

**European Commission consultation: “FinTech: A More Competitive and Innovative European Financial Sector”: The UK Financial Conduct Authority’s response**

## **Introduction**

The Financial Conduct Authority (FCA) welcomes the opportunity to respond to the European Commission's consultation on FinTech.

## **Summary of key points**

- We support the timing and focus of the Commission's consultation;
- We see the themes and questions discussed as consistent with our own FinTech priorities, initiatives and experience – including our work on a Regulatory Sandbox model and on "RegTech";
- There is considerable scope for regulatory co-operation and supervisory convergence on FinTech issues – and much already underway;
- And there is value in seeking a consistent global agenda, given the global and cross-border potential of FinTech;
- In our response to the consultation, we offer specific thoughts on issues such as Distributed Ledger Technology, Automated Advice, Crowdfunding, Artificial Intelligence and Cyber-security;
- We support the Commission's proposed overarching principles: technological neutrality, proportionality, and market integrity;
- As FinTech innovation evolves, all regulators will need to reconsider what changes may be needed to national and EU legislation and requirements (e.g. in respect of disclosures and other customer communications) to ensure that we keep pace appropriately and maintain regimes that adapt effectively.

## **Our response**

We very much support the aims of the Commission to explore what more might be done to support and encourage FinTech development to improve access to digital products and services. We also generally agree with the set of issues, risks and regulatory challenges highlighted in the paper.

The Commission's objectives are essentially consistent with the response to financial innovation that the FCA began nearly three years ago when we launched "Project Innovate" to support those financial innovations with the potential to improve the integrity and efficiency of financial markets and benefit consumers through increased competition and access to financial services. Regulation has a role to play in making sure these right conditions exist, but we agree it must develop and adapt so that regulators can facilitate innovation whilst being mindful of emerging new risks and responding appropriately.

We have sought to reduce regulatory barriers to innovation whilst maintaining robust standards of regulation and consumer protection. More recently, our 'Regulatory Sandbox' (a first for regulators worldwide) has sought to create a controlled space for firms to pilot new ideas on a limited scale without incurring disproportionate regulatory consequences - but still subject to the necessary consumer protections for their limited testing activity. In such areas, as in our work with firms developing automated models to deliver lower cost advice, and our 'RegTech' initiative to apply technology creatively to improve our regulatory interactions with firms and markets, the FCA is committed to harnessing the power of innovation in the interests of consumers and to deliver better outcomes for the markets we regulate.

We agree with the Commission that even before the recent focus on FinTech, innovation and technology have long been powerful drivers of the development of global capital

markets. The FCA's long-standing regulatory approach has been consistent with the three core FinTech principles set out by the Commission in its paper: technological neutrality, proportionality, and market integrity. If the three were to be supplemented, the Commission might want to include at least an additional explicit principle on consumer protection. Furthermore, given the importance of a consistent global approach to FinTech regulation, there might also be scope to promote a set of global principles.

In the light of this, our response focuses on some particular elements of the Commission's consultation; notably:

- FCA FinTech initiatives such as our Innovation Hub, "Sandbox", Advice Unit, and work on RegTech;
- Distributed Ledger Technology (DLT);
- Automated advice;
- Crowdfunding;
- Artificial intelligence;
- Data analytics;
- Cloud computing services/outsourcing arrangements; and
- Cyber security.

We have not sought to answer each of the Commission's 48 questions, but to cover the relevant questions for us in the course of our comments.

The experience we have gained through initiatives such as the Innovation Hub, regulatory "Sandbox" and efforts to support RegTech has allowed us to increase our knowledge of new and emerging business models, and enabled us to identify potential consumer protection issues early on in the design phase for proposed innovative projects. We would expect other authorities who have launched similar initiatives to have benefitted in similar ways. Such experience, together with the work of the ESAs and others, should therefore provide a pool of knowledge and good practices on which the Commission can draw in determining the best way forward.

