DTCC

ISO 20022 Implementation for Corporate Actions

Business Benefits

> Improve identification and representation of events by allowing events to be presented under a single record (event-based as opposed to function or activity-based). This means that events such as mergers with elections and optional dividends will no longer require multiple announcements to support processing, thus resulting in cost reduction and efficiency benefits.

> Support delivery of corporate actions messaging over the DTCC SMART and SWIFT networks, thus providing greater client choice.

> Provide corporate actions data in a global context—both North American and global data, and in complete alignment with global standards.

> Support automated elections by giving firms the ability to send DTCC instructions for electable events via the ISO 20022 message format, hence less manual processing required.

> Support intraday announcements for real-time delivery of corporate actions information.

> Development of a new unified, browser-based client interface that allows clients to manage their entire corporate actions lifecycle, from announcements through instructions to payments.

> Provide a unique corporate action identifier to establish a clear and consistent way of identifying events throughout their lifecycle.

> Provide a standard messaging and data model that will assist in reducing miscommunications and manual errors throughout the corporate actions chain.

Introduction

First phases of The Depository Trust & Clearing Corporation's (DTCC) reengineering program and adoption of ISO 20022 enables risk reduction and greater efficiencies within corporate actions processing. "The same standard, the same browser, and unique corporate action identification numbers being used by the industry will help automate and streamline corporate actions processing, help reduce risk, and move the industry a step closer to straight-through-processing," says Robert Epstein, Vice President, Asset Services, DTCC.

DTCC is moving forward with its reengineering program, which will see the depository retire its legacy systems in favor of a new single integrated system, as well as adopting the ISO 20022 standard for corporate actions messaging. The decision to go with ISO 20022 goes back several years when the industry, DTCC, and various working groups were investigating ways to approach corporate actions reengineering. It was decided to implement a single standard for the entire industry so that DTCC, the custodians, the investment managers, the brokers — everyone in the corporate actions chain—could speak the same language and use the same standard. ISO 20022, with the DTCC extensions, was selected in order to realize that goal.

Accordingly, one of the main benefits of the industry using the same standard is that the risk of misinterpretation when transferring data from one broker to another or from one custodian to another is reduced significantly and efficiencies are boosted. Also, DTCC's corporate actions identification number, coupled with ISO 20022, will enable a corporate actions user to track an event from the announcement all the way through to the instruction and payment.

Milestones, Challenges, Costs

When the reengineering project began in 2009, DTCC, along with the industry, decided it should be a multi-year, phased-in project where different components would be delivered each year. So, in 2010 for example, DTCC drafted and posted a corporate actions roadmap and timeline on its website, along with a detailed list of technical documents and specifications covering legacy files, ISO 20022 messages, corporate action scenarios and related information. Working with SWIFT, it also released for public comment ISO 20022-compatible corporate actions announcement messages and later posted a revised draft of the announcement messages incorporating industry feedback.

SWIFT

In 2011, it launched the pilot program testing ISO 20022 corporate actions announcement messages using the new browser-based user interface with four pilot firms—Brown Brothers Harriman, BNY Mellon, J.P. Morgan and National Financial. The announcement messages went into production in November 2011, and, as of May 2012, DTCC had sent over 20 million ISO 20022 messages to these four pilot firms (see detailed project phases in Table A below).

Epstein explains that one of the most important milestones reached last year was the deployment of a new data model. "Currently, clients see announcements as function codes communicated via envelopes and there can be two, three, four, five, or even more, different announcements for one event. Now, with the new data model, we use a single-event structure," he says. "For example, instead of identifying a tender and consent offer as two '52' function codes, it's now called what it is known as in the market—a tender offer with a consent – and all of the information is communicated within a single event, represented by a unique corporate action ID."

In terms of resources dedicated to the reengineering project, it has been quite large in scope for DTCC, involving teams from Product Management, Operations, Applications Development and Maintenance (ADM), Infrastructure, Service Activation and the Customer Help Center. On the pilot firms' side of things, they have dedicated operations and project management staff to ensure proper testing between the old and new data model. Network infrastructure and application teams have also been heavily involved in the effort to ensure that their networks are operating at peak efficiency in order to handle ISO 20022 messages and volumes.

