

# Decentralized Financial Regulation

## A Primer for an Innovative Decentralized Regulatory Framework for Financial Services

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# Paper Overview

The regulation of financial services in modern western societies is effected through centralized regulatory bodies exerting government-granted authority within a defined territory. This fragmented, territorial-based framework lends itself very well for the regulation of local, centralized financial services within a territory, but is difficult to apply to innovative, increasingly global and decentralized financial services. It is evident that this regulatory framework must evolve to keep pace with the services they supervise.

Part I of this paper outlines the evolution of territorial regulatory practices and discusses the drawbacks of centralized frameworks both to financial services and society as a whole. The paper argues that the current global regulatory system suffers from fundamental flaws and argues that a revision of the underlying foundation of regulation should be revisited.

Part II of this paper introduces the basics of an alternative, decentralized and privatized regulatory framework. The paper argues that this innovative system could be applied such that it corrects many of the flaws outlined in Part I. A decentralized regulatory body is outlined, fundamental principles described and the paper then proposes how such a regulatory body could be utilized to regulate financial services.

Part III of this paper discusses the risks and challenges of a decentralized regulatory framework and theorizes on how such a framework could be implemented and adopted globally.

## Introduction

We live in a world of ever increasing regulation. Regulatory bodies found around the world have cemented themselves into the very ethos of the investment infrastructure and practice, supported by government edicts and legislation. The regulatory framework we know today has evolved over centuries to become the sole gateway by which legitimate financial services may be provided, supported by coercive measures and often with little or no direct private stakeholder input.

This framework has no doubt served society very well – these centralized regulatory bodies were able to protect investors, ensure adequate disclosures are provided, adequate capital reserves held, prevented conflicts of interests and restricted malicious actors from easily taking advantage of an unsuspecting or unsophisticated public. This regulatory framework is able to effectively oversee activities and services being offered by centralized financial service providers – it can seek out needed information, monitor activities taking place and enforce a set of standards.

Yet this system is now faced with an important conundrum – it is territorial, meant to supervise a limited geographical area in a world that is increasingly more global in nature. Digital Asset services such as decentralized finance are now by-passing traditional third parties, infrastructure and processes – taxing regulatory enforcement of traditional regulators. Indeed, regulators today struggle to enforce traditional territorial standards on products and services which have become increasingly global and digital in nature. Financial service innovators are revolutionizing how financial services are delivered by applying recent developments in cryptographic and blockchain technology. Yet, this very same technology also has the potential to modernize the regulatory infrastructure governing financial services.

Though financial service regulators around the world have made great strides in recent years, there exists a disconnect between territorial-based regulatory standards they wish to enforce and the global nature of next-gen financial services. Cross border transfers which occur without a centralized intermediary (such as the SWIFT network), innovative custodial practices which utilize new cryptographic technologies instead of safes and reinforced premises, and the decentralization of previously localized server stations are only a few of the issues faced by regulators. Not only do digital innovative financial services make oversight and enforcement of activities and participants very difficult for the regulators, the territorial-based obligations imposed by traditional regulators make compliance impracticable for financial service providers wishing to operate on a global level. Digitization of services is changing the world, and both regulators and regulated entities must adapt to progress

This paper purports that territorial-based, government-controlled regulatory bodies are not the ideal system to regulate innovative financial services sectors. It proposes and describes a new decentralized system which is meant to be global, adaptable, dynamic and resilient. This paper is presented as a means to spur discussion around this topic and, with any luck, encourage innovation in the global regulatory space. We argue that investors should have a choice of how their investments are regulated, and that the invisible hand of free markets would greatly improve a rigid regulatory infrastructure. We believe it comes at a crucial moment in the evolution of financial services and that it offers a compelling argument towards redefining and revising how financial services are to be regulated in the modern digital age.

## Key Concepts and Scope

We understand this paper may be read by a wide range of individuals with diverse backgrounds. While the paper seeks to remain broad and high-level, some underlying key concepts must be defined to ensure the scope of the paper is clear.

The term “regulation” is commonly understood to mean “the rules or systems that are used by a person or organization to control an activity or process, or the action of controlling the activity or process”<sup>1</sup>. This paper uses the term “regulation” to mean the latter with regards to the provision of financial services – that is, the process of controlling how financial services are provided to users within a regulator’s territory.

The term regulation is also often applied to the oversight of Anti-Money-Laundering requirements within a jurisdiction. As this paper proposes a regulatory framework which is voluntary, the paper only includes the regulation of financial activities insofar as they relate to consumer/investor protection and market stability. The use of the term “regulation” does not therefore include the oversight and implementation of Anti-Money Laundering and Countering the Financing of Terrorism requirements<sup>2</sup>.

The use of the term “decentralized” must also be understood in the proper context. Traditional regulatory bodies are institutions with an exclusive right to oversee specific activities within a given territory. This paper offers an alternative to such establishments – where any number of private or governmental “authorities” may supervise an activity. These authorities would not need be limited to a territory or geographical area, thus “decentralizing” the foundational structure of financial regulation.

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1 As defined in the Cambridge English Dictionary, 2023

2 We understand that a voluntary framework would not be effective in preventing such activities and oversight of these requirements if best left for Government Authorities.

# PART I

## Local Regulators for Global Activities

Regulatory frameworks have evolved as a geographically-bound system over time – implementing societal standards on local markets with little concern of requirements or standards outside their designated territory. While some efforts have been made to harmonize standards over larger geographical areas, this gradual localized evolution has, on a global level, yielded a highly fragmented complex regulatory tapestry which is often difficult to navigate for entities operating globally or even nationally<sup>3</sup>.

There are clear and obvious benefits to territorial regulatory frameworks. Territorial-bound regulators are the most efficient way of applying regulatory standards within a specific geographical area. The local regulatory body can implement societal standards in the services it oversees, quickly become aware of breaches to its requirements due to its close proximity of the clients and entity delivering the service, and enforce the standards via government edicts in an prompt manner through the application of fines or the use of the legal system.

Territorial-bound regulation begins to unravel when the financial activities it oversees transcend the geographical limit of a regulatory body's sphere of influence. Indeed, the regulatory standards between two territories may differ significantly and are often times difficult to harmonize, flows of value beyond a jurisdiction are difficult to trace, and international actors are difficult to enforce against.

The advent of digital technology has already revolutionized financial services delivery. However the existing digital infrastructure and structure of financial service providers have operated under a high degree of centralization – where a small amount of centralized providers were able to efficiently service a large client base. Entities operating a bank and serving persons within a local jurisdiction had to undergo strong scrutiny and comply with robust requirements when sending funds internationally. The banks were highly localized with bricks and mortar branches which were still necessary for the delivery of its services, and had highly geographically based governance and operating structures. The internet of the 1990-2015 did much to improve financial services, but the centralized nature of service providers kept services controllable by the localized regulatory frameworks. Financial services providers remained highly centralized, and thus local regulation continued to be effective.

## Centralized Regulation for Decentralized Entities

The widespread application of cryptography in the delivery of financial services, as well as the development of decentralized delivery channels are yet again changing the manner in which financial services are provided. The application of innovative technologies such as blockchain databases, the distribution of open source code, decentralized governance models and pseudo-anonymous fungible assets pose a fundamental and existential test for the localized regulation paradigm.

