CENTER FOR FINANCIAL MARKETS
MILKEN INSTITUTE

FINTECH

Views from the Market

Insight from Market Participants on the Evolution of Financial Technology and the Interplay of Innovation and Regulation

By Brian Knight

April 2015

FIN TECH

TABLE OF CONTENTS

FinTech – Views from the Market

Insight from Market Participants on the Evolution of Financial Technology and the Interplay of Innovation and Regulation

Introduction

The financial sector, including aspects ranging from capital markets to consumer payments, is undergoing dramatic change. Financial Technology, or “FinTech” – the use of technology to perform financial functions – encompasses an incredibly broad scope of activity, covering everything from technologically enabled investment to innovative ways to pay for daily consumables to cross-border transactions. FinTech is disrupting traditional processes and challenging longstanding incumbents. It also promises greater accessibility, efficiency, and choice for users around the world. It also presents very real challenges. While FinTech can help people move money for legitimate purposes, it also faces traditional challenges, like preventing fraud and money laundering. Regulators have the unenviable task of trying to manage risk without stifling needed innovation, and without inadvertently choosing winners and losers.

The Milken Institute Center for Financial Markets’ FinTech program, launched in October 2014, analyzes the impact of FinTech on financial services and products, and contributes to the creation of a regulatory environment that encourages positive development. To provide some structure to the analysis, we have focused our FinTech program to focus on four pillars:

1. Digital Payments: Defined broadly to include everything from digital wallets (e.g., Apple Pay) to payments infrastructure (such as the ACH or FedWire system), digital payments are forever changing how we conduct transactions. In the developed world, the ability to pay reliably, quickly, and securely is often taken for granted. But for many people in both developed and emerging economies, the ability to make timely and secure payments is elusive. This includes the United States, which has seen several high-profile compromises of consumer credit card information. The ability to facilitate reliable, on-time, efficient, and secure payments both domestically and internationally is a major promise of digitizing payments.

2. Digital and Electronic Currencies: Digital currencies are defined as independent, non-fiat currencies (e.g., Bitcoin), while electronic currencies represent fiat currencies transferred electronically (e.g., M-Pesa). The impact that digital currencies will have is uncertain. While some experts believe that currencies like Bitcoin will see widespread adoption and become an independent medium of exchange, others believe its value will primarily exist in how the

underlying technologies, such as the use of a distributed public ledger, will affect areas as diverse as fiat money transfer, contracts, and cryptography. Likewise, the use of electronic currency, while not a threat to traditional fiat currency or the role of central banks, can potentially foster greater financial inclusion and transform how numerous types of transactions will occur, from dispensing foreign aid to splitting a pizza.

3. Online Finance and Investment Platforms: Online platforms facilitate numerous activities, including making investments or providing loans to companies seeking capital. While online platforms for investing are not new, the diversity and functionality offered by them, and the disintermediation they are providing, are of increasing sophistication and importance.

4. Big Data: The ability to efficiently use huge amounts of data has major implications for both financial technology and society. The accessibility and usability of customer data outside of traditional credit scoring metrics can potentially open up credit to underserved populations, or allow lenders to provide more accurate pricing of loans. Conversely, there are risks, both to consumers who may not fully understand how much personal information they are revealing as they use FinTech products, and to the companies and their investors – to the extent that new data models do not work as well as more traditional methods in assessing risk.

Obviously these pillars are not mutually exclusive, with many FinTech products and services touching more than one. Nor are they necessarily permanent or inviolate. Because of the rapid pace of change occurring in the FinTech space, it is possible that issue areas will emerge or recede in importance or independence.

To initiate the Milken Institute's effort, Senior Fellow Chris Brummer and Adjunct Fellow Daniel Gorfine published a white paper at the launch of the FinTech program, "FinTech: Building a Regulator's Toolkit"[1]. The paper discusses how the dynamic and innovative nature of financial technology presents challenges to traditional regulatory frameworks, and it highlights the potential costs and benefits of different regulatory models (e.g., a rules-based model contrasted with principles- or performance-based models) and activities (e.g., pilot programs, sunset provisions, etc.). The paper avoided any hard-and-fast pronouncements, acknowledging that the type of regulation that worked "best" was both fact-specific and would vary based on the values or concerns held by the party evaluating the regulation. It also acknowledged that the experience of market participants, including financial technology companies, their customers, and the regulators responsible for the space, was crucial for determining how policymakers should move forward in crafting responsive regulations and regulatory frameworks.

