September 2008

ReferenceDataReview presents

Corporate Actions

A-TEAMGROUP

Corporate actions automation has languished on the STP to do list for some time and significant challenges remain to be tackled, not least of which is the adoption of the same set of standards by all market participants.

Even though corporate actions data does ultimately reach the end investor, the process involves a high degree of manual intervention, which incurs operational risk and cost for all involved. Globalisation has not helped matters as investors are actively investing a large proportion of their business outside of their home markets and corporate actions are often categorised differently from market to market.

Furthermore, as market offerings become more complex, the ability to apply set standards to existing processes is often tricky. Based on the terms, conditions and options provided by the companies and their agents, custodians can find themselves falling into a more manually intensive review of processes they have already automated, as the offers do not fit well into event templates.

Given the current economic climate, it also seems unlikely that corporate actions automation projects will see a surge in investment over the next six months, at the very least. Those corporate actions vendors that choose to remain in the market must step up their game in order to survive these harsh times.

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One step forward, two steps back?

By Virginie O'Shea, Editor, A-Team Group

Corporate actions has to be one of the most paper-based and complex areas in the custody business (well, apart from OTC derivatives that is). Progress seems be a constant uphill struggle, as no sooner is one type of corporate actions message standardised and set on the road towards automation than another more complex one comes to take its place.

Alain Pochet, head of banking operations at BNP Paribas Securities Services, sums it up perfectly: "Corporate actions is a strange area because the more you try to standardise and automate corporate events, the more corporate events are created. For example, we have a lot of new corporate events being invented by our mergers and acquisition group that are increasingly complex."

> Although some of the pain has been taken away in specific areas by the work of bodies such as the Securities Market Practice Group (SMPG) and Swift, there is still much to do

Last year's white paper from the Association of Global Custodians (AGC) about the state of the corporate actions space was also truly depressing reading. It highlighted incidences of non-uniform and paper-based communication at every stage in the corporate actions process. Although some of the pain has been taken away in specific areas by the work of bodies such as the Securities Market Practice Group (SMPG) and Swift, there is still much to do.

"The flow of information needs to be improved between the issuer, market intermediaries and the end investor. The process lacks in speed and is often paper-based, and as a result it loses time, efficiency and accuracy," says Edwin De Pauw, director, product management at Euroclear.

The basic challenges of receiving accurate corporate actions information and subsequently managing the flow of that information persist, agrees Tim Wood, head of securities operations in the UK for RBC Dexia Investor Services. "There needs to be a standardised format on what should be included in actions and how this information should be laid out," he adds.

Furthermore, as noted by Richard Stumm, vice president of Securities Processing Solutions for Broadridge Financial Solutions, while there has been progress in the creation of standards, creating a standard does not infer compliance. It all comes down to the consistent use of the standard by all parties.

Even if many of the plain vanilla corporate actions are to some extent automated – and Pochet estimates that around 60 to 70% of them are already – there is still the problem of late and inconsistent data at the start of the chain. The primary source of this market condition stems from the offering agent and the communication channels within the securities industry, says Amy Harkins, senior vice president at BNY Mellon Asset Servicing.

Many organisations will dual source the data received from the marketplace prior to the corporate actions notification cycle in order to avoid these inconsistencies, but this is costly and time consuming.

Harkins believes that this also has the negative impact of convincing institutions that the corporate actions space cannot be automated. "The industry must strive to change this perception to move forward aggressively towards automated processing," she contends.

> The current economic climate has certainly not been kind to the corporate actions vendor community

Bernard Lenelle, vice president at Clearstream Banking, reckons that corporate actions automation projects sometimes still struggle with regards to management buy-in and, given the recent performance of many of the vendors in the market, it would seem he is right.

The current economic climate has certainly not been kind to the corporate actions vendor community, many of whom have seen a downturn in profits over the past six months.

It is easy to see why there can be some hesitation around embarking on a system upgrade for corporate actions when you take the cost of such a solution into account. "A significant number of technology dollars must be spent by organisations to install and maintain systems that process corporate actions activity," says Harkins. "The corporate actions engine of today must be capable of accommodating ISO 15022 messages and providing vendor and depository interfaces for the both receipt and the instruction of the corporate action information, and be flexible and customisable for many client needs."

Alan Jones, product manager of corporate actions at SmartStream Technologies, adds: "Too often corporate actions has been viewed as a huge challenge offering less strategic benefits than processing new instruments, or a project that carries a greater element of regulatory compliance. As a result it's tended to be reactive – it's not until something goes wrong, causing a significant operational loss or customer service issue that corporate actions automation is given priority."

However, regardless of senior management interest levels, the problems caused by errors in the corporate actions process can be severe. "There is tremendous risk involved; one of our custodians said that if he had a dollar mistake on one corporate event for which he had six million shares held in custody, it would be a serious issue to handle the loss resulting in $6million in claims," explains Max Mansur, senior product and markets manager at Swift.

The risk is also proportionate to the size of the business and the top 20 custodians have 90% of the world's assets under custody – a scary prospect to contemplate.

> There is no doubt that globalisation has affected the industry and that the volume of notifications has risen hugely

RBC Dexia's Wood feels that despite the market downturn, these projects are still firmly on the radar for senior management. He believes that globalisation has had a significant part to play in raising the profile of the corporate actions space: "There is no doubt that globalisation has affected the industry and that the volume of notifications has risen hugely. To keep up with demand the major players need to increase resources and automate the process."

BNP Paribas' Pochet agrees: "Five years ago, clients were investing largely in their own markets, but now around 70% of their investments are outside of their domestic market. This means that they are asking us for more information on non-European countries, including corporate events."

As well as raising the profile of the problem, globalisation is exacerbating it, says Harkins. Add on top of this the increasing complexity of financial products and their impact on the space and you have a serious issue. "As market offerings become more complex, the ability to apply set standards to existing processes is often challenged. Based on the terms, conditions and options provided by the companies and their agents, custodians often find themselves falling into a more manually intensive review as the offers do not fit well into event templates," says Harkins.

"This reduces the efficiency of the corporate actions teams within a firm's operational area and inherently increases the risk as human intervention is required for the process. As markets continue to evolve, technology solutions must at least keep pace, if not ahead of these changes to bridge the gaps and work closely with their clients in order to achieve success," she adds.

Lenelle agrees that the combination of globalisation and the increase in complex products has created a moving target for those who wish to standardise and automate.

"It is therefore essential to work both externally and internally," he contends. "Externally through collaboration. For instance we have launched with Euroclear the International Securities Market Advisory Group (ISMAG) initiative to address communication flows across the entire chain from issuers to investors for international securities primarily deposited with the two ICSDs. Internally, by investing smartly in rules-based systems that can handle the complexity and adapt to the changing market environment."

Euroclear's De Pauw explains how the project is progressing thus far: "We have focused in the past on improving corporate action electronic processing and communication between CSDs and their members. But now we are looking at how the issuer and issuer's agent can improve their information flows with CSDs. We have been at the forefront in running an ISO working group on understanding and defining the messages in this space. We are very close to having ISO messages approved for communication between the issuer or its agent and the CSD. Once in place, the end to end information flow from the issuer to its intermediaries and to the end investor will be fully automated."

> "In one word, predictability is what the systems need and predictability is what the SMPG has started to offer"

Lenelle is also a proponent of the work of the SMPG and points to deliverables such as the global SMPG document and the Event Interpretation Grid (EIG) as proof of its success because they have created a sound basis that market players can leverage in order to increase their internal automation. "In one word, predictability is what the systems need and predictability is what the SMPG has started to offer," he says.

BNP Paribas's Pochet agrees that the SMPG and Swift are the right players to push the agenda, given the time and effort they have invested in driving forward automation and standardisation.

He also believes the wider harmonisation of the European market will have a positive impact on the corporate actions area. "The more you have harmonised across Europe in terms of the securities market, the easier it will be to harmonise corporate actions. For example, the introduction of the single system for the Euronext markets or Target2-Securities will mean the market players are more open to the idea of harmonisation. The automation of the custody space in Europe will help a lot in the standardisation of corporate actions."

