Where we are...

financial fragmentation

Americans' Shadow Financial Lives: Why Banks Don't Know Jack (Or Jill)

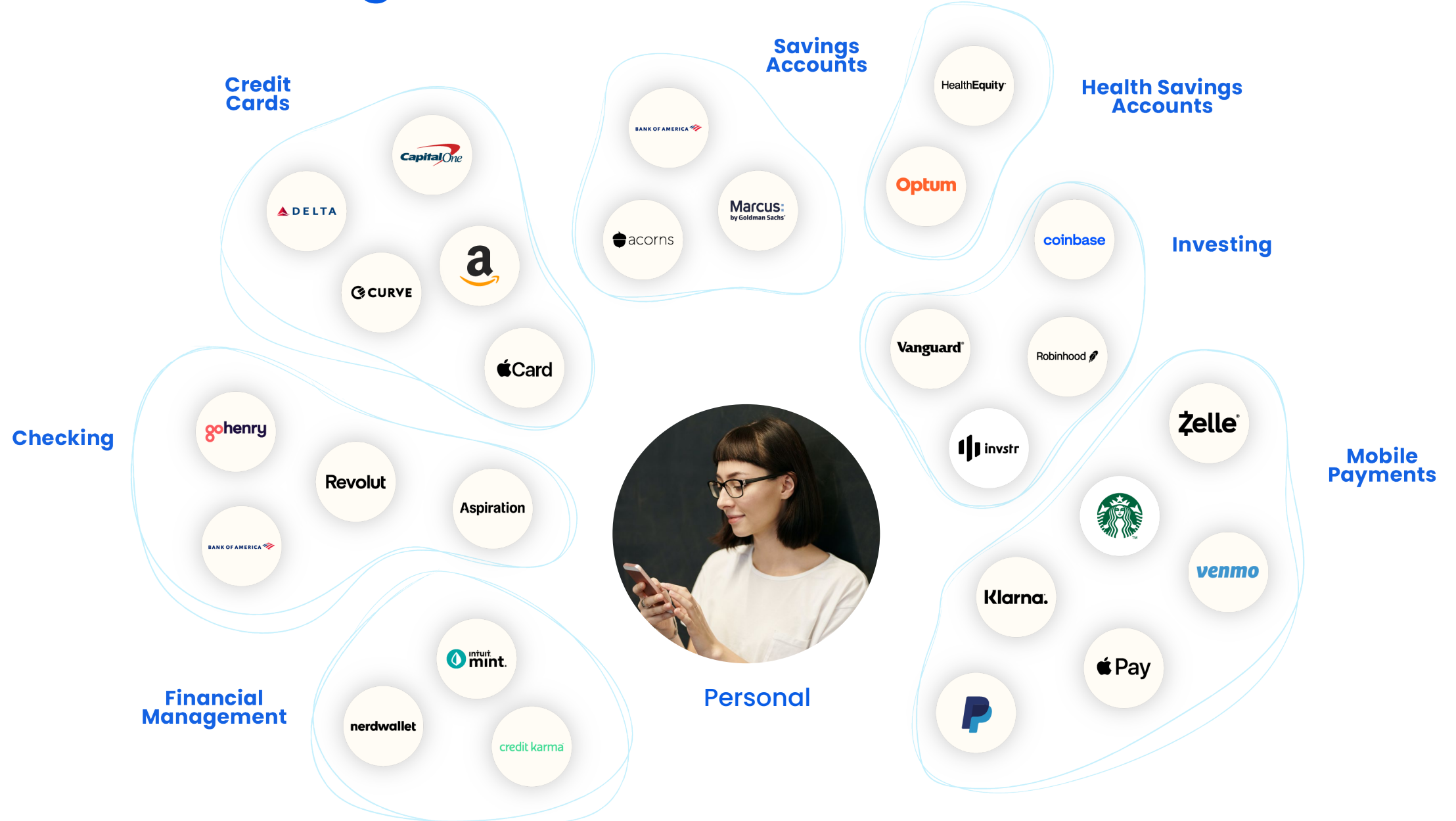**Ron Shevlin** Senior Contributor ⓘ

Fintech

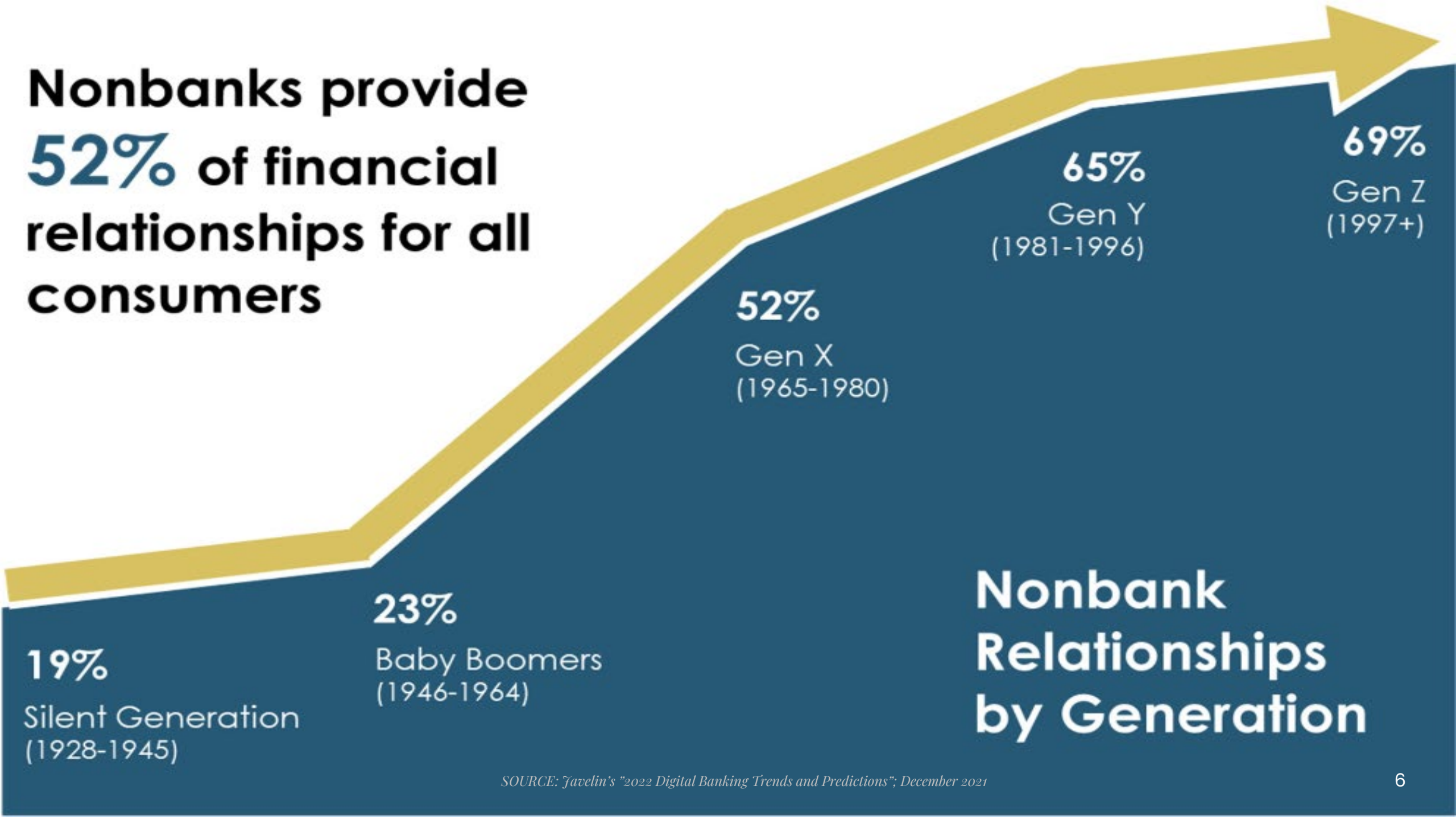*Observations from the Fintech Snark Tank*

Forbes

"Overall, it's not uncommon for a Gen Z or Millennial couple to do business with **30 to 40 financial providers**. **In our quest for more convenience in our financial lives, our financial lives have become** *more* **complex to manage.**"

jack henry™ | strategy   4

financial fragmentation - consumer

Credit Cards

Capital One

DELTA

amazon

CURVE

Card

Savings Accounts

BANK OF AMERICA

Marcus: by Goldman Sachs

acorns

Health Savings Accounts

HealthEquity

Optum

Investing

coinbase

Vanguard

Robinhood

invstr

Checking

gohenry

Revolut

Aspiration

BANK OF AMERICA

Financial Management

intuit mint

nerdwallet

credit karma

Personal

Mobile Payments

Zelle

Starbucks

venmo

Klarna.

Pay

PayPal

Nonbanks provide 52% of financial relationships for all consumers

Nonbank Relationships by Generation

- 19% — Silent Generation (1928-1945)
- 23% — Baby Boomers (1946-1964)
- 52% — Gen X (1965-1980)
- 65% — Gen Y (1981-1996)
- 69% — Gen Z (1997+)

20-30
financial relationships
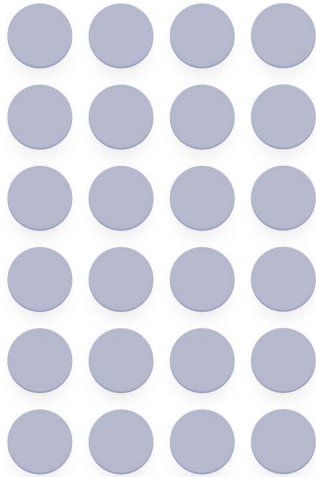
30-40
financial relationships

14
financial apps

3s
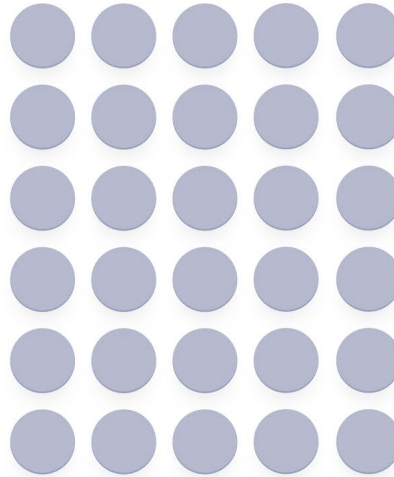
Average
person

Average
millennial family
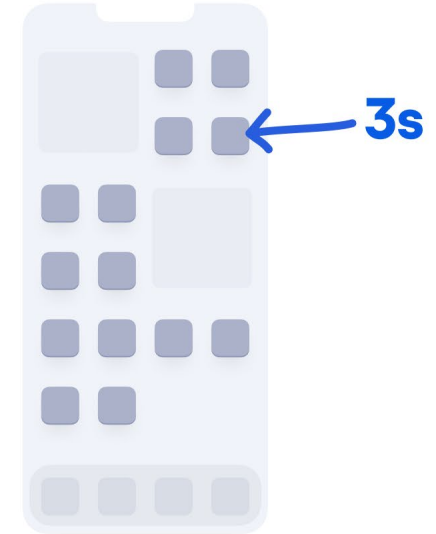
Average
person

