



## **New Revenue Sources in Banking**

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**President**

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# Do any of you use...

- Paypal?
- Paypal Bill me later (now Paypal Credit)?
- Mint?
- Groupon?
- Pandora?
- Spotify?
- Any experience with some of the new lending platforms?
  - Lending Club, Zest Finance, Affirm, etc?

# The Backdrop

## Revenues on transaction accounts are growing at a rapid pace

- “...PayPal’s revenue will double in 2 years...”
- “...Intuit acquires Mint for \$260 million...”
- “...Dwolla on pace for \$1 billion in transactions in 2013...”
  
- Just not in banking. Why?

# 1920's

- Records



# 1982

- The compact disc is born



- 2004: 30 billion discs sold
- 2012: 0.3 billion discs sold

# What did people want?

- Songs
- The “medium” was irrelevant
- Digital distribution was “better”

# 1920's





# 2000's



# Today



PayPal™



BillMeLater®  
a PayPal service



DWOLLA



smart pay powered by billfloat



Google  
wallet



mint

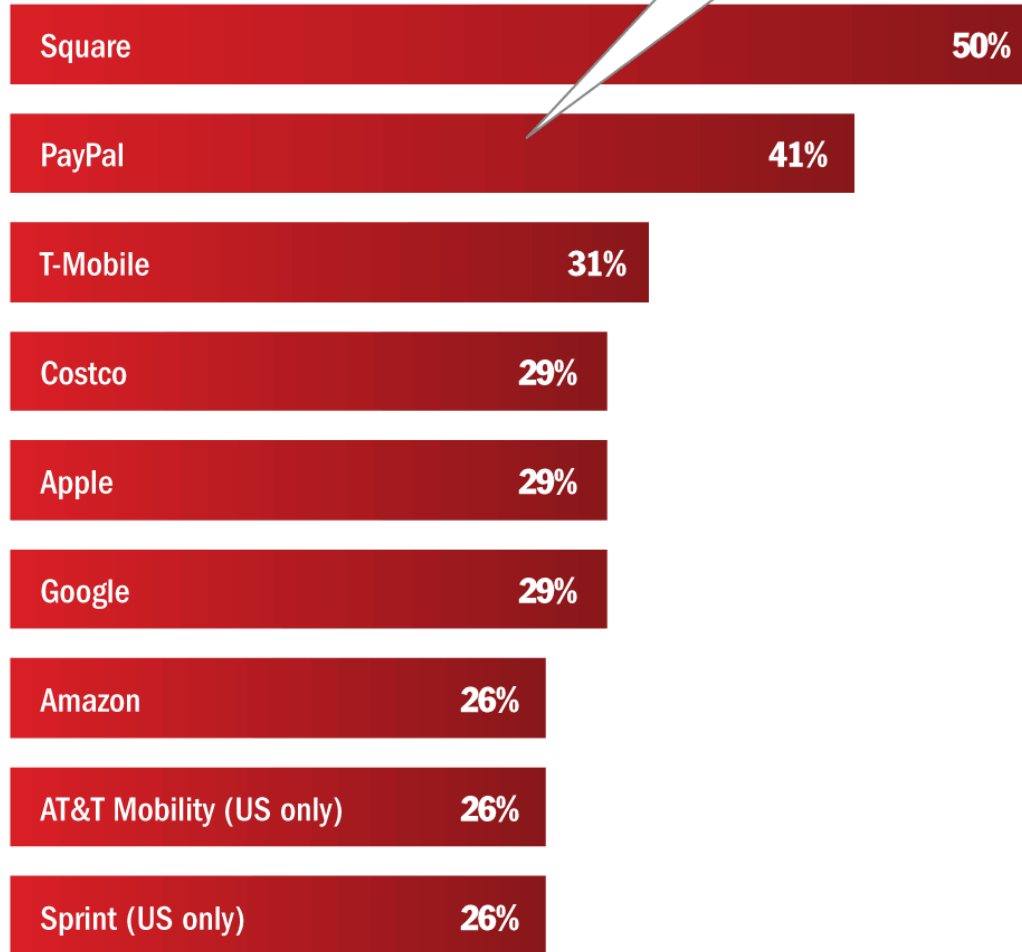
Many others!



haberfeld associates

Are you mad?  
(You should be.)

## Consumers who would consider these companies if they offered banking services



Source: Accenture © June 2014 The Financial Brand

# What do we have?

- The ecosystem
- The cost of all the infrastructure
  - Rising compliance costs
  - Very expensive branch network
  - A business model of high fixed costs and low variable costs
  - Tremendous excess capacity
- And...everyone else is monetizing our customers
- **IN PARTICULAR...THE TRANSACTIONS**

# New Revenue Sources

# Possible New Revenue Sources

- Near Term
  - Debit Card
  - One specific thing not to do
- Mid Term
  - Take advantage of new regulation and the possible disruption of an entire industry...
- Long Term
  - Big Data!

