

## At the Intersection of Technology & The Client Experience

Welcome Remarks

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### Welcome/Introduction

Good afternoon, thank you all for joining us. Welcome to DTCC's fourth European Client Forum. We really appreciate you taking the time to be with us today.

It's great to be in London again and to have an opportunity to get together with our clients to share our ideas and to hear from you. Collaboration is central to our mission at DTCC – it's deeply ingrained in our DNA – so I'm excited for an interactive discussion on a topic of great interest to all of us – the intersection of technology and the client experience.

So much of the debate on fintech today tends to focus on the technology itself. However, just as important are the underlying reasons why we're all pursuing innovation so aggressively right now. To a large extent, it reflects the realities of the current environment – the need to reduce costs, to achieve regulatory compliance, to protect against new forms of risk and to stay relevant in a fast-moving and uncertain environment. I know that last point is felt more acutely here because so many issues around Brexit are still unresolved.

However, there's also another driver – maybe the most important one of all. It's the client. Every discussion of fintech should start and end with the same question: How do we use technology to enhance the client experience and drive greater client value?

The panels and speakers we have lined up today will discuss fintech through the lens of how it can help firms more effectively support their stakeholders. To set up the conversations ahead, I want to spend a few minutes talking to you about the technologies that I believe will have the greatest impact and deliver the most client value today, tomorrow and in the future.

First, I'll discuss robotics process automation because bots are already being widely used across many parts of financial services to enhance the client experience.

Second, I'll highlight applied machine learning and the work the industry is doing to set the foundational requirements to achieve maximum client value in the near term.

And third, I'll talk about distributed ledger technology because it has the potential to fundamentally reshape the future of how financial firms and their clients engage and interact with one another.

### Topic #1: Impacting Today: Automation

So, let me begin with my first topic – robotics process automation, or RPA. This is a favorite subject of mine because at DTCC, we've been automating manual processes using the latest technologies since our founding more than 4 decades ago.

Of all the technologies we'll talk about today, bots are the most ubiquitous in financial services today – and they're already improving the client experience, both in our personal and professional lives. We see this clearly on the retail side

of banking and in wealth management, for instance, where robo-advisors are becoming more common every day.

Not surprisingly, progress is also being made in integrating RPA into the back office. And as the technology continues to mature, bots will be able to take on a wider range of complex and labor-intensive processes, such as gathering data from multiple applications, managing client master data and avoiding dual data entry.

What firms find so exciting about the technology is that it's capable of not only delivering cost and productivity benefits, but it can also drive more transformational client engagement and personalized service.

### **Bots Supporting GTR Onboarding**

At DTCC, for example, we're in the process of integrating bots into our infrastructure to support client onboarding for our Global Trade Repository. We selected this as one of our first pilots for several reasons, but the major driver was the recognition that our client community is often faced with short timeframes to onboard following changes to regulations or in response to market events like Brexit. I'm pleased to say that we've seen initial success with our one-click through onboarding process.

Longer term, we believe bots can optimize the onboarding process across three dimensions:

- Mitigating risk by reducing manual error rates,
- Speeding up the process for clients by highlighting exceptions earlier, and
- By adding a level of consistency that simplifies the onboarding lifecycle.

This should translate into a better client experience and increased client value. It should also enable our human staff to devote their time to solving more complex client issues or to building stronger client relationships.

We're also advancing other automation initiatives, and our experience so far has been positive. In the not-too-distant future, it's likely that bots will be able to manage many "run the bank" processes for firms across the industry.

### **Coordination Across the Enterprise**

However, a word of caution – there are risk implications of a digital workforce. That's why it's so critical that automation initiatives are carefully managed and coordinated across the enterprise and appropriate controls and governance are established before RPA programs are rolled out.

We've all heard the stories of some members of our industry who have launched aggressive bot programs, attempting to quickly lock in savings and efficiencies, only to lose control over where and how they were implemented. I believe it's best summed up by the saying that bots are great in that they can do the same task correctly, at blazing speed, on many transactions on a 24 x 7 basis. The bad news is they can do the same task incorrectly, at blazing speed, on many transactions on a 24 x 7 basis.

As I said, coordination and governance are critical success factors.

## **Topic #2: Transforming Tomorrow: Applied Machine Learning**

While RPA initiatives continue to advance, the industry is also making excellent progress on applied machine learning – an area that represents the next frontier in the digital transformation of post-trade processing. However, its future success depends largely on getting the foundational requirements right today.

The industry is still in the early stages of applying machine learning to solve business challenges, and I expect to see advancements quickly within the next 2 to 5 years. What's driving this trend is data and how it can be used to support business growth and enhance the client experience.

## **Big Data**

The Big Data movement that took off less than a decade ago was a success in that financial firms now store more data across more dimensions than ever imagined. However, our capacity to collect data has not been matched by our capability to create the sophisticated analytical tools and systems to draw out insights or conclusions. Machine learning has the potential to change that.

