

Dynamic Coalition on Blockchain Technologies

IGF 2017 Substantive Paper

I. Introduction to the Dynamic Coalition on Blockchain Technologies

The Dynamic Coalition on Blockchain Technologies endeavors to bring clarity to governance approaches for blockchain technologies, smart contracts and decentralized autonomous applications. The Dynamic Coalition strives to bring together diverse stakeholders, from diverse experts to global institutions, to facilitate the development and deployment of blockchain-based applications alongside governance policies that enable innovation. The hope is that the Dynamic Coalition can contribute to the conversation around blockchain technology policy, technical development, and next-generation applications at a global scale.

II. Governance Issues and Trends in Blockchain Technologies

Since the December 2016 IGF meeting in Guadalajara, Mexico, several new governance issues and trends emerged in blockchain technologies: governance mechanisms related to hard forks in open source blockchain technologies, government adoption of blockchain-based systems for use in their own processes, the growing popularity of “Initial Coin Offerings” or “ICOs” and the resulting regulatory response, and the ever present concern for appropriate regulation of blockchain-based applications and activities.

Blockchain Governance Challenges

In March 2017, Business Insider ran a story called “A Bitcoin civil war is threatening to tear the digital currency in 2 – here’s what you need to know.”¹ The authors described “[d]evelopers, miners, and other stakeholders [] locked in a heated debate over how best to scale the network, with chances steadily rising of irreconcilable differences causing a so-called ‘hard fork’ that would split Bitcoin in two.”² The authors describe the situation in stark terms as a “crisis,” and warned that terrible things, including a steady price drop and battered reputation, would result from a hard fork.³ Commentators also predicted a loss of trust for the Ethereum protocol after its hard fork in early 2017.⁴ The Bitcoin blockchain and the Ethereum protocol have now each undergone a hard fork. Some view the hard forks as failure of the system and use them as an opportunity to criticize the technology. Others argue that hard forks represent one of the most democratic elements of the built-in governance mechanisms of public blockchains. Even for those who view hard forks positively, questions remain about whether and to what extent limits on hard forks should exist, and how to create those limits endogenously to mirror the core values of the public blockchains.

¹ Oscar Williams-Grut & Rob Price, *A Bitcoin civil war is threatening to tear the digital currency in 2 – here’s what you need to know*, BUSINESS INSIDER (Mar. 26, 2017), <http://www.businessinsider.com/bitcoins-hard-fork-bitcoin-unlimited-segregated-witness-explained-2017-3>.

² *Id.*

³ *Id.*

⁴ Kathleen Breitman, *Op Ed: Why Ethereum’s Hard Fork Will Cause Problems in the Coming Year*, BITCOIN MAGAZINE (Feb. 3, 2017), <https://bitcoinmagazine.com/articles/op-ed-why-ethereums-hard-fork-will-cause-problems-coming-year/>.

Government Adoption of Blockchain-Based Systems

Governments all over the world launched blockchain initiatives in 2017 with the aim of using blockchain-based systems to make their administrative processes more efficient, transparent and accountable. For example, Delaware launched its Blockchain Initiative in May 2016 to begin moving certain Delaware government processes to blockchain-based systems. Delaware's project is three-fold: (1) moving records in the Delaware archives to a blockchain-based archival system, (2) enabling the issuance of corporate shares on blockchain-based systems, and (3) enabling participants in the secured credit system to file notices of liens in a blockchain-based filing system. Elsewhere, Sweden is building a real property recording system for the blockchain, Dubai launched a significant government blockchain effort, Malta is developing a broad national strategy to allow the government to embrace bitcoin and blockchain innovation, and the EU Commission works to streamline anti-money laundering compliance through blockchain-based systems. Other similar government efforts abound. The questions for government blockchain-based initiatives such as these are two-fold: (1) when should an administrative legal function be moved to a blockchain-based system, and (2) what impact will doing so have on related law?

