

FinTech: Shaping the Financial World

April 22, 2020

Class 7: Overview

- Facebook Libra Update
- Credit Sectors & Market Design
- Earlier FinTech - Credit Cards
- Disruptive Tech Across Credit Value Chain
- FinTech Credit Competitive Landscape
- Marketplace Lending
- Credit Scoring & Alternative Data
- Professionalism & Academic Integrity

Class 7: Readings

- *'Apple Card: 12 Fintech Companies Driving Credit Card Innovation'*
Crunchbase
- *'Need a loan? There's a tech company for that'* Jason Abbruzzese, NBC
- *'Get to Know Your Marketplace Lenders'* American Banker
- *'Alternative Data Across the Loan Life Cycle: How FinTech and Other Lenders Use It and Why'* Experian

Class 7: Study Questions

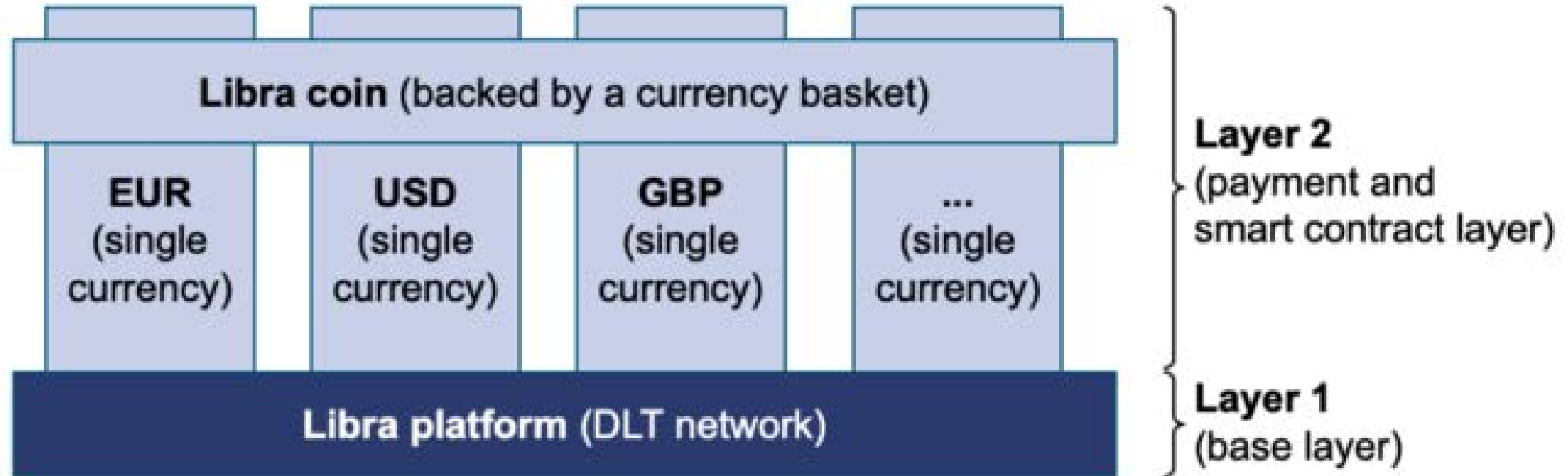
- How have Big Tech firms positioned themselves to offer credit and lending products to consumers and businesses?
- What is marketplace or peer-to-peer lending? What is point of sale lending? How might they change the provision of consumer credit and its competitive landscape?
- How is so-called 'Alternative Data' and machine learning changing the world of credit ratings and underwriting?

Libra vs. China DCEP



Name of currency	Libra	Digital Currency Electronic Payment (DCEP)
Issuer	Libra Association led by Facebook	People's Bank of China (PBoC)
Blockchain Type	Permissioned blockchain (accessible to association members only)	Centralized private network controlled by PBoC
Peg	Basket of currencies including USD, EUR, JPY, GBP and SGD	Renminbi (RMB)
Status	Release Date TBC	Release Date TBC

Libra 2.0



Source: 'Understanding Libra 2.0: A compliant global platform for the digital programmable EUR, USD, GBP & Co.', Philipp Sandner (4/17/20)

Credit Sectors

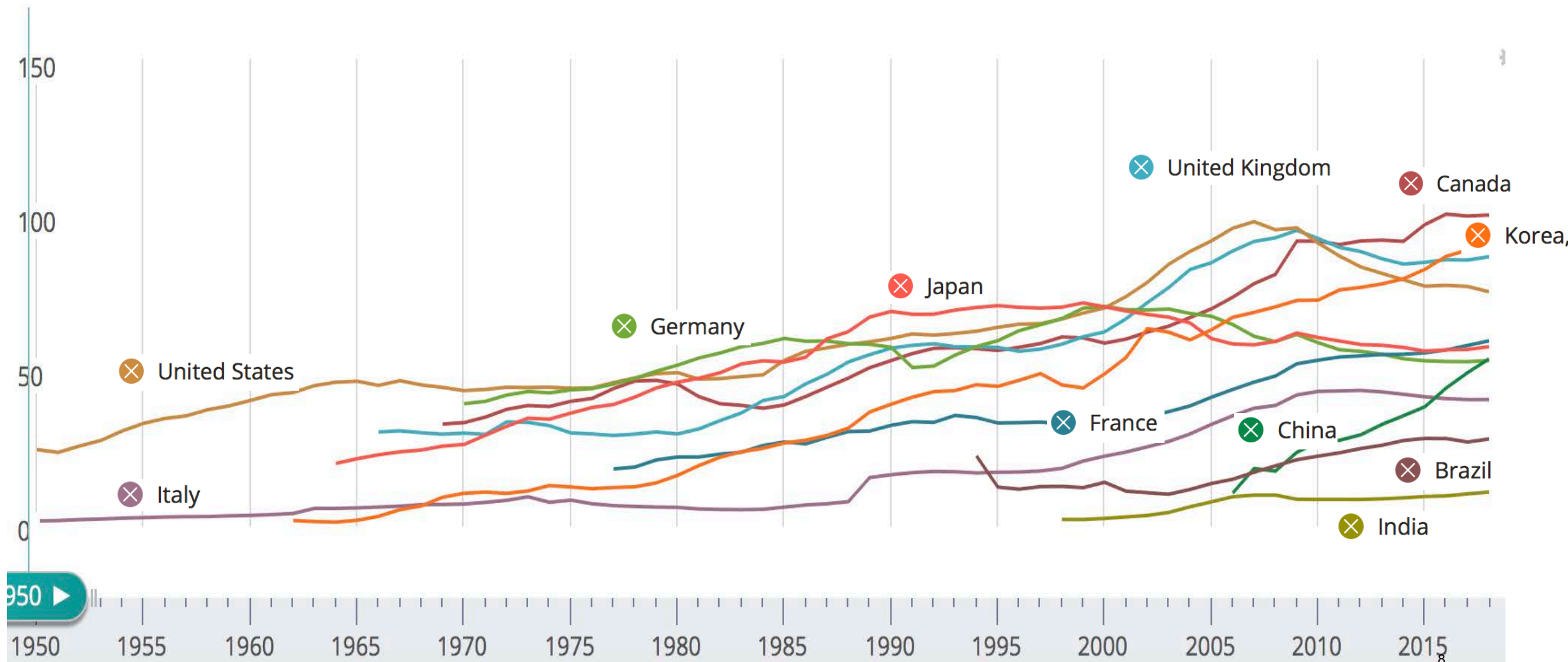
- Household:

