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When Markets Quake: Online Banks and Their Past, Present and Future

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Abstract

This paper examines why what has been called peer-to-peer and marketplace lending has attempted, but has not yet fulfilled, its dream of fundamentally transforming finance by disintermediating the regulated banking system. That said, we remain convinced that its impact will be significant and longstanding, particularly on the traditional consumer finance sector. This paper recounts the history of the industry, explores both the promises of marketplace lending and the flaws in its evolving model and concludes that the Internet-based model has enormous promise and could well create a sustained competitive advantage. Though many new lenders may not survive the next downturn in the credit cycle, the sector will adapt to new commercial, technological, financial and regulatory realities and continue to drive innovation. The paper concludes with scenarios for the future and a series of policy recommendations aimed at encouraging financial innovation while protecting consumers and the safety of the financial system.

Fundamentally, this paper explores the intersection of technological innovations—the Internet, computing power and big data—and financial regulation. The larger underlying issues involve the tradeoff between accessibility, price and safety of important mass financial products as well as the age-old problem of how we shape and regulate this critical financial activity known as banking.

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1. Introduction: Dreams and Realities of Online Lending

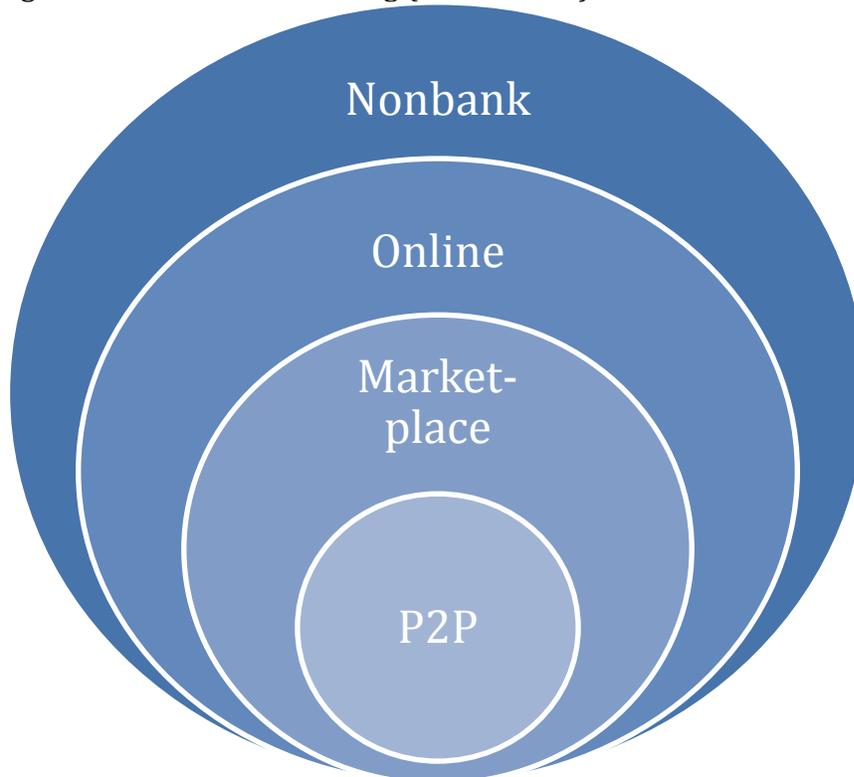
This is a paper about the end of a dream and the beginning of hard commercial realities.

¹ Title inspired by Joseph Bower's seminal "When Markets Quake: Management Challenge of Restructuring Industry." 1 December 1986. Harvard Business Press.

Like so many products of Silicon Valley, the much-touted early concept of peer-to-peer (P2P) lending represented a utopian ideal of an efficient and inherently equitable technological solution to a traditional and highly regulated activity—lending. That occurred well over a decade ago—well before P2P lending discovered the daunting realities of modern finance and regulation, finding itself forced to adapt and change.

We are now in the testing phase of activities that have been labeled, successively, P2P lending, marketplace lending and online lending, all of which have been subsumed under the flashy marquee of financial technology, popularly known as *fintech*. This testing process has been difficult, sometimes dispiriting, and has required pragmatic choices and difficult compromises. Money has been made and lost; startups have come and gone. And we still have a way to go. Yet, after all that, we believe that online lending will not only survive—albeit in a form that has evolved quite far from its origins—but will play a major role in a business, consumer finance, that will remain hungry for innovation in the decades ahead. As a result, we believe that policymakers and regulators should nurture this fertile, growing and innovative industry within the larger regulated banking system. Banking and consumers will both be better off for its continuing viability.

Figure 1: Categories of Non-Bank Lending (Not to Scale)



Source: Authors' Analysis

In this paper, we focus on online lending, which we define as a transaction in which most interactions between investors and borrowers, including underwriting and fulfillment, are significantly mediated by the Internet. This is a subset of the larger universe of (mostly) non-bank finance, and the online lending universe in turn encompasses marketplace lenders, a category that includes the early P2P platforms that facilitated lending between individuals and more. We primarily focus on installment loans to consumers, which involve fixed terms and multiple payments with a fixed interest rate. However, we will reference other types of loans when relevant to the discussion.

Despite the hype, online lending began simply as a new way to fund loans, but today the industry has developed innovations that have reshaped activities well beyond funding. Over its short life, online lending has attracted a vast amount of journalism and commentary. This paper, however, is unique in that it attempts to clinically examine the step-by-step evolution of the industry and how it has adapted, not just to the larger banking and financial system but also to complex regulatory, legal and market environments.

Early on, so-called P2P lending saw itself as profoundly subversive. It explicitly sought to disrupt traditional lending through digital technology. The aim was to construct online marketplaces shaped by big-data algorithmic tools where borrowers and lenders could easily meet and quickly and inexpensively transact, steeped in the same confluence of disruptive technologies that produced Amazon.com and Netflix and highly valued startups like Uber Technologies, which undercut regulated car services, and Airbnb, which did the same for the conventional lodging industry. (There were other disrupters, of course, that have not fared as well, notably diagnostic startup Theranos.)

In its initial public offering prospectus, Lending Club's then-CEO claimed that it was "transforming the banking system" by "cutting out the middleman." He promised to give borrowers and savers more of the wide differential between the cost of borrowing on credit cards and interest paid on deposits, but it was not meant to stop there. He prophesied that "banking is next" for disruption.² This was not unusual. An ethos of democratization often informs these sorts of disruptive technologies: eliminating middlemen, reducing costs and "frictions," while broadening access and reducing costs for consumers.

Online lending, however, is just the latest wave of bank disintermediation since the late '70s when commercial banking began to deregulate, allowing non-banks like Wall Street firms, mutual fund complexes, money market funds or technology companies to peel away once-profitable bank products. That disintermediation, along with regulation and technology, has reshaped banking over the past five decades, in part by creating a shadow-banking system—non-banks that sell banking

² Lending Club. Form S-1, 27 August 2014. Page 81. Accessed through SEC's EDGAR.

products such as loans, mortgages or investment accounts—outside the regulated banking system. The legacy of that disintermediation has been mixed. It played a role in the disastrous subprime mortgage crisis, and Goldman Sachs more recently called online lenders “the new class of shadow banks.”³ These are companies such as Lending Club, SoFi, Avant, Affirm, OnDeck, Kabbage and a growing number of standalone startups backed by private equity and venture capital sponsors.

Today’s sophisticated players naturally embody a continuation of a second longstanding trend: financial services moving online. Financial services of all sorts moved online with the advent of the Internet, from E*Trade in brokerage to E-Loan in mortgages and PayPal in payments. There is often a direct line from these firms that embodied fintech before it was a common term to today’s leading online lenders: Christian Larsen used his exit from E-Loan to found Prosper, and PayPal co-founder Peter Thiel was an early investor in Avant and SoFi. Banks have rushed to provide online banking through desktop computers and now mobile phone apps, as they continue to close physical branches. From 2012 to 2015, Federal Deposit Insurance Corp. (FDIC) insured commercial banks shed over 1,500 branches,⁴ and JPMorgan Chase reported in 2015 that in-person teller transactions fell by 100 million during the prior three years.⁵

Some have used the term “regulatory arbitrage” to describe what this new class of lenders has been up to—that is, exploiting areas of the market that had little or no regulation. There is some truth to this charge, though the result has been to create new linkages and competitive pressures on bank incumbents. As the shadow-banking system has evolved, it has become clear that disintermediation is rarely as simple as a zero-sum struggle between banks and non-banks. The same applies to online lending. Regulated commercial banks have long participated in the shadow-banking world, from owning or controlling highly levered off-balance sheet structured investment vehicles (SIVs) to engaging in the kind of trading and transactional activities that Glass-Steagall once forbade them to practice. In 2015, Goldman Sachs estimated that some \$11 billion in banks’ annual profit is at risk from the new players from 2015 to 2020 and beyond, or some 7% of the \$150 billion in total.⁶ Although the early promotion of P2P lending presented it as a zero-sum struggle in the U.S. (it appears to have started in the United Kingdom and has

³ Nash, Ryan and Eric Beardsley. “The Future of Finance: The Rise of the New Shadow Bank, Part 1.” 3 March 2015. Goldman Sachs & Co. Page 6.

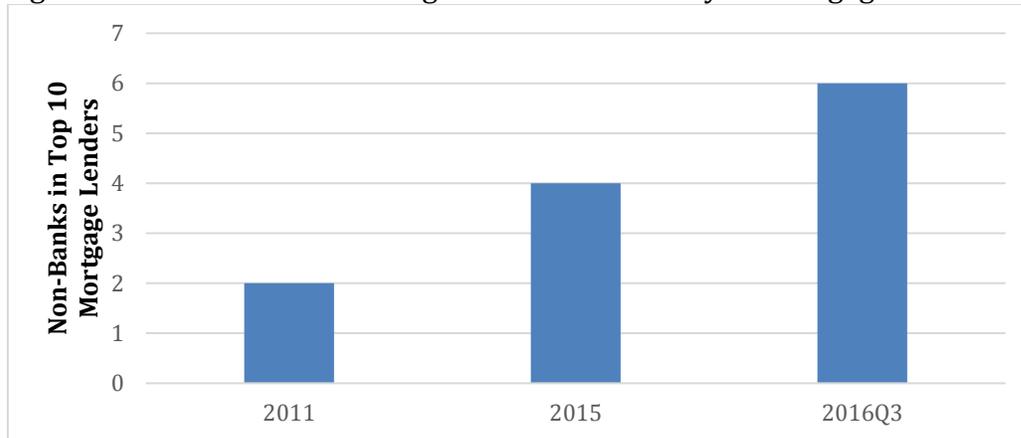
⁴ Federal Deposit Insurance Corporation. “Number of Institutions, Branches and Total Offices.” FDIC Bank Data and Statistics Table CB01. <https://www5.fdic.gov/hsob/HSOBRpt.asp>. Branches peaked in 2012 at 83,593 and declined to 82,046 at the end of 2015.

⁵ Marino, Jon. “Bank Branches Are Evolving and Shrinking.” 21 April 2016. CNBC <http://www.cnbc.com/2016/04/21/bank-branches-are-evolvingand-shrinking.html>.

⁶ Nash and Beardsley 2015, *Supra* note 3. Page 3.

also developed in countries such as China⁷), the relationship with the larger banking establishment has grown more complex.

Figure 2: Non-Banks Are Taking Over Bank Territory in Mortgages⁸



Source: Wall Street Journal, Inside Mortgage Finance

Regulated banks already originate loans in many online lending transactions. Under federal preemption powers, most large banks export rates and fees of their home states both in online and other channels. In the future, they may take stakes in major players or engage more directly in the practice themselves. Numerous marketplace lenders like Lending Club and Prosper have partnered with smaller banks like Web Bank in order to achieve the same exportation results for their national platforms (though this does not allow them to avoid licensing requirements in some states) and avoid certain states' usury laws. For the small banks, a relationship with a platform can provide diversification, for example from a commercial real estate portfolio. These partnerships have come under a cloud of legal uncertainty after cases like one in August 2016 in which a federal judge in California agreed with the Consumer Financial Protection Bureau (CFPB) that a payday lender, CashCall, had engaged in "unfair, deceptive and abusive practices" by employing such a strategy with a tribal lending institution.⁹ While CashCall is not a marketplace lender, the economic substance of both transactions—to preempt usury and other state laws—was close enough to cause turmoil. Meanwhile, adding another layer of complexity, marketplace loans themselves are often bought by

⁷ Martin Chorzempa. "Finance for the People: The Rise of Online Debt Crowdfunding in China." Forthcoming. 31 August 2016.

⁸ Andriotis, Annamaria. "Banks No Longer Make the Bulk of U.S. Mortgages." 2 November 2016. The Wall Street Journal. <https://www.wsj.com/articles/banks-no-longer-make-the-bulk-of-u-s-mortgages-1478079004>.

⁹ Berry, Kate. "CFPB Court Victory Raises Uncertainty for Marketplace Lenders," 9 September 2016. American Banker, <http://www.americanbanker.com/news/law-regulation/cfpb-court-victory-creates-uncertainty-for-marketplace-lenders-1091212-1.html>.

institutional investors in secondary or asset-backed markets, rather than the P2P or crowdfunding models (in which retail investors buy fractional interests in specific consumer loans)¹⁰ originally envisioned, just as they have increasingly played a role in more-conventional syndicated lending.

This paper summarizes what we now know about online lending and what we can expect in the future, particularly as the post-2009 recovery fades and as the extraordinarily low interest-rate regime, which has fueled credit creation and a period of low consumer delinquency, gradually ends. We will explore trends in the development of marketplace lending that suggest both strengths and weaknesses—assets the regulatory system should protect and problems that must be managed. We will analyze the effect that marketplace lending has on the regulated banks and what role they may come to play. Like so many disruptive technologies, marketplace lending forces vital questions about the role of traditional incumbents in the financial system—industry structure—and of regulation and the market. In the end, we make recommendations that we hope can strike a regulatory balance, encouraging necessary innovation, efficiency and credit creation while protecting consumers, small businesses and vulnerable sectors of the financial system. Given the fluidity and volatility of the financial markets and the ability of market participants to quickly adjust, this is a challenge.

