

FINTECH & RETAIL BANKING

Virginia Bankers Association



UNIVERSITY
of VIRGINIA

DARDEN SCHOOL
of BUSINESS



Company Overview



| | |
|---------------|---------------|
| CEO: | Barrett Burns |
| Headquarters: | Stamford, CT |
| Founded: | 2006 |

- VantageScore was founded by the three national credit reporting companies (Equifax, Experian and TransUnion) to develop highly accurate credit scoring models and provide competition in the market
 - VantageScore Solutions is an independently managed company that holds the intellectual property rights to the VantageScore model
 - The models are marketed and sold independently by Equifax, Experian, and TransUnion through licensing agreements with VantageScore Solutions
- The team leverages its decades of collective analytical and extensive credit data experience to develop cutting-edge, patented, and patent-pending techniques that can analyze extensive, anonymous consumer credit data — data that more accurately reflects current economic conditions

VantageScore Ownership



Industries Served



Bankcard

Credit scoring advancements in data, analytics, segmentation, governance, and consumer interaction can help issuers optimize portfolio performance. As borrower behaviors change to reflect demographic and economic shifts, card issuers can leverage these innovations to improve the bottom line.



Mortgage

The VantageScore model can uniquely improve a mortgage lender’s business while increasing responsible access to mortgage credit for consumers. By widening the window without lowering the bar in terms of credit standards, lenders can reach more qualified applicants.



Auto

In the auto industry, the VantageScore model provides significant predictive performance improvement for account management and originations across the risk distribution.

2019 Key Metrics

- Over 12 billion VantageScore credit scores used
- Over 4 billion VS credit scores used by credit card issuers
- 2.5k users, including 2.2 lenders
- 9 of 10 largest banks use VantageScore
- 20% CAGR since 2015

Unbundling of a European Bank





WORLD TOP COMPANIES

- **Microsoft**
- **Apple**
- **Amazon**
- **Alphabet**

A BRAVE NEW DIGITAL WORLD

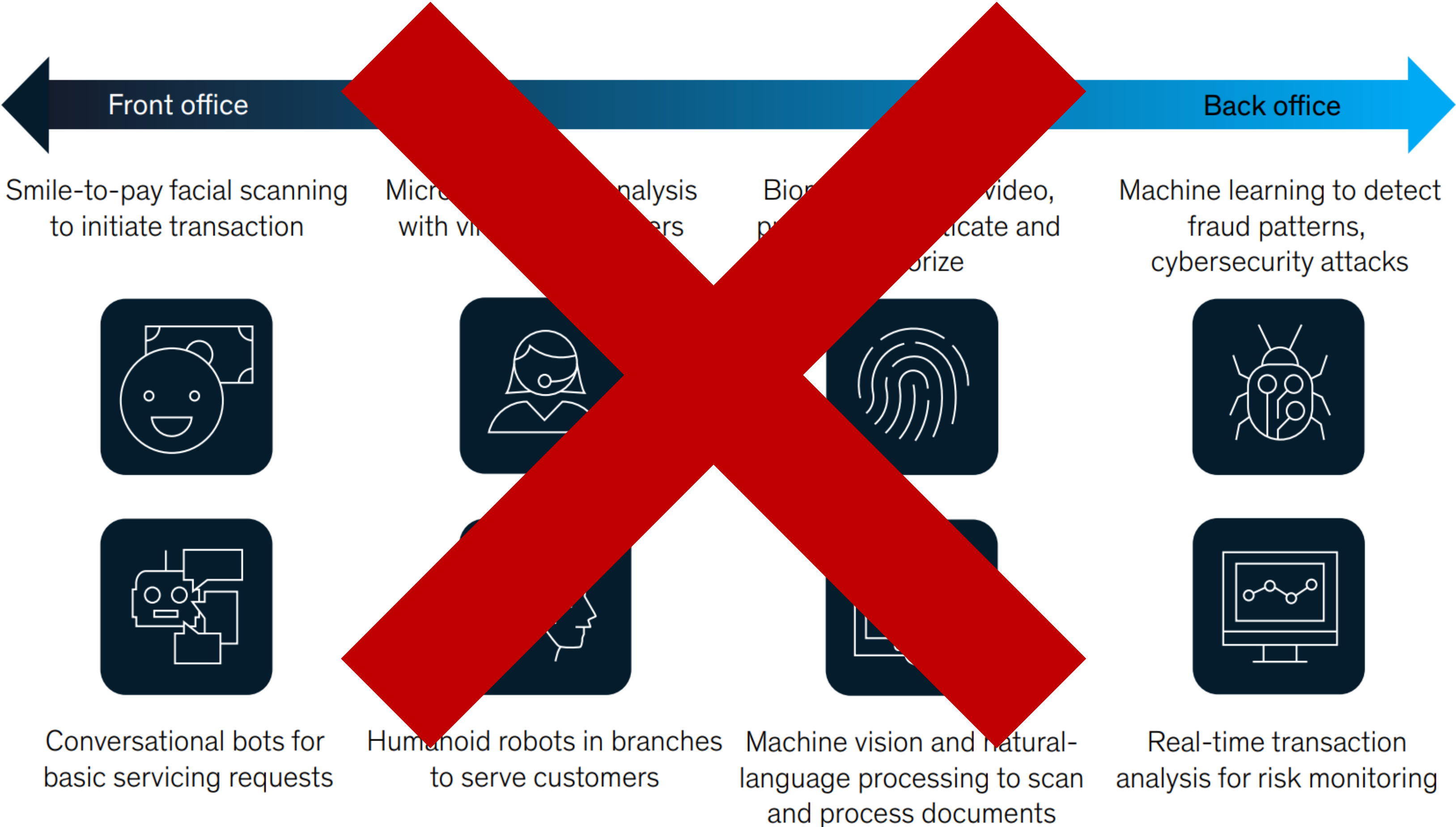
- Marginal cost of an additional digital transaction tends to zero
- Capital requirements to build a digital business are lower
- Opex & Capex to manage a digital business are lower
- Economies of scale
- Attention is the name of the game
- Value creation and value chains get upended

Enabled by: cloud computing, mobile computing, edge computing, AI/ML, APIs, open banking regulation/legislation, faster payment rails, blockchain/crypto

KODAK MOMENT

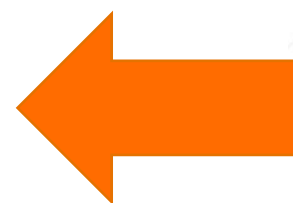
- Do you use any Kodak products today?
- Do you know that Kodak was the first company to invent a digital camera?
- Nokia
 - 2000: market cap of \$300 billion and revenues of \$28 billion
 - 2005: market cap of \$26 billion and revenues of \$2 billion
 - From 38% of the mobile phone market at the peak to <1% today

Banks are expanding their use of AI technologies to improve customer experiences and back-office processes.



