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A PRIMER ON PRUDENTIAL REGULATION FOR VIRTUAL CURRENCY BUSINESSES

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Virtual currencies, once a nascent technology used largely only by technology enthusiasts and peddlers of illicit products, have become an increasingly mainstream tool for value transfer and investment. Their newfound popularity, however, has brought with it regulatory scrutiny. Legislators and regulatory agencies have been somewhat puzzled by the combination of virtual currencies' intangible nature, seemingly opaque functionality, and deviation from a centrally managed or controlled model. Further complicating the issue are the various business models that exist within the broad Virtual Currency Business ("VCB") ecosystem that comprise the larger virtual currency industry. Despite these regulatory challenges, governments around the world are starting to accept the fact that many VCBs have transitioned from early stage start-up ventures to well-established multinational enterprises. Regulators have responded with clarifications as to how VCBs will be regulated. A review of these early attempts to create regulatory regimes suggests that a prudential regulatory framework will become the framework of choice for VCB regulation.

Prudential regulation is a heavy-handed form of regulation and one that may not be familiar to VCBs or their sponsors, who often come from the less regulated technology industry and are accustomed to rapid technology-based business expansion unimpeded by regulatory constraint. While a significant amount of attention has focused on the technical details of the emerging VCB regulatory regimes, little to no literature has focused on detailing the nature of prudential regulation for the VCB community in a practical and accessible way and how VCB industry participants may respond to efficiently manage the emerging regulatory burden. This article seeks to fill in that gap and address, at the level of an introductory primer, the fundamental issues that might arise for a VCB as it adapts to prudential regulation. It should also be instructive to VCBs' investors, advisers, and counterparties, among others.

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I. The Challenge and Emergence of VCB Regulation

At their heart, virtual currencies are a technology protocol that permit secure transfer of information between parties.[1] They are fundamentally agnostic to political borders, the identity of their users, or the underlying transactions for which they are used. Perhaps most cryptically, they exist in the digital world, free from the brick and mortar paradigm of the traditional bank. VCBs that facilitate virtual currency use may take on various structures, but are generally best understood as facilitators of users of the underlying technology and not the technology's producer, custodian, or administrator. Each VCB, whether it provides digital wallet services, an exchange forum, a trading platform, or custodial services, is itself the most logical point of focus for regulatory attention. However, the number of products and services that can be offered raise different concerns and, as such, regulation at the VCB level should be appropriately calibrated to each VCB's unique facts and circumstances. Further, the global nature of virtual currency use and lack of regulatory harmony or approach across jurisdictions mean that VCB regulation necessarily will be suboptimal and fragmented.

Domestically, prudential regulation of banking and insurance occurs at the federal and state levels; however, the States have traditionally been the prudential regulator of nonbank financial service providers, such as money transmitters, check cashers, and payday lenders. Unsurprisingly, the States also have taken the lead in enacting comprehensive VCB regulation. New York is the first jurisdiction to have formally implemented a prudential regulatory regime with its so-called "BitLicense," administered by the New York State Department of Financial Services.[2] California, a jurisdiction with several key resident VCBs, is currently proceeding through its legislative process to release its own prudential regulatory regime through statute, known as its "Virtual Currency Act," to be administered by the State's Commission of Business Oversight.[3] Other states are currently working through similar legislative proposals.[4]

In an attempt to harmonize the States' regulatory initiatives, in early 2014, the Conference of State Bank Supervisors ("CSBS") established the Emerging Payments Task Force "to examine the intersection between state supervision and payments developments, and to identify areas for consistent regulatory approaches among states."[5] The effort included an assessment of virtual currency activities for which the CSBS concluded "that activities involving third party control of virtual currency, including for the purposes of transmitting, exchanging, holding, or otherwise controlling virtual currency, should be subject to state licensure and supervision."[6] The CSBS subsequently released on December 16, 2014, its "State Regulatory Requirements for Virtual Currency Activities" for public comment.[7] The Uniform Law Commission similarly established a Study Committee and subsequently a Drafting Committee to consider, in part, whether a new uniform state law should be proposed to cover virtual currency companies and transactions and to formulate such a state law model."[8]

