<u>FinTech and Consumers</u>:

A Preliminary Overview of Important Consumer, Privacy, Small Business, and Civil Rights Issues

Technological innovation and the rapid adoption of mobile phones and other digital devices and applications are bringing sweeping changes to the ways consumers engage and interact with financial services. New technologies now entering the financial sector have unleashed far-reaching developments that will continue to impact businesses, recent and new commercial start-ups, regulation, and consumer interaction with and use of financial products.

Meanwhile, numerous regulators have engaged on the issue, with workshops, white papers and proposals for FinTech regulation. On Friday, the chief national bank regulator, the Office of the Comptroller of the Currency (OCC), provided an outline of a limited-purpose FinTech charter that consumer groups and state regulators contend will preempt strong state consumer protections, undercut existing federal laws and precipitate a race to the bottom.[1]

FinTech technologies developed for or adopted for the financial services industry are being used for both consumer-facing and business-to-business applications. FinTech companies take advantage of the capabilities of "Big Data" practices to offer online services that enable them to compete with the traditional banking and credit sector. The ability to use new technology in innovative ways by these new entrants has challenged the legacy financial institutions, which find themselves on the defensive. These companies realize they must embrace technology if they are to remain competitive.

The financial system is highly regulated for a variety of reasons and FinTech challenges some of the important safeguards that address privacy, consumer protection and the safety and soundness of the economy. There are a growing number policy initiatives designed to foster the growth of FinTech services. But many critical questions regarding consumer protection must be raised. Is the start-up culture of many of these FinTech companies equipped to not only innovate but to safeguard consumer rights at the same time. Are new consumer protections, especially for the most vulnerable needed or are existing laws adequate?

A whirlwind of global activity is now underway, fueled by billions in venture and other capital investment, as legacy lenders and new entrants variously compete and align to help companies take advantage of the efficiencies of digital technology and "Big Data." Meanwhile, as a generation of millennial consumers are offered financial services in ways that reflect their "digital-native" lifestyles, regulators (including those that want to stimulate the sector's growth) continue to monitor this new financial landscape.

The growth of FinTech also reflects a much broader transformation that is rapidly redefining more than simply how consumers apply for credit or transfer funds. Nearly everything they do today—from grocery shopping, buying retail and entertainment products, communicating with friends, accessing information, and even voting—is influenced by the role of data and digital media. Smartphones, which are the dominate digital device and are used by nearly 80 percent of U.S. mobile subscribers, make nearly any service available at anytime, anywhere. Our mobile devices and computers, as well as many of the products and services we use—ranging from shopper-loyalty cards to ATMs to credit cards—are firmly connected to a vast data-driven and intelligent apparatus. Increasingly, information on individuals is continuously swept up into a powerful Big-Data processing system. Advances in predictive analytics have helped create more precise consumer profiles, constructed through algorithms, data, and marketing "clouds," enabling the capture of a nearly endless array of information on our lives. There are also new ways to make all of this information, in the industry's term, "actionable" and personally tailored (increasingly in near- or actual real time).[2]

FinTech companies, such as peer-to-peer lenders Prosper and LendUp, have built their operations taking advantage of data and digital applications and consumer behavior. The dominant financial services companies, while having increased their FinTech-related spending, are still playing "catch-up." There is a critical window of opportunity to ensure that 21st-century consumer financial services better serve the public interest—providing affordable products, adopting fair and transparent practices, and demonstrating true accountability. Industry leaders are in transition, restructuring their businesses to capture the revenue made possible by the digital marketplace (such as offering mobile apps that encourage consumers to apply for loans, enabling transactions via PayPal to take place in Facebook's Messenger application, or using "chatbots" to encourage spending or offer financial advice).[3] Both they and their newer FinTech competitors are investing in or developing state-of-the-art products. Banks are at risk to loose anywhere from 10-to-40 percent of their revenues arising from consumer finance, mortgages, lending to small and medium businesses, retail payments and wealth management services to the FinTech sector by 2015. [4]

