

Nasdaq response to the Commission consultation on a new digital finance strategy for Europe / FinTech action plan

Q1 - What are the main obstacles to fully reap the opportunities of innovative technologies in the European financial sector (please mention no more than 4)?

Please also take into account the analysis of the expert group on Regulatory Obstacles to Financial Innovation in that respect ([here](#)).

The lack of clarity around certain essential regulatory requirements as well as the concerns they seek to address, can make it difficult to utilize a new technology for instance outsourcing in the context of cloud technology. Consequently, given market participants and competent authorities are already familiar with the financial markets rules concerned, it would be useful to clarify such rules to ensure that essential requirements needing to apply in all cases are easily identifiable, including for applying new technologies. As a preliminary step guidance is helpful until the legislative framework is clarified in order to allow to use recent technology developments in a stable and safe regulatory environment. This would help market participants, as it shortens time to markets for services and products.

Q2 - What are the key advantages and challenges consumers are facing with the increasing digitalisation of the financial sector (please mention no more than 4)?

For each of them, what if any are the initiatives that should be taken at EU level?

Q3 - Do you agree with the choice of these priority areas?

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

Q3.1 - Please explain your answer to question 3 and specify if you see other areas that would merit further attention from the Commission:

A predictable, consistent and straightforward legal environment should be promoted. Areas which would benefit from review include licensing requirement for FinTech companies, data protection, conflict of laws, outsourcing, settlement finality and proper legal recognition of holding and transferring securities and other types of assets.

It is important to establish key principles upon which the EU can build a role in facilitating the development and implementation of FinTech. These principles include the need for:

- The application of the same rules for the same services and risks (including across different pieces of legislation) based on the principle of technology neutrality;

- A risk-based approach built on proportionality and materiality which allows for flexibility, particularly in respect of innovation with small groups of customers (i.e. sandboxes), while ensuring a level playing field across the EU;
- A balancing of the local (country) risks alongside the benefits of cross-border markets (i.e. scalability, interoperability and passporting of services);
- Strict application of the subsidiarity principle so that EU regulation do not duplicate regulations and requirements already existing at national level. This is particularly important with respect to cybersecurity in order to avoid an explosion of costs for the industry without real benefits for users and providers.

1. Ensuring a technology-neutral and innovation friendly EU financial services regulatory framework

Q4 - Do you consider the existing EU financial services regulatory framework to be technology neutral and innovation friendly?

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

Q4.1 - If not, please provide specific examples of provisions and requirements that are not technologically neutral or hinder innovation:

The current regulatory framework may not apply in the same way to new technologies and already in use technologies. While we are convinced of the need to support innovation and not build artificial barriers to new technologies, at the same time, it is important that technology neutrality works in all situations and that the principle of "same business, same risks, same rules" fully applies to uphold the principles of transparency, fairness, stability, investor protection and market integrity.

With this in mind, it would for instance be important to clarify at EU level that where "digital-assets" qualify as financial instruments these will be subject to already existing financial market rules. This would increase the speed to market for innovations, as the regulatory environment would be clearer and more stable.

Q5 - Do you consider that the current level of consumer protection for the retail financial products and services established by the EU regulatory framework is technology neutral and should be also applied to innovative ones using new technologies, although adapted to the features of these products and to the distribution models?

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

Q5.1 - Please explain your reasoning on your answer to question 5, and where relevant explain the necessary adaptations:

Q6 - In your opinion, is the use for financial services of the new technologies listed below limited due to obstacles stemming from the EU financial services regulatory framework or other EU level regulatory requirements that also apply to financial services providers?

Please rate each proposal from 1 to 5:

	1 (irrelevant)	2 (rather not relevant)	3 (neutral)	4 (rather relevant)	5 (fully relevant)	N. A.
Distributed Ledger Technology (except crypto- assets)		X				
Cloud computing				X		
Artificial Intelligence/Machine learning				X		
Internet Of Things (IoT)						X
Biometrics			X			
Quantum computing						X
Other						

If you see other technologies whose use would be limited in the financial services due to obstacles stemming from the EU financial services legislative framework, please specify and explain:

Q6.1 - Please explain your answer to question 6, specify the specific provisions and legislation you are referring to and indicate your views on how it should be addressed:

Q7 - Building on your experience, what are the best ways (regulatory and non-regulatory measures) for the EU to support the uptake of nascent technologies and business models relying on them while also mitigating the risk they may pose?

Please rate each proposal from 1 to 5:

	1 (irrelevant)	2 (rather not relevant)	3 (neutral)	4 (rather relevant)	5 (fully relevant)	N. A.

Setting up dedicated observatories to monitor technological and market trends (e.g. EU Blockchain Observatory & Forum; Platform Observatory)					x	
Funding experimentation on certain applications of new technologies in finance (e.g blockchain use cases)					x	
Promoting supervisory innovation hubs and sandboxes			x			
Supporting industry codes of conduct on certain applications of new technologies in finance			x			
Enhancing legal clarity through guidance at EU level for specific technologies and/or use cases					x	
Creating bespoke EU regimes adapted to nascent markets, possibly on a temporary basis			x			
Other						

Please specify what are the other ways the EU could support the uptake of nascent technologies and business models relying on them while also mitigating the risks they may pose:

In any case, it is essential to apply a risk-based approach built on proportionality and materiality which allows for flexibility, particularly in respect of innovation with small groups of customers (i.e. sandboxes). If a product or a service for large distribution or to the retail the general rules would need to apply. It is also key to ensure a level playing field for the various service providers across the EU.