Perhaps a more harmonised European landscape will provide the tipping point for these projects but until then, it will be up to industry bodies and vendors to persuade market participants to invest.

Beyond the Standard

By Linda Bookheim, global market manager, Custody and Asset Servicing, Swift

What is holding up the implementation of full straight-through processing (STP) for corporate actions? The building blocks for STP are all in place and have been for some time. Industry participants have access to ISO standard messages covering the key flows in the corporate actions process. Market practices governing how the messages should be used have been established. Many of the vendors of corporate actions data now offer feeds in ISO 15022 format. And a range of mature software applications for automating corporate actions processing is now available.

So why is the corporate actions function still widely considered the most manual and risk prone area of the back office?*

It's Not All Bad News

It is important to point out that significant progress has been made towards corporate actions STP. Chairing the *CorpActions 2008* conference in New York in June, Amy Harkins, senior vice president at Bank of New York Mellon, paid tribute to the industry's efforts to date to improve the efficiency of corporate actions processing. Harkins told delegates at this event – held in Swift's Times Square office and hosted by Securities Operations Forum – that Swift's corporate actions solution, based on ISO 15022 messages, has made a major contribution to the efficiency improvements achieved so far.

However, Harkins also warned that there is no room for complacency, because the challenge is a complex one, and there is still much work to be done.

From Theory to (Market) Practice

One recognised impediment to corporate actions STP is that there has been a lack of consistency across the industry in how the ISO 15022 standard is used for corporate actions announcements. The flexibility of the standard means it is possible for users of the messages to interpret differently what data should go where. This in turn makes the messages less predictable and therefore less easy for recipients to automate.

At the New York conference, this subject was explored in detail during a panel session on standards and data quality. There is some good news, said Ted Rothschild, executive director at JPMorgan – not least Swift's recently launched Simulation Testing and Qualification Service (STaQS) for Corporate Actions.

The value of STaQS lies in making it easier for firms to implement industry agreed market practices, designed to help eliminate the problem of differences in interpretation of the message standard.

Using STaQS, firms can self-test their corporate actions messages for adherence to market practice according to the Event Interpretation Grid (EIG), developed by the Securities Market Practice Groups (SMPGs). The EIG defines option preferences for more than 60 event types, plus differences for events in 19 different national markets.

To engage further in the ongoing debate about how to improve data quality to boost corporate actions STP, don't miss this session at Sibos 2008 in Vienna:

Beyond the standard: improving corporate actions data quality

> Thursday 18 September - 12:00-12:45

Corporate actions messaging standards are only part of the automation story; market practice is vital to ensure each participant deploys the standards in a consistent manner. Because these standards must handle the complexities of many different event types, global market practice has been defined to significantly enhance the process-ability of the messages. But how can we effectively implement this market practice? Over the years, different flavours and interpretations of the messages have generated an abundance of well-intentioned and seemingly useful market practice guidance. We should, as a community, turn this guidance into significant improvement in automation, STP, and risk reduction.

With a central point of reference, the Securities Market Practice Group guidelines can be consistently implemented. Swift's Simulation Testing and Qualification Service (STaQS) for Corporate Actions is now available to support customer self-policing for conformance to market practice.

Speakers:

• **David Grant Duff**, senior officer, Corporate Actions, Abu Dhabi Investment Authority • **Max Mansur**, senior product/markets manager, Swift • **Sonda Pimental**, vice president, Brown Brothers Harriman • **Ted Rothschild**, executive director, JPMorgan Chase

For Rothschild, STaQS is an important positive development in the corporate actions STP story. He did point out, though, that large financial institutions are usually active in 80-100 markets, while there are national market practice groups in 39 countries, and not all of those have contributed to the EIG. In light of this, he called for the extension of the work of the SMPGs into more markets to be addressed as a key priority.

The Issue of the Issuers

Another outstanding challenge identified during the New York conference was the engagement of corporate actions issuers in efficiency efforts. Currently, significant work goes into interpreting and cleansing information about corporate actions announcements from disparate sources – a risky, time consuming process. Getting issuers to adhere to industry standards "is the most important thing we can do to take risk out of the process", Rothschild said.

This theme was picked up during a panel session exploring a number of activities under way to bring issuers into the straight-through process. Some of these are focused on ISO messaging and some on formats such as XBRL, and, as the discussion revealed, there is concern in the industry that if these efforts are not co-ordinated, more problems could be created than solved. Co-ordination is happening, but clearly this is an area in which continued collaboration is a must, and the industry requires more information and reassurance going forward.

Don't Delay – Automate Today

So there are still barriers to full STP for corporate actions. But that doesn't mean that significant progress hasn't been made, and can still be made, even if the nirvana of issuer engagement with STP hasn't quite been achieved yet. As with STP in all contexts, there will always be 'exceptions' that require manual processing. The creativity of issuers will continue to generate complex events that need manual expertise, but that shouldn't impede the implementation of automation for more straightforward event types. Instead, the need to shift expertise to manage complexity should justify investment in automation to push the simpler events into STP mode.

In her closing speech at *CorpActions 2008*, Harkins told delegates that "more IT dollars need to be spent" on streamlining corporate actions processing, and she called on them to step up to the plate and get involved in the array of initiatives under way in this area. "You also need to partner with data vendors, with software providers – and definitely with your clients," she said.

Many of the tools required to eliminate the lion's share of the risk and cost associated with corporate actions processing are available now – and there are numerous opportunities for firms to get involved at the industry level to try to resolve the outstanding barriers to STP for this activity. Harkins recognised this at the New York conference, where she concluded with a rallying call for firms to "stay focused on standardisation – and keep the STP numbers going up".

***To try to answer this question even more fully, Swift has again teamed with consultancy CityIQ to reprise the research the two companies jointly carried out in 2003 into the state of play of corporate actions STP. Look out for the results at Sibos in Vienna.**

Swift in Asset Servicing

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The combination of ISO 15022 securities messaging standards and Swift connectivity offers an opportunity to standardise corporate actions communication flows between information sources, market infrastructures, local agents, global custodians and investment managers. *www.swift.com*

SimulationTesting and Qualification Service for Corporate Actions

Helping customers conform to industry market practice

Swift's Simulation Testing and Qualification Service (STaQS) has been developed to support the Swift community working to implement standards and conform to market practice. STaQS for Corporate Actions is now available for testing market practice compliance with published industry guidelines. *www.swift.com*

Data Distribution

Standardising communications from data providers and market infrastructures

Swift's Data Distribution solution combines ISO 15022 securities messaging standards and Swift connectivity to enable you to standardise your communication flows from market data providers and market infrastructures. *www.swift.com*

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Swift's Proxy Voting solution supports automation of the proxy voting process by implementing end-to-end, standardised messaging. This service validates and delivers those messages with security and reliability for the benefit of all market participants. The solution reduces risk, increases voting levels and enables better regulatory compliance. *www.swift.com*

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State of Play

By Simon Barry, head of product management, Telekurs (UK)

Is progress being made in the automation of corporate actions? With no clear regulatory directive, a confusing picture regarding standards, and an increasing complexity of instruments and associated actions, the management of corporate actions is getting more difficult. How can firms respond and what should their approach be?

Last year more than 1.6 million corporate actions were reported, covering nearly 100 different types of events affecting a company's structure, ownership or share price. Mix this with a huge number of issue to issuer relationships, multiply that by the numerous cross border complexities, and you begin to get a picture of how complicated the corporate actions world is.

The need has always been for simplicity. The market wants it to diminish risk for standardisation purposes and end users want it to ensure straightforward delivery, and so that due diligence and processing can be carried out with fewer chances of errors. Clients receiving payments that are subject to geographically based taxation rules are demanding a more streamlined system for more accurate payments. Finally, with data providers and consolidators using large departments to manually check, administer and process this information correctly, there is a demand to reduce dependency on manpower, to increase accuracy through automation, and to streamline costs.