### **Fostering access to financial services for consumers and businesses**

Technology offers opportunities to overcome barriers to access for both consumers and businesses.

In terms of consumer access, for example, we agree that automated advice services may offer access to investment advice in a more available and cost effective way. However, we also agree that there are also risks with some models – for example with the use of algorithms to identify recommendations, and the potential of concentration risks for some processes linked to such features as Artificial Intelligence, cloud computing or Big Data. Such risks need to be assessed carefully by firms and regulators before the launch of such services, and monitored thereafter.

Such considerations, together with the different maturities of national FinTech sectors, also underline the importance of European or global measures introduced to foster innovation to accommodate the necessary flexibility for regulators to adopt additional measures where appropriate to new and emerging local developments and issues. Different markets are seeing different innovations and different speeds of change.

Indeed, flexibility in regulatory regimes generally is particularly important given the pace of change and innovation in the sectors.

Consistency in how technology neutral solutions are promoted across different sectors is also important. For example, different pieces of sectoral EU legislation may adopt

different approaches to accommodating innovation which can hinder or restrict developments. This may be most evident in older legislation (e.g. the Consumer Credit Directive) which applies alongside relevant newer measures (e.g. the Mortgage Credit Directive). Going forward, all standards should be viewed in the light of the Commission's FinTech principles.

### **Bringing down operational costs and increasing efficiency for the industry**

Given the significant benefits to regulators and market participants that 'RegTech' solutions can bring, identifying ways to harness technology to improve regulatory effectiveness, efficiency and compliance should be a key focus for national authorities and regional/global authorities. We explain our own RegTech priorities below. For ESMA and the other ESAs, this should fit both with their innovation agendas and their Supervisory Convergence work. Regulators are already sharing experiences in the ESAs on this; in order to promote an understanding of the challenges and scope for consistent approaches (such as for data and reporting) and outcomes across authorities. We agree that this is something that the Commission should also support and encourage – including by accommodating RegTech solutions in its legislative proposals, where relevant.

An additional point to consider is firms' outsourcing to the Cloud, where consistent interpretations and supervisory approaches under the various sectoral legal frameworks are important. (We expand on this later in our response.) Again, consideration of the Cloud sits well with the ESAs' Supervisory Convergence work and some work is already in hand. But agreed views across EU Data Protection legislation, PSD 2, MiFID II and Solvency II (and other pieces of EU legislation) will be important given the capacity for use of the Cloud to lower costs for the industry.

In a similar vein, DLT solutions have the capacity to lower the cost of access to finance (including for SMEs) with efficiencies through processing, storage and security of data. Again, though, risks need to be monitored carefully. We comment further on DLT too, below.

### **Making the single market more competitive by lowering barriers to entry**

Efforts that appropriately support FinTech through innovative regulatory initiatives can facilitate market entry and consumer access, and promote competitive markets. They can also spur the development of new products, services, and channels for access and distribution, and offer the potential to improve the integrity and efficiency of financial markets.

In the context of competition, we would stress that the FCA's Innovation Hub and Sandbox are designed to be able to help all types of innovators - whether large or small, new FinTech start-ups or already authorised incumbent firms.

## **Further comments on specific aspects of the FinTech agenda covered by the Commission paper**

### **FinTech initiatives**

Aside from the existing financial institutions that are developing innovative FinTech applications and projects, most FinTech firms are smaller entrepreneurs with limited experience in dealing with regulators or knowledge of how regulation might apply to their products or services. Therefore, navigating regulation (particularly for a start-up) can be challenging, and can present a structural barrier to innovation.

## **The FCA Regulatory Sandbox**

The FCA's Innovation Hub encourages greater competition by supporting innovative firms of all kinds in identifying the necessary regulatory approval and applying for it. To complement this, our "Regulatory Sandbox" has created a controlled, limited, space for firms to pilot new ideas at small scale without incurring disproportionate regulatory consequences – but still subject to the necessary consumer protections for their limited testing activity.