At the federal level, it is unclear whether any federal regulator has jurisdiction or authority to comprehensively regulate virtual currencies absent federal legislation granting such authority. Chairwomen of the Board of Governors for the Federal Reserve System ("Federal Reserve"), Janet Yellen, went so far as to testify before the Congress that "[t]he Federal Reserve simply does not have authority to supervise or regulate bitcoin in any way."[9] The federal prudential banking regulators have established an informal inter-agency working group to discuss regulatory developments and concerns regarding virtual currencies, but have to date consistently determined that no regulation is necessary or appropriate.[10]Similarly, the Congress has looked at, but not acted on passing VCB regulation.[11]

The Financial Crimes Enforcement Network ("FinCEN") has been more active in the virtual currency regulatory space and has released a series of orders and guidance pieces concerning the scope of its regulations concerning the treatment of VCBs with respect to virtual currency payment systems services, digital wallets, exchange platforms, investing, mining, and brokerage.[12] The Consumer Financial Protection Bureau ("CFPB") has not taken formal regulatory action with respect to VCBs, but it has issued a consumer advisory warning as to the risks of holding and using virtual currency and has invited consumers to submit complaints regarding virtual currency, noting that it will use such complaints "to help enforce federal consumer financial laws and, if appropriate, take policy steps."[13] Meanwhile, the Federal Trade Commission ("FTC") has taken explicit enforcement actions with respect to VCBs.[14]

Internationally, countries have taken a variety of approaches to VCB regulation, including: (1) taking no action; (2) monitoring developments in virtual currency use; (3) clarifying the tax treatment of virtual currency use (and implicitly legitimizing virtual currency as an asset class); (4) permitting virtual currency use but warning consumers about its dangers; (5) prohibiting or limiting virtual currency use; and (6) formally recognizing virtual currency as a medium that can be regulated and regulating it accordingly.[15]

II. Prudential Regulation

Government regulation, at a fundamental level, is often times directed at consumer protection. The manner in which it approaches this goal, however, takes on many different forms. Prudential regulation in particular is, perhaps short of an absolute prohibition, an extreme form of regulation. It has been defined in different ways in different contexts, but there exists no single definition that captures its full meaning. In certain contexts prudential regulation refers to *ex ante* regulation and is justified when the government provides a guaranty against a firm's failure or acts as a lender of last resort. In other contexts it is used to promote the goals of financial stability and avoid systemic risk. It is generally associated with banking regulation and, regardless of its precise contours, implies that there exists a significant deal of discretion afforded to a supervisory body that is tasked with regulating a business's prudence.[16]

At its heart, prudential regulation is directed toward comprehensive regulation to ensure the safety and soundness of a firm's operations. Prudential regulators, to varying degrees, focus on both micro-prudential and macro-prudential goals, and attempt to calibrate standards and requirements based on the facts and circumstances of each scenario, as opposed to a one-size-fits-all check-list approach. In other words, prudential regulation is risk-based and aims to adapt to industry developments. Prudential regulation also tends to be a comprehensive cradle to grave regulation, commencing at the licensing stage and ending with the resolution of a firm, while encompassing extensive day-to-day supervision, activities restrictions, and enforcement along the way. Its scope of coverage may include capital and liquidity adequacy requirements, leverage limits, investment limits, activity restrictions, risk management supervision, collateral use restrictions, compensation limits, quantitative risk modeling, and stress testing, among other items.