# Near Term



# Revenues and DC usage

Client Case Study Average	% Accounts	Avg Bal	NSF Freq	Debit Card Activity		Revenue Streams			
				Avg Swipes	Avg Spend	NSF	Card	Spread	Contrib
1-Non-Taker	35.73%	\$ 12,381	0.89	-	\$ -	\$ 24	\$ -	\$ 279	\$ 303
2-Non-User	18.45%	\$ 6,302	1.43	-	\$ -	\$ 39	\$ -	\$ 142	\$ 180
3-Light-User (1-5 Swipes)	10.00%	\$ 4,418	2.57	2.62	\$ 174	\$ 69	\$ 21	\$ 99	\$ 190
4-Moderate-User (6-20 Swipes)	14.08%	\$ 3,302	3.81	12.20	\$ 593	\$ 103	\$ 71	\$ 74	\$ 248
5-Heavy-Users (Over 20 Swipes)	21.74%	\$ 2,495	4.60	49.35	\$ 1,885	\$ 124	\$ 226	\$ 56	\$ 407
<b>Totals</b>	<b>100.00%</b>	<b>\$ 7,036</b>	<b>2.38</b>	<b>12.71</b>	<b>\$ 511</b>	<b>\$ 64</b>	<b>\$ 61</b>	<b>\$ 158</b>	<b>\$ 284</b>

# Debit Card Activation & Usage

You can impact the debit card usage of your customers by asking (and rewarding) them for a behavioral change.

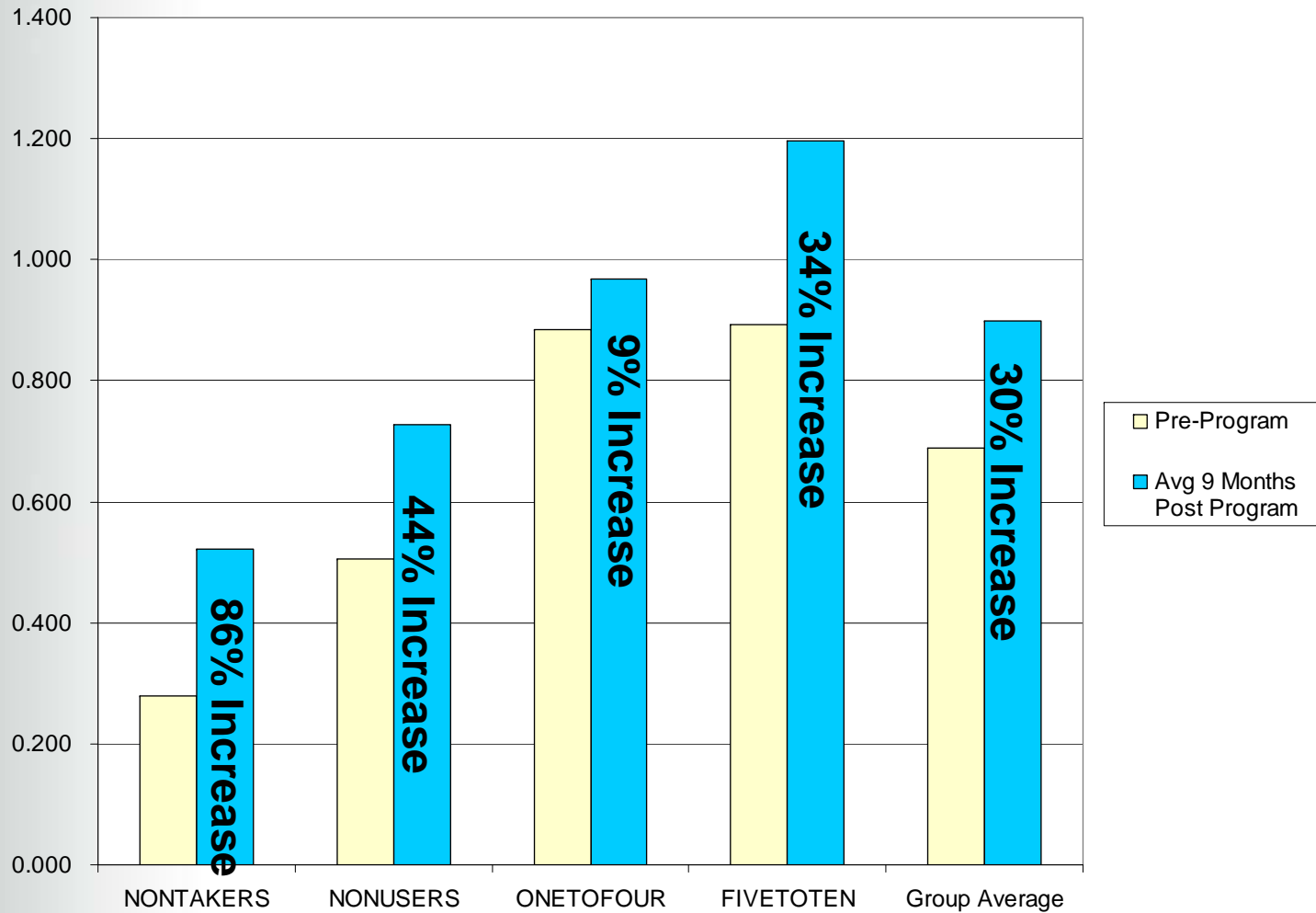
# The “lower end” of usage

- **Non-Taker** – take the card and use it once in the offer period to receive reward
- **Non-User** (zero swipes) – use the card once in offer period to receive reward
- **Low-User** (max usage of 1-4 times/mo. over past 90 days) – use the card 5 times/mo. in offer period to receive reward
- **Moderate-User** (max usage of 5-9 times/mo. Over past 90 days) – use the card 10 times/mo. in offer period to receive reward