Unbundling of a Bank





REDESIGNING RETAIL BANKING

First Principles

SPACE PROGRAMS

- **At the height of the Apollo program**
 - Average launch cost \$380 million
 - \$18,000 per kilo (2.2 lb) of weight
- **And that is after 60 years of innovations**
 - A lot of improvement over the original Apollo rocket design and...
 - About 1/3 reduction in costs...



SPACE PROGRAMS

ELON MUSK VERSION

- **Falcon Heavy Platform**
 - Average launch costs \$90 million
 - \$1,100 to get 1 kilo (2.2 lb) into space
- **Falcon Light Platform**
 - Average launch costs \$35 million



FIRST PRINCIPLES IN ACTION

VISA

- Average 6,700 transactions per second
- 3.5 billion cards
- 61 million merchants
- 200+ countries
- ~40 APIs

ALIBABA

- Average 120,000 transactions per second
- 81% of Chinese consumers
- 1.3 billion users
- 55 countries
- About 1,500 APIs to simplify management of online transactions.
- Introduction of QR code for P2P payments

FIRST PRINCIPLES IN ACTION

- **Kenya 2005**
 - 70% of population is unbanked
 - Physical infrastructure barriers
 - Banks are oldfashioned



FIRST PRINCIPLES: M-PESA



- Kenya 2020
 - ~100% of population is banked
 - 40% of the economy GDP moves through M-Pesa
 - 600 transactions per second

**FIRST PRINCIPLES
VS
DESIGN BY ANALOGY
IN RETAIL BANKING**

RETAIL BANKING STACK



Front End or Customer-Facing Side

deposits and customer accounts, payments, and credit

Bank's Balance Sheet and the Infrastructure

checking accounts, payments and credit

Underlying Infrastructure of Services and Software

the various balance sheets together

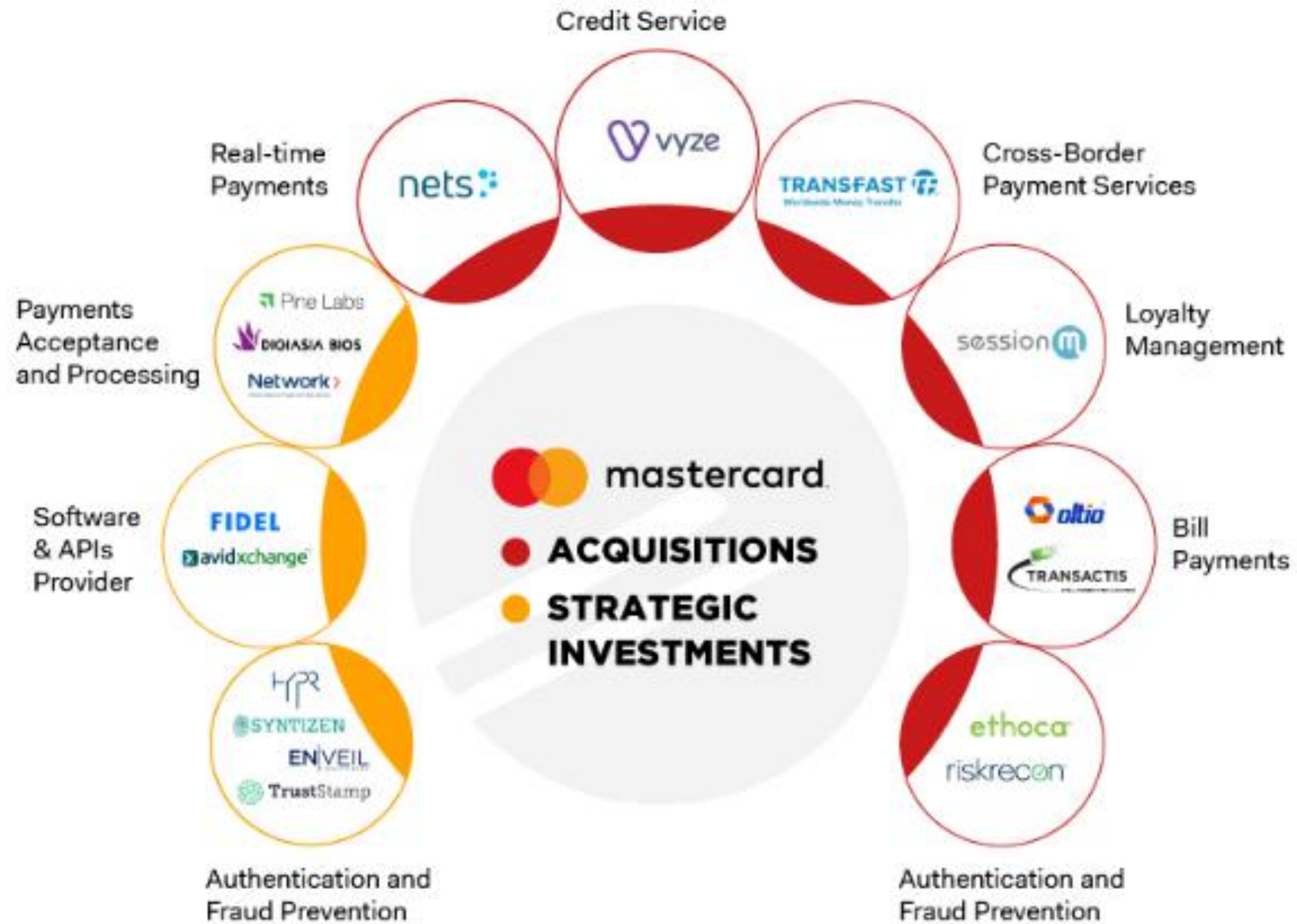
DO YOU HAVE RESOURCES TO FIGHT THIS?

