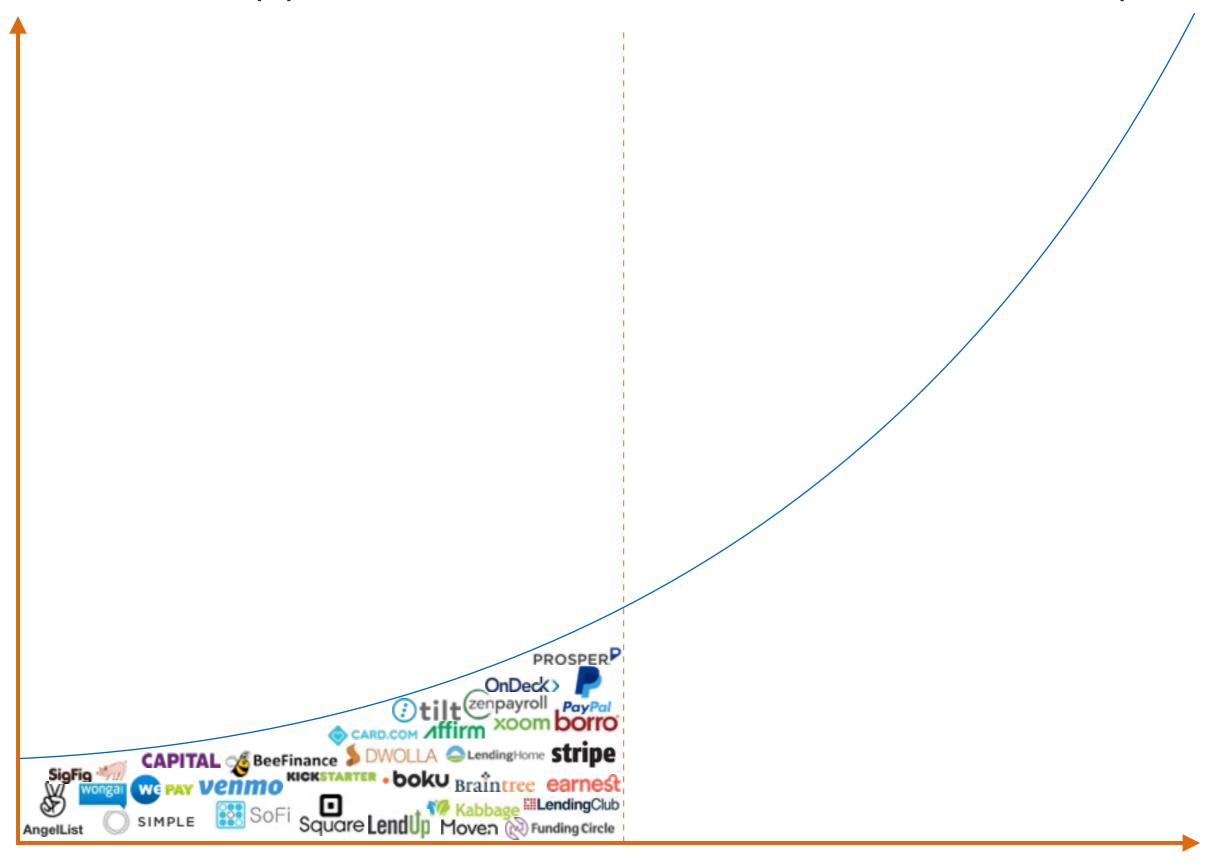


# STANDARD TREASURY

Series-A

Trend: the application layer of financial services is exploding



# Behind every fintech application is a wholesale bank:















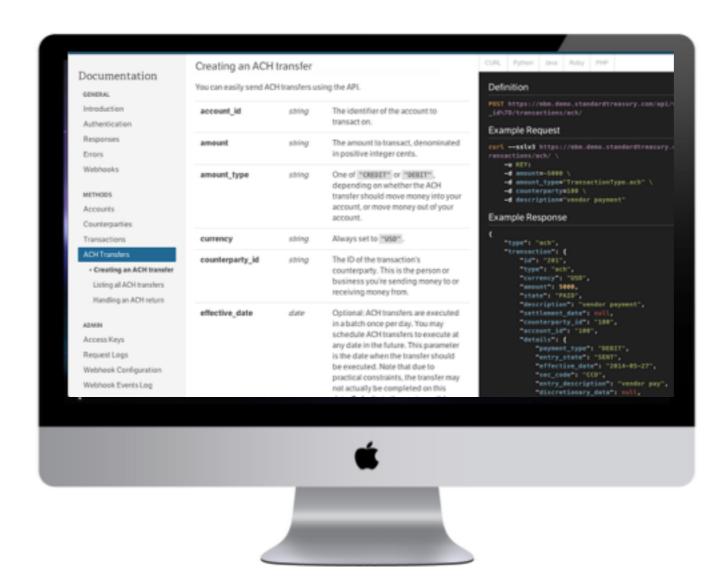




Fintech apps are hard and costly because banks have: bad technology bad culture bad technology culture

We know this problem better than most.

The world's largest banks had asked us to build them APIs.



But we stopped to build our own wholesale bank: the banking platform to power the fintech app revolution

## Value



## Giant market with a focused start



Gross Value: Wholesale banking \$259 Billion

TAM:
Global Startup
Wholesale banking
\$5 Billion

This is hard...

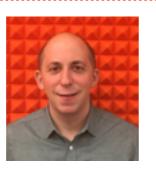
## ...what it takes:

- Great API platform
- Great backend infrastructure
- Banking license in at least one country (UK)
- Global roll out (US and Europe)

# Why now? The timing is right:

- Regulatory Changes
- Technology Maturity
- Rapidly growing market with eager customers

## Our world class team



Dan Kimerling, CEO COO of Giftly, Analyst at TechCrunch BA/MA, University of Chicago



Zac Townsend, President Risk @ Stripe, CTO of Newark NJ BA, Brown, MPA, NYU



Chris Dean, VPE Co-Founder, Merced VP, BabyCenter CalTech Physics



**Jim Brusstar**: Eng Lead, Sidecar Eng Lead, FB Platform BSE in CS from Michigan



**Mike Clarke**: Infrastructure Lead, Disqus EE from Notre Dame



Keith Ballinger, Head Architect Co-Creator of .Net; Developer, Fed Reserve, Published 2 software books



**David Jarvis**:
Software Engineer
CircleCI;
Data Scientist, AK
BA, University of Chicago

# Current landscape









aren't nimble, too much legacy tech









bad technology but worse risk management and relationship with the regulators



STARLING

**Atom** 



these are all consumerfocused retail banks

# With \$10M, we will get authorized in the UK

#### **LAUNCH TO PRESENT**

#### **Complete Regulatory Work**

Studied US Regulation
Studied UK regulation
Completed early legal and
regulatory work
Met UK Regulators

#### **Built Product**

Public API
Developer portal
SDKs
Core Ledger
Authenticate and Authorize