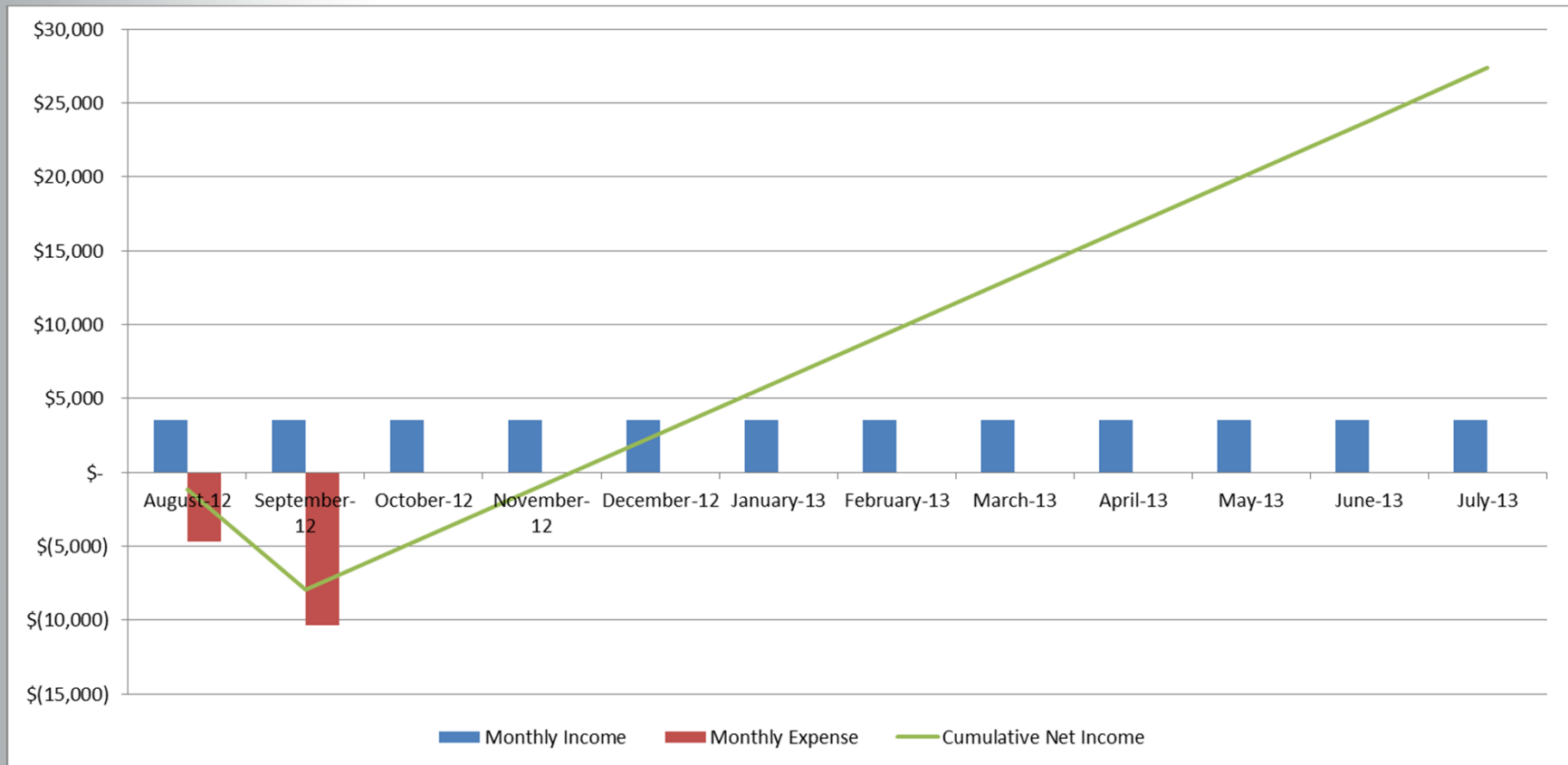
# A Very Typical Result

Households Targeted			
Group	Accounts	Fulfilled	%
Non-Takers (NT)	8,874	87	0.98%
Non-Users (NU)	3,725	523	14.05%
Low-Users (T5)	3,140	784	24.96%
Moderate-Users (T10)	2,552	892	34.93%
	18,292	2,285	12.49%

