LendIt Europe Conference

17 November 2014

My vantage point spans from “Big Banking” to start-ups

Co-founded in 1994, President and COO through 2004

Co-founded in 2007, Managing Partner

We moved on to create QED

Nigel Morris

Frank Rotman

Caribou Honig

Miles Reidy
(Special Advisor)

- Venture Capital firm focused on Digital Marketing and FinTech
- Founded in 2007
- Collectively 95+ years of experience in leveraging data in Financial Services
- Breakthrough disrupters audaciously building a franchise or attacking the incumbents
- Play active, hands-on consigliore roles with leaders leveraging our operating experience with data driven strategies

Over the last seven years QED has worked with numerous FS innovators

QED INVESTORS

Pre-2011

- 信而富 China Rapid Finance
- HARVEST
- Credit Karma
- PROSPER – THE LOANS MARKETPLACE
- GLOBAL analytics
- WealthEngine.com
- L2C inc

2011

- Braintree PAYMENT SOLUTIONS
- bloomspot
- The Americas Card – Powered by TAC Financial, Inc.
- drivefactor
- VALEN ANALYTICS
- GROVE CAPITAL MANAGEMENT
- TransUnion
- RED VENTURES

2012

- CARD.com
- Sociogramics
- SIGNIFYD
- klarna
- borro
- CAN CAPITAL
- Progreso Financiero

2013

- AVANTCREDIT
- PRIVLO
- BlueYield
- TDX GROUP
- peerTransfer
- LendUp
- REMITLY
- GreenSky

2014

- FUTURE FINANCE
- SoFi
- ApplePie CAPITAL
- Orchard

The current climate favours disruptors over traditional banks

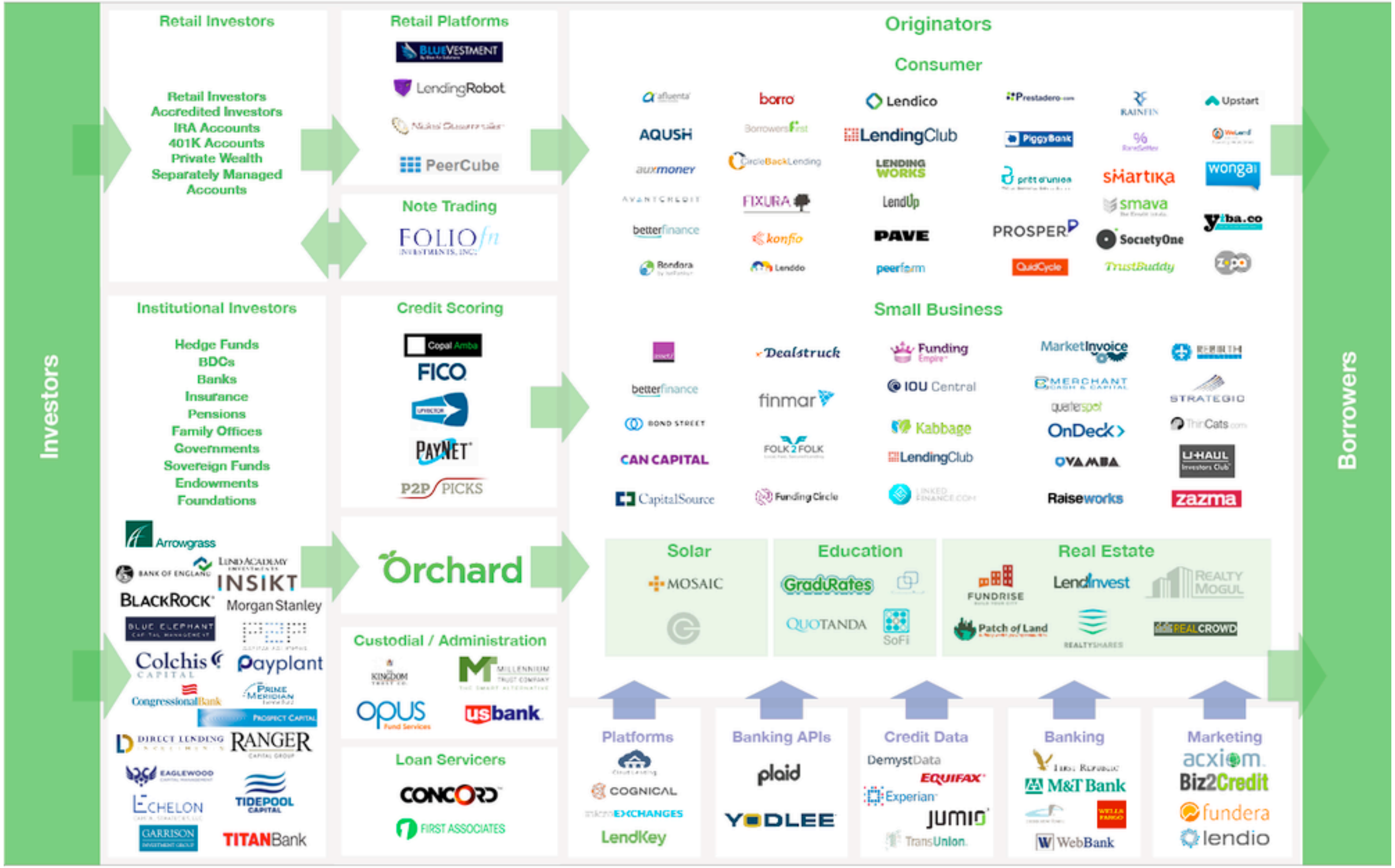
Banking Climate

1. Consumer has lack of trust in banks
2. Regulation increasing (CFPB, etc), Rising capital requirements
3. Retail cost reduction focus
4. Technology debt
5. Consumer lending and I-Banking headwinds
6. Harder to hire/hold talent