- Mortgages, Auto, Credit Card, Personal Loans, Student Loans
- Super Prime, Prime, Subprime
- Secured, Unsecured, Term, Revolving
- Purchase, Debt Consolidation, Refinance, Point of Sale

- Corporate:

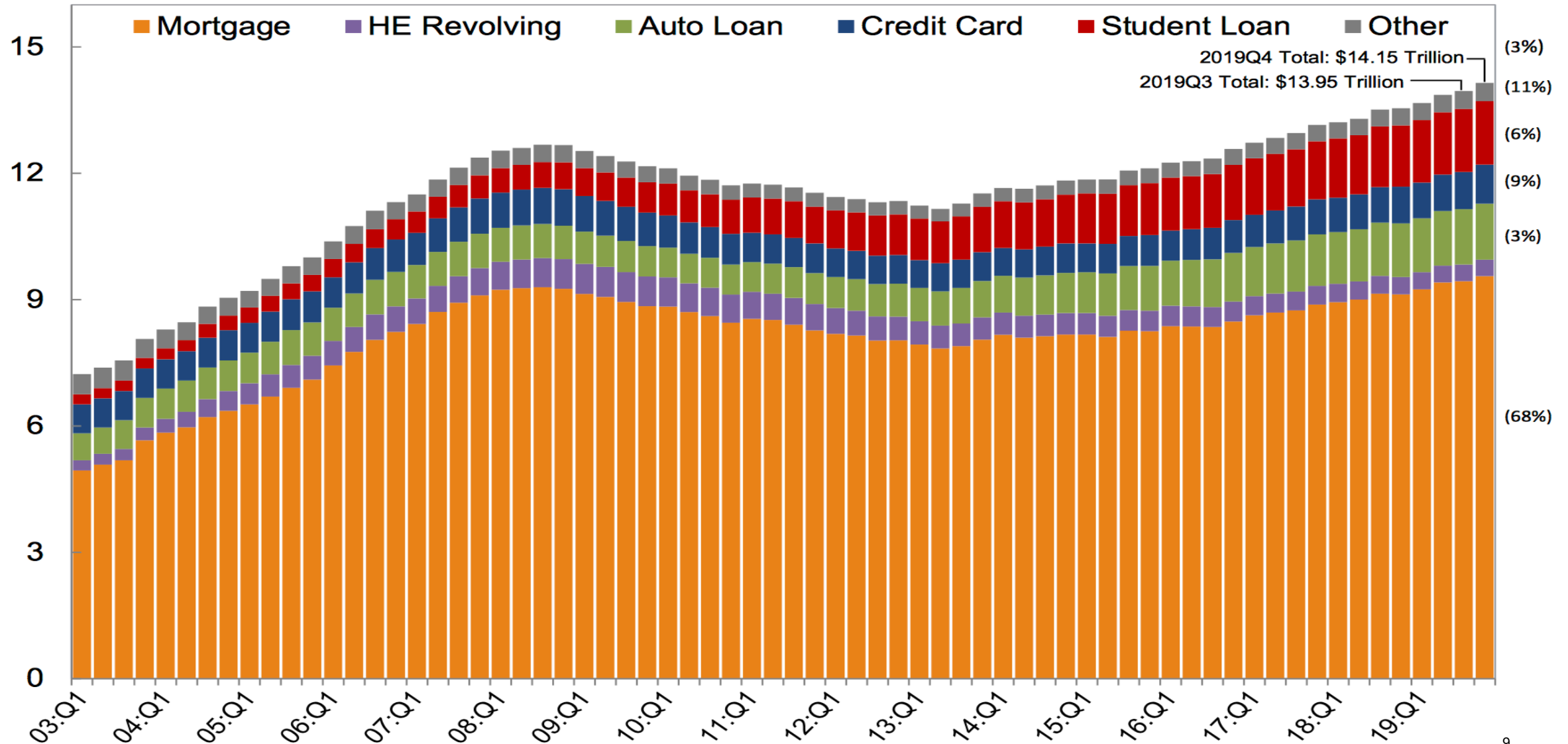
- Small Business, SBA Loans, SME / Mid Market, Large Enterprise
- Bonds, Loans
- Investment Grade, High Yield, Leveraged Loans
- Unsecured - Cash Advance, Purchase Credit, Working Capital
- Secured - Floor Plans, Invoice Factoring, Inventory Finance