In furtherance of that goal, the Milken Institute hosted a series of meetings in the first quarter of 2015 with market participants in the fields of payments[2] and online capital (marketplace lending and online securities offerings)[3]. The Institute also held private meetings and conversations with select stakeholders in each space and attended events on select topics related to each of our convenings[4]. Our

[1] FinTech: Building a 21st-Century Regulator's Toolkit (http://www.milkeninstitute.org/publications/view/665)
[2] Milken Institute private roundtable, "FinTech: A Payments Revolution" held on February 19, 2015 in Palo Alto, CA.
[3] Milken Institute private roundtable, "FinTech: 21st Century Finance" held on March 5, 2015 in New York, NY.
[4] These events were held "Off the record". No attribution to any particular party is intended.

outreach helped us gain insight into how the markets are developing and how regulation is affecting that development – the basis of this report. The Milken Institute is extremely grateful for the participation and generosity of the experts who joined us.

While this report does not claim to provide an authoritative view of the market or its regulation, it contains what we see as valuable information from leaders in their respective fields whose views are shaped by real-world experience, as well as recommendations that policymakers and regulators may want to consider, though their applicability will, of course, depend on the unique circumstances of any given situation.

The State of the Marketplace

Understanding what is going on in the market is essential to understanding what is at stake.

Our private roundtable sessions allowed stakeholders to share their views of what was happening in the market, what they believe is likely to happen in the future, and how they see the impact of regulation. The participants were not asked to prepare materials or cite to hard numbers, and the information presented here is based to an extent on our impressions. Still, our off-the-record conversations allowed for a candid exchange of ideas. While the meetings did not provide an exhaustive view of the state of FinTech, they allow us a glimpse into a dynamic and challenging space.

To understand the impact regulation has, it is important to understand what is going on. The first section of this report provides a synopsis of the attendees' views on what is happening in digital consumer payments, payments infrastructure, marketplace lending, and online securities offerings. The second portion discusses the role of regulation, including the advantages and disadvantages of different regulatory approaches to financial innovation.

Digital Payments

The rise of ubiquitous mobile devices and innovative payment platforms is changing how people and governments all over the world transact.

Digitized payments via mobile technology are having a major impact globally, providing safer, more secure, and more efficient means for people to safeguard and transfer funds. Digital wallets like Apple Pay, Google Wallet, and PayPal leverage existing credit- and debit-card networks while providing enhanced security via tokenization or virtual cards that prevent the customer's actual payment credentials from being passed to a merchant. Internationally, efforts – often led by telecommunications companies like Safaricom and Vodafone with M-Pesa and Globe Telecom with GCash – are allowing people who have only limited access to formal financial services to store and transfer value as part of their phone account. These services allow users to transfer balances between users via text message and use authorized agents to deposit or withdraw money. Meanwhile, in parts of the developing world, there is a lack of infrastructure for merchants to accept forms of digital payments that people in the developed world take for granted, like debit cards. International efforts are underway to address this.

- Digital wallets can utilize advanced security technology such as tokenization and biometric verification to protect customers from having their payment credentials compromised.
- While current digital wallets are focused on payments, it is reasonable to expect that subsequent iterations will combine other features (such as digital proof of insurance or identification) to truly supplant the role physical wallets occupy. Digital wallets could provide other benefits to both consumers and retailers, such as coupons keyed to consumer usage or location.
- Digital wallets may also ultimately disrupt traditional payment methods or intermediaries, potentially lowering costs for merchants. An example is the Merchant Customer Exchange's (MCX) CurrentC wallet. The MCX is a consortium of retailers seeking to avoid paying credit card fees by utilizing the Automated Clearing House (ACH) transfers from a customer's bank account instead of their credit cards.
- By utilizing mobile phones, services like M-Pesa and GCash are able to provide banking functionality to large populations that lack access to formal banks, without the cost of building out additional bank branches or the inconvenience to consumers of limiting services to those branches.
- Both private parties like Kiva (through their *Kiva Zip* direct loan program) and government agencies like USAID are utilizing and encouraging digital payments as a way to provide more efficient payments that are also less susceptible to "leakage" (the fraud and waste that can occur when cash or tangible goods need to cross many sets of hands before they reach the ultimate recipient).

