



Comments to the Office of the Comptroller of the Currency on Exploring Special Purpose National Bank Charters for Fintech Companies

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Introduction

Coin Center is an independent nonprofit research and advocacy center focused on the public policy issues facing digital currency technologies such as Bitcoin. Our mission is to build a better understanding of these technologies and to promote a regulatory climate that preserves the freedom to innovate using blockchain technologies. We do this by producing and publishing policy research from respected academics and experts, educating policymakers and the media about blockchain technology, and by engaging in advocacy for sound public policy. We welcome the opportunity to comment on the OCC's recent paper, *Exploring Special Purpose National Bank Charters for Fintech Companies* and hope we can be of assistance as the OCC takes steps towards encouraging responsible innovation in the U.S. financial industry.

We applaud the OCC for engaging in its responsible innovation process and we believe its decision to pursue a special purpose national bank charter policy is a wise one. The creation of a coherent national approach to regulating fintech companies will be a significant boon to American competitiveness, and will foster technologies that reduce the costs of providing financial services, thus encouraging financial inclusion. In this comment letter we hope to provide detailed background information about the digital currency ecosystem and offer suggestions about how it would best fit within the national charter context in the interest of responsible innovation.

Digital currency exchanges and hosted wallet providers perform a core banking function, check paying, and also engage in other activities that are (or are functionally equivalent to) bank-permissible activities. In this comment, we ask that the OCC exercise its discretion to make this determination in the interest of regulatory coordination, and the creation of a unified national approach to regulating digital currency firms that will encourage innovation and keep consumers safe.

The initial section of this comment characterizes the activities performed by digital currency companies and finds analogs in more traditional bank-permissible activities. The following section addresses Question 10 from the OCC's proposal, and characterizes the risks associated with digital currency activities. We find that these activities pose risks similar to those inherent in traditional custodial banking activities but highlight areas where the OCC will need to make determinations regarding how best to address these risks within newly chartered special purpose digital currency

banks. In the final section we address Question 1 and characterize the public policy benefits that would stem from approving digital currency firms to operate under a national charter.

Analogs with Existing Bank-Permissible Activities

As with “fintech,” the phrase “digital currency company” encompasses a wide variety of product and service providers. Some may be custodial in nature (securing valuables on behalf of customers) while others may be purely infrastructural (developing and maintaining software or network technology that facilitates a customer’s ability to safekeep her own digital valuables). Similarly, some may be financial in nature (offering payment, safekeeping, or exchange services) while others may be non-financial (utilizing the open networks that power digital currencies to generate authoritative records describing digital identity credentials,¹ document notarization,² or machine-to-machine messages in the Internet of Things³).

Digital currency companies that we believe would be most likely to seek a national charter are custodial and financial, and can be described generally as *hosted wallet providers* and *exchanges*. These companies primarily engage in the following six activities: (1) safekeeping digital currency on behalf of a customer (*i.e.* hosting a digital currency wallet); (2) accepting or initiating bank transfers to and from a customer’s bank account(s); (3) custodying cash off-balance sheet in advance of buying digital currency at the instruction of a customer or after a customer-directed sale; (4) buying or selling digital currency according to the customer’s instructions; (5) connecting buyers and sellers to facilitate trade of digital currency for other digital currency or for cash; and (6) developing, distributing, and maintaining software tools or electronic platforms to accomplish these activities.

Before we can apprehend the relevant risks inherent in these activities, we must describe how they fit into the business of banking. The OCC has in the past viewed various innovative (at that time) products/services as the functional equivalent of the core banking activities, and as a guiding principle going forward the OCC should continue to anchor its exercise of discretion to those rationales.

(1) Safekeeping digital currency for a customer is the functional equivalent of a traditional bank’s safekeeping and custodial services. Hosting a digital currency wallet, as an activity, is indistinguishable from providing a cryptographic key escrow service. The *sin qua non* of digital

¹ “About” *Oname* <https://onename.com/about> (“Oname makes it easy to register and manage a blockchain ID. Users can create a personal or company profile and share their blockchain ID on their website, social media profiles, and business cards so others can easily find them online.”).

² “About” *Proof of Existence* <https://proofofexistence.com/about> (“Use our service to anonymously and securely store an online distributed proof of existence for any document.”)

