



# AT THE INTERSECTION REMOTE PAYMENTS

Consumers, Merchants, FIs and Technology Convergence

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 GLENBROOK

OCTOBER 2013

# TOPICS

Today

Consumers

Merchants

Financial Institutions

Age of Context



# OMNICHANNEL RETAIL

*\$10 TRILLION, 5% CAGR*

## ONLINE COMMERCE

*\$1 TRILLION  
14% CAGR*

# The Omnichannel Opportunity is Huge

Source: Economist Intelligence Unit, Morgan Stanley

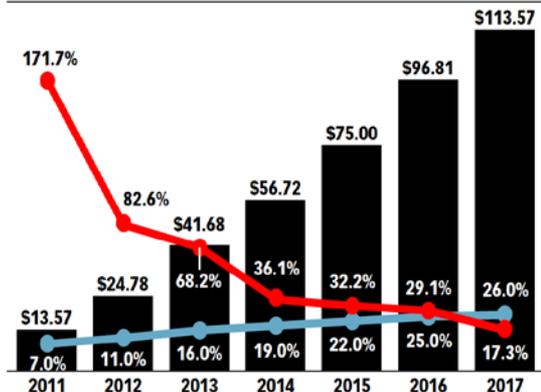
Note: Market sizes as of 2012. Compounded Annual Growth Rates from 2012 to 2015

# Remote Mobile Commerce in U.S. Market

## \$113B by 2017, 140M consumers participating

### US Retail Mcommerce Sales, 2011-2017

billions, % change and % of retail ecommerce sales



■ Retail mcommerce sales

■ % change ■ % of retail ecommerce sales

Note: includes products or services ordered using the internet via mobile devices, regardless of the method of payment or fulfillment; excludes travel and event ticket sales; includes sales on tablets

Source: eMarketer, Sep 2013

162464

www.eMarketer.com

### US Mobile Buyers, by Device, 2011-2017

	2011	2012	2013	2014	2015	2016	2017
<b>Mobile buyers (millions)</b>	34.0	57.0	79.5	98.9	115.0	129.0	140.8
—% of digital buyers	23.7%	38.2%	51.1%	61.1%	68.6%	74.1%	78.3%
<b>Buyers on smartphone (millions)</b>	26.2	41.3	52.3	63.5	74.0	83.2	91.0
—% of smartphone users	29.0%	35.0%	38.5%	41.0%	43.0%	44.5%	45.5%
—% of mobile buyers	77.2%	72.3%	65.8%	64.2%	64.4%	64.5%	64.6%
—% of digital buyers	18.3%	27.6%	33.6%	39.2%	44.1%	47.8%	50.6%
<b>Buyers on tablet (millions)</b>	15.4	49.8	71.1	83.7	93.7	104.4	109.7
—% of tablet users	50.0%	58.0%	63.0%	68.0%	72.0%	77.0%	78.0%
—% of mobile buyers	45.4%	87.3%	89.4%	84.7%	81.5%	80.9%	77.9%
—% of digital buyers	10.8%	33.3%	45.7%	51.8%	55.9%	60.0%	61.0%

Note: ages 14+; mobile device users who have used their mobile device to make at least one purchase via web browser or mobile app during the calendar year