Direct Deposit
Direct Debit

venmo
Zelle CHUCK™
popmoney DWOLLA

ACH ← → **Rails**

Nacha SameDayACH

Pay CHUCK™
Cash App
FACEBOOK Pay venmo

Cards ← → **Rails**

VISA MASTERCARD®
MoneySend
VISA Direct mastercard

PayPal
Cash App venmo

Closed Loop ← → **Rails**

Leverage ACH and Card rails for bank transactions

Zelle
RTP

Faster Payments ← → **Rails**

The Clearing House
FedNow INSTANT PAYMENTS

xapo ABRA
Gem airBitz Bitnet

Distributed Ledger ← → **Rails**

bitcoin
ripple IXOPAY

jack henry | strategy
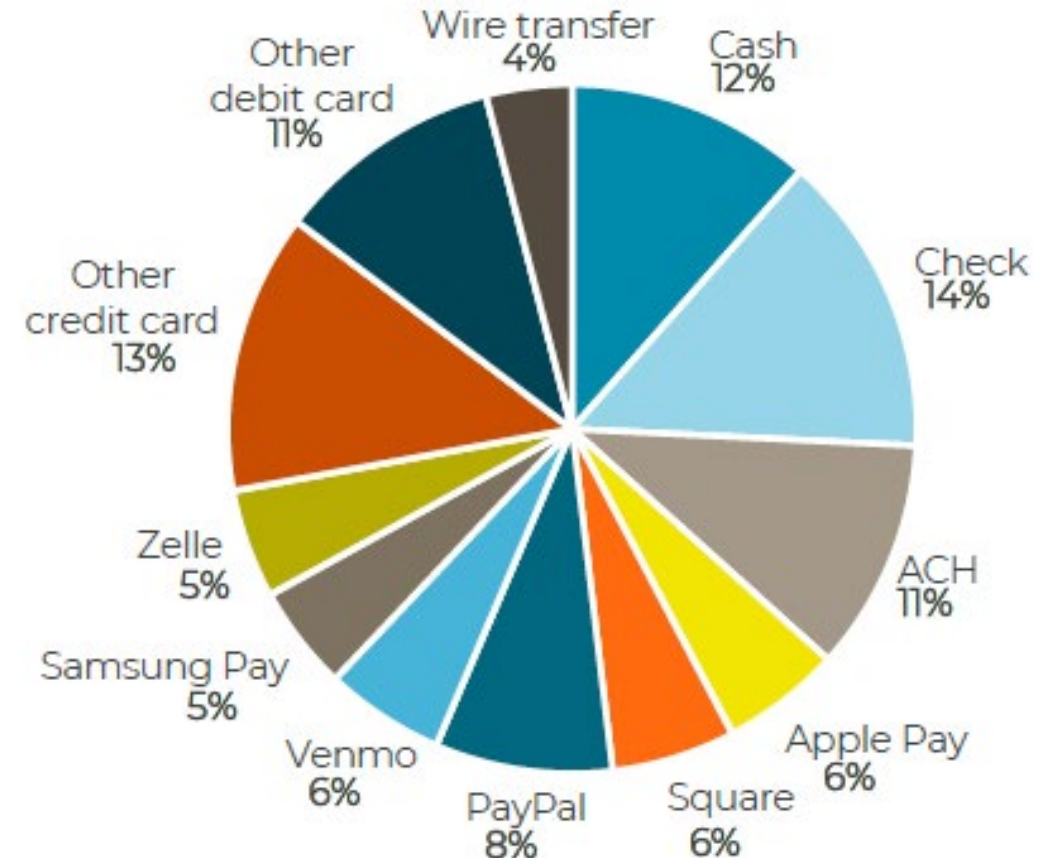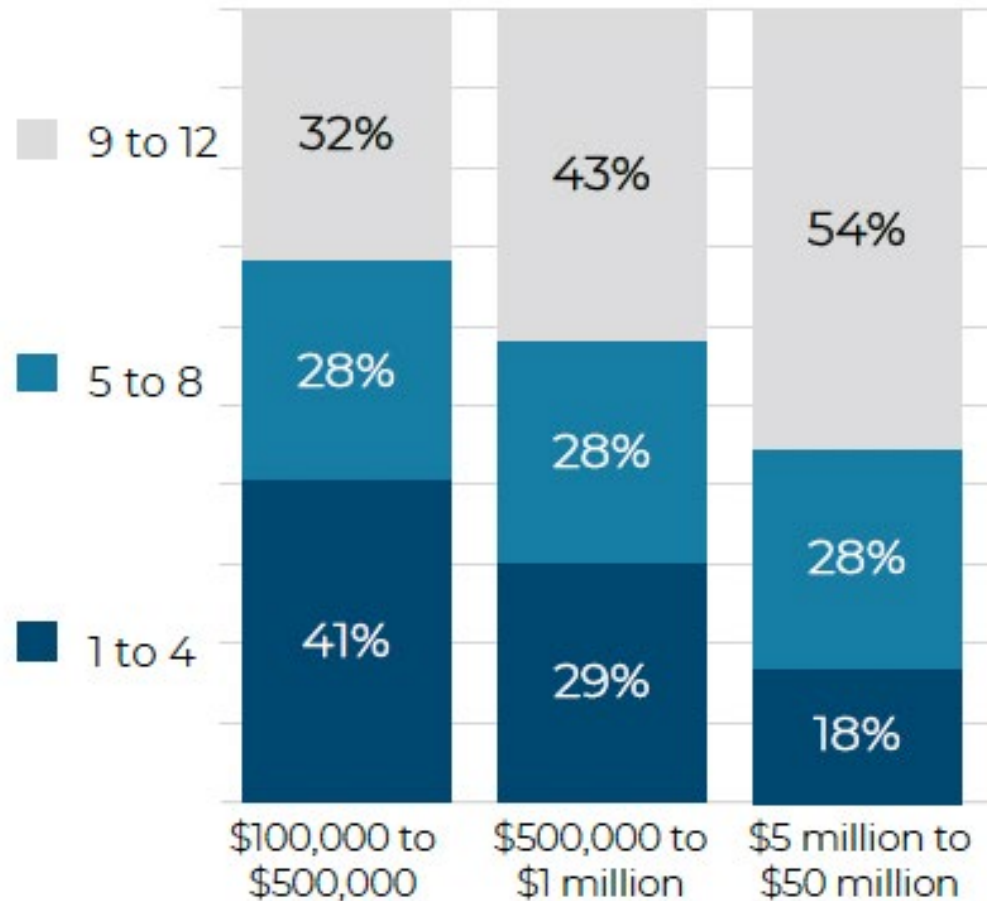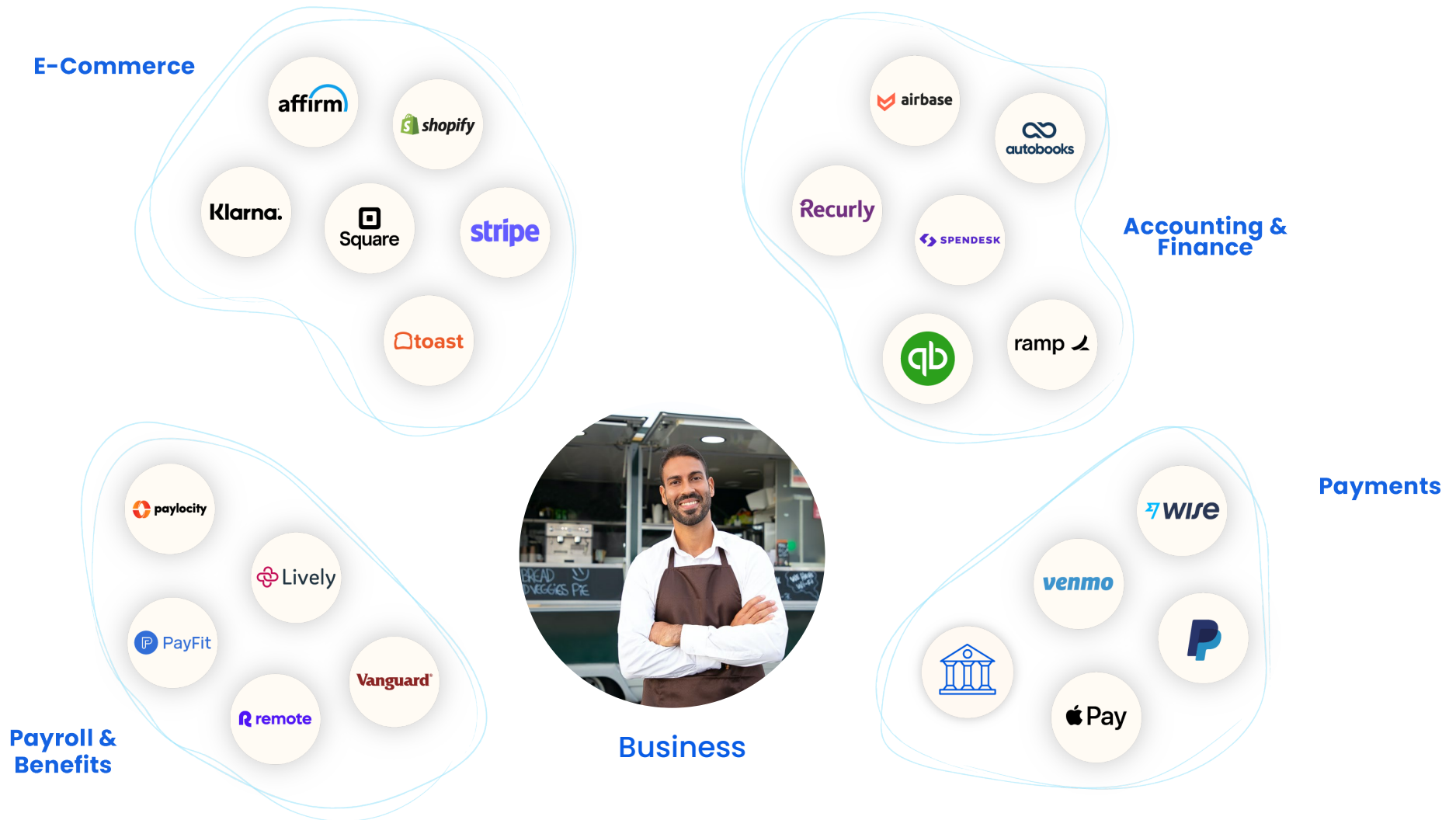
payments complexity creates headaches for SMBs

Number of payment types accepted by companies per revenue size; aggregate market

SOURCE: Cornerstone Advisors

financial fragmentation – small business

E-Commerce

Accounting & Finance

Payroll & Benefits

Business

Payments

Industry disruption vs. ecosystem disruption

NOTE: Our industry is undergoing both classic disruption and ecosystem disruption simultaneously.

Industry disruption

AKA "classic disruption", The 'attack-from-below' model of competition highlights substitute threats, presented by entrants who use a different technology supported by lower costs and prices.

Ron Adner, Winning the Right Game

Ecosystem disruption

The interaction and fallout that occurs when the introduction of a new value proposition impacts competition across industries, erasing boundaries, changing the rules and overturning structure.