³ “Device democracy: Saving the future of the Internet of Things” *IBM Institute for Business Value* (July 2015) available at http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?subtype=XB&infotype=PM&appname=GBSE_GB_TI_USEN&htmlfid=GBE03620USEN&attachment=GBE03620USEN.PDF.

(“In our vision of a decentralized IoT, the blockchain is the framework facilitating transaction processing and coordination among interacting devices. Each manages its own roles and behavior, resulting in an ‘Internet of Decentralized, Autonomous Things’ – and thus the democratization of the digital world.”).

currency possession is knowledge of a private key that mathematically corresponds to a public key or address that has received digital currency payments according to a distributed ledger, *e.g.* a blockchain. Hosted wallet providers in the digital currency industry develop and maintain technological infrastructure that can safeguard the cryptographic keys and credentials necessary for a customer to transact using her digital currency, and enable her to sign transaction messages—thereby transferring her digital currency to another person—using these keys at will. Providing such a cryptographic key escrow service is an activity that the OCC has interpreted as part of the business of banking since 1998:

Key escrow services are the functional equivalent of bank safekeeping services. In addition to and separate from its certification authority activities, **the Company proposes to provide a service escrowing encryption keys. This activity is part of the business of banking.** Banks have traditionally performed the function of keeping safe valuable or confidential items for their customers. For example, national banks, as part of the business of banking, provide safe deposit services. *Colorado Nat'l Bank v. Bedford*, 310 U.S. 41 (1949); *Bank of California v. Portland*, 69 P.2d 273 (Ore. 1937). The key escrow service proposed by the Company is a functional equivalent to this recognized safekeeping service, although it uses electronic technology suitable to the digital nature of the item to be kept safe. [Emphases added.]⁴

Technically, digital currency private key safekeeping is nothing new as compared with the long practiced activities of digital certificate authorities and cryptographic key escrow providers, activities that the OCC has deemed within the core competency of banks. From a risk perspective, however, given the value and fungibility of the digital currency that can be moved by signing messages with these keys, there are new considerations that we will address in the subsequent section on risk.

The safekeeping of a customer's digital currency credentials may appear similar to deposit taking. However, this is not generally an accurate characterization. Each business will be unique, yet—to our knowledge—no hosted wallet providers or exchanges hold customer digital currency on balance sheet. None hypothecate, invest, or fractionally loan customer digital currency out to other customers. In this sense, there are no deposit-taking digital currency companies.⁵ The digital currency is simply stored in the customer's name in a secure facility usually on-premises, rather like a digital safety deposit box.

⁴ Department of the Treasury, Office of the Comptroller of the Currency, *Conditional Approval #267* (Jan. 1998) available at <https://www.occ.gov/static/bit/ca267.pdf>.

⁵ To our knowledge there are no US-based companies that intend to do fractional lending with digital currencies. In many ways this activity is culturally alien or even taboo to advocates of digital currency technology. These technologies emerged in part as a response to the the credit crises, and as a means to truly own and hold one's wealth digitally, rather than through a liability-carrying financial intermediary. *See, e.g.,* Alec Liu, "What Satoshi Said: Understanding Bitcoin Through the Lens of Its Enigmatic Creator" *Motherboard* (Jan. 2014) <http://motherboard.vice.com/blog/quotes-from-satoshi-understanding-bitcoin-through-the-lens-of-its-enigmatic-creator>.

(2) Accepting bank transfers and initiating transfers to and from a customer’s bank account(s) is understood as check paying, and it is one of the three core functions of banks. Digital currency companies generally do not perform the other two core functions of banking (deposit-taking and lending) and, instead, limit themselves to this check paying activity.⁶ As the OCC has recently made clear in multiple publications related to its responsible innovation initiative, “a special purpose bank must conduct **at least one** of the **three** core banking functions” (emphases added).⁷ We are not certain whether any other existing nationally chartered institution performs *only* the check paying function without also making loans and/or taking deposits, as might a limited purpose digital currency bank.⁸ In many ways, this sort of bank would be rather like a credit card bank but one that loads cards or devices with the ability to spend actual digital cash rather than a line of credit; it is still performing a check paying and payments function when it accepts bank transfers in exchange for loading the customer’s card with her newly obtained digital cash, but it does not make loans. Similarly this activity could be likened to a bank that provides customers with debit cards, except the card spends from a fund of valuables kept in a digital safe-deposit box that is safeguarded by the bank rather than an on-balance sheet account tracking cash liabilities of the bank.