# Monthly NSF Occurrences



# Quick Payback



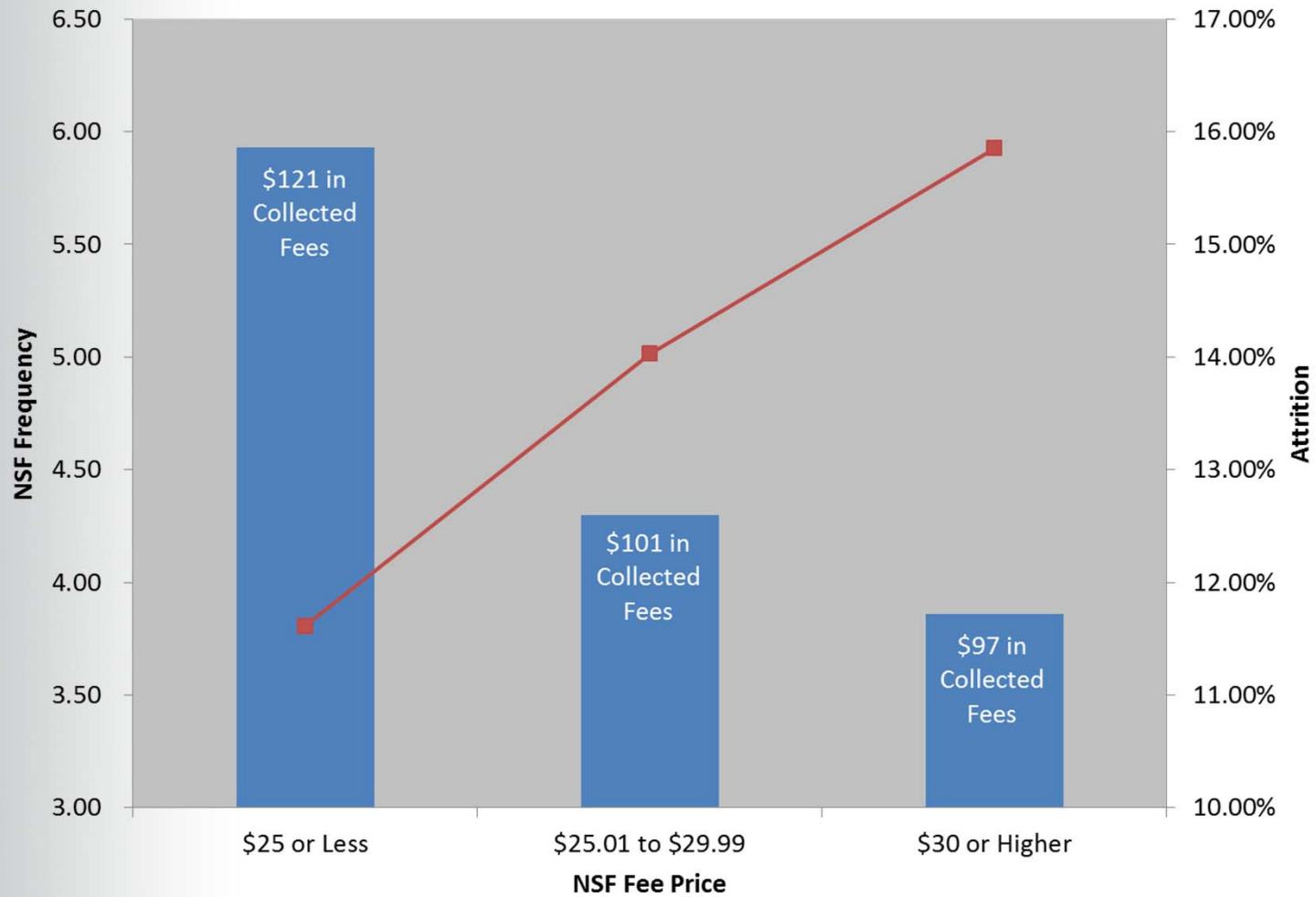
# Opportunity on the upper end

- 1.5% of debit card swipes are > \$200, but they make up 16% of the overall spend and interchange income
- People swiping their debit card > 40 times/month:
  - Average age: > 40
  - Average balance: \$1,900, but...
  - Average \$ deposits/month: >\$5,000
  - Average # of debit card swipes/month: around 60, but...
  - More than half of the monthly spend IS NOT made on the debit card – huge opportunity
  - There is a STRONG correlation between swipes and NSF

# One Thing not to do



# Attrition, NSF's and Fee Revenue



# Mid Term

Small dollar lending to  
consumers and small businesses

# A Confluence of Events

- CFPB issued proposed prepaid card rules Nov '14
- CFPB issued proposed rules for comment on Payday lending March '15
- Banks have historically not been able to efficiently underwrite small dollar loans, but technology has improved and bankers have become comfortable using deposit data
- CFPB is expected to issue new OD rules at some point (October '15?)

