

# Future Freak

Techs Transforming Financial Services

Lee Wetherington, AAP  
Director of Strategic Insight  
Jack Henry & Associates, Inc.®





# Presenter

## Lee Wetherington

Director of Strategic Insight

- Develops actionable insight and strategy for the financial services industry at large
- Delivers keynotes nationwide
- Technology Faculty Chair for several graduate schools of banking
- Authors articles for industry trades
- Degrees in Economics and English from Duke University
- Accredited ACH Professional (AAP)



 @leewetherington

# Agenda

- Freaking Here & Now
  - My 2 Young Freaks
  - The 3 M's: MST, Myelin & Monty Hall
- Future Freaks
  - Loans; Mobile; Biometrics; Behavior; Web
- How to Get Your Freak On
  - 5 Steps Forward for Banks

New cardholders  
New mobile bankers  
New mobile wallet owners  
Liam & Ethan Wetherington



**...but their bank  
doesn't offer  
any of that.**

# Here & Now

# Samsung acquires Apple Pay competitor LoopPay



Mike Snider, USA TODAY

6:51 p.m. EST February 18, 2015



(Photo: LoopPay)

f 61  
CONNECT

144  
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in 51  
LINKEDIN

9  
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MORE

Samsung has made its move to counter Apple Pay by acquiring Boston-based mobile payment tech firm LoopPay.

The electronics giant acquired the mobile start-up for an undisclosed sum. LoopPay launched a fob-based payments solution that works with the existing magnetic stripe readers last year. However, LoopPay had been expected to have its next generation of digital wallet tech on board with the next Samsung Galaxy smartphone.

"Today is a great day for LoopPay and all those who have supported us over the last few years," said co-founder Will Graylin on [the company's website](#) Wednesday. "Our vision of inspiring consumers to transition from a physical wallet to a truly digital wallet

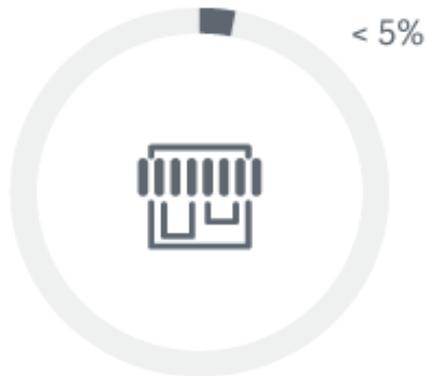
# Magnetic Secure Transmission (MST)

# O LoopPay

# Apple Pay vs. LoopPay: Merchant Acceptance

## Merchant-ready in the US today

Apple Pay



Works at less than 5% of retail locations

LoopPay

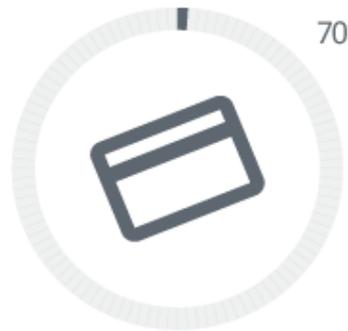


Works at around 90% of retail locations

# Apple Pay vs. LoopPay: Card Eligibility

## Types of cards that can be loaded and used at POS readers

Apple Pay



Apple Pay supports just 70 issuers

LoopPay



LoopPay supports 10,000+ issuers, thousands of credit and debit cards along with most gift, loyalty, private label, prepaid, and campus cards

# Apple Pay vs. LoopPay: Smartphone Coverage

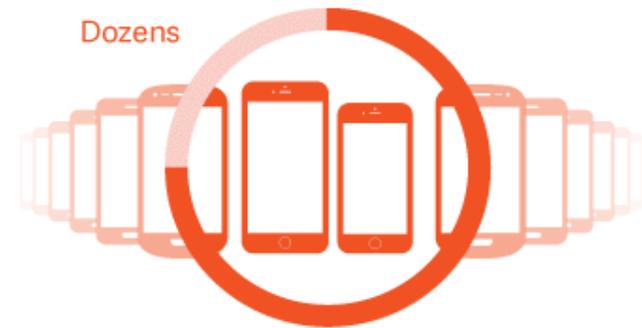
## Type of smartphones consumers can use

### Apple Pay



iPhone 6 and 6 Plus, iPad Air 2, iPad mini 3, Apple Watch

### LoopPay

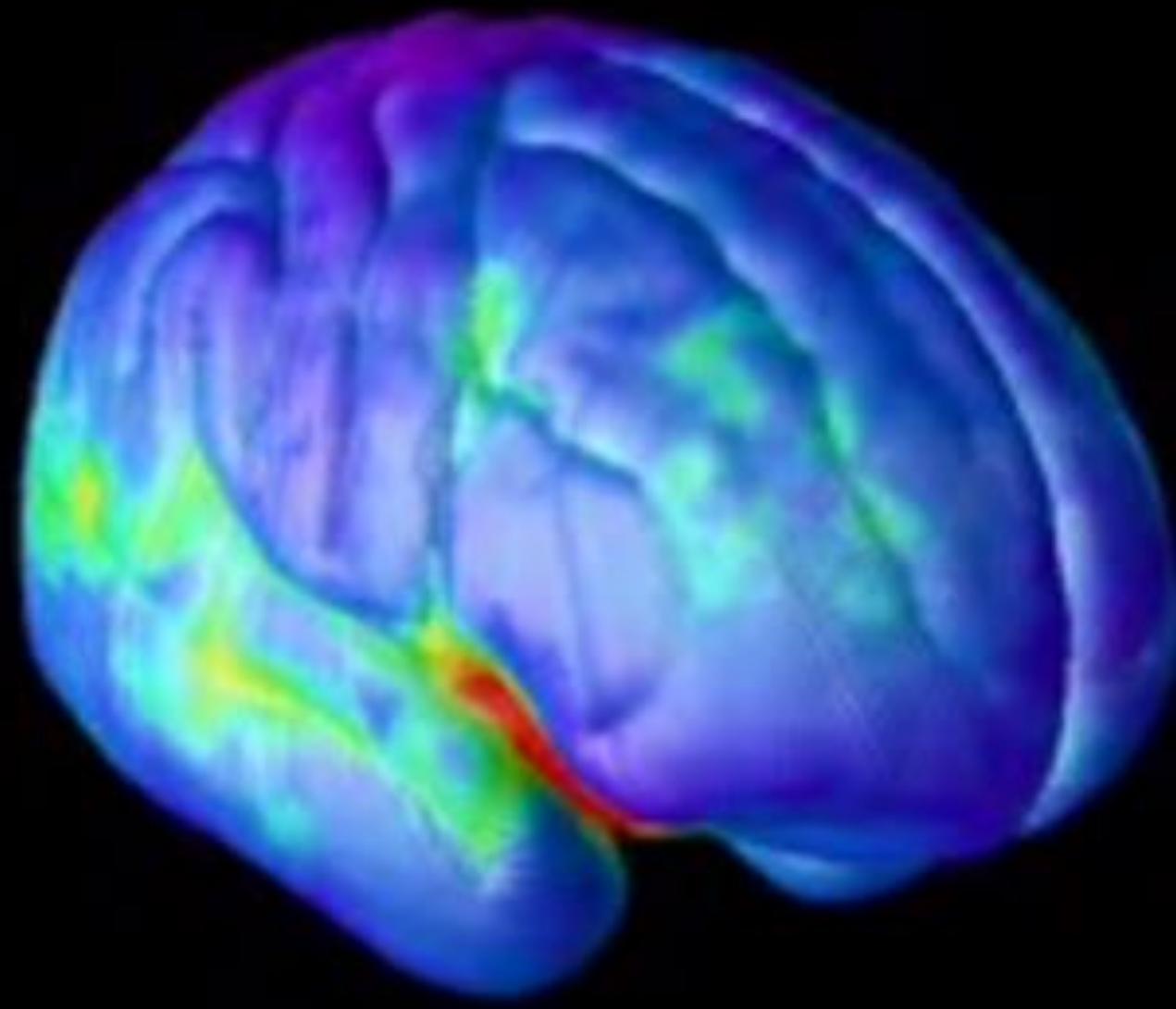


iPhone 6, 6 Plus, 5s, 5c, 5, 4s and 4, iPad Air 2, iPad mini 3, Google/LG Nexus 5; LG G2, G3, Nexus 4, HTC One (M8), One (Max & Remix), Motorola Droid (Maxx & Turbo), Moto X, Moto X 2014, Moto G (2nd Gen), Nexus 6, Samsung Galaxy S3, S4, S5, Alpha, Note 2, 3 & 4, Mega 2, Sharp Aquos Crystal L, and more

# Myelin

# Neuro Science 101: 3 Questions

1. What organ in your body is the last to mature?
  - **A: The brain**
2. When does that organ fully mature?
  - **A: Late 20's, early 30's**
3. In what order does it mature?
  - **A: From the back to the front**



Gray Matter Amount

1.0  
0.9  
0.8  
0.7  
0.6  
0.5  
0.4  
0.3  
0.2  
0.1  
0.0



# What does this mean for Gen Y?

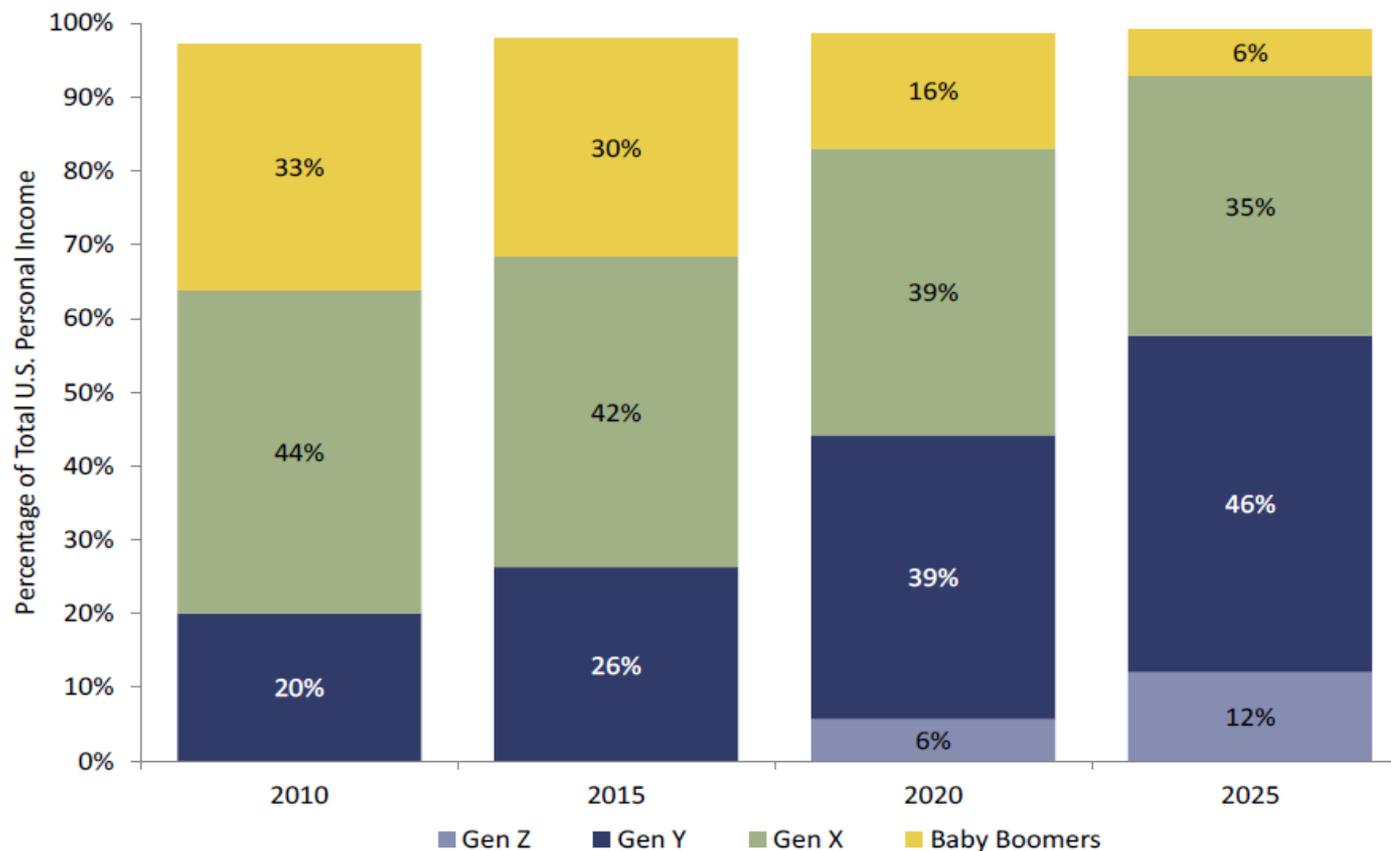
# Gen Y Woes

- First to have **lower standard of living than their parents'** generation
- First to have **higher student loan debt, poverty and unemployment** than their two immediate predecessor generations had at the same age
- **60% of young Gen Yers (21-26), and 50% of older Gen Yers (27-34) say they have an “impulse purchase” problem**
- Nearly **half of all Gen Y** consumers looking to switch FIs **want** their next FI to offer **PFM tools**

SOURCE: Pew Research; June 2014

# Gen Y Surpasses Gen X in Income by 2020

## Personal income by demographic segment (2010-2025)



© 2014 Javelin Strategy & Research

# Motivational PFM for Gen Y



**Ready For Zero**



SOURCE: Javelin Strategy & Research; "Managing Money in the 'Mobile-First' Era:  
A Blueprint for On-the-Go Personal Finance Management"; June 2014

