



June 15, 2017

Via Electronic Submission

Directorate-General for Financial Stability
Financial Services and Capital Markets Union
European Commission
1049 Bruxelles/Brussel
Belgium

Re: Comments of the Chamber of Digital Commerce on European Commission Consultation Document: FinTech – A More Competitive and Innovative European Financial Sector

Dear Directorate-General:

The Chamber of Digital Commerce (the “**Chamber**”) welcomes the opportunity to submit these comments in response to the European Commission’s Consultation Document titled “FinTech – A More Competitive and Innovative European Financial Sector” (the “**Consultation Document**”). The Chamber is the world’s largest trade association representing an international membership of participants in the digital asset and blockchain industry. Our mission is to promote the acceptance and use of digital assets and blockchain-based technologies and we are supported by a diverse advisory board that represents the industry globally.

Through education, advocacy, and close coordination with policymakers, regulatory agencies and industry across various jurisdictions, our goal is to develop a pro-growth legal environment that fosters innovation, job creation, and investment. We represent the world’s leading innovators, operators, and investors in the digital asset and blockchain technology ecosystem, including start-ups, software companies, global IT consultancies, financial institutions, insurance companies, and investment firms.¹ Consequently, the Chamber and its members have a significant interest in the Consultation Document.

Respectfully submitted,

A handwritten signature in black ink that reads "Perianne Boring". The signature is written in a cursive, flowing style.

Perianne Boring
Founder and President

¹ A complete list of our member is available online at <http://digitalchamber.org/membership.html>.

Responses to Questions

I. FINTECH GENERALLY

A. **Question No. 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? Are there combinations of existing and new technologies that you consider particularly innovative?**

The Chamber's members develop and promote the adoption of a wide variety of distributed ledger technology ("*DLT*") applications that make it easier and more efficient for businesses to operate in today's globalized economy. Its diverse membership of start-ups, software companies, global IT consultancies, financial institutions, insurance companies, and investment firms demonstrates that a broad swath of companies have identified needs that can be served by DLT. A number of the Chamber's members are developing innovative DLT applications that various sectors of the global economy will benefit from, as described below.

Digital Asset ("*DA*") is building a permissioned DLT platform for the financial services industry (the "*DA Platform*") that mutualizes financial market infrastructure across market participants while maintaining confidentiality and scalability, both vital for large, regulated markets. The DA Platform eliminates discrepancies between disparate but duplicative siloed data records, reducing the current errors, latency, risk, cost, and capital requirements involved in processing financial transactions. Participants in the DA Platform share a single source of truth which provides continuous data integrity, any desired or mandated degree of transparency, and the opportunity for rapid innovation. The DA Platform does not share any confidential information with parties not entitled to view it, yet still has the same network integrity guarantees as typical blockchain solutions.

Gem focuses on the healthcare, supply chain, and automotive industries. Its blockchain platform, GemOS, helps connect a federated blockchain which will be the thread connecting all of a company's applications to orchestrate regulatory compliance. This platform helps track all the events needed to automate the compliance process. For example, with respect to compliance with the EU General Data Protection Regulation ("*GDPR*"), based on a governance model, GemOS customizes the actions that are required for compliance, such as identity resolution, data consent, data access, data updates, and objection. Each event has a request and an acknowledgement component.

NuID is developing a "silver-bullet" authentication system that can trustlessly secure and distribute personal information. NuID uses DLT technology and an innovative key management protocol to secure digital information and interactions, which allows for simpler user management, frictionless developer implementation, and improved security in multiple layers of Internet transactions. The NuID protocol can secure personal information on a blockchain related to financial payments, smart contracts, healthcare, and asset digitization, among other things.

Circle offers a practical application that can be used by anybody to send and receive money via text messaging. Circle offers zero transaction fees and does not limit the amount that persons can send or receive using its application.

Medici, a subsidiary of Overstock.com, is currently developing the post-trade blockchain project tØ. This new concept aims to offer a private equities trading platform, and eventually public equities trading platform, using cryptographically protected DLT to improve the security and efficiency of financial transactions.

The Depository Trust and Clearing Corporation (“DTCC”) is working with IBM, Axoni and R3 to re-platform its Trade Information Warehouse (“TIW”), building a derivatives distributed ledger solution for post-trade processing. DTCC is also working with DA to explore the potential use of a DLT-based platform to manage the settlement of start leg repo transactions. ASX Limited (“ASX”) and DA also are working together to build a candidate replacement to replace their clearing and settlement system (CHESS) utilizing DLT.