#### H1'15

#### Regulation

Prepare Application
Pre-Meetings and Challenge
Sessions
Consulting
Set up UK Subsidiary and
Operation

#### **Product**

Payment Systems
Customer Information System

#### Hiring

Bank CEO Engineers Designers

#### H2'15

#### Regulation

Application
Regulatory Assesment
Individual Capital Guidance
Individual Liquidty Guidance

#### **Product**

Infrastructure
Logging/Auditing
Online/Mobile Banking
Compliance/KYC/AML

#### Hiring

Compliance Engineers

#### H1'16

#### Regulation

Application
Governance
Policies/Procedures
IT Review

#### **Product**

Debit Issuance Deployment Testing/Launch



#### Hiring

Compliance
Engineers
Operations
Support

# Series A Financials

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total
		Phas	e 1: A	pplica	ation	ion		Phase 2: Authorization				Phase 3: Mobilizations				P	Phase 4: Cus			tomers Live					
Current Burn																									
SF Office	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	240
Five Engineers	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	1680
Two Founders	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	408
Benefits, etc	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	792
New Personnel in UK																		 							
Bank CEO				20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	420
Compliance				15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	315
Risk				15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	315
Designer															12	12	12	12	12	12	12	12	12	12	120
UK Office				10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	210
New Personnel in the US																									
Engineers																									
Security	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	288
Product			12	12	12	12	24	24	24	24	24	24	36	36	36	36	36	36	48	48	48	48	48	48	696
Infrastructure													12	12	12	12	12	12	24	24	24	24	24	24	216
Regulatory Work																		 							
Regulatory Advisor	150	150	250	250	350	350	150	150	150	150	150	150	25	25	25	25	25	25							2550
Legal Work	25	25	25	25	50	50	10	10	10	10	10	10						 							260
Total	337	337	449	509	634	634	406	406	406	406	406	406	295	295	307	307	307	307	306	306	306	306	306	306	8990