# Better Choices, Fraud Protection



# Moven

MOVEN  
BALANCE

\$370.26



You're in the GREEN

You are below your  
average spend by  
\$871>



MOVE FUNDS



GET RECEIPT



PAY FRIEND



# Moven

MOVEN  
BALANCE

\$370.26



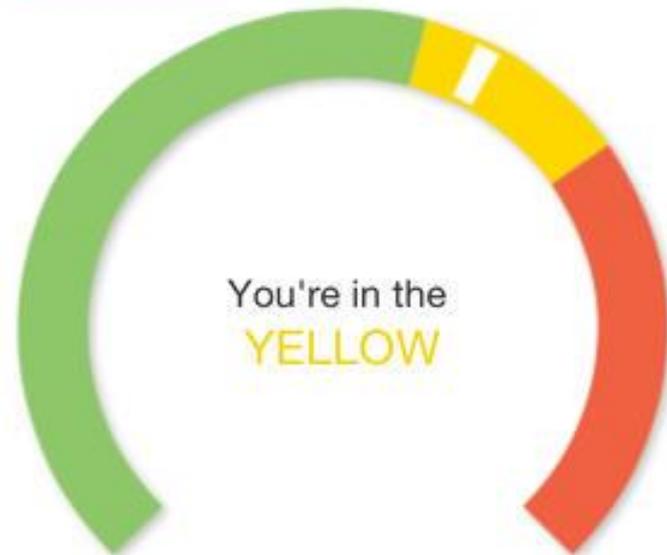
Spend



Save



Live



## All Accounts

You've spent  
as of Tue May 28

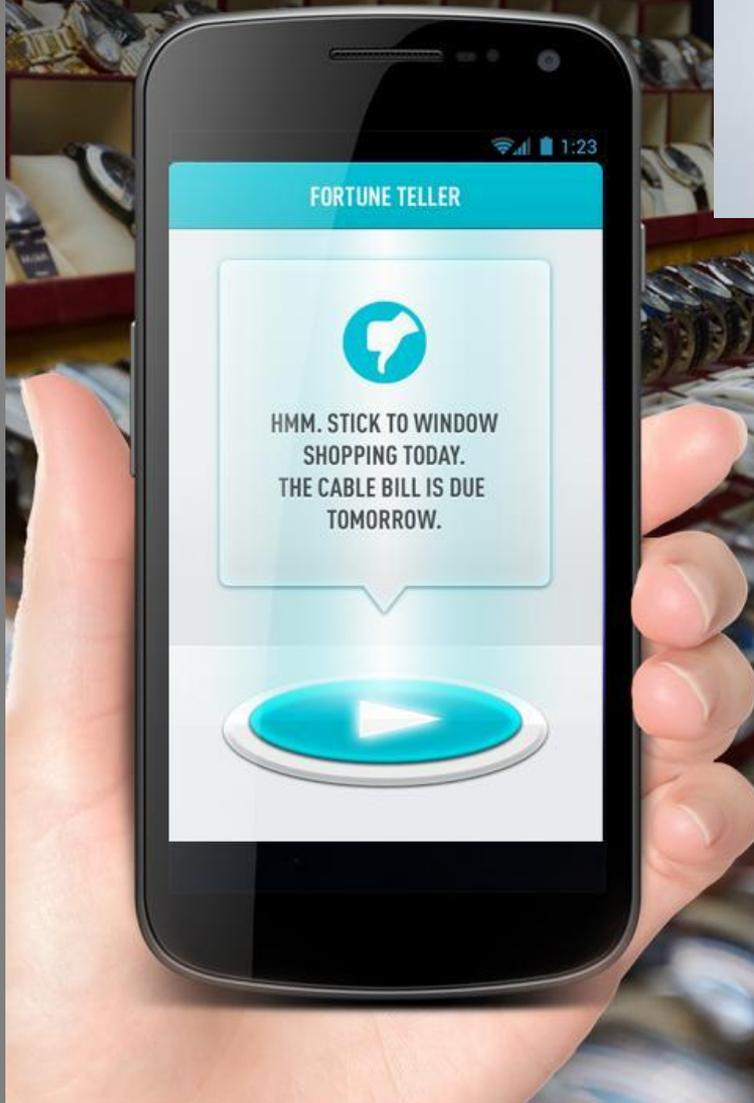
\$3,681

Your average to date is

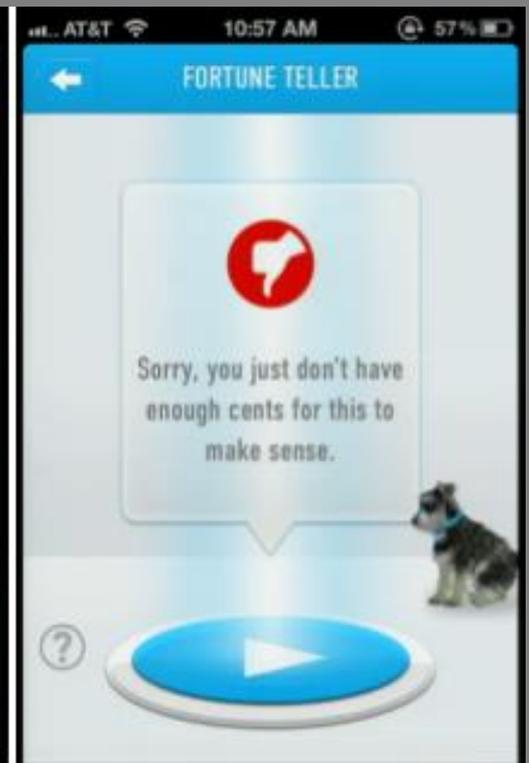
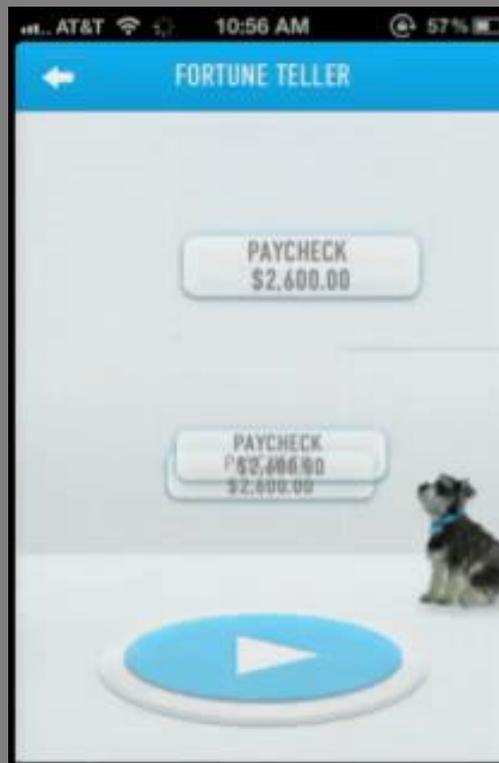
\$3,971

You are below your typical \$ 200

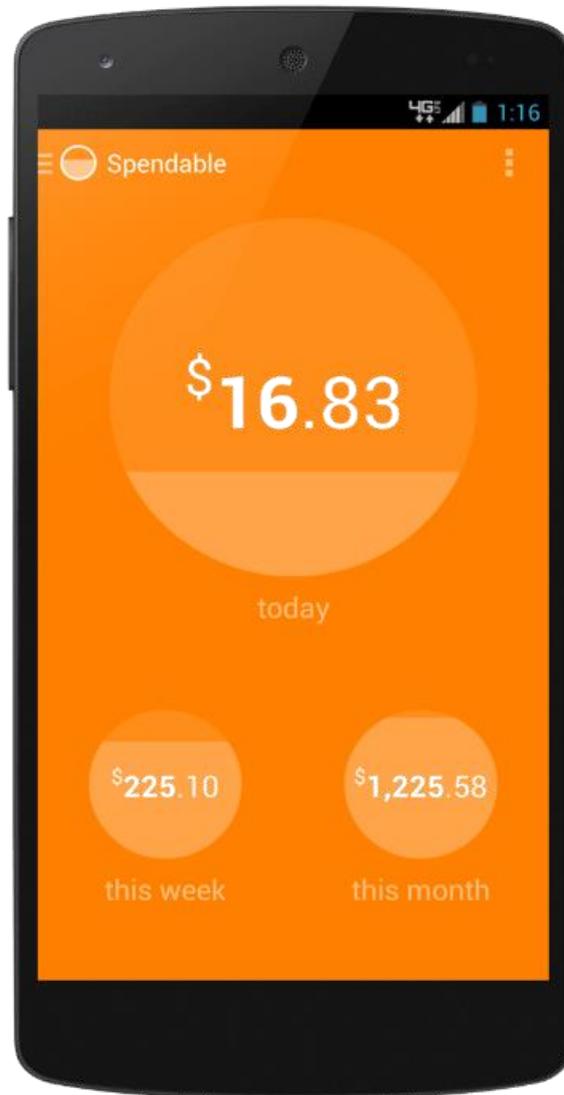
# SHOULD YOU BUY IT? ASK THE FORTUNE TELLER



