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By Electronic Mail

Office of the Comptroller of the Currency
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Re: Office of the Comptroller of the Currency White Paper "Supporting Responsible Innovation in the Federal Banking System: An OCC Perspective"

Markit is pleased to submit the following comments to the Office of the Comptroller of the Currency ("OCC") in response to its white paper regarding "Supporting Responsible Innovation in the Federal Banking System: An OCC Perspective" ("White Paper").¹

Markit is a leading global diversified provider of financial information services. Founded in 2003, we employ over 4,000 people in 11 countries, including over 1,600 in the United States. Our shares are listed on Nasdaq (ticker: MRKT). Markit has been actively and constructively engaged in the debate about regulatory reform in financial markets, including topics such as the implementation of the G20 commitments for OTC derivatives and the design of a regulatory regime for benchmarks. Over the past years, we have submitted more than 150 comment letters to regulatory authorities around the world and have participated in numerous roundtables.

I. Introduction

Markit welcomes the Comptroller's launch of an "initiative to develop a comprehensive framework to improve the OCC's ability to identify and understand trends and innovations in the financial services industry, as well as the evolving needs of consumers of financial services."² We agree with the White Paper when it states:

Innovation holds much promise. Technology, for example, can promote financial inclusion by expanding services to the underserved. It can provide more control and better tools for families to save, borrow, and manage their financial affairs. It can help companies and institutions scale operations efficiently to compete in the marketplace, and it can make business and consumer transactions faster and safer.³

¹"Supporting Responsible Innovation in the Federal Banking System: An OCC Perspective," Mar. 2016, <http://www.occ.treas.gov/publications/publications-by-type/other-publications-reports/pub-responsible-innovation-banking-system-occ-perspective.pdf>.

² See Remarks by Thomas J. Curry, Comptroller of the Currency, Before the Federal Home Loan Bank of Chicago. Aug. 7, 2015 <http://www.occ.gov/news-issuances/speeches/2015/pub-speech-2015-111.pdf>.

³ White Paper, at 2.

Innovation has been a vital component of Markit's success and we are excited about OCC's leadership in this area. Markit provides a variety of fintech services to OCC-regulated banks and other market participants, for example:

- *Managed services*: facilitating due-diligence on their counterparties,⁴ trading algorithms,⁵ and vendors.⁶ Other Markit services assist firms in complying with tax regulations.⁷
- *Pricing, liquidity, reference, and valuation data*: Markit provides pricing, liquidity reference, and valuation data that is used in different use cases, e.g., trading, post-trade, risk, and regulatory and accounting compliance contexts.
- *Research and advisory-related services*. Markit assists firms manage their research payments in an effective and transparent manner⁸ and support investment managers, wealth managers, and brokers in creating solutions to facilitate their clients' investment decisions (so called "robo-advice").
- *Post-trade services*: facilitating compliance with best execution requirements⁹ and margin calculation requirements.¹⁰ Markit's post-trade processing service also facilitates compliance with CFTC and other regulatory regimes' derivatives reporting and confirmation requirements, among other regulatory requirements, in addition to facilitating clearing, providing operational efficiencies, and mechanisms for risk mitigation that come from utilizing Markit's trade processing platform.¹¹

It should be noted and emphasized that Markit is actively working with other industry stakeholders to leverage distributed ledger technology ("DLT" or blockchain).¹² As discussed in further detail in section III.a.ii of this comment letter, we believe this technology has a number of applications, particularly in post-trade contexts, that can substantially reduce operational risks and facilitate the processing and settlement of financial transactions (among other things).

⁴ Provided by Markit's KYC.com platform.

⁵ The Markit Counterparty Manager platform (MCPM) helps firms perform due diligence on trading algorithms used by their executing brokers. This is a requirement, for example, in Hong Kong and under MiFID 2.

⁶ Firms perform due diligence on their third party vendors as part of their business continuity and disaster planning programs. See <http://www.markit.com/product/ky3p> for more details.