All of these companies also seek varying forms of favorable regulatory treatment. There are antitrust and other competition concerns as partnerships and alliances are formed. As the financial system is "reset," the industry is likely to be potentially vulnerable to consumer advocacy that links the lessons of the country's economic crisis to new threats posed by Big Data and digital services. Leading civil rights and consumer groups, scholars, and policymakers, for example, have already cited the threats posed by the widespread role of algorithmic decision-making, invisible "scoring" practices, the role of data brokers, the use of "alternative data," and similar practices.[5] A host of privacy issues also loom as financial companies increasingly seek both to acquire new customers and to gain a "360-degree" view of those customers they already have. Cybersecurity concerns are also a key touchpoint for public concern, with data breaches roiling banks, leading online firms, and even the FDIC. Recent examples of corporate malfeasance by companies such as Wells Fargo, Lending Club, and LendUp are useful examples of how the consumer financial system, without effective oversight and enforcement, can wreak havoc.[6]

Funding for FinTech worldwide reached $19 billion in 2015, and is expected to surpass that total this year. According to BI Intelligence, some of the key developments shaping the growth of financial technology companies and services include the following:

- Legacy players and technology partners are stepping up to help drive FinTech industry growth through investments and by setting up accelerators and incubators.
- Governments are also increasingly supporting the development of FinTech industries.
- Media and investor attention is expanding beyond alternative lenders and payments firms to new segments including insurtechs, robo-advisors, blockchain, and digital-only banks.
- FinTechs continue to face challenges with customer acquisition.
- Profitability also remains elusive for many large FinTechs, despite attracting large volumes of customers and creating significant revenue.
- To manage the threat of disruption, incumbents are investing in FinTechs, partnering with them, hiring them as vendors, and building competitive solutions.
- The relationship between FinTechs and incumbents, once strictly competitive, has evolved again from a more collaborative model to something more nuanced.[7]

Consumers especially value financial companies that use technology to provide them with "security services"; the "ability to see [their] financial life in one place"; that offer mobile payments; that "personalize the digital experience"; and that provide auto insurance pricing that incorporates the latest tech advances.[8] As a report from McKinsey and Co. explained, "…in the U.S., alone, 85 million Millennials, all digital natives, are coming of age, and they are considerably more open [to considering] a new financial services provider that is not their parents' bank." These "mobile first" individuals "are more open to relationships" than the products traditionally offered by banks. They seek financial services that provide them with an array of "personalized" offerings "on demand."[9]

FinTech companies are also using Facebook, Instagram, and other digital marketing applications that combine data and interactive experiences to influence consumers and their social networks. SoFi, the student lending service, ran several Facebook and Instagram campaigns this year that used many advanced data-targeting tools, including one that "clones" potential targeted consumers based on how their behavior and background resembles known customers ("lookalike modeling"). They tracked their Facebook targets online to observe how they eventually responded. Facebook says that SoFi achieved a "39%

increase in pre-approved applications for student and personal loans."[10]

Key Concerns

The many new developments in technology and Big-Data practices, as well as the emerging players in the financial services sector, will likely deliver many lasting innovations, but not all will advance consumer protection. There is nothing unique about marketplace lenders that should lead to any weaker consumer protections or regulatory exemptions. To the contrary, we fear that the market today is developing with little oversight and some signs of problems. The framing of the debate by industry as innovation holding new promise for consumers should continue to be challenged. It diverts focus from the real risks and solutions, which require strong consumer protections and regulatory oversight. Below we identify key risks that threaten to undermine equity, justice, and fairness, and specifically consumer rights and economic inclusion, and that are the results of the trends in the FinTech industry that we identified above.

1. <u>Privacy Risks</u>

   An ongoing and increasingly challenging issue confronting citizens and consumers are new threats to their privacy and their ability to control how personal and non-personal data about their online and offline behavior are collected and used by online financial services companies. There are many new on- and offline data sources used to classify consumers and to make predictions about them. For example, social media, mobile device use, utility payments, or other public-record information are used in a myriad of ways: for identity verification, fraud prevention, credit risk evaluation, underwriting, marketing or prioritizing incoming customer service calls at call centers.[11] Sophisticated data-processing capabilities allow for more precise micro-targeting, the creation of comprehensive profiles, and the ability to act instantly on the insights gained from consumer behaviors.