Corporate actions information is disseminated through a combination of electronic and manual delivery, which still includes custodians sending messages to investment managers by email, fax and telephone. With the spectrum of differing types of corporate events, the content of messages can become very complex, and lead to organisations having to invest in departments of experts to manually deconstruct, interpret and enter the information into their in-house systems. Data vendors and consolidators help make sense of this information, delivering real-time company news and corporate events electronically. However, data vendors can also be affected by similar issues. There remain many of types of events that cannot be easily classified.

Regulation, in some cases, has not been helpful. The latest European directive, MiFID, has led to a proliferation of quoted and pricing data. This has led to the sharp increase in the number of venues, which has both increased the amount of corporate events, and has also muddied the waters of standardisation.

Over the years, the industry has tried to tackle this. There have been various attempts at trying to make this type of information more manageable, ranging from proprietary data formats from data providers, to today's ISO 15022 and 20022 standards. There are sure signs that standardisation is becoming more popular. With a standard format there is an opportunity to automate from multiple sources, and this would allow the bulk of corporate events to be automated more easily. What we have now are various venues, software houses and data vendors supplying aggregated services, which offer consolidated corporate actions feeds electronically. These services have multiple data inputs, and rely on software checks and manual processing to compare, correct and upload the correct data into the system.

There is also an increasing tendency in the market for more complex corporate events. For example, in the UK there are multi-currency dividends, which are linked to currency options. The type of currency paid is dependent on the country in which the client is domiciled, and there is also a degree of choice by the client. This makes the corporate action ever more complex, as it needs data input both from the client and the provider. The 'credit crunch' too has had some impact; banks are now conducting more complex rights issues to help with their balance sheets.

One other significant consideration is the desire for better levels of straight-through processing (STP). Given the manual nature of much of the corporate actions collection process, it is often difficult to guarantee timely delivery, especially if the standard of accuracy is to be maintained. It goes without saying that accuracy is of paramount importance for the correct interpretation, and to the overall success level of the STP chain. A perfect balance is required. Simpler and more structured corporate actions types call for a more automated approach. However, in reality a higher level of manual processing and analysis for the more complex corporate actions is needed. Standardisation certainly paves the way for simplicity, regarding technical issues, payment methods that allow withholding tax, and counterparty payments, which can be received and swapped effectively by intermediaries. However, it is not possible to standardise each part of the process.

To conclude, the future of corporate actions will become clearer with the help of standards, such as ISO 15022. Standardisation will facilitate data vendors to automate corporate events more and more. What is unlikely to change in the short term, however, is the manual intervention needed to process complex events. At Telekurs, we have implemented automatic processes to overcome this obstacle, which has given our corporate actions specialists greater freedom to focus on the analysis and timely processing of the complex events. For the moment we feel that we have got the balance right, and we will continue to adapt this balance to fit to the changing landscape.

AUTHOR

Simon Barry is head of product management at Telekurs (UK). He has specialised in process and product management and development in the reference data and real time industry for much of his career.

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Software as a service: The future of corporate actions?

By Christopher Madigan, vice president and head of global sales and marketing for Fidelity ActionsXchange

Management expectations, today, are exceedingly high. Costs are to be kept to a minimum, while increasing workloads tax organisational resources to their limits. Sound familiar? This is a struggle confronting all industries, but has hit the financial services community particularly hard, in the face of a global economy that has taken a decidedly sharp downward turn.

Corporate actions processing, still highly manual and, therefore, vulnerable to errors is an area that can be well served by an improved model in order to comply with management's desire to lower costs and increase efficiency.

Because of the tremendous amount of risk associated with corporate actions, firms are re-examining their internal operations, streamlining processes and automating wherever possible. To facilitate this, organisations are moving away from using internally developed systems to utilising third party providers to assist with a piece or all of their corporate actions processing. These external solutions, however, are not without their challenges.

Installable products such as software come with high licensing costs and considerable upkeep. There are patches to run, new releases to install and maintenance to perform on existing systems that support the software, all of which need to be managed by a firm's in-house staff, further depleting valuable time and resources.

While certainly not a new technology concept, software as a service (SaaS), an application hosted as a service provided to customers via the web, is a novel approach for managing corporate actions and is beginning to gain momentum in the industry. Cost effective and virtually hassle free, SaaS-based solutions can be used to automate and support key business processes.

According to a white paper co-written by Fidelity ActionsXchange and Infosys, entitled "Corporate Actions Outsourcing Utilising a SaaS Model, " software as a service for corporate actions makes good business and economic sense:

- Cost of development is lower because it is spread over many clients.
- Eliminating the need to maintain corporate action systems reduces internal IT costs to a certain, fixed amount.
- Ongoing capital investment required to maintain state of the art technology is reduced.
- SaaS vendors can make a significant contribution in addressing the operating and technology challenges.
- There is more flexibility in defining the modularity of a SaaS solution, thus reducing the overall cost.

Furthermore, SaaS applications help front, middle and back office staff as well as corporate actions groups around the globe stay connected and make decisions based on the same data. Globalisation has increased the need for enterprise-wide solutions for firms with multiple sites that need to communicate and share information.

With a SaaS-based product, colleagues in the US, UK, India and beyond can all share in the same experience just by logging in, viewing and discussing the information in front of them on the screen.

Gartner has estimated that in 2005, 5% of all business software spending was for applications delivered in a SaaS model, and that by 2011, this figure is expected to grow to 25%. This growth explosion may be attributed to an increased understanding of SaaS models, which has helped to dispel some of the more common misconceptions about these applications.

In a SaaS model, a firm's information resides on a provider's server; however, its data's security is not necessarily at greater risk. Data security is one of the most critical factors in the decision making process, and therefore, an organisation needs to conduct thorough due diligence in order to ensure it chooses a provider that is trustworthy, reliable and has outstanding security provisions in place. That being said, a provider's data security capabilities can actually be superior to what a financial firm has in-house.

Because it is used across many clients, SaaS applications have been mistakenly labelled as non-customisable solutions. Fidelity ActionsXchange recently launched ActionCompare, a SaaS-based application, used by our clients to compare our cleansed ActionService corporate actions data against their own custodial or proprietary information. We have worked closely with each of our ActionCompare clients to create a dashboard for them that meets their own unique workflow needs. Because no two firms run their operations exactly the same, our clients' dashboards are highly customised and look completely different from one another.

Whether SaaS truly is the way of the future for corporate actions is yet to be determined. Ultimately, SaaS models can help organisations focus more fully on core competencies and revenue generating activities. Management would surely appreciate this shift in focus at a time when they are trying desperately to improve the bottom line.

FOR MORE INFORMAION

To learn more about Fidelity ActionsXchange's global corporate action solutions, please visit www.actionsxchange.com or contact us at 877.777.5838.

Intelligence in Action

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Intelligence in Action

Data Quality and Timeliness: The Key to Corporate Actions Risk Mitigation

By Charles Price, senior director, Entity Data Products, Interactive Data Pricing and Reference Data

The past 12 months have placed a significant amount of pressure on financial institutions. With the extreme volatility of the financial markets and the credit crunch, the constantly shifting sands of the global economy have made it increasingly important for institutions to have access to timely, high quality corporate actions information to help them better understand their investments and, therefore, effectively manage their risk.

These market conditions have exacerbated several factors that can increase an institution's risk exposure, namely the volume and complexity of information about an investment. As an example, think about the number of companies that have tried to strengthen their financial position by raising additional funds, whether through a rights offering or other action.

For each one of these announcements, financial institutions must process this information and then communicate it to impacted parties who may need to make a decision, often within a short timeframe, as to whether or not to participate in the action.

Obtaining timely access to corporate actions information can also help financial institutions gain a competitive edge when it comes to investing. For instance, if a company announces its intent to acquire a rival, an institution's traders may be interested in acquiring shares of one of the parties involved in the potential transaction. Adding to the complexity of this situation is the global nature of the markets, as there is often no uniform way of communicating information.