Ron Adner, Winning the Right Game

WINNING THE RIGHT GAME

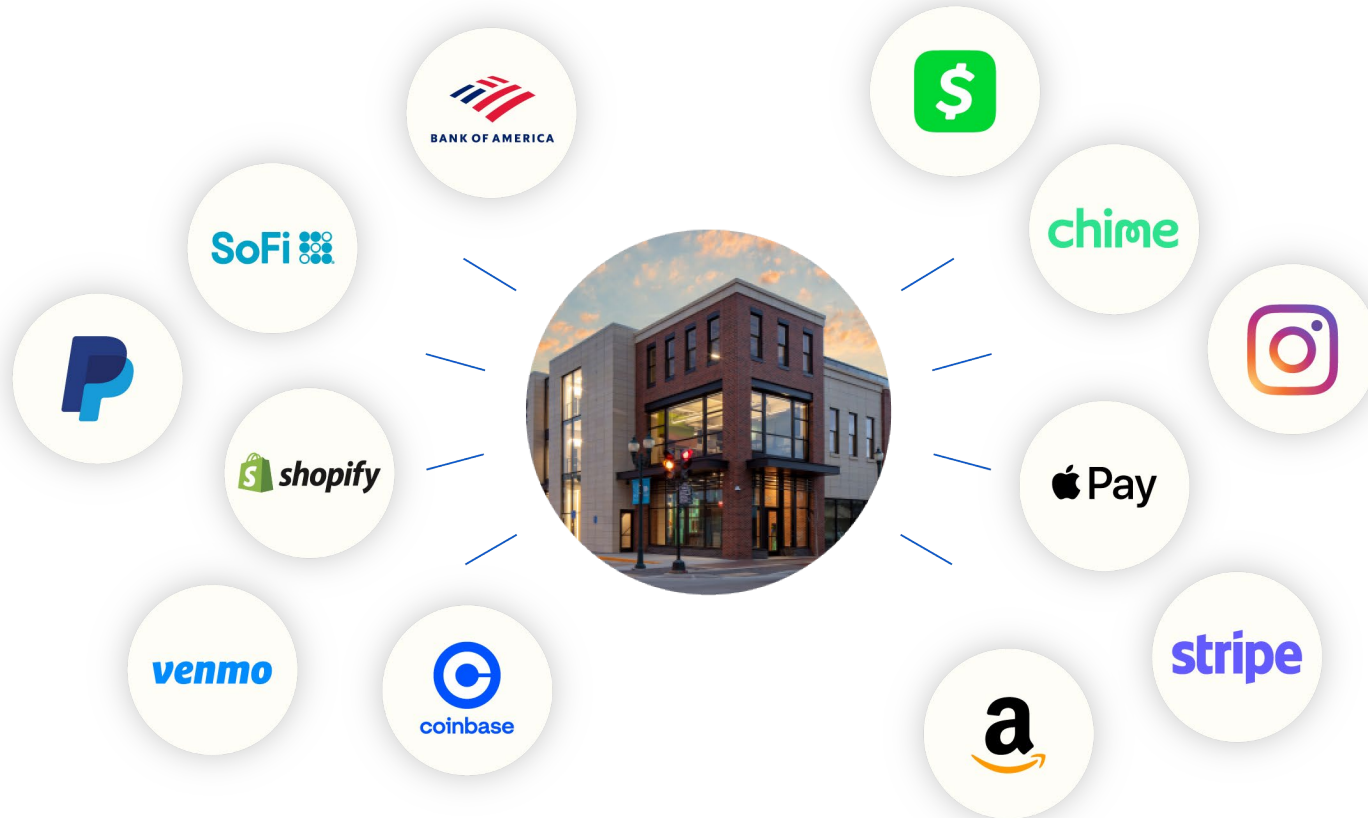## HOW TO DISRUPT, DEFEND, AND DELIVER IN A CHANGING WORLD

RON ADNER

"One of our most important strategic thinkers for the twenty-first century."
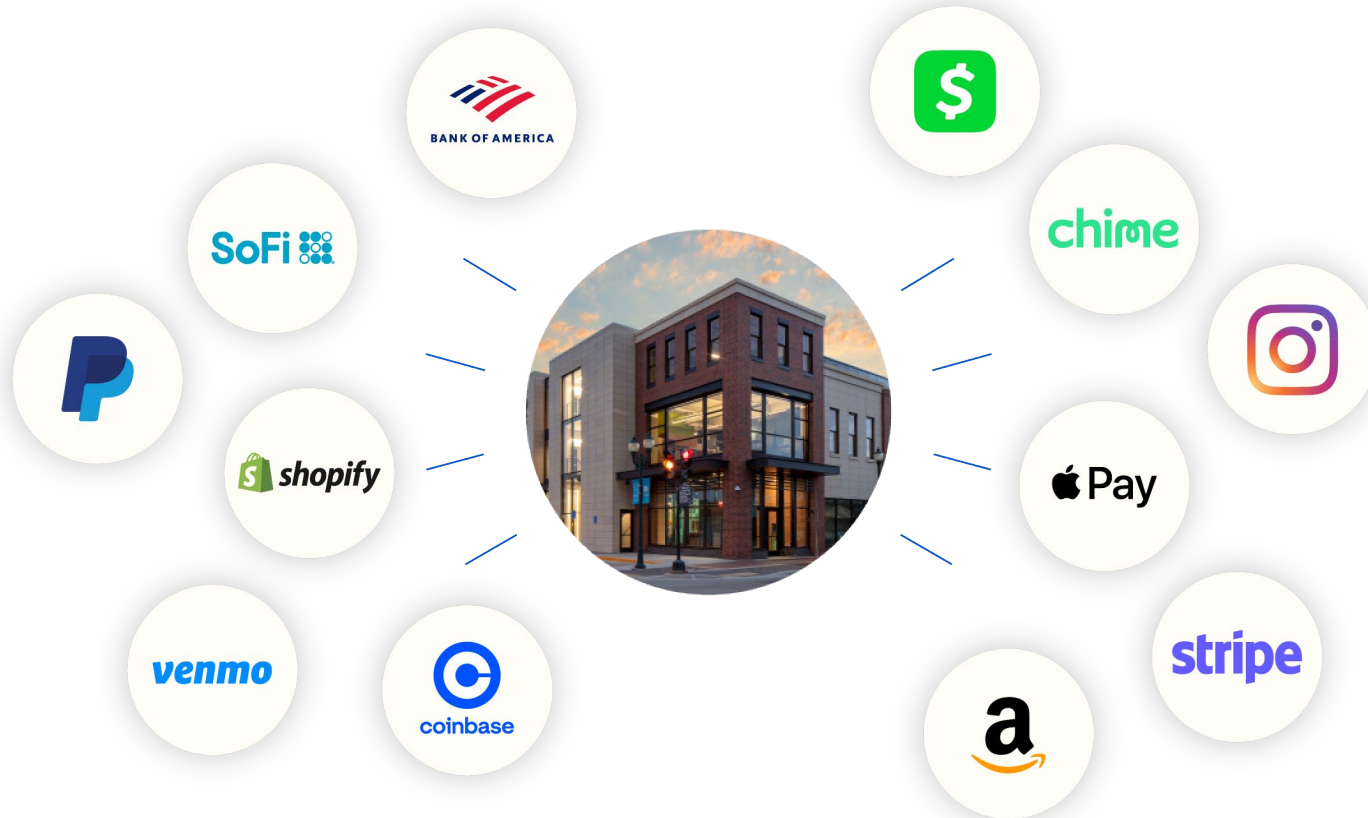—JIM COLLINS

disruption proof points

$250B in payments dollar volume was siphoned away from incumbent financial institutions in 2020.

Cornerstone Advisors

• disruption proof points

Square provides payment processing for more merchant outlets than Chase, Wells Fargo, Bank of America, Citi Bank and PNC... combined!

Nilson Report, March 2020

disruption proof points
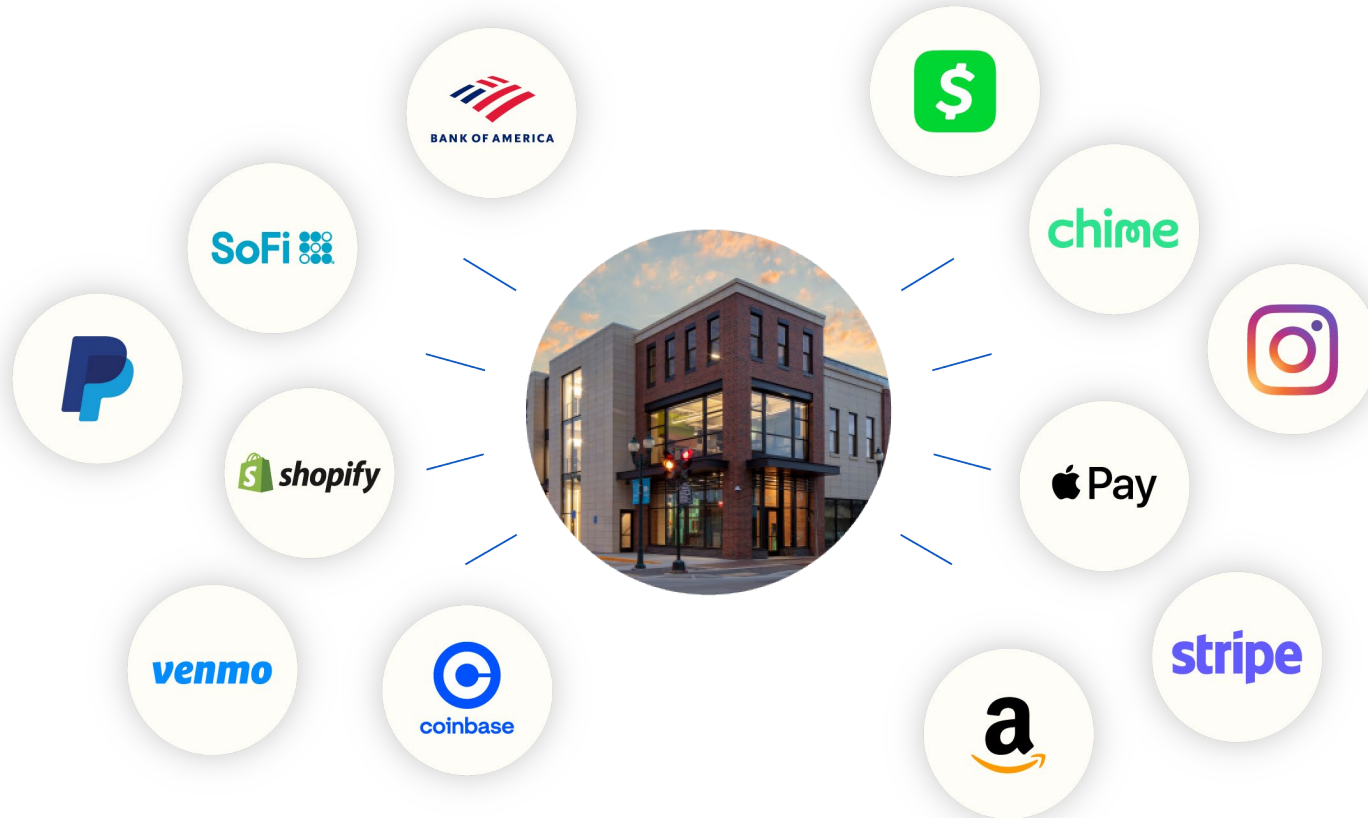
While banks provide merchant services to 2-4% of their commercial DDAs, fintechs service 30-40% of banks' commercial DDAs.

Autobooks analysis

• disruption proof points
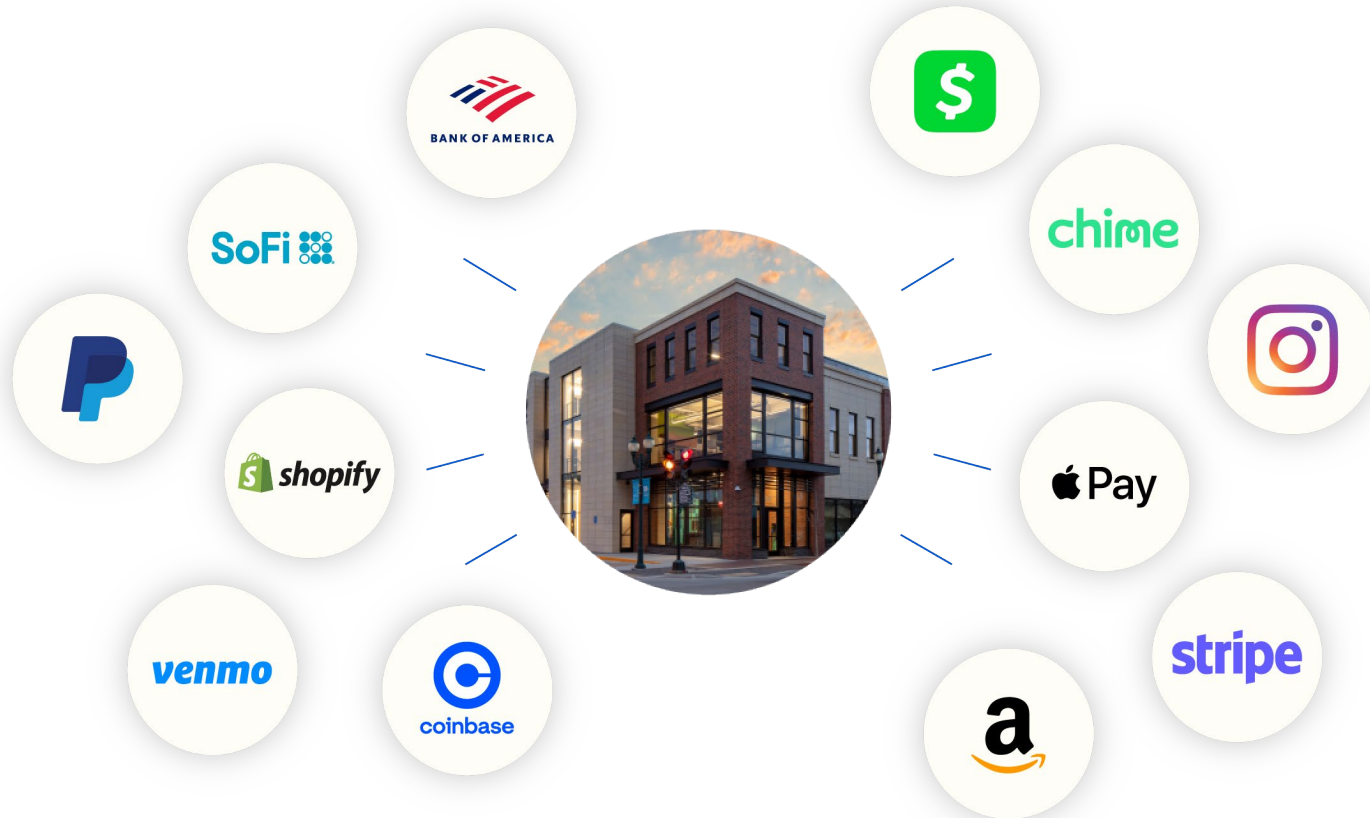
19% of FIs' businesses use competitor payment processors.

Segmint analysis

• disruption proof points

Between 13% and 35% of average FI's consumer accounts are actually small businesses.

Segmint analysis

• disruption proof points
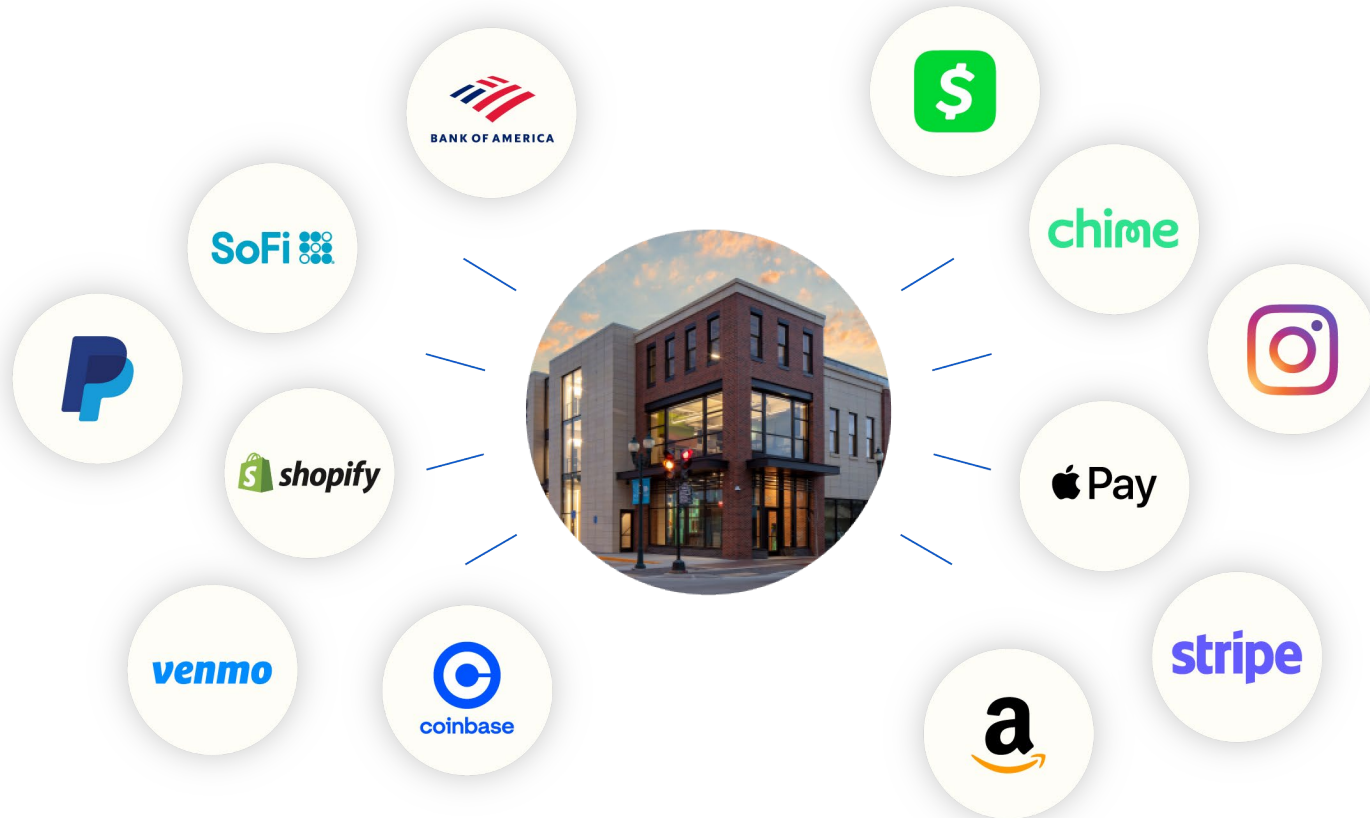
**Nearly 80% of FIs'
small business revenue
is at risk.**

Oliver Wyman

How did we get here?