# Regulatory Environment

CFPB released proposed rules on prepaid cards on November 13, 2014:

- 870 pages!!!
- 10 pages (page 60-70) are about overdrafts
- Credit Card section of Reg Z is proposed to apply to prepaid cards
- View OD services as a lending activity

# Proposed CFPB Rules on Prepaids

- Timing
  - 90 day comment period prior to final rules. Likely effective 9-18 months after finalized, approx. mid 2016.
- Reg Z and Lending
  - Fee as part of APR would violate most state usury laws

# Proposed CFPB Rules on Prepaids

- Prior written consent is necessary from the consumer (like Reg E)
- No compulsory repayment – consumer must have 21 days
- Reasonable and proportional fees are mentioned in the Card Act

# Proposed CFPB Rules

## “Payday” Loans

- CFPB released proposed rules for comment on March 26, 2015
- Doesn't only apply to payday loans. It covers:

“Payday loans, vehicle title loans, deposit advance products, certain high-cost installment loans, open-end loans.”

# Proposed CFPB Rules “Payday” Loans

Critical components:

- Ability to repay determination
  - Debt trap prevention
  - Debt trap protection
- APR limitations
- Frequency limitations and cooling off periods
- Some pundits project the impact at > 80%



# What is going to happen to Overdrafts?



Richard Cordray  
Director of the  
CFPB

“We are not going to be banning the overdraft product. I don’t know that we would have the authority to do that and I also don’t think that’s justified,”

“As to whether we will have certain modifications and constraints around existing practices, that will all depend on what we see in the data but I would encourage people to continue to give us plenty of feedback.”

# FBR Capital Markets – June 2

- ...we believe it is likely the CFPB will attempt to limit the total number of overdraft fees per year (likely six), require the establishment of a line of credit for any additional overdrafts, include an assessment on the ability to repay on any overdraft lines of credit, and limit banks' ability to collect overdrafts from deposits.
- “CFPB’s recently updated rulemaking agenda targets October for first action in the space, though recent CFPB actions have slipped past their targets.”

# Bloomberg Article – June 5

- “After studying overdraft fees for more than three years, the Consumer Financial Protection Bureau is leaning against subjecting banks to tough new rules that would cap the size of charges or limit how frequently they can be imposed on consumers.”
- “There would be a fierce backlash if the CFPB gets too prescriptive here, and that would play badly in Congress,” said Camden Fine, chief executive officer of the Independent Community Bankers of America”

# What does this mean for ODs?

- In short, we don't know yet...
- *But it probably won't be revenue positive*

# Outcome

- How can the industry recoup/replace?
  - Monthly account fees?
  - Increased NSF fees?
  - Other ways to address short term liquidity needs?
  - Other/new ways to monetize the customer relationship?
  - New Products?

# Positioning for the Future

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Richard Cordray  
Director of the CFPB

“The result is that some consumers are essentially paying \$34 -- which is the typical overdraft fee -- to have the bank spot them less than \$24 for just a few days, ... If a consumer were to get a loan on those terms, that would equate to an annual percentage rate of over 17,000 percent.”

“...opting in for overdraft coverage for debit card and ATM transactions is an expensive way to manage a checking account.”



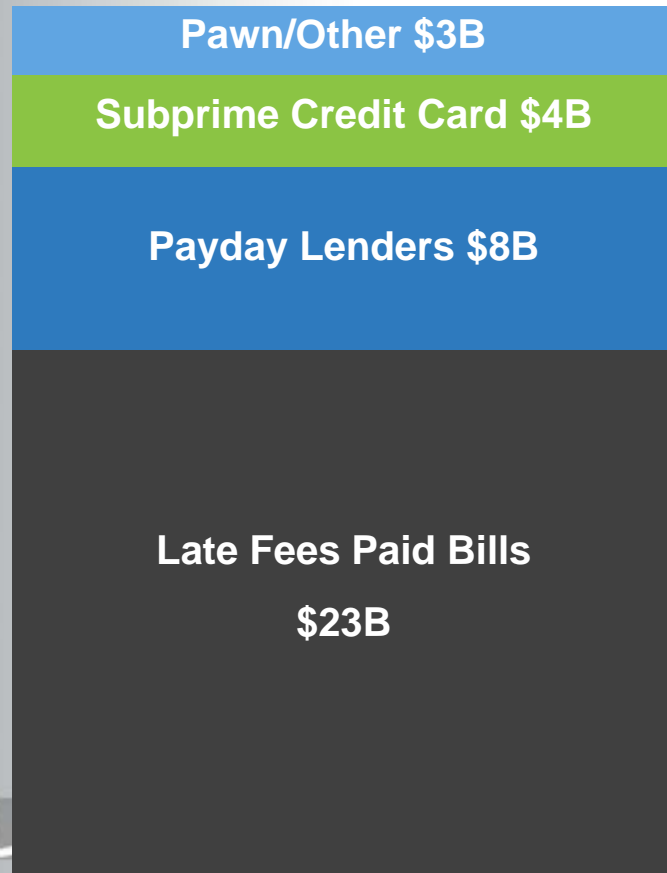
Thomas Curry  
Comptroller

“It is clear to me banks do a good job of providing consumer loan products to consumers with good credit histories. However, mainstream credit products with reasonable pricing and repayment are out of reach to those with weak or thin credit histories. We encourage banks to offer small dollar loans.”