These examples demonstrate some of the challenges that institutions must deal with, the risks that they can face, and the importance of data quality and timeliness. If institutions cannot effectively process corporate actions information, or if the information that they monitor is not timely or accurate, they could miss out on an important investment opportunity or make a decision based on flawed or out of date information.

In light of these challenges, it is critical to have access to high quality corporate actions data delivered in a format that can be seamlessly integrated into a financial institution's systems and applications. Interactive Data Pricing and Reference Data delivers comprehensive information for more than 100 corporate actions types throughout the day, helping financial institutions to effectively monitor information that can impact the markets. Interactive Data also supports industry standards by mapping its corporate actions services to the ISO 15022 format. Providing a standardised file in this format can help reduce the risk of incorrect interpretation, and help facilitate downstream processing of information.

Interactive Data has gained a significant amount of experience working with complex corporate actions information over the past 30 years, which has helped improve the accuracy of information released to the marketplace. Corporate actions notifications from issuers are typically made in free form text and in an issuer's native language. Interactive Data needs to understand this information in order to successfully gather, validate and deliver it to clients around the globe. As a result, Interactive Data places an emphasis on capturing corporate actions information from direct and authoritative sources – including EDGAR filings, company press releases, dealer managers and stock exchanges – as opposed to aggregating information from other data providers.

As the world's financial markets continue to expand and become increasingly complex, financial institutions will continue to demand a broader range of corporate actions information to help them effectively monitor their investments. To continue to meet this need, Interactive Data will look for opportunities to expand its coverage and optimise data delivery, while remaining focused on the quality and timeliness of its corporate actions data.

Interactive Data Corporation (NYSE: IDC) is a leading global provider of financial market data, analytics and related services to financial institutions, active traders and individual investors. The company's businesses supply real-time market data, time-sensitive pricing, evaluations and reference data for millions of securities traded around the world, including hard-to-value instruments.

www.interactivedata.com

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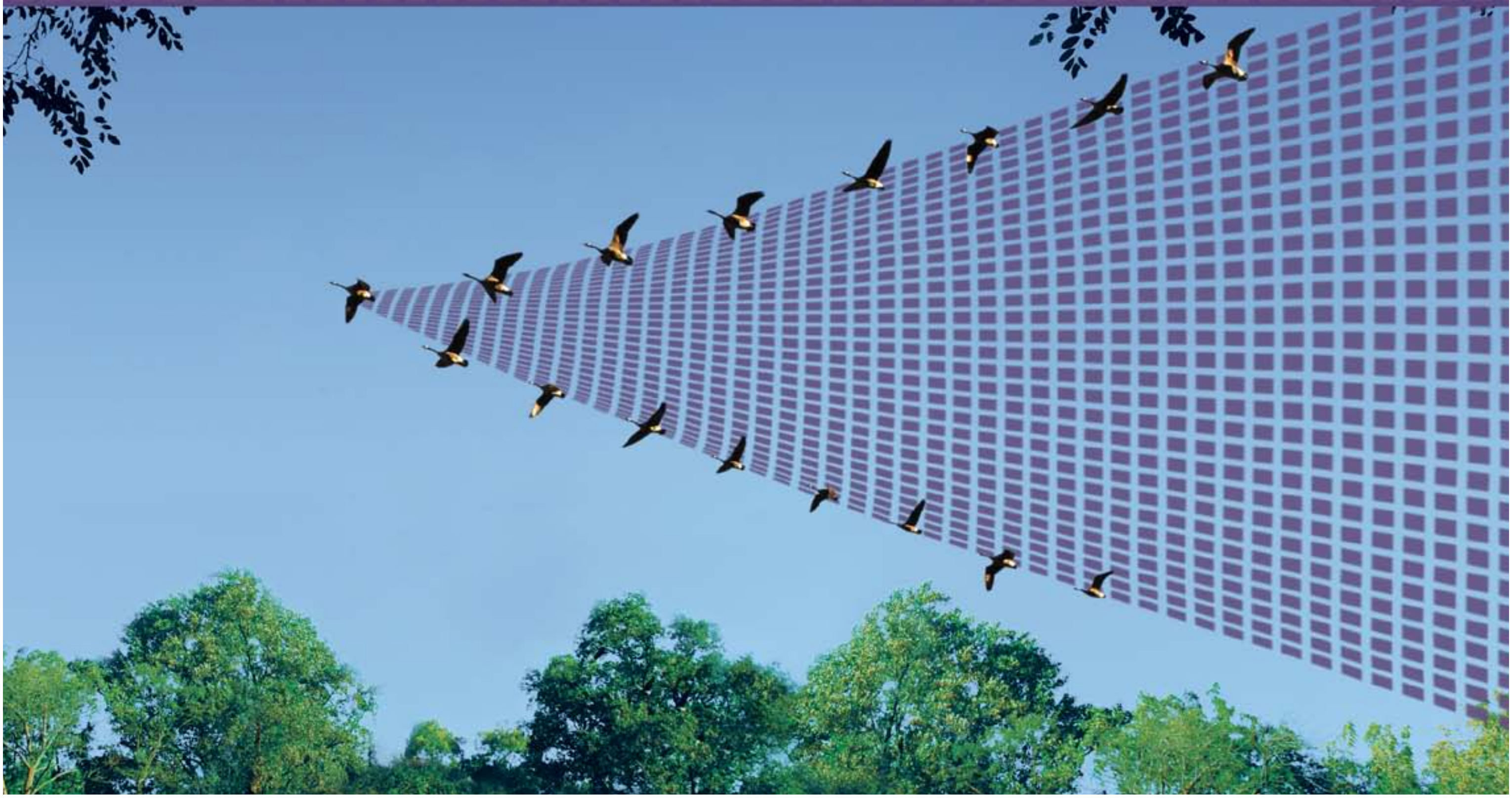

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A trusted leader in financial information

The Bar Has Been Raised

By Brett Lancaster, vice president, DTCC Solutions and head of Global Corporate Actions

When the Depository Trust & Clearing Corporation (DTCC) began to provide global corporate actions announcement information five years ago in response to requests from our customers, the main goal was to create a single place where corporate actions data could be assembled, validated and distributed.

At that time, the goals were relatively modest – according to our charter clients, there were supposed to be less than 10,000 corporate actions per month, matched against 700,000 securities, and the service would employ about 12 operations staff, all based on the east coast of the US. But, as our customers' expectations changed, we have had to adapt, change and grow.

The risk exposure faced by a firm associated with a 'bad' corporate action is significant

Five years later, by year end 2007, the Global Corporate Action Validation Service (GCA VS) provided an average of 100,000 announcements per month, plus an additional 750,000 scheduled payments, against more than two million securities. We employ 65 operations staff across three service centres (New York, London and Shanghai), work in 16 languages, and operate every week day, round the clock, including all public holidays, except for New Year's day.

However, now we are being asked to raise the bar to another level. It is no longer enough to get accurate data on corporate action announcements from around the world from a single place any more. The need now is to get it faster, in industry standard formats, secured by contractual service level agreements, and to give clients the assurance that the root cause of the issue is actually being addressed, once and for all.

Risky Business

For securities firms, the management of corporate actions data remains a risky and costly task. Simply getting hold of good, 'clean' data, that is comprehensive, is very challenging.

The risk exposure faced by a firm associated with a 'bad' corporate action is significant. Simply getting a date, or a rate, or a restriction wrong can cost a firm dearly. In an independent study carried out by Oxera, the risk exposure, at the industry level, was estimated at around US$0.5 billion, per year.

At the firm level, this translates to an average actual loss of US$0.5 million per firm, with potential trading risk of approximately US$5 million, each year. These are average losses, and we frequently hear reports in the market of losses in the region of US$5-20 million for an individual event.

Managing the Complexity

To further complicate matters, financial services firms and investors are seeking geographic and product diversity to stay competitive. For corporate actions, this causes more risk.

The overall growth rate for global corporate action announcements is about 5% per year. Although the US currently generates about 65% of the global corporate action announcements, the bulk of this growth is taking place in Europe, Middle East and Asia, especially from Brazil, India, China and Russia. For these markets, extra effort is needed because the corporate action events are complex, the market practice rules are less mature and the data is less readily available.

