



Keynote Address of CFTC Commissioner J. Christopher Giancarlo Before the Cato Institute, Cryptocurrency: The Policy Challenges of a Decentralized Revolution

“If Allowed to Thrive, Blockchain May Finally Give Regulators Transparency”

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Introduction

Good morning, ladies and gentlemen. Thank you for your warm welcome.

Before I begin, let me say that my remarks reflect my own views and do not necessarily constitute the views of the Commodity Futures Trading Commission (CFTC or Commission), my fellow CFTC commissioners or the CFTC staff.

It is a pleasure to be here with you today for this important discussion of the policy implications of crypto-currencies, one of the more fascinating developments arising from the current revolution in exponential digital technologies.

Notwithstanding today’s broad topic, my remarks this morning will not be directed broadly to crypto-currencies. Rather, I want to focus specifically on a key foundational technology that underlies the crypto-currency, Bitcoin. That is the technology of distributed ledgers often referred to as the “blockchain,” an emerging technology that may have enormous implications for the capital and hedging markets overseen by the CFTC and other regulators.

Lack of Counterparty Credit Risk Transparency During the Financial Crisis

To begin, I want to take you back for a moment to September 2008. That was a perilous time in global financial markets. An enormous U.S. housing bubble had burst triggering a cascading global credit crisis. Concern was rife about imminent investment and commercial bank failure.

I was on Wall Street, serving as a senior executive of one of the world's major trading platforms for credit default swaps (CDS), then the epicenter of systemic risk. Panic was in the air and tension was on our broking floor trying to maintain orderly markets. I remember a call from a U.S. bank regulator asking about CDS trading exposure of several major banks, including Lehman Brothers. In fact, trading conditions were deteriorating by the hour. It was clear that the regulator had little means, short of telephone calls, to read all the danger signals that the CDS markets were broadcasting.

Now, let's fast forward to today. It is seven and a half years after the financial crisis and global regulators still do not have full visibility into the swaps trading portfolios of major financial institutions.

It is not for lack of hard work and effort. One of the key market reforms agreed upon following the financial crisis was the reporting of swaps transactions to regulators and central data repositories. My agency, the CFTC, started that initiative in 2011 and has pursued it ever since. Yet, CFTC data still does not provide a complete picture of global swaps trading. In part, it is because global regulators have not harmonized global reporting protocols and data fields across international jurisdictions. It is also because of the practical impossibility of a single national regulator collecting sufficient quality data for both cleared and uncleared swaps to recreate a real-time ledger of the highly complex, global swaps trading portfolios of all market participants.

Fortunately, emerging distributed ledger technology, what I will call "DLT" or "blockchain," may address this crucial need. That is what I want to talk about this morning.

The Promise of Distributed Ledger Technology

The Bank of England recently dubbed DLT the "first attempt at an *Internet of Finance*."¹ It has the potential to link networks of legal recordkeeping the same way the Internet connects networks of data and information, increasing settlement efficiency and speed, reducing transaction costs and broadening market access.

The potential applications of DLT are being widely imagined and explored and promise benefits to market participants, consumers and governments alike. DLT could allow for the confirmation and ownership transfer of virtually anything from hockey tickets and magazine subscriptions to auto repair warranties, airline loyalty rewards and apartment leases. It could empower better and more verifiable voting systems, whether for proxies by corporate shareholders, customer satisfaction surveys or voting for political candidates.

DLT is likely to have a broad impact on global financial markets in payments, banking, securities settlement, title recording, cyber security and trade reporting and analysis.² It may make possible new “smart” securities and derivatives that can value themselves in real-time, report themselves to data repositories, automatically calculate and perform margin payments and even terminate themselves in the event of counterparty default.³

As I have noted before, however, this transformation will not come without consequences, including a greatly disruptive impact on the human capital that supports the recordkeeping and transaction processing of contemporary financial markets.⁴ A recent report by Citigroup forecasts that retail banking automation including blockchain could spur a 30 percent decline in banking jobs across the U.S. and Europe over the next decade, the equivalent of eliminating nearly 2 million jobs.⁵

Still, in the wake of the 2008 financial crisis, the potential benefits of DLT are enormous for both financial services firms and the regulators who oversee them. For market participants, DLT may manage the enormous operational, transactional and capital complexity brought about by the legion of disparate mandates, regulations and capital requirements promulgated unceasingly by regulators here and abroad.⁶ In fact, one study estimates that DLT could eventually allow financial institutions to save as much as \$20 billion in infrastructure and operational costs each year.⁷ Another study reportedly estimates that blockchain could cut trading settlement costs by a third, or \$16 billion a year, and cut capital requirements by \$120 billion.⁸

For regulators, the potential of blockchain is equally valuable. In February, the U.S. Government Accountability Office issued a report⁹ that U.S. regulation of financial markets has not meaningfully improved since its issuance of a comprehensive study more than seven years ago that concluded that the U.S. financial regulatory system is generally “ill-suited to meet the nation’s needs in the 21st century” because of its high level of complexity and overlap.¹⁰ The current report finds that the U.S. financial regulatory framework leads to inconsistencies, among other things, in the oversight by different regulators of securities and derivatives market participants and banking and depository institutions.¹¹ Against these inconsistencies, DLT offers the promise in allowing U.S. government overseers to transcend the fragmented regulatory structure by providing reference to a single, verified record of all financial transactions across regulated markets.