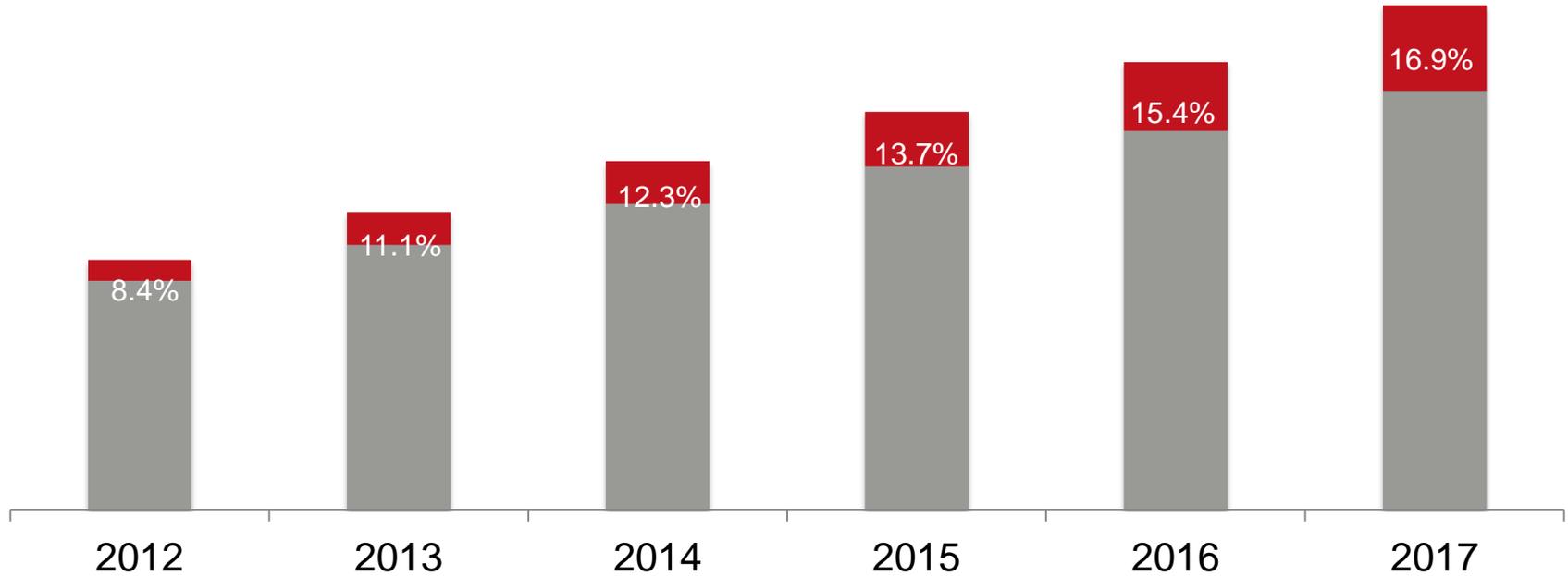
Source: eMarketer, Sep 2013

162477

www.eMarketer.com

# Mobile Commerce Growth

Mobile Commerce as % of Global eCommerce, 2012-2017



Source: Glenbrook Analysis, May 2013

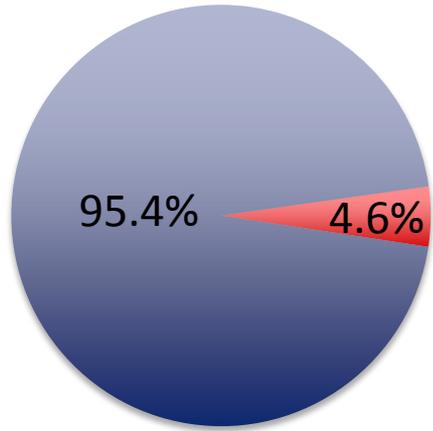
# Adyen Mobile Payments Index

Breakdown by market segment, by device...