This paper is structured in 12 sections. In Section 2, we'll recount the genesis of P2P lending in the pre-crisis boom as the fortuitous marriage of an ancient practice with the Internet, big data and powerful computing tools. In Section 3, we'll recount how P2P gave way to marketplace lending, as "peers" were not enough to fund voracious borrower demand for credit and investor demand for growth. In Section 4, we cover the fall from grace and the struggle to refine a workable model in 2016. In Section 5, we'll look at the current online-lending industry, with its proliferation of startups and experimentation far beyond marketplaces. In Section 6, we'll begin our examination of flaws in the developing business model, focusing on regulatory arbitrage. In Sections 7 and 8, we'll turn to the future, delving into the question of how marketplace lending's innovative—if not fully tested—credit-scoring processes and funding arrangements will fare in a market downturn and in a rising interest-rate environment. In Section 9, we'll step back to make an argument for online lending that focuses on its rich array of potential benefits and suggests a range of future scenarios, and in Section 10, we'll examine the relationship of the regulated banks to online lenders. In Section 11, we'll turn to policy implications of this new industry. And in Section 12, we'll offer some conclusions.

2. In the Beginning, There Was P2P

¹⁰ Manbeck, Peter and Marc Franson. "The Complete Guide to Regulation of Marketplace Lending, 2016 Update." April 2016. Chapman and Cutler LLP. https://www.aba.com/Tools/Offers/Documents/Chapman_Marketplace_Lending_Regulation_Issues_041116.pdf. Page 13.

Peer-to-peer lending grew out of a simple idea practiced throughout history: people lending directly to each other. Traditionally, there have been heavy constraints to this form of lending: the loan is usually limited only to those the lender trusts and knows well enough to believe they will pay it back—and even then most participants have no idea what interest rate to charge. Many may want to avoid mixing business and personal relationships, especially when it comes to the contentious process of collecting bad debts. In a modern economy with great geographic distances between parties, such basic P2P lending practices are destined to remain a tiny portion of overall credit.

What makes modern P2P lending different is digital electronics—a combination of the Internet, big data and computing tools like machine learning. In theory, a P2P platform can use data-driven methods to set minimum standards for potential borrowers to meet. Once a borrower is permitted to list a request for a loan on the platform, the platform grades and prices the risk according to its judgment of borrower creditworthiness. It bases the evaluation on data provided by credit bureaus, but it also uses innovative techniques to go beyond traditional FICO scores. For example, a number of these platforms also use insights into how consumers fill out applications to build more appealing, informative and efficient online interfaces.

On the other side, potential lenders can shop from a menu of loans listed by a P2P platform to create a portfolio. The purest form of P2P lending is when the platform serves only as the matchmaker. The loan contract would then reflect that one individual is lending to another, with the platform taking some sort of matchmaking fee. Thus, there is no maturity transformation, and the platform itself does not take on credit risk in the transaction. Some platforms now also allow investors to obtain liquidity by selling loan shares in a secondary marketplace.¹¹ All of this may work if the P2P platform can reliably assess credit risk and has a sufficient incentive to care for its reputation. However, P2P's earliest lenders discovered the hard way that pricing loans is not as easy in practice as it may appear in theory. One analytics firm estimates that the total net return of investing on the loans Prosper funded was *negative* 4.67% in its first manifestation from 2006–08, even before the housing crash.¹²

Peer-to-peer lending in the United States grew out of the fertile soil of the pre-financial-crisis boom years. The online P2P lending platform is actually an import from the U.K., where ZOPA, named after the negotiation concept of “zone of possible agreement”—that is, the set of deals making all parties to a transaction better off—launched its first platform in 2005. Prosper followed in the same year, and Lending Club launched in 2006. In those years, credit levels were soaring, thanks in part to

¹¹ One example of this is Lending Club's note trading platform.

¹² Rotman, Frank. “The Hourglass Effect: A Decade of Displacement.” 2015. QED Investors. <https://fintechjunkie.files.wordpress.com/2015/04/the-hourglass-effect.pdf>. Page 11.

financial innovations such as the originate-to-distribute (OTD) model for mortgages and securitizations of all kinds of standardizable debt obligations. Sophisticated, data-driven models—“big data”—were enthusiastically touted as tools to automate essential aspects of financial intermediation, from credit-rating agencies using statistical models to rate securitizations to value at risk (VAR) models for asset management. Technology entrepreneurs naturally thought: Why can't we use these to find a new way to lend to consumers and small businesses?

When the financial crisis hit, the founders of Lending Club and Prosper, both based in San Francisco, constituted essentially the entire market for P2P consumer loans. They had more than just a promising idea and new technology going for them; they also had luck. A 2015 white paper by Frank Rotman, a former Capital One banker and early investor in some of the most prominent fintech firms, outlined four key external factors that benefited these startups. First, large fundraising rounds completed just before the subprime crisis broke provided the war chests required to endure a period when the financial system ground to a halt. Second, a run-in with the Securities & Exchange Commission (SEC) led both to temporarily pause lending operations just when credit losses were skyrocketing everywhere else, and subsequent SEC registration of loans they originated as a type of security, “payment dependent notes,” may have buoyed investor confidence. Third, the crisis then drove much of their competition from the market. Girding for massive losses, finance companies and banks scaled back their consumer installment lending businesses,¹³ which were a tiny proportion of bank lending anyway (banks had long ago shifted to more profitable credit card operations). Fourth, the housing bust also cut off easy, cheap credit previously accessible through home-equity lines of credit and refinancing through steadily rising home valuations.

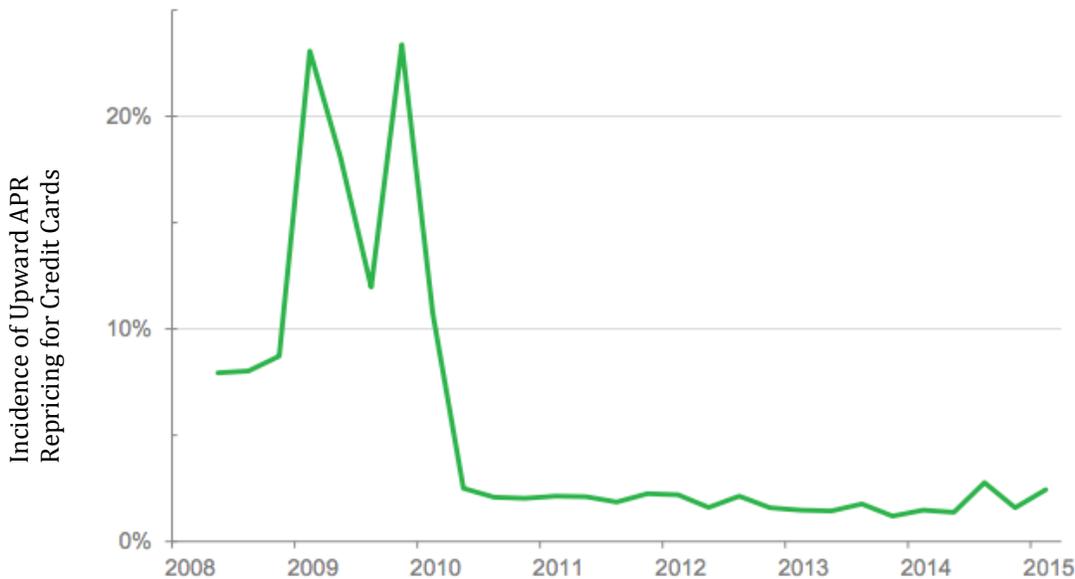
Another tailwind involved the Federal Reserve, which slashed interest rates and held them low over an extended period, driving funding costs down and sparking the search for the kind of high yield P2P loans could provide. The crisis was thus in some ways a blessing in disguise for marketplace lenders, who found themselves in a market defined by high demand and limited supply. However, the real challenge, they discovered, would be to find lenders willing to buy those loans.

The P2P pioneers were also helped along by some unintended consequences of the regulatory response to the crisis. The Dodd-Frank Wall Street Reform and Consumer Protection Act in July 2010 and the Basel III capital guidelines raised capital requirements for the banks, meaning, among many ramifications, that they would need to hold more equity against longer-term loan portfolios. These and other regulations made it harder for banks to move from cleaning up legacy issues from the crisis and new compliance requirements to being on the lookout for new businesses and new models. As consumer credit became harder to come by and more expensive, a similar squeeze occurred with credit cards. Losses had piled up in

¹³ Rotman 2015. *Supra* Note 12. Page 18.

the crisis, and the Credit Card Responsibility and Disclosure Act of 2009 (CARD Act) meant that issuers would face more barriers to interest rate hikes in the future. The chart below, from the CFPB, shows that credit card interest rates went up for many borrowers between the crisis and the CARD Act's implementation. In a 2016 Harvard white paper, Lux and Greene found that in the wake of the CARD Act, originations of credit card accounts to lower FICO score consumers fell 50%, and average credit lines to these accounts fell by 31%.¹⁴ While Lending Club and Prosper focus on borrowers with higher FICO scores and thus did not directly embrace those excluded from credit cards, these actions would free up room for later online lenders, like Avant and Affirm, to fill the gap that opened up.

Figure 3: Credit Card Interest Rates Rose in the Crisis Before the CARD Act¹⁵



Source: Consumer Financial Protection Bureau

This potent mix of tailwinds saw P2P lenders grow rapidly in the ensuing years. Their main business was refinancing revolving credit card debt into installment loans at much lower interest rates. Lending Club and Prosper loan issuance shot up to \$2.1 billion in 2014, an astounding 80 times the \$26 million they originated in 2009.¹⁶

¹⁴ Lux, Marshall and Robert Greene. "Out of Reach: Regressive Trends in Credit Card Access." M-RCBG Working Paper No. 54. April 2016.

<https://www.hks.harvard.edu/centers/mrcbg/publications/awp/awp54>.

¹⁵ Consumer Financial Protection Bureau. "The Consumer Credit Card Market." December 2015. http://files.consumerfinance.gov/f/201512_cfpb_report-the-consumer-credit-card-market.pdf. Page 73.

¹⁶ Nash and Beardsley 2015. Page 4.

3. The Shift to Marketplace Lending

With unproven models, no reputation or history and little visibility at a time when even Triple-A rated securities from major banks were taking heavy losses, it was an uphill battle to find retail investors willing to trust their funds to new marketplace lenders.¹⁷ Another problem was regulatory. The marketing of investment products to the public is heavily regulated in the U.S. The SEC, with authority to stipulate and oversee disclosure for securities offerings, was critical of the P2P pioneers. Lending Club proactively reached out to the SEC and voluntarily submitted to a quiet period of just under seven months to comply with regulations in April 2008, and Prosper went into a quiet period for around 10 months.¹⁸ Prosper was also hit with a cease-and-desist order in November 2008, which stated that its loans were securities offered to the public with “no appropriate regulatory safeguards for Prosper lenders.”¹⁹

In the ensuing period, Prosper and Lending Club faced high compliance hurdles with a litany of state laws in addition to federal SEC registrations. Even today, some states have blocked residents from investing in loans on Lending Club,²⁰ and even those that permit such investments can have strict regulations on investor eligibility that limit the number of potential investors for P2P loans. These regulatory costs, restrictions and the expenses to market a platform to widely dispersed borrowers *and* lenders indicated that the economics of the P2P model were more challenging than initially expected. If they stuck with retail investors, the scale and growth of the business would be too small for their backers.

The P2P platforms then pivoted on the investor side to add institutional buyers around 2011. They needed to sustain breakneck growth to satisfy their investors, and there were just not enough interested retail investors to fuel the expansion they needed. Though it would mean a tougher bargain, they inked deals to bring large institutional investors onto their platforms. One of the “peers” in peer-to-peer, the lender, was in decline. The name this industry had carried since its infancy no longer fit the adolescent’s new form, so it invented a new name for itself to fit online platforms in which financial institutions constituted an increasing share of

¹⁷ Lichtenwald, Ryan. “Lending Club Earnings Results Review – Q2 2015.” 4 August 2015. Lend Academy Blog. <http://www.lendacademy.com/lending-club-earnings-results-review-q2-2015/>.

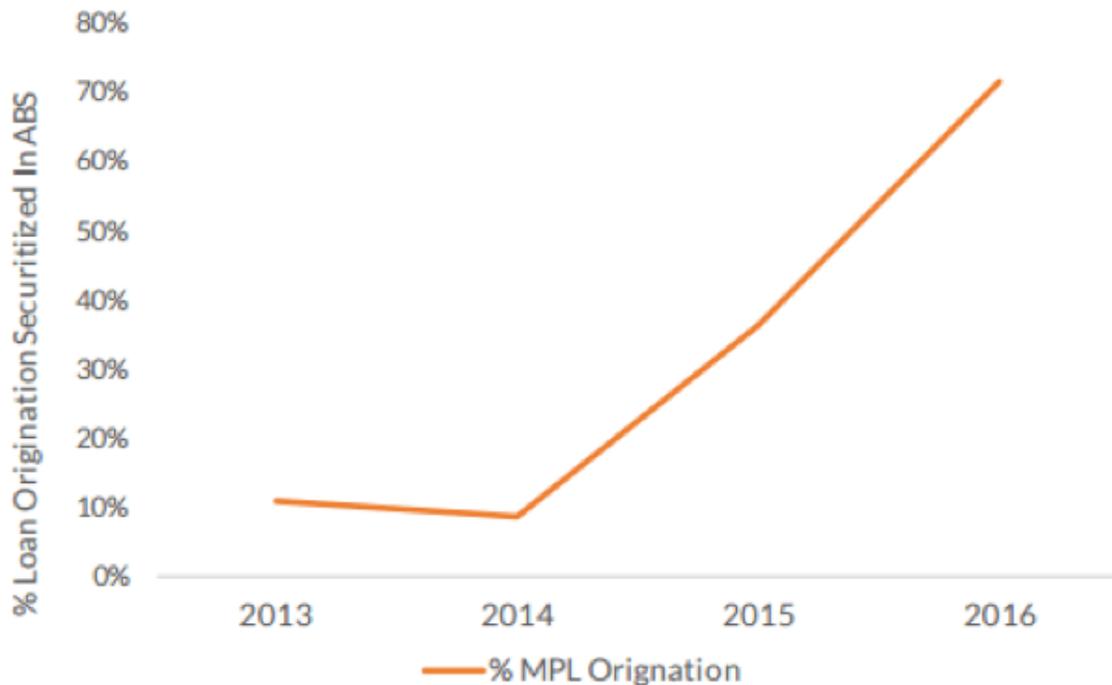
¹⁸ Renton, Peter. “A Look Back at the Lending Club and Prosper Quiet Periods.” 19 December 2011. Lend Academy Blog. <http://www.lendacademy.com/a-look-back-at-the-lending-club-and-prosper-quiet-periods/>.

