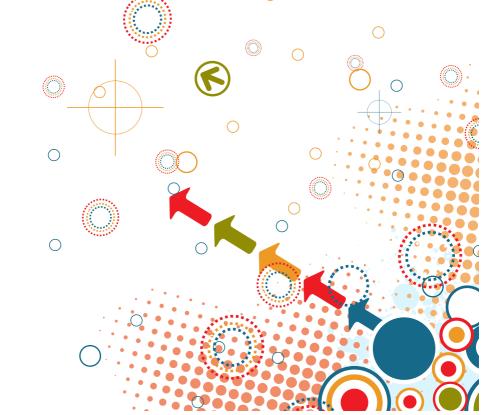
Inside Reference Data

August 2015

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Corporate Actions Special Report





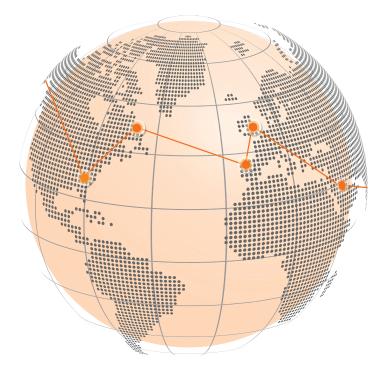
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Editor's Letter



Simply About Methods

Questions in this special report, probing the increased complexity of corporate actions, provoked responses about digitizing these instruments at the source, as they are generated. Citi's John Kirkpatrick, an advocate of the practice, says on page 18 that custodians must read, translate and consolidate information before publishing it to clients. JP Morgan's Kerry White notes in the Virtual Roundtable

that digitization may only be as good as the source data used. "The problem is not rooted in technology, as institutions including DTCC and Swift already demonstrate technical ability," she says. "Converting analog and free-form data to digital form is an even bigger challenge with complex corporate actions." Global standards compelling issuers to format corporate actions consistently will be need to cut the risk of many digitizing the same data but getting different outcomes, she adds.

How should the industry then go about digitizing data at its source and using consistent messaging standards? AIM Software's Ben Hopcroft says a more "pragmatic" method is to combine people's knowledge with automation technology to process "pre-event activities" for greater volumes of corporate actions events. SunGard's Brendan Farrell says keeping up with the changes in corporate actions events requires significant "continual modifications" to internal systems.

If a global corporate actions processing utility is not a possibility, adds Farrell, at least more customers can look to service providers to manage their corporate actions processes. Stuart Martin of Thomson Reuters points to creation of a golden copy as an effective way to address greater complexity in corporate actions. The industry's overall response appears to still be a work in progress, making for interesting changes to follow.

Yours sincerely,

Michael Shashow -

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Contents

FEATURES

8 Virtual Roundtable

Inside Reference Data gathers together leading data management professionals to discuss how corporate actions' increasing complexity is affecting automation and digitization of processing, and the quality of their data

18 Q&A

IRD speaks to John Kirkpatrick, MD of custody operations at Citi in London and chair of the corporate actions working group of the International Securities Services Association, about market activity that is making corporate actions processing more challenging



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NEWS

- 6 ASX Upgrades nCore With GoldenSource EDM
- 6 Charles River Partners with Interactive Data for Corp Actions
- 7 SunGard XSP Launches Dashboard, BPaaS Services
- 7 News Download



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News Review

ASX Upgrades nCore With GoldenSource EDM

The Australian Securities Exchange (ASX) and enterprise data management (EDM) solutions provider GoldenSource have announced they have successfully completed re-architecting ASX's core back-office systems.

The ASX says the revamp will improve its productivity by 80% as it goes live with GoldenSource's EDM systems for corporate actions management. GoldenSource says the solution, which took two years to put in place, will result in faster speed to market and product development, as well as increased automation and straight-through processing (STP).

Working with an exchange required

taking account of different considerations than those involved in working for a bank, because announcements could have immediate and major systemic impact on markets, says Neill Vanlint, London-based managing director of global sales and client operations at GoldenSource.