# GObank™

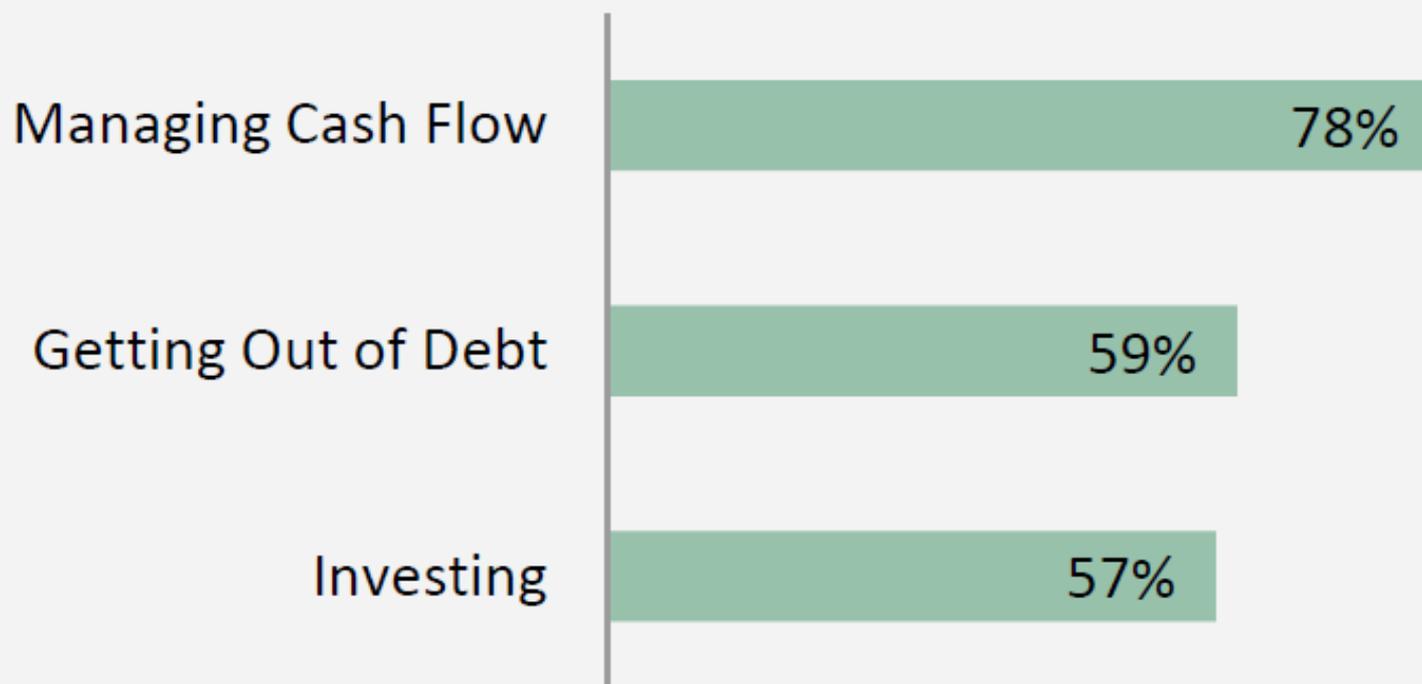


# Level



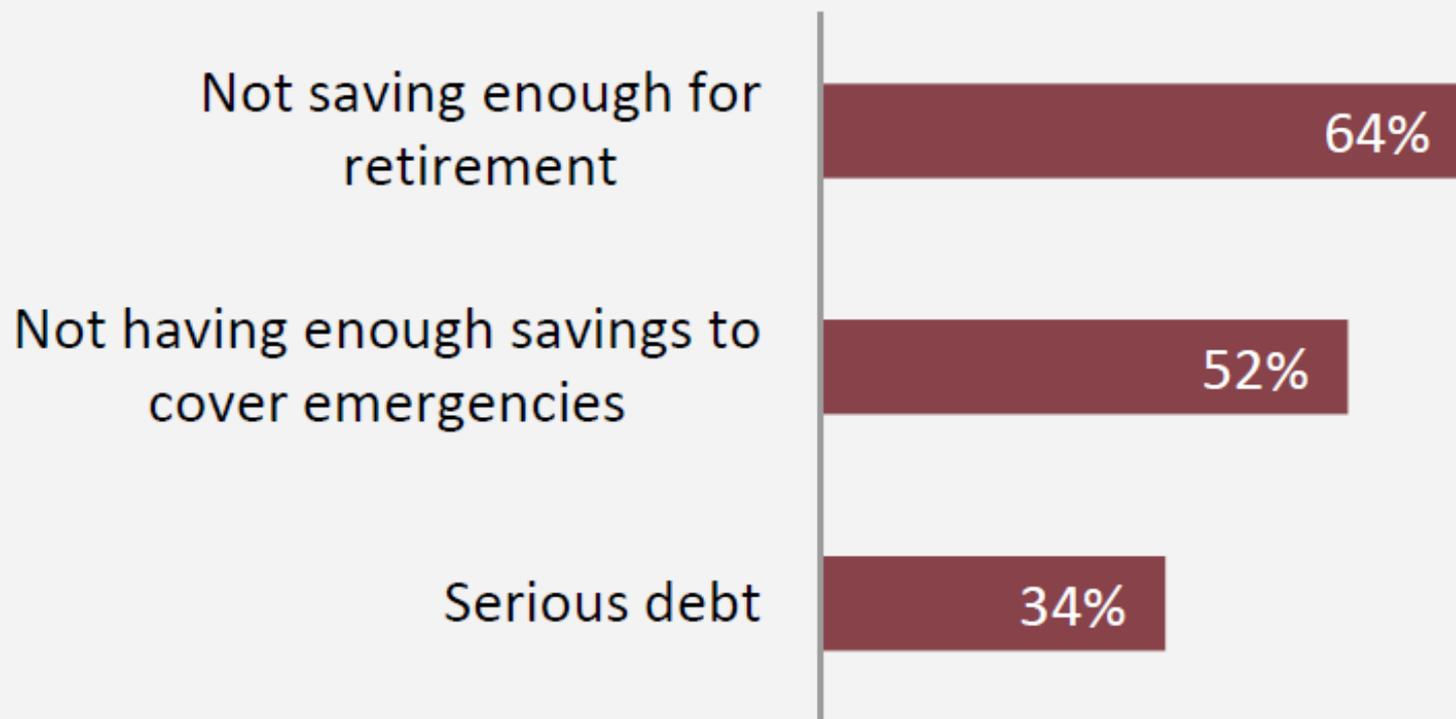
# Gen Y Financial Goals

## Top 3 Self-Selected Priorities



# Gen Y Financial Concerns

## Top 3 Vulnerabilities

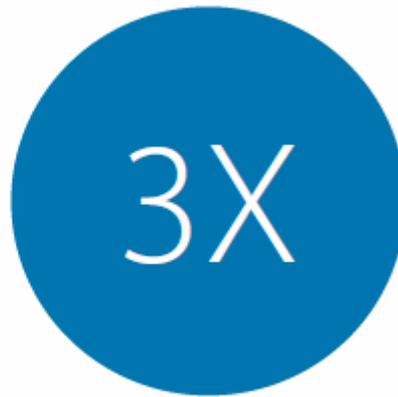


# Gen Y Churn Risk is High

## Millennials



More likely to close all accounts with primary bank

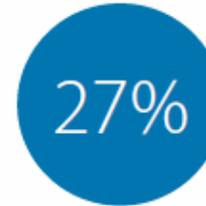


More likely to open a new account with a primary bank

## Why Millennials Leave Banks



Account fees too high



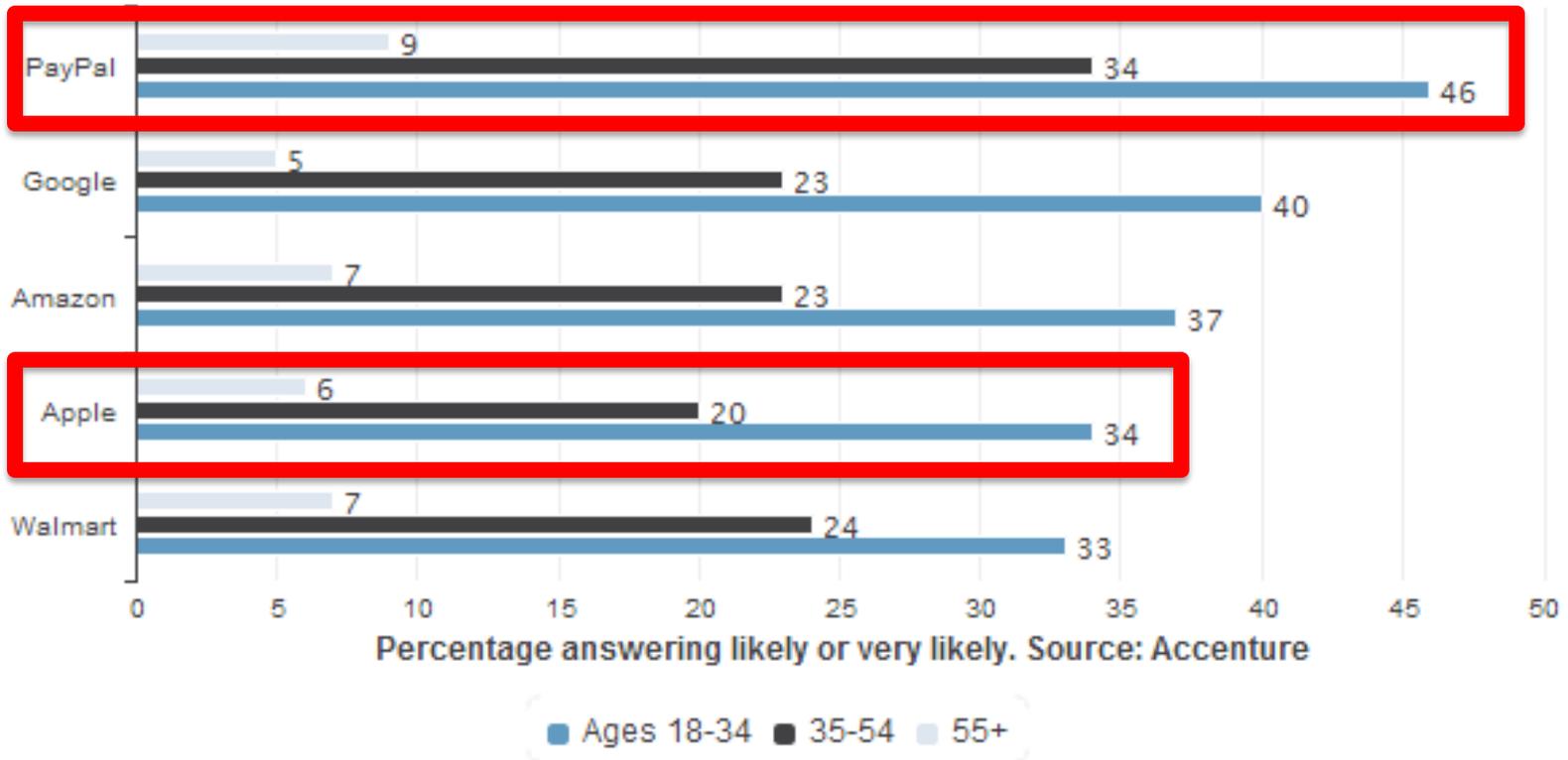
Negative experience with a representative of the bank



There were too few ATM locations

# Threat: Alternative Banking

Open to Alternatives: If these companies offered banking services, how likely would you be to bank with them?



# iTunes Precursor to Prepaid Wallet?



## iTunes Pass NEW

Now you can add money directly to your iTunes or App Store account with iTunes Pass. To get iTunes Pass, go to the iTunes Store on your iOS device, scroll down, and tap the Redeem button. Then go in to any Apple Retail Store<sup>3</sup> and let a Specialist know you want to add credit to your account. Open iTunes Pass in Passbook, and have the Specialist scan it and accept your payment. Your balance will be updated and can be used immediately.

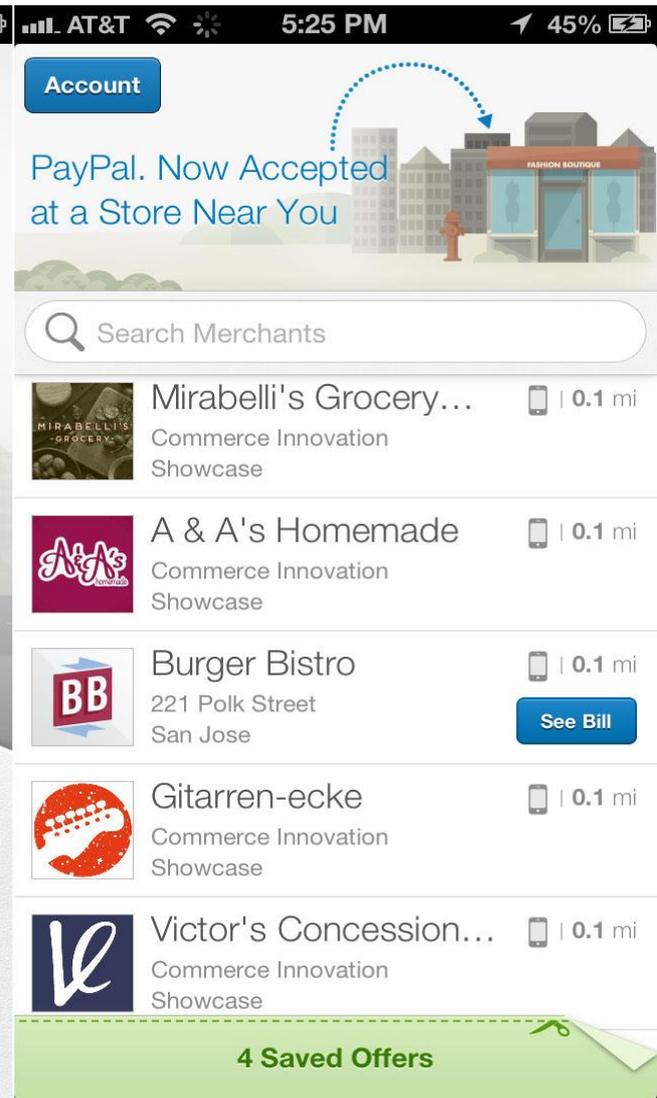
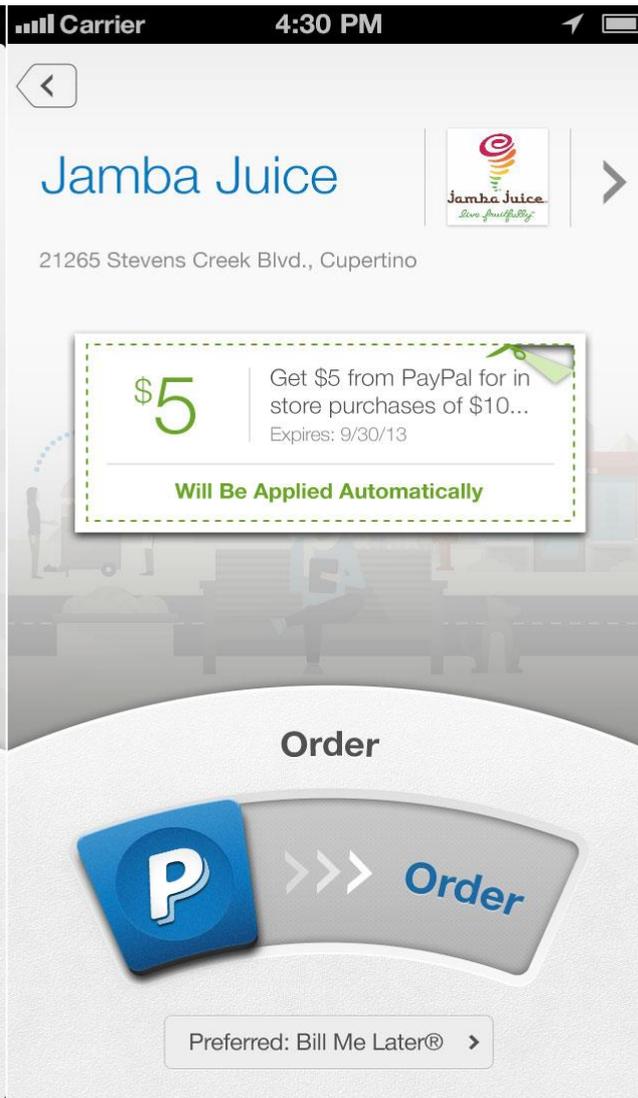
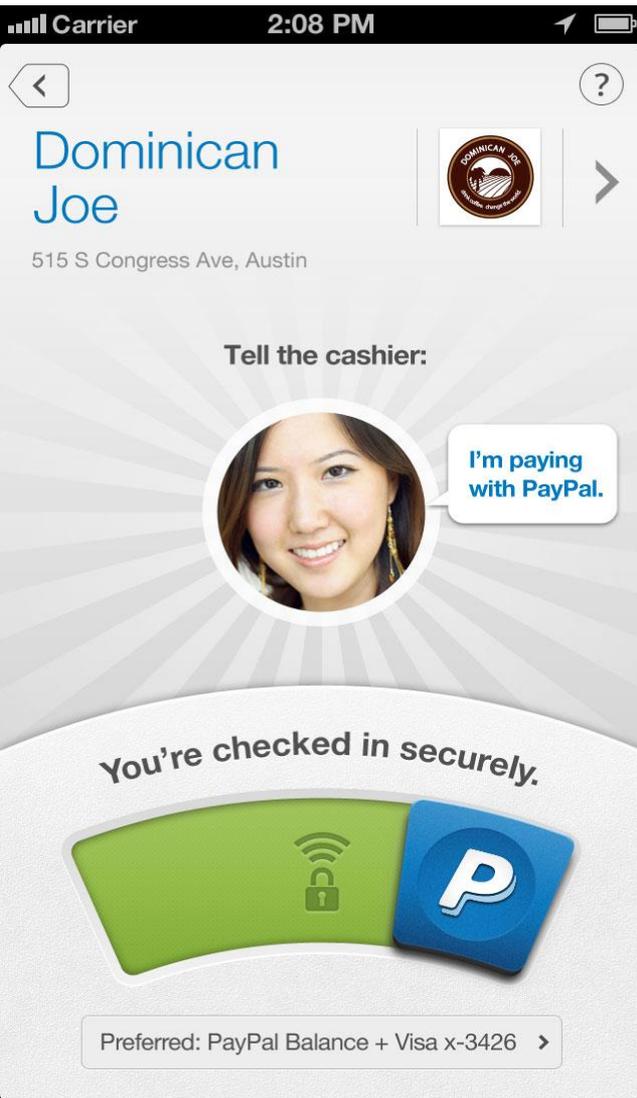
Ethan and Liam now receive allowance on prepaid cards.



# The Boys' New Allowance Card



# ...also comes with a mobile app.



# The **Monty Hall** Problem

# Data Breach

Prevention. Response. Notification. TODAY

- Response ▾
  - Breaches
  - Forensics
  - Governance
  - ID Theft
  - Preparedness ▾
  - Litigation
  - Technology ▾
- News ▾
  - Blogs ▾
  - Interviews
  - Webinars ▾
  - White Papers
  - Memberships
  - Resources ▾
  - Events ▾
  - Jobs ▾
- 

## The Latest News

### [Anthem Breach: Phishing Attack Cited](#)

Phishing Campaigns Now Targeting Anthem Members



Anthem believes that the breach that has exposed up to 80 million individuals' information began after a handful of employees fell victim to a phishing attack. Other attackers appear to be using the breach as a lure for their own phishing campaigns. [Read more](#)

## Featured Interviews

### [Can PINs Reduce Online Fraud?](#)

Merchant Association Executive Outlines Her Argument



PINs can effectively reduce card-not-present as well as card-present fraud, argues Liz Garner of the Merchant Advisory Group, who will be a featured speaker at Information Security Media Group's...

### [Risk Management Lessons from Anthem Hack](#)

What Healthcare Organizations Can Learn from Breach



The recent cyber-attack on health insurer Anthem Inc. is a "call to action" for the

## Get Daily Email Updates

## Report a Breach

Are you aware of a data breach that has not yet been reported? Alert our news team.

## Solutions

INTERVIEW

[ZixCorp CEO on E-mail Security Evolution](#)

WEBINAR

[Advances in Application Security: Run-time Application Self Protection](#)

**U.S. accounts for 25% of global card volume and 50% of card fraud... because we rely on magnetic stripes and signatures in cursive.**

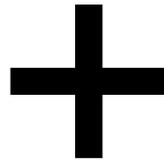


Signatures are worthless!