The Chamber is optimistic that DLT can improve business processes, increase efficiency, and promote transparency in the financial services space. DLT has the potential, if implemented correctly, to: reduce risks inherent in financial services; provide better security for data and data processing; promote compliance and regulatory transparency; increase efficiency and timeliness of asset processing; and reduce the effort and time required for trade reconciliation.

DLT could drive further modernization in the securities and derivatives markets. DLT could transform clearing into an efficient process by enabling the automatic calculation of variation margin, potentially reducing the amount of collateral required to be posted and minimizing counterparty risk. A KPMG case study demonstrates that using DLT, swap counterparties would be able agree to the terms of a transaction using swap documentation linked to a blockchain at the time of trade capture, with the blockchain facilitating continuous agreement to the terms and conditions of the swap documentation. KPMG estimates that this technology could increase operational efficiency for swaps market participants by 20%.

Question No. 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?

As discussed above in our response to Question 1.1, a number of the Chamber’s members are working on and implementing financial services back office solutions using DLT in collaboration with other industry members. For example, DTCC is working with IBM, Axoni and R3 to provide a DLT framework to drive further improvements in derivatives post-trade lifecycle events; DTCC also is working with DA to explore the potential development of a DLT-based platform to manage the settlement of start leg repo transactions; ASX and DA are developing a DLT-based solution to address post-trade (clearing and settlement) functionality in the Australian cash equities market; and UBS, Deutsche Bank, Santander, BNY Mellon, and ICAP, along with technology provider Clearmatics are working together to explore the

possibility of using DLT to clear and settle financial trades over blockchain using a “Utility Settlement Coin.”

Numerous blockchain use cases are likely to involve cooperation with other market players. Consortiums, like Hyperledger, will be extremely important to the development and growth of blockchains, particularly for the use cases of financial service back office solutions. A private or consortium blockchain platform, as opposed to a public platform such as the Bitcoin blockchain, will allow participants to retain control and privacy while still reducing their costs and increasing transaction speeds. DLT consortiums may offer lower costs and faster speeds than a fully public blockchain platform can offer, but would be less decentralized – only members/authorized participants can use the platform. A consortium platform provides many of the same benefits affiliated with private blockchains, such as efficiency and transaction privacy, without consolidating power within a single company.

B. Question No. 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?

The Chamber encourages the Commission to facilitate the development and implementation of DLT by supporting regulatory harmony across the EU and internationally. Consistency in regulatory treatment will be an important factor in industry growth. The Chamber also encourages the Commission to consider the various structures and levels of regulator-industry engagement currently in place in other jurisdictions when developing its own initiatives.

The Chamber suggests that the Commission look to regulatory initiatives in other jurisdictions, such as the regulatory sandbox established by the Monetary Authority of Singapore (the “*MAS*”). The sandbox enables FinTech companies to experiment in an environment with regulatory requirements amended to meet the goals of this initiative, which enables participants to focus on developing their businesses rather than those inhibiting laws and regulations that were not developed with innovation in FinTech in mind.

Additionally, the Chamber considers the U.K. Financial Conduct Authority’s (“*FCA*”) sandbox to be a good start as it incorporates the goals of avoiding consumer harm and includes a robust cross-section of startups. The Chamber also recognizes the efforts of the Bank of England (“*BoE*”) with regard to FinTech, such as the BoE’s FinTech Accelerator which “*works in partnership with firms working with new technology to explore how FinTech innovations could be used in central banking*”². However, the Chamber suggests that the Commission build a larger and more inclusive sandbox to allow a greater number of participants.

In addition, the BoE’s community of FinTech-related organizations intends to: (a) share developments, trends and insights so that firms across the sector can learn from each other, and the BoE, in turn, can learn from them; (b) make sure that the BoE is engaging with a variety of

² <http://www.bankofengland.co.uk/Pages/fintech/default.aspx>

FinTech firms from across the sector; (c) increase networking across firms that are interested in FinTech; and (d) help the sector to develop.

