

Future-Proofing Payments

Talk About Payments Webinar

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The views expressed in this presentation are those of the presenters and do not necessarily reflect the views of the Federal Reserve Bank of Atlanta or the Federal Reserve System.

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Retail Payment Risk Forum's Mission

Detect and identify, assist and encourage...

- Identify: What?
 - Risk, in existing and emerging retail payments
- Help how? Contribute to mitigating payment risks by:
 - Researching products, services, and systems
 - Collaborating with industry
 - Convening
- *Take On Payments* weekly blog
 - takeonpayments.frbatlanta.org/



Agenda

- A look back at debit before looking ahead
- Mobile phones as disruptors
- Is mobile the future of payments?
- Questions & discussion

Is Predicting the Future for Fools?

By Karen Pulfer Focht

Zachary Jones, 9, a fourth-grade student at Idlewild Elementary School, wore a hard hat to class Monday in case the earthquake predicted by Iben Browning rumbled to life. Zachary also brought a spare.



Some choose to steer clear, but Mother Earth is unmoved

By Barbara A. Burch
and Tom Charlier
The Commercial Appeal

Downtown Memphis didn't fall into the Mississippi River Monday, but a lot of people steered clear of it, just in case.

Parking was plentiful as some workers stayed home, and local schools reported increased absenteeism as the midpoint of a five-day earthquake alert came and went without incident.

As of Monday night, there had been no quake, and the Center for Earthquake Research and In-

formation reported no seismic activity in the New Madrid fault zone.

Despite that, many people took to heart Dr. Iben Browning's prediction that tidal forces were likely to cause a major earthquake in the New Madrid zone, and stayed home.

There were noticeably fewer cars in downtown parking garages and lots.

Please see **ABSENT**, Page A7

■ Additional earthquake coverage **A5, A7, B1**

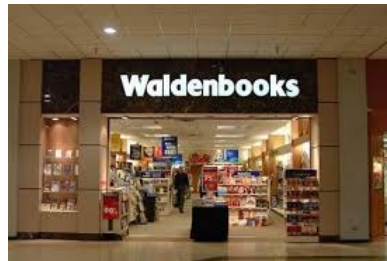
QUAKE WATCH

Although it has created a regional frenzy, Iben Browning's projection that there is a 50-50 chance for an earthquake in the New Madrid fault zone in early December has been rejected as scientifically unfounded by most geologists, including the National Earthquake Prediction Evaluation Council.

Technology Makes Predictions Even Tougher!

My grandmother could have never imagined today's book experience.

