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work for society

# **FINTECH - BEWARE OF 'GEEKS' BEARING GIFTS?**

## **A FINANCIAL INCLUSION CENTRE DISCUSSION PAPER**

## SUMMARY

- There has been much hype recently about the potential for fintech<sup>1</sup> to transform financial services, and improve consumer welfare. But, there have been few *objective* assessments of the potential impact. Therefore, we thought it was timely to produce a discussion paper to generate better informed debate. We consider: what *is* changing and *not* changing in financial services due to fintech; the potential benefits and risks; and conclude with a set of policy questions which need to be answered to ensure the benefits are harnessed, and risks mitigated.

## WHAT IS *NOT* CHANGING, WHAT *IS* CHANGING?

- Financial services perform a number of primary roles for households and real economy firms: providing banking and payment services; channelling resources to the real economy; credit provision and deposit taking; and providing insurance and risk management services.
- Those roles are supported by activities including: information processing, financial research and analysis, financial advice, marketing and promotions, asset management services, trading, product development, clearing and settlement of transactions, accounting and auditing.
- Those primary roles will *not* fundamentally change, and those activities will still need to be undertaken. But, what is changing is *how* these roles and activities are carried out. The complex ecosystem of financial institutions and financial professionals will change and new types of organisation, roles, and professionals with different skill sets are emerging. Consumers will be forced to change, too, and they will have to develop new skills.
- All the main retail financial sectors (banking and payments, credit, pensions and asset management, life and general insurance) are being ‘disrupted’ by fintech – some more than others. The huge capital, wholesale, institutional and reinsurance markets that make up the global financial system and markets and sit behind more visible retail finance are also affected. Fintech is also becoming an economic success story for the UK – particularly the City of London.
- But we cannot assume fintech is beneficial just because it is new and exciting. We must objectively consider: the potential risks and benefits; and whether fintech will improve the economic and social utility of financial markets and services by enabling those primary roles and activities to be undertaken more effectively for the benefit of households and real economy.

## POTENTIAL BENEFITS

- Proponents have been almost evangelical in their beliefs about fintech – and there will be real benefits for *some* consumers able to access better value, more suitable, personalised products and services. Transactional banking should become more flexible, responsive, and convenient.
- If used properly, fintech should allow information to be gathered, analysed, and shared more cost effectively. If cost reductions are passed on, this should increase the number of consumers who are commercially viable for financial providers (including non-profit providers) so aiding financial inclusion. Fincapps<sup>2</sup> could be deployed intelligently to improve financial behaviours to bolster financial capability and financial resilience. Fintech also has the potential to help consumers better understand how their money is invested to promote more sustainable markets and hold corporates to account.

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<sup>1</sup> According to Wikipedia, the most comprehensive study of the definition of fintech concludes that: ‘fintech is a new financial industry that applies technology to improve financial activities’. On-line financial services have been with us for some time (for example, on-line banking, and comparative information websites). But, fintech goes further. When we refer to ‘fintech’ we include the full range of digital finance technologies, big data analytics, artificial intelligence/ machine learning, algorithmic trading, distributed ledger technology and so on.

<sup>2</sup> Financial inclusion and financial capability apps

- Perhaps the greatest claims have been made about blockchain technology which is supposed to benefit everything from back office efficiency, to establishing property rights, to remitting money overseas, to improving compliance and anti-money laundering checks.
- But, despite the claims about fintech, not much tangible benefit has emerged yet. At the *aggregate* level, so far we see little reason to believe fintech will produce the same stepchange as, for example, the humble ATM, debit card, and direct debit. To be fair, it's early days. We hope we are wrong and fintech delivers the much needed transformation of retail financial services. But the hype does not match even a cursory objective assessment of the potential.

## POTENTIAL RISKS AND DETRIMENTS

- It could be argued that the only people who will suffer if fintech fails to deliver are shareholders in fintech ventures. But, the hype has drowned out meaningful, realistic assessment of the risks to consumers. Moreover, there is a risk regulators will yet again pin their hopes on innovation and competition and ease up on regulation needed to make markets work.
- It could also be argued that fintech is just an evolution of what we have already with on-line banking and comparative information websites - and there is no additional cause for concern. But, the combination of the new digital finance technologies and big data analytics could significantly change market dynamics and the relationships between providers, intermediaries and end-users. Add into the mix a huge amount of investment which needs to generate returns for investors and we have a recipe for major detriment.
- There are numerous potential risks and detriments which we group into: outright scams and fraud; greater difficulties with rights and redress; higher costs, greater value extraction; major conduct of business risks<sup>3</sup>; transition risks, disruption of established financial services; greater financial exclusion and discrimination; corporate governance, cultural risks; and regulatory risks.

### Scams and frauds

- These come in two main types: unauthorised/ illegal financial transactions and data breaches. While the *types* of scam and fraud might not change, there will be more opportunities for fraudsters to target consumers - more intermediaries in the supply chain, more points of entry, greater complexity and confusion for scammers and fraudsters to exploit. These risks apply to fintech generally but the introduction of Open Banking and coming into force of the PSD2<sup>4</sup> on 13<sup>th</sup> January 2018 presents an imminent risk. The publicity surrounding Open Banking/ PSD2 could help fraudsters as consumers will be primed to be approached by genuine third party intermediaries. Not enough has been done to warn consumers about the risks, or establish robust consumer protection measures<sup>5</sup>.

### Even less effective competition, higher costs, greater value extraction, less transparency

- Fintech will create more, not less, complexity, fragmentation, opacity and spurious choices – always the enemy of *real* competition in financial services. The interjection of more fintech intermediaries into the supply chain could extract further value from consumers' limited finances. Intermediaries' business models have to be paid for in one way or another. Consumers may be either charged fees for services which offer no value (or cost more than the value

<sup>3</sup> It is important to note that these conduct of business risks will be an issue in wholesale and institutional markets, not just retail financial services

<sup>4</sup> 2<sup>nd</sup> Payment Services Directive

<sup>5</sup> There is a parallel here with the recent pensions freedom and choice reforms which was also intended to 'liberalise' the pensions decumulation market. The effect has been to introduce more complexity into the pensions market while the publicity created opportunities for scammers to target consumers with offers to liberalise them from restrictive, poor value products with offers of too-good-to-be-true alternatives.

created), pay commission to intermediaries, or pay for it indirectly by having their data sold on<sup>6</sup>. Conversely, dominant providers could further consolidate their position and extract more value.

- Fintech is not a panacea for fixing the perennial problems of information asymmetries and sub-optimal consumer behaviours and decision making. If anything, fintech provides more opportunities to exploit embedded consumer behavioural biases and utilise confusion marketing and cross-selling techniques to charge higher prices and extract more value.

#### Conduct of business risks in retail financial services

- There is a heightened risk of: outright misselling of unsuitable/ inappropriate products and services; and consumers misbuying products and services they don't need or understand. Manipulation and abuse of personal data will become more common.
- The risks are heightened due to a combination of: even more opaque business models/ conflicts of interest; a more complex, fragmented financial ecosystem; greater information asymmetries; more sophisticated confusion marketing; firms/ intermediaries utilising data analytics to manipulate consumer behaviour, exploit consumers' behavioural biases, and manufacture fears. Far from levelling the playing field for consumers, compared to 'analogue' financial services, fintech could make it harder for consumers to make effective decisions and choices.

#### Transition risks and disruption to established financial services

- The probability of fintech 'disruptors' displacing the 'dinosaurs' of finance (to the extent that fintech evangelists hope) is low. But, established financial providers will adopt and adapt fintech to their own needs<sup>7</sup>. Established players with legacy corporate structures and IT infrastructures face a huge task managing the transition to a digital finance<sup>8</sup> world on top of other priorities<sup>9</sup>. Boards and senior managers only have so much 'bandwidth'. Mistakes will happen.
- If established players do manage the transition successfully (from the perspective of shareholders that is), this will have consequences for access to financial services for consumers and local economies (see below) and, of course, for financial services employees.
- If, in the long term, the disruptors do consign established business models to history, this carries major transition risks for customers, employees and shareholders and the wider financial system. 'Creative destruction' might sound exciting but it is not necessarily a good idea when critical financial services are involved. Standing back and allowing nature to take its course is not an option, any transition must be managed.
- The other scenario is that the 'BigTech' giants enter financial services in a major way – this *could* be a game changer. The level of control already exercised by BigTech over our lives is a major concern - allowing them control over our financial data would take these concerns to a whole new level. There have been some tentative signs but so far it is not clear how interested BigTech firms are given the necessary conduct and prudential regulation in financial services.

#### Greater financial exclusion and discrimination, economic and social justice

- On balance, we think fintech could increase financial exclusion and discrimination. Geographical access problems caused by the growth of on-line banking could be exacerbated. Potentially the biggest problem involves customer segmentation and profiling – a key cause of exclusion and

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<sup>6</sup> As the saying goes, 'if you're not paying for it, you're the product'

<sup>7</sup> From the consumer perspective, not a bad thing if it leads to established players providing more accessible, responsive, better value financial services but harmful if they use fintech to further consolidate their dominant position and extract further value

<sup>8</sup> One bank refers to itself as a digital finance company with a balance sheet attached

<sup>9</sup> Some sectors are struggling with legacy misselling cases, low returns on equity and of course they have Brexit to deal with

discrimination. The combination of fintech, behavioural finance insights and big data analytics means firms and intermediaries can identify with greater precision more profitable/ more desirable/ less risky consumers and less profitable/ less desirable/ more risky/ more vulnerable consumers. This creates the conditions for greater exclusion and/ or exploitation of large groups of consumers raising fundamental questions of economic and social justice. Moreover, commercial firms are in a better position to exploit fintech than non-profit providers.