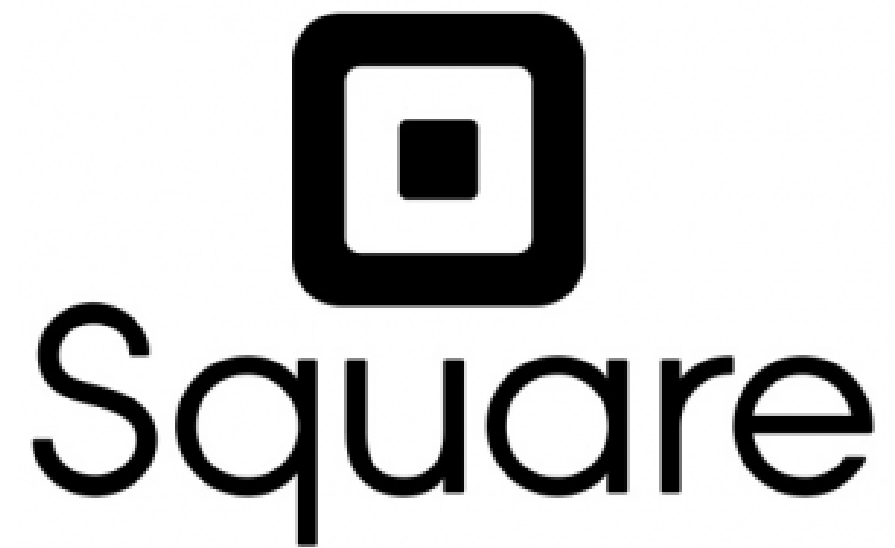


THEY ARE FIGHTING



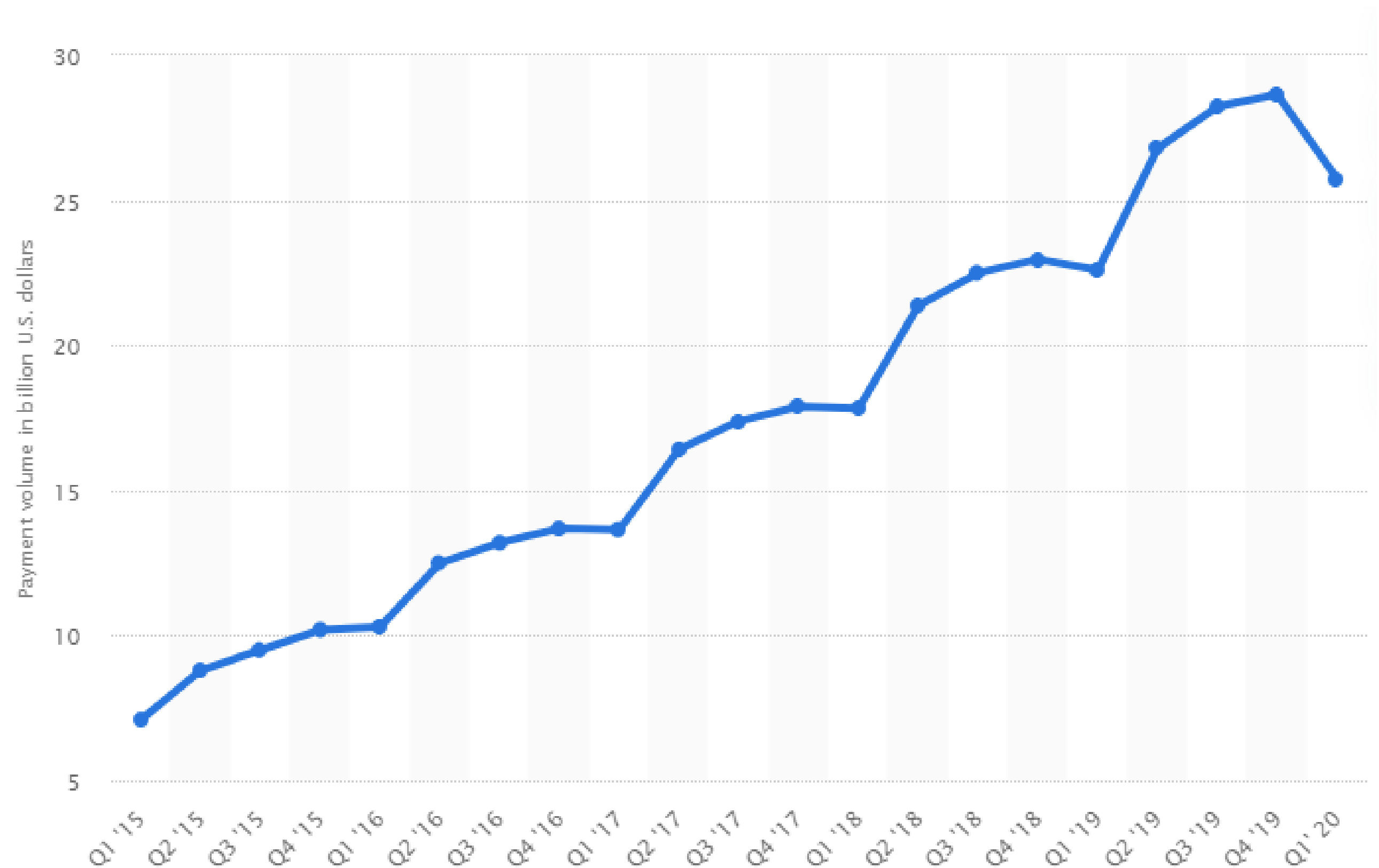
... AND FIGHTING