Mid-1980s



Early 1990s



July 1995



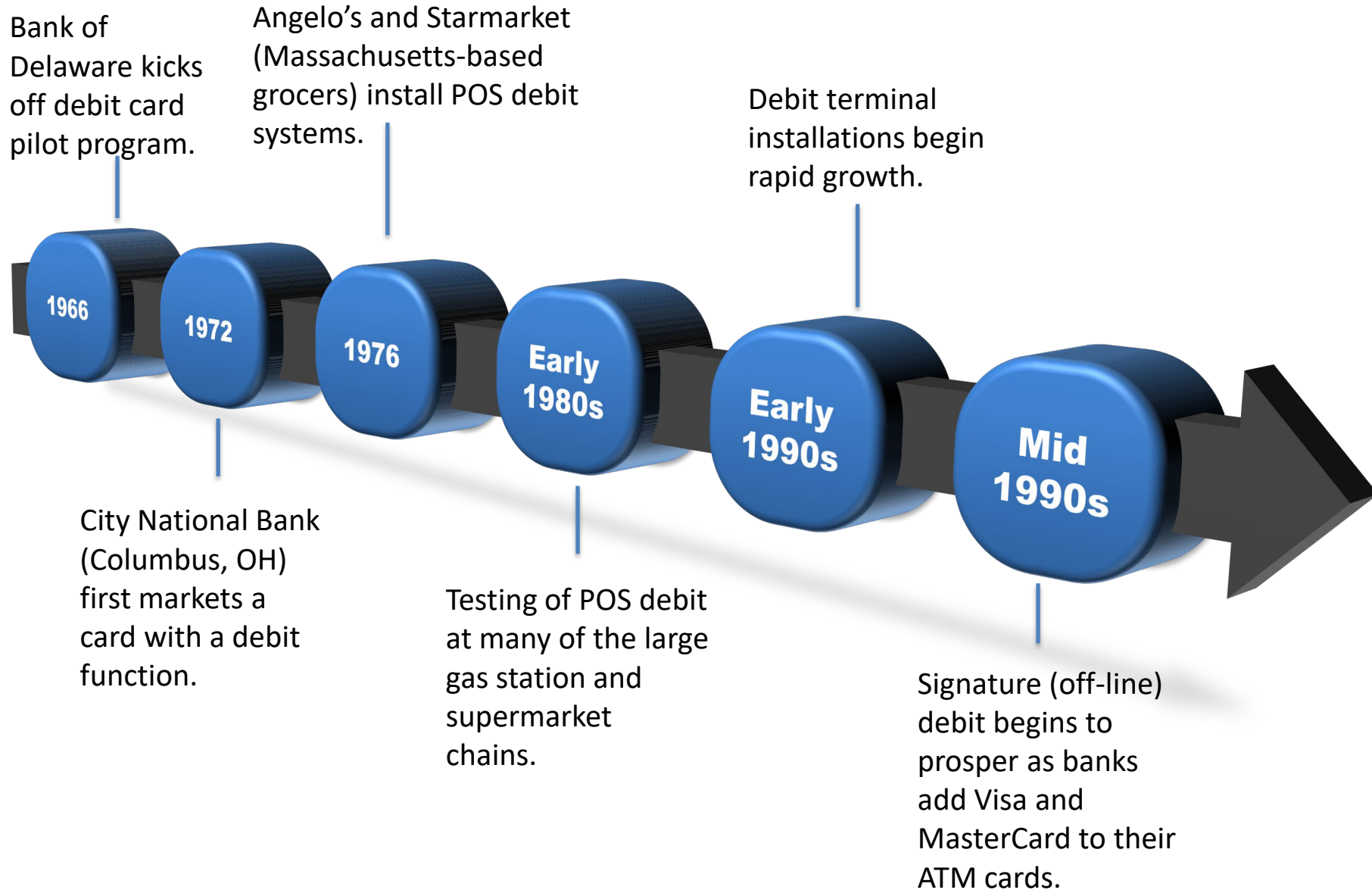
November 2007



Today

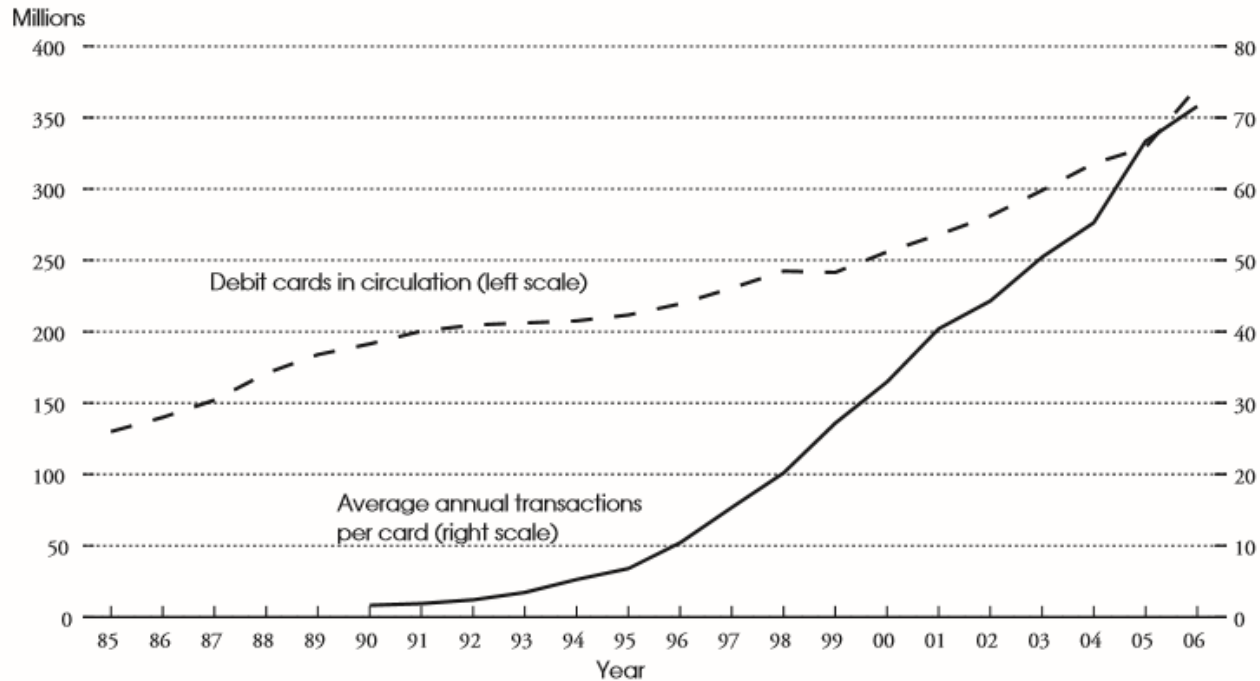


Timeline of Debit: Pre-2000