ASX's nCore takes corporate actions announcements from companies' chief financial officers and sends these through a workflow and enrichment process, then publishes them directly with little or no manual intervention, says Vanlint.

Joanna Wright

Charles River Partners with Interactive Data for Corp Actions

Charles River, a front- and middleoffice investment management solution provider, is offering Interactive Data's Corporate Actions Service to its buy-side clients, the company announced.

Corporate actions data is fed into the Charles River investment book of record (IBOR) solution and processed to adjust positions in real time, which can be used by the Charles River Investment Management System and fed to downstream systems, the company says.

Clients now have intraday access to

Interactive Data's corporate actions, dividends and capital events information, covering 80,000 firms in more than 100 countries.

Boston-based Charles River global managing director Tom Driscoll says the partnership for corporate actions data expands on the firm's IBOR solution, released in Q1. With this Interactive Data partnership, Charles River aims to provide a simplified, turnkey solution for a crucial aspect of its position data.

Joanna Wright

News Download

SunGard XSP Launches Dashboard, BPaaS Services

SunGard's XSP corporate actions data unit has launched two new services—XSPosure, a cloud-based risk data dashboard developed during an internal SunGard coding competition, and a separate business process as a service (BPaaS) version of its data utility.

The XSPosure dashboard for use with XSP's corporate actions data allows automation of corporate actions lifecycle processes and identification of important risk events.

"We think there will be another advancement in the way our customers consume and manage information, especially when they're under so much pressure to do more, faster and with less resources," says Brendan Farrell, New York-based executive vice president and general manager of SunGard's XSP business. "Now we can allow them at a glance to see what the potential risk is and not have to go through tons of data to find out."

The XSPosure dashboard was the "next logical step" for building on the data captured by the company's XSPrisa managed services platform, according to Brendan Farrell, New York-based executive vice president and general manager of SunGard's XSP business.

In addition, the BPaaS version of XSP's data utility puts the company's own experts in front of the processes the company offers, Farrell explains.

Michael Shashoua

Singapore Exchange Upgrades Reporting

The Singapore Exchange (SGX) has begun requiring issuers and listed companies to complete structured data fields through its SGXNet platform, as part of an effort with the Singapore National Market Practice Group (SG NMPG) to improve both corporate actions reporting and disclosure in the market, according to exchange officials.

Structured data allows better definition for corporate actions processing, says Peter Shen, a market data executive at SGX.

Markit Acquires Information Mosaic

Financial information provider Markit has acquired Information Mosaic, a corporate actions and post-trade securities processing software provider. The acquisition follows expansion of the Markit Corporate Actions (MCA) platform in October to cover more securities and serve more users.

Information Mosaic's enterprise software will allow Markit to extend its corporate actions service to support the full corporate actions trade lifecycle and enhance Markit's asset-servicing solutions.

Corporate Actions: Confronting New Developments

Inside Reference Data gathers together leading data management professionals to discuss how corporate actions' increasing complexity is affecting automation and digitization of processing, and the quality of their data

Why are corporate actions increasing in complexity?

Ben Hopcroft, senior business lead, corporate actions solutions. AIM Software: There are a lot more complex events around capital restructuring: firms looking to refinance debt, issue share capital to raise money-leading to more rights offer events-or get involved in mergers and acquisitions. This aggravates the well-known challenge of the subjective interpretation of events-which start with the announcements themselves and carry right through the process. Different interpretations of the same event among industry participants leads to discrepancies in classification of event type, sequence of dates or stock splits, or how the complex event should be announced. This creates issues in the downstream systems and can affect payments,

dividends and tax compliance, which turns into additional post-event activities or even reputational risks.