¹⁹ Securities and Exchange Commission. “Order Instituting Cease and Desist Proceedings.” Administrative Proceeding File No. 3-13296.24. November 2008. <https://www.sec.gov/litigation/admin/2008/33-8984.pdf>. Page 5.

²⁰ Lending Club. “Is Lending Club Available in My State?” 12 September 2016. Lending Club Blog. <http://blog.lendingclub.com/is-lending-club-available-in-my-state/>.

investment: “marketplace lending.” Lending Club started an investment advisory that began packaging loans for private placements in 2011, and soon after it brought banks, hedge funds and other large investors to its marketplace to purchase whole loans.

Figure 4: So Much for “Peer”: Marketplace Loans Are Increasingly Securitized²¹



Source: PeerIQ

They also began securitizing an increasing share of their loans. Data from PeerIQ, a leading credit analytics firm for marketplace lending, shows that securitization has become a key channel for funding marketplace loans, rising from about 10% of total origination in 2014 to around 70% in 2016.²² For a while, the pivot to institutional money ushered in continued breakneck growth.

4. Fall and Stall

At their zenith, marketplace lenders originated over \$3.8 billion in consumer loans in the fourth quarter of 2015. The optimism was palpable, but these firms were in retrospect like Icarus, flying too close to the sun. The weak wax holding the model together gave way, the wings came loose, and the industry then began its fall. Marketplace lending loan originations fell 6.4% in the first quarter of 2016²³ as the

²¹ PeerIQ “MPL Securitization Tracker Q4 2016.” 9 January 2017.

<http://www.peeriq.com/peeriq-monthly-update-december-2016/>.

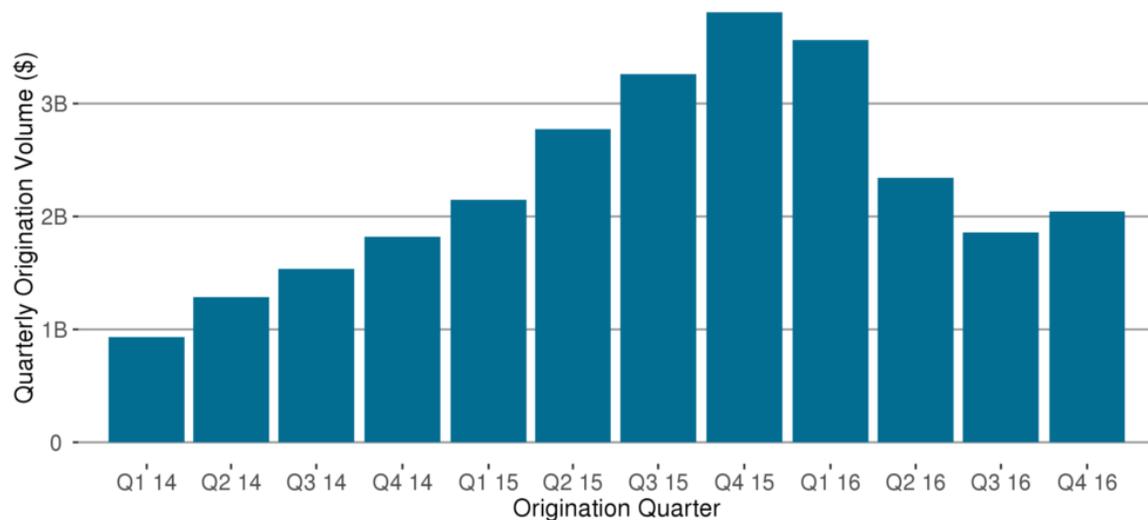
²² This PeerIQ data includes consumer unsecured and small business loans.

²³ Orchard Platform. “Quarterly Industry Report Q3 2016.” 28 November 2016.

<https://www.orchardplatform.com/blog/quarterly-industry-report-q3-2016/>.

unreliability of its funding model revealed itself in what, for most of the funding markets, was a minor blip. Worries about Federal Reserve interest-rate increases and the economy weighed down the previous exuberance. Charge-offs rose more than expected, and marketplace lenders hiked interest rates they charged borrowers in an attempt to shore up cooling investor demand. After appearing to arrest the decline in early 2016, marketplace lending ran into problems in April that sent shock waves through the industry. In the second quarter of 2016, Lending Club, the largest marketplace player in the U.S., forced out its founder and CEO after a scandal involving falsified loan data to meet buyer criteria.²⁴ Originations across the industry plummeted in the wake of the scandal, down almost 35% in the second quarter from the first quarter’s already declining number.

Figure 5: Origination of Marketplace Consumer Loans Falls After Meteoric Rise²⁵



Source: Orchard Platform

In early October, Prosper shut down its secondary market in loans—citing a lack of demand from investors—following a \$35 million loss as loan originations tumbled.²⁶

²⁴ Undisclosed conflicts of interest involving a fund engaged in purchasing Lending Club’s loans and apparent attempts to pump up origination numbers by granting loans to the founder’s family members were also involved.

²⁵ Orchard Platform. “Quarterly Industry Report – Q4 2016.” 28 November 2016. <https://www.orchardplatform.com/blog/signs-of-a-turnaround-a-closer-look-at-orchards-2016-q4-report/>.

²⁶ Wack, Kevin. “Prosper Shuts Down Secondary Market for Its Loans,” 3 October 2016. American Banker. <http://www.americanbanker.com/news/marketplace-lending/prosper-shuts-down-the-secondary-market-for-its-loans-1091729-1.html?zkPrintable=true>.

For the fourth quarter of 2016, the last quarter for which we have data, originations were down a staggering 46% from a year earlier, though the slight rise from Q3 could be construed as a sign of hope for a beleaguered industry. Sentiment in marketplace lending has shifted “from exuberance to tempered realism.”²⁷ A series of issues now bedevil the industry: concerns about transparency and the reliability of low-level data, rising delinquencies and funding costs, and decreasing liquidity in the asset-backed market.²⁸ As one study said, “There is currently a lack of standardization in areas such as loan-origination data elements, loan performance data, and representations and warranties, which has contributed to the challenges in establishing a secondary market and broadening the investor base to larger, more mainstream institutional investors.”²⁹

Like many emerging industries, marketplace lending has experienced a boom and bust pattern in a period of rapid evolution. That will probably continue. After rapid growth, the sugar high has faded; reality has intruded. The two U.S.-based online lenders that have listed themselves on stock exchanges, OnDeck and Lending Club, have faced a near-constant decline in market capitalization since their 2014 IPOs and are now worth around a quarter of what they were at the end of December 2014.³⁰

Figure 6: Market Caps of Public Online Lenders Down to a Quarter of IPO Valuations

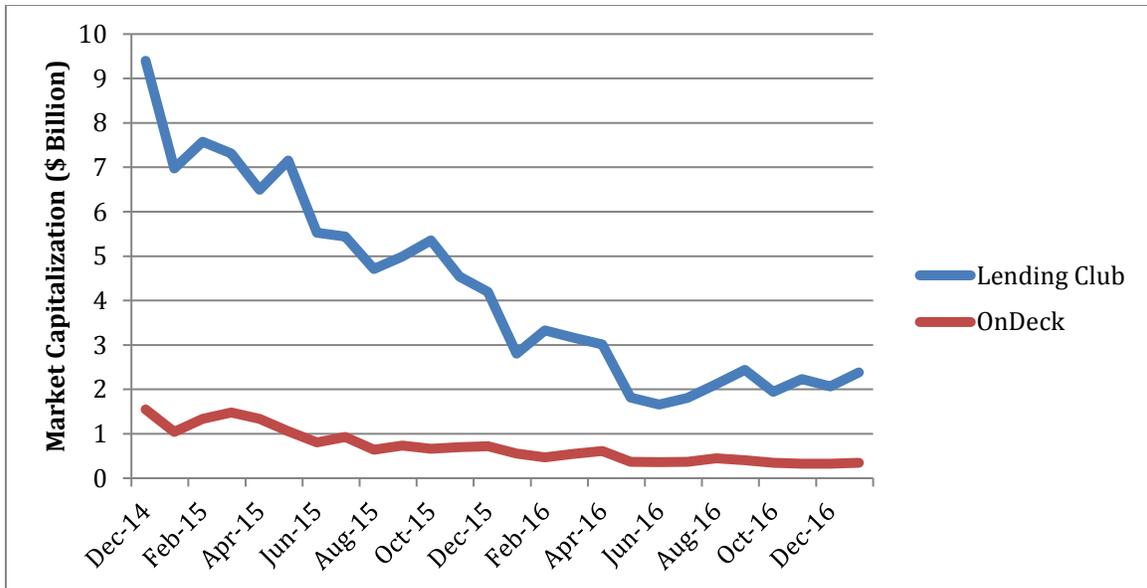
²⁷ PwC. “Marketplace Lending Comes of Age: Navigating the New Regulatory and Risk Environment in Online Marketplace Lending,” 2016.

<http://www.pwc.com/us/en/consumer-finance/publications/assets/pwc-marketplace-lending-comes-of-age-navigating-the-new-regulatory-risk-environment-in-online-mpl.pdf>. Page 2.

²⁸ Ibid. Page 2.

²⁹ Ibid. Page 10.

³⁰ Author calculations based on data from Ycharts.



Sources: Authors' calculations, YCharts data

Like any financial services provider, marketplace lenders perform a finite number of activities: origination, underwriting, funding and servicing. Firms must do at least one or two of these functions really well to generate sustainable competitive advantage.³¹ A major weakness of the marketplace-lending model is that the funding side is very weak due to its unreliability and the relatively high cost of capital, despite historically low interest rates, making it difficult to compete with banks and others that have cheaper sources of funding, like deposits. What Lending Club, for instance, did well initially was origination. But this was never going to last. Startups in servicing or on the origination side have been able to innovate similarly to Lending Club; some loan-origination companies lend off of their balance sheet with a cost of capital half that of Lending Club. The marketplace model has thus committed a cardinal sin of entrepreneurship: trying to be something you are not in order to gain a higher valuation multiple than you could if you were a straightforward balance-sheet lender.³² It is also important to note that the vast majority of marketplace lenders have been losing money since their inception, meaning that these models have yet to prove that they can be profitable and sustainable long term. In short, the banks turned out to be less vulnerable than the initial P2P argument for online disintermediation suggested.

5. Beyond Marketplaces: Online Lending

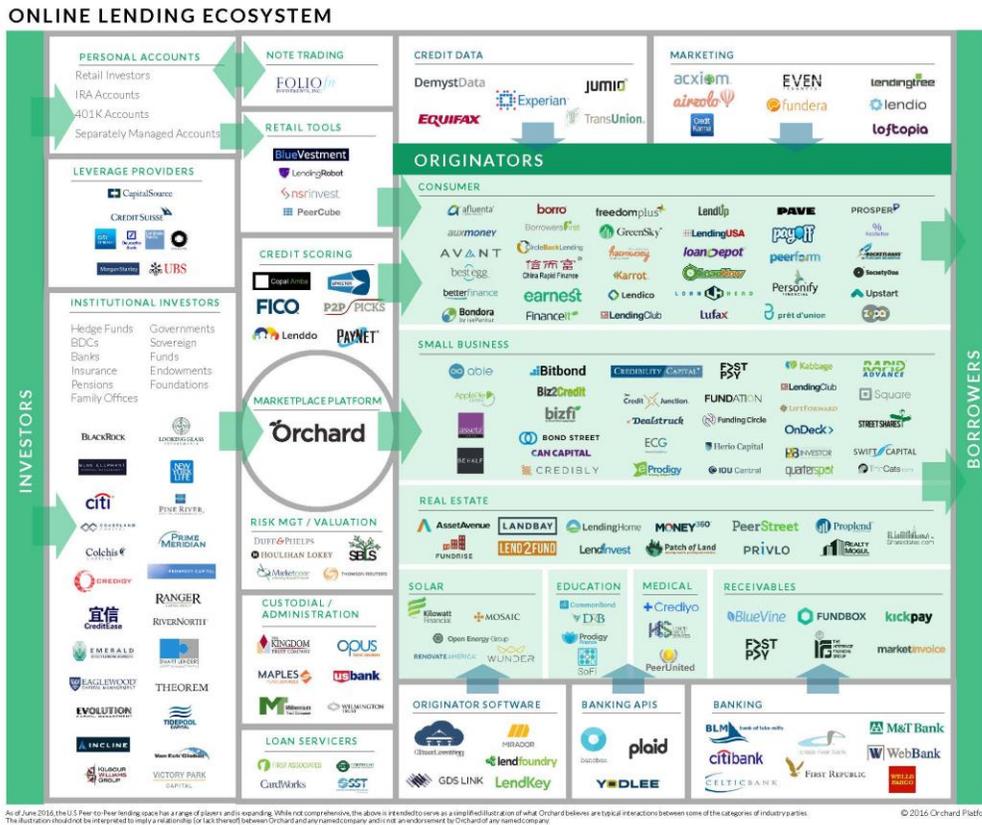
³¹ Slightly adapted from Harris, Matt. "The Short History and Long Future of the Online Lending Industry." 10 March 2016. Forbes.