Debit's Value Proposition: Issuance

Chart 12: *Cards with a Debit Function*

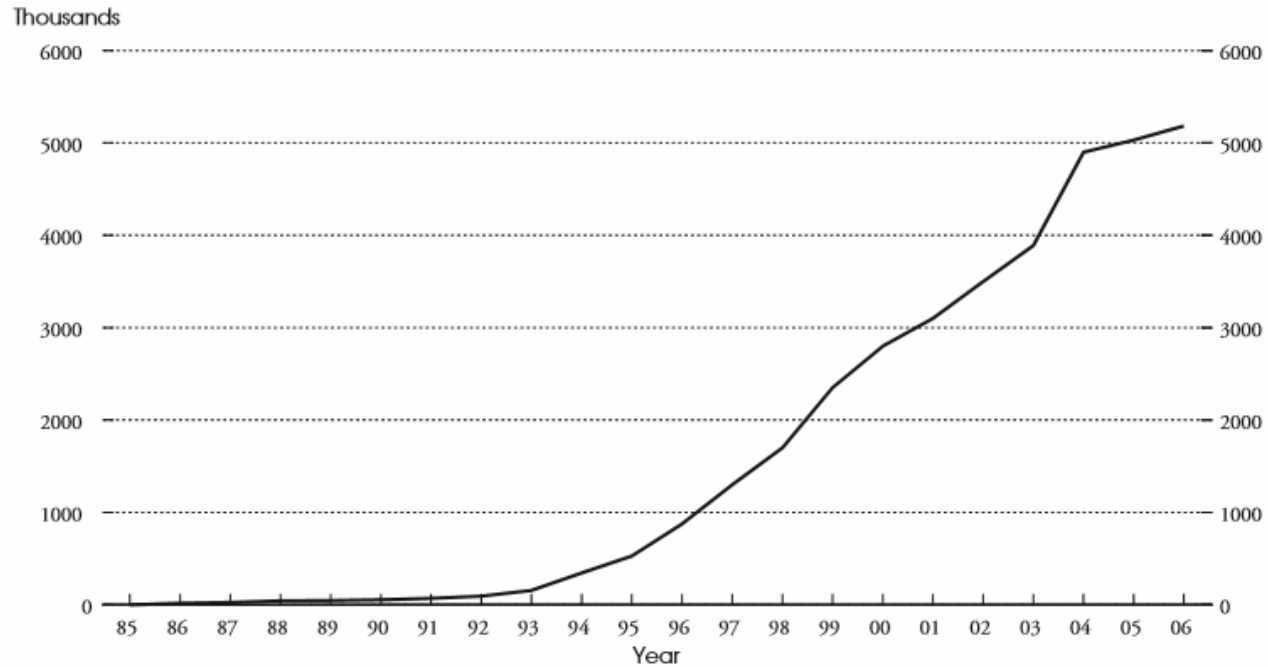


Source: *EFT Network Data Book* (various years).