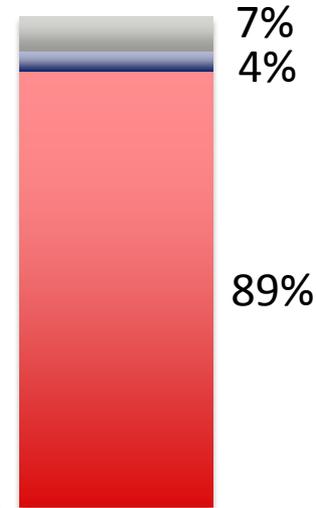


# Remote Mobile Commerce is Tablet Driven

## Mobile Share of Shopping Revenue



## Mobile Shopping Devices



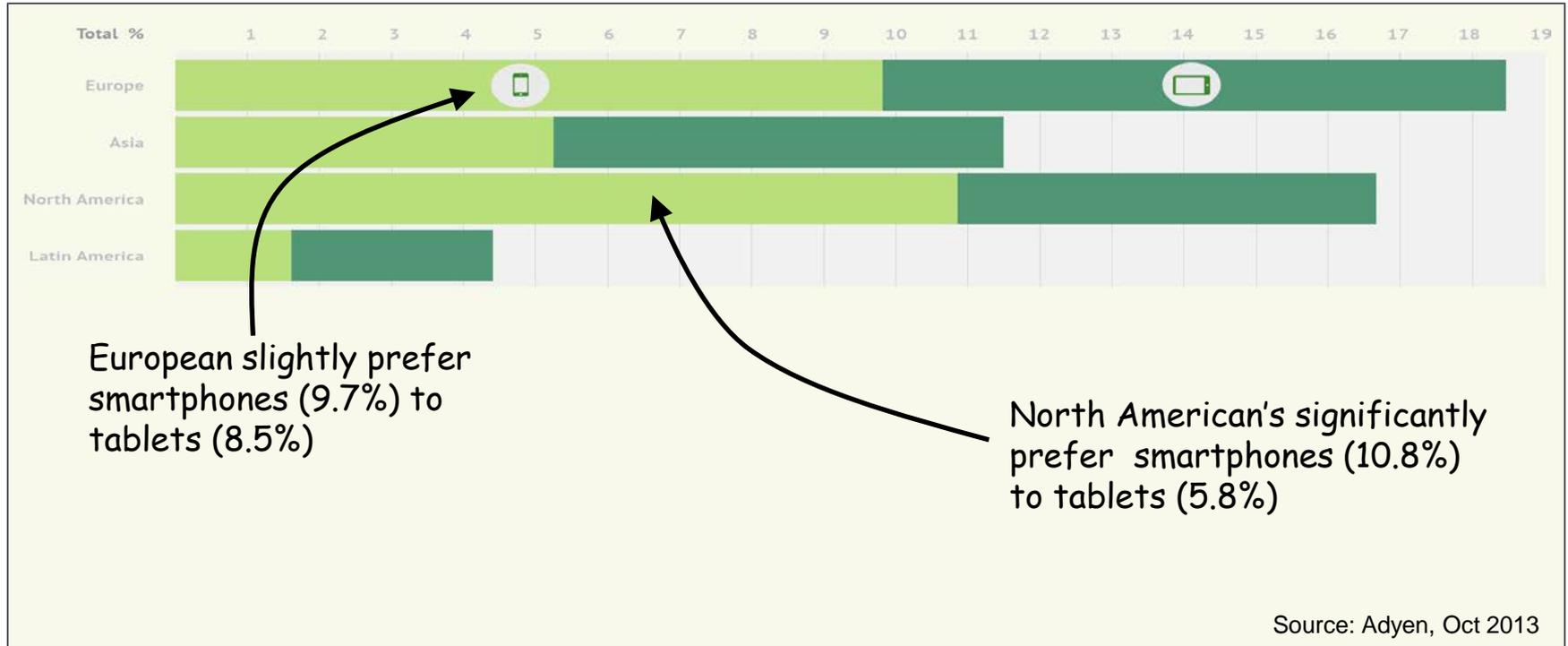
■ Mobile ■ Desktop/Laptop

■ iPad ■ iPhone ■ Other Mobile

Source: RichRelevance Shopping Insights 2012 Q1 Mobile Study, Apr 2012

# Adyen Mobile Payments Index

## Breakdown by region, by device



**MOBILE PAYMENTS AT POS**

# PROXIMITY COMMUNICATIONS OPTIONS

BARCODE



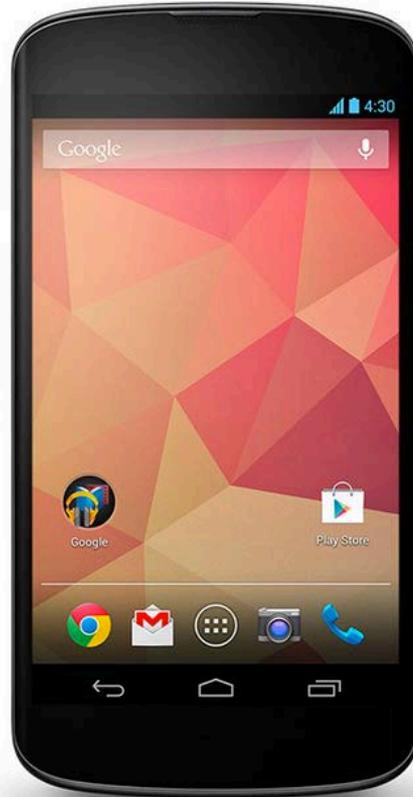
QR CODE



NFC



BLUETOOTH



RFID



AUDIO



WIFI



GPS

# Mobile POS Wallets – Two Approaches

## 1 NFC/Secure Element

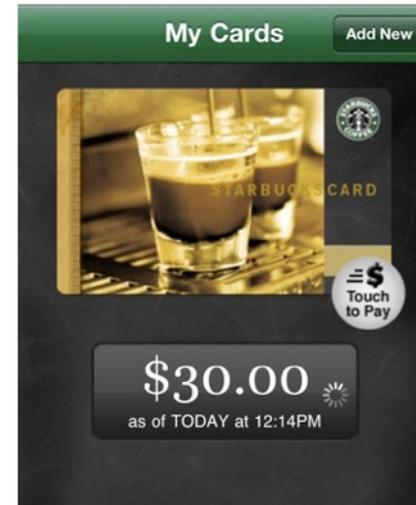
Payment Data  
on the phone in an SE  
(Card Present Rules)



## 2

## In the Cloud

Payment Data  
in the Cloud  
(Card Not Present Rules)



# KEY PLAYERS – US MOBILE POS MARKET

NFC/SE



ISIS



CLOUD



Square Wallet

MANY OTHERS

# Tech and EMV-driven Shift to CNP

## FICO Falcon analysis

	2011 - 2012
Credit CNP incident rate	+ 25%
Credit Counterfeit card incident rate	+ 14%
Credit CNP as percentage of all credit card fraud	47%
Credit Ratio of fraud as proportion of all transactions	Flat
Credit Average loss per compromise	- 10%
Debit Card fraud incident rate	+ <1%
Debit Average loss per compromise	- 3%

**WHAT DO CONSUMERS WANT?**

# WHAT DO CONSUMERS WANT?



CONVENIENCE

REWARDS

UTILITY

LOWER  
FEES

SECURITY AND PRIVACY ARE TABLE STAKES

# CARDS AREN'T BROKEN

WELL UNDERSTOOD, WIDELY ACCEPTED

CONVENIENT IN MOST ENVIRONMENTS

VERY LOW “PAIN” FOR CONSUMER USAGE

BUT, NOT PERFECT...