- Additionally, digital payments can help protect the most vulnerable members of society by allowing them to receive, hold, and transfer funds directly and secretly, rather than having physical cash that can be stolen.

There are obstacles to adoption in the US and abroad.

While consumer-focused innovations are exciting, there are questions about whether the value proposition and regulatory environment will allow them to gain traction and compete with, if not replace, traditional methods of payment.

- While Apple Pay has some impressive sounding stats, such as 1 million activations within the first 72 hours of launch, digital wallets have not yet achieved breakout traction. In fact, Softcard, a digital wallet created by a consortium of cellular phone companies, recently announced it is closing, with Google buying much of its technology.
- Digital wallets face the problem that the current status quo (physical cards) works well. Cards are cheap to produce, easy to store and carry, do not require batteries or online access, degrade gracefully, and enjoy a large install base and significant "muscle memory" on the part of users.
- Digital wallets may be less secure in some respects than traditional cards. In an effort to make digital wallets easy to use there is a relatively low bar to attaching a credit- or debit-card to the wallet, possibly making it easy for thieves to load stolen card credentials without needing to have the physical card in hand. Under current rules, liability for this fraud would fall on the bank who issued the card or the merchant, which could discourage them from embracing digital wallets.
- Efforts to make digital wallets more fully featured will increase both their vulnerability, as more personal information is collected, consolidated, and stored, and the regulatory complexity for companies seeking to enter the space.
- Further innovation may also lead to the market's becoming fragmented with different technology standards. This could undercut the ubiquity, interoperability, and consistency that the current payment system enjoys.
- Adoption of mobile payments appears at least partially dependent on the existing environment for financial services and regulation. While M-Pesa is thriving in Kenya, a country with a less developed banking sector and regulatory environment, as well as forward-leaning regulators, it has underperformed expectation in South Africa, a country with a more developed banking system and regulatory environment. It's unclear whether this is a result of South African customers being satisfied with the status quo, regulators making it hard to operate, or both.
- Using digital means to facilitate direct payments to people overseas can create significant regulatory complexity, which may be taxing for smaller businesses, non-profits, and individuals.

Payments Infrastructure

Technology is poised to help make the domestic and international payments infrastructure faster, safer, and more efficient.

Both the domestic and international payments infrastructure – the systems that allow funds to transfer between financial 9institutions – are outdated. In the U.S., the Federal Reserve and the private sector rely on a batch system and settlement windows, which can take several days to settle a transfer, for many consumer payments. Internationally, the ability to transfer money overseas is plagued by high-costs, inefficiency, and reliance on legacy systems.

- The Federal Reserve, acknowledging that the U.S. lags behind other nations in terms of payments speed and security, is initiating an industry-wide effort to make the domestic payments infrastructure faster and more secure, moving towards same-day, and possibly nearly real-time transfers. Likewise, NACHA, the private organization responsible for administering the ACH system (the system used by many banks to move funds electronically), is also seeking to modernize by including more settlement windows in order to allow same-day transfers.
- These improvements to increase the speed of transfers could have benefits for the underbanked, who often have little-to-no cash reserves and are more likely to need to move money quickly to another party (e.g., paying rent right after being paid themselves), allowing them to utilize mainstream financial products instead of less cost effective alternative products like check-cashing.
- Faster settlement may also benefit merchants who want an alternative to accepting credit cards (like MCX). The ability to receive payment from a bank account more quickly can limit the risk that a customer lacks sufficient unspent funds in their account.
- While the Federal Reserve is considering several traditional options that are extensions and improvements of its current technology, it is also contemplating more revolutionary options, such as allowing bilateral settlements by banks via a common protocol, or completely redesigning the payments infrastructure from the ground up.
- Private sector companies are looking at how international transfers could be modernized using a distributed ledger and digital currency as a common medium of exchange among network participants. The common medium of exchange allows for automated multi-party exchanges, allowing the user to get the best exchange rate.
- The use of a distributed public ledger can also help protect the integrity of the international money transfer system by making transactions transparent and requiring multiple, distributed nodes in the system to agree the transaction is valid. This would allow for more competition, rather than relying on a few large banks.

There are challenges to widespread modernization.