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<sup>3</sup> For example, an entity that wishes to offer securities related financial services in Canada must monitor and comply with requirements from 13 securities regulatory bodies – each with their own sets of forms, penalties, standards and practices – a daunting task.

Indeed, while localized regulation was effective in supervising centralized entities, regulators face greater headwinds when attempting to regulate entities or systems which are increasingly decentralized. Monitoring activities, enforcing standards, issuing fines and obtaining information from service providers is challenging when the very structure and nature of these providers is fluid and nebulous. After all, enforcing against and shutting down servers and systems is near impossible when code is distributed globally such as is the case with node-based blockchain infrastructure. Transactions are difficult to follow when they can use any of thousands of inter-operable value transfer mechanisms.

While we agree that truly decentralized (in other words, without a central governance effecting control over an activity) frameworks are few and far between, it is evident that many innovative service providers are making great strides in decentralizing certain functions in the services they provide. This is a trend we assume will continue going forward as it offers clear benefits of scale and efficiencies from automation. Localized regulators can therefore continue to exert some degree of control and oversight on financial services today, however this may become more and more difficult as the decentralization trend continues and we suggest a revision of the manner by which decentralized financial services are regulated is now overdue.

## Mis-Pricing Risk

Not all types of risk are created equal. There are some risks which are unwanted on a societal level whether due to existing moral ideals or historical precedent in a society. For example, one could argue that disclosure rules were created and enforced by regulators because society frowned on the malicious distribution of false or misleading information. Society as a whole agreed, in time, that such a risk should be minimized and sought to apply regulatory principles and obligations in order to do so. Many more such “unacceptable” risks have been identified and targeted in a similar fashion, such as the risk of a fiduciary advisor with insufficient knowledge of expertise, a custodian not taking adequate and sufficient means to prevent loss of an asset, using insider information to make a profit, or not having adequate measures in place to mitigate market and other risks. Modern societies have opted to minimize such risks through regulation in financial services.

We should therefore draw a distinction between two types of risks – risks which a society tolerates and risks which a society finds unacceptable. The risk of an investment or project failing because of unforeseen market conditions, supply issues, lack of consumer demand are types of risks which societies see as “tolerated” – if only for the fact that they cannot be easily minimized without extreme measures. Indeed, market participants would be hard pressed to attempt to maximize customer demand for a service by regulatory requirements – though this has been attempted indirectly as we discuss in this paper<sup>4</sup>.

It is understood that the investment of capital with the expectation of a return must include risk and that one of the primary roles of a financial market is the efficient pricing of this “tolerated” risk. Indeed a discrepancy between an investment’s priced-in risk and actual risk often leads to an arbitrage opportunity for savvy investors. While it is the desire of every investor to minimize risk, it is also impossible for investors to eradicate all risk from an investment. The ability of a market to identify and price risk and properly apply the consequences of this risk are the cornerstone of any efficient market. It is the role of the regulator to minimize “unacceptable” risks, while the role of the markets is to efficiently price “tolerated” risks.

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<sup>4</sup> For example, by regulating that investors may only access certain classes of services at the exclusion of others.

Yet we have seen this principle blurred in recent years. Western regulators have, through their concern with maintaining a “stable economy” or similar mandate, sought to blur the line between tolerable and unacceptable risk for the sake of the greater good – thereby throwing a wrench in the market pricing mechanism. We refer of course to the recent market turmoil in 2006-2009 where innovative products (mortgage backed securities first implemented in the 70’s and 80’s) had become so large that a collapse would pose significant risk to the stability of the markets. Regulators were incentivized to turn a blind eye to certain risk indicators and some say even actively participated in the proliferation of that asset class. With the cooperation of rating agencies, mortgage back securities were severely mis-priced for decades.

The centralized nature of regulatory bodies, combined with their lack of transparency poses a considerable threat to efficient pricing mechanisms. The knowledge and expertise required to both participate in, and therefore regulate complex financial activities is such that the talent pool is extremely limited. Thus, there is strong evidence of a “revolving door” between market participants and regulators – where individuals move from one to the other on a regular basis. Such a mechanism has the unfortunate effect of favoring certain services or providers over others, eroding the neutrality of a regulator and affecting efficient pricing of products.

Market pricing is affected by many factors – the opportunity cost of capital, its availability, market conditions or government interference and is not solely dependent on regulatory oversight. However the neutrality of a regulator is a key element and we will argue that the centralized nature of a regulator and its lack of transparency both contribute significant risk to markets today.

## **Rigid Regulation for Fluid Markets**

The need for a revision of regulatory frameworks is not limited to tackling an increasingly decentralized financial services sector. Indeed – it is a law of nature that any organism, body or natural system must grow and contract in order to evolve. Everything we see around us, the stars, planets, oceans, landmasses, ecosystems, organs, cells, atoms, sub-atomic particles must expand and contract in order to adjust to outside circumstances. Similarly, private enterprises are very familiar with the ebbs and flows of business cycles, while a family unit must adapt to lean times and appreciate times of plenty. These expansions and contractions are necessary, and healthy for any organism; contractions force the entity to shed needless elements while expansions allow the entity to benefit from growth.

Countries and government bodies are subject to these very same forces. The citizens within a jurisdiction, the economic activities taking place within also contract and expand as they will based on the availability of new technologies, weather patterns or any other such influence. Government however (including regulatory bodies) have been built upon a foundation that allows them to bypass a large portion of the forces which prompts cyclical contraction. Whether this is caused by the availability of money printing in fiat-based monetary systems<sup>5</sup>, legislation<sup>6</sup>, political pressures<sup>7</sup> or other means is beyond the scope of this paper. We suggest however that government bodies do not suffer from contractions in a manner that coincides with contractions like those of a private enterprise.

Due to this, governments around the world have been able to grow in a manner disproportionate with the entities and persons they govern. By forgoing (or lessening) needed contractions, systems

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5 Which may allow a government to expand the monetary base to weather a reduction of tax-revenue.

6 As is the case with functions which are created and maintained by legislation which may not account for cyclical contractions.

7 A government may wish to maintain a certain level of regulation regardless of market forces for political reasons.

and processes were allowed to grow and expand on a continuous basis over centuries. As a result, the regulatory burden on financial service providers continues to grow and many regulatory bodies seek to further expand this burden to regulate the decentralization of financial services. This regulatory bulk makes dynamic and swift adjustment increasingly difficult for regulatory bodies, whom are burdened by entrenched and growing regulatory processes and procedures.

This growth and “complexification” has made understanding – and indeed complying with – regulatory standards increasingly difficult. Whereas a business with relatively small overhead and modest expertise in regulatory matters was once able to engage in financial services, increasingly complex regulatory systems make it a near requirement to engage an army of highly specialized experts in order to understand and apply processes to meet regulatory requirements. While some might argue that the “complexification” of regulatory frameworks has been beneficial to the sector (in that it ensured a greater level of risk-mitigation for end users and stability for markets in general) we argue that the complexity of regulation also serves to create a walled garden within financial services. Only enterprises with sufficient capital to engage the needed regulatory expertise are able to meet this burden and thus provide services, pushing away new entrants, needed innovation and the evolution of the financial services industry.