Table A: Phases of DTCC Reengineering Project

Phase	Description	Roadmap	Dates
Phase I	DTC data into WAVES	Additional DTC specific data elements added to the platform to support ISO 20022 messages.	October 2009
Phase IIa	Announcements ISO 20022	New browser for announcements and event-based ISO 20022 announcement messages available intraday to all DTC participants for DTC-eligible data and to all GCA VS clients.	November 2011
Phase IIb	Full XBRL interface	Full connectivity to issuer-based XBRL tools, and issuer authentication for Cash ADRs and Stock Dividends	July 2012
Phase III	Distribution events: announcements and processing	New customer user interface and ISO 20022 messaging is introduced for the entire lifecycle for distribution events, from announcements through elections and payments.	February 2013 – June 2014
Phase IV	Redemption events: announcements and processing	Same steps as in Phase III, but applied to redemption events.	December 2014
Phase V	Reorganization events: announcements and processing	Same steps as in Phase III, but applied to reorg events. DTC legacy reorg processors and Computer-to-Computer Facility (CCF) files are upgraded to handle new activity types and data elements.	By December 2015

Source: DTCC

These tests and preparation work have thrown up a range of different issues to tackle and, on the subject of hurdles faced and lessons learned thus far, Epstein says: "Perhaps one of the biggest challenges during the pilot was testing out of a non-production environment. Initially, it was very helpful in terms of testing the new standard because it was the first time anyone had sent out ISO 20022 messages. But as the test went on, our clients were anxious to see real workflows from a production environment. When we did go into production in November 2011, and customers were able to do tests in parallel systems, they could see the full production data and full workflows and understand how the new data model and new standard worked in practice."

The pilot program has been an evolutionary process for all involved; as well as learning about the workflows underlying the new data model, DTCC and the pilot firms also tailored speed of delivery options for different client groups. The reengineered system was initially conceived as a real-time messaging system, but some customers realized they didn't need everything in real-time; they needed the flexibility to subscribe or not subscribe to different event groups. This led DTCC to develop different subscription options allowing customers to receive data in real-time or at the end of the day.

ISO 20022 Real-time Publication vs. CCF End of Day Batch File

Event Type	Function Code / Activity Code	ISO 20022 Real Time Publication			CCF File Batch Publication	
		Created (Option 1)	Incomplete Manual Update or Final Status (Option 3)	# of Data Elements	Batch Schedule	# of Data Values
Mandatory Put	FC-65G	IN-3:31PM	AP-6:46PM	35	8:30PM	31
Name Change	FC-91	IN-1:32PM	CA-6:30PM	37	8:30PM	20
Put	FC-62	AP-1:32PM	AP-1:32PM	47	8:30PM	33

Benefits for Clients

DTCC sees an opportunity for risk mitigation as the new communication standard unfolds. Epstein explains: "The standard messaging and data model will go a long way in reducing miscommunications and errors throughout the corporate actions chain—from custodians, to investment managers, to the end investors. And then there's also the XBRL effort which will increase the timeliness and accuracy of corporate actions information. By aligning our technology with the same standards and taxonomies, we believe there are opportunities to further mitigate risk. In addition, as the initiative progresses to new phases, DTCC will be offering the ability to send inbound instructions and elections on elective dividends and other events. By automating what is now a manual process, DTCC will produce operational efficiencies for its member firms and reduce the risk associated with manual instruction errors."

Feedback thus far indicates that its pilot firms have been very pleased with the data provided in the ISO 20022 message. The extensions allow for the population of more data, enhancing accuracy, boosting efficiencies and moving the firms closer to STP. In general, however, the ISO 20022 standard has allowed DTCC to publish more 'fielded' data than its CCF formats, allowing firms greater automation on corporate actions.