# Market Opportunity

An opportunity in the industry exists to meet the liquidity needs of consumers from \$200 to \$5,000.

**\$38 Billion**



*Banks need new delivery capabilities.*



# Key Consumer Needs

New competitors are stealing customers and revenue

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**NO OVERDRAFT CHECKING**



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**DIGITAL LENDERS**



# Short term liquidity needs

- 28% of workers have less than \$1,000 in savings Employee Benefit Research Institute
- 76% of Americans are living paycheck to paycheck Bankrate.com
- Nearly half of all Americans have less than \$500 in savings Huffington Post Article

# Serving constituencies

- Banks do a great job serving two groups:
  - Those with no short term liquidity needs
  - Those with short term liquidity needs that value having their transactions honored and are willing to pay a fee for that (ODs)
- Banks simply do not serve a third group:
  - Those with short term liquidity needs but can't and won't pay OD fees
  - This group wants their items declined and gets their liquidity needs met outside of banking

# One solution?

- A No Overdraft Fee Ever account
  - Charge a monthly fixed fee instead (\$14.95?)
- ...tied to an automatically underwritten LOC
  - Use deposit patterns and EOM balance to establish limit – automate the underwriting (which makes it cost effective)
  - Charge 15% interest on the line
- ...that the consumer controls (not the bank).

# The (possible) math...

- \$14.95/month for the checking account (\$180/year)
- \$15% interest on \$600 average balance (\$108/year)
- 5% loss of principal (\$30)
- Cannibalize 2 NSF's/year/account on average (\$60)
- ...some other small stuff
- Net: ~\$200/customer/year

# My best guess...

- At a typical community bank, at least 10% of customers are currently using liquidity services outside the bank
- If you could get a net increase of \$200 on 10% of your customers, what would that mean to the bottom line?
- ...and, you may be getting prepared for banking in a post-OD world should the CFPB aggressively attack overdrafts.

# Long Term

Big Data

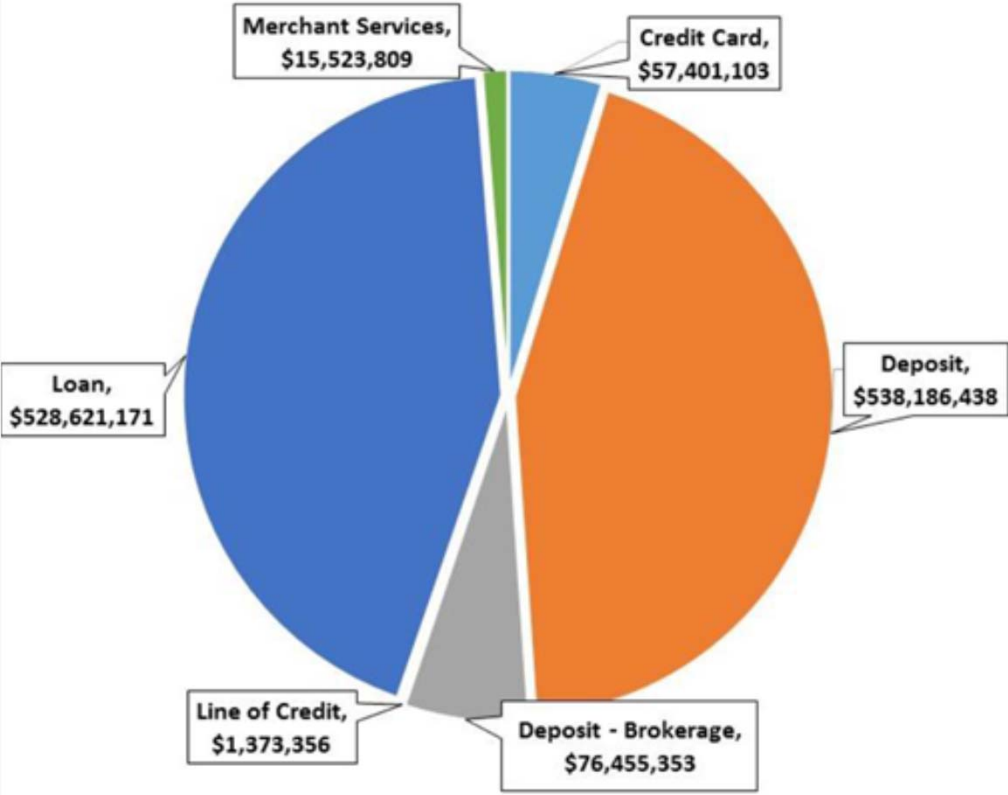
“In God we trust; All others bring data”

# What else do we have?

- A lot of data!
  - *We know where people spend their money.*
  - We know where they have other products.
  - We know what channels they use.
  - There is now outside data that we can use that can be coupled with our data in a powerful way.