(3) Custodying cash in advance of buying digital currency at the instruction of a customer or after a customer-directed sale is indistinguishable from cash management as it is understood in a traditional bank’s core custodial operations. As understood by the OCC, a traditional bank custodian “typically settles trades, invests cash balances as directed, collects income, processes corporate actions, prices securities positions, and provides recordkeeping and reporting services.”⁹ In the digital currency space, these activities are the same, except they revolve around cash associated with a customer’s digital currency positions rather than securities or derivative positions.

(4) Exchanging digital currency according to the customer’s instructions is the functional equivalent of an activity explicitly enumerated within the National Bank Act: “buying and selling exchange, coin, and bullion.”¹⁰ Particularly in the case of customer-directed transactions, these activities do not raise novel concerns given existing interpretations of bank

⁶ Some exchanges may wish to offer margin trading, and in this capacity may be engaged in both lending and payments.

⁷ Department of the Treasury, Office of the Comptroller of the Currency, 12 CFR Part 51 [Docket ID OCC-2016-0017] RIN 1557-AE07, *Receiverships for Uninsured National Banks* (Sep. 16, 2016). Available at <https://www.occ.gov/news-issuances/news-releases/2016/nr-occ-2016-110a.pdf> p. 62837.

⁸ Credit card banks do not take deposits and do not make *commercial* loans, however they do make loans to individual cardholders when they extend lines of credit. Traditional money transmitters like Western Union, as well as their Internet-based equivalents, e.g. Paypal, engage only in check paying, but are state licensed firms rather than chartered banks. Presumably some of these fintech firms may also wish to seek a limited purpose national charter.

⁹ Department of the Treasury, Office of the Comptroller of the Currency, *Custody Services Comptroller’s Handbook*, (Jan. 2002) <https://www.occ.gov/publications/publications-by-type/comptrollers-handbook/custodyservice.pdf>.

¹⁰ 12 U.S.C. 24(Seventh).

permissible activities with respect to physically settled foreign exchange and commodities derivatives transactions.¹¹

(5) Connecting buyers and sellers to facilitate trade of digital currency for other digital currency or for cash is no different than typical “finder” activities already deemed permissible for National banks.¹²

(6) Developing, distributing, and maintaining software tools or electronic platforms to accomplish these activities. Assuming that the underlying activity is itself a bank permissible activity, accomplishing that activity by developing or utilizing novel electronic means is also permissible according to long-held OCC interpretation.¹³

We recognize that characterizing the full range of digital currency custodial and exchange activities as already within the set of permissible core and incidental banking activities may be surprising, and we admit that these are preliminary and debatable interpretations, yet it certainly seems to be the case. Ultimately, the OCC has discretion to formally make this determination.

We believe the OCC should utilize that discretion and explicitly find that digital currency exchanges and hosted wallet providers perform one of the core banking functions—check paying—and that the other functions described herein are incidental to the business of banking and thereby permissible activities for federally chartered banks. This will be an essential step toward offering a unified national approach to regulating digital currency companies. It would make clear that state laws must not condition or otherwise restrict a nationally chartered bank from engaging in these activities,¹⁴ and it would facilitate coordination with other federal regulators. The OCC should then

¹¹ “A NB may engage in customer-driven commodity transactions that are physically settled, cash settled, and settled by transitory title transfer. These transactions may be hedged with matching transactions or hedged on a portfolio basis. See, e.g., OCC Interpretive Letters 937 (June 27, 2002), 962 (Apr. 21, 2003), 1039 (Sept. 13, 2005), 1040 (Sept. 15, 2005), 1060 (Apr. 26, 2006), 1065 (July 24, 2006), 1073 (Oct. 19, 2006).” Department of the Treasury, Office of the Comptroller of the Currency, *Summary of the Powers of National Banks And Federal Savings Associations* (Aug. 2011) p. 12

<https://www.occ.gov/publications/publications-by-type/other-publications-reports/pub-other-fsa-nb-powers-chart.pdf>. While conclusions in some of these interpretive letters may be invalidated by the adoption of the Volcker Rule, the point with respect to customer-driven virtual currency purchases and sales stands, given (A) that these will be Volcker Rule-permissible client facing trades rather than impermissible proprietary trading, and (B) applicants will generally not be deposit-taking institutions.