## Regulating an Unfair Advantage

Whether by design or not, existing regulatory frameworks have also adopted a highly-risk averse approach to regulatory policies and requirements which has served to segregate society. A regulator, being an entity which depends heavily on its reputation, seeks to minimize risk whenever it can and in any location it can in order to prevent negative events from occurring within its realm of influence. We take for example the requirement of many regulatory frameworks to be a “sophisticated investor” or “accredited investor”<sup>8</sup> in order to participate in certain financial services products and services. While the main justification for this requirement is said to be to prevent unsophisticated investors from participating in a product or service they many not understand (which may be the case in many instances), this requirement has also had the unfortunate drawback of preventing persons who may benefit the most from certain products and services from participating in them.

Indeed, “sophisticated” investment products are often times the products which tend to carry the greatest risk, but also yield the highest returns<sup>9</sup>. On the other hand, the retail investment solutions offered to “unsophisticated” persons often yield returns diluted by a complex and large overhead of fees and advisors. Participating directly in “sophisticated” products could allow persons (who are able and willing to assume the risk despite falling outside of the requirements to become a sophisticated investor) to benefit greatly from associated returns on those investments. The recent Initial coin offering boom which took place from 2016-2019 shows this clearly. During this time a new class of assets was developed which by-passed the traditional financial infrastructure and sold directly to end users without any prior checks or balances found in traditional finance. Persons who would not otherwise be able to participate in “sophisticated” investments were quick to participate and get involved in this type of investment. Many such investments returned negative yields but many also yielded great returns for investors - offering “unsophisticated” participants the opportunity to considerably grow in wealth. Indeed, they have since been known to be a new class of wealthy individuals known as the “crypto wealthy”.

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<sup>8</sup> The determination of what consists of a sophisticated investor varies by jurisdiction. However, it is most often linked to a person’s wealth and/or expertise such as a license or certification. It is a distinction which is, by definition, difficult to obtain for the average retail investor.

<sup>9</sup> For example, by participating in a private placement prior to shares being offered to the public.

This is a clear example of how the “sophisticated investor” requirement in traditional financial frameworks limits the growth potential for a certain class of citizens, segmenting the “unsophisticated” from the “sophisticated” in growth of wealth – in effect making the rich richer when compared to unsophisticated individuals. While we do acknowledge that many investors lost considerable sums of capital in the crypto period, the unregulated nature of these assets leveled the playing in a manner of speaking, giving the poor and the rich the same opportunity to lose and gain from their investments. This was a clear effect of the de-regulated nature of initial coin offerings at the time. While we agree that the ability to assume risk may very often be a function of wealth for many investors, we would suggest that this arbitrary measure does cut out a large portion of the society from accessing significant investment opportunities.

## **Weaponized Regulation**

Any centralized system provides, conveniently, a central, identifiable group of persons or individuals who control and govern said system. Traditional regulatory frameworks also rely on a central body of laws, rules and regulations which can only be changed through a political legislative process. While this may offer some resilience and strength in preventing arbitrary and rash changes from being put in place, it also offers an attractive target for persons or individuals who may wish to influence decisions or policies implemented by the regulatory body.

Most western societies have implemented restrictions on how regulatory bodies and those involved in their operation may operate in financial markets. It would, after all, be very difficult to justify why the director of a securities and exchanges department may invest in the very companies his organization oversees. Regulatory bodies are structured in such a way as to separate the regulatory process from the political process as much as possible in order to prevent regulatory processes from being politically weaponized against a politician’s competitors. Yet, the regulatory process remains integrally linked to the political as it is the political process which creates the laws which govern the regulator.

Legislative-based traditional regulatory frameworks allows individuals, groups, lobbyists or other entities to influence the passing of legislation for one purpose or another, thereby binding the regulator to enforce the change. The very nature of legislation also makes the process of identifying and removing unwanted provisions in a law tedious, difficult and politically costly, especially when it goes against the wealthy and/or powerful entities who lobbied to put them in place. This has for effect to quasi-permanently cement politically charged policies in regulation.

It is not within the scope of this paper to list out instances where a regulatory process was captured or politically motivated, but rather to simply note that the centralized nature of today’s regulatory system offers an attractive identifiable target for nefarious actors who may wish to raise barriers to entry in a particular sector (thus reducing potential competitors from entering the market), restrict who can use/benefit from a solution or service, impose capital or trade restrictions, or other such restrictions on a market. Such actors would simply need to interfere in the creation of policy and the creation/passing of legislation, influence a person placed in a key position in the bureaucratic process or even the regulator itself. Such policy or legislation would need to be implemented by the regulator, thus eroding the independence and impartiality of the regulator.

## **Behavior Modification Through Regulation**



Traditional regulators have as their core objective to minimize unacceptable risks within financial markets. However how are these risks identified? Regulatory policies and requirements have evolved over centuries in a number of different ways – mainly via established common-law precedent (at least in today’s western societies). The Rule Against Perpetuities for example, governing how long trusts may exist for, was first created and conceptualized in the 17<sup>th</sup> century via important court decisions<sup>10</sup>. It was gradually adjusted, tweaked, evolved and finally formalized in legislation in most western countries – many of which maintain it to this day.

This very gradual evolution of standards has had the benefit of allowing a slow, tried and tested buildup of a society’s regulatory policies over centuries. Whenever a new technology, financial product or service raised a particular dispute, the courts would adjudicate whether society should or should not, or how it should, tolerate the activity. This process took into account a large body of precedents, human rights and other considerations in making decisions.

However a new trend began to emerge as regulatory frameworks began to grow and concretize; regulatory policy-making shifted from common law courts to politically created legislation and regulators were given greater powers to by-pass the courts when creating and implementing regulatory policy. This shifted the focus of policy making to protecting investors and participants as opposed to the consideration of common law legal precedent human rights. Whenever an issue, product or service exposed a retail investor to an identifiable risk – especially risks which could easily be mitigated - regulators began to implement policies which minimized those risks. While this was arguably good for the average, “unsophisticated” investor, it also had the unfortunate effect of gradually and quickly reducing the choices available to all retail investors and removing the right of the society to intervene and participate in the creation of regulatory policy.

The freedom of an individual to choose how he wishes to invest his hard earned capital was, bit by bit, eroded and taken away – for his own protection. Today if such an investor wished to invest in a high-risk asset – he has to navigate a plethora of disclaimers, waivers and warnings before he is able to invest – if he is allowed to participate at all. We can see this trend today in the digital asset sector and the growth of regulation around its activities. Where the participation in a new crypto venture was easy a few years ago, it has become increasingly difficult (and often times impossible) for persons to do today.

The gradual evolution of regulatory policy from common law courts to a political process is further exacerbated by recent trends to incorporate powerful not for profits in the development process. We would argue that this practice, while it may be well-meaning, has the unintended consequence of further widening the gap between individuals in a society and the regulation that governs their investment actions. Where members of a society could influence the governments that develop regulatory policy by voting, protests or other methods involving freedom of speech, the direct influence of a country’s citizens on a global policy-making not for profit is nebulous at best. Global not for profits are often times unelected, and often times heavily influenced by powerful industry stakeholders<sup>11</sup>.