   Because of the importance of the mobile phone for accessing financial services and for paying for goods and services, consumers are particularly vulnerable regarding the exploitation of their geolocation information. Moreover, mobile-payment technologies offer third parties, banks, and FinTech companies the ability to collect more information about the payments-transaction process than would be possible with a debit/credit card, and to share it with different participants, such as merchants and payment providers.[12]

   To appreciate fully the privacy risks in this new world, we need to remember that privacy has both an individual and a group component. Most existing privacy laws in the U.S. focus on the individual aspect, protecting personally identifiable information and aiming, more or less successfully, to provide individuals with certain controls over their data. Group privacy is also concerned with the individual autonomy and the protection of one's identity; it focuses, however, on characteristics about the group that the individual either belongs to or has been assigned to. The U.S. regulatory framework addresses these privacy risks inadequately.

2. <u>Biased Data Analysis and Increased and Entrenched Inequality via Scoring</u>
Perhaps the biggest risk to equity, fairness, and justice stemming from new practices in the financial services sector relates to the scoring of Americans.[13] All the new data points that are so easily available to these companies are analyzed through Big-Data algorithms. They are used to classify and score individuals using past data to make future predictions. Regulators must closely examine these non-transparent tools.

   The use of classifying and predictive algorithms in FinTech (as in other areas) can be the source of bias and have a discriminatory effect in at least two obvious areas: the data input can be biased or contain errors, and the algorithms and classification schemes can be biased and can further entrench inequality. While companies have an incentive to "get the model right," the evidence is overwhelming that these models often produce biased and discriminatory outcomes.[14] "Getting the model right," in fact, might exacerbate these undesired outcomes. The Equal Credit Opportunity Act must also continue to play an important role in preventing disparity or discrimination.

   Recognizing that serving so called "thin-file" consumers can be good business, some companies have developed products that use non-traditional data, such as "cable, landline, mobile and utility payments, along with select public record information."[15] While alternative credit scoring can be a boon for the underbanked, there need to be standards and safeguards to ensure that any new data are used appropriately. New data sources may be biased and their use may lead to unintended consequences. For example, some credit scoring companies are promoting full-file reporting of utility-payment data to credit-reporting agencies. But mass incorporation of these data could give millions of low-income consumers bad or worse credit scores and could undermine state consumer protections, such as prohibitions against wintertime shut offs for vulnerable consumers (e.g., the elderly).[16]

   Scoring and profiling techniques are by their very nature discriminatory tools.[17] They allow unparalleled kinds of social sorting and segmentation that could have unfair effects. These are not any kind of classifying and predictive algorithms, however; in the commercial space the models aim to sort people according to their ability to maximize profit or to minimize risk to the organization that deploys such techniques.[18]Sorting individuals according to their highest credit risk or lowest potential to contribute to the bottom line may further stratify consumers.[19] While this practice is rational from the point of view of the corporation (as it maximizes profit and reduces risk to the company), it is not necessarily efficient, fair, or just from a social point of view. So, new forms of both overt and covert discrimination may be one of the consequences that scoring has on economically vulnerable consumers.

While industry has argued that increased automation will help expand access to credit and lower costs overall, credit models that are more "accurate" may lead to increasingly stratified outcomes, as it will leave those at the bottom potentially excluded from credit forever. Models that judge individuals against group profiles based on past data inevitably incorporate elements of past inequality and discrimination. Communities of color, in particular, are thus most vulnerable.[20] Unless additional policies are put in place to address these consequences, inequality is likely to become more entrenched the more we rely on models for risk evaluations. [21]

3. Price Discrimination
Big-Data practices also allow firms with pricing power to identify the highest price a consumer is willing to pay for a good or service and charge accordingly. The practice upends the current distribution of wealth by allowing firms to charge the highest possible prices to everyone.

4. Unfair and Deceptive Marketing Practices
Financial services companies, including leading banks and FinTech companies, use many of the latest data-driven digital marketing tools. For example, the financial sector is expected to spend $8.37 billion this year for digital marketing, including on mobile devices. This includes the use of data-driven targeting platforms that make decisions in 200 milliseconds whether and how to target an individual, regardless of her device.[22] The combination of powerful ways to gather and use data (such as lead generation) along with alluring and personalized interactive applications, are used to identify and target consumers in real time. These practices can foster consumer behaviors that are not in the best interest of the individual, and also raise concerns about the use of data profiling.

