



BANKING AND FINANCE

Public consultation on FinTech: a more competitive and innovative European financial sector

Fields marked with * are mandatory.

Introduction

Thank you for taking the time to respond to this consultation on technology-enabled innovation in financial services (FinTech). Our goal is to create an enabling environment where innovative financial service solutions take off at a brisk pace all over the EU, while ensuring financial stability, financial integrity and safety for consumers, firms and investors alike.

Please note: In order to ensure a fair and transparent consultation process **only responses received through our online questionnaire will be taken into account** and included in the report summarising the responses. Should you have a problem completing this questionnaire or if you require particular assistance, please contact fisma-fintech@ec.europa.eu.

More information:

- [on this consultation](#)
- [on the protection of personal data regime for this consultation](#) 

1. Information about you

*Are you replying as:

- a private individual
- an organisation or a company
- a public authority or an international organisation

*Name of your organisation:

European Fintech Alliance

Contact email address:

The information you provide here is for administrative purposes only and will not be published

alessandro@fintech-alliance.eu

*Is your organisation included in the Transparency Register?

(If your organisation is not registered, [we invite you to register here](#), although it is not compulsory to be registered to reply to this consultation. [Why a transparency register?](#))

- Yes
- No

*If so, please indicate your Register ID number:

972543722670-76

*Type of organisation:

- Academic institution
- Consultancy, law firm
- Industry association
- Non-governmental organisation
- Trade union
- Company, SME, micro-enterprise, sole trader
- Consumer organisation
- Media
- Think tank
- Other

*Please indicate the size of your organisation:

- less than 10 employees
- 10 to 50 employees
- 50 to 500 employees
- 500 to 5000 employees
- more than 5000 employees

*Where are you based and/or where do you carry out your activity?

Other country

*Please specify your country:

Belgium, Finland, France, Germany, Luxembourg, Netherlands, Spain, UK

*Field of activity or sector (*if applicable*):

at least 1 choice(s)

- Accounting
- Asset management
- Auditing
- Banking
- Brokerage
- Credit rating agency
- Crowdfunding
- Financial market infrastructure (e.g. CCP, CSD, stock exchange)
- Insurance
- Investment advice
- Payment service
- Pension provision
- Regulator
- Social entrepreneurship
- Social media
- Supervisor
- Technology provider
- Trading platform
- Other
- Not applicable



Important notice on the publication of responses

*Contributions received are intended for publication on the Commission's website. Do you agree to your contribution being published?

([see specific privacy statement](#) )

- Yes, I agree to my response being published under the name I indicate (*name of your organisation /company/public authority or your name if your reply as an individual*)
- No, I do not want my response to be published

2. Your opinion

1. Fostering access to financial services for consumers and businesses

FinTech can be an important driver to expand access to financial services for consumers, investors and companies, bringing greater choice and more user-friendly services, often at lower prices. Current limitations in traditional financial service markets (e.g. opacity, lack of use of big data, insufficient competition), such as financial advice, consumer credit or insurance, may foreclose access to some categories of individuals and firms. New financial technologies can thus help individuals as well as small and medium-sized enterprises (SMEs), including start-up and scale-up companies, to access alternative funding sources for supporting their cash flow and risk capital needs.

At the same time, potential redundancy of specific back-office functions or even of entire market players due to automation via FinTech solutions might have adverse implications in terms of employment in the financial industry, even though new jobs would also be created as part of the FinTech solutions. The latter, however, might require a different skill mix.

Question 1.1: What type of FinTech applications do you use, how often and why? In which area of financial services would you like to see more FinTech solutions and why?

Our members either use services of other fintech companies or work with fintechs which offer different services within finance (e.g. payment, digital banking etc.). EFA members would like to see more “fintechs” in the RegTech Business especially for the needs of compliance departments. This is not limited to anti-money laundering requirements, there are many more opportunities.

Our members use/offer a variety of services.

This includes Fintechs with services in the field of inter alia:

- online payment platforms
- mobile banking platforms
- investment management services
- secondary market for distressed claims and loans
- supply chain financing

One topic we believe is very important concerns the field of regulation. A vast amount of regulations need to be complied with and needs to be monitored. This is a very costly and time consuming task. Therefore, new ideas on how to deal with this topic (not limited to anti-money laundering) is one area we would want to see Fintechs solutions as Fintechs that are apart from “traditional” firms can have more creative and maybe disruptive solutions, especially as FinTechs are sophisticated in using AI that might help in the field of Regulation. In conclusion our members would want to see more in the field of RegTechs. Additionally, RegTechs that operate cross-border would help to foster cross-border business in general, as apart from language issues, different regulations in different countries that need to be complied with are difficult to monitor and therefore hinder cross-border business.

Artificial intelligence and big data analytics for automated financial advice and execution

Please [refer to the corresponding section of the consultation document](#)  to read some contextual information before answering the questions.

Question 1.2: Is there evidence that automated financial advice reaches more consumers, firms, investors in the different areas of financial services (investment services, insurance, etc.)?

- Yes
- No
- Don't know / no opinion / not relevant

If there is evidence that automated financial advice reaches more consumers, firms, investors in the different areas of financial services, at what pace does this happen? And are these services better adapted to user needs? Please explain.

EFA does not have evidence showing that automated advice reaches more consumers, firms, investors in the different areas of financial services than traditional firms. Take up also differs from country to country. In continental Europe, for example, consumers appear more cautious than, e.g. in the UK or the US where this service has developed at a faster pace. Such differences might also be explained by the specificities of each country's banking system; in Germany, with its "Sparkassen" und "Genossenschaftsbanken"; many consumers and SMEs, especially in the countryside, prefer these traditional banks for face-to-face advice. We need to keep in mind that automated advice is still a new approach of advice especially in Europe.

Nevertheless the advantages of automated advice are the accessibility (24 hours) and the possibility to present information in a digestible way. Furthermore, some consumers might lack the confidence to consult a human advisor and therefore automated advice might be attractive to some groups of consumers who might not be reached in the traditional way.

Several studies and surveys can give hints to what kind of clients can especially be reached by automated advice (which is one of the areas FinTechs operate in).

Though not targeting solely automated financial advice, the World FinTech Report 2017 (https://www.se.capgemini-consulting.com/sites/default/files/world_fintech_report_wftr_2017_final_web.pdf) has shown that 50.2 % of those questioned do business with at least one non-traditional firm, which shows that services of Fintechs are of high interest. According to the FinTech Report especially tech-savvy (especially those of Gen Y) users are supplementing traditional services with FinTech offerings twice as much as non-tech-savvy users.

Furthermore the IOSCO Report on automated advice (attached) has shown that the target group of automated advice platforms are in the first instance typically younger, tech savvy consumers with limited capital though some platforms are targeting "active young seniors".