¹² National Banks “may serve as finders for certain goods and services, i.e., they may bring parties together for a transaction that the parties themselves negotiate and consummate.” Department of the Treasury, Office of the Comptroller of the Currency, *Activities Permissible for a National Bank, Cumulative* (Apr. 2012).

¹³ National Banks may “perform, provide, or deliver through electronic means and facilities any activity, function, product, or service that it is otherwise authorized to perform, provide, or deliver.” 61 Fed. Reg. 4849 (1996) codified at 12 C.F.R. § 7.1019.

¹⁴ As the OCC points out, “under these [existing] statutes, rules, and precedents, state laws would not apply if they would require a national bank to be licensed in order to engage in certain types of activity or business.” Department of the Treasury, Office of the Comptroller of the Currency, *Exploring Special Purpose National Bank Charters for Fintech Companies* (Dec 2016) available at

<https://www.occ.treas.gov/topics/bank-operations/innovation/special-purpose-national-bank-charters-for-fintech.pdf>.

proceed to work with digital currency charter applicants to better understand the risks inherent in their particular business models, and find ways to best protect their customers and the banking system at large from those risks.

B. Risks Unique to Digital Currency Activities

Risks will always vary across particular digital currency services and use cases, but generally speaking, at least in the case of activities 2-6 described above (custodying cash before and after customer-directed transactions, connecting buyers and sellers, exchanging digital currency at the customer's instruction, and developing electronic means to accomplish these activities), there are no risks that necessarily arise solely by virtue of the underlying asset being a digital currency rather than a foreign currency or commodity.

Indeed, counterparty risk may be decreased in the context of digital currency trading because of the speed of settlement inherent in these technologies. A digital currency trade can be settled almost instantaneously, and actual delivery of the digital currency into the control of the buyer occurs in a matter of minutes.¹⁵ This avoids much of the risk that the OCC has identified in physical commodity ownership, *e.g.* “production, transportation, transmission, distribution.”¹⁶ In many ways the OCC's existing risk analysis of customer-directed trading in electricity derivatives matches what we would expect to see in the digital currency space. In both cases the proposed activity “will require the introduction of some new operational processes (*e.g.*, scheduling of power flows” or in the case of digital currencies, key escrow, sending and relaying signed transaction messages, but “the majority of operational functions, such as passing notices, document transfers, and payments, are similar to those regularly performed by national banks in their role as financial intermediaries.”¹⁷

When it comes to safekeeping digital currency for the customer, there may be different risks as compared with, for example, typical safe deposit box provision. In previous interpretative letters, the OCC has suggested that “Key escrow services are the functional equivalent of bank safekeeping services.”¹⁸ We agree that at root there is little difference in risk between key escrow and traditional safekeeping and custodial activities. These activities primarily generate operational risks that are best addressed by separation of duties, dual control, and accounting controls, as each term is understood in the OCC's Custody Services Handbook.¹⁹ In the context of digital currencies,

Just as state licensing laws do not apply to credit card banks (who pay checks but may or may not accept deposits and make loans), state licensing laws of any type should not apply to a fintech bank that limits its activities to check paying, cash management, custodial services, safekeeping, and key escrow.

¹⁵ See Joseph Bonneau, “How long does it take for a Bitcoin transaction to be confirmed?” *Coin Center* (Nov. 2015) <https://coincenter.org/entry/how-long-does-it-take-for-a-bitcoin-transaction-to-be-confirmed>.

¹⁶ Department of the Treasury, Office of the Comptroller of the Currency, *Conditional Approval #962* (May 2003) <https://www.occ.gov/static/interpretations-and-precedents/may03/int962.pdf>.