While there is optimism among the experts with whom we met that the domestic and international payments system will be modernized, there is also a recognition that meaningful modernization will prove challenging.

- There are thousands of banks and other financial entities that are stakeholders in the current domestic system. Getting them to agree to make changes may prove difficult, especially dramatic ones. For example, for a faster ACH system to work, all banks would be required to receive and process the requests, increasing their costs. An increase in mandatory fees would be needed to compensate receiving institutions for the additional work, raising costs for stakeholders and customers.

- The current domestic system works well in most cases. The Federal Reserve estimates that only 12 percent of U.S. payments would benefit from (near) real-time speed[5]. The lack of a pressing need may limit the appeal to stakeholders to undertake costly improvements.

- Additionally, it may not be possible, without significant investment, to increase speed to meet the needs of all users. For example, some retailers want ACH to serve as an alternative to credit cards because the fees are much lower, but they also want ACH to function in (near) real-time. ACH's low cost is in large part because it is a batch system, rather than a one-off system. To make ACH a one-off system would require significant development and increase costs, possibly leading to rates comparable to those of credit cards.

- Internationally there are several well established legacy incumbents (e.g., Western Union) with strong name recognition and robust distribution networks. It could be hard to displace them even if they are less efficient.

- Due to concerns about money-laundering and terrorism-financing, the cross-border transfer of money overseas is an area of significant government scrutiny. This scrutiny can lead to regulatory complexity, increased compliance costs, and possible litigation risk. While private sector innovation may reduce risk, regulatory barriers are likely to remain a significant obstacle.

- Given the complexity of the United States' regulatory environment, any changes, especially revolutionary ones, may require significant regulatory/policymaker buy-in and be delayed by the requirements of the regulatory process.

[5] U.S. Federal Reserve – *Strategies for Improving the U.S. Payments System (2015*) pg. 38; https://fedpaymentsimprovement.org/wp-content/uploads/strategies-improving-us-payment-system.pdf

Marketplace Lending

Non-bank lending platforms are helping connect small business borrowers with lenders, providing faster and more efficient capital access.

The rise of marketplace lenders has the potential to dramatically change the nature of small business financing. As traditional banks have scaled back their lending to small businesses due to changing regulatory and market conditions, other non-bank players have emerged, seeking to provide businesses (through the use of proprietary analytics) a faster and more efficient process for obtaining credit. Marketplace lenders are also providing investors, both retail and institutional, with access to favorable rates of return at a time when historically low interest rates have made it difficult to find yield.

- Small business marketplace lending remains a fairly small part of the overall lending picture but has increased significantly in recent years.
- Marketplace lending models are diversifying. While early platforms tended to securitize the loans as a means to sell them directly to the lender, platforms now also package and securitize loans in bulk for sale, retain the loans on their books, or adopt a hybrid model blending approaches.
- The types of businesses seeking loans are also diversifying. While typical small business marketplace loans are for much less than $1 million and may involve a personal guarantee, new platforms are emerging that offer larger loans and different terms, including using borrower assets as collateral.
- The investor pool is also broadening, with a mix of institutional and retail investors either lending directly to borrowers or investing in marketplace lenders, who use the funds to make loans.
- Marketplace lenders utilize both traditional credit-scoring methods (e.g., FICO) and proprietary algorithms to reach an underwriting decision. They believe this allows them to price risk more efficiently than banks at greater speeds. The underwriting process seeks to make a determination for the borrower, even if the decision is “no”, as quickly as possible. (Banks, on the other hand, are more likely to do the entire underwriting process for every candidate, even those who are obviously ineligible.) This enhanced efficiency may allow marketplace lenders to service credit-worthy borrowers whose needs are simply too small for banks to service profitably.
- Banks view marketplace lenders as potential competitors and also as potential partners. Banks have entered into agreements with marketplace lenders to allow mutual referrals and co-branded or co-distributed products. The idea is that this allows banks to maintain the relationship with their customers, even if they cannot loan to them directly, while allowing the marketplace lender to leverage the bank’s network of potential borrowers.

There are challenges for marketplace lending.

While marketplace lending to small businesses has grown rapidly, it is unclear how aspects of the model, as an alternative to banks, will weather changes in the market.