Q8 - In which financial services do you expect technology companies which have their main business outside the financial sector (individually or collectively) to gain significant market share in the EU in the five upcoming years?

Please rate each proposal from 1 to 5:

	1 (very low market share - below 1%)	2 (low market share)	3 (neutral)	4 (significant market share)	5 (very significant market share - above 25%)	N. A.
Intra-European retail payments						
Intra-European wholesale payments						
Consumer credit provision to households with risk taking						
Consumer credit distribution to households with partner institution (s)						
Mortgage credit provision to households with risk taking						
Mortgage credit distribution to households with partner institution (s)						
Credit provision to SMEs with risk taking						
Credit distribution to SMEs with partner institution(s)						
Credit provision to large corporates with risk taking						
Syndicated lending services with risk taking						
Risk-taking activities in Life insurance products						

Risk-taking activities in Non-life insurance products						
Risk-taking activities in pension products						
Intermediation / Distribution of life insurance products						
Intermediation / Distribution of non-life insurance products						
Intermediation / Distribution of pension products						
Other insurance related activities, e.g. claims management						
Re-insurance services						
Investment products distribution						
Asset management						
Others						

Please specify in which other financial services you expect technology companies to gain significant market share in the EU in the five upcoming years:

Q8.1 - Please explain your answer to question 8 and, if necessary, describe how you expect technology companies to enter and advance in the various financial services markets in the EU Member States:

Q9 - Do you see specific financial services areas where the principle of “same activity creating the same risks should be regulated in the same way” is not respected?

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

Q9.1 - Please explain your answer to question 9 and provide examples if needed:

At the current stage, crypto-assets trading platforms do not comply with requirements in relation to the organisation of secondary markets. All such platforms should be regulated as Regulated Markets, MTFs or OTFs under MiFID II/R. In other words, these crypto-assets

trading platforms should have to follow the same rules applicable to trading venues like, inter alia, transparency requirements, accountability, operational resilience, ICT security, recordkeeping, proper governance arrangements, KYC and AML requirements, etc.

Additionally, we believe that there is a need to maintain the same level of obligations for financial markets participants trading “crypto-assets” that act as financial instruments and those trading traditional financial instruments; otherwise, there could be a risk of introducing regulatory arbitrage based on the technology used.

Q10 - Which prudential and conduct risks do you expect to change with technology companies gaining significant market share in financial services in the EU in the five upcoming years?

Please rate each proposal from 1 to 5:

	1 (significant reduction in risks)	2 (reduction in risks)	3 (neutral)	4 (increase in risks)	5 (significant increase in risks)	N. A.
Liquidity risk in interbank market (e.g. increased volatility)						
Liquidity risk for particular credit institutions						
Liquidity risk for asset management companies						
Credit risk: household lending						
Credit risk: SME lending						
Credit risk: corporate lending						
Pro-cyclical credit provision						
Concentration risk for funds collected and invested (e.g. lack of diversification)						
Concentration risk for holders of funds (e.g. large deposits or investments held in a						

bank or fund)						
Undertaken insurance risk in life insurance						
Undertaken insurance risk in non-life insurance						
Operational risks for technology companies and platforms						
Operational risk for incumbent financial service providers		X				
Systemic risks (e.g. technology companies and platforms become too big, too interconnected to fail)						
Money-laundering and terrorism financing risk				X		
Other						

Please specify which other prudential and conduct risk(s) you expect to change with technology companies gaining significant market share in financial services in the EU in the five upcoming years:

One area is firms conducting business without applying EU legislation in the context of crypto assets and ICOs (especially investor protection requirements).

Another is data protection issues in relation to DLT environments, as the immutability of this technology and impossibility to delete data prevent these systems from dealing with personal data safely, and therefore do not allow for complying with the requirements laid out in GDPR. Even for permissioned DLT, confidentiality of data can only be guaranteed by keeping satellite records in traditional technologies that ensure personal information can be erasable, which does not contribute to the overall safety of the information and adds complexity and costs to the maintenance of the system.

Q10.1 - Please explain your answer to question 10 and, if necessary, please describe how the risks would emerge, decrease or increase with the higher activity of technology companies in financial services and which market participants would face these increased risks:

Q11 - Which consumer risks do you expect to change when technology companies gain significant market share in financial services in the EU in the five upcoming years?

Please rate each proposal from 1 to 5:

	1 (significant reduction in risks)	2 (reduction in risks)	3 (neutral)	4 (increase in risks)	5 (significant increase in risks)	N. A.
Default risk for funds held in non-banks and not protected by Deposit Guarantee Scheme						
Liquidity risk						
Misselling of insurance products						
Misselling of investment products						
Misselling of credit products						
Misselling of pension products						
Inadequate provision of information						
Inadequate complaint and redress process and management						
Use/abuse of personal data for financial commercial purposes				X		
Discrimination e.g. based on profiles				X		
Operational risk e.g. interrupted service, loss of data						
Other						

Please specify which other consumer risk(s) you expect to change when technology companies gain significant market share in financial services in the EU in the five upcoming years:

Q11.1 - If necessary, please describe how the risks would emerge, decrease or increase with the higher activity of technology companies in financial services and which market participants would face these increased risks:

Q12 - Do you consider that any of the developments referred to in the questions 8 to 11 require adjusting the regulatory approach in the EU (for example by moving to more activity-based regulation, extending the regulatory perimeter to certain entities, adjusting certain parts of the EU single rulebook)?

