THE THREE DIMENSIONS OF FINTECH: AN ANALYTIC FRAMEWORK

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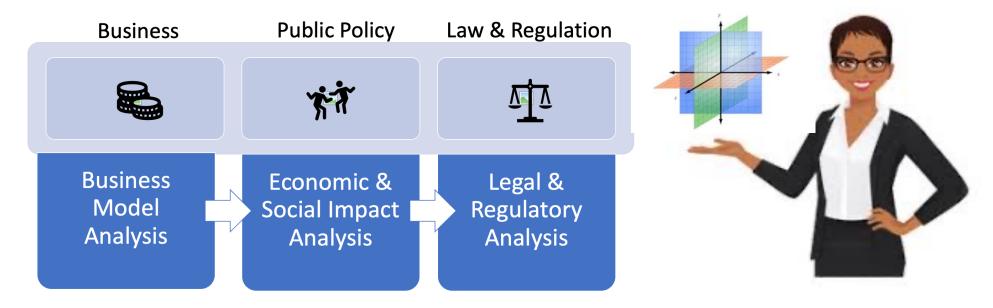
Here's the Question We'll Consider...

- An Entrepreneur Pitches a New Consumer Fintech Idea to You and Asks for Advice...
- How Do You Respond?



This Course Will Give You the Tools to Answer the Question---in Three Dimensions

FinTech Analysis in a Nutshell



So, Let's Start



The 3-Dimension FinTech Framework

Public Policy Law & Regulation Business Business Legal & **Economic &** Model Regulatory Social Impact Analysis Analysis Analysis

1st Dimension: Business Model Analysis

Business Public Policy Law & Regulation

TA

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Business Model Analysis

Economic & Social Impact Analysis

Legal & Regulatory Analysis

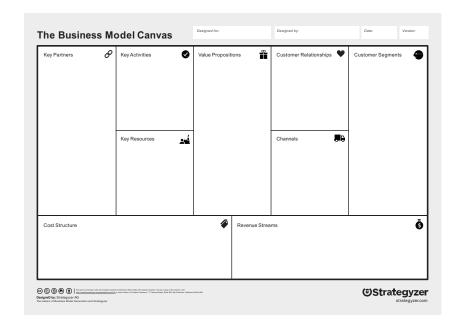


Tools for FinTech Business Model Analysis

1A: Canvas



1C: Risks











Financial Services Risks:
Credit risk
Market risk
Operational risk
Liquidity (Funding) risk
Reputational risk
Legal, regulatory & political
risk
Data/AI risk
Systemic risk

2nd Dimension: Public Policy Analysis

Public Policy Law & Regulation Business Economic & Legal & Business Social Impact Regulatory Model Analysis Analysis **Analysis**



Policy Screens for Consumer FinTech

Utility/Scalability

- Utility: Cost/Avoidance vs. Alternatives
- Delivery at Scale Possible?

Inclusivity/Exclusivity

Wealth/Income/Race/Ethnicity/Sex/Disability

Alignment Analysis

• The incentives imbedded in a fintech business and/or product model and consumer interests

Data Utilization

Source/Privacy/Control

Systemic Impact

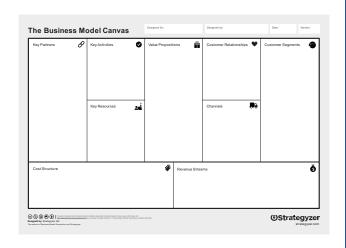
3rd Dimension: Legal/Regulatory Analysis

Public Policy Law & Regulation Business Legal & Business **Economic &** Regulatory Social Impact Model Analysis Analysis **Analysis**

Tools for Legal/Regulatory **Analysis** Financial Services Risl Analyses Policy Screens for Consumer FinTech U.S. Financial Regulatory Structure, 2016 Regulators State regulators Board of Governors of the FDIC OCC **NCUA** FTC **CFPB FHFA** SEC CFTC FINRA MSRB NFA Securities Banking Insurance Federal Reserve System Fit in Here? CFPB Bureau of Consumer Financial Protection CFTC Commodity Futures Trading Commission FDIC Federal Deposit Insurance Corporation FHFA Federal Housing Finance Agency Nondepository Broker-dealers Investment Fannie Mae FINRA Financial Industry Regulatory Authority entities that or other Financial companies, Freddie Mac. Federal Trade Commission offer Depository securities and investment market utilities Insurance and Federal MSRB Municipal Securities Rulemaking Board consumer institutions derivatives and other companies advisers, Home Loan NCUA National Credit Union Administration financial markets infrastructures or muncipal Banks products or National Futures Association intermediaries advisors Office of the Comptroller of the Currency services Federal Laws State Laws Regulated entities Safety and soundness oversight Insurance oversight Consumer financial protection oversight Housing finance oversight Consolidated supervision or systemic risk-related oversight Securities and derivatives markets oversight Source: GAO. | GAO-16-175 Note: This figure depicts the primary regulators in the U.S. financial regulatory structure, as well as their prima generally refers to entities that have rulemaking, supervisory, and enforcement authorities over financial institu agencies involved in regulating the financial markets and there may be other possible regulatory connections



Business Model Analysis



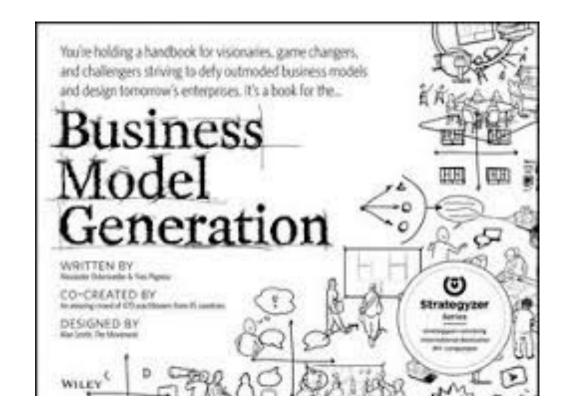
Business Model Analysis 1A: The Business Model Canvas

INTRODUCING THE BUSINESS MODEL CANVAS

A strategic management tool for developing new or documenting existing **business models**.

A visual chart with elements describing a firm's or product's value proposition, infrastructure, customers, and finances

Created by Alexander Osterwalder & Yves Pigneur



building blocks

- 9 blocks cover the 4 main areas of a business
- Customers
- Offer
- Infrastructure
- Financial Viability

The Business Model Canvas

Designed for:

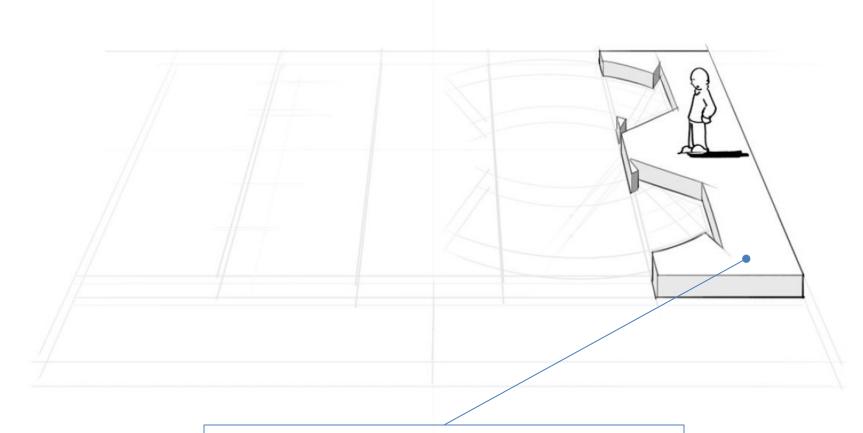
Designed by:

Date:

Version:

Key Partners	Key Activities	Value Proposition	s &	Customer Relationships •	Customer Segments
8	7 Key Resources	2		Channels 3	1
Cost Structure	9		Revenue Strea	ms 5	\$

Customer Segments



which customers and users are you serving? which jobs do they really want to get done?

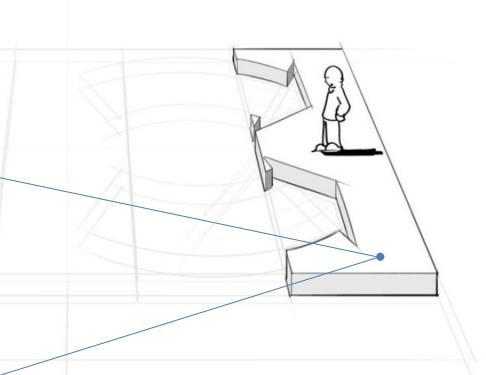
Drilling Down: Customer Segments

Segments

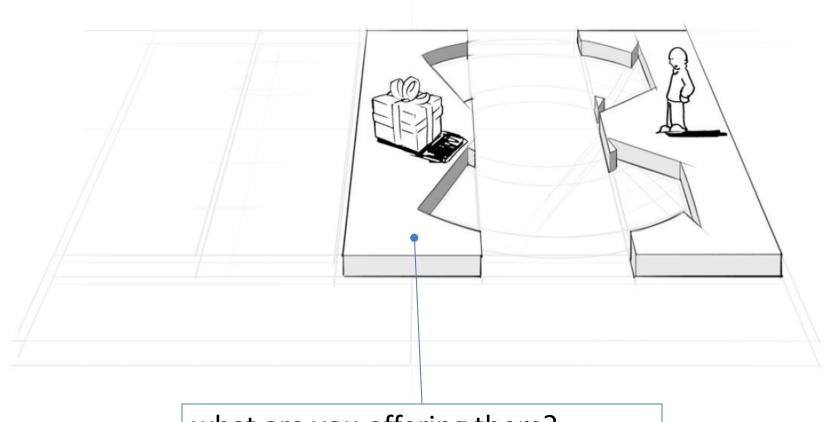
- Do their needs justify a separate offer?
- Are they reached though a distinct channel?
- Do they require different relationships
- Are they differentially profitable?
- Are they willing to pay for different things?

Examples

- Mass Market
- Niche Market
- Segmented
- Diversified
- Multi-Sided Platforms



Value Proposition

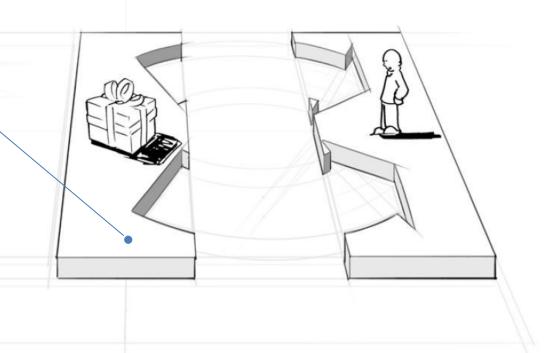


what are you offering them? what is that getting done for them? do they care?

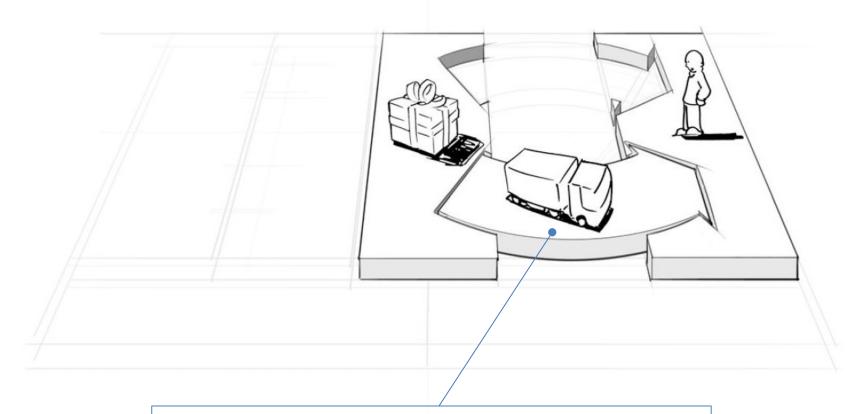
Drilling Down: Value Proposition

What creates value for a Segment?

- Newness
- Performance
- Customization
- Design
- Brand/Status
- Price
- Cost Reduction
- Risk Reduction
- Accessibility
- Convenience/Usability
- "Getting the Job Done"



Channels



how does each customer segment want to be reached? through which interaction points?