The Hong Kong Monetary Authority (“**HKMA**”) in 2016 launched a FinTech Supervisory Sandbox (“**FSS**”) to allow banks to test innovative FinTech products and initiatives within a live, controlled environment. Additionally, similar to the BoE’s initiative, HKMA has also established a FinTech Facilitation Office (“**FFO**”) “*to facilitate the healthy development of the FinTech ecosystem in Hong Kong and to promote Hong Kong as a FinTech hub in Asia.*”³

Indonesia set up a dedicated FinTech office and regulatory sandbox to help FinTech developers, and said it plans to provide services to help developers understand Indonesia’s regulatory policies on FinTech, gather and publish information, and meet regularly with authorities interested in FinTech.

Finally, in the United States, the Commodity Futures Trading Commission (“**CFTC**”) has launched LabCFTC, which is intended to facilitate cooperation between the agency and FinTech companies, to engage with the CFTC, discuss compliance issues, and obtain guidance.

DLT industry members welcome the opportunity to work with European regulators by participating in cooperative regulatory projects and EU-level forums to inform industry participants and regulators. The Chamber encourages incorporating a larger number of participants from a greater variety of focus areas than the current schemes. Ideally, through a community like that established by the BoE, EU regulators also would interact directly with industry groups and self-regulatory organizations (“**SROs**”), representing individual firms, to promote communication and a collaborative effort to appropriately regulate FinTech. We would appreciate guidance from EU regulators on how they envision cross-border FinTech initiatives complying with (a) EU regulations, and (b) the implementation of EU Directives between Members States.

The ability of industry to discuss regulatory matters with EU regulators is critical because some laws and regulations currently in place are an ill fit for FinTech advancements and the new technology may actually achieve regulators’ goals more appropriately. For example, DLT technology, such as Elliptic’s transaction tracer technology, provides real-time monitoring and alerting of transactions happening on the network. This will help in detecting and alerting privacy breaches and fraudulent transactions in real-time instead of mandating the running of some test tools after the fact. Encouraging the usage of a test network on DLT with a known set of participants and limiting the promulgation of new DLT-specific regulations will help facilitate this.

The Chamber views DLT as a revolutionary technology that can create jobs and modernize various sectors of the global economy. It hopes to work with industry to educate regulators about DLT’s benefits and complexities.

³ <http://www.hkma.gov.hk/eng/key-functions/international-financial-centre/fintech-facilitation-office-ffo.shtml>

C. Question No. 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?

DLT will automate some of the middle and back office functions and thereby likely replace some related jobs. However, DLT will achieve significant cost efficiencies freeing up capital that can be used to generate new job opportunities. As well, we believe that DLT will create new jobs required to develop, implement, and assess, among other things, the commerce created by this new technology.

D. Question No. 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?

The Chamber represents innovative financial technologies providers that are developing DLT applications to facilitate compliance with laws and regulations in a more efficient manner (*i.e.*, RegTech). RegTech has the ability to automate compliance tasks and reduce operational risks for non-compliance with a financial services firm's regulatory obligations, such as those resulting from legislation developed in response to the global financial crisis. As the regulations continue to evolve, RegTech could provide tools which allow firms more time to prepare for new or amended regulatory requirements. Additionally, DLT can be used by market participants and regulators to facilitate the reporting of financial information, such as regulatory and transaction reporting, under these new regimes.

One timely example of the benefits of RegTech is the proposed revisions to EMIR, or EMIR 2.0. Under the current proposals, central counterparty clearinghouses (“*CCPs*”) are to report both sides of exchange-traded derivatives (“*ETDs*”) and financial counterparty (“*FC*”) / sell-side firms are to report both sides of transactions with non-financial counterparties (“*NFCs*”) (with NFCs no longer having a reporting obligation). Such reporting divorces the data reported from the counterparties involved. There is no link from the data reported by the CCPs and the books/records of the counterparties and data reported by FC/sell-side firms would give little insight into the books and records kept by the NFC or third country entity. There is no easy solution to harmonizing this data in the current reporting mechanism. A central platform using DLT could give access to all parties involved to ensure that data reported is consistent and accurate across the lifecycle of the transaction. NFCs and third country entities will need to reconcile what FCs and CCPs are reporting about them against their own books and records and a central, accessible system would assist greatly in this process.