VCB sponsors who are familiar with corporate regulation are likely more accustomed to securities regulation which, while focusing on consumers like prudential regulation, does so through a disclosure regime. Disclosure regulation focuses on disclosing asymmetric information and risks to consumers. It empowers securities regulators generally to focus more on broad rulemakings and *ex post* enforcement than on *ex ante* intervention and supervision.[17] Securities registration, for instance, requires the disclosure of certain information that provides investors sufficient information to make judgments about whether or not to purchase a security. It does not provide a basis for the government to pass judgment on the soundness of the investment. Enforcement may be brought for inaccurate disclosure, or lack thereof, but not for general business conduct driving investment returns.[18]

Although prudential regulation and disclosure regulation are both directed to protect consumers, certain regulatory regimes have become known specifically as consumer protection regulation. Following the financial crisis of 2007-2009, this brand of regulation gained particular notoriety with the creation of the CFPB, which continued and strengthened a type of consumer protection previously administered by the FTC and the prudential bank regulators. The focus of consumer protection regulation is to ensure that institutions comply with specific regulations, often highly technical in nature, that are specifically directed at protecting consumers.[19] Examples of such regulation topics including fair lending, disclosure of fees, limitations on debt collection practices and, perhaps most central, the prohibition of unfair and deceptive acts or practices.

III. Notable Features of Prudential Regulation for VCBs

Various aspects of prudential regulation are noteworthy for VCBs. The following discussion focuses on the most salient aspects of prudential regulation and offers insights as to how a VCB and other interested parties might manage the emerging prudential regulatory regime.

Licensing, Applications and Notices

Under a prudential regulatory regime, a VCB would need to obtain a license, which can be a significant undertaking. Even before filing a license application with its applicable regulator, the VCB would be expected to approach the prudential regulator with a proposal and solicit feedback. If the regulator does not indicate that an application would likely be denied, the VCB applicant would then need to assemble a robust application that might include items such as a detailed business plan, biographical and financial information of the VCB's owners and operators, and answers to a variety of regulatory questions concerning legal compliance. The biographical and financial information submission can be particularly burdensome for those unfamiliar with such requests, and often requires the submission of fingerprints that are used to conduct

Federal Bureau of Investigation background checks. First time entrants into a prudential regulatory regime often express concern that such biographical and financial submissions seem overly intrusive and not sufficiently related to appropriate regulatory concerns.

Application review may take on different degrees of intensity depending on the type of request and the reputation of the parties involved. Applications involving novel issues of regulatory first impression in particular are highly scrutinized in a prudential regulatory regime. In the quickly evolving world of technology that VCBs operate within, the review process and speed (or lack thereof) may be frustrating to VCBs. Applicants may also find surprising how much discretion prudential regulators have with respect to application approvals or denials and should not expect that their application will be approved merely because a seemingly similar one had been approved by the same regulatory body.

Effectively preparing applications is an important skill that VCBs will need to acquire, as the application filing process will continue throughout a VCB's lifecycle. Most significant transactions will require some sort of filing with a prudential regulator, be it a change in business plan, launch of a new product, or change in organizational structure, all of which would be routine transactions for a growing and evolving VCB.

A particular area of concern of prudential regulators that exists through the lifecycle of a prudentially regulated business is the control structure of the business and changes thereto. A change in control will generally require a filing to the appropriate prudential regulator. Control is determined based on an analysis of both quantitative and qualitative factors. Quantitatively, a 10-percent ownership of voting equity typically triggers a rebuttable presumption of control. Qualitatively, factors that indicate control may include the ability to influence the management, policies, or procedures of a firm and right to a board seat. In the VCB context, because a significant amount of funding may arise in early financing rounds, ownership limits may change significantly and, under a prudential regime, may necessitate a VCB to make several regulatory filings.

Some key points with respect to prudential regulatory filings are that:

- Preparing and filing successful applications with a prudential regulator requires great care. Working in close coordination with experienced regulatory counsel is essential to conform filings with regulatory expectations and acceptable regulatory customs;
- A VCB should factor into its transaction execution and deal documentation the regulatory process, which is particularly key to merger, acquisition, capital raising, restructuring, and similar types of activities; and
- Stakeholder communication regarding the regulatory process is important and requires a balance between the risks and rewards of disclosure, which is limited by what is permissibly disclosable information and what is considered non-disclosable confidential supervisory information.