Yes

No

Don't know / no opinion / not relevant

Q12.1 - Please explain your answer to question 12, elaborating on specific areas and providing specific examples:

By application of the “same business, same risk, same rules” principle, technology companies / FinTech companies should be subject to the established financial regulatory requirements. This is important to maintain stability and safety in markets concerned.

As previously mentioned, there is a need to maintain the same level of obligations for financial market participants trading crypto-assets that act as financial instruments and those trading traditional financial instruments. If not, there is a risk of introducing regulatory arbitrage based on the technology used. It is important to make a classification of “digital assets” and a categorisation of “crypto-assets” at EU level to distinguish between different forms of tokens (as suggested by the Commission in the past crypto-assets consultation), notably to make a clear differentiation between “digital-assets” that act as financial instruments based on the existing MiFID II framework and use cryptology (i.e. “crypto-assets”) and “digital-assets” that do not act as a financial instruments and use cryptology (which could be defined as “crypto-tokens”). If an EU level bespoke regime for “crypto-tokens” (“digital assets” that do not act as financial instruments) could be set up (based on a set of concrete qualifications and criteria and allow for innovation in that field without compromising market integrity and investor protection), for “digital-assets” that act as financial instruments the existing MiFID II/R provisions should fully apply. Moreover, this clarification would allow to identify which existing provisions would have to be amended to clarify the legal framework to encourage the trading of “crypto-assets” that act as financial instruments, whilst preserving the principles of market integrity and investor protection embedded in law.

Q13 - Building on your experience, what are the main challenges authorities are facing while supervising innovative/digital players in finance and how should they be addressed?

Please explain your reasoning and provide examples for each sector you are referring to (e.g. banking, insurance, pension, capital markets):

As technology evolves it creates challenges as to what regulatory requirements mean in a new context, especially if the requirements are not principle based. This in turn creates uncertainty for the industry on what products and services can be developed on the basis

of the new technologies. A permanent dialogue between the industry (including service providers) and regulators/competent authorities is absolutely needed to keep challenges under control.

Q14 - According to you, which initiatives could be put in place at EU level to enhance this multi-disciplinary cooperation between authorities?

Please explain your reasoning and provide examples if needed:

From our point of view, not only the cooperation between market participants and authorities at different levels is important, but also the alignment and cooperation of authorities in different jurisdictions and at different levels as well as sectors is beneficial (horizontal and vertical cooperation).

2. Removing fragmentation in the single market for digital financial services

Q15 - According to you, and in addition to the issues addressed in questions 16 to 25 below, do you see other obstacles to a Single Market for digital financial services and how should they be addressed?

Cloud markets offer technological solutions in financial markets to innovate and should be supported. While the level of cybersecurity is already high, further advancements would be welcome in the following areas:

- (i) reinforcing data protection (confidentiality and integrity primarily) for data-in-use or in memory including by e.g. extending encryption technologies as appropriate;
- (ii) implementing end-to-end encryption wherever possible;
- (iii) ensuring consistent implementation of customer lockbox or consent requirements before data is accessed or shared; and
- (iv) developing international agreements between the EU and other major jurisdictions to adequately regulate cross border access and activities.

Moreover, it is important to consider the imbalance in contract negotiations between customers and Cloud services providers, resulting in endless discussions to agree on regulatory compliant contracts in the financial sector. We therefore support the EU’s work on “Voluntary Standard Contract Clauses” to facilitate future negotiations.

Finally, it is still problematic to procure and adopt innovative cloud solutions, as it takes a long time to ensure that these new services comply with applicable regulation and meet requirements and expectations of supervisory authorities.

Q16 - What should be done at EU level to facilitate interoperable cross-border solutions for digital on-boarding?

Please rate each proposal from 1 to 5:

	1 (irrelevant)	2 (rather not relevant)	3 (neutral)	4 (rather relevant)	5 (fully relevant)	N. A.
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Harmonise rules governing customer due diligence requirements in the Anti-Money Laundering legislation					X	
Harmonise rules governing the acceptable use of remote identification technologies and services in the Anti-Money Laundering legislation					X	
Broaden access for obliged entities to publicly held information (public databases and registers) to enable verification of customer identities					X	
Provide further guidance or standards in support of the customer due diligence process (e.g. detailed ID elements, eligible trusted sources; risk assessment of remote identification technologies)					X	
Facilitate the development of digital on-boarding processes, which build on the e-IDAS Regulation					X	
Facilitate cooperation between public authorities and private sector digital identity solution providers					X	
Integrate KYC attributes into e- IDAS in order to enable on- boarding					X	

through trusted digital identities						
Other						

Please specify what else should be done at EU level to facilitate interoperable cross-border solutions for digital on-boarding:

We believe that the EU should step first towards an interoperability layer controlled by the EU that is effectively deployed by each market. In this way the normalisation of the data elements to allow interoperability can effectively be shared via a central 'normalised view'. This will speed adoption and facilitate all the advantages discussed in the questions above

Q17 - What should be done at EU level to facilitate reliance by financial institutions on digital identities gathered by third parties (including by other financial institutions) and data re-use/portability?