In anti-money laundering (“*AML*”) and sanctions compliance, companies are developing, and in some cases currently using, DLT to monitor transactions to identify suspicious behavior. Additionally, a number of companies are developing digital identity solutions that can be utilized for know-your-customer compliance (“*KYC*”) requirements as well as helping to provide financial services to the unbanked and underbanked. For example, KPMG is in the process of creating a KYC syndicate to tackle the challenges that banks and other financial institutions face with customer onboarding. They are working with banks on a case study, where the banks will be able to conduct KYC checks to verify customers in real-time by utilizing a shared blockchain

solution and other 3rd party sources. KPMG is estimating that the overall cost savings for banks could range around 25%~50% over what banks currently spend on their KYC processes. The Chamber urges the Commission to work with these companies to ensure that current regulatory frameworks allow for such advances in technology and compliance.

Other examples of where RegTech could assist market participants in meeting regulatory obligations include:

- Using cloud technology to test new reporting requirements in a proxy trade repository environment (*i.e.*, not having to wait/depend on official test environments from trade repositories);
- Centralized regulatory and transaction reporting (*e.g.*, transaction reporting under EMIR, post trade transparency under MiFIR, transaction reporting under REMIT, position reporting under MiFID II);
- Centralized virtual books and records (transaction record keeping, records of ownership, securities registers);
- Automated systems for behavior monitoring (transaction and activity monitoring) in light of market abuse (*e.g.*, REMIT and MAR) and conduct of business surveillance;
- Gap analysis tools for comparing regulation/legislation (*i.e.*, REMIT v. MAR obligations or similar legislation across jurisdictions);
- Delivering and monitoring internal training of staff; and
- Risk data warehouses (with the ability to easily access and analyze the data stored from various locations).

Current regulatory requirements may foreclose certain lines of DLT development. The right of access and the right to erasure (also referred to as the right to be forgotten), for example, may impact the deployment of permissionless DLT networks, although there may be innovative governance or technical strategies that could achieve compliance.

Furthermore, issues may also arise when regulatory schemes conflict. By its very nature, DLT networks are transnational and can span multiple jurisdictions and involve participants and organizations from all over the world. The goal of global interoperability will be facilitated by generally consistent global regulations.

E. Question No. 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? What is the most efficient path for FinTech innovation and uptake in the EU? Is active involvement of regulators and/or supervisors desirable to foster competition or

collaboration, as appropriate, between different market actors and new entrants. If so, at what level?

The Chamber encourages the EU and Member State lawmakers and regulators to adopt a “do no harm” approach to regulation and legislation. EU and Member State lawmakers and regulators should allow DLT to develop freely and for companies to innovate. The Chamber supports the Commission’s proposed core principles for FinTech and agrees that laws should be modernized such that they are technologically neutral. For example, the CFTC recently approved amendments to CFTC Rule 1.3, which sets forth the form and manner for recordkeeping by commodities market participants. The rule, originally adopted in the 1970s, included archaic terms, such as “micrographic media,” and directed market participants to retain electronic records on microfiche. The CFTC and industry worked together to discuss the potentially onerous nature of requiring outdated technology solutions and, accordingly, the agency recently refurbished the rule to make it technologically neutral, using broad terms designed to stand the test of time, such as “electronic regulatory records,” and using general principles to guide conduct rather than prescriptive rules.

The unique and evolving nature of FinTech means that it may not fit neatly into the existing legal and regulatory framework. Accordingly, the Commission should analyze current, pending, and proposed laws and regulations to determine if they are discriminatory to FinTech applications. The Chamber suggests that the Commission work with the industry to address potential problem areas and explore where it may be necessary to change EU-level regulation to accommodate and incorporate new FinTech functionality. For example, DLT may provide new ways to check and confirm identity creating a potential need to amend the current AML/KYC regulations to incorporate this new functionality as a legitimate means for regulated financial institutions to meet AML/KYC obligations. Such changes could be made directly to the legislation in place or via guidance issued with regard to the legislation.

Additionally, there are current requirements where certain information is required to be kept with a trusted third party. In the future, it may be more efficient for this information to be held in a central, digital location. Also, as discussed above, GDPR’s right of access, right to erasure, and data controllers’ accuracy obligations regarding personal data may conflict with the technology architecture of permissionless DLT networks. Again, changes may need to be made to existing legislation to allow market participants to make use of the technology. Alternatively, the appropriate regulators could issue guidance to advise the industry and market participants on how to reconcile any conflicts arising with the existing legislation.

Having regulators work hand-in-hand with the technology companies and large enterprises in developing the next set of standards and regulations for digital rights management will help speed appropriate adoption of these new technologies. FinTech companies need the regulators’ expertise to understand the nuances of the various regulations and the regulators need to understand the capabilities and the potential these new technologies can provide.