Source: *A Guide to the ATM and Debit Card Industry—2006 Update*, Federal Reserve Bank of Kansas City, 2006

Debit's Value Proposition: Acceptance

Chart 13: *Online (PIN) Debit Terminals*



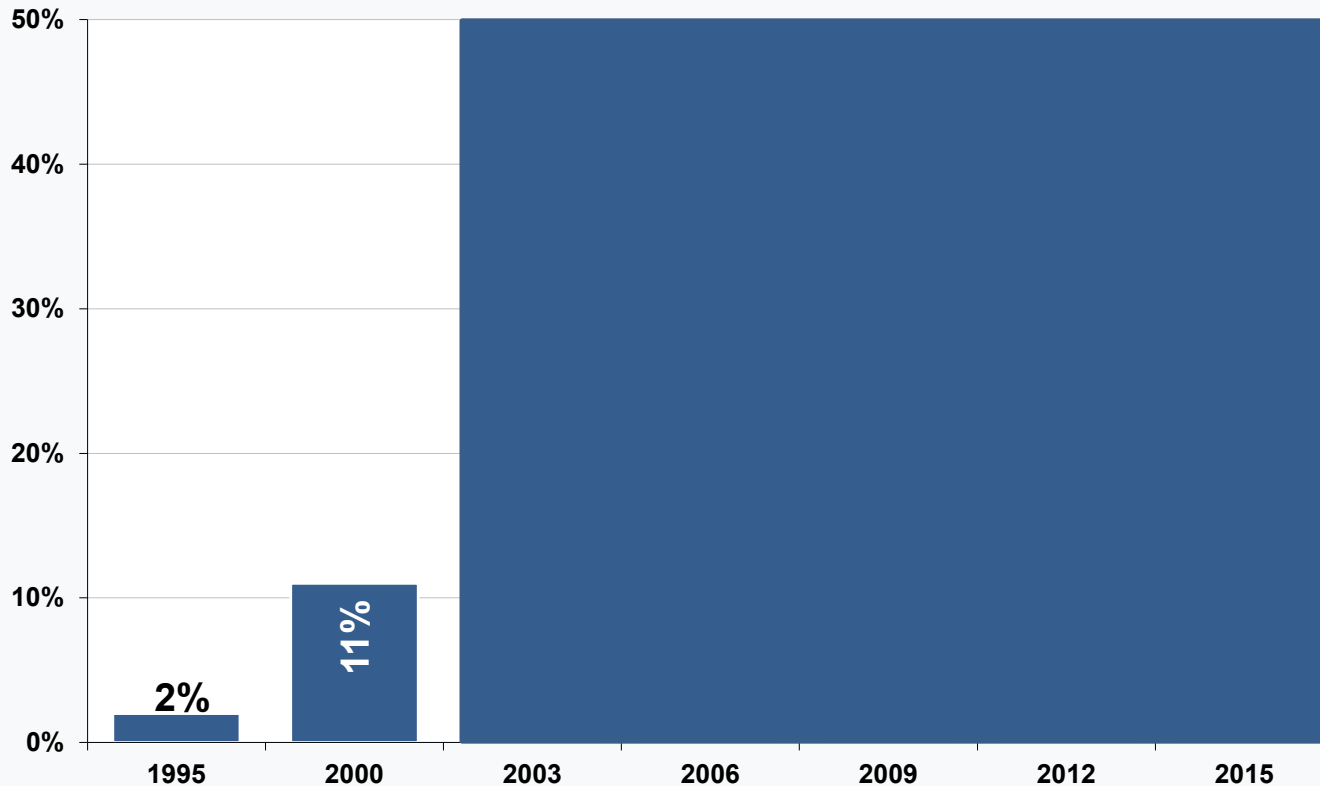
Source: *EFT Network Data Book* (various years).