In addition, the growth rate in 'complex' announcements, - those announcements that are not routine or mandatory, but have an elective component with differing options and payouts - is almost double the overall rate.

All of these factors and all these risks need to be managed, and firms only have two choices. Either, they manage the complexity and effort themselves, or they outsource the effort to an experienced third party.

If they do the work themselves, then independent studies, for example those carried out by CityIQ, have shown that, across a sample of hundreds of firms, both large and small, the average number of resources needed is between 15 and 20 full time equivalents (FTEs). For every firm to get hold of, and retain, this number of qualified people is, to say the least, challenging.

Alternatively, firms can mitigate this issue by engaging with a third party expert that acts as a centralised 'data scrubbing' outsourcing provider. As well as helping firms manage the risk, 'outsourcing' also enables firms to reassign operations staff to other duties.

There are two prominent outsourcing candidates, Fidelity's ActionsXchange and DTCC's GCA Validation Service, both of which provide 'scrubbed' corporate action announcement information on a range of global securities.

Raising the Bar

For GCA VS, the original objective set by our charter clients still stands – provide a centralised source of 'scrubbed' corporate action announcement information, across 160 countries, and ensure timely and accurate delivery of the information driven by stringent and contractual service level agreements (SLAs) where non-performance is met with financial penalties.

However, as our clients' business changes, then so do their expectations. Last year's DTCC customer satisfaction survey cited the biggest request from clients was a growing 'need for speed'. And we responded accordingly.

In June 2008, we began taking multiple intraday feeds from the Depository Trust Company (DTC), the central securities depository for the US. GCA VS used to get a file listing all events and changes to events at the end of the day, the same as DTC participants, and that list would be available to customers the next day. GCA VS now gets feeds six times a day from DTC, and that information is fed out to clients in the 15 intraday output feeds GCA VS provides its clients daily.

What it means to customers is that they can get information the same day it is announced, and GCA VS clients can now get the information before the rest of the market.

> Not content with continuous service improvement, we have much, much bigger strategic plans to resolve the root cause of the corporate actions issue, once and for all

In April 2008, we began taking information directly from the source by actively monitoring news outlets to find and electronically capture data from press releases and other communications issued directly by the issuers and their agents. The result is that GCA VS is getting the information faster than waiting for vendors.

In April 2008, we also began the re-cast of our service level agreements (SLAs), to make them much more aggressive. Originally, for the non-voluntary events, our SLA was based on getting the event into a 'clean' and 'approved' state by 'Important Date' minus 7 days, regardless of how early the event was announced in the market.

The new SLA states that the service must validate the event with all data available in the market by 'Added Date' + 24 hours.

We have already made the changes for all of the complex events. We aim to complete the initiative by the end September 2008, and every event type will subject to the new SLA except for cash dividends and calls, which will remain at Important Date – 7 days.

The result of these changes is that our data is much more timely. Further, we are obligated to maintain this high level of performance through contractual SLAs. These changes, coupled with very low error rates, clean terms and text and a responsive help desk have not gone unnoticed, and our customers have recognised that we have raised the bar. This year's customer satisfaction survey score reached 92%.

The Future is Bright

Not content with continuous service improvement, we have much, much bigger strategic plans to resolve the root cause of the corporate actions issue, once and for all.

The plans span three separate, but related, initiatives: DTCC's CA re-engineering project; driving standards and XBRL.

Firstly, DTCC is undertaking its Corporate Actions Re-engineering Initiative. This is a major, multi-year, project to re-write all DTCC's corporate action processing systems, covering announcements, elections and payments. Initially, the new system will create corporate action announcements in both ISO 15022 and XML formats, with the aim of migrating to ISO 20022.

Announcements will continue to be published in legacy formats (DIVANN, REORG, REDEM) until two years after the project goes live.

This change is important, because it ensures that all of DTCC's participant clients, which are essentially all of the North American market, will actively adopt and use industry standards. The first release is scheduled for 2010.

Secondly, DTCC has committed to the premise that all DTCC data should be aligned with industry standards. Accordingly, DTCC is actively working with formal standards bodies and industry associations (Swift Standards, Sifma, ISITC, ISO) to drive industry standards and market practice.

> Customers keep asking for the bar to be raised, and we need to stay one step ahead

We are helping to shape the future definition of ISO15022 and ISO20022, and will, in turn, ensure alignment with the CA re-engineering project.

Lastly, and possibly the most important, DTCC is driving issuer-based 'data tagging' of all key data elements by the originating issuer/agent, via XBRL. To facilitate adoption, and actively seek a regulatory endorsement from the SEC, DTCC has taken a seat on the XBRL board.

This initiative will ensure that all US corporate action announcements are sourced directly from the source, in machine readable format, according to the industry standard. This will fundamentally change the corporate action industry by removing the root cause of the issue and the result will be extremely high STP rates, lower rate of manual exceptions and lower risk.

There are still several years of work ahead before this becomes a reality. XBRL tagging for corporate actions ultimately could even make services like GCA VS obsolete, or at least much different in terms of its current value proposition. But, from an industry perspective, it is the right thing to do.

Meanwhile, we are continuing to focus on new requests from customers, such as a browser-only product, enhancements to the user interface such as 'watch-lists', and e-mail alerts for 'late' announcements.

Customers keep asking for the bar to be raised, and we need to stay one step ahead.

Standards: Speaking the Same Language Worldwide

By Frank Träxler, international sales manager, WM Datenservice

Due to the increasing complexity of its fields of activity and the relevant regulatory framework, the financial industry is faced with ever greater challenges in managing its systems, processes, data and information. The international environment, subject to diverse regulations (for example, EU Prospectus Directive, EU Savings Tax Directive, EU Transparency Directive, and MiFID), is fraught with inefficiency. It is now up to the financial industry to ensure the legally stipulated transparency on a sustainable basis.

The gain in cross border transactions is often at odds with individual national barriers. Although there is a large spectrum of solutions on the market in the form of software, hardware, and other methods, all-purpose remedies in respect of content, data and information are rare. The degree of specification in the data sector is also on the rise, making the integration of data streams from various providers the rule and not the exception in the international financial industry. To facilitate this type of 'data picking' and to offer compatible data for every link in the production chain on a competitive basis, WM Datenservice has been involved in the creation and provision of international standards for many years, with organisations such as ISO, DIN, Swift, EFAMA, FISD, and ISSA. This has led to such international standards as ISIN, CFI, IBEI, FISN, MIC and FPP, which reduce interfaces, simplify IT processes, facilitate outsourcing and enable core business concentration – while being increasingly prescribed by regulatory agencies.

In short, standards allow financial market participants to 'speak the same language', and are a precondition for international securities trading. As such, standards allow collated and qualified master data, issuer information, and corporate actions data to be provided on an integrated, worldwide basis.

> WM Datenservice recommends its plug and work internet solution WM-DatenOnline

In addition to standards as the prerequisite for entry into the international markets, the transparent depiction of financial instruments and the timely availability of such information are now the deciding factors. It has thus come down to providing the market with data as promptly as possible, and in the adequate measure, so that investors are comprehensively informed of the features and risks of their investments. WM Datenservice is in a position to depict complex financial instruments and provide reference data for order and trading systems and for risk management on a near-time basis. The time to market between the issue and the trading of structured products, for instance, is only a few hours.

Depending on the data content and the degree of automation required by international customers, WM Datenservice recommends its plug and work internet solution WM-DatenOnline, which requires no integration on the customer side, provides real world data profiles or comprehensive, customer oriented data feeds for straight through processing.

