Banking on the Future
An Exploration of FinTech and the Consumer Interest
2017

This is a summary of a full report available at www.consumersinternational.org
INTRODUCTION

FinTech services and products have started to become widely used and are transforming financial services markets for consumers, with positive and negative implications. Those working in the consumer interest must work quickly to address some of the emerging consumer protection issues.

WHAT IS FINTECH?

FinTech is the point at which financial services and technology collide. It is not a new phenomenon – financial institutions have a long history as early adopters of new technologies – from the telegram to high frequency trading. Commonplace services like ATMs and credit cards were once considered radical innovations.

In the last decade disruptive new start-ups and technology companies have begun to deliver financial products and services directly to businesses and the general public. These FinTech challengers are using cutting edge technologies to reimagine how financial services can be delivered. In this sense FinTech mirrors the disruption in the wider economy as online platforms, such as Amazon or Uber, have upended the established order.

DRIVERS FOR GROWTH OF FINTECH:

- Near-ubiquitous access to high power, low cost computing. This enables FinTech adoption (e.g. by consumers using smartphones); and FinTech innovation (by enabling FinTech firms to operate nimbly and with much lower overheads than incumbents).
- Rising consumer expectations and unmet needs – including the way in which tech companies such as Apple and Amazon have set the bar in terms of user experience; and the unmet need that financial exclusion represents.
- Demographic changes – Millennials are the largest generation in US history and the first to grow up digital. They are three times more likely than baby boomers to bank using mobile devices; and a third of Millennials don’t expect to need a bank in five years’ time.\(^1\)
- The Global Financial Crisis of 2008 and subsequent regulatory interventions have ignited FinTech lending. The increased capital requirements and stricter lending criteria that banks faced made it more difficult for SMEs and individuals to secure credit, thus creating an unmet need. New regulations initiated in response to the Global Financial Crisis and enhanced capital requirements also increased compliance costs for banks right at the moment FinTech started taking off.
- Growth in e-commerce. In countries where high proportions of the population are either unbanked or don’t use credit cards consumers migrate straight from cash to digital wallets, using mobile platforms such as Alipay, or WeChat.

\(^{1}\) Forbes citing the 2016 FIS Consumer Banking PACE Index
\(^{2}\) Cited in FinTech Ranking
**HOW FINTECH IS RE-SHAPING FINANCIAL SERVICES SECTORS**

**SAVINGS**

Savings sector has seen explosive growth. For example, China’s Yu’e Bao has attracted 185 million customers within 18 months, giving it 600 billion yuan of assets under management. Yu’e Bao enables users to earn bank-beating interest rates on cash and has quickly grown to become one of the world’s largest money-market funds. The service is offered as a feature within Alipay, the escrow payment platform developed by Alibaba for use in its online marketplaces. It’s ease of use is likely to have led to its rapid uptake, particularly by young, educated Chinese people.

**ADVICE**

Personal financial manager services consolidate in one place a user’s account balances, card transaction histories, credit scores and other key financial data from across providers. They add value through analytics and data visualisation to provide the user with a picture of their current financial health, forecasts on how this will change in the future and suggestions on how to improve, for instance by switching to a better credit card deal.

‘Automated investment’ or ‘robo-adviser’ services are designed to provide automated, algorithm-based portfolio management advice. Robo-advisers use the same software as human advisors but cost less.

**LENDING**

Lending is a major FinTech sub-sector. World Economic Forum analysis indicates that, of total investment in FinTech enterprises, 27% has gone into consumer lending and 16% into business lending. Some FinTech firms have built models around matching lenders and borrowers, where either financial institutions or individuals (peers) provide the capital for loans made, known as P2P lending. Other models offer micro-lending or point-of-purchase payment by instalments as an alternative to credit cards.

FinTech activity in the mortgage category is much more subdued than in the non-secured lending sector, perhaps because of the increased capital, timelines, regulation and costs of default involved. However, FinTech firms are starting to make an impact in the sector, primarily through online marketplaces. Here, FinTech ‘brokers’ use algorithms to identify the market’s best deal for the consumer, based on the consumer’s individual circumstances. They offer a simpler mortgage pre-approval process that can be completed online.