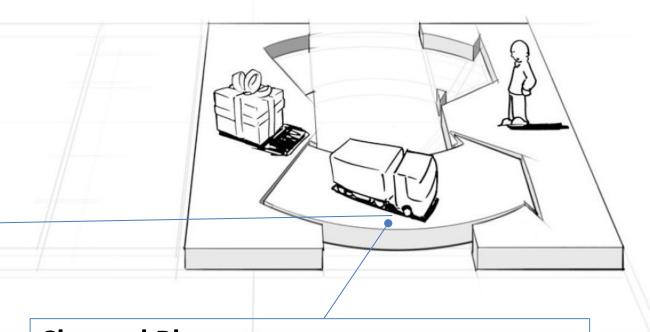
drawings by JAM

Drilling Down: Channels

Channel Types

- Sales Force
- Web Sales
- Phone Sales
- Own Stores
- Partner Stores
- Wholesaler

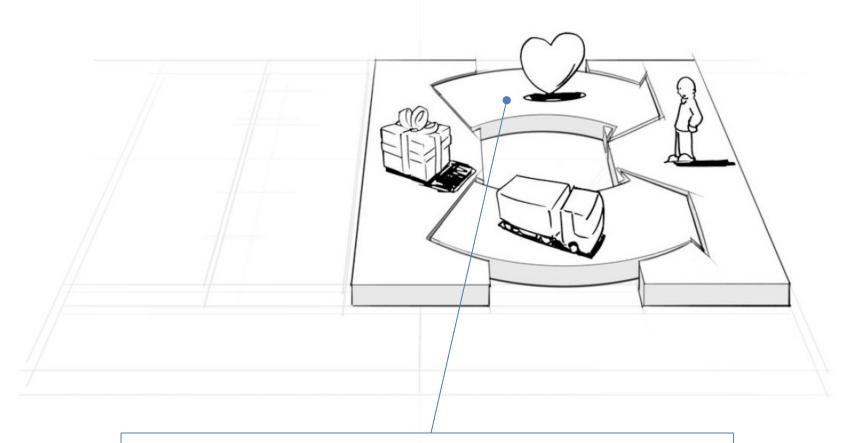
Direct/Indirect
Partner/Owned



Channel Phases

- Awareness
- Evaluation
- Purchase
- Delivery
- Customer Support

Customer Relationships

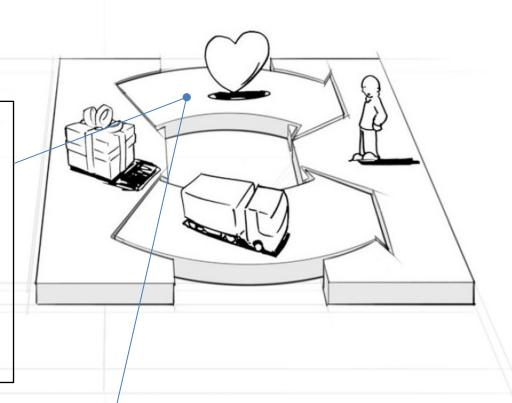


what relationships are you establishing with each segment? personal? automated? acquisitive? retentive?

Drilling Down: Customer Relationships

Some Types:

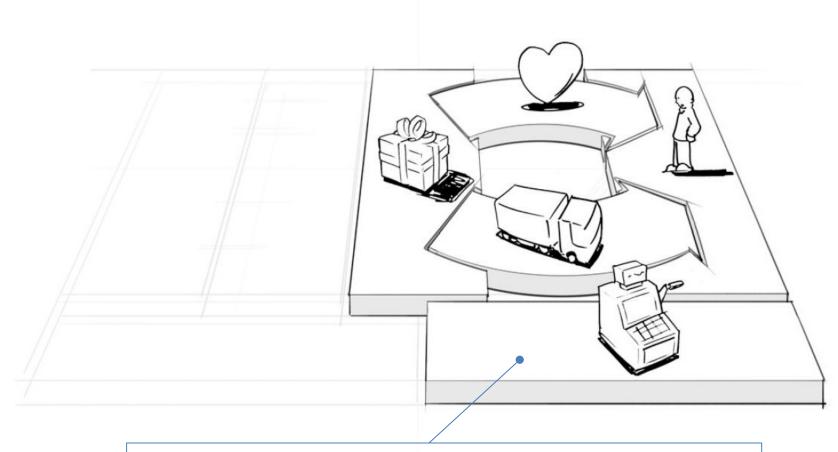
- Personal Assistance
- Dedicated Personal Assistance
- Self-Service
- Automated and Al Services
- Communities
- Co-Creation



Purpose Matters

- Customer Acquisition
- Customer Retention
- Upselling

Revenue Streams



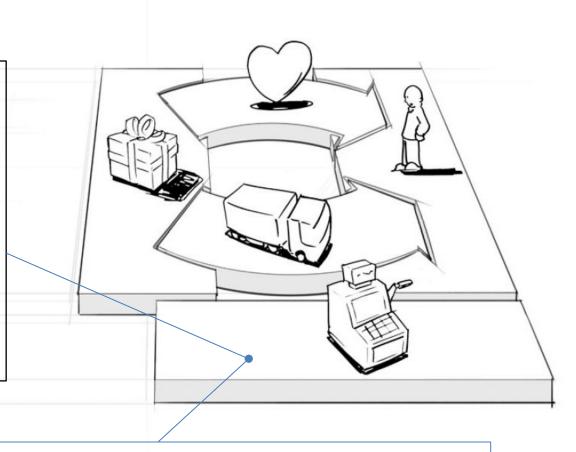
what are customers really willing to pay for?
how?
are you generating transactional or recurring
revenues?

25

Revenue Streams

Ways of Generation

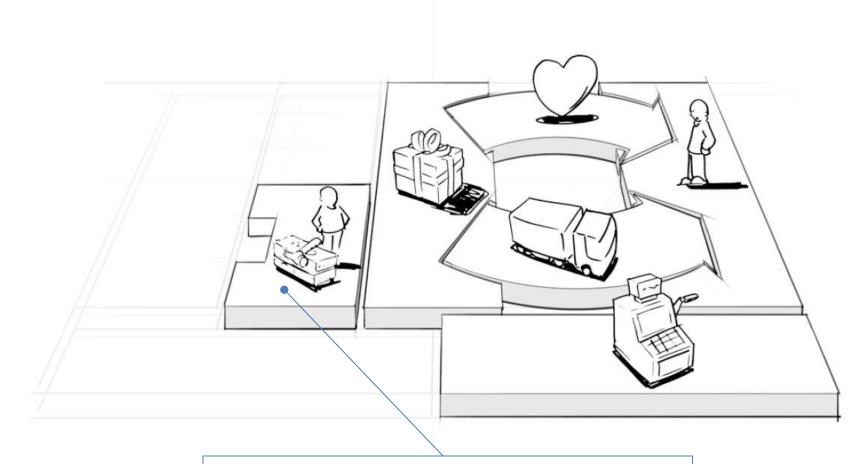
- Asset Sale
- Usage Fee
- Subscription Fee
- Lending/Renting/Leasing
- Licensing
- Brokerage
- Advertising



Types of Revenue

- Transaction Revenues
- Recurring Revenues
- Fixed vs. Dynamic Pricing

Key Resources

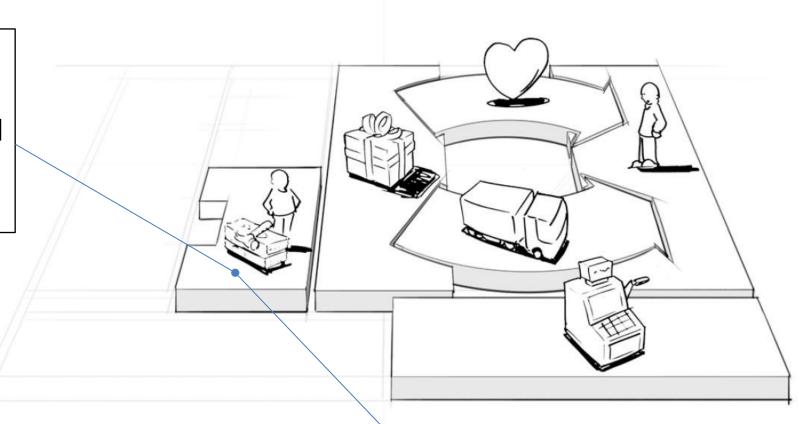


which resources underpin your business model? which assets are essential?

Drilling Down: Key Resources

Types

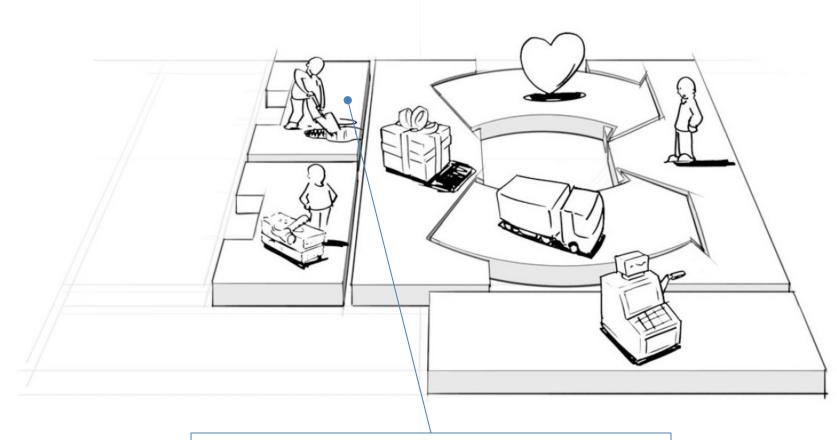
- Physical
- Intellectual
- Human
- Financial



Legal Relationship

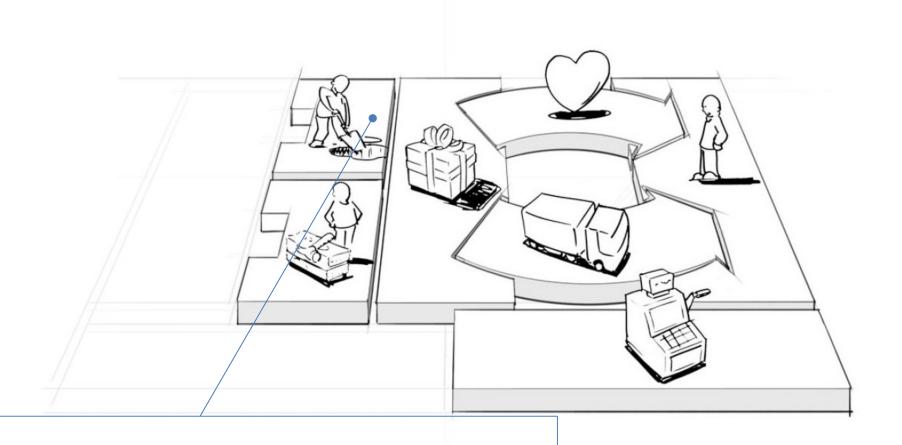
- Owned/leased by company
- Acquired from Partners

Key Activities



which activities do you need to perform well in your business model? what is crucial?

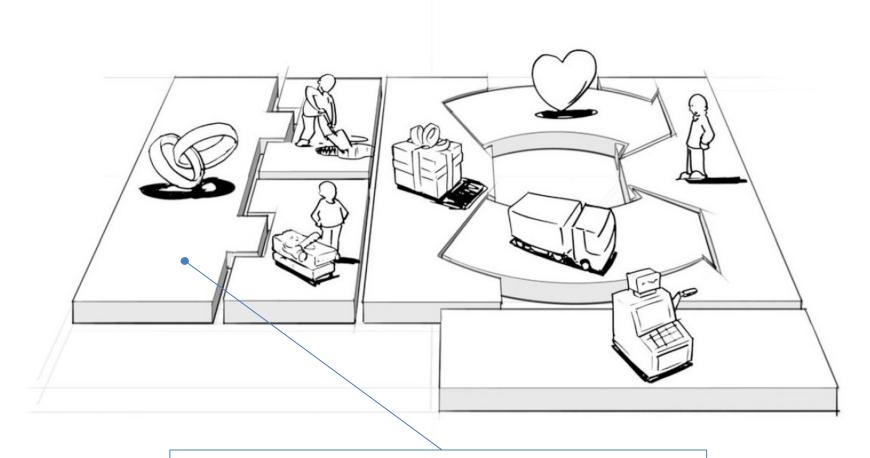
Drilling Down: Key Activities



Types

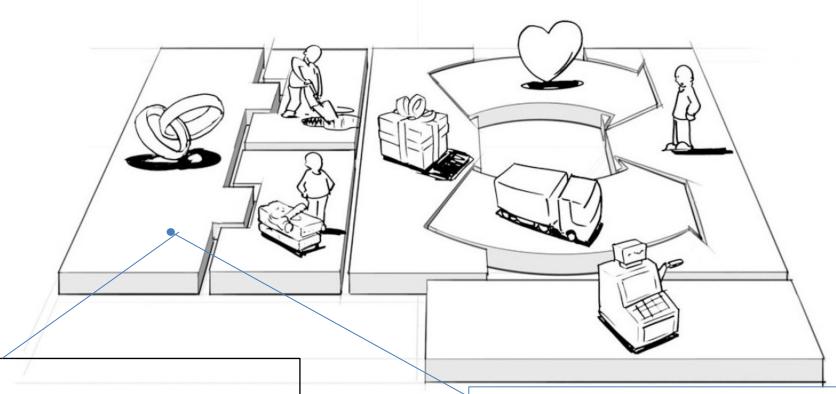
- Production
- Problem Solving
- Platform/Network Development & Management

Key Partners



which partners and suppliers leverage your model? who do you need to rely on?

