HARVARD Kennedy School
MOSSAVAR-RAHMANI CENTER
for Business and Government

Regulation Innovation: Using Digital Technology to Protect and Benefit Financial Consumers

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March 2019

M-RCBG Associate Working Paper Series | No. 110

Mossavar-Rahmani Center for Business & Government
Weil Hall | Harvard Kennedy School | www.hks.harvard.edu/mrcbg

REGULATION INNOVATION:

USING DIGITAL TECHNOLOGY TO PROTECT AND BENEFIT FINANCIAL CONSUMERS

A Series of Papers by Jo Ann Barefoot

Introducing the Regulation Innovation Series

This series of six papers argues that new technology can enable most consumers to lead far healthier financial lives by both protecting them from harm and widening their access to affordable services. It further argues that in many respects, technology-based innovation can be superior to regulation in advancing these goals, and that in fact a half-century of traditional U.S. regulation aimed at promoting consumer financial fairness and inclusion has largely failed.

The series recommends revising public policy in two ways. First, it urges modernizing financial regulation to optimize oversight of innovative "fintech" – financial technology that is transforming financial products, channels, cost structures, business models, and consumer empowerment. Second it encourages policymakers to embrace use of "regtech," including digitally-native innovative design that restructures regulatory and compliance processes and can yield major gains in both effectiveness and efficiency. The series suggests practical steps for introducing policy change over time, to enable empirical testing of outcomes and to permit gradual and often voluntary adoption by industry.

These opportunities reflect the fact that both finance and financial regulation are being "digitized," a trend driven by the exploding availability of data combined with powerful new kinds of data analytics like artificial intelligence. Both finance and regulation can begin to capture the gains that digitization brings to everything else -- making things work better, faster, and cheaper, all at once, and moving them into an environment that enables continuous improvement through further innovation, in much the same way that apps can be added and enhanced for an iPhone in the regulatory arena, *achieving better outcomes and lower costs simultaneously could depolarize many contentious issues and spark a deep rethinking of public policy possibilities.*

The papers in the series will be published at intervals, as follows:

Paper 1: Paper 1 has two parts -- an Introduction to the Series, followed by Analog Regulation in the Digital Age -- Today's Public Policy Model for Consumer Financial Protection and Inclusion

Paper 2: Failures and Costs of Traditional Consumer Financial Protection Regulation

Paper 3: Digitizing Finance -- Fintech as a Solution for Consumer Financial Protection and Inclusion

Paper 4: Digitizing Financial Regulation -- Regtech as a Solution for Regulatory Inefficiency and Ineffectiveness

Paper 5: Technology Risks -- Dangers Arising from Fintech and Regtech in Consumer Finance

Paper 6: Recommendations -- Using Digitized Fintech and Regtech to Enhance Consumer Financial Inclusion and Health

Note that the series concentrates on the United States but incorporates global trends, especially in the developing world where some innovation is outpacing progress in the advanced economies. The papers emphasize consumer finance, especially banking and lending, but also securities and insurance issues. Most of the analysis also applies to small businesses.[1] *While regulatory digitization strategies could benefit many fields, this series covers only finance, and mainly consumer finance.*

[1] For in-depth discussion of related small business issues see paper by Harvard Business School Senior Fellow Karen Mills and Brayden McCarthy, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2877201

ANALOG REGULATION IN THE DIGITAL AGE:

TODAY'S PUBLIC POLICY MODEL

FOR CONSUMER FINANCIAL PROTECTION AND INCLUSION

First in a series of six papers on Financial Regulation Innovation

This paper is the first in the Regulation Innovation series and has two parts. First, it provides an introduction to the issues that will be explored in the series. Second, it examines the current public policy framework and strategies for protecting financial consumers and assuring financial access.

Introduction to the Series: Leveraging Technology to do Better

On May 29, 2018, the Truth In Lending Act turned fifty. Its passage in 1968 launched an intensive half-century effort to protect financial consumers and widen their access to services through increasingly proactive regulation.[2] Year upon year, rules have been issued by dozens of federal and state agencies until, today, they comprise a major subset of financial regulations that are expected to total more than 300 million pages by 2020.[3]

Despite some progress toward protection and inclusion, these efforts have largely failed. As we will discuss in Paper 2, millions of consumers do not understand financial products. Millions do not understand or successfully manage their financial health. Of the millions who lost their homes in the financial crisis, many had entered into unaffordable mortgages that complied fully with the consumer protection rules that government had put in place to protect the public. Meanwhile government studies show that more than one of five U.S. households is unbanked or "underbanked," relying on high-cost nonbank financial services to perform crucial financial tasks.[4] Other estimates suggest that 80-135 million

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[2] The first major federal consumer financial protection law of the modern era was the Truth in Lending Act of 1968.
[3] https://techandfinance.com/2016/04/20/financial-regulations-will-surpass-300-million-pages-by-2020-says-jwg/
[4] https://www.fdic.gov/householdsurvey/2017/2017execsumm

Americans are financially underserved, despite many having attributes of economic success like holding jobs and owning homes. These consumers pay about $40,000 over their lifetimes in unnecessary financing costs.[5] A Brookings study found that those funds, invested appropriately, could generate up to $360,000 in wealth over a forty-year career.[6] In the words of PayPal CEO Dan Schulman, "It's expensive to be poor."[7]

Failures also plague the government's primary non-regulatory strategy for fostering consumer financial health, namely financial education. Federal policy has officially promoted "financial literacy" for a century.[8] Numerous entities provide financial education and some states teach it in school. As discussed in the second paper in this series, research shows these efforts to be yielding weak results.

Consumer harm also arises as an ancillary effect of regulations that do not directly aim to promote protection and inclusion, but that unintentionally and unnecessarily lock many consumers out of the financial system. Chief among these are anti-money laundering rules, which still employ analog era methods that cannot detect most digital-age financial crime – the United Nations estimates that we catch less than one percent of the nearly $2 trillion laundered each year worldwide. These rules cause financial companies to screen out law-abiding customers along with likely terrorists and traffickers in drugs and human beings, due to lack of finely-tuned data.

These poor outcomes are being achieved at high cost. The global banking industry alone spends an estimated $100 billion annually on compliance.[9] [10] This contributes substantially to making financial services unaffordable for millions of people and also weakens the competitiveness of small banks and other companies, as well as deterring new entrants into financial markets. Even worse, some regulatory

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5 http://www.spentmovie.com/
6 https://www.brookings.edu/research/banking-on-wealth-americas-new-retail-banking-infrastructure-and-its-wealth-building-potential/
7 http://time.com/4587743/paypal-dan-schulman-social-mission/
8 The Smith-Lever Act of 1914 created a nationwide cooperative extension service that included focus on teaching financial literacy
9 https://letstalkpayments.com/a-report-on-global-regtech-a-100-billion-opportunity-market-overview-analysis-of-incumbents-and-startups/
10 https://www.thetradenews.com/Sell-side/Banks-spent-close-to-$100-billion-on-compliance-last-year/

"protections" not only fail, but actually exacerbate consumers' problems. The second paper in the series quantifies the financial costs of regulation and also describes how some requirements actually backfire, such as by mandating disclosures whose complexity discourages most people from even reading them.[11] Similarly, the public goal of inclusive finance is impeded by policy that creates high regulatory risks and costs for providers that are seeking to serve lower-income and other vulnerable consumers, partly due to high levels of uncertainty about permissible product design and pricing. This discourages banks, in particular, from even attempting to serve these markets, thereby reducing competition and leaving the people who need the most protection consigned to the least-regulated markets (which also tend to attract less scrupulous providers). Meanwhile, current regulatory architecture emphasizes hyper-technical consumer protection rules that reward procedural "compliance" over fairness or ethics and have fostered a widespread industry assumption that if a practice isn't explicitly banned, it must legally be fair game.