Fragmented Regulation

As the regulatory regime for VCBs continues to develop in the United States, there currently does not appear to be a significant push to prudentially regulate VCBs at the federal level. With the federal government reluctant to lead in VCB regulation promulgation, the states are starting to emerge with regulatory proposals or passing prudential regulatory regimes. The result is likely to be the emergence of a fragmented state-by-state prudential regulatory regime, in which VCBs will need to comply with multiple regulators with potentially conflicting regulatory agendas or regimes. Although the federal government has not exhibited any real desire to put forth a federal regulatory regime, various federal agencies, such as FinCEN, the Office of Foreign Assets Control ("OFAC"), FTC, CFPB, the Securities and Exchange Commission ("SEC"), and the Commodities Futures Trading Commission ("CFTC")[20] do have various powers that allow them regulate certain activities of VCBs. As may be apparent, the upshot for a VCB operating within such a highly fragmented supervisory structure is increased regulatory compliance complexity, decreased efficiency, and a patchwork regulatory framework that a VCB must recognize and appreciate when operating its business.

Some key points with respect to the fragmented regulatory structure are that:

- VCBs will need to carefully consider the pros and cons of entering each jurisdiction from a compliance and product offering perspective. There have already been examples of VCBs electing out of certain jurisdictions with onerous compliance burdens;[21] and
- The VCB industry will need to consider the benefits of lobbying for the passage of a federal regulatory regime that preempts state-by-state regulation and provides for consistency in approach throughout the United States.

Enforcement

VCBs, like other businesses in the United States, generally operate with enforcement exposure to a variety of sources. On the public side there is exposure to anti-money laundering provisions of the Bank Secrecy Act enforced by FinCen, securities actions from the Department of Justice or SEC, economic sanction actions from OFAC, and consumer protection actions from the FTC and state attorney generals. On the private side there is exposure to a multitude of customers, counterparties and shareholders who might have a claim to bring against the VCB or its officers or directors. In addition to these general exposures, a VCB that becomes subject to prudential regulation would face a significant enforcement exposure to its prudential regulator, which, as further noted below, would have general authority to examine the VCB's operations, book, and records. Also, given the fragmented regulatory structure emerging with respect to VCBs, the multitude of prudential regulators a VCB may be subject to would be great. Should any one of those regulators bring an enforcement action, the result may be a domino effect of follow-on actions, as regulators attempt not to appear lax in comparison to their sister regulators.

Some key points with respect to managing enforcement exposure are that:

- A VCB, when facing an enforcement action, should carefully and strategically manage its enforcement defense strategy while keeping in mind the political interests of its different regulatory bodies and how such differences may complicate settlements and the enforcement process generally;

- When structuring a VCB, establishing control relationships and working with counterparties, a VCB should be mindful that the enforcement jurisdiction of a prudential regulator may extend to various parties, including a VCB's affiliates, each of whom are generally defined as a person that directly or indirectly controls, is controlled by, or is under common control with the VCB; and
- Records produced by the VCB may be inspected and can be used against the VCB in the course of an enforcement action and, thus, a VCB should maintain a culture of appropriate recordkeeping in line with all compliance requirements and minimizing enforcement exposure.

Books and Records

VCB sponsors who have backgrounds in investing and operating public companies or other prudentially regulated entities like banks or insurance companies may be quite familiar with the extensive books, records, and reporting requirements such firms bear. A VCB, under a prudential regulatory regime, even if private, would generally be required to keep robust records that, absent the prudential regulatory regime, the VCB would not likely keep. For instance, a VCB may find that its prudential regulator requires presentation of audited financial statements prepared by a certified public accountant.[22] With respect to customer accounts and transactions, a VCB would generally be required to keep significant records, which might include transaction amounts, dates, times, payment instructions and fees, and customer names, account numbers, physical addresses, and counterparties. Generally, a VCB should be prepared to provide access to its books and records to its prudential regular, including access to those books and records maintained by and of VCB affiliates.

Some key points with respect to maintaining books and records are that:

- A VCB should consider how the books and records collection and storage requirements are not just a recordkeeping exercise, but are impactful upon the nature of the services the VCB offers to its customers; and
- As previously noted, a VCB should maintain a culture that appropriately maintains books and records but does not maintain records that create unnecessary enforcement exposure.