Changing Environment

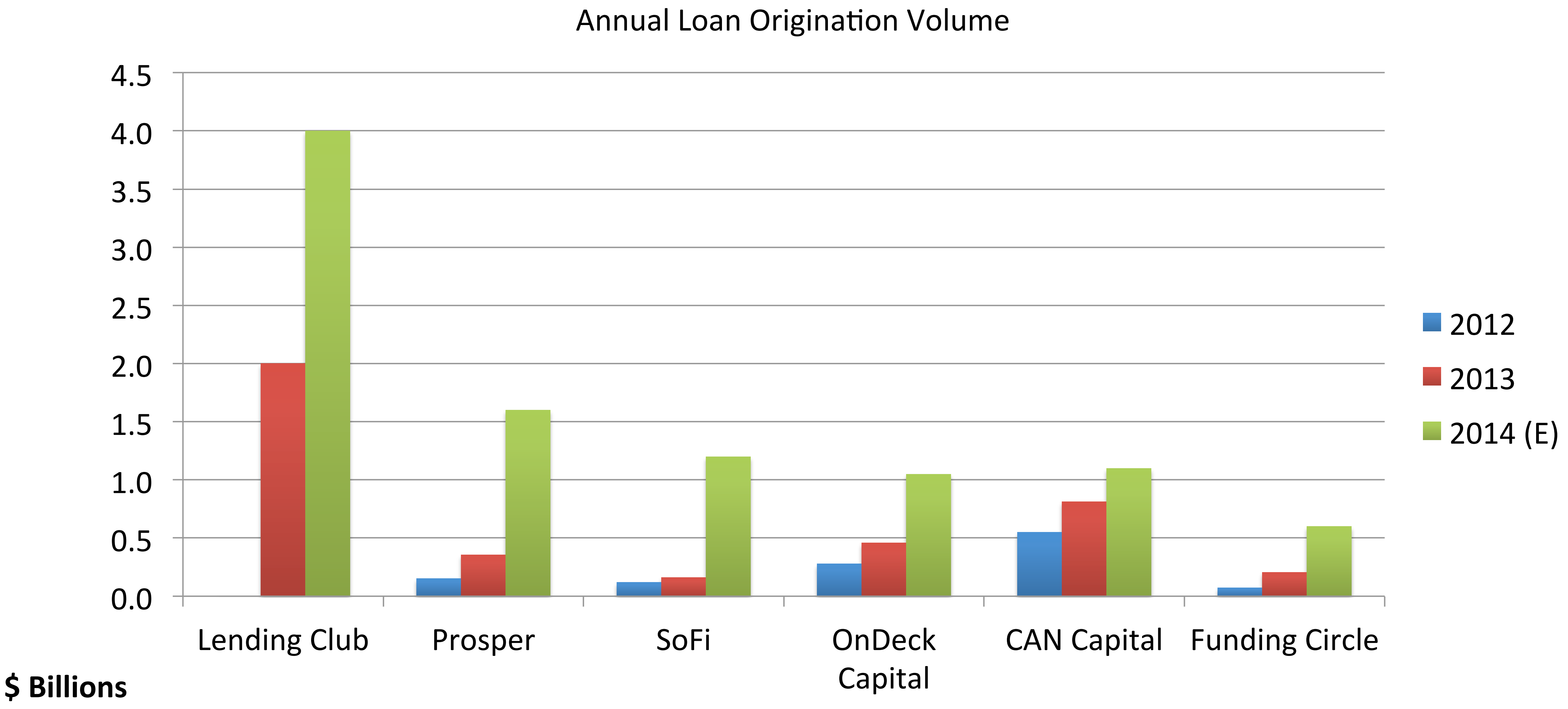
1. Mobile acceptance
2. Splintering value added chain
3. Non-bank entrants (Amazon, Ebay, Apple, AliPay, etc.)
4. Increasing importance of affiliates
5. New data sets – geo, behavioural, sand social

An entire ecosystem has emerged to support this new world



Source: Orchard Platform Advisors LLC

Several lending platforms are achieving breakout scale – and accelerating growth



Estimates derived from public facing statements and filings

And new entrants continue to emerge, further splintering the value chain

QED INVESTORS

US

- amazon lending
- SQUARE CAPITAL
- PRIVLO
- C2FO
- earnest
- PAVE
- GreenSky
- Kabbage
- ApplePie CAPITAL

EUROPE

- Funding Circle
- Kreditech DIGITAL LENDING
- Bondora by isePankur
- VisualDNA
- aire
- zopa
- Rate%Setter