<http://www.forbes.com/sites/valleyvoices/2016/03/10/the-short-history-and-long-future-of-the-online-lending-industry/#4d8856624874>.

³² Harris, Matt. 2016

The online lending industry today has expanded far beyond its headline-grabbing pioneers. It is a bustling marketplace, made up of hundreds of firms experimenting with different funding models and customer niches.

Figure 7: The Online Lending Ecosystem Is Large, Growing and Complex³³

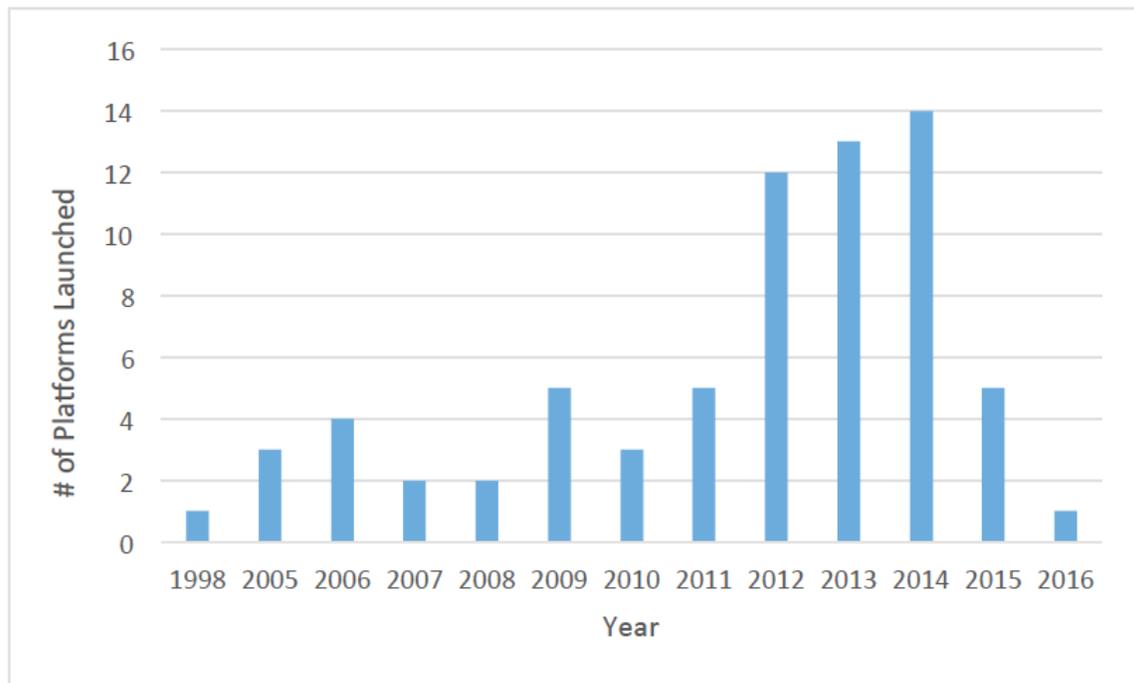


Source: Orchard Platform

A 2016 profile of 70 online non-bank lenders broke them down into categories that include two kinds of marketplace platforms, balance-sheet platforms, hybrid marketplace/balance-sheet lenders, purchase financing, education financing, many small-business lending models and even nonprofit players. Dozens of online lending platforms have sprouted up, with 2014 as the peak year for startups.

³³ Orchard Platform. "Orchard Lendscape 5.0." Orchard Blog. 22 June 2016. <https://www.orchardplatform.com/blog/orchard-lendscape-5-0/>.

Figure 8: New Marketplace Platforms Peaked in 2014³⁴

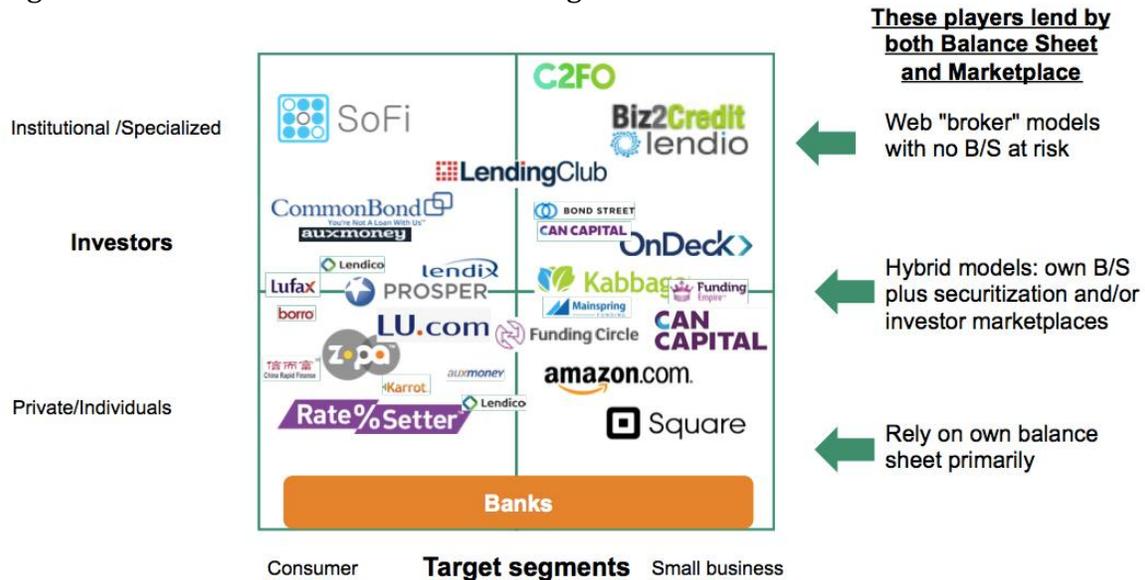


Source: Jackson Mueller, Milken Center for Financial Markets

All this diversity can be essentially encapsulated in three types of funding models, per the chart below. The first is a “pure” marketplace, including peer-to-peer lenders, which acts only as a broker and/or originator and never takes loans onto its own balance sheet. The second is a balance-sheet lender, which holds the loans it originates on its balance sheet. The third is a mix or “hybrid” of models, with some loans sold over marketplaces, others first originated and held on balance sheet only to be securitized later and others held on balance sheet until maturity.

³⁴ Mueller, Jackson. “The U.S. Online, Non-Bank Finance Landscape.” 13 June 2016. Milken Institute Center for Financial Markets Viewpoints. <http://www.milkeninstitute.org/publications/view/806/>

Figure 9: Small Selection of Online Lending's Diverse Business Models



Source: Boston Consulting Group Fintech Control Tower

Some online lenders run platforms that today focus purely on marketing loans originated through their online platforms to institutional investors. This includes SoFi, which started as a P2P player but quickly pivoted away from that model. These companies have standing purchase agreements with institutional investors, securitize loans or use private placements. The benefit of this strategy is that it gets around the most onerous SEC regulations that lenders selling to retail investors face, and it may be far less costly per dollar raised to obtain funds from institutional buyers flush with capital than from a large number of small-dollar retail investors. The drawback is that institutional buyers may be more skittish than retail investors may once rates or defaults rise, but it has yet to be seen whether this will be the case.

Online lenders like Avant and Affirm dip beyond prime borrowers into the near-prime segments to serve consumers who may not qualify for loans from Lending Club and Prosper. Avant also operates with a mixed-marketplace/balance-sheet lending model, which gives it the flexibility to ride out capital market fluctuations without suddenly stopping its lending operations. Affirm focuses on financing specific purchases with online retailers for younger borrowers with shorter borrowing histories. Launched in 2013, it has raised \$425 million to make loans and expand operations.³⁵

³⁵ Benner, Katie. "Affirm Raises \$100 Million, Bucking the 'Down Round' Trend." 12 April 2016. The New York Times.

<https://www.nytimes.com/2016/04/13/technology/affirm-raises-100-million-bucking-the-down-round-trend.html? r=0>.

LendUp reaches even deeper into subprime on the consumer-lending side. It bills itself as a better alternative to payday lending, allowing borrowers to establish borrowing histories that promise lower-cost methods of credit if they are able to establish a record of paying back loans. Its implementation has not been flawless, as witnessed by its settlement with the CFPB for failing to report to credit bureaus as it promised and for violations of the Truth in Lending Act by misrepresenting fees. But it has continued to grow (as well as growing its compliance team) and now appears to be fulfilling its promises to borrowers by reporting to the credit bureaus.

LendUp's story is indicative of the growing pains small firms face when trying to break into markets as heavily regulated as consumer finance. But for every LendUp, there is another high-interest online lender like CashCall that is just a classic payday lender migrating online to reduce overhead and avoid state regulations (it is unclear if CashCall ever passes savings to their customers). An estimated 60% of payday loans are now online.³⁶

We believe that online lending has enormous promise and potential for a sustainable advantage in the near- and subprime niches, with its potentially enormous underserved group between prime customers and those applying for loans with annual percentage rates (APRs) that may be in the hundreds.³⁷ For the conceivable future, regulators are likely to steer banks away from lending to these riskier borrowers; in any case, reputational risk concerns will remain an important factor in keeping banks away. The pioneering use of alternative data sources for these borrowers and relationships built there could serve to create a market the banks would find hard to enter on their own, though they could buy loans originated in this way once the new models develop a satisfactory track record.

While these players are all non-bank startups, incumbent banks may find other ways to enter the market for higher-priced credit as online models prove themselves through the next downturn. This may provide a better quantification of risk that could help them justify to regulators that lending in this area is consistent with safety and soundness. But it is not all about competition. Banks are already entering into a multitude of partnerships with online lenders, which we discuss in greater detail below. Niche markets are where new players are likelier to develop sustainable competitive advantages. One area in which this is the case is in the

³⁶ Bourke, Nick. Alex Horowitz, Walter Lake, and Tara Roche. "Fraud and Abuse Online: Harmful Practices in Internet Payday Lending." October 2014. Pew Charitable Trusts. [http://www.pewtrusts.org/~media/assets/2014/10/payday-lending-report/fraud and abuse online harmful practices in internet payday lending.pdf](http://www.pewtrusts.org/~media/assets/2014/10/payday-lending-report/fraud%20and%20abuse%20online%20harmful%20practices%20in%20internet%20payday%20lending.pdf). Page 3.

³⁷ Zinman, Jonathan. "Consumer Credit: Too Much or Too Little (or Just Right)?" June 2014. The Journal of Legal Studies. Vol. 43, No. S2. Page S212.

financing of assets that may require expert knowledge to appraise and specific networks of contacts to sell.

6. Flaws in the Model: Regulatory Arbitrage

Like many emerging industries, marketplace or online lending has struggled to move from theory to practice and to remedy a number of flaws inherent in the original P2P business model as practiced by its young protagonists—flaws that surfaced only as its initial success faded. It's undeniable that many key aspects of the current online lending model work because of regulatory arbitrage, finding ways to complete essentially the same economic substance of a transaction with less regulatory burden. Often this can be done in finance through “unbundling”, splitting activities that were combined in one banking institution among many specialized institutions. Depending on the nature of regulatory arbitrage, it could be a serious flaw in the model. Over time, any business built on weak compliance will grow too large to hide in the shadows and be forced to conform to legal and regulatory norms. This is especially true as inexperienced firms grow in both scale and attention. As the businesses grow, they may also face strategic challenges, such as the need for insured deposits or other low cost capital, that will increase the need for a bank charter and eliminate any arbitrage advantages.

For example, while some companies go state-by-state to obtain specific lending licenses, many online lenders use a single bank in Utah, Web Bank, to originate their loans applying federal preemption applicable to all state and national banks. The borrower applies online for a loan, which is only issued after a group of institutional and/or retail investors commit over the platform to fund it. The bank then issues the loan and sells it to the marketplace, which promptly turns it into a “payment dependent note.” This process benefits the bank and allows the platform to compete with other nationwide banking lenders, which also can benefit consumers. Loans made in this way, it is argued, are not subject to state law usury and fee requirements. However, the loans originated are quickly off-loaded to institutional and retail investors who funded the loans through the marketplaces.

This system allows marketplace platforms to facilitate loan transactions with interest in excess of usury limits in certain states through preemption. This helps to avoid transaction costs of state-by-state infrastructure faced by traditional state-based finance companies. As the model developed, Web Bank initially assumed essentially no credit risk, as the funds and agreement to purchase the loans were already prearranged between the platform and those prepared to ultimately purchase the loan. In light of legal developments Web Bank changed its agreements to capture two days' worth of interest and certain other amendments that provide for an ongoing economic interests in the loans that it originates. However, legal developments related to certain payday lenders may require additional evolution of

the model.³⁸ Under FDIC guidance, any loan made by Web Bank must comply with all applicable federal (and Utah) laws, and the bank must oversee the activities of the marketplace platform as a service provider. This oversight may include FDIC examination of the platform. Finally, the marketplace may still need to obtain a state license to conduct servicing or other activities. However, a number of states are concerned both that this model could be used improperly by very high cost (payday) lenders and that the model represents an inappropriate expansion of federal preemption.