Please rate each proposal from 1 to 5:

	1 (irrelevant)	2 (rather not relevant)	3 (neutral)	4 (rather relevant)	5 (fully relevant)	N. A.
Make the rules on third party reliance in the Anti-Money Laundering legislation more specific					x	
Provide further guidance relating to reliance on third parties for carrying out identification and verification through digital means, including on issues relating to liability					x	
Promote re-use of digital identities collected for customer due diligence purposes in accordance with data protection rules					x	

Promote a universally accepted public electronic identity					X	
Define the provision of digital identities as a new private sector trust service under the supervisory regime of the eIDAS Regulation					X	
Other						

Please specify what else could be done at EU level to facilitate reliance by financial institutions on digital identities gathered by third parties (including by other financial institutions) and data re-use/portability:

We believe eIDAS solutions should be made a regulatory sand box for a defined period. This will drive normally risk adverse financial services organisations to earlier adoption whilst enabling the technology providers to engage at an accelerated rate.

Q18 - Should one consider going beyond customer identification and develop Digital Financial Identities to facilitate switching and easier access for customers to specific financial services?

Should such Digital Financial Identities be usable and recognised throughout the EU?

Which data, where appropriate and in accordance with data protection rules, should be part of such a Digital Financial Identity, in addition to the data already required in the context of the anti-money laundering measures (e.g. data for suitability test for investment services; data for creditworthiness assessment; other data)?

Please explain your reasoning and also provide examples for each case you would find relevant.

As a more general remark, we would like to connect this question to the debate about “digital identities” and raise the issue on whether a “digital finance identity” would be a separate identity for consumers/businesses or would the “digital finance identity” a subset of a “digital identities”. We consider that it would not be efficient to create multiple digital identities for consumers/businesses. The identifier would need to be both reliable as well as comprehensive. A modular approach could be most useful, to create this new identity comprising of existing identifiers (like LEI), which are already based on existing standards.

Q19 - Would a further increased mandatory use of identifiers such as Legal Entity Identifier (LEI), Unique Transaction Identifier (UTI) and Unique Product Identifier (UPI) facilitate digital and/or automated processes in financial services?

Yes

No

Don't know / no opinion / not relevant

If yes, in which framework(s) is there the biggest potential for efficiency gains?

LEI, UTI and UPI would certainly lower the cost of compliance to MIFID and other market regulator directives, whilst potentially lowering the operating costs of financial services organisations. The challenge is as always recency and frequency

Q20 - In your opinion (and where applicable, based on your experience), what is the main benefit of a supervisor implementing (a) an innovation hub or (b) a regulatory sandbox as defined above?

Sandboxes are a solution in the technical testing phase, however if the service is offered broadly and in particular to retail, the general rules have to be applied to prevent regulatory arbitrage, for example regarding GDPR or sector specific regulations.

It is also key that when the service is offered to the retail sector effective protective measures are in place to prevent that issues backfire on the uptake of digital services and products.

Q21 - In your opinion, how could the relevant EU authorities enhance coordination among different schemes in the EU?

Please rate each proposal from 1 to 5:

	1 (irrelevant)	2 (rather not relevant)	3 (neutral)	4 (rather relevant)	5 (fully relevant)	N. A.
Promote convergence among national authorities in setting up innovation hubs and sandboxes, through additional best practices or guidelines				x		
Facilitate the possibility for firms to test new products and activities for marketing in several Member States (“cross border testing”)				x		

Raise awareness among industry stakeholders				x		
Ensure closer coordination with authorities beyond the financial sector (e.g. data and consumer protection authorities)				x		
Promote the establishment of innovation hubs or sandboxes with a specific focus (e.g. a specific technology like Blockchain or a specific purpose like sustainable finance)				x		
Other						

Please specify how else could the relevant EU authorities enhance coordination among different schemes in the EU:

Q21.1 - If necessary, please explain your reasoning and also provide examples for each case you would find relevant:

Q22 - In the EU, regulated financial services providers can scale up across the Single Market thanks to adequate licenses and passporting rights.

Do you see the need to extend the existing EU licenses passporting rights to further areas (e.g. lending) in order to support the uptake of digital finance in the EU?

Q23 - In your opinion, are EU level initiatives needed to avoid fragmentation in the Single Market caused by diverging national measures on ensuring non-discriminatory access to relevant technical infrastructures supporting financial services?

Please elaborate on the types of financial services and technical infrastructures where this would be relevant and on the type of potential EU initiatives you would consider relevant and helpful:

One prominent example would be the need for EU harmonised rules for outsourcing to cloud service providers. Currently, national measures on outsourcing hinder the usage of this technology and the respective services. This is not only relevant to the financial sector, but for the economy as a whole.

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Q24 - In your opinion, what should be done at EU level to achieve improved financial education and literacy in the digital context?

Please rate each proposal from 1 to 5:

	1 (irrelevant)	2 (rather not relevant)	3 (neutral)	4 (rather relevant)	5 (fully relevant)	N. A.
Ensure more affordable access at EU level to financial data for consumers and retail investors						x
Encourage supervisors to set up hubs focussed on guiding consumers in the digital world				x		
Organise pan-European campaigns and advisory hubs focusing on digitalisation to raise awareness among consumers				x		
Collect best practices				x		
Promote digital financial services to address financial inclusion				x		
Introduce rules related to financial education comparable to Article 6 of the Mortgage Credit Directive, with a stronger focus on digitalisation, in other EU financial regulation proposals					x	
Other						

Please specify what else should be done at EU level to achieve improved financial education and literacy in the digital context:

Inclusion of financial literacy in school curricula throughout the EU is urgently needed to provide equal opportunities and living conditions in Europe.

Q25 - If you consider that initiatives aiming to enhance financial education and literacy are insufficient to protect consumers in the digital context, which additional measures would you recommend?