## **Foundational Requirements**

Of course, maximizing the value of this technology requires the right foundational strategy and approach. I want to highlight three areas of priority:

*The first* is the need to create and use the most robust data sets possible. Normalizing and standardizing data prior to analysis is important to ensuring that modeling results are accurate. But machine learning, unlike any of the technologies we use today, thrives on complete datasets because it seeks out patterns that may unearth a risk, trend or key insight.

Blythe Masters, CEO of Digital Asset, summed it up at Sibos a few weeks ago when she said:

*“All of these technologies, DLT, AI, ML, Robotics, Big Data Analytics - are highly dependent on a foundation of clean, high quality data in one place, easily accessible. Without that, these technologies will turn dirty data into dirty data cubed.”*

And just a few weeks ago, we performed a demo of our renovated credit systems for a US regulator and highlighted the difficulties we had aggregating risk information 5 years ago versus today. She reacted by saying “I thought you all had great systems.”

I explained that while we had robust processing systems, they weren't built with the use of data for analytics in mind, and so we had to change our mind-set completely in terms of data as an asset versus data as a fuel for processing.

*The second* building block is recruiting, developing and retaining data scientists and technologists who can work with the algorithms and train them to validate their results. As you can imagine, this is especially critical when using machine learning for risk management purposes.

*The third* requirement is addressing concerns around data security and confidentiality. These can be thorny issues, so the industry is going to need to work through them during these early days. As a user-owned and governed market infrastructure, DTCC comes at this with a unique perspective, and we look forward to being part of the industry conversation on data usage.

We all understand the need for confidentiality in data usage. Similarly, we're in the position in areas like FRTB to utilize client data to provide significant support for clients in terms of capital usage, risk reporting and other key concerns. However, the question we have to answer is this: How do we balance the need for privacy with the need to utilize data for beneficial reasons?

## **Topic #3: Shaping the Future: Distributed Ledger Technology**

To recap for a moment, robotics process automation is delivering real value to solve business challenges today...and machine learning is just starting to make an impact on post-trade processing, with its best days still ahead of it.

Interestingly, the technology that's gotten the most exposure – distributed ledgers – is the one that's the most complex in terms of delivering client value. It's also, however, the one with the most potential to transform how the industry transacts and supports clients.

## **TIW & US Equity Market Study**

At DTCC, I'm very proud that we're leading one of the largest DLT initiatives to date – the re-platforming of the Trade Information Warehouse. Our work is helping to lay the foundation for the industry to leverage a shared, common auditable database.

Looking ahead, we remain strongly committed to continuing to provide leadership to advance the use of DLT. Just last month, for instance, we completed a study with Accenture that demonstrated DLT can process the average daily trading volumes of the US equity market – about 115 million trades per day – without hitting the ceiling in terms of performance and scalability.

This is an important milestone because it helps build confidence in the underlying technology. What it's not, however is an invitation to crown DLT as the solution to every operational challenge. Rather, we need to be thoughtful about how and where we apply DLT to address an industry pain point. And we also must recognize that in some cases using existing technology may still be the best solution.

### **DLT Future Vision**

This is a critical point because our collective goal shouldn't be to simply move current processes to a distributed ledger. Doing so is a wasted undertaking of massive proportions. Instead, we need to view the technology as a springboard to fundamentally rethink how to transform the post-trade ecosystem.

It's impossible to predict how DLT will change market structure in the years ahead, but I can envision a future where the capital markets are more intimately integrated through distributed ledger systems...where all data is captured and stored in the cloud...where critical assets are digitized and natively reside on these networks...and where networks seamlessly synchronize data across capital markets.

Saying that, in some ways, building that end-state may be the easiest part. It's the transition from today's technology, processes and market practices that may be the most complicated and difficult task before us.

In addition, I expect the tokenization of assets to continue to progress and change how we do business. Here, too, market infrastructures are at the forefront of innovation, helping to solve the complexities of this transformation and enabling adoption by the larger financial community.

This vision of data synchronization would deliver client value through massive cost savings, risk reduction and by fulfilling the industry's long-time goal of achieving straight through processing from execution through settlement.

### **Closing/Conclusion**

As I wrap up my remarks, I want to reinforce how important collaboration is to realize the promise of fintech. All of us in this room today, along with our colleagues across the industry, have the power to be the trailblazers of innovation.

We must work together, share our successes and failures and put aside the competitive spirit to serve a greater purpose – that is, the digital transformation of the post-trade environment. If we do that, I have no doubt we'll enhance the client experience and drive greater client value.

I also want to stress the continued importance of London as both an incubator of fintech and a global center of financial services. Despite the uncertainties of Brexit, it's equally obvious that London has too much to offer, and I have no doubt it will continue to be a leader in our industry. That's why DTCC is keen on continuing to bring together market leaders like we've done today.

In many ways, that's what this conference is all about – talking, listening and partnering. We have an outstanding afternoon planned, beginning with a client view on global markets, fintech disruption and business uncertainty, among many other topics.

Thank you again for joining us today. Let's begin with our first panel.