Additionally the different existing models of automated advice show that a wide basis of consumers and investors shall be addressed by automated advice. So far we can see two different models of automated advice.

1. Fully automated advice:

- Within the fully automated advice, no human intervention is needed

2. Hybrid model:

- Within the hybrid model the customer has a human contact person

We conclude that the hybrid model has the chance to reach groups of investors that have used a human advisors in the past and still want to have a human contact possibility as well as groups of tech-savvy investors, whereas the fully automated advice might be more suitable solely for tech-savvy customers.

Question 1.3: Is enhanced oversight of the use of artificial intelligence (and its underpinning algorithmic infrastructure) required? For instance, should a system of initial and ongoing review of the technological architecture, including transparency and reliability of the algorithms, be put in place?

- Yes
- No
- Don't know / no opinion / not relevant

Please elaborate on your answer to whether enhanced oversight of the use of artificial intelligence is required, and explain what could more effective alternatives to such a system be.

From our point of view a general or rather isolated oversight of the use of artificial intelligence does little for the purposes of financial supervision; however, we fear it will unnecessarily increase complexity.

The use of AI is a very new technology. First of all it is of great importance that the regulator and the NCAs develop an understanding for this topic and we therefore appreciate the efforts of some NCAs to create working groups and get in contact with the relevant stakeholders.

For the acceptance of AI in market, trust of consumers is pivotal. Once the trust of a consumer, firms and investors is lost it might be very hard to regain trust and to implement AI within the advice and investment process.

Though it is important to understand the technology at first it is also important from a consumers point of view that the technology being used has been reviewed by a neutral authority (that in some countries also has a consumer protection task).

People make mistakes in the advice and investment processes. But also algorithms are not free of faults that might be uncovered through a review before it is used by a customer. Therefore we do not in general reject an oversight of the use of AI, though the oversight should not hinder the potential of this technology.

If the purpose of this oversight is consumer protection, regulation should focus on smart ways of transparent consumers consent (de-complication of contracts/user agreements and data protection declaration, also by smart contract tools, etc.) to make use of artificial intelligence solutions as well as the diligent handling of consumers' data for the ongoing optimisation of the technological architectures in question. EU data protection regulation might therefore be a better link for appropriate oversight in that regard. Especially, as AI solutions are not solely used in the context of retail financial products and data protection rules have cross-industry impact.

When AI is used in the context of smart solutions for regulatory requirements, e.g. risk-based AI approaches for specific customer authorisation needs, IT auditors of regulated entities should be enabled and obliged to assess if the AI solution meets the GIVEN and GENERAL provisions for the regulatory requirement. Any specific regulation for these solutions hampers the principle of technology neutrality as well as urgently needed RegTech innovation.

Question 1.4: What minimum characteristics and amount of information about the service user and the product portfolio (if any) should be included in algorithms used by the service providers (e.g. as regards risk profile)?

Again, from our point of view a general or rather isolated oversight of the use of artificial intelligence does little for the purposes of financial supervision, but unnecessarily increasing complexity. When AI is used in the context of smart solutions for regulatory requirements, e.g. risk-based AI approaches for specific customer authorisation needs, IT auditors of regulated entities should be enabled and obliged to assess if the AI solution meets the GIVEN and GENERAL provisions for the regulatory requirement. Any specific regulation for these solution hampers the principle of technology neutrality as well as urgently needed RegTech innovation.

Question 1.5: What consumer protection challenges/risks have you identified with regard to artificial intelligence and big data analytics (e.g. robo-advice)? What measures, do you think, should be taken to address these risks/challenges?

General Remarks

- Regulatory authorities need to assess the topic as well as companies offering automated financial services
- A large body of research shows that even simple algorithms outperform humans in the kinds of tasks that robo-advisors perform (reduce conflict of interest, honesty, competence, behavioural finance)
- Differentiation between Hybrid-robos (human layer on top) vs. fully automated robos may be needed in assessment

Challenges/Risk

- Regulators need to develop capacities to assess the algorithms logic, the data incorporated, the IT infrastructure in the robo advisors
- Regulators need to establish quality and testing standards for what is a well-designed robo-advisor
- Important is not to set a higher bar than for human advisors
- Protecting consumers from being taken advantage of due to their relative lack of knowledge about financial instruments
- General data privacy - finding the right balance between enough personal data in order to generate best investment strategy and privacy concerns and regulation
- Machine learning algorithms need to be assessed differently, as their programming is more complex and non-static. They identify predictive relationships between variables, and they are often not intelligible to humans, including their creators. They tend to have lower transparency levels.

Measures

- Increase transparency levels for consumer protection
- Regulators need to assess if robos are “well designed”, define specifications for an advisor compliant to consumers needs
- International exchange of experience and regulatory harmonization

In sum, trust of consumers especially in the field of financial services is pivotal for providers of financial services. Therefore, consumer protection and transparency towards the consumer is of great importance. Nevertheless if additional measures should be necessary they need to be proportionate.

Social media and automated matching platforms: funding from the crowd

Please [refer to the corresponding section of the consultation document](#)  to read some contextual information before answering the questions.

Question 1.6: Are national regulatory regimes for crowdfunding in Europe impacting on the development of crowdfunding?

- Yes
- No
- Don't know / no opinion / not relevant

Please elaborate on your reply to whether there are national regulatory regimes for crowdfunding in Europe impacting on the development of crowdfunding. Explain in what way, and what are the critical components of those regimes.

Question 1.7: How can the Commission support further development of FinTech solutions in the field of non-bank financing, i.e. peer-to-peer/marketplace lending, crowdfunding, invoice and supply chain finance?

A central point of information on EU level (installed at ESA), responsible for gathering innovative ideas and the status of regulatory needs (per member state - if necessary) in general - incl. specifically for non-bank financing solution - could help to get a clear and up to date overview. This leads to more legal certainty for innovative solution providers. Simultaneously, it enables the EU Commission to be up-to-date on new ideas and their regulatory problems.

A more specific idea on supporting the development of FinTech solutions in the field of non-bank financing would be empowering TPPs through PSD2 to obtain customer financial data in order to enable lenders, whether companies or crowds, to accurately score potential customers in order to mitigate risks. Just as traditional financial institutions do. If non-banking lenders are not given the opportunity to score their potential customers with financial data, there simply will not be an alternative lending business. This is covered by PSD2 in principle, but we are concerned that it can be limited by some of the RTS, or perhaps by the interpretation of these RTS and the corresponding transpositions to different Member States' legislation.

To sum it up, the way the Commission can support the further development of non-banking financing is by ensuring that the RTS fully support PSD2's vision of creating a more competitive and transparent payments space across the Union, with a level playing field between the established financial institutions and new entrants.