3. Promote a well-regulated data-driven financial sector

Q26 - In the recent communication "A European strategy for data", the Commission is proposing measures aiming to make more data available for use in the economy and society, while keeping those who generate the data in control.

According to you, and in addition to the issues addressed in questions 27 to 46 below, do you see other measures needed to promote a well-regulated data driven financial sector in the EU and to further develop a common European data space for finance?

Nasdaq supports the European Commission’s proposal of an overarching data strategy aimed at achieving the benefits of the single market and avoiding further fragmentation. To this end, a harmonised European approach is preferable to speed up the use and investment in technologies. Self-regulatory approaches risk taking excessive implementation time and creating fragmentation whereas harmonisation would be beneficial. The establishment of EU wide regulatory standards therefore appear appropriate provided such requirements are proportionate and adapted to the current business environment.

If society at large can benefit from a wide use of data from different sources, especially from a research and development perspective, it is key that a number of principles apply.

Firstly, data privacy and the use of data for public interests need to be balanced. In this respect, it is worth noting that one person’s data should of course be protected and not be shared, but in general companies using data do not care about data for one person, they want it aggregated at a level that actually has value e.g. the time at which an age group wakes up is valuable in relation to services that can be offered to that group as opposed to the time at which a specific member of the age group wakes up.

Secondly, not all data can be accessed for free or considered as common good. Companies producing data have to have incentives to invest in the production of data and obtain a return on investment. Companies should be allowed to develop commercial products and services on the basis of raw data. It is, therefore, important not to create disincentives towards data collection, standardisation and product developments.

Consequently, we see the need for a clear and concise definition of “data” in the form of a classification framework. We propose the following:

1. Source of data. It makes a significant difference whether data is originated by (i) private individuals, (ii) companies, and (iii) if data is created in the retail market (C2B) vs wholesale data (B2B).
2. Ownership of data. There could be cases where the originator of data does not correspond to the owner of the same data because they have been for instance

- aggregated in a given format or refined. For example, Exchanges have ownership of data through their market data licensing agreements (i.e. contractual ownership).
3. Data quality. Differentiating between pure ‘raw’ data and a form of data that is refined and upgraded.
 4. Data value. Distinguishing between commercially valuable data and those that are not.
 5. Pooling of data. Having the possibility of commercializing for making pooled data readable or available.
 6. Availability. Data sets can be either free for distribution, linked to a fee, for user subscription, etc.
 7. Time stamp. Which would be used also as a measure to determine when data lose its commercial value after a certain amount of time.
 8. Data sensitivity. To classify if the data has to be considered public or highly restricted.

With respect to the proposal on “EU data spaces” whereas a harmonised approach across different industry sectors may appear attractive, we consider it too complex and likely to miss its desired objective of innovation. A competitive approach is therefore preferable. We also consider that standardisation of data is a task better performed by industry bodies as they master the necessary technical knowledge and work on common standards on a voluntary basis.

Q27 - Considering the potential that the use of publicly available data brings in finance, in which areas would you see the need to facilitate integrated access to these data in the EU? Please rate each proposal from 1 to 5:

	1 (irrelevant)	2 (rather not relevant)	3 (neutral)	4 (rather relevant)	5 (fully relevant)	N. A.
Financial reporting data from listed companies				X		
Non-financial reporting data from listed companies				X		
SME data				X		
Prudential disclosure stemming from financial services legislation				X		
Securities market disclosure						
Disclosure regarding retail investment products				x		
Other				X		

Please specify in which other area(s) you would see the need to facilitate integrated access to these data in the EU:

Nasdaq supports measures that would facilitate sharing of company information, the provision of information to investors, and that give companies visibility on a European basis. One such proposal currently being discussed in the creation of an EU Single Access Point, in considering this, it will be important to ensure that any reporting requirement targets information that is useful. While this idea is relatively new, other similar projects already exists. Notably the European Financial Transparency Gateway (EFTG) project where Officially Appointed Mechanisms that handle the financial documents received from European companies have worked on a more advanced EEAP system over the last two years. There is also work ongoing to create European business register. Ideally, an inventory of ongoing similar projects should take place in order to get a better overview and merge those projects that have similar objectives.

Nasdaq considers that an EU Single Access Point should include information disclosed by companies listed on Regulated Markets, MTFs and SME Growth Markets (SME GMs). The Single Access Point would facilitate access and availability of data about companies and as such serve as a basis for investors' assessments.

To increase integration but keep the project, efficient and manageable in terms of administrative burden of data processing, the scope should be limited to disclosures stemming from the Transparency Directive or, in the case of issuers on SME Growth Markets, the relevant disclosure documentation required. Should it extend to other requirements, it is important to consider that, depending on how it is implemented, this may introduce considerable extra costs for listed companies compared to non-listed ones as many reporting obligations do not apply to private companies and this would be a concern.

Please note that as the scope of the NFRD is, and should be, for both listed and non-listed companies in regards to the rules regarding disclosure, the reporting, storage and access to information. Therefore, if the National Competent Authorities' supervisory databases are leveraged for non-financial information, they will also need to be adapted accordingly to ensure the supervision of companies' compliance with the disclosure framework. There are certain structures already in place for listed companies which can be used as a model for the information provided by non-listed companies, such as the Officially Appointed Storage Mechanisms under the Transparency Directive, but these structures may not be suitable straight off for the broader scope of companies within the NFRD.