Kerry White, executive director, JP Morgan: First, the challenges around automating corporate actions seem to be a perennial topic in our industry, which is now processing higher volumes of activity, as well as increasingly complex transactions. Over the past 10 years, we've seen a growth in transactions that cut across a diverse range of asset classes, in new geographies and often with market-specific nuances and tight deadlines.

On the positive side of the ledger, the automation of corporate actions has gained ground in recent years. However, the proliferation of data sources and the lack of standardization continue to pose challenges for market participants. It sometimes seems as if we take two steps forward and then occasionally a step (or maybe a half step) backwards in terms of achieving true straight-through processing (STP), as processing corporate actions remains complicated.

Some of this complexity has arisen as corporations seek to access new international markets, which have differing domestic rules, procedures and processes. Many of these crossborder transactions may involve several intermediaries and custodians as well as complex terms and conditions. Crossborder trade has also impacted what had been considered more "vanilla" events, such as dividend announcements, if the shareholder is entitled to receive payments in a variety of currencies. Furthermore, new event types with multiple facets continue to evolve and challenge the industry. Examples include a multi-legged spin-off, where more than one security is distributed to the shareholder, and complicated debt exchanges that the market has seen recently with Greek sovereign debt restructuring.

Brendan Farrell, executive vice president, SunGard: In the old days, corporate actions—except for dividends—were events that happened in smaller companies and usually within local markets. Today, there are much larger companies involved in corporate



actions across global markets, so these events are getting more complicated.

A recent example is Sara Lee's corporate actions, which consisted of a name change, a one-for-five reverse stock split, a spin-off and an exchange. These events can get difficult for our customers to handle, especially in the case of a market leader like Sara Lee that has actively traded securities in multiple markets.

Stuart Martin, global head of asset servicing, Thomson Reuters: Corporate actions professionals are facing mounting pressure as their business processes increase in complexity. This complexity stems from a variety of sources, in particular from the need to process complex events, manage new types of taxation information as part of the actions, and on top of that achieve even better accuracy while still delivering with greater timeli-



ness. All of these, underlined by different formats and standards, make the process even more complex.

How is the increasing complexity of corporate actions weighing against efforts to digitize their processing and generally improve the quality of corporate actions data?

Hopcroft: This affects the timeliness of the event: the more complex the event, the more time is necessary to assess it. The need to re-key an event into an email, a letter or a fax, adds further delay and introduces the risk of manual error.

Standards are also misused by firms with aging systems that capture key information within lengthy blocks of texts—so-called "narrative"—resulting in even higher reliance on human expertise to carefully read pages of options, restrictions and associated conditions, although a new field exists and would have facilitated STP. The permanent efforts of working groups to align standards with new market requirements are also undermined if a single participant in the processing chain hasn't implemented them. We believe modern data management systems that remain aligned with latest standards can contribute to a general improvement of the quality of corporate actions data.

White: In recent years, we've seen great strides in digitization capabilities and technology associated with execution of functions within the corporate actions lifecycle. A large challenge in dealing with the increasingly complex corporate actions lies with the source data-namely from the issuers themselves. This problem is not rooted in technology, as we've seen a number of credible institutions in the US, including DTCC and Swift, already demonstrate the technical ability to digitize source data using XBRL. This standard is aligned to the ISO 20022 messaging standard and is based on XML. Digitizing this type of source data is critical to successful execution of the automation of downstream activities

Converting analog data and freeform data to digital form is an even bigger challenge with complex corporate actions. Until there are globally



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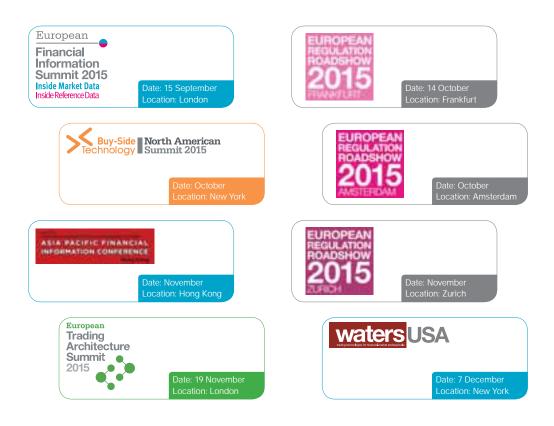
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agreed-upon standards that compel issuers to provide corporate actions information in a certain way, we run the risk of multiple market participants attempting to digitize the same data with potentially differing outcomes.