Household Debt as Percent of GDP



Total Debt Balance and its Composition

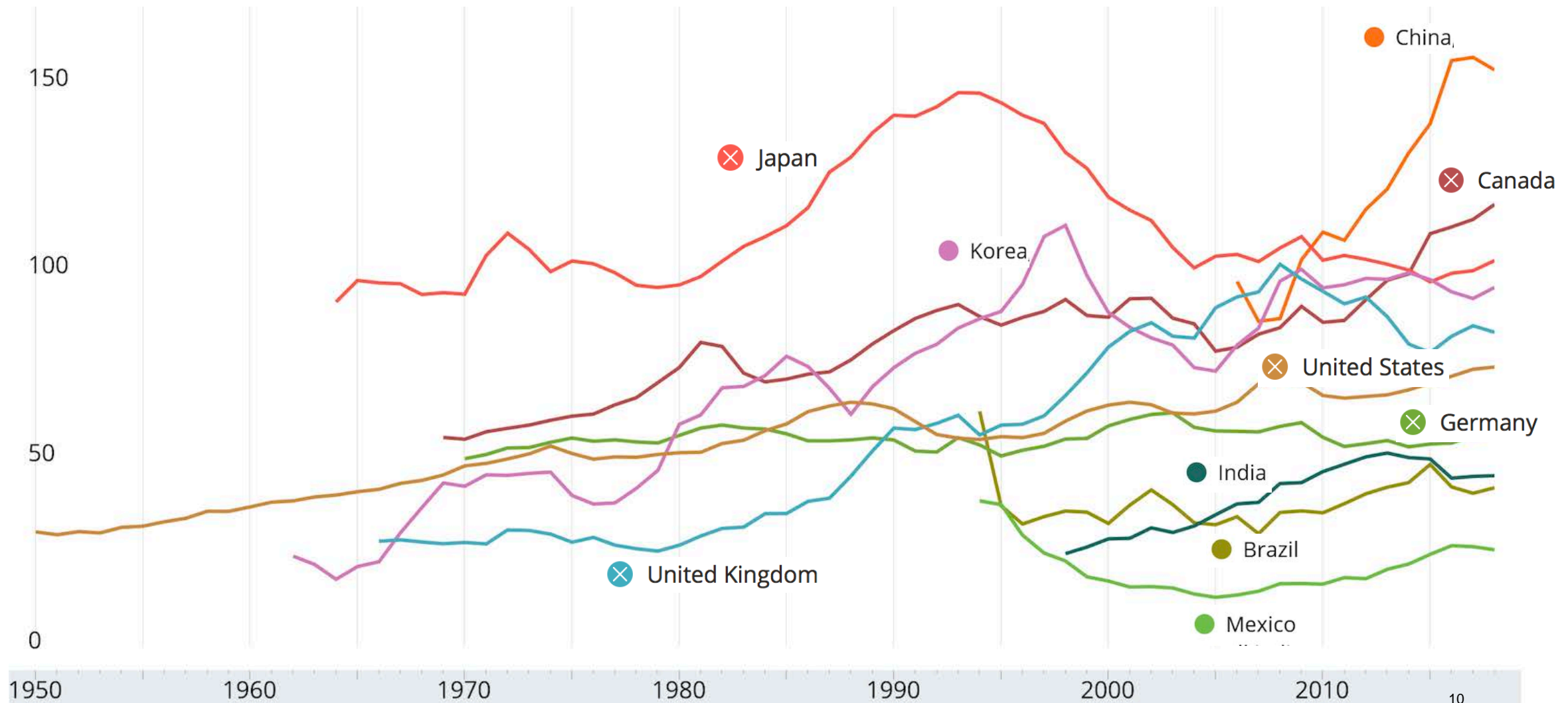
Trillions of Dollars



Source: New York Fed Consumer Credit Panel/Equifax

Courtesy of the Federal Reserve Bank of New York. Used with permission.

Non Financial Corporate Debt as % of GDP



Credit & Lending: Market Design

Data

- Alternative Data, Credit Scoring, Cross Selling, Marketing & Underwriting

Funding

- Balance Sheet, Securitization, or Issuer Bank Partner

Marketing Channels

- User Experience & User Interface

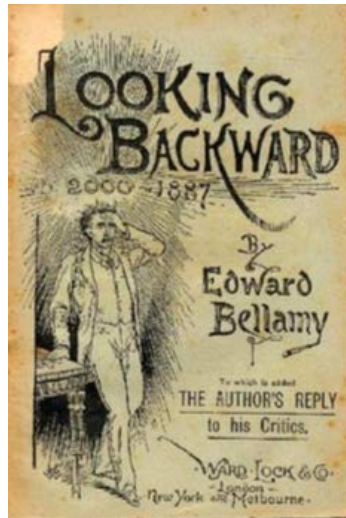
Risks

- Credit / Default, Market (Basis, Rate, Spread, Volatility), & Prepayment
- Funding, Liquidity, Model, Operational, & Reputational / Compliance

Roles

- Brokerage / Origination, Underwriting, Credit Enhancing, Securitizing, Credit Rating, Appraising, Servicing, Collecting / Foreclosing, & Funding

Credit Cards & Charge Coins



Term 'Credit Card'
Edward Bellamy's
Science Fiction
'Looking Backward'
1887

Book cover in the public domain.



Charge Coins &
Charge-Plates
Late 1880s – 1960s



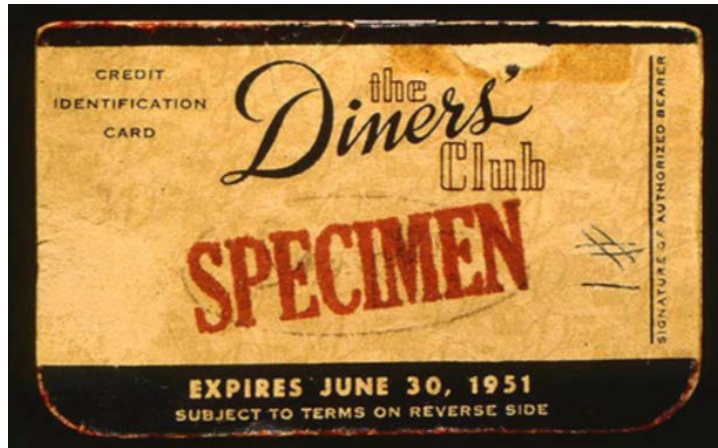
Merchant Credit Cards
Late 1920s – 2000s