In theory, a regulatory system that is ineffective, expensive, and sometimes harmful, will be changed. Leonard Chanin, who for nearly twenty years led the legal teams that wrote most of today's consumer protection regulations at the Federal Reserve Board and then at the Consumer Financial Protection Bureau (CFPB), has said, "The only solution is to blow it all up. If we just take what we have and try to improve it, we will fail."[12]

However, taking what we have and trying to improve it is precisely the track we are on. Congress responded to the financial crisis by creating the CFPB[13] and giving it broad powers of regulation, enforcement, and for large financial companies, direct supervision, as well as mandates on consumer education. While the CFPB has made strides toward improving on past efforts, this model amounts largely to a doubling down on the same strategies that have fallen short.

[11] http://press.princeton.edu/titles/10267.html
[12] Barefoot Innovation podcast interview, November 2015
[13] Note: I served on the CFPB's Consumer Advisory Board for its first three years of existence

In connection with research for this series of papers, the American Bankers Association expanded its annual survey of bank compliance officers in 2017 to pose questions on regulatory effectiveness.[14] [15] Asked to respond to the statement, "Consumers generally read standard federal disclosures and find them helpful in choosing financial products," 89.5 percent disagreed or strongly disagreed (nearly half -- 49.5 percent -- strongly disagreed). Only 1.3 percent agreed. These respondents – the executives who are professionally dedicated to ensuring their banks' compliance with consumer protection laws – were ambivalent even about whether such regulations are generally effective in protecting consumers – only half think so. By overwhelming margins, they think regulations produce unintended consequences that negatively impact consumers, and that regulatory costs and uncertainty deter pro-consumer innovation. This survey was conducted six years after creation of the CFPB.

The need to rethink regulatory approaches makes it timely to ask a core question: why have past regulatory efforts failed? Critics of the financial industry argue that regulators have been insufficiently aggressive and that therefore the remedy is heightened pressure on the financial industry. Even if one accepts this contention in theory, regulatory systems operate within political frameworks that shift over time. Since passage of the Truth-in-Lending Act in 1968, the U.S. presidency has been in Democratic hands nearly half the time (20 of 43 years), with Republicans in the White House for the other half. The U.S. political system creates an almost inevitable seesaw dynamic between greater and lesser regulation and more versus less active enforcement. The record suggests that even if aggressive regulation could solve consumers' problems, it cannot be sustained over years and decades of governmental change. Better strategies are needed if consumers' problems are to be solved.

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[14] Survey of 387 compliance professionals representing a cross section of bank sizes and regulatory agencies.
[15] https://drive.google.com/a/jbarefoot.com/file/d/1hnOCr8NfOm7ssRXsyB8eC2BM--Kf_m2E/view?usp=sharing

Fortunately, a new element has emerged in this dynamic that could make real solutions possible.

Nearly 90% of bank compliance officers responding to a 2017 American Bankers Association survey disagreed with the statement: "Consumers generally read standard federal disclosures and find them helpful in choosing financial products."

This new factor also has the potential to improve outcomes and reduce costs, simultaneously, thereby winning widespread political support and breaking some of the gridlock that traditionally surrounds consumer protection policy. That factor is technology innovation.

This innovation takes two broad forms, generally referred to as "fintech" and "regtech."

The term *Fintech,* discussed in Paper 3, refers to use of new technology to improve financial products, delivery channels, and cost structures, and to equip consumers with better tools for managing their money lives. Product examples include innovations like marketplace lending (which matches lenders and borrowers online), other online lending, investment robo-advising, cryptocurrency and initial coin offerings (ICO's), instant payments and payment-sharing tools, insure-tech,[16] easy tools for savings and money management, and voice-interface digital assistants. While the financial industry has always innovated and used technology extensively, today's changes are mold-breaking, mainly because they arise out of the society-wide technology trends altering how people live. Finance faces a profound disruption of the kind that has remade industries like publishing, music, retailing and taxis.[17] Francisco Gonzales, Chairman of the Spanish bank BBVA, has predicted a resulting "Cambrian explosion" with "mass extinction" of thousands of banks.[18] This turmoil is still in an early stage and it is unclear, globally and in

[16] Insuretech refers to new technologies that are disrupting traditional insurance practices, such as mobile phone-based claims, discounts for using risk-reduction technology like driving trackers, and peer-to-peer insurance. https://www.vertafore.com/resources/blog-posts/what-insurtech-and-how-can-you-harness-its-disruptive-powers

[17] "Ex-Barclay's Boss: This Is the Uber Moment for Banks," The Memo 11/26/15, http://www.thememo.com/2015/11/26/banks-uber-moment/

[18] "BBVA Chairman Leads Tech Push to Fend Off Google, Facebook Threat," Bank technology News, 3/3/15 http://www.americanbanker.com/syndication/bbva-chairman-leads-tech-push-to-fend-off-google-facebook-threat-1073080-1.html?utm_campaign=btn%20daily-mar%205%202015&utm_medium=email&utm_source=newsletter&ET=americanbanker%3Ae3951672%3A4268652a%3A&st=email

the US, how it will actually impact the structure of financial industry.[19] Whatever the structural outcomes may be, however, new technology is already changing every element of consumer finance at both banks and their competitors.[20]

Many innovations today are narrow point solutions, but these are converging into large-scale shifts. As they do, they create the potential to remove most of the drivers of consumers' financial ill-health, other than lack of money.[21] Innovation has the capacity to make financial products more affordable, transparent, and easy to use, and also to help consumers manage their own behaviors that contribute to financial difficulties. *Properly regulated, these technologies could succeed where regulation has failed by producing a marketplace of nearly universal consumer financial protection and widespread access.*

Policymakers face the difficult task of crafting regulation that can unlock this potential, while simultaneously managing novel risks that are often embedded in the same technology, and of doing so amidst exponentially accelerating change.

Most of this opportunity is being driven by the rapid evolution of finance from analog to digital form, creating the possibility of fundamentally different products, services, and profit models. As one illustration, imagine a woman preparing her children's breakfast. On her kitchen counter is a smart voice-assistant device that greets her as she pours orange juice. It reminds her that the rent is due next week and that her bank balance is low, with advice to limit her daily spending to a specific amount until month-end. This woman has not had to search for incoming bills, start her computer, pull out her phone, or even touch a screen or keypad. Strictly via speech, she can ask the assistant for details, instruct it to pay or defer bills, or approve financial management suggestions the device may suggest and then can execute for her. When the billpaying is done, the assistant might chat with her about progress toward saving for retirement

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[19] https://www.forbes.com/sites/jimmarous/2018/08/27/future-of-banking-fintech-or-techfin-technology/#b8ef0415f2d5

[20] World Economic Forum, "Beyond Fintech: A Pragmatic Assessment of Disruptive Potential in Financial Services." http://www3.weforum.org/docs/Beyond_Fintech World, 2017

[21] People at every level of income and wealth have financial lives that need to be managed and optimized

or paying off her student loans or credit cards. That evening, when she stops for groceries on her return from work, the same assistant, now in her phone, can text her: “I see we’re at the market. We can spend $70 here today.”