Source: *A Guide to the ATM and Debit Card Industry—2006 Update*, Federal Reserve Bank of Kansas City, 2006

Debit's Rise to Prominence Started Very Slowly

But then skyrocketed over the past 18 years!

Debit Transactions as a % of Noncash Payment Transactions

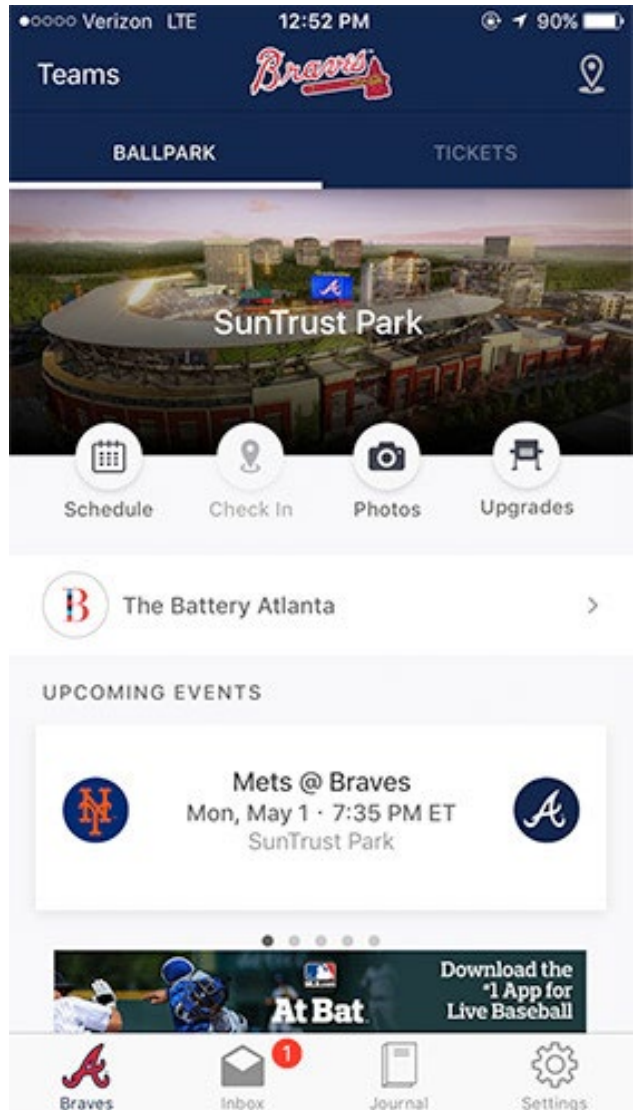


Thirty-four years after the Bank of Delaware's debit card pilot, debit transactions finally achieved more than 10 percent of all noncash payments.

Sources: For 1995: *The Use of Checks and Other Noncash Payment Instruments in the United States*, Federal Reserve Bulletin, August 2002. Other years: Federal Reserve Payment Studies (various years).