Further, as a matter of principle, regulators should regulate by function rather than by technology. The Commission should promote a regulatory culture that ensures regulations and legislation address the function (*e.g.*, financial instrument trading) rather than form (*e.g.*, hard/soft copy contract vs. digital ledger entry).

The Chamber also suggests that the Commission work together with international bodies, such as the International Organization of Securities Commissions (“*IOSCO*”) and the Financial Stability Board (“*FSB*”), to coordinate efforts to understand these new technologies. The Chamber encourages an increased effort to streamline regulatory initiatives at a global level, similar to efforts of the G20 to regulate the OTC derivatives market after the financial crisis. With this new initiative for FinTech, as a proactive effort, rather than a reactive effort, the focus should be on ensuring that the multinational and supranational efforts to regulate FinTech result in closely aligned regulation globally. This coordination is needed to make the industry less susceptible to regulatory arbitrage and a race to the bottom in certain jurisdictions.

The international regulatory community should work together to avoid duplicative requirements and overly onerous demands which may deter investment and stymie development.

Further, regulators, including financial regulators, should work with EU national data protection authorities to issue consistent guidance on how FinTech companies may reconcile the immutable nature of blockchain with the rights of correction and erasure arising under the GDPR coupled with the duties to ensure data accuracy and enable data portability.

F. Question No. 3.2: What is the most efficient path for FinTech innovation and uptake in the EU? Is active involvement of regulators and/or supervisors desirable to foster competition or collaboration, as appropriate, between different market actors and new entrants. If so, at what level?

As discussed in Question 2.2, we suggest broad sandbox options for comprehensive industry involvement and support.

It is crucial that the global regulatory community does not seek to push the FinTech industry in a particular direction. The technology should be allowed to grow organically that, in turn, will permit regulatory solutions to emerge as the functionality develops and matures.

The Chamber is of the view that the best way to achieve this is through broad, supranational sandboxes with ample capacity to engage with a large number and a broad range of FinTech firms. Additionally, open channels for communication and collaboration, similar in nature to the FFO in Hong Kong and the BoE’s community, should be established, where interaction, which would allow regular interaction between regulators, supervisory organizations, industry groups, and SROs.

These open channels of communication are incredibly important because no matter how large a sandbox is, it is unlikely that all firms will be able participate. Nevertheless, many such firms still could have a valuable contribution to make to the discussion. It is important to establish such channels of communication to encourage collaboration and information-sharing between the regulators, supervisors, industry groups, and SROs who would communicate the views/interests of market participants globally (both established and new entrants).

The Chamber supports focusing on industry groups/SROs interacting with regulators as a way to expand meaningful dialogue and streamline the process. First, it is easier to facilitate

these discussions with industry bodies representing the vast majority of market participants. Second, this is a middle ground between the small, practically inaccessible network of sandboxes currently available and expecting the regulators to be able to engage directly with the myriad of FinTech participants globally. Through these channels, both industry groups/SROs and regulatory bodies could convey expectations, observations and key concerns, guidance, best practices, and achievements.

G. Question No. 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 details. 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? If yes, please specify in which specific areas you think this should happen and what role the European Supervisory Authorities (ESAs) should play in this. For instance, should the ESAs play a role in pan-EU registration and supervision of FinTech firms?

These technologies have the potential for a global reach and the Chamber again stresses the need for interoperability across jurisdictions, across Member States in the EU as well as across the global financial community. The focus on regulatory interoperability across jurisdictions should emphasize finding agreement and common approaches at a global level, including mutual recognition for FinTech regulatory regimes. And, as more sandboxes are developed at the supranational and Member State level, the Chamber would welcome guidance on when it would be most appropriate to apply to an EU-level sandbox versus a Member State sandbox.

The growth of DLT and FinTech could be impacted by divergent licensing requirements and restrictions across EU Member States. The industry requires a consistent regulatory approach across the EU in order for the technology to take hold and flourish and to encourage FinTech company activities in the EU. Gaps or conflicts in regulation across jurisdictions potentially could inhibit the uptake of the technology and certainly make it more difficult for DLT firms and market participants to make use of it. As mentioned by the Commission, these include the divergent regulations with regard to virtual currency, P2P insurance platforms, automated investment advice, and online platforms acting as brokers.