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ Department of the Treasury, Office of the Comptroller of the Currency, *Custody Services Comptroller's Handbook*, (Jan. 2002)

<https://www.occ.gov/publications/publications-by-type/comptrollers-handbook/custodyservice.pdf>.

so-called multi-signature or multi-sig technology can be especially useful in assuredly creating and enforcing dual control over digital currency between multiple persons at the bank.²⁰

The OCC's interpretive letter on key escrow services was issued in a situation where the keys in question were utilized for encryption of private data, or the creation of a cryptographic certification that particular digital documents had been delivered without modification or tampering (*e.g.* a digital signature or checksum).²¹ In the case of private keys maintained in a digital currency context, the key is the single necessary and sufficient requirement for initiating irreversible digital currency transactions. Possession of a private key *is* control over the digital currency that, according to a distributed ledger, has been sent to a matching public key or address. Digital currency keys, therefore, have a greater immediacy of value as compared with a key that could eventually be valuable via document forgery or revelation of encrypted secrets. Accordingly, the risks of consumer harm from key loss or theft are greater.

Additionally, to the extent that control over keys now equates directly to control over valuable funds, the OCC may wish to revisit whether key escrow constitutes a fiduciary activity rather than merely a contractual arrangement and, relatedly, whether performing this activity will require trust powers. With regard to cryptographic key escrow the OCC has previously said the following:

National banks do not need trust powers to offer escrow and other safekeeping services... [A]gency services arrangements that do not involve the exercise of discretion or similar fiduciary responsibilities, such as escrow, safekeeping and custody, may be performed by a bank under the incidental powers of banking without having trust powers.²²

Within the range of activities we have thus far described there is little that can be characterized as the exercise of discretion. Digital currency exchanges and wallet providers, are generally contractually obligated to act only as instructed by their customers. These are not wealth funds or investment advisors. They are services for obtaining customer-specified quantities of digital currency, safekeeping that digital currency (effectively in the manner of a common law bailment), and initiating transactions according to customer instructions. Nonetheless, the value of digital currency that a company may secure on behalf of its customers does place the company in a position of trust.²³

Accordingly, the OCC may wish to use its conditional chartering authority to work with prospective applicants and determine how best to treat this activity and hedge against risks. In many ways,

²⁰ Ben Davenport, "What is Multi-Sig, and What Can It Do?" *Coin Center* (Jan. 2015) <https://coincenter.org/entry/what-is-multi-sig-and-what-can-it-do>.

²¹ Department of the Treasury, Office of the Comptroller of the Currency, *Conditional Approval #267* (Jan. 1998) available at <https://www.occ.gov/static/bit/ca267.pdf>.

²² Department of the Treasury, Office of the Comptroller of the Currency, *Conditional Approval #267* (Jan. 1998) available at <https://www.occ.gov/static/bit/ca267.pdf>.

²³ See Conference of State Bank Supervisors, State Regulatory Requirements for Vitrual Currency Activities CSBS Model Regulatory Framework 10, (Sep. 2015) available at [https://www.csbs.org/regulatory/ep/Documents/CSBS-Model-Regulatory-Framework\(September%2015%202015\).pdf](https://www.csbs.org/regulatory/ep/Documents/CSBS-Model-Regulatory-Framework(September%2015%202015).pdf).

safekeeping digital currency credentials is something new that falls between traditional custodial key escrow services and fiduciary trust services.

The OCC should work closely and flexibly with digital currency focused charter applicants to best understand how risks can be mitigated and customers protected. Possibilities include minimum net worth requirements or bonding requirements as found in the existing state money transmission and virtual currency licensing contexts. However, a wiser option may be a requirement to obtain robust private insurance. This could allow chartered firms to accurately price risk using insurance markets rather than selecting, haphazardly, a blunt figure (this minimum net worth or that bond amount) as adequate security. Whatever the OCC chooses, we believe that any regulations or conditions placed on fintech charters should not discriminate unfairly against digital currency firms. If custody of digital currency gives rise to new insurance or bonding obligations for chartered institutions, so too should custody of any other asset with a similar risk profile.

Finally, we do not believe that digital currencies, or their use by nationally chartered banks, create any systemic risks to the economy at large.²⁴ Presently, the scale of the digital currency activities is inconsequential by global economic standards. As of January 2017, Bitcoin, the largest and most widely used digital currency, has total market capitalization of around \$15 billion. Bitcoin's current design similarly limits transaction volume to roughly seven transactions per second at most, while Visa's network is designed to handle peak volumes of 47,000 transactions per second. Should the scale of Bitcoin adoption grow substantially, economy-wide risks may emerge, but this would not be expected to happen in the short to medium term or without warning.