**PAYMENTS**

Payments is another area in which FinTech has caused significant disruption. For consumers, FinTech’s advances in the payments space are most apparent in the evolution of ‘digital wallets’. PayPal, for example, now has 197 million active user accounts and processed 4.9 billion payments in 2015. In China, where just 16% of consumers have credit cards, digital wallet Alipay was created by Alibaba. It currently has 400 million users globally and processes 175 million transactions per day, of which more than 60% were made through a mobile device. The range of services now offered includes: splitting bills using QR codes, paying utility bills, buying mobile phone credits, buying train tickets and checking the balance of linked bank accounts.

**MOBILE MONEY TRANSFER SERVICES HAVE HAD A MAJOR IMPACT ON THE DEVELOPING WORLD**

Mobile money transfer services have had a major impact on the developing world. The growth of this service has enabled people to bypass bank accounts, instead transferring money to each other and to merchants via mobile phones. The most celebrated example of this is Kenya’s M-Pesa, which allows users to deposit money into an account stored on their cell phones, to send balances using PIN-secured SMS text messages to other users, including sellers of goods and services, and to redeem deposits for regular money. M-Pesa now has more than 20 million active users across Africa, the Middle East, Asia, and Eastern Europe.

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3 The Economist, February 2017
4 Investopedia.com
5 65 Amazing PayPal Statistics, March 2017
6 Credit in China – Just spend, The Economist, November 2016
7 See: https://intl.alipay.com/
8 Alipay speeds up expansion in Europe, targeting Chinese tourists, The China Post, August 2016
9 Cashless Africa: Kenya’s smash success with mobile money, CNBC, November 2013
INSURTECH

InsurTech is the distinct branch of FinTech dealing in insurance. Data that our increasingly connected devices (in homes, cars and worn about our person) generate, allow insurers to calculate risk in new ways. Consumers can now opt to use sensors and trackers that share their data with the insurer. In return, the insurer offers bespoke policies, along with interventions that reward low-risk behaviours, or support risk mitigation. Peer-to-peer, or P2P insurance models are also emerging. A digital platform acts as the middleman, inviting users to form small groups of policyholders who pay premiums into a pool to pay claims, but where members get any leftover funds at the end of the policy period. Another type of FinTech emerging is micro-insurance. Ghana’s Tigo mobile network, for instance, offers hospital and life insurance policies to low-income earners and people in the informal sector.

REMITTANCES

Migrant remittances to developing countries are worth around $440 billion every year, according to the World Bank. FinTech firms such as WorldRemit, Kantox and CurrencyFair offer international money transfer and foreign exchange services that are cheaper and faster than many incumbents. Another example is Transferwise, which reduces fees by pairing two transfers going in opposite foreign directions. It then reroutes the two within their respective countries.

CRYPTOCURRENCY

One area of FinTech that has received growing attention and some controversy is the cryptocurrency field. Sometimes referred to as virtual money, or alt-coins, Bitcoin is the first, largest, best known, and currently most valuable, example. Launched in 2009, Bitcoin is a privately developed, internet-based, cryptographic global currency and payment system. In simple terms, Bitcoin is a virtual currency that a user holds in a Bitcoin-specific virtual wallet. When the holder makes a Bitcoin payment they use their virtual wallet to send bitcoins directly to the payee who then receives the Bitcoin to their own virtual wallet. The transaction is verified and recorded in a distributed public ledger. Sending and receiving Bitcoin is done under a pseudonym, allowing a certain degree of anonymity. The supply of Bitcoin is finite.

Cryptocurrencies appeal because they are designed to avoid centralised control, give financial return from investment and lower transaction fees. However, the qualities that set Bitcoin and its equivalents apart, have also contributed to some of the issues and notoriety that have come to be associated with cryptocurrencies such as money laundering, avoiding financial regulations, terrorist financing and evading taxes.