Board Considerations

Many entrepreneurs and investors who routinely serve on companies' board of directors appreciate the significance of having fiduciary duties; however, they may not be as familiar with how safety and soundness expectations of prudential regulators impact the expectations of a director serving on a VCB's board of directors. In the first instance, even before serving on the board of directors of a prudentially regulated business, a prospective director may be required to submit extensive biographical and financial information, from which a prudential regulator will judge the individual's character and fitness to serve on the board. The principal of safety and soundness, especially as administered within a risk-adjusted context, means that actions of an officer or director, whether in conformity with fiduciary duties, may nevertheless pose a concern to regulators and justify an enforcement action. Directors may be further limited with respect to the other directorships they may hold to a degree more severe than provided for in general antitrust law.[23]

Some key points with respect to serving on a VCB's board of directors are that:

- An individual representing an institutional investor or himself as an individual investor should familiarize himself with the responsibilities of the commitment, and understand that the safety and soundness considerations of a prudential regulatory framework would make a VCB board seat different than one of a non-prudentially regulated firm;
- A VCB will need to assess the appropriate level of director and officer insurance it should obtain, which should be calibrated to the business it does and the level of prudential regulatory risk to which the board is exposed; and
- A VCB's board will need to be significantly involved in the review and approval process of various policies and procedures to a degree that is perhaps greater than a non-prudentially regulated board. Such approvals would include anti-money laundering and cyber security policies and procedures.

Regulatory Capital Requirements

Regulatory capital requirements are fundamental to prudential regulation and can significantly influence many business issues ranging from firm valuation, capital structure, and expansion ability. Independent of regulation, a business's operating model will dictate whether it is capital heavy or capital light. Capital heavy businesses, like banks, use capital as an engine for growth, such as to support investment activities. Similarly, insurance businesses may maintain significant amounts of capital in the ordinary course to fulfill insurance claims. Capital light business are generally based on operating models that involve little to no inventory or manufacturing operations. Rather, capital light businesses might offer services based on human capital, such legal, investment banking, or accounting advisory services. Prudential regulators look at the use of capital inherent in a business and the riskiness of a firm to determine how much and what type of capital is appropriate for such a business to retain - the firm's so-called "regulatory capital."

As relevant to a VCB, depending on its business model and what aspect of the virtual currency ecosystem it participates in, the VCB may fall along different points of the capital light to capital heavy spectrum. Depending on how regulators view the riskiness of a VCB's operating model, that VCB may be required to hold varying degrees of regulatory capital. By way of example, the BitLicense regime requires VCBs to "maintain at all times such capital in an amount and form as the superintendent determines is sufficient to ensure the financial integrity of the [VCB] and its ongoing operations based on an assessment of the specific risks applicable."[24] If this BitLicense-style model becomes the prevailing regulatory capital model of other states, the capital requirements of VCBs can vary greatly. Notably, other states have taken different approaches, such as Wyoming, whose Division of Banking has interpreted its existing Wyoming

Money Transmitter Act to require VCBs offering hosted wallet services to maintain dedicated fiat currency reserves in an amount equal to the value of all virtual currency held on behalf of customers - a regime that predated the modern VCB industry and would likely need to be reformed with VCBs in mind to enable Wyoming residents to transact effectively with virtual currencies.[25]

Some key points with respect to regulatory capital are that:

- On the whole, unless a VCB is engaging in heavy lending on its trading or exchange platform, or taking principal or custodial risks, it will not likely be a capital heavy business, and its regulatory capital levels may be moderate;
- Dividend payouts may be restricted by regulatory capital requirements and, hence, valuation using a dividend discount or similar model will be affected; and
- Capital levels may inform whether a VCB would be a good leveraged buyout target as the VCB might be restricted by other debt or leverage limits similar to regulatory capital requirements.