Further information on the details of our Sandbox model are set out at: <https://www.fca.org.uk/firms/regulatory-sandbox>. This provides more explanation of how the Sandbox provides a testing space for all sizes of firms (both authorised and non-authorised) which meet our eligibility criteria<sup>1</sup> to test innovative products in a way that benefits from early engagement to ensure that consumer protection issues are understood and mitigated in the early design phase; and the controls our model involves (including limited permissions, increased regulator attention, regular reporting by firms).

We believe that it would be helpful for the Commission and the ESAs to support and encourage the Sandbox approach of allowing safe spaces for limited testing activity without the need for the application of a full set of regulatory rules and procedures. Such a model could also more explicitly allow NCAs to waive certain rules in such limited circumstances.

The networks of regulators in which the FCA is involved around the globe (as well as through the ESAs) have been sharing experiences, findings and 'lessons learned' as Innovate/Sandbox models have evolved over recent years.

This exchange of ideas increases the potential for international collaboration, and to support this we have also concluded a number of bilateral "co-operation agreements" with counterpart regulators.

## **RegTech**

"RegTech" provides a valuable opportunity for the FCA to innovate, as a regulator, by using technology to augment and support all that we do (such as making policy, authorising, supervising and enforcing activities), thereby increasing our internal efficiency and effectiveness. For example, we have "coded" some of our handbook to improve the way that firms identify online which rules may apply to them, and are currently seeking feedback from industry on this. Through this work, we also support firms in adopting their own innovations to enable more efficient and effective regulatory compliance. This should also promote competition by reducing barriers to entry.

Our consultation and engagement with industry has revealed that the most promising uses of technology in our regulatory interactions are:

- more efficient means of sharing information (such as alternative reporting mechanisms and shared utilities)
- improved efficiencies in interpreting and implementing regulation (such as robo-assistants and semantic technologies)
- helping firms to leverage their data assets (such as real and near time analytics and compliance monitoring); and
- allowing regulation and compliance processes to be delivered differently (such as through smart-coded regulatory rules online).

---

<sup>1</sup> FCA's Sandbox eligibility criteria, these are the criteria against which we will make decisions regarding applicants for testing in the sandbox  
<https://www.fca.org.uk/publication/documents/sandbox-eligibility-criteria.pdf>

The main challenges we have found are in appreciating the potential applications of rapidly changing technology options, and establishing the regulator as a welcome and credible part of the technology community. In addition, it may not be appropriate for us to *approve* technology solutions; since this potentially distorts market competition and raises questions about the regulator's liability.

We are keen to explore the scope for common standards, especially in relation to data standards, and to understand the rationale for approaches being adopted by our regulatory counterparts and whether we can learn lessons. This is why the FCA sees RegTech as a good candidate for Supervisory Convergence work by the three ESAs, in order to promote an understanding of the challenges, sharing of experiences, and consistent approaches and outcomes across authorities. ESMA is already beginning such an exercise under its Financial Innovation Standing Committee by mapping current approaches to RegTech (where they exist), before looking at the scope for future alignment.

### **Distributed Ledger Technology (DLT)**

The development of Distributed Ledger Technology (DLT) will be an iterative process.

Much valuable work, exchange of views and analysis is already underway across national regulators, ESMA, IOSCO, the Commission and others.

Our view is that all regulators will need to develop our responses, adapt and change as research and experimentation continues. We therefore intend to continue to monitor development of this technology, given the benefits it can bring, while remaining alive to any future risks it may pose. Over time this may well mean reconsideration of various existing rules as potential applications develop.

The FCA's recent discussion paper<sup>2</sup> on Distributed Ledger Technology sets out our views of the risks and opportunities and DLT's compatibility with the existing regulatory framework. Our findings thus far indicate no major regulatory impediments to the deployment of DLT solutions in the financial sector. However, from a supervisory perspective it will be important for firms who use third party providers of DLT solutions to demonstrate adequate outsourcing arrangements, particularly when using 'permissionless' and public DLT networks.