In the area of invoice there are already lot of activities steered by the EU Commission. This is important as a pre requisite and a basis for different offerings in the areas of lending, funding and finance. Still, for all areas it would be most important to create awareness and trust for the different offerings. It must be guaranteed to have same juridical and tax regulations across Europe. The focus should not be on technical standards, instead technology neutrality is key. The requirements should differentiate between new products with lower requirements for a period of time and a restricted number of clients and established products with complete requirements. A solution could be to establish a sandbox for fintechs to test alternative financing solutions. To lower the risks for the environment, the sandbox should be in a defined area with a restricted number of "test" clients.

Question 1.8: What minimum level of transparency should be imposed on fund-raisers and platforms? Are self-regulatory initiatives (as promoted by some industry associations and individual platforms) sufficient?

- Transparency on data privacy is the main concern for end consumers. Consumers must always be in control of their own personal data.
- Companies should implement and disclose a minimum transparency level, enabling the end consumer to know and agree about the use of his data before, during and after using the respective services.
- This minimum level of transparency should be defined and overseen by the regulator.

Sensor data analytics and its impact on the insurance sector

Please [refer to the corresponding section of the consultation document](#)  to read some contextual information before answering the questions.

Question 1.9: Can you give examples of how sensor data analytics and other technologies are changing the provision of insurance and other financial services? What are the challenges to the widespread use of new technologies in insurance services?

Question 1.10: Are there already examples of price discrimination of users through the use of big data?

- Yes
- No
- Don't know / no opinion / not relevant

Please provide examples of what are the criteria used to discriminate on price (e.g. sensor analytics, requests for information, etc.)?

Currently, we are not aware of any cases of price discrimination of users through the use of big data.

Other technologies that may improve access to financial services

Please [refer to the corresponding section of the consultation document](#)  to read some contextual information before answering the questions.

Question 1.11: Can you please provide further examples of other technological applications that improve access to existing specific financial services or offer new services and of the related challenges? Are there combinations of existing and new technologies that you consider particularly innovative?

Since there is no such thing as a same level of innovation for all Member States yet, it is difficult to provide a straight-forward answer. For example, video identification is an innovative solution that some Member States are still fighting for, while others have clear regulated requirements with regard to secure video ID tools (please see our answer to question 3.1. in that regard for further detail). We therefore expect that replies to this question will reflect different levels of progress, depending on the Member State market.

Consequently, we prefer to provide you with a general overview: "other technological applications that improve access to existing [specific] financial services or offer new services" are:

- SMART CONTRACTS in a technical sense (self-executing contracts with the terms of the agreement between buyer and seller being directly written into lines of code. The code and the agreements contained therein exist across a distributed, decentralized blockchain network.)
- TRANSPARENCY BY DESIGN - solutions that help providing consumers with transparent risk information/consent agreements, etc. (make financial service contracts readable/comprehensible again) - fostered, where appropriate, by regulated standards on front-end design and content in that context.
- Data Portability for Identification (KYC-databases or technical information services via APIs for cross-party usage of KYC-data of companies or consumers). Challenge: innovative KYC solutions are in the pipeline of the RegTech Market (Sharing Consumer ID's via API-solutions between KYC-obliged market players). Also: DLT solutions for similar approaches. An AML/CFT level playing field would be vital for their success, with enormous potential for cost reductions, maintaining consistent - and even higher! - security than any manual process provides today.
- VOICE-Tools (e.g. initiate payments via Voice assistants, such as Alexa, Siri, etc.)

2. Bringing down operational costs and increasing efficiency for the industry

Please [refer to the corresponding section of the consultation document](#)  to read some contextual information before answering the questions.

FinTech has the potential of bringing benefits, including cost reductions and faster provision of financial services, e.g., where it supports the streamlining of business processes. Nonetheless, FinTech applied to operations of financial service providers raises a number of operational challenges, such as cyber security and ability to overcome fragmentation of standards and processes across the industry. Moreover, potential redundancy of specific front, middle and back-office functions or even of entire market players due to automation via FinTech solutions might have adverse implications in terms of employment in the financial industry, even though new jobs would also be created as part of the FinTech solutions. The latter, however, might require a different skill mix, calling for flanking policy measures to cushion their impact, in particular by investing in technology skills and exact science education (e.g. mathematics).

Question 2.1: What are the most promising use cases of FinTech to reduce costs and improve processes at your company? Does this involve collaboration with other market players?

Digitization and seamless processes across company borders. The whole financial supply chain should be with as little media breaks as possible. Supplier, Customer, Financial Service Provider and Infrastructure Provider should be connected with each other to share information. All solutions that accelerate process steps without lowering the quality or increasing risk are promising. New ways of financing for businesses allow to reduce their financing costs heavily. In addition it increases their flexibility. To be able to achieve those benefits companies must be connected with their business partners through common networks or alike.

Question 2.2: What measures (if any) should be taken at EU level to facilitate the development and implementation of the most promising use cases? How can the EU play its role in developing the infrastructure underpinning FinTech innovation for the public good in Europe, be it through cloud computing infrastructure, distributed ledger technology, social media, mobile or security technology?

Again, it is difficult to provide as straight-forward answer to this question, as the level of innovation and related measures are not the same for all Member States yet. The following are - by no means exhaustive - examples for some measures, we identified with our members:

- defining EU-standards / a level playing field for requirements with regard to non-EU cloud services (on the level of international politics (non-foreign-state-access) as well as EU supervisory needs)
- foster SMART CONTRACTS in a TECHNICAL sense (self-executing contracts with the terms of the agreement between buyer and seller being directly written into lines of code. The code and the agreements contained therein exist across a distributed, decentralized blockchain network.)
- foster TRANSPARENCY BY DESIGN - solutions that help providing consumers with transparent risk information/consent agreements, etc. (make financial service contracts readable/comprehensible again) - fostered, where appropriate, by regulated standards on front-end design and content in that context.
- foster an AML/CFT level playing field in order to promote new KYC-solutions (see before mentioned details)

Question 2.3: What kind of impact on employment do you expect as a result of implementing FinTech solutions? What skills are required to accompany such change?

The main financing methods for companies are bank loans and factoring. Those alternatives are expensive and inflexible. New solutions will allow companies to do more investments and thus increase employment. Even insolvency due to late payments can be avoided.

RegTech: bringing down compliance costs

Please [refer to the corresponding section of the consultation document](#)  to read some contextual information before answering the questions.

Question 2.4: What are the most promising use cases of technologies for compliance purposes (RegTech)? What are the challenges and what (if any) are the measures that could be taken at EU level to facilitate their development and implementation?