**So, guess how we're  
securing credit card  
payments this year?!**

# EMV Chip & Quill!!!



# CNP Fraud Forecast: 2018

CNP FRAUD WILL HAVE A CONSISTENT YET DRAMATIC GROWTH

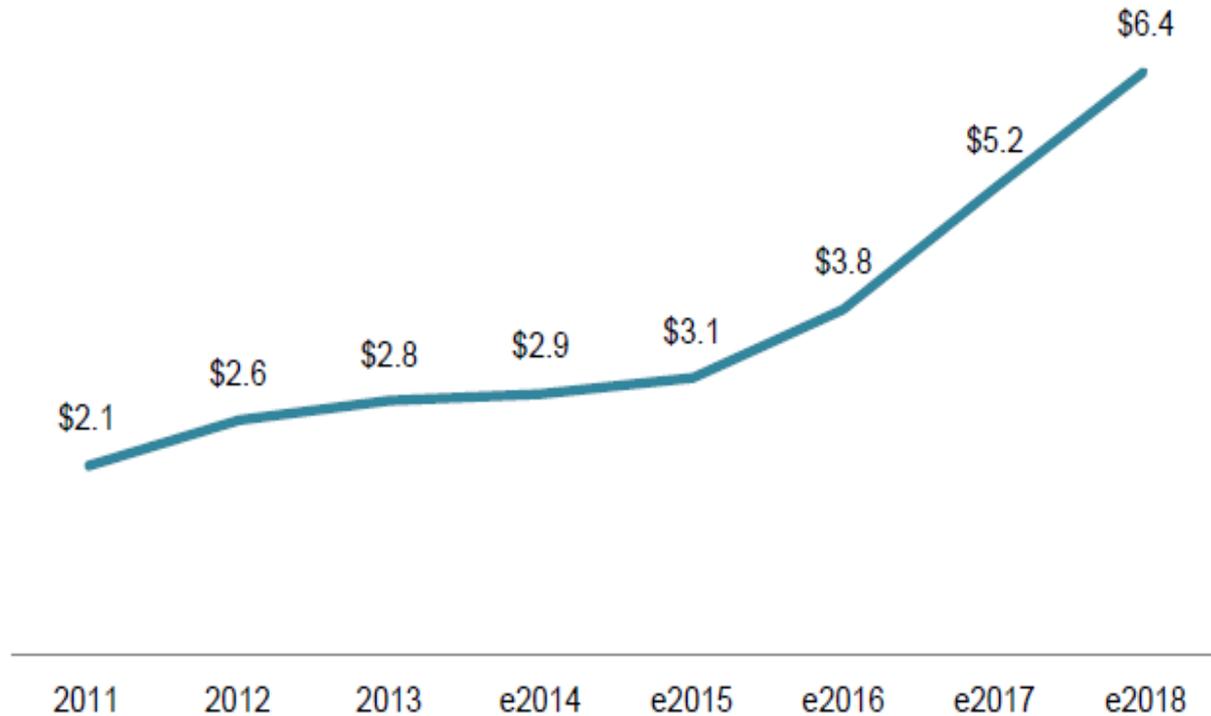
CNP FRAUD WILL BE

4X

POS CARD FRAUD BY  
2018

# Post-EMV Card-Not-Present (CNP) Fraud Explodes

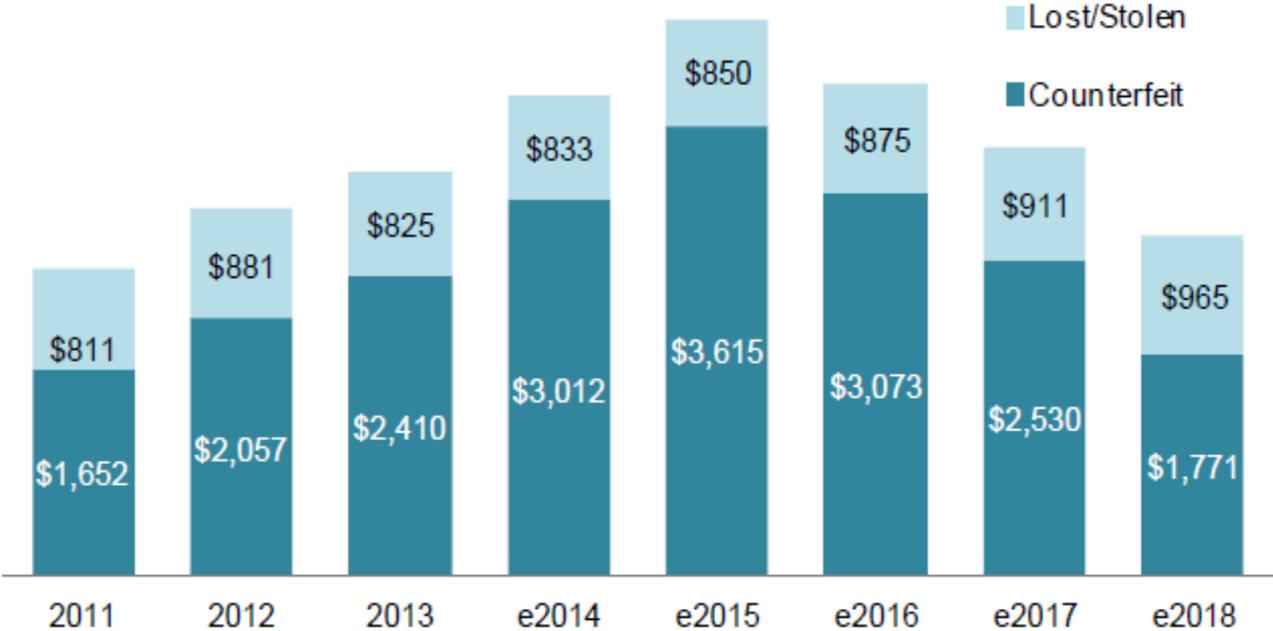
U.S. CNP Credit Card Fraud Losses,  
2011 to e2018 (In US\$ Billions)



Source: Aite Group interviews with card executives from 18 of the top 40 U.S. issuers and payment networks, April and May 2014

# Post-EMV Credit Card Fraud Projections

U.S. Credit Card Fraud Losses, 2011 to e2018  
(In US\$ millions)



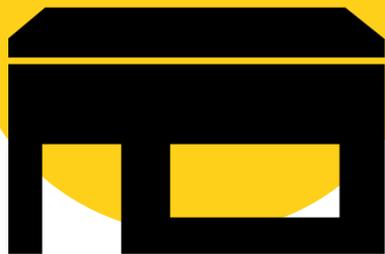
Source: Aite Group interviews with card executives from 18 of the top 40 U.S. issuers and payment networks, April and May 2014

# EMV: Transitional Fraud Targets

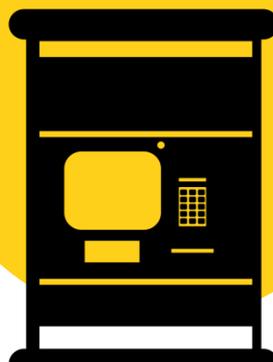
SMALL MERCHANTS AND UNATTENDED TERMINALS WILL REMAIN VULNERABLE

WHILE BIG MERCHANTS ARE WELL ON THEIR WAY,  
FRAUDSTERS WILL STILL HAVE **TARGETS**.

SMALL  
MERCHANTS



ATMS



GAS PUMPS



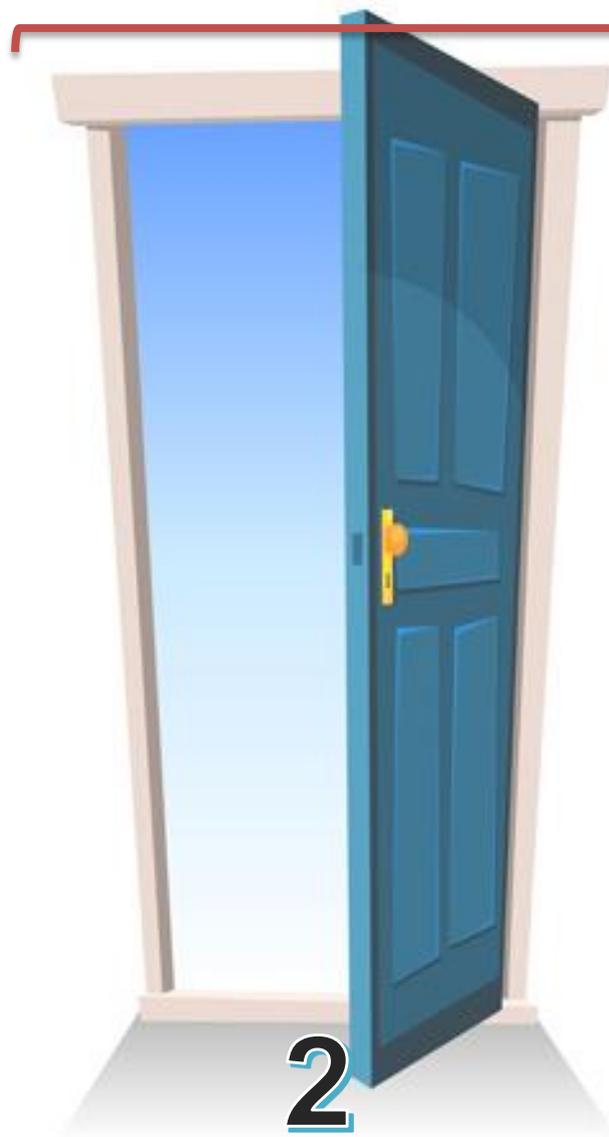
SOURCE: Javelin Strategy & Research; "Fixing CNP Fraud: Solutions for a Pre- and Post-EMV U.S. Market; October 2014

# LET'S MAKE A DEAL



**odds: 1/3**

**odds: 2/3**



**So, should you  
choose door #3?**

**During the EMV transition,  
the **probability of fraud**  
will **concentrate** among  
the last to migrate.**

# Counterfeit Card Fraud Probability

**odds: 0**



**1**

**odds: 0**



**2**

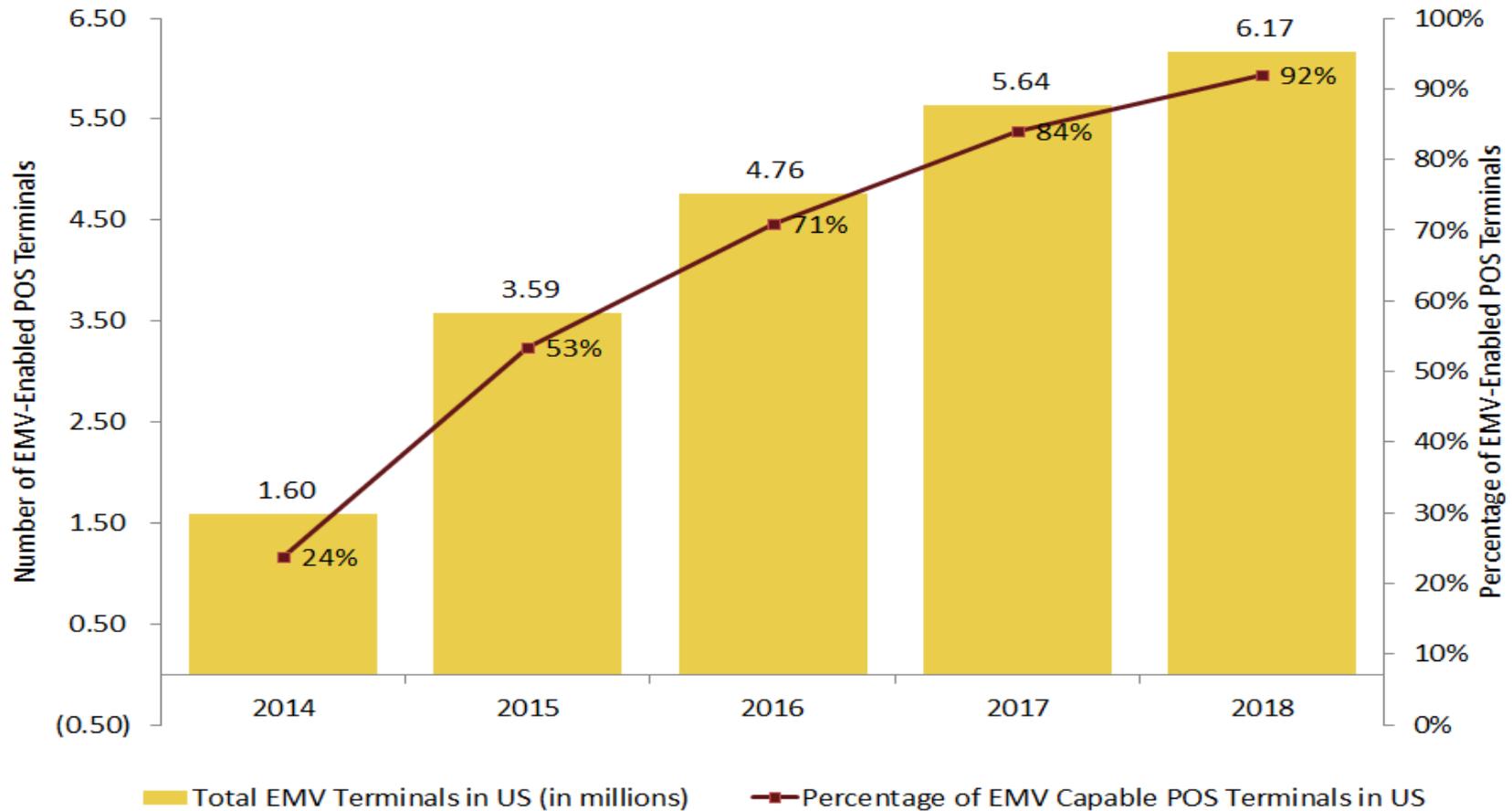
**odds: 100%**



**3**

# Over Half of U.S. POS Terminals Will Be EMV Compliant by EOY 2015

Percentage and Number of Total U.S. EMV POS Terminals, 2014–2018



SOURCE: Javelin Strategy & Research; "Mobile Wallets 2014: How Apple Pay Changes Everything"; Webinar; 10/22/14

#3 TIE

# Apple Pay

28%  of smart device owners likely to choose Apple

TECH  NFC/TOKENIZATION/TOUCH ID

CARD NETWORKS



BANKS/ISSUERS



MERCHANTS

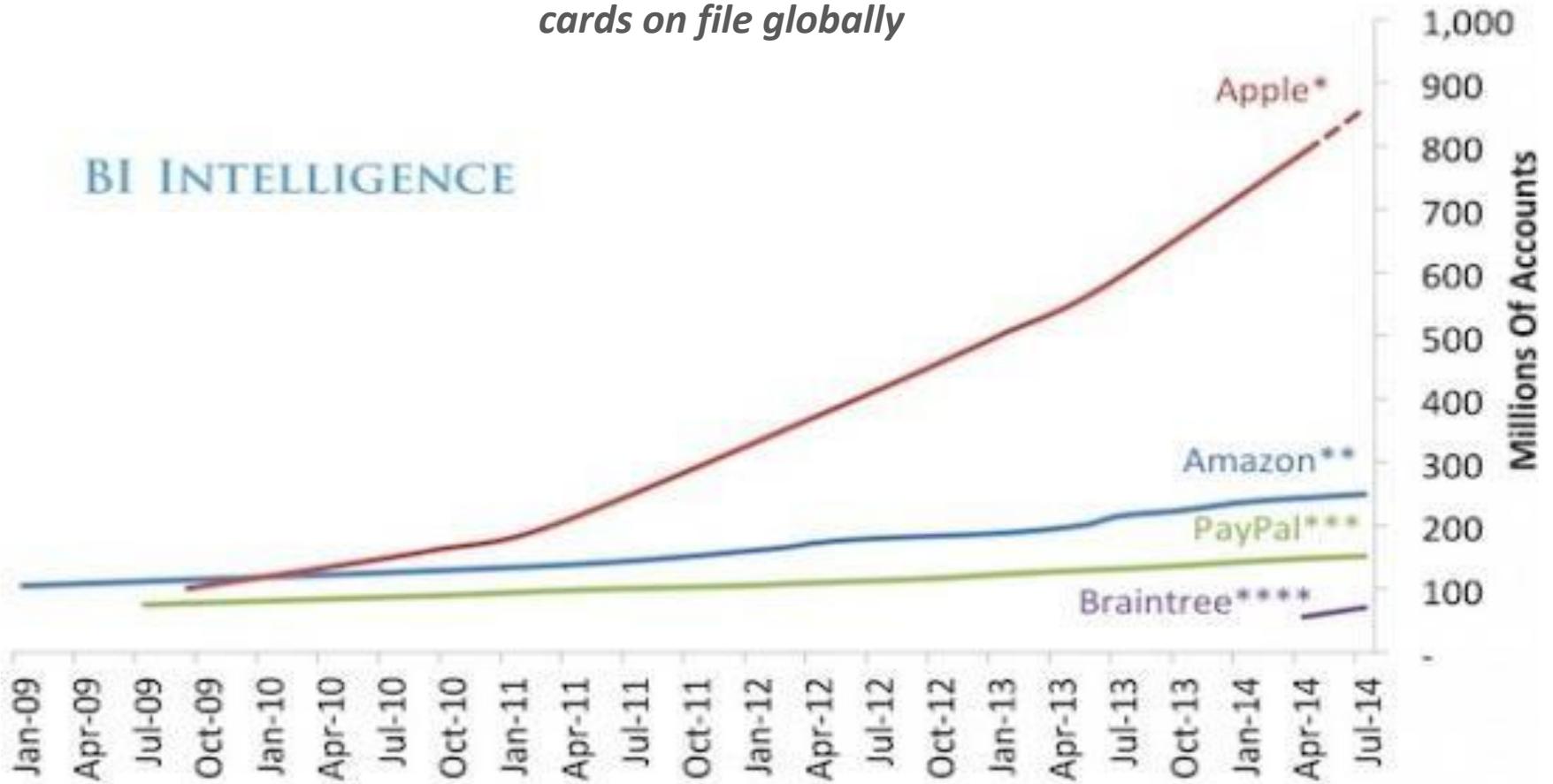


SOURCE: Javelin Strategy & Research; "Mobile Wallets Analysis and Strategy: How the Game Changes with Apple Pay"; October 2014