- Marketplace lenders have primarily operated in a period of historically low interest rates. It is unclear whether a rise in rates would affect marketplace lenders' ability to attract investment, as investors are able to find yield in more traditional assets. Also unclear is whether enough borrowers would be able to service higher interest-rate loans to avoid the asset class becoming viewed as overly risky.
- Likewise, marketplace lenders may enjoy a certain amount of regulatory arbitrage where banks are prevented by regulation (either directly or indirectly) from directly competing with them. If the regulatory environment were to change as we move farther away from the global financial crisis that precipitated the increase in financial regulation, banks might be able to compete more directly.
- Marketplace lenders, so far, do not have the same relationships with small businesses that banks enjoy. While banks engage with small businesses and their owners with a host of products (e.g., bank accounts, credit cards, etc.), and can therefore build and maintain a relationship even if they aren't lending, marketplace lenders have only one touch point (the loan). If marketplace lenders are unable to expand their relationships with businesses they may not be able to generate the loyalty that banks can.
- There is a risk that price will become the primary differentiator between platforms, leading both borrowers and lenders to select less competent platforms that seem to offer a better price. This can create the risk that more sub-par loans will be created and ultimately fail, damaging the reputation and liquidity of the space as a whole.
- A lack of standardization in the loans may hamper the development of a robust secondary market, which may in turn limit the attractiveness of the asset class among investors.

Online Security Offerings

Recent changes to securities laws have made it easier for companies to offer debt and equity securities online without having to register with the Securities and Exchange Commission, opening a potentially transformative source of business capital.

The private securities offering market is huge, with estimates placing it at over $1 trillion dollars. These offerings are traditionally handled through personal relationships. However, recent changes to Federal and state securities laws have made it easier for companies to offer securities to potential investors via the Internet, without having to go through the SEC's complex and expensive registration process. Some of these changes also allow companies to advertise to the general public that they are seeking investment, though only "accredited" investors can actually invest. While many changes are still waiting for regulations to be drafted by the SEC, or to take effect, some have been in place for more than a year. While the picture is still incomplete as to how effective these rules will ultimately be, companies and investors do now have more options.

- While it is hard to determine the exact size of the private online securities market, it appears to be growing, with the largest platforms reporting volumes in the $50-100 million dollar range, with increasing traction.
- Online securities offerings may allow companies in industries that have traditionally had trouble attracting early investment to leverage their customers as an investment base. An example of this is the success of consumer goods offerings on platforms like CircleUp.
- Investors interested in online securities offerings tend to be angel investors with previous experience, but new investors may be drawn in as the space matures, or as regulations permit. However, there is some evidence that the general solicitation provisions found in 506(c) offerings are drawing new investors to the platforms, potentially expanding the investor base.
- Different platforms and companies use different arrangements for organizing investors. Some platforms allow investors to form syndicates to help investors and companies manage investment. This can allow relatively unsophisticated investors to leverage the experience of more sophisticated and experienced ones, without having to personally know them.
- The SEC has recently finalized rules for exempt offerings under Regulation A, though these were not operational at the time of this writing. This exemption will permit companies to solicit for investment of up to $50 million per year from the general public, including unaccredited investors. This may allow companies to leverage a much larger potential investor base and allow unaccredited investors better access to high yield investments.

There are concerns about how great an impact these changes will ultimately make.

While turning to the Internet to seek investment seems like an obvious solution for companies seeking capital, there are potential problems that might limit its effectiveness.

- Experts question how much knowledge and appetite for this type of offering exists. Companies may be concerned about the risks that seeking money online might have for their future (e.g., not having a productive relationship with investors or complications from subsequent strategic moves like seeking additional investment).
- Investors may avoid the space. There is concern among at least some venture capitalists that companies seeking funds online could be of a lower quality than those able to obtain funding via more traditional means. Additionally, a lack of liquidity or ability to diversify may discourage investors from participating.
- Online securities sales occupy a complex and evolving regulatory environment, and the potential costs and risks involved may discourage both companies and investment platforms from entering or staying in the market, leaving only companies and firms that are ignorant of the rules or insufficiently concerned with compliance, and ultimately leading to a riskier investment environment.

The Role of Regulation

Across FinTech, regulation is having a huge impact on where and how innovation is happening – or isn't happening.