PAST
On-premise

TODAY
Banking "as a service"

FUTURE
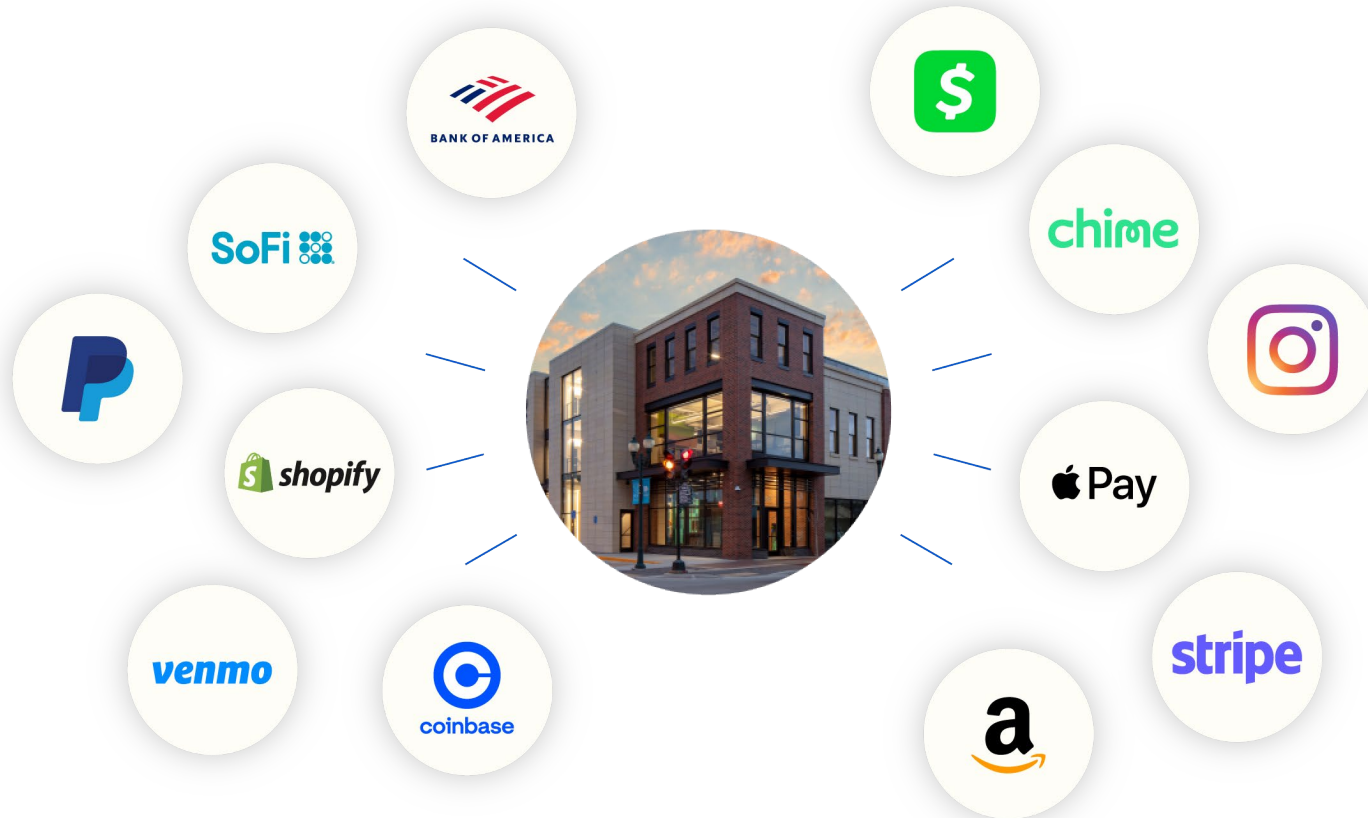Banking **primitives** "as a service"

PAST:
- User Interface
- Fraud
- Regulatory
- Data
- Payments
- Core Systems
- License

TODAY:
- User Interface
- Fraud
- Regulatory
- Data
- Payments
- Core Systems
- License

FUTURE:
- OFAC, FIRE, Metro2
- RTP, Wires, ACH
- Ledger
- FedLine, Visa, Master card, TCH

SOURCE: Andreesen Horowitz; https://a16z.com/2020/12/04/investing-in-moov/

jack henry | strategy   20
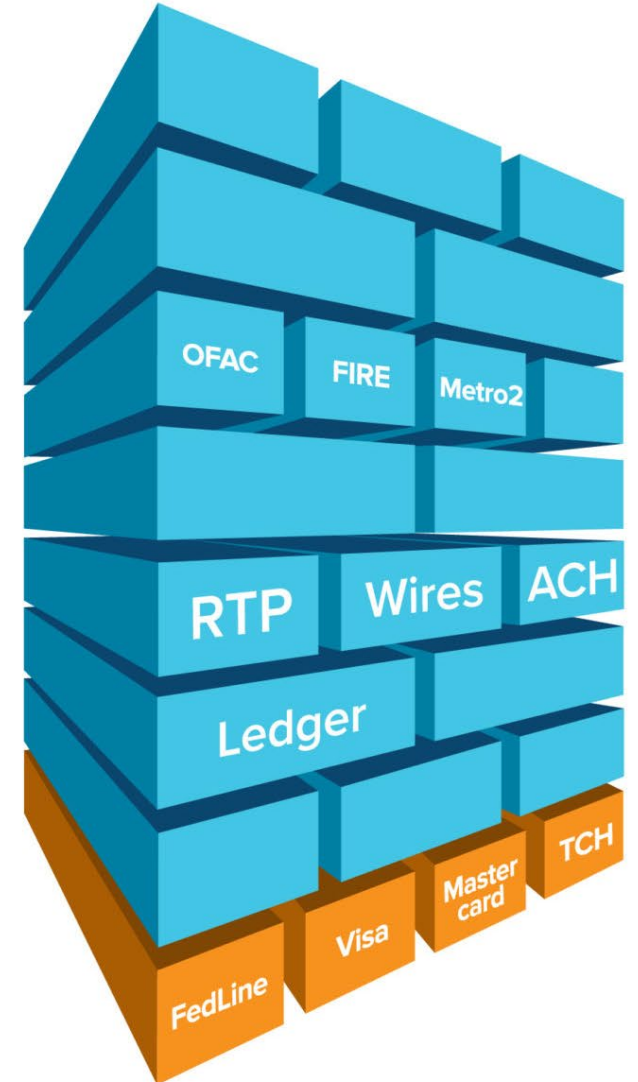
BaaS vs.
open banking

- # BaaS vs. open banking

Understanding the terminology

Banking-as-a-Service

A bank allows third-party partner brands to use their charter to embed financial services in their customer experience. Partnering with 3rd parties to deliver more complete account-like experiences (For example, Bancorp, Meta Bank, Sutton, Evolve, powering neobanks, and brands like Square).

Open banking

Bank-held data or payments that are initiated by a 3rd party on behalf of your customer (often related to checking products). They are usually, but not exclusively, delivered via API. They do not have to be a regulated activity (but they are in Europe)

- **open banking**

Consumers already rely on open banking

Many consumers already share data across multiple third parties to manage their finances: merchant apps, P2P apps, PFM apps, digital wallets, crypto exchanges, neobanks, and roboadvisors.

● open banking

The opportunity for financial institutions

Open banking is a blue-ocean opportunity for community financial institutions—to become home base, first app, and/or first wallet. And it's completely consistent with the ethos of community banking and the credit union movement.

Open banking considerations

- Customer experience
- Data holding and sharing
- Data requesting and ingesting
- Privacy and security
- Partnerships and third-party access

open banking: U.S. vs. Europe

Open banking by the numbers

United States

200M
Bank accounts connected to Plaid alone

3X
Fintech apps on a consumer's phone on average

Europe

60M
Bank accounts connected to regulated Open Banking

30+
Different providers across all markets

11:FS, DoJ filling, Plaid 2020 Fintech Effect Report, Statista

The regulators are coming...

Section 1033

Section 1033 of Dodd Frank "requires covered financial services providers to make available to a consumer, upon request, information in the financial services provider's control concerning the consumer financial product or service obtained by the consumer."

- **open banking**

The regulators are coming...
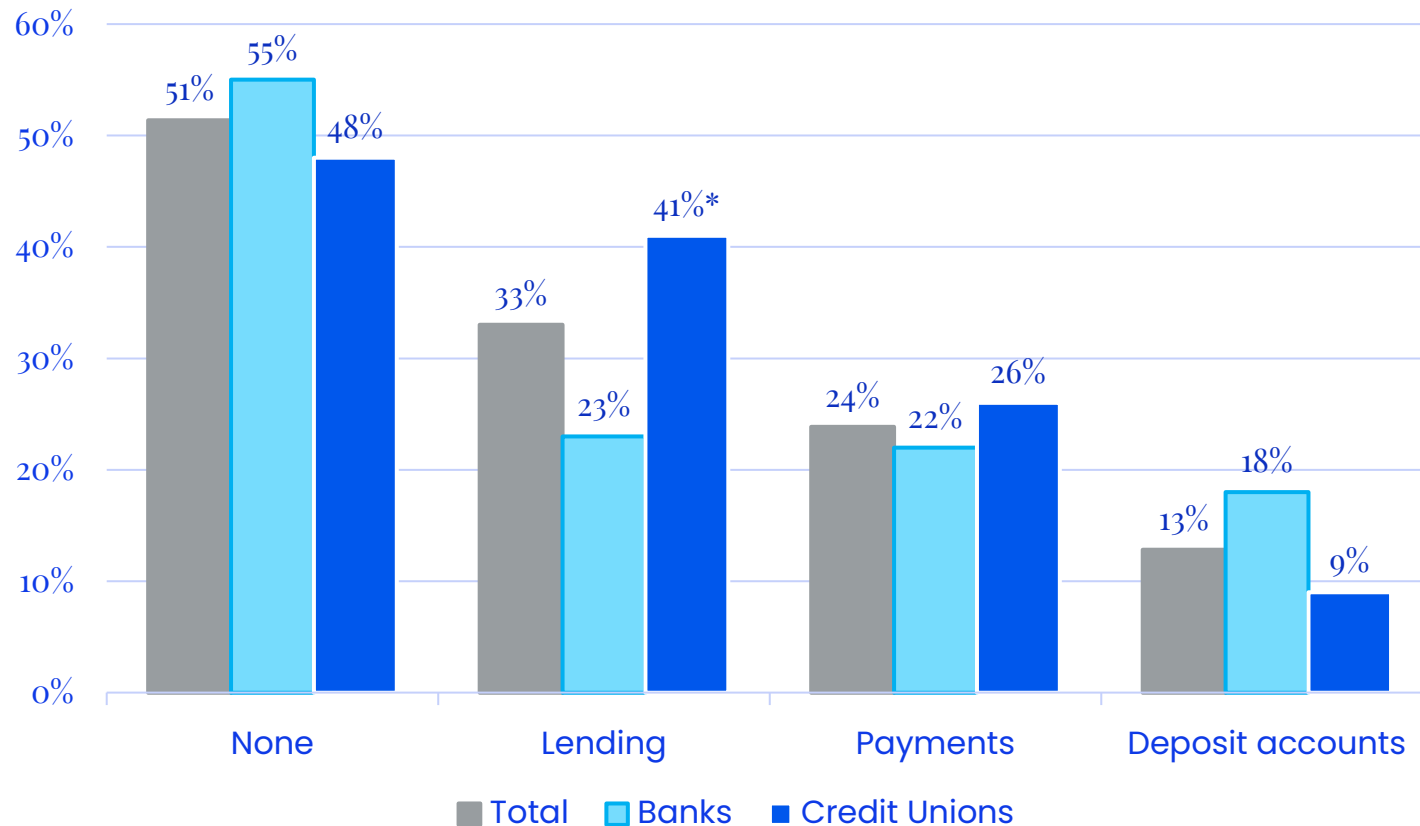
CFPB Advanced Notice of Proposed Rulemaking

1033 has entered public comment, and is much broader than European regulations. It's focused only on account data, but involves any financial product (credit or debit).

55% of banks plan to embed into non-bank brands

"Select which of your financial services you plan to embed into non-bank brands over the next 2 years."