The Rise of Initial Coin Offerings

A wave of very successful Initial Coin Offerings ("ICOs") occurred in 2017. ICOs are viewed as an innovative method for raising business capital, using smart contract enabled by blockchain technology. By the end of May 2017, twenty-five (25) ICOs raised just over \$163 million, whereas in all of 2016, sixty-four (64) ICOs raised \$103 million total. Regulatory bodies were slow to move on the ICO phenomena, but by the end of July 2017, the United States Securities Exchange Commission ("SEC") issued a ruling explaining that some ICOs would be considered securities under the U.S. analysis of an "investment contract." Before the end of August 2017, the SEC would follow-up with a consumer investor alert, warning consumers to be cautious when considering whether to invest in an ICO. Meanwhile, the Government of China issued an order banning ICOs as a method of corporate fundraising. As a result, the field remains rife with unanswered governance questions, including how to coordinate national policies that affect an activity based on a borderless technology, and whether and to what extent the application of existing laws in the name of consumer protection is preferable to allowing an ICO market to develop and test the waters for new and innovative methods of economic and financial order.

Continued Debate Over Appropriate Regulation

The debate over appropriate regulation of blockchain-based activities remains a heavy focus of advocacy efforts, academic investigation, and government interest. Discussions in the United States in 2017 centered around the Uniform Law Commission's Uniform Regulation of Virtual Currency Businesses Act (a model law to guide state measures in the future), finding a path toward federal, uniform regulation, and tax relief. China remained uniformly contrarian towards cryptocurrencies, prohibiting financial institutions and third-party payment providers from accepting, using, or selling virtual currencies. This tightened control impacted bitcoin exchanges in China directly, forcing them to impose trading fees beginning in January 2017. The National Bank of Hungary issued a public statement just after the 2016 IGF meeting warning consumers

about the unregulated nature of cryptocurrencies and their related risks. In January of 2017, the Israeli central bank and Finance Ministry followed suit, issuing warnings to the public about the risks associated with cryptocurrencies.

Meanwhile, on April 1, 2017, Japan's Financial Services Agency enacted a new law authorizing the use of digital currency as a method of payment. To do so, Japan essentially categorized bitcoin as a form of prepaid access and subjected participants in the prepaid ecosystem to the same kind of anti-money laundering and consumer protection requirements as those dealing in prepaid access. Other countries also took action in 2017, most of which was along similar lines: exhibiting overarching concern for protecting consumers and enabling tight compliance with anti-money laundering regulations.

In France, pursuant to the law of 9 December 2016 on Transparency, Anti-Corruption and Economic Modernisation, and following the adoption of the legislation on mini-bonds, the Government has been granted powers until 9 December 2017 to reform securities laws so that securities that are not traded via a central securities depository (CDS) or a securities settlement system (SSS) could be represented and transmitted using distributed ledger technology. The list of securities potentially covered by the French initiative is as follows: (a) equity securities which are not traded on a trading venue and are not transferred following a financial guarantee contract; (b) debt securities which are not traded on a trading venue and are not transferred following a financial guarantee contract; (c) short term debt securities; and (d) units in collective investment undertakings. The driving force behind such legislation is that the French authorities are convinced that a robust legislative framework is needed to ensure the legal certainty of the financial transactions conducted using this technology. Thus, the French Treasury launched a consultation on the representation and transmission of certain securities via "distributed ledger technology" before proposing a draft ordinance that has now been submitted to stake-holder consultation by the Treasury.

The consultation process was very interesting, as it underlined the frictions between blockchain and regulation regarding securities laws, especially in the fields of compliance, know-your-customer, data protection law, and supervision issues. Moreover, some stakeholders emphasized that the references to distributed ledger technology should be more precise (i.e., private or public blockchains) in order to build a solid legislation or consider new kinds of supervision based on the inherent characteristics of such a technology.

The question moving forward is whether and to what extent such measures inhibit adoption of the technology, and how much of the regulatory approach to cryptocurrency will spill over to the underlying protocol technology, which can be used for a myriad of other use cases. Furthermore, it will be important to consider ways to ensure the positive effect of "technology neutral" legislation.

III. Current Efforts of the Dynamic Coalition on Blockchain Technologies in These Areas

The Dynamic Coalition carries out its work through its email list-serve and through organically formed working groups, which are composed of academics, lawyers, economists, programmers, protocol architects, cryptographers, security experts, technologists, and entrepreneurs, amongst

other disciplines. Of the ten (10) active working groups, several focus directly on the issues that emerged as preeminent since the 2016 IGF meeting: Identity & Privacy, Blockchain Governance, Regulation & Compliance, Institutional Governance, Smart Contracts, and Crypto-Equity.