Drilling Down: Key Partners



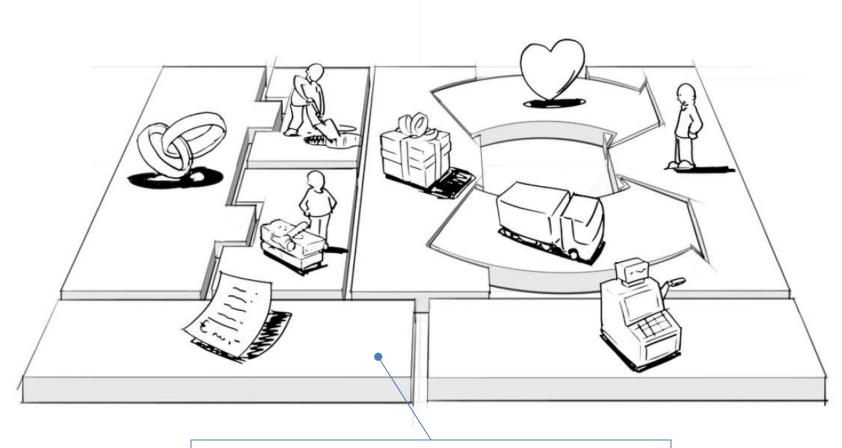
Types

- Alliances with Non-Competitors
- "Coopetition" with Competitors
- JVs to Develop New Business
- Buyer/Supplier Relationships
- Regulators

Motivations

- Optimization/Economies of Scale
- Risk Reduction arawings by JAM
- Acquisition of Specialized Resources/Activities

Cost Structure

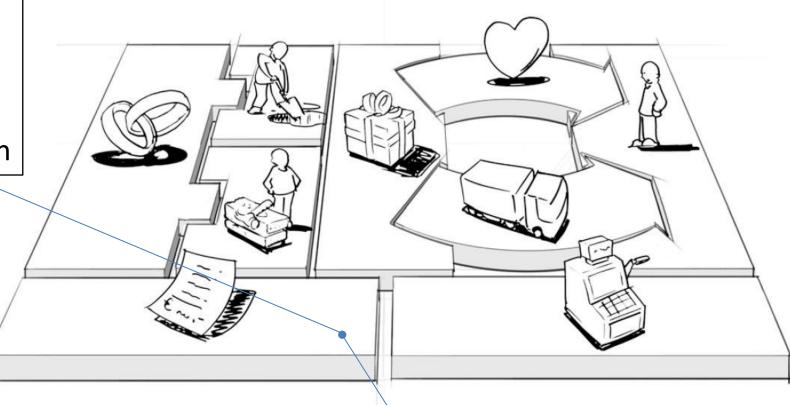


what is the resulting cost structure? which key elements drive your costs?

Drilling Down: Cost Structure

Types of Cost Structure

- Cost-Driven
- Value Driven



- Fixed Costs
- Variable Costs
- Economies of Scale
- Economies of Scope

The Business Model Canvas

Designed by: Designed for: Date:

Key Partners	م	Key Activities	Value Proposit	ions 🔐	Customer Relationships		Customer Segments	•
		Key Resources			Channels	9		
Cost Structure			*	Revenue Strea	ıms			Š

Version:

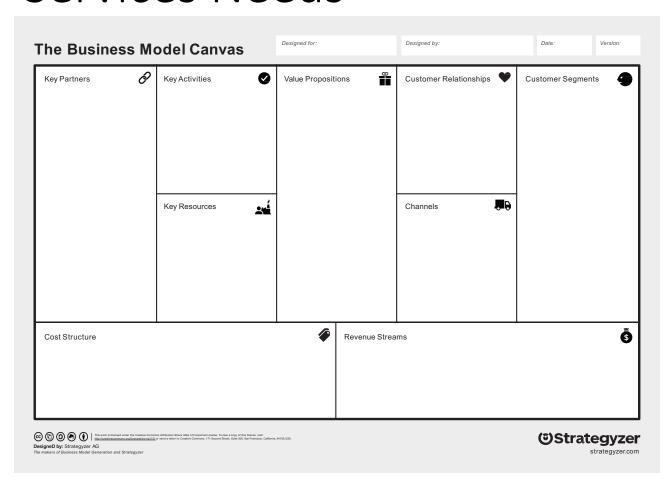
Summarize the Canvas 1/2

- Who are the Customers?---Consumer, Business, Segmentation
- What Product Categor(ies)—Credit,
 Payments, Securities, Deposits, Other
- How are Products Distributed? Online/Mobile, Brokers, Physical Locations
- How is Company Funded?---Deposits,
 Short/Long Debt, Equity, Securitization
- What Revenue Sources? --Spread, Direct Fees, Subscriptions, Data "Sales," Indirect Fees

Summarize the Canvas 2/2

- How are Operations/Activities Run?-- Directly, Through 3rd Party "Partners", Through Service Providers
 - What Issues Does Each Bring?
 - How is Revenue/Expense Split?
- Where is the Company Operating?—Both physically and virtually
- How Does the Company Use, Store & Protect Data?
 - Is ML or Al Being Used in the Business?
- What's the One (or More Than One) Thing Absolutely Necessary for the Business to Thrive?

But the Basic Canvas Sometimes Isn't Granular Enough for Our Consumer Fintech/Financial Services Needs







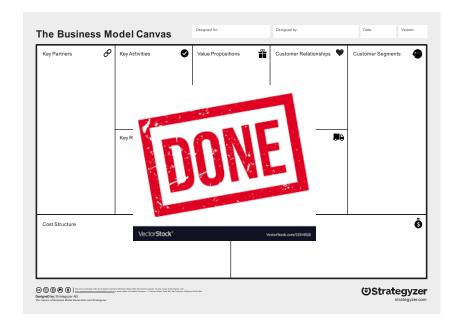


We Need to Use Supplementary Tools

1A: Canvas

1B: Supplements

1C: Risks











Financial Services Risks:
Credit risk
Market risk
Operational risk
Liquidity (Funding) risk
Reputational risk
Legal, regulatory & political
risk
Data/Al risk
Systemic risk

Key Product Insights

Customer Segment
Product Function
Product Value Prop
Pricing Structure
Who Pays/Subsidizes
Use of Banking Rails
Product Structure &
Behavior
Data/AI

Business Model Analysis 1B: Key Product Insights

Add "Key Product Level Insights" if Needed

- What is the Customer Segment for the Specific Product?
- What Does the Product Do?
- What is the Customer Value Proposition?
- Pricing Model for Product
- Who pays for the Product—
 Consumer/Advertiser/Employer/Retailer?
- Does the Product Use the Banking System and How?
- Does Product Structure Influence Behavior?
- How are Data/Al Collected and Used in Product?

Key Product Level Insights

- Customer Segment
- Product Function
- Product Value Prop
- Pricing Structure

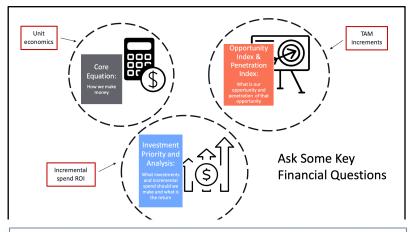
- Who Pays/Subsidizes
- Use of Banking Rails
- Product Structure & Behavior
- Data/Al



Business Model Analysis 1B: SWOT

Perform a Simple Swot Analysis





A FinTech's valuation is a function of its Life Time Value of customers, divided by Customer Acquisition Costs

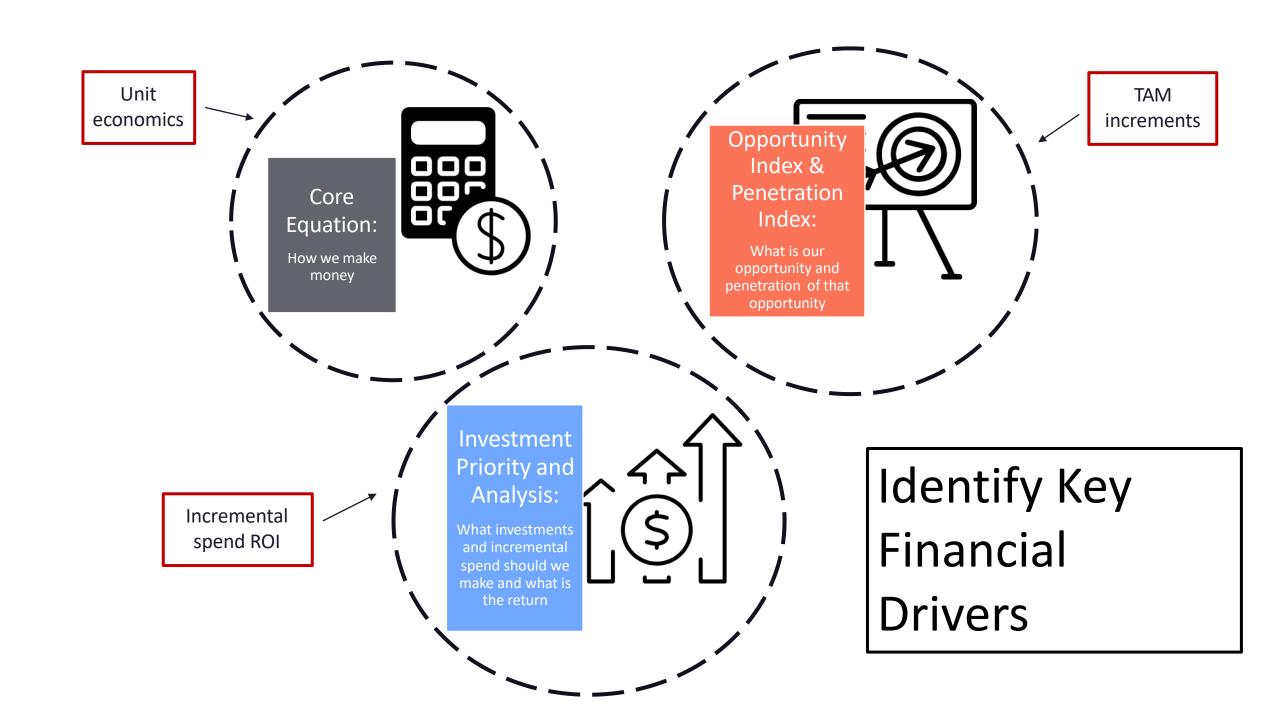
Valuation =
$$f(LTV/CAC)$$

Life Time Customer

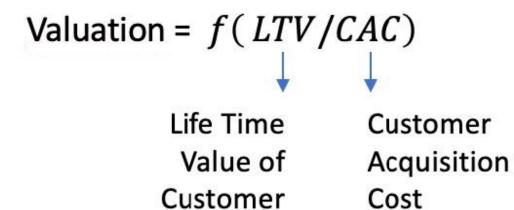
Value of Acquisition Cost

Customer

Business Model Analysis 1B: Key Financial Drivers



A FinTech's valuation is a function of its Life Time Value of customers, divided by Customer Acquisition Costs



Assess
What's
Most
Important
to Value

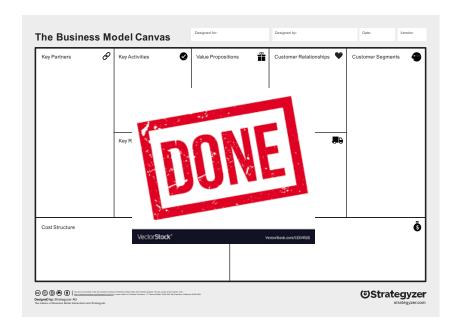


Now We Must Consider Risks

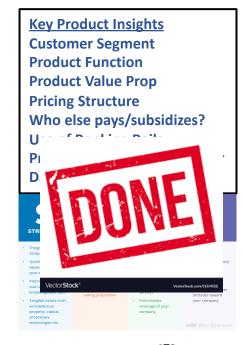
1A: Canvas

1B: Supplements

1C: Risks











Credit risk
Market risk
Operational risk
Liquidity (Funding) risk
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risk
Data/AI risk
Systemic risk

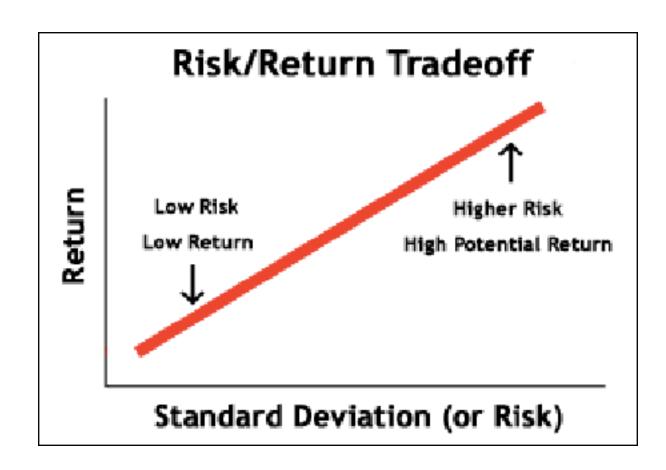
Financial Services Risks:

There are Special Financial Services Risks

- Credit risk
- Market risk
- Operational risk
- Liquidity (Funding) risk
- Reputational risk
- Legal, regulatory and political risk
- Data /AI risk
- Systemic risk



Risk Is The Principal Source of Reward in Financial Services



And Banks & FinTechs are in the Business of Managing Risk for Optimized Returns



But Risk Is Also the Main Reason for Regulation



Financial Services Risks:

Credit risk

Market risk

Operational risk

Liquidity (Funding) risk

Reputational risk

Legal, regulatory and

political risk

Data /AI risk

Systemic risk

Business Model Analysis 1C: Special Financial Services Risks

Credit & Market Risk

- Credit risk is the possibility of a loss resulting from a borrower's failure to repay a loan or meet contractual obligations
- Market risk is the risk of losses in positions arising from movements in market prices.