The participants at our roundtables, including several regulators, acknowledged that regulation is a large factor driving how financial technology is developing. Financial services firms have traditionally been highly regulated and continue to be. It is not surprising that financial technology would find itself more highly regulated, earlier in its lifecycle, than other technological fields. However, this does not mean that the current regulatory environment is optimal.

While there was agreement among roundtable participants that regulation matters, there were different opinions about how regulators should approach FinTech, and vice versa. While the specifics varied depending on the industry and circumstances, certain topics were considered important across the spectrum of FinTech:

- <u>Who should regulate what?</u> The number of regulators with responsibility and control over a particular industry or activity, how coordinated those regulators are, and whether they share similar concerns and values can have a dramatic impact on an industry. How should regulatory authority be structured? In cases where there is more than one regulator, how should they act to enable pro-social innovation and respect other regulators authority?
- <u>How should regulations work?</u> Should regulations serve as checklists laying out in detail how an activity should be conducted, or should regulators simply provide guiding principles to market participants and allow them to figure out how to achieve them? Should regulators instead focus on performance metrics and intervene in cases where market participants fail to meet them?
- <u>How should regulators handle innovative ideas?</u> There will be times when innovative ideas will come up, whether wholly new creations or unique twists on the status quo. How should regulators view them, and what processes should they use to address them?

There are no easy answers to these questions, and they can represent a tension or trade-off, or at least a perceived one, between important values like consumer protection and capital access. While the status quo may create certain problems, roundtable participants acknowledged that changes run the risk of introducing new problems. Our participants provided significant insight into these issues.

Who Should Regulate What?

Many transactions enabled by FinTech cut across the jurisdictions of multiple regulators, often with different organizational responsibilities. This can lead to uncertainty in the marketplace.

The fact that a financial transaction can be regulated by multiple federal, state, and international regulators creates significant risk for market participants. Likewise, multiple regulators can frustrate efforts at positive regulatory and policy reform.

- There is significant concern in situations where there is more than one regulator responsible for a space or activity, because cost, complexity, and risk grow exponentially. For example, digital payments are regulated in part by at least eight federal regulators, as well as state regulators whose scope of authority varies depending on the conduct in which parties are engaged and on state laws. This is especially a concern for smaller companies and new entrants to a market, because they often do not have resources to hire legal counsel and have not developed the knowledge, sophistication, and goodwill with regulators that larger, more established participants may enjoy.
- Different regulators may have different worldviews, incentive structures, and constituencies. For instance, a developing country's regulators may be more concerned with promoting access to capital and financial inclusion compared to a developed country's regulators, who are more concerned with preventing money laundering or terrorism financing.
- A similar issue may occur within the United States between federal and state regulators. One level of regulators may wish to liberalize an activity while the other may be more concerned with fraud, leading to incompatible requirements and a frustration of purpose. An example of this is Regulation A, which provided an exemption from registration with the SEC at the Federal level, but did not preempt state review of the offerings. [6] This added expense and frustration is considered a major reason why the original Regulation A was seldom used and why the SEC preempted the states in Tier II of the recently updated Regulation A.
- Multiple regulators may have different views as to what should be allowed and how regulation and enforcement should be conducted. This may frustrate a regulator's efforts at innovation since market participants will conform their behavior to that required by the most restrictive regulator.
- Regulatory regimes that hinge on *who* is undertaking an activity versus *what* is being done, and place different burdens accordingly, can create an environment where certain types of companies cannot compete, whether because they are overtly forbidden or because the burdens placed on them make competition uneconomical. These restrictions could result in a less competitive and less consumer friendly market.

[6] The SEC promulgated new requirements for Regulation A offerings in March 2015. At the time of this writing it is impossible to tell whether the changes will make the Regulation more attractive and effective.

Having different, overlapping regulators and regulatory regimes can reflect validation of different levels of sovereignty, provide for a division of labor, and promote opportunities for innovation.

While multiple regulators may add complexity and inefficiency, they can also give voice to different constituencies and help ensure that important work is done.