More credit unions (41%*) plan to embed lending compared to banks.

Legend: Total, Banks, Credit Unions

None: Total 51%, Banks 55%, Credit Unions 48%
Lending: Total 33%, Banks 23%, Credit Unions 41%*
Payments: Total 24%, Banks 22%, Credit Unions 26%
Deposit accounts: Total 13%, Banks 18%, Credit Unions 9%

what to do

Plumb into open banking in the U.S...

Eliminate inbound screen-scraping...

- **screen scraping sucks**

Rule of Thirds:

- **Approximately 1/3 of financial accountholders share their financial data with 3rd parties.[1]**

- **That means that at least 100M consumers are sharing their financial data in the US…and Plaid alone is exchanging data between 200M accounts in the U.S.**

On average[1,2] banks' online traffic is:

- **1/3 malicious automation (bots and harvesters)**

- **1/3 benign automation (aggregators and apps)**

- **1/3 human**

Solve fragmentation...
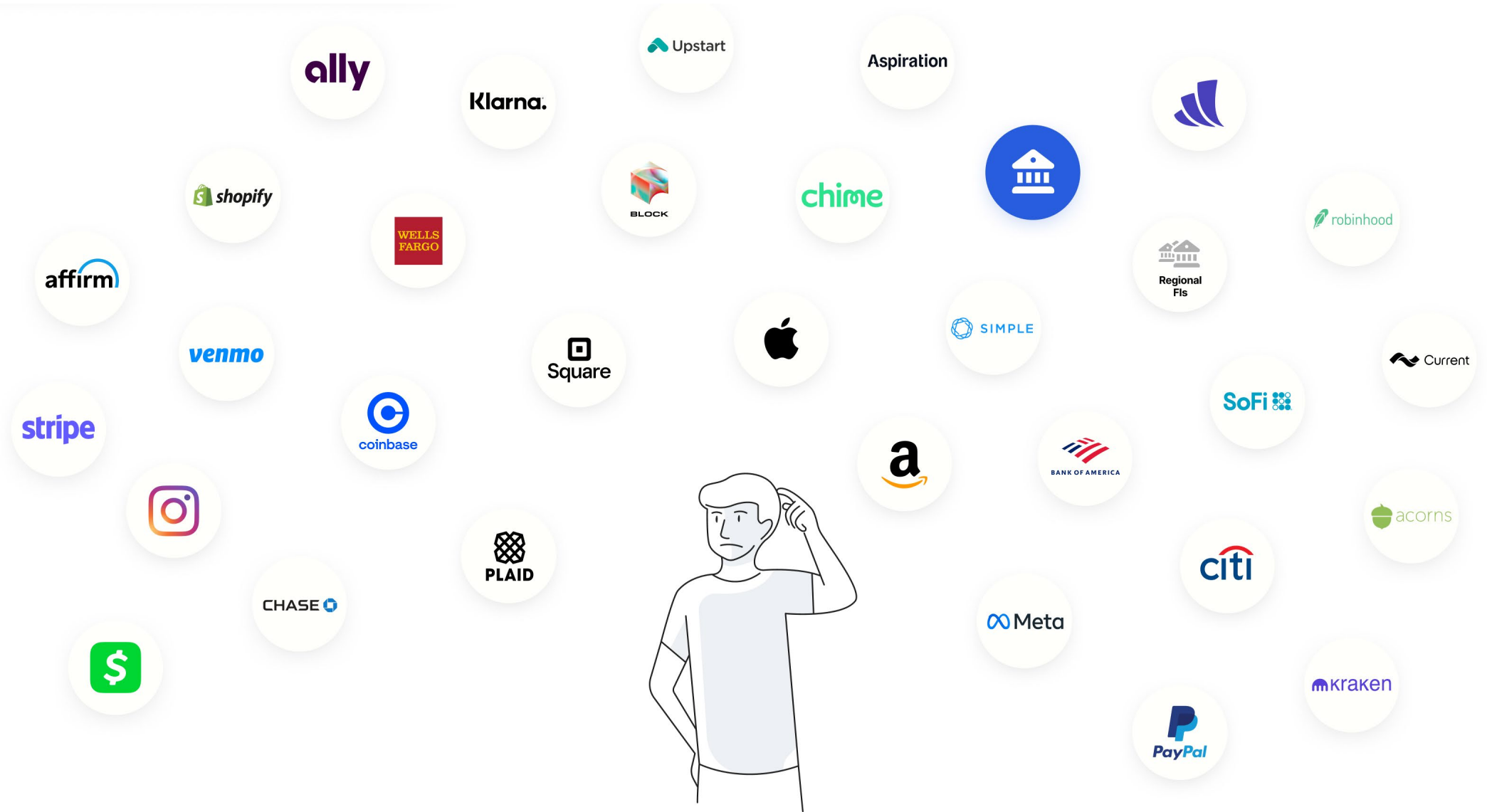
Consolidate, categorize, enrich transaction data that you bring home...
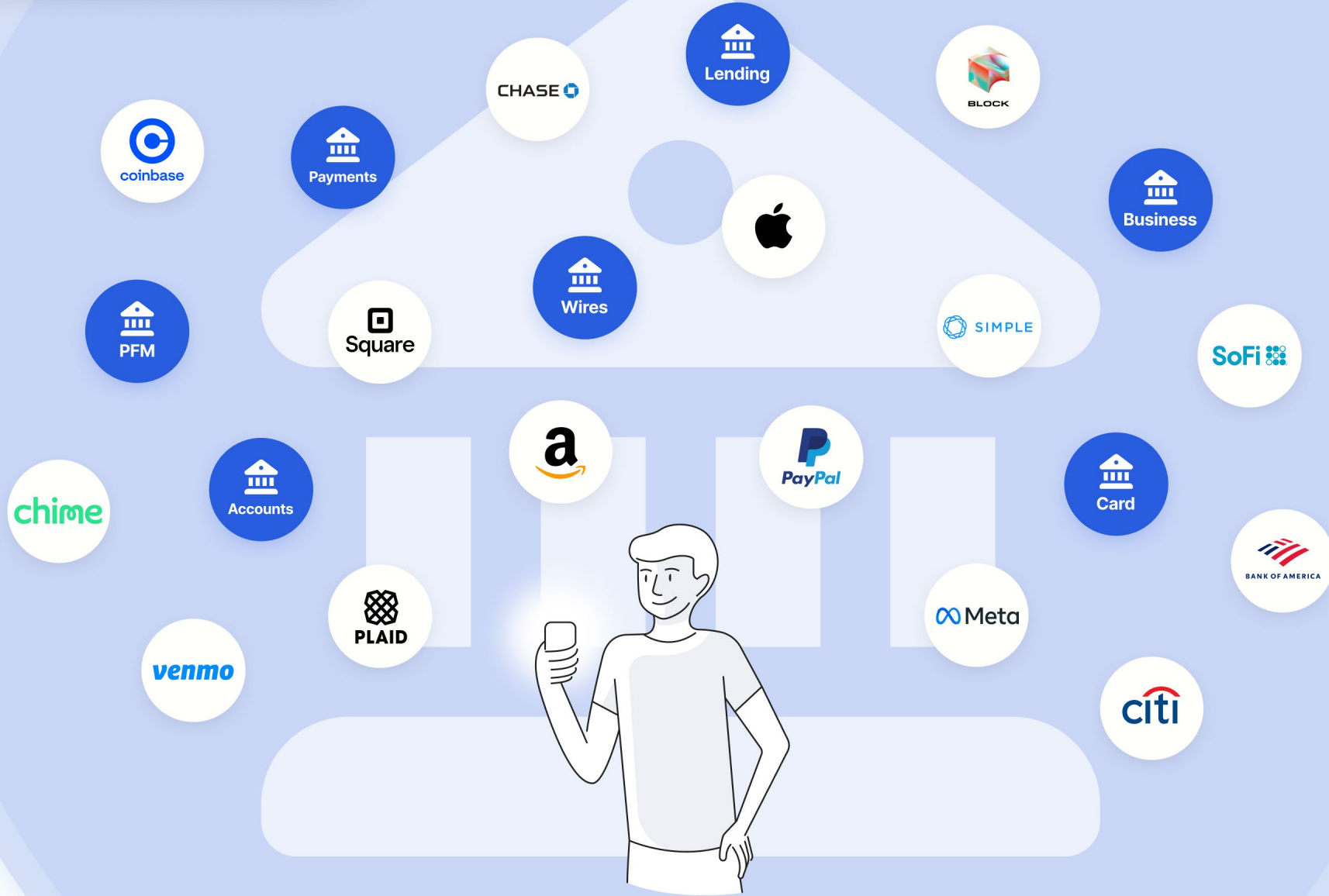
Hi, Emma

Accounts ···

PERSONAL CHECKING 001
x0000
$3,573.88
Available

SAVINGS ACCOUNT 003
x9867
$4,800.78
Available 2 weeks ago

MORTGAGE LOAN
x1486
$375,975.74
Balance

Blue Cash Preferred®
x1234 - American Express
$3,573.88
Balance 1 hr ago

Transfer	Deposit	Pay	Message

Transactions 🔍 ···

SOHO SUSHI BAR/THE ST CED...
Pending   Nov 20, Checking
$33.34

WHOLE FOODS MARKET CHICA...
$8.84

Add an account

YourFI

Username
_____

Password   Show
_____

Forgot?

Sign in

---

x1234 - 4 min ago   Available

Visa Credit Card
x1234 - 4 min ago
$7,457.39
Balance

Mortgage
x1234 - 4 min ago
$165,215.36
Balance

Emma's spending
x1234 - 4 min ago, Ovation Bank
$815.36
Available

Emma's savings
x1234 - 4 min ago, JPMorgan...
$1,378.95
Available

Jeff's Spending
x1234 - 4 min ago, Ovation Bank
$2,564.11
Available

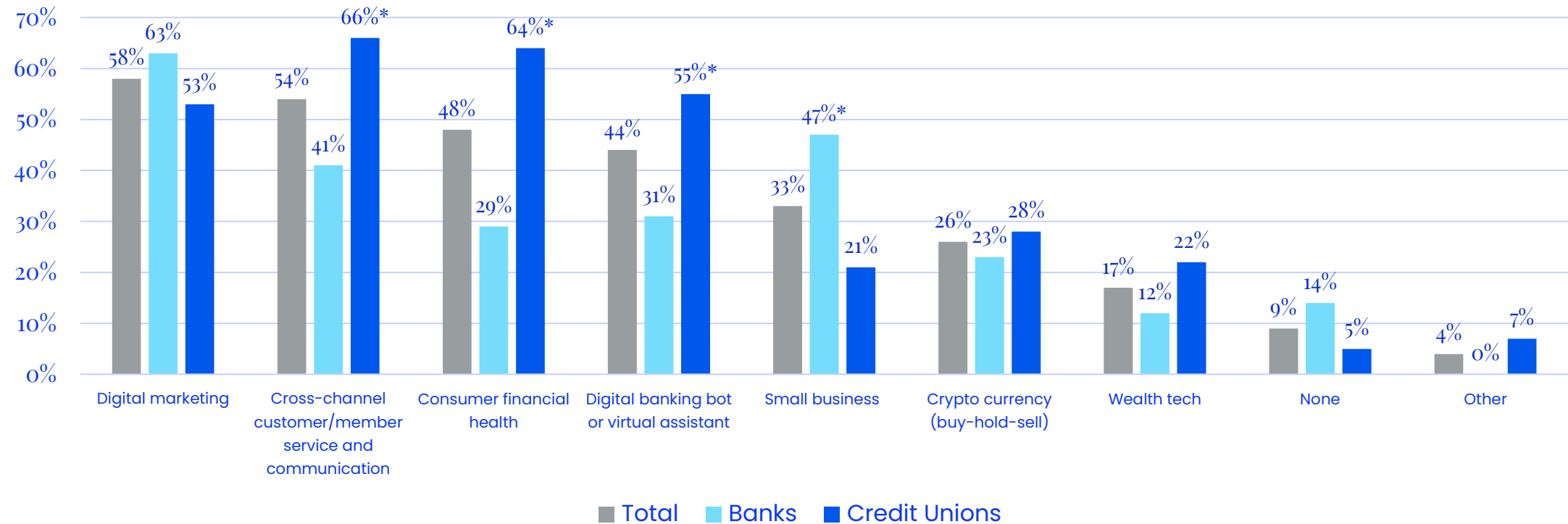✈ Travel notices

Accounts

🏛 Your FI

🔴 Bank of America

⇄ External transfers

➕ Add an account
Open an account or view balances and make

Embed the right fintech(s)...

90% of banks plan to embed fintech in digital

"Select all types of fintech you plan to embed in your digital banking experience over the next 2 years."