Blockchain is expected to have a disruptive impact on the business models of banks, credit card businesses, monetary transfers and the trading of assets

Cryptocurrencies are enabled by and function on top of a technology called Blockchain. Blockchain is made possible by the Internet and takes the form of a distributed ledger that can settle transactions with a high degree of certainty. The network is decentralised, just like the internet, which means it’s very durable. The distributed, decentralised nature of the technology means there is no central governing body. Everything ever written in a blockchain is locked, stored forever, and cannot be tampered with or altered. This means any series of transactions can be tracked with one hundred per cent accuracy. Built-in encryption means it’s inherently secure and the need for a trusted third party is eliminated. Blockchain is expected to have a disruptive impact on the business models of banks, credit card businesses, monetary transfers and the trading of assets.

In countries where access to banking is widespread, deposit taking may prove to be the category most resistant to FinTech disruption. Consumers need a bank account in order to be able to use many FinTech services. Deposit taking is also a highly regulated activity, with few FinTech firms appearing willing or able to take on the regulatory responsibility of becoming account providers in the conventional sense. Some FinTech firms are working with conventional banks on a white label basis, with the FinTech firm then offering the deposit facility to their customers under their own branding.

11 5 Trends affecting the remittance industry, Devex, December 2016
13 FinTech – how TransferWise Disrupts International Payments, Smartup
16 Cary, N. Bringing Money into the Digital Age, guest blog for the OECD, June 2016
17 Digital Currency: What the Heck Is It?, RBC Royal Bank, February 2017
19 Blurred lines: How FinTech is shaping Financial Services, PWC, March 2016
THE CONSUMER RESPONSE TO FINTECH

Take up of FinTech services is high. In a recent survey of financial consumers in 15 countries, half had used at least one non-traditional firm for banking, insurance, payments or investment management, with the highest take up in Asia pacific. Consumers who are younger, tech-savvy and affluent are more likely to supplement their basic financial services with FinTech offerings.20

Customers Using At Least One Non-Traditional Firm for Financial Services, by Domain, 2016.
Source: Capgemini, World FinTech Report, 2017

![Pie charts showing the percentage of consumers using non-traditional firms for investment management, payments and transfers, insurance, and banking.]

BENEFITS FINTECH CAN BRING FOR CONSUMERS

COMPETITION AND CHOICE

FinTech firms enjoy a number of advantages over incumbents – lower operating costs, lower levels of regulatory responsibility, new ideas and agile approaches to realising them. Major banks are fighting back through an embrace of FinTech. This showdown stands to benefit consumers, as companies from both camps compete for their custom.

While competition between FinTech challengers and incumbents is set to deliver tangible benefits for consumers, it could be that incumbents will deliver those benefits to more consumers than FinTech firms. Incumbent banks enjoy a number of advantages not easily available to FinTech start-ups. For example, they have scale, an existing customer base in a low-churn market, strong institutional trust and built-in regulatory compliance. They also have the capital to invest in FinTech catch-up and/or acquisition. Banks also enjoy an advantage in terms of consumer trust. Global consumer research undertaken for FIS, a financial technology provider, found that, of banked consumers who are using personal financial management apps, 90% are doing so with an app provided by their existing provider.22

ACCESS TO FINANCIAL SERVICES

38% of the world’s population lack a basic bank account23 and an even greater proportion lack the simplest of insurance and investment products.24 Mobile-led FinTech has benefited significant numbers of consumers in Sub-Saharan Africa, where mobile money accounts drove the growth in overall account penetration from 24% in 2011 to 34% in 2014.

However, access to the benefits of mobile FinTech is dependent on access to a mobile handset and network subscription. At the end of 2015 just 46% of the African population had a mobile subscription, compared to 63% globally. That number is forecast to climb to 54% by 2020, compared to 72% globally.25

20 Capgemini, World FinTech Report, 2017
21 EY, EY FinTech Adoption Index, 2015
22 FIS Consumer Banking Pace Index, 2016
23 Global Findex Database
24 Financial services in 2017 – The Economist Intelligence Unit, 2016
CHALLENGES THAT FINTECH PRESENTS FOR CONSUMERS

DATA, PRIVACY AND FINTECH

FinTech has led financial services to become the most intensive user of data. This gives rise to security concerns around hacking and data breaches and, in a banking context, where identity theft and the theft of assets can be simultaneous this can lead to potentially catastrophic detriment for consumers (see liability, below). FinTech’s appetite for evermore data concerning the context, circumstances and behaviours of the consumer also fuels data and privacy concerns.

Critics have voiced concerns that access to so much data could increase price discrimination and financial exclusion as the riskiest consumers and those lacking a digital footprint could be priced out, while providers seek to offer services only to the most profitable, or least risky segments of the market. There is also the possibility that insurance providers will make consent to tracking a condition of coverage. The use of closed, proprietary algorithms could also lead to a situation where consumers are denied access to a service (e.g. credit or insurance) based on an inaccurate correlation, but are unable to determine why or to correct underlying assumptions.

FRAUD

FinTech is particularly vulnerable to cybercrime and espionage. Fraudulent online transactions are predicted to reach a value of $25.6 billion by 2020, up from $10.7 billion in 2016. That means for every $1,000 spent, $4 will be fraudulent. More than a quarter of that figure will relate to banking fraud.

Issues with P2P lending

Some P2P platforms have developed using untested models, and have hit problems. In 2016 US ratings agency Moody’s said investments backed by loans issued by Prosper weren’t performing as well as expected and might have to be downgraded. This may point to problems with vetting borrowers. In addition to the ratings agencies’ concerns, the US Financial Stability Oversight Council has suggested that regulators should be vigilant in monitoring digital lenders.

The explosive growth of P2P lending in China – from 214 lending platforms in 2011, to more than 3,000 by 2015 – took place initially beyond the purview of regulators and led to some fraud and dangerous funding models. More than a third of P2P firms have shut down.

Personal data is at risk if devices are lost and vulnerable during credit card enrolment into mobile wallets. This is driving the growth of two-factor authentication, which requires a wallet user to have at least two types of security credentials to access their account such as a PIN or password, possession of a physical item, such as a smartphone, and biometric information, such as a fingerprint or retina recognition.

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26 Big data, financial services and privacy, The Economist, February 2017
28 Online Transaction Fraud To More Than Double To $25BN By 2020, Juniper Research, May 2016
29 Online Transaction Fraud To More Than Double To $25BN By 2020, Juniper Research, May 2016
31 The age of the appacus – In FinTech, China shows the way, The Economist, 2017
PROBLEMATIC DEBT AND PREDATORY LENDING

FinTech firms have created platforms that streamline application processes and crunch data in ways that enable a rapid decision on whether a loan is made. This can mean qualifying consumers are able to access loans in minutes. While these can be positive developments, there are instances where easily available credit can lead to problematic levels of debt for consumers. Technology has also brought ease and convenience to the world of payday and predatory lending – meaning that consumers denied credit elsewhere and/or quite possibly in desperate circumstances can now access high cost, potentially toxic credit within minutes.

LIABILITY: WHERE DOES THE BUCK STOP IF THINGS GO WRONG?

The issue of liability and, more accurately, which party it rests with, has been a prominent FinTech theme, especially in relation to personal financial manager/ account aggregator services. Without the protocols by which a consumer can authorise these types of service to receive account data direct from their bank, the consumer has to provide their login credentials to the FinTech third party, which can then access the account and ‘scrape’ the requisite data. This gives rise to:

- Consumer protection concerns – particularly where the consumer’s contract with their bank contains provisions clearing the bank of any liability for losses from fraud or other illegal activities arising from a consumer granting access to their account to a third party.
- Banks can cite concerns around consumer protection as cover to forbid, or at least strongly discourage third party access to account data, thus denying FinTech third parties the opportunity to offer consumers a service from which they might benefit.

Liability is also an issue in relation to cryptocurrencies, where the decentralised nature of the system sees the user assume all liability for theft (where they hold the currency in a digital wallet).