While it is not the intent of this paper to investigate the causal relationship between the objectives of global not for profit policy groups and the wishes of individual citizens, we are curious whether it is the citizens which influence the objectives of these not for profit entities, or the not for profit entities which influence the opinions of the citizens (through private-public partnerships for example). If it is the latter, regulatory policy could prove an effective means to influence a society’s

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10 See [https://en.wikipedia.org/wiki/Rule\\_against\\_perpetuities](https://en.wikipedia.org/wiki/Rule_against_perpetuities) for an explanation of how this rule evolved over time.

11 Such as the World Economic Forum: <https://www.weforum.org/partners/#search>

behavior by implementing standards and requirements on financial activities which must comply with a given policy aim<sup>12</sup>.

This is an important emerging trend in global regulatory policy and should be properly assessed to ensure standards and policies promoted by such entities are in line with the wishes and expectations of the societies they are imposed on, how such influences could be corrupted or coerced and how the democratic process is respected.

## Emergence of a One-World Regulator

As noted previously, the delivery of financial services is evolving, prompting a need for reform in how service providers are regulated. Two trends are leading this need – the growing global nature of financial services and the increasingly decentralized nature of its products and services. So how can the regulatory environment adapt? What are some possible solutions?

There are three main options available to today's regulators and governments; the first is to increase the degree of cooperation between regulators globally while retaining regulatory independence; the second is the harmonization of regulatory processes and policies and finally the creation of a global regulatory body charged with oversight of global financial activities. By all evidence, regulators today have opted to implement a blend of all three of these options. Indeed, global standard-setting bodies<sup>13</sup> are growing in importance, and regulators globally are relying on policy and recommendations written by these very bodies when creating policy locally. Many of these supra-national organizations create and publish standards and "rate" member states' adoption and implementation of those standards. Refusal or failure to implement these standards usually come with very harsh and complex penalties for non G7 countries - such as being included in gray-lists, increased cost of borrowing on a national and private level, lower capital investments due to apparently weak local economies, erosion of critical banking relationships, reduced flow of funds, etc, etc. This is without mentioning the risks to reputation a country may suffer from if their regulatory systems are not "up to date".

This has for effect to harmonize regulatory policies and legislation, increase regulatory cooperation and essentially install the standard setter as a de-facto global regulatory body – at least in terms of policy setting. Global standard-setting bodies have become a vehicle for greater centralization in the regulatory space while traditional regulators and governments take on the role of executors and implement the policies. This system is also far from being fair and democratic in most cases - members of these organizations with greater influence (such as G7 countries) may pass policies which then must be adopted by the remaining members of the organization through a carrot and stick enforcement approach, effectively skewing the creation of global standards and policies towards the wishes of powerful and wealthy nation states.

We have seen how a centralized system creates a single point of failure, prompting the need to implement complex due processes in order to minimize the risks associated with centralization. Centralization has benefits – it eases and streamlines the allocation of tasks and capital, facilitates the implementation of harmonized standards. The answer to the localized regulatory system is therefore obvious to regulators; regulatory systems are fully centralized today within their respective territories, so greater centralization is required on a global level to be more effective in

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12 For example, regulatory frameworks today are beginning to designate investments which do not comply with environmental, social and governance (ESG) standards and impose restrictions on new financial products and services based on these standards.

13 Such as the OECD, BIS, FSB, IMF, IOSCO and the FATF

regulating global financial activities. We foresee, if no action is taken on the part of stakeholders and investors, the emergence of a global regulatory body through this growing trend.

## **PART II**

### **Examples of Decentralization Regulation**

Is it possible to have a decentralized regulatory system? How would such a system operate? Technological innovation only amplifies existing trends and practices - it may either amplify a trend of centralization or amplify a trend of decentralization. The provision of mail is a good example of this; where mail was once delivered physically by any number of mail services globally, email enabled a small number of centralized mailing services to service billions of users<sup>14</sup>. Alternatively 3d printing or automation allows certain manufacturing tasks which used to be highly centralized to be made locally in a decentralized manner. This paper proposes that a decentralized regulatory system is possible and in fact that many decentralized regulatory systems are already in place, operating efficiently and adequately today. We only need to take existing decentralized principles and apply modern technology to them to decentralize financial services regulation. The application of technology will either serve to expand regulatory centralization or decentralization, the choice is ours to make.

Implementing a decentralized regulatory system would, if done properly, have the ability to both adequately oversee the increasingly global, digital and dynamic evolution of financial services, while protecting the basic needs of global investors. We believe that such a system could focus on globally accepted basic fundamental standards applied throughout most societies (such as the prevention of mischief, adequate governance or capital requirements), while giving sufficient leeway for individual countries to implement additional societal-based standards (such as environmental, governance and sustainability standards) if they wish. A global and dynamic, decentralized regulatory system would also ensure that investors have the freedom of choice, maximizing the allocation of capital in global markets and ensuring financial services are able to evolve in the most efficient manner.

Such a decentralized regulatory system already exists in our society today. In fact, decentralized regulatory systems exist in a large number of various applications; from food to education to underwater diving. We are referring of course to certifications.

An excellent example of a decentralized certification are the various certifications surrounding food preparation - the “certified organic” or “certified kosher” or “certified halal” programs which are applied in our everyday foods. There are at the time of writing over 20 different kosher certifications globally - offered by a growing number of certifying bodies. These certifying bodies apply a set of agreed standards such as the type of product and how it is prepared, in an independent manner. Though they may meet to adjust and discuss policies when new foods are developed, they are not (to our knowledge) regulated by a unique and central authority. Organic certification is another such example. Though the largest of these is the USDA organic certification in the United States, there is nothing preventing any new certification body to be created anywhere in the world to certify organic standards to foods. The best feature of decentralized food certifications is that the user has the choice as to which certification he wishes to look for, trust and support – the consumer can choose to consume halal food, organic foods, or kosher foods or any combination of these. The user can further choose which certifying authority he prefers within

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<sup>14</sup> Most would agree that centralized email service providers such as Gmail or Microsoft Outlook have overtaken the federated physical mail networks in terms of correspondence sent and received.

those certification standards. A food producer wishing to be certified Organic may also choose which certification they wish to pursue. Certification in those instances is not a requirement but rather a feature which offers a net benefit to the end user. If a user wishes food that is certified, this user will only consume foods which are certified. Users who do not seek to abide by any food standard may choose to purchase what they wish. Should this also be the case for regulatory measures meant to protect the capital of investors?

Higher education institutions such as universities and colleges are another excellent example of decentralized certification. Each school, college or university offers some type of certification through examination and other means for the students who pass their standards of knowledge or competence. There is no central degree-granting school-of-all-schools issuing degrees to all students in a jurisdiction and mandating which courses a student may or may not take. Each school is responsible to grow and nurture the reputation of its programs and certifications. A school which applies rigorous standards to its certification process would tend to have higher value in the eyes of students or world-be employers - thus increasing the value of the certification itself. Different institutions may choose to specialize in different fields of study to maximize their expertise or competitive advantage and it is up to the student to choose which institution he wishes to seek a certification from. Nothing other than abilities and means are a limiting factor for a student to enroll in one single school – the student has complete freedom of choice within their realm of competence.