Insolvency and Resolution

Many VCBs may be familiar with the bankruptcy process and the general concepts associated with them. The ability to raise funds, organize a capital structure, and conduct general business and financial risk analyses are based on the priority sequence and process of bankruptcy and reorganization. Under a prudential regulatory framework, the insolvency and resolution process often takes on a different complexion. Under a prototypical prudential regime, regulated entities are subject to an insolvency framework that may be exempted from bankruptcy and, rather, resolution is administered by a company's prudential regulator. The entire insolvency regime, claims process, wind-up of a company's affairs, and so forth, differs from a traditional bankruptcy. This creates a host of issues, such as the ability to voluntarily reorganize a business, uncertainty with respect to the creditor claims process and, in many cases, the requirement to pay assessments into a pool of funding used to administer that insolvency regime (*e.g.*, deposit insurance paid to the Federal Deposit Insurance Corporation ("FDIC") or broker-dealer assessments paid to Securities Protection Investment Corporation ("SIPC")).

Some key points with respect to VCB insolvency are that:

- VCBs, their investors, and general creditors can continue to operate with the expectation that the Bankruptcy Code will govern their affairs; however, they should be cognizant of the fact that under a prudential regulatory regime, it would not be surprising for resolution to become governed by a VCB-centric prudential resolution scheme in light of the several controversial VCB failures,[26] which would eliminate certain benefits that a traditional bankruptcy model might afford (*i.e.*, corporate restructuring); and
- While VCBs do not presently pose systemic risk to the financial system, should any one become systemically important, the Financial Stability Oversight Council ("FSOC"), housed within the U.S. Department of the Treasury, would have the authority to de-

sign the VCB as being systemically important and subject it to a rigorous prudential regulatory regime, administered by the Federal Reserve, and an orderly resolution regime, administered by the FDIC.

Supervisory Relationship

A final holistic observation about prudential regulators and regulation that a VCB would be wise to consider is that a VCB will have a significant and ongoing relationship with its regulators. A prudentially regulated VCB will learn the names and personalities of its examiners, discover the difficulties of monitoring and adapting to evolving regulatory standards, find the lack of guidance on key legal issues frustrating, and not understand initially why regulators move at a significantly slower pace when reviewing filings and other requests than the VCB desires. These are common frustrations that must be understood and appreciated before a VCB can build a healthy and productive working relationship with its regulators. How a VCB deals with its regulators will also inform how public relations information is managed, disclosure is made, confidential information is treated, books and records are kept and compliance is achieved. As may now be readily apparent from the above, operating under a prudential regulatory framework is no small undertaking and may be quite a rude awakening for those VCB sponsors who do not fully educate themselves as to the prudential regulatory framework prior to engaging with it.

As a general matter, prudential regulatory agency staff are well-intentioned but often times find themselves in the difficult position of balancing various weighty legal and policy considerations in each of their administrative actions. VCBs should accordingly be prepared to deal with regulators who are, for a variety of reasons, often overly conservative in approach, preferring to err on the side of denying a good application than approving a bad one. Compared to a VCB's own sense of urgency to move forward with a new product offering or structure, a prudential regulator may move at a seemingly glacial pace that is uninformed or otherwise unmoved by the practical and economic considerations in which a VCB operates. Knowing beforehand what the culture of a VCB's prudential regulator is will enable the VCB to navigate the regulatory regime with greater strategic and emotional fortitude.

IV. Conclusion

Although the regulatory landscape of VCBs continues to evolve, early frameworks suggest that the prevailing regulatory regime will be a prudential one. It thus greatly benefits VCBs and interested parties to familiarize themselves with this often heavy handed form or regulation. The best approach, particularly for a VCB new to prudential regulation, is to work closely in connection with experienced regulatory advisers as the VCB comes to learn about the culture of prudential regulators and how most effectively to operate under a prudential regulatory regime.

ENDNOTES:

[1] *See generally* Satoshi Nakamoto, Bitcoin: A Peer-to-Peer Electronic Cash System, Bitcoin.Org, (Oct. 31, 2008), *available at* https://bitcoin.org/bitcoin.pdf.

[2] *See* N.Y. CODE ANN. Tit. 23, Part 200.