- Local regulators may be more aware of the conditions in their jurisdiction than national regulators. Local regulators may also have a better understanding of the needs of their constituents and act upon any problems more quickly.
- This local knowledge and comfort may also allow local regulators to innovate, providing a "laboratory of democracy" where successful policies can be expanded outside the jurisdiction, while the fallout from unsuccessful ones is limited.
- Limiting the number of regulators may lead to a "winner-take-all" game of regulatory capture, where the interests that capture the few responsible regulators have disproportionate sway in the regulator's policy and enforcement decisions.
- Multiple regulators with somewhat different but overlapping jurisdictions can also lead to the development of specialization and expertise among regulators, which can be leveraged outside that one organization.
- Regulating entities based on what they are rather than what they do can make sense when those entities are systemically important, such that their being exposed to certain risks is dangerous to the broader economy, while similar risks to less important entities may not extend beyond the entity itself. While entity based regulation may lead to a somewhat less competitive market, the benefits in safety may outweigh the costs.

Recommendations

- Policymakers should be willing to evaluate whether innovation has changed the nature of a transaction such that traditional regulators are no longer appropriate (e.g., a traditionally state level transaction is now predominantly interstate commerce).
- When developing regulations and regulatory structures, policymakers should be certain to consider the risk of foregone advancement and prosperity, as well as downside risk.
- Regulators should prioritize coordination to minimize inter-regulatory friction and maximize consistency. An example could include coordination on no-action letter requests to allow a market participant to address all relevant regulators at one time.

How Should Regulations Work?

Many regulations involve a long and cumbersome process and provide exacting detail to regulated parties on how they must conduct their business. This can stifle innovation.

Regulations can apply different methods and frameworks, from deeply prescriptive ones (giving precise rules guiding how a regulated entity must perform) as well as more flexible ones (establishing a set of principles or desired outcomes that allows market participants to determine how best to meet them), and interceding if the market participants' activities are inconsistent with the principles or they fail to meet their goals. While regulations are usually a mix of these methods, in the U.S. regulation is frequently tailored towards the rules-based end of the spectrum.

- Rules-based regulations can create problems where innovations that would be better for everyone fall outside of what is permitted. This can delay or prevent those innovations from reaching users and may discourage companies from pursuing innovation in the first place.
- Complex rules may be hard for smaller and newer market participants to understand or cope with, discouraging both entry into the market and competition and providing an advantage to larger and more established participants that have the knowledge and resources to comply with the rules.
- Additionally, a rules-based system may invite politically powerful entities to encourage unnecessarily complex rules as a way to secure a competitive advantage.
- Rules-based systems, coupled with the lengthy regulatory process found in the United States, can lead to a "dead-hand" problem, where outdated rules restrict competition but are difficult to change, especially if incumbents view the rules as a barrier to competition.
- Rules-based systems may lead entities to prize mere compliance with the rules over solving the underlying problem. An example is anti-fraud activities. A rules-based system may cause market participants to worry more about whether they have checked all the boxes than whether the boxes are stopping fraud.
- Principles-based regulation – where the regulator gives market participants principles to guide their activity (e.g., minimize fraud), but allows wide discretion on how the participant will achieve the goal – may allow greater innovation and competition as companies seek to achieve the required principles in a way that is both the most efficient and most pro-consumer.
- Performance-based regulations – where regulators establish and monitor certain metrics (e.g., the rate of fraud) and intercede if a market participant fails to meet those metrics – can also provide greater room for innovation and an incentive for market participants to meet the metrics as efficiently as possible.[7]

---

[7] PayPal has advocated a version of Performance-based regulations called "Dynamic Performance Standards". "21st Century Regulation: Putting Innovation at the Heart of Payments Regulation." PayPal, n.d.; http://www.ebaymainstreet.com/sites/default/files/PayPal-Payment-Regulations-Booklet_US.pdf

Rules-based systems have certain advantages.

While a heavily rules-based system can create certain problems or inefficiencies it also has certain values, while principles and performance-based systems are not without flaws.

- Rules-based systems can provide clarity and predictability to market participants, and their enforcement is transparent to the public. Principles-based systems can make it difficult for market participants to predict what is required of them or when they might face enforcement.
- Rules-based systems can give regulators a justification to act before an actual harm occurs. While rules-based systems provide regulators with clear and objective things to monitor and enforce, principles-based systems can make it much harder for regulators to determine whether enforcement is necessary, except in hindsight after harm has occurred. Performance-based systems are inherently retrospective and therefore run the risk that harm must occur before regulators can act.
- New and less sophisticated market entrants may not know enough to effectively utilize principles-based regulations or meet performance targets without guidance. Rules-based regulation can provide a "recipe" for compliance, giving a clear and objective roadmap. It can also free regulator resources that would be required to give guidance, allowing them instead to focus on enforcement or rule promulgation.