We believe that digitisation could help to expand and improve the reporting. The handling of science-based targets, climate stress tests, scenario analyses and disclosure by financial institutions of the compatibility of their portfolios with the reduction targets of the Paris Agreement on Climate Change will possibly be easier. This kind of forward-looking sustainability data is an important prerequisite for improved assessments of the risks and opportunities associated with the future viability of companies and their external effects on the environment.

Q28 - In your opinion, what would be needed to make these data easily usable across the EU?

Please rate each proposal from 1 to 5.

	1 (irrelevant)	2 (rather not relevant)	3 (neutral)	4 (rather relevant)	5 (fully relevant)	N. A.
Standardised (e.g. XML) and machine-readable format						
Further development of the European Financial Transparency Gateway, federating existing public databases with a Single EU access point						
Application Programming Interfaces to access databases						
Public EU databases						
Other						

Please specify what else would be needed to make these data easily usable across the EU:

The questions asked in the above table are too generic and answers would depend on each type of information concerned.

Q29 - In your opinion, under what conditions would consumers favour sharing their data relevant to financial services with other financial services providers in order to get better offers for financial products and services?

Consumers would be more likely to favour sharing their data if they have control on who access their data as well as on the use of such data.

Q30 - In your opinion, what could be the main benefits of implementing an open finance policy in the EU?

Please rate each proposal from 1 to 5:

	1 (irrelevant)	2 (rather not relevant)	3 (neutral)	4 (rather relevant)	5 (fully relevant)	N. A.

More innovative and convenient services for consumers/investors, e.g. aggregators, comparison, switching tools			X			
Cheaper traditional services for consumers/investors			X			
Efficiencies for the industry by making processes more automated (e.g. suitability test for investment services)				X		
Business opportunities for new entrants in the financial industry				X		
New opportunities for incumbent financial services firms, including through partnerships with innovative start-ups				X		
Easier access to bigger sets of data, hence facilitating development of data dependent services				X		
Enhanced access to European capital markets for retail investors				X		
Enhanced access to credit for small businesses			X			
Other						

If you see other benefits of implementing an open finance policy in the EU, please specify and explain:

Q31 - In your opinion, what could be the main risks of implementing an open finance policy in the EU?

Please rate each proposal from 1 to 5:

	1 (irrelevant)	2 (rather not relevant)	3 (neutral)	4 (rather relevant)	5 (fully relevant)	N. A.
Privacy issues / security of personal data				X		
Financial exclusion			x			
Poor consumer outcomes (e.g. unfair pricing strategies)				x		
Misuse of consumers' financial data				X		
Business confidentiality issues				X		
Increased cyber risks				x		
Lack of level playing field in terms of access to data across financial sector activities				x		
Other						

If you see other risks of implementing an open finance policy in the EU, please specify and explain:

One additional concern is touching upon the trust of consumers and clients regarding the safety of their data and the obligations of those processing such data, including Cloud service providers.

Q32 - In your opinion, what safeguards would be necessary to mitigate these risks?

Clear guidance for companies based on existing rules would be beneficial. Further, there is a clear need for EU rules covering cloud outsourcing, which on the one hand promotes

the uptake of the technology to make the financial industry more competitive and on the other hand incorporates existing standards, which are already used by the industry.

Q33 - In your opinion, for which specific financial products would an open finance policy offer more benefits and opportunities?

Please rate each proposal from 1 to 5:

	1 (irrelevant)	2 (rather not relevant)	3 (neutral)	4 (rather relevant)	5 (fully relevant)	N. A.
Savings accounts						
Consumer credit						
SME credit						
Mortgages						
Retail investment products (e.g. securities accounts)						
Non-life insurance products (e.g. motor, home...)						
Life insurance products						
Pension products						
Other						

If you see other financial products that would benefit of an open finance policy, please specify and explain:

Q33.1 - Please explain your answer to question 33 and give examples for each category:

Q34 - What specific data (personal and non-personal) would you find most relevant when developing open finance services based on customer consent?

To what extent would you also consider relevant data generated by other services or products (energy, retail, transport, social media, e-commerce, etc.) to the extent they are relevant to financial services and customers consent to their use?

Please explain your reasoning and provide the example per sector:

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Q35 - Which elements should be considered to implement an open finance policy?

Please rate each proposal from 1 to 5:

	1 (irrelevant)	2 (rather not relevant)	3 (neutral)	4 (rather relevant)	5 (fully relevant)	N. A.
Standardisation of data, data formats						
Clarity on the entities covered, including potential thresholds						
Clarity on the way data can be technically accessed including whether data is shared in real-time (e.g. standardised APIs)						
Clarity on how to ensure full compliance with GDPR and e-Privacy Directive requirements and need to ensure that data subjects remain in full control of their personal data						
Clarity on the terms and conditions under which data can be shared between financial services providers (e.g. fees)						

Interoperability across sectors						
Clarity on the way data shared will be used						
Introduction of mandatory data sharing beyond PSD2 in the framework of EU regulatory regime						
If mandatory data sharing is considered, making data available free of cost for the recipient						
Other						

Please specify what other element(s) should be considered to implement an open finance policy:

Q36 - Do you/does your firm already deploy AI based services in a production environment in the EU?

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

Q36.1 - If you/your firm do/does already deploy AI based services in a production environment in the EU, please specify for which applications?