Scenarios like this are rapidly emerging, worldwide, enabling non-wealthy people to get financial advice, or even just to get access to the financial system. A farmer in India who lacks traditional identity documents may be able[22], today, to open a bank account and connect to the mainstream economy because he has a government issued ID confirmed by his biometrics.[23] A mobile money user in Mexico or the Philippines can complain to the government about a scam instantly through a chatbot on his phone,[24] [25] producing an electronic report the regulator can easily analyze and address. As discussed in Paper 3, technologies like mobile phones, big data, artificial intelligence, blockchains, digital currency, cloud computing and voice technology are driving up access and driving down cost and consumer confusion, worldwide.

All this promising technology faces regulatory obstacles that are intertwined with political, cultural and philosophical barriers. Furthermore, much of it will produce downside risks like cyber-insecurity, loss of privacy, and use of “unfair” data factors in evaluating consumers’ creditworthiness or desirability as customers. As discussed later in this series, today’s regulatory framework is ill-equipped either to capture the potential benefits of fintech or to manage its dangers, especially because rapid advances in technology are outpacing traditional models for considering and adopting regulatory change.

Fortunately, the same innovation technologies that are driving fintech are also being applied today to the regulatory process itself, in the form of regtech,[26] as described in the series’ fourth paper.

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[22] A 2018 Indian Supreme Court decision struck down portions of the Aadhaar program that enables these connections, for failure to secure adequate consumer consent. More litigation may follow.
[23] Aadhaar Card https://uidai.gov.in/
[24] R2A Regtech for Regulators https://www.r2accelerator.org/
[25] https://www.r2accelerator.org/chatbot-prototype/
[26] This is sometimes spelled RegTech

Regtech has two meanings. One is regtech for regulators[27] – that is, using new technology to change how regulation, itself, is designed and implemented. The other is regtech for industry, applying cutting-edge technology in order to ease or enhance regulatory compliance. Both are undergoing rapid, global evolution. This movement is particularly strong in the developing world, in part because many emerging economies lack an advanced regulatory infrastructure and can therefore start with a clean slate using new technology, essentially leapfrogging over more mature systems.

Here again, digitization is making it possible not only to speed up processes that derive from the analog age, but actually to replace them with far more effective and efficient "digitally-native" systems. These are systems that are "born" in digital form, rather than adapted from older process. They mirror how digitally-native consumers[28] – born in the digital age – tend to grasp new technology easily and intuitively, in situations where older consumers (sometimes called digital immigrants), find it more difficult to convert from prior ways of performing tasks. Most of today's regulation and compliance activities, even if they have been automated, still reflect the linear processes that first produced them. That is, they were originally designed on paper. Instead of laying technology on top of them, new regtech sets them aside and builds new processes from scratch using robust data and digital tools.

Despite extensive automation, both regulators and industry today struggle with poor analog systems and information in every facet of their work. Important information is still locked up in siloed databases, unused or accessible only through difficult, expensive efforts. Regulators and auditors still pull small samples of files to test for signs of legal violations and risk. Reports are still prepared manually and periodically, often monthly or yearly, while problems accumulate during the time lags. Software is still updated at intervals of years, rather than continuously. Aging IT systems leak information and generate compliance violations because they lag behind regulatory and market changes, and because they fail at the "seams" between legacy systems that have been ineffectively patched together over the years

[27] Regtech for regulators is also sometimes called "suptech" or "supertech," referring to new technology for financial supervisory agencies.
[28] https://www.techopedia.com/definition/28094/digital-native

and even decades. Regulatory updates are still issued in the form of paperwork, often thousands or tens of thousands of pages in length, that must be read and interpreted by experts and then translated by every regulated company into new policies, procedures, training, IT protocols, testing procedures and much more. Smaller banks and fintech startups often lack the expertise and resources even to know what rules apply to them, much less how to comply with them properly. All of this leads to reduced innovation and competition and to rising risks for consumers and financial system stability.

Regtech is attacking these problems. As we will discuss in Paper 4 of this series, both regulators and private sector innovators are working on new strategies like making rules "machine-readable;" using expanded data and artificial intelligence to detect patterns that might signal securities market misconduct; redesigning anti-money laundering systems to find large-scale financial crimes like terrorism and human trafficking; and blockchain technologies for airtight tracking of records or transactions.

As an illustration of regtech, imagine that an agency needs to issue a new regulation affecting the information that banks must report to the government. Banks implementing this change would normally need to invest several years of work to interpret the new rule, retool processes and IT, retrain personnel, and the like. What if, instead, the regulator gave banks the option to use regulator-issued computer code that could connect to a bank database and automatically produce the needed report, without errors, in a matter of seconds? The U.K. Financial Conduct Authority has already experimented with this kind of "machine-executable regulation" – that is, issuing regulation in the form of code that could make a regulatory change instant, automatic, inexpensive, error-free, and self-implementing.[29] This approach could completely revolutionize vast swaths of regulatory and compliance activity.

As with fintech, the move toward regtech raises many novel challenges. These include how governments should be allowed to use data, including big data; how they should use and permit use of machine learning and artificial intelligence in regulatory and compliance processes; how to equip regulatory bodies with the skills, cultures, and accelerated cycles of learning and action needed to

[29] https://www.fca.org.uk/events/techsprints/model-driven-machine-executable-regulatory-reporting-techsprint

optimize these shifts; how to assign liability for problems and errors in a system where government may have complete, real-time access to industry information; and how to enable both government and industry to transition to digitally-native regulation gradually and voluntarily, to minimize disruption.

Analog Regulation in the Digital Age: Today's Regulatory Framework for Consumer Financial Protection and Inclusion

Against this backdrop of rapid change, we turn now to examining the current state. This paper will look at how consumer financial protection regulation is designed and implemented in the United States today. The following paper in the series will argue that this design has largely failed, and has done so at high cost.

Government bodies in the United States use multiple strategies to address consumer financial protection and inclusion. These include laws, regulations, informal regulatory guidance, and litigation at the federal, state, local and sometimes multi-national levels. Government directly regulates many aspects of finance, especially banking, securities, retirement and pension funds, insurance, money transmitting, and mortgage and consumer lending. It also employs tax policy, price controls like usury laws, financial education, secondary securitization markets (especially for mortgages), credit facilities for certain activities, direct lending (including student loans), and loan guarantees and subsidies. Government bodies use numerous tools to implement these efforts, including onsite and offsite examination of compliance, especially for banks.

This system is also impacted by financial regulatory activities that are not expressly aimed at consumer protection and access but nevertheless affect them. Again, this is especially true for banks, which are actively supervised by government in order to assure the "safety and soundness" of the financial system. For example, banks are subject to stringent capital requirements for home mortgage lending, designed to assure prudent financial management of the bank, but with impacts on availability of mortgage credit for consumers. Traditionally there has been considerable tension among bank regulators between prudential oversight versus goals like expanded financial inclusion and consumer protection, a dynamic that contributed to Congress' decision to transfer most protection regulation to a new Consumer Financial Bureau.[30] As discussed below, anti-money laundering regulation is another area where regulatory mandates often cause unintentional conflict with financial inclusion goals, as a side-effect of unrelated policy objectives -- in this case, combatting financial crime.