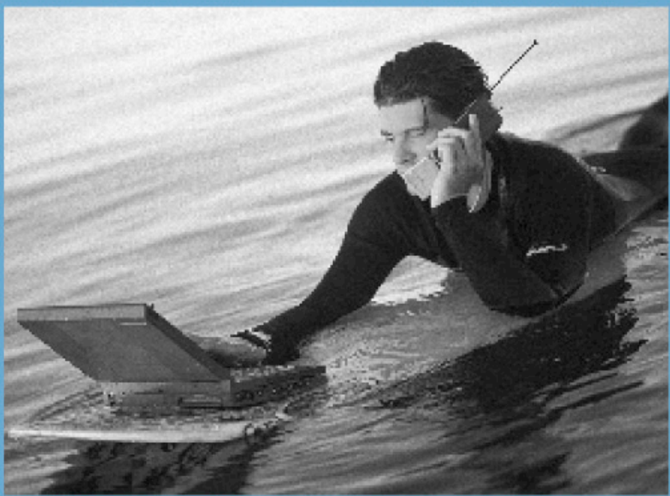
Even in the area of issuer services, transparency and standards are in demand on the international level, an example being the Fund Processing Passport (FPP) defined by the European Fund and Asset Management Association (EFAMA) and the Bundesverband Investment und Asset Management (BVI) in cooperation with WM Datenservice. The FPP is a uniform information profile with slightly more than 100 data fields, covering all information required for trading and settlement. The resulting transparency improvements can optimise transaction bank processing and fund company sales efforts. Capital investment companies subscribing to this service can publicise their fund data on the WM website at www.wmdaten.com, with WM Datenservice providing access to the FPP data free of charge to market participants worldwide.

Within the scope of the Fund Reporting Service (FRS) package, the FPP Service represents a coherent, overall concept. Through the FRS, WM Datenservice is forging closer relationships with international fund companies, as experience has shown that the comprehensive and timely provision of data to the important financial markets – those with a high demand for financial instruments – is crucial. And that corresponds to the location of WM Datenservice: in the heart of Europe.

The FRS includes up to date templates for data reporting as per all regulations (such as the German flat tax rate in 2009), WM-DatenOnline for monitoring own issues, extended quality checks on fund data reported to and distributed by WM Datenservice, free processing of urgent announcements and data corrections and complete tax support, as well as the FPP Service mentioned above.

Hence, it is standards and standardised products as well as services that facilitate faster and more efficient task completion – and increasing the competitiveness of our customers is our objective.

WM Datenservice



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Demystifying Corporate Actions Administration Challenges

By Manmohan Singh, solutions head, TCS Financial Solutions, Tata Consultancy Services

To mitigate the risks of delivering incorrect and untimely information, securities firms continue to invest in corporate actions information capture and processing solutions. But due to a lack of global standards, error prone manual processes, diverse communication protocols and increasing volumes, it has always been arduous for market players. On one side of the value chain, depositories, depository participants and custodians have direct liability for accurately disseminating information. On the other side, asset managers, broker-dealers, investment banks and hedge funds use corporate actions as a service level differentiator. On both sides, the corporate actions requirements point to straight-through processing (STP).

Financial institutions and vendors alike have long pursued a vision of industry-wide STP in corporate actions through automation. Yet because markets have not settled on a single framework or standard for corporate action types and structures, this vision has not been truly achieved. For automation in corporate actions to become a reality, the industry will have to promote the adoption of improved data formats on a global scale.

Industry-wide and local initiatives have succeeded in bringing about a higher level of standardisation and automation, and developments in this direction have already delivered enormous benefits in cost reduction, risk mitigation and efficiency improvements. Yet these benefits have been withered by peculiarities stemming from local market practises and differences in the regulatory environment. Also, while the standardisation challenge has been borne by the distributors of corporate actions data, much progress remains in standardising output from the information originator side – the issuers and agents.

The financial services industry has taken significant steps towards bridging these geographical and market structure gaps. ISO-based Swift messaging standards play a crucial role in providing an electronic mechanism and a standard template for data transfer. These continually maturing standards include a growing range of data elements and event types from all markets. Specifically, the Swift-sponsored Securities Market Practice Group (SMPG) and National Market Practice Groups (NMPGs) in over 35 countries have a big role in creating and coming up with standardised processing practices across markets. These groups have taken steps to reduce the differences between major market practices and global market practices through such actions as creating Event Interpretation Grids (EIGs) and Sequence D versus Sequence E (DvE) validations.

However, the mere availability of new standards and message types doesn't guarantee operational and cost efficiencies. To gain the maximum benefit, financial services firms have to take a '3M Triad' approach: minimal development time, market ready flexible features and a mature functional and technical platform. These elements of the '3M Triad' depend upon top quality execution of data migration, implementation of proven change management processes and the selection of a committed partner with impeccable credentials and a solid track record. With a corporate actions processing product based on global benchmarks and supported by deep understanding of industry processes, financial institutions can meet the unified objective of 'de-risking corporate actions administration'.

We believe in innovation as an idea. Innovation makes a material difference to an organisation's current capabilities, enables future capabilities and drives steady incremental upgrades in technology platforms, operating processes and business models. Over the years, TCS Financial Solutions has tracked various industry initiatives to develop a state of the art corporate actions processing system that meets the current needs of the industry as well as foreseeable future transitions. Our solutions are backed by proven experience handling large volumes of corporate actions across both mature and emerging markets.

TCS BaNCS Corporate Actions supports multiple vendor feeds across a full range of formats, providing a single platform for data scrubbing and a clean 'golden copy' that powers complete downstream corporate actions processing. Business users gain the ability to better manage corporate actions processing through intuitive dashboards and metrics. Clients, portfolio managers, and financial advisors gain a web-based view of corporate actions with elections capture to bolster the value added services that a firm can offer its custody clients. Finally, TCS BaNCS Enterprise Wide Integrator helps TCS BaNCS Corporate Actions fit into the client's operational environment as well as support any future transitions.

Global standards ensure that the best ideas generated in one market are disseminated across all markets with widespread institutional support. With standards comes the possibility for the development of global benchmarks for corporate actions. By measuring the STP rate on a consistent, standardised basis, not only will market participants increase their STP rates for corporate action processing platforms, but also drive performance enhancement and risk monitoring.

Given the complexity of the marketplace, innovative thinking and continuous focus in this direction is the need of the hour. By incorporating the continually evolving standards into TCS BaNCS Corporate Actions and preparing to achieve the highest benchmarks possible, TCS Financial Solutions is completely committed to meet the needs of the marketplace.

Roundtable

Reference Data Review Panel Debate: Corporate Actions

Brett Lancaster, vice president, DTCC Solutions, and head of Global Corporate Actions

Christopher Madigan, vice president and head of global sales and marketing for Fidelity ActionsXchange

Charles Price, senior director, Entity Data Products, Interactive Data Pricing and Reference Data

Max Mansur, senior product and markets manager at Swift

Georg Eisel, managing director, WM Datenservice

Nanda Kumar, product director for Telekurs Financial

Our panel of corporate actions experts debate the impact of recent developments in the market, progress towards automation and what has been holding the industry back from STP.

What are the main impediments remaining with regards to achieving full corporate actions automation? Do these projects still struggle with regards to management buy-in?

Lancaster: In comparison to significant STP rates that are being realised throughout the lifecycle of a trade in trading and settlement applications, the automation of corporate actions, from announcement through election to entitlement and payment, has not yet been realised.

The main impediments to achieving automation and high STP rates are the lack of a holistic standard, the lack of harmonised market practice and the lack of enforced usage for both standards and market practice.

Standards and market practice guidelines exist, of course, but neither is complete, encompass all corporate action event types, data elements or apply to all countries, and neither is used endemically as part of the corporate actions process, from announcement to payment. The result is that the corporate actions process remains highly manual, with low STP rates and high inherent risk.

Projects and systems can support data normalisation and data distribution within a firm, but highly specialised operations resources are still needed to perform various tasks, from data 'scrubbing' through to management of the election process. Simply getting hold of good, 'clean' data that is comprehensive is very challenging. The skill set needed to manage the data is very specific, and very deep.

These projects help, but investment will be limited as firms realise that they cannot entirely solve the problem, and they will always need to continue to employ highly skilled operational resources to manage the shortfall. In our experience, it is far easier to gain, and keep, management's attention if you can offer a solution that manages their risk by providing them with good, clean data, and also allows them to realign their resources.

