

From Competition to Collaboration— FinTech, Big Data, and Traditional Financial Services

Introduction

The last two years have witnessed an international obsession with the new twin stars of financial services—Big Data and FinTech. Reminiscent of the late 1990s halcyon days of the dot.com era, enthusiasts claims about the likely impacts of this trending pair know no bounds. According to this narrative, well-established actors within each segment—consumer lending, commercial lending (especially small business lending), investment services, payment systems, credit reporting and scoring—had become anachronistic, and would soon be disinter mediated by innovative ideas hatched by young entrepreneurs from Silicon Valley who were armed with Big Data.

Initially, new FinTech innovations were labeled “disruptive” and the emergence of growing numbers of FinTech players was viewed as a threat to the established players—some sort of mortal combat with only clear market winners and losers. According to the disruption narrative, JPM Chase will lose out to Prosper, Citi to Kabbage, Vanguard to Aspiration, Visa to Google Wallet, Experian to Facebook, and FICO to Zest Finance and so on. Indeed, at the 2014 World Consumer Credit Reporting Conference in Dubai, one senior officer from the International Finance Corporation told a packed audience to look to their left, and then to their right, and say goodbye to one or the other as there would be many new faces at the next WCCRC in 2016 owing to the inevitable disruption caused by new entrants like Google, Facebook, LinkedIn, Alibaba, Amazon, eBay and other internet companies endowed with massive consumer data assets.

What has happened over the ensuing 18 months is very much akin to the dot.com sector after its two-year honeymoon with the media, investors, and the general public. Investor enthusiasm reached an inflection point (and eventually plummeted, a phenomenon we haven’t observed in FinTech yet—and are unlikely to for reasons upon which will be elaborated later in this white paper), and the narrative framework surrounding FinTech and Big Data has shifted from combative to complementary. Big Data is being reduced into different components and is being relabeled into “smart data” and “actionable data.” The challenges of data acquisition and the limitations around Big Data—use limitations in advanced countries with complex regulatory frameworks governing data collection, storage, use and re-use, are increasingly considered and have brought a more pragmatic tone to the discussion about impacts from Big Data.

Similarly with FinTech. The relationship between FinTech and the traditional financial services sector is now viewed as complementary in the parlance of economics—and is more likely to be characterized now by terms such as collaboration, symbiosis, and synergy than by disruption. Future progress within the financial services sector, it now seems, critically depends



upon the ability of banks and lenders to find creative ways to productively engage with innovative FinTechs who need the experience, skills, and wherewithal of traditional players to scale and thrive—maybe even survive.

In fact, what seems to be playing out in consumer and commercial lending, as well as in payments systems, is a version of the tried and true pharma model—scientists invest sweat equity building a better mousetrap, launch a nimble start-up only to be gobbled up by cash rich giant players with established compliance departments, legal departments, marketing arms, distribution platforms, needed relationships and trusted brands that are eager to add to their pipeline but who struggle to innovate owing to institutional constraints—let’s call it the gravity of size and protocol.¹

Banks are increasing internal IT budgets to promote innovations while investing more and more in partnerships with FinTech firms or simply acquiring seemingly promising FinTech start-ups to increase their product portfolio and innovate through acquisition.

Why Credit Reporting is Viewed Differently: Some Examples From Around the World

Interestingly, one area within financial services where the narrative hasn’t shifted is credit information sharing—a terrain occupied by credit bureaus and value added service providers such as FICO and SAS. Within this quarter of the financial services sector, the prevailing belief is that credit bureaus and companies that develop credit scores are going to be disintermediated. It is seemingly incontrovertible that at some point, these dinosaurs will be rendered obsolete by a FinTech or dot.com company that just figures out a better way of doing it.

ZestFinance is the poster child of this dynamic. Founded by a former Chief Technology Officer from Google, ZestFinance made public claims that they had built a better credit risk assessment model. Instead of using credit report data—ancient history in the mind of ZestFinance CEO Douglas Merrill—that would only tell you how well a person has paid their past obligations, or a FICO score based upon credit history, ZestFinance would use thousands of variables, forging them into meta-variables and tool kits that would be better at predicting how likely a person would be to repay their debt obligations moving forward. According to Merrill, his model was the future and credit bureaus and value added service providers the past.