Moreover, this model came into question after a 2nd Circuit Court ruling in May 2015 in *Madden v. Midland Funding LLC* and separate cases involving CashCall, which partnered with a tribal lending institution to issue its loans.³⁹ *Madden* does not involve marketplace lenders, but it has serious ramifications for this business (as well as other aspects of banking including bank loans sales and securitization). Instead, the case centers on charged-off credit card loans sold by Bank of America, in which the court found that a bank's ability to use a federal preemption of usury rules did not transfer with the assets to a new owner. *Madden* only applies in one circuit, but cases like it may eventually head to the U.S. Supreme Court. This has created a degree of uncertainty generally and in marketplace lending. Separately under a true lender theory, CashCall lost a case with the CFPB in September 2016 over very high interest rates. The court rejected the claim that the relationship between CashCall and the tribal entity, Western Sky Financial, was not subject to state usury rules. While marketplace lenders have in many cases restructured their arrangements to ensure that the originating bank retains at least some economic stake in loans, some uncertainty remains.

Credit scoring may be a source of arbitrage, however—and a potential legal risk. Online lenders often boast about the thousands of variables they use in their credit scores, but legal ambiguity remains despite a great deal of effort to ensure compliance with the Fair Credit Reporting Act and Equal Credit Opportunity Act. The potential problem: Some of these variables they use and banks do not, though helpful in predicting default, could be correlated with race or other protected classes. It will likely take litigation to pursue a disparate impact case against marketplace lenders for the compliance status to be unambiguously clear. We will explore this issue in greater detail below in the recommendations section.

On the borrower side, however, there is little regulatory arbitrage to be had other than avoiding the Community Reinvestment Act, the federal law enacted in 1977 to encourage banks to “help meet the credit needs of the communities in which they operate, including low- and moderate-income neighborhoods, consistent with safe

³⁸ The true lender classification in *CFPB v. CashCall* depended on whether the originating institution had a “predominant economic interest” in the loan, a different and potentially conflicting legal test with that of federal preemption.

³⁹ *CashCall v. Morrissey* and *Consumer Financial Protection Bureau v. CashCall*.

and sound operations.”⁴⁰ This arose also because banks were collecting deposits in some areas without lending in them. However, as we discuss below in Section 10, many online lenders are both serving the customers that the CRA is designed to include *and* partnering with banks to make it economical for banks to serve these customers. Many online lenders are focused almost exclusively on this type of market, like small businesses or near-prime consumers. More broadly, online loans need to comply with essentially the same laws related to borrower disclosure, credit scoring, debt collection and others of conventional regulated banking institutions. Other lenders, like credit card banks that do not take deposits, are also exempt from CRA.

On the investor side, there appears to be little regulatory arbitrage. As we have seen earlier, the SEC has been vigilant in ensuring that marketplace lenders marketing their loans to retail investors comply with securities laws in their disclosures and registration.

7. Risks on the Horizon: Credit Scoring in a Downturn

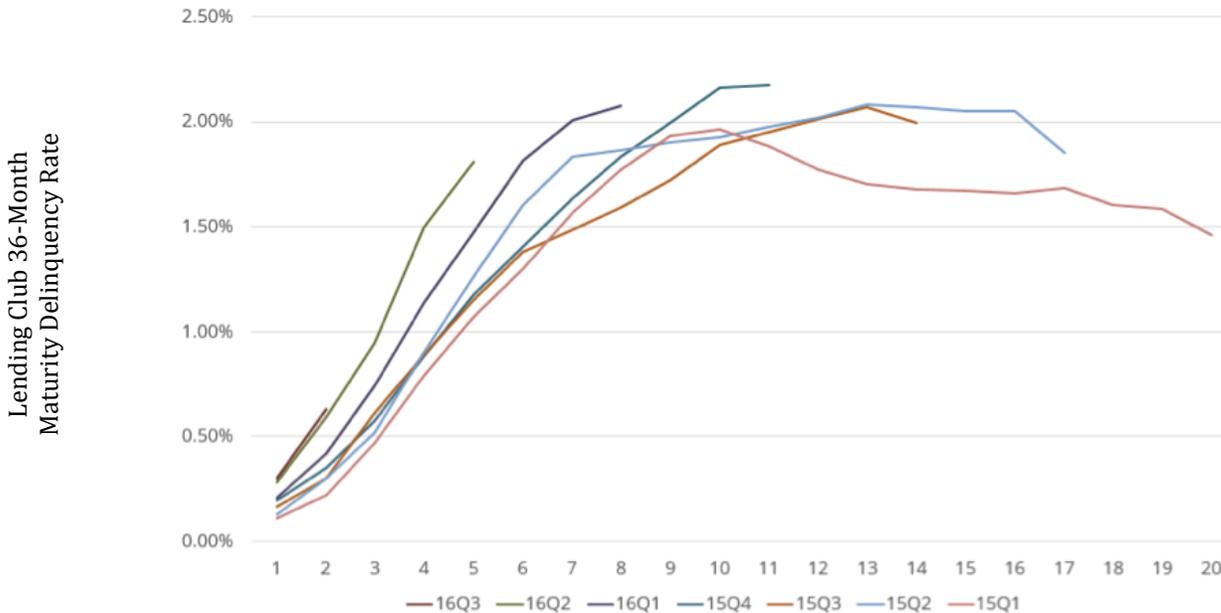
One of the common critiques of online lending is that its credit-scoring models have not demonstrated how they will perform through the next credit cycle. While Prosper and Lending Club had begun lending before the financial crisis, their lending volumes were miniscule then. In addition, the performance of the initial borrowers, likely tech-savvy consumers looking to save money on credit card consolidation loans, may be very different from today’s marginal borrower. To make matters worse, many of the newer online lenders do not even have the 2008–09 crisis in their data sets, raising questions about how they will fare when the next economic downturn hits.

While they have almost surely purchased external data sources to model these eventualities, Lending Club’s most recent quarters show that even market leaders are facing an uphill battle. The chart below plots delinquency rates for different vintages of Lending Club loans originated by quarter over the past two years. It shows a consistent rise in delinquencies occurring sooner after origination and hitting higher levels with each subsequent quarter. This is occurring in a very benign credit market with relatively robust economic performance, and a broad-based economic downturn is likely to do far more damage.⁴¹

⁴⁰ Board of Governors of the Federal Reserve System. “Community Reinvestment Act (CRA).” 2014. https://www.federalreserve.gov/communitydev/cra_about.htm.

⁴¹ Delinquency rates for credit card loans at commercial banks were stable over this period. They have risen from 2.125 to 2.29 percentage points (an eight percent increase) since Q1 2015, but these rates are near historic lows. Source: Federal Reserve Bank of Saint Louis FRED, <https://fred.stlouisfed.org/series/DRCCLACBS>.

Figure 10: Lending Club Loan Delinquency Rates Are Rising⁴²



Source: Lend Academy, NSR Invest

Only when we are through the next credit cycle will we know which underwriting models were robust, which need significant recalibration and which went bust. Even online lenders with much broader customer data sets and longer histories have had difficulty predicting where default rates will go in the next recession. For example, even big banks had to rethink their underwriting practices after the advent of the financial crisis, but thankfully some of their enormous losses predicted in the depths of the crisis did not end up being nearly as bleak as their projections had showed.⁴³

Another precedent exists in the high-yield bond market of the 1980s. Just like online lenders do today, upstarts like Drexel Burnham Lambert discovered what appeared to be a hole in the market for financing and began selling high-yield bonds, first in fallen companies, then in emerging companies, M&A and leveraged buyouts, to institutional investors such as savings and loans, insurers and takeover entrepreneurs. In bad times—the recession of the late '80s—the defaults spiked. Both originators and purchasers failed in large numbers, and junk bonds' most prominent pioneer and innovator, Drexel's Michael Milken, ended up in prison on fraud charges and the firm collapsed. But the shakeout served as a valuable lesson to firms that survived in the high-yield business. Many Drexel veterans moved to new

⁴² Lichtenwald, Ryan. "Recap of Recent Performance Trends with Lending Club and Prosper – Part #2." 18 January 2017. Lend Academy.

http://www.lendacademy.com/recent-performance-trends-lending-club-prosper-part-2/?utm_source=newsletter&utm_medium=email&utm_campaign=Feb12017.

⁴³ Rotman, Frank. 2016. Page 25.

jobs after that firm collapsed, dispersing a vast amount of experience and expertise in the business. High yield recovered and blossomed into a global, diversified market now comprised of hedge funds, credit funds, private-equity firms, retail and wholesale investors and many more. After the crisis of the late '80s, which many believed at the time represented the death of junk, high yield established itself as an accepted and robust component of the global market system.

In a financial-stress scenario, funding models of marketplace lenders have some significant weaknesses, much like mortgage originators such as Countrywide, IndyMac and Washington Mutual during the growth of the subprime real-estate bubble. In the financial crisis, institutional investors that provided liquidity to the commercial paper, mortgage-backed securities and other markets pulled back their financing, leaving originators without purchasers for the loans. The originating banks and brokers had to either take the failing loans onto their balance sheets or scale back their originations. Origination fee revenue collapsed.

Today's online lenders do not pose this level of risk. First, they remain a tiny portion of financial intermediation despite their breakneck growth, and the growth rate has fallen significantly in 2016 and 2017. Second, despite the securitization boom, the market lacks the additional structures (synthetic CDOs, etc.) that amplified the subprime mortgage defaults to far beyond the underlying defaults. Third, retail investors might be counted on to continue lending—though they currently contribute a negligible amount of the total credit online lenders originate. Fourth, up until now they have issued longer-term three-to-five-year loans. Flighty investors will thus not be able to suddenly create a dangerous liquidity squeeze for borrowers because rollover risk is not a major factor. The last reason, however, may also be a warning. There is increasing talk of standardizing loans to allow for a more liquid secondary market with open-ended funds, opening the door to maturity transformation. In addition, if the funds purchasing these loans allow for investor redemptions in a shorter time frame than the duration of the underlying assets, for example in an open-ended fund, then the maturity transformation could migrate to these institutions/funds. The net effect of marketplace lenders in a crisis scenario would then be not to eliminate the maturity transformation of bank-funded loans with deposits, but to shift this maturity transformation to very lightly regulated funds.

The business models most likely to be robust enough to survive through the next downleg of the credit cycle are those with the most diversified funding sources. In a crisis scenario, when loan buying dries up or slows to a trickle, online lenders will need to rely on other sources of income to sustain their fixed costs. Securing lines of credit that lower funding costs and ensure access to liquidity, even in tough times, will thus be key to continued loan originations to generate fee revenue, and the interest revenue from holding loans on balance sheet can also sustain the platform.

8. Risks on the Horizon: A Rising Rate Environment

The Federal Reserve's most recent interest-rate rise appears to have jolted the market into believing that rates will continue to rise. We predict that this will constitute a difficult challenge to online lenders, who have relied on a historically low interest-rate environment and the accompanying search for yield from institutional investors for their growth. As rates rise, competition for funds will as well. Both retail and institutional loan buyers will begin to demand better yields for a given risk category, and these will have to come from a combination of three sources:

- Charging borrowers higher interest rates
- Narrower spreads for the platforms
- Higher leverage

All three of these have adverse side effects for online lenders' business model. The first means that the difficulty of repayment for any given borrower will rise, producing elevated default risk. It also brings the risk of adverse selection, as higher rates tend to attract higher-risk clientele.⁴⁴ If you intend to default, you care less about interest rates. The second is no better. Investors were already cooling to marketplace-originated loans before Lending Club's scandal added further headwinds last year, cutting down on the growth of origination/servicing fee revenue needed to become profitable and to stop the burn of equity investors' cash. Tighter margins will certainly not be welcome. In addition, many of their competitors in the loan market, like banks, have much larger net interest margins due to their lower costs of funds, like deposits. As firms like Goldman Sachs and American Express use their technology-enabled platforms to issue consumer installment loans, the competitive environment will get tougher.

The final source, higher leverage, is where most of the risk will be concentrated. Institutional loan buyers take advantage of leverage provided by banks to juice up their marketplace-originated lending returns from an unlevered 8% or so up to the teens with two or three times leverage.⁴⁵ As rates rise, better-yielding alternatives available to funders of leverage will make obtaining leverage more difficult and more expensive. Thus, obtaining higher yields through leverage will grow more difficult just as it becomes more necessary for loan purchasers to achieve returns demanded by their investment committees. This could well necessitate further trips down the credit spectrum to load up on risk or attempts to raise leverage levels through more expensive, opaque channels. These trends are likely to continue.

⁴⁴ Stiglitz, Joseph E. and Andrew Weiss. "Credit Rationing in Markets with Imperfect Information." June 1981. *The American Economic Review*, Volume 71, Issue 3. Pages 393-410.

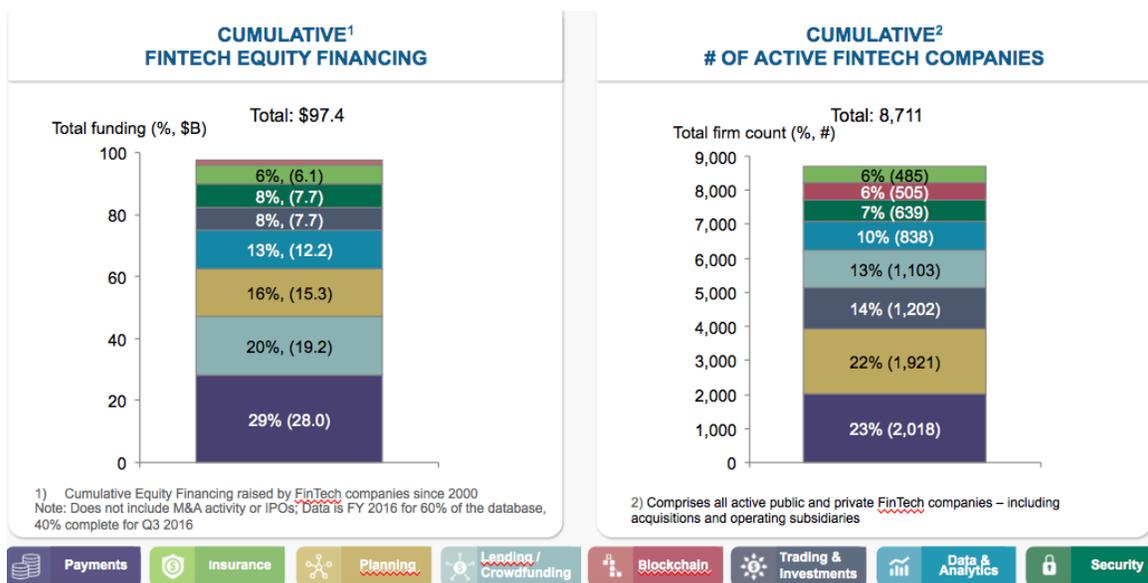
⁴⁵ The CFO of a prominent marketplace lender estimated the readily available leverage for buyers of unsecured consumer loans at 60%-70% loan-to-value in a conversation with one of the authors in November 2016.