Farrell: Corporate actions are both unregulated and, in many cases, unknown events, so it is extremely difficult to anticipate what types of events are going to be announced. The digitization of the process is difficult as you need to build applications that are flexible enough to handle this constant data flux. The ISO 15022 and 20022 standards are continually being updated, so Swift users have to either make ongoing enhancements to their internal systems at great expense or look to outsource their corporate actions technology to companies like ours. Keeping up with this constant change in the events and then the subsequent enhancements to the standards' formats requires a significant number of continual modifications to internal systems.

Martin: There's little doubt that current messaging protocols, which must keep pace with new and more complex corporate actions event structures, have had an impact on the efforts to digitize and improve the quality of the corporate actions data. In particular, we see the debate on messaging protocols as a key obstacle to achieving higher levels of automation. When it comes to the quality of corporate actions data, we see event structures that are notably more complex, encompassing the growing number of options, qualifiers and new attribute information being introduced in the market. This all adds to the complexity and makes data quality a challenge.

A key point to highlight is the desire to find structured alternatives to narrative expositions, as the latter invariably increase reliance upon human intervention and vulnerability to error. Registration authorities must respond with agility, adapting their models to keep up with market evolution.

How should increasing complexity in corporate actions be addressed?

Hopcroft: Everyone agrees that enforcing digitization at the source and messaging standards are keys to address this. To succeed, these initiatives would require a unilateral adoption by all participants, which is unlikely in the near future. A more pragmatic approach combines human expertise supported by STP technology that can automate pre-event activities on higher volumes of events. Where events cannot be automated, these systems offer workflow support and quick access to further data sources to accelerate identification of discrepancies.

White: As corporate actions teams face increasingly complex events coupled with increased volumes, many are still operating in an environment that includes manual processes and controls. Because of this, STP of corporate actions messages is the industry's "holy grail." As we tackle the issue of increasingly complex events, we must continue to pursue automation programs wherever practical and possible.

Previous barriers to automation, such as market infrastructure, are less of an obstacle today than a few years ago. From a Swift processing perspective, the framework really exists today. One element contributing to the complexity in this domain is the increasingly narrow window around market deadlines. This is a fact of life and we recognize the increased risk of late or missed deadlines can impact reputation and profit. Service providers have the best chance to meet their obligations by advancing automation and standards adoption programs, while ensuring corporate actions teams are as well educated as possible regarding the global nuances and market requirements.

Martin: In addressing the complexity of corporate actions, there is a clear need for practitioners to focus today not only on completeness of information but also on timeliness and accuracy. This is because in an environment where timeliness and accuracy are assigned primacy in determining standards, professionals need to mitigate their exposure to risk. Incomplete events can also result in significant risk in terms of managing entitlement risk, as it will vary depending on the investor, jurisdiction or market, as well as tax qualification. Practitioners will need to fully understand the nature of the event and the complexity of the market where they work. This will often require further analysis and event enrichment. An additional emphasis to emerge recently is for professionals to have access to the broadest global range of corporate actions data in a manner that is quick and efficient. This is especially the case in the complex corporate actions market, where highly nuanced information demands the highest level of global expertise.

What ways of reducing corporate actions complexity are successful or becoming successful, and why are they having an impact, if they are?

Hopcroft: Pilot digitization projects are observed with interest. The London, Singapore and Australian exchanges already digitize capture of corporate actions at the source using ISO standards. We have seen great emphasis for many years on XBRL and issuer-toinvestor initiatives in the US to automate collection of data via a website.