Category	Total	Banks	Credit Unions
Digital marketing	58%	63%	53%
Cross-channel customer/member service and communication	54%	41%	66%*
Consumer financial health	48%	29%	64%*
Digital banking bot or virtual assistant	44%	31%	55%*
Small business	33%	47%*	21%
Crypto currency (buy-hold-sell)	26%	23%	28%
Wealth tech	17%	12%	22%
None	9%	14%	5%
Other	4%	0%	7%

■ Total ■ Banks ■ Credit Unions

- **enable your embedded fintech strategy**

"The integration of fintech products and services into financial institutions' product sets, websites, mobile apps, and business processes."
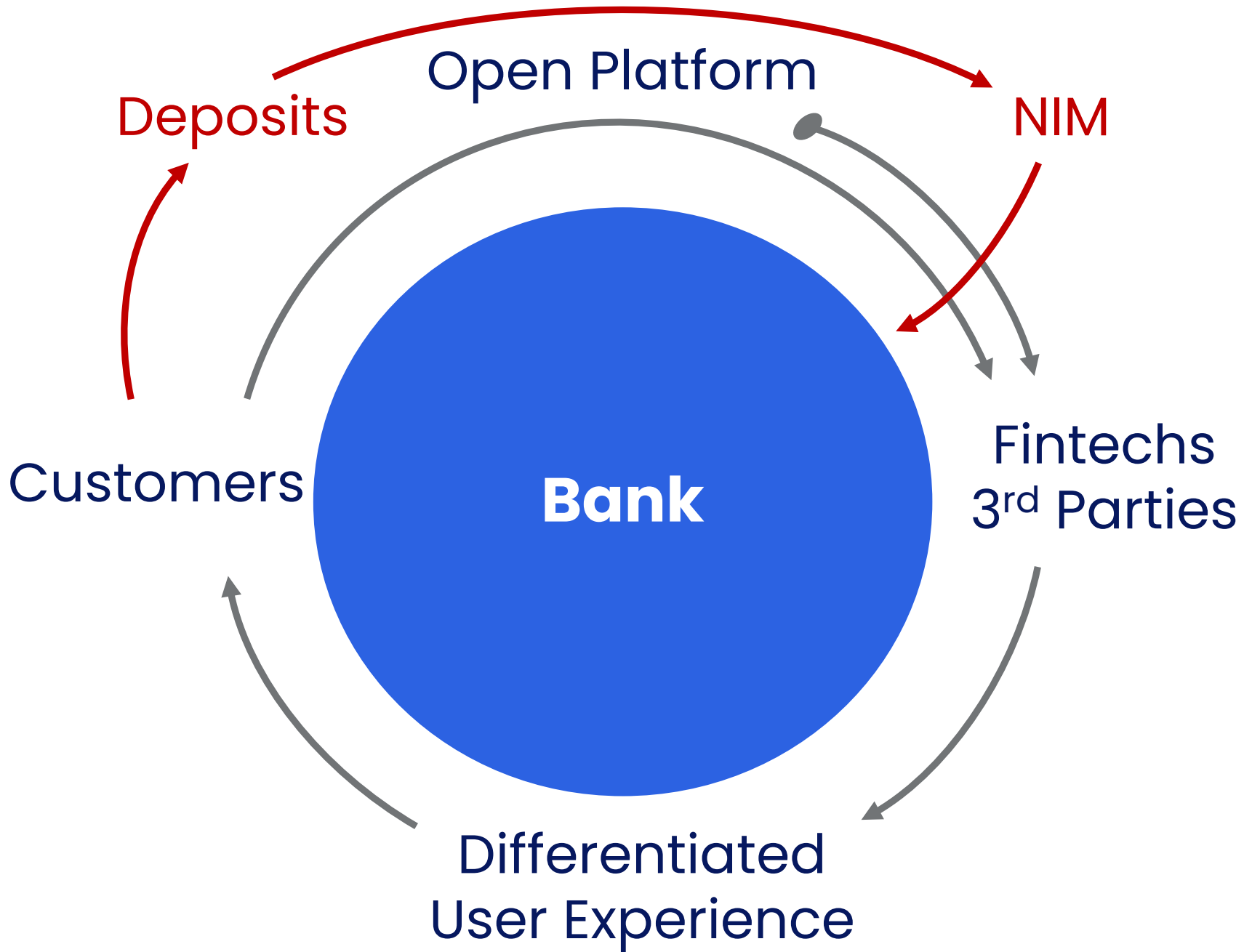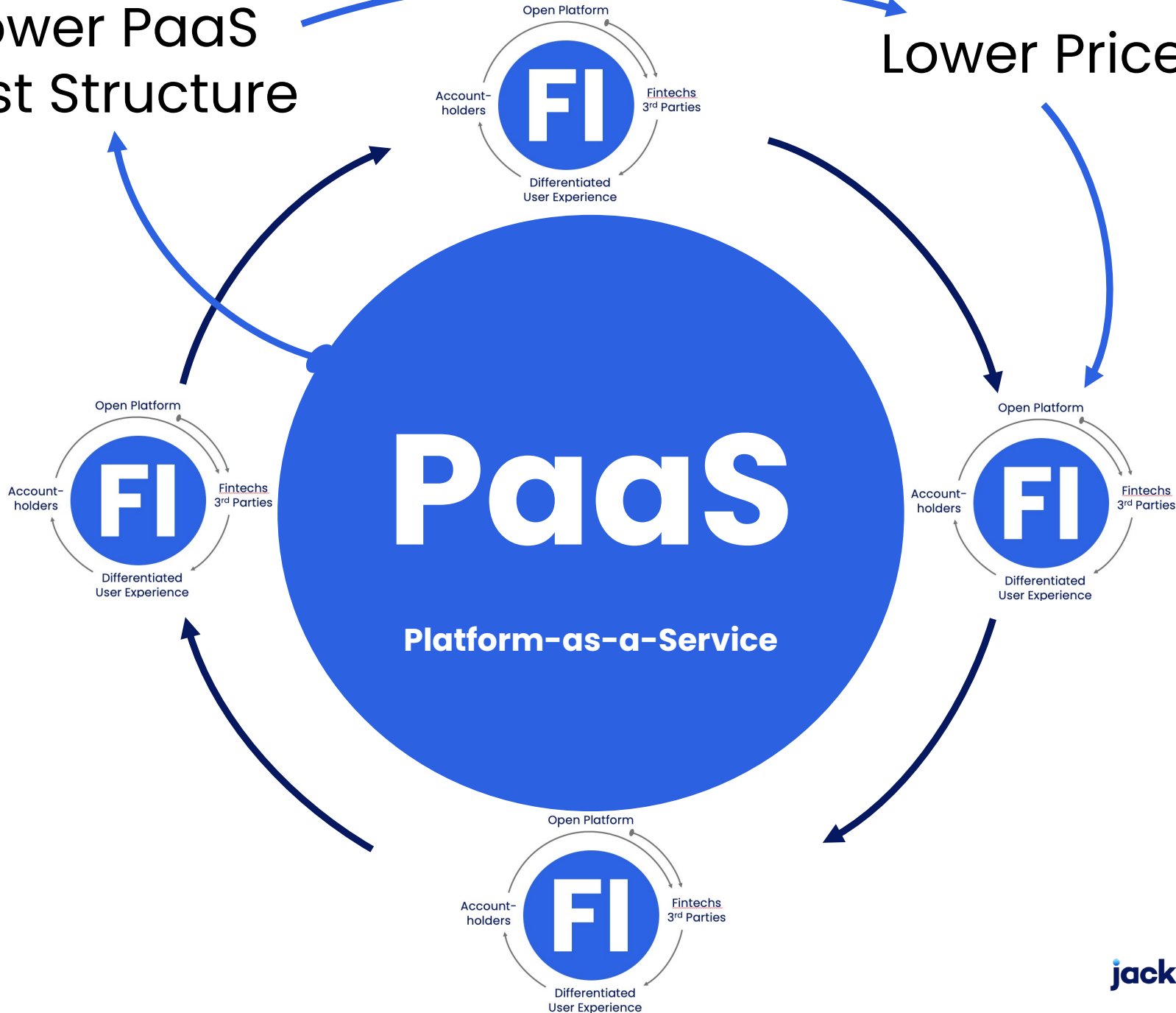
Lower PaaS Cost Structure
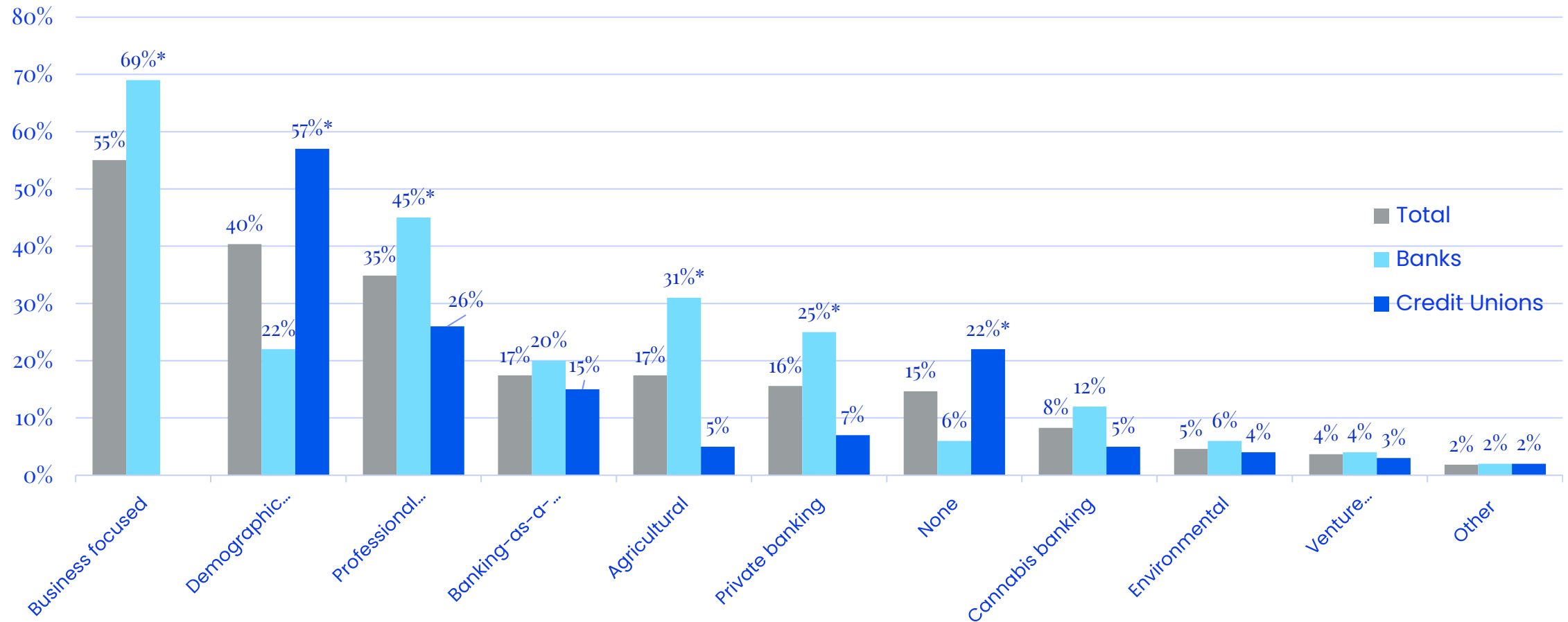
Lower Prices

PaaS

Platform-as-a-Service

FI
Open Platform
Account-holders
Fintechs 3rd Parties
Differentiated User Experience

jack henry | strategy   45

Pursue a niche...

niche strategies: banks vs. CUs

Legend: Total (gray), Banks (light blue), Credit Unions (blue)

- Business focused: 55%, 69%*
- Demographic...: 40%, 22%, 57%*
- Professional...: 35%, 45%*, 26%
- Banking-as-a-...: 17%, 20%, 15%
- Agricultural: 17%, 31%*, 5%
- Private banking: 16%, 25%*, 7%
- None: 15%, 6%, 22%*
- Cannabis banking: 8%, 12%, 5%
- Environmental: 5%, 6%, 4%
- Venture...: 4%, 4%, 3%
- Other: 2%, 2%, 2%

Map (sub)niches to proven fintechs that have the specific innovations, features, and services that would bring unique value to the bank's targeted segments/ prospects.