⁷ Our platforms help firms comply with "Common Reporting Standards" (see <http://www.markit.com/Product/File?CMSID=675f66d146e94986ad043d78f47e3558>) as well as with the Foreign Account Tax Compliance Act (FATCA) requirements. See <https://www.markit.com/Product/Fatca-Service-Bureau>

⁸ Markit's Commission Manager platform helps firms manage commission sharing agreements in an efficient manner. See <https://www.markit.com/Product/Commission-Manager>

⁹ As required, for example, under MiFID 2. See <https://www.markit.com/Product/Transaction-Cost-Analysis>

¹⁰ This is required, for example, under the EMIR and Dodd-Frank risk mitigation techniques for uncleared derivatives. See <https://www.markit.com/product/analytics>

¹¹ See https://www.markitserv.com/assets/ms-en/docs/presentations/MarkitSERV_for_EMIR_Regulatory_Reporting_presentation.pdf.

¹² To provide a publicly discussed example, see Bitcoin's Blockchain Technology Proves Itself in Wall Street Test, Apr. 7, 2016, <http://www.wsj.com/articles/bitcoins-blockchain-technology-proves-itself-in-wall-street-test-1460021421>.

We are encouraged by the fact that the OCC has identified a need for more dialogue between the fintech industry, its customers, and regulators including the OCC. It is in this spirit that we submit our comments on the White Paper. In commenting on the White Paper, we speak only as it relates to the types of fintech services Markit provides, and do not intend to comment on other fintech services that we do not provide, e.g., peer to peer lending and other services that would result in direct competition with our bank customers in their core business areas. We express no opinion on whether these other kinds of fintech services would require a different approach.

II. Executive Summary

In sum, we welcome the OCC's initiative to foster dialogue between the OCC, other regulators, banks, and the fintech industry. We would urge the OCC to work with other US regulators to promote the attractiveness of the US as a place for fintech firms to innovate while ensuring that the objectives of the US financial regulatory system are achieved in the most effective and efficient manner possible: which, in many cases, is through leveraging fintech. Markit focuses its comments on how the OCC-led dialogue might affect its managed services and DLT fintech offerings in particular. We recommend the OCC (and other US regulators):

- Adopt an objectives-based approach to ensuring that regulatory interests are being addressed as new technologies are developed, as opposed to a strict rules-based approach;
- Create an "innovation zone" to allow firms to develop and test innovative solutions without fear of enforcement action and regulatory fines;
- Provide clarity that they will look favorably on regulated firms that are trying new systems that meet regulatory requirements and expectations in a more efficient and innovative way;
- Be actively involved in the development and testing of new technologies that an innovator identifies as potentially affecting market practices in such a way that the current regulatory system is not designed to accommodate; and
- Remain competitive with foreign jurisdictions in terms of providing a favorable environment for fintech innovation.

III. Discussion

a. General comments

In providing our comments below, we focus on two kinds of fintech services Markit provides and that have recently received relatively more attention from regulators recently: (i) managed services and (ii) DLT technology used for post-trade processing. The former was a topic of a recent Committee for Payments and Market Infrastructures ("CPMI") consultation we'll discuss below. The latter is an area Markit has invested heavily in and is working with other stakeholders, including several banks. DLT technology will bring about a radical change in how firms process trades. DLT progress is likely to be sensitive to regulators' reception of it. Both kinds of fintech services provide public benefits that we think the OCC's initiative can promote.

Immediately below in subsections (i) and (ii) we describe some of the benefits of managed services and DLT respectively that we think the OCC should be cognizant of as it makes moves forward with the initiative launched by the White Paper.

i. Managed Services

In a recent consultative report regarding correspondent banking (“CR”), CPMI listed a number of benefits that accrue to banks using the services of “know your customer” (“KYC”) Utilities. Specifically, CPMI highlighted that “(i) the number of times a bank must send the same information could be greatly reduced; (ii) the accuracy and consistency of the information could improve, as banks would only maintain one set of updated information; (iii) the use of a single template might promote the standardisation of the information that banks provide to other institutions as a starting point for KYC obligations; (iv) the use of a central KYC utility might speed up the process; and (v) costs could be reduced thanks to a lesser amount of documentation being exchanged.” CPMI also stated that the costs incurred by banks to perform KYC due diligence “could be further reduced if they were able to place more reliance on KYC utilities so that they could undertake fewer checks of the quality of data held in utilities.”