Madigan: Corporate actions, particularly voluntary corporate actions, will always require manual intervention. The ultimate goal, therefore, is to automate the corporate actions process to the highest degree possible. Automation projects face the same challenges confronting other major initiatives. Everyone is competing for resources and, especially, budget dollars in today's uncertain economic environment. Additionally, the time involved for implementation and the availability of in-house experience and expertise are also major factors in whether an automation project will receive approval.

As with most projects, management buy-in still holds a tremendous amount of weight and, ultimately, can make or break a project. Most companies do not realise how faulty their current corporate actions processes are until they suffer a major P&L hit due to a missed or inaccurate corporate action. Fortunately, savvy senior managers are beginning to recognise and acknowledge the tremendous risk involved and are allocating dollars toward automating the corporate actions process.

Price: It is critical for financial institutions to have access to high quality corporate actions data delivered in a format that can be seamlessly integrated into their financial systems and applications. The required tools to begin achieving corporate actions automation are available and have been for some time. The key challenge is how to close the remaining gap that exists with the acceptance of the standardisation of corporate actions messages.

Global custodians have embraced the available standards, while many of their counterparties have also realised the benefits. Most of the software vendors that offer solutions in this space have tied them to ISO 15022, and many data vendors also accept this standard as a necessary component in meeting the demands of corporate actions automation.

However, manual intervention and differences in interpretation still exist. We can be speaking the same language but still fall short when it comes to understanding a certain dialect. The same is true of the standards that we employ in the corporate actions space. The market practice groups have effectively clarified how ISO 15022 can be used, but no consensus exists regarding a standard way to implement it.

The automation of corporate actions processing requires an extensive allocation of resources. Whether a firm decides to build or buy, a big commitment needs to be made by senior management to allocate the appropriate resources toward automation. They need to show the fortitude that they are dedicated to getting the job done, understanding the costs and realising the benefits.

Mansur: Actually, achieving 'full corporate actions automation' may be a long way off. Indeed, there are impediments in that even the most cursory analysis of the process reveals a system that is not closed, but it is open-ended from the initiation of the process. The very notions of data scrubbing and golden copy in corporate actions means there is absolutely no single, definitive source or record of the truth.

This does tend to frustrate justification of automation projects because the end is not in sight. Automation can improve things, but manual intervention is still needed. Only income events are getting close to full automation: dividends and interest.

Eisel: In the past few years, considerable advances were made in supporting the securities business through standards, within the scope of globalisation – particularly 'Europeanisation' in connection with the implementation of European regulations, for example: ISO 10962 Classification of Financial Instruments (CFI); ISO 6166 International securities identification numbering system (ISIN); and ISO 18774 Financial Instrument Short Name (FISN).

These standards would be of considerable benefit to the financial industry in terms of rationalisation, if their integration were not impeded by the inadequate definition of the registration authority function within the scope of each standard.

These standards are unique in that, in addition to their technical features, emphasis is placed on content in the form of tables and data developed and supplied by, for example, the National Numbering Agencies in connection with their respective roles in issuing ISINs.

The provision of specific information on copyrights and usage rights is of great importance to the users of these 'content standards', as standardisation is useless if a lack of transparency clouds the assessment of investment risk.

Kumar: The lack of standardised messaging across all event types and inconsistent field definitions for complex corporate actions are two major reasons why corporate actions processing still remains a largely manual effort. In addition, firms having to process more than one source of data, which are usually not of the same format, make it difficult to automatically compare data.

And when you add in current market conditions, which dictate a decrease of investments in non-essential technology for most firms, corporate actions automation still remains a lower priority.

What impact have globalisation and the growing complexity of products in the market had on the area of corporate actions with regards to automation?

Madigan: Increasing global corporate action volumes combined with growing complexity are a major cause for concern for financial services firms. These organisations, recognising their limitations, are seeking out industry experts to help them deal with an issue that promises only to get bigger as more and more markets open up. As a result, we are seeing organisations increasingly shift from using in-house systems to implementing third party corporate actions solutions.

Firms are looking to partner with providers that can deliver robust corporate action solutions to help them automate the process, gain efficiencies, save money, reduce risk and add value to trading and investment decisions.

Kumar: Competitive and regulatory drivers have increased cross border trading. This has resulted in portfolio holdings often being comprised of complex securities for investments and hedging. As a result, corporate actions are also resulting in growing complexity.

One of the major challenges globalisation creates for corporate actions is the lack of uniformity between data and markets around the world. Different markets often have local conventions, different laws and different restrictions. As a result, implementing standards for corporate actions globally poses a major challenge.

Price: Financial institutions need to be able to accurately interpret and understand the information being released into the marketplace. Corporate actions notifications from issuers are generally made in free form text and in an issuer's native language. This requires a degree of interpretation in order to process the notification into a structured form – adding an element of risk to the process. Such interpretation relies on experience acquired in processing events from a variety of sources, including EDGAR filings, company press releases, dealer managers and stock exchanges.

If a custodian is operating cross border, there is the added complexity that the reporting rules are linked to local law, which may vary from region to region. The result of the same event interpreted in two different back offices can often look significantly different. In the world of corporate actions, the challenge is to extract the intended meaning from the announcements. With such a complex set of opportunities for error and misinterpretation, this is a challenge.

Mansur: Globalisation means that a corporation has investors cross border and means that the provider of asset services must deal with much more volume cross border. This brings many problems including translation risks when the event is announced in the language of the local market. The usual interpretation risk is amplified by the multiple sources necessary to resolve the golden copy. And the variety of local market practices, rules and regulations challenge the capabilities and skill set of a global custodian's operations.

Lancaster: Firms across the board, from global broker-dealers, to banks, investment managers and hedge funds, are seeking geographic and product diversity to stay competitive. The knock-on impact is that the additional corporate actions complexity needs to be managed.

To illustrate the geographic complexity, we find that it takes us five times the effort to clean up a corporate action event from outside the US than it does to clean up a US-based announcement. For the emerging markets, that factor jumps to 25 times. The extra effort is needed because these events are complex, the market practice rules are less mature and the data is less readily available.

In addition, we see cyclic peaks and troughs reflecting the swings in volumes of events being announced by the market. Volumes can easily double, and sometimes treble, between quiet and busy periods, especially during 'European dividend season', from February through May.

The increase in product complexity also results in challenges for corporate actions. Although the effect of the corporate action on the underlying security can be established, the overall impact on structured products, such as derivatives or indices, which are structured by an individual firm, also needs to be understood, and properly represented to the market.

All of these factors need to be managed, and firms only have two choices. Either they employ additional, specialised resources and manage the complexity and undertake the effort themselves, or they outsource the effort to an experienced third party.

How much traction has corporate actions automation gained in the market as a whole? How do the various geographies compare - the US, Europe and Asia, for example?

Mansur: Automation continues to gain traction and is now moving outward from the asset servicing players upstream to engage the CSDs, ICSDs and exchanges that are now moving to adopt ISO standards. This is true in the US, Europe and Asia. The attention to harmonisation and breaking down the Giovannini barriers in Europe continues to be a significant driver. Although the Asia Pacific markets have lagged somewhat in automation, the leadership of Australia, Singapore, Japan and Hong Kong is spreading to both smaller markets such as Indonesia and the emergence of what will surely be a giant market in China. Each of these markets is recognising the value of ISO standards as removing a barrier to global investment. Japan is dematerialising its securities and has indicated the next major thrust will be in corporate actions, including capturing data directly from the issuers and their agents, a theme also emerging in China, Europe and the US.

The main impediments to achieving automation and high STP rates are the lack of a holistic standard, the lack of harmonised market practice and the lack of enforced usage for both standards and market practice.

Price: Corporate actions automation continues to be the focus for organisations that have yet to adopt an alternative solution to the manual process that exists today. The standardisation of corporate actions notifications through ISO 15022 messages has paved the way for firms to gain immediate efficiencies in automating some of their processes. This is particularly true in the European and Asian markets where there has been a significant increase in the use of ISO messages for communicating corporate actions. In addition, many emerging market firms do not face the issue of integrating large legacy systems when looking at implementing a corporate actions system. Overall, we will continue to see a drive toward automation, as more and more firms try and close the risk gap associated with processing corporate actions manually.