More so than in other countries, consumer financial protection regulation in the U.S. is heavily "rules-based," rather than "principles-based." The primary U.S regulatory model has been to issue pervasive, prescriptive requirements, such as mandating that consumers receive specified product disclosures or barring certain product features and activities. These are supplemented in some areas by principles-based, subjective standards like prohibiting practices that are "unfair," "deceptive," or "abusive;" banning activities that could discriminate, even inadvertently, against groups like minorities and women; and requiring reporting of "suspicious" activity – a subjective standard -- under anti-money laundering laws. Banks are also subject to the Community Reinvestment Act's principles-based mandate that articulates an "affirmative obligation" to "help meet the credit needs" of lower-income customers.

Government bodies must oversee compliance with both rules and compliance principles across a wide, varied landscape of financial providers. The industry is complex and decentralized, comprising of nearly 7,000 banks and hundreds of thousands of nonbank financial companies[31] -- over 16,000 licensed mortgage companies, more than 130,000 licensed mortgage originators, and about 138,000 other state-licensed providers of financial services like money transmitters and consumer lenders.[32] The industry also includes many non-licensed companies that provide financially-related services and that, generally, are subject functionally to the same laws and standards, such as the universal legal ban on deception.

[30] https://www.investopedia.com/terms/d/dodd-frank-financial-regulatory-reform-bill.asp

[31] The essential difference between a bank and a nonbank (with some exceptions) is that banks are chartered by the federal government or a state and are authorized to accept consumer deposits, which must be insured by the Federal Deposit Insurance Corporation in order to protect the public and maintain financial system stability.

[32] https://www.csbs.org/about/Pages/default.aspx

Regulators have less visibility into unlicensed companies' activities but address issues as they surface through consumer complaints and various kinds of targeted investigations.

U.S. financial regulatory structure:

Numerous agencies implement these efforts.[33] At the federal level alone, five separate agencies directly oversee depository institutions[34] under mandates that are distinct but involve extensive overlap. At least 20 additional federal agencies or federally-related entities impact consumer and small business financial products and practices.[35] Much of this structure is, in turn, mirrored in each of the fifty states, the District of Columbia, and the U.S. territories (Guam, Puerto Rico, and the U.S. Virgin Islands). The U.S. federal structure for overseeing depository institutions (banks, thrift institutions and credit unions) is uniquely complex in the world and is often cited as a competitive threat to America's global leadership in financial innovation.[36] [37]

A highly simplified overview of the structure for supervising financial institutions (i.e., financial companies that take in consumer deposits, such as banks and credit unions) is as follows.

Three of the five federal agencies are "prudential" supervisors of banks (that is, responsible for bank "safety and soundness"), with each playing roles that are differentiated but that, again, overlap. The Office of the Comptroller of the Currency or OCC (established in 1863) is a bureau of the Department of the Treasury and charters and supervises national banks (federally-chartered banks) and federal thrift institutions. The Federal Reserve Board (established 1913) supervises state-chartered banks that are

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[33] GAO overview,"Who Regulates Whom?" https://fas.org/sgp/crs/misc/R44918.pdf

[34] The five are the Consumer Financial Protection Bureau, the Federal Deposit Insurance Corporation, the Federal Reserve Board, the Office of the Comptroller of the Currency, and the National Credit Union Administration.

[35] A partial list of other federal government agencies and quasi-governmental entities directly impacting consumer and small business financial products (some of which are subsidiary to others) is: Department of Justice, Securities and Exchange Commission, Federal Trade Commission, Department of Housing and Urban Development, Department of Agriculture, Department of Commerce, Department of Veterans Affairs, Department of Treasury, Financial Crimes Enforcement Network (FinCEN), Department of Labor, Department of Education, Commodities Futures Trading Commission, Internal Revenue Service, Federal National Mortgage Association (Fannie Mae), Federal Home Loan Mortgage Corporation (Freddie Mac), Federal Housing Finance Agency, Small Business Administration, Federal Home Loan Bank System, Financial Industry Regulatory Authority and Federal Communications Commission.

[36] https://www.cato.org/publications/testimony/regulatory-fragmentation-balkanization-financial-markets-competitiveness

[37] https://www.volckeralliance.org/publications/reshaping-financial-regulatory-system

members of the Federal Reserve System, and also oversees all financial holding companies, in addition to executing its mandates in monetary policy and other areas. The Federal Deposit Insurance Corporation, or FDIC (established 1933) oversees the thousands of state-chartered banks that are not Federal Reserve System members, as well as operating the deposit insurance system for all banks (including overseeing resolution of failing banks). These three agencies directly and proactively "supervise" banks, employing cadres of bank examiners who regularly conduct examinations onsite. For the Federal Reserve and FDIC, these examinations are conducted jointly with state regulators, since their banks are state-chartered. A forth agency, the National Credit Union Administration (established 1970) conducts both prudential and consumer protection examination of credit unions.[38]

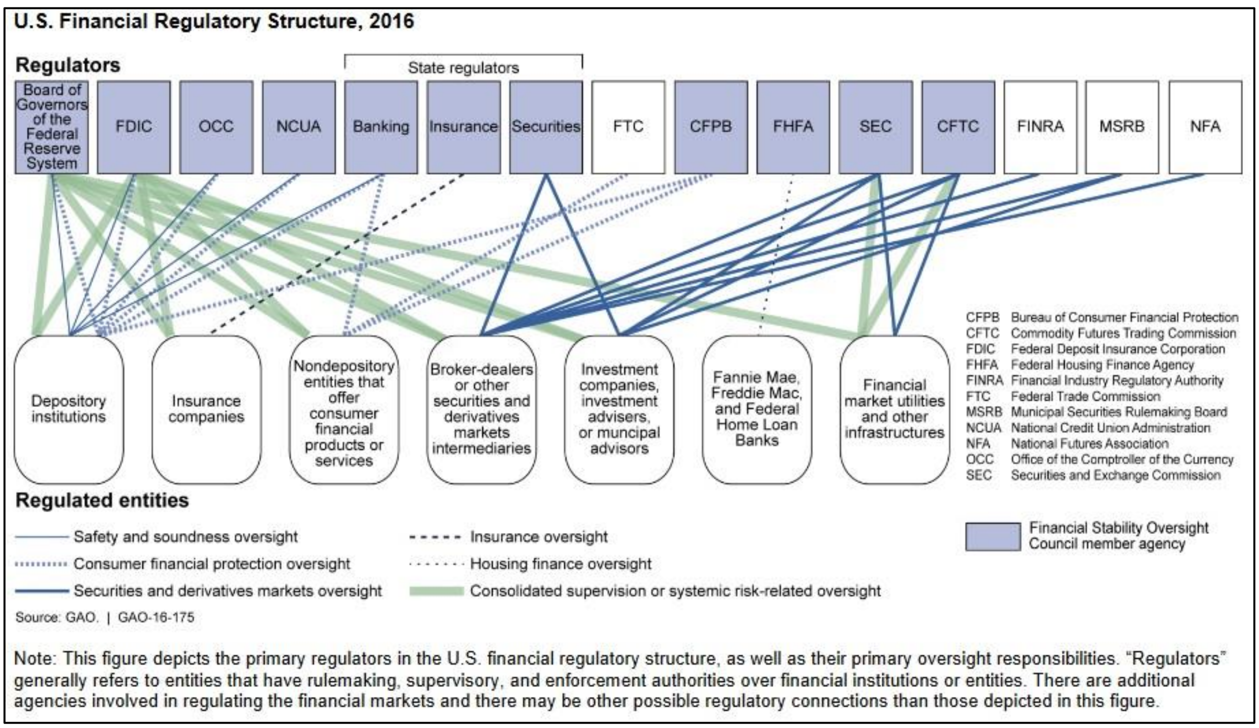
The fifth agency is the CFPB (established 2011), which has no role in prudential regulation but writes most (not all) of the regulations that all banks and nonbank financial companies must follow regarding consumer protection. The CFPB also directly supervises large financial institutions (with assets over $10 billion) regarding compliance with most (but not all) consumer protection regulations. The prudential agencies meanwhile continue to examine institutions smaller than $10 billion for consumer protection compliance, requiring them to comply with rules issued by the CFPB as well as other rules promulgated by themselves and other agencies. These prudential supervisory agencies also retain rule-writing authority for some consumer financial laws. All the federal agencies have regional offices and field examiners throughout the country, with differing boundaries between districts.