The benefits of KYC Utilities from the CPMI CR can be generalized to cover all similar fintech managed services designed to facilitate the transmission of regulation or risk-related information, e.g., know-your-vendor or know-your-third-party services. All of these services provide a centralized means to transmit, store, and validate data and information that facilitates compliance with regulatory standards or serves some risk management function.

ii. DLT

In this subsection, we describe some of the key use cases of DLT and the benefits that we expect would come out of these use cases. Many efforts falling under the header of DLT attempt to address different aspects of the trade lifecycle, whether by improving market behavior or boosting technology. We believe that distributed ledgers would ultimately come to be used as digital asset registries for financial instruments, including loans, securities, and derivatives. Distributed ledgers are not exchanges or trading venues, but rather the mechanisms by which parties maintain custody of their obligations and the contracts that enshrine those obligations. In other words, a distributed ledger is a single ledger shared amongst interested parties. Instead of a central utility, a network of peers would secure a distributed ledger containing the obligations of the peers. These peers would be incentivized to participate in the network given their vested interest in the obligations that the distributed ledgers network maintains.

Mutualization of maintenance and security of a distributed ledger would change the relationship between parties and the financial instruments to which they are a party. Financial instruments would exist in an exclusively digital format on distributed ledgers. With legal and regulatory support, the peer-to-peer network replaces today’s process by which multiple parties reconcile proprietary books and records to accurately represent the custody and value of a financial instrument at any given point in time.

This network would effectively unbundle the third-party services that maintain the post-trade lifecycle across all asset classes and contract types as reliance on a central utility is replaced through a golden record residing on a single, shared ledger.

1) Smart contracts

Smart contracts can play a role in the adoption of DLT. If parties privy to a contract each reference the same data object, they are afforded flexibility and mutual ownership over the events that affect the contract's terms, such as cash flows, credit events, corporate actions, etc.

It is important to note that DLT is not a prerequisite for a smart contract solution. Rather, DLT complements smart contracts by commoditizing reconciliations and reporting via a single, shared ledger. .

2) Digital assets

Beyond smart contracts, DLT provides a framework for securing natively digital asset classes. Natively digital assets are units that achieve scarcity and value by way of a peer-to-peer network protocol. Such a protocol provides an alternative to today's method of printing and warehousing paper assets. Though digital currencies remain its best known use case, DLT could be used to create and authenticate natively digital forms of assets that financial service providers currently maintain on paper, such as central bank cash, equity products, and credit instruments.

DLT that digitizes today's financial products can foster competition amongst commercial banks, promote fair and affordable access to financial services, and improve the efficiency of regulatory reporting between banking entities and the OCC, enhancing the financial integrity of financial institutions and markets.

3) Collateral, Securitization, and Liquidity

Industry adoption of a single, shared ledger could provide market participants a degree of control over risk and versatility over the balance sheet that is unachievable with today's paper assets. To provide an example, parties that own identical records in a single, shared ledger would reap explicit cost savings around reconciliations. Similarly, parties that transact obligations in a wholly digital, peer-to-peer network underpinned by such a ledger would reap explicit cost savings around settlement activities as well.

As transaction costs and trade maintenance costs decrease as DLT is adopted, we can begin to explore how collateral might be managed in different ways. As an example, supported by DLT parties might be able to consider cash flow exchanges every 30 seconds instead of every 30 days, reducing counterparty and credit risk commensurately, as well as changing how these risks are measured.

Furthermore, parties would be able to manage implicit costs in different ways. Exceptions management, regulatory reporting, KYC and anti-money laundering (AML) are but a few use cases that stand to be streamlined in ways that provide maximum value in a peer-to-peer workflow. At scale, peer-to-peer networks that secure digital assets would allow parties to identify, transact, and settle with each other in expedited workflows.

Moreover, if DLT can demonstrate this promise, opaque markets and the asymmetrical information that entrenches such opacity would be challenged. Greater pre- and post-trade price transparency would drive markets to common standards across all asset classes, either through legal digital representations of physical assets or natively defined digital assets. Transparency, alongside reduced transaction and trade maintenance costs, could, in turn, enhance trading liquidity and the safety and soundness of financial markets and institutions.

b. White Paper Questions

Below we provide answers to a selection of questions posed in the White Paper.