Machine learning and artificial intelligence can be used for compliance purposes; however, from Nasdaq's perspective market surveillance is the primary area of use. Artificial intelligence can be used to monitor systems and recommend actions. It is a valuable tool to improve surveillance performance and accuracy. The development of artificial intelligence solutions entails that a surveillance system would learn from issues as they occur and it would iteratively increase its accuracy and performance, thereby enabling a more comprehensive and holistic way to solve detected trading anomalies.

Q37 - Do you encounter any policy or regulatory issues with your use of AI?

Have you refrained from putting AI based services in production as a result of regulatory requirements or due to legal uncertainty?

There are difficulties with regard of the use of data due to restrictive EU regulations (e.g. banking secrecy versus developing big data solutions to fight anti-money-laundering). We see the need for clarification to comply with existing rules and simultaneously to develop further solutions (e.g. via criteria for the use of anonymised or pseudo-anonymised data in order to facilitate broader analysis). AI needs per se more data and should be allowed

to use data on an aggregated level. It is important to find a careful balance between data privacy, GDPR, and use of data for private interests.

Q38 - In your opinion, what are the most promising areas for AI- applications in the financial sector in the medium term and what are the main benefits that these AI-applications can bring in the financial sector to consumers and firms?

FinTech solutions, including AI, have the potential to enable firms to meet regulatory compliance and provide the regulatory community with the means to scale efficiently. For example in the field of market surveillance, machine learning and artificial intelligence allow us to analyze many more data than before enabling us to discover more quickly and precisely abuses, giving better tools to maintain fair and orderly markets.

Q39 - In your opinion, what are the main challenges or risks that the increased use of AI-based models is likely to raise for the financial industry, for customers/investors, for businesses and for the supervisory authorities?

Please rate each proposal from 1 to 5:

1. Financial industry

	1 (irrelevant)	2 (rather not relevant)	3 (neutral)	4 (rather relevant)	5 (fully relevant)	N. A.
1.1. Lack of legal clarity on certain horizontal EU rules				X		
1.2. Lack of legal clarity on certain sector-specific EU rules				X		
1.3. Lack of skills to develop such models			X			
1.4. Lack of understanding from and oversight by the supervisory authorities			X			
1.5. Concentration risks				X		

1.6. Other						
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Please specify what other main challenge(s) or risk(s) the increased use of AI- based models is likely to raise for the financial industry:

Any AI application needs clear and well-designed rules to minimize the associated risks. Nasdaq considers that consumers of AI do not necessarily face unique challenges and risks. The consumer protection for AI should be similar to other data based services in the financial sector, including classic investor protection, ensuring fair treatment and safeguards for data protection and against abuse as well misselling. A technology neutral environment should also prevail with respect to the protection framework.

2. Consumers/investors

	1 (irrelevant)	2 (rather not relevant)	3 (neutral)	4 (rather relevant)	5 (fully relevant)	N. A.
2.1. Lack of awareness on the use of an algorithm						
2.2. Lack of transparency on how the outcome has been produced						
2.3. Lack of understanding on how the outcome has been produced						
2.4. Difficult to challenge a specific outcome						
2.5. Biases and/or exploitative profiling						
2.6. Financial exclusion						
2.7. Algorithm-based behavioural manipulation (e.g. collusion and other coordinated firm behaviour)						

2.8. Loss of privacy						
2.9. Other						

Please specify what other main challenge(s) or risk(s) the increased use of AI- based models is likely to raise for customers/investors:

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3. Supervisory authorities

	1 (irrelevant)	2 (rather not relevant)	3 (neutral)	4 (rather relevant)	5 (fully relevant)	N. A.
3.1. Lack of expertise in understanding more complex AI-based models used by the supervised entities						
3.2. Lack of clarity in explainability requirements, which may lead to reject these models						
3.3. Lack of adequate coordination with other authorities (e.g. data protection)						
3.4. Biases						
3.5. Other						

Please specify what other main challenge(s) or risk(s) the increased use of AI- based models is likely to raise for the supervisory authorities:

<p>Technical developments are moving faster than the underlying legal and regulatory frameworks. In order not to impede innovation and investment, a rigid application of existing rules must be avoided. Instead a predictable, consistent and straightforward legal environment that is technology neutral should be promoted.</p> <p>Nasdaq also supports a proactive approach where existing laws and regulations are adapted to new technical developments when necessary i.e. building upon already existing rules and regulations, while taking into account the need to foster a technology neutral</p>

regulatory framework. It is also important that EU legislation is consistent with global standards and principles adopted by international bodies.

Q40 - In your opinion, what are the best ways to address these new issues?

Please rate each proposal from 1 to 5

	1 (irrelevant)	2 (rather not relevant)	3 (neutral)	4 (rather relevant)	5 (fully relevant)	N. A.
New EU rules on AI at horizontal level			X			
New EU rules on AI for the financial sector		X				
Guidance at EU level for the financial sector				X		
Experimentation on specific AI applications under the control of competent authorities				X		
Certification of AI systems				X		
Auditing of AI systems			X			
Registration with and access to AI systems for relevant supervisory authorities			X			
Other						

Please specify what other way(s) could be best to address these new issues:

For high-risk AI applications, a combination of ex-ante assessments, based on an external conformity procedure, as well as ex-post market surveillance could be warranted.

The list of requirements for high-risk AI applications should be reviewed and updated timely and frequently (e.g. without the requirement for a Level 1 change of the regulatory framework) to keep up with technological innovation. The review of the criteria should take the form of guidelines published by supervisory authorities and could be updated on a more regular basis.

For non-high-risk AI applications, we consider that a labelling system, if any, should follow and implement general guidelines stemming from industry standards and practices.