# A POST-CARD WORLD IS EMERGING

AMAZON 1-CLICK – STORE CARD ON FILE

MANY OTHER CARD ON FILE EXAMPLES

PAYPAL – EMAIL + PASSWORD

NEW EXAMPLES EMERGING

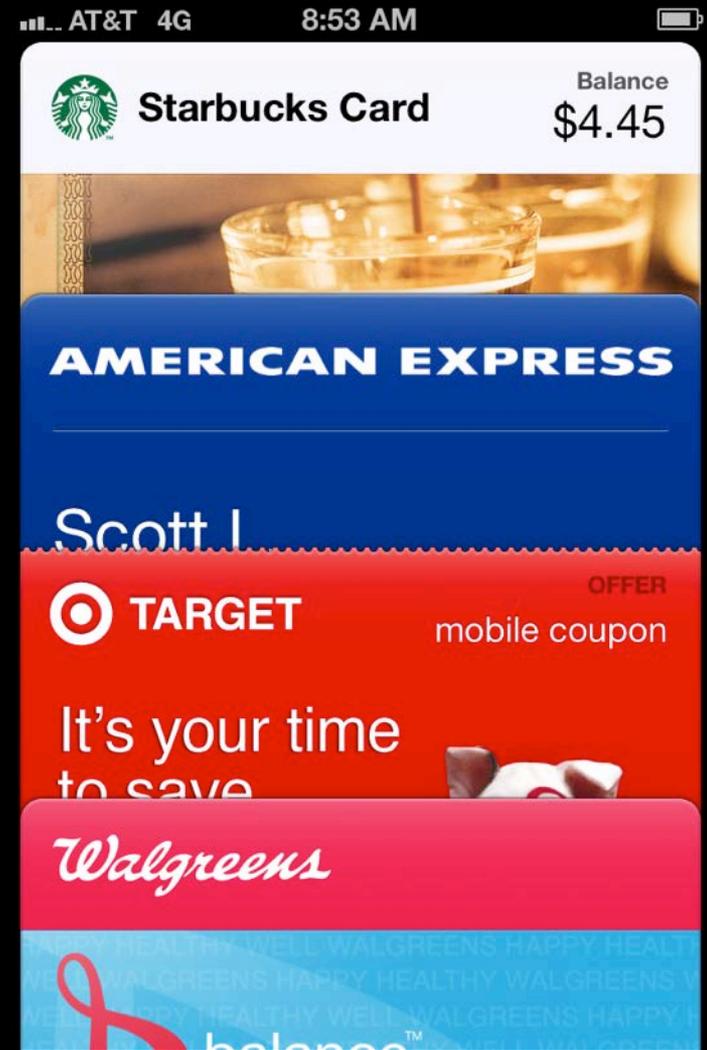
# APPLE EASYPAY

SELF CHECKOUT



# APPLE PASSBOOK

FAST CHECKOUT



# CHIPOTLE

REMOTE ORDER AND PAY  
SKIP LINE, GRAB FOOD, GO  
PAYMENT GOES AWAY

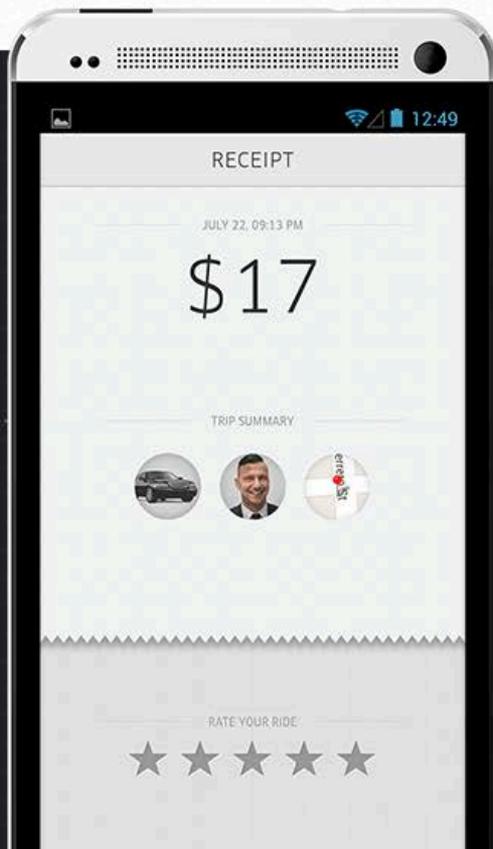


# THE UBER APP

Request, ride, and pay via your mobile phone

## CASHLESS & CONVENIENT

You don't need cash when you ride with Uber. Once you arrive at your destination, your fare is automatically charged to your credit card on file – no need to tip. We'll also e-mail you a receipt.



# Security a Big Concern

## But Convenience, Information About Money Attract

### SECURITY, PRIVACY, CONVENIENCE AND VALUE ARE KEY DRIVERS

Among current non-users:



Worry about security



Worry about privacy



Prefer convenience of non-mobile payments

### VALUE-ADDED TOOLS ALSO A DRAW

Wants among current users:



Receipt-tracking capabilities



Better financial management tools



Use as proof of insurance



Use as proof of ID

Source: Accenture, Mobile Payments Survey 2013

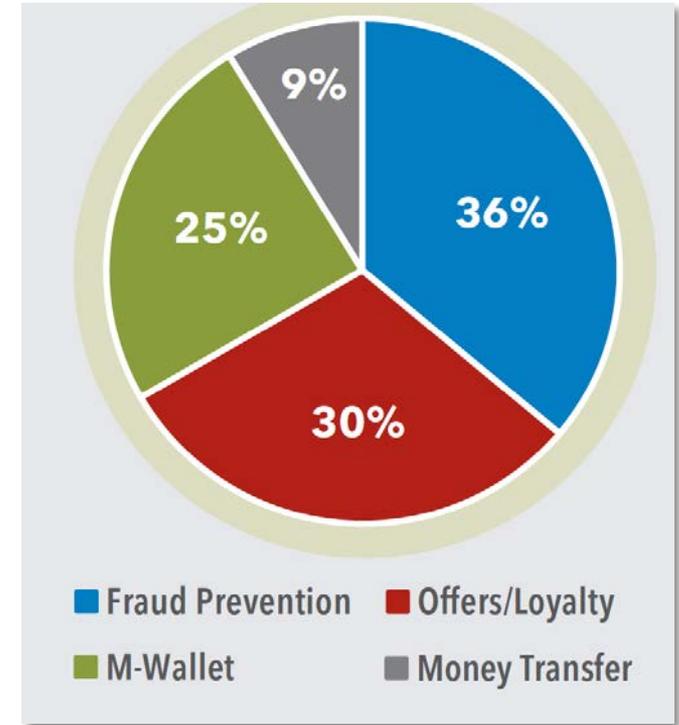
# Consumer Payment Actions

Action	%	
Purchased with credit card on file at online retailer	48%	↑
Opened a PayPal account	34%	↑
Purchased with debit card on file at online retailer	32%	↑
Registered credit / debit card with online retailer	28% / 21%	↑
Used a discount from issuer's online statement	13%	↓
Merchant used a mobile phone or tablet to take payment	7%	–
Consumer made a retail payment with mobile device	6%	–

