

BROWN BROTHERS HARRIMAN

ISO 20022 Implementation for Corporate Actions

Business Benefits

- Announcement phase is the foundation for increased automation of corporate action processing.
- Provides universal identification of an event with the adoption of the Official Corporate Action Event Reference ID for DTCC eligible securities.
- Improved data quality from the source.
- Adoption of industry-standard messaging allows for more streamlined and timely communication with DTCC.
- Improved turnaround processing times.
- Increase in the amount of data communicated in standard format.
- Reduce risk related to misinterpretation of events.
- A single announcement message replaces multiple proprietary file feeds for an event.
- Core foundation for future improvements to downstream processing; entitlements, elections, payments.

Introduction

Brown Brothers Harriman & Co (BBH) has realized improved turnaround times, enhanced data quality and reduced risk as part of its completion of the first phase of the ISO 20022 pilot for corporate action and reorganization announcements. "The adoption of the ISO 20022 standard represents the first step toward streamlining corporate action messaging, which will lead overall improvements in data quality throughout the life cycle of an event, as well as comply with global market practices," says Sonda Pimental, Vice President, Brown Brothers Harriman & Co.

In October 2010, BBH announced its participation in the ISO 20022 corporate actions messaging pilot program, run by the Depository Trust & Clearing Corporation (DTCC). The aim of the pilot is to enable BBH and other pilot firms to automatically receive standardized real-time corporate action announcements from DTCC in ISO 20022 messaging formats.

The pilot program is part of DTCC's overall corporate actions reengineering initiative, which will see the depository replace its 60 legacy systems with a new single platform, allowing users to manage the full lifecycle of their corporate actions. The reengineering initiative was announced back in 2009 and is expected to be completed in

2015, when DTCC will retire all corporate action legacy files. DTCC's transition from communicating information in proprietary formats and adopting the universal standard of ISO 20022 messaging is a great step on the journey toward universal standards and automation. Initially, the pilot has focused on corporate actions announcements and their related cancellations, however, the remaining corporate actions life cycle processes, such as entitlements, elections and payments will be tackled in upcoming future phases.

Motivation

BBH was the first firm to join the ISO 20022 corporate actions pilot program and the first to go live with reorganization announcements in May 2012. "Over the years, BBH has worked closely with SWIFT and DTCC in order to address challenges around corporate action processing. We chose to pilot with DTCC because we were looking for solutions in the ISO regime that would solve corporate actions pain points in the U.S. market. ISO 20022 provides solutions to improve transparency and granularity when communicating corporate events," explains Sonda Pimental, Vice President, Brown Brothers Harriman & Co.

The U.S. market is more sophisticated than most with regard to corporate actions due to the high number of complex events and the ever-changing regulatory environment. This results in a large manual processing effort



based on proprietary communication methods. The move by DTCC to adopt more standard messaging has been welcomed by custodians such as BBH as an opportunity to standardize global market practice. "A lot of work has been done in the ISO standards space to leverage the opportunity to implement new messaging and enhance system infrastructure as part of our long term strategy," says Sonda Pimental.

To put the challenges of the U.S. market into context, previously, all of the data received by BBH from DTCC was in a non-standardized, proprietary format and sent in batch files. There was therefore a time lag for the receipt of data and a high degree of manual intervention was required to convert the data into internally consistent formats.

Benefits Experienced During Phase One

The move to ISO 20022 represents an opportunity for BBH to leave behind some of the issues related to dealing with proprietary formats. Throughout 2010 and 2011, BBH led many workshops with DTCC, SWIFT and other pilot firms to discuss the design of the messages as well as the overall impact this initiative will have on the U.S. community. BBH committed a significant amount of time and resources to analyze DTCC's documentation, message specifications, data element mapping, and sample messages. Once the pilot began, BBH's focus turned to testing the announcement messages in a production-parallel environment. This allowed BBH to compare and contrast information and data received in the new messages to that of the legacy files to measure the timeliness of information and the quality of data benefits. In addition, BBH also reviewed processing workflows and downstream system impacts to its internal applications. In addition, because of these efforts, BBH was able to provide recommendations on improved workflows, status updates, data element mapping, and timing of the messages.

BBH sampled approximately 300 reorganization events in the test environment to compare the timeliness of data received from DTCC via the new ISO 20022 (real-time messages)

versus batch proprietary files. The result was that more than half of the test data (real-time messaging) was received in a more timely manner than the data in production (batch files), including improvements in communication intra-day:

- A minimum of 24-hour improvement was realized on 60 percent of the data one business day earlier than the batch files.
- The remaining 40 percent of event updates were received intra-day, which allows more time for clients to make investment decisions.

"The ISO 20022 message formats are more aligned with the business process than the ISO 15022 messages that are available to us today," says Pimental of the other key consideration for joining the pilot.

The DTCC proprietary files provide limited, unstructured data, which means that BBH is forced to reach outside of its systems, manually pull data from DTCC's legacy systems, and scrub that data in order to enrich the corporate actions records.

The elimination of manual processes related to pulling data from DTCC also has an impact on levels of risk, as well as turnaround times. The improved workflow from DTCC to BBH minimizes risk for everyone involved because the required data is provided from the source in the structured fields of the ISO 20022 messages. Less rekeying of static data means that there is also less opportunity for operational risk.