3. How can the OCC enhance its process for monitoring and assessing innovation within the federal banking system?

We welcome the OCC's desire to accommodate "responsible innovation." We would welcome the OCC hosting an innovation forum to provide a mechanism for the exchange of information between the OCC, other regulators, the banking industry, and fintech firms. This forum should provide for a means for technology innovators to solicit the participation of OCC (and other relevant regulators)'s participation in the testing of new technologies[. For example, blockchain technology could revolutionize the way financial instruments are traded, processed, and settled and innovators in this space would benefit from understanding regulators' concerns as the technology is developed and tested. Similarly, regulators would benefit from understanding at a granular level the technology so that they can ensure the principles underlying their regulatory regimes are met and that regulations can be adjusted to address new technologies. This involvement from the OCC and other regulators is most important where the technological innovation has potential to affect market practices in such a way that the current regulatory system is not designed to accommodate, let alone encourage even if the innovation enables the fulfilment of the regulatory objectives that underlie a regulators' rules.

We recommend that the OCC and other regulators adopt an objectives-based approach to ensuring that their regulatory interests are being addressed as new technologies are adopted, as opposed to a strict rules-based approach. For example, recordkeeping requirements that might be based on reliance on a traditional custodian or repository should not be applied strictly to preclude records made on a DLT platform. Instead, the focus in enforcing such rules should be whether the substance of the requirement is met, e.g., whether records are comprehensive and readily available.

We would add that beyond objectives-based approaches to applying regulatory standards and expectations, there should be active involvement and "breathing room" provided to DLT innovators through the creation of an "innovation zone." As described by the Commodity Futures Trading Commission's Commissioner Christopher Giancarlo, "[f]inancial regulators should foster a regulatory environment that spurs innovation similar to the FCA's sandbox, where FinTech businesses, working collaboratively with regulators, have appropriate 'space to breath' to develop and test innovative solutions without fear of enforcement action and regulatory fines."¹³ The United Kingdom ("UK")'s Financial Conduct Authority's ("FCA") "Innovation Hub" is an example of how the OCC could go beyond facilitating a dialogue to actively promoting innovation.¹⁴ Through the "Innovation Hub" the FCA aims to promote "new and established businesses - both regulated and non-regulated - to be able to introduce innovative financial products and services to the

¹³ Keynote Address of Commissioner J. Christopher Giancarlo before the Markit Group, 2016 Annual Customer Conference New York "Blockchain: A Regulatory Use Case," May 10, 2016, <http://www.cftc.gov/PressRoom/SpeechesTestimony/opagiancarlo-15>.

¹⁴ FCA, Project Innovate, <https://innovate.fca.org.uk/>.

market.”¹⁵ Through the “Regulatory Sandbox,” the FCA has introduced “a ‘safe space’ in which businesses can test innovative products, services, business models and delivery mechanisms without immediately incurring all the normal regulatory consequences of pilot activities.”¹⁶

Beyond the creation of an innovation zone, we would recommend the OCC express a willingness to adjust regulations to reflect changes in the marketplace and among banks that come into being due to technological change. For example, the OCC and other banking regulators globally could signal that certain capital requirements might be relaxed if operational and settlement risks of the sort that can be reduced by blockchain technology materialize.

4. How would establishing a centralized office of innovation within the OCC facilitate more open, timely, and ongoing dialogue regarding opportunities for responsible innovation?

As we have highlighted in previous responses to other regulators,¹⁷ we would support the OCC’s creation of an office dedicated to fintech. Such an office would provide a means for the industry to interact with the OCC and for the OCC to become aware of and participate in the development of new technology. In contrast, in the absence of such a dialogue, non-regulated fintech firms have found it difficult at times to consult with the OCC even though the services they provide are allowed and are relied upon to meet OCC requirements and expectations. Greater dialogue with the OCC will benefit all parties and further the cost efficiency benefits provided by many fintech innovations.

5. How could the OCC provide guidance to nonbank innovators regarding its expectations for banks’ interactions and partnerships with such companies?