At this stage, in the short term we expect firms to focus on ensuring that any DLT solutions are robustly built and that adequate testing has been carried out. Interoperability will also be an important consideration.

On access to finance, DLT also offers potential to support the needs of consumers and the market, particularly SMEs. For example, various DLT firms are currently looking to assist SME fundraising (e.g. by automating corporate secretarial aspects of capital-raising such as prospectus documentation, or registering shares electronically to provide a record of ownership).

Our discussion paper on DLT also discusses the potential of the technology to allow participants to process, store and share data across multiple points in a network. We are conscious of the need for all parties to respect relevant data protection obligations when storing and processing client data. We will continue to work collaboratively with new firms and those exploring the use of new technology to ensure that consumer protections issues are identified early on.

---

<sup>2</sup> FCA's (April 2017): Discussion paper on Distributed Ledger Technology, DP/17/3, <https://www.fca.org.uk/publication/discussion/dp17-03.pdf>



With regard to digital identity, DLT is seen as a potential solution for identity verification. In addition, a customer's transactions could potentially be more easily traced, resulting in a reduction in financial crime and costs of AML compliance. All these aspects are on our agenda.

### **Automated advice**

Whilst the way customers choose and buy financial products and services has changed radically over the past ten years in various ways, a growing number are now exploring options for accessing financial products and services by making use of developments in technology. Many have therefore benefited from increased choice. However, there is little reliable evidence for the scale of the automated financial advice market (for example, assets held through such services, the number of client accounts, or the types of clients making use of such services). We also acknowledge that the automated advice sector is still relatively new - anecdotal evidence suggests there is still little awareness of the available options among customers and that take-up is low.

In terms of the FCA's work on automated advice, we have undertaken particular work as part of the UK's 2015 "Financial Advice Markets Review" (FAMR)<sup>3</sup> which explored the potential for automated advice to increase the availability of lower cost advice for consumers in the retail investments and pensions markets. This in turn led to the creation of the FCA's Advice Unit<sup>4</sup> that provides regulatory feedback to firms who are developing automated advice models for consumers. The Unit has engaged with firms in the investments, pensions and insurance sectors, and we see firms' keenness to engage as an indication of their willingness to explore new and innovative distribution channels which could potentially reach larger consumer segments. Some established market players and retail banks have also announced plans to launch automated advice models - and there are indications that automated advice models may develop beyond investment advice; for example, in the mortgage and general insurance sectors. To support this work, we are also planning thematic supervisory work to investigate risks presented by automated advice models.

We have fed in our experience and consideration of automated advice issues into the work that has been done by the three ESAs over recent months.

Enhanced oversight of Artificial Intelligence (and its underpinning algorithmic infrastructure) is also clearly significant for regulators, given the risks of the dependency on the algorithms that can determine automated advice. Existing standards for suitable advice still apply in a technology-neutral way, and our risk-based supervisory approach considers the nature of the advice given by the model rather than just the process that has produced it. We are also applying relevant lessons from our work on algorithmic trading in the securities markets and how firms develop, test and monitor their trading strategies.

In all this work, engagement with firms (particularly when they are in the initial development stage of AI strategies) is beneficial, along with support for industry 'good practice' initiatives.

### **Crowdfunding**

As crowdfunding allows people and businesses (including start-ups) to raise money from the public to support a business, project, campaign or individual, we believe that customers looking to invest in crowdfunding offers need to have confidence that there is an appropriate regulatory framework in place. In the UK we have sought to balance

---

<sup>3</sup> Financial Advice Markets Review (FAMR), 2015: Final report and recommendations: <https://www.fca.org.uk/firms/financial-advice-market-review-famr>

<sup>4</sup> FCA's advice Unit: <https://www.fca.org.uk/firms/innovate-innovation-hub/advice-unit>

investor protection needs with support for the development of a competitive digital fund-raising market. Our aim is that this builds investor and borrower confidence in the sector, and has a positive impact on growth and ensures the sector develops appropriately.