First Bank Card
Charge-It
Flatbush National Bank
Brooklyn, 1946

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Credit Cards



**First General Merchant Card
Diners' Club
1949**

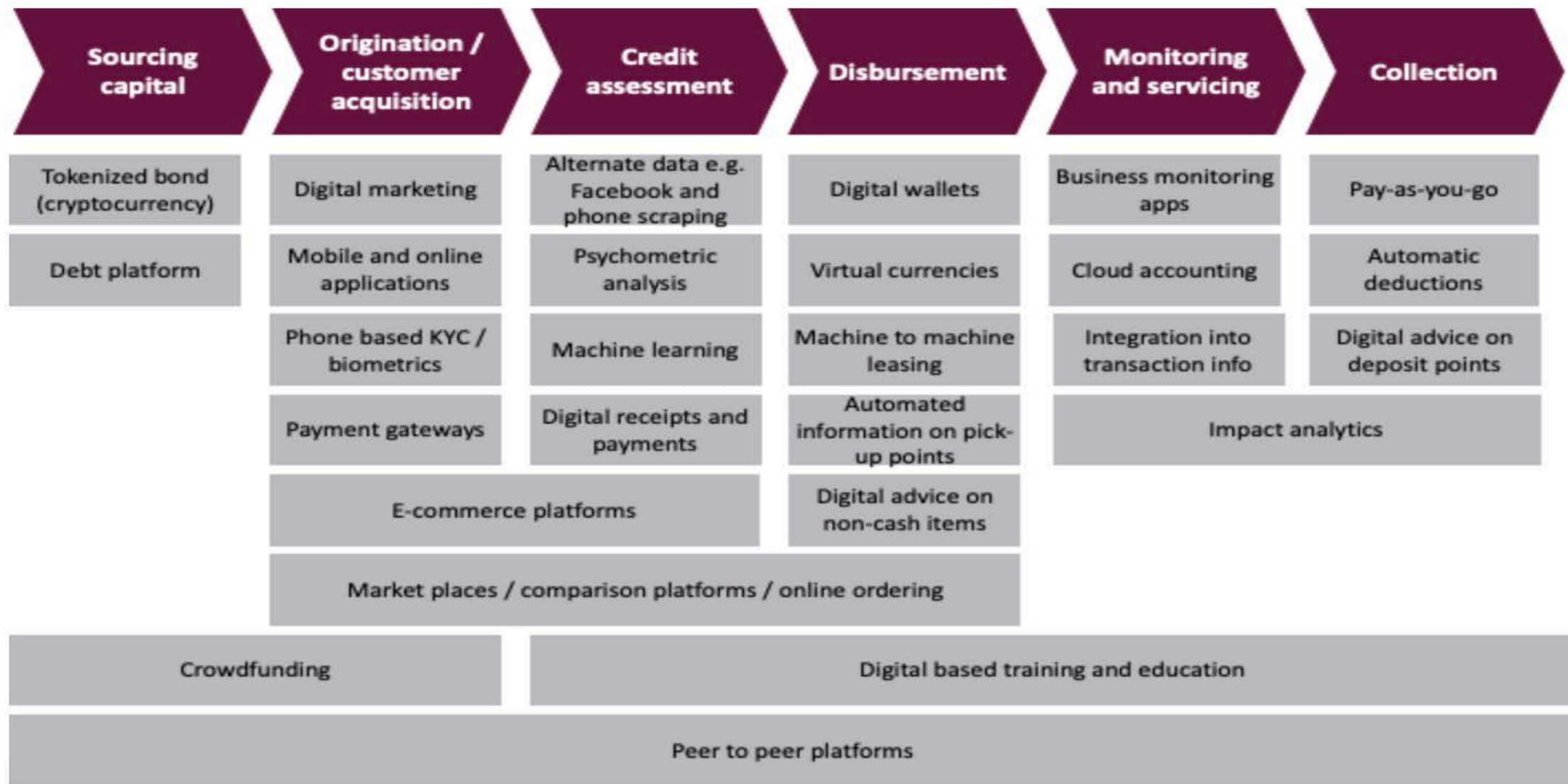


**American Express
First Plastic Card
1959**



**Bank of America
First General Purpose
Credit Card
1966**

Disruptive Tech Across Credit Value Chain



FinTech – Payments & Credit

Big Tech



2003



2007



2007



2011



2013



2014



2014

Payment Unicorns



Credit Unicorns



FinTech SME Lending Companies

- Alipay
- Amazon
- BlueVine
- Brex
- C2FO
- DPO
- Fundbox
- Foundation
- Funding Circle
- Intuit
- Kabbage
- Lendio
- Payoneer
- PayPal
- Prosper
- Seed
- Square
- Stripe
- Tencent WeBank
- Toast
- Upserve