# Why Apple Pay Matters...

Apple, Amazon, PayPal And Braintree  
cards on file globally

BI INTELLIGENCE



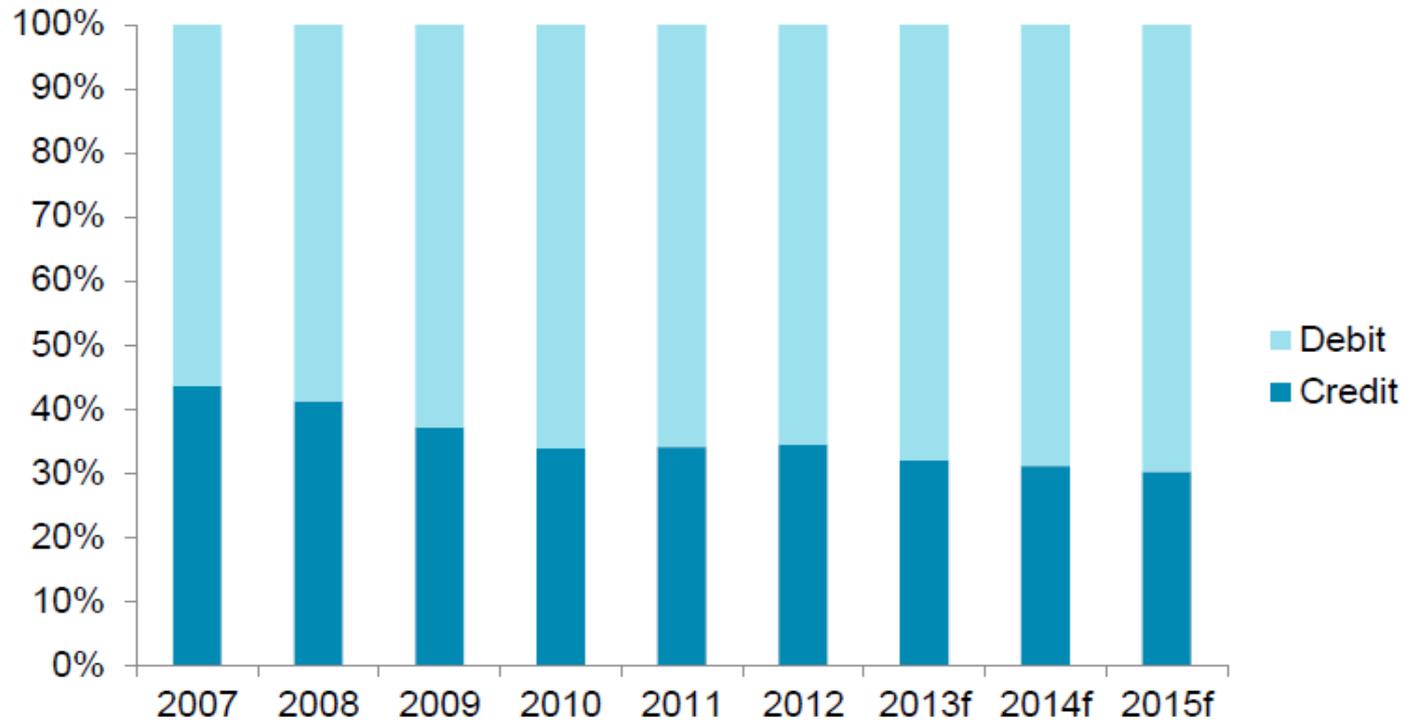
# Apple Pay: Good News and Bad

- Good News
  - Reinforces issuer's card franchises
  - **Apple not going after issuers' payments data**
  - Adds security and reduces card fraud risk/liability
- Bad News
  - New fees that issuers must pay Apple
  - New player in already crowded field of card stakeholders (from 4-party to 5-party)
  - Increases urgency for financial institutions to remain relevant in the convergence of payments/banking/ shopping

# Apple Pay: Shift from Debit to Credit?

Accepting contactless would likely increase the number of credit card transactions, shifting the balance away from debit card transactions

Debit Vs. Credit Card Transaction Mix in North America



Source: Celent's Payments Data Model

SOURCE: Celent: "Apple Enters Payments: Is Apple Pay the Answer for Mobile Payments?"  
Celent Webinar; 20 October 2014

# EMV Challenges

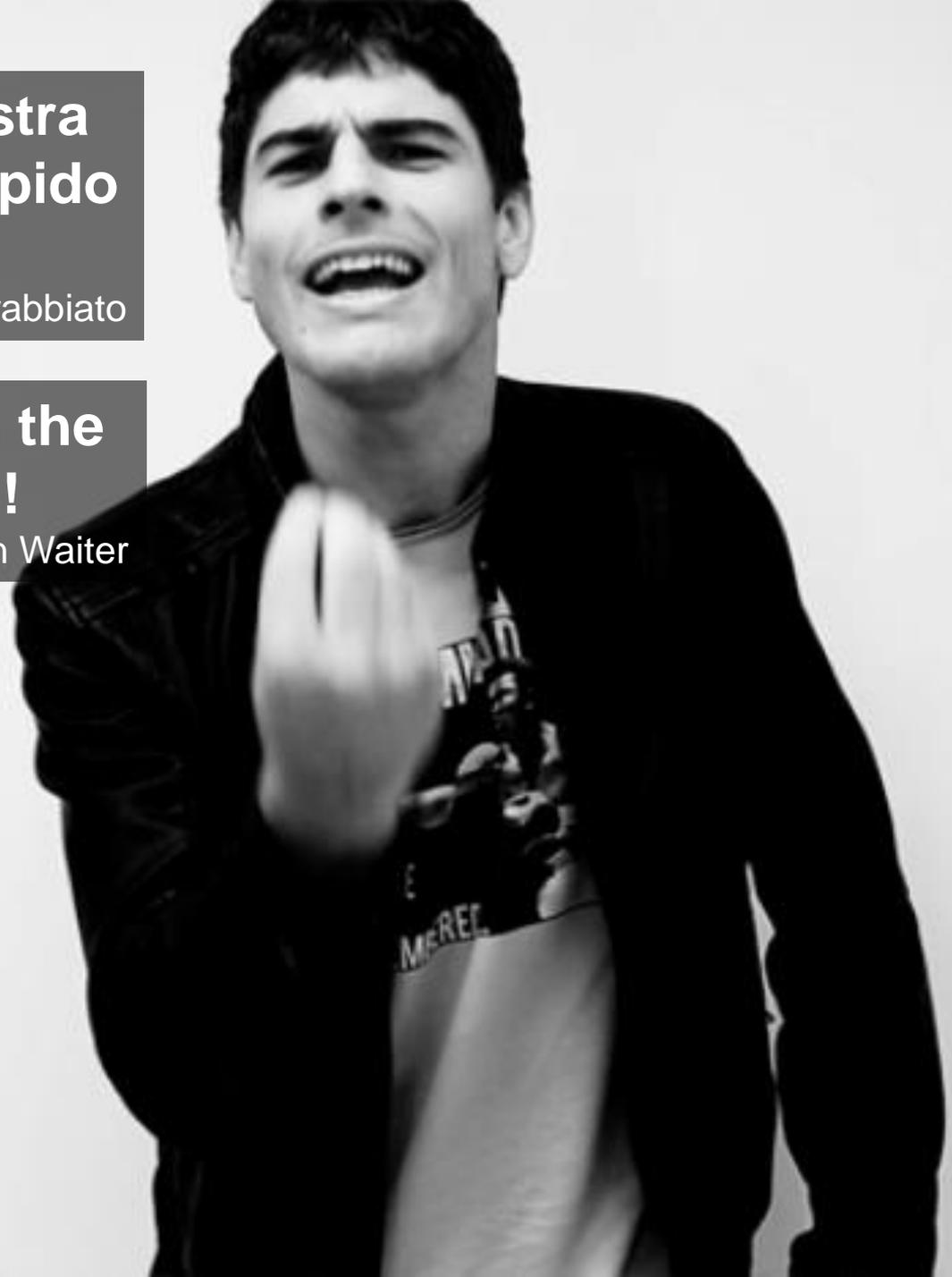
- Transitional concentrations of fraud on weakest links and last to the party
  - **Debit Cards**
  - **Smaller Merchants**
- Get ready: tokenization ain't free (see MasterCard)
- Signatures are meaningless...and we're transitioning to, you guessed it, Chip & Signature EMV
- The learning curve for consumers
  - **Dip and leave vs. dip and yank (gas pump)**

**Si prega di lasciare la vostra  
carta nella macchina, stupido  
Americano!**

--Cameriere Arrabbiato

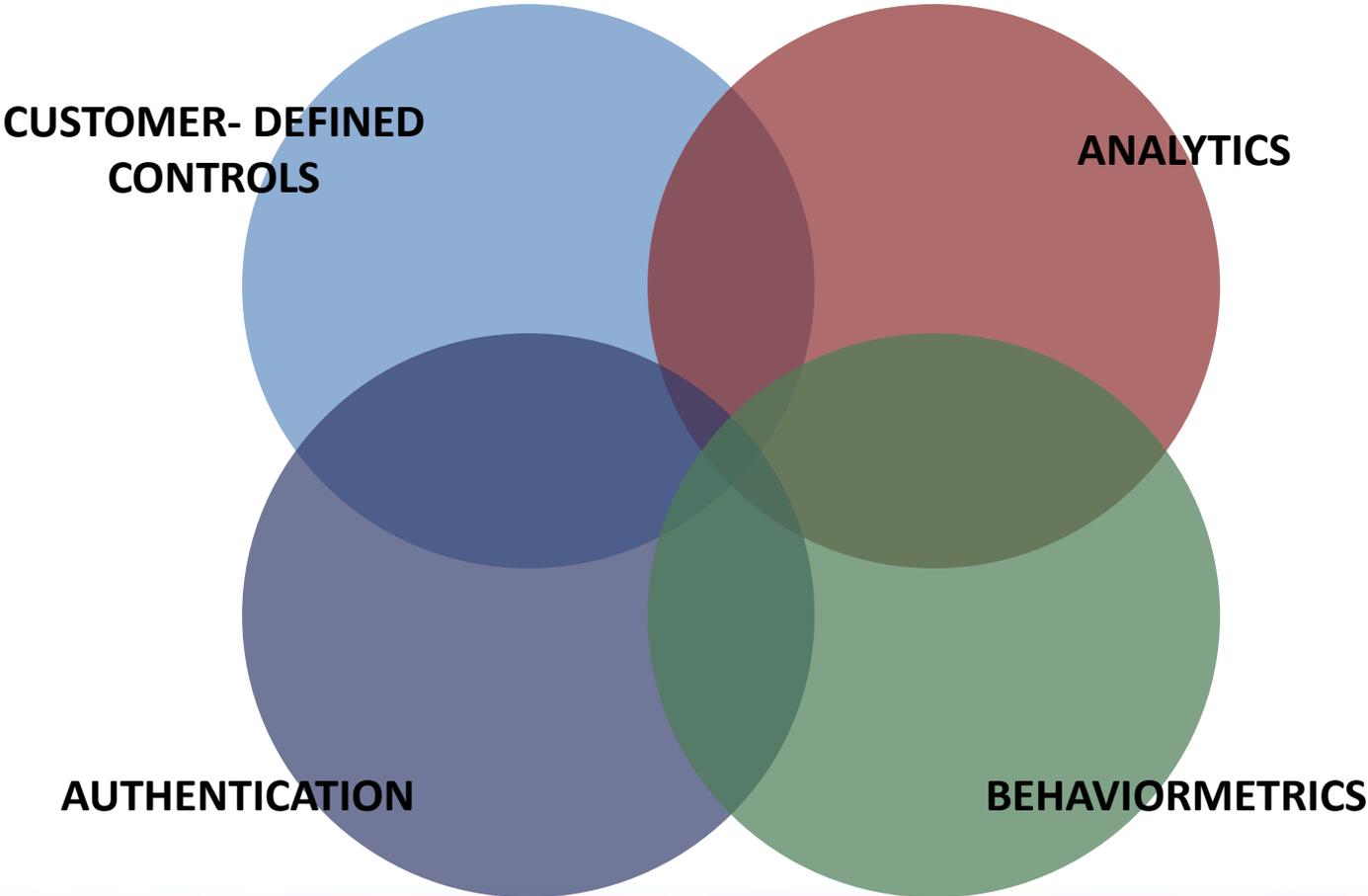
**Please leave your card in the  
machine, handsome man!**