Operational & Liquidity Risk

 Operational risk is the prospect of loss resulting from inadequate or failed procedures, systems or policies. Employee errors. Systems failures. Fraud or other criminal activity. Any event that disrupts business processes. Liquidity risk or Funding liquidity risk is the risk that a bank may be unable to meet short term financial demands. This usually occurs due to (a) the inability to convert a security or hard asset to cash without a loss of capital and/or income in the process and/or (b) the inability to roll over borrowings

Legal/Regulatory & Reputational Risk

 Legal or regulatory risk is the **risk** of financial loss or disruption in business operations that can result from lack of awareness or misunderstanding of, ambiguity in, or reckless indifference to, the way laws and regulations apply to a business, its relationships, processes, products and services.

• Reputational risk is the potential loss to financial capital, social capital and/or market share resulting from damages to a firm's reputation. This is often measured in lost revenue, increased operating, capital or regulatory costs, or destruction of shareholder value.

Data Management & Systemic Risk

- Data/AI risk is the exposure to loss of value or reputation caused by issues or limitations to an organization's ability to acquire, store, transform, move, protect and use its data assets.
- Systemic risk is the possibility that an event at the company level could trigger severe instability or collapse an entire industry or economy.

A Reminder: FinTech Startups Also Have Non-Industry Specific Risks <u>Shared With All Startups</u>

- Capability Risk
- Design Risk
- Development Risk
- Economic Risk
- Economic Life Risk
- Equity Funding Risk
- Legislative and Policy Risk

- Maintenance Risk
- Management Risk
- Operations Risk
- Procurement Risk
- Research Risk
- Technology Risk
- Volume / Demand Risk

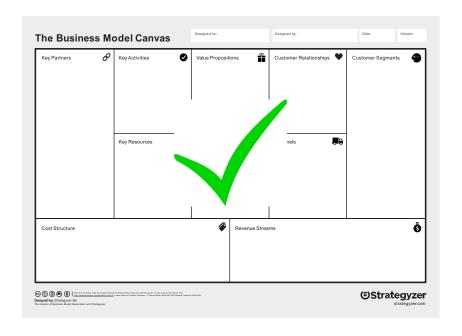


FinTech Business Model Analysis is Complete

1A: Canvas

1B: Supplements

1C: Risks







Identify Key

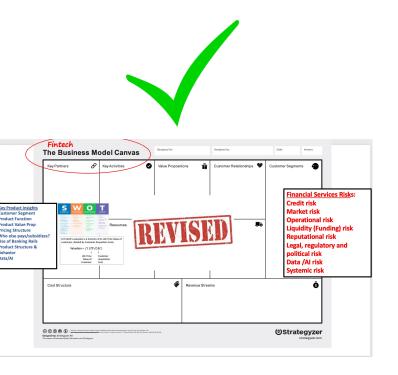
Financial

Incremental spend ROI



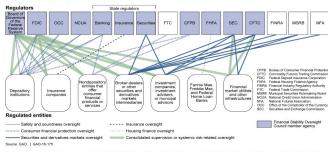
Financial Services Risks: Credit risk Market risk Opera 3) risk Liquid, Reput Legal, regulatory & political risk Data/Al risk **Systemic risk**

Now: Add Second Dimension: Public Policy









Note: This figure depicts the primary regulators in the U.S. financial regulatory structure, as well as their primary oversight responsibilities. "Regulators generally refers to entities that have rulemaking, supervisory, and enforcement authorities over financial institutions or entities. There are additional agencies involved in regulating the financial markets and there may be other possible regulatory connections than those depicted in this figure.



2





Public Policy Analysis

Policy Screens for Consumer FinTech

Utility/Scalability

- Utility: Cost/Avoidance vs. Alternatives
- Delivery at Scale Possible?

Inclusivity/Exclusivity

Wealth/Income/Race/Ethnicity/Sex/Disability

Alignment Analysis

• The incentives imbedded in a fintech business and/or product model and consumer interests

Data Utilization

Source/Privacy/Control

Systemic Impact

Utility

- "Utility" is the ability of the financial products offered by a company to either (a) provide a superior substitute for current products in producing financially healthy outcomes, or (b) provide an effective mechanism for consumers to avoid the use of current products producing financially unhealthy outcomes.
- A product is a "superior" substitute if it provides substantially equivalent functionality at a significantly lower price or with a product structure that would be likely to avoid outcomes adverse to consumer financial health.
- In considering Utility in either of the two alternative meanings noted above, take into account a time element, in that companies sometimes describe their products as part of an explicit multi-step path for the consumer culminating in increased Utility through (i) the ability to access a superior substitute (i.e., credit on standard terms and pricing) and/or (ii) financial resilience through improved financial capacity.

Scalability

- "Scalability," is the potential for a company's business model to support rapid penetration of the market to serve a significant percentage of total available households.
- Scalability is important in that positive or negative policy effects are maximized to the extent that a business is scalable
- In assessing Scalability, consider various impediments to scale, including
 - funding and capital requirements
 - operational complexity
 - technology constraints
 - regulatory structure
 - reliance on third-party infrastructure and
 - length of sales cycle
- Focus on key revenue and expense drivers from the business model analysis to ask whether a company appears
 capable of generating an appropriate return on capital only if Scale is reached.
- Also assess whether, and to what extent, external assistance or subsidy—from employers, non-profits or government--would be required to serve a significant portion of low-income households, or to accelerate the scaling process.

Inclusivity/Exclusivity

- "Inclusivity/Exclusivity" has several dimensions:
 - whether a company's products are appropriate for the full range of consumer income/wealth segments (e.g., savings accounts), or are designed for and marketed to high, middle, or low-income/wealth consumer segments (e.g., private banking vs. payday lending)
 - whether the makeup of the company's customer base, or the profitability of its business model or products, is skewed towards particular income/wealth or protected class segments
 - whether company's practices have a disparate impact on, or are otherwise discriminatory with respect to, protected classes defined by race, ethnicity, sex, and/or disability
 - Special attention should be paid to a company's data and AI practices

Alignment

- "Alignment" or "Misalignment" is a measure of the extent to which the incentives (primarily financial) imbedded in a fintech business and/or product model are **aligned or misaligned** with consumer interests measured by changes in consumer financial health.
- Understanding Alignment is critical to evaluating the public policy impact of any fintech business model

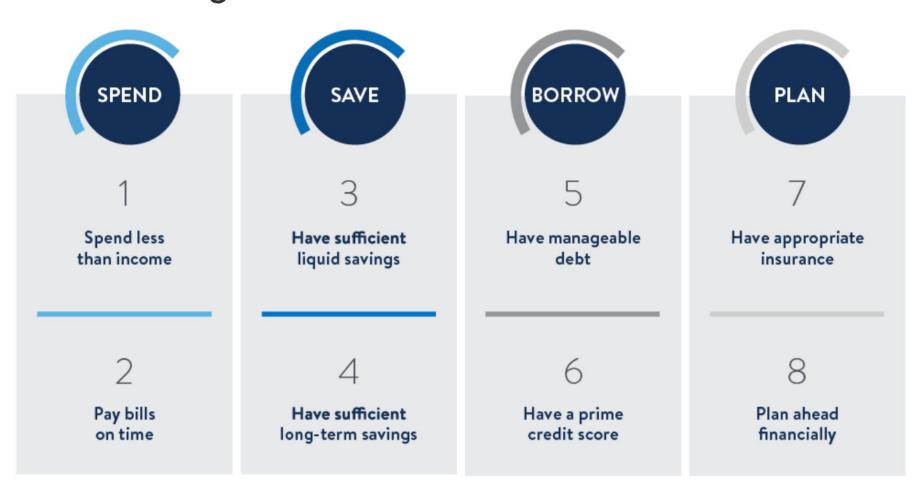
Financial Health Outcomes-Based Analysis is the Preferred Basis for Alignment Review

- Consumer financial regulation in the U.S. is biased in favor of maximizing "consumer choice" effected through disclosure and against examination of the actual outcomes for consumers using financial products.
- The "consumer choice" construct is tautological: it presumes that the markets for consumer financial services are competitive and that consumers rationally and knowledgeably choose what is best for themselves. This then obviates any need to assess whether consumer welfare has been maximized.
- Recently, empirical measures of "financial well-being" or "financial health" have emerged for use in assessing consumer financial welfare.
- These measures seek to characterize and quantify how the financial and monetary circumstances of an individual or household stack up against normative definitions of financial well-being and to measure changes in those circumstances over time.

The system created by the Financial Health Network is the most advanced



Eight Indicators of Financial Health



Alignment Assessment Process

- Use output from Business Model Analysis to identify financial incentives imbedded in in Fintech business and/or product model
 - Pay particular attention to product structure & behavioral incentives on consumer experience
- Assess whether provider incentives work to improve or degrade customer financial health
 - Empirical analysis of outcomes data if available
 - Normative assessment based on experience if data unavailable (e.g., default is bad/savings is good)

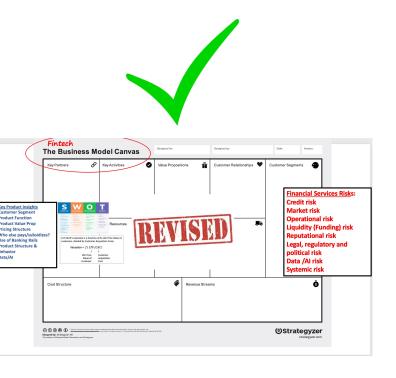
Data Utilization

- Assess the extent to which a company follows <u>evolving</u> best practices in the sourcing, utilization and protection of consumer personally identifiable information.
 - CFPB Principles For Consumer-Authorized Financial Data Sharing and Aggregation
 - Financial Health Network Data Sharing Principles
 - GDPR Standards
 - California Data Privacy Rules

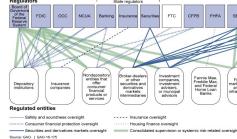


• Refer to Business Model Risk Assessment

Now: Add Third Dimension: Law and Regulation







Note. This figure depicts the primary regulators in the U.S. financial regulatory structure, as well as their primary oversight responsibilities. "Regulators generally refers to entities that have rulemaking, supervisory, and enforcement authorities over financial institutions or entities. There are additional agencies involved in regulating the financial markets and them may be other possible regulatory connections that hose depicted in figure.



2

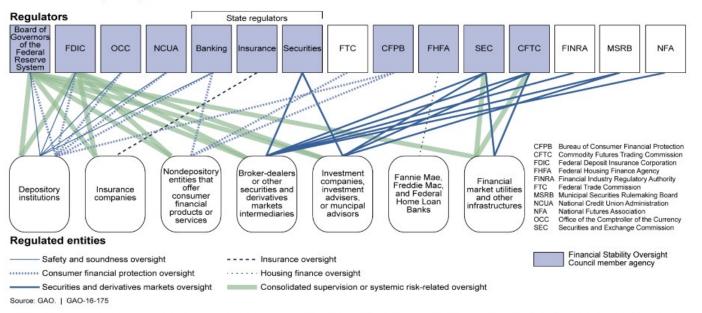


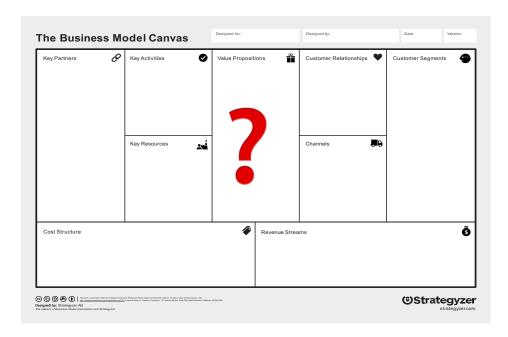


Legal and Regulatory Analysis

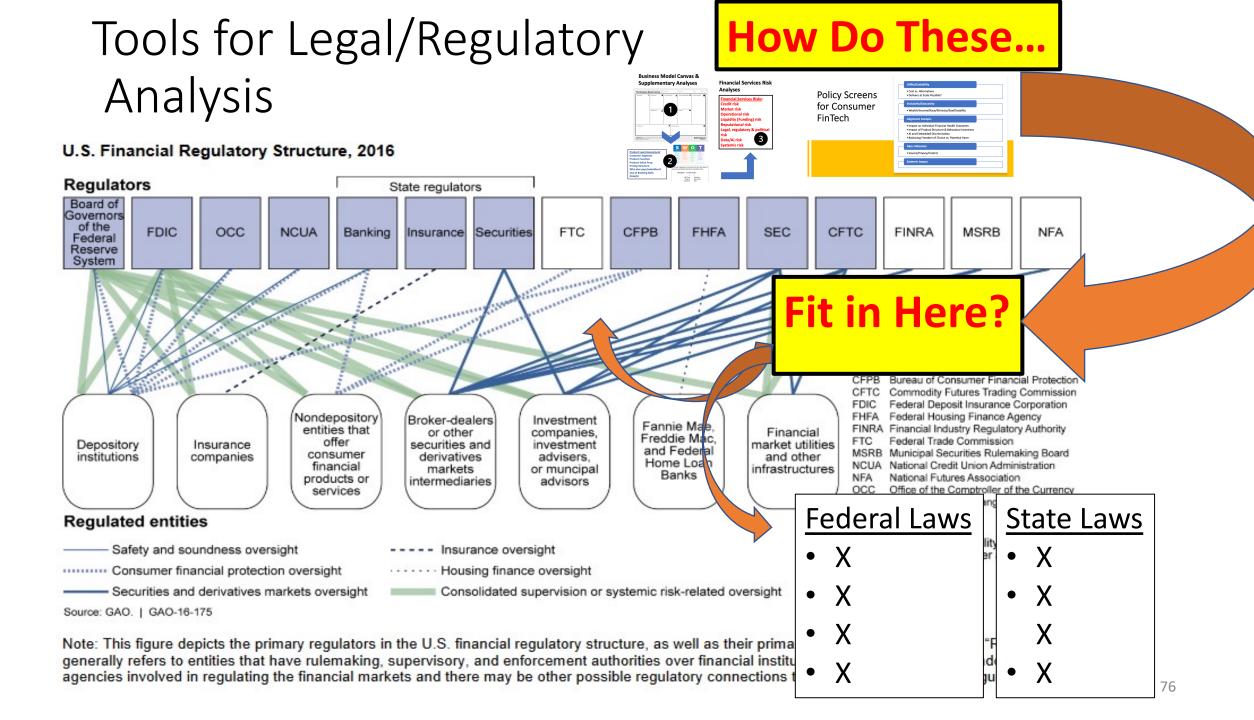
New FinTech Models Are Often Square Pegs in a Legal and Regulatory System of Round Holes