Some of this structural complexity is illustrated in Figure 1. The system's intricate web of overlapping and interlocking missions, domains, powers and shared responsibilities produces massive

[38] Prior to the Dodd-Frank reform law, there was an additional federal agency, the Office of Thrift Supervision. Like the OCC, it was a bureau of the Treasury Department and addressed federal chartering, regulation, enforcement, supervision and, through an affiliated entity, deposit insurance for "thrift" institutions like savings banks. Thrift institutions had traditionally operated under a narrow legal mandate and business model focused on consumer savings and home lending. Many failed during past credit cycles. The institutions remaining today have broadened powers and are chartered and supervised by the OCC, while their deposits are insured by the FDIC. Traditionally many thrifts had mutual rather than stock ownership, and some still do. Credit Unions, meanwhile, traditionally could serve only customers who shared a close "common bond," such as an employer or university relationship. This limitation, too, has now been considerably broadened.

complexity in the day-to-day lives of both regulators and the companies they oversee. For the agencies, many areas of regulatory change, policy guidance and enforcement activity must be coordinated through extensive interactions and complicated processes. Among other things, this slows down needed change and consumes massive resources. For the industry, the regulators' efforts to coordinate often fall short of full consistency, leaving companies unsure of which guidance to follow or how to comply. Startups in finance routinely cite the difficulty of even identifying all the rules they must follow and all the agencies that oversee their activities.[39]

Figure 1



Partial depiction of US Financial Regulatory Structure
Source: Government Accountability Office, GAO WatchBlog, 2016[40]

Again, much of this federal structure is then duplicated in the fifty states, which charter and supervise state banks (i.e. state-chartered banks), and which also license and oversee all the nonbank

[39] https://www.ropesgray.com/en/newsroom/alerts/2018/08/Treasury-Department-Issues-Regulatory-Report-on-Fintech-and-Innovation
[40] https://blog.gao.gov/2016/03/31/financial-regulatory-structure-podcast/

financial companies subject to regulation. In most states, the latter include mortgage and consumer lenders and money transmitters.

Notably, there is no direct federal-level regulation of nonbank fintechs, unless they participate in federal programs (which few do). They are subject only to indirect federal scrutiny, which flows through to them to some extent when bank regulators examine the financial institutions where the fintech does its banking and through which it connects to the payments system (more on this later).[41] Since federal bank regulators tend to dominate many regulatory policy issues, this lack of direct experience with fintechs is consequential.

Again, these nonbank fintechs are licensed (if necessary) and overseen by the states, and onsite supervision is generally much less pervasive than for banks.

The scope and focus of US states' regulatory work is illustrated in Figure 2, which presents the California Department of Business Oversight's list of "Licensees and Industries Regulated by the Department):[42]

Most federal and state agencies that oversee banks and licensed companies have a range of powers. Most have enforcement authority (as do numerous other federal agencies), meaning the power to investigate and bring legal actions for violating the law. Many have regulation-writing powers, in addition to examining for and enforcing applicable regulations written by other agencies. Some federal regulations preempt state law, leaving federal and state institutions subject to different rules (sometimes even if they have federal supervisors), while some federal regulation defers to state-level law that is more protective of consumers, adding yet more complexity.[43]

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[41] In recent years, a number of "sponsor banks" or "partner banks" have developed, specialized in serving fintech companies. These banks' regulatory agencies generally scrutinize the affiliated fintechs, since these materially affect the soundness of the bank involved.

[42] http://www.dbo.ca.gov/Licensees/

[43] In addition, at the federal level, the Federal Trade Commission has broad investigative and enforcement powers in consumer protection that supplement state and federal efforts, usually focusing on individual cases or specific issues. It is also the lead US agency addressing public policy on privacy, which is broader than finance but impacts actions and powers of financial companies.

All this means that many financial institutions operate with multiple federal and state agencies directly supervising their holding companies, their banks, and their nonbank affiliates, *regarding compliance with the same regulations.* The largest banks have multiple agencies' examination teams permanently housed on their own premises.

The agencies have some systems for coordination, including uniform examination procedures and joint training for most areas.[44] Nevertheless, differences frequently arise over how to interpret or prioritize regulations they all implement. This produces compliance complexity and often generates uncertainty that can result in unintended consequences, as discussed further below.

Figure 2

Licensees and Industries Regulated by the Department
Banks
Broker-Dealers and Investment Advisers
Business and Industrial Development Corporations (BIDCO)
California Deferred Deposit Originators (commonly known as "Payday Lenders")
California Finance Lenders
California Residential Mortgage Lenders
Capital Access Companies
Check Sellers, Bill Payers and Proraters
Credit Unions
Escrow Agents/ Escrow Law
Foreign (Other Nation) Banks
Foreign (Other State) Banks
Franchises
Industrial Banks
Local Agency Security Program (LASP)
Money Transmitters
Mortgage Loan Originators
Premium Finance Companies
Responsible Small Dollar Loans (Pilot Program)
Securities (Corporate Securities Law of 1968)
Trust Companies and Departments

Source: California Department of Business Oversight

[44] The Federal Financial Institutions Examination Council plays the central role on examinations, while the Financial Stability Oversight Council, or FSOC, coordinates high-level policy on systemic risk.

It seems clear that this U.S. structure[45] would not be adopted today if Congress started from scratch, but changing it is extremely difficult politically, for example, the financial crisis sparked numerous proposals to reorganize the federal bank regulatory agencies. In the end, the Dodd-Frank law folded one small agency[46] into a larger one and carved out the CFPB, but did not deal with the overlap among the prudential bank supervisors. This is partly due to the intrinsic challenge of reorganizing agencies that have entrenched activities and constituencies, especially given the unique complexity of the U.S. banking system (most nations have a relatively small number of banks).