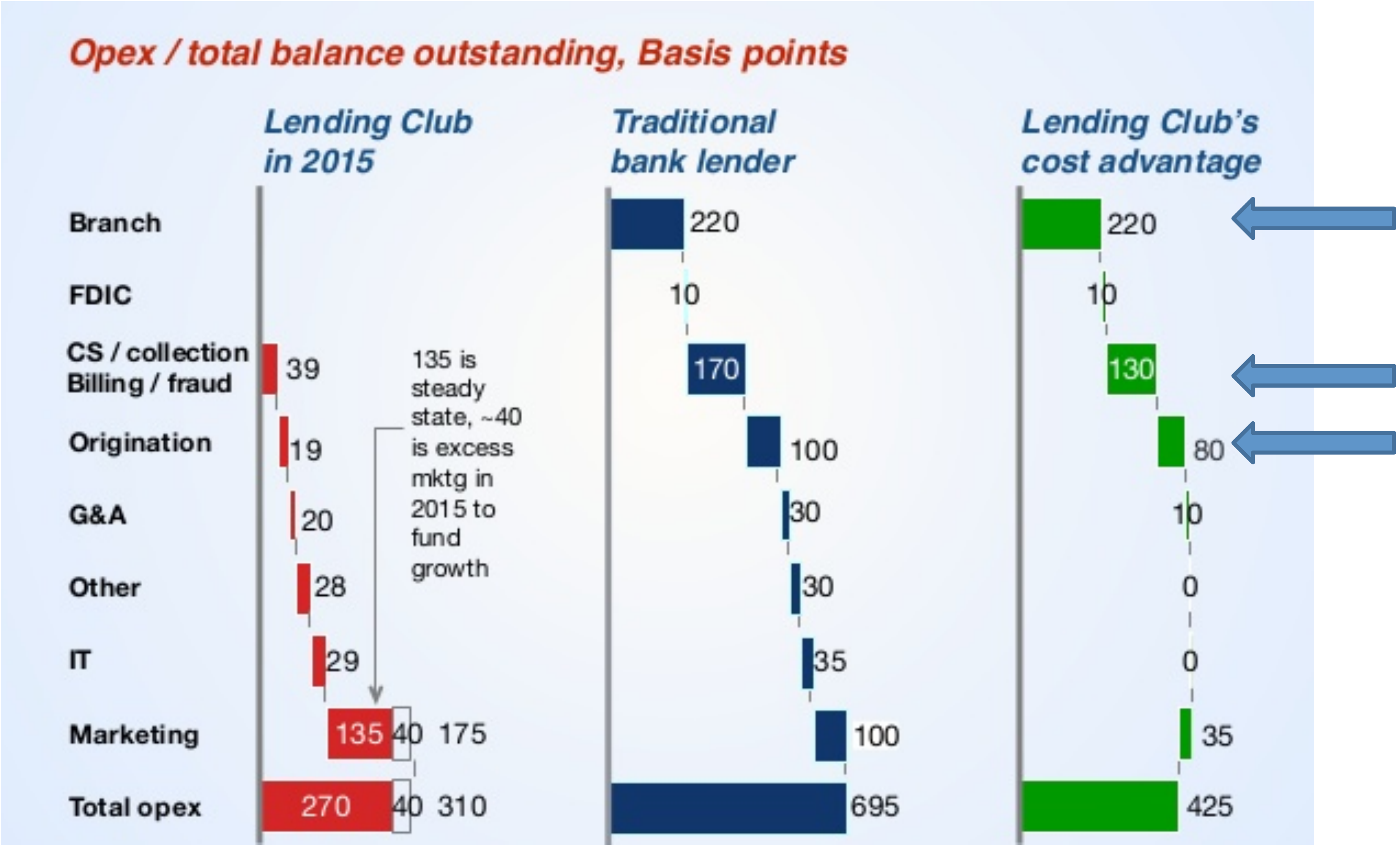
CHINA

- 信而富 China Rapid Finance
- 宜信 CreditEase
- 陆金所 Lufax.com 中国平安集团成员
- 点融网 Dianrong.com
- 幸福借贷 • 幸福理财
- 拍拍贷 ppdai.com 简单，快速，借得到！
- 人人贷 renrendai.com

OTHER

- Lenddo
- afluenta crédito humano
- Society One
- Prestadero

Traditional bank cost structure makes it difficult to compete with specialized originators



Source: Lending Club materials

We learned how to operationally harness our IBS

- Integration of marketing, risk and operations
- Can do, curious, hypothesis-oriented culture
- Top drawer analytical talent
- Job shop flexibility to perform and read thousands of tests and continuous flow economics to keep expenses competitive

Some Major IBS Lessons

- Start with hypothesis- watch competition, listen to customers, seek parallels
- Test the limits
- Become students of multi-phased testing
- Peel the onion
- Test and re-test vs. controls – the world changes
- Show patient, careful testing <u>then</u> explosive growth.
  - The IBS Paradox

We do see a number of banks beginning to respond…

QED INVESTORS

Building Innovation Teams, Incubators and "Labs" Internally	Acquiring and Partnering with "Innovation DNA"	Leveraging rich deposit franchises to "buy" loans from innovators succeeding at origination

Capital One is latest firm with S.F. innovation center

By Kathleen Pender Updated 4:59 pm, Wednesday, November 5, 2014

CAPITAL ONE LABS

BBVA Compass, Dwolla Partner on Real-Time Payments

The bank also agreed to open up its technology platform to Dwolla developers.