Q41 - In your opinion, what are the main barriers for new RegTech solutions to scale up in the Single Market?

Please rate each proposal from 1 to 5:

Providers of RegTech solutions:

	1 (irrelevant)	2 (rather not relevant)	3 (neutral)	4 (rather relevant)	5 (fully relevant)	N. A.
Lack of harmonisation of EU rules				x		
Lack of clarity regarding the interpretation of regulatory requirements (e.g. reporting)				x		
Lack of standards				x		
Lack of real time access to data from regulated institutions				x		
Lack of interactions between RegTech firms, regulated financial institutions and authorities				x		
Lack of supervisory one stop shop for RegTech within the EU				x		
Frequent changes in the applicable rules				x		
Other						

Please specify what are the other main barrier(s) for new providers of RegTech solutions to scale up in the Single Market:

Financial service providers:

	1 (irrelevant)	2 (rather not relevant)	3 (neutral)	4 (rather relevant)	5 (fully relevant)	N. A.
Lack of harmonisation of EU rules				x		
Lack of trust in newly developed solutions				x		
Lack of harmonised approach to RegTech within the EU				x		
Other						

Please specify what are the other main barrier(s) for new Financial service providers solutions to scale up in the Single Market:

As Digitalisation and new technologies need to be integrated into the existing ecosystem of infrastructure in the securities markets, such integration requires efforts and time. Transition planning and execution is also important as new solutions have the potential to replace legacy technology. No-one will invest in a transition project if there is a significant risk that such a transition process gets stuck half-way (leaving participants with the unattractive situation of having to support parallel infrastructures). Hence, transition planning and execution is critical and requires efforts, which has an impact on the timeline for implementation of digitalization and new technologies in the securities markets.

Taking the above into account, it is reasonable to assume that the early adoption of technologies such as DLT in the securities markets is likely to happen in markets where regulatory, technical and business complexity is relatively low. Adoption in more complex and demanding environments is likely to follow once DLT has proved its worth in relation to small and medium sized implementation projects.

With respect to artificial intelligence and machine learning, progress go fast and are increasingly used both by market infrastructures and market participants. Based on the current trends in the financial markets, we assume that machine learning and artificial intelligence could be fully integrated into the trading space within a few years and, as such, affect both services and financial instruments of exchanges throughout Europe.

Q42 - In your opinion, are initiatives needed at EU level to support the deployment of these solutions, ensure convergence among different authorities and enable RegTech to scale up in the Single Market?

Yes

No

Don't know / no opinion / not relevant

Q42.1 - Please explain your answer to question 42 and, if necessary, please explain your reasoning and provide examples:

Nasdaq believes that the EU regulatory framework needs to be geared towards fostering technological development as the financial industry and its users are benefitting significantly from such developments.

Data analytics, machine intelligence and robot advice are already significantly aiding the decision process and quality of information being shared. FPGA also supports distribution of massive amounts of data with high throughput for market transparency and equality. Cloud techniques to efficiently distribute data, easily scale storage needs and secure data for resiliency purposes will also help to improve the access to finance.

Another area which improves access to finance is mobile banking.

However, it is also crucial to adequately manage potential risks in order to ensure that markets can remain fair, orderly and trusted venues to carry out businesses.

Areas that regulators could look further into include: how the DLT models of sharing data/records of ownership as well as the various consensus models within the DLT technology can win support through regulations.

Q43 - In your opinion, which parts of financial services legislation would benefit the most from being translated into machine-executable form?

Please specify what are the potential benefits and risks associated with machine-executable financial services legislation:

Q44 - The Commission is working on standardising concept definitions and reporting obligations across the whole EU financial services legislation.

Do you see additional initiatives that it should take to support a move towards a fully digitalised supervisory approach in the area of financial services?

Please explain your reasoning and provide examples if needed:

As mentioned above, in considering proposals for harmonising standards and establishing databases, it will be important to ensure that any reporting requirement targets information that is useful. The costs linked to a lack of clarity in the regulation should not be underestimated as risk averse issuers (in particular SMEs) will consider the regulatory risks in choosing their financing options. SMEs would benefit from pooling the information they disclose at a one-stop shop: The SMEs' visibility would be increased and barriers to access capital reduced, overall ensuring and increasing their competitiveness. A Single Access Point could also serve as a starting point for the establishment of a European database for SME-research.

Moreover, while some harmonisation of information may be required, this should be done in a proportional manner that does not negatively impact issuers, in general, and SMEs, in particular, that may lack resources to report according to certain standards. It should therefore be considered that there is value added in pooling information in one place, even where the information may not be exactly the same.

There will need to be a differentiation between SME GM and Regulated Market issuers, where, while they are both required to disclose similar information, they are still subject to different requirements. We would not support issuers on SME GMs being subject to the same requirements as issuers on Regulated Markets under the Transparency Directive.

Q45 - What are the potential benefits and drawbacks of a stronger use of supervisory data combined with other publicly available data (e.g. social media data) for effective supervision? Should the Please explain your reasoning and provide examples if needed:

4. Broader issues

Q46 - How could the financial sector in the EU contribute to funding the digital transition in the EU? Are there any specific barriers preventing the sector from providing such funding? Are there specific measures that should then be taken at EU level in this respect?

Q47 - Are there specific measures needed at EU level to ensure that the digital transformation of the European financial sector is environmentally sustainable?

Should Members wish to provide additional comments, please do so in the box below: