

Regulating for Blockchain Ecosystem Development Means Getting Past the Stumbling Block of Regulatory Incrementalism

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Abstract

An incrementalist strategy based on the single supporting column of engagement with public capital has been adopted by policymakers in response to the disruption caused by blockchain-based crypto assets. In order to avoid the consequences of incrementalism, this paper examines why we need to rethink how we oversee cryptoassets. It also suggests how we may create a more significant regulatory response that better takes into account the core features of blockchain technology.

Introduction

Blockchain's disruption—first with Bitcoin's constrained capabilities, then Ethereum and all that followed—has not been matched by any significant advancements in the way that it is seen from a regulatory perspective. Financial regulators' application of financial rules to cryptoassets is widely accepted by institutions (the "standard narrative"). This paradigm is often hailed as having improved consumer protection, systemic risk problems, and industry reputational protection from those who would abusively attempt to profit illegally from the buzz around blockchain. A Wild West atmosphere was somewhat subdued by the early implementation of financial regulation. For the most part, this was and still is enforcement-based. However, the precise and constrained mission of financial regulators contrasts sharply with the potential offered by blockchain, which may go well beyond the goals for which such a mandate was created.

The suitability of the conventional narrative paradigm, its influence on how the industry develops, and the potential that opportunities offered by blockchain and opportunities to test it are being needlessly postponed, blocked, or preempted have all received insufficient consideration. How did we get here, and what can we do next?

Regulatory incrementalism

When presented with a novel policy issue, policymakers' response is often influenced and limited by both explicit and implicit information about the nature and extent of the issue. By identifying a comparison based on current

procedures, then attempting to implement an already-existing remedy—financial rules in the case of cryptocurrency. This is known as regulatory incrementalism, and it is not inherently harmful. It tends to maintain the status quo, draws on experience, and permits a

gradualistic growth of standards that minimises disturbance. Let's take a step back. It makes sense that incrementalism works best in situations where change is gradualistic, yet blockchain is generally recognised as a cutting-edge, disruptive, and disintermediating technology that is completely different from what was feasible in the 20th century. The techie saw the implementation of financial regulation as a radical change that was not incrementalist at all.

Regulatory incrementalism promotes a conservative mindset that tends to operate against creating better responses to new fact patterns when the predicate of an incrementally evolving fact pattern is missing. This leads to the adoption of less policy options and a stronger focus on risk reduction than goal facilitation, both of which are characteristics of the conventional narrative.

The European experience serves as an illustration. The European Parliament recognised in a 2018 resolution the wider societal advantages of blockchain technology to transform value chains independent of banking sector issues. However, with its planned Markets in Crypto-assets ("MiCA") legislation, Europe has recently embraced a predominantly financial regulatory agenda. MiCA is still based on a perspective that is focused on how cryptoassets affect payments and monetary policy on a systemic level.

The inclination to see innovation as something that happens naturally and to solely consider regulation from the viewpoints of risk management and market failure is an inadequate picture. Innovation may thrive when there are favourable legal circumstances in place. However, since it contains presumptions about the design of commercial endeavours that could not align with the opportunities presented by blockchain, the conventional narrative limits blockchain innovation. Additionally, identifying answers within the current

regulatory framework diverts effort from the development of other tools that are possibly more effective.

Institutional preferences and mantras

Within its own account of reality, the implementation of securities rules is sufficient both philosophically and factually. Ample freedom is provided by flexible functional tests of what constitutes a security, such as the Howey test in the US or the concept of a collective investment plan under other legal systems. Additionally, it aligns with institutional preferences for well-known investment forms. The ability for investors to obtain the legal opinions they were familiar with—namely, that securities were being offered in accordance with an applicable exemption from securities laws—was one of the key components of the transition from the initial coin offering (ICO) to the securities token offering (STO). Professionals with links to the financial sector who wanted to use their knowledge of established markets to new business ventures would also benefit from it. Regulatory agencies, which could partially depend on such experts as control gateways and as hubs for research and experimentation, benefited from this. However, it also meant that future public blockchain ideas that did not cleanly fit within that framework may get less funding from

investors seeking legal clarity. "Same business, same risks, same rules" and the need that regulations be "technology neutral" are two often heard catchphrases in this context. The first mantra, which is built on a vertical hierarchy centred on investors as financial capital providers, a business that employs financial capital, and the consumers of goods or services that are ultimately created or given, is firmly rooted in institutional presumptions. Although blockchain may sometimes support these institutional arrangements more effectively, to stop there would be to ignore the fact that blockchain opens up hitherto unattainable opportunities for the development of business partnerships, institutional arrangements, and community connections. This involves creating opportunities for organisational structures that are more networked and flatter than hierarchical, a general move away from hierarchies as economic activity coordinators and toward markets, and as a result, new models for economic coordination and governance. The second repetition ignores the fact that effective policy development probably requires interaction with the technology at a more basic level and that the new opportunities provided by blockchain are really about the technology. Technology agnosia is not implied by technology neutrality. These catchphrases are deceptive tactics that prevent further in-depth investigation and have a tendency to focus regulatory thinking on current practices that uphold an institutional status quo. For instance, since they are based on existing exchange structures, centralised cryptocurrency exchanges may achieve the reputational badge of being subject to regulatory monitoring; decentralised exchanges, on the other hand, cannot, even if they perform the same exchange activities. It is difficult to overlook the significant telescoping of blockchain's potential for institutional transformation, which has led to its progress being pinioned by the conventional narrative in a number of ways and painted into a corner to supply financial goods. Decisions about capital allocation have been impacted, which has impeded the capacity for experimentation and innovation. As a consequence, the ecosystem development environment has become skewed, which might be an exclusionary factor preventing institutional innovation. This has an impact on the industry that cannot be ignored, and the implications need to be considered. It's possible that placing blockchain under financial regulation unintentionally increased interest in cryptocurrency assets as speculative investments. As a result, the business idea of disintermediated trade that might be carried out via a digital medium today faces competition from a crypto-finance industry that is still unstable, prone to abusive activities, and has few effective monitoring areas. The lack of effective rules that define and manage market misuse in cryptoassets is what makes this more difficult, even with the protections suggested by the application of financial regulation.

The stumbling block

Both the governance features of such amazing consensus-based transformations and the unique ability of blockchain to record anything of value as a tradeable information object—information and value thus being interchangeable—are seldom mentioned in the conventional narrative. However, this aspect of information/value interchangeability could be the ideal illustration of how economies are built on the value of information. Such an idea of information value served as the foundation for both Timothy May's experimental information market, BlackNet (1993), and Phil Salin's American Information Exchange (1984). But at the time, blockchain technology had not yet emerged from the debates that preceded it, leaving only more approximative methods for turning information

or value into a distinct, tradable entity. This has been dubbed the "tokenisation of everything" in the post-Ethereum age; in theory, a cryptoasset might represent anything of perceived value, whether it be material or intangible. It is appropriate to refer to cryptoassets as the currency of an information economy as they symbolise the intersection of value and information. This is not money in the narrow way that central banks or Aristotle define it. Instead, it is currency in the sense that information objects, or cryptoassets, are widely recognised or ubiquitous due to their common expression, which makes them exchangeable. Therefore, "cryptocurrency." Regardless of what it represents, a cryptoasset may be generated, owned, stored, evaluated, valued, utilised, swapped, transacted, sold, and so on. This could be anything from a right to do or acquire something to a proof of ownership like a car registration certificate or an artwork, carbon footprint data that is visible to everyone but unchangeable by anyone, or a dynamic NFT (non-fungible token) that enables the value and exchange of sustainability-related knowledge. Policymakers and regulatory bodies have faced a fundamental dilemma in trying to integrate cryptoassets into the current regulatory silos of money (or store of value), securities (whether by design or function), and commodities due to the virtue of interchangeability. This strategy has been problematic from the beginning since, among other things, all cryptoassets as information objects are really just a representation (or storage) of value. This contrasts sharply with the unique rigidity of money, securities, and commodities as they are usually conceived, which are largely based upon and differentiable by their form and function.

Policymaking for ecosystem development

Initially an effective temporary solution, the mainstream story has not much changed. A financial regulator's goals scarcely appear to include investigating other options that would fall outside of its purview and need a break from statutory beginnings based on centralised forms of operation. Asking a securities regulator a query will result in a securities regulation response, and within that narrow context, it may be quite reasonable to build a regulatory response based on the one supporting column of engagement with public capital. There hasn't been much need for policymakers to challenge an established worldview that upholds the current quo. However, the more one explores the limits of blockchain as a general-purpose technology (rather than any particular product), the more that structure begins to resemble a shaky legal device. The conventional narrative has enabled a whirlwind of activity around financial goods and decentralised finance, rather than observing the formation of a polymorphic ecosystem. According to SEC Commissioner Hester Peirce, the current course of action does not provide a clear route for the emergence of a functional cryptoasset network. When creating and releasing a cryptocurrency that may not comply with a conventional financial regulatory framework, the ex post facts-and-circumstances enforcement strategy that emerges from the normal narrative causes a great deal of confusion. In contrast to an ex ante approach, which may be more cost-effective in complex scenarios like the blockchain landscape where policymakers have less information about participants who are quite diverse, it arguably creates unreasonable costs for developers by requiring compliance from many people. It will be more beneficial for ecosystem growth if policymakers acknowledge and address blockchain's qualitatively distinct features from those outlined in the conventional narrative. By doing this, it may encourage the

development of regulatory oversight systems that better serve society's interests in the more thorough investigation of blockchain technology. How to do so is the question. Developing cryptoasset taxonomy has been one strategy. However, they often vary from being descriptive and responsive to the most recent market or regulatory trend to being a restatement of the previously described triarchy. Tasca and Tessone's taxonomy tree offers a more promising bottom-up method, while it is still mostly descriptive.