In 2008, prudential regulators had to call around to brokerage firms like mine searching for market confirmation of Lehman’s distress. What a difference it would have made if regulators had access then to a “golden record” of the real-time ledgers of all regulated trading participants, rather than trying to assemble piecemeal data to recreate complex, individual trading portfolios. I believe that, if regulators in 2008 could have viewed a real-time distributed ledger, and, perhaps, been able to utilize modern cognitive computing capabilities, they may have been able to recognize anomalies in market-wide trade activity and diverging counterparty exposures indicating heightened risk of bank failure. It would certainly have allowed for far prompter,

better-informed, and more calibrated regulatory intervention instead of the disorganized response that unfortunately ensued.

Moreover, had Lehman still failed, records powered by DLT and held by trading counterparties (and available to regulators) would have accurately shown Lehman's open positions across asset classes. Imagine if, instead of requiring countless legal actions spanning eight years, we could have known all of Lehman's exposures within minutes of its bankruptcy filing. Accelerated settlement of open positions and accounts could have taken weeks, not years.

It is, therefore, not surprising that DLT has sparked an incredible amount of interest within the financial industry – regulators and regulatees alike. Not a week goes by without several news articles, opinions and reports discussing the potential benefits and challenges of the technology. Billions of dollars are being invested in dozens of new ventures and innovations.¹²

Last week, seven firms announced the successful test of DLT to record on a shared network a month's worth of trades in the multi-trillion dollar single-name CDS market.¹³ The test was organized by the Depository Trust & Clearing Corp. (DTCC) and included Bank of America, Credit Suisse, J.P. Morgan, Citigroup, financial service provider, Markit, and blockchain technology developer, Axoni.¹⁴ The test included smart contracts and demonstrated the potential real-time transparency benefits to regulators.¹⁵ Tests like this one prove there is merit to the promise of potential DLT applications. Similarly promising projects are underway.¹⁶ A few weeks ago, DTCC said it has started working with Digital Asset Holdings to determine whether short-term lending arrangements between dealers known as repos could be settled using blockchain.¹⁷

Adoption of the “Do No Harm” Regulatory Model

DLT development is clearly moving rapidly, certainly faster than underlying legal and regulatory frameworks. Rules regarding DLT are currently unwritten and likely years away, leaving the industry with little clarity.¹⁸

Investment in DLT faces the danger that when regulation does come, it will come from a dozen different directions with different restrictions stifling crucial technological development before it reaches fruition.

Fortunately, there is a good model for the healthy development of DLT – the “first, do no harm” approach to the early Internet. Two decades ago, as the Internet was entering a phase of rapid growth and expansion, a Republican Congress and the Clinton administration established these foundational principles: the Internet was to progress through human social interaction; voluntary contractual relations and free markets; and governments and regulators were not to harm the Internet's continuing evolution.¹⁹

This simple approach is well-recognized as the enlightened regulatory underpinning of the Internet that brought about such profound changes to human society. During the almost 20 years of “do no harm” regulation, a massive amount of investment was made in the Internet’s infrastructure. It yielded a rapid expansion in access that supported swift deployment and mass adoption of Internet-based technologies. Internet-based innovations have revolutionized nearly every aspect of American life, from telecommunications to commerce, transportation and research and development. This robust Internet economy has created jobs, increased productivity and fostered innovation and consumer choice.

“Do no harm” was unquestionably the right approach to development of the Internet. Similarly, “do no harm” is the right approach for DLT.

I recently called on the CFTC and its domestic and overseas counterparts to join an international consensus to avoid impeding essential DLT innovation by protracted rule uncertainty or uncoordinated actions.²⁰

I believe regulators and policy makers have a choice: we can either follow a path that burdens the industry with multiple onerous regulatory schemes or one where we come together and set forth uniform principles in an effort to encourage DLT investment and innovation. I favor the latter approach.

I believe that innovators and investors should not have to seek government’s permission, only its forbearance, to develop DLT. Government must foster a regulatory environment conducive to the technological innovation needed to address the increased operational complexity and capital consumption of modern financial market regulation.

Once again, the private sector must lead. Regulators must avoid impeding innovation and investment. Instead, they must provide a predictable, consistent and straightforward legal environment. Protracted regulatory uncertainty or an uncoordinated regulatory approach must be avoided, as should rigid application of existing rules designed for a bygone technological era.²¹

Need for Global Regulatory Coordination

As they did with the Internet, U.S. and foreign regulators must coordinate to create a principles-based approach for DLT oversight in order to provide the flexibility, certainty and harmonization necessary for the technology to flourish.