In the UK, we regulate both loan-based (or peer-to-peer/P2P) lending and investment-based crowdfunding.

In 2014 the authorities introduced a new UK regime for both forms of crowdfunding, building on our existing requirements (including those that implemented relevant EU law such as MiFID) as well as our new responsibilities for the regulation of consumer credit from April 2014. Our approach focused on ensuring that consumers have access to clear information about crowdfunding offers, and that firms operating in the sectors complied with key consumer protection rules including to protect client money, to meet minimum capital standards, and for crowdfunding platforms to have in place effective resolution plans. Donation-based crowdfunding or crowdfunding that offers non-financial rewards is not regulated by the FCA.

We are currently completing a post-implementation review of our regime to ensure our rules remain fit for purpose. Findings so far have indicated that disclosures for both loan-based and investment-based crowdfunding could be strengthened to help investors to make informed decisions. As a result, we have set out our intention to consult on new disclosure requirements in our Interim Feedback Statement<sup>5</sup>. Consideration will be given to the risks around different business models and the nature of the asset classes offered, alongside the need to give investors appropriate information. We are aware that some business models in this sector are changing through the addition of secondary market trading facilities. We will therefore need to consider, through our policy and ongoing supervisory work, whether some crowdfunding platforms should be subject to any other requirements that apply to market platforms more generally.

With regard to the Commission's question on self-regulation, we have seen examples in this sector in the UK. However, stakeholders (in particular industry associations) have encouraged and supported FCA regulation of the sector.

At this stage, we do not see a strong case for new crowdfunding legislation at EU level, but support this being kept under review as the sector develops. Currently, the sector is still at an early stage of development and is generally covered by domestic rules within the framework of applicable EU legislation. We would also note that newer EU legislation such as MiFID II seems more attuned to the needs of inexperienced investors and so can provide a better basis for investment-based crowdfunding oversight than MiFID I did.

Beyond the application of existing relevant EU measures, at this stage we still favour the supervisory convergence work that has been co-ordinated by ESMA and the EBA to bring regulators together to share their experiences of regulating the sector, share good practices, and discuss common challenges. The FCA has been very active in this work. But we also agree that all regulators should continue to aim for consistent approach in regulating the sector as it continues to develop and keep under review the need for strengthened co-ordination.

### **Data analytics and its impact on the insurance sector**

Digitalisation presents a number of advantages to the provision of insurance, as well as challenges. It allows firms to be better able to price risk by utilising sensor data

---

<sup>5</sup> FCA's (2016): Feedback Statement, Interim feedback to the call for input to the post-implementation review of the FCA's crowdfunding rules  
(<https://www.fca.org.uk/publication/feedback/fs16-13.pdf>)



analytics and identify issues; but concerns about fairness, efficiency and distribution on pricing practices are also important.

It could be that pricing practices change as the use of customer data ("Big Data") increases and firms become more sophisticated in their understanding of, and ability to react to, consumer behaviour. For example, the use of motor telematics (e.g. "black-boxes" in cars) may result in traditionally higher risk drivers, such as younger drivers, gaining access to cheaper insurance if they demonstrate good driving skills. There are a number of other technology innovations that may impact the insurance sector and which regulators need to consider. Devices/sensors may also be beneficial in alerting firms when a crash has occurred, or in households to monitor water pipes for significant leaks. Such developments could lead to reduced cost of claims, fewer claims and lower premiums.

In contrast, users of insurance products with a higher risk profile may be unable to obtain insurance or be 'priced-out' of the market. Given the potential consequences, consideration therefore needs to be given to ensure that data is accurate and used fairly in profiles and by algorithms. Pricing and risk-rating should be objectively justified, this and issues around 'price discrimination' have been considered in a 2016 FCA paper<sup>6</sup>. In parallel, the conclusions from our work on Big Data in General Insurance<sup>7</sup> noted that behavioural data could make it easier, in future, for companies to charge different prices/premiums for the same products/services within the same target group. We are undertaking follow-up supervisory work and will continue to monitor developments and share our findings.