The ISO 20022 messages, therefore, allow for more supplementary data to be included than the previous DTCC proprietary formats. Pimental elaborates: "Cost basis information required for asset managers to review and assess impacts is one such example, where the gap in the legacy data is passed on from the issuer through the central securities depository (CSD) and intermediaries, such as BBH. There are fields available within the ISO 20022 messaging to report such information, should information agents begin to send the details. DTCC's proprietary files do not support that information." "We will now have the infrastructure in place to consume the data, when the

issuer is ready to send it, and pass the information to the end investor."

The hope is that the adoption of the standard will enable the industry to address regulatory requirements in a consistent, cost-effective manner. Data will be structured in such a way that it can be utilized downstream for tax reporting, rather than converting proprietary formatted data into a required reporting format manually, thereby reducing the number of announcement updates to an event.

To measure the enhanced quality of structure data, BBH sampled nine specific reorganization events in the test environment via the ISO 20022 message versus the proprietary files. The result was that in each case, an increased amount of information was received in a structured format from the outset. The table below highlights the number of data attributes that were included in the pilot (test region data) versus the DTCC production data for different mandatory corporate action event notifications used in the sample.

- In the case of the cash merger with the CUSIP 86323M100, only 50 percent of the attributes required are being provided by the proprietary file, whereas 67 percent are being provided by ISO 20022 messages.
- In the case of the stock merger CUSIP 67071M104, only 40 percent of the attributes required are being provided by the proprietary file, whereas 80 percent are being provided by the ISO 20022 pilot messages.
- Overall, an average of 25 percent more data is being received via the structured message.

Notifications		CCF File		SWIFT 20022		
Event	CUSIP	Attributes Received and Percentage of Attributes Required		Attributes Received and Percentage of Attributes Required		Percentage Increase
Stock Merger	67071M104	7	41.18%	14	82.35%	41.18%
Cash Merger	86323M100	6	50.00%	8	66.67%	16.67%
Cash Merger	670823103	3	25.00%	8	66.67%	41.67%
Reverse Split	74347X690	9	56.25%	12	75.00%	18.75%
Reverse Split	74347X682	9	56.25%	12	75.00%	18.75%
Reverse Split	563118405	11	68.75%	12	75.00%	6.25%
Manexc	512807AH1	3	20.00%	9	60.00%	40.00%
Manexc	512807AK4	3	20.00%	9	60.00%	40.00%
Manexc	226373AA6	3	20.00%	9	60.00%	40.00%

Milestones, Challenges, Costs

This is the first time that BBH has received ISO 20022 messaging for corporate actions. The first milestone achieved by BBH was to adapt its systems to be able to receive these messages. The second milestone, achieved in 2011, was the testing and the mapping of the messages, and the verification of the quality of the data that DTCC was sending in the new formats. BBH is currently working through how that information is implemented within its systems and how it impacts downstream processes. “We want to make sure that we have no gaps from what we have internally today, so we are continuing to analyze the process,” explains Pimental.

One of the challenges of moving to ISO 20022 is that the naming conventions between the DTCC proprietary standard and the ISO standard are different. The proprietary format conventions are very specific to DTCC. BBH had to interpret what those events mean from a standards perspective – whether it is a tender or an exchange, for example. Therefore, BBH is keen to make sure that the data it receives from DTCC is aligned with the naming conventions and existing market practice standards. The main risk is that if this is not checked, BBH may end up cancelling events in error. Hence BBH is using its test data in parallel to identify any issues.

Since the standard is new, and it is the first time that BBH is using the messages in the corporate action space, investments were made in order to adopt ISO 20022. This includes the requirement to:

- Conduct analytics on the new messaging formats.
- Assess effect of adopting ISO 20022 on BBH’s systems.
- Assess effect on downstream workflow implications.
- Implement the necessary system enhancements and infrastructure improvements in order to handle the messages.

BBH’s strategy is to align with DTCC’s phases, which will allow BBH to plan and spread out development and implementation over future phases of the project.

Future Benefits

BBH is confident that there will be further efficiency gains realized in the future by not having to manually rekey data. However, it is difficult to tangibly measure these benefits ahead of the migration of other message types to ISO 20022. BBH believes that future phases will have much more of an impact, particularly the phase related to elections. “The improvements realized throughout the life cycle of an event will allow for more accurate projections, cash/share availability, and reduced deadlines, which affords more time for making investment decisions,” says Pimental.

At the moment the communication of elections between BBH and DTCC is 100 percent manual – via the rekeying of data into a DTCC terminal. In the future, BBH will have the opportunity to automate that process.

The Roles of DTCC and SWIFT

DTCC and SWIFT have supported the pilot group and are both committed to the long term goal of moving away from the DTCC’s proprietary files. Pimental explains, “We had several workshops before the pilot actually started in 2011. Our discussions focused on the business process of corporate actions., DTCC partnered with SWIFT to allow firms to look at the messages and understand what they were going to do.”

Once the pilot started, BBH had regular calls with the pilot group in order to share experiences and particular issues. In addition, during the last six to seven months, BBH has started discussing migration strategy with the other individual pilot firms.

“SWIFT has been a huge contributor to the process by ensuring that DTCC and the pilot firms understood what was required from a messaging standpoint,” says Pimental. “None of the firms were previously using ISO 20022 messages for corporate actions, so we all had to analyze the impact to our system platforms as well as require input on standards, mapping, and message formats. SWIFT was instrumental in setting up workshops to support the pilot firms’ efforts.”