CB INSIGHTS

Fintech 250

2022

Payments processing & networks

xendit · FOODICS · CODA PAYMENTS · GOCARDLESS · Rapyd

MODERN TREASURY · stripe · MFS AFRICA · checkout.com

teamapt · EBANX · CITCON · Thunes · mollie

sumup · cedar · SpotOn · Razorpay · melio

PayCargo · SaltPay · ba/ance · Airwallex · NIUM

Modulr · ripple · pine labs · innoviti · cloudwalk

Volanté · BharatPe · FINIX · deliverect

Payroll & benefits

deel. · gusto

Velocity Global · bob

dailypay. · CaptivateIQ

RIPPLING · PayFit

Oyster · Pinwheel

Nayya · papayaglobal

remote · atomic

darwinbox · guideline

Asset management

CAIS · AlphaSense · ADDEPAR

Corporate cards & expense management

PLEO · airbase

tribal · tide · 分贝通 · SPENDESK

Brex · MESH · ramp · yokoy

Payhawk · JEEVES · JUNI · Qonto

Digital banking

Revolut · KOHO

GREENLIGHT · tonik

C6 BANK · Current

monzo · Starling Bank

Lydia · agi · Varo

chime · Klar · N26

Cryptocurrency

zero hash · ELLIPTIC

MoonPay · Prime Trust · Blockchain.com

FALCONX · CONSENSYS · KUCOIN · TAXbit

BLOCKDAEMON · Fireblocks · Chainalysis

PAXOS · ANCHORAGE DIGITAL · BINANCE · FTX

TALOS · STARKWARE · nansen · TRM

LEDGER · GEMINI · CoinDCX · alchemy

BNPL & credit cards

Petal · upgrade

Klarna · zilch

uplift · tabby

AVANT

atome · Mission Lane

Capital markets

SYMPHONY · CAPITOLIS · Digital Asset

Trumid · carta · Genesis · LIQUIDITY · OPENGAMMA · iCapital

Consumer lending

WeLab · Caribou · kueski

Happy Money · creditas

TALA · Anyfin · CRED

Business lending

built · Yubi · OakNorth

Fundbox · C2FO · wayflyer

biz2credit · Konfío · pipe

Accounting & finance

pilot · Chargebee · amaka

FloQast · Khatabook

highradius · tipalti

Investing & trading infrastructure

DRIVEWEALTH

upvest · Alpaca

Financial services automation

SHANNON.AI · glia

unqork · HYPERSCIENCE

earnix

Fraud prevention & compliance

ALLOY · feedzai · COMPLY ADVANTAGE

Signifyd · UNICO · IMMUTA

Prove · Socure · Quantexa

FORTER · veriff · onfido

Retail investing & wealth management

STASH

Republic · Betterment

ALTO · acorns · Pluang · Wealthfront · StockGro

warren · Groww · Yieldstreet · public.com

Moonfare · TRADE REPUBLIC · scalable CAPITAL · Flink · eToro

vetting for high-grade fintechs

CB INSIGHTS

Identification of highest-grade fintechs for targeted integration, partnership and acquisition

Quarterly reports identifying key fintech trends, growth and funding

FinXTech

Annual survey of fintechs to track how fintechs experience Jack Henry

Sponsor *Experience FinXTech* and *Acquire or Be Acquired* conferences

Quarterly tracking of fintechs partnering successfully with FIs

Annual fintech Pitch Day of most strategic, vetted fintechs

Accounting & Finance

brightflag #FloQast

tipalti Chargebee Khatabook STAMPLI autobooks AGICAP clear

pilot SETTLE Pennylane avidxchange highradius zenoti

Capital Markets

carta genesis iCapital NETWORK Trumid PrimaryBid CAPITOLIS

Personal Finance

M scalable CAPITAL trust &will wealthfront Betterment HMBradley

StashAway Albert Titan STASH A.L.T.O. Truebill

POS & Consumer Lending

Addi CRED deserve Mission Lane Klarna. bit Petal

Regulatory & Compliance

ComplyAdvantage FORTER Trulioo Signifyd ure FR

Quantexa onfido IMMUTA

Real Estate & Mortgage

Loft HomeLight Rhino roofstock Pacaso hometap

LeaseLock SPRUCE QUINTOANDAR snapdocs Valon

Juniper Square SIMPLENEXUS Qualia Flyhomes Divvy

Retail Investing & Secondary Markets

Webull atom

public.com YIELDSTREET Groww Rally TRADE REPUBLIC

Payroll & Benefits

remote snappy PayFit Human Interest dailypay. check

PAVE papayaglobal Guideline deel. truework gusto

Asset Management

ADDEPAR

VISE EquityBee DRIVEWEALTH AlphaSense

Payments Processing & Networks

Bolt cedar mollie clip NIUM

Airwallex ppro Orum checkout.com

paymongo Cashfree BharatPe GOCARDLESS

Flutterwave stripe ZEPZ OPay PayCargo

Enfuce RELAY Rapyd Razorpay deliverect

ba/ance Paystand Pine Labs xfers ripple

SpotOn melio xendit EBANX recharge

Insurance

Extend Ladder wefox

alan CyberCube TRACTABLE at bay ARTURO

CAMBRIDGE MOBILE TELEMATICS ZEGO BESTOW socotra digit

PIE INSURANCE VOUCH COWBELL CYBER ETHOS

NEXT Thimble Coalition luko CORVUS

EMBROKER BOUGHTBYMANY Policygenius marley

Business Lending & Finance

spendesk ramp CLEARCO Konfio pipe

Tradeshift PLEO BlueVine Capchase Rho

C2FO MERCURY Brex airbase tide

PRODUCEPAY Fundbox

Financial Services & Automation

glia Ocrolus (h[s]) N Notarize unqork Fairmarkit

Core Banking & Infrastructure

ALLOY AMOUNT Finxact unit Solarisbank MX

TRUELAYER zeta MAMBU Modulr NYMBUS

FINIX Reserve Trust cross river TREASURY PRIME narmi

MANTL Thunes. Railsbank Lithic HASH belvo.

codat PLAID

Credit Score & Analytics

Borrowell credit sesame NOVA CREDIT

Digital Banking

freo nu Starling Bank

chi gree GH ili step Varo Current

monzo nto evolut LUNAR GREENWOOD uala

Mobile Wallets & Remittances

hippe DEADOR PAYSEND FAZZFINANCIAL toss

Cryptocurrency

CERTIK Bitcoin Suisse ANCHORAGE DIGITAL copper.co FTX SYNTHETIX

MESSARI BLOCKDAEMON Chainalysis Blockchain.com

Dapper BlockFi TAXbit bitpanda Bitwise Lukka

PAXOS FalconX Fireblocks alchemy MobileCoin

Bitso celo Finoa AMBER Ledger CoinDCX wyre

General Lending & Marketplaces

CAPITAL FLOAT upgrade creditas WeLab

Note: Companies are private as of 9/14/21.

Created by You. Powered by CBINSIGHTS

- **questions framing the future for banks**

1. **How will you secure first-app status?**
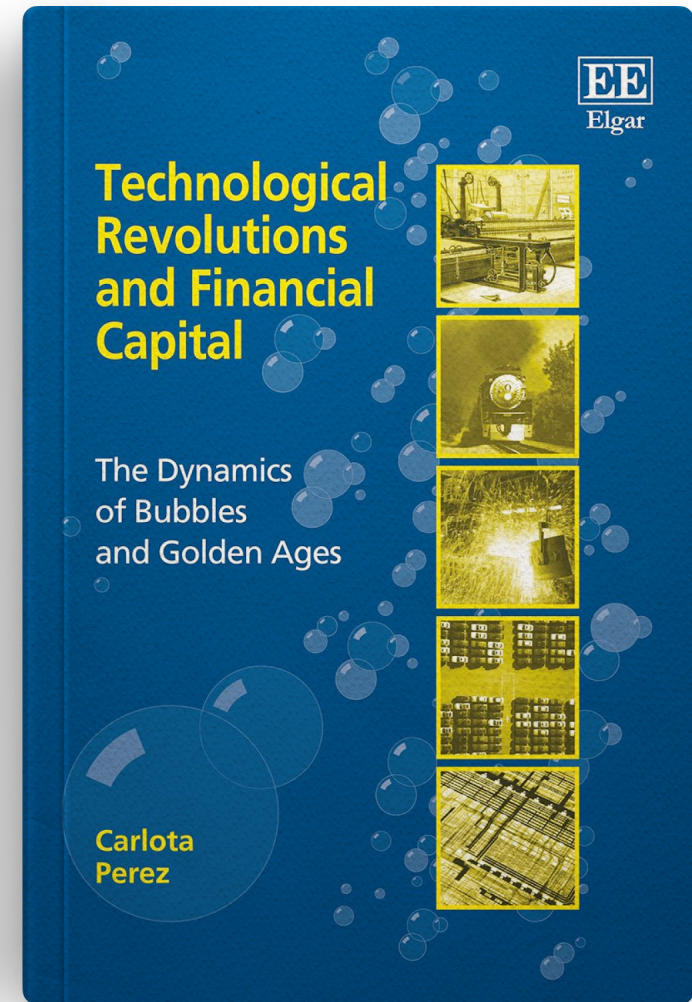
2. **What is your open strategy?**

3. **What is your real-time (data/payments) strategy?**
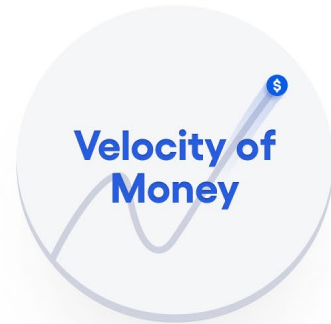
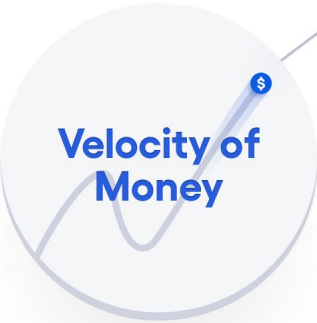4. **What is your embedded fintech strategy?**

the future

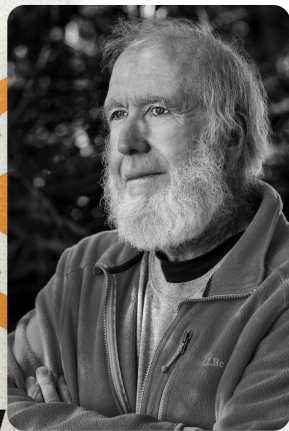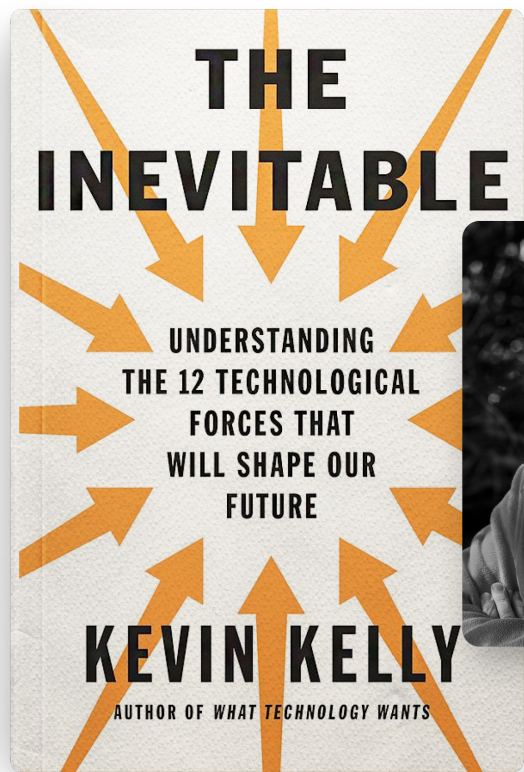Technical revolutions are never due to one advancement—but a convergence of multiple advancements.

Technological Revolutions and Financial Capital
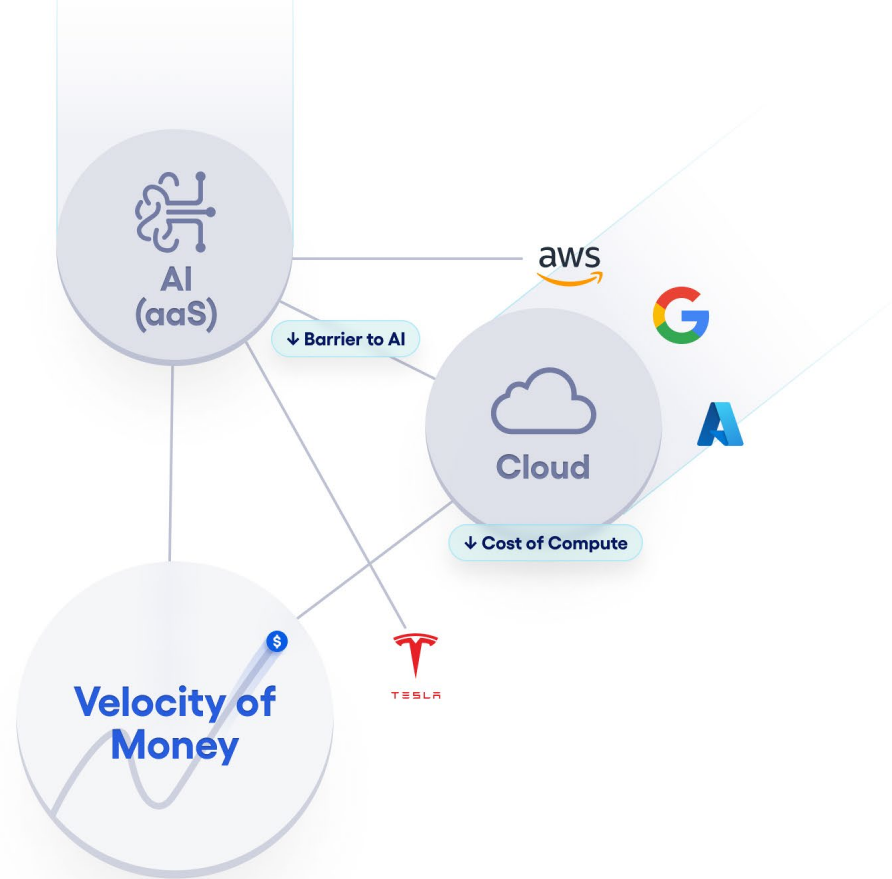
The Dynamics of Bubbles and Golden Ages

Carlota Perez

EE
Elgar

Velocity of Money

THE INEVITABLE

UNDERSTANDING THE 12 TECHNOLOGICAL FORCES THAT WILL SHAPE OUR FUTURE

KEVIN KELLY

AUTHOR OF *WHAT TECHNOLOGY WANTS*

aws

G

A

Cloud

↓ Cost of Compute

$

Velocity of Money

AI (aaS)