The Mobile Phone Has Been Transformative

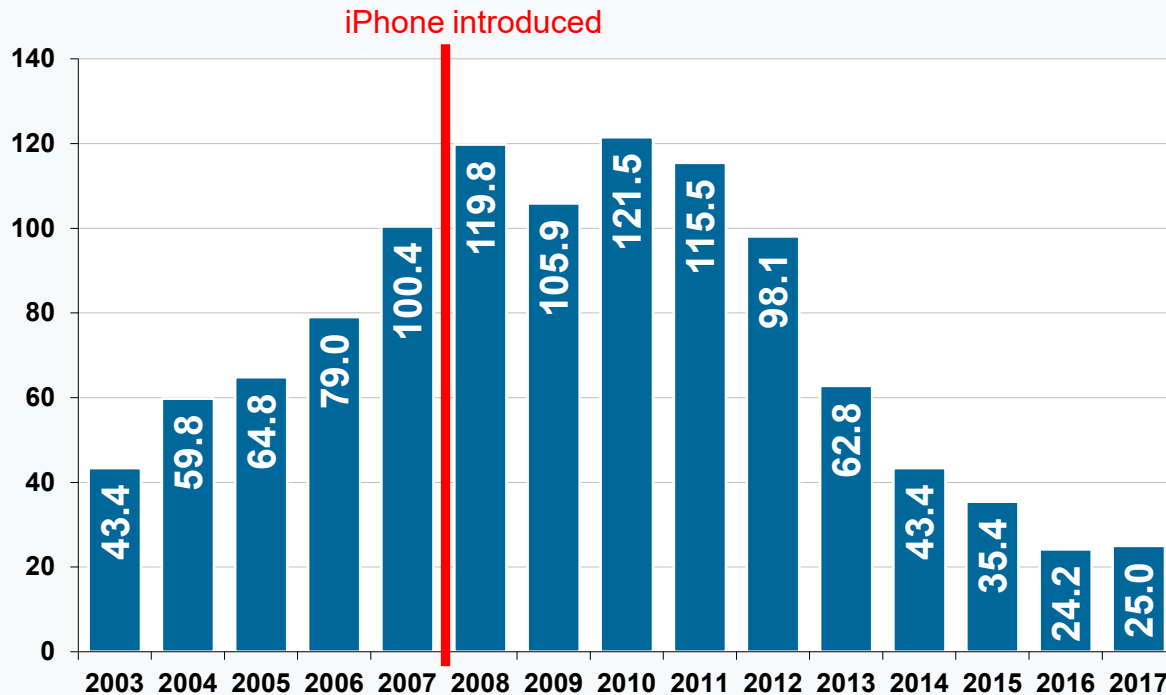
Especially for this baseball fan!



Mobile Phones Are Rapidly Displacing Digital Cameras

Digital Camera Shipments

(Millions)



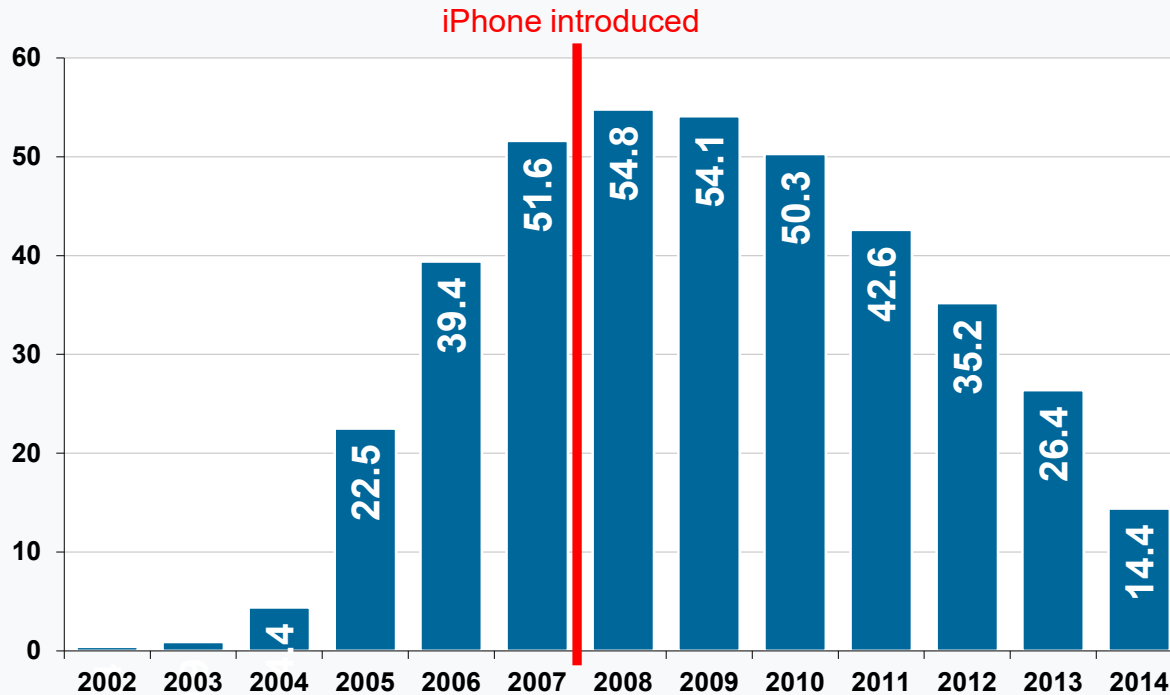
As the phone's picture-taking capabilities have improved, digital camera shipments have plummeted.