- **KYC: Data Portability for Identification** (KYC-databases or technical information services via APIs for cross-party usage of KYC-data of companies or consumers, in best case maintained by authorities themselves (i.e. API access to company registers or official consumer eIDs, etc.) or DLT solutions for similar approaches. Challenge: not yet existing AML/CFT level playing field
- **Regulator reporting in real-time:** National authorities, as well as EU authorities should actively check how they can make use of new technologies themselves for operative tasks, such as the administration of reporting obligations. One could consider diverse use cases and related technologies, i.e. Distributed Ledger Technologie (DLT) for regulatory reporting purposes as part of security trading or own Application Programming Interfaces (APIs) for the monitoring of regulated market interfaces, such as the dedicated interfaces banks have to provide with a certain availability and performance under PSD2. This does not only minimise the burden on market parties but also on regulators.
- **any INTEGRAL RISK Mangement SOLUTION** should be urgently fostered on a regulatory level: For years and to a growing extent, the financial market is faced with diverse areas for which risk-assessments are mandatory (Governance Risks, Regulatory Risks, Operational Risks, Money Laundering Risks, Financing of Terrorism Risks, Fraud Risks, Business Continuity Risks, Information Security Risks, Data Protection Risks, ...). For every area EU and local authorities defined detailed but isolated requirements. Using isolated RegTech innovation to meet those requirements does not help the market in the long run. Just as the motto "Regulatory Risk/Fear sells", promoted mainly by consultants who came up with more and more detailed risk assessments over the last couple of years in Excel tables, the task will only be handed over to new RegTech players, inventing isolated technical solutions for all kinds of risk areas - without an any impact for the original purpose of those provisions, i.e. risk minimisation. The more the solutions are driven by complexity, the less transparent audit reports on risk minimising efforts of financial market players will become (often written by companies which earn money by being consultants on these topics at the same time). Integral regulatory requirements or at least "same method approaches" for regulated risk assessments and the regulation of an overall transparent risk-based approach, would be a first step to foster innovative technical solutions in that regard. Consequence: minimising complexity, increasing transparency, increasing comparability and minimising efforts for authorities and market players to an enormous extent.

Recording, storing and securing data: is cloud computing a cost effective and secure solution?

Please [refer to the corresponding section of the consultation document](#)  to read some contextual information before answering the questions.

Question 2.5.1: What are the regulatory or supervisory obstacles preventing financial services firms from using cloud computing services?

In general, more and more banks use cloud computing and have already started creating a cloud strategy respectively. Because of cost reductions, many banks are interested in cloud based solutions. The main challenge is to meet all the requirements regarding security, data privacy, compliance, availability and absence of standards (Vendor Lock In). In order to advance cloud computing, it should be accessible worldwide. Cloud computing already has the highest regulatory requirements. However, meeting these requirements results in high costs, making cloud computing not as cheap and cost efficient as it was initially intended to be.

Question 2.5.2: Does this warrant measures at EU level?

- Yes
- No
- Don't know / no opinion / not relevant

Please elaborate on your reply to whether the regulatory or supervisory obstacles preventing financial services firms from using cloud computing services warrant measures at EU level.

Question 2.6.1: Do commercially available cloud solutions meet the minimum requirements that financial service providers need to comply with?

- Yes
- No
- Don't know / no opinion / not relevant

Please elaborate on your reply to whether commercially available cloud solutions do meet the minimum requirements that financial service providers need to comply with.

No, as not all cloud solution provider offer their services to financial services companies. Moreover, compliance with more regulation results in higher costs. Hence, there would be less incentive for cloud solution providers to offer a service which is costlier and not required from a regulatory point of view for non-financial companies.

Question 2.6.2: Should commercially available cloud solutions include any specific contractual obligations to this end?

- Yes
- No
- Don't know / no opinion / not relevant

Please elaborate on your reply to whether commercially available cloud solutions should include any specific contractual obligations to this end.

Disintermediating financial services: is Distributed Ledger Technology (DLT) the way forward?

Please [refer to the corresponding section of the consultation document](#)  to read some contextual information before answering the questions.

Question 2.7: Which DLT applications are likely to offer practical and readily applicable opportunities to enhance access to finance for enterprises, notably SMEs?

The current DLT industry is at a similar stage as the early days of the Internet. Many DLT implementation with various characteristics and goals are entering the market and it is yet to be seen which ones will reach maturity.

It is still too early to make a definite statement, which applications are most likely to offer practical and readily applicable access to finance for SMEs. However, it is evident that current applications are technically ready and are already being used to finance enterprises - therefore one must recognize that "practical and readily applicable opportunities" are already existing today but still involve a considerable risk due to the lack of regulation and consumer protection, technical maturity and usability.

One of the most popular implementation of DLT is Ethereum and will be the focus of our answers due to its wide adoption and thriving community in the public and private space.

Instead of a mere distributed ledger for transacting value from account A to account B (as with Bitcoin),

Ethereum offers a more sophisticated approach of the computation of values. This simply means you are able to deploy immutable programs (also referred to "Smart Contracts") with Ethereum. One example of such a commonly used Smart Contract is the ERC20 token standard (See also: https://theethereum.wiki/w/index.php/ERC20_Token_Standard). The ERC20 token Smart Contract enables everyone to issue a digital token on Ethereum, defines its inherent properties and distributes it to the global crowd. Hence token sales are a readily available opportunity to finance any endeavor or enterprise already today. Undoubtedly, digital tokens are not only similar in characteristics to money as a medium of exchange or a store of value but can offer unique properties such as being a necessary „digital fuel or gas“ for the utility of a certain protocol and hence will drive a new open digital economy.

One example of a recent token sale is the Basic Attention Token (BAT) sale which collected funding worth 35 million dollar within a matter of seconds from the global crowd. It was initiated by Brave Software Inc. and Brendan Eich - former CEO & Co-Founder of the Mozilla Foundation and creator of the JavaScript programming language:

What does BAT stand for and what is it?

Basic Attention Token. The BAT, a token based on the Ethereum technology, can be used to obtain a variety of advertising and attention-based services on the Brave platform, a new Blockchain based digital advertising system. User attention is privately monitored in the Brave browser and publishers are rewarded accordingly with BATs. Users also get a share of BATs for participating." (see: <https://basicattentiontoken.org/token/>)

Question 2.8: What are the main challenges for the implementation of DLT solutions (e.g. technological challenges, data standardisation and interoperability of DLT systems)?