Consumer protection regulation:

Figure 3 presents a partial list of the consumer protection regulations that are implemented by this infrastructure. The total volume of financial laws and regulations eludes quantification. The 2010 Dodd-Frank Act, alone, is 2,300 pages long and has produced approximately 22,000 pages of regulations[47] – a count that is still rising. A major share of banks' overall regulatory mandate involves consumer financial protection and inclusion, as reflected in the fact that virtually all banks employ dedicated staff – sometimes thousands of people – to perform this function, as discussed further below.

While some protection laws have roots in the first half of the twentieth century or earlier, a new class of legislation began to proliferate when the consumer movement[48] first emerged in the 1960's and

[45] The above overview applies to banks, credit unions, and state-supervised lenders and money transmitters, which are the main focus of this series of papers. It thus does not include other major financial regulatory functions, including oversight of securities markets and insurance (functions that are often conducted by banks as well). Separate agencies address securities regulation, especially the Securities and Exchange Commission (SEC, established 1934) and the Commodity Futures Trading Commission (established 1974, with powers greatly expanded after the financial crisis to cover regulation of futures and derivatives markets). These agencies oversee a wide range of equity market activities, including for consumer protection, through required disclosures, oversight, investigations and enforcement. Another arena of financial regulation oversees insurance markets, including for consumer protection and fair access. Almost all insurance regulation occurs at the state level, with no federal role. The insurance industry has seen a recent proliferation of innovative services, collectively called "insure-tech" and policymakers are grappling with optimizing insurance regulatory strategies. All of these major regulatory spheres are then supplemented with consumer protection and access activities by numerous other agencies, including those running government programs in which financial institutions participate, such as mortgage insurance and mortgage guarantees for veterans.

[46] The Office of Thrift Supervision was a specialized agency focusing on thrift institutions and was subsumed by the Comptroller of the Currency in the Treasury Department.

[47] https://www.nytimes.com/...dodd-frank.../dodd-frank-is-hurting-community-banks

[48] The consumer movement arguably began with Ralph Nader's book on the Chevrolet Corvair, "Unsafe at Any Speed," published in 1965 -- more than fifty years ago.

70's, paralleling the social movements that arose in those decades to champion civil rights and environmental protection (and also paralleling profound growth and change in consumer financial products, by both banks and nonbanks). Prior to that time, most consumer financial protection regulation was narrowly drawn to specify what could *not* be done -- outlawing certain industry practices or product terms, or barring interest rates that exceeded set usury caps. With the rise of the Great Society and more activist government in the 1960's, regulatory efforts began to expand, aiming proactively to achieve social benefits. Congress passed a series of laws to ban credit discrimination, to encourage lending to lower-income people and neighborhoods, and to foster pro-consumer market competition and wise consumer decision-making by mandating standardized consumer disclosures.[49]

The year 1968 was a watershed in this shift. It saw passage of the Fair Housing Act, or FHA,[50] prohibiting not only discrimination in housing sales and rentals, but also in mortgage finance. In that year Congress also passed the Truth-in-Lending Act (TILA) requiring lenders to calculate and disclose Annual Percentage Rates, or APR's, so that borrowers could compare and choose loans by evaluating standardized and reliable information.

TILA became the template for a growing body of regulations that followed in the ensuing decades and that incorporated TILA's strategy of mandating disclosures (at least in part). This reflected a policy theory that uniform disclosure would be a market-friendly way to protect financial consumers from harm. TILA and its lengthy implementing rules, known as Regulation Z, were joined over time by the Real Estate Settlement Procedures Act (RESPA), the Truth in Savings Act (TISA), the Fair Credit Billing Act, the Fair Credit Reporting Act (FCRA), the Equal Credit Opportunity Act (ECOA, pronounced "ee-co-ah") and Regulation B; rules implementing the law barring Unfair and Deceptive Acts and Practices

[49] Debate continues about whether this proactive effort is an appropriate role for government, with some advocates preferring a restrained model that simply bars egregious deceptive practices and maintains systemic soundness. That argument assumes that consumers should be able to make good choices with no government help and that promoting widespread access is not a government function. This paper assumes that public policy will continue to seek actively to foster consumer financial fairness and inclusion and contends that those goals, as well as reduced regulatory burden, require radical regulatory change.

[50] FHA also refers in the financial world to the Federal Housing Administration, which is part of the U.S. Department of Housing and Urban Development.

(Regulation AA); the Fair Debt Collection Practices Act (FDCPA), the Right to Financial Privacy Act and Regulation P, the Electronic Funds Transfer Act (EFTA) and Regulation E, the Credit Card Accountability Responsibility and Disclosure Act (CARD Act), and many more.

The regulations with letter names, like Z, E, and B, were originally promulgated by the Federal Reserve Board. Many of them have now been transferred to the CFPB which then lengthened this list, often in response to Dodd-Frank mandates. One CFPB addition was the lengthy Ability to Repay and Qualified Mortgage rule issued in 2013, designed to prevent recurrence of the lending practices that fueled the financial crisis. Another major issuance was the 2016 rule on TRID, or Truth in Lending and RESPA Integration Disclosure, intended to integrate and rationalize parts of these two older laws. Those older rules overlapped but had been issued by two different agencies, resulting in conflicting requirements and interpretation. The Truth in Lending Act itself has been amended many times and has numerous subsections addressing specific issues.[51]

This era also brought enactment of laws aimed at promoting financial access and inclusion. Again, the Fair Housing Act banned housing discrimination, including in mortgage finance, in 1968. In 1975 Congress built on it with the Equal Credit Opportunity Act, which extended the ban on credit discrimination to all types of consumer lending and also expanded the factors that cannot be considered in lending. In the same year, the Home Mortgage Disclosure Act (Regulation C) began to require new disclosures, not to individual customers, but to a public data registry that enables regulators, media, advocates and academics to analyze patterns of mortgage lending for evidence of redlining or discrimination. Two years later Congress passed the Community Reinvestment Act, asserting that chartered financial institutions have an "affirmative obligation to help meet the credit needs" of their "entire communities, including low- and moderate-income neighborhoods," consistent with "safe and sound operation." The same decade also saw the creation or expansion of numerous federal programs and strategies promoting financial and housing opportunities, including many in which banks participate.

[51] https://www.fdic.gov/regulations/laws/rules/6500-3200.html#fdic65001026.1

These include loan insurance and/or subsidy programs run by the Department of Housing and Urban Development, Veterans Administration, Small Business Administration, and Department of Agriculture, as well as government-sponsored enterprises (GSE's) like the Federal National Mortgage Association ("Fannie Mae") and the Federal Home Loan Mortgage Corporation ("Freddie Mac") providing a secondary securities market for mortgages. All of these activities involve additional, unique compliance requirements.