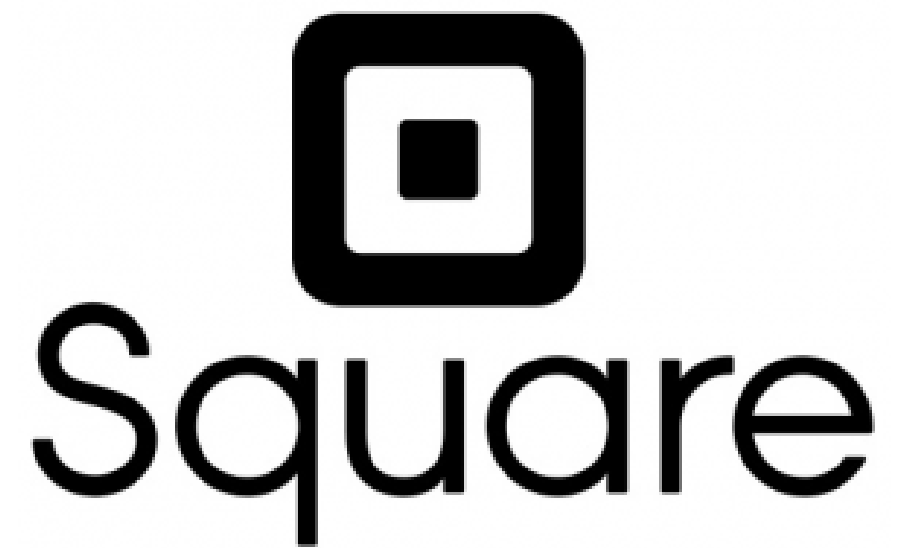




VOLUME OF PAYMENTS

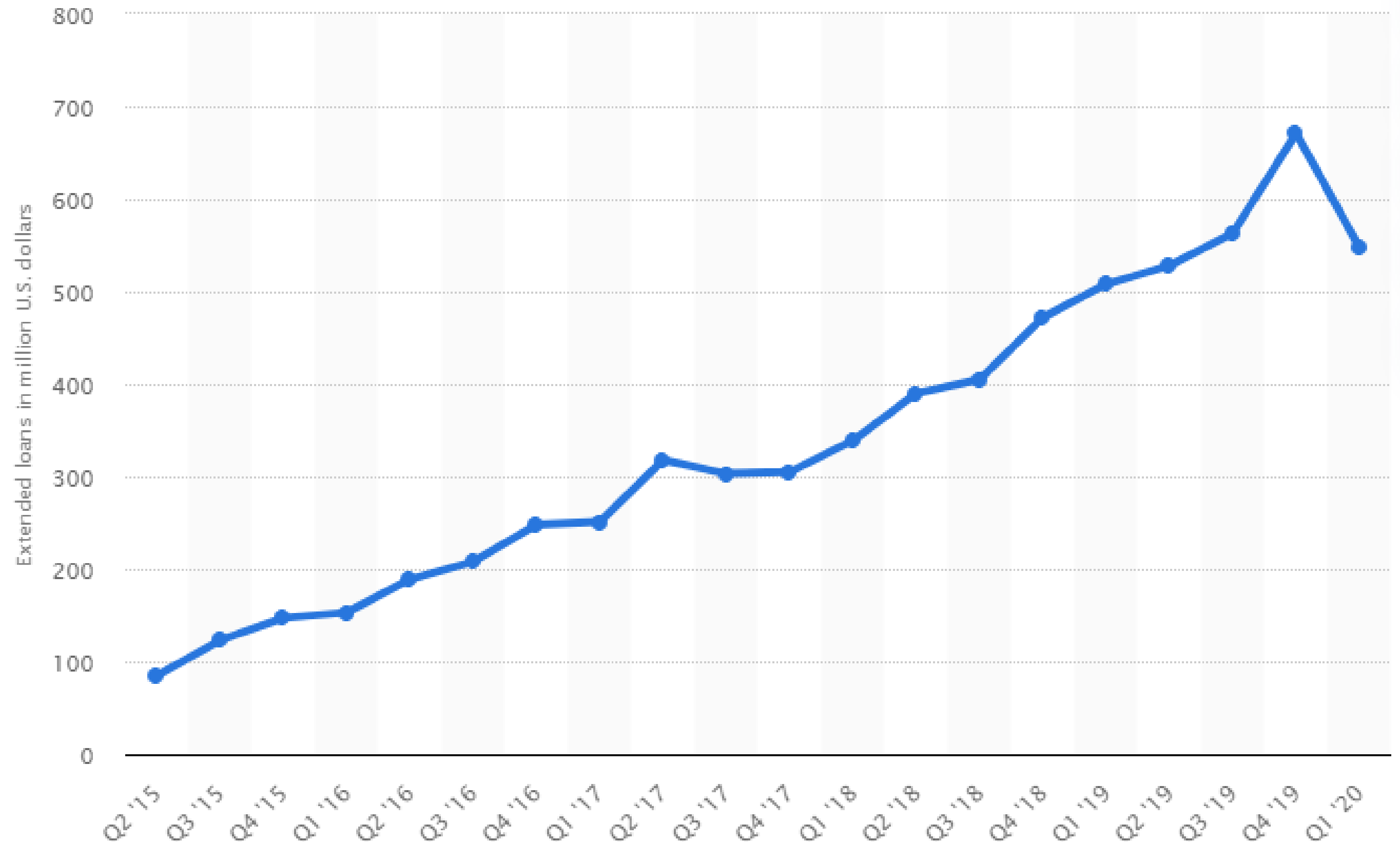
... AND FIGHTING