It is a mystery to us why governments have seen the implementation of food preferences and the education of our youths as less important than the delivery of financial services – and by this, chosen to implement coercive mandatory standards for one but not the other. Education, and indeed food preparation are very important for both individual welfare and the future of an economy. There have, we are certain, also been a number of malicious schools, universities, or food preparation certifications which have operated in the past. It is a testament to the need for the certifying authorities to provide rigorous tests and standards and the ability of consumers to “vote with their feet” that such actors have been weeded out.

We note that many western countries do have government-set standards when it comes to food preparation and higher education. Such government standards usually relate to basic standards and practices which could harm a person’s welfare, such as the use of poisonous additives in food or other such practice. We do not propose that financial services exist without any kind of basic fundamental government intervention. Indeed, we believe governments are necessary in preventing basic criminal (or life threatening) behaviors, such as anti-money laundering, theft, child trafficking, etc. However we suggest that choice beyond this basic level of care should be left to the decision of the investor. Certification systems like those described above offer a strong degree of protection and comfort to the discerning consumer, with the understanding that an fundamental underlying standard applies to those services.

## **A Decentralized Regulatory System**

This paper has outlined a number of possible issues with traditional regulatory framework which exist throughout the western world. This paper has also discussed the benefits and drawbacks of centralization in the regulation of financial services and will tackle the risks of decentralization in a later section. We would suggest that the best regulatory system is neither a centralized regulatory system nor a decentralized regulatory system but one where investors are ultimately given the choice to decide for themselves how much protection they desire when conducting financial services and how they wish this protection to be implemented. We believe that financial services

should be offered in such a way as to be available for any persons willing to assume the risks associated with an activity regardless of class, wealth, or location. Finally, this paper outlines the need for a global regulatory framework sufficiently adaptable to keep up with innovations in the financial services sector and how this system could be implemented.

This paper will now outline a foundation for a new type of regulatory framework - it does not outline a regulatory body or processes and procedures regulators should implement. The foundation which included herein should simply serve as a base by which particular entities and organizations may build and develop regulatory bodies, certification entities or automated platforms which serve to regulate a financial services activity. We envision a regulatory framework which relies on automated smart contracts, deep learning artificial intelligence, decentralized governing bodies but also traditional centralized corporations, partnerships or not for profits all competing to set standards and attract business – very much like universities and colleges and online learning platforms do today. It is, we believe, free market competition and freedom of choice in a realm which has to date been mandated and centralized which will revolutionize the next generation of regulatory bodies.

We have identified 4 elements which are necessary for such a foundation to thrive.

## **Elements/Principles of a Decentralized Regulatory System**

### **Transparency**

We believe dealings in a regulatory system should be as open and transparent as possible, whenever possible. We understand that free and open source regulation has not been possible to date due to technological constraints; it would have been nearly impossible for a person to read the thousands of physical forms, communication, faxes, and financial transactions. We are however in a position today where digital communication and the use of big-data and language learning tools allow for a person or group of individuals to easily scan and process large amounts of digital data. We see no reason why it should not be possible to audit an open-source regulator in a decentralized regulatory system.

We understand of course that communication may contain confidential or private information, such as insider information which may be used to front-run market movements were it to become available publicly. Regulator/regulated communications should therefore be excluded from being made public or at the very least encrypted - such that the communication cannot be read and understood by the public - but where there is a public record the communication taking place which may be made public as needed (for example in a court case or other such situation). We believe that any decentralized regulator should, at the very least, provide as much information to the public as a publicly listed entity currently does.

This paper will not expand unnecessarily on the benefits of open source information in the digital age. Open source code and systems benefit from the review and audit of hundreds or thousands of persons in a manner which is proportionate with their use and popularity. We envision a future where automated language learning models or artificial intelligence will eventually make the task of auditing code or any other large amount of data easily doable in a convenient and concise manner. This technological trend will increase the need for freely distributed and open dealings in the digital age. It is our belief that hidden, closed door meetings and communication have the unfortunate effect of inciting corruption and malicious activities, like cockroaches in a dark room.

We envision a future where a decentralized regulatory system is comprised of hundreds of regulatory bodies each operating in their respective sectors and all open and readily auditable by anyone. It may even be possible that automated deep learning and artificial intelligence systems may be created to audit decentralized regulators in an ongoing and dynamic manner, providing gadded safety to the framework and markets in general. Such audits may be beneficial and would, we present in the upcoming sections, be necessary for the proper operation of a global decentralized regulatory framework.

## **Common Standards**

We briefly outlined how global supranational organizations are currently the manner by which regulators and governments are attempting to create global standards. While these efforts are needed, and indeed commendable, we note that the participation in these standards tend to be limited to governments and regulators alone. While industry persons are often able to present to these bodies, or participate in limited consultations – the amount of influence industry associations may exercise on the final set of standards is debatable and often times negligible. The process by which these global standards are created are, in effect, centralized and highly controlled by a limited number of (often times) unelected persons and subject to the risks outlined above in this paper.

Indeed, it is our experience that regulators and governments are wary of direct industry participation in the creation of regulatory policy. There is a concealed sense that industry participants mostly seek to maximize profits over the welfare and well-being of their clients. Allowing private entities to have too great a say in policy development could, often times without the regulator realizing it, benefit the entities at the expense of adequate protection. While this may be true in some instances, it is also true that financial service providers may alternatively seek to maximize profits by providing the best service possible in order to attract more clients. Persons who have, in the past, sought to maximize profits in surreptitious or underhanded manners, such as Bernie Madoff and his highly successful pyramid scheme, are used as a pretense to assume that all financial service providers may do the same and must therefore not be trusted with policy creation. This is a very narrow risk-minimizing view which we are sure is not a true representation of the financial services industry today.

A good example of this is the recent (at the time of writing) example of FTX digital assets exchange and its chief operating officer Sam Bankman-Fried. Mr. Fried spent a large amount of his time attending meetings with global policy makers and regulators in an attempt to harmonize regulatory frameworks for the provision of digital asset services. While his efforts were received in a hesitantly lukewarm manner by regulators at the time, the subsequent bankruptcy of his company and discovery of lax policies and misuse of funds nailed the certitude by regulators that his efforts were subversive and meant to facilitate corrupt activities. This high-visibility event had the unfortunate effect to solidifying the view that industry's participation in the creation of regulation should be limited, despite the hundreds of well-meaning, honest associations and companies worldwide that operate in an well-intentioned and fair manner.

What is the alternative? It is this paper's position that global regulatory standards are necessary and that global standard-setting bodies are an integral part in streamlining their creation and evolution. An organization like IOSCO, staffed by government representatives, working in an equal footing with global industry groups for policy creation may not be a reasonable expectation today - consensus may be difficult to obtain and goals may differ by each group. However we are of the opinion that in the short term the policy creation process should be more transparent at the

development level (without closed door meetings for example), and include greater industry participation.

Ultimately however we believe there is no need for a centralized organization or entity to create regulatory standards. We envision a situation where many organizations – both public and private, create standards for the delivery of specific financial services. Much like any new innovation, it should be up to the market to decide which implementation is best and fit for a specific purpose. Regulatory standards which do not adequately capture risks and lead to inadequate protection for the investor will be quick to fail, to the benefit of other, more rigorous standards. This process has been tried and tested in other sectors throughout history with clear results<sup>15</sup>.