Unfair and deceptive marketing practices also include the practices of so called lead generators that sell sensitive financial information and other consumer data to businesses that offer risky financial products and other controversial services, such as payday loans. Unregulated online advertising practices facilitate practices that hit the financially most vulnerable the hardest.[23]

5. Threats to Consumers and Small Businesses
It is important to understand that small business advocates are raising similar

concerns. A leading advocacy group, Main Street Alliance, joined comments to the Office of the Comptroller of the Currency (OCC) on FinTech making the following point:

> Unfortunately, we believe innovation is already outpacing regulation and oversight, and there are several pieces of information to support this. In the media, online small business loans have already been compared to subprime mortgages.[…]

The comment goes on to cite to work by the authoritative Chicago-based Woodstock Institute:

> The Federal Reserve's 2015 Small Business Credit Survey reports that only 15 percent of small businesses that took out loans with an online lender were satisfied with their experience. And, Woodstock's analysis of 15 small business loan contracts from online lenders showed APRs ranging from 26 percent to 347 percent. Against this backdrop, regulatory reform seems past due. Advocates in Illinois, including Woodstock, are advocating for legislation that would create a regulatory regime for non-bank small business lenders.[24]

The Regulatory and Policy Landscape

2017 promises to be a significant year for how FinTech will be treated by the new administration, Congress, and regulators. Federal regulators have signaled their interest in supporting the promises of the FinTech sector to consumers.[25] They generally have welcomed the promise of financial innovation, expecting that such developments can provide better, safer, more affordable, and more widely available financial products and services. Many FinTech firms are pressuring agencies, particularly the CFPB, to provide guidance on what products can be developed without coming into conflict with regulations.[26]

We highlight several recent activities here:

- <u>Consumer Financial Protection Bureau</u>
  In September 2016, the CFPB ordered the online lender LendUp to pay $3.63 million for failing to deliver promised benefits. CFPB found that the company did not give consumers the opportunity to build credit and gain access to cheaper loans, as it claimed to consumers it would.

  In October, the CFPB issued its first report on Project Catalyst, highlighting market developments that have the potential to produce benefits to consumers.[27] The agency gleaned these insights from research and by engaging directly with FinTech start-up companies and other stakeholders. The report emphasized the importance of ensuring that consumer protections are built into emerging products and services from the outset. The agency identified the following ways in which innovations can serve consumers:

- Expand access: Facilitating financial inclusion and making products and services available to consumers who are underserved, locked out of the banking system, or have unique or special needs.
- Improve consumer control: Empowering consumers to make day-to-day decisions or adopt spending and savings habits that are more consistent with their long-term aspirations.
- Reduce prices: Driving down costs for consumers through increased competition or adoption of technologies that reduce operating expenses.
- Increase features and functionality: Adding or improving functionality so that consumers can benefit from new financial services or financial services that work better, are easier or quicker to use, or are more widely available.
- Enhance safety and security: Enhancing the safety and security of products and services, including better defenses against data breaches, mechanisms to avoid or reduce errors, and more efficient correction of mistakes that do occur.
- Promote transparency: Improving transparency and consumer understanding, especially to help consumers choose the best products and services for themselves and use them successfully without unnecessary cost or complication.[28]

On 17 November 2016, the Consumer Financial Protection Bureau (CFPB) announced a request for information (RFI) to better understand the benefits and risks associated with market developments that rely on access to consumer financial records.[29] CFPB Director Cordray conveyed strong support for the ability of consumers to access their financial data, and expressed "grave concerns" about reports that financial institutions are seeking to limit such access.[30]

- Office of the Comptroller of the Currency (OCC)

The OCC issued a white paper in March 2016, in which the agency outlined how regulators might encourage innovation while ensuring safety and soundness.[31] The report correctly framed the policy issues in support of *responsible* innovation in the federal banking system. But innovation is not a uniformly positive thing. The key is to be supportive of responsible innovation that improves lives while maintaining robust consumer protection.

Several public interest organizations asked the OCC to be "vigilant in adoption of rules and procedures to prevent such unfair, deceptive, and abusive use of innovation from causing widespread harm, as it has in the recent past." Among other things, they asked the OCC to ensure that innovation does not result in a lack of transparency and accountability; emphasized the continued importance of brick-and-mortar branches for lower- and moderate-income people; and asked that the public be given access to data about innovations including information about the nature of the technology and who it is affecting.[32]

Subsequently, the OCC announced that it would establish an Office of Innovation, which will be the central point of contact and clearinghouse for bank and FinTech requests starting in 2017.[33] While such an office could be helpful, it must have a core consumer-protection mission. It should not primarily be an advocate for companies that are looking to loosen consumer-protection regulations.