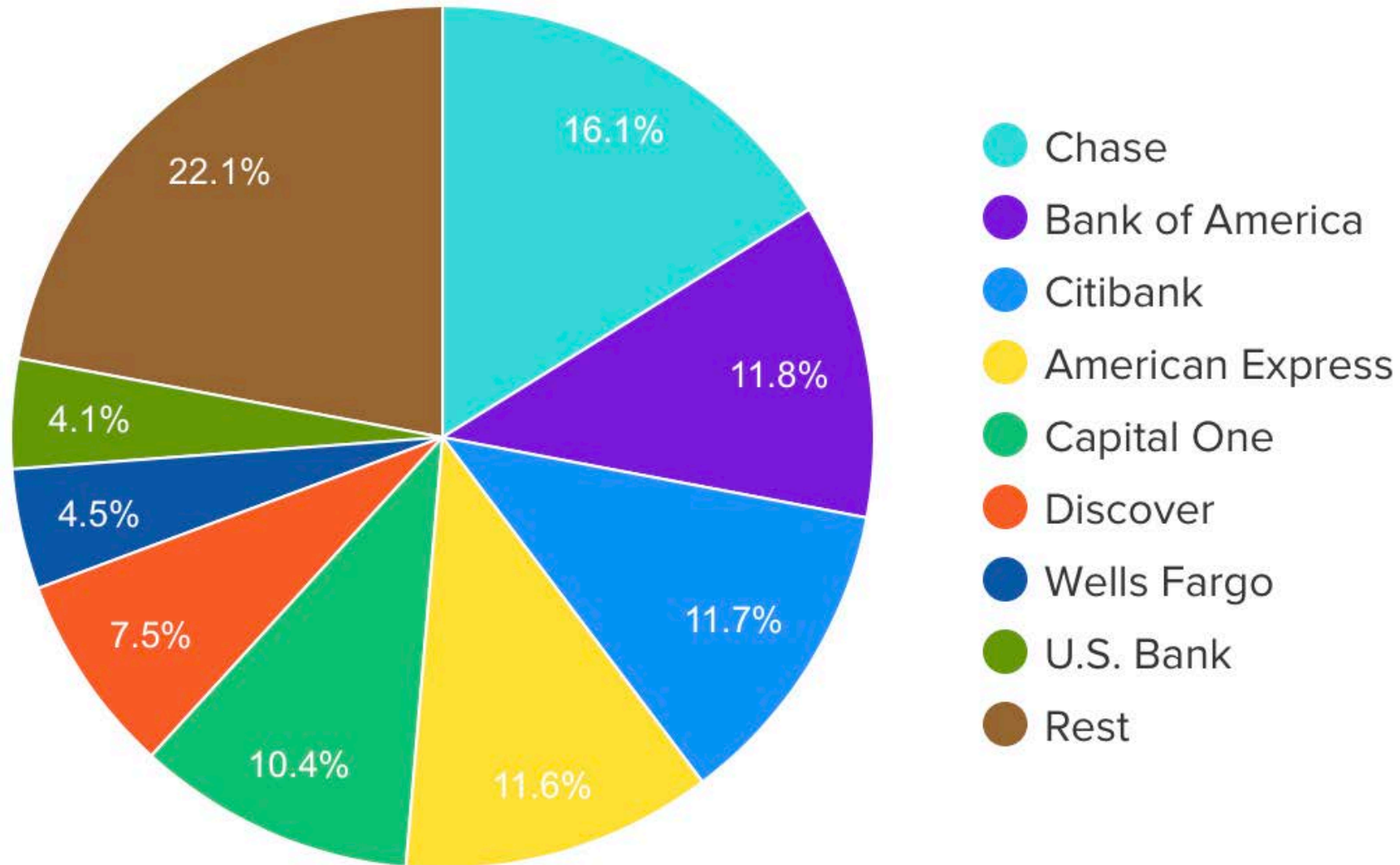
AvidXchange, Tradeshift, TripActions

Largest U.S. Mortgage Lenders – 2018 (out of \$1.7 Trillion Originated)

• Wells Fargo	258,762 loans	\$83.4 B
• Quicken	375,656 loans	\$81.4 B
• JP Morgan Chase	187,642 loans	\$57.7 B
• Bank of America	192,652 loans	\$55.2 B
• United Wholesale Mortgage	145,579 loans	\$41.6 B
• LoanDepot	124,027 loans	\$32.0 B
• U.S. Bank	132,253 loans	\$29.5 B
• Caliber Home Loans	104,037 loans	\$29.1 B
• Fairway Independent Mortgage	105,780 loans	\$24.9 B
• Flagstar Bank	73,087 loans	\$19.6 B

Source: 'Here are the top 10 mortgage lenders of 2018'
Housing Wire (9/6/19)