SYSTEMIC RISKS

Minimal cost distribution and accelerated network effects can result in FinTech services reaching and being used by millions before any inherent flaws or risks are properly understood; or before regulators can make a proper assessment of whether the service at scale poses a systemic risk, and the safeguards required if it does.

MAKING FINTECH WORK FOR CONSUMERS

FinTech is still in its early days. Whilst it is reshaping large financial services markets in ways that deliver benefits for consumers, some risks and detriments are already becoming apparent. Others will emerge as FinTech adoption increases, or as new innovations further transform what the market offers. While it is inevitable new or revised legislation and regulation will be required to address these, we are not yet able to forecast with any certainty the form that either the risks or the optimal responses will take.

Nonetheless, the G20's High-level Principles on Financial Consumer Protection (FCP, 2011); and High-Level Principles for Digital Financial Inclusion (DFI, 2016), along with other key instruments and initiatives, could offer the basis of a response to the risks and detriments identified. Regulators have also started to respond to Fintech. Actions taken by the European Commission may ensure EU member states are further ahead than other regions.

USING FINTECH TO EXPAND ACCESS TO FINANCIAL SERVICES (SEE DFI1).

Supporting the continued expansion of FinTech is vital, given the role it can play in advancing consumers’ wider economic interests and overcoming causes of consumer detriment. Expansion will need to proceed in concert with protection principles, ensuring services are secure, treat consumers fairly and treat their data respectfully.

In countries with widespread access to banking, incumbents’ pursuit of digital by default strategies risks causing detriment through the exclusion of consumers who cannot, or choose not to engage with digital channels, particularly if bank branch closures ensue. It will be important that those working in the consumer interest maintain sight of the interests of these groups and ensure they are treated fairly by providers.

LEGAL, REGULATORY AND SUPERVISORY ISSUES & ROLE OF OVERSIGHT BODIES (SEE FCP1, FCP2, DFI2, DFI3).

Some regulators have offered ‘open door’ initiatives, such as the UK Financial Conduct Authority’s Project Innovate. These are intended to allow nascent FinTech firms to better understand the regulatory requirements they will face; and to enable the regulator to assess firms’ character and stay abreast of FinTech innovation. China’s Internet Finance Guidelines, released in July 2015, have been cited by some as an important example.  

Looking beyond core mandates, FinTech is encouraging regulators to develop an additional mandate focused on supporting the growth of FinTech. In some instances, this takes the form of innovation hubs that provide for bilateral dialogue, and regulatory ‘sandboxes’ that allow for the controlled trials of FinTech innovations (e.g. in UK, Singapore). Regulators can also use ‘RegTech,’ which repurposes the technological advances that give rise to FinTech in support of data-led, automated approaches to the supervision of the financial system and the monitoring of FinTech firms’ performance and compliance.

With regards to the operation of ‘sandboxes’, exemptions from regulation should be treated as privileges to be earned. Best practice in this respect should see regulators grant exemptions only where the FinTech firm can demonstrate (i) it represents a genuine innovation, (ii) if consumer facing, is premised on delivering a benefit to consumers, (iii) is cognisant of the risks it could pose; and (iv) can exit the market without causing financial harm to consumers, if it fails. In addition, the exemption granting process offers an opportunity for the FinTech to demonstrate to the regulator its adherence to the relevant FCP (e.g. on data and equitable and fair treatment of consumers).

PROTECTION OF CONSUMER DATA AND PRIVACY (SEE FCP8, DFI5, DFI7).

FinTech firms should embed data protection safeguards into products and services from the earliest stage of development. The EU General Data Protection Regulation will oblige these commitments from FinTech firms operating in EU member states. Non-European FinTech could match these commitments by internalising the seven foundational principles of Privacy By Design, along with adherence to the OECD’s 2013 Guidelines Governing the Protection of Privacy & Transborder Flows Of Personal Data. Regardless of jurisdiction all should have particular regard to provisions relating to collection limitation/data minimisation, use limitation and to the prompt correction and/or deletion of inaccurate data.