The OCC, the federal regulator for banks that can operate across state lines, also expressed interest in granting a new type of special-purpose "national bank" charter for financial technology firms, including firms that engage in lending and other activities but do not take deposits.[34] FinTech firms do not like state-by-state licensing and would prefer to have to deal with only one regulator. Instead of having to follow regulations in 50 states, they emphasize the value of Internet-based technologies designed to let them reach customers regardless of geography.[35] The sole purpose of such a charter, however, would be to preempt state consumer-protection laws, which is a wholly inappropriate reason to provide a federal charter. Indeed, state regulators rebelled against this idea, citing lack of statutory authority, an OCC history of preempting state consumer-protection laws, and an approach that would distort the marketplace.[36] Again, small businesses also oppose the granting of a "limited purpose" or special federal charter to FinTech companies that would preempt state laws and regulations.[37]

Some banks have not been in support of a FinTech charter either, as it could give FinTech firms an advantage over the banks, as these newly chartered companies would be exempted from certain regulations that banks have to follow. Moreover, OCC's legal authority to charter non-depository lenders unilaterally and without Congressional assent is doubtful.[38] Reportedly, Comptroller Thomas Curry will announce next steps as early as December 2.

- <u>Congress</u>
  While it is yet unclear how this issue will play out under a Trump-appointed comptroller at the helm of the OCC in 2017, there might emerge a bill in Congress to help FinTech firms gain ground. A House Resolution introduced in September 2016, which had bipartisan support, would create an innovation office in a number of government agencies dedicated to FinTech, as well as a system for companies to apply for protection from regulatory enforcement actions as they develop new products.[39] And Democrats could possibly support the bill because FinTech might be seen as a way to reach underbanked and unbanked consumers.[40]

- Federal Deposit Insurance Corporation
  In July 2016, the FDIC issued Examination Guidance for Third-Party Lending, supplementing existing guidance for Managing Third-Party Risk.[41] The FDIC's guidance aimed to ensure safety, soundness, and consumer compliance when banks conduct aspects of lending through a business relationship with a third party. The FDIC emphasized that banks must take full responsibility to ensure that all aspects of the lending process comply with consumer-protection laws and do not pose undue risks.[42]

- Federal Trade Commission
  The FTC continues to play a role in examining the benefits and risks of the FinTech sector, from mobile payments to virtual currencies to crowdfunding and more. The commission uses its authority under the FTC Act and other laws to bring law-enforcement actions against companies whose deceptive or unfair actions harm consumers. The agency has conducted a series of workshops on peer-to-peer (P2P) lending and payment systems and crowdfunding, and has examined the role of Big-Data analytics in harming consumers, particularly low-income and underserved populations.[43]

  The FTC's 2016 Big Data Report summarized how potential inaccuracies and biases in Big-Data analytics might lead to detrimental effects for low-income and underserved populations. Big Data may, for example, result in more individuals mistakenly being denied opportunities based on the actions of others, create and reinforce existing disparities, assist in the targeting of vulnerable consumers for fraud, may result in higher-priced goods and services for lower income communities, and may weaken the effectiveness of consumer choice, according to the report.[44]

- U.S. Securities and Exchange Commission
  Jumping into the fray, the SEC recently held its first forum exclusively focused on the impact of the FinTech movement on capital markets, addressing automated investment advice, blockchain and distributed-ledger technology, crowd funding and marketplace lending, and investor protection. While it might not be entirely clear which agency will be the main agency regulating FinTech, the SEC's Commissioner Michael S. Piwowar tried to claim that position, stating in his remarks that the SEC is uniquely positioned to take the lead on this sector. The remarks indicate that the SEC expects FinTech to play an increasingly important role in the securities industry. New regulations may be needed to keep up with the "speed and impact" of financial technology developments, and the agency's FinTech working group will be focusing on "specific, tailored recommendations," SEC Chairwoman Mary Jo White said at the event.[45]