ZestFinance has a regulatory SNAFU in the US—the Fair Credit Reporting Act (FCRA) that governs consumer credit reporting. Unable to convince regulators that “every piece of data is

¹ “These Banks are Funding FinTech.” *American Banker*. <http://www.americanbanker.com/gallery/these-banks-are-funding-fintech-1090978-1.html>; Marino, Jon. “Big Banks Shift FinTech Strategy,” 11 April 2016. CNBC. <http://www.cnbc.com/2016/04/11/big-banks-shift-fintech-strategy.html>; Webster, Ian and Jeremy Pizzala. “FinTech: Are Banks Responding Appropriately?” Ernst & Young Viewpoint. 2015. [http://www.ey.com/Publication/vwLUAssets/EY-fintech-are-banks-responding-appropriately/\\$FILE/EY-fintech-are-banks-responding-appropriately.pdf](http://www.ey.com/Publication/vwLUAssets/EY-fintech-are-banks-responding-appropriately/$FILE/EY-fintech-are-banks-responding-appropriately.pdf)

credit information” comprised a sound approach to risk assessment, and more importantly that this approach was even capable of complying with the data furnisher and consumer reporting agency obligations under the FCRA, Merrill and ZestFinance took a different tack to roll out Basix Loans and collections solutions in the US market. Instead of unstructured data, they relied on alternative payment data from niche consumer reporting agencies and application data, including psychometrics such as answer inconsistencies, length of time to complete the application, and whether an applicant used all capital letters (apparently this is bad). The allure of this approach sufficiently appealed to investors that hundreds of millions was thrown at ZestFinance.² They did not abandon their commitment to disrupting credit reporting using Big Data, instead they exported the model to a country with a more flexible regulatory regime—China.³ According to Baidu, data scientists from both firms will collaborate to apply ZestFinance’s technology (their data platform and machine learning algorithms) to Baidu’s data (search, location, and payment).

The opportunity for ZestFinance in China and other emerging and markets exists owing to deficiencies with existing credit reporting systems. For instance, in China, while traditional credit data and some non-financial payment data on over 800 million people is currently collected by the People’s Bank of China Credit Reference Center “CRC”, making the CRC the world’s largest credit bureau by volume of data subjects, there are open questions about the integrity and quality of much of the data collected by the CRC. Owing to this, proper credit scores were not developed or used in China for a decade. Recently, FICO began partnering with the CRC to develop a score. As of September 2016, efforts to build a score do not include traditional consumer or commercial credit file data. Instead, it is the understanding of the authors of this paper that FICO and the PBOC are examining how to use payment data from mobile network operators (MNOs) and other behavioral data to generate a score.

A key point here is not that Big Data and FinTech are disruptive and will displace traditional credit reporting in China or anywhere. Rather, it’s that Big Data and FinTech could combine to offer a powerful substitute for a traditional credit bureau in places where either there is no credit bureau, or where the credit bureau is grossly underperforming relative to the needs of market actors in the financial services sector. Despite the proliferation of private credit bureaus over the past 20 years, there are a significant quantity of markets in which there is no functioning private credit bureau (France, for instance), where a public credit registry is failing (Equador, China, Indonesia), where the private bureaus are underperforming owing to ownership structure issues (Japan, Mexico) or where private credit bureaus are just too new to have fully developed to meet market needs (India, China, Philippines, Indonesia). Collectively,

² Shin, Laura. “Alternative Lender ZestFinance Raises \$150 Million In Funding From Fortress.” *Forbes*. October 6, 2015. <http://www.forbes.com/sites/laurashin/2015/10/06/alternative-lender-zestfinance-raises-150-million-in-funding-from-fortress/#49f3127419c9>

³ “Baidu Invests in ZestFinance.” July 18, 2016. *CrowdFund Insider*. <http://www.crowdfundinsider.com/2016/07/88099-baidu-invests-zestfinance-will-partner-credit-data/>;" Baidu Turns Search Data Into Credit Data To Improve China’s Credit Scoring System.” *ecommerceIQ*, July 29, 2016. <http://ecommerceiq.com/baidu-invests-in-zest-finance/>

there exists ideal conditions for FinTech and Big Data to impact credit information sharing and credit risk assessment in countries accounting for half the world's population. This is very good news indeed for financial inclusion—as this should provide a much-needed social and economic boost for a segment of the world's unbanked and financially excluded.