Indeed it is the potential economy-wide benefits of digital currencies, and specifically the benefits that could emerge if digital currency companies were approved to operate under a national bank charter, that are most readily apparent. The remainder of this comment will focus on explaining these public policy benefits.

C. Public policy benefits of approving digital currency companies to operate under a national bank charter.

Approving digital currency companies to operate under a national bank charter will **spur innovation, enhance American competitiveness** within the global financial technology sector, **improve protections for consumers** of digital currency services, and promote the development of tools and platforms that can **bolster financial inclusion**.

Innovation

Perhaps the most exciting aspect of digital currencies, and cryptocurrency networks in particular, is that they are entirely open for experimentation. There is no patent or copyright to license, no university or corporation from which to seek a job, no exclusive membership fee to

²⁴ See Lloyd's Emerging Risk Report, *Bitcoin Risk Factors for Insurance* (2015) available at <https://www.lloyds.com/~media/files/news%20and%20insight/risk%20insight/2015/bitcoin%20%20final.pdf>.

pay. Anyone with a computer and an Internet connection can develop and share her own currency, her own financial contracts and strategies, her own vision of the future.

These technologies are platforms, not products. They are software standards and shared networks whose purpose is to enable group computing and trust with respect to financial data, flows, and tools. Like the PC and the Internet before them, they are not useful in isolation, but rather as a means for consumers to access new applications and a means for developers to design and share new applications (just as word processing applications make the PC platform useful and websites make the Internet useful).

Also like the PC and the Internet, the ungated nature of open blockchain networks ensures that a diverse set of innovators can have a fair shot to bring their own unique products and services to a consumer market. Difficulties in legally and comfortably obtaining digital currency, and the chilling effect of an uncertain regulatory landscape discourage open and diverse participation and threaten to crush the dynamism these technologies can offer. Providing a national path to the regulation of custodial digital currency companies will help ensure that these platforms remain open and available for all to experiment with and benefit from.

American Competitiveness

As we have described in a previous comment on the OCCs Innovation White Paper, the U.S. does not currently offer a welcoming home for digital currency businesses because of two structural features of U.S. financial regulation that are not present in many foreign jurisdictions: *federalism*, and a *rules-based rather than principles-based* approach.²⁵

Without a federal charter, a digital currency exchange or custodian will likely be treated as a money services business and, more narrowly, a money transmitter. As a money transmitter, a firm must be prepared to interface with multiple federal regulators²⁶ as well as regulators in every one of the several states wherein they have or expect to have customers.²⁷ Money transmission regulations were developed long before the emergence of digital currency technologies and often inflexibly demand rote compliance with rules that are inappropriate or confounding as applied to these new technologies. A handful of states are drafting new licensing laws aimed specifically at digital currencies, but—despite laudable efforts to foster a unified

²⁵ See generally, Peter Van Valkenburgh & Jerry Brito, “Comments to the Office of the Comptroller of the Currency on Supporting Responsible Innovation” *Coin Center* (May 27, 2016). Available at <http://coincenter.org/entry/comments-to-the-office-of-the-comptroller-of-the-currency-on-supporting-responsible-innovation>.

²⁶ MSBs are subject to regulation by FinCEN under the Bank Secrecy Act as well as being potentially regulated by the CFPB under the Dodd Frank Act, the FTC under Unfair and Deceptive Acts and Practices standards. Additionally, if the firm engages in margin trading or derivatives exchange it will be regulated by the CFTC and potentially the SEC.