There are currently a large number of private and public initiatives, outlining broad, high level standards of practice or very specific technical standards for an activity. These standards are created by industry groups, not-for-profit lobby groups, companies and corporations<sup>16</sup>. Though localized regulators typically do not tend to adopt these, they could form a basis for the creation of multiple standards in a decentralized industry and form a strong basis for the development of global standards.

We envision a future where a large number of standards are initially created by a multitude of participants. These standards will compete with others in a free market - standards which are most dynamic, clear, innovative, able to protect consumers and easy to implement will tend towards dominance while less efficient standards are either revised or unused. These most adopted standards and the organizations/bodies/groups who create them could coalesce into truly global standards with sufficient time. The ability for new standards to be created at any time and the lack of mandate for any particular set of standard will ensure that any set of standards that achieves market dominance does not evolve into a centralized system. It would be true market evolution applied to regulatory policy.

## **Certifying Authorities**

As with certifications offered by higher level education providers outlined above, certifications would form the bedrock element of any decentralized regulatory system. Regulatory licensing and registration regimes today are in essence already permissioned systems of certification. If a person wishes to engage in an activity which requires a license this person is mandated to apply and qualify for the grant of a license from the regulator. A decentralized regulatory system would simply enable other certifying authorities to offer similar certification for the same service.

These certifying authorities would be the enforcers of a chosen set of standards in a decentralized regulatory system. Much like universities today issuing diplomas to graduating students based on curriculum, certifying authorities would be responsible to vet businesses that apply for certification, be responsible for the development of requirements and policies certified businesses should practice and implement, and be the enforcers of the standards. Assuming a large number of certifying authorities are created, it would be up to the financial service providers to choose which authority best suits their needs and the needs of their clients.

The idea of operating under independent certifying authorities is not a novel concept, however the application of this concept in traditional regulated activities is. This should be discussed and

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<sup>15</sup> Such as ISO standards for example

<sup>16</sup> For example there are numerous accounting standards in the world, created and maintained by professional industry groups such as GAAP, FASB and other such standards.

expanded in much more detail than this introductory paper can do. However we will try to tackle the most common critiques of this suggested approach as best we can.

What if malicious actors set up an authority? It is very likely that some authorities would attempt to distort, deceive, collude or lie in the supervision of entities. They may become captured by the very service providers which they are meant to oversee, or simply opt to misuse the powers granted to them. This is of course a serious problem to consider. While we do not wish to belittle the drastic consequences such an event may have on investors, we will point out that these authorities would not last long in an open and decentralized system. While authorities may attempt to deceive, open source information and processes would eventually bring this type of behavior to light.

We would also assume that third party services will develop in time which may serve as rating agencies for decentralized authorities. Such rating agencies would audit authorities, critique processes and methods and provide a rating framework for the performance of authorities - much like the private rating agencies today which rate and critique governments and financial institutions. Authorities, by having their finances, transactions, (non-client related) internal processes and behaviors made public would allow for such rating agencies to accurately portray the health and aptitudes of an authority and benefit from a much greater level of information on which to base their ratings. Large learning models may also be used to provide automated ratings and just-in-time reports and information on developing events.

Malicious authorities would also see their business quickly move to another authority as soon as the breach of trust would be known to the public and relevant parties. Transparency and the use of open communication is key in keeping authorities accountable for their actions. We have seen with the development of social media how quickly information spreads and how quickly funds and financial value may shift from one service provider to another. Indeed, many investors were able to quickly retrieve funds from failing crypto exchanges before they went into receivership thanks to readily available information and a strong community. This fluidity would be a cornerstone of any decentralized regulatory system.

Enforcing against breaches: Regulators today have a very entrenched ability to enforce against breaches of a regulator's requirements. Such enforcement methods are enshrined in law, and unwillingness to comply associated with jail, monetary fines or other such coercive measures. This is very effective as a means to thwarting unwanted behavior however these mechanisms would not be directly available to an authority under a decentralized regulatory system. Additionally enforcement would have to be possible both ways – it would need to be possible for regulated entities to seek remedy against an authority for breach of agreement or contract. We will tackle the matter of enforcement in the next section, and offer a solution to this problem.

We understand that a decentralized regulatory system is novel and relies on the awareness of both community and authorities to operate effectively. It is most often the case that users of financial services do not wish to spend the time and effort in researching a particular matter or constantly keeping up with recent developments in a particular space. The current regulatory system benefits from an in that users can rely on regulated entities without major concern by the understanding that a basis of care is applied to and by those entities by the government regulator. We are of the opinion that in time such a system would become easier to navigate but that an added degree of care would be needed initially.

The reputation will be, we believe, a fundamental element of an authority's success or failure. A certification from a highly reputable certificate authority is much more likely to bring in more consumers than a certificate from a new or disreputable certificate authority. Should a certificate authority fail to prevent or warn of a negative event which should have been overseen, the authority



would lose its reputation and suffer consequences, as any industry and company would in a free and open market.

It is also possible that the standard setting bodies - the very same entities responsible for the development and evolution of common standards - would be able to endorse certifying authorities. If this were to happen, a prospective service provider would only need to seek out the standards they best prefer and align themselves with an authority certified by the organization which set the standards. Such endorsements would go a long way in providing legitimacy for the certifying authorities and thereby attracting business and influence.

There are also no restrictions as to whom may certify authorities in a decentralized regulatory system. Governments themselves may choose to certify decentralized authorities – in fact this may be a necessary step towards adoption of this system and a net benefit for entities that have historically relied on government-lead regulation of their activities. Governments, instead of operating as regulator themselves, may save large sums of capital and energy and reduce government overhead by choosing to endorse decentralized regulatory bodies in its jurisdictions. This would make regulation more fluid, adaptable to new technologies and of course much less expensive to operate. We imagine that this may not be attractive for large, established jurisdictions at first, but would be a beneficial system for new and developing jurisdictions that may not have established regulatory infrastructures in place. Government-decentralized authority partnerships could be established, facilitating enforcement of standards and the sharing of revenue from fines.

The development of the structure, governing principles and policies of a decentralized certifying authority will require a considerable amount of study, discussion and trial and error. This paper does not portend to outline all possible avenues such an authority may take, but rather to simply show that it is possible for such a body to exist and operate. We envision a future where these entities will coexist and work with innovative financial services.

## **Contracts and Enforcement**

A decentralized regulatory system would, by definition, include any number of organizations, bodies, legal structures or arrangements. It should operate in such a way as to allow for the most efficient form of regulation and oversight to be implemented. We assume that this would include the creation of new and innovative relationships between decentralized regulatory bodies and governments or even traditional regulators. Such partnerships would serve to cement coercive measures for enforcement of certain requirements, for oversight purposes or policing the perimeter of activities taking place in the jurisdiction. While we agree that government-led enforcement (e.g. fines, jail, etc) is the most effective method of implementing requirements for a sector, it is by no means the only one. In fact, a decentralized regulatory system could, in time, move away from extreme coercive measures and lean towards methods that rely on greater fluidity of markets, transparency, openness, and the availability of information.

In essence, any legislation enacted by a government is a contract between persons to whom the laws apply and the government itself. Legislation simply outlines the requirements and penalties for breaches of this special type of contract and persons in a jurisdiction are said to agree to the terms of it. In the same way the relationship between service providers and decentralized authorities would, in the absence of government legislation, need to be hinged on complex contractual agreements and the application of contract law. A new contract would be created whenever a service provider were to seek certification with a decentralized authority. This contract, much like legislation, would need to outline all obligations for both parties involved, especially obligations on

the part of the authority to the service provider. We should remember that the applicant is ultimately seeking certification in order to increase consumer confidence in the services it offers and the contract would only serve to ensure the proper application of specific standards. Should either party fail to supervise (in the case of the authority), or adequately carry on a requirement set by a standard (in the case of the supervised entity), the contract outline penalties, payments, covenants, restrictions or measures which would then take effect. Such contracts could rely on automated systems such as that used by smart contracts, or require additional adjudication by a legal court system in case of disagreement.

Enforcement mechanisms which could be added to such a contract may include any number of actions such as automatic disclosures to clients of the service provider, financial penalties, restrictions on services to be provided, change and removal of governance, involvement of third parties in the provision of the financial service, and the list goes on.

Contract law is applied differently in most jurisdictions – however international trade has established a large body of precedents and standards for international contracts. In order to minimize potential conflicts, especially in the context of international activities, a neutral jurisdiction could be chosen which would be agreed upon by both parties for the application of the contract. Indeed, most international contracts have standard ‘boilerplate’ clauses typically added which outline the jurisdiction and choice of law for the contract. This standard practice ensures that a specific court of law is used in the event of a dispute. Many ‘neutral’ jurisdictions exist today and are used for complex large international projects involving stakeholders from different countries.

The difficulty in relying on a decentralized regulatory contract for two global entities would be the application of punitive fines and restrictions. Indeed, it may be difficult for a court, say in a neutral jurisdiction like the Cayman Islands to enforce against a global, semi-decentralized digital asset exchange with assets scattered all over the world. This is why this paper suggests the application of a regulatory bond to all decentralized regulatory contracts.

Regulatory bonds would act as letters of credit do in international trade. A letter of credit offers some certainty to the purchasers and buyers in a trade deal that funds will only be exchanged once certain specific events take place, e.g. the delivery of product at a specific port. These products are usually offered by neutral intermediaries such as banks – however we understand that smart contracts have the potential to eradicate the need for neutral intermediaries altogether. In the context of decentralized regulation, two bonds would be created on the grant of a certification by an authority. The first bond would be offered by the service provider and the second by the decentralized authority itself. It may appear unusual to require a regulating entity to put a bond, however in a decentralized regulatory system the lack of government oversight of the regulator would necessitate a mechanism by which they can be held accountable.

The bond payable by the regulated entity would provide funds for the payment of fines or penalties in the event of a breach in the agreement/application of the standards. These fines could be triggered by the authority or automatically on a particular event – much like letters of credit today. We would like to note that the bond does not need to be a fixed amount - indeed today’s technology allows for bonds to be dynamic and apply to any number of systems or assets. A bond could, for example represent a percentage of transaction flows of the regulated entity, balances held in accounts, or even represent a fixed delay-based hold on ongoing and outgoing value transfers. The composition of decentralized regulatory bonds would likely evolve over time as the decentralized regulatory relationships are put in practice, making room for valuable innovation and evolution. We do stress that these bonds should `by necessity be freely monitor-able by users of the regulated service providers, the authority itself and ideally the public at large.

The second bond, that paid by the certifying authority, has a dual purpose. The first being a method of enforcement by the regulated entity in the event the decentralized authority breaches the contractual agreement which exists between the two parties. A regulating entity placing a bond on the certification of a service provider is a novel concept and may seem counter-intuitive to most readers. Yet there have been many instances where a regulator has not applied the standards or legislation appropriately, levy unjust fines or cause other such harm to the regulated entity without warrant. The only manner for a regulated entity to reverse a decision made by a regulator today is via the courts – a long and arduous process. In a decentralized regulatory system the regulator's bond serves to streamline this process and provide some very tangible cost to an authority should they make inappropriate decisions. The decentralized regulatory contract would list the specific particulars of this bond and the terms of its usage.

The second, (and most important) purpose of the decentralized regulator bond would be to place a restriction on the number of entities the authority may regulate. As any regulator would attest, overseeing financial services requires a large amount of expertise, systems and resources. The use of artificial intelligence will no doubt alleviate this in the coming years, however we are of the opinion that authorities should be restricted in some way as to how many entities they may oversee. If an authority wishes to regulate a large number of entities in this instance, it must put aside larger amounts of capital, and risk losing greater capital if it fails to uphold its obligations. Combined with open financial statements and accounts, applicants of the authority and indeed any clients of the regulated entities would be able to audit the health of the regulating entity. This transparency would be critical in the new decentralized regulatory system.

This paper only provides a high level overview on the role of contracts in a decentralized system. The concept must be further studied and developed before it may be put in place. As with other elements of the decentralized regulatory system, this paper only means to show how contracts could provide an alternative to government legislation in the regulation of financial services.

## **PART III**

### **Risks and Challenges**

The authors are very optimistic about the evolution of decentralized regulatory frameworks. We would be remiss however were we to not delve into the possible hazards and risks such a framework could entail. We began our narrative by listing some of the perils of the existing regulatory systems. Many of these same issues (political capture, corruption, ossification, etc) could pose a threat to a decentralized regulatory system. While we believe in the positive, accepting, and noble side of humanity – it is the worst of humanity that has the tendency to do the most harm. Many individuals will of course seek to maximize profits above all other considerations, bend rules whenever possible for illegitimate returns. Individuals may be corrupted, and power corrupts.

We are under no illusion that such individuals would leave a decentralized regulatory system alone. A decentralized regulatory system would be open to all, and we are sure this will attract nefarious actors. They may create their own set of standards, they may create their own certifying authorities and/or partner with malicious actors and service providers to front-run investors or markets. Yes, it is likely that such actors would be able to do a large amount of harm, such as is the case in the

current digital asset space with the failure of high-visibility companies due to gross incompetence and malpractice.

Much like code created for a new digital service, or a tree growing in a forest, new and emerging systems and organisms must be exposed to harsh and unforgiving elements in order to progress, strengthen and improve. Minimizing this process in the creation of a decentralized regulatory system would require careful consideration, discussion and processes to be put in place by the global financial services industry. Limited trials would need to be put in place before it could be implemented to the larger public, at the very least. We believe that openness and transparency will play an important and crucial role in preventing malicious actors from operating in the space. The more an organization or service is audited or examined the more likely it is to improve and in turn, prevent exploits and malpractice from taking place. We would argue that a large part of malicious activities occur today because of opaqueness and the lack of transparency in systems and procedures.

Another consideration is that of unregulated entities operating in the sector. Regulators today have been directed to ensure that all activities which fall within a certain scope must be regulated. An entity which is not regulated is seen to offer little protection to users and even pose greater market risks to financial services in general. We are certain regulators would shy away from the adoption of a decentralized regulatory system due to the very fact that regulation would be optional, and the choice of the type of regulation left to the service provider. Would all service providers, in such a system, immediately opt not to be regulated, or gravitate towards the most lax, self-serving set of standards?