Much progress has been made in the industry, but more is needed to speedup the adoption of standards, and get higher levels of timeliness, accuracy, completeness and efficiency. Corporate actions, unlike other kinds of data management, use a much higher degree of manual processes and this won't change in the near term. Specialized data management systems are promising because they offer both automation and workflow support: it isn't just improving operational efficiency, but being more productive within the existing environment.

White: When clients talk about corporate actions complexity and automation, the conversation generally gravitates toward issues in the middle and back office. However, having worked in both the investment management and investment servicing industries, I find it interesting that the conversation rarely touches upon the benefits that can be derived in the front office. There should be an increased focus in drawing the linkages between how corporate actions automation can lead to better investment decisions in the front office. Working to reduce the complexity in corporate actions, coupled with educating investors about this complex environment, will allow us to shift the conversation and discuss how an efficient corporate actions operating environment can create value for the front office.

Farrell: More financial services firms are realizing it is not worthwhile to attempt to keep up with all the changes in technology while maintaining these zero value-add activities in-house. Every financial services firm around the world does the exact same corporate actions processes. So more and more customers of all sizes and locations around the world are looking to firms like ours to manage the entire process for them, potentially creating, for want of a better word, a global corporate actions processing utility.

Martin: The creation of a "golden copy" has been seen to help tackle complexity. This must be produced for each event to which they are exposed. There are two benefits to be enjoyed by firms for whom this is normal practice, including the ability to maintain regulatory compliance and additionally achieve greater transparency.

Other factors contribute to how firms are tackling the complexity of corporate actions. For instance, despite extensive tools for data management, cleansing and reference data, exceptions are. These exceptions are typically compounded when data from a multitude of disparate sources is combined. In recent years, we've seen that validation of the data often requires manual intervention. There are, however. clear advances we recognize with the tools and techniques for capturing and managing corporate actions data maturing and improving with time. In particular, the introduction of ISO 20022 and the application of domainspecific languages and standards such as XBRL have supported the automation of data management and cleansing.

Is the complexity of corporate actions affecting automation of entitlement calculation and posting?

Hopcroft: The complexity comes from rates and ratios and the markets' inability to define how this is shown. This leads to accuracy issues in the data, which can affect payments, income, dividends and tax compliance. What is needed is an approach to solve all discrepancies upfront, before they impact downstream processes, prior to entitlement calculation or even client notifications. with minimal disruption on the existing ^{JP Morgan} processes. There is



Kerry White,

clearly a high demand for "data firewalls" in front of existing systems, extending their capabilities and thus offering an integrated end-to-end workflow leveraging the existing environment.

White: We try to have as much automation as possible for entitlement calculation, but more complex issues can create a challenge. I would be remiss in neglecting to mention corporate actions operations teams work constantly on the ongoing cleansing and validation of data as part of the pre-event processing. Issues that arise during the event processing for whatever reason unclear options, aggressive deadlines, incorrect entitlement or other reconciliation breaks-can make post-event processing quite time-consuming.

Overcoming these challenges requires greater collaboration among industry players as well as engagement with the securities issuer community to help facilitate a meaningful dialogue, and

most importantly help drive change and adoption of standards to address this complexity.

Farrell: If a firm cannot get the data cleansed correctly or does not have workflow and downstream processing applications that are flexible enough to consume and process the data, the process of entitlement calculation, customer notification, instruction processing and posting of events is negatively affected.

Martin: The heightened complexity of corporate actions has a clear relationship to the automation of entitlement calculation and posting. Traditionally, we've seen firms employ more manual processes or what appear to be lessintegrated automated processes to support the processing of a corporate actions event, but this lack of automation, which typifies a more fragmented support model can lead to additional discrepancies, exceptions and errors.

Ultimately, the best way to detect and avoid discrepancies and exceptions is to use a fully automated and highly integrated process that controls and monitors the full lifecycle of event information—from the original notification to election and confirmation of the entitlement.