### **Cloud**

The 'cloud' is a broad term, and stakeholders have interpreted it differently. We see it as encompassing a range of IT services provided in various formats on-line. This includes, for example, private, public or hybrid cloud, as well as the accepted concepts of "Infrastructure as a Service" (IaaS), "Platform as a Service" (PaaS), and "Software as a Service" (SaaS). Cloud services are constantly evolving, though, and our aim is to avoid imposing inappropriate barriers to firms' ability to outsource to innovative and developing areas, while ensuring that risks are appropriately identified and managed.

We consider firms' use of the Cloud as a form of outsourcing and apply related regulatory standards derived from EU regulations (CEBS guidelines on outsourcing, MiFID II, Solvency II). We are also currently involved in the development of the EBA guidelines on outsourcing to the cloud, which we think is a helpful initiative to interpret existing standards in the context of new technological circumstances. The Cloud is a specific example of where EU standards on outsourcing (e.g. under PSD2, MiFID II and Solvency II) and data protection also need to be technology-neutral and 'future-proof' in response to technology developments. When they are reviewed, they need to be reviewed with such new forms of outsourcing in mind.

### **Cyber security**

As recent global events have demonstrated, cyber security risk is an ever-evolving and asymmetric threat. As a result, detailed and prescriptive rules and requirements will be outdated very quickly. European and international responses can therefore best approach the risks from a principles perspective, instead of focussing on detailed controls which are unlikely to remain current and will anyway not be applicable to varied operating models/environments.

---

<sup>6</sup> FCA's (2016): Occasional paper on price discrimination and cross-subsidy, <https://www.fca.org.uk/publication/occasional-papers/op16-22.pdf>

<sup>7</sup> FCA's (2016): Feedback Statement to the Call for Input on Big Data in General Insurance, <https://www.fca.org.uk/news/press-releases/fca-publishes-feedback-statement-big-data-call-input>

We believe that the principles contained within the CPMI-IOSCO Guidance on Cyber Resilience for Financial Market Infrastructures contain the strongest set of principles for establishing effective cyber resilience. These principles are aligned to the NIST framework on cybersecurity and G7 fundamental elements for cyber security; therefore we do not see a strong case for setting up any hard recovery time objectives for cybercrime at this time, as this may incentivise the wrong behaviours.

At this stage, regulatory barriers that may impede or prevent cyber threat information sharing among financial services providers are mainly second-order impacts or risks caused by sharing the information. Concerns revolve around the fact that information may not be in the public interest or in the interest of financial markets to share information widely, additionally, information sharing networks may not be tightly controlled and secured to prevent authorised access to or disclosure of information shared by trusted parties. Therefore, there is a strong case for building trusted networks in secure environments so we can address information sharing issues.

Given that penetration testing is a critical part of the cyber security framework, traditional penetration is no longer sufficient to provide assurances needed by organisations in today's growing threat environment. This should now be intelligence led, and focus on relationships between attackers and network defenders. We have established the CBEST programme with relevant domestic authorities to provide minimum requirements for penetration testing and intelligence, and any coordination at EU-level should take into consideration that these minimum criteria are essential. Steps to further explore EU-level coordination can be facilitated through the ESA's, for example EIOPA is considering initiating a dialogue with the industry in order to better understand risk, opportunities and challenges that have an impact on the sector.

In terms of addressing risks, testing scenarios should be developed relevant to the threat intelligence available and scope and scale of the test (i.e. multi-jurisdictional vs. critical functions only). Threat intelligence should be based on validation and inform the actions of penetration testers, this will ensure a realistic testing experience and derive maximum value from penetration testing activities. So any proposed measures would need to be well-designed and tests should be effective in addressing cybercrime risks.