--Angry Italian Waiter



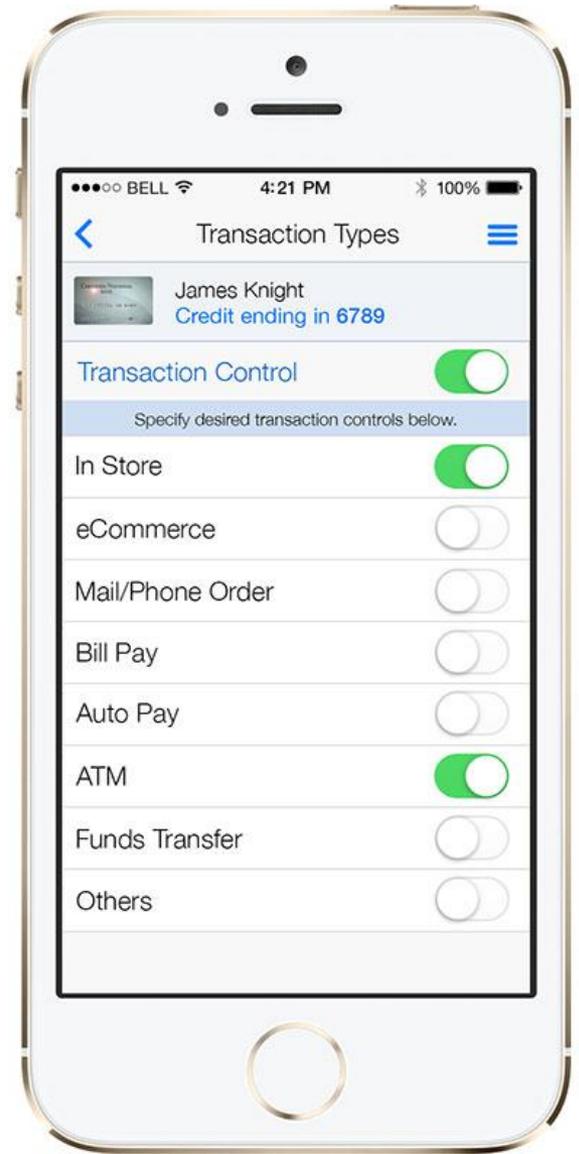
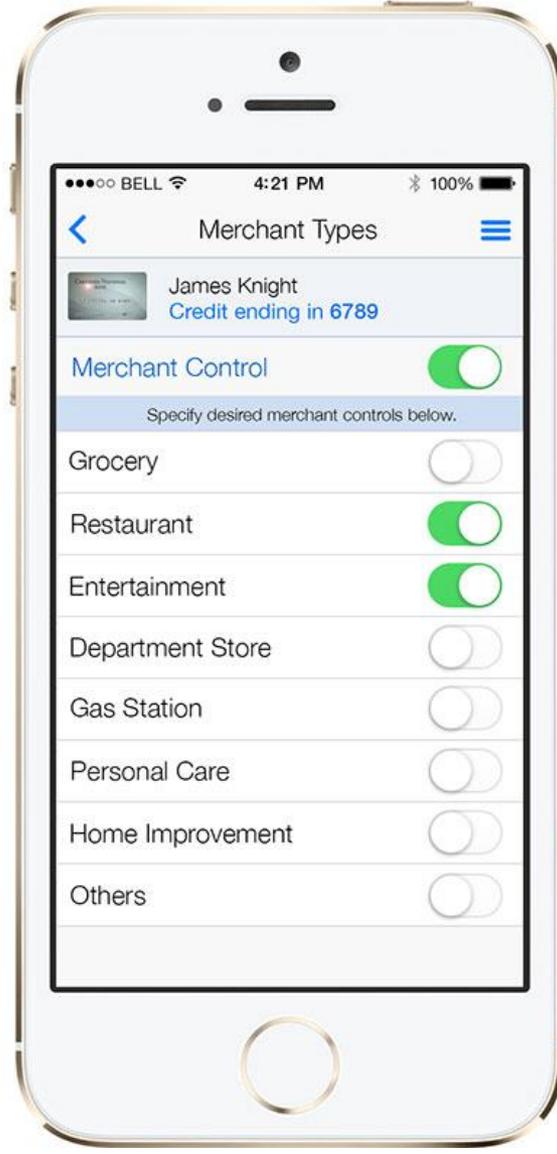
# A Holistic Approach: Fighting CNP Fraud

DRIVING DOWN CNP FRAUD WILL REQUIRE A COMPREHENSIVE STRATEGY



# Customer-Defined Controls for Cards





# Events



- Alerts
- Events**
- Feeds
- Trusted Circle
- Analysis
- Reports
- Administration

### Events Summary ⚙️ ⓘ



05  
EVENTS

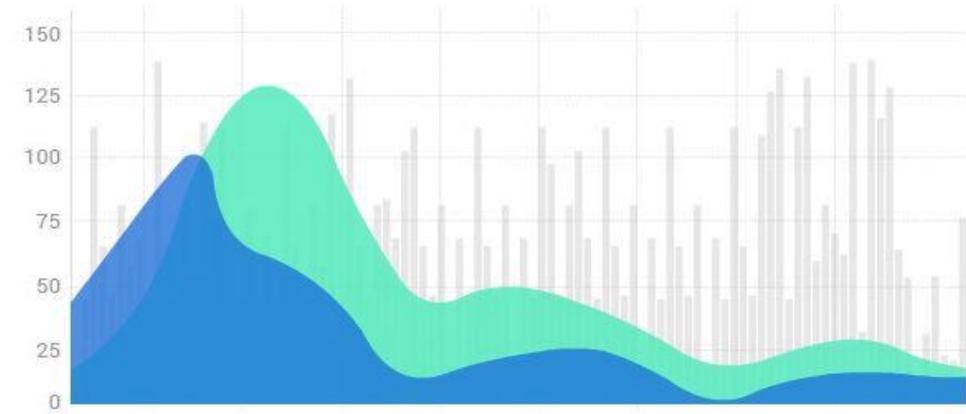
● 2-5 Sources    ● Confirmed Benign

### Traffic Summary ⚙️ ⓘ

28  
 Incoming

33  
 Outgoing

83%  
 Overall



09:00 UTC 10:00 UTC

Data compiled from **30** Sources in **01** Trusted Circles ⓘ

Local Events 1

Intra-Company Events

Global Events

Early Warnings 3

All Events

**Inbox**

1 Thread

5 Items/page ▾

Showing 1 to 5 of 28 messages

✕  
☆

**Security Community**

Account Takeover Alert

April 29 | 10:30 AM

SECURITY COMMUNITY PROPRIETARY - PRIORITY:AMBER - ONLY SHARE WITH THOSE INSIDE YOUR ORGANIZATION WITH A NEED TO KNOW. DO NOT SHARE OUTSIDE OF YOUR ORGANIZATION WITHOUT FIRST COORDINATING WITH THE SECURITY COMMUNITY.

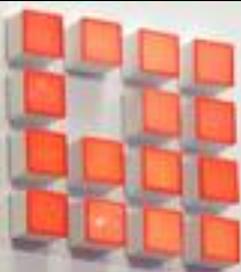
# Detect Breaches Early with Big Data



yantra

 rippleshot  
stopping fraud at the speed of data

# Loan Freaks



# LendingClub



NEW YORK STOCK EXCHANGE

LC | Welcome



- IPO on 12/10/14 raised \$834M
- P2P business model
- Loans range from \$15k - \$300k (majority of loans: \$15k - \$100k)
- Risk-based pricing, 10 grades
- Rates from 6% to 30%
- Terms range from 1 to 5 years
- Over \$4B in loans to date
- Year over Year Q314 - 118%
- [May 5, 2014](#)...*Lending Club Teams Up with Union Bank*
  - Until LendingClub partnered with Union Bank, they have publicly worked with very small community banks.

# The Skinny on Small-Biz Lending

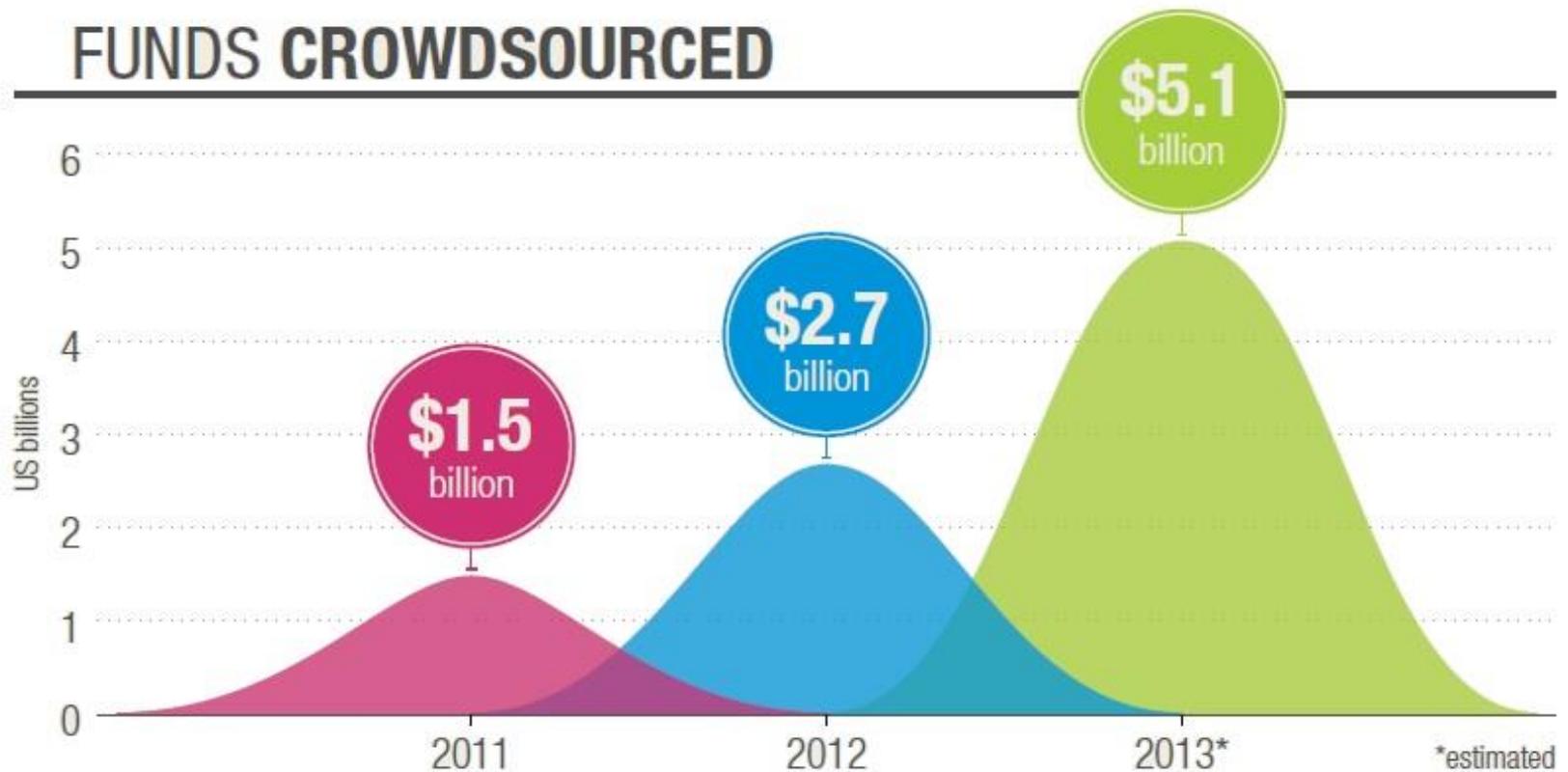
- “\$300 billion small-business lending market has an estimated unmet demand of around \$80 billion to \$120 billion because traditional lenders are ignoring the sector.”
- “Traditional lenders are reluctant to lend to small businesses because of the difficulty in assessing their credit worthiness in a uniform manner.”
- “50% of bank customers rejected for a loan never return to the bank.”

# The Alternative Lending Threat

- Alternative lenders are eroding loan volume.
- Even quality borrowers are choosing alternative methods because they're faster and easier.
- They'll choose them even though they cost more.
- When turned down, if applicants come back to traditional financing, they'll do it with another financial institution.

# Alternative Lending

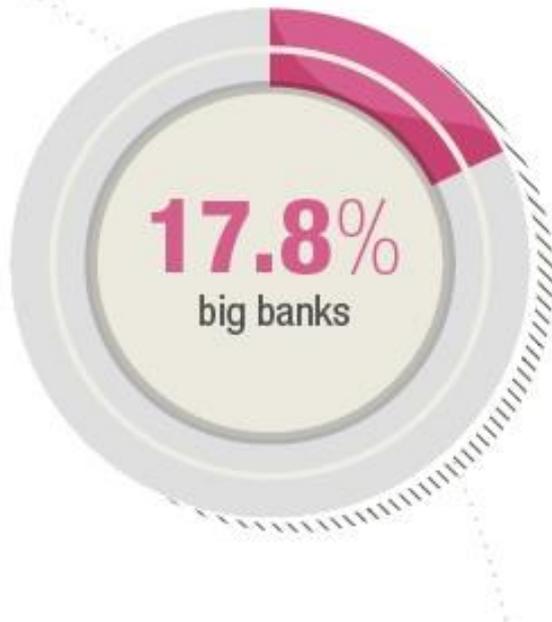
- SMB alternative lending is a \$4B industry and growing 10–20% annually.



Source: National Federation for Independent Businesses (NFIB)

# Small Biz Loan Approval Rates

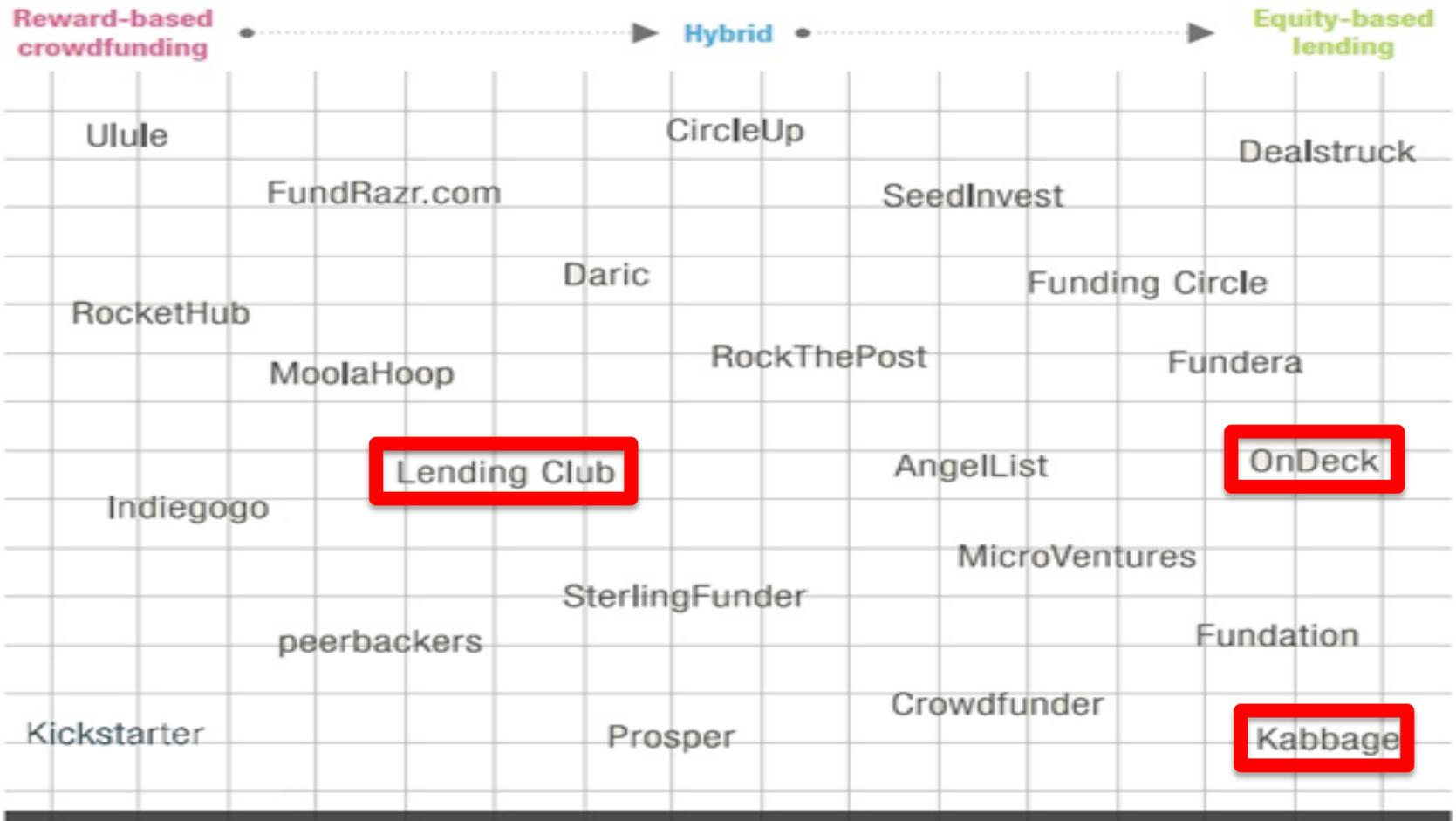
## SMALL BUSINESS LOAN APPROVAL RATES IN JANUARY 2014