Since the industry is still in its infancy there are many challenges ahead to be solved. However, some are already being actively addressed. The following listing shows current challenges and their current popular development endeavors:

- **Privacy:** Most of the DLT implementation lack privacy and make any transaction open to the public (such as Bitcoin and Ethereum). This can be potentially solved with “zkSnarks” as a mathematical method to verify computations as correct without knowing the inputs: <https://blog.ethereum.org/2016/12/05/zksnarks-in-a-nutshell/>
- **Scalability:** DLT implementations currently have a very limited transaction output per second due to its distributed nature which can be addressed through several technological advancements:
Switching from the Proof-of-work DLT consensus mechanism (Bitcoin and Ethereum) to Proof-of-stake: <https://github.com/ethereum/wiki/wiki/Proof-of-Stake-FAQ>
- **State Channels or Off-Chain Transactions**
What are State Channels? <https://blog.stephantual.com/what-are-state-channels-32a81f7accab>
Raiden Network: <http://raiden.network/> (Ethereum)
Lightning Network: <https://lightning.network/> (Bitcoin)
Sharding: <https://github.com/ethereum/wiki/wiki/Sharding-FAQ>
- **Interoperability:** Make different DLT implementation able to communicate with each other.
COSMOS: <https://cosmos.network/>
Polkadot: <http://polkadot.io/>
Blockstream: <https://blockstream.com/>
Interledger: <https://interledger.org/>
- **Formal Verification:** Preventing non-intended behavior of highly critical code (e.g. Smart Contracts).
Formal Verification of Ethereum Smart Contracts: <https://github.com/pirapira/ethereum-formal-verification-overview>
- **Distributed Data Storage:** Make the storage of larger files such as documents and images possible in a distributed manner.
IPFS: <https://ipfs.io/>
Swarm: <http://swarm-gateways.net/bzz://theswarm.eth/>
Storj: <https://storj.io/>
Sia: <http://sia.tech/>

Question 2.9: What are the main regulatory or supervisory obstacles (stemming from EU regulation or national laws) to the deployment of DLT solutions (and the use of smart contracts) in the financial sector?

Currently, we are not aware of any regulatory or supervisory obstacles (stemming from existing EU regulation or national laws) in that regard.

Outsourcing and other solutions with the potential to boost efficiency

Please [refer to the corresponding section of the consultation document](#)  to read some contextual information before answering the questions.

Question 2.10: Is the current regulatory and supervisory framework governing outsourcing an obstacle to taking full advantage of any such opportunities?

- Yes
- No
- Don't know / no opinion / not relevant

Please elaborate on your reply to whether the current regulatory and supervisory framework governing outsourcing is an obstacle to taking full advantage of any such opportunities.

Question 2.11: Are the existing outsourcing requirements in financial services legislation sufficient?

- Yes
- No
- Don't know / no opinion / not relevant

Please elaborate on your reply to whether the existing outsourcing requirements in financial services legislation are sufficient, precising who is responsible for the activity of external providers and how are they supervised. Please specify, in which areas further action is needed and what such action should be.

Other technologies that may increase efficiency for the industry

Question 2.12: Can you provide further examples of financial innovations that have the potential to reduce operational costs for financial service providers and/or increase their efficiency and of the related challenges?

- FTG encourages the growing interoperability and standardization of the industry, which leads to overall cost reductions and efficiency gains as well as constant innovation which eventually benefits the end consumer.
- Market oversight will benefit from these standardization efforts as reporting and monitoring are enabled
- Outsourcing will always develop the market further with regards to efficiency gaps; their customers, eg. the banks will follow these technical standards.

3. Making the single market more competitive by lowering barriers to entry

Please [refer to the corresponding section of the consultation document](#)  to read some contextual information before answering the questions.

A key factor to achieving a thriving and globally competitive European financial sector that brings benefits to the EU economy and its society is ensuring effective competition within the EU single market. Effective competition enables new innovative firms to enter the EU market to serve the needs of customers better or do so at a cheaper price, and this in turn forces incumbents to innovate and increase efficiency themselves. Under the EU Digital Single Market strategy, the EU regulatory framework needs to be geared towards fostering technological development, in general, and supporting the roll-out of digital infrastructure across the EU, in particular. Stakeholder feedback can help the Commission achieve this goal by highlighting specific regulatory requirements or supervisory practices that hinder progress towards the smooth functioning of the Digital Single Market in financial services. Similarly, such feedback would also be important to identify potential loopholes in the regulatory framework that adversely affect the level playing field between market participants as well as the level of consumer protection.

Question 3.1: Which specific pieces of existing EU and/or Member State financial services legislation or supervisory practices (if any), and how (if at all), need to be adapted to facilitate implementation of FinTech solutions?

The following are - by no means exhaustive - examples of current adaptation needs, we identified with our members:

- PSD2/EBA mandate on RTS on SCA/communication: We welcome the intention of the fall-back solution proposed by the Commission, i.e. that direct access by third parties is allowed, in case that dedicated interfaces of ASPSPs are not available or do not work in compliance with regulation. As a matter of principle, this amendment seems to be a suitable trade-off to calm the again "hardened fronts" of the banking and FinTech lobby. However, the devil is in the detail. The current EU Commission proposal is not yet adequate from a FinTech's point of view as to when exactly the fall-back solution is triggered. For example, non-compliant performance does not yet refer to the rules of the scope of information that banks are obliged to provide via their interface (see Article 36 (1) (a) of the Commission's draft). If banks do not comply with the scope of information standards, third parties do not have a legally secure switching option, although the "equality of information" is a basic principle of the PSD2.

As far as the interim period is concerned, in which banks can still build up their appropriate APIs and third-party services still have access to current screen scraping interfaces for direct access, the fall-back solution might support the market development. However, switching to direct access during a running operation of any dedicated API connection does little for the market in the following years. In addition to the 30-second rule, the FinTech would have had to keep up the potentially needed ad hoc switch to direct access by enormous double efforts - otherwise, efforts may arise that even take several working days until the alternative connection is established again. Meanwhile the user might not only waive single payments but also entire customer relationships. So, the FinTech market can only hope that banks will provide sustainable API solutions which would be the best solution from a general

market point of view.

On the other hand, some banks now fear that they will have to provide a total of three access routes when they choose the dedicated interface. However, since it is the responsibility of the third party to ensure that they only transfer data, necessary for their regulated service (see Article 33 (3) c of the Commission draft), we do not see this need. But we see the risk that banks could waive necessary innovation steps (developing APIs) due to alleged double efforts on wrong assumptions.

- **Video Identification to fulfil KYC-requirements und AML-provisions:** In our opinion, the EU Requirements for the prevention of Anti-Money Laundering/CFT need to be based on a clear level playing field/ full-harmonization approach. Otherwise it will be difficult to establish a digital single market for financial retail products.