# A quick analysis – one bank



# What is big data?

# The Flu

- In 2009 a new strain of flu was discovered – H1N1
- The CDC relies on doctor reporting to track flu outbreaks – but the data lags by several weeks
- Google receives 3 billion search terms daily
- Engineers at Google looked at past flu outbreaks to see if they could track and even predict the spread of flu based on what people were searching on

# Approach

- Google did not try to “guess” what people would search and look for correlation
- Instead, they didn’t care about “why”, they only cared about “what”
- They processed a staggering 450 million mathematical models in order to test search terms
- They found 45 search terms that allowed them to predict the spread of flu BEFORE there was an outbreak

# First, some key concepts

# We love Causality

- Fred's parents arrived late
  - The caterers were expected soon
  - Fred was angry
- 
- Why was Fred angry?

# Comparative History

- Gutenberg invented the printing press in 1439
- In the 50 years after that, it is estimated that 8 million books were printed
- This is more than all the scribes in Europe had created in the prior 1,000 years

# “Data Exhaust”

- You leave a vast trail of data in everything you do
  - Cell phone
  - Websites visited
  - Searches done
  - Driving your car
  - Purchases



# Going digital

- In 2000, only  $\frac{1}{4}$  of all data was digital –  $\frac{3}{4}$  was analog
- In 2013, only 2% of all data is analog

# Scale and State

- A change in scale often creates a change in state
- To a water strider, gravity is much less important than surface tension
- Surface tension is not very meaningful to us



# Really BIG data

- Google processes 24 million gigabytes of data every day
- Facebook has 10 million new photos uploaded and has 3 billion new comments posted every hour
- YouTube gets one hour of video uploaded every second
- Twitter has 400 million tweets per day



# What is Big Data?

- A significant shift – no need to analyze a small, perfect set of data:  $n = \text{everything}$
- Because of this, the data is inherently messy:  
 $2 + 2 = 3.9$
- Less reliance on causality: “what” is more important than “why”- this is going to be really hard for us bankers

# Basic Notion

- You can likely get better results by:
  - Using a lot of data points
  - Even though any one data point may not be highly correlated
  - You will not have consistent data
  - And...you may not be able to explain why certain correlations exist (and this will drive you nuts)

# Causality

- A large study of used cars found that Orange cars had defects at about half the rate of the average car
- Why?
  - Orange cars owned by enthusiasts that took better care of them?
  - Custom color mean the car was built better?
  - More noticeable on the road, so fewer accidents, and thus in better shape?

# Conclusions – be careful

- If you were an insurer, you could probably safely conclude that you could charge less for premiums on Orange cars
- Incorrect conclusion: paint your car Orange and it will last longer

# Weird Big Data

- Aviva, a large insurance company, has determined that looking at data can provide better insurance underwriting information than a blood test or a urine sample
  - How much TV you watch
  - What websites you visit
  - Estimates of income
  - Your hobbies



# Car Insurance

- Traditionally underwritten by age, sex and driving record
- Now, some companies are looking at other data
  - Where you drive
  - How much you drive
  - The roads you drive
- I.e. how much “drive risk” you consume

# Risks/Ethics

# Recidivism

- University of Pennsylvania study claims to predict with 75% accuracy whether a person released on parole will be involved in a future homicide
- Variables include date of first offense, reason for incarceration, age, gender, and case specific variables
- Should we use this data? It is wrong 1 in 4 times

# 1984

- Irony: There are now more than 30 video surveillance cameras within 200 yards of the apartment where George Orwell wrote 1984
- Question: Is it ethical to “pay” for more privacy?

# Where are the moral and ethical lines?

- Crime: Is it OK to visit kids at home that fall into likely categories to become criminals?
  - Realize that we could, as a society, use this data and reduce crime rates
  - What becomes of “Innocent until proven guilty”?
- Where are the privacy lines? Who enforces those?
- Do we need more government oversight?

# The big shift in privacy

- In the past, we expected that we “owned” our privacy rights – notice and consent
- If an entity wanted to use it, they had to ask us or disclose their rules to us
- **It’s over – that doesn’t exist anymore**
- We are going to have to sort out a new world order as it relates to data

# Secondary Use

- Much of big data's use wasn't even envisioned when the data was collected
  - Remember Google's use of search data to identify the spread of flu
- How can a company reasonably disclose how it will be used? It's impossible.

# “Fuzzing”

- In October 2006, Netflix released 100 million rental records on 500k users and challenged anyone to come up with a better recommendation system
- NO PERSONAL INFORMATION
- Within days, one of the users was identified: a mother in the conservative Midwest was outed as a closeted lesbian
- She sued



# One example

- New electrical meters can measure electrical usage very accurately and sample every 6 seconds.
- Different devices have unique electric usage “signatures”
- Marijuana grow lights might produce a signature that is unique enough for law enforcement to correlate with some reasonable accuracy.

# Ethics

- MasterCard's data shows that when someone fills up their tank around 4:00, they are very likely to spend between \$35 - \$50 in the next hour at a grocery store or restaurant
- How should they use that info?

# Transactions – “the gold in them thar hills”

- Systems today capable of reading the payee line on checks, endorsement info, and interpreting debit card transactions
- You can use for highly targeted leads for your sales team
  - Commercial loans
  - Merchant services
  - Brokerage/Wealth management
  - Insurance
  - Etc.