The new browser has been a bigger success with clients than DTCC expected. "The browser had gotten rave reviews as far back as 2010 when we first started conducting browser webinars with clients to obtain feedback," Epstein continues. "The feedback we've gotten from the pilot firms has also been extremely positive. They've cited the flexibility of the browser and the ability to customize it. They're very pleased that going forward they will have a single platform where they will have the ability to track all processing from the inception of an announcement, to entitlements, all the way through to instructing or electing on their positions and, ultimately, the allocation and payment of the proceeds."

Future Benefits

This year, DTCC has begun onboarding additional clients for ISO 20022 announcement messages, as well as offering new message protocols for greater flexibility in handling large volumes. One of the pivotal events for 2012 will be the launch of ISO 20022 pilot testing for distribution events covering the entire lifecycle, including entitlement and settlements messages. DTCC will also be adding related functionality to its new browser-based user interface.

In the longer term and as the industry moves to ISO 20022 over the next few years, DTCC expects to see a much higher level of STP. "The same standard, the same browser, and unique corporate action identification numbers being used by the industry will help automate and streamline corporate actions processing, help reduce risk, and move the industry a step closer to STP," says Epstein.

Key Partnership with SWIFT

SWIFT has supported all of the pilot program efforts and DTCC has worked closely with SWIFT in developing the necessary ISO 20022 extensions. As a result of these efforts, DTCC clients can now choose either DTCC's SMART network or SWIFT to connect to DTCC. Accordingly, DTCC has, for the first time, started to send corporate actions data over the SWIFT network.

Epstein elaborates: "The pilot firms like the network flexibility and our partnership with SWIFT has been a close one during the past few years. We believe it will continue to be as we automate and bring greater accuracy to corporate actions and to the industry as a whole."

One of the key benefits of DTCC's shift away from dated legacy file formats that are delivered in end of day batch files is the ability to send real-time ISO 20022 data as it is available in the market. In the table above, there are three examples of events that were published to customers significantly faster via real-time ISO 20022 messaging compared to the current CCF batch files. In the Mandatory Put example, the initial ISO 20022 publication was sent at 3:31 p.m. and an updated, fully validated event was sent at 6:46 p.m., a full 5 hours prior to the end of day file that is available in the CCF formats. In the Name Change and Put examples, the initial ISO 20022 messages were sent at 1:32 p.m., almost 7 hours before they were available via CCF. In the example of the Put, the 1:32 p.m. ISO 20022 publication was the final, approved record.

Additionally, the table above displays the enriched, added data elements that are published via ISO 20022 – the Name Change published 17 more data elements (46% more), the Put published 14 more data elements (30% more), and the Mandatory Put published 4 more data elements (11% more).

Adherence to U.S. Market Practice and the ISO Global Standard

In defining a new model for U.S. and global corporate actions, DTCC worked closely with SWIFT, ISO 20022's registration authority. DTCC then worked with the International Securities Association for Institutional Trade Communication (ISITC), in its capacity as the US National Market Practice Group, to develop proposals for changes to the ISO 20022 standard as it related to corporate actions. These changes were then reviewed and approved by the ISO 20022 Securities Standards Evaluation Group as well as the SWIFT Securities Maintenance Working Group. DTCC is now an active member of these 'standards maintenance bodies'.

The yearly ISO standards maintenance process requires DTCC to constantly review, scrutinize and update its message formats to ensure compliance with market practice. This in turn will lead to less ad hoc maintenance and instead institute a systematic approach to the business rules driving the file formats, not the other way around.

DTCC's Commitment to Messaging Standards and Market Practice

Throughout the life of DTCC's Corporate Actions initiative, it has demonstrated a commitment to standardizing corporate actions communications through the use of ISO standards. DTCC recognizes the benefits its member firms can derive from such standardization and continues to work within the industry's various organizations – ISITC, SIFMA, and others – to provide transparency to the process. The pilot program that took place from 2011 through 2012 demonstrated this commitment, and DTCC will continue to engage its participants as it moves towards testing the lifecycle phases of ISO 20022 messaging into 2013, 2014 and through 2015.