Source: National Federation for Independent Businesses (NFIB). NFIB recognizes the following entities as the resources for data contained in their charts: *Small Business Lending Index*, Biz2Credit, January 2014; *2013CF The Crowdfunding Industry Report*, Massolution; "Retail Businesses That Try Crowdfunding Face Some Skepticism," *New York Times*, February 2014; "Can't Get a Bank Loan? The Alternatives Are Expanding," *New York Times*, March 2014

# Alternative Funding Providers

## THE ALTERNATIVE FUNDING LANDSCAPE





- IPO on 12/16/15 raised \$200M
- Provides SMBs working capital/loans
- [March 6, 2014](#)... *OnDeck Raises \$77M From Tiger Global To Loan SMBs Working Capital*
  - This brings a total of \$180 million in equity and over \$300 million in debt financing, led by Goldman, Deutsche and Key Bank.
- Average loan size is \$40K to \$250K
- Short-term loans (3-24 months)
- Borrowers are acquired through many channels – direct acquisition (direct mail, TV, radio, online), brokers and strategic partners.
- Member, ProfitStars Lending Network
  - [May 6, 2014](#)... *BBVA Compass Teams with OnDeck to Bolster Bank's Small Business Offerings*
  - [May 8, 2014](#)... *Why BBVA Compass Is Sending Customers to an Online Rival*

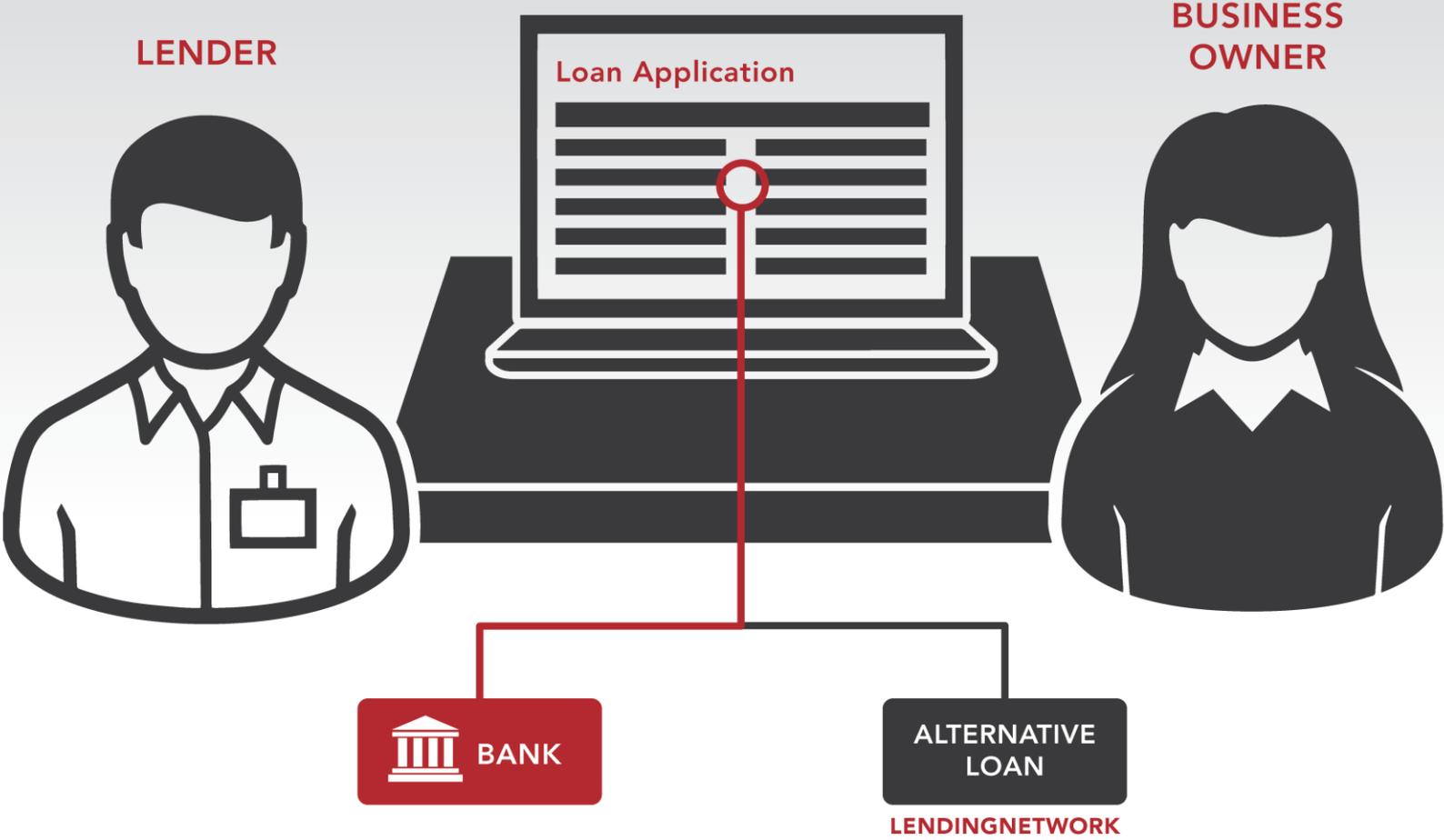


- Offers merchants working capital
- Loans range from \$500 to \$100K
- 6 month terms
- Fees are 1% - 13.5% of loan amount the first 2 months and 1% for each of the remaining 4 months
- [December 5, 2013](#)...*Kabbage Adds Square Transactional Data to its Credit Decisioning Process*
- [April 9, 2014](#)...*Kabbage Raises \$270 Million Credit Line as Online Business Lending Grows*

# Offensive Strategies for Banks

- Allow businesses to get pre-approved online easily with multiple options.
- Promote a wide variety of financing solutions that can be found through the bank even if the bank turns down loan.
- Leverage creative alternative programs which cater to small business borrowing needs.

# Harness the Alternative Lender Market?



# Mobile Freaks

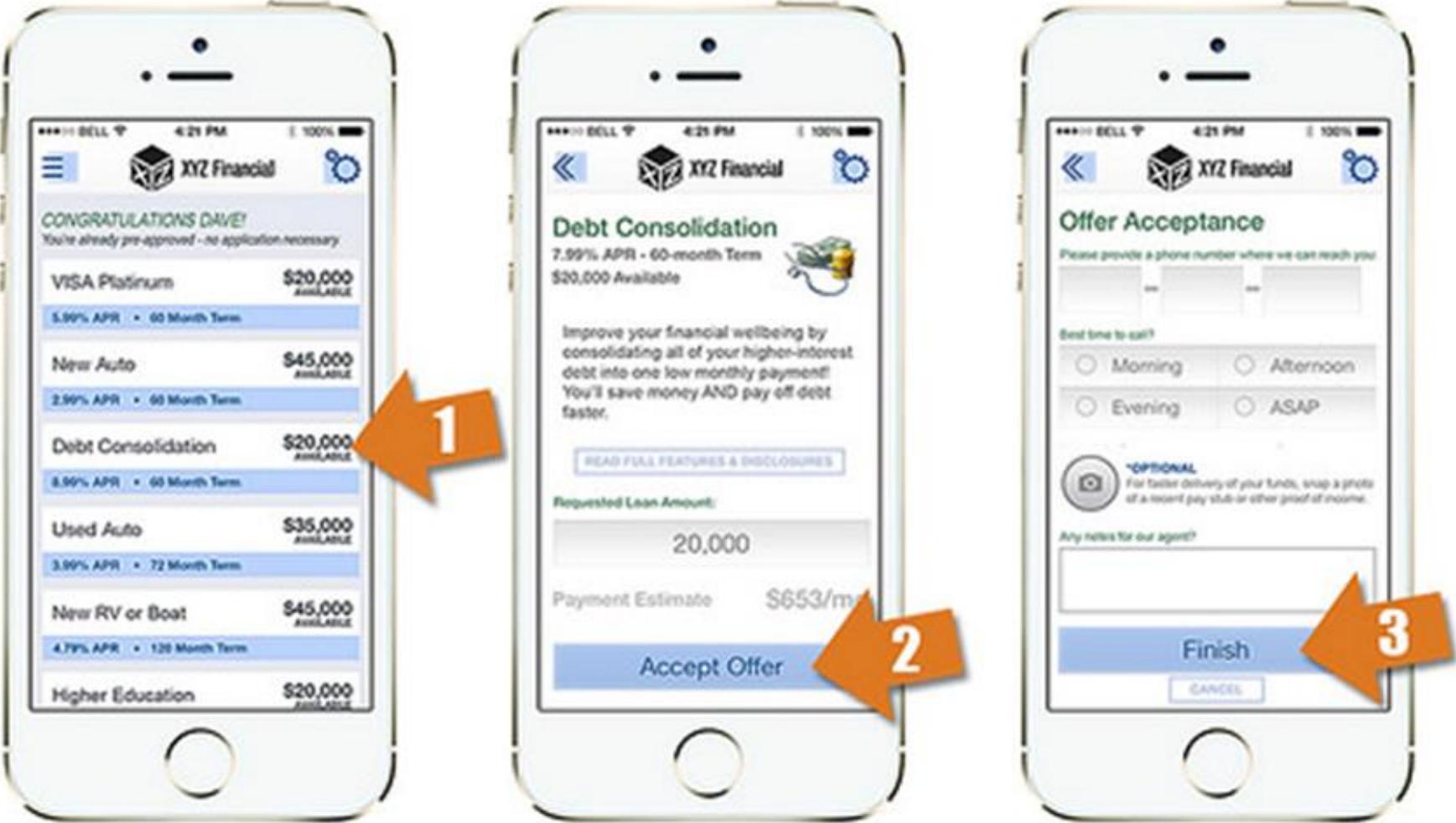


# Activity Based Marketing

Marketing within the context of an activity being performed by a customer or prospect.



# Perpetual Loan Approval

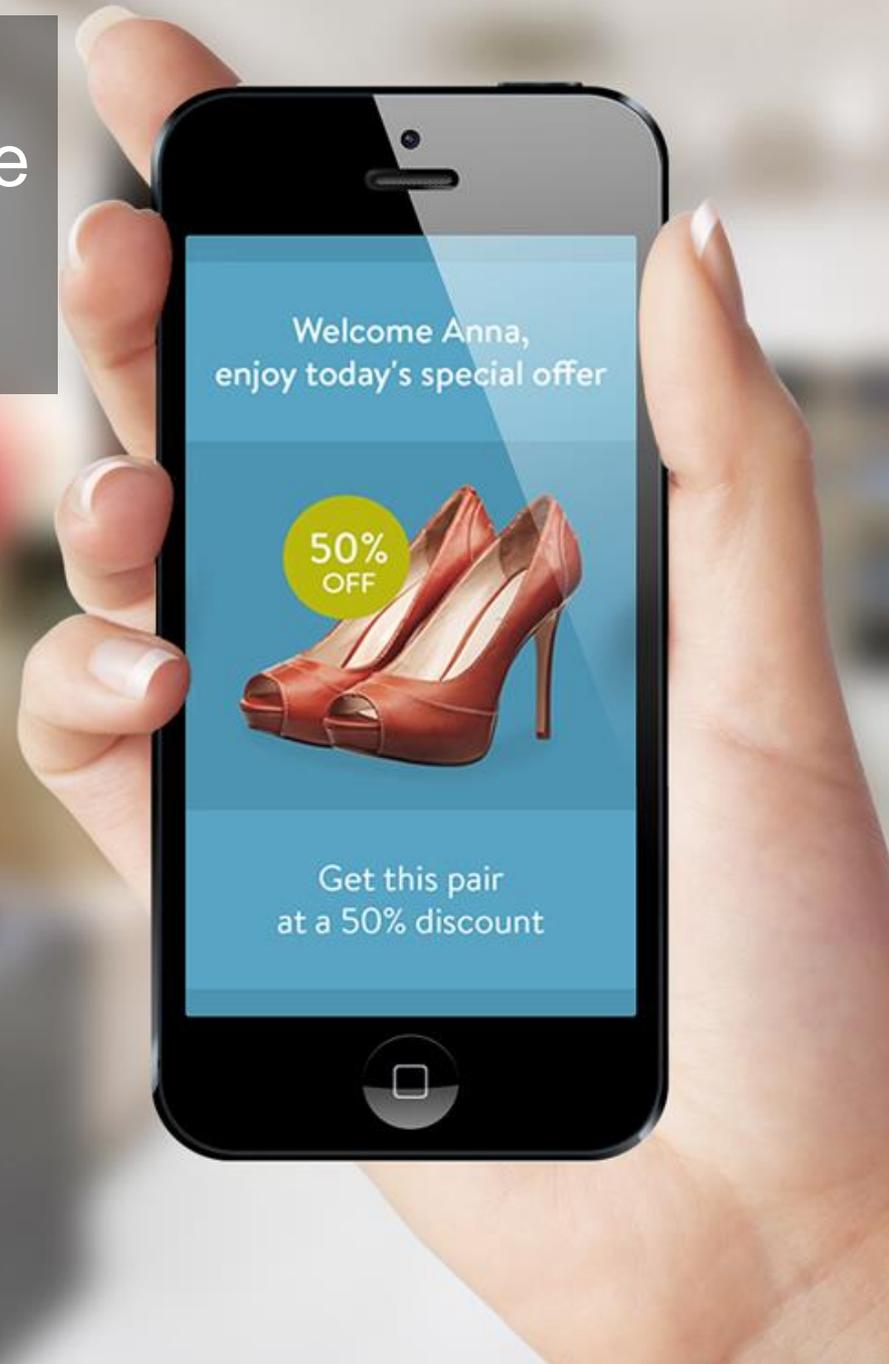




# Bank<sup>®</sup>

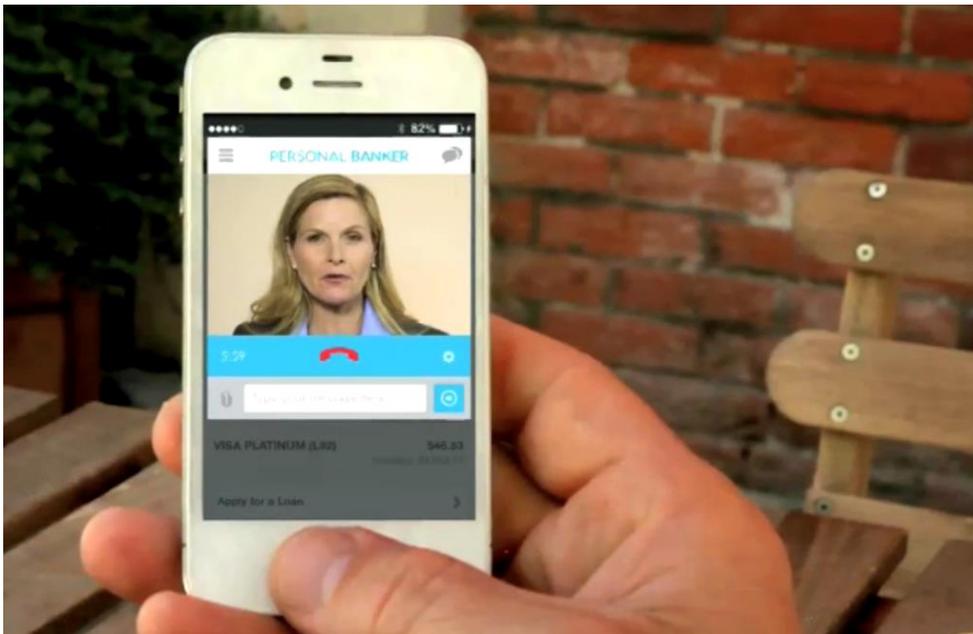


Beacons will transform the in-store shopping experience and shake up the mobile payment tech wars.