We believe that a lack of clarity may in certain instances hold back the adoption of innovative solutions by OCC-regulated banks. It would be helpful for the OCC to be clear that they will look favorably on regulated firms that are trying new systems that meet the regulatory requirement in a more efficient and innovative way.

For example, in the adoption of managed services, there is some confusion and firms will receive inconsistent messages from supervisors about using such shared solutions and until very recently, limited interest in learning more about these utilities even though many banks rely on them. Despite the potential benefits of managed services, we believe their development – and that of similar shared services in financial services – is being held back by inconsistent messaging from regulators.

Of course, it is a firm’s responsibility to ensure that it is compliant with regulation – but it would be helpful if the OCC communicated more systematically with such service providers and made clear to the firms they supervise they would take an open and facilitative approach to such innovation, for example by endorsing standards that such providers have established in dialogue with the industry, if it is clear the objectives of the regulation are met.

¹⁵ Id.

¹⁶ FCA, Regulatory Sandbox, <http://www.fca.org.uk/news/regulatory-sandbox>.

¹⁷ Markit, re Call for Input: Supporting the development and adoption of RegTech, Feb. 3, 2016, <https://www.markit.com/Company/RegulatoryResponsesFile?CMSID=857c79d7e21a40b79f15255da61a601c>.

8. What forms of outreach and information sharing venues are the most effective?

We would recommend that the centralized office of innovation schedule regular formal meetings, both bilateral with firms and multilateral across a spectrum of stakeholders, to discuss new opportunities for responsible innovation and also, as we discussed in our answer to question (3) above, that the OCC staff be actively involved in the development and testing of new technologies. What we mean by involvement in development is that the OCC have staff dedicated to understanding new technologies and that these staff be made available to answer questions to firms. Conversely, the OCC staff would be able to freely ask questions to learn about new technologies.

It is important to provide that all such OCC involvement in development and testing be kept strictly confidential. Innovators' ability to keep their intellectual property away from competitors is absolutely critical, especially so when it comes to developing new technology. The mechanism to ensure confidentiality should be robust yet efficient. For example, the OCC could provide that there is a presumption of confidentiality for all information submitted to the OCC's office of innovation unless otherwise specified. In contrast, under current OCC rules one must request confidential treatment.

9. What should the OCC consider with respect to innovation?

There are two key and interrelated forces driving change in the financial service industry: regulation and technological innovation. Sub-optimal coordination between regulators and innovators has the potential to impede regulatory and technological progress. Without closer dialogue, innovators may invest significant sums to develop technologies that regulators may, at the last minute, reject. Similarly, regulators may find that their objectives would be better achieved when they are involved at the earlier stages of technological development.

We add that the OCC can play a critical role in promoting innovation in the United States. As discussed in our answer to question (3) above, the UK has undertaken efforts to promote innovation and the jobs and other benefits that flow from innovation inside of its borders. We know of similar efforts underway in Australia,¹⁸ France,¹⁹ Japan,²⁰ and Singapore.²¹ We would urge the OCC to work with other US regulators to promote the attractiveness of the US as a place for fintech firms to innovate.

* * * * *

Markit appreciates the opportunity to provide these comments to the OCC. We would be happy to elaborate on or further discuss any of the points addressed above. If you or your respective staffs have any questions, please do not hesitate to contact the undersigned or Salman Banaei at salman.banaei@markit.com.

¹⁸ Hayley McDowell, Australian Regulators Follow FCA with Launch of Regulatory Sandbox, The Trade, May 4, 2016, <http://www.thetradenews.com/Regulation/Australian-regulators-follow-FCA-with-launch-of-regulatory-sandbox/>.

¹⁹ French Regulators to Launch Fintech Teams, May 4, 2016, <http://www.wsj.com/articles/french-regulators-to-launch-fintech-teams-1462362892>.

²⁰ Press Release, Establishment of "Panel of Experts on FinTech Start-ups," Japan Financial Services Agency, Apr. 27, 2016, <http://www.fsa.go.jp/en/news/2016/20160427-1.html>.

²¹ Tsering Namgyal, *Singapore Fintech 'Regulatory Sandbox' Likely Before Year-End*, MLex, Apr. 27, 2016.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Schuler', with a large, stylized initial 'S'.

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