The Financial Stability Board (FSB) and the International Organization of Securities Commissions or “IOSCO” have recently turned their attention to financial technology innovations, including DLT.²² I was encouraged to read that FSB Chairman Mark Carney recognizes that regulation should not stifle emerging innovation.²³ I similarly understand that IOSCO is working on international policies to drive innovation without undermining confidence in markets.²⁴

Noteworthy is the recent white paper of the Office of the Comptroller of the Currency (OCC), entitled “Supporting Responsible Innovation in the Federal Banking System”.²⁵ In its paper, the OCC offers its support for innovation in the financial services industry that it views as “consistent with safety and soundness, compliant with applicable laws and regulations, and protective of consumer’s rights.”²⁶ It emphasizes the need to “support responsible innovation” and business cultures “receptive to responsible innovation.”²⁷

IOSCO Chairman, Greg Medcraft, has said that issues around DLT must be dealt with at the multilateral level, not by individual countries.²⁸ I agree. Regulation of DLT must indeed be coordinated on a multilateral level based on the principle of “do no harm.” Just as many financial services firms are joining together in broad DLT consortiums, regulators must do the same. The FSB and IOSCO have important roles to play in coordinating DLT regulation. These organizations should put forth a set of simple governing principles flexible enough to accommodate the issues and concerns of different national regulators. Such principles would create a regulatory environment that encourages the development of DLT, just as U.S. policymakers’ 1990s framework fostered the exponential growth of the Internet.

Without such a “do no harm” approach, financial services and technology firms will be left trying to navigate a complex regulatory environment, where multiple agencies have their own rule frameworks, concerns and issues.²⁹ Some of the issues are anti-money laundering, know-your-customer requirements, privacy and security and dispute resolution.³⁰

It is therefore critical for regulators to come together to adopt a principles-based approach to DLT regulation that is flexible enough so innovators do not fear unwitting infractions of an uncertain regulatory environment. Some regulators have already openly acknowledged the need for light-touch oversight. Masamichi Kono, Vice Minister for International Affairs at the Japan Financial Services Agency, stated that regulators must take a “pragmatic and flexible approach” to regulation of new technologies so not to stifle innovation.³¹ Similarly, the UK’s Financial Conduct Authority (FCA) has committed to regulatory forbearance on DLT development for the foreseeable future in an effort to give innovators “space” to develop and improve the technology.³² The FCA is even going one step further and engaging in discussions with the industry to determine whether DLT could meet the FCA’s own needs.³³

I have no doubt that the FCA’s intention to give DLT innovators “space” to innovate will be good for DLT research and development. I also suspect that it will be very good for London’s burgeoning FinTech industry and job creation in the United Kingdom.³⁴

Yesterday in London, a senior representative of Her Majesty’s Treasury announced that the United Kingdom will establish an “industry-led panel” that will set an overarching strategy for the British FinTech industry.³⁵ She went on to say, “[t]he [UK] government wants to ensure the UK continues to be the best place in the world to be a FinTech company.”³⁶

It is unfortunate that we do not hear similarly strong voices on this side of the Atlantic. U.S. lawmakers concerned about the rapid loss of jobs in the U.S. financial service industry, especially in the New York City area where job losses are pronounced,³⁷ should similarly look to provide “space” to U.S. DLT innovation and entrepreneurship and the well-paying jobs that will surely follow.

American global leadership in technological innovation of the Internet was built hand-in-hand with regulators’ enlightened, “do no harm” approach. The same opportunity for technology leadership is present today – if we have the good sense to seize it.

Practical Steps to “Do No Harm”

While international regulatory coordination and the adoption of a principles-based approach are important, each regulatory agency can take steps now to ensure that its existing rules do not inhibit DLT development and adoption.

For the CFTC, one example comes to mind – recordkeeping rule 1.31.³⁸ Rule 1.31 requires all books and records to be kept in their original form or native file format.³⁹ Such records must be produced in a form specified by any representative of the Commission.⁴⁰ Rule 1.31 also has requirements for certain records to be stored in either micrographic media or electronic storage media and other related conditions.⁴¹

As I have previously stated, the CFTC should revisit this rule and make it technologically neutral such that it can accommodate DLT and other innovations that promote efficiency, accuracy and security in recordkeeping.⁴² The CFTC should also examine and, as necessary, revise other rules that may inhibit DLT innovation. Other regulators should similarly examine their recordkeeping and other rules.

Conclusion

In conclusion, I note that when the Internet developed in the mid-1990s, none of us could have imagined its capabilities that we take for granted today.

Fortunately, policymakers had the foresight to create a “do no harm” regulatory environment that served as a catalyst rather than a choke point for innovation. Thanks to their forethought and restraint, Internet-based applications have revolutionized nearly every aspect of human life, created millions of jobs and increased productivity and consumer choice.

Policymakers must show that same forethought and restraint now.

Today, I repeat my call for my agency, the CFTC, and other U.S. and overseas policymakers and regulatory counterparts to repeat that broad-minded approach.

I look forward to working with my fellow CFTC commissioners, U.S. lawmakers and other financial services regulators here and abroad to develop a “do no harm” framework from which

to launch a new era of innovation in distributed ledger technology – for the good of our markets, the jobs they support and the people they serve.

Thank you for your time and attention.