# lingto

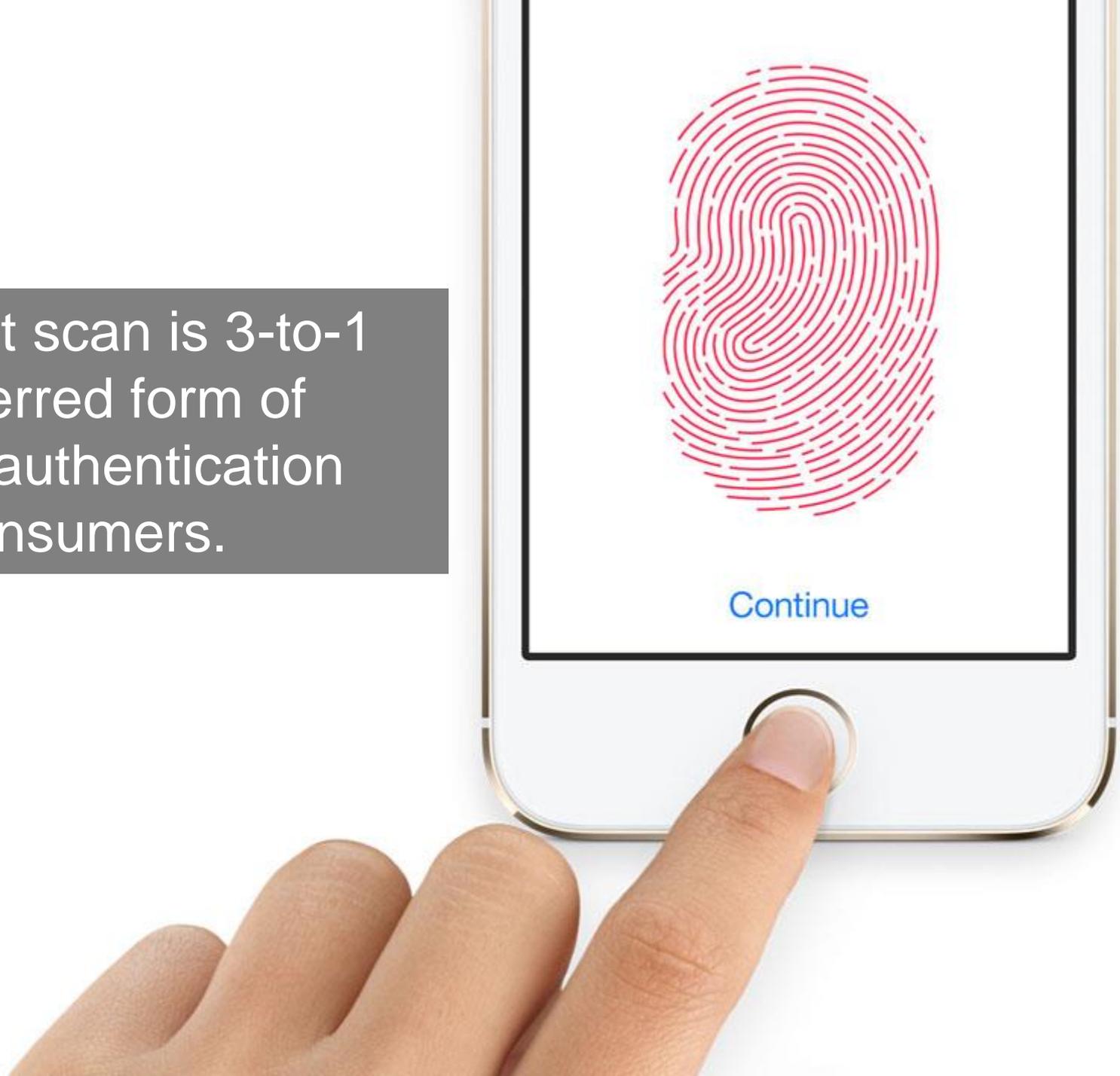
personal banker



# Biometric Freaks

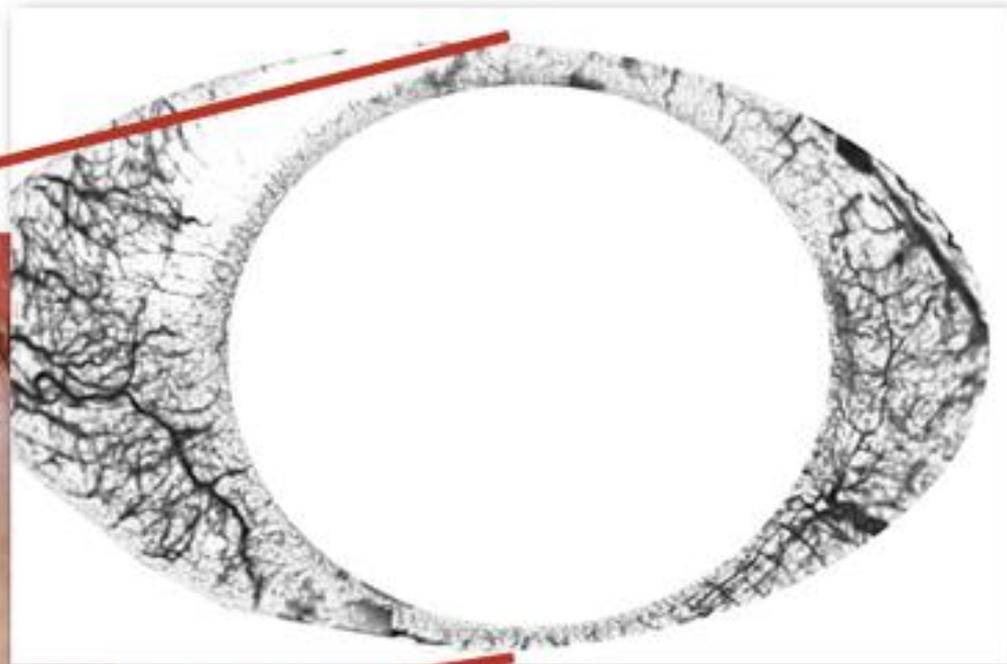
**Biometrics are  
boosting perception  
of mobile security.**

Fingerprint scan is 3-to-1 most preferred form of biometric authentication among consumers.



# Sign In With A Sarcastic Gesture?

Eye✓ify



# Behavior Freaks

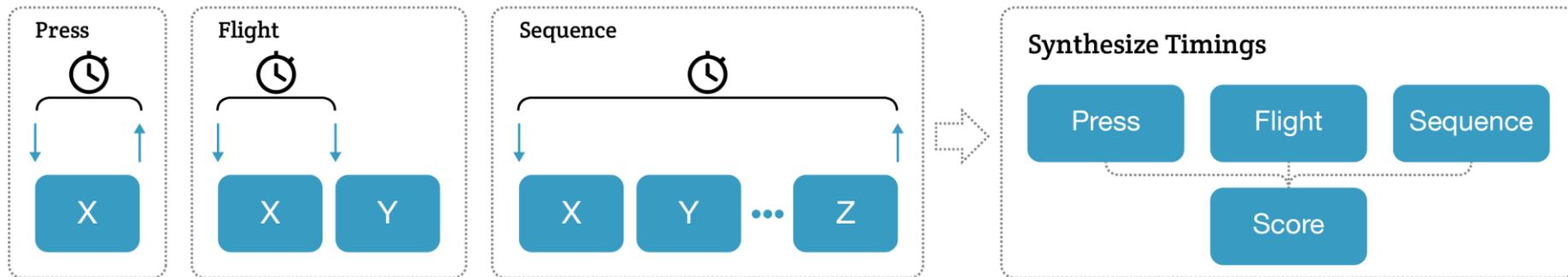


BehaviorSec

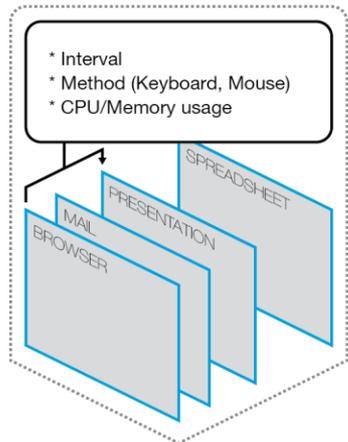
**BIOCATCH.**  
Behavioral Profiling



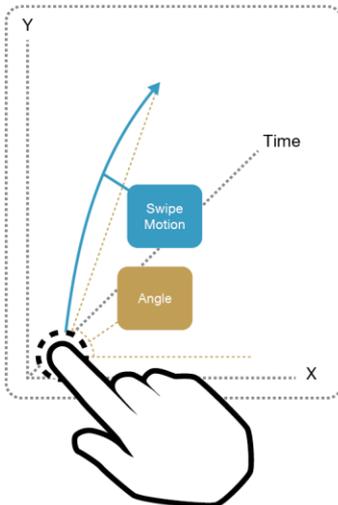
## Keyboard Capture Intervals



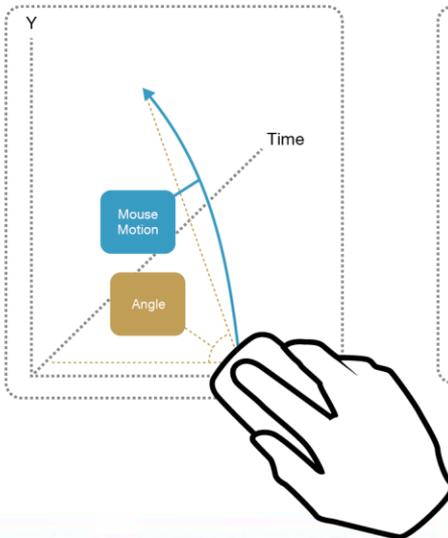
## Application Switching



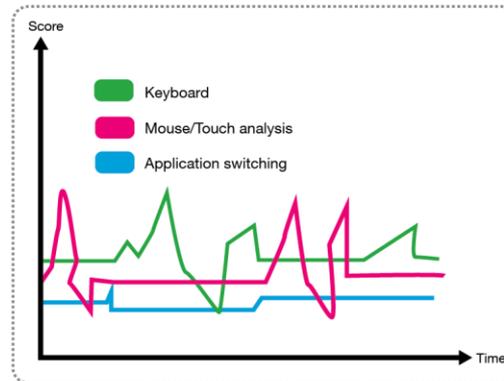
## Touch Motion



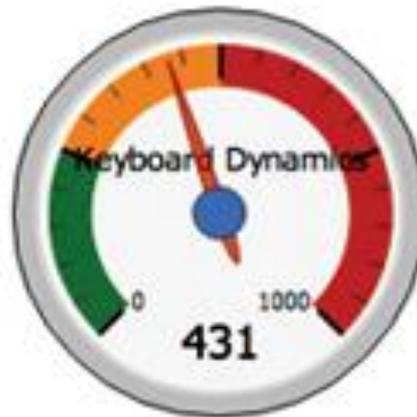
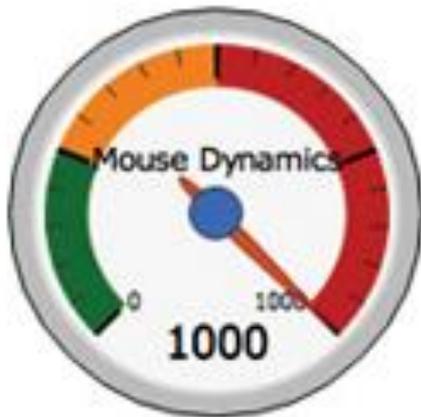
## Mouse Motion



## Continuous



## Authentication Activity Scores



# Wearable Freaks



PM

6:27

 **WATCH**





# Web Freaks

# .bank Domains Available: Get Ready to Grab!

- ICANN opens “.bank” domains for registration
  - Plus 2000 more: directory at <https://gtldresult.icann.org>
- fTLD Registry Services, LLC
  - ICANN granted fTLD the right to operate .BANK on September 25, 2014 and facilitate secure/vetted registration of .bank domains
  - .bank domains will help prevent redirects to fake bank websites, make it more difficult to spoof emails from a .bank website, and provide a higher level of encryption
  - <https://www.ftld.com/>

# What to Do When? .bank Domains

- May 2015 (Sunrise Period)
  - Banks that have registered trademarks should register with ICANN's Trademark Clearinghouse prior to May 1, 2015.
  - If you own a registered trademark, you may register the trademark with ICANN's Trademark Clearinghouse and apply for the .bank version of that domain name during the Sunrise Period before general availability.
- June 2015 (General Availability)
  - .bank domains will be available to the wider banking community on June 1, 2015, following the Sunrise Period.
- For more info: <http://www.aba.com/dotbank>

## Other Domains On the Horizon

- .loan
- .loans
- .credit
- .pay
- .financial
- .creditcard
- .mortgage
- .insurance
- .money
- .cash
- .finance
- .banque

**So, how should you  
get your freak on?**

## 5 Steps Forward: Banks Must...

1. **Master** their data, so that they can use it to...
2. **Serve** personalized, relevant ads for the bank's products and services across all channels consistently and **in context**.
3. **Expedite** customer's acquisition of bank's products and services when they choose (without data re-entry).
4. **Curate** "partners" who may use bank's ad engines to serve customers with relevant ads that can be one-clicked to acquire.
5. **Earn ad fee income** wearing a white hat.

# Lee Wetherington, AAP

**lwetherington@jackhenry.com**

**<http://discover.profitstars.com/leewetherington>**



@leewetherington



**<http://www.linkedin.com/in/leewetherington>**