Source: TSYSY 2013 Consumer Payment Choice Study

# Consumers Want 2-Way Dialog About Money

- Consumers are more willing to participate in fraud prevention than they are eager to take advantage of incentives programs
  - Transaction alerts via SMS
  - Ability to turn off card accounts
- Mobile wallet interest is a function of familiarity



Source: TSYSY 2013 Consumer Payment Choice Study

# WHAT DO MERCHANTS WANT?

**SIMPLE: JUST GET PAID!**



**INCREASE  
SALES**



**LOWER  
COSTS**

INTERCHANGE FEES  
PCI-DSS COSTS  
POS CHANGES

**AND NO SHARING OF MERCHANT/CONSUMER DATA!**

# MERCHANT APPS

## MOBILE-ENABLED PREPAID CARD

2D BARCODE FROM PHONE IS READ BY  
SCANNER AT POS

ALSO IN APPLE PASSBOOK

## USING SQUARE FOR PROCESSING

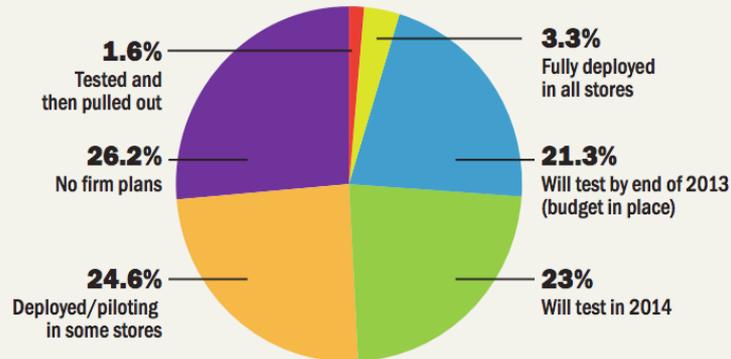


OVER 10% OF POS TRANSACTIONS AT STARBUCKS ARE MADE WITH MOBILE  
PHONES

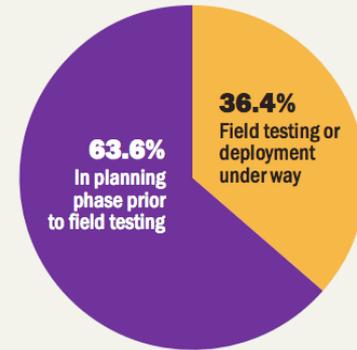
# Merchant Mobile Deployment is Underway

While 27% of retailers see no need, the rest are active

What is the status of mobile POS in your stores today?



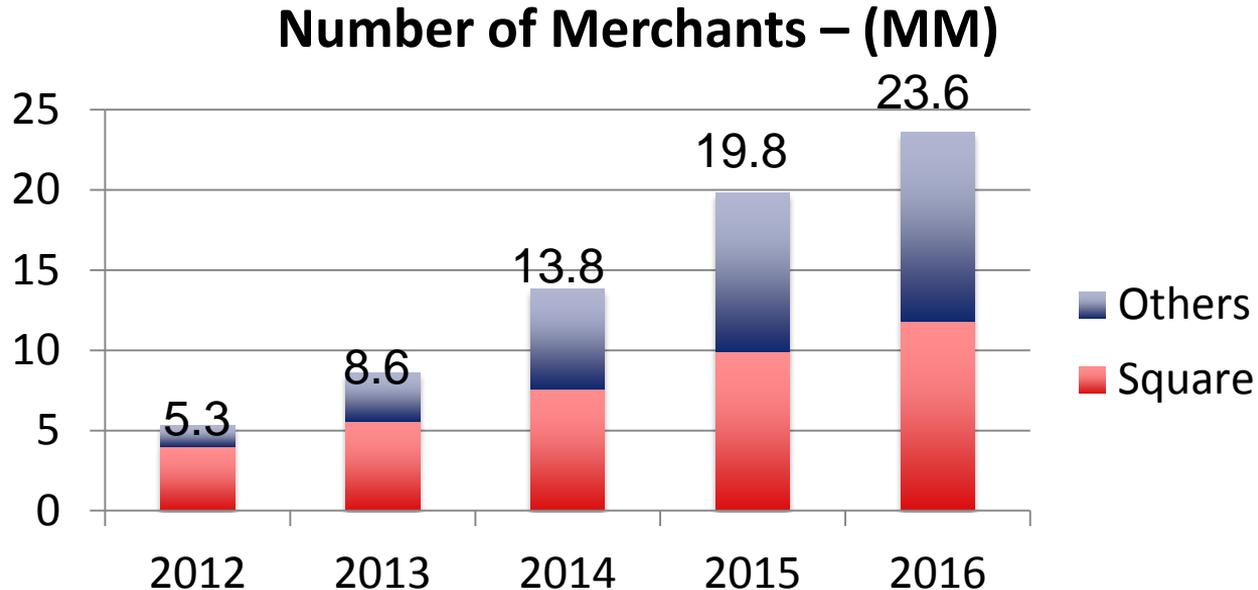
What is the status of your company's mobile POS project?\*



\* Note: Retailers that do not have firm plans are not included in responses for Figures 2,3 and 4.