Are standards for corporate actions messaging and processing still an issue that needs to be addressed, and why or why not?

Hopcroft: Standards bring many benefits, but also two obvious disadvantages. Standards are built around supporting automation, and this requires firms to maximize this advantage by implementing solutions. This can often be seen as a bridge too far—back-office departments are seen as revenue protectors, not creators. Therefore, they lack funding or roadmaps that encompass future requirements (more complex events, volumes, less people with the required skills).

The other negative is that standards never stand still, as they need to adapt yearly to manage new challenges, market practice enhancements and regulatory drivers. With this fluidity comes cost—cost of maintaining the standard and all the downstream systems that consume it. This can be solved by taking a solution —the vendor will maintain the standard to ensure the solution itself and the data it consumes is pressure-tested.

White: Yes—messaging standards go a long way in addressing the triple threat of regulation, risk mitigation and cost. As investors expand into new geographies in search of alpha, the volume of corporate actions is growing exponentially. While this represents an opportunity for investors, it also can pose a challenge, particularly due to the variety of nuances from country to country.

Just as the investment frontier is evolving, so too is communications technology. Issuers can send corporate actions announcements in a variety of ways. Through adoption of common messaging standards and automation of corporate actions functions, service providers can streamline corporate actions processing and improve the quality and timeliness of data. This will ensure firms' long-term operational efficiency and effectiveness.

Regulatory change and the development of new post-trade infrastructure is a global phenomenon. Some firms will be impacted by a rapidly changing environment in various markets if messaging standards are not adopted. It will be interesting to see how things evolve with SEPA—the Single Euro Payments Area. The concept of SEPA includes adoption of mandatory ISO 20022 (XML-based) payment standards messages and usage rules, which will have a substantial impact on financial institutions. When the regulatory and business environment is growing in complexity and volume, greater adoption of ISO format standards should help all market participants.

Farrell: It's still an issue because not only are we dealing with this constant state of change in data requirements within a single standard, but we now have two standards used globally for the same corporate actions process: ISO 15022 and the newer ISO 20022. Organizations that support customers around the world now have to handle two completely different standards. This issue isn't being addressed, as established Swiftcompliant organizations have spent large sums of money since 2002 building out their messaging infrastructures around ISO 15022 and have little appetite to replace all these systems with new ISO 20022 compliant solutions.

Martin: The adoption of standardized communications at a primary level (i.e. among event initiators) would significantly reduce downstream processing overheads and mitigate associated risk. Even with multiple messaging schemes concurrently in play, the interpretation of formulaic notifications is less error-prone and more efficient. Although industry groups have increased standards within the ISO standards, they can still be open for interpretation. Until the issuers are fully engaged in the process, the industry is still manually reading prospectuses to determine what event needs to be created, and so is open to interpretation from the end-reader.

Contending With Complexity

IRD speaks to John Kirkpatrick, MD of custody operations at Citi in London and chair of the corporate actions working group of the International Securities Services Association, about market activity that is making corporate actions processing more challenging



John Kirkpatrick

What are the challenges posed by discrepancies in corporate actions?

Any discrepancy will slow the process and delay the announcement being received by the end-investor. It adds cost by the manual effort involved in researching and resolving any conflict in the data. Risk is also significantly increased, as the time during which investment decisions are made can be reduced and the exposure to manual error is increased.

How are debt exchange activity and bond issuance affecting the complexity of corporate actions data?

Debt exchanges can be very complex and often leave little time for investors to

elect any given option. Volatility in these instruments can lead to significant profit and loss deltas for each option. These can quickly move as underlying bond and share prices change. There are often multiple options with varying outcomes, secondary events and tax implications.

How are corporate actions data managers responding to increased complexity in this data?

Coverage of debt exchange from data vendors varies by market and instrument type. When information is published close to deadlines and in physical form, the custodian will need to read, translate and consolidate information before publishing in digital form to clients.

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