Market Share by Credit Card Issuer

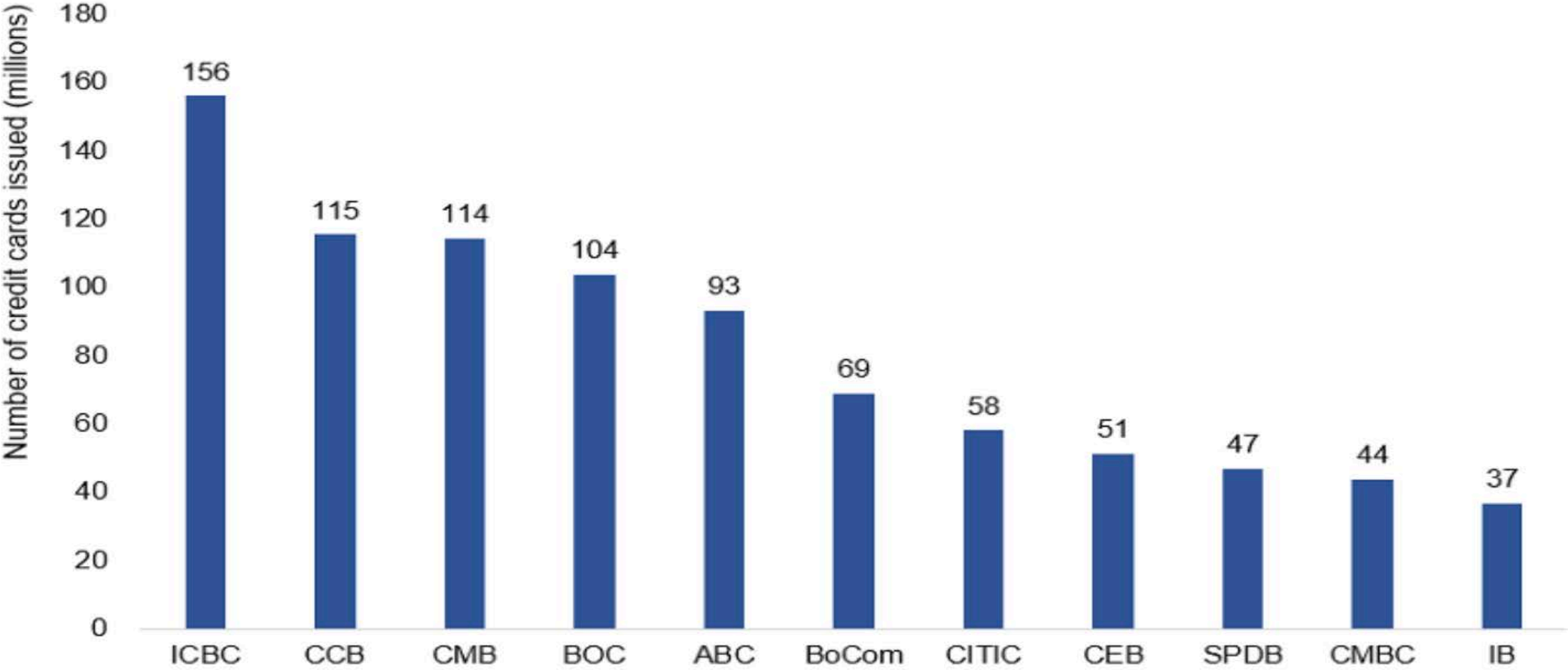


Note: Nilson Report and Federal Reserve data on outstanding credit card balances, as of Dec. 31, 2018

Courtesy of WalletHub. Used with permission.

Source: 'List of Credit Card Companies, Card Networks & Major Cards', WalletHub (1/13/20)¹⁸

Leading Chinese Credit Card Issuers

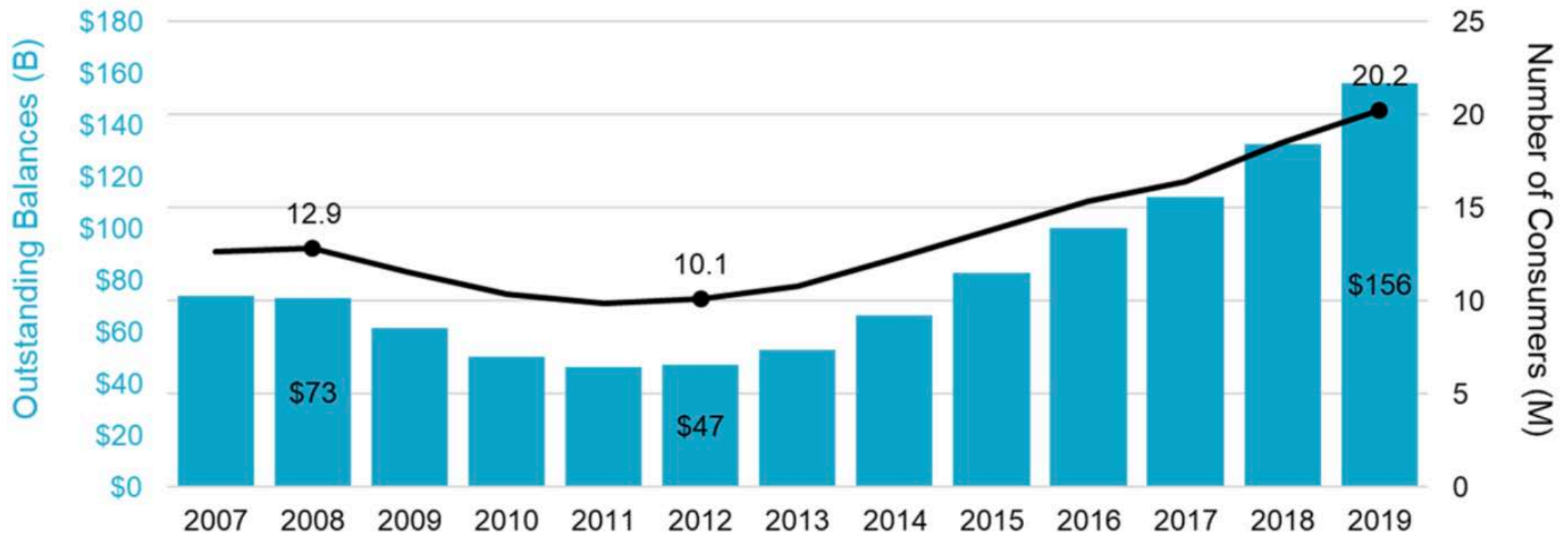


Note: ICBC = Industrial and Commercial Bank of China, CCB = China Construction Bank, CMB = China Merchants Bank, BOC = Bank of China, ABC = Agricultural Bank of China, BoCom = Bank of Communications, CITIC = China CITIC Bank, CEB = China Everbright Bank, SPDB = Shanghai Pudong Development Bank, CMBC = China Minsheng Banking Corporation, IB = Industrial Bank
Source: Asian Banker Research

Source: 'Despite rapid digitisation of payments in China, credit card usage will reach new heights by 2020', The Asian Banker (2/28/19)