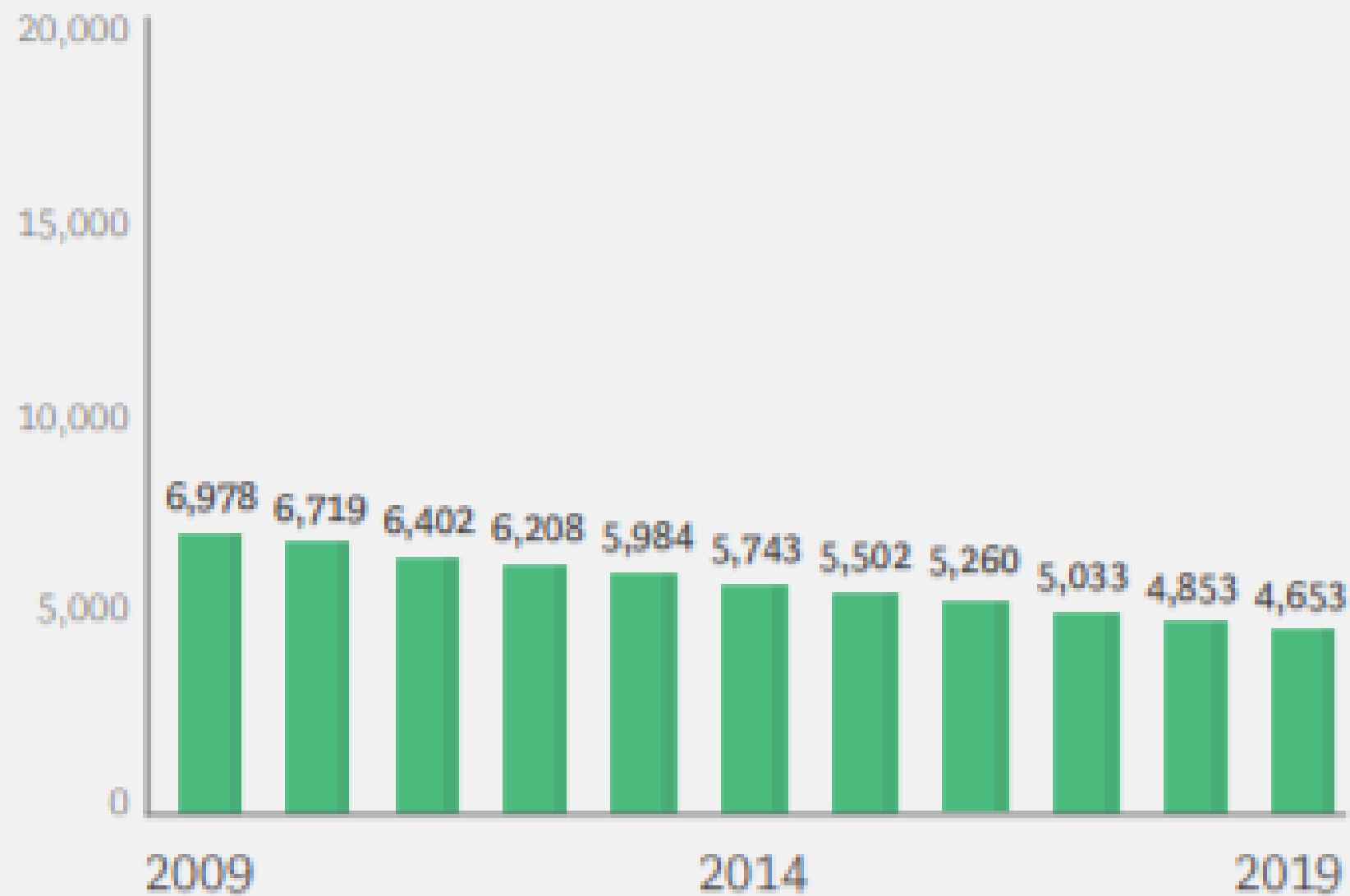
VOLUME OF **LOANS**

... AND FIGHTING

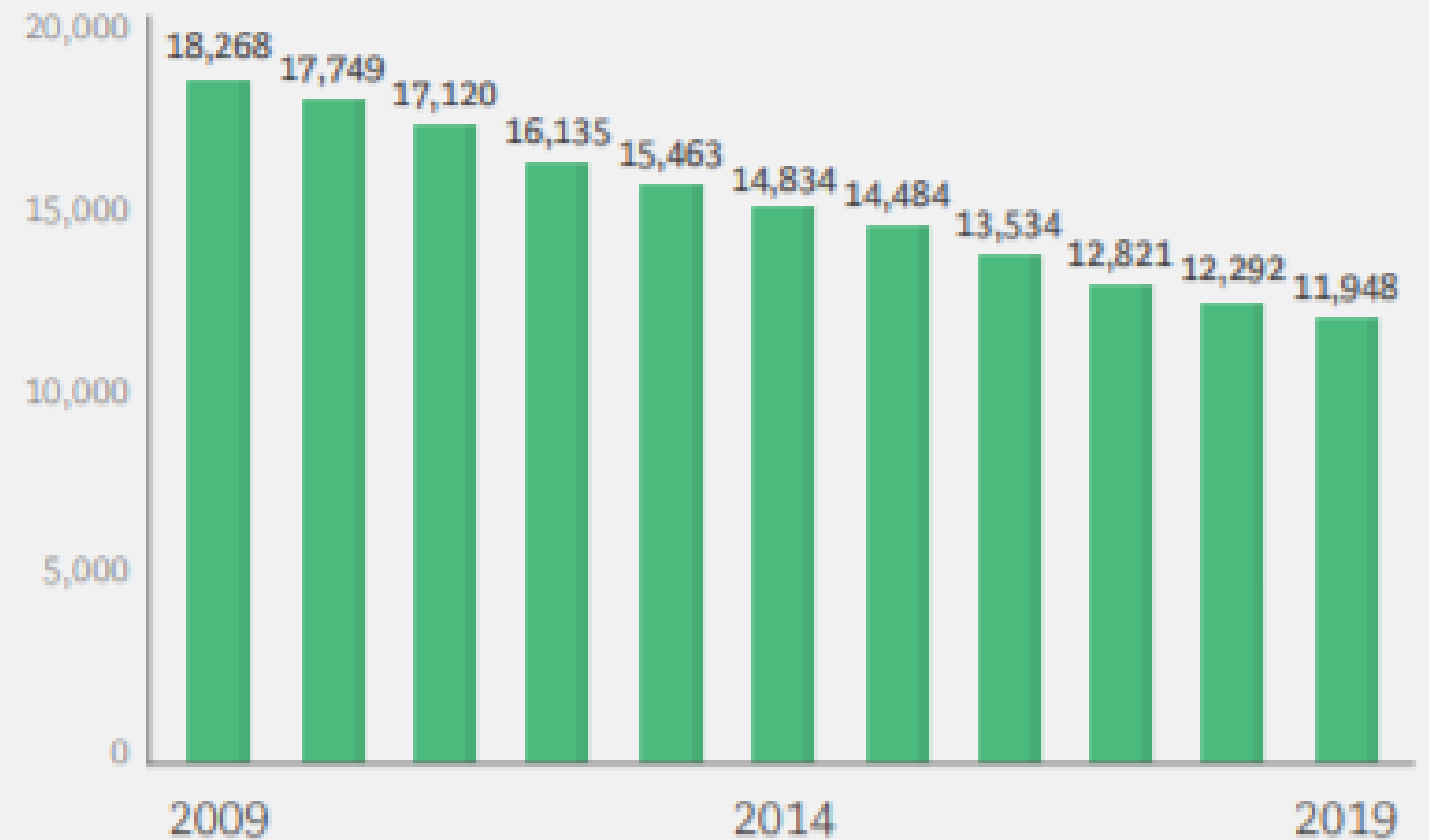


IS THIS LOOSING?