Figure 3

Partial list of US Federal Consumer Financial Protection Laws	
1914	Federal Trade Commission Act
1933	Banking Act (Glass-Stegall Act)
1933	Securities Act
1934	Securities Exchange Act
1938	Temporary National Economic Committee
1939	Trust Indenture Act
1940	Investment Advisers Act
1940	Investment Company Act
1968	Securities Disclosure Act
1968	Truth in Lending Act
1970	Fair Credit Reporting Act
1974	Fair Credit Billing Act
1974	Real Estate Settlement Procedures Act
1975	Securities and Exchange Act
1975	Home Mortgage Disclosure Act
1975	Equal Credit Opportunity Act
1977	Fair Debt Collection Practices Act
1977	Community Reinvestment Act
1978	Electronic Fund Transfer Act
1982	Garn–St. Germain Depository Institutions Act
1987	Expedited Funds Availability Act
1999	Financial Services Modernization Act
2000	Commodity Futures Modernization Act of 2000
2002	Sarbanes-Oxley Act
2003	Fair and Accurate Credit Transactions Act
2006	Credit Rating Agency Reform Act
2010	Dodd–Frank Wall Street Reform and Consumer Protection Act

In addition, the Federal Trade Commission, or FTC (established 1914), expanded its activities in these years. As noted earlier, it has extensive powers relating to consumer protection in finance and is the leading federal agency addressing consumer privacy.

Anti-money laundering regulation:

Emerging in parallel with regulation aimed at consumer protection and inclusion has been an even more extensive regime to pursue Anti-Money Laundering, known as AML. Congress passed the Bank Secrecy Act, or BSA, in 1970, requiring financial companies to help the government detect and address financial crime.[52] Its original purpose emphasized drug enforcement, but after the 9/11 terror attacks the law was expanded to incorporate provisions of the U.S. Patriot Act. Today this system provides information to law enforcement agencies in the U.S. and globally as they combat terrorist activity and trafficking in illegal drugs, weapons, endangered animals, and human beings sold for labor or sexual exploitation.

On its face this law seems unrelated to policy aimed at protecting financial consumers, but most banks have incorporated it into their "compliance" departments and address it as part of their specialized compliance risk management activities using the same types of personnel, processes and controls. The two fields sometimes compete for resources and are also linked by the fact that AML compliance sometimes harms financial inclusion, as will be discussed in the next paper.

Under the BSA and the AML rules, financial companies must undertake a range of activities aimed at keeping terrorists and traffickers out of the banking system and at catching them if they get in and try to launder illicit funds. To comply, companies must authenticate the identity of every prospective customer under rules known as "Know Your Customer", or KYC. They must block specified high-risk individuals from the banking system. They must report currency transactions that exceed $10,000 (as well as transactions that appear "structured" to avoid this reporting requirement). They must also monitor each customer's account for signs of "suspicious activity." Situations flagged as potentially suspicious must be investigated and if appropriate, reported to the government through a Suspicious Activity Report, or SAR.

The regulatory structure surrounding AML is uniquely complex. The lead AML federal agency is the Financial Crimes Enforcement Network, or FinCEN (a unit of the Department of the Treasury).

[52] https://www.occ.treas.gov/topics/compliance-bsa/bsa/index-bsa.html

FinCEN issues most of the relevant rules, receives the suspicious activity reports, analyzes data, and feeds information to law enforcement. The users of the data are a large group of federal, state, local and international law enforcement agencies. In the U.S. these range from police departments to the FBI, Secret Service, Department of Homeland Security (DHS), Drug Enforcement Agency (DEA) and many others, including numerous special task forces and many international entities. A great deal of serious money laundering today is global in scope.

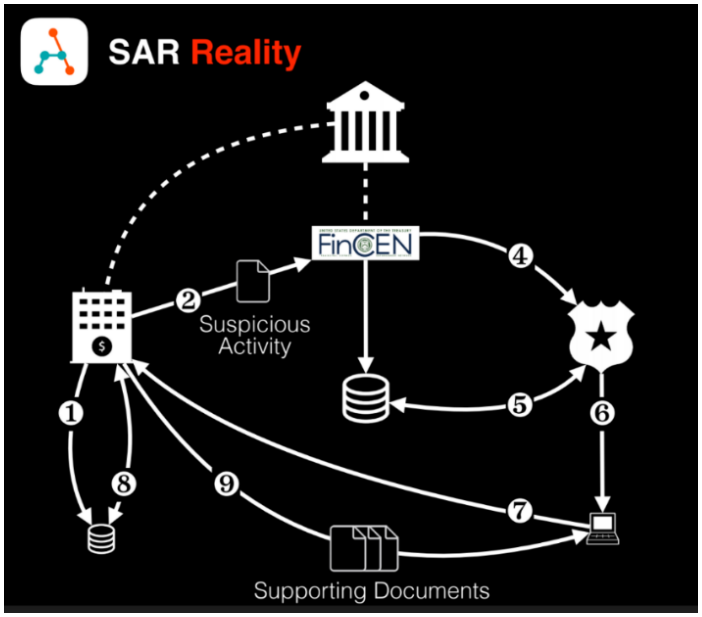
While the users of this system are law enforcement and the pivotal agency is FinCEN, banks' compliance with the AML rules is supervised by the prudential bank regulatory agencies described earlier. This reduces the number of agencies overseeing the bank, but also introduces both net complexity and some weakening of alignment of the parties and their priorities, since the banking agencies have little to do with the underlying law enforcement efforts.

Figure 4 illustrates the flow of information and work between industry and government when suspicious activity is detected. A bank or financial company submits a Suspicious Activity Report, or SAR, to FinCEN. FinCEN may request further information and will analyze the report and provide information to law enforcement. If law enforcement officials have questions or need documentation, they request them from the bank through a complex process that generally involves considerable time lags (during which information sometimes becomes unrecoverable).

Since the bank regulators overseeing the institution's compliance with AML rules have little involvement with this law enforcement work, they tend to emphasize the importance of technical compliance, on the reasonable theory that this should produce good AML results. In practice, as will be discussed in the next paper, it generally does not. Furthermore, the very complexity of this regulatory design, with its numerous players, convoluted information and process flows, bottlenecks for reporting and communication, slow pace, and non-aligned priorities fuels both high compliance costs and poor outcomes. Figure 5 suggests a rationalized approach that would enable law enforcement easily to get information directly and in timely manner from the bank, if new technology was applied to the task.

Figure 4

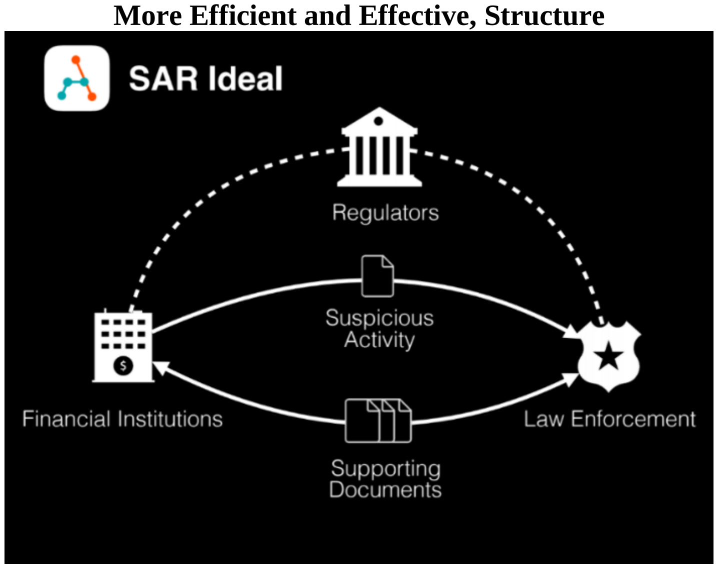
Complex Flow of AML Reporting from Financial Companies, Through Financial Regulators, to Law Enforcement Agencies