DealBook WITH FOUNDER ANDREW ROSS SORKIN

MERGERS & ACQUISITIONS | INVESTMENT BANKING | PRIVATE EQUITY | HEDGE FUNDS

BBVA Buys Banking Start-Up Simple for $117 Million

By WILLIAM ALDEN FEBRUARY 20, 2014 2:34 PM 1 Comment

Last updated: Tue Oct 21 11:00:46 BST 2014

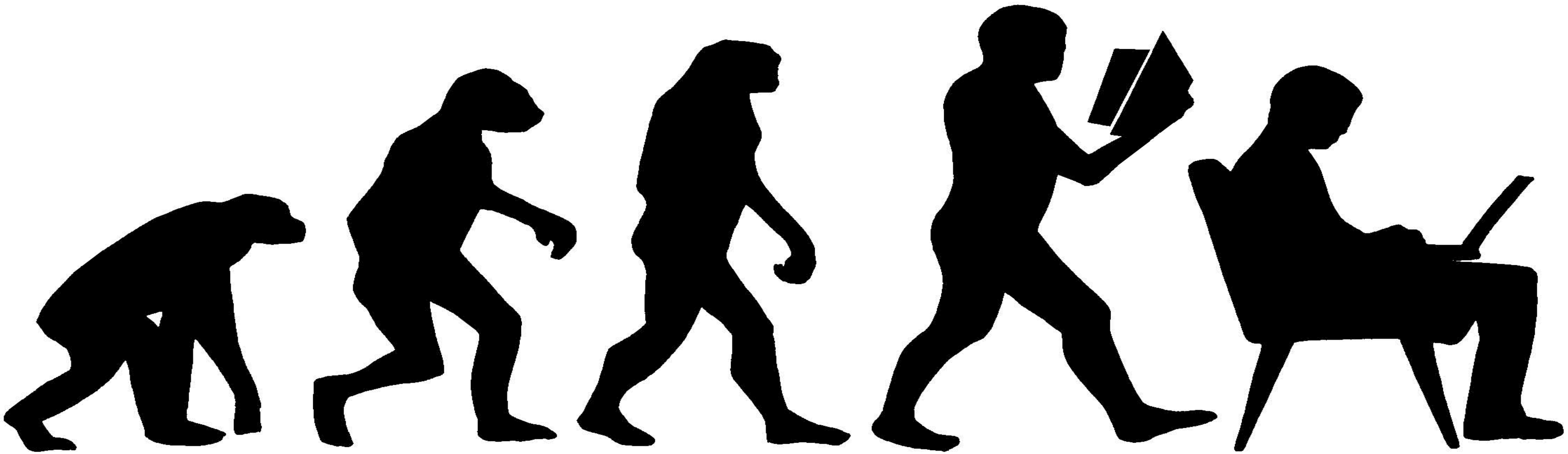
SMEs welcome the embrace of P2P lenders

BoE's Trends in Lending report recognises the rise of alternative finance, but underplays the significance of the sector

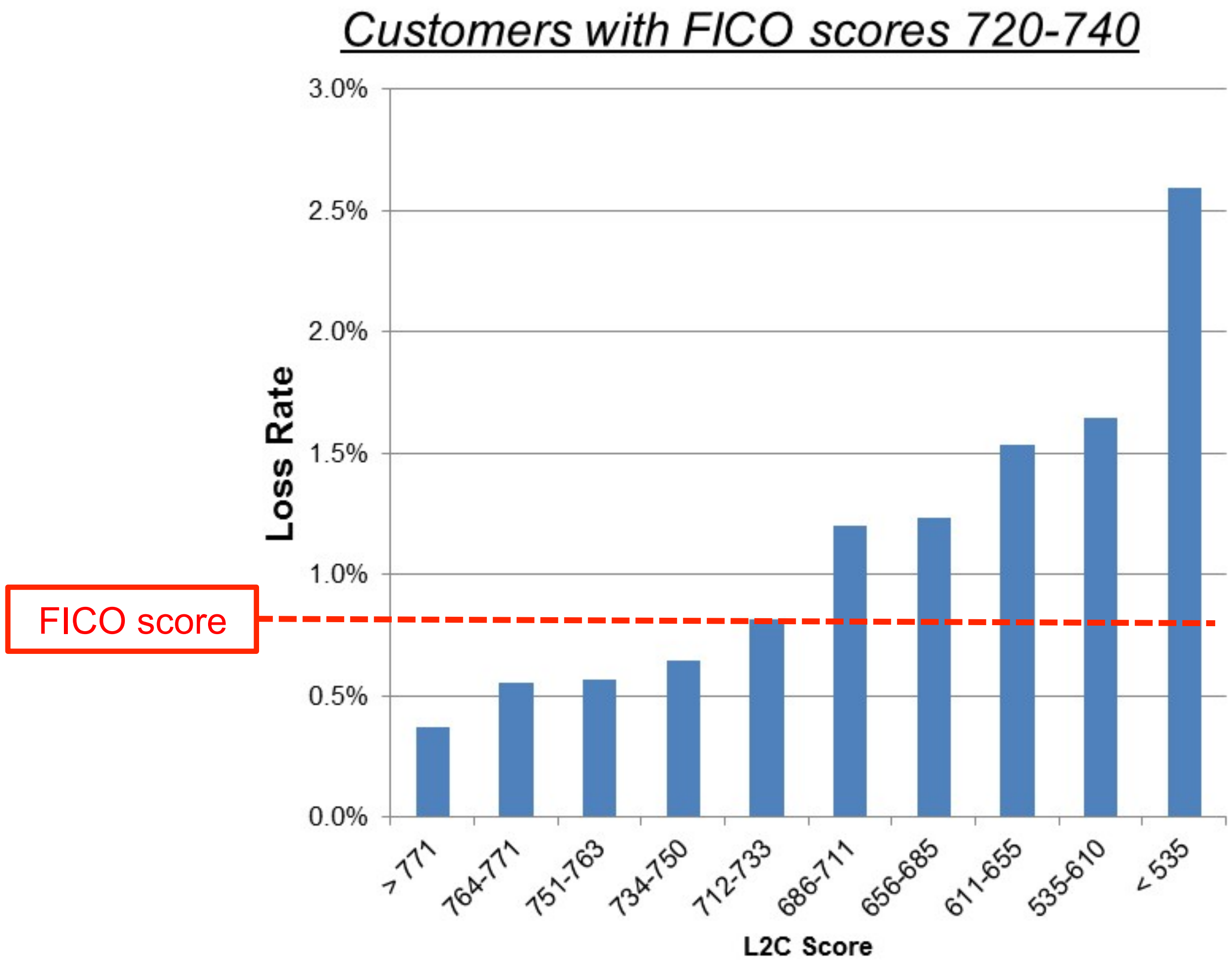
GreenSky™

The evolution of underwriting and the dawn of “Big Data”