The Chamber is also of the view that regulators should focus on the function, not the form, of technology. For example, financial instrument trading should be regulated under the same regime, regardless of whether they are a hard or soft copy document or an entry in a digital ledger. Any regulation of persons and firms providing or using DLT services should be reviewed to ensure FinTech isn't prejudiced against other more established systems and technology.

Additionally, the Commission suggested treatment for FinTech firms which "*are not seeking to directly provide financial services, but rather offer regulated firms tool to improve their client services and operations to compete more effectively. These firms can help with, e.g. data analytics, digital claim handling, customer digital identification and infrastructure*

services.” (Page 15 of the Consultation Document). The Commission has said that it is “*considering whether the current regime strikes the right balance between allowing for such cooperation, while sufficiently managing the additional risks it may introduce.*” (Page 16 of the Consultation Document). In this regard, the Chamber believes that outsourcing of services delivered to regulated entities should not be subject to greater or different regulation and oversight than when those same services that are delivered via a non FinTech solution.

To that end, the Chamber suggests that the EU look to outsourcing regulations currently in place, like those of the FCA (*i.e.*, outsourcing provisions included in the “Senior Arrangements, Systems and Controls” chapter of the FCA Handbook) which in part implement the requirements of MiFID and the MiFID Implementing Directive. Here, the responsibility and liability of key functions outsourced still remains with the regulated entity under an existing regime of checks and balances. This follows in the spirit of the Commission’s support for and the Chamber’s recommendation that regulation of FinTech focus on the function, not the form, of the activity.

Additionally, as discussed above, several EU data protection principles may be difficult to implement in the context of DLT (for example, the right to erasure, the right of correction, the data controller’s obligations to ensure personal data is accurate and update and to facilitate data portability). The Chamber suggests that the Commission look to issue guidance on how organizations may embrace DLT without inadvertently falling foul of EU data protection laws including (from May 2018) the GDPR.

A critical contributor to the success of DLT will be a large network of participants adopting the technology. The Chamber thus encourages regulators to participate as nodes on relevant DLT networks and engage with other nodes as they are introduced together with financial institutions and other users. This involvement would enable regulators to review transaction data in real time along with other users. Regulators may even find this access useful with respect to fraud and misconduct investigations.

H. Question No. 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? To what extent regulations on data localisation or restrictions on data movement constitute an obstacle to cross-border financial transactions?

Certain jurisdictions have data localization laws, such as Russia (whose laws permit personal data to be stored outside Russia as long as it is also stored within Russia) and France (whose laws require any sensitive personal data to be hosted by an accredited data host). These laws together with the prohibition under EU law (of personal data being transferred outside the EEA unless an adequate protection mechanism is in place) can inhibit the free flow of data between authorized blockchain participants who may be located anywhere in the world.

I. Question No. 3.7: Are the three principles of technological neutrality, proportionality and integrity appropriate to guide the regulatory approach to the FinTech activities?

The Chamber supports the Commission’s choice of the three principles of technological neutrality, proportionality, and integrity. We encourage a “do no harm” approach to regulating new financial technologies, such as DLT, and ask that governing bodies regulate by function. While we agree that laws and regulations should be technologically neutral, in order to achieve neutrality, lawmakers and regulators will need to undertake a thorough analysis of existing laws and regulations to determine if they are discriminatory to FinTech and innovation and whether they require enhancement or guidance to permit adoption of new technologies to meet the challenges facing businesses and consumers today. In order to ensure that laws and regulations “do no harm” to unique FinTech solutions, lawmakers and regulators may need create regulatory sandboxes, revise the laws and regulations currently in place, or issue binding guidance to market participants on compliance methods.

J. Question No. 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? If yes, please specify how these programs should be organised?

The Chamber supports the establishment of an “Innovation Academy.” As we discussed in our response to Question 3.1, the CFTC has established a similar innovation initiative named LabCFTC. We recommend that the Commission could use LabCFTC as a model. LabCFTC provides a direct point of contact to FinTech innovators to engage with the CFTC, discuss compliance issues, and obtain guidance. The CFTC website has a dedicated portal that persons can use to reach out to the CFTC with their questions and concerns. The Commission should also consider establishing working groups within the Innovation Academy that focus on critical FinTech issues, such as interoperability and cybersecurity.

K. Question No. 3.10: Are guidelines or regulation needed at the European level to harmonise regulatory sandbox approaches in the MS? Would you see merits in developing a European regulatory sandbox targeted specifically at FinTechs wanting to operate cross-border? If so, who should run the sandbox and what should be its main objective?