²⁷ Specifically, 53 states and territories have individual licensing requirements for money transmission. See Thomas Brown, *50-STATE SURVEY: Money Transmitter Licensing Requirements* (last accessed May 2016) [http://abnk.assembly.ca.gov/sites/abnk.assembly.ca.gov/files/50%20State%20Survey%20-%20MTL%20Licensing%20Requirements\(72986803_4\).pdf](http://abnk.assembly.ca.gov/sites/abnk.assembly.ca.gov/files/50%20State%20Survey%20-%20MTL%20Licensing%20Requirements(72986803_4).pdf).

approach²⁸—the process remains a patchwork. Little coordination exists between these several regulatory bodies and conflicting approaches and non-uniformity abound.²⁹ The resulting complexity and uncertainty massively increases the costs of operating these businesses in the U.S. as compared to other nations, while simultaneously providing little if anything in the way of enhanced consumer protections.³⁰

Compared with the regulatory environment in the EU (where e-money firms can passport their license between member countries), the UK (where the FCA has created a sandboxing initiative and clearer expectations and accommodations for idiosyncratic fintech business models), and Singapore (which has taken a similar approach to the UK), the U.S. is a difficult place to start an innovative financial services business, and—particularly—a digital currency business. This puts American firms at a disadvantage and runs the risk of pushing talented developers and entrepreneurs overseas, damaging the long term health of our economy and narrowing the visibility and reach into key aspects of future financial infrastructure that U.S. regulators and policymakers can expect to enjoy.

Consumer Protection

Without a national alternative, our patchwork approach to regulation may not optimally protect consumers. For one, it may drive service providers overseas to jurisdictions that do not sufficiently protect U.S. consumers. Companies that choose to locate overseas because of the costs or uncertainties associated with a state-by-state licensing approach may choose to continue offering services to U.S. customers via the Internet. The architecture of digital currency networks and of the Internet in general makes it extremely difficult to prevent foreign service providers from accessing U.S. consumer markets. *Innovation* may be a foregone conclusion in the financial services industry. Whether it is, on balance, *responsible innovation* may come down to offering incentives (in the form of commonsense and uniform regulations) that will make more innovative companies choose nations with adequate regulatory protections, like the U.S., as their home.

Even for companies that do locate within the U.S., the current regulatory landscape may be sub-optimal in protecting their customers from harm. This can be the case because each individual state will generally be concerned only with the activities of licensed firms that touch their own citizens, rather than the systemic health and risk profile of the licensee as a whole. This is a particularly odd regulatory approach for businesses that, by virtue of the Internet, are almost assuredly global in the scope of their operations. For example, in Alabama, a money

²⁸ Both Conference of State Banking Supervisors and the Uniform Law Commission have worked diligently to encourage uniformity among the states, however, progress is slow.

²⁹ For example, as of 2016, the Uniform Law Commission's *Uniform Money Services Act* has only been adopted by legislatures in nine states and territories. The UMSA was finalized in 2000. After 16 years it has only modestly remedied the issue of disparate standards for money transmission regulation across the several states. See Uniform Law Commission, *Uniform Money Services Act* (last accessed May 2016) <http://www.uniformlaws.org/Act.aspx?title=Money%20Services%20Act>.

³⁰ See Marco Santori, "What is Money Transmission and Why Does it Matter?" *Coin Center* (Apr. 7, 2015) <http://coincenter.org/entry/what-is-money-transmission-and-why-does-it-matter>.

transmission licensee need only prove a minimum net worth of \$5,000 and obtain a surety bond of \$10,000 in order to satisfy the capital and liquidity protections mandated by that state's money transmission laws.³¹ At best this may be barely sufficient to protect customers in Alabama, and in general it appears severely disjointed from the realities of the modern payments and financial services industry.

Financial Inclusion

By creating the opportunity for fintech firms to obtain national charters, the OCC is taking an extraordinary and commendable step toward its stated goal: to “explore new ways to promote fair access and financial inclusion and innovate responsibly.”³²

The OCC has primarily discussed financial inclusion in the context of innovative lending technologies, but new payments tools and digital currencies also have the potential to promote “fair access to financial services and fair treatment of customers.”³³

Speaking generally, IMF staff recently found that “[digital currency] schemes and distributed ledger technologies can strengthen financial efficiency by facilitating peer-to-peer exchange while reducing transaction times and costs, especially across borders. In the longer term, these technologies have the potential to deepen financial inclusion by offering secure and lower-cost payments options.”³⁴

A particular area of promise is the remittances industry, which may presently lack the competitive pressures necessary to drive down fees and guarantee reasonable and transparent currency exchange rates.³⁵ Digital currency technologies spur competition in this industry by providing new and alternative cross-border payment plumbing, thereby lowering the fixed costs of starting a competitive remittances business. As reported by the Consultative Group to Assist the Poor, a global partnership of 34 leading organizations that seek to advance financial inclusion, the emergence of digital currencies “opens new possibilities for customers as well as alternative payment channels for providers, who have traditionally had to work through a highly intermediated correspondent bank network.”³⁶

³¹ Code of Alabama 1975, §§ 8-7-1 to 8-7-15 available at [http://asc.alabama.gov/Acts/Chapter%207_SOC.aspx#Section 8-7-7](http://asc.alabama.gov/Acts/Chapter%207_SOC.aspx#Section%208-7-7).