Phase 1.0	Phase 2.0	Phase 3.0	Phase 4.0
Manual Underwriting	Automated Scoring (introduced bureau data)	Automated Scoring (powered by bureau AND alternative financial data sets)	Automated Scoring (now also incorporating social and other non-financial data)



New data sets provide considerable predictive ability over traditional variables alone

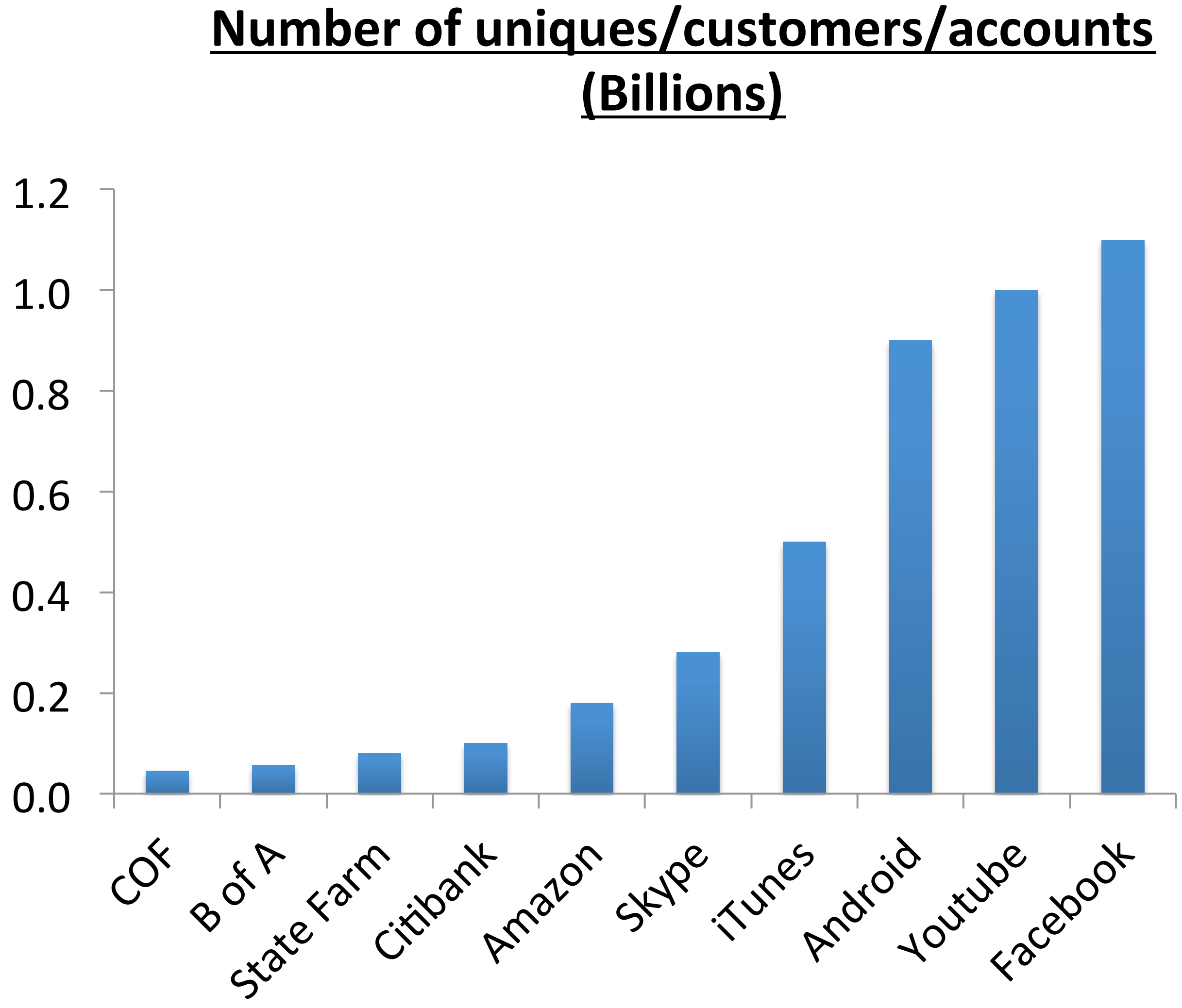


Non-traditional data

- Database of known frauds
- Debit acct behavior
- Payday loan applications
- Check cashing activity

Source: L2C

The internet has redefined the “big” in Big Data



- FI’s had bragging rights to Big Data in the ‘90s
- Their reach is an order of magnitude less than tech giants
- Bank data (assets, liabilities, payments) *does* have signal…
- But bank data is one signal out of many (geo, demo, interests, surfing, purchases, sku, etc)