All of this is not to say, however, that private credit bureaus and value added service firms are or will ever be rendered obsolete. Quite the contrary. That opportunities may exist in some markets for FinTech firms using Big Data for credit origination reflects a market failure, a market distortion, or a fledgling and under-developed credit information sharing market. It does not mean that private credit bureaus and value added services providers cannot or will not succeed in those markets. In fact, the success of FinTech in this segment is tied to the success of traditional private credit bureaus and value added service providers.

There are two likely scenarios involving the development of a FinTech/Big Data credit bureau to fill a void created by a market failure/underdeveloped market. In the first scenario, the established market player (a public credit registry or and underperforming monopoly private credit bureau) will act to foreclose competition from the FinTech start-up. For instance, the PBOC would pass regulations rendering the ZestFinance/Baidu joint venture non-viable, or French banks coalesce to convince the French government and European Union Commission that the new entrant's model violates national and EU privacy laws and threatens consumer privacy and safety. In the second scenario, in response to competitive entry, the private credit bureau becomes more responsive to the needs of other market actors, specifically lenders. Data acquisition, data quality, value added services, and client relations are prioritized.

With the rapid growth in credit activities enabled by the new FinTech/Big Data firm(s), ever more credit payment data is sent to the traditional private credit bureau enhancing the value of their data asset and ancillary value added services. Eventually, agreements between the new FinTech players and the private credit bureau are forged allowing for the resale of one another's solutions, and the joint-development of new solutions based upon their combined data assets. At some point, the larger and more established players may even invest in the FinTech start-ups or simply acquire them.

These are the two most likely scenarios. Either entrenched players will see new entrants as a competitive threat and takes steps to eliminate them, or, they will see them as a complementary player that can help create new market opportunities and they will seek to collaborate. It is this second outcome that all market actors—banks, lenders, regulators, traditional credit bureaus, value added service providers, and FinTech firms—should work to ensure will happen in market after market, developed and developing. Unfortunately, this socially and economically optimal outcome is also less likely than the first scenario—whereby powerful actors move to squash competitive entry by innovative FinTech firms. This outcome is far more likely in countries with a dominant public credit registry or underperforming private credit bureaus owned by large lenders. Regulators and policymakers in countries in which these conditions obtain would do well to watch for signs that this is happening, and aggressively

move to protect competitive market forces.

A further, and highly improbable scenario, is that a FinTech firm enters a market, uses Big Data, and completely displaces a traditional private credit bureau or public credit registry. This is unlikely for several reasons. First, as was previously discussed, an existing actor has a strong incentive to act either to crush the competition while the new entrant is weak, or to embrace the new entrant and adapt to a changed environment to survive and even thrive. Second, in markets in which there is no functioning traditional credit bureau, should a FinTech enter and offer a platform to use Big Data for credit risk assessment, the very extension of loans creates a greater need for a traditional credit bureau. Either the new entrant will take on that function, or a private credit bureau will be built green field to capitalize upon the pressing and growing demand for such services.

This highlights the symbiotic relationship between FinTech firms using Big Data and traditional credit bureaus and value added service providers. Given current technology, one cannot exist for long in isolation without the other. A vacuum must be filled—and if a traditional credit bureau or public credit registry is underperforming you can be sure that a FinTech firm will enter. Similarly, if a FinTech firm operates in a country in which traditional credit information sharing functions are not being performed, either the FinTech firm will broaden their operation to fulfill this function or a private credit bureau will emerge and co-evolve with the established FinTech player. The market dictates these outcomes. Where this doesn't occur, there is market interference or distortions that create suboptimal outcomes.

Big Data/FinTech Misperceptions

ZestFinance CEO and Founder Douglas Merrill once quipped “All data is credit data.” Merrill first presented this notion at a TedXWallStreet event in 2013. He argued that a full-third of all Americans could not come up with \$1,000 given a month's notice, and blamed this inability on lenders using traditional credit information and credit scores based upon that data. To Merrill, relying upon a few pieces of credit data, that are “often flawed,” limits the ability of lenders to accurately assess credit risk and forces people needing credit to smooth over short-term cash flow disruptions (income volatility has been trending upward for a generation, according to some studies) into the hands of pawn shops, pay day lenders and others who charge fees and interest that may equal or exceed the value of the original loan.

While these types of rousing speeches certainly fill seats and make for good headlines, the notion that all data is credit data is simply preposterous. Let's examine social media data for a moment. In a recent conversation with the founder of a growing FinTech consumer reporting agency, he told me that by scraping FaceBook his firm created nearly 3,200 variables of which just 2 could be used—and those for identity verification. This should not be belittled—verifying a person's identity is a thread that ties nearly every possible type of financial service, and it has become increasingly important to ensure compliance with AML and KYC requirements.