TOTAL NUMBER OF COMMERCIAL
BANKS IN THE US

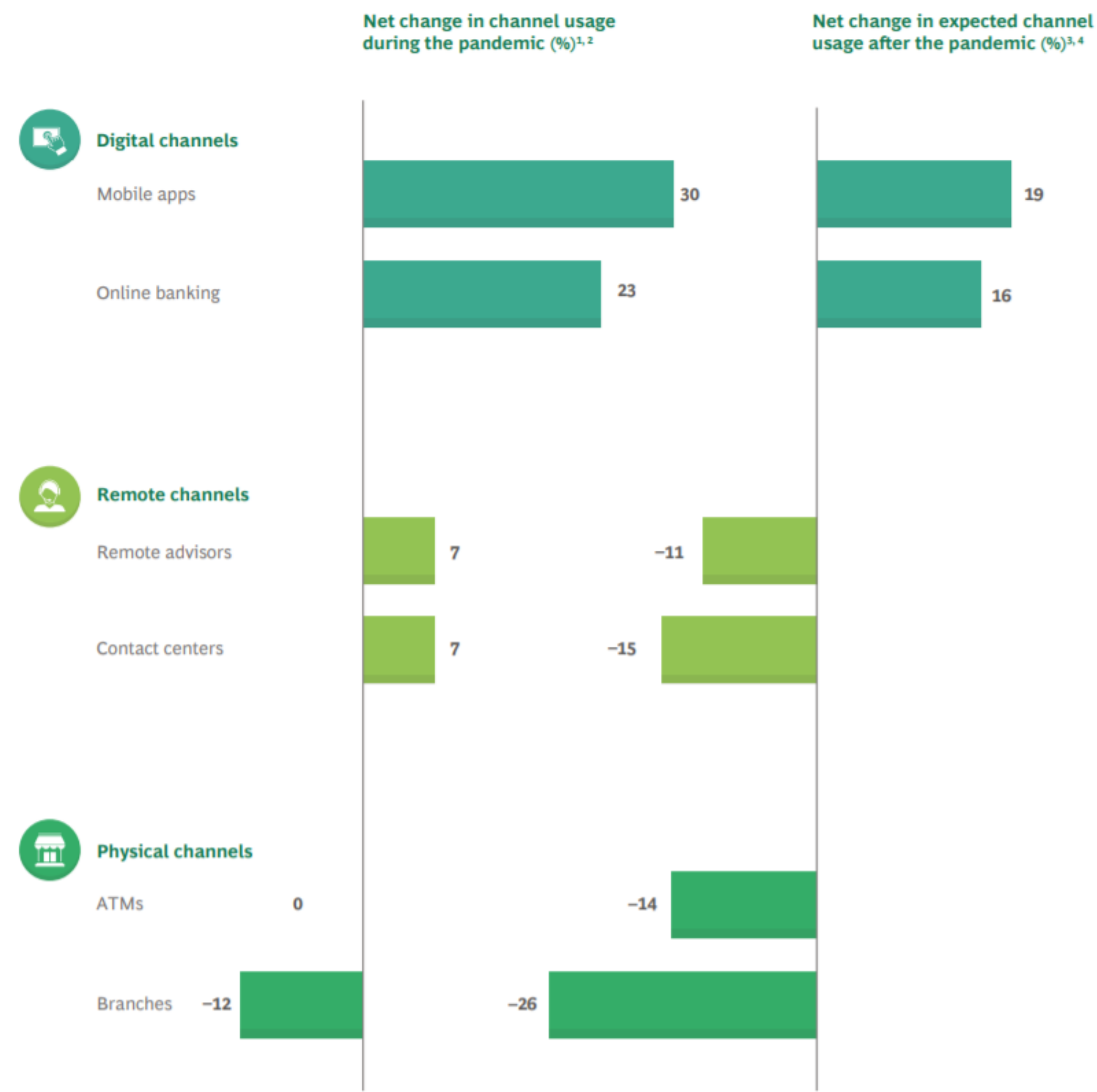


TOTAL NUMBER OF MONETARY FINANCIAL
INSTITUTIONS IN THE EU



Sources: Statista; St. Louis FRED; ECB.

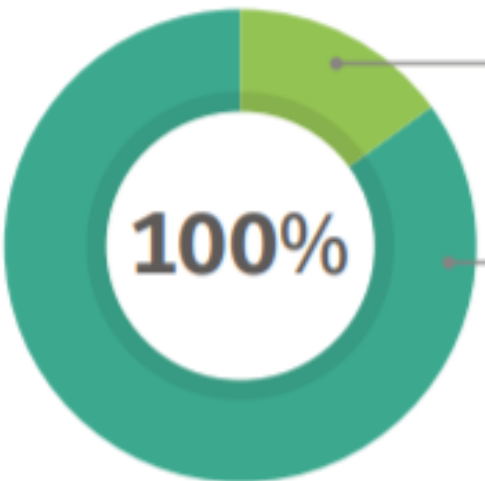
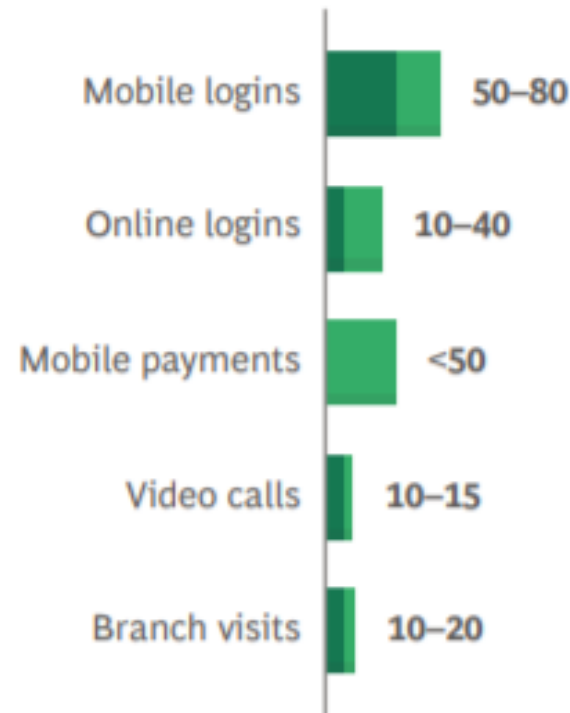
COVID-19 Is Driving Increased Use of Digital Channels



A Digital Bank Will Have More Customer Interactions, Driving Sales and Loyalty

Typical bank today

Number of customer interactions (per year)



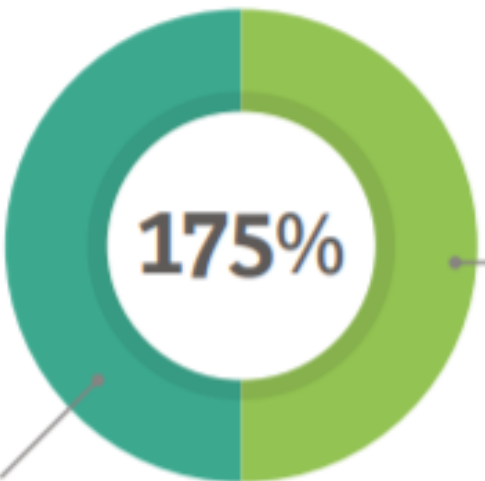
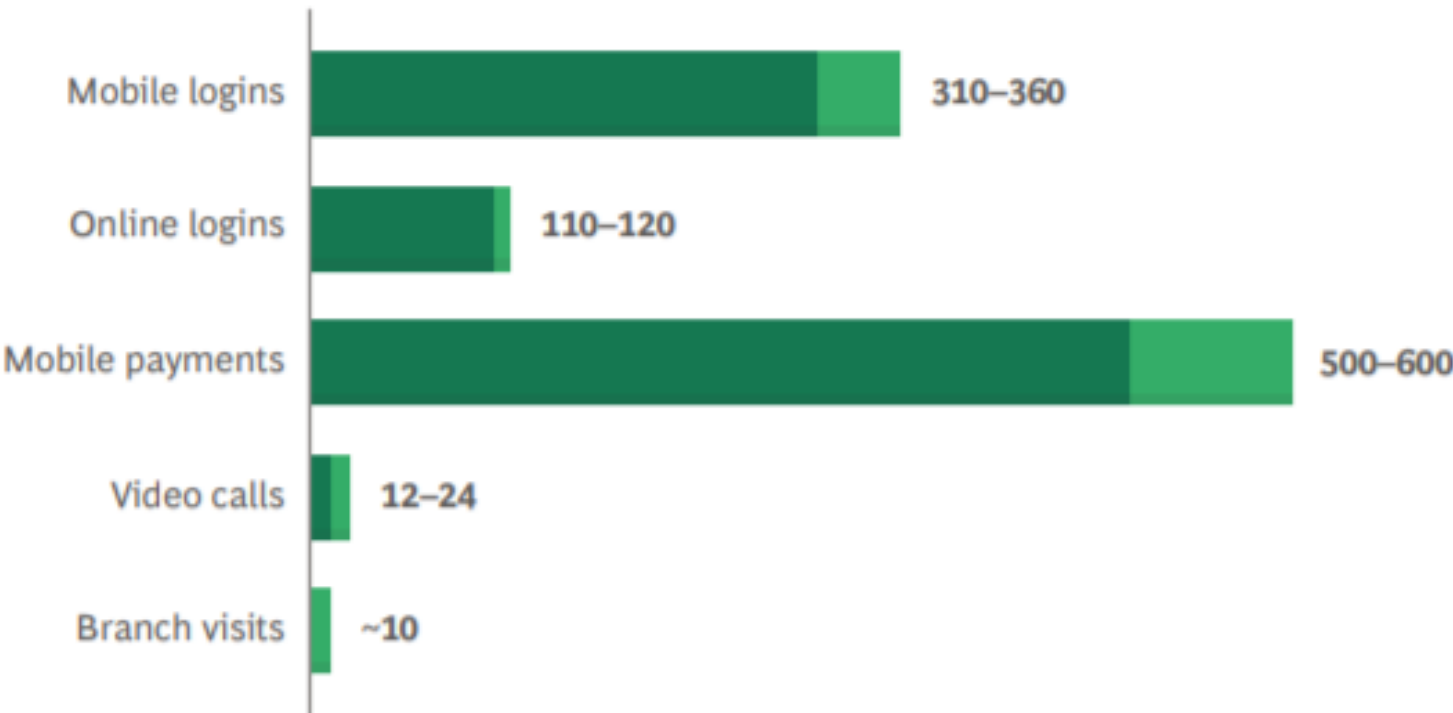
Low traffic and conversion