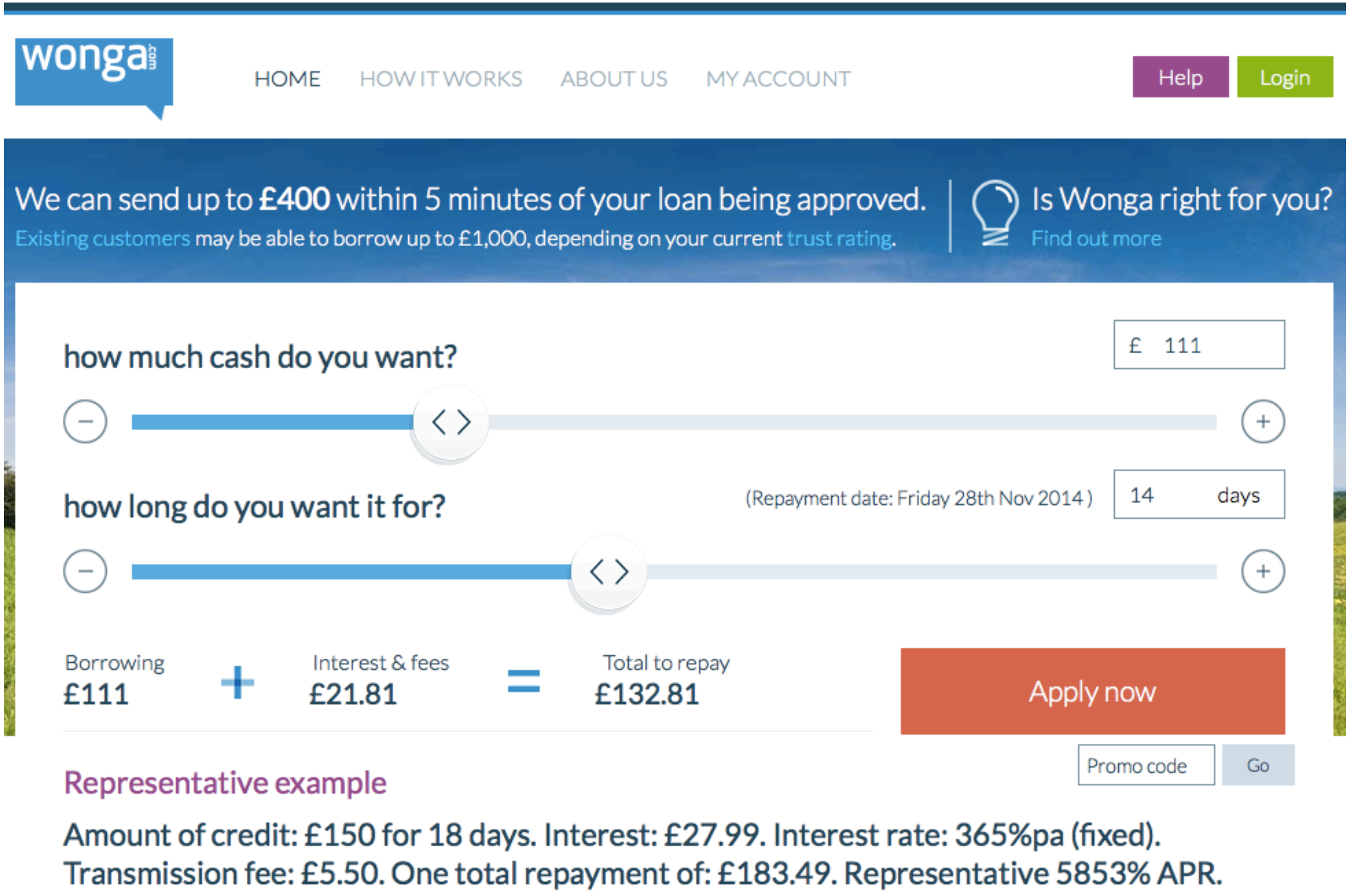
Source: company reports.

"Stage 4" BIG data is diverse and can be very impactful

Wonga uses over 8,000 distinct data points to price it's loans

Example – "Slider" data
Behavioral data from slider interaction – users that immediately "max out" have higher default risk

Other "Stage 4" data:
- Browser data
- Mobile device type
- Facebook data
- Time of day
- Search engine of choice (Google or Bing?)
- Time of day
- IP address / location



The US is struggling to make use of all the rich new data sources…but the rest of the world shouldn't have the same problem!

<u>Untouchable data per US regulation:</u>

- Education data
- Can't require a checking account (or ACH payments) as a condition of extending credit
- Age data (unless Seniors automatically get best "class")
- Occupation data
- Demographic / Zip code data
- Facebook data
- Other social media data (imagery reveals age, gender, race)

Blocked in the US, but leveraged for innovation abroad

…and there are new data sources emerging everywhere that will have <u>fantastic predictive power</u> that aren't useable in the US but are opportunities globally!

The result in the US is a complicated and still evolving regulatory structure

QED INVESTORS

Dotted line indicates authority to request information but no examination authority

Green indicates new agency or new power authority

Blue indicates old agency

Agencies and powers

OFAC/FinCEN

Financial Stability Oversight Council

Identify risks to the financial stability of the U.S. from activities of large, interconnected financial companies. Authority to gather information from financial institutions. Make recommendations to the Fed and other primary financial regulatory agencies regarding heightened prudential standards.

State regulatory Authorities and AG's

Power to enforce rules promulgated by CFPB

SEC

Regulate securities exchanges, mutual funds and investment advisers. Examination authority for broker-dealers

Authority over security based swaps, security-based swap dealers and major security-based swap participants.

CFTC

Market oversight and enforcement functions.

Authority over swaps, swap dealers and major swap participants.

Regulates tracing markets, cleaning organizations and intermediaries.

Office of Comptroller of the Currency

Safety and soundness. Primary regulator of national banks and federal savings associations. Examination authority. Examines loan portfolio, liquidity, internal controls, risk management. Audit, compliance, foreign branches

Federal Reserve

Safety and soundness. Supervisor for bank holding companies: monetary policy, payment systems.

Supervisor for systemic FIs and their subsidiaries.
Establish heightened prudential standards on its own and based on Council recommendations.
Examination authority.

Office of Financial Research

Office within Treasury, which may collect data from financial institutions on behalf of Council. No examination authority.

FDIC

Protecting deposits through insurance fund, safety and soundness, manage bank receiverships.

Examination authority.
Orderly liquidation of systematically important financial institutions.

FINRA

Regulates brokerage firms and registered securities representatives. Examination authority over securities firms.