Recommendations

- Policymakers and regulators should be consider the cost of overly prescriptive regulation to innovation, in addition to the potential harms they seek regulation to prevent.
- Policymakers should be willing to consider whether advances in technology allow for new regulatory methods less dependent on prescriptive rules.
- Policymakers and regulators should consider the need to provide guidance to market participants, especially new entrants, to ensure they understand the requirements of the regulations to which they are subject, especially if the regulations are less prescriptive.

How Should Regulation Handle Innovative Ideas?

Regulators will face new and innovative ideas. Providing a means for innovation to occur without having to formally change the regulations could be beneficial.

Changing regulations can be a long and cumbersome process. To enable pro-social innovation, and to allow changes to be tried for a limited time or at a limited scale before becoming fully adopted, regulators should allow market participants to try things that may not be explicitly approved by the existing regulations.

- Participants agreed that collaboration between regulators and market participants was essential to helping regulators foster innovation. Coordination allows regulators to leverage market participants' knowledge and insight on the state of innovation, while remaining comfortable that the activity would not "get away" from the regulator. Likewise, market participants felt that collaboration could allow them to feel comfortable in innovating without fear that they would be subject to a surprise enforcement action.
- Pilot programs can allow for an innovation that has not been formally approved to be conducted on a limited basis, either by a limited number of firms or over a limited time, or both. After the program runs through its allotted time, the regulator, policymakers, and the public can assess whether the innovation should be adopted.
- A "no-action letter" or waiver process could allow market participants to seek guidance and have comfort that a proposed course of action that may be ambiguous under existing regulations is considered permissible by the regulator. This process also allows the regulator to provide guidance in case the firm's initial plan would run afoul of the regulation, allowing the firm to adjust its course. Such guidance can then serve as a road-map for subsequent firms.

There is a risk that circumventing the formal regulations may lead to problems.

While innovation and flexibility are important, there are also potential risks posed when regulators and market participants seek to move beyond the requirements of the regulations.

- While collaboration can be a positive undertaking, there is a risk of "regulatory capture", where certain firms or industries achieve disproportionate sway over a regulator. This does not mean that the relationship is corrupt, rather it could simply be a product of the regulator's being exposed to only one side of an argument.
- Formal "no-action" letter and waiver processes can help provide guidance and clarity but are frequently expensive and time consuming, making obtaining them difficult and limiting their usefulness in fast moving industries.
- Pilot programs can allow for the testing of innovation, but to the extent that access to the program is limited to certain firms it can result in those firms being given an advantage over competitors that are not part of the program. Even if the innovation is ultimately allowed for the entire market, the first-mover advantage obtained by being part of the pilot program may not go away.
- Likewise, firm-specific waivers may give certain firms an unfair advantage over their competition as they are able to operate more effectively without fear of an enforcement action.
- Consequently, non-firm-specific waivers, or waivers relying on specific behavioral guidance, may be fairer to market participants but could deprive the public of the protection the regulation seeks to provide.

Recommendations

- Regulators should ensure that any pilot program that may provide a competitive advantage be open to all market participants.
- Regulators should make waivers available to all market participants, though they can limit access to those participants who agree to reasonable and necessary conditions (e.g., enhanced monitoring in exchange for the waiver).
- Regulators should strive to make access to waiver or no-action letter programs feasible for small companies, including taking steps to minimize cost and time required.

Conclusion

The financial services industry is undergoing profound changes due to the disintermediating and democratizing force of financial technology, which is forever altering how firms and individuals exchange funds. In some cases the innovative changes offer both the promise of a better life and hard choices, as core values like safety and opportunity come into tension with each other. It falls to market participants, regulators, and ultimately society as a whole to determine how we wish to respond to these changes, and how to structure our regulations to guide them. This will require all stakeholders – consumers, businesses and other organizations, and regulators – to engage in the dialogue. The Milken Institute looks forward to playing an active role in facilitating these necessary conversations.

We thank all of the participants in our roundtable conversations; their insight has been essential to this work. *We thank all of the participants in our roundtable conversations; their insight has been essential to this work.* *Also, the author would like to thank Jackson Mueller, Daniel Gorfine, and Chris Brummer for their assistance with this report.*