However, ensuring that an identity is genuine and not synthetic is a far cry from a disruptive platform that displaces traditional credit risk analytics based upon credit payment history. This owner/entrepreneur went on to state that any firm claiming that they are using social media data for credit risk assessment is “...full of it.”⁴

In the context of credit risk assessment, data is useful only to extent that it predicts an outcome—whether a person will be 90 days late paying a line of credit, whether the relationship will be profitable, whether an offer of credit will be accepted. Thus, that all data is credit data is simply untrue. Publicly known efforts to use big data for credit risk assessment are characterized by over-fitting data to models. With so many variables, the noise crowds out the signals and it’s impossible to discern what data is truly predictive from data that is superfluous.

While blunt, to the point, and perhaps a tad inelegant—when considering facts and evidence to date it’s hard to take issue with the conclusion that claims that social media data is being used for credit risk assessment are full of it. Within developed countries in particular there are simply too many problems for it to be otherwise. Compliance with existing regulations governing credit information sharing in the US and EU is not possible for a lender using Big Data. Similarly in most advanced economies such as Japan, Korea, Singapore, Australia, and New Zealand—where comprehensive data privacy protections are in place. Explaining to regulators, let alone consumers, eligibility determination based upon thousands of variables that comprise a meta-variable (the approach espoused by Merrill and ZestFinance) seems impossible. Imagine a reasons code on your adverse action notification stating “Too many profanities posted by members of your social network.” Unlikely indeed. Obfuscation is not an option either. Denial based upon a “took kit” being too low also seems like a non-starter from a compliance perspective.

Even if it’s possible to get beyond the compliance barriers, there are business process challenges that are no less daunting. Assuming that there are predictive social media or other unstructured Big Data elements that are predictive of small business or individual credit risk, there are open and largely unanswered questions around how a Big Data FinTech firm would move this data into a bank’s automated decision platform. How is the data then moved from the banks platform into a scorecard? How are the results validated? Will data subjects be able to access the data in order to review it and dispute it if it is perceived to be inaccurate? Can it be corrected? Who is standing behind the data?

Oddly enough, these business process challenges all concern areas in which traditional credit bureaus—commercial and consumer—have deep experience. They are already integrated into the automated decisioning platforms of many banks and lenders, and have worked with the same establishing data formatting standards, data sharing protocol, dispute resolution processes, and machine readable credit files that can easily be loaded into a bank’s proprietary

⁴ Telephone interview with senior FinTech data service firm executive. August 2016. The actual quote was similar to “full of it” but utilized profanity for emphasis.

credit risk scorecards. For these reasons, the obvious question to ask is why aren't credit bureau's just as capable of delivering Big Data in to credit risk assessment as are FinTech firms?

Arguably, the conditions that exist within the credit reporting and credit risk analytics segments of the broader financial services sector are every bit as conducive to a collaborative co-evolution with new FinTech entrants as are consumer and commercial lending—segments that have received far more media attention and which are now characterized as having cooperative relationships between traditional banks and new FinTech firms. The synergies between FinTech and traditional credit bureaus become even greater when one considers the full range of offerings in which Big Data may be applied including anti-money laundering, identity verification/know your customer (KYC), fraud detection/protection, and credit scoring.

The Path Forward: Collaboration and Light Touch Regulation

Putting aside legitimate policy considerations about whether the US and EU have an obligation to monitor and regulate the behavior of their FinTech companies and investors that are “experimenting” in less-regulated countries—a form of “regulatory arbitrage”—regulators in advanced economies clearly have a key role to play in the direction of innovation in the financial services sector. In this case, it is one of calibration.

First, regulators must be careful to avoid reactive regulation in the wake of the inevitable fits and starts growth and development of FinTech. There will be road bumps, and yes likely even some collateral damage as was the case with the dotcom phenomenon in the late 1990s. Had regulators been overzealous with privacy regulations then, it is unlikely that FaceBook, Google, LinkedIn, Amazon and other firms born from that era would exist, at least in their current incarnation. As it is, FinTechs are entering market spaces much more regulated than did Google or Amazon.