Bureau of Consumer Financial Protection

Protecting consumers in the financial products and services markets

Investment Advisory
Mutual/ money mkt funds, wealth mgmt, trust svcs

Derivatives
Futures, commodities and derivatives

Consumer Lending
Credit cards, auto and student loans

Commercial Lending
Commercial and industrial lending

Broker-dealer
Inst. & retail brokerage, prime broker svcs, securities lending

Retail Banking
Deposit products, mortgages and home equity

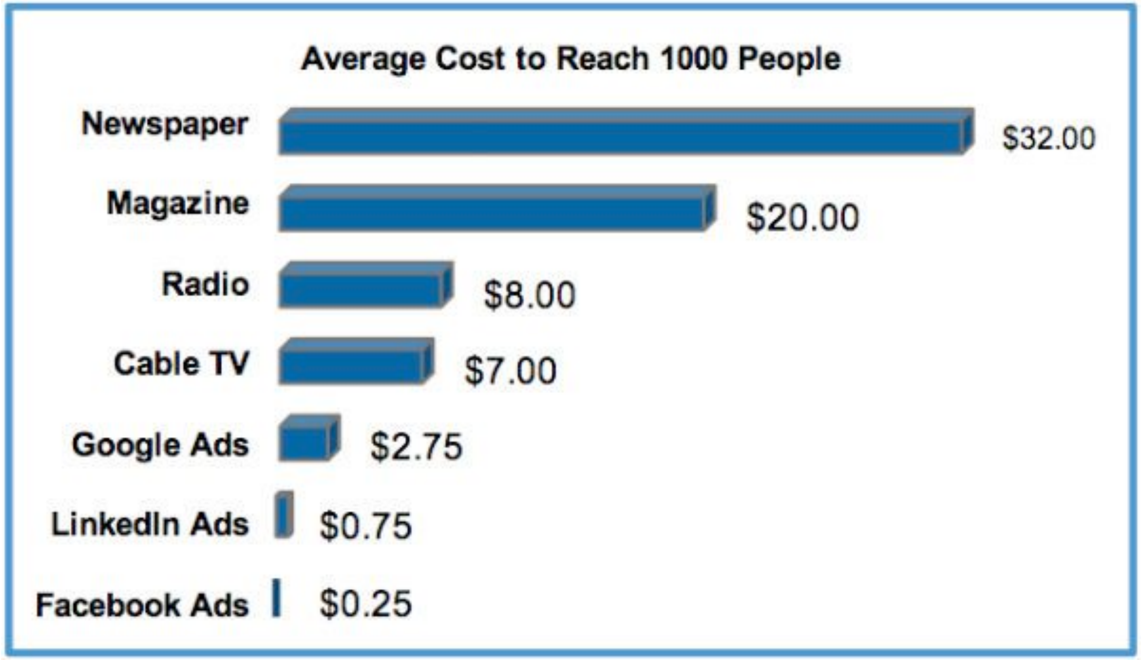
Alternative Investments
Hedge funds, private equity

Investment Banking
Securities, U/W, M&A financial advisory services

Payment and Clearing Sys.
Processing, custody &clearing

Source: JPMorgan Chase investor presentation at 9/14/10 Barclays conference

New data sources create leverage for marketing and operations – not just underwriting



Dramatically better tools and platforms emerging to enable marketing teams to drive down CPA and improve yield throughout the lifecycle

Marketing value

- New platforms and 3rd party data are driving down cost to acquire
- New channels emerge to reach higher yield customers / more valuable segments

Operations value –

- Complimentary tools and similar data also allow for improved operations down the funnel
- Opportunities emerge to improve all aspects of the customer experience through personalization

Source: Content Marketing Institute

Déjà vu all over again?

- MBNA

  …develops credit scoring models to evaluate common applicant characteristics and their correlation to credit risk and utilizes such models in making credit assessments. Less than half of the credit applications received by the Corporation were approved. Analysis is derived from previous experiential data and makes use of credit scores and other statistical techniques.

- Providian

  …business strategy is dynamic risk management capabilities, which utilize proprietary technology and business processes to optimize the balance between risk and return. The Company's internally-generated customer segmentation and credit risk models are applied and continually updated to address the individual customer's risk profile in product pricing, account management and collections. The Company uses television, the Internet and alternative media to market to consumers and establishes pricing and credit limits based on the customer's credit profile and loan feature preferences and on the Company's profitability and risk guidelines.

- NextCard

  …an Internet-based provider of consumer credit combining expertise in consumer credit, an exclusive Internet focus and sophisticated direct marketing techniques with the aim of attracting profitable customer segments on the Internet. We have developed a set of underwriting criteria based on risk models utilizing industry data as well as our own internally developed decision rules and analytic techniques. Our underwriting, risk management and pricing policies are designed to balance credit risk and potential profitability by adjusting the interest rate, credit limit and required minimum balance transfers offered to a particular customer.

- Metris

  …uses internally and externally developed models to supplement our evaluation of consumers. These models help segment prospects into unique credit groups within each FICO score range, allowing us to better evaluate individual credit risk and to tailor our product and pricing accordingly. We believe that our proprietary models give us a competitive advantage in evaluating the credit risk of middle-market consumers. We monitor the performance of the proprietary models and continually re-evaluate the effectiveness of these models in segmenting credit risk, which results in further refinements in our targeting and selection strategy.