The Identity & Privacy working group focuses on the fundamental problem of trust on a trustless Internet. It aims at identifying the various challenges and opportunities of blockchain technologies to the identity/privacy dilemma, elaborating potential interim solutions (e.g., federated KYC), and sketching out a variety of issues related to the developing world (e.g., persistent identity and secure land records) which may require distinct treatment. In addition, the working group explores ways in which blockchain technologies may be applied to existing AML/CTF frameworks. To that end, the group has conducted an exhaustive survey and impact assessment of current AMF/CTF policies, as applied to emergent blockchain technologies. Specific attention should also be paid regarding the entry into force of the Data Protection Regulation in Europe by the 18th of May, 2018. The economic consequences of the GDPR, its standards on privacy and the possible interactions with any regulation on blockchain could be particularly useful.

The Blockchain Governance working group investigates the intersection of law and blockchain governance, asking whether and how law can provide guideposts for blockchain governance. Inversely, the Regulation & Compliance working group aims at investigating (and elaborating) specific regulatory and policy frameworks for blockchain technology that will promote innovation and growth while preventing systemic risk, ensuring financial stability and protecting consumers and entrepreneurs against economic harm and illegal activity. These efforts are increasingly important in light of the significant and fast-paced growth of blockchain and other distributed ledger technologies. The number and variances of protocols is rapidly growing, as are the number of significantly different use cases.⁵

Relatedly, the Institutional Governance working group explores the spectrum of ways in which we can leverage blockchain technologies to address the growing deficit of accountability and trust in both public and private institutions. This can be done in two ways: (1) using blockchain technologies as a means to improve existing governance structures within an institution by improving the transparency, auditability, and accountability of its operators; and (2) leveraging new opportunities that blockchain technologies provide for the establishment of a new operational layer for human interaction that can support, complement, and perhaps replace, current governance structures. The working group addresses these questions by investigating the use of blockchain technology and smart contracts for enhanced information security and institutional governance, with particular focus on the new opportunities for technological due process and institutional accountability that these technologies provide.

The Smart Contracts working group investigates the legal validity and enforceability of smart contracts and the need for alternative enforcement or adjudication mechanisms. Relatedly, the Crypto-equity working group investigates the technical implementation and legal viability of new governance structures based on the issuance and distribution of digital tokens (often done through smart contracts). Blockchain technologies provide new ways of issuing secure and tradable digital tokens on a distributed network. Although these tokens are often described as cryptocurrency, they

⁵ As to new use cases, see, e.g., <https://www.forbes.com/sites/delltechnologies/2017/06/27/how-blockchain-could-revolutionize-the-internet-of-things/#588435906eab>.

have many other potential applications, ranging from traditional stocks and securities, claims to an underlying property title, proof of ownership over specific assets, voting rights or other privileges within an organization, and many other use-cases. The purpose of the Crypto-equity working group is to examine the benefits and drawbacks of blockchain-based applications from the standpoint of existing legal infrastructure.

The Ethics working group works to inculcate a culture of healthy social and ethical norms that foster individual and collective responsibility. The working group asks what kind of values can be baked into a blockchain-based system, and queries whether those involved in developing the technologies can ensure they empower people, as opposed to replicating or exacerbating prevailing societal inequalities and power dynamics.

IV. Issues and Questions Calling for Further Exploration

The Dynamic Coalition on Blockchain Technologies sees many governance policy issues emerging as a result of the trends discussed above, which its working groups will continue to explore, including:

- How does the dichotomous move of some governments, on the one hand, adopting blockchain technologies for use in government processes, and other governments, on the other hand, criminalizing certain uses of cryptocurrencies, impact the future of the technologies' use and the trajectory of governance mechanisms?
- What social changes could Blockchain put in effect in a community in order to foster social goods?
- Is there a role for Blockchain in reducing inequalities?
- How can Blockchain developments be allied to sustainable development?
- Should developers build solutions to these questions with the over-arching governmental concerns with consumer protection and anti-money laundering in mind? If so, how do they achieve that? If not, how do developers prevent walking into a regulatory conundrum like that faced by ICOs?