- Department of the Treasury

Treasury released a white paper last May on "Opportunities and Challenges in Online Marketplace Lending." The agency had solicited comments from stakeholders, including consumer groups, on the role of FinTech. Among its findings were that the "Use of Data and Modeling Techniques for Underwriting is an Innovation and a Risk," explaining that "while data-driven algorithms may expedite credit assessments and reduce costs, they also carry the risk of disparate impact in credit outcomes and the potential for fair lending violations. Importantly, applicants do not have the opportunity to check and correct data potentially being used in underwriting decisions." The report also concluded that while there is an "opportunity to expand access to credit," many of the practices of the industry (including underwriting tools) "remain untested." Treasury called for "greater transparency" (for both borrowers and investors) and for a greater role by the federal government to monitor industry developments and also to foster more effective and fair lending practices.[46]

- <u>Obama White House</u>
  The Council of Economic Advisors released an Issue Brief last June on "Financial Inclusion in the United States." It focused on low-income consumers (both the underbanked and unbanked), including how they can face additional financial burdens because they are forced to seek alternative credit services, such as payday loans. The paper noted that FinTech-related developments have the potential to expand "access to safe and affordable products." Critically, it also made the connection on the need to address the "digital divide" by ensuring that more American are able to access the Internet, as well as the important role of mobile phones. It also called for "further research" to "better understand the links between financialization of the economy, fintech products, and the financial inclusion of American families."[47]

- <u>State Attorneys General</u>
  In October, representatives of the consumer protection divisions of the AGs from nearly all the states, as well as officials from the FTC and CFPB, met to discuss and coordinate activity on a range of issues affecting consumers. The meeting was sponsored by the National Association of Attorneys General (NAAG). Key panels at the meeting addressed state involvement in FinTech, payday lending, and growing threats from abusive structured settlements. "FINTECH—The New Frontier," in particular, was teed up for prominent discussion and included briefings by the FTC, the Utah Department of Financial Institutions, and academics. A particular theme emerged that many AGs believe they already have the tools to regulate and pursue legal matters regarding FinTech under state consumer-protection statutes governing unfair or deceptive acts and practices ("UDAP" laws), notwithstanding that new products may not be subject to laws specifically addressing them. Efforts

to preempt state actions and regulations with respect to FinTech, such as proposed by the OCC, appear to be strongly resisted by the states.[48]

Next Steps

As part of advocacy consumer and civil rights-based strategy that addresses the role of data and digital applications, there is a need for the development of a collaborative research agenda. The Big Data practices we observe and the potential risks to privacy and consumer protection cut across all sectors of the economy. Sector by sector policy solutions are unlikely to be effective, as data knows no boundaries. Still, we need to better understand the role and impact of current and emerging financial industry practices on consumers. What are the technologies, data sources, partnerships, and alliances that define the landscape? How do emerging business practices that promote data sharing among a multitude of firms impact the development of services as well as harm individual and group privacy, and how do they implicate existing consumer protections, and small business interests? Which additional protections are needed?

The authoritative National Consumer Law Center has summarized a number of concerns:

- Use of consumer data in ways potentially inconsistent with the protections of the Fair Credit Reporting Act, privacy rights, and fair-lending laws.
- Skewed origination incentives that could lead to poor underwriting.
- The mandatory or default use of preauthorized electronic payments, which can weaken consumers' control over their bank accounts, cause bank account closures, and create incentives for weaker underwriting.
- Evasion of state laws, including usury caps, consumer-protection laws, and licensing and oversight requirements.

Here are a number of other concerns:

What safeguards, if any, have been put in place regarding the potential impact of discriminatory outcomes arising from data processing? How are the leading companies using these products to target vulnerable consumers, including those for whom English is not the primary language. What "best practices" have been adopted in the U.S. and in other countries regarding how to ensure the development of affordable products, fair treatment, and adequate regulation?

How are regulators more favorable to FinTech (such as the United Kingdom's Financial Conduct Authority) dealing with the industry? What problematic models and policies would we want to oppose or change if proposed for the U.S.? How can the critiques from others, such as Germany's Federal Financial Supervisory Authority (BaFin), be used to our benefit?

How do we ensure that financial services offered through mobile devices and apps are fair and provide for meaningful consumer decision-making? How do emerging technologies, including the Internet of Things, impact consumer financial services? For example, as "wearable" devices become more popular (and perhaps given to consumers for health reasons), they will also serve as ways to pay for products. What will their role be and what safeguards are required?

What consumer-lending and mobile-payment/financial-transfer products offer the most robust safeguards, including low pricing, data security, and privacy?