U.S. Financial Regulatory Structure, 2016

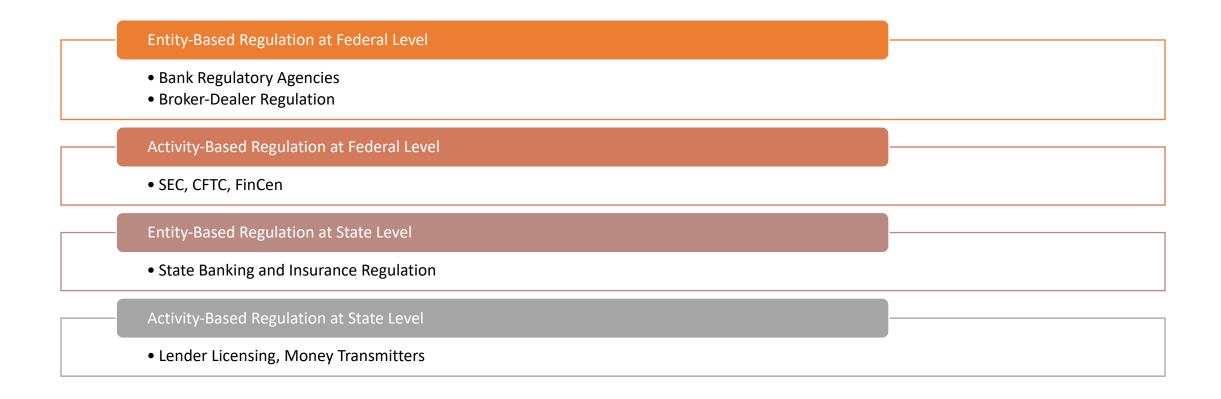








US Approach to Fintech Regulation is Uncoordinated



No US Laws Specifically Designed for Fintech—A Multi-Layer Analysis Must be Followed

• Bank Holding Company/Volker Does fintech's **provision or use** of **Banking** • Bank Service Provider banking services bring regulation? If so, Oversight Regulation how and from what agency? • Use of Partner Bank for Lending, Deposits or **Payments** • Is it a Security? • Registrable or Exempt **Securities or** • Broker Dealer, Investment Does fintech create, or facilitate holding Company, Exchange Commodities or trading in, securities or commodities • Is it a Commodities derivatives? If so, how? Regulation Derivative? Fed • Commodities Exchange OCC **FDIC** • Lender Licensing State State Usury Are fintech's products or activities **Activities** Money subject to specific state financial and Transmission consumer protection laws? Regulation SEC Privacy **CFTC** State • TILA. ECOA. Federal EFTA, FCRA **Activities** BSA/AML

State

CFPB

Regulation

Privacy

Are fintech's products/activities

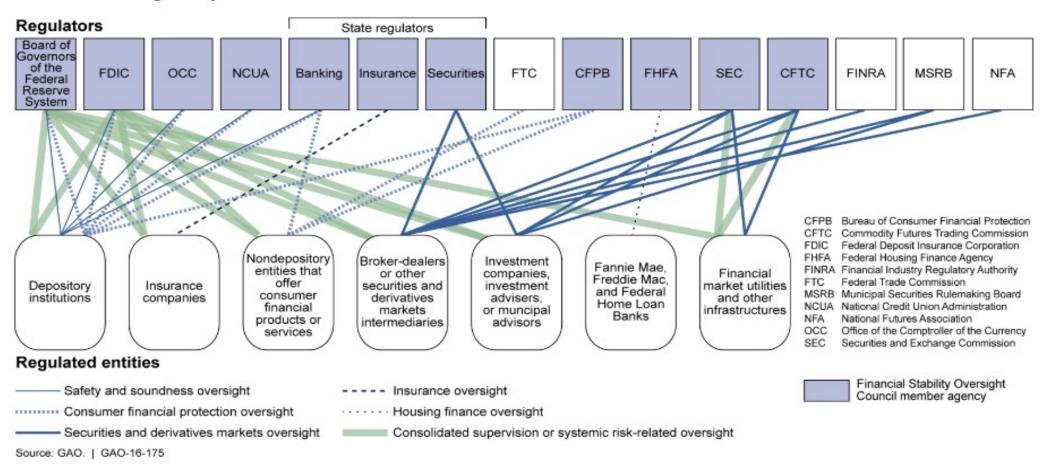
and consumer protection laws?

subject to specific federal financial

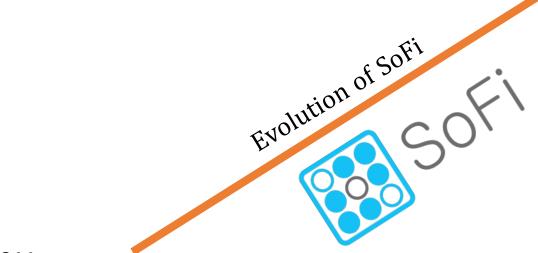
FTC

Assess How Many Ways Fintech is Regulated Directly and Indirectly

U.S. Financial Regulatory Structure, 2016

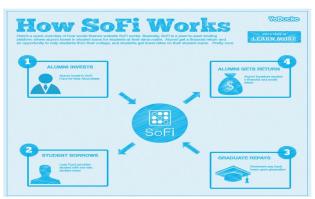


"Rebundling" Increases Complexity



2011

• Student Loan Refi



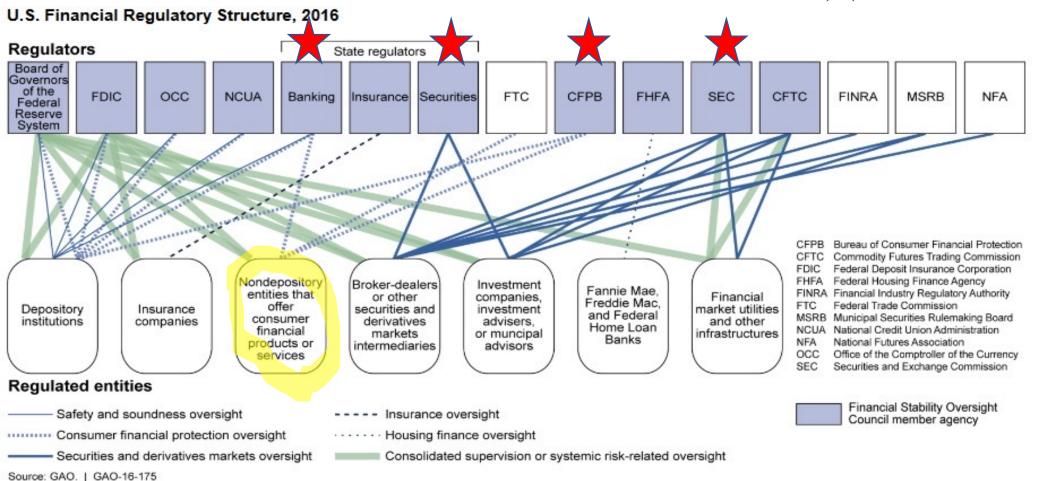


2022

- Student Loan Refi
- Private Student Loans
- Personal Loans
- Credit Cards
- Home Improvement Loans
- Mortgages
- Small Business Loans
- Loans Funded by
 - Marketplace
 - Balance Sheet
 - Securitizations
 - Bank
- Broker-Dealer
 - Active
 - ETF/IPOs
 - Crypto
- SoFi Bank
- Asset Management (Active/Passive) and Financial & Estate Planning
- Renters, Homeowners, Auto, Life Insurance
- International P2P Transfers
- Networking/Career Services
- Bank Acquisition
- SPAC IPO

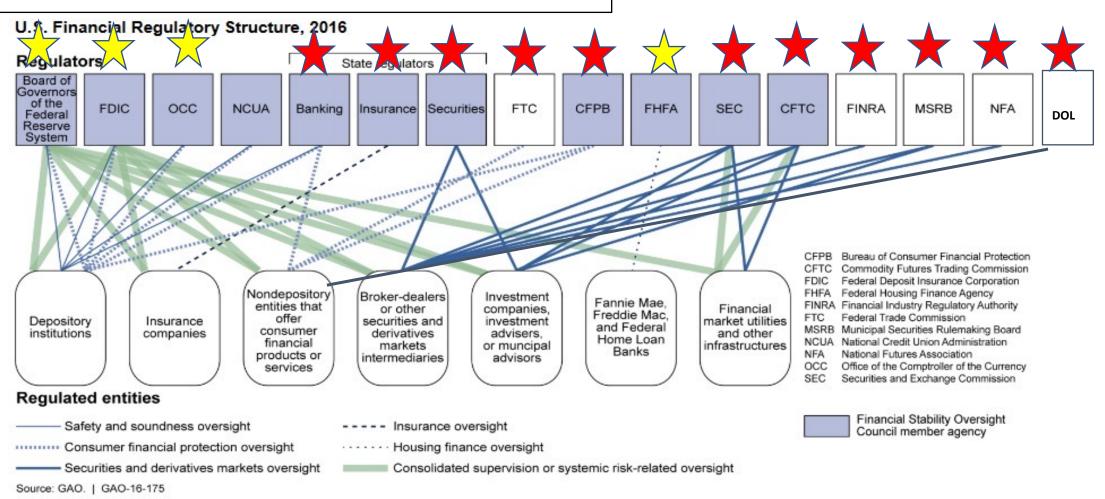
SoFi Regulatory Structure 2011





SoFi Regulatory Structure 2019

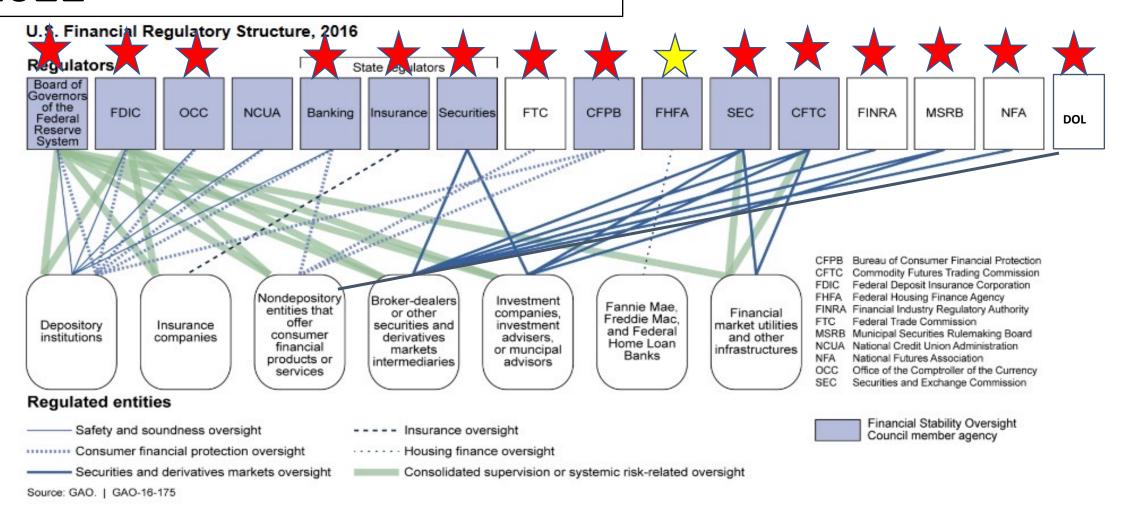




SoFi Regulatory Structure 2022



Direct Regulation
Indirect Regulation



Follow the "Waterfall" to...

Banking Regulation

- Bank Holding Company/Volker
- Bank Service Provider Oversight
- Use of Partner Bank for Lending, Deposits or **Payments**



Does fintech's **provision or use** of banking services bring regulation? If so, how and from what agency?

Securities or Regulation

- Is it a Security?
 - Registrable or Exempt
 - Broker Dealer, Investment Company, Exchange
- Derivative?

Commodities

• Is it a Commodities

• Commodities Exchange

Does fintech create, or facilitate holding or trading in, securities or commodities derivatives? If so, how?

State

Fed

OCC

FDIC

- SEC
- **CFTC**
- State

State **Activities** Regulation

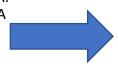
- Lender Licensing
- Usury
- Money Transmission
- Privacy

Are fintech's products or activities subject to specific state financial and consumer protection laws?