# Mobile POS Merchant Growth

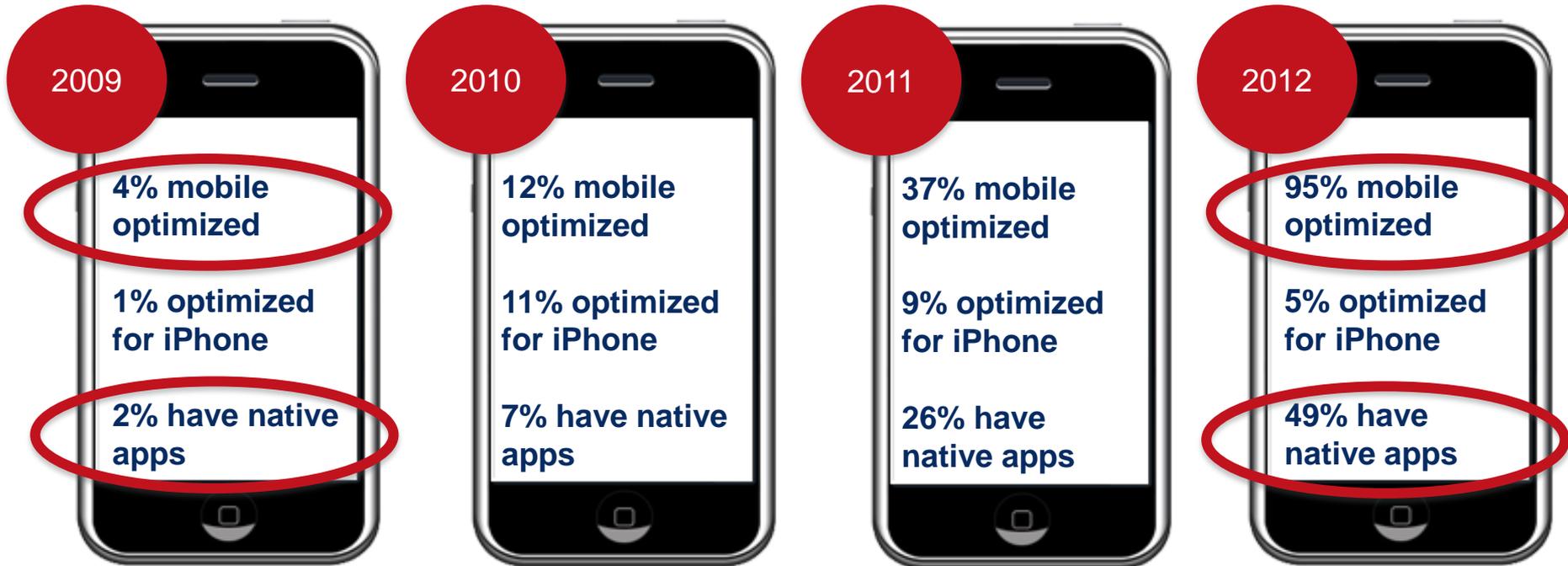
The market has seen rapid merchant enrollment