Mostly servicing instead of sales

■ Digital sales ■ Assisted sales

Digital bank of the future

Number of customer interactions (per year)



Higher volume of simple sales at a lower cost

Higher volume of higher-value sales

VERTICAL VS HORIZONTAL INTEGRATION

Marc's BANK

User interface

Customer operations

Compliance

Risk management

Financial crime

Payments

Lending products

Treasury

Accounting

Elena's BANK

User interface

Customer operations

Compliance

Risk management

Financial crime

Payments

Lending products

Treasury

Accounting

Lisa's BANK

User interface

Customer operations

Compliance

Risk management

Financial crime

Payments

Lending products

Treasury

Accounting

CORE CHARACTERISTICS

- **Modularized services**
- **Complex coordination via communication protocols**
- **Data sharing (APIs)**
- **ALL IN REAL TIME**

BANKING STACK: LEGO VERSION

- **Issues?**

- Who will own the cl
- Who will deal with
- Why would custom
- collection of random
- Do banks give up e

- **What are banks still doing etc?**



BANKING STACK

- **Need for banking charter holder**
 - Deposits
 - Regulations
 - Deep knowledge of banking industry
- **Need for client facing brand**
 - Name customers can trust with their money and their problems



Charter and Deposit Holder

- Enable tech partners to provide their services by renting out your license as a service
- Ensure compliance
- Unify customer experience



REGULATORY HURDLES

Do start-ups have the expertise to maneuver through regulations?

Incumbent banks are used to doing this daily.
or even co-opt regulatory turmoil.



REGULATORY HURDLES

Washington regulators have decided to put new fintech approvals on hold and focus energies on specific segments of the industry, stunting growth.

Neo-banks










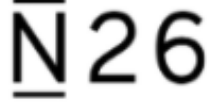










“Full Stack” Banking



Strive to provide an alternative customer experience while acquiring a banking license while significantly reducing regulatory burden by leveraging existing banks to handle their deposits transactions.

Capital requirements further restrict “full-stack” fintech banks, by forcing them to grow profitably.

ONLY 3 OUT OF 10 ARE FULL-STACK BANKS

| | Rank | Company | Valuation (\$Bn) | Clients (M) | Banking license | Real Bank |
|---|------|---|------------------|-------------|-----------------|-----------|
|  | 1. |  | 10 | 22 | ✓ | ✗ |
|  | 2. |  | 5.8 | 8 | ✗ | ✗ |
|  | 3. |  | 5.5 | 12.5 | ✓ | ✗ |
|  | 4. |  | 4.8 | 1 | ✗ | ✗ |
|  | 5. |  | 3.5 | 5 | ✓ | ✓ |
|  | 6. |  | 2.8 | 0.14 | ✓ | ✓ |
|  | 7. |  | 1.6 | 4.75 | ✓ | ✓ |
|  | 8. |  | 1 | 10 | ✗ | ✗ |
|  | 9. |  | 1 | 4 | ✗ | ✗ |
|  | 10. |  | 0.99 | 1.3 | ✗ | ✗ |

SMALL US BANKS AND BAAS



Ohio bank that
reinvented itself

Sutton has an active “partner bank” strategy and is the deposit holding entity for many challenger banks and brands (e.g. Monzo) The Ohio-based community bank has partnered with various providers of BaaS, from partnerships with **Marqeta** and **Galileo**.



Tennessee bank
powering Synapse

Evolve Bank & Trust, partnered with **Synapse** to provide the underlying deposit accounts for both payments and lending products. Evolve enables Synapse to use its regulated capabilities and offer a more complete proposition to brands such as **Mercury**.



Small bank, big
name brands

Lincoln Savings Bank has focused on becoming a “partner bank”. By working with a new generation of providers, Lincoln’s LSBX proposition has attracted Acorns, Q2, Qapital, **Money Lion** and **Square**.



The pioneer
partner bank

The Bancorp provides its banking license as well as covers vendor elements as a vertically integrated offering to its partners, and helps enable **Marqeta’s** platform. The Bancorp is a banking provider for many well-known fintech brands (such as **Chime**).

BANKING STACK

- **Need for banking charter holder**
 - Deposits
 - Regulations
 - Deep knowledge of banking industry
- **Need for client facing brand**
 - Name customers can trust with their money and their problems



Brand Name

- Your bank vs...
- Companies wishing to embed financial services in their customer experience
 - Trust
 - First line of interaction with customers
 - ...





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BANKING STACK

- What can incumbent community banks focus on?

Brand Name

User interface

Customer operations

Compliance

Risk management

Financial crime

Payments

Lending products

Treasury

Accounting

Charter and Deposit
Holder

Different technology providers

Lending products

- **Who are your customers?**
- **Would they trust other brands?**
- **Can they rely on other brands?**

**WHAT IS YOUR BANK
GOOD AT?**

**IS BAAS THE CERTAIN
FUTURE?**

BANKING STACK CONCERNS

- Integration
- Modular design of services
 - Customer facing
 - Partner facing
- Data sharing
- Trust
- Digital security risks

Brand Name

User interface

Customer operations

Compliance

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Accounting

Charter and Deposit
Holder

Different technology providers

CAN WE CREATE AWC OF BANKING?