The Chamber supports the development of some form of regulatory sandbox or safe harbor to enable financial technologies to develop in a controlled environment. Sandboxes or safe harbor environments should involve incentives for participation and contribution. We suggest offering broad membership for SMEs with the potential for financial grants, regulatory guidance, governance guidance and other support for FinTech companies. Ideally, any new sandboxes or safe harbor environments would have greater capacity so as to include a greater number of market participants in order make the benefits more broadly accessible.

Furthermore, the Chamber is strongly of the view that, while blockchains should be interoperable, the EU should not seek to harmonize regulatory sandboxes or safe harbors across

Member States such that they all incentivize the development of financial technologies in the same fashion. Different jurisdictions may have different goals and they should be allowed to foster innovation and development as they feel necessary. Member States may differ in their views of how to best establish a regulatory initiative and what types of technologies would be most beneficial to its citizens. Regulatory harmony is vital but how such harmony is supported and fostered may vary.

II. DISTRIBUTED LEDGER TECHNOLOGY

A. **Question No. 2.7: Which DLT applications are likely to offer practical and readily applicable opportunities to enhance access to finance for enterprises, notably small and medium-sized enterprises?**

DLT applications offer a wide variety of practical and readily applicable opportunities to enhance access to finance for enterprises:

- Digital currencies and tokenized assets can facilitate payments and contracting across borders with low transaction costs;
- DLT trade credit financing platforms with multiple lenders offer businesses a new, more efficient vehicle for obtaining financing;
- DLT can allow for more efficient recordkeeping, reporting, clearing, and settlement in financial transactions (*e.g.*, securities, derivatives, repos); and
- DLT can benefit supply chains maintaining efficient records of inventory and shipments.

B. **Question No. 2.8: What are the main challenges for the implementation of DLT solutions (e.g. technological challenges, data standardization and interoperability of DLT systems)?**

DLT companies face a number of critical challenges with respect to implementation. One challenge is interoperability. Many different companies, and even sovereign nations and localities, throughout the world are developing their own applications that use DLT, however, these applications do not share a common blockchain. These blockchains may have limited to no connectivity with one another. This is analogous to a domestic highway system which fails to connect across national/Member State borders. If drivers cannot connect between countries/across national borders they may be unable to take the optimal route, or even reach their destination. Similarly, users of one blockchain may be missing out on efficiencies or functionality that would be gained in a world of interoperability. The adoption of DLT will likely not happen across all entities in a market at the same time. Participants may phase in to the network, which could lead to further interoperability challenges. The Chamber suggests that the guidance for interoperability is best sourced from the industry itself. It would be helpful for regulators to work with industry working groups and/or SROs to support and guide global interoperability standards.

Additionally, DLT companies face challenges related to scaling. While there are some advancements in the consensus protocols of DLT that may address this, choosing the right consensus for the use case is very important. DLT industry members currently are in discussions regarding scaling solutions.

Moreover, DLT companies are challenged with retaining privacy while maintaining transparency. Although there are advancements in this space that attempt to address these challenges, such as Zero Knowledge Proofs and homomorphic encryption, discussion with and guidance from regulators regarding privacy options and solutions would be welcomed.

C. Question No. 2.9: What are the main regulatory or supervisory obstacles (stemming from European Union regulation or national laws) to the deployment of DLT solutions (and the use of smart contracts) in the financial sector?

A number of laws and regulations may present obstacles as DLT solutions develop and enter the marketplace. The foremost regulatory impediment would be the risk of imposing new regulations relating to DLT too early, which could hinder future innovation, discourage further investment in innovation, and/or restrict the utilization and incorporation of DLT into the financial services industry.

A specific example is the right to erasure (discussed in our response to Question 2.4), which may be claimed where “personal data are no longer necessary in relation to the purposes for which they were collected and otherwise processed.” While, at the conclusion of a DLT transaction, personal data may no longer be necessary to process that single transaction, the permanent and traceable nature of DLT may necessitate personal data be retained after a single transaction is completed. DLT applications that store personal information on a blockchain may need to develop solutions that allow for the erasure of such data.

Moreover, EMIR and MiFID will present challenges for DLT-based settlement and clearing platforms. These platforms may not fit neatly into existing securities and derivatives laws and regulations because the line between execution and clearing might become blurred as both would occur instantaneously on a blockchain. Additionally, recordkeeping and reporting solutions that use DLT will need to comply with laws and rules intended for non-DLT infrastructure, which may not account for these new methods of bookkeeping.