## Once launched we have durable advantages:

- Sticky developer relationships
- Regulatory head start (2-3 years)
- Risk management network effects
- Easy to expand to commercial banking

# Risks & Mitigations:

	Risk	Plan
1	We can't get licensed; significantly less market demand	Sell our software to other banks
2	It takes longer to get license	Slow down our burn
3	It takes longer to ship our software	Speed up engineering hiring
4	If we can't find the right people	Work with headhunters and use contractors, as needed



# STANDARD TREASURY

Thank you

# Appendices

- A. Background: Past financing, product and progress
- B. UK Regulatory Environment
- C. US Regulatory Environment
- D. Product Roadmap and Use Cases
- E. Technology and Architecture

# Appendix A

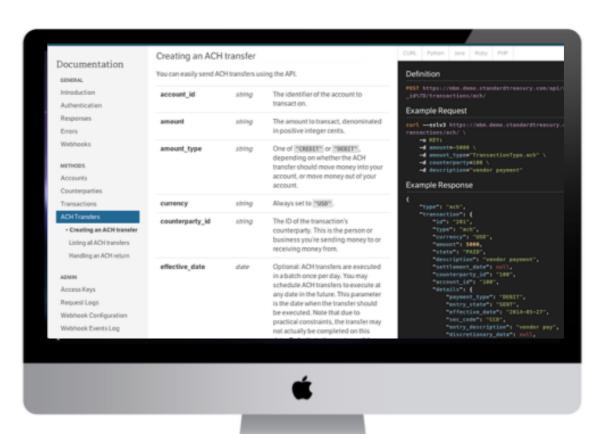
- A. Background: Past financing, product and progress
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# Our history

We've always been focused on API Banking...

by providing the world's largest banks all the ingredients for success in API Banking.

- Secure integration with bank middleware
- Public APIs tailored to each partner's unique needs
- Self-service developer administration
- Up-to-date documentation & SDKs
- World-class developer support
- Partner & growth engineering
- Turnkey app store





# Background

## **PRESS**

American Banker's Top Ten Tech Companies to Watch

## **FINANCE**

\$2.7M convertible note financing

Featured in









## **ACCELERATORS**

## **Fintech Innovation Lab**

Selected by fourteen top banks to participate Mentored by Goldman Sachs, Deutsche Bank, Morgan Stanley and UBS



## Commerce.Innnovate

Mentored on advanced payments by MasterCard

## Current investors include:













# Data Collective



Angels include:

Brian McLoughlin

Cory Ondrejka

Paul Buchheit

Josh Abramowitz

Jonathan Abrams

Greg Kidd

Gus Felder

Jay Mandelbaum

Dalton Caldwell

John Wolthuis

# Appendix B

- A. Background: Past financing, product and progress
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# Easier to start in the United Kingdom

We have spent the last six months studying the regulatory and legal landscape.



## Planning to de novo a bank in the United Kingdom:

- Much friendlier regulatory climate
- Political desire for new banks and banking models
- New legal pathway to more easily de novo a bank
- Specific authorizations to operate our business model
- Fewer restrictions on capital structure

Big opportunity in United Kingdom as first market:



Every startup we met said there was a need for the bank, and that they would either switch their existing business to our bank or would switch all future product development to our bank. Given what these existing players told us about their current usage bills with their banks, we believe we could easily be profitable on the soft commitments we've already received.

## New Easier Process to Start Banks

- Improvements to and streamlining of the pre-filing system
- Reduced capital requirements at authorization
- Reduced liquidity requirements for new entrant banks
- Simplification and streamlining of application documentation
- A reduced minimum realistic time for the application process of six months (previously two years)

# Three relevant regulators in the UK, all friendly

### **Prudential Regulator Authority**

- Part of Bank of England
- Part of "dual" bank authorizations process
- Has responsibility for safety and soundness regulation of U.K. banks
- Open to competent business plans outside traditional banking models
- Analogous to the Federal Reserve's supervision work in the US

### **Financial Conduct Authority**



- Independent agency
- Part of "dual" bank authorizations process
- Has responsibility for regulating banks in relation to consumer protection, conduct, market participation and financial crime issues
- Mash up of SEC, FDIC, and Fincen for a US analogy
- Set up Innovation Hub to guide startups through agency

## **Payments Systems Regulatory**



- Part of the Financial Conduct authority
- Standing up on April 1, 2015
- Publishing guidance supporting "challenger" banks

# There is a rich financial technology ecosystem

We met with some ecosystem players like Level39, Innovate. Finance, the FinTech Innovation Lab, etc. We like the concentration of community, lobbying power, and knowledge that we found, as well as the appetite for the type of infrastructure we're proposing.

We got the sense, as well, that we could be a active, vocal, and potentially powerful member of the community. Several people said we might be able to influence UK political discussion given sufficient time and resources: that we could be fintech's poster child because we're infrastructure.

# Appendix C

- A. Background: Past financing, product and progress
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- 1. Why not start a bank in the US?
- 2. Why not buy a bank in the US?
- 3. Why not partner with a bank in the US?

## 1. Why not start a bank in the US?

FDIC not granting de novo charters:



Since the financial crisis the FDIC has approved only two de novo applications – one for a development bank in New Haven and another for an Amish bank.

## 1. Why not start a bank in the US?

### WHY THE FDIC DISLIKES DE NOVOS

- FDIC identified that recent de novo banks had a disproportionate share of failures and serious safety and soundness problems.

  • After the crisis, the FDIC tightened its policy on de novo banks
- and effectively restricted serious consideration of de novo banks

### STANDARD TREASURY COULD NOT DE NOVO

- We do not believe that the Standard Treasury plans fall within the exceptionally narrow parameters that, at this moment in time, would cause the FDIC to give serious consideration to a de novo application.
- Barring a major change in the FDIC's approach to de novo charters, which we deem unlikely under the current Chairman, we believe it highly improbable that Standard Treasury could successfully pursue an application for a de novo charter.
- Completely auditable and trackable.

We'd have to own their

- customers
- technology
- loan book
- staff
- particular authorizations
- regulatory relationships
- physical plant

these would be major distractions while we build tech infrastructure

Since the financial crisis, all U.S. federal bank regulators have increased scrutiny of applications to acquire banks, particularly applications by non-banks.

Non-bank applicants can expect to have to meet standards applicable to de novo institutions including:

- a requirement to operate under a business plan approved by the bank's primary regulator for the first seven years of operation
- closer supervisory scrutiny
- more frequent examinations
- operating conditions specific to the particular application, typically include higher capital standards than required by otherwise-applicable regulation
- the more an application deviates from a traditional community-banking model, the greater this scrutiny becomes.

This heightened scrutiny of non-traditional models in turn gives rise to longer application processing times and reduced likelihood of success.

## Restrictions on capital sources:

- Many banking regulators in the US have a natural skepticism towards private equity and venture capital investors, who they perceive as having short term profit motives.
- While this perception is unfair to many such investors, particularly in the venture capital industry, few banking regulators understand the sector well enough to make nuanced distinctions

## Bank holding company:

- There are a complex series of controls that very likely prevents any non-natural person from owning more than 9.9% of a bank without being subject to registering as a bank holding company.
- Banking holding companies are regulated by the Federal Reserve and are subject to an onerous set of reporting, risk management, and internal financial controls.

# 3. Why not partner with a bank?

- 1. Lack of control
- 2. Bad technology interfaces
- 3. Aren't responsive
- 4. Designed unscalable internal control & risk management
- 5. Are reluctant to white label
- 6. Stuck in legacy mindset
- 7. Bad culture and worse technology culture

# Appendix D

- A. Background: Past financing, product and progress
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# Our product

# We are providing banking infrastructure via API to partners who will use and resell our services at scale.

The Amazon Web Services (storage, compute platform) or Uber (logistics, transportation platform) of banking: the high-volume provider of core financial services.