Source: Glenbrook estimates

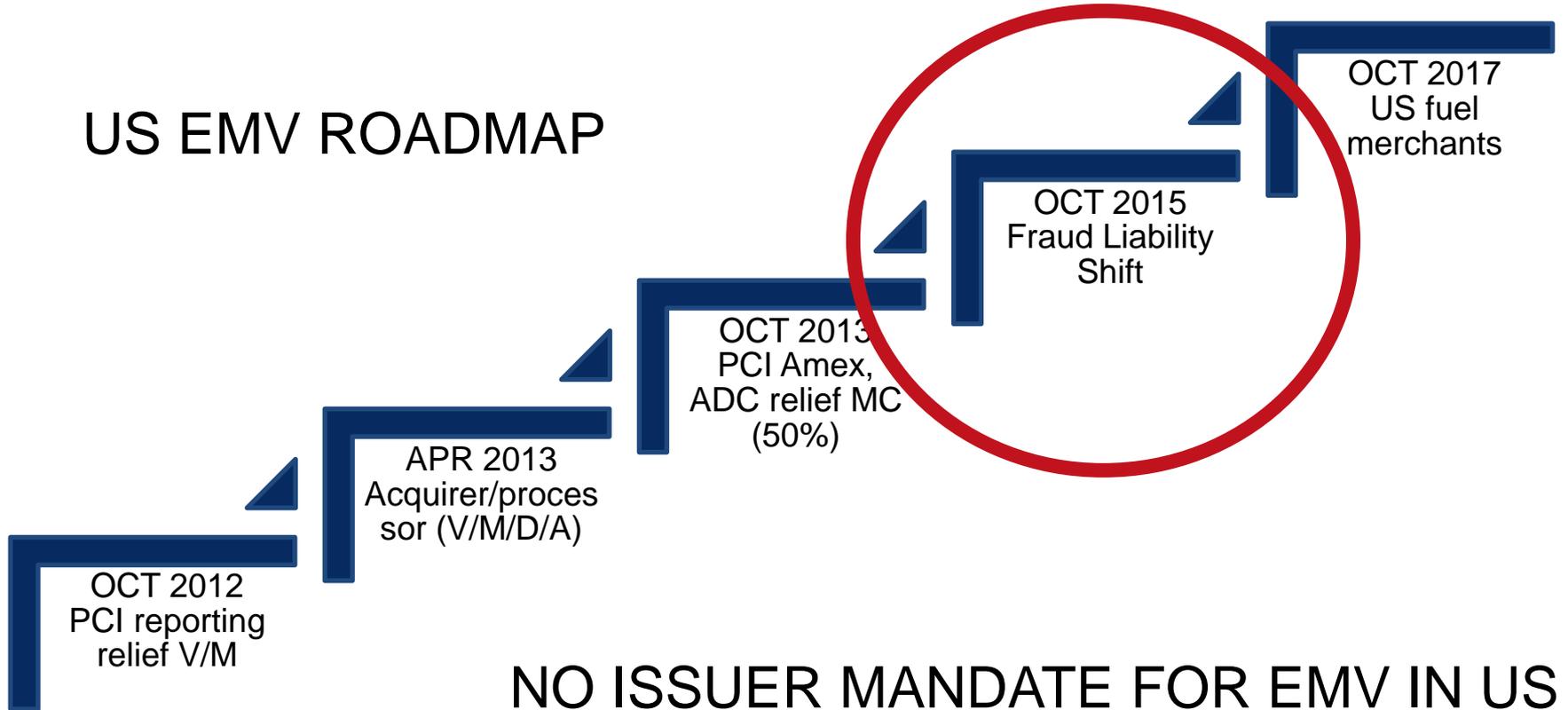
# State of Remote Mobile Commerce 2013

eRetailers are becoming more sensitive to mobile retailing...



# POS MOVING TO EMV

## US EMV ROADMAP



NO ISSUER MANDATE FOR EMV IN US

# MCX

MERCHANT  
CUSTOMER  
EXCHANGE



BANANA REPUBLIC



BED BATH &  
BEYOND



buy buy  
BABY



Christmas Tree Shops



CVS/pharmacy



Dillard's



FACE VALUES



HOBBY  
LOBBY

HyVee

KOHL'S



MAGGIANO'S  
"LITTLE ITALY"

meijer

Michaels

OLD NAVY



PACIFIC  
CONVENIENCE & FUELS



Publix



sears



Walmart

Wawa

# FINANCIAL INSTITUTIONS, THE COMING DEMOCRATIZATION OF ELECTRONIC PAYMENTS



# DEMOCRATIZATION OF ELECTRONIC PAYMENTS

ANYONE  
CAN PAY



ANYONE  
CAN ACCEPT

# DEMOCRATIZATION OF ELECTRONIC PAYMENTS

ANYONE  
CAN PAY



ANYONE  
CAN ACCEPT

MARKETPLACES

CONNECT BUYERS WITH SELLERS

REQUIRES A NEW APPROACH TO PAYMENTS

# DEMOCRATIZATION OF ELECTRONIC PAYMENTS

ANYONE  
CAN PAY

NEEDS ACCESS TO  
LOAD FUNDS,  
INITIATE PAYMENTS



ANYONE  
CAN ACCEPT

NEEDS ACCESS TO  
RECEIVE AND  
WITHDRAW FUNDS

RISK MANAGEMENT TO ENSURE  
LEGITIMACY

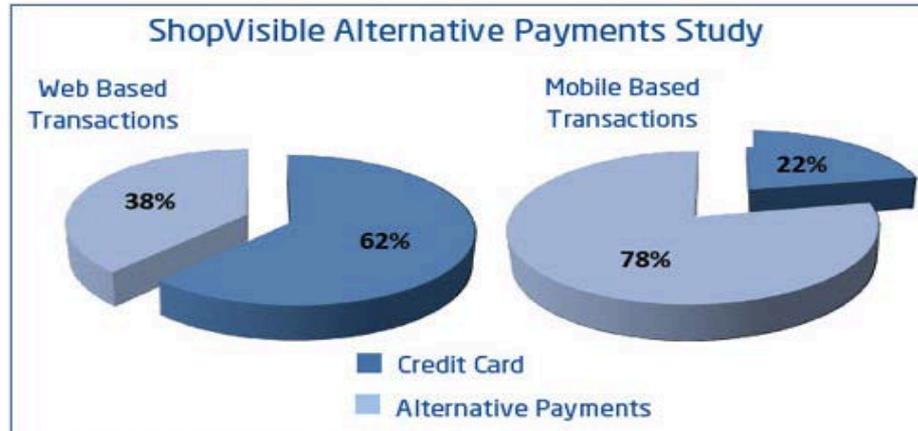
# IMPLICATIONS

MAJOR MERCHANTS NOT INTERESTED IN MULTI-MERCHANT PAYMENT WALLETS, ETC.