In short, rising rates will drive defaults and put downward pressure on margins and upward pressure on competition for funds. None of these options is positive for online lenders, which will have to adjust.

9. The Good in Online Lending

Though online lenders have so far not fulfilled the arguably unrealistic expectations set by their IPOs, we should not deny that these companies have played positive roles—and will continue to do so in the future. After all, they are part of much broader experiments aimed at the increasing use of technology in financial services and the migration of lending activity to the capital markets. While these experiments often end badly for first adopters, and sometimes also for consumers and taxpayers, they can bring fundamental and valuable innovations to the market that force both regulators and incumbents to adapt to new realities. A look at the expanding marketplace indicates thousands of fintech firms around the world creating new ecosystems across lending, payments and much more.

Figure 11: Online Lending Platforms/Crowdfunders in Ecosystem of Thousands of Fintech Firms and Nearly \$100 Billion in Equity Funding



Source: BCG and Expand Analysis

Online lenders have proven to be very good at streamlining the lending process—a boon to the companies and to consumers. Whether their big-data-driven models are actually better at predicting defaults and managing portfolios than that of bank incumbents is debatable (we think it unlikely, at least for prime consumers), but their improvement of the user experience of, say, the loan application process is clear. The technology-driven approach can significantly reduce the marginal costs of each additional loan, making it far easier to scale operations.

This is especially relevant to smaller community banks, for which the economics of building their own advanced back offices makes no sense because of their limited scale. They can, instead, partner with online lenders who can help provide user interfaces that facilitate compliance and low-cost loan originations, offer co-branded products or even purchase individual loans if they have a surplus of funds or wish to diversify their risk. If they improve their capacity for compliance and transparency, if they can incentivize existing players to undertake technical upgrades, this will further facilitate such partnerships. The role of online lenders may well evolve into more of a technology provider than a lender, such as what GreenSky has done.

It is unlikely that the retail investor channel will play a large role in the next few years, but once the sector shakes out after the next credit cycle and improves its risk management, transparency and loan pricing, fractional loans may find their way into the portfolios of more investors. Lack of awareness and regulatory barriers have checked the development of this channel, and the quality of the scores that the online lenders use to price loans has also been problematic. Investors have so far experienced higher returns by investing in a fund rather than buying pieces of loans directly from the platforms, in effect paying sophisticated asset managers like Goldman Sachs to use their own models, layered on top of the model that marketplace lenders have developed, to cherry-pick loans available on the platforms.

This type of system departs from the ideal of a marketplace in which each buyer, retail or institutional, is on equal footing. Both new and familiar firms are thus reintermediating marketplace lending that promised “disintermediated” lending of P2P lenders. The retail share of Lending Club’s originations fell from about 75% in 2015’s first quarter to about 45% in the same quarter of 2016, then rebounded to 70% in 2016’s third quarter, mostly because of individual accounts “managed” by intermediaries that provide analytics and automated investment tools to retail investors.⁴⁶ The Jumpstart Our Business Startups Act (JOBS Act) of 2012’s easing of regulation for selling new types of crowdfunded securities to a wider variety of investors may help make it easier for marketplace lenders to eventually increase individual investor participation as marketplace lending becomes more of a household name. This would be good news for the industry, but time will tell if retail investors are ready for the kind of risk that these investments entail.

Another area that should be encouraged is one that comes with great risk: near- and subprime lending. There is already such heated competition for borrowers in prime and super-prime sectors with high FICO scores that the predictive power of new models is likely to hit steeply diminishing returns. The real promise of the use of alternative data is for borrowers who haven’t generated a large amount of traditional financial data. These tend to be consumers currently served by high-

⁴⁶ Author calculations, based on Lending Club 8-K filings accessed through SEC EDGAR.

overhead, low-tech, no-underwriting payday and other loans with annual percentage rates (APRs) that may be in the hundreds. The CFPB estimated in 2015 that just under 20% of American adults were either “credit invisible” or had too little information housed at the three main credit bureaus to score based on traditional metrics.⁴⁷

That means that some 45 million adult Americans could find their lives improved by faster and easier access to cheaper, less exploitative credit through attractive, low-overhead online interfaces, which may use alternative means to assess borrower reliability. These lenders are likely to charge relatively high interest rates, and there will undoubtedly be public criticism, but we believe that this is an area in which online lending could provide considerable benefit. The CRA already requires banks to serve a wide range of demographic groups throughout the community, even if it is not economical, but nimble online lenders might be able to serve these consumers profitably.

Another benefit of online lenders can be seen in the explosion of conferences, speeches, requests for information and general interest on the part of regulators who might otherwise have paid little attention to new business models and technologies. They have the opportunity to listen to incumbents explaining which regulations are blocking them from adapting to changing landscapes, the necessity for coordination due to ever-murkier distinctions between activities and institutions regulated by the complex tangle of regulators, and important debates around key questions: What kinds of innovations are possible and advisable to adopt? What kinds of products should be available to retail investors? What kinds of borrower protections are necessary? How can we have a more data-driven regulatory regime that focuses on consumer outcomes rather than rigidly following the letter of laws that are routinely flouted in spirit?

Like incumbents, regulators do not want to be seen as behind the times and have begun to launch new initiatives to learn and adapt. The OCC’s Office of Innovation is one of these initiatives, as is its fintech charter proposal, explored in more detail in Section 11. The Fed’s working group on fintech is another, as are some state actions like California’s to explore ways to make regulation simpler while still protecting consumers.

In any case, aspects of the marketplace-lending model that are reliant on regulatory arbitrage seem to be falling away as companies grow. Now that regulators are aware of their activities, these firms ignore the rules at their own peril. Even relatively small lenders like LendUp have faced multimillion-dollar fines for infractions that it

⁴⁷ Consumer Financial Protection Bureau Office of Research. “Data Point: Credit Invisibles.” May 2015. http://files.consumerfinance.gov/f/201505_cfpb_data-point-credit-invisibles.pdf. Page 6.

claimed occurred when it was a startup with only a few people.⁴⁸ As this happens, online lenders will increasingly look like the firms they once claimed they were poised to disintermediate or will be acquired by conventional banks. In a crowded field of online lenders looking to build trust and attract borrowers and lenders, signing up for higher regulatory compliance, like the OCC charter, while costly, will allow them to credibly signal their dependability and “safety and soundness.”

10. Whither the Banks?

The regulated banks are closely tied to online lenders, which are just another manifestation of the shadow-banking phenomenon. Shadow banks do not emerge spontaneously, but rather are funded by public or private markets because there is a perceived need, a gap or a hole in the market. When the first P2P companies were launched, many believed that if online lending succeeded, the banks would suffer. In the early days of online lending, the struggle was always presented as a zero-sum game, a revolution through disintermediation. That hasn't been how the business has evolved. Rather than develop as two diametrically opposed entities, the banks and online lenders have established partnerships and evolved together, a more complex process we would expect to see continue as the credit cycle turns. In any case, banks have never been the only game in town. They have long thrived in the presence of competition from finance companies and more.

The banks have much to offer online lenders and consumers. They have robust diversified businesses. They have built vast distribution systems, in some cases national in scale, with ATM networks and branches. The banks have customers in the form of millions of depositors—who are protected by deposit insurance offered by the Federal Deposit Insurance Corporation. There's a tradeoff here: deposit insurance (and consumer confidence) for regulatory oversight that at times can impose restraints, red tape and reduced profits. The banks have, in varying ways, brands that customers recognize. And the big banks boast enormous balance sheets anchored in billions of dollars of capital. Online lenders often lack distribution and access to customers or pay hefty costs to brokers to gain these, but even more importantly, they may need bank deposits to effectively fund their lending operations at a competitive price.

The banks, however, do have deficiencies. They are not notably innovative or nimble, despite the resources they possess that allow them to move into new areas; some of the blame—though not all of it—goes to needlessly heavy and excessive regulation. Since the financial crisis and the new rules that followed (adding to the already dense thicket of bank and public company regulation), banks have shouldered a heavier and more complex regulatory burden, have had to significantly

⁴⁸ Andriotis, Annamaria. “Fintech Upstart LendUp Fined by CFPB, California Regulator.” 27 September 2016. Wall Street Journal. <https://www.wsj.com/articles/fintech-upstart-lendup-fined-by-cfpb-california-regulator-1474993380>.

boost their capital and have faced restrictions from entering certain businesses. This has led to a variety of unintended consequences, including playing a role in reshaping the kinds of products banks offer and the kinds of customers they seek. These new rules, which ironically were a response to problems caused in part by lightly regulated shadow-banking activities, have inevitably opened new opportunities outside the regulated banking system.

The banks have broadly retreated from a number of lower-margin consumer businesses, shrinking credit lines on some credit cards, raising fees and getting out of businesses or parts of businesses that were once staples. Mortgages, for instance, make up a \$14 trillion market, but banks like Wells Fargo and Bank of America have either retreated from the business or focused only on its most profitable and safest parts. Online lenders early on targeted the banks' mortgage business, particularly emphasizing how they were developing a better and easier customer experience. The banks have brands and customers, but no one would confuse most of them with providing a superior customer experience. loanDepot, an online lender launched not long ago (2010), has now originated \$100 billion in mortgages.⁴⁹ Quicken Loans is even larger, ahead of major banks in this category (and number two overall) with \$96 billion in originations in 2016 alone.⁵⁰

Online lenders have rethought the customer experience, making the application process easier—it's all online, for one thing—and faster, reducing consumer fulfillment before approval by 75%; and without legacy information systems (also shaped in part by regulatory demands and in part by complexity and age), they've been able to build more streamlined back offices.⁵¹ They also targeted narrow slices of the larger lending market to attack, often seeking out underserved demographics or groups. Online lenders have proven to be more appealing to Millennials, who, as polls suggest, do not particularly like dealing with the banks.

Studies indicate that younger customers tend to use online financial services providers. The Millennial Disruption Index from Viacom found that banking faced the highest risk for disruption because of changing attitudes of younger consumers, with 33% of Millennials surveyed anticipating that they would not need a bank at

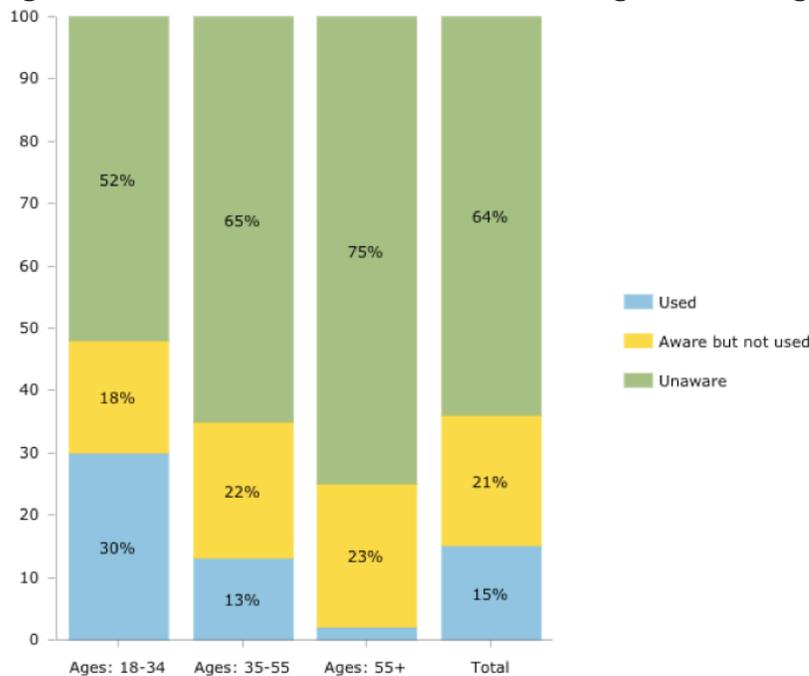
⁴⁹ Hsieh, Anthony. "A 100 billion-dollar milestone, built from the heart." 25 January 2017. LinkedIn. <https://www.linkedin.com/pulse/100-billion-dollar-milestone-build-from-heart-anthony-hsieh>.

⁵⁰ Creswell, Julie. "Quicken Loans, the New Mortgage Machine." 21 January 2017. <https://www.nytimes.com/2017/01/21/business/dealbook/quicken-loans-dan-gilbert-mortgage-lender.html>.

⁵¹ See Gebre, Biniam, Ahmet Hacikura, Kenan Rodrigues, Cosimo Schiavone, Sishil Raja. "Digital Mortgage Nirvana: Cheaper, Better, Faster." February 2017. Oliver Wyman. <http://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2017/feb/Oliver%20Wyman-%20Digital%20Mortgage%20Nirvana.pdf>.

all, and 73% more interested in a financial services offering from a technology company than a bank.⁵² While these are only surveyed attitudes, it is important to see if this openness actually has corresponded with use of these services beyond the kinds of easy-to-adopt payment services provided by the likes of PayPal.