Source: CIPA (Camera & Imaging Products Association).

And the Same Is True for MP3 Players

Apple iPod Unit Sales

(Millions)



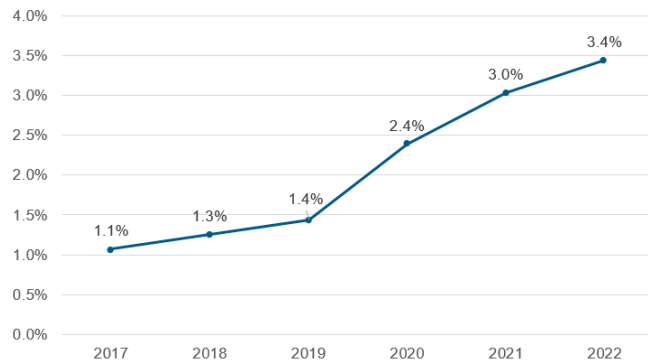
Apple's own MP3 player, the iPod, was only in the market for 12 years before being discontinued.

Source: Apple (via *Business Insider*)

But What About Mobile Payments at the POS?

Far from transformative, but still early

US Contactless Mobile Payment Transaction Sales as a Percentage of Overall US In-store Retail Sales



Source: 451 Research's Global Unified Commerce Forecast, 2018



“Though BI Intelligence projects that US in-store mobile payments volume will quintuple in the next five years, **usage is consistently lagging below expectations, with estimates for 2019 falling far below what we expected just two years ago.**”

Source: [Why Americans aren't using their phones to make payments in stores](#), Yahoo Finance, May 25, 2018