CONSUMERS WANT CONVENIENCE

TO PLAY, FINANCIAL INSTITUTIONS MUST SUPPORT MERCHANT PAYMENT INTEGRATION INTO THEIR MOBILE APPS

# Trend Towards Wallets Already Clear



## Web Based Transactions

- 62% Credit Card
- 17% PayPal
- 13% Amazon Payments
- 8% Google Checkout

## Mobile Based Transactions

- 46% PayPal
- 32% Amazon Payments
- 22% Credit Card

# REDEFINING “TOP OF WALLET”

FI, NOT PAYPAL, AS SOURCE : DESTINATION OF MOVING MONEY

“BANK-GRADE” AUTHENTICATION

SECURE LINKAGE TO MERCHANT AND SERVICE PROVIDER  
WALLETS VIA ONLINE BANKING

LEVERAGE EMV INFRASTRUTURE BEYOND COUNTERFEIT

# THE AGE OF CONTEXT

## Mobile

*What is known about my device?*

*How is my device configured?*

*Am I using my device or is someone else?*

## Geolocation

*What building am I in?*

*Which direction am I going in?*

## Data

*What have I done in the past?*

*How does that fit with what I'm doing now?*

## Sensors

*Where am I standing?*

*What am I looking at?*

## Social

*Who am I connected to?*

*What is their reputation?*

# THE AGE OF CONTEXT

Mobile



What is my device?

How is it configured?

Am I using it or is someone else?

Geolocation



Which direction am I in?

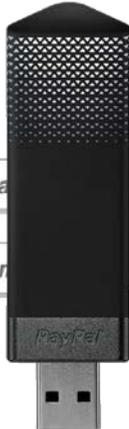
Data



What have I done in the past?

How does that fit with what I'm doing now?

Sensors



Where am I going?

What am I doing?

Social



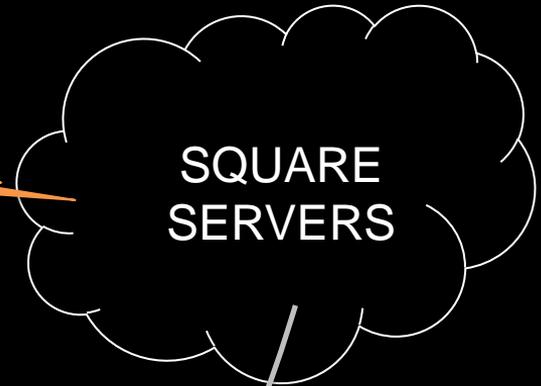
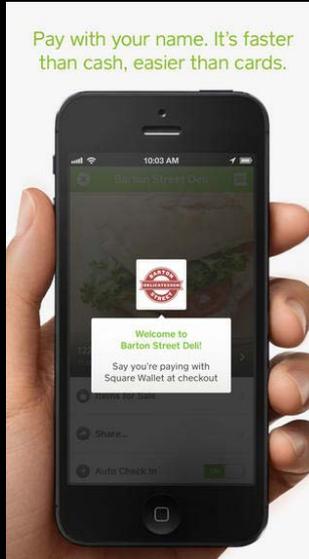
Who am I connected to?

What is their reputation?

# SQUARE

SQUARE WALLET ON  
CONSUMER'S PHONE

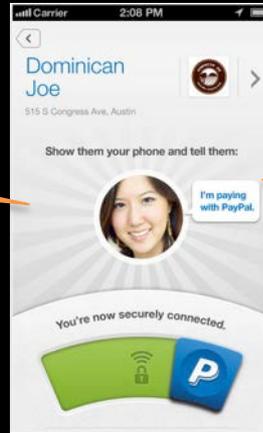
MERCHANT  
TABLET  
POS



SQUARE  
SERVERS

# PAYPAL BEACON

PAYPAL APP ON  
CONSUMER'S PHONE



ANDROID + iOS

BLUETOOTH LE



MERCHANT  
TABLET  
POS

PAYPAL  
SERVERS

# Touch ID.

## Your fingerprint. Your iPhone.



You check your iPhone dozens and dozens of times a day, probably more. Entering a passcode each time just slows you down. But you do it because making sure no one else has access to your iPhone is important. With iPhone 5s, getting into your phone is faster, easier, and even a little futuristic. Introducing Touch ID — a new fingerprint identity sensor.

Put your finger on the Home button, and just like that your iPhone unlocks. It's a convenient and highly secure way to access your phone. Your fingerprint can also approve purchases from iTunes Store, the App Store, and the iBooks Store, so you don't have to enter your password. And Touch ID is capable of 360-degree readability. Which means no matter what its orientation — portrait, landscape, or anything in between — your iPhone reads your fingerprint and knows who you are. And because Touch ID lets you enroll multiple fingerprints, it knows the people you trust, too.



[Watch the Touch ID video](#) ©

# Between Today and Tomorrow...

## A Clutter of Approaches



# Standard, Shared Authentication

Federated Approaches to Attributes and Identity



**INDUSTRY COOPERATION**

# Security Education?



# 2014 THEMES TO WATCH

Mobile technologies

Wearable computing

Marketplace payments

Embedding payments

Merchant apps

Big data for merchants

Social identity

Location awareness

Stronger authentication

Biometrics

Merchant initiatives

Tokenization

Regulatory climate

New disruptors

# 2014 THEMES TO WATCH

Mobile technologies  
Wearable computing  
Marketplace payments  
Embedding payments  
Merchant apps  
Big data for merchants  
Social identity

Location awareness  
Stronger authentication  
Biometrics  
Merchant initiatives  
Tokenization  
Regulatory climate  
New disruptors

# THANK YOU!



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