# Now let's make it personal

- You know where people SPEND THEIR MONEY!!!!!!
- How can we monetize this REALLY valuable data?
- Is this the future of checking account value?

# 1. Consultative sales?

- Customer opts-in to your “service”
- You analyze their spending patterns and make recommendations and/or helpful offers?
  - Insurance
  - Mortgage re-fi
  - Budgeting
  - Etc.
- BTW...Mint did this by stealing your data. Sold to Intuit for \$260 million.

## 2. Banner ads on your site?

- Make a deal with local businesses that are customers of yours
- Look at consumers that spend money in those areas
- Put a non-invasive banner ad in front of them when they log on

# 3. Do offers ourselves?

- We know who buys pizza and where
- Cut a deal with Pizza Hut?

## 4. Partnership with Groupon?

- Sell them our data? Probably not...
- Partner with them to serve up offers?
- Serve offers through our website/email?



# Paint a new picture

- Assume the CFPB rolls out new OD regs this summer
- Whacks OD revenue by 80% (hopefully not...)
- Banks pivot to charging for most checking accounts
- Can you offer a free account if customers let us market to them using their data?

# Big Data in Banking

# Underwriting

- Fair, Isaac Corporation invented credit scores in the late '50s
- What does the future of underwriting look like?

# “Social” Studies

- “Birds of a feather stick together”
- Could it be that responsible “repayers” socialize with other responsible “repayers”?
- Also, could it be that deadbeats hang out with deadbeats
- Could we determine that by Facebook? Website visits?
- Could Facebook be the next FICO?

# Big Data in “banking”

- Douglas Merrill, Former CIO of Google, forms Zest Finance
- Short term loans to individuals
- They analyze many, many “weaker” data points to predict likelihood of repayment
- They say repayment rates 40% better
- Vast amounts of missing and wrong data – for example, about 10% of people that get a reasonable score are dead – but the data shows that this single data point doesn’t correlate strongly to repayment rates overall

# Affirm

- Max Levchin, one of the founders of PayPal, starts company to allow people to pay over time
- Signing up on-line merchants to have an additional button when “buying” – pay over time with Affirm
- They are on track to do \$100 million in loans during their first 12 months
- Have over 100 merchants signed up now

# Requires different technology

- Most current systems require very accurate data
- New systems will need to handle much more “messiness”
- Large chunks of data will be missing, but because of the overall quantity of data, we can still get very valid results

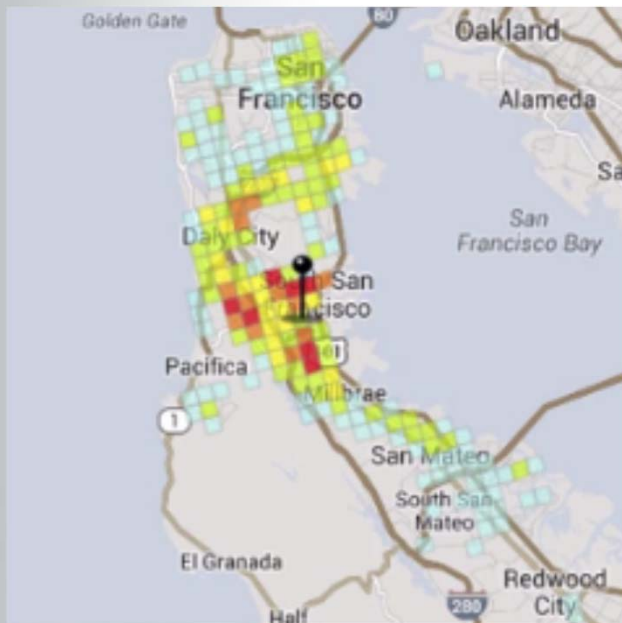
# Airsage

- 100 million mobile devices in their database
- 150 “activity points” per day, per device
- They know where your cell phone
  - “works”
  - “sleeps” (home)
  - “eats”
  - “drives”



# StreetLight Data

- Cell Phone and GPS data combined
- They purport that their data is representative of 85% of the population of the U.S.



# GeoFencing

- In 2014, 68% of ad requests online included location-based data
- If someone is within a specific distance from your branch and they:
  - Look at Facebook
  - Listen to Pandora
  - Look at ESPN.com
  - Etc.
- You can serve them up VERY targeted ads
- Can improve conversion rates by 81%

# xAd.com

- Started in 2009
- Verified Location supplied in ad request
- 300 billion available impressions per month with location data
- 30,000 mobile applications included
- 1 million advertisers using

# Pay Per Click

- If you are doing any PPC marketing today and not using location-based data, you are probably leaving money on the table
- Change that right away

# Utilizing This Data

It is your data, use it

- Grow your customer base – you have tremendous excess capacity
- Increase share of wallet
- Grow customer desired delivery channel usage
- Position your FI strategically, change is coming...

# My belief

- Big data will transform the way we monetize customers in the future
- Start learning and testing now

**Thank you!**