How are the new "RegTech" companies, which automate the compliance requirement for financial companies, incorporating consumer protection into their products? How do we assess this new way being used to address regulations?

Because of the growth of the data-driven financial marketplace, privacy safeguards are as important as ever. What privacy protections are needed to safeguard both individual and group privacy rights most effectively?

The Fair Credit Reporting Act (FCRA) should not only apply to the use of data for credit, insurance, or employment eligibility, but also for advertising and targeted marketing, and, in fact, for any kind of scoring. Are FCRA-type protections (access, correction, dispute resolution) enough, or do we need to have additional safeguards against discriminatory effects?

Regulators must continue to enforce the Electronic Funds Transfer Act's protections, including its prohibition on conditioning loans on a requirement that consumers automatically agree to loan payments by electronic transfer or preauthorized ACH.[49]

How do we regulate data brokers appropriately?

How do we broaden financial inclusion and include those historically discriminated against who are likely to be most harmed by Big-Data practices?

Should social media data be used to evaluate eligibility for financial services or insurance products? (Note, this is behavioral data unrelated to the product.)

Should social media data be used to target advertising for financial services or insurance products?

Should discounts for financial or insurance products be given in exchange for revealing additional personal information? (Note here that due to the so called "unravelling" effect and the undermining of the whole concept of insurance—sharing risk, rather than sorting out the low from the high risk—in my mind the answer is "no.")

What standards or criteria need to be in place to ensure that any new data for credit evaluations are being used appropriately? Fairness, effectiveness, relationship to loan product, unintended consequences?

When the application of profiles causes harm, the liability for this harm has to be determined—who is to be held accountable? Is the software programmer, the profiling service provider, or the profiled user to be held accountable? How do we account for market externalities? Incorporate costs at the source (user/producer of the algorithm) or make the subject of the algorithm pay (as we do now), or make society at large compensate those harmed?

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[1] Comptroller Thomas Curry's remarks to a conference Friday 2 December 2016 as well as an outline of the OCC proposal can be found here https://occ.gov/news-issuances/news-releases/2016/nr-occ-2016-152.html. A letter from 49 consumer and community groups, expressing concerns, but prepared before the announcement, can be found here http://ourfinancialsecurity.org/wp-content/uploads/2016/12/OCC-fintech-charter-49-groups-FILED-12-1-2016.pdf.

[2] As recent report on the role digital marketing plays in financial services explained, "there is an explosion of data flowing through devices, servers and the cloud. More is known about us than ever before: our demographics, purchase history, location, browsing behavior online, and interactions with wearables, car, house and refrigerator. This flood of data is overwhelming for many companies trying to understand what data to collect and how to leverage this data back to the customer in order to be relevant to individual demands for a real time digital experience." Stefan Tornquist, "Digital Trends in the Financial Services and Insurance Sector," Econsultancy, May 2016, https://econsultancy.com/reports/digital-trends-in-the-financial-services-and-insurance-sector-2016/.

[3] Juan Benitez, "Braintree Drives Commerce Forward with Facebook Messenger and Uber," 16 Dec. 2015, https://www.braintreepayments.com/blog/braintree-drives-commerce-forward-with-facebook-messenger-and-uber/; "Chatbots for Investing: Research and Trading," Daily Fintech, 26 July 2016, https://dailyfintech.com/2016/07/26/chatbots-for-investing-research-and-trading/.

[4] McKinsey summarizes the technological hurdles traditional financial companies face. They explain that "now the large-scale availability of new and big data (and the fact that banks no longer have a monopoly on such data) is pushing banks to radically transform just to keep up. Building a comprehensive data ecosystem to access customer data from within and beyond the bank; creating a 360-degree view of customer activities; creating a robust analytics and data infrastructure; and leveraging these to drive scientific (versus case law-based) decisions across a broad range of activities from customer acquisition to servicing to crossselling to collections—all are critical to a bank's future success." Miklos Dietz, Somesh Khanna, Tunde Olanrewaju, and Kausik Rajgopal, "Cutting Through the FinTech Noise: Markers of Success, Imperatives for Banks," McKinsey and Co., 2015, http://www.mckinsey.com/industries/financial-services/our-insights/cutting-through-the-noise-around-financial-technology.

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- Assist in the targeting of vulnerable consumers for fraud
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- Weaken the effectiveness of consumer choice.

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