Figure 13: Peer-to-Peer Lender Awareness High with Younger Consumers⁵³



Source: Morgan Stanley Research and Alphawise

A survey by Morgan Stanley Research and Alphawise indicates that Millennials are already using P2P or marketplace lending at a high rate, twice the national average. Almost half of 18- to 34-year-olds surveyed were aware of P2P lending or had used it. These two categories were almost double that of the over-55 age group, with only 2% usage and 23% who were aware but had not used it. This kind of imbalanced distribution of awareness toward younger consumers bodes well for the medium- and long-term prospects of online lenders.

Significantly, most banks are publicly listed entities, which involves more layers of SEC compliance, regulation and disclosure, not to mention a large and often demanding shareholder base and a Wall Street sell-side research establishment intent on immediate results, not necessarily market experimentation. Online lenders, with a few exceptions like Lending Club and OnDeck, have been financed

⁵² Viacom Media Networks. “The Millennial Disruption Index.” 2013.

<http://www.millennialdisruptionindex.com>.

⁵³ Morgan Stanley Research. “Can P2P Lending Reinvent Banking?” 17 June 2015.

<http://www.morganstanley.com/ideas/p2p-marketplace-lending>.

with private equity or venture capital in private markets. The private players may remain overvalued, but they do operate under a more direct governance setup and a lot less oversight from multiple interests.

The debate over banks and shadow banks, like online lenders, pits the balance sheet, installed base and relative stability and safety of conventional regulated banks against the flexibility, nimbleness and innovation of the online lenders. But again, while these differences are real, these are not two rigid blocs. Both are capable of change, and the border between them is fluid and shifting. While there is competition and fear of a zero-sum struggle, each satisfies the needs of the other. That does not mean the banks won't attempt to move into areas in which online lenders have made incursions—through acquisitions or organic growth. When they do, they may be formidable. As Prosper Marketplace noted in a recent SEC disclosure, “[M]ost of our current or potential competitors have significantly more financial, technical, marketing, and other resources [than we do].”⁵⁴ It's not that the online lenders won't continue to attack bank businesses with fat margins, with startups continuing to appear and IPOs continuing to occur. But much of this market, we believe, will combine strengths and hopefully minimize deficiencies through partnerships between the two. This will raise a number of important management, operating and cultural issues on both sides, and provide yet more challenges to regulators.

Partnerships between online lenders and banks have developed in a variety of forms to make use of strengths and weaknesses. Though there are other ways to segment these deals, they generally fit into two overarching categories: origination and funding.⁵⁵ A typical example for an origination partnership came in 2015 when JPMorgan Chase partnered with OnDeck. The latter provides an online interface, underwriting and servicing for small-dollar, small-business loan applicants, all of which is marketed to consumers under the JPMorgan brand. These loans would likely be unprofitable with the big bank's traditional underwriting strategy, but the tech backbone of the marketplace player makes it possible. It is still forming, and OnDeck noted in its latest earnings call that it is planning to expand the partnership “in a meaningful way.”⁵⁶ Other relationships replicate many of these characteristics but add an additional referral element. The 2016 partnership between Avant and

⁵⁴ Prosper Marketplace, Inc. Rule 424(b)(3) Filing. 2 December 2016. Securities and Exchange Commission Registration Number 333-204880. Page 32.

⁵⁵ For a detailed discussion of bank partnership models in the Small Business Lending Sector, see Mills and McCarthy, “The State of Small Business Lending: Innovation and Technology and the Implications for Regulation.” Harvard Business School Working Paper 17-042.

⁵⁶ Breslow, Noah. From OnDeck Q4 2016 Earnings Call. Breslow also noted that Chase is OnDeck's largest strategic partner for new customers. Transcript from seekingalpha.com. <http://seekingalpha.com/article/4046804-ondeck-capitals-ondk-ceo-noah-breslow-q4-2016-results-earnings-call-transcript?page=3>.

Regions Bank involves a co-branded online borrowing interface (Regions, powered by Avant) with two sets of underwriting standards. If borrowers do not meet Regions' criteria, they are referred to Avant, which makes its own underwriting decisions.⁵⁷

On the funding side, banks can pair up with online lenders by purchasing loans originated on their platforms. They can also act as investment banks to securitize marketplace loans, which, as we saw earlier, have now reached 70% of marketplace lending originations. Goldman Sachs, Morgan Stanley and Jeffries have all led marketplace lending securitizations of over \$1 billion each.⁵⁸ Banks can also purchase the securities that result from these transactions. Numerous banks have entered into commitments to purchase loans directly from online lenders. For example, SoFi says that it has sold \$1.2 billion in loans to banks and insurers.⁵⁹ These purchases can give banks access to assets (online lending securitizations are increasingly rated) that they can fund cheaply, which benefits online lenders that can originate loans at interest rates too low for them to be able to hold themselves with their much higher cost of capital.

Citigroup also recently launched an online small-business loan service in partnership with Biz2Credit, partially motivated by the desire to comply with CRA requirements,⁶⁰ and has also been involved in purchasing loans from Lending Club for the same purpose.⁶¹ The benefit of such a model is especially pronounced for midsize and community banks that lack the scale to justify significant back-end investment in technology for online or automated lending. These cases can involve co-branded products, or the online lender can serve simply as a technology provider. It's unclear what role online/marketplace lenders will play in coming years as banks upgrade their technology and find it economical to enter niches previously dominated by non-banks.

⁵⁷ Regions Bank. "Regions Bank to Offer Expanded Online Loan Customer Loan Experience Powered by Leading FinTech Firm Avant." 8 April 2016, Press Release. <http://ir.regions.com/releasedetail.cfm?ReleaseID=964213>; Daniels, Steve. "Avant in landmark partnership with top 20 bank." 7 April 2016. Crain's Chicago Business. <http://www.chicagobusiness.com/article/20160407/NEWS01/160409850/avant-in-landmark-partnership-with-top-20-bank>.

⁵⁸ PeerIQ 2016. *Supra* Note 24.

⁵⁹ SoFi. "SoFi Surpasses \$6 Billion in Funded Loans, Bolsters Leadership Team." Press Release. <https://www.sofi.com/press/sofi-supasses-6-billion-in-loans/>.

⁶⁰ Freed, Dan. "Citigroup quietly launches small business lending website." Reuters. <http://www.reuters.com/article/us-citigroup-loans-internet-idUSKBN15B2CK>.

⁶¹ Levine, Matt. "Citigroup Joins the Lending Club." 14 April 2015. Bloomberg View. <https://www.bloomberg.com/view/articles/2015-04-14/citigroup-joins-the-lending-club>.

For a borrower in the near future, obtaining funds from traditional lenders may end up looking a lot like borrowing from Lending Club and Prosper—though possibly even faster (banks do not need to wait for a loan to be funded in a marketplace). The partnership between JPMorgan Chase and OnDeck has already done this, with small-business loan applicants being guided through an online experience over OnDeck’s platform under the JPMorgan brand. The banks will also be doing this at a far lower cost and with more stable funding, and their deep pockets and longer lending histories will help them further develop the online algorithms. We suspect that current online lending leaders will adapt and leverage their existing brands to continue operations.

11. Policy Recommendations

It is easy to forget how young the industry is and how rapidly it is evolving. What we are seeing is a much more complex industry than the one envisioned by the pioneers of P2P or marketplace lending. Indeed, the use of these innovative credit-scoring analytics and algorithmic underwriting models has never been tested in a market downturn or recession—and there has been enough fallout from other examples of innovative finance, like the securitized mortgage system that played a role in the subprime bubble, to be cautious. Additionally, they have not yet proven their ability to become and stay profitable. Not surprisingly, there are also pressing issues about regulation of marketplace lending, which involve both state and federal bodies, including the FDIC, the OCC and the CFPB, and which undercut the notion that marketplace lending offers an escape into a pure and efficient market process.⁶²

As the industry grows, U.S. regulators have belatedly begun their information-gathering processes to determine what kind of oversight is needed. The Obama administration’s Treasury Department in its last months released a white paper on marketplace lending,⁶³ and the New York Department of Financial Services requested information from 28 online lenders and demanded “immediate compliance” with state licensing requirements. The Financial Stability Oversight Council, the federal interagency body watching over systemic financial risk, highlighted credit risk in marketplace lending in its annual report.⁶⁴ The Financial Stability Oversight Council (FSOC), for example, admitted that the direct nature of marketplace lending did not involve “maturity transformation”—that is, the banking practice of borrowing money on shorter time frames than it is lent out, which can lead to bank runs—but algorithmic underwriting models have not been tested and there “is a risk that marketplace loan investors may prove less willing than other

⁶² Manbeck and Franson 2016. *Supra* Note 10.

⁶³ United States Department of the Treasury. “Opportunities and Challenges in Online Marketplace Lending.” 10 May 2016. White Paper. https://www.treasury.gov/connect/blog/Documents/Opportunities_and_Challenges_in_Online_Marketplace_Lending_white_paper.pdf.

⁶⁴ Pwc. *Supra* Note 27, Page 4.

types of creditors to fund new lending during times of stress”⁶⁵—that is, so-called liquidity risk. Enhanced regulatory scrutiny is also occurring overseas, even in the U.K.,⁶⁶ which tends to be regarded as the model for marketplace-lending regulation.

Part of the reason that these platforms are much more lightly regulated than banks is that they differ on key issues of pooling and ownership. Traditional intermediaries, like banks, take funds and create a liability backed by the credit of the bank. They then pool these funds to grant loans, owed to the bank. The supplier of funds does not know which loans they funded, and the user of funds does not know who funded their loans, since all of these loans are pooled at the bank level. Other than evaluation and pricing of risk for loan clients, the bank provides services that marketplace lenders do not: maturity transformation and risk diversification. Short-term deposits are turned into longer-term loans, which create the risk of runs if deposits are suddenly withdrawn. Risk diversification allows a depositor to gain exposure to the whole loan portfolio instead of individual loans. In exchange for these services, the banks make a profit by taking a spread between rates paid on deposits (essentially zero today) and those it earns on loans. It is this spread that has enticed marketplace lenders. If they could find a way to reduce costs far enough, they could be more profitable than the conventional banks with a tighter spread that attracts both borrowers and lenders.

Regulators face a formidable challenge to balance the benefits of innovation and increased efficiency that new models and methods can bring the financial system with keeping the risks at an acceptable level. The following recommendations flow from our diagnosis of the most important regulatory issues for this sector, which include:

- Consumer Protection
- Barriers to Entry
- Consumer Access
- Financial Stability

Recently announced plans from the Trump administration to roll back aspects of Dodd-Frank are sure to have an effect on the marketplace-lending sector, but it is too early to tell whether this will be to their benefit or detriment. On the one hand, they may lose some of their competitiveness as opportunities for regulatory arbitrage and cost advantages versus heavily regulated banking institutions will shrink. On the other hand, simpler regulation could lower barriers to entry and

⁶⁵ Financial Stability Oversight Council. “2016 Annual Report.”

<https://www.treasury.gov/initiatives/fsoc/studies-reports/Documents/FSOC%202016%20Annual%20Report.pdf>. Page 126.

⁶⁶ Rovnik, Naomi. “FCA to probe peer-to-peer lending sector.” 8 July 2016. Financial Times. <https://www.ft.com/content/7663e4b4-44fb-11e6-b22f-79eb4891c97d>.

reduce compliance costs that can be more difficult to shoulder for smaller upstarts than for established institutions.

Consumer Protection

Consumer protection laws and regulations should shift their focus away from legalistic “compliance” with a bewildering set of statutes and instead focus on the end impact for the consumer. Previous legislation like the Truth in Lending Act has helped consumers of financial products with the laudable goals of making disclosures more standardized and intelligible, but the sheer variety of different financial products available makes this standardization difficult and expensive to achieve in practice.

Though it has attracted its share of criticism, the CFPB has taken some positive steps toward a more data-driven, innovative approach to regulation. Its Project Catalyst gives entrepreneurs a chance to engage in informal discussion with regulators to identify potential regulatory issues early on, the no-action letter aims to help reduce some of the legal uncertainty around introduction of new products, and its extensive use of carefully monitored pilots to test new models for disclosure is a good way to stem proliferating mandated disclosures that can raise costs without helping consumers. Since different consumer segments approach purchases of financial products with different degrees of financial literacy, the language and type of disclosure should be allowed to vary significantly between a super-prime credit card and near- or subprime installment loans.

Some states with very low usury caps should consider raising them, as appropriate. The largest underserved population for financial services falls into the gap between those able to obtain a credit card with a reasonable credit limit and those who have little choice in getting credit other than expensive payday lenders and pawnshops. For many of these consumers, a reasonable interest rate to compensate a lender for the associated default risk is far above state usury caps, which can be too low for lenders to even consider near- or subprime consumers.⁶⁷ Credit card banks, payday lenders and many out-of-state banks can essentially ignore state usury laws, so these restrictions appear to have little teeth as it is.

While many consumer advocates and state regulators have fixed on 36% APR as a safe rate for installment loans, there is no uniform threshold at which all types of loans, in terms of borrower creditworthiness, maturity, amount, collateral and cost structure, make sense. This is why today’s rate cap landscape is littered with exemptions and differing thresholds. Many investors will not touch lenders with

⁶⁷ 70% of jurisdictions in the U.S. have usury caps at or below 36% annual interest for small dollar installment loans. See Saunders, Lauren K. “Why 36%? The History, Use, and Purpose of the 36% Interest Rate Cap.” April 2013. National Consumer Law Center. <https://www.nclc.org/images/pdf/pr-reports/why36pct.pdf>. Page 3.

products that exceed 36%, even if the business is lending at 50% APR to customers who would normally pay annual percentage rates in the hundreds. The heterogeneity in state lending laws and frequent changes should provide fertile ground for natural experiments that regulators and academics could use to undertake rigorous studies on the effects of past rate cap introductions. More evidence on these effects would help raise the quality of the debate over cost versus access with clearer evidence on consumer impact.