Smart contracts are in initial implementation stages and may raise novel legal issues. Nevertheless, with respect to smart contracts used in financial markets, for the time being, we suggest code used for automation be utilized consistent with applicable legal systems and market rules.

D. Question No. 4.2: To what extent could DLT solutions provide a reliable tool for financial information storing and sharing? Are there alternative technological solutions?

Financial information can greatly benefit from DLT storing and sharing solutions. For example, DLT could be used for financial recordkeeping purposes. With respect to the variety of products that could be issued and traded on DLT-based platforms, all information needed and

collected for issuance, trading, settlement and trade management over the life cycle of the product could be captured through DLT or other digital smart contracts.

DLT also can facilitate instantaneous reporting to regulators across the globe. When a transaction is executed or cleared, or new terms are agreed to or existing terms amended, this information can be input directly onto a blockchain. Regulators and counterparties can serve as nodes on a blockchain and review this information in real time. DLT could eliminate or considerably reduce the inefficiency of duplicative reporting as well as the risk of misreporting and misinformation resulting from data stored in multiple databases. With this technology, all participants would contribute to a single blockchain, which could then be viewed by the market and the regulators in real time and be subject to robust fact checking by counterparties, thus providing more accurate data and achieving the regulatory goal of reporting.

Currently, depending on which EU legislation applies, data from regulatory and transaction reporting is held in different silos, including trade repositories, approved reporting mechanisms (“*ARMs*”), and recognized reporting mechanisms (“*RRMs*”). Firms must be granted permission to serve as a certain type of data silo. When parties need to access the data stored, permission must be granted for data to be accessed and those needing to review and analyze the data must have the ability to read the stored data in any one of a number of formats dictated by various EU directives and regulations. These formats may even vary between Member States. Additionally, any data outside of the EU would be held in different repositories and would have been reported in a different format entirely.

A centralized DLT format could provide a central tool for data storing and sharing as well as data review and analysis. Regulators could also benefit from the increased accessibility of data from a central location and universal data storage in blockchain/DLT format.

Additionally, regulators could benefit from real time reporting across product categories for new and error/amendment reports. At present, based on the different regulations in place, reporting and error/amendment reports are required to be submitted real-time, T+1, T+2, T+ 1 month, etc. Reporting via blockchain could make all reporting practically instantaneous.

E. Question No. 4.3: Are digital identity frameworks sufficiently developed to be used with DLT or other technological solutions in financial services?

We believe that blockchain and DLT can play a significant role in digital identity frameworks. The Chamber has multiple members whose entire business model is focused on building digital identity solutions using DLT. For example, Chamber member NuID currently is working to create a generalized identity system that would support DLT and many other technological solutions in financial services and more generally. NuID’s protocol utilizes DLT and modern cryptographic schemes to abstract identity from devices to the individual, providing trustless authentication of trusted identity at any device. The NuID protocol allows for broad integration with almost any traditional login or data security system and could potentially serve as a standard in general authentication and identity validation. Ideally, financial services technologies that implement the NuID protocol could leverage the technology to comply with AML and KYC regulations and securely protect user data while offering easy audit solutions to regulators.

F. Question No. 4.4: What are the challenges for using DLT with regard to personal data protection and how could they be overcome?

As we mentioned in our responses to Questions 2.4 and 2.9, a critical challenge is the right to erasure. Some company models break the blockchain into two pieces, with only notification and synchronization on a blockchain, and all personal data kept off the blockchain. Other companies may rely on the Bitcoin blockchain or Ethereum blockchain. If their business is built on top of these systems, there is uncertainty as to how these business models will work in conjunction with Europe's strict privacy regulations.

There are specific technology modifications or solutions that can address European regulatory limitations. For example, one of our members, Gem, offers a blockchain platform solution, GemOS, to help track all the events needed to automate the GDPR process. Based on a governance model, GemOS customizes the actions that are required for compliance, such as identity resolution, data consent, data access, data updates, and objection. Each event has a request and an acknowledgement component. Other companies may similarly develop modified permissioned ledgers that could address GDPR challenges.

However, EU regulators may wish to evaluate whether there are certain circumstances where exemptions or exceptions should be adopted. The benefits of the immutable record may, in some cases, outweigh the need for a specific GDPR requirement. This may be a discussion worthy of having in a sandbox environment.