- It is in the nature of markets that more confident, savvy consumers gain at the expense of less confident, less financially capable consumers. If fintech leads to aggregate efficiency gains, vulnerable consumers will benefit (even if they lose out in relative terms). But, if as we fear, fintech leads to less efficiency (or no overall change) at the aggregate level, vulnerable consumers will lose out in absolute terms – they will be in an even worse position (unless alternative solutions are developed or policy measures implemented to mitigate this).

#### Financial markets and infrastructures

- Again, there will be some benefits in the wholesale and institutional markets, and payment, clearing and settlement systems. But, despite the amount of ‘innovation’, so far we can see little evidence that fintech will: cause financial markets to better allocate resources to productive economic activities; improve the value provided by the notoriously inefficient asset management industry; make a major difference in helping real economy firms (especially SMEs and micro-enterprises) get access to the finance they need; or significantly enhance risk management in the financial system and wider economy. In short, fintech is unlikely to meaningfully improve the overall economic and social utility of financial markets and services.
- But, fintech will also create more opportunities for fraud, market manipulation, and misconduct in these fast moving markets. So far, the main use for blockchain technology seems to be criminal activity and speculation. The distinction between unsophisticated consumers (retail) and supposedly ‘sophisticated’ institutional clients such as pension funds is artificial and unhelpful. Spuriously complex and opaque financial products and strategies remain an intrinsic feature of markets except this is now combined with unimaginably fast processes based on complicated computer algorithms and AI/ machine learning that only a handful of experts truly understand. These conditions could enable flawed processes and decisions being replicated more quickly, and create opportunities for rapacious market practitioners to rip off less savvy institutional clients or sell them complex products and strategies they do not understand.

#### Corporate governance and culture risks

- We detect a culture gap between those who run financial institutions<sup>10</sup> and those who develop fintech<sup>11</sup>. The conditions we describe above means that misselling scandals must be considered inevitable. Boards and senior managers of financial institutions will have to be alert to the risk of ‘classic’ misselling (which usually stem from conflicts of interest in the supply chain but this time in more complex, faster moving environments). But, boards and senior managers will also have to be alert to the risk of marketeers and product developers<sup>12</sup> using insights gained from big data to exploit behavioural biases and fears to sell consumers unsuitable products and

<sup>10</sup> Older/ middle aged, experienced in traditional financial services, who after years of misselling scandals now have an understanding of conduct of business regulation works and what regulators expect (certainly in the analogue financial services world) - but with limited understanding of how fintech works and associated risks

<sup>11</sup> Younger, more ambitious, impatient for change, who may have come from other less well-regulated industries and may consider regulation to be a burden or stifling innovation

<sup>12</sup> Beware of geeks bearing gifts!

services. Due diligence, treating customers fairly, and exercising duties of care will be very difficult in fragmented markets with complex supply chains.

- Corporate governance and risk management will be an issue in the wholesale and institutional markets, too. It is evident that boards and senior managers of many financial institutions did not understand what the ‘rocket scientists’ who devised complex and opaque derivatives based products, instruments, and trading/ investment strategies were doing in the run up to the financial crisis in 2007/08. The difficulty exercising due diligence and fiduciary duties of care to clients in dynamic fintech-powered markets does not need to be spelt out.

### Regulatory challenges

- Top regulatory priority is dealing with the immediate risks created by the introduction of Open Banking and PSD2. We are concerned that regulators, the banking and payments industry, and consumers are not prepared. Consumer protection is split between the Financial Conduct Authority (FCA) and the Information Commissioner’s Office (ICO) introducing confusion into the process of exercising rights and redress. Moreover, there are concerns that the ICO<sup>13</sup>, may not have enough resources to also deal with Open Banking/ PSD2 related risks.
- Regulators will also have to find better ways of communicating with consumers so they understand their rights and how to get redress in a more complex, fragmented fintech market.
- The FCA particularly will face a more difficult challenge ensuring firms have the right governance structures and culture in place to prevent consumers being exploited by the combination of fintech and big data analytics. Complex, fast moving fintech markets will be a big test for the Senior Managers and Certification Regime (SMCR)<sup>14</sup>. Supervising markets and determining culpability for breaches will be more challenging. Fintech will present a difficult test for the FCA’s product intervention and governance powers.
- Financial regulators always face an uphill struggle keeping up with innovation in wholesale and institutional markets. Technology keeps evolving but human behaviours don’t – fear and greed remain the dominant emotions in markets with huge sums of money at stake. The temptation to manipulate markets will still be there and fintech will create more opportunities to do so. Regulators are likely to lose this new technology arms race. Alternative approaches to regulation, supervision, and enforcement in these markets will be needed.
- The FCA has done some very good work recently on vulnerable consumers, and is re-thinking the boundary between its statutory regulatory remit and wider social policy issues such as financial exclusion<sup>15</sup>. The FCA will need to enhance conduct of business rules and supervision to prevent exploitation of, and discrimination against, vulnerable consumers. The FCA cannot mandate provision of services to excluded groups – that is the job of the government. But the FCA can, and should, play a more important role in highlighting the ways fintech and big data analytics contribute to exclusion and make recommendations to government for action.

### **CONCLUSION AND NEXT STEPS**

- Growth in fintech use is inexorable so it is time to inject some objectivity into the debate. Growth isn’t occurring because fintech is guaranteed to generate beneficial creative destruction

<sup>13</sup> Which also has to deal with the introduction of the huge General Data Protection Regulation (GDPR) in May 2018

<sup>14</sup> The SM&CR is intended to reduce harm to consumers and strengthen market integrity. One of the key ways it aims to do this is by making sure senior managers can be held accountable for misconduct within their area of responsibility.

<sup>15</sup> See for example: <https://www.fca.org.uk/publications/corporate-documents/our-future-approach-consumers>

or is truly ‘progressive’<sup>16</sup>. Nor will it be consumer demand led. Rather, fintech will grow because so many opinion formers and influencers (investors, fintech developers, policymakers, regulators, media, and consumer groups) believe in it. The fintech genie cannot be put back into the bottle but it should be contained. The challenge now is to harness the potential for good, and identify more precisely how risks will materialise in different sectors, the scale of the risks (which all depends on take up), and how to manage the risks. To do that, we need to address the following questions:

- How do we communicate the risks to consumers? How do we help consumers understand their rights (including how to obtain redress) in a more complex, fragmented fintech world? Open Banking/ PSD2 is an immediate priority if we are to avoid a repeat of the pensions freedom and choice debacle.
- We cannot rely on competition to make financial services work, so how do we stop firms and intermediaries exploiting complexity and fragmentation to push up costs, extract more value, or sell consumers products and services they don’t need?
- Similarly, information provision and financial education are not effective at dealing with information asymmetries. So how do we help consumers get good deals and avoid being ripped off – especially less capable, confident, savvy consumers?
- How do we protect consumers from serious conduct of business risks arising from the use of fintech, big data analytics, and exploitation of behavioural biases and fears? Can we build ‘break points’ into the sales process to ensure consumers consider decisions carefully?
- If fintech does radically ‘disrupt’ financial services, what are the consequences? The impact on critical sectors such as banking and insurance could be profoundly destabilising.
- What measures are needed to tackle economic impacts and greater financial exclusion and discrimination? What are the impacts on jobs in the industry? How do we help non-profit organisations harness fintech to promote financial inclusion and local economic resilience? Can fintech be used to promote positive financial behaviours and financial resilience? Do we need to rethink social policy mandates to protect vulnerable consumers and communities?
- How do we improve corporate governance and risk management in firms? How do we address the culture gaps in firms between those who run firms and those who develop fintech?
- Overall, the key regulatory challenge is: how do we upgrade analogue regulation for a digital finance world?
- A great deal of further work is needed to fully answer those questions and develop policy solutions to mitigate those risks. We look forward to working with partners on this over the coming year.

<sup>16</sup> In that it will significantly improve the financial and social welfare of households and the efficiency with which financial markets serve the real economy – although we at pains to emphasise there will be **some** benefits



## 1. INTRODUCTION AND BACKGROUND

There has been much hype recently about the potential for fintech and other associated digital technologies<sup>17</sup> to transform financial markets and services, and improve the lot of financial consumers. A search for ‘fintech’ on the internet brings up 32 million results, while a search for ‘big data financial services’ brings up nearly 22 million results. Numerous reports have been written by consultants, industry lobbyists, and financial media on the subject.

But, there have been surprisingly few objective analyses of the potential risks and detriments associated with fintech produced by consumer or civil society advocates<sup>18</sup>. Therefore, we thought it was important to publish a discussion paper to raise awareness of the limitations of, and potential risks created by, fintech.