Source: Company 10K filings

Simply paying lip service to "data" was not a magic wand…and won't be today

- MBNA -- sold to Bank of America in 2005 for $35 billion

  WSJ Dec 2009- BofA…cards also lost $4.5 billion during that same period, making it the worst-performing Bank of America business line. It also had a default rate higher than other major rivals, at 13%

- Providian -- Sold to Washington Mutual in 2005 for $6.5 billion

  FORTUNE March 2002, There once was a company that invented a business, and it made a lot of people a lot of money. But it was also doing some crummy things. It made a quiet accounting move that shook Wall Street's confidence. Top execs started selling stock. The share price cratered. The CEO abruptly resigned…Signing up ever-riskier customers was a terrible mistake.

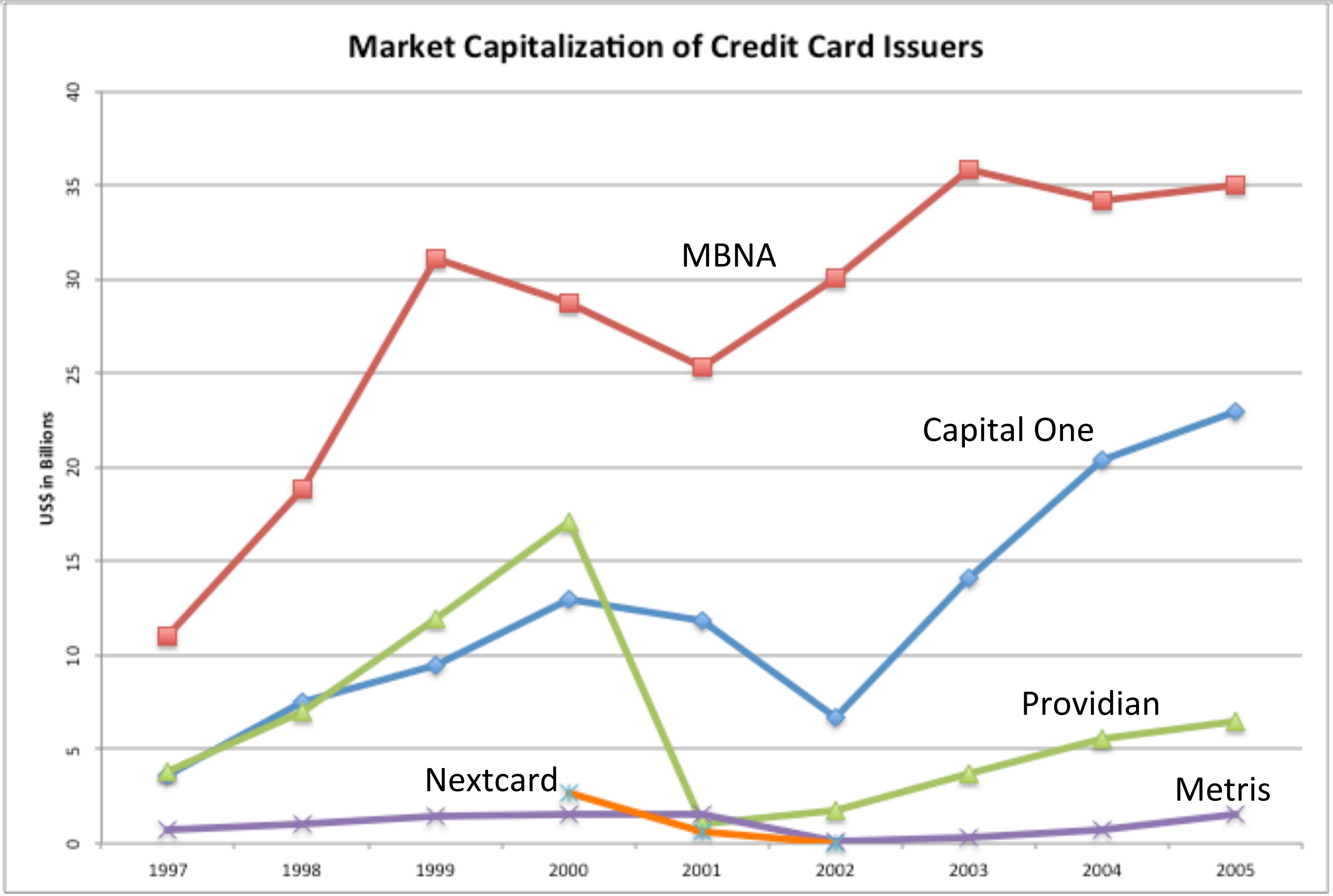
- NextCard -- Filed for bankruptcy November, 2002
  - On February 7, 2002, the Office of the Comptroller of the Currency ("OCC") closed NextBank and appointed the Federal Deposit Insurance Corporation ("FDIC") as receiver for NextBank

- Metris -- Sold to HSBC/Household in 2005 for $1.6 billion

  "The company finds itself in this precarious position partly because of the economy but also because of a decision that was made in 2001 to extend the credit limits of the company's most profitable customers," wrote Julie Forster in the *Star Tribune* in March 2003.

  Metris' Direct Merchants Credit Card Bank subsidiary agreed to make operational changes at the behest of the Office of the Comptroller of the Currency (OCC), the chief regulator of the credit card business. Losses for 2002 totaled $33.9 million. Stock traded between $1 and $2 per share.

The market was ruthless to the insincere – we shouldn't expect it to be different today



Source: Company 10K filings and QED analysis

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So what? Where do we look next?

1. Is there a valuation bubble (3 S1's filed)?

2. Is it a given that innovators will continue to succeed? Will they hit critical mass?

3. Will lenders and originators survive a recession?

4. Will funding dry up when rates rise?

5. Will early innovators simply be absorbed back into the chain via acquistion by big banks? Which ones will hit escape velocity? Which will build national brands? Will they become banks (think COF)?

Invite me back next year and I'll tell you what happened!