Second, regulators in advanced economies would do well to be permissively proactive. This does not mean advocating a “wild, wild, West” type approach where anything goes. Quite the contrary—this means instead creating a carve-out for experimentation with more flexible requirements using a “principles-based approach” rather than a rigid and complex set of rules, but rules are in place nonetheless. An example of this approach would be the “sandbox” established by the UK Financial Conduct Authority (FCA).⁵ FinTech firms operating within the sandbox are free to test various new developments on a sub-set of customers before receiving formal approvals from the FCA. This approach has been well received by FinTech and investors in the UK, and is being closely watched by regulators in the US and around the world.

The stakes here are nothing short of an inclusive, responsible, and sustainable consumer and

⁵ Colchester, Max. “U.K. Takes Novel Approach on Fintech: Financial Conduct Authority’s regulatory ‘sandbox’ is a way for companies to test new ideas without being bogged down by authorization process.” *Wall Street Journal*. April 11, 2016. Downloaded at <http://www.wsj.com/articles/u-k-takes-novel-approach-on-fintech-1460370600>

commercial lending system. However, in order to have well functioning MSME system undergirded by well-functioning MSME credit info sharing system (including sharing data for AML, fraud protection, ID verification, and credit scoring) regulators at the highest level MUST embrace a culture of data sharing. Without this, there will be no source of data to funnel back out to the private sector—whether FinTech or traditional players—for these different applications.

Apart from the UK (and one could quibble that with BREXIT, the UK is no longer part of Europe), this is missing in Europe. Until financial regulators understand that they have role in advocating and enabling a culture of data sharing FinTech and all other firms will get nowhere fast with respect to MSME credit information sharing, let alone other innovations contingent upon access to various data assets.

Regulators in Europe and elsewhere (Australia, Brazil, and New Zealand all come to mind) must encourage banks to share data, as regulators have consistently done in the US. It is impossible to overstate how important it is regulators advocate this and not accept banks choosing an insufficient level data sharing. Otherwise, when core elements of credit data sharing choose not to share data, the results are bad for individual borrowers, bad for MSMEs, and harmful to their national economy. Under this scenario, lending to the private sector is socially and economically suboptimal, resulting in reduced growth and increased unemployment. Credit contractions resulting from deferential regulations are most harmful to lower income persons, small businesses, women, and members of minority communities.

For years, central bankers and finance ministers around the world have been decrying the need for greatly improved access to affordable credit for MSMEs and Base of Pyramid (BOP)/Missing Middle persons. As PERC has long argued—well before digital financial services, Big Data, and FinTech were global obsessions—one way to do so is by promoting the sharing of credit, payment, and other data with private credit bureaus (consumer and commercial). India has mandated this practice (reporting financial data). This is a model that should be considered by regulators worldwide, and not just in emerging markets. Instead, regulators in countries in which consumer and small business credit is dominated by a handful of large lenders who (for anti-competitive reasons) are unwilling to fully report to a credit bureau would do well to explore this option.

In summary, regulators seeking to create an environment conducive to growth in inclusive and responsible lending would do well to:

- Calibrate regulations to allow for and encourage innovative uses of alternative structured data (e.g. energy utility, telecoms, rental and other payment data);
- Promote permissive and proactive regulations based upon a broad set of principles rather than a complex and rigid set of rules, such as the “sandbox” approach recently implemented in the UK;
- Embrace a culture of data sharing, and act as leading advocates and champions. Data sharing is critically tied to access to finance for MSMEs and financially excluded persons. By being deferential to large banks (most often seeking to distort data sharing markets upstream to foreclose competition downstream) regulators are harming sustainable economic growth and development;
- Progress and don’t regress. Regulators must respect automated decisioning. The benefits—both in terms of increased lending to the private sector, fewer misidentifications, more inclusive lending, and sustainable economic growth—are well documented. Policies that promote manual underwriting are damaging and reflect an ignorance of facts and history.
- Consumers must be protected—and not just in advanced economies. Defining what Big Data (or any data) can be moved into automated underwriting systems is key. Regulators must maintain fair information value associated with transparency. Any Big Data must be viewable and disputable by the consumer. Has to be accurate—so that a consumer can see, correct the data, and ensure a dispute system to correct if wrong. Someone must stand behind the data.

Ultimately, if regulators heed the advice above, new FinTech entrants into the credit information sharing and credit risk analytics space will be seen less as competitive threats to the established players, and instead will correctly be seen as necessary catalysts for market improvements. When the relationship between these two important sets of actors is changed, the potential for beneficial developments is the greatest. Regulators can either help or hinder this outcome—and their actions or lack there of will be determinant in the months and years ahead.