We would like to point out that a large majority of digital asset service providers today have sought regulation from major western governments – and this despite the regulators shying away from regulating the space! The “wild-west” years of crypto services 2015-2020 have seen many scams and failures. We believe that the industry has matured and that legitimate users of digital asset services seek stability and certainty – in other words; service providers they can trust. Regulation and oversight provides this trust to a large degree. We would venture that in time, a decentralized regulatory framework would match the most stringent regulatory requirements required by regulators today due to this trend.

We should also note that regulation does not guarantee the safety and adequacy of a service provider’s governance or processes. Indeed, many major failures in the digital space came from regulated entities such as FTX. We note that FTX was comprised of a number of legal entities which in turn were regulated throughout the developed world. We also note that some legal entities did not fail (such as is the case for FTX Japan<sup>17</sup>) which had to comply with a specific set of regulatory requirements. This shows that the regulatory procedures in Japan were better than those of other jurisdictions and we see no reason why a decentralized regulatory system would not benefit from this insight in creating standards. It is widely agreed that the FTX failure was borne by a failure at the governance level<sup>18</sup>. This failure was, we argue, caused by lack of transparency and opaqueness in internal processes. Had there been more transparency, and thus more scrutiny, such failures would not have happened.

Other issues such as the faking or forging of certifications, etc could also be minimized by the proper application of technology and transparency.

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17 <https://www.bloomberg.com/news/articles/2023-02-21/ftx-unit-in-japan-becomes-first-to-resume-customer-withdrawals>

18 <https://www.forbes.com/sites/georgecalhoun/2022/11/21/ftx-and-esg-a-panorama-of-failed-governance-pt-1--the-internal-failures/>

In our opinion the biggest risk to widespread adoption of a decentralized regulatory framework would not come as a result of malicious actors. Decentralized systems, such as smart contracts rely on the user to understand and assume the risks of activities he/she chooses to take. If a user chooses to rely on a smart contract, he must be comfortable with any flaws that may exist in the code and have a minimum degree of understanding of processes and the technology underlying it. A decentralized regulatory system would, in our opinion, require the same degree of assumption of risk and investigation by users, at least initially. User apathy is the greatest threat to a decentralized system. We have seen many solutions made available recently which empower individuals to own their own data however users will most often go the easiest route, regardless of whether it is in their best interest or not.

We understand that this paper has not tackled all possible risks and perils of a decentralized regulatory system. We also understand that the eradication of risks is inversely related to transparency and the number of active persons engaged in the space. We hope that there will come a day when an adequate forum will be created for the discussion of such a system and how the risks may be mitigated going forward.

## **Implementation and Adoption**

We are certain many readers who have read to this point have asked themselves how such a system could ever be implemented. Governments have, to this date, had ultimate jurisdiction over the regulation of financial services. We do not deny that implementing such a system in large and established jurisdictions will be a difficult and gradual task, however we do see clear benefits of this system for smaller, adaptable, underfunded and fluid jurisdictions that do not yet have cemented a large complex regulatory infrastructure.

We take for example a country which seeks to attract the innovative technology sector and whom may have very little in place in terms of financial service regulation. Such a country would have limited options in attracting legitimate service providers who seek certainty and regulation. It cannot rely on another country's regulation of the activities, nor can it quickly establish the necessary infrastructure, systems and expertise needed for a traditional regulator – at least not one that would be able to compete with larger more established jurisdictions.

A decentralized regulatory system offers this jurisdiction an attractive way to attract legitimate service providers, without having to invest large sums of time, political capital or money. All things considered, little is required to enable the implementation of a decentralized regulatory system. A country would only need declare that it is open to the idea, and that it would either not regulate these activities in the future (allowing decentralized authorities to do so), or put in place a bare-bone legislative infrastructure which would support authorities (such as the implementation of fines and other enforcement mechanisms). With sufficient adoption and education, companies would seek this jurisdiction both to establish decentralized entities or service providers. Indeed, we would suggest that this smaller jurisdiction would have a lot to gain from such a system and very little to lose, given that such activities are not already regulated.

We see it as inevitable that this type of selective adoption will in time develop into a global decentralized system. Adopted by smaller jurisdictions at first, the system would develop itself to such a point where major jurisdictions could be ready to “delegate” portions of their own regulatory frameworks initially, and major elements in time. We firmly believe that the free and open market will provide a competitive advantage which traditional regulators will not be able to match –

leading to economies of scale and quicker and more dynamic evolution of regulation and regulatory policy.

Ultimately however we believe that the adoption of such a system would not depend on any one country, of physical jurisdiction. While the adoption of this system by a country would help speed up adoption it is by no means a necessity. Indeed, we note the current evolution of financial services globally and how emerging technologies already provide services more efficiently and securely than providers in larger regulation-heavy jurisdictions. These entities - decentralized financial institutions, will have little to benefit from regulation from a geographically-based traditional regulator. We see the evolution of a decentralized regulatory system as a natural evolution of this overall trend in financial services. There is (to our knowledge) nothing preventing a decentralized regulatory system from operating in parallel with existing traditional regulatory frameworks. There is little evolution without competition, and we can only imagine what current entrenched regulators will be able to do were they to be spurred by a little bit of healthy competition.

In a more practical sense a decentralized regulatory system would need to be promoted by one or many not for profits or communities initially. Any decentralized system relies on the grass-roots promotion of its services and in this very manner persons, communities, financial service providers and global communities will need to promote the concept. We foresee the creation of a global forum or hundreds of communities worldwide, actively discussing how liberating a decentralized regulatory system may be for the evolution of financial services.

## Conclusion

This paper has outlined a number of outstanding concerns with the current geography based, government lead regulatory system. Whether risks come from regulatory capture, its complexity and rigidity, the inequalities it creates in society, or from its inability to adapt to changing financial technologies and services, it is clear to us that it is in dire need of an immediate change.

Decentralizing regulatory systems will, we believe, usher in a new era of innovation in the regulatory space and would enable the creation of an entirely new array of products and services. We envision a world where free markets and open competition allows for the innovation of new technologies both from the point of view of government policy, authorities, and users and financial services innovators, creating a fluid and dynamic symbiosis between regulators and regulated. A system based on free and open information and the unbiased computational powers of technology, opening the regulatory space to free market innovation. We envision a world where open competition forces existing calloused, coercive and adversarial regulators to innovate and transform, for the betterment of society.

We do acknowledge that decentralized regulatory systems will require users, service providers, governments and authorities themselves to be more aware, engaged and responsible for their actions. It is after all through education and responsibility that man is made free, and we see no greater goal than that of achieving true freedom.

We would end this paper with a warning. We note the current trend of regulatory burden growing without end, of new technologies being created which have the potential to multiply the centralization which is taking place in the world today – granting governments unprecedented powers to control and manipulate with complete impunity. This is not the future we wish to hand

over to our children and we believe this discussion – that of the very nature of financial flows and the exchange of value – is more important now than it has ever been in the history of mankind.

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