Over time this will include white labeled services like:

### **ACCOUNTS**

- Deposits through companies like Simple, Bee, Zenefits
- Custodial accounts through companies like WealthFront, Betterment, Sigfig
- Escrow accounts through companies like Angellist

### **LENDING**

- Real-time mortgage decisioning for companies like Trulia
- Warehouse facilities for companies like Lending Club



#### **PAYMENTS**

- Cash payments through companies like ZenPayroll, LendingHome.
- Card payments merchant acquiring through companies like Stripe, WePay, Balanced Payments
- Card issuing through companies like Card.com, TrueLink Financial

## Product demo demo.standardtreasury.com

# Example use cases

#### 1. Commercial Customers (Lever)

- 1. Open a new account
- 2. Collect all the information for CIP and KYC
- 3. Automatically run KYC (and credit) checks
- 4. Open account with zero dollar
- 5. Accept a BACS/CHAPS/FPS from another bank account / investor
- 6. Rent office space
- 7. Create a letter of credit
- 8. Pay corporate rent
- 9. Send BACS/CHAPS/FPS to particular counterparty
- 10. Pay for other things (debit cards, checks, other payments)
- 11. Accounting and identity (Xero or direct connections)
- 12. Bill pay

#### 2. Commercial Customers with Debit Features (Lever+)

- 1. Accept ACH debits
- 2. Drawdown wires

#### 3. Wholesale Payments Customers (ZenPayroll)

- 1. FBO accounts
- 2. KYC on beneficiaries
- 3. ACH Debit to corporate
- 4. ACH Debit at scale to FBO
- 5. ACH Credit from FBO
- 6. KYC on counterparties

#### 4. Wholesale Resellers of Retail Accounts (Bee/Simple)

- 1. Open retail accounts
- 2. Information
- 3. Payments

#### 5. Card Issuance Programs (TrueLink, card.com, Giftly)

- 6. ISO/PSP and Merchant Acquiring (Stripe/WePay/PayPal/Balanced)
- 7. Custodial accounts for asset managers (Betterment/WealthFront/Sigfig)
- 8. Advanced data and analytics on usage, counterparties, international accounts
- 9. Foreign exchange execution, settlement, accounts
- 10. Private wealth management tools
- 11.Broker dealer execution, settlement, white labeled portals

# Economics by program type

	Fixed revenue per program	Variable revenue per transaction						
Acquiring	Minimal set-up fees	Significant revenue per dollar processed						
Issuing	Significant set-up fees and ongoing program management fees	Significant revenue per card issued and swipe						
Cash Payments	Minimal set-up fees	Mixed: Significant revenue per real-time dollar processed, minimal for multi-day settlement						
Custodian	Significant set-up fees and ongoing program management fees	Little revenue per dollar of AUM						
Origination	Significant set-up fees and ongoing program management fees	Little revenue per origination; ongoing revenue for servicing						

# Appendix E

- A. Background: Past financing, product and progress
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## Our technology

Our core banking system is built using an API-first design. Every operation in the bank is controlled by a secured rest API, with a micro-services architecture on the backend. Because we started from scratch, our system is built with security, reliability, speed, and usability.

## API

- Payments and Transfers
- Authentication and Authorization
- Logging and Auditing
- Documentation

## IJX

- Bank Manager Operations
- Online Commercial Banking
- Developer Portal

## Technology Stack

- Clojure on JVM
   AngularJS
- PostgreSQL
- AWS (Beanstalk, RDS, ELB, S3)

- Kafka
- Storm

## Infrastructure

- Core ledger
- Customer information System
- KYC, AML, Fraud detection

## Technical Details

After building out APIs for core banking systems in the US we determined that none of the standard offerings met our desire to drive the entire bank with a secure API in a highly performant manner. All of our services and UX are built around the existing API.

### **HIGH LEVEL DESIGN**

- API uses OAuth and JWT to auth every request/response
- All synchronous calls are delegated from the API gateway to the relevant internal micro-services
- A large percentage of those calls create events that are asynchronously handled by our fault tolerant master workflow system.
- Each micro service has its own cluster of machines with its own datastore
- There are separate public and private API services. Public for general consumption, private for services used by the Bank Personnel.

### **OUR SYSTEM**

- API first
- High volume, Reliable, Secure
- Completely auditable and trackable