Just to mention one example: Some Member States successfully implemented Video Identification solutions to fulfil KYC requirements. On the basis of smartly developed security measures (in close cooperation with the market), these techniques are accepted by member states authorities (see e.g. new German requirements: https://www.bafin.de/SharedDocs/Veroeffentlichungen/DE/Rundschreiben/2017/rs_1703_gw_videoident.html). However, some Member States still do not even allow Video Identification, such as Finland. More innovative KYC solutions are in the pipeline of the RegTech Market (Sharing Consumer ID's via API-solutions between KYC-obliged market players). An AML/CFT level playing field would be vital and a foundation for their success, with enormous potential for cost reductions, maintaining consistent - and even higher! - security than any manual process provides today.

- **Plattform banking/Sponsored Features:** FinTech solutions (still at the beginning of their business development or esp. providing regulated services only as a small feature of their products) would be supported, if they could rely on clear rules for the insourcing of regulated products in order not to be obliged to hold their own licence. Currently the market relies on rather uncertain models like "reverse outsourcing", which raises unnecessary complexity for the internal organisation and for responsible supervisory authorities of licenced companies providing "License as a Service" solutions.

- **EU-passporting:** The current provisions of EU passes for regulated business in other Members States are a welcomed first step towards a prospering digital single market for financial retail products. However, the provisions are often misinterpreted by practitioners as "automatically granted" and therefore expansion plans are hampered due to mistakenly set time schedules. Cross-border business could be even more fostered, if granting of EU passes would be part of the timeline of the initial license application (e.g. via pre-application, when business is not yet established in according member states).

Question 3.2.1: What is the most efficient path for FinTech innovation and uptake in the EU?

- Clear rules and proportionate legislation to allow entry to market for newcomers: the fintech sector is very diverse in terms of company size and products on offer, and much of the technology on which its business is based is still in its infancy; at this stage, tailor-made measures instead of one-size-fits-all regulation will help create a level-playing field and foster further innovation. To this end, we would welcome regular dialogue with regulators to discuss options of tiered/progressive regulation according to size/risk.
- Harmonisation and better funding for fintechs: harmonised rules are fundamental for a competitive Digital Single Market in financial services as fintechs are 'per se' cross-border; in order to take full advantage of the Internal Market, fintechs will also need better access to venture capital in order to achieve economies of scale which in turn will allow them to compete with finance hubs in the US and South East Asia
- Cooperation: In the coming years, we expect further evolution in the sector rather than a revolution, with increased cooperation between fintechs and established players, as well as among financial institutions themselves, to develop new technologies. Trust of businesses and consumers in these new products is also of great importance for the future growth of the sector. We would therefore encourage platforms that allow regular exchanges between fintechs and incumbents as well as regulators and consumer organisations
- Success of the Digital Agenda to ensure we have the necessary infrastructure in place

Question 3.2.2: Is active involvement of regulators and/or supervisors desirable to foster competition or collaboration, as appropriate, between different market actors and new entrants?

- Yes
- No
- Don't know / no opinion / not relevant

If active involvement of regulators and/or supervisors is desirable to foster competition or collaboration, as appropriate, between different market actors and new entrants, please explain at what level?

See answer above (3.2.1).

Please [refer to the corresponding section of the consultation document](#)  to read some contextual information before answering the questions.

But remaining barriers need to be addressed

Please [refer to the corresponding section of the consultation document](#)  to read some contextual information before answering the questions.

Question 3.3: What are the existing regulatory barriers that prevent FinTech firms from scaling up and providing services across Europe? What licensing requirements, if any, are subject to divergence across Member States and what are the consequences? Please provide the details.

The EU requirements lose their effectiveness as soon as they are diversified into localised requirements. FinTech's are challenged by local requirements for example concerning different KYC and KYB standards. Services can not be fully offered due to IBAN-Discrimination cases which are not under the scope of the regulation No 260/2012; i.e. financial transfers or POS-terminals companies under Art. 4 Number 14 (2007/64/EG) which are not able to offer service for different country IBANs. As a result the expansion in different countries is limited to certain services.

Another point is limited and, often outdated, data collection points and transparency for AML purposes, lack of centralized - on EU level - transparency and data sharing without infringing privacy laws.

- Merchants/Company prefer a domestic IBAN, does not want or cannot (technical limits in their system) accept a foreign IBAN
- Often, third parties experience challenges in executing a transfer to a foreign IBAN as their online banking tool is limited to domestic IBANs only. This causes more work for the third party as the bank needs to be called once to activate other countries. Sometimes they need to call for each single payment within SEPA.
- Missing knowledge on the EU regulations and the EU right to use a foreign IBAN

Question 3.4: Should the EU introduce new licensing categories for FinTech activities with harmonised and proportionate regulatory and supervisory requirements, including passporting of such activities across the EU Single Market?

- Yes
- No
- Don't know / no opinion / not relevant

Question 3.5: Do you consider that further action is required from the Commission to make the regulatory framework more proportionate so that it can support innovation in financial services within the Single Market?

- Yes
- No
- Don't know / no opinion / not relevant

If you do consider that further action is required from the Commission to make the regulatory framework more proportionate so that it can support innovation in financial services within the Single Market, please explain in which areas and how should the Commission intervene.

There are already five licensing categories: (i) banking license, (ii) e-money license, and (iii) three different license categories for payment institutions (the payment institution license, the payment initiation services license, and the account information services license). Under the above licenses fintechs are able and allowed to provide different banking, e-money and payment services and are obliged to abide by the various regulatory and equity requirements. It is our opinion that these requirements are proportionate and also harmonized to a great extent, except for the AML regulation. The latter should be fully harmonized to provide for a level playing field for FinTechs in the EU, which currently is NOT the case. The current AML regulation (including AMLD4 and AMLD5) cause distortion between EU Member States. Whereas Germany has a very strict approach on how customers are to be identified when establishing a business relationship (by means of presenting their passport in person or conducting a so called video identification procedure, e.g. ID-NOW), other Member States such as the UK or Luxembourg have a less strict approach, allowing a so called risk based approach for the identification of a customer. In particular with regard to the e-commerce a risk based approach for the AML and KYC procedures is much more user convenient allowing a higher conversation rate. Thus, Fintech based in Member States such as the UK or Luxembourg have a competitive advantage. The Commission should therefore intervene by means of having a fully harmonized AML regulation throughout the EU, with a high level of protection against money laundering.

Question 3.6: Are there issues specific to the needs of financial services to be taken into account when implementing free flow of data in the Digital Single Market?

- Yes
- No
- Don't know / no opinion / not relevant

Please elaborate on your reply to whether there are issues specific to the needs of financial services to be taken into account when implementing free flow of data in the Digital Single Market, and explain to what extent regulations on data localisation or restrictions on data movement constitute an obstacle to cross-border financial transactions.

Question 3.7: Are the three principles of technological neutrality, proportionality and integrity appropriate to guide the regulatory approach to the FinTech activities?