State

Federal **Activities** Regulation

- TILA. ECOA. EFTA, FCRA
- BSA/AML
- Privacy



Are fintech's products/activities subject to specific federal financial and consumer protection laws?

- **CFPB**
- FTC

Identify and Assess Laws Applicable to a FinTech

Federal Laws

• X

• X

• X

State Laws

• X

• X

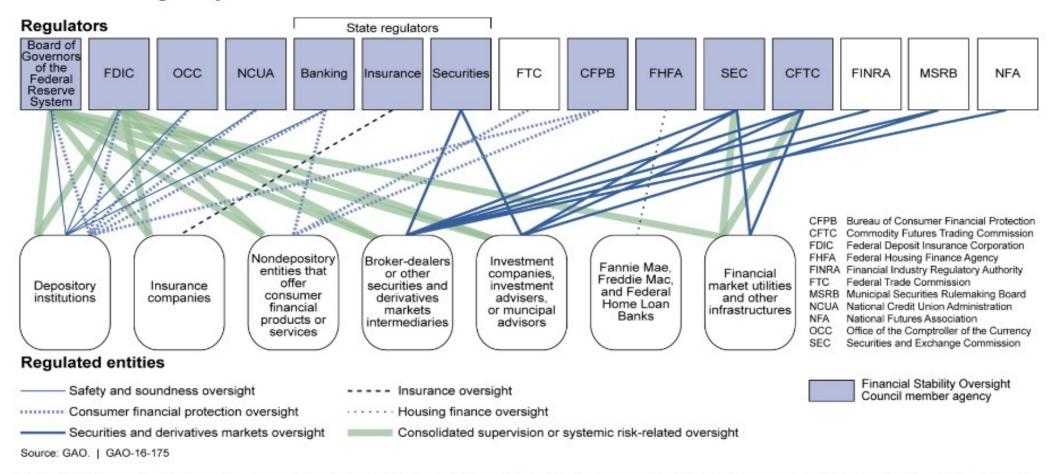
• X

US Regulatory Structure

- "The financial regulation and architecture we have today is the result of principled and differing views about the appropriate nature of regulation, turf battles among congressional committees and regulatory agencies, politics, lobbying and inter-sectoral wars in the private sector, and happenstance, personality, technology, and the long shadow of history."
- --Barr, Jackson and Tahyar

US Regulatory Structure is Complex

U.S. Financial Regulatory Structure, 2016



US Bank Regulators

The United States has a complex regulatory framework that features a myriad of federal regulatory agencies having often overlapping responsibility for banking regulation. A brief description of the relevant bank regulatory agencies follows:

- The Board of Governors of the Federal Reserve System ("Federal Reserve")
 The Federal Reserve System is the central banking system of the United States and conducts U.S. monetary policy. In addition, the Federal Reserve supervises BHCs (and FHCs), state-chartered banks that are members of the Federal Reserve System, the U.S. activities of FBOs, and SIFIs designated by the FSOC (as described below).
- The Federal Deposit Insurance Corporation ("FDIC")
 The FDIC is the primary regulator for state-chartered banks that are not members of the Federal Reserve System as well as state-chartered thrifts. The FDIC also insures bank and thrift deposits and has receivership powers over FDIC-insured banks and certain other institutions.
- The Office of the Comptroller of the Currency ("OCC")
 The OCC is an independent bureau of the U.S. Department of the Treasury led by the Comptroller of the Currency that charters, regulates, and supervises all national banks and federal savings associations as well as federal branches and agencies of foreign banks (although most FBOs operate through state-licensed branches).
- The Consumer Financial Protection Bureau ("CFPB")
 The CFPB has primary authority to develop consumer protection regulations applicable to both banks and non-banks, and to enforce compliance with such laws by banks with \$10bn or more in assets and their affiliates, as well as by certain non-banks.
- The Financial Stability Oversight Council ("FSOC")
 The FSOC is chaired by the Secretary of the U.S. Treasury and comprises the heads of eight financial regulators and one independent member with insurance experience. Notably, FSOC is empowered to designate systemically significant non-bank financial institutions (generally referred to as non-bank SIFIs) for supervision by the Federal Reserve. However, no such institutions are currently subject to Federal Reserve supervision.

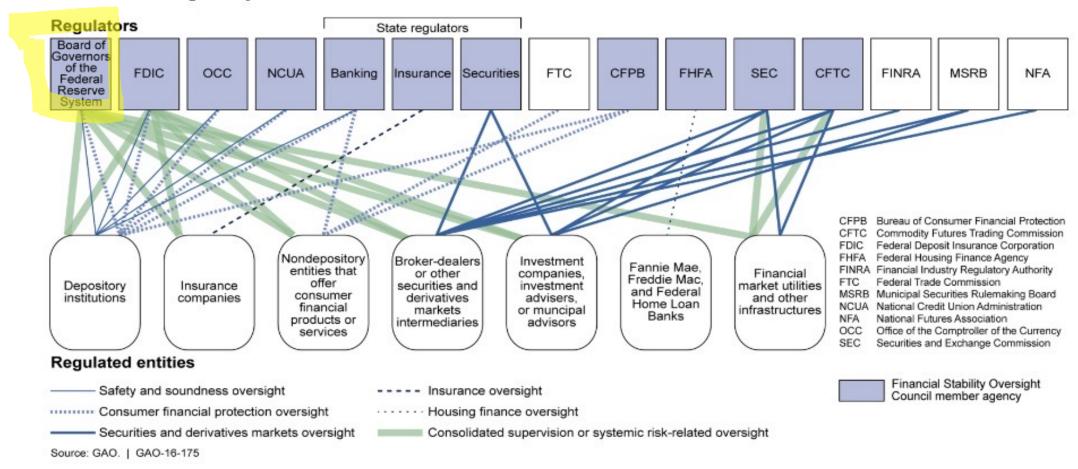
Primary Federal Banking Statutes

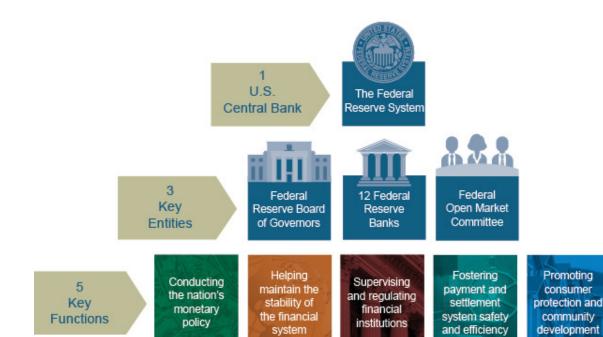
Primary federal banking statutes

- The National Bank Act (1863) created the basic framework for the U.S. banking system and the chartering of national banks.
- The Federal Reserve Act, enacted in 1914, created the Federal Reserve System.
- The Banking Act of 1933 generally separated commercial banks from investment banks and created the system of federal deposit insurance.
- The Federal Deposit Insurance Act ("FDI Act") consolidated prior FDIC legislation into one act and authorised the FDIC to act as the receiver of failed banks. Section 18(c) of the FDI Act, commonly called the Bank Merger Act, subjects proposed mergers involving FDIC-insured depository institutions to prior regulatory approval. Section 7(j) of the FDI Act, commonly called the Change in Bank Control Act, subjects certain acquisitions of FDIC-insured institutions to prior regulatory approval.
- The Bank Holding Company Act of 1956 ("BHC Act") requires Federal Reserve approval for a company to acquire a bank (and thereby become a BHC) and requires BHCs to obtain prior Federal Reserve approval to acquire an interest in additional banks and certain nonbank companies.
- The act commonly known as the Bank Secrecy Act (1970) requires all financial institutions, including banks, to establish a risk-based system of internal controls to prevent money laundering and terrorist financing.
- The International Banking Act of 1978 ("**IBA**") establishes the framework for federal supervision of foreign banks operating in the United States.
- The Gramm-Leach-Bliley Act (1999) generally repealed the provisions of the Banking Act of 1933 that separated investment banks from commercial banks (Glass-Steagall Act) and authorised the creation of FHCs.
- The Dodd-Frank Act (2010) was the greatest legislative overhaul of financial services regulation in the United States since the 1930s and made significant changes to the U.S. bank regulatory framework.
- The Economic Growth, Regulatory Relief, and Consumer Protection Act ("EGRRCPA"), Pub. L. 115-174 (2018), relaxed the regulatory requirements imposed by Dodd-Frank for all but the very largest banks, those holding \$250bn or more in assets.

The Federal Reserve

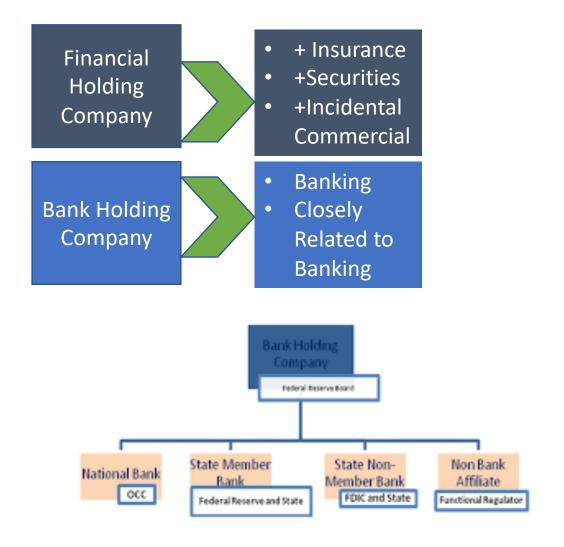
U.S. Financial Regulatory Structure, 2016





Federal Reserve Wears Many Hats

Bank & Financial Holding Companies



"Control" of a Bank is the Key Concept:

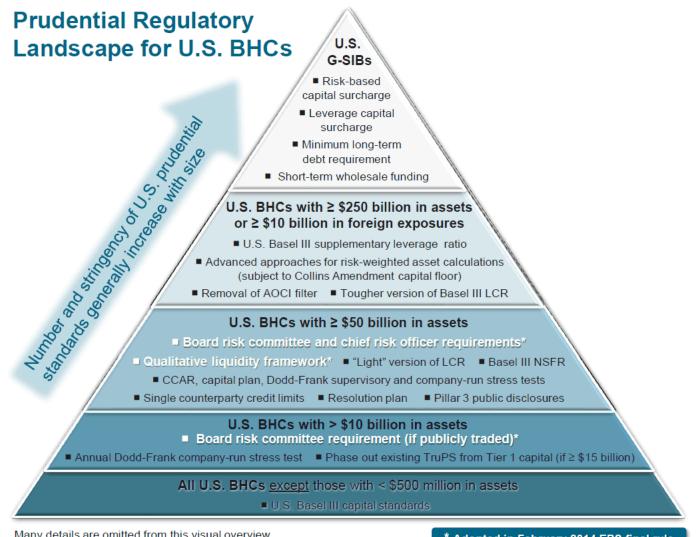
- The size and terms of investments in banks are dictated by a variety of Federal Reserve, FDIC and OCC rules, many of them unwritten.
- Control thresholds arise when an investor owns more than 4.9%, 9.9%, and 24.9% of a single class of voting stock, but softer factors are given great weight.
- Effectively has precluded many private equity and VC investments in banks.
- "Volcker Rule" a related issue

Bank Holding Company Restrictions

- The primary legislation defining the allowable scope of BHC activities is the Bank Holding Company Act of 1956 (BHCA, 12 U.S.C. § 1841). The Act establishes conditions under which a corporation may own a U.S. commercial bank and invests responsibility for supervising and regulating BHCs with the Federal Reserve.
- A key original goal of the BHCA was to limit the comingling of banking and commerce, that is, to restrict the extent to which BHCs or their subsidiaries could engage in nonfinancial activities.
- This separation is intended to prevent self-dealing and monopoly power through lending to nonfinancial affiliates and to preventing situations where risktaking by nonbanking affiliates erodes the stability of the bank's core financial activities, such as lending and deposittaking.
- To further enhance stability, BHCs are also required to maintain minimum capital ratios and to act as a "source of strength" to their banking subsidiaries, that is, to provide financial assistance to banking subsidiaries in distress.

- BHCs today engage in a significantly broader range of activities than the narrow limits set out in the 1956 BHCA, enabled through subsequent amendments to the Act.
- For example, in 1970 the BHCA was amended to allow multibank holding companies to engage either directly or indirectly through subsidiaries in activities that are "closely related to banking" BHCs may invest in nonfinancial firms, although their stake cannot generall exceed 5 percent of the company's outstanding voting stock.
- The passage of the Gramm-Leach-Bliley Act (GLBA) of 1999 further amended the BHCA to enable a BHC to register as a financial holding company (FHC), thereby allowing the firm to engage in a broad range of financial activities, including securities underwriting and dealing, insurance underwriting, and merchant banking activities.7
- Today, virtually all large BHCs are registered as FHCs.