↓ Barrier to AI

Cloud

↓ Cost of Compute

Velocity of Money
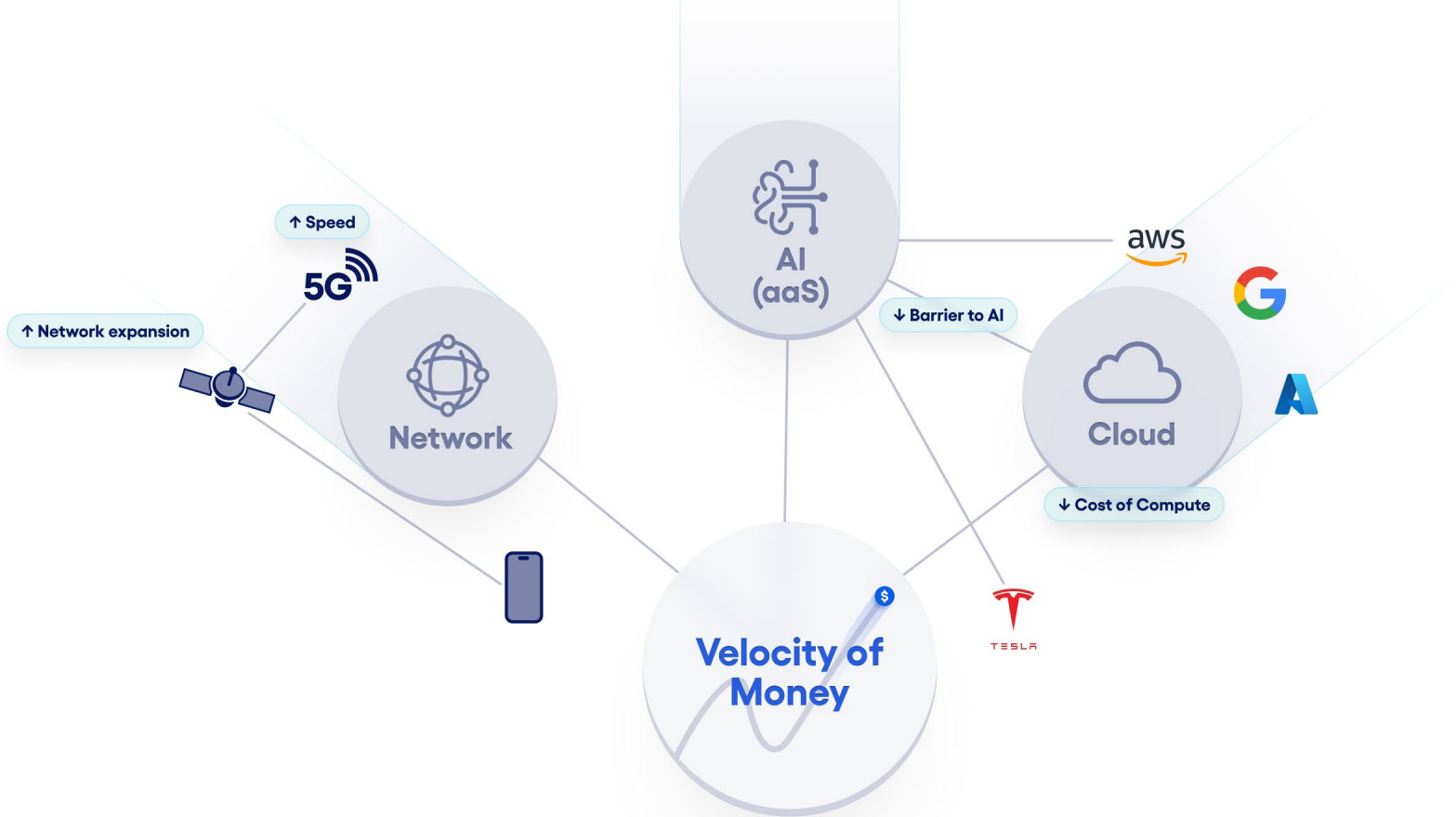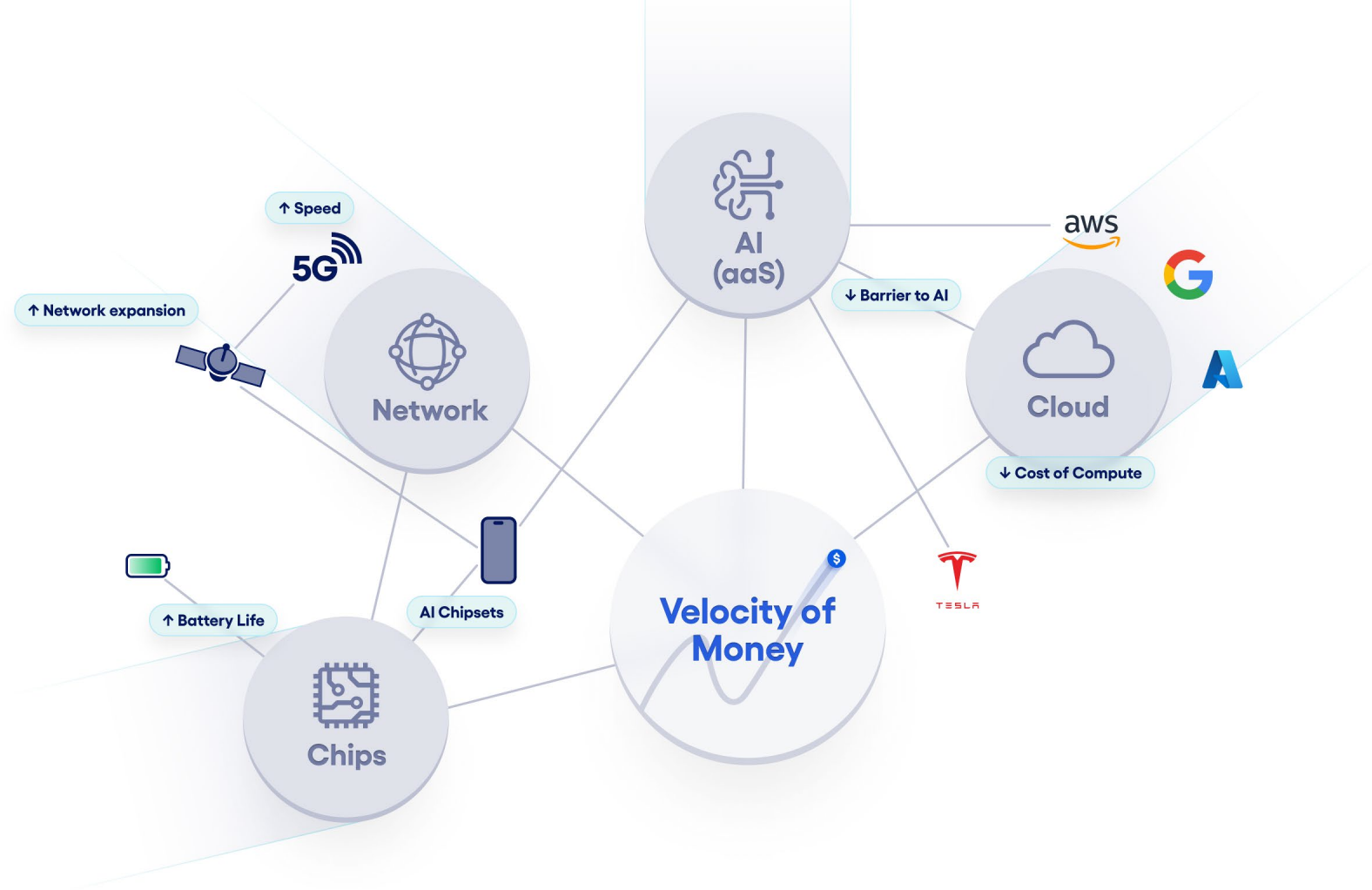
Speculation
is a feature,
not a bug.

AI
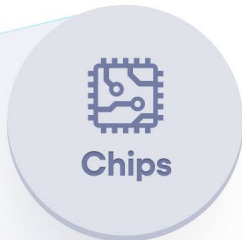(aaS)

Network

Cloud

Velocity of
Money

Chips
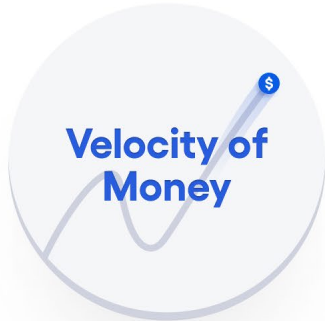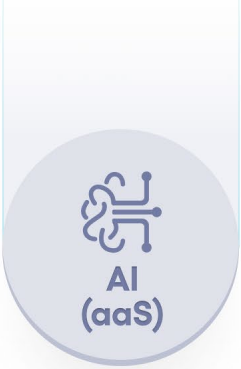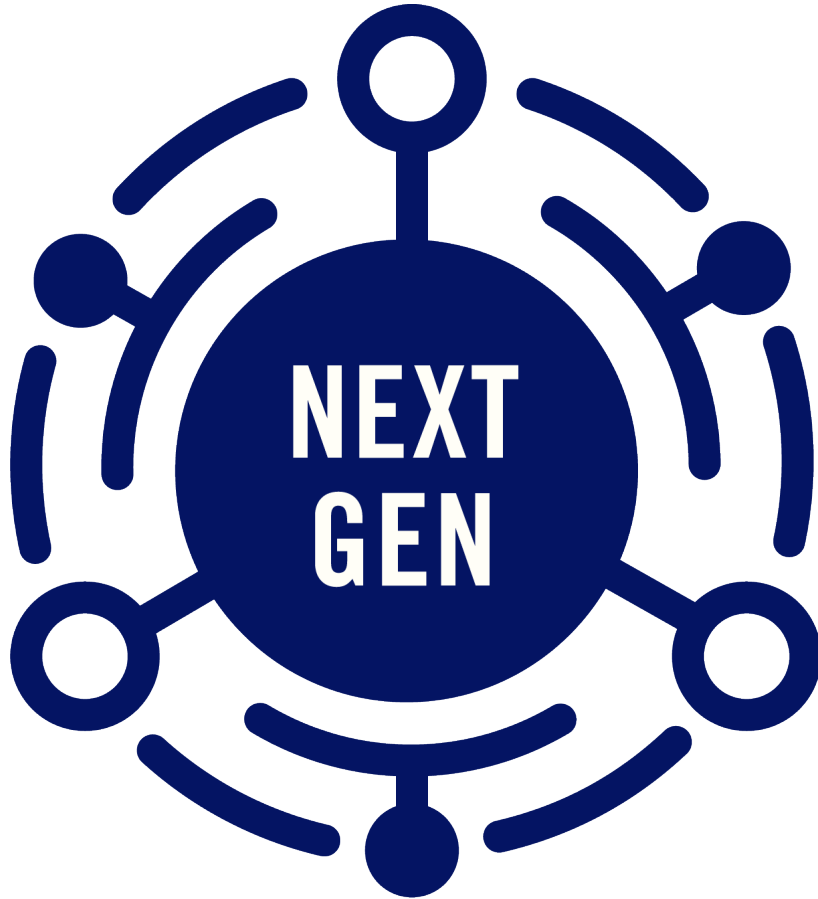
Fiat

CMN

Fintech

- **future-ready**

NEXT GEN
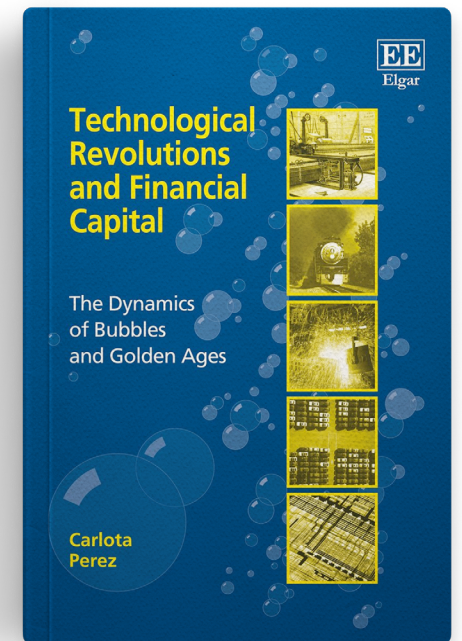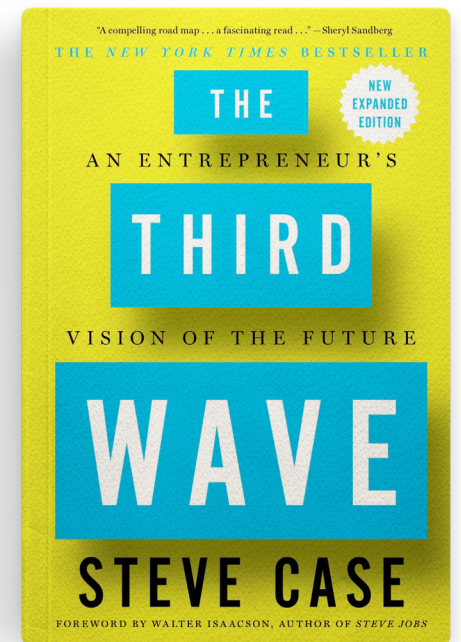
Digitally centric

Cloud-native

Open

Modular

Extendable

Web 3.0-enabled

- **technology modernization**

The ideal platform ecosystem:

- Is open and relational

- Delivers platform-as-a-service (PaaS)

- Offers developer toolkits and open APIs

- Delivers ongoing and deep integration of capabilities

- Facilitates partnerships with the highest grade fintechs to solve your biggest problems...and enables embedding them quickly