U.S. Unsecured Personal Loans

Total Unsecured Personal Loan Balances and Consumers, Q3 Each Year



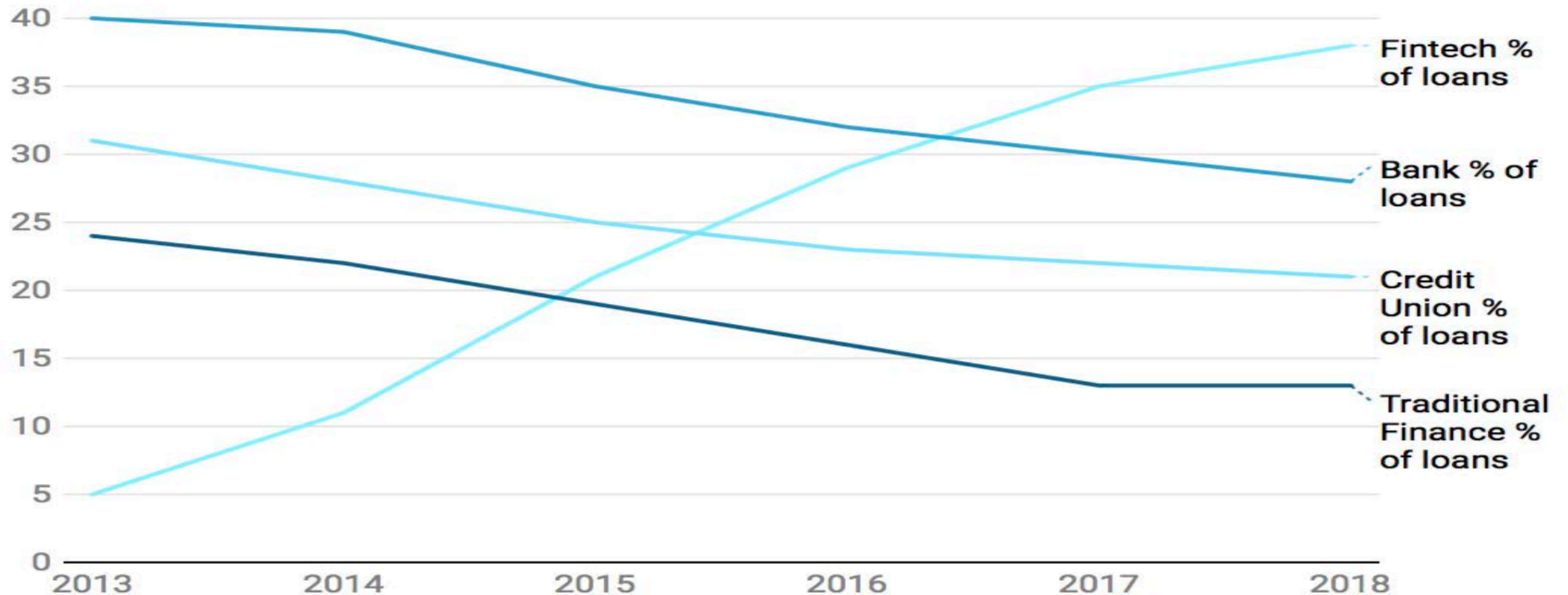
Source: TransUnion consumer credit database

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Personal Loan Industry Trends

Percentage of total unsecured personal loan balances originated by fintech vs. others



Source: TransUnion • [Get the data](#) • Created with Datawrapper

FinTech Personal Loan Companies

- **Affirm**
- **Afterpay**
- **Avant**
- **GreenSky**
- **Klarna**
- **Lending Club**
- **Lending Tree**
- **Marcus (by Goldman Sachs)**
- **Monzo**
- **Nubank**
- **Prosper**
- **Revolut**
- **Rocket Loans**
- **SoFi**
- **Square Installments**
- **Upstart**

Private Student Loan Originators

- **Ascent**
- **Citizens Bank**
- **College Ave**
- **CommonBond**
- **Credible (comparison shopping)**
- **Discover**
- **Earnest**
- **EDvestinU**
- **INvested**
- **LendKey (partners w/ banks)**
- **MPower**
- **Navient**
- **Prodigy**
- **Sallie Mae**
- **Sofi**
- **SunTrust Bank**
- **Wells Fargo**