- Yes
- No
- Don't know / no opinion / not relevant

Please elaborate on your reply to whether the three principles of technological neutrality, proportionality and integrity are or not appropriate to guide the regulatory approach to the FinTech activities.

See answer above (3.2.1).

Role of supervisors: enabling innovation

Please [refer to the corresponding section of the consultation document](#)  to read some contextual information before answering the questions.

Question 3.8.1: How can the Commission or the European Supervisory Authorities best coordinate, complement or combine the various practices and initiatives taken by national authorities in support of FinTech (e.g. innovation hubs, accelerators or sandboxes) and make the EU as a whole a hub for FinTech innovation?

From our point of view, local initiatives do not differ as much as they might appear and mainly differ in their public communication. Location marketing has a deep impact on those initiatives.

There would be definitely merits in pooling expertise on EU-level and even more in fostering an EU-wide solution for hub, accelerators, sandboxes, etc.

MINIMUM SOLUTION: A central point of information on EU level (installed at ESA), responsible for gathering innovative ideas and the status of regulatory needs (per Member State - if necessary). This could help to get a clear and up to date overview. This leads to more legal certainty for innovative solution providers. Simultaneously, it enables the EU Commission to be up-to-date on new ideas and their regulatory problems.

MAXIMUM SOLUTION: A political commitment by all Member States to find and actively support an EU-wide solution for hub, accelerators, sandboxes, etc. while waiving local initiatives with isolated solutions. Local taxation differences however, will always play a huge role in location decisions as well. An EU-harmonised rule on tax simplifications for start up companies is a bold idea, however, might be a trigger to discuss further harmonised supervisory solutions on equal terms.

Question 3.8.2: Would there be merits in pooling expertise in the ESAs?

- Yes
- No
- Don't know / no opinion / not relevant

Please elaborate on your reply to whether there would be merits in pooling expertise in the European Supervisory Authorities.

See answer above (3.8.1).

Question 3.9: Should the Commission set up or support an "Innovation Academy" gathering industry experts, competent authorities (including data protection and cybersecurity authorities) and consumer organisations to share practices and discuss regulatory and supervisory concerns?

- Yes
- No
- Don't know / no opinion / not relevant

If you think the Commission should set up or support an "Innovation Academy" gathering industry experts, competent authorities (including data protection and cybersecurity authorities) and consumer organisations to share practices and discuss regulatory and supervisory concerns, please specify how these programs should be organised.

Any initiative to foster the cooperation between industry experts, competent authorities and consumer organisations are highly welcomed. An initiative in form of an Academy might help but should not be exhaustive. For every initiative the EU Commission should bear in mind that FinTech industry experts are mostly part of SMEs which often do not have enough resources to concentrate exclusively on regulatory developments. In most cases, regulatory needs are initiated by members at the management directors level, i.e. those experts have limited time to support any kind of initiative. This has to be considered when planning initiatives and events (minimise operative efforts for experts, provide them with sufficient preparation time up-front; etc.). Market driven initiatives to represent FinTech interests, such as the European Fintech Alliance itself, should be promoted by the EU Commission in order to minimise efforts in identifying suitable market experts.

Question 3.10.1: Are guidelines or regulation needed at the European level to harmonise regulatory sandbox approaches in the MS?

- Yes
- No
- Don't know / no opinion / not relevant

Please elaborate on your reply to whether guidelines or regulation are needed at the European level to harmonise regulatory sandbox approaches in the MS?

There would be definitely merits in developing a European regulatory sandbox targeted specifically at FinTechs. We refer to details with regard to a minimum and maximum solution under question 3.8.1.

Question 3.10.2: Would you see merits in developing a European regulatory sandbox targeted specifically at FinTechs wanting to operate cross-border?

- Yes
- No
- Don't know / no opinion / not relevant

If you would see merits in developing a European regulatory sandbox targeted specifically at FinTechs wanting to operate cross-border, who should run the sandbox and what should be its main objective?

There would be definitely merits in developing a European regulatory sandbox targeted specifically at FinTechs. We refer to details with regard to a minimum and maximum solution under question 3.8.1.

Question 3.11: What other measures could the Commission consider to support innovative firms or their supervisors that are not mentioned above?

Please see answers above.

Role of industry: standards and interoperability

Please [refer to the corresponding section of the consultation document](#)  to read some contextual information before answering the questions.

Question 3.12.1: Is the development of technical standards and interoperability for FinTech in the EU sufficiently addressed as part of the European System of Financial Supervision?

- Yes
- No
- Don't know / no opinion / not relevant

Please elaborate on your reply to whether the development of technical standards and interoperability for FinTech in the EU is sufficiently addressed as part of the European System of Financial Supervision.

The data standard is different in each Member State, therefore outsourcing services to different providers as well as offering services, is currently held back by data and system adaptations. This is also due to different - local (KYC and KYB) requirements and data collection services. FinTech's are being challenged by a non-automatic and centralized Data set in order to connect i.e. API's or verifying different customer inputs. Furthermore, data access is limited and due to localization difficult to query.

Question 3.12.2: Is the current level of data standardisation and interoperability an obstacle to taking full advantage of outsourcing opportunities?

- Yes
- No
- Don't know / no opinion / not relevant

Please elaborate on your reply to whether the current level of data standardisation and interoperability is an obstacle to taking full advantage of outsourcing opportunities.

Please see answer to question 3.12.1.

Question 3.13: In which areas could EU or global level standards facilitate the efficiency and interoperability of FinTech solutions? What would be the most effective and competition-friendly approach to develop these standards?

Data architecture and accessibility is key. So far, FinTech's do not have a standard data set or access point.

The technology is ahead of the actual practices in terms of providing a secure and efficient way to implement or provide services. At EU or global level, we should have either a centralized, or at least a standard data set up for the different Member States to gather valid data to perform efficient customer due diligence and be able to verify different information sources.

Such a central access point is also needed to provide better coordination and accessibility for local sanctions, blacklists, and AML reports. This should help to accelerate investigations and to provide a fast response, and to protect a safe customer registry.

Apart from standards, a central access point at EU level should also help to ensure efficient and more transparent cross-border services (e.g. SEPA vs. foreign payment / which right do you have with an EU IBAN / how can I fight the IBAN discrimination and how can the EU help,...)

Question 3.14: Should the EU institutions promote an open source model where libraries of open source solutions are available to developers and innovators to develop new products and services under specific open sources licenses?

- Yes
- No
- Don't know / no opinion / not relevant

Please elaborate on your reply to whether the EU institutions should promote an open source model where libraries of open source solutions are available to developers and innovators to develop new products and services under specific open sources licenses, and explain what other specific measures should be taken at EU level.