What follows here is not a complete assessment of the pros and cons of fintech. We cannot say with certainty what the consequences will be as fintech is still in the early stages of development. However, we can draw on our knowledge and experience of other financial markets to make reasoned judgments about the risks involved.

The history of financial services is littered with painful lessons of market failure. Too often, innovations have been heralded as game-changing. Policymakers and regulators have been swept up in the excitement, worried not to be seen to stifle innovation (or have been influenced by an ideological belief in the potential of market innovation). They have stood back and tried to create the right *conditions* for markets to work (rather than actually *make* markets work) only to find that they had to step in *ex post* to ensure consumers who suffered great harm obtained redress.

This paper sets out our main areas of concern and where we think further work is needed. We are in no doubt that there is a significant risk of major misselling/ conduct of business scandals involving fintech in addition to issues of economic injustice.

It is surely preferable that we build in, *ex ante*<sup>19</sup>, the right safeguards and protections to protect consumers from the risks and harms created by fintech. Appropriate regulation does not stifle genuine innovation – but it does drive out spurious and toxic innovations. Conversely, failure to regulate this development properly will damage consumer confidence and trust and set back the genuinely useful fintech innovations. The introduction of Open Banking and coming into force of the Second Payment Services Directive (PSD2)<sup>20</sup> presents imminent risks which must be dealt with as a priority.

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<sup>17</sup> For the purposes of this article, when we refer to ‘fintech’ we include the full range of digital finance technologies and related developments including big data/ data analytics, artificial intelligence/ machine learning, algorithmic trading, distributed ledger technology and so on. We differentiate in this paper between on-line financial services and fintech. On-line financial services are already established in the main financial sectors and have brought undoubted benefits in the form of administrative efficiency and convenience – if not overall better value products and services.

<sup>18</sup> There are some exceptions – for example, see the report commissioned by Barclays entitled *Open Banking: A Consumer Perspective*, Faith Reynolds, January 2017

<sup>19</sup> It is not quite *ex ante* as fintech is already with us – but it is still in its early phase so it’s perhaps a case of better late than never

<sup>20</sup> Open Banking and PSD2 are meant to open up the banking and payment account markets to competition and innovation. PSD2 requires all payment account providers in the EU to provide third party intermediaries access to customer data (with their consent). Open Banking applies specifically to the nine largest UK current and personal account providers and is built around an Open Application Programming Interface to facilitate this access. The idea is that these third party intermediaries will help consumers manage their money better and get better deals from the markets covered – for example, by creating tailored comparative information websites.



## Structure of paper

In terms of structure, the paper is set out as follows:

- In Section 2 (page 10), we briefly describe what is *not* changing as a result of fintech and what is actually changing. It is helpful to understand this as, although fintech could cause much 'disruption', the primary roles and functions of financial markets and services will not change. When thinking about the potential impact of fintech, the critical questions are: will it improve the efficiency with which these primary roles and functions are carried out; and will it enhance the economic and social utility of financial markets and services from the perspective of households and the real economy?
- To help us answer those questions, in Section 3 (page 13), we assess what we think are the potential benefits and risk/ detriments provided by fintech and associated technologies. Not surprisingly, given the volumes written already about the benefits of fintech, we have focused more on the potential risks and detriment as these have not received anywhere near the same coverage.
- This is a discussion paper rather than a policy report for the simple reason that we do not have the policy solutions at this stage. Therefore, in Section 4 (page 30), we set out some questions which will help us make sense of where fintech is going, where policy solutions needs to be developed, and what needs to be done to protect consumers.

We are confident that we have identified the potential benefits and types of risk that will result from greater use of fintech. But, at this stage, we have not been able to assess with any real degree of precision how those benefits and risks/ detriment will materialise in different sectors (and the scale of those benefits and risks). This will all depend on take up of fintech in those sectors. Much more work needs to be done to establish that. However, we hope that, at least, this discussion paper will prompt much needed thinking and debate about this hugely important issue.

For further information or if you have any queries, please contact Mick McAteer on [mick.mcateer@inclusioncentre.org.uk](mailto:mick.mcateer@inclusioncentre.org.uk) or Gareth Evans on [gareth.evans@inclusioncentre.org.uk](mailto:gareth.evans@inclusioncentre.org.uk)

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## 2. WHAT IS *NOT* CHANGING AND WHAT *IS* CHANGING?

### WHAT IS *NOT* CHANGING

Before going on to outline how financial markets and services *are* likely to change due to fintech, it is worth understanding what is *not* changing.

Regardless of the technology involved, financial markets and services undertake a number of primary roles and functions and provide a range of core services to households and firms in the real economy. The four primary functions are<sup>21</sup>:

- Providing banking and payments services allowing wages and bills to be paid, money transferred around the system and withdrawn from ATMs.
- Channelling investment capital and loans to firms in the real economy (and to the Government) and in doing so allowing households to save for the future (through pension, insurance and investment funds).
- Creating credit and money through the process of ‘financial intermediation’ and ‘maturity transformation’, providing mortgages and loans to households and real economy firms, and depositors with a return on their savings.
- Providing insurance and risk management services (for example, using derivatives) allowing households to insure themselves and their possessions, and firms to protect against economic risks such as foreign exchange or commodity price volatility.

Those primary functions and provision of those core products and services are supported by a range of activities that take place in the financial services supply and distribution chain between the end-user and providers of those services. These activities include: information gathering, information provision, financial research and analysis, financial advice/ money guidance, marketing and promotions, asset/ portfolio management services, financial trading, product development, clearing and settlement of transactions/ other back office activities, accounting and auditing.

Of course, some consumers are confident enough to undertake many of these activities themselves – carrying out their own research, trading shares on their own account, and so on. But, the vast bulk of these activities are undertaken by a complex ecosystem of financial institutions, financial infrastructure providers, and financial professionals including: stock exchanges, clearing and settlement houses, various payment systems providers, investment banks, retail banks and building societies, wholesale and reinsurance insurers (including Lloyds of London), brokers, underwriters, stockbrokers, institutional fund/asset managers (including sovereign wealth funds), private equity/ venture capital providers and managers, hedge funds, financial intermediaries and advisers/ consultants, and various service providers such as analysts, ratings agencies, and information providers/ choice influencers such as comparative information websites.

What will not fundamentally change are those four primary functions. Regardless of what happens with fintech, bills and wages will still have to be paid, firms will still need investment capital and/ or loans, households will still need to save for the future or need/ want to borrow, and consumers and

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<sup>21</sup> We have not included central bank functions such as the creation of money and the management of the money supply.

businesses will still need/ want to protect themselves, their property or their businesses against risks.

Moreover, the main activities which underpin those primary functions won't fundamentally change. Information will still need to be gathered, decisions made, assets managed, monitored and traded, transactions verified and so on.

## WHAT IS CHANGING

But, what is changing is **how** these functions are performed and activities carried out. The complex ecosystem of financial institutions, financial infrastructure providers, and financial professionals described above will be affected by fintech. The nature and role of financial institutions and infrastructures are changing as is the role of many of the professionals operating in this ecosystem. New types of organisation, roles, and types of professional with different skill sets are emerging. In a fintech environment, consumers will interact differently with financial services. They will have to develop new skills if they are to engage effectively.

All of main retail financial sectors that are critical to households and the real economy (banking and payments, provision of credit, pensions and asset management, life and general insurance) are being 'disrupted' by fintech – some more than others. As well as the visible financial services which households and firms engage with, the huge capital, wholesale, institutional and reinsurance markets that make up the global financial system and markets and sit behind retail finance are also affected.

A search for 'fintech' on the internet brings up 32 million results, while a search for 'big data financial services' brings up nearly 22 million results. There has also been a huge number of reports written by consultants, industry lobbyists, and financial media on the subject. So, it would be difficult to do justice to the amount of activity in a short paper. But, to summarise, some of the main changes we see include:

- Financial services supply chains and distribution channels are being 'disrupted' with a shift from face-to-face or telephone based interactions between customers and employees to fintech enabled interactions between customers, intermediaries/ distributors and financial providers.
- The way financial decisions are made (including the speed with which decisions are made) are being transformed with decisions being automated and human interaction becoming less critical (although this may be exaggerated).
- Similarly, the provision of financial information and advice is being disrupted by the growing use of robo-advice and apps which take advantage of the lessons of behavioural economics insights to influence consumer decision making.
- New technologies are being developed to help financial services deal with regulatory, compliance and corporate governance challenges – this is known as RegTech.
- The combination of fintech and big data is allowing for even more granular segmentation and profiling of consumers which will affect the pricing of products and services and have consequences for choice, access and inclusion.
- The Bank of England has recently opened up access to the critical payment system infrastructure - the Real Time Gross Settlement (RTGS) system - to allow the new generation of non-bank

Payment Services Providers (PSPs)<sup>22</sup> to compete on a more level playing field with the established banks.

- Similarly, the Open Banking Initiative and implementation of the PSD2<sup>23</sup> in January 2018 means third party intermediaries will be able to access customer bank and payment data (with their consent it should be stressed) to offer them better choices and make payments on their behalf.
- The primary market functions of financial intermediation, asset allocation/ management, trading and risk management are also being disrupted due to the application of ‘artificial intelligence’/ machine learning/ algorithmic trading and big data.
- Perhaps the most talked about innovation currently is distributed ledger technology (DLT). Rather than have a controller (eg a bank) who keeps tracks of who owns an asset (financial, physical or electronic) in a centralised electronic ledger, the data on ownership is ‘distributed’ across multiple computers (known as nodes). The best known example of DLT is blockchain technology. It is known as blockchain because the digital records are created in blocks linked together using cryptography. This encryption process means that only those with the right cryptographic key can see or add to the data. Bitcoin is the best known crypto-currency.
- Of course, given the amount and speed of transformation and innovation, financial policymakers and regulators are needing to rethink how to regulate financial markets and services.

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<sup>22</sup> See: Bank of England extends direct access to RTGS accounts to non-bank Payment Service Providers, Bank of England, News Release, 19 July 2017. 51 banks and building societies hold settlement accounts in the RTGS system which allows them to access UK payment systems directly. Until now, other users of these payment systems that settle payments across the RTGS system have done this via an agent bank. But, now a range of non-bank PSP will be able to access RTGS directly (assuming they meet pre-conditions). There are currently around 450 non-bank PSPs authorised by the FCA. There are two main types: E-Money Institutions and Payment Institutions. E-Money Institutions mainly provide prepaid cash cards and prepaid online and mobile accounts. Some of the online accounts have similar functionality to traditional current accounts (eg. allowing users to make ATM withdrawals, utilise direct debits and internet payments as well as have a debit card). Payment Institutions tend to follow of three main models. The main type are institutions which provide remittance and foreign exchange services. Others are ‘merchant acquirers’ who provide the payment processing infrastructure that allows retailers to accept card payments on the premises or on-line. The third main type is issuing credit cards to consumers and business customers.

<sup>23</sup> Second Payment Services Directive

### 3. POTENTIAL BENEFITS AND RISKS

Before going on to discuss the potential benefits and risks it is important to note two points:

- While there has been much talk about the potential for fintech, it is still in its early stages of development and application (assuming here that we treat on-line banking and comparative information websites as a previous phase in the development of fintech); and
- Consequently, not enough time has elapsed to allow for actual research and analysis to be undertaken of the potential scale of benefits and risks/ detriments – hard evidence is thin on the ground.

Nevertheless, at this stage, it is perfectly reasonable to rely on our expertise and draw on the lessons from the history of financial services to identify the potential benefits and, critically, risks. There have been surprisingly few objective analyses produced by consumer or civil society advocates on the potential risks and detriment. This time around it is surely preferable that we try to identify those risks now and build in, *ex ante*, the right safeguards to protect consumers from the risks identified.

#### POTENTIAL BENEFITS

There has been much hype recently about the potential for fintech and ‘big data’ to transform financial markets and services for the better, and improve the lot of financial consumers - and there will be benefits for some consumers. Moreover, we should also consider the benefits to the wider economy. The UK is the European Union’s leading fintech hub.

In terms of direct benefits for consumers, fintech has potential in the following areas.

Transactional banking should become more flexible, responsive and convenient as a result of competition provided by the emergence of non-bank payment services providers (PSPs). These non-bank PSPs won’t just provide greater range of real choices<sup>24</sup> to consumers and businesses, the signs are that they are forcing the established banks to respond by improving their own services. But, whether these new types of payment service will represent as great a stepchange in banking as the ATM, debit card, credit card, or direct debit remains to be seen – we very much doubt it.

There is no question that the more granular profiling enabled by fintech and big data analytics will allow firms to offer commercially attractive consumers better value, tailored choice of products and services. There are high hopes for new third party providers starting to offer these services to some consumers once Open Banking and PSD2 comes in.

In the insurance market, there is an expectation that we will see a growth in ‘just-in-time’ insurance allowing consumers to buy insurance for specific events or very short periods of time.

If used properly, fintech could reduce the costs of gathering and sharing customer data and information which, if passed on by financial providers and intermediaries, should reduce distribution costs and create better value, lower costs products for consumers.

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<sup>24</sup> It is important to recognise the distinction between choice *per se* and choices that socially useful and add value for consumers.

Similarly, the greater use of ‘robo-advice’ and data analytics could cut the cost of providing financial advice. This will probably be restricted to the most basic advice needs and is unlikely to replace human interaction in cases that involve any real complexity. Nevertheless, it should help strip some costs out of the financial advice supply chain – of course, there is no guarantee that these costs will be passed on to the end-consumer (see below).

But, if competition can be made to work so that fintech does lower the unit costs of doing business, this in theory should also increase the number of consumers who are commercially viable for financial providers – including non-profit providers who want to tackle financial exclusion.

We also think that fintech apps (fincapps) could be deployed intelligently to help consumers make better financial decisions and improve financial behaviours so building financial capability and promote financial inclusion and resilience. For example, fincapps could be used more widely and proactively to alert consumers if they are going into the red on their bank accounts, to provide warnings when spending limits are being breached, or help consumers set up and manage savings goals. Similarly, we see potential for consumers using fincapps to undertake regular financial healthchecks and work towards financial fitness (for example, rebuilding credit scores if turned down for a loan). Again, in theory, if taken to the next level, fintech could be used to enable groups of consumers to operate on a collective basis to demand better deals from financial services providers.

Fintech also has the potential to help consumers understand better how their money is being invested. Campaigners have made great strides recently in promoting ESG<sup>25</sup> investing. Fintech apps seem ideal for helping socially-minded investors and firms keep track of supply chains, understand the environmental impact of investment decisions, or organise better to hold firms and company boards to account.

Perhaps the development which has seen the most hype is blockchain technology. There are great expectations for application of blockchain technology across a wide range of financial services (and related services). For example, it is claimed that:

- Remitting money overseas could done more safely, quickly, and cheaply than with the current money transfer systems;
- Verifying customer identities and ‘know your customer’ checks critical to complying with anti-money laundering regulations could be done more efficiently;
- Blockchain could be used to improve the efficiency of critical back office processes such as clearing and settlement of transactions in financial markets which could lead to significant cost savings;
- Blockchain technology can be used to verify and transfer property or shareholder rights;
- In the insurance and reinsurance markets, using blockchain to streamline paperwork and risk management is being tested; and
- Auditing and accounting professions will be transformed (for example, through real time stock control, tracking of assets).

So, there is undoubtedly *potential* benefits if fintech is harnessed properly.

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<sup>25</sup> Environmental, social, governance

## POTENTIAL RISKS AND DETRIMENTS

But, it is important to stress that the examples outlined above relate to *potential* benefits. It is early days. Even if we do see a reduction in costs, there is no guarantee that competition will ensure these gains will be passed on to consumers.

Moreover, the history of financial services is littered with examples of ‘innovation’ that provided spurious benefits, increased rather than reduced costs for consumers, or created new risks and detriment. Indeed, many innovations in financial services seem to have been developed to deal with the risks created by previous round of financial innovation. So, a healthy degree of scepticism about fintech innovation is wise.

Just as we cannot say with certainty what the potential benefits are, we cannot say with certainty what the potential risks are. However, we can draw on our knowledge and experience of other financial markets to make reasoned judgments about the risks involved. There are major risks associated with fintech which have not been analysed properly by policymakers and, it must be said, by consumer groups and wider civil society organisations.

### Categories of risk and detriment arising from the growth in fintech

There is a wide range of specific potential risks and detriments associated with fintech. We categorise these into four broad categories:

- Outright scams and frauds involving unauthorised/ illegal financial activity and data breaches.
- Conduct of business risks including behavioural manipulation, poor decision making, outright misselling/ inadvertent misbuying of inappropriate or unsuitable products and services, greater difficulty exercising rights and redress.
- Even less effective competition, higher costs and value extraction in the financial services supply chain.
- Greater financial exclusion and discrimination.

Managing these risks will present difficulties for boards and senior management of firms, and policymakers and regulators so we have also included: **corporate governance and culture risks**; and **regulatory risks**. If fintech does have a major impact on established financial services then we could see significant disruption which will create **transition risks**.

How these risks and detriments will play out will very much depend on the sector (banking, lending, insurance, pensions and asset management) and activity (trading, financial advice and so on). We cannot provide a detailed analysis in this short paper. Therefore, it is critical that further work is done to assess the potential scale of these risks.

One of the key things to remember about fintech is that the *types* of threat to consumers and businesses is not actually changing. But, the risks and threats and potential for detriment are *heightened*, and the scale of detriment and harm potentially magnified.

### Imminent risks associated with Open banking/ PSD2

In particular, the risks associated with PSD2 and the Open Banking Initiative in UK have not been considered in any real detail even though these are going live in January 2018. We are very



concerned about the approach adopted by the FCA with regards to Open Banking/ PSD2. So far, the FCA has focused too much on the potential benefits for competition in the banking sector<sup>26</sup>.

Managing the ongoing risks associated with fintech generally will require a new approach to financial regulation. But, in particular, we have seen nothing substantive on how the FCA will manage ongoing conduct of business risks with Open Banking/ PSD2 or ensure that it introduces real competition (rather than the illusion of choice) so that consumers get better value.

However, the potential for scams and fraud arising from the introduction of Open Banking/ PSD2 presents an imminent serious risk – see below.

## **SCAMS AND FRAUDS**

There are numerous types of scam and fraud already taking place in financial services. As mentioned, the types of scam and fraud will not change but fintech does provide more opportunities these to occur – the introduction of Open Banking and application of PSD2 in January this year provides an immediacy to these threats.

Scams and frauds can be categorised into two broad groups:

- Unauthorised financial transactions/ illegal financial activity; and
- Data breaches resulting in fraudulent activity.

Examples of threats and risks include: devices being compromised; security credentials being captured or inadvertently shared; consumers being redirected to spoof/ fake sites; consumers not understanding who they are giving consent to when sharing data; consumers sending data to fraudulent third parties (with Open Banking there is a very real risk that consumers will inadvertently provide access to bank data to scammers and fraudsters some of who will be based outside the jurisdiction of UK regulatory authorities); third party intermediaries having poor security and/ or fraud controls; and consumers being targeted by less scrupulous financial providers authorised in less well regulated jurisdictions selling regulated (but unsuitable) products or unregulated products (investment products are a particular concern).

The main reasons why we are concerned that threats of scams and frauds will be heightened with fintech/ Open Banking/ PSD2 are fairly obvious.

- There will be more third party intermediaries in the supply chain which consumers will have to be aware of and regulators have to supervise.
- There will be more points of entry for scammers and fraudsters to target consumers.
- Financial services will become even more complex and fragmented so the risk of consumers being misled, confused and making wrong decisions increases.
- Responsibility for regulation and protecting consumers is split between two regulators – the Financial Conduct Authority (FCA) and Information Commissioner's Office (ICO) who will be responsible for data breaches and losses. Ensuring consumers are well protected will require effective coordination between the two regulators. But, there are concerns that the ICO already needs additional resources to monitor and supervise compliance with, and

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<sup>26</sup> See for example, <https://www.fca.org.uk/news/speeches/future-competition-and-regulation-retail-banking>

enforce breaches against, the new General Data Protection Regulation (GDPR)<sup>27</sup> which brings major changes to data protection laws and is coming into force in May 2018<sup>28</sup>. Monitoring how financial firms and third party intermediaries treat consumers' data in the new Open Banking and PSD2 environment will be a challenge for the ICO on top of the GDPR responsibilities.

To be fair, Third Party Providers (TPPs) who will provide new services in the Open Banking/ PSD2 environment need to be authorised by the FCA. But, authorisation is only the beginning of the regulatory process.

Making sure consumers understand their rights in a more complex world is a priority. The FCA has published some information for consumers on how to make complaints when Open Banking/ PSD2 comes into force<sup>29</sup>. But, this is very limited.

### **EVEN LESS EFFECTIVE COMPETITION, GREATER VALUE EXTRACTION, HIGHER COSTS INJECTED INTO DISTRIBUTION AND SUPPLY CHAINS**

Rather than promote more effective competition from the perspective of consumers, there is a risk that fintech may actually undermine competition, create more value extraction, and make it harder for consumers to identify and access best value products and services.

Why might this be the case? There are a number of supply side and demand side reasons. Each of these can be found in analogue markets but will be exacerbated in fintech based markets.

First of all, contrary to competition economics orthodoxy, history shows us that in financial services, consumer demand led competition and choice have not been very effective mechanisms for ensuring the 'best', truly innovative providers, products and services prevail. The factor that makes the main difference is having the resources to dominate marketing and distribution channels. There is little reason to expect that this will be any different with fintech based financial services.

Rather than streamline distribution and supply chains by cutting out the 'middleman', there is every likelihood that fintech will result in new forms of intermediary services and types of intermediaries being introduced into financial services (and associated supply chains). This will create even more complexity and fragmentation, further undermining already ineffective competition in key sectors.

Under the guise of innovation, new products and services will be developed and marketed, existing financial products and instruments deconstructed and repackaged, or rebundled with other products and services. Consumers will be offered new fintech services, tools, and apps which they hitherto hadn't realised they needed or wanted.

Overall, fintech could expand the number of product choices (or permutations and combinations) available to consumers, and the number of providers and intermediaries consumers have to deal with. Remember, more choice does not necessarily equate to effective competition or greater

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<sup>27</sup> The GDPR is a EU Regulation. It improves data protection laws, gives people more rights and controls over how their data is used, and imposes greater obligations on how organisations use citizens' personal data

<sup>28</sup> <https://ico.org.uk/about-the-ico/news-and-events/news-and-blogs/2017/03/statement-on-extra-resources-needed-by-the-ico-under-gdpr/>

<sup>29</sup> <https://www.fca.org.uk/consumers/account-information-and-payment-initiation-services>

market efficiency from the consumer perspective. Product and service development costs money, product proliferation increases search and advice costs, and intermediaries have to be remunerated.

Unless the use of fintech by savvy consumers results in more effective competition, culling of inefficient existing providers and poor value products, and streamlining of distribution channels then, by definition, the financial services ecosystem must become even more fragmented and complex, and inefficient.

But, consumer pressure on the demand side is unlikely to lead to greater market efficiency for a number of obvious reasons.

The more complex and fragmented, less transparent the financial ecosystem becomes, the harder it is for consumers to spot good value products and services. Product proliferation and spurious choice makes it more difficult for consumers to exert discipline on markets, to keep down costs.

More opaque, complex business models, and less transparent conflicts of interest will make it easier for firms and intermediaries to recommend/ sell higher cost products or services of doubtful value services.

Similarly, fintech and big data analytics provides greater opportunities to exploit consumer behavioural biases and information asymmetries to sell poor value products and services.

The time for consumers to reflect and consider decisions and choices is also compressed in faster moving markets.

So, making the right choice and effective decisions will become even more difficult – no doubt we will see new fintech services and apps introduced to help consumers make sense of the complexity caused by the growth in fintech!

Overall, it seems wise to assume that the net effects will be: further value extraction from the supply chain, and an actual increase in aggregate end-to-end costs for retail consumers.

To be fair, certain specific fintech firms may be more cost efficient than established mainstream financial services providers with legacy corporate structures and business models to support or unwind, creaking IT and back office infrastructures to upgrade or replace entirely - banks and insurance companies spring to mind. It may well be that years from now the 'dinosaurs' of finance will have been replaced by an ecosystem of lean, nimble, adaptable fintech providers able to respond to consumers changing needs and preferences and provide value for money products and services.

But, from the vantage point of 2018 this doesn't look too likely. Major change is more likely to be driven by established providers adopting and adapting the new technologies, rather than driven by disruptors. Fintech might end up actually helping established providers in key markets consolidate their dominant positions.

If it leads to dominant (utility like) providers making their own services more responsive and flexible, and improving the value of their products, then that will be a positive development<sup>30</sup> - remember, what matters is not the number of choices *per se* in a market but how providers behave.

But, if fintech allows dominant providers to extract further value or price discriminate against vulnerable consumers then that will clearly be detrimental. The outcome will primarily depend on the response of regulators and the corporate culture within established providers.

Even if we assume a more optimistic outlook for disruptors, it will take some time before this translates into more efficient, flexible, responsive financial services. During the long transition period, financial services will become even more complex, fragmented, and risky, and as a result less efficient overall.

It is helpful to look at a number of examples to illustrate the problems.

Open Banking and PSD2 is meant to open up the banking and credit markets to allow third party providers (TPPs) to provide consumers with access to better value, more suitable products/packages of products (cheaper current accounts, better paying savings rates, cheaper credit cards). Some of these TPPs may charge explicit fees to operate these new services. But, of course, a significant proportion of consumers in the UK have such low balances on current/ savings accounts that any service fee could actually outweigh the financial gain from switching. Similarly, consumers who could benefit from switching to a lower cost credit card may find that those options are not available to them. Regulators are going to have to ensure that the costs and potential benefits are disclosed fairly and transparently when Open Banking/ PSD2 takes effect.

Similar issues will emerge in the asset management sector which has already been criticised by consumer advocates for high levels of charges and opacity of fee structures. On the plus side, as mentioned, the introduction of 'robo-advice' may end up reducing some of the costs in providing investment advice. However, we are just as likely to see the investment industry and intermediaries (including new types of intermediaries) develop and promote innovative but spurious fintech services and apps to encourage investors to actively manage their investment portfolios and/ or exposure to investment risk.

There is a huge body of evidence which shows that at the aggregate level, once charges are factored in, active management consistently underperforms passive investment strategies over the long term. There is nothing to suggest that fintech or more sophisticated data analysis that encourages even more active investment management will deliver enhanced returns for investors. Indeed, if anything, the injection of new fintech services and apps could well worsen the position for investors. These new technologies and intermediaries have to be paid for. If their activities do not lead to enhanced returns then, by definition, the increased costs involved in supporting the new technologies and intermediaries will extract further value from investors' funds.

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<sup>30</sup> But, of course, this will come at a cost for consumer access and inclusion and, in all likelihood, for employees. The growth in telephone and on-line banking has already contributed to the decisions of banks to cut operating costs by reducing the size of the branch network. If fintech has a big impact, this will force banks to further reduce their physical presence. If we retain the commercial banking model, this shift away from physical networks is inexorable. We cannot have free-if-in-credit banking and both virtual and physical banking at the levels demanded by some consumer media and consumer advocates. Something has to give. The only ways this dilemma can be addressed is if the state offers an alternative, alternative localised banking develops (no real sign of this so far), or regulators mandate social obligations and banking is treated as a utility. And, as explained elsewhere, this won't just have an impact on geographical access. It will have wider impacts on access and local economies.

It is also important to remember the basic point that unless the welfare gains from a technological innovation outweigh the investment costs, then a net welfare loss will occur. Blockchain is a case in point. The claims made so far about blockchain remain just that, claims. Despite the great expectations and the hype by blockchain evangelists, very little tangible benefit is in evidence. So far, the main uses seem to have been currency speculation and facilitating illegal transactions<sup>31</sup>. It may well be that blockchain technology is in fact a complex, expensive solution for a need that is already being met very well by existing technologies. Migrating to blockchain technology could also involve huge costs for the financial services industry with little gain for firms or indeed its customers. Indeed, we could see a net welfare loss for consumers if newer financial systems built on blockchain technology are not better than existing systems but involve additional costs.

But, this is the story of much of the ‘innovation’ we have seen in financial services over the years. Moreover, there are externalities to consider. For example, it is now recognised that Bitcoin mining requires huge energy consumption.

## **CONDUCT OF BUSINESS RISKS**

Conduct of business risks include behavioural manipulation, poor decision making, outright misselling/ inadvertent misbuying of inappropriate or unsuitable products and services, and greater difficulty exercising rights and redress.

The same root causes which threaten to undermine effective competition will also heighten conduct of business risks - an even more complex and fragmented financial ecosystem, more opaque business models/ conflicts of interest, greater opportunities to exploit consumer behavioural biases and information asymmetries, and time for reflection and decision making being compressed in faster moving markets.

Poor corporate governance and cultures and ‘analogue’ regulation means that these risks may not be identified and mitigated effectively.

### **Business model opacity/ conflicts of interest**

If fintech firms/ TPP<sup>32</sup> business models aren’t built around charging explicit fees, then they will have to make money in other ways. For example, they could adopt similar business models to comparative information websites by taking advertising or receiving payments from product providers who receive new business from consumers who switch.

Alternatively, what we may see is TPPs selling customer data to other firms. In the new world of fintech/ big data, customer data is hugely valuable to advertisers and financial services providers who want the data to target products and services more precisely – as the saying goes: *‘if you’re not paying for something, then you’re the product’*.

Whichever business models do prevail, the inherent conflicts of interest will have to be managed. Of course, conflicts of interest are nothing new in financial services – after all, these have been at the root of the major misselling scandals of the past 30 years.

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<sup>31</sup> For a scathing critique of the potential for blockchain technology to really change financial services, see Ten years in, nobody has come up with a use for blockchain, Kai Stinchcombe, December 2017, <https://hackernoon.com/ten-years-in-nobody-has-come-up-with-a-use-case-for-blockchain-ee98c180100>

<sup>32</sup> Third Party Providers

But, as explained below, fintech is likely to make life even more complex, complicated, and difficult for consumers (and regulators) than ‘analogue’ financial services. It will be easier for firms and intermediaries to deploy confusion marketing strategies and exploit behavioural biases and consumer fears. This will require a new approach to regulation upgraded for the digital world – we have analogue regulation in a digital world.

### **An even more complex and fragmented financial ecosystem**

The financial services industry is already notorious for its complexity, confusing terminology/ terms and conditions, fragmented distribution models and structures, and unnecessary product proliferation. All this complexity and fragmentation hinders good decision making by consumers. As well as pushing up the costs of providing products through higher marketing and advice costs (see above), this will increase the risk of misselling, and makes for harder for consumers to understand their rights and obtain redress.

### **Exploitation of consumer behavioural biases and information asymmetries**

Proponents of fintech argue that it can be used to tackle some of the perennial problems in financial services – information asymmetries and sub-optimal consumer and market behaviours. Again, used by capable consumers and in the hands of the right trusted intermediaries, fintech could be a powerful tool for levelling the playing field for consumers.

For example, as mentioned above, with Open Banking new third party providers (TPPs) are expected to emerge to help consumers switch to better value providers. In theory, this should keep providers such as banks and credit card companies on their toes. Similarly, fintech could help consumers manage their finances better, avoid getting into debt and so on.

But, thinking about this, even just for a moment, it is obvious that fintech and big data will allow providers and intermediaries to take the use of exploitative and confusion marketing techniques to a whole new level. With the combination of fintech and big data (enabled by the huge improvement in IT processing capabilities), providers and intermediaries are in a position to understand consumers’ behaviours better than they do themselves.

The concern here is that firms and intermediaries could use these insights to:

- exploit behavioural biases and sell consumers unsuitable or poor value products; or
- manufacture anxieties and fears to sell products consumers hitherto hadn’t realised they ‘needed’.

Note that the risk here won’t necessarily arise due to unscrupulous boards and senior managers of firms *deliberately* using fintech to exploit consumers as part of corporate strategy. Rather, as we explain below, the risks are also likely to emerge due to the culture gap between boards/ senior managers and fintech developers and weak corporate governance/ risk controls. Boards and senior management could *inadvertently* allow consumers to be exploited.

### **Poor decision-making by consumers and market participants in complex, fast moving environments**

Linked to the above, there is an increased risk that consumers will make poor decisions in more complex, faster moving markets.

As explained, the likelihood is that fintech will make financial markets and services more, not less, complex. Greater complexity creates higher risks of misselling and poor decision making by consumers.

Moreover, fintech will further speed up decision making. But, when consumers make decisions in haste, without full and proper consideration of the consequences, this obviously increases the risk of detriment. Payday lending was a prime example of this. The supposed benefits of payday lending – convenience and immediate access – was also one of its inherent design flaws.

One of the key priorities for regulators will be to find ways of slowing down the sales process and insert ‘break points’ so that consumers are required to give due consideration to the decisions and choices they make.

In the institutional and wholesale financial markets, where fast and furious trading activity takes place, the greater use of AI/ algorithmic trading could lead to flawed processes and decisions being replicated more quickly.

### **Rights and redress**

It is worth saying a separate word about rights and redress. Greater complexity and fragmentation increases the risk of consumers being misold or misbuying unsuitable or inappropriate products and services.

If misselling or misbuying does occur, the same complexity and fragmentation could make it more difficult for those consumers affected to exercise their right to make a complaint and obtain redress. For example, in the fintech/ Open Banking/ PSD2 world there is likely to be more third party intermediaries involved in facilitating transactions or providing information/ advice. This will make it more difficult for consumers to identify who is to blame, who to make a complaint to and obtain redress from.

With Open Banking/ PSD2, a new dispute resolution scheme is being developed by the Open Banking Implementation Entity which hopefully should dovetail with the existing Financial Ombudsman Scheme (FOS). As it stands, it is not clear if this new resolution scheme has been finalised properly in time for the coming into force of Open Banking and what the plans are for communicating how it works to consumers. If a data breach results in financial loss consumers may find themselves dealing with the dispute resolution scheme and two different statutory regulatory systems – the FCA and ICO.

It is easy to imagine how more difficult it will be for consumers to navigate the system of rights and redress in the fintech/ Open Banking/ PSD2 world. The FCA has published some information for consumers on how to make complaints when Open Banking/ PSD2 comes into force<sup>33</sup>. But, this is very limited.

### **Financial markets and infrastructures**

Moreover, fintech isn’t just affecting retail financial services, it is having an impact on institutional, wholesale and capital markets, and critical infrastructures such as payment, clearing and settlement

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<sup>33</sup> <https://www.fca.org.uk/consumers/account-information-and-payment-initiation-services>



systems. But, as ever with financial innovation, much of it will be spurious, and create new risks and market failures that are greater than the value and benefits created.

So far, we can see little evidence that fintech will do that much to improve the economic and social utility of financial markets and services. There will be some benefits – most likely in clearing/ payments systems<sup>34</sup>. However, overall, we see little to support the view that fintech will: cause financial markets to better allocate resources to productive economic activities; improve the value provided by the notoriously inefficient asset management industry; make a major difference in helping real economy firms (especially SMEs and micro-enterprises) get access to the finance they need to invest and grow; or improve the way risk is managed in the financial system and wider economy.

Just as we expect greater risk of misselling in retail financial services, the new technologies will also create more opportunities for fraud, market manipulation, and misconduct in the fast moving wholesale and institutional financial markets. So far, the main use for blockchain technology seems to be criminal activities and market speculation.

The distinction between unsophisticated consumers (retail) and supposedly ‘sophisticated’ institutional clients such as pension funds is artificial and unhelpful. Spuriously complex and opaque financial products and strategies remain an intrinsic feature of these markets except this is now combined with unimaginably fast processes based on complicated computer algorithms and AI/ machine learning that only a handful of experts truly understand. These conditions could lead to flawed processes and decisions being replicated more quickly and create opportunities for clever and rapacious market practitioners to rip off less savvy institutional clients or sell them complex products and strategies they do not understand.

### **Corporate governance and culture risks**

One of the less obvious risks (or at least one which doesn’t appear to be receiving much consideration) is the potential culture and knowledge gap between those who:

- **Run financial institutions:** they tend to be older/ middle aged, experienced in traditional financial services and who after years of misselling scandals now have an understanding of ‘analogue’ conduct of business risks and the expectations of regulators. But they have little understanding of how fintech actually works and the main risks associated with fintech; and
- **Develop fintech:** they tend to be younger, more ambitious and more impatient for change, and may see regulation as a burden or stifling innovation.

This knowledge and culture gap combined with the speed of change in financial markets, and the capacity for system design flaws to be replicated more quickly within financial sectors, means that misselling scandals must be considered inevitable.

Boards of financial institutions will have to be alert to the risk of the ‘classic’ type of misselling (which usually stem from conflicts of interest in the supply chain but this time in even faster moving environments). But, boards will also have to be alert to the risk of clever marketeers and product developers using behavioural and profiling insights gained from big data analytics to take advantage of behavioural biases and fears to sell consumers unsuitable or inappropriate products and services.

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<sup>34</sup> Note: although it is worth noting that despite big claims about blockchain technology, so far, little has actually been delivered.

The need for boards to exercise due diligence and a duty of care to customers will be greater than ever.

Corporate governance and risk management by boards is an issue in the wholesale and institutional markets, too. It is evident that boards of many financial institutions did not understand what the ‘rocket scientists’ (who devised complex and opaque derivatives based products, instruments, and trading/ investment strategies) were doing in the run up to the financial crisis in 2007/08.

Complex and opaque financial products and strategies remain an intrinsic feature of these markets. Moreover, unimaginably fast processes have been a feature of markets for some time, too (for example, high frequency trading<sup>35</sup>). But, now this complexity and speed is combined with even more complicated computer algorithms and AI/ machine learning that only a handful of experts truly understand. The challenge for boards to exercise due diligence and fiduciary duties of care to clients in these dynamic markets does not need to be spelt out.

## **GREATER FINANCIAL EXCLUSION AND DISCRIMINATION**

Fintech evangelists (not just in the industry but amongst consumer advocates and wider civil society) are very hopeful that fintech will promote access and inclusion in financial services. As mentioned above, if it does reduce costs and promotes better financial behaviours it could help tackle financial exclusion.

But, on balance, we think there is a very real risk of fintech exacerbating financial exclusion and discrimination.

As mentioned elsewhere, the growth in the use of fintech is having an impact on the coverage of the physical bank branch network. This could have an impact on local economies and households – particularly those who do not have the right quality of internet coverage to make online banking and fintech services viable.

However, it isn’t just geographical access and exclusion we have to worry about. Markets are amoral and allocate value according to economic value and power, not needs. This is not a value judgment just a statement of fact about how markets operate<sup>36</sup>.

One of the clearest lessons of financial services is that customer profiling and segmentation is associated with financial exclusion – whether in the form of consumers being denied access altogether or priced out of a market.

The combination of fintech and big data will allow financial providers to segment and profile consumers at an even more granular level – and not just by income, job, region etc but according to behaviours and other social characteristics. Financial firms will be much more able to identify profitable/ less risky/ ‘desirable’ consumers and exclude or exploit low income/ more risky/ less ‘desirable’ consumers.

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<sup>35</sup> For a good summary of the evolution of high frequency trading see *Speed Bump*, FT Big Read, Trading, Financial Times, 2<sup>nd</sup> January 2018

<sup>36</sup> If you think about it, the value a consumer gets from a market is a function of: their economic power (how much they can spend); how well the consumer operates in that market (based on their capability and confidence to make good decisions and choices); how efficient that market is in delivering the right products/ services to consumers; and the structure of that market (whether it is built around principles of individualism, mutuality, or social provision is mandated etc).

Of course, we could hope that alternative, non-profit financial providers (eg credit unions or CDFIs, or new mutual insurers) might be able to meet the needs of consumers excluded as a result of fintech. But, we must be realistic. For example, as was evident with payday lending, commercial lenders were able to exploit technology with ruthless efficiency to target vulnerable consumers. Sadly, as it stands, non-profit or alternative financial providers are not yet fintech-ready to be able to compete with commercial providers (who have the technical and financial resources) at any significant scale.

This will be a critical issue. If we want to prevent vulnerable consumers (who could be pushed out of mainstream markets as a result of fintech) from being exploited by unscrupulous, efficient commercial providers, we will need to build capacity in the alternative, non-profit sectors.

As well as the supply side dynamics outlined above, the risk of greater exclusion arises from demand side behaviours. More confident, capable, tech savvy consumers will be well placed to navigate and negotiate the more complex, sometimes threatening fintech marketplace, and access the better deals. Less confident consumers with low levels of financial capability will not thrive. Markets function as zero sum games (unless fintech improves market efficiency at the aggregate level – and as outlined above, there is no guarantee of that) so if one set of consumers gain, another set will lose out.

## **TRANSITION RISKS AND DISRUPTION TO ESTABLISHED FINANCIAL SERVICES**

We envisage a number of potential scenarios for fintech, each of which carry risks to established providers. Of course, the extent of the risks all depends on the take up of fintech – which is the great unknown.

As it stands, we think the probability of new fintech ‘disruptors’ displacing the ‘dinosaurs’ of financial services (certainly to the extent that evangelists imagine) is quite low. Rather than see new players truly shake up the market and displace the established firms, it is just as likely that existing players will adopt and adapt fintech to their own organisational needs. Ironically, in sectors such as banking, the dominant players could further consolidate their power.

This is not necessarily a bad thing if, for example, the big banks use the new technologies to provide better value and make banking more responsive, convenient and flexible. Having large numbers of providers in a market is not necessary to ensure good outcomes for consumers – indeed, too many providers and product proliferation can be as harmful as too few providers and little choice. What matters is that there is *sufficient* competition in a market, firms have a consumer-centric culture, and regulators actively make a market work.

But there are risks. Established players with legacy corporate structures and IT infrastructure face a huge task managing the transition to a digital finance<sup>37</sup> world on top of all the other priorities (including Brexit). Boards of financial institutions only have so much ‘bandwidth’. Mistakes will happen.

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<sup>37</sup> One bank refers to itself as a digital finance company with a balance sheet attached

If established players do manage the transition successfully (from the perspective of shareholders that is), this will have consequences for access to financial services for consumers and local economies, and for financial services employees.

If the disruptors do consign established business models to history, this in itself also carries major transition and disruption risks for customers, employees and shareholders and the wider financial system.

Whichever scenario plays out, it is important that policymakers and regulators understand and mitigate the risks involved. Not much thought has been given to the consequences of this. ‘Creative destruction’ might sound exciting but it is not a good idea when critical financial services are involved. Standing back and allowing nature to take its course is not an option, any transition must be managed. Consumers, and possibly the financial system itself, could be badly harmed during and after the transition – if it happens to the degree forecast by some commentators.

The other possible scenario is that the BigTech firms enter financial services in a serious way. There have been some tentative signs of entry but so far it is not clear how interested BigTech firms are given the necessary conduct and prudential regulation that accompanies selling financial services.

But, if they did, this could be a game changer given the reach, marketing and technology skills, and huge cash reserves BigTech firms have. The BigTech firms are clearly innovative, are experts at marketing and have a huge customer reach. Some experts believe that they would offer a much needed challenge to established financial providers. That may well be the case. BigTech could have much greater impact than that provided by the small fintech ‘disrupters’.

However, there are obvious risks involved. The level of control exercised by BigTech over our personal data and their ability to influence and manipulate our behaviours through advertising is already a grave concern. Allowing BigTech access to our financial data would take these concerns to a whole new level.

## REGULATORY CHALLENGES

Policymakers and regulators face a number of challenges in the new fintech world including:

- Dealing with the immediate risks created by Open Banking and PSD2;
- Identifying and mitigating ongoing conduct of business risks in retail *and* wholesale/ institutional markets (including supervision), ensuring good corporate governance and cultures;
- Improving communications with consumers so they better understand the risks involved with fintech, and how to exercise their consumer rights and obtain redress in more complex, fragmented fintech markets;
- More generally, making competition work for consumers in more complex, fragmented markets, preventing greater value extraction, ensuring consumers get better value products and services; and
- Dealing with greater financial exclusion and discrimination.

## **Open Banking/ PSD2**

Top priority is dealing with the immediate risks presented by the introduction of Open Banking and PSD2 in January 2018<sup>38</sup>.

To be fair, there has been some recognition by regulators, and the banking industry of the risks relating to scams and frauds – particularly the risk of consumers giving scammers and fraudsters consent to access their data.

Third party providers (TPPs) will also have to be authorised by the FCA. But, this will offer limited protection. Scammers and fraudster by definition do not get authorised. Moreover, authorisation is just the beginning of the regulatory process. We will need to see tougher ongoing conduct of business regulations, as well as robust authorisation criteria.

The scale of the potential risks, of course, depends on how much activity we see, how many new ventures and so on. But, we are concerned that regulators, the financial services industry, and consumers are not prepared for the start of Open Banking and coming into force of PSD2.

Consumer protection is split between the Financial Conduct Authority (FCA) and the Information Commissioner's Office (ICO) which will introduce confusion into the process of exercising rights and redress. The FCA will also have to find more effective ways of communicating with consumers to help them understand their rights and how to make complaints and get redress in a more complex banking and payments world. There is some information provided by the FCA but this is very limited<sup>39</sup>. Moreover, there are concerns that the ICO, which also has to deal with the introduction of the huge General Data Protection Regulation (GDPR) in May 2018, may not have enough resources to also deal with Open Banking/ PSD2 related risks.

## **Conduct of business risks, corporate governance and culture**

With regards to fintech generally, a more complex financial ecosystem and fragmented supply chains will make it even more difficult for the FCA to identify and mitigate conduct risks, supervise market practices and behaviours, and determine culpability for misselling and other forms of consumer detriment.

The FCA particularly will face a more difficult challenge ensuring firms have the right governance structures and culture in place to prevent consumers being exploited by the combination of fintech and big data analytics. Complex, fast moving fintech markets will be a big test for the Senior Managers and Certification Regime (SMCR)<sup>40</sup> and for the FCA's product intervention and governance powers. In this paper we call for an upgrading of the approach to conduct of business regulation – we argue we have analogue regulation for a digital finance world.

Moreover, it will be interesting to see how regulators respond to the challenges of identifying and mitigating conduct of business risks, preventing market abuse and fraud, and maintaining market integrity in the vast, complex wholesale and institutional markets. As mentioned above, the main uses for blockchain technology so far seem to be criminal activities and market speculation.

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<sup>38</sup> To be precise from 13<sup>th</sup> January

<sup>39</sup> See for example <https://www.fca.org.uk/consumers/account-information-and-payment-initiation-services>

<sup>40</sup> The SM&CR is intended to reduce harm to consumers and strengthen market integrity. One of the key ways it aims to do this is by making sure senior managers can be held accountable for misconduct within their area of responsibility.

Financial policymakers and regulators have always faced an uphill struggle keeping up with innovation even in the ‘analogue’ world. The technology might be evolving but there is little reason to believe human behaviours are – fear and greed remain the dominant emotions in markets where huge sums of money are at stake.

The distinction between retail/ unsophisticated consumers and sophisticated clients is unhelpful. There are numerous examples of supposedly sophisticated corporate and institutional clients (eg pension funds<sup>41</sup>) faring badly in wholesale and institutional markets, becoming victims of misselling by clever, aggressive and rapacious market practitioners. The temptation to manipulate markets and take advantage of institutional clients will still be there but now there will be more opportunities to do so with fintech and data analytics.

Regulators are constantly playing catch up and face the perennial problem of being outgunned in terms of resources (human, financial, and technological). We saw how this played out with the systemic failures caused by the growth in the use of complex, esoteric derivatives based financial products and instruments. Regulators are likely to lose this new technology arms race.

The main challenges for regulators will be to monitor and supervise behaviours to identify and prevent market manipulation and abuse in this new complex, fast moving environment, and to gather and preserve the evidence to enforce against breaches. Alternative approaches to regulating, supervising, and enforcing against breaches will be needed.

### **Improving communication with consumers on rights and redress**

A recurring theme in this report is that the greater complexity and fragmentation associated with fintech will make it harder for consumers to know i. who to blame if misselling/ service problems occur, and ii. how to exercise their rights to redress.

We would urge the FCA and the FOS to do more to communicate to consumers what their rights are and who they should complain to in the event of a problem arising (for data breaches the ICO would need to be involved).

### **Making markets work**

Policymakers, the FCA, and many consumer advocates and think tanks are much too optimistic about the potential for fintech related innovation to enhance the economic and social utility of financial markets – particularly for improving competition and access (see below). The fact that fintech will create more choice and innovation will not, in and of itself, automatically result in markets which produce better value, more suitable products and services.

Another recurring theme in this discussion paper is that, rather than enhance *true* competition, the growth in fintech could make markets more complex and less transparent, create even less transparent conflicts of interest, exacerbate information asymmetries, and expand the proliferation of products and services of doubtful value. We could see even greater value extraction, and an increased probability of consumers choosing poor value products.

So, how do we address the potential for market failure as a result of greater complexity and fragmentation etc? Experience tells us that financial education or providing consumers with

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<sup>41</sup> Remember, the collective nature of pension funds means that if they (or their agents) are victims of misselling or misrepresentation this harms large numbers of individual consumers.

information is not very effective in making markets work and driving true competition in more complex markets (eg pensions and asset management). The answer will lie in more intelligent, targeted, robust conduct of business regulation and effective use of product intervention. Further work is needed on this.

### **Dealing with greater financial exclusion and discrimination**

The FCA has been doing some very good work recently on vulnerable consumers. It has also started re-thinking how to handle the boundary between its statutory regulatory remit and wider social policy issues such as financial exclusion<sup>42</sup>.

But, as we explain above, fintech is likely to exacerbate financial exclusion and exploitation of vulnerable consumers. The FCA will need to enhance supervision to prevent exploitation of, and discrimination against, vulnerable consumers.

Resolving the boundary problems will be challenging. Exclusion can be dealt with by: making commercial markets more efficient so that unit costs are reduced<sup>43</sup>; supporting alternative provision by non-profit providers; mandating provision of services to excluded groups; or the state providing (or facilitating) products and services to meet needs.

The FCA has a clear role to play in the first two interventions. It cannot mandate provision of services to excluded groups – that is the preserve of the government. But the FCA can, and should, play a more important role in highlighting the ways fintech and big data analytics contribute to exclusion and make recommendations to government for action.

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<sup>42</sup> See for example: <https://www.fca.org.uk/publications/corporate-documents/our-future-approach-consumers>

<sup>43</sup> In theory, if unit costs are reduced, this should expand the number of consumers who are commercially viable and attractive for the market



#### 4. CONCLUSIONS AND NEXT STEPS

We don't pretend to have all the answers – this is why this is a Discussion Paper rather than a Policy Paper. But, we want to start by injecting a degree of reality about the potential benefits and risks associated with fintech into the debate. Fintech may well cause significant disruption in markets and financial services. However, as it stands, there is little to suggest that fintech will give rise to the sort of creative destruction in financial services that can result from innovation in other markets.

Nevertheless, the growth in fintech is inexorable. This is not because it is 'progressive' (in that it will significantly improve the financial and social welfare of households and the efficiency with which financial markets serve the real economy) – although we are at pains to stress that there will be some genuinely useful innovation. Nor will it be consumer demand led – 'innovation' rarely is.

Rather, the use of fintech will grow because so many people in positions of influence (investors, fintech developers, policymakers and regulators, media, and consumer groups) believe in it. The fintech genie cannot be put back into the bottle. The challenge now is to work out to how to contain the genie, manage the risks, and harness the potential for good.

To do that, we need to address the following questions:

- All of main retail financial sectors that are critical to households and the real economy (banking and payments, provision of credit, pensions and asset management, life and general insurance) are being 'disrupted' by fintech – some more than others. As well as the visible financial services which households and firms engage with, the huge capital, wholesale, institutional and reinsurance markets that make up the global financial system and markets and sit behind retail finance are also affected. Can we identify more precisely how these benefits and risks will materialise in different sectors?
- Can we assess the extent of the risks to consumers and markets? This, in turn, all depends on take up – do we have a realistic idea of what take up will be like in the different sectors and parts of the market?
- How do we communicate the risks to consumers? The introduction of Open Banking/ PSD2 is an immediate priority if we are to avoid a repeat of the pensions freedom and choice debacle.
- How do we help consumers understand their rights (including how to obtain redress) in a more complex, fragmented fintech world?
- We cannot rely on competition to make markets work in financial services, so what needs to be done to stop firms and intermediaries exploiting complexity and fragmentation to push up costs, extract more value, or selling consumers products and services they don't need?
- Similarly, information provision and financial education are not effective at dealing with information asymmetries between consumers and providers/ intermediaries. These information asymmetries will be heightened as a result of fintech and big data analytics. So, how do we help consumers get the best deal and avoid being ripped off – especially less capable, confident, savvy consumers?
- How do we protect consumers from serious conduct of business risks arising from the use of fintech, big data analytics, and exploitation of behavioural biases and fears to sell consumers

unsuitable or inappropriate products and services? Can we build 'break points' into the sales and marketing processes to require consumers to think twice before making decisions?

- If fintech does radically 'disrupt' financial services, do we understand the consequences for critical sectors such as banking and insurance? 'Creative destruction' might sound good in theory but the impact on critical sectors such as banking and insurance could be profoundly destabilising.
- What measures are needed to tackle greater financial exclusion and discrimination arising from the combination of fintech and big data analytics? Do we understand the impact of the reduction of physical bank branch networks on local economies? How do we help non-profit organisations harness the positive potential of fintech to promote financial inclusion? Can fintech be used to promote positive financial behaviours and financial resilience? Do we need to rethink social policy mandates to protect vulnerable consumers and communities from the impacts of fintech?
- How do we improve corporate governance and risk management in firms so that boards and senior management recognise the potential harm that may be caused by fintech and big data analytics? How do we address the culture gaps in firms between those who run firms and those who develop fintech products and services?
- Overall, the growth in the application of fintech means we will need more effective financial regulation to protect consumers *and* make markets work for consumers and the real economy. The key regulatory question is: how do we upgrade 'analogue' regulation for the digital finance world?

A great deal of further work is needed to properly answer those key questions. We look forward to working with partners on this critical issue over the coming year.

**Financial Inclusion Centre**  
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