- **Fostering an ecosystem is difficult**
 - especially for a company cannibalizing a large portion of their existing business.
- **Update the core banking system software?**
 - Most >20 years old
- **Success comes at a cost:**
 - BBVA Compass: \$360 million

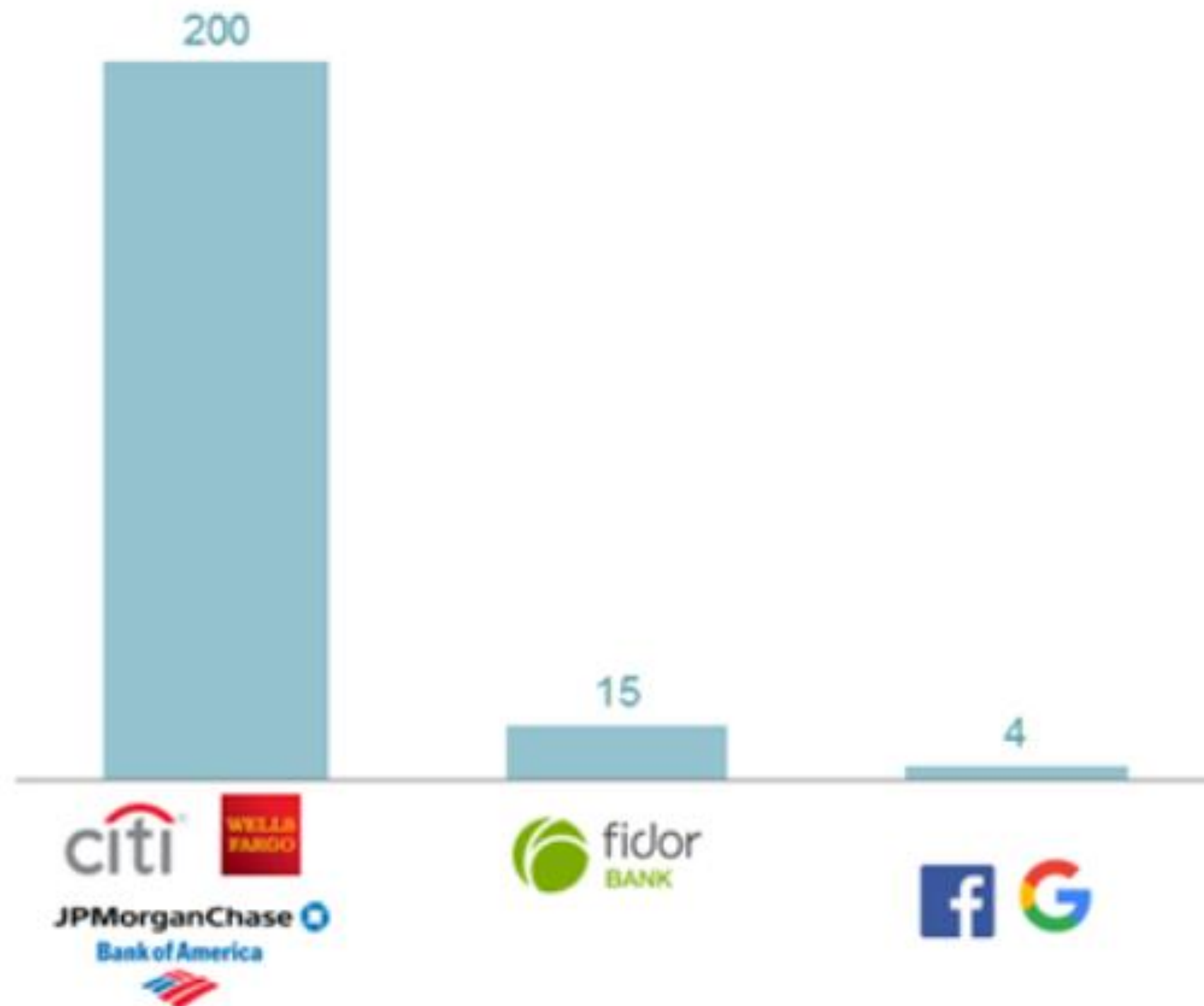
WHAT CAN YOU DO?

“The key problem with designing better banking really begins with how incredibly difficult bankers find it to think outside the branch”

- Brett King

IT Cost Per User

\$/User





Breaking Banks

Breaking Banks - The #1 Global Fintech Podcast



Banking Transformed with...

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AB

American Banker Podcast

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—Piyush Gupta, Group Chief Executive Officer, DBS Bank

BANK 4.0

Banking Everywhere, Never at a Bank



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Devie Mohan

THE FINANCIAL SERVICES GUIDE TO FINTECH

Driving banking innovation
through effective partnerships



AMERICAN BANKER DIGITAL BANKING

November 16 -18 | Virtual Summit



Compete or collaborate

What are fintechs and challenger banks doing right, and how can banks compete or partner to win?



Reimagining customer experiences

How can organizations reimagine and develop next-gen customer experiences for today's consumer and the consumer of the future?



New threats, new safeguards

What are the latest security and fraud threats, and how can banks protect their customers while offering innovative and personalized products and services?



RADIUS
BANK



Now **LendingClub**

THE UNBUNDLING AND RE-BUNDLING OF RETAIL BANKING

Virginia Bankers Association



DARDEN SCHOOL
of BUSINESS

ONE LAST THING ...

There is no such thing as a new idea. It is impossible. We simply take a lot of old ideas and put them into a sort of mental kaleidoscope. We give them a turn and they make new and curious combinations. We keep on turning and making new combinations indefinitely; but they are the same old pieces of colored glass that have been in use through all the ages.

Mark Twain

**THANK YOU
AND
GOOD LUCK**

INCUMBENTS INNOVATION

| For incumbent banks | Driven by Competition | Driven by Cooperation |
|---------------------|---|---|
| Radical | <ul style="list-style-type: none"> Automatisation and use of AI Multi-channel approach Implementing some peer-to-peer aspects in core services Wearable Tech and new security Introduction of Big Data Analytics | <ul style="list-style-type: none"> Establishment of Venture Capital funds specialising in acquisition of FinTech Companies Establishing Market Foresight teams to eye potential disruption and recommend buys |
| Incremental | <ul style="list-style-type: none"> Further development of mobile apps and online platforms Reinvention of the existing physical outlets Balance Sheet minimization Expanding Core Services (Bank in a Box logic) and offering advisory and non-banking services CRM measures to retain trust | <ul style="list-style-type: none"> Allowing FinTech companies to utilise apps issued by banks Using FinTech platforms to deliver old services such as payments Using FinTech platforms as their end users, for example participating in peer-to-peer lending as a lender |

INSURGENTS INNOVATION

| For entrant companies | Driven by Competition | Driven by Cooperation |
|-----------------------|---|---|
| Radical | <ul style="list-style-type: none"> Peer-to-peer platforms and crowdfunding Payments with smartphones, wearable tech and high-tech devices AI advisors and investment managers Measuring risk with Big Data Entirely virtualising operations Leveraging partnerships with non-financial companies such as retailers Individually tailored service | <ul style="list-style-type: none"> Actively seeking banking investors Keeping structural architecture open to facilitate potential purchases |
| Incremental | <ul style="list-style-type: none"> Advancing the excellent app interfaces Social Media integration Offering personal classic banking products with more appealing secondary attributes (money transfers, individual accounts, stock trading accounts) Cybersecurity with new modes of authentication | <ul style="list-style-type: none"> Allowing banks to use platforms and apps to transpose their services into the FinTech world Allowing banks to participate in peer to peer lending and funding as one side of the transaction Designing structures with a focus on scalability |