Mobile Payments Timeline

2011

2012

2013

2014

2015

2016

2017

QR Codes

NFC

NFC

NFC + MST

QR Codes

NFC



NFC

Phone # + PIN



NFC



QR Codes



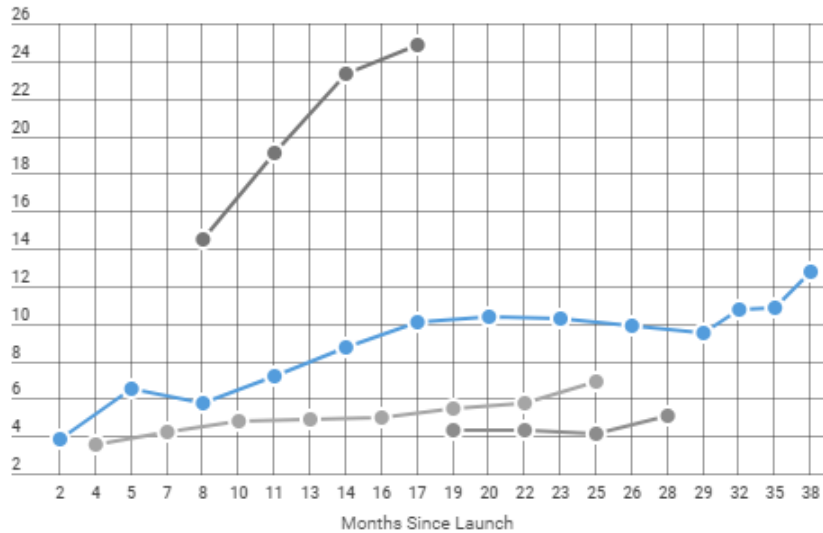
QR Codes



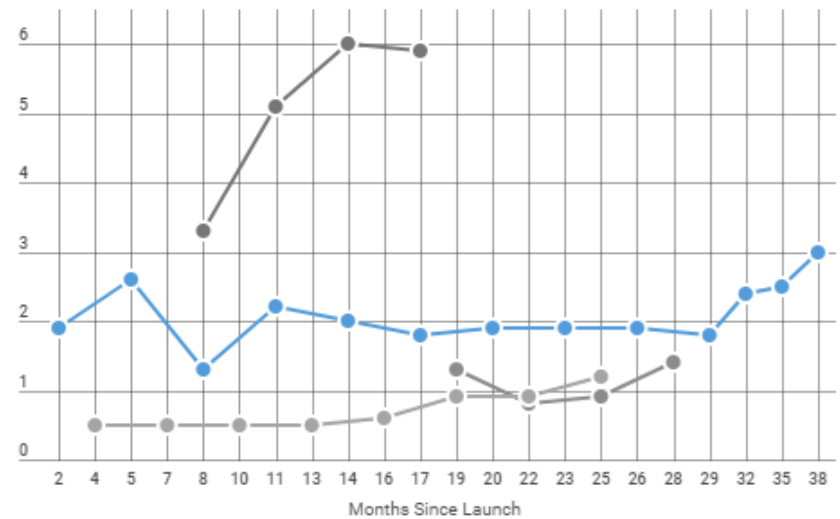
Diving Deeper Into Mobile Pay Usage

ADOPTION AND USAGE SINCE THE WALLET WAS LAUNCHED

PERCENTAGE OF RESPONDENTS THAT HAVE TRIED THE WALLET



PERCENTAGE OF RESPONDENTS THAT USED THE WALLET



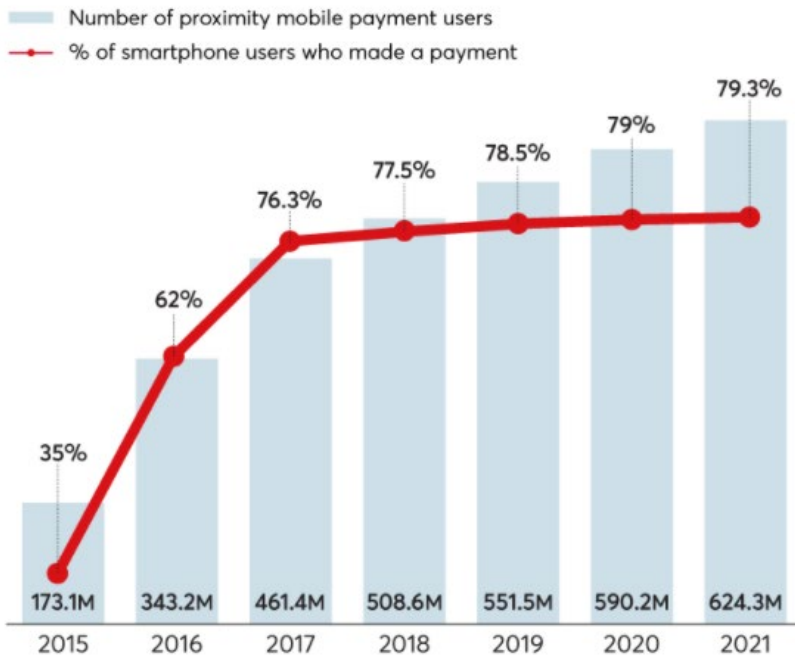
- Apple Pay (Oct 2014)
- Walmart Pay (July 2016)
- Samsung Pay (Sept 2015)
- Andriod Pay (Sept 2015)

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- Samsung Pay (Sept 2015)
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The Transformation in China Has Been Swift!

The swift pace of mobile payments adoption in China

By 2021, eMarketer projects that 79.3% of smartphone users in China will be tapping, scanning and swiping at the point of sale. By comparison, it will be 30.8% of users in the U.S. and 22% in Germany.



Note: Ages 14+; mobile phone users who have made at least one proximity mobile payment transaction in the past six months; includes point-of-sale transactions made by using mobile devices as a payment method; excludes transactions made via tablet; excludes Hong Kong. Data as of Nov. 2017



What Will It Take To Catch On in The U.S.?



So Is Mobile at the POS the Future?



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Questions & Discussion

Ask a Question:

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- Email rapid@stls.frb.org

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