³² Department of the Treasury, Office of the Comptroller of the Currency, *Exploring Special Purpose National Bank Charters for Fintech Companies* (Dec 2016) available at <https://www.occ.treas.gov/topics/bank-operations/innovation/special-purpose-national-bank-charters-for-fintech.pdf>.

³³ *Id.*

³⁴ Dong He, *et al.* IMF Staff Discussion; *Virtual Currencies and Beyond: Initial Considerations* (Jan. 2016) <https://www.imf.org/external/pubs/ft/sdn/2016/sdn1603.pdf>.

³⁵ See Jessica Silver-Greenberg, “New Rules for Money Transfers, but Few Limits” *NY Times* (June 2012) <http://www.nytimes.com/2012/06/02/business/new-rules-for-money-transfers-but-few-limits.html>.

³⁶ Paul Breloff, Jeff Bond, “Picking Winners in the Great Remittance Disruption” *CGAP* (Apr. 2015) <http://www.cgap.org/blog/picking-winners-great-remittance-disruption>.

While large scale use of digital currencies for remittances (*i.e.* rebittances) has yet to materialize, the emergence of a large number of rebittance startups is indicative of a remittance landscape that is growing more and more competitive by the day.³⁷ If we believe that providers facing increased competitive pressure will be more responsive to the needs of customers and better proxies for their interests, then this is good news regardless of the ultimate success or failure of any particular firm.

Globally, digital currencies are emerging as invaluable tools for those who face financial exclusion because of disastrous monetary policy or unfortunate regulatory consequences in their home nations. In India,³⁸ where anti-corruption motivated de-monetization has limited poorer populations' access to cash, and Venezuela,³⁹ where hyper-inflation has made cash useless, bitcoin usage is on the rise as a store of value that does not require access to a financial system or reliance upon the questionable regulatory policies of the state.

Finally, the transparency of financial activities committed to open, public ledgers (such as Bitcoin's blockchain) can also be a positive force for *fairness* as well as access in the financial industry. Much as ride-sharing apps such as Uber and Lyft use technology to reduce information asymmetries between drivers and riders with ratings and recordkeeping, open blockchain networks can enable users to directly verify that payments have been made and that fees were as advertised. The single source of truth in these systems is an unforgeable cryptographic log of all activities, rather than the good-word of any particular financial services provider.⁴⁰

We thank the OCC for this opportunity. If you have any questions or concerns regarding these emerging technologies and business models, do not hesitate to get in touch.

³⁷ See, e.g., Bitpesa, <https://www.bitpesa.co/>, and Abra, <https://www.goabra.com/>; see generally Claudia McKay, "Digital Currencies and Financial Inclusion: Revisited" *CGAP* (Dec 2014) <http://www.cgap.org/blog/digital-currencies-and-financial-inclusion-revisited>.

³⁸ See Karan Kashyap, "India's Demonetization Is Causing Bitcoin To Surge Inside The Country" *Forbes* (Dec. 2016)

<http://www.forbes.com/sites/krnkashyap/2016/12/22/indias-demonetization-is-causing-bitcoin-to-surge-inside-the-country/#2076a08a738a>.

³⁹ See Joon Ian Wong, "Venezuelans are turning to bitcoin as the bolívar crumbles" *Quartz* (Nov. 2016). <https://qz.com/825519/venezuelans-are-turning-to-bitcoin-as-the-bolivar-crumbles/>.

⁴⁰ See Juan Llanos, "Will Bitcoin Change How We Think about Regulation?" *Coin Center* (Mar. 2015) <https://coincenter.org/entry/will-bitcoin-change-how-we-think-about-regulation>.