

2016 Blockchain Symposium

Opening Remarks By Michael Bodson, DTCC President and CEO

On March 29, 2016, DTCC President and CEO Michael Bodson spoke at the opening of the 2016 DTCC Blockchain Symposium held in New York City.

Good morning, thank you for joining us and welcome to the DTCC 2016 Blockchain Symposium.

As the [opening video](#) made clear, there is a lot of debate on the potential of distributed ledger technology, with competing opinions ranging from the skeptics and cynics to the evangelists and disciples, and everyone in between. While those opinions run the gamut, we can all agree that blockchain is absolutely going to impact the way we do business in the future.

The turnout this morning reinforces the high level of interest this topic has generated in a relatively short period of time.

We titled our Symposium “Blockchain: Tapping the Real Potential...Cutting Through the Hype” because our goal is to move from the latter to gain a better understanding of the former. Before we begin, I want to spend a few minutes talking about 3 things:

- One, the current post-trade ecosystem – an area where we have unique expertise at DTCC...
- Two, the potential impact of distributed ledgers on the industry, and ...
- Three, our views on the best way forward for the industry.

The Current Post-Trade Ecosystem

Let me begin with a look at the current post-trade ecosystem.

One of the primary reasons blockchain has captured the attention of so many people is that we all see opportunities to simplify the network of internal systems and service providers that arose over the course of the past four decades to support the processing of hundreds of millions of financial transactions each day. Many parts of the system were not created through intentional architecture and design and, in some cases, it has become unnecessarily complex as markets have evolved and become more global.

Despite this, today’s post-trade infrastructure is highly efficient, relatively low cost and, most importantly, provides the necessary stability, reliability and certainty to protect the integrity of today’s global markets.

As an industry owned and governed company, one that includes three of the eight Systemically Important Financial Market Utilities in the U.S., DTCC has unique insights into the post-trade process – and we are excited by this once-in-a-generation

opportunity to reimagine the infrastructure to address long-standing operational challenges.

I was recently speaking with Peter Hiom, Deputy CEO at the Australian Stock Exchange, about why blockchain is such a hot topic right now. We were saying that, unlike the Internet, which took several years to emerge as a truly disruptive technology, blockchain has become a topic of intense discussion because the industry is so focused on reducing cost, mitigating risk and increasing efficiency right now.

When you look at the challenging regulatory and economic environments, it's clear that the emergence of this technology could not have come at a better time.

Big Picture – The Potential Impact

However, when looking at the potential long-term impact of this technology, we must not view blockchain as a hammer and every problem as a nail.

In other words, there will definitely be opportunities to improve the post-trade process by leveraging distributed ledgers, but, in some cases, it may be more cost-effective and efficient to standardize industry workflows and expand use of cloud technologies.

This sentiment is consistent with conversations we've had with many key players in this space. Interestingly a Twitter poll we conducted in March found:

- 65% of respondents said widespread industry adoption of the technology would take five years or longer, with nearly one in five people saying blockchain will never achieve that level of integration.
- When asked whether blockchain would replace the entire post-trade ecosystem or just areas that are still highly manual, 65% said targeted areas.

While not scientific, this poll reflects a feeling among many in the industry that there are opportunities to leverage distributed ledgers, but that the technology needs investment in time and money to validate its true value.

As I mentioned, enthusiasm among major banks and service providers has grown dramatically over the past year and this has sparked a frenzy of activity – mostly uncoordinated – of firms investing in research and development efforts.

It's ironic that virtually every firm is exploring how to leverage a consensus technology individually.

Many have created blockchain labs, sandboxes and funding experiments across multiple asset classes, and while this level of activity may spark innovation and quicken development of use cases, the seemingly chaotic whirlwind of multiple and competing bets are not without pitfalls. With so many firms working privately, the industry runs the

risk of creating a new and disconnected maze of distributed ledger silos based on different standards and with significant reconciliation challenges – essentially the same issues we face with today's infrastructure.

Not to say that Wall Street doesn't learn from its past. Remember, the paper crunch of the stock market in the 1960s and 1970s led to the creation of DTC, and the paper crunch of the 1980s led to the creation of MBSCC, and the paper crunch in derivatives in the 1990s and 2000s led to the creation of DTCC DerivSERV. Thank God Wall Street has the best and brightest minds who never make the same mistake twice.

There are a wide range of issues that the industry now needs to come together to answer in order to put shape to the future-state vision, such as establishing the foundational building blocks, developing the governance and standards and identifying which areas of the post-trade process would benefit most from implementing the technology.

Perhaps most importantly, we need to consider the regulatory framework, legal perspectives of contract enforcement, inter-connectivity—all of which need to be addressed—before blockchain can be successfully adopted.

In particular, the regulatory question will be critical to answering how the industry incorporates blockchain. While this technology will not be able to replace the regulatory framework that has been created over the past 70 years, it has the potential to give supervisors better oversight of the markets and a deeper understanding of risk.