DBA framework

Examining the technology's internal workings to determine what could be pertinent to regulation is another strategy. This is comparable to moving the conceptual level of investigation from molecules to the atomic elements that make them up. As new methods of setting the "atomic elements" are discovered and applied to new use cases, it would be feasible to provide a more sustainable regulatory framework if such elements can be identified. Such a strategy would put into practice a previously stated argument, which is that any blockchain legislation must be aware of and sensitive to the real workings of the technology.

Bonneau et al.'s technical study, which identifies three axes around which blockchain technology often revolves, is an intriguing example in this respect. Specifically, decentralisation in the form of an ad hoc peer-to-peer network of participants, a consensus mechanism that permits agreement on the state of data maintained by the network, and public-key cryptography that permits safe transactions. According to my proposed Determined-By-Architecture ("DBA") paradigm (see Figure 1), questions that are more pertinent to ecosystem growth may be raised if regulatory supervision were focused on problems that arise across these three axes. For instance, how the consensus method affects decentralisation or if cryptographic design promotes interoperability. Understanding that a blockchain's performance in the field relies not just on the technical features of the implementation (design elements, lack of bugs, unexpected qualities, etc.) but also on social behaviour is a crucial overlay to this technological layer of governance. It might be challenging to predict how actors could try to manipulate a certain blockchain version or develop self-organising tendencies. Information sharing in the blockchain context may lead to the emergence of stigmergy. As a result, aim and results may differ due to the interplay between the code's technological infrastructure (the "internal dimension") and social behaviour (the "external dimension").

The interplay between the internal and external dimensions creates problems related to code governance, specifically the arrangements that instill or enforce order and entice (or do not entice) the pursuit of activities deemed desirable (either within the specified objectives of that chain or, more broadly, socially). Governance processes may be badly designed, manipulated, misused, or just provide insufficient ways to address problems in the future. Acknowledging problems resulting from these interactions also raises more pertinent regulatory challenges, such as how the various capabilities granted to nodes in a network affect network activity or how a consensus process divides power and may favour certain token holders over others.

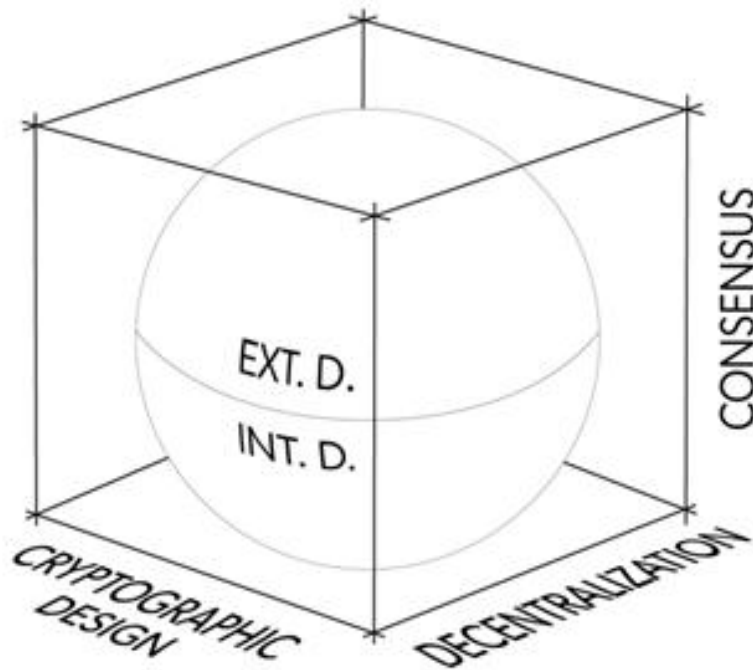


Figure 1: The DBA framework. A blockchain iteration can be characterized by three axes and its internal and external dimensions.

The DBA framework makes it possible to ask a variety of questions and concentrate on topics that are important to the business and customers. Crucially, it may mitigate the danger of a cryptoasset being regarded differently at various periods by avoiding an outcome-dependent formulation of regulatory taxonomy based on fitting a cryptoasset ex post into the historical triarchy of money, securities, and commodities. Legislators must begin considering blockchain in terms other than the "investment purpose" that is implied in the conventional narrative paradigm and begin speculating about potential new regulations. The goals of the present regulatory organisations, the scope of their activities, and whether or not they are appropriate for regulating blockchain-based activity must unavoidably be discussed in order to pursue a more informed regulatory strategy. Beyond some conventional financial capital transactions, financial authorities are ill-suited to control blockchain. In order to determine and restrict the boundaries of potential financial regulation, it will be important to investigate what kind of agency should be established and what authority it would have. The paradox is that the development of a polymorphic ecosystem is contingent upon the availability of a more appropriate regulatory paradigm. To make progress, the current regulatory framework, as well as the attitude and immediate concerns of today's regulators,

must be drastically altered to take into account the bigger frames of concern. This covers everything from the appropriate role of regulation in addressing society's urgent needs to the opportunities made possible by blockchain, the dynamics driving regulatory policymaking, and the implications of the conventional narrative on the technology's growth arc.

This essay is based on Syren Johnstone's *Rethinking the Regulation of Cryptoassets: Cryptographic Consensus Technology and the New Prospect* (Edward Elgar Publishing, 2021).