Marketplace Lending - Lending Club

Online Fee Based Platforms Connecting Borrowers with Investors

Borrowers

3M+

Mainstream Consumers¹

600-850

FICO Range²

\$68K

Median Income³

15.9%

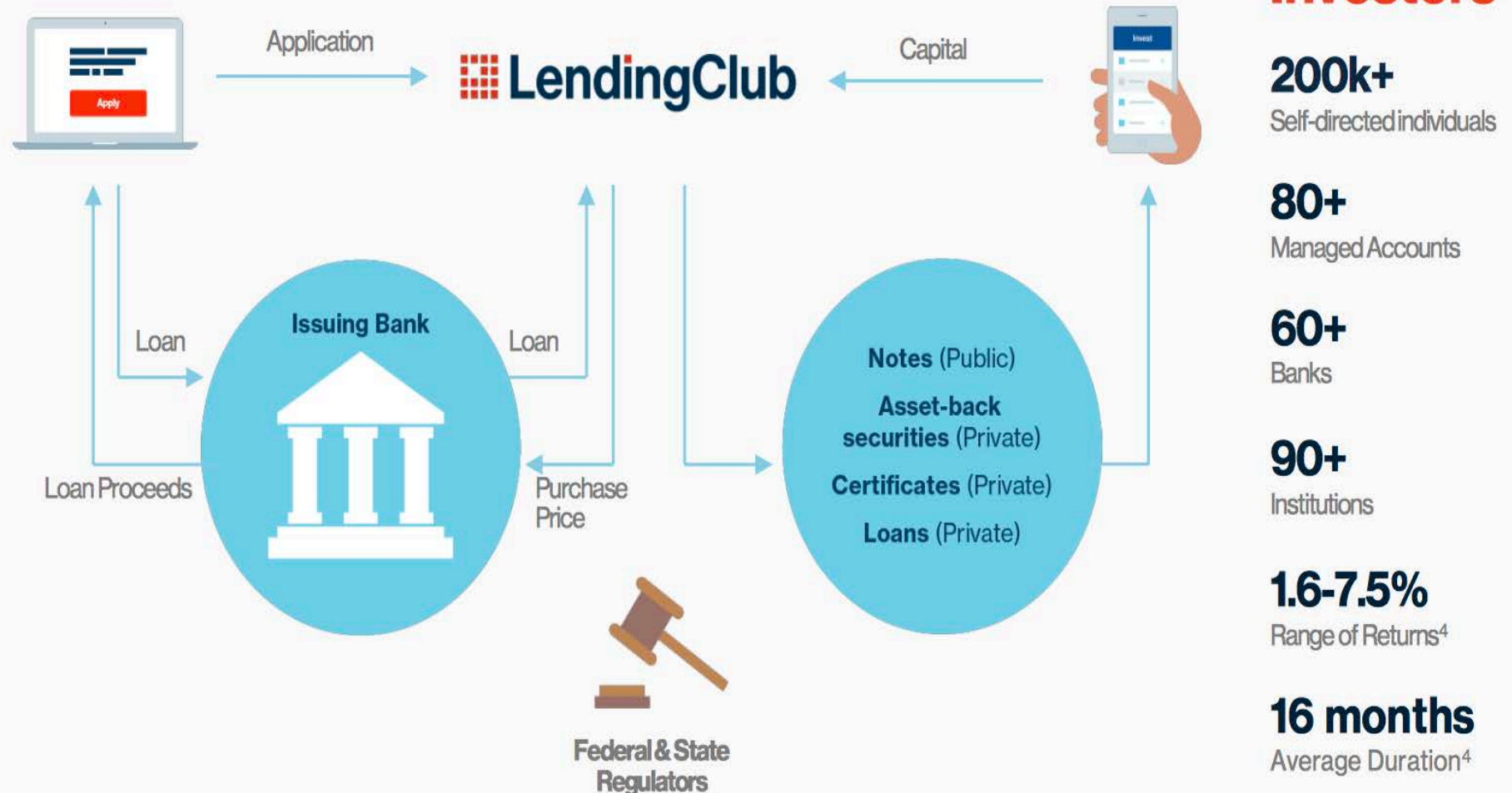
Average APR³

up to \$40k

Loan Size³

\$16k

Average Loan Size³



Investors

200k+

Self-directed individuals

80+

Managed Accounts

60+

Banks

90+

Institutions

1.6-7.5%

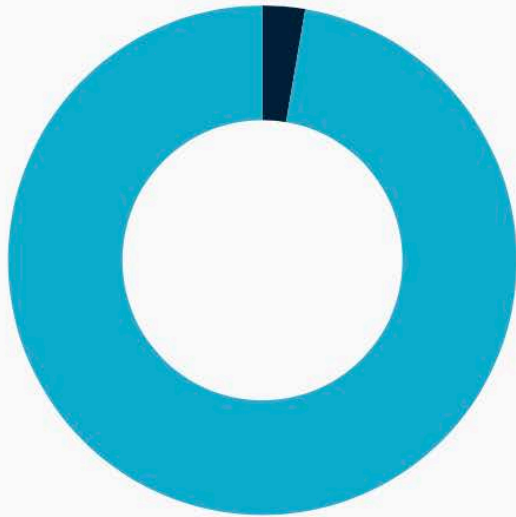
Range of Returns⁴

16 months

Average Duration⁴

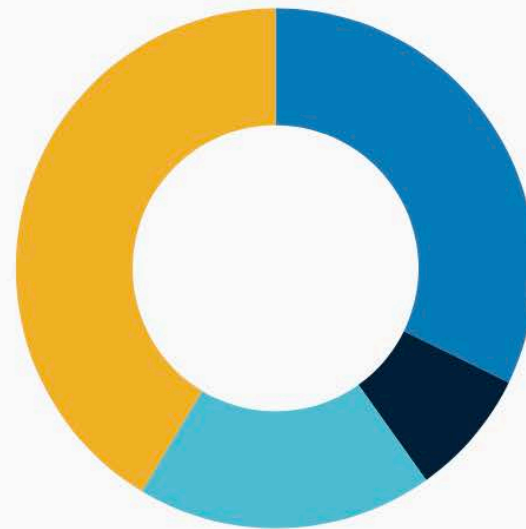
Lending Club

2010



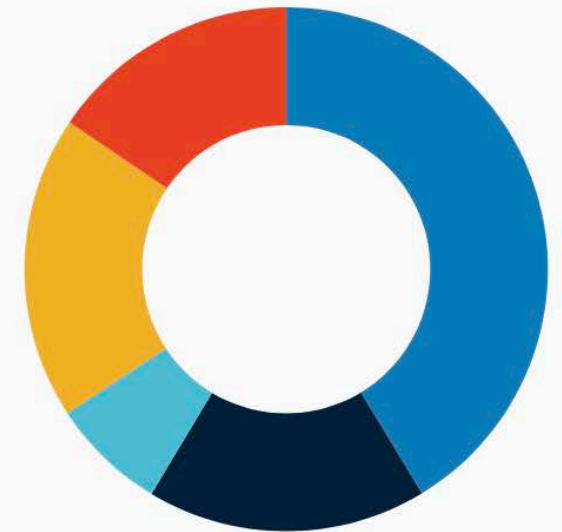
\$102.2M originations facilitated
<10 Banks and Other Institutional
<30K Self-directed retail investors

2014



\$4.4B originations facilitated
>70 Banks and Other Institutional
>90K Self-directed retail investors

2018



\$10.9B originations facilitated
>230 Banks and Other Institutional
>200K Self-directed retail investors



China Peer to Peer Lending

- 343 Companies, down from 2680 in 2016 per 493 B yuan (\$70 B) loans outstanding down from 1.3 T yuan (\$189 B)
- November 2019 Announced new P2P lender regulations
 - Require 1 B yuan Capital
 - Only Institutional Funding
 - Or must exit business

Credit Scoring

- Fair Isaac Corporation (1989), Vantage (2006)
- National Credit Reporting Cos: Equifax, Experian, Trans Union
 - Innovis, PRBC
- Other Screening Credit Reporting Cos:
 - Check and Bank (6), Employment (15), Gaming (1), Low Income (5), Personal Insurance (4), Medical (2), Retail (1) Supplementary (4), Tenant (7), Utilities (1)
- FinTech Startups:
 - Credit Score Services: Credit Karma, Credit Sesame, Credit.com, Mint, NerdWallet, Quizzle
 - Data Aggregation: Envestnet | Yodlee, Finicity, Plaid

Professionalism & Academic Integrity

- Success goes to those Prepared, Curious & Self Starters
- Respect & Courtesy builds Reputations, Networks & Trust
- Learning comes best to those who Listen as well as Talk
- Understanding Strategy and Paying Attention to Details both Matter
- Staying True to your Values is the best alternative
- Avoiding Plagiarism is not just an Academic Integrity Policy
 - It respects other Authors
 - It protects one's Grade, Job and Reputation

Be attentive, speak in class, keep your video on, and audio muted unless speaking
Proper attribution of quotes and paraphrasing is required

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