With regards to spurring competition, a right to data portability and a framework that provides for this, along with the right for a third party nominated by the consumer to receive the ported data, is vital. The EU’s Payment Services Directive 2 offers one example of how this could be enacted.

Efforts to provide consumers with a digital identity have the potential to improve the consumer experience by enabling remote account opening with a new banking provider, while also enhancing security and reducing fraud. The European Commission has attempted to do this with its eIDAS regulation on electronic identification and trust services for electronic transactions in the internal market.

EQUITABLE AND FAIR TREATMENT OF CONSUMERS (SEE FCP3).

The ideas outlined in relation to data protection (such as internalisation of privacy by design) and regulatory practices (best practice in granting ‘sandbox’ exemptions, supervision via RegTech) offer starting points in thinking how to address unfair decisions made by FinTech firms based on algorithms (technological bias, cherry picking and price discrimination).

With regards to liability for fraud and loss when account data is shared with a FinTech third party, EU PSD2 and its provisions for secure data portability based on API architecture, offers a blueprint for how to address this issue in a way that can empower and protect consumers. Consumer facing accreditation schemes and a regulator maintained ‘whitelist’ of approved FinTech firms, with whom incumbents can confidently share data, might offer a way to identify and differentiate trustworthy FinTech third parties, although it would not prevent bad actors from continuing to operate.

34 FCA Project Innovate
Instances of FinTech P2P lenders demonstrating hard inflexibility towards distressed debtors indicates that stronger adherence to this principle could drive improvements in that sector too.

**FINANCIAL EDUCATION AND AWARENESS & DISCLOSURE AND TRANSPARENCY (SEE FCP4, FCP5, DF6).**

Some FinTech services use technology to make consumers’ account data and patterns in their financial behaviour more intelligible to them, generating insights the consumer can act on. Such services can enhance consumer education. But providers should also use these techniques to help consumers better understand the product or service they are considering or already using, their rights in relation to that product or service, and how consent is sought in relation to how their data is collected and used.

**Data security and privacy, should be baked into FinTech offerings at the outset**

The risks that cryptocurrencies can pose for consumers arise in part from poor understanding of how they function, the security vulnerabilities they can present and their potential volatility; and the fact that, as decentralised systems, they operate for the most part beyond the reach of regulatory and consumer protection frameworks. Consumer education is needed to help consumers appreciate the risks of buying and using cryptocurrencies.

**PROTECTION OF CONSUMER ASSETS AGAINST FRAUD AND MISUSE (SEE FCP 7).**

Adherence to FCP7 is something that all regulators should be seeking evidence of in their interactions with FinTech firms and, as with data security and privacy, should be baked into FinTech offerings at the outset.

**COMPETITION (SEE: FCP 10).**

In Europe, the ‘open banking’ elements of Payment Services Directive 2 are intended to promote competitive markets. Interoperability also plays a key role in breaking down provider silos and facilitating competition, as well as an improved consumer experience – not least in the developing world, where interoperability for mobile payments is essential if people using different mobile networks are to be able to send payments to each other.

**CONCLUSIONS**

FinTech has had a major impact on the financial services market and on consumer behaviour in those sectors. FinTech can deliver significant benefit to consumers – in driving greater choice, competition and convenience, and in opening access to core financial services in parts of the world where consumers have for too long been denied these. Benefits will come from new FinTech firms as well as from incumbents seeking to compete with new offerings. There are however, a number of risks and detriments are emerging from FinTech. These including ‘Fintrusion.’ Cybercrime remains a significant concern – more so where people’s assets are concerned.

Regulators have a key role to play in maximising the benefits and minimising potential harm, by supporting innovation and in mitigating risk. RegTech innovations look set to play a key role in supporting them in this endeavour. Alongside regulation, elements of existing financial services consumer protection principles and access to digital financial services principles, can act as a starting point in tackling emerging detriments.
Consumers International brings together over 200 member organisations in more than 100 countries to empower and champion the rights of consumers everywhere. We are their voice in international policy-making forums and the global marketplace to ensure they are treated safely, fairly and honestly.

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