[3] *See* CAL. A.B. 1326 (2015-2016).

[4] *See, e.g.,* N.J. A.B. 4478 (2015); CONN. H.B. 6800 (2015); PENN. H.B. 850 (2015);N. CAROLINA H.B. 289 (2015); UTAH H.C.R. 6 (2015).

[5] Policy Statement, Conference of State Bank Supervisors, CSBS Policy on State Virtual Currency Regulation, (December 16, 2014),*available at* https://www.csbs.org/regulatory/ep/Documents/CSBS%20Policy%20on%20State%20Virtual%20Currency%20Regulation%20—%20Dec.%2016%202014.pdf.

[6] *Id.*

[7] Request for Comment, Conference of State Bank Supervisors, State Regulatory Requirements for Virtual Currency Activities: CSBS Draft Model Regulatory Framework and Request for Public Comment, (December 16, 2014), *available at* https://www.csbs.org/regulatory/ep/Documents/CSBS%20Draft%20Model%20Regulatory%20Framework%20for%20Virtual%20Currency%20Proposal%20—%20Dec.%2016%202014.pdf.

[8] Uniform Law Commission, Committees: Alternative and Mobile Payment Systems, *available at* http://www.uniformlaws.org/Committee.aspx?title=Alternative%20and%20Mobile%20Payment%20Systems; Statement, Uniform Law Commission, Study Committee on Virtual Currency, (April 23, 2015), http://www.google.com/url?url=http://www.virtualcurrencyreport.com/wp-content/uploads/sites/440/2015/04/AMPS-Report-for-April-23-2015-Stakeholders-Meeting.pdf&rct;=j&frm;=1&q;=&esrc;=s&sa;=U&ved;=0CBoQFjABahUKEwjlu4nv24bIAhWG04AKHWt-BKA&usg;=AFQjCNGA__Mvnuw90MAzjIFMw6__g8P4V5fQ.

[9] Steven Russolillo, Money Beat, "Yellen on Bitcoin: Fed Doesn't Have Authority to Regulate It in Any Way," (Feb. 27, 2014), *available at* http://blogs.wsj.com/moneybeat/2014/02/27/yellen-on-bitcoin-fed-doesnt-have-authority-to-regulate-it-in-any-way/.

[10] The Comptroller of the Currency, Thomas Curry, has noted that the Office of the Comptroller of the Currency is looking at ways in which to facilitate the application review process of innovations in banking, including virtual currency use by traditional banks. *See* OCC, Remarks by Thomas J. Curry, Comptroller of the Currency, (Aug. 7, 2015), *available at* http://www.google.com/url?url=http://www.occ.gov/news-issuances/speeches/2015/pub-speech-2015-111.pdf&rct;=j&frm;=1&q;=&esrc;=s&sa;=U&ved;=0CBQQFjAAahUKEwjvxIWxmIfIAhWCjw0KHU5ICow&usg;=AFQjCNFX56WOslT00KTubr-XAajRntHAHg.

[11] Senate Homeland Security Committee Hearing, Digital Currency, (Aug. 13, 2013), *available at* http://www.c-span.org/video/?316346-1/senate-banking-virtual-currencies.

[12] FinCen, FIN-2015-R001, Application of FinCEN's Regulations to Persons Issuing Physical or Digital Negotiable Certificates of Ownership of Precious Metals, (Aug. 14, 2015); FinCEN, FIN-2014-R012, Request for Administrative Ruling on the Application of FinCEN's Regulations to a Virtual Currency Payment System, (Oct. 27, 2014); FinCEN, FIN-2014-R011, Request for Administrative Ruling on the Application of FinCEN's Regulations to a Virtual Currency Trading Platform (Oct. 27, 2014); FinCEN, FIN-2014-R002, Application of FinCEN's Regulations to Virtual Currency Software Development and Certain Investment Activity, (Jan. 30, 2014); FinCEN, FIN-2014-R001, Application of FinCEN's Regulations to Virtual Currency Mining Operations (Jan. 30, 2014); FinCEN, FIN-2013-G001, Application of FinCEN's Regulations to Persons Administering, Exchanging, or Using Virtual Currencies, (Mar. 18, 2013).