Holding Company Requirements Grow with Size

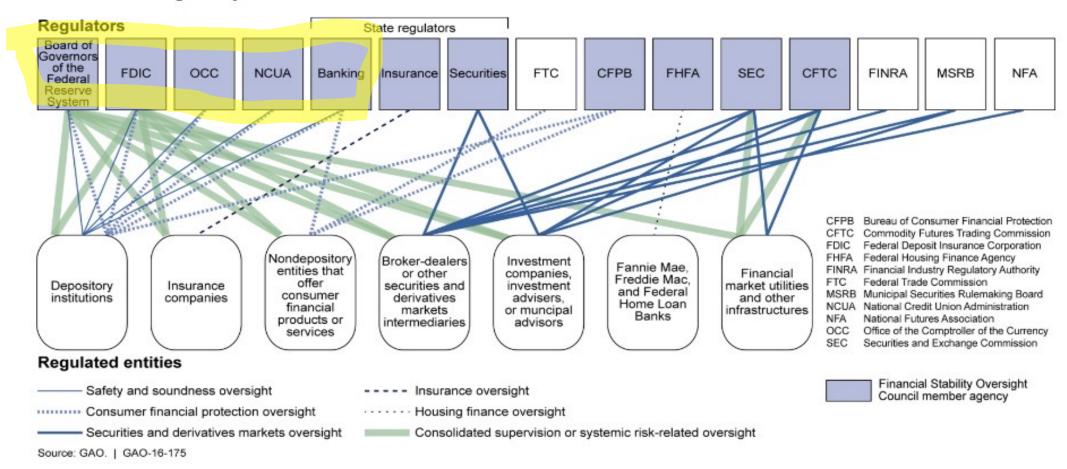


VC and PE and Strategic Investors Don't Want to be Bank or Financial Holding Companies

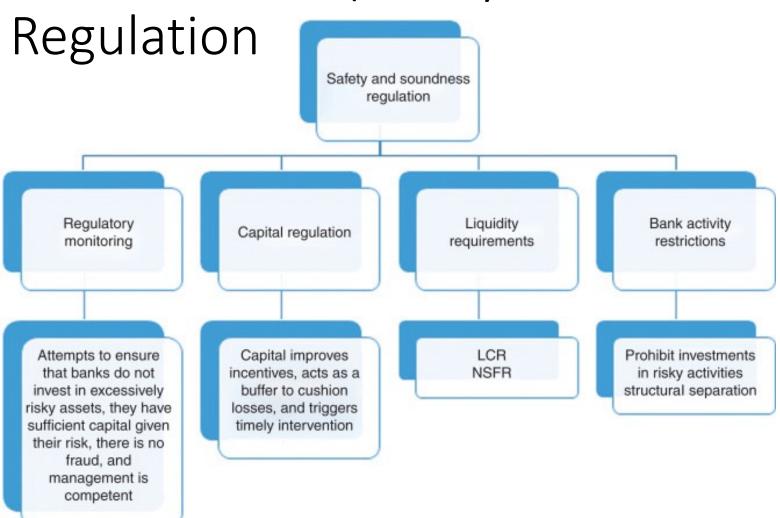
- They typically invest in a variety of sectors that go well beyond Bank and Financial Holding Company limitations
- They would have to divest all noncompliant investments if they were deemed to "control" a bank
- They would be required to hold capital and act as a "source of strength" to the bank
- They would become subject to supervision, examination etc etc.

The Prudential Bank Regulators

U.S. Financial Regulatory Structure, 2016



US Prudential (Safety & Soundness) Bank



OCC---National Banks & Thrifts

FDIC—State Non-Member Banks

NCUA—Credit Unions

Federal Reserve---State Member Banks and BHCs

States---State Banks

Who's Your Consumer Regulator?

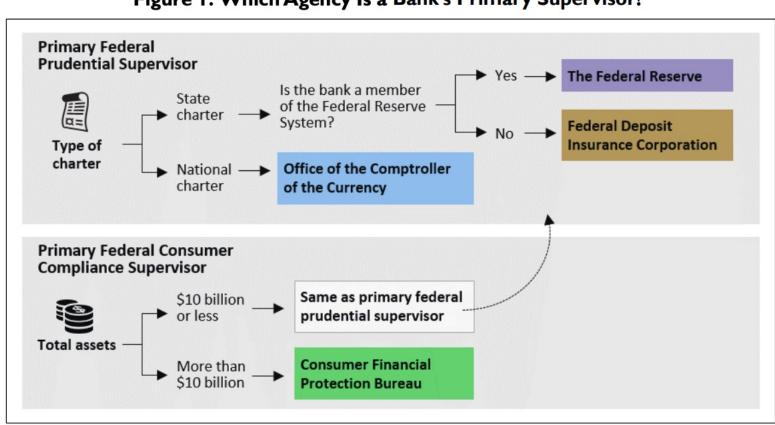
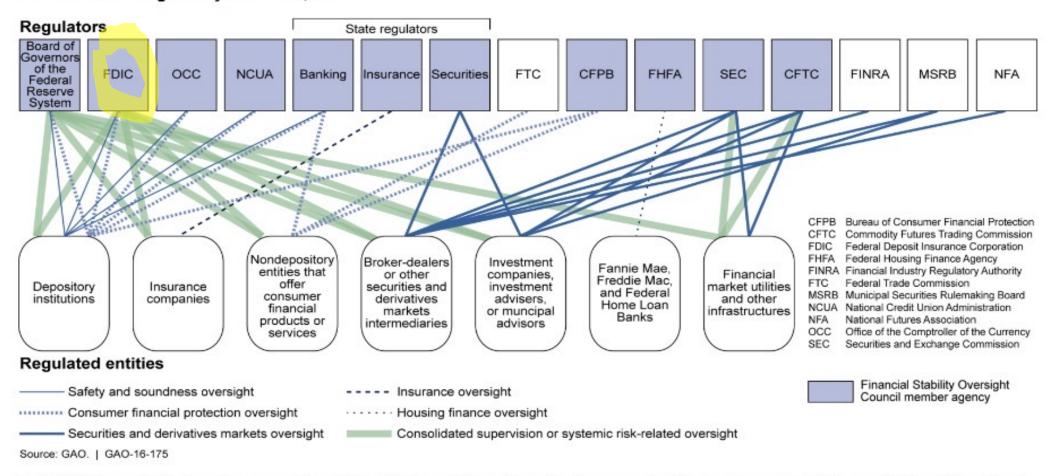


Figure 1. Which Agency Is a Bank's Primary Supervisor?

Deposit Insurance

U.S. Financial Regulatory Structure, 2016



Deposit Insurance Regulation

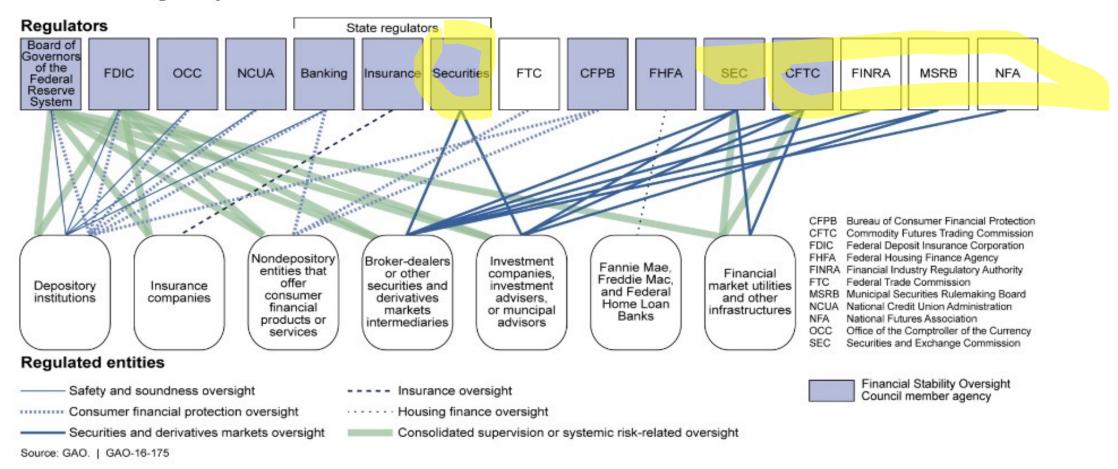


- The obligation of the bank to service its depositors so long as it is solvent creates an incentive on depositors who are concerned about the viability of the bank to withdraw their deposits ahead of other people—i.e. make a "run" on the bank.
- Deposit insurance was created in part to deal with this problem.



Securities Regulators

U.S. Financial Regulatory Structure, 2016



Securities Regulation

Federal Agency Oversight: State Agency Oversight: Securities and Exchange Commission (SEC) • State insurance regulators State banking regulators Fed) • State attorneys general **Self-Regulatory Organizations (SROs):** • Financial Industry Regulatory Authority (FINRA) • Municipal Securities Rulemaking Board (MSRB) **Investment Agents:** • Investment firms, brokerage houses, and banks • Investment advisors, brokers, and dealers

SEC



The Mission

The Mission of the SEC:

- Protect Investors
- · Maintain Fair, Orderly, and Efficient Markets
- Facilitate Capital Formation



The Mission

Accomplishes its Mission by:

- Administering and enforcing federal securities laws
- Overseeing brokerage firms and investment advisers
- Reviewing filings by most public companies

2

SEC



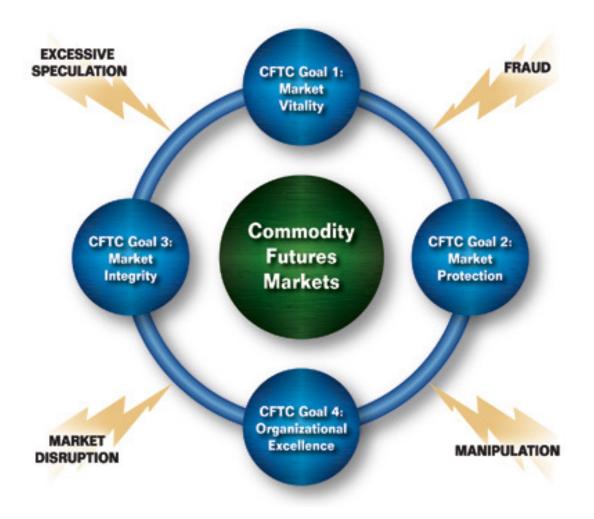
Organization of the SEC

5 Major Divisions

- Division of Enforcement ("Enforcement")
- Division of Corporation Finance ("Corp Fin")
- Division of Trading and Markets ("TM")
- Division of Investment Management ("IM")
- Division of Economic and Risk Analysis ("DERA")

- Securities Offerings
- Public Reporting
- Anti-Fraud
- Broker- Dealers
- Investment Companies
- Investment Advisors

CFTC



- The mission of The Commodity Futures Trading Commission (CFTC) is to foster open, transparent, competitive, and financially sound markets. To achieve this aim, the CFTC administers and enforces the Commodity Exchange Act ("CEA") and its respective regulations.
- The CFTC has exclusive jurisdiction over, among others, any transaction "for the contract of sale of a commodity for future delivery," with certain exceptions. Consequently, commodities are generally subject to the regulatory requirements of the CEA.
- In addition, market participants in commodities face CFTC registration requirements for traders, advisors, agents and exchanges as well as enforcement actions brought by the CFTC's Division of Enforcement for violations of fraud and manipulation rules and regulations.

SEC and CFTC



CFTC and SEC Jurisdiction

Commodity Interests subject to CFTC Jurisdiction

Securities subject to SEC Jurisdiction

New "Swaps"

- Swaps on broad-based security indices - Swaptions
- Options on interest rates, currencies, commodities
- Many forward contracts
- Cash settled FX swaps and FX forwards

Already Regulated - Commodity and broad-

- based index futures
 Options on futures
 Options on commodities
- "Mixed Swaps" <u>Already</u> Single stock and narrowbased index

futures

New

New "Swaps"

- "Security-based Swaps" (on single security and narrow-based security indices)

Already Regulated

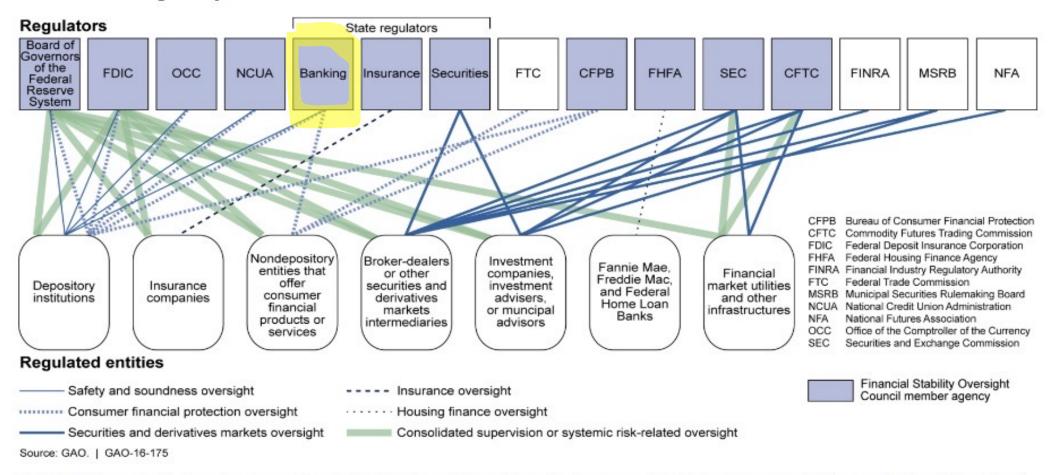
- -Stocks
- Bonds
- Options on securities and security indices

Joint CFTC/SEC
Jurisdiction

State Regulatory and Legal Structures Relevant to FinTech, Banking and Securities

State Non-Bank Regulation

U.S. Financial Regulatory Structure, 2016



State Regulation



National Banks

Banks chartered and regulated by the Office of the Comptroller of the Currency (OCC).