Barriers to Entry

Those who pejoratively chalk up the growth in online lending solely to regulatory arbitrage are missing the point. Many of these lenders have found legal ways to bypass inefficient processes in the lending business. These processes are a result of banks' legacy systems and the development over time of a complex and overlapping financial regulatory structure that risks becoming more focused on legalistic compliance than on the fundamental safety of the banking system and the protection of consumers. In that sense, online lenders have created competitive pressures on the banks and their regulators, challenging them to find ways to overcome cumbersome existing practices and demonstrating to regulators that this can be done in a responsible manner. The regulatory system's barriers to entry should thus not be designed to build an impregnable wall and moat around the banks, forcing every lender to adopt the same lofty standards as those institutions that have the responsibility for holding FDIC-insured deposits or accessing the Federal Reserve's discount window.

Current licensing requirements in lending markets already vary enormously across states, sectors and funding models. A small-business lender, funded with a warehouse line, may not need a license at all in many states and is often not subject to more onerous consumer-lending regulations.⁶⁸ Those with nationwide reach that lend to consumers or operate marketplaces for loans accessible to retail investors face much higher barriers to entry due to regulation. While online lending appears to be an inherently national activity, the differences in states could prove to be fertile experimentation grounds to prove the viability of new models at a smaller scale to state regulators before they expand nationwide. While states have beneficial laws aimed at protecting residents from unfair practices and argue that they are better placed to respond to changes in the market than federal regulators, constantly shifting inconsistencies across the states creates regulatory burdens that end up being paid for by borrowers.

Online lenders and their advocacy organizations should engage with organizations like the Conference of State Banking Supervisors to harmonize lending laws as much as possible to reduce the headache and expense of complying with 50 different

⁶⁸ Mills and McCarthy 2016. *Supra* Note 61. Page 8; Manbeck and Franson 2016. *Supra* Note 7. Page 43.

regulatory regimes (possibly in addition to multiple federal regulators). These steps would reduce costs for lenders, and ultimately the cost to borrowers, by reducing the incentive for marketplace lenders to partner with banks to issue loans in order to gain preemption from state law. State regulators admit that there is room for improvement. Jan Owen, California's State Commissioner for Regulatory Oversight, said recently that "The [fintech] industry has legitimate criticisms about the lack of consistency and certainty in the current state regulatory regime," and invited 13 fintech firms to a dialogue to find "ways to improve the interstate regulatory structure so fintech companies can operate across jurisdictional lines with less cost, regulatory burden, and compliance risk."⁶⁹

This kind of constructive dialogue and drive for change may not have happened without the looming pressure of the OCC fintech charter, which would give online lenders a choice between state and federal regulations as well as potentially providing many of the rights to preempt state laws of chartered banks. That said, the charter would have to ensure that applicants are held to high standards to avoid a regulatory race to the bottom. In this case, a level playing field should not simply aim to hold fintech firms to the same rules as banks, because the risks in their business models are not the same as depository institutions. Instead, it should be viewed as an opportunity to update and streamline consumer protection regulations that financial services providers, no matter their organizational form, must follow.

We support the OCC's proposal to design a fintech charter. The dearth of new charters issued since the financial crisis should make it clear that the OCC does not hand them out easily, so only the most compliant and safest fintech firms would even bother to undertake the effort and expense to apply. We anticipate that the typical path will be that the online lender begins its operations in one or a few states with relatively proactive regulators and large markets, like California, to ensure that the regulatory burden is not too heavy in its early stages. State regulators could consider coordination on this matter to lower the costs required to monitor many different states' regulatory regimes. As a fintech firm successively demonstrates the capability of its management and quality of its underwriting techniques, it could then (likely a few years into its operations) apply for a fintech charter. It is clearly not in the self-interest of a risk-averse regulator like the OCC to issue charters to risky, unproven businesses that could harm their reputation for focusing on safety and soundness. In this way, we would have a continuation of the current system, in which nationally chartered and state-chartered banks play important roles in providing financial services.

⁶⁹ Quoted in Clozel, Lalita. "California regulator acknowledges 'legitimate criticisms' of state licensing." 14 February 2017. American Banker.

<https://www.americanbanker.com/news/california-regulator-acknowledges-legitimate-criticisms-of-state-licensing>.

In any case, current barriers are not effective as long as the online lender is able to find a chartered bank (like Web Bank or Cross River) willing to partner to make loans. If they do not partner, they face a formidable barrier for a young business. They must go state-by-state, a strategy that Jo Ann Barefoot, a former Deputy Comptroller of the Currency and current regulatory technology (regtech) entrepreneur, noted requires “several years and millions of dollars” to attain compliance and licensing in each state.⁷⁰ This barrier to nationwide entry unnecessarily leaves online lenders between a rock (a costly, legally gray workaround with a rent-a-charter) and a hard place (state-by-state compliance). This also would leave many consumers either without or with higher cost products and services offered by these online lenders.

Consumer Access

One of the concerns both online lenders and incumbents have expressed is related to the legal risks stemming from “disparate impact” and their use of innovative credit underwriting models that take into account alternative data not used in the past. Disparate impact rules try to ensure that lenders are not implicitly discriminating against borrowers based on factors like race and age. The Federal Trade Commission (FTC), which is responsible for enforcement of the Equal Credit Opportunity Act (ECOA), states that disparate impact happens when a lender “employs facially neutral policies or practices that have a disproportionate adverse effect or impact on a protected class, unless those practices or policies further a legitimate business need that cannot reasonably be achieved by means that are less disparate in their impact.”⁷¹ To complicate matters, it further states, “Even if evidence shows the decisions are justified by a business necessity, if there is a less discriminatory alternative, the decisions may still violate ECOA.”

The lack of clarity of what these “alternatives” mean for underwriting models that use machine learning algorithms and thousands of data points poses serious legal risks for online lenders and may be keeping traditional financial institutions from using new data that could help improve their underwriting. In fact, “this problem exists in traditional lending as well,”⁷² but there has in effect been a carve-out for

⁷⁰ Barefoot, Jo Ann. “Letter of Comment: Consideration of Authorizing National Bank Charters for Fintech Companies.” 17 January 2017. <https://www.occ.gov/topics/bank-operations/innovation/comments/comment-barefoot.pdf>. Page 6.

⁷¹ Federal Trade Commission. “Big Data: A Tool for Inclusion or Exclusion?” January 2016. <https://www.ftc.gov/system/files/documents/reports/big-data-tool-inclusion-or-exclusion-understanding-issues/160106big-data-rpt.pdf>. Page iii.

⁷² Knight, Brian R. and Staci Warden. “Public Input on Expanding Access to Credit through Online Marketplace Lending.” 28 September 2015. Milken Institute Center for Financial Markets.

the use of scores like FICO that also correlate with protected classes. Regulators must strive to be aware of the most advanced underwriting/scoring technologies and actively evaluate their implications for consumer outcomes, industry practice and regulation. This includes updating their rulemaking and enforcement mechanisms when changes are necessary.

With today's most advanced methods, it may be impossible to point to specific variables that result in a rejection. This makes compliance with ECOA a difficult affair. The FTC says that it approaches each practice with a "case specific inquiry,"⁷³ so it may be difficult ex-ante to know if a certain underwriting practice puts a lender at risk of legal liability. To make matters even more complicated, the CFPB is also responsible for rulemaking for the ECOA in consumer-lending products. While its goals are laudable, the uncertainty around application of disparate impact is problematic. The CFPB and FTC should issue joint guidance with clear tests that lenders can use to prove that their practices do not have disparate impact. In addition, they should provide more detailed definitions, specific to lending, of "business necessity" and the nature of a "less discriminatory alternative"; e.g., what the key metrics are and how they will be weighed. The interpretation of these laws must adapt to achieve their goals in the least distortionary way possible.

Financial Stability

The FSOC, the Federal Financial Institutions Examination Council (FFIEC) or another interagency body should study the use of leverage in the purchase of online-originated loans and follow the flow of funds to ascertain their ultimate source. Marketplace lenders argue that they do not pose financial stability risks because they do not carry much credit risk on their balance sheets. Online lenders more generally insist that smaller consumer loans make it easy to diversify risk for investors. While there is a great deal of truth in these arguments, the real financial stability risks will eventually lie in the leverage and lack of visibility on the funding side of online lenders.

In its white paper on marketplace lending, the Treasury noted that most online lending transactions occur in private markets and do not require SEC filings.⁷⁴ As in the financial crisis, regulators may realize the extent to which underlying credit quality is declining, but lack the data to understand the implications for financial stability: Which institutions/funds will take the losses, how leveraged are they and who is at risk as counterparties in the event of a failure? Just as in the previous mortgage boom, it is almost certainly regulated banks serving as the ultimate providers of funds and leverage. The transparency at the loan level should thus

<http://assets1c.milkeninstitute.org/assets/Publication/Viewpoint/PDF/MICFM-Comment-Letter-TREAS-DO-2015-0007-FINAL.pdf>. Page 7.

⁷³ Federal Trade Commission 2016. *Supra* Note 77. Page iv.

⁷⁴ United States Department of the Treasury 2016. *Supra* Note 69. Page 25.

extend to funding, at least for regulators, and the requirements could set tiers of reporting burdens according to origination volume or balance sheet size so they are commensurate with the risk posed by the institution.

12. Conclusion

American banking regulation has long swung between two impulses: control and competitive experimentation. As a result, disintermediation, the emergence of non-bank companies offering new or more efficient financial products and services in competition with regulated banking institutions, tends to retreat in periods of heavy bank regulation (often following financial crises), like the three decades from the Great Depression to the 1960s, only to return in eras of relative deregulation. The most recent wave of non-bank insurgents has appeared under the banner of fintech, or financial technology: P2P, marketplace or online lenders out of Silicon Valley that emerged and have proliferated in the years after the millennium. Their initial strategy was clear, their story compelling. Using powerful (and exponentially improving) computer software and hardware, big data and the near-universal portal of the Internet, non-bank lenders could directly link investors and borrowers, cutting out traditional banks as intermediaries and providing more accessible, cheaper, efficient and safer banking products. As this paper describes in some detail, the realities of events, markets and regulation over the past decade or more have reshaped and refocused these aspirations in new and revealing ways.

These startups brought an upsurge of innovation to lending—we focused here particularly on the consumer side, but the innovation in small-business lending is also extraordinary—where banks were slow to change and, after the financial crisis and its subsequent spasm of re-regulation, in retreat. But the much-discussed Manichean clash of online lenders and traditional banks soon gave way to a more complex combination of competition and cooperation. Online lenders discovered they needed banks' ample and relatively cheap capital; the notion of a direct connection between lenders on the Internet and borrowers faded, particularly as institutional investors appeared as buyers of online loans. Rather than compete, banks often partnered with marketplace lenders or put their considerable resources into replicating their innovative and efficient online interfaces. Online lenders also tangled with regulators—both traditional financial regulators, like the Fed, the OCC and SEC, and the new CFPB—and with state banking regulators, on one hand driving some clarification of legal issues between state and federal authorities, while on the other strategically adapting to a shifting regulatory environment.

The rules of the game may be about to change with the coming of the Trump administration and its avowed deregulatory push. Legislative and regulatory reforms and lighter enforcement may give banks more leeway than they have had in recent years and reduce the gap between regulatory costs and restrictions on banks versus online lenders. But the situation with the new administration is fluid and uncertain; no one really knows what kind of regulation will result as initiatives work their way through Congress and the regulatory establishment. This deregulation could pose a challenge to online lenders aiming to take on the banks, but it could

also serve as a boon to firms that have already created strategic partnerships with banks and will profit from their expansion.

Many more challenges remain. Last year was a difficult one in online lending, with many online lenders laying off employees and seeing share prices fall, and with institutional funds that purchase online loans discovering returns declining sharply. Delinquencies are rising, provoking questions about online credit standards. More generally, the algorithms developed by online lenders to determine whom they will lend to and at what price will clearly be tested with rising rates and in the next credit downturn—along with their financial robustness, risk controls and management skills.

We are confident, however, that the innovative forces unleashed by the rise of online lending, which have produced hundreds of new companies, will continue, will find ample room within the regulatory system to experiment and will, over the longer term, produce significant benefits for the financial economy. Like so many insurgents intent on transformation, online lending has driven significant disruption in financial services and will find itself, one day, a secure and accepted part of the financial establishment.

We will take this one step further. It may well be that online lending has come along just in time to reform consumer banking and finance, which has, for a variety of reasons, many of which involve fallout from the subprime financial crisis, grown increasingly expensive for consumers, with smaller credit lines, higher fees, fewer branches and diminished credit. Online lending, with its efficiencies, lower costs, ease of use and ubiquity, may well be one answer to this relatively silent crisis, which has seen lower demographic and FICO-score groups squeezed out of the regulated banking system and into the arms of expensive payday lenders and pawnbrokers,⁷⁵ as well as the disappearance of non-urban community banks in large numbers.⁷⁶ It is hard to imagine that the innovations of fintech could have come as quickly from within incumbent banks.

And so, this is a kind of call to arms: Online lending is not just a way to make a profit in the shadow of the banks; it may be a necessary path to create a more accessible, better regulated and efficient U.S. consumer banking franchise. It goes without saying, as well, though it is often muted in the play of self-interests, that the necessary precondition for financial experimentation embodied by online lending is a vigilant and self-critical regulatory system.

⁷⁵ Baradaran, Mehrsa. “How the Other Half Banks: Exclusion, Exploitation and the Threat to Democracy.” Harvard University Press. Cambridge, Mass. 2015.

⁷⁶ Lux and Greene. “The State and Fate of Community Banking.” M-RCBG Working Paper No. 37. Harvard Kennedy School. 2015; and Lux and Greene. 2016. *Supra* Note 17.