Regulators will have a strong voice in its development and application because their primary goal is to ensure that potential implementations protect the stability and integrity of the marketplace.

In the last month, I've had conversations with two sets of regulators and I found their comments fascinating. One asked, "can you explain how blockchain will fit into the PFMLs," or the Principles of Financial Market Infrastructures—the standards by which we run our business. Another set of regulators said, "we will need to really re-examine our practices to adapt to the changes that blockchain could bring." Two valid comments, both relevant, and in some ways representing diametrically opposed approaches.

CFTC Chairman Timothy Massad spoke at the FIA conference two weeks ago about some of these issues as well, and we have had discussions with both the SEC and Fed regarding how blockchain fits with both the existing rules and practices. Later today, CFTC Commissioner Giancarlo will share his own thoughts with us on the technology from his perspective.

DTCC's Point of View

At DTCC, we intend to use our more than 40 years of experience and expertise to help shape the future and lead the development and implementation of this technology. We also see ourselves helping the industry transition from the old to the new processes

because in some cases, technology is several steps ahead of market practice and structure as well as regulation.

For example, it has taken about five years to gain industry consensus on shortening the U.S. settlement cycle to T+2, although we could move to T+1 tomorrow using existing technology. We need to be realistic that the industry is simply not prepared for a Big Bang. Rather, the technology will likely be implemented in phases over a period of time and initially in targeted areas where processes are still overly manual.

We have spent a lot of time at DTCC thinking about these issues, and educating ourselves, exploring and testing the technology and identifying the building blocks to integrate it into the post-trade environment.

In addition, we have also: Published a white paper, which has received global recognition; Joined the Linux Foundation's Hyperledger Project; Made a financial investment in Digital Asset Holdings; and we continue to engage and partner across the industry.

You may already be aware that this morning, we announced with Digital Asset Holdings plans to develop and test a distributed ledger based solution to manage the clearing and settlement of repo transactions.

This is an exciting initiative, and it is one among several that we are currently working on with different service providers. We will be unveiling more information about these efforts in the coming weeks and months as we continue to work collaboratively across the industry to advance research, testing and, eventually, implementation of distributed ledgers into the fabric of the post-trade ecosystem.

As I said earlier, we believe distributed ledgers like blockchain hold enormous potential to modernize certain areas of the post-trade process. However, that outcome is not a foregone conclusion. We believe there are three keys to long-term success.

First, the industry should engage in a collaborative rearchitecture of core processes and practices to ensure standardization. And let me again stress the word collaborative.

Second, the existing, regulated and trusted central authorities should help play a leading role in introducing the standards, governance and technology to support distributed ledger implementations. These organizations, working in partnership with a wide range of the industry, can help ensure that new opportunities truly enhance post-trade processing and are consistent with long-standing goals of mitigating risk, enhancing efficiencies and driving cost savings for market participants.

Third, the industry needs to forge consensus on whether implementing distributed ledgers is more cost effective than improving existing technology and whether they can overcome their inherent scale and performance challenges.

I'm sure many of you saw the news earlier this month about the concern over the increasing amount of time it takes to process Bitcoin transactions. At one point several weeks ago 40,000 Bitcoin transactions were waiting to be cleared, and the average time to verify a transaction was up around 43 minutes.

One blogger noted that there was a need for governance over Bitcoin. That struck me as a meeting of anarchists asking for a parliamentarian to step up.

This raises a critical question for the industry – how do we mature the technology so that it is capable of processing the hundreds of millions of transactions each day that flow through the financial pipeline?

Instead of boiling the ocean, we believe the industry should begin by exploring targeted opportunities to improve upon the existing infrastructure in certain areas where automation is limited or non-existent and where the technology provides a clear benefit over existing processes. After that, we can focus on larger-scale issues.

In short, the industry needs a coordinated effort to develop the right architecture, prioritize the infrastructure building blocks, and support focused and collaborative experiments to help the technology mature.

Conclusion: Getting the Most Out of Today

In conclusion, we hope that today's Symposium helps to advance this objective, so let me give you an overview of the day ahead.

The first half of the day is focused on the basics. With so much of industry's attention on blockchain, we believe it is important to:

- Level set on what the technology is and why it matters to the financial industry,
- Determine a best practice approach in developing the necessary standards and protocols, and
- Understand how the technology can bring real value to our organizations.

During the second half of the day, we will take a look at the blockchain landscape and new innovations as well as the regulatory view on this rapidly evolving ecosystem and what these new innovations mean for the future of the financial industry.

We've brought together an impressive lineup of speakers to share with you their insights and hopefully to debate the challenges and opportunities that exist for the industry.

I'd like to start things off by welcoming my predecessor at DTCC, and good friend, Don Donahue who now serves as President and CEO of Miranda Partners and as an advisor

to distributed ledger technology company Ripple. Don will moderate the panel “Separating Hype from Reality.”

Thank you again for attending. We appreciate you taking the time to join us and hope you enjoy the day.