Source: Hummingbird Regtech LLC

Figure 5

Illustration of How AML Information Would Flow in a Simplified, More Efficient and Effective, Structure



Source: Hummingbird Regtech LLC

The regulatory compliance profession:

Over the past half-century, the proliferation of regulatory requirements has inspired both the financial industry and its regulators to develop new organizational structures and gave birth to a new professional specialization in "compliance." In 1978, I became the first Deputy Comptroller of the Currency for Customer and Community Programs, leading a new OCC unit whose framework was mirrored at other agencies at approximately the same time. The banking industry similarly created a new role called Compliance Officer, which initially was typically part-time duty but eventually evolved into responsibility for overseeing a major function at most banks. The American Bankers Association responded to these evolving industry needs by establishing a compliance school, professional certification, and conferences, and other trade groups began running conferences as well. In 2018 the ABA's annual Regulatory Compliance Conference drew approximately 2,000 people, making it one of the largest events in the U.S. banking industry. For banks, the term "compliance" shed its plain-language meaning over time and came to refer specifically to compliance activity centered on consumer protection and, often, anti-money laundering. As will be discussed in Paper 2, headcount in these functions grew inexorably.[53]

The hyper-technical nature of most compliance work has caused the profession to become a highly specialized field. This, in turn, has tended to isolate it from other functions in both the industry and government. One cause and manifestation of this phenomenon is that the compliance world has evolved extensive jargon that produces, in effect, an insider language. Not even counting the investment and insurance worlds, there are laws called HMDA, ECOA, FCRA, FHA, TILA, TISA, CRA, FDCPA, FSRA, EFTA, RESPA, BSA, FACTA and GLBA, to name a few. There are agencies and quasi-agencies with names like FDIC, OCC, FRB, NCUA, FHLB, FTC, DOJ, FFIEC, FINRA, FSOC, FNMA, FHLMC, FinCEN, and FSLMA. There are regulations with names like AA, B, C, E, O, P and Z. There are terms abbreviated as DI, DT, APR, FC, APY, LMI, QM, QRM, AML, KYC, SAR, NTI, SN, EFT, GFE, PII,

[53] http://blogs.marketwatch.com/thetell/2014/07/14/citi-will-have-almost-30000-employees-in-compliance-by-year-end/

LDR, CCO, FRL, MIP, HECM …and on and on. The seemingly common-sense principle that finance must not be unfair, deceptive or abusive is discussed as a compliance issue called "UDAP" or "UDAAP" (whether to use the extra "A" depends on which agencies with which powers are involved) and is pronounced "You-dap." Today, thousands of compliance professionals have deep expertise in these rules.

This private language tends to wall off the consumer financial protection world by shutting out the non-initiated. (One cannot discuss regulation of unfair practices without constantly stumbling over the need to say "you-dap," and watching listeners lose interest). The emphasis on regulatory minutia has prevented these mandates from winning mindshare from the leaders of both the industry and the regulatory agencies, who have tended to delegate the whole function to the subject matter experts.

The pervasiveness and detail of the rules have also fostered an industry tendency, including among many financial attorneys, to view any practice that is not barred as being permitted.[54] That in turn has led to an industry culture of looking for loopholes around technical requirements, on the theory that if the regulators didn't want banks to do something, they would ban it.[55] This phenomenon can fuel a competitive race to the bottom in areas where exploiting such legal loopholes enhances profits.

Compliance management:

The evolution of the compliance function has led to development of extensive compliance risk management systems and norms for best practice at financial companies. For example, bank regulators generally require banks to establish and document the work of "three lines of defense" in compliance and risk management. The first line is in the affected business unit, the second is the compliance function, and the third is internal audit.[56] Regulators generally want these roles to be largely independent of each other

[54] https://www.americanbanker.com/opinion/nine-dangerous-words-quot-show-me-where-it-says-we-cant-do-that-quot

[55] Tension often arises between companies' compliance staffs, who generally frame their work as "risk management," versus legal advisors counseling that non-barred activities are appropriate. This issue diminished as the Consumer Financial Protection Bureau prioritized enforcement on UDAAP, unfair, deceptive and abusive acts and practices, starting in 2012, and other agencies joined in. UDAAP does create legal risk in practices that are not explicitly barred. However, evaluating UDAAP issues is highly subjective, which means that different administrations and regulatory leaders vary in whether they pursue it aggressively.

[56] Use of the word "defense" is perhaps revealing, in that these systems are mandated largely in order to defend the bank against regulatory risk, which originates mainly with the regulators themselves.

so as to provide redundant controls. One reason for this is that the information available to risk managers is often incomplete and sometimes wrong. Therefore, these functions all independently collect overlapping data from the same business units, at considerable cost and burden, rather than being able to rely on each other's information or on one high quality pool of data.

The compliance units generally must identify all "intrinsic" risks that are inherent in all their products and activities; must set up compliance controls to address each of those risks; and then must further identify "residual" risks that survive the controls. Compliance risk control programs have standard elements, like written policy and procedure, staffing structures, training, risk monitoring and testing, monitoring of regulatory updates, change management, complaint monitoring, management of identified problems and remedial action for addressing each one, and much more. Specialized software tools are used for many kinds of compliance activity and sometimes for training. Statistical analysis software and protocols for proving compliance have evolved in many areas. New products require cross-functional teams that typically work for months to build compliance controls.

Compliance departments coordinate with their counterparts in legal (internal and outside counsel), risk management, IT, quality assurance functions, and all the business lines, as well as audit, to assure strong performance. The large IT vendors that serve the industry build compliance into their systems. When a major regulatory change occurs, these vendors and individual institutions often need years of work to implement them across the whole chain of compliance management functions (this is discussed further in Paper 4 on Regtech).

For banks, regulators then evaluate the quality of all these management efforts, which are often called "Compliance Management Systems" or CMS. Examiners conduct their own reviews and, typically, sample files. Identified violations and weaknesses in controls may trigger potential regulatory responses ranging from citation in examination reports for routine errors, to more serious "matters requiring attention" or MRA's, to "memoranda of understanding" or MOU's that require the institution to take and document formal action. For serious problems, the process can escalate through enforcement actions that can involve lengthy investigations, public disclosure of the failures, imposition of fines, and even Cease and Desist orders (C&D’s).

Despite the extensive expertise and apparatus dedicated to compliance, government examiners virtually always find violations in every institution – and expect to do so. It is not possible, in a complex company, to get everything right.

In light of all this activity, and the fact that it has persisted and expanded over decades of policymaking and compliance effort, it is appropriate to ask how well the system is serving the consumers who are meant to benefit from it, and also to ask what costs these benefits have imposed on the industry and, ultimately, its customers. The next paper in the Regulation Innovation Series will explore those two questions.

Acknowledgments

I want to express my gratitude to Brigitte Madrian, Dean and Marriott Distinguished Professor in the Brigham Young University Marriott School of Business, for mentoring and reviewing this work in her previous role as Aetna Professor of Public Policy and Corporate Management at the Harvard Kennedy School. I’m also profoundly indebted to Amrita Vir for her invaluable contribution to this project as my research assistant at the Harvard Kennedy School.