Challenges

Please [refer to the corresponding section of the consultation document](#)  to read some contextual information before answering the questions.

Question 3.15: How big is the impact of FinTech on the safety and soundness of incumbent firms? What are the efficiencies that FinTech solutions could bring to incumbents? Please explain.

Fintechs improve the safety and soundness of incumbents in the financial market sector, e.g. banks, by providing new and innovative banking solutions. This includes, among others, new technologies and processes for onboarding of customers, the storage of data or the execution of transactions in the B2B and B2C market. By pushing the technological frontier further and thereby finding new solutions for new challenges, e.g. data security, customer mobility, incumbents are inspired to either integrate these solutions into their processes or portfolios or to make similar or even better technological advancements.

The latter could be for the benefit of the incumbents' clients as well as for the company's own efficiency. By creating a (free and competitive) market in which the best solution can win over existing ones, the result will always be more efficient than before. This could either be the case through cooperation of the incumbent with an innovative Fintech or the acquisition of a fintech's technology or the Fintech company itself. In addition, fintechs and their new solutions could spark the decision of the incumbent to develop a similarly competitive and strong technology or process on its own.

4. Balancing greater data sharing and transparency with data security and protection needs

Please [refer to the corresponding section of the consultation document](#)  to read some contextual information before answering the questions.

Question 4.1: How important is the free flow of data for the development of a Digital Single Market in financial services? Should service users (i.e. consumers and businesses generating the data) be entitled to fair compensation when their data is processed by service providers for commercial purposes that go beyond their direct relationship?

As long as the user's data is "only" stored but not provided with any added value, such as categorisation or other refining, the upcoming right of data portability under the GDPR should not be contradicted by any compensation rules among market players. The user owns his original data and as he is provided with the right to transfer it to other market players, the receiving parties should not be forced to pay for the transfer - only for any added value that user could not deliver himself.

Storing and sharing financial information through a reliable tool

Please [refer to the corresponding section of the consultation document](#)  to read some contextual information before answering the questions.

Question 4.2: To what extent could DLT solutions provide a reliable tool for financial information storing and sharing? Are there alternative technological solutions?

Question 4.3: Are digital identity frameworks sufficiently developed to be used with DLT or other technological solutions in financial services?

- Yes
- No
- Don't know / no opinion / not relevant

Please elaborate on your reply to whether digital identity frameworks are sufficiently developed to be used with DLT or other technological solutions in financial services.

Digital identity based on DLT are still under early development. Current popular developments are for instance the following:

- uPort - "uPort is an open source software project to establish a global, unified, sovereign identity system for people, businesses, organizations, devices, and bots.": <https://www.uport.me/>
- Civic - "Giving businesses and individuals the tools to control and protect identities.": <https://www.civic.com/>
- ShoCard "ShoCard is the one identity verification system that works the way consumers and businesses need it to for security, privacy, and always-on fraud protection.": <https://shocard.com/>

Question 4.4: What are the challenges for using DLT with regard to personal data protection and how could they be overcome?

One of the inherent characteristics of DLT to date is the fact that public distributed ledgers are transparent to the public which means everyone can see and track transactions taking place with DLT. However, they are also pseudo-anonymous since there are not necessarily names or identities attached. Technical developments are still underway such as „zkSNARKS“ as mentioned previously in order to achieve personal data protection and bring privacy to DLT.

The power of big data to lower information barriers for SMEs and other users

Please [refer to the corresponding section of the consultation document](#)  to read some contextual information before answering the questions.

Question 4.5: How can information systems and technology-based solutions improve the risk profiling of SMEs (including start-up and scale-up companies) and other users?

Question 4.6: How can counterparties that hold credit and financial data on SMEs and other users be incentivised to share information with alternative funding providers ? What kind of policy action could enable this interaction? What are the risks, if any, for SMEs?

Security

Please [refer to the corresponding section of the consultation document](#)  to read some contextual information before answering the questions.

Question 4.7: What additional (minimum) cybersecurity requirements for financial service providers and market infrastructures should be included as a complement to the existing requirements (if any)? What kind of proportionality should apply to this regime?

Question 4.8: What regulatory barriers or other possible hurdles of different nature impede or prevent cyber threat information sharing among financial services providers and with public authorities? How can they be addressed?

Question 4.9: What cybersecurity penetration and resilience testing in financial services should be implemented? What is the case for coordination at EU level? What specific elements should be addressed (e.g. common minimum requirements, tests, testing scenarios, mutual recognition among regulators across jurisdictions of resilience testing)?

Other potential applications of FinTech going forward

Please [refer to the corresponding section of the consultation document](#)  to read some contextual information before answering the questions.

Question 4.10.1: What other applications of new technologies to financial services, beyond those above mentioned, can improve access to finance, mitigate information barriers and/or improve quality of information channels and sharing?

The technological boundaries are created as soon as each Member State is given the chance to adapt the standards to their local requirements, which leads to different data profiles in each Member State. A solution for effectiveness would be a centralized and shared data base, or the enforcement of a minimum data setup, to avoid bad data and manual fixes for each market. The second step would be to move to a unified data base and unblock current barriers that occur in a local environment i.e. IBAN discrimination or limitation to provide country specific services (E-invoicing...). The third step would be an EU consultation platform for control, information and complaints, since solving complaints on a Member State level would result in renewed fragmentation. The current work flows or procedures are time consuming and not effective.

Apart from the technological limitations there is not much transparency so far on cross-border activities.

Question 4.10.2: Are there any regulatory requirements impeding other applications of new technologies to financial services to improve access to finance, mitigate information barriers and/or improve quality of information channels and sharing?

- Yes
- No
- Don't know / no opinion / not relevant

Please elaborate on your reply to whether there are any regulatory requirements impeding other applications of new technologies to financial services to improve access to finance, mitigate information barriers and/or improve quality of information channels and sharing?

See answer to 4.10.1.

3. Additional information

Should you wish to provide additional information (e.g. a position paper, report) or raise specific points not covered by the questionnaire, you can upload your additional document(s) here:

7fabe5d7-e43a-468d-9bac-4767114c565d/IOSCOPD552.pdf

Useful links

[More on the Transparency register \(http://ec.europa.eu/transparencyregister/public/homePage.do?locale=en\)](http://ec.europa.eu/transparencyregister/public/homePage.do?locale=en)

[Consultation details \(http://ec.europa.eu/info/finance-consultations-2017-fintech_en\)](http://ec.europa.eu/info/finance-consultations-2017-fintech_en)

[Specific privacy statement \(https://ec.europa.eu/info/sites/info/files/2017-fintech-specific-privacy-statement_en.pdf\)](https://ec.europa.eu/info/sites/info/files/2017-fintech-specific-privacy-statement_en.pdf)

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