- FDIC-insured.
- Regulated by the OCC.

State-chartered Member Banks (*)

Banks chartered by the state which are members of the Federal Reserve System.

- FDIC-insured.
- Regulatory responsibilities are shared by the state and the Federal Reserve.

State-chartered Nonmember Banks (*)

Banks chartered by the state which are NOT members of the Federal Reserve System.

- FDIC-Insured.
- Regulatory responsibilities are shared by the state and the FDIC.

State-chartered Credit Unions

Credit Unions chartered by the state.

- NCUA-insured.
- Regulatory responsibilities are shared by the state and the NCUA.

Federal Credit Unions

Credit unions chartered by the National Credit Union Administration (NCUA).

- NCUA-insured.
- Regulated by the NCUA.

State-licensed Non-Depository Service Providers

Collection Agencies
Debt-Settlement Providers
Deferred Presentment Service Providers (Payday Lenders)
Money Brokers
Money Transmitters
Mortgage Loan Originators
Trust Companies

(*) Some banks receive a separate authority to operate a trust department.

Kansas State Bank Commissioner

Who We Regulate

Home» Consumer Assistance » Who We Regulate

- Who We Regulate
- Online Institution Lookup
- File a Complaint
- Consumer Education
- Kansas Financial Scholars
- Calendar
- FAQs
- Other Resources
- Open Records Request

Who We Regulate

- ✓ Residential Mortgage Lenders and Brokers (Licensed as Mortgage Companies)
- ✓ Loan Originators (Licensed as Loan Originators)
- ✓ State Chartered Banks Kansas Chartered
- ✓ State Chartered Trust Companies
- ✓ Finance Companies (Licensed as Supervised Lenders)
- ✓ Payday Lenders (Licensed as Supervised Lenders)
- ✓ Title Loan Companies (Licensed as Supervised Lenders)
- ✓ Debt Buyers (Licensed as Supervised Lenders)
- ✓ Auto Dealers who Extend Credit (Notification Registrants)
- ✓ Consumer Credit Sales (Notification Registrants)
- ✓ Credit Counseling Companies (Licensed as Credit Service Organizations)
- ✓ Debt Management Companies (Licensed as Credit Service Organizations)
- ✓ Money Transmitters

Who We DO NOT Regulate

- ✓ Nationally Chartered Banks (Often have NA following their name) Regulated by Office of the Comptroller of Currency (OCC)
- ✓ Federal Savings Banks (Often have FSB following their name) Regulated by Office of the Comptroller of Currency (OCC)
- ✓ State Chartered Banks Chartered in Other States Regulated by the State in which they are chartered. See CSBS Directory of State Banking Departments
- ✓ Kansas Chartered Credit Unions Regulated by Kansas Department of Credit Unions
- ✓ Nationally Chartered Credit Unions Regulated by the National Credit Union Administration
- ✓ Collection Agencies* Fair Debt Collection Practices Act is enforced by Federal Trade Commission (FTC)

^{*}If consumer debt is purchased by a collection agency, then it would qualify as a 'Debt Buyer' and licensure may be required as a supervised lender as indicated above in the "Who We Regulate" section.

State Financial Regulation

- 50 States Plus DC, PR and Territories: **Every One Has a Regulator**
- What State Law Applies?
 - Contractual Choice of Law and Location of FinTech Not Dispositive
 - Generally if Customer in State or Solicits by Any Means in State, That State Law Applies
 - Email, Internet, Smartphone, Telephone all Count as Solicitation
- Jealous of Authority & Active in Enforcement
 - Directly and through State AGs

Types of Nonbank State Laws 1/3

- Banks are Exempt from Most, but Not All
- Lending & Loans
 - Usury Caps
 - Loan Broker Licensing
 - Lead Generators (NerdWallet) as Brokers
- Money Transmitters
 - Very Broadly Defined
 - Example: Maryland
 - "the business of selling or issuing payment instruments or stored value devices, or receiving money or monetary value for transmission to a location within or outside of the United States by any means, including electronically or through the Internet."
- Financial Privacy
 - States Can Go Further than Federal (GLB Act) Law

Types of Nonbank State Laws 2/3

- California as Example of Financial Privacy Laws
 - California Consumer Privacy Act of 2018 (Later Slide)
 - California California Financial Privacy Act
 - Opt-in vs Opt-out
 - Financial Institution can't sell, share, transfer or otherwise disclose nonpublic personal information to or with any nonaffiliated third parties without <u>explicit prior consent</u> of consumer
 - Song-Beverly Credit Card Act
 - California Online Privacy Protection Act
 - Requires an company that collects personally identifiable information through website or mobile app to post a privacy policy.
- Electronic Transmission Laws
- Bitcoin and Crypto Laws



Types of Nonbank State Laws 3/3

Bitcoin and Crypto Laws



Welcome to the NMLS Resource Center

The NMLS Resource Center is the official gateway into the Nationwide Multistate Licensing System & Registry (NMLS) and provides users with tools, tips, news and

Getting Started Company

Getting Started Mortgage Loan Originator

Reminder: Request for Ombudsman Meeting Agenda Items -2019 NMLS Annual Conference

Posted 1/2/2019
In NILS Office dudings in Heating will be heat Wednesday, February 20, from 9.00
In NILS Office and In Till the 2019 NILS Armail Conference & Training in Ordando,
Flordas, Submit agenda tense by emailing ombudsman@mins org no later
In Wednesday, January 30, Flees provide the Issue and any reversant information
in the Conference of the C

Visit the NMLS Annual Conference website to get more information about this year's

NMLS Mortgage Industry Report for 2018 Q3 Released

Posted 1/11/2019
The NMLS Mortgage Industry Report for the third quarter of 2018 is now available. Updates to the Money Services Businesses Fact Sheet and Debt Collection Fact Sheet have also been posted. For all reports, including updated Mortgage Call Report data, go to NMLS Reports.

NMLS Annual Renewal Period to End at Midnight, December 31; Reinstatement Period Begins January 2

The NMLS annual renewal period will end at midnight ET on December 31. NMLS will be unavailable on January 1, 2019 (New Year's Day).

The Reinstatement Period will start January 2, 2019 and end at midnight ET on February 28, 2019. Review the State Licensing Annual Renewal page of the NMLS Resource Center for steps to reinstate your license.

NMLS Annual Renewal Ends December 31, 2018

Massachusetts Division of Banks Adopts Uniform Authorized Agent Reporting

The Massachusetts Division of Banks will begin using the NMLS Uniform Authorized Agent Reporting functionality to fulfill agent reporting requirements for their Check Seller License. Companies are required to upload Massachusetts located agents in NMLS by February 14, 2019.

See the NMLS Uniform Authorized Agent Reporting page of the NMLS Resource Center for more information.

Illinois Department of Financial and Professional Regulation to Add Student Loan Servicer License to NMLS December 15, 2018

Starting December 15, NMLS will begin receiving new application filings for the Illinois Department of Financial and Professional Regulation Student Loan Servicer License. New applicants will be able to submit these records through NMLS. Click

New Jersey Adds Transitional Mortgage Loan Originator License, Registered Depository Institution and Exempt Company Registration to NMLS November 21, 2018

NMLS is now receiving new applications for the New Jersey Department of Banking and Insurance Transitional Mortgage Loan Originator License, Registered Depository Institution and Exempt Company Registration. New applicants can now submit these records through NMLS.

Visit www.nmlsconference.org to view the agenda, venue information and fee schedule. Register today!

Workflow for New Companies State Agency Checklist Quick Guides - Company Quick Guides - Individual NMLS Expanded Industries Mortgage Call Report Money Services Businesses Call Report

Employment Changes (Quick Guide) NMLS Call Center FAQs: S.2155 Temporary Authority to Operate

() Annual Renewal

Training Workshops

Multistate Licensing

Coordinated Exams

- Money transmitters like Western Union, PayPal and cryptocurrency firms will be able to more easily expand across the United States, after 48 state regulators agreed to a single set of supervisory rules that should reduce their compliance costs.
- Money services businesses will undergo a single exam by a joint group of state regulators that oversee licensing, instead of dozens of individual state exams.
- The new streamlined regime applies to 78 large payment and cryptocurrency firms, which combined move over \$1 trillion annually.



Newsroom Policy Data & Research Examiners





> State Regulators Roll Out One Company, One Exam for Nationwide Payments Firms

PRESS RELEASES

State Regulators Roll Out One Company, One Exam for Nationwide Payments Firms

to follow up throughout the year.

in customer funds.





#26 - Who Protects Your Payments?

Related Posts

State Regulators Seek Industry Input on **Mortgage Loan Originators Licensing Test**



PODCASTS #24 - The Future of **Consumer Complaints**

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The single exam will be led by one state overseeing a group of examiners sourced from across the country. By relying on experts across the state system — including in cyber security and anti-money laundering regulators will gain more insight while also freeing up state resources. Rosemary Gallagher, Western Union associate general counsel, shared, "Western Union was a proud participant in the CSBS's successful one company, one exam pilot. We firmly believe that the impact of this

Money transmitters operating in 40 or more states will benefit from streamlined state supervision in 2021

The Conference of State Bank Supervisors (CSBS) announced today the launch of a state-initiated program whereby nationwide payments firms will undergo a single comprehensive exam to satisfy all state

nation's largest payments and cryptocurrency companies that combined move more than \$1 trillion a year

Building on years of multistate coordination, this exam protocol will enable states to fine tune a risk-based

approach to each company's operations. When compliance issues arise, the states will be better positioned

regulatory requirements. Known as MSB Networked Supervision, the initiative will apply to 78 of the

new approach to multistate exams will be significant in terms of driving harmonization and streamlining of state supervision across the board."

Kevin Hagler, Georgia Department of Banking and Finance commissioner and CSBS Board chair, said,

Other Relevant Federal Laws 1/3

- Bank Service Provider Rules
 - Allows examination and enforcement against contractors for banks (e.g., FinTechs)
- Electronic Funds Transfer Act---Reg E
 - EFTs in and out of consumer accounts
- Bank Secrecy Act
 - Applies to "Money Service Businesses"
 - Forex, check cashing, travelers checks, money orders, prepaid access, money transmitter

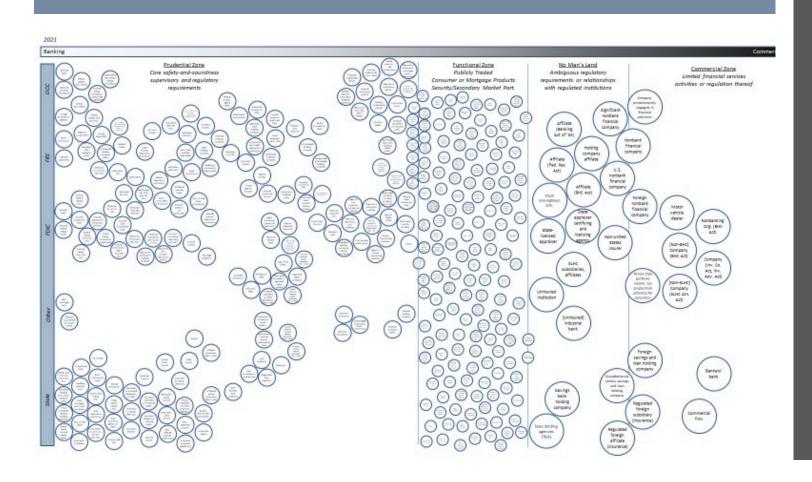
Other Relevant Federal Laws 2/3

- Truth in Lending Act
 - Consumer credit and finance charges
- Privacy, Title V of Gramm-Leach-Bliley Act
 - Any institution "substantially engaged" in "financial activities"
 - CFPB Regulation P
 - Notices re privacy policy
 - Procedures for sharing nonpublic personal information with unaffiliated third parties
 - Opt-out right for consumer
 - FTC retains authority over some nonbanks, including money transmitters

Other Relevant Federal Laws 3/3

- Equal Credit Opportunity Act (ECOA)
 - Discrimination in Lending
- Fair Credit Reporting Act
 - Consumer Reporting Agencies
- Fair Debt Collection Practices Act

Keep in Mind That The Regulatory Perimeter Shifts Over Time



- FinTech Can Be Found in All the Zones
- We Are in a Moment of Possible Big Change

And Consider What to Do When Legal Status "Falls Between the Cracks"

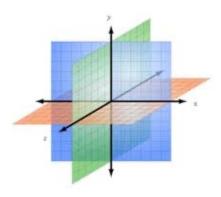


These are the Three Analytic Dimensions You Need to Master...



So You Can Answer that Question with Confidence...

- An Entrepreneur Pitches a New Fintech Idea to You and Asks for Advice...
- How Do You Respond?





THE THREE DIMENSIONS OF FINTECH: AN ANALYTIC FRAMEWORK

July 2022



TODD H. BAKER

SENIOR FELLOW, RICHMAN CENTER FOR BUSINESS, LAW & PUBLIC POLICY, COLUMBIA UNIVERSITY