[13] Press Release, CFPB Warns Consumers About Bitcoin, CFPB, (Aug. 11, 2014), *available at* http://www.consumerfinance.gov/newsroom/cfpb-warns-consumers-about-bitcoin/.

[14] Press Release, At FTC's Request, Court Halts Bogus Bitcoin Mining Operation, FTC, (Sep. 23, 2014), *available at* https://www.ftc.gov/news-events/press-releases/2014/09/ftcs-request-court-halts-bogus-bitcoin-mining-operation.

[15] Kevin V. Tu and Michael W. Meredith, *Rethinking Virtual Currency Regulation in the Bitcoin Age*, 90 WASH. L. REV. 271, 301 (2015); Global Legal Research Directorate Staff, Regulation of Bitcoin in Selected Jurisdiction, The Law Library of Congress, (January 2014).

[16] Michael T. Cappucci, *Prudential Regulation and the Knowledge Problem*, 9 VA. L.

& BUS. REV. 1, 5-7 (Fall 2014).

[17] *Id.* at 8-9.

[18] Tu, 90 WASH. L. REV. at 337. The distinction between prudential and disclosure regulation can sometimes blur, as disclosure regimes are often times supplemented with prudential type features, such as collateral or margin requirements and the monitoring of activities or financial condition of exchanges. *See* David H. Carpenter, The Consumer Financial Protection Bureau (CFPB): A Legal Analysis, 2, Congressional Research Service, (Jan. 14, 2014).

[19] Carpenter, CFPB at 20.

[20] Press Release, CFTC Orders Bitcoin Options Trading Platform Operator and its CEO To Cease Illegally Offering Bitcoin Options and To Cease Operating a Facility for Trading or Processing of Swaps Without Registering, CFPB Warns Consumers About Bitcoin, CFTC, (Set. 17, 2015), *available at* http://www.cftc.gov/PressRoom/PressReleases/pr7231-15.

[21] Coinbase, for instance, has ceased offering its products in Wyoming due to onerous regulatory requirements. *See* Coinbase, Coinbase Accounts - Wyoming, (Sep. 11, 2015), *available at* http://www.coindesk.com/coinbase-suspends-operations-in-wyoming/.

[22] N.Y. CODE ANN. Tit. 23, Part 200.14(b).

[23] See, e.g., Section 8 of Clayton Antitrust Act, 15 U.S.C. § 19, although note that the exclusion for interlocking bank directors, which are regulated by Depository Institution Management Interlocks Act, 12 U.S.C. 3201 et seq., are expressly excluded. Presumably a prudential regulatory regime limiting interlocks at the state level would survive and not be preempted by Section 8 of Clayton Antitrust Act.

[24] N.Y. CODE ANN. Tit. 23, Part 200.8(a).

[25] *See* Yessi Bello Perez, "Coinbase Suspends Operations in Wyoming," CoinDesk, (June 4, 2015), *available at* http://www.coindesk.com/coinbase-suspends-operations-in-wyoming/.

[26] *See, e.g.,* Yoshifumi Takemoto and Sophie Knight, Mt. Gox Files for Bankruptcy, Hit with Lawsuit, Reuters, (Feb. 28, 2014) (discussing the bankruptcy of the of the Mt. Gox exchange which, at the time, lost seven percent of the global value of bitcoin and had over 127,000 creditors in bankruptcy). *See also* Stan Higgins, Bitcoin Miner Aquifer Files for Chapter 11 Bankruptcy, CoinDesk, (Feb. 23, 2015), *available at* http://www.coindesk.com/bitcoin-miner-aquifer-files-for-chapter-11-bankruptcy/; Stan Higgins, Bitcoin Mining Firm CoinTerra Files for Chapter 7 Bankruptcy, CoinDesk, (Jan. 27, 2015), *available at* http://www.coindesk.com/bitcoin-mining-firm-cointerra-files-chapter-7-bankruptcy/.