Lancaster: Corporate action automation is gaining in spite of, or perhaps because of, the complexity of the events with their inherent risks and client pressure to provide timely and accurate information in the most effective manner possible. Many large broker-dealers, global custodians and CSDs are in various stages of large system rewrites. Third party solution providers are increasingly trying to address the needs of smaller banks, asset managers and hedge funds. All this points to a relatively robust technology investment, even in these times of market financial tightness. In addition to market pressures, regulatory pressures (for example, Giovannini barriers 1 and 3) are also pushing the market towards greater levels of automation and standards adoption. Progress is not only occurring in the mature markets of North America, Europe and Asia, but also expanding into other major markets such as Mexico and Brazil, where the respective CSDs have also embarked on enhancing corporate action systems and market processes to meet current and future needs.

Undoubtedly, at any corporate action focused industry conference, the themes that recur most often are those of standards and improving issuer communication, not just on a local, but a global level. With this level of interest tied in with market and regulatory forces, we can truly appreciate that automating corporate actions is gaining traction, especially when there is light at the end of the tunnel.

Kumar: Corporate actions automation continues to be a work in progress. On the one hand, there seems to be an increase in interest in data cleansing services and 'golden copy' offerings, on the other hand, firms still struggle to determine what the best source is. ISO 15022 has made a huge impact in helping achieve corporate actions automation and is being implement widely.

When it comes to corporate actions automation across the three major regions, the trends seem to be very similar. In all cases even though automation is rising in priority, most firms continue to have challenges processing events easily and accurately.

Madigan: In mature markets such as the US and Europe, data is more readily available and generally more complete. While manual intervention is still necessary, less people need to touch the data, making automation easier as some corporate action information can be fed directly into downstream systems.

As you move into Asia and other emerging markets, complications such as underdeveloped infrastructures can impede the free flowing transfer of information. This leads to more inaccuracies and data gaps which require greater hands-on attention to validate and process the information, thus making automation much more difficult.

This is why many companies are choosing to receive multi-sourced cleansed data. The more accurate and comprehensive the information you have coming in, regardless of origin, the more quickly and efficiently you can use it across an organisation.

Who is leading the charge within the industry with regards to championing automation in this area and how has their recent work improved the corporate actions landscape?

Lancaster: Driven by competition, cost and risk, the automation of corporate actions has long been led by the sell side, specifically, global custodians and global broker-dealers. With their need to bring efficiencies to a myriad of manual processes that connect them to external parties, clients or otherwise, the large banks were instrumental in developing messaging standards.

More recently, the growth of the asset manger and hedge fund community has continued the push for automation, driven by the same forces as the sell side, in a quest to find providers with the best services at the lowest cost.

Today, the same driving forces exist, but with new players such as data vendors and market infrastructures entering the picture. Especially, with some CSDs/ICSDs in the middle of major corporate action redevelopment programs, we are entering an age where automation and standards are being championed holistically, albeit still with the exception of issuers.

Perhaps more than ever, financial services firms of all stripes are working together on enhancing standards as a means to address these forces which, in turn, has put the spotlight on industry organisations to take leading role as the enablers of corporate action automation.

Swift, acting on behalf of ISO, has long been the primary industry organisation that has pursued corporate action standards, first with ISO 7775 messages, and now with the more comprehensive and flexible ISO 15022 data dictionary.

Acting in partnership with Swift, in pursuing the adoption and enhancement of ISO 15022, we have seen the growth of market practice groups (for example, ISITC in the US) who bring representatives of the financial services markets to the standards table.

Certainly, it has taken a few years for ISO 15022 to become a true global standard. It has had to overcome the complexities of market variance and lack of processing compatibility, even within a single market. However, the market practice groups (through work on the Event Interpretation Grid [EIG], Global Market Practice Guides and the development of an 'Official Corporate Action ID') and Swift have begun to make headway that will help bring greater efficiencies to STP.

Looking into the future with the movement to ISO 20022 messaging, greater stabilisation of global standards and raised awareness, we can turn our attention to the issuing community. By establishing what information is needed and when, the asset servicing community is in a far better place to work with issuers and their agents to provide a clear picture of what is expected from them for a dividend through to a tender offer announcement.

Madigan: Certainly Swift has emerged as a leader and made significant inroads in terms of developing a standard, but outside of Europe, ISO messaging is still under-utilised.

Without a regulatory body mandating and enforcing the usage of a standard, there is no incentive for firms to spend substantial funds on updating existing systems or building or purchasing new systems to accept a global data standard.

Price: Industry-wide, the Securities Market Practice Group (SMPG) has played a significant role in defining how ISO 15022 messages should be used given regional diversity. This clarity is exactly what the industry required, and what the standard alone cannot provide.

The direction provided by the SMPG suits the nature of the relationship between custodian and beneficial owner, but not necessarily that of the data supplier and consumer. It is here that the Market Data Provider User Group (MDPUG) has made a significant step in the right direction by publishing a set of principles, which supplements the progress made by the SMPG.

Another development relates to which ISO standard is selected to convey corporate actions messages. The International Organisation for Standardisation had asserted that ISO 15022 would continue to be used for the foreseeable future for areas of business where it was already an established component. Now it appears that the MT564 notification format will be replaced with a MX series of messages in ISO 20022. The new ISO 20022 messages may begin to address some of the shortcomings of the current Swift messages.

Mansur: The SMPG and its associated national market practice groups are significant drivers of both the ISO standards and market practice. There is a co-operative relationship between ISO, Swift and the SMPG that is both mutually beneficial and of significant value to the entire industry.

The DTCC is now moving completely into ISO standardisation and Euroclear has begun addressing several gaps in standardising the relationship between issuers, their agents and the depository. Standards have been developed or are in the pipeline for issuer agent corporate actions messages, registration, market claims, and issuance messages. In the next few years, ISO 20022 messages will transform the corporate actions world with XML, a far more dynamic and more easily maintainable messaging structure.

Kumar: Swift and the SMPG continue to make great strides in providing solutions for corporate actions automation. The SMPG has recently introduced the EIG, which has helped the process to a large extent; however it is not mandatory that firms employ the suggested guidelines. Swift has been attempting to enforce the guidelines defined by the SPMG but firms are not ready to comply for various reasons.

There needs to be a concentrated effort to bring data providers, solution providers, Swift and the SMPG closer together to enhance the standards and increase the adoption of the guidelines throughout the industry.

Do you think the DTCC's recent proposals for semantic interoperability between ISO and XBRL in order to automate the issuer space are feasible?

Madigan: The DTCC, by way of this initiative, is attempting to provide corporate action information from issuers in a truly electronic form. This will become increasingly difficult as one moves outside of the US into emerging markets where data is much less efficient.

It is vitally important to get issuers more engaged and involved in helping the industry move toward greater automation. This can be accomplished by inviting them to sit on the committees, industry boards and groups working to shape the global corporate actions landscape.

Mansur: This is still a very early stage in the discussion, but since XBRL and ISO 20022 are both XML, feasibility is a given. It is quite important that no new definitions of corporate actions are produced when issuers are engaged, whether the structure to deliver the information is XBRL or ISO 20022.

As well, it is critically important that each market does not introduce a new structure and that the global viewpoint is maintained. In reality, the ideas being discussed only deal with a portion of the process, albeit a critical aspect – the event notification.

There are other issues that will require the agents of the issuers that operate and process the event on the market to get engaged in the standardisation and automation processes. This is beneficial to not only the issuers, but to the market infrastructures, the asset servicers and especially the investors. The time has come for including the issuers in the process that allows them to best utilise 'other people's money'.

Kumar: The SEC requirement to adopt XBRL for is a large step forward in automation financial reporting in the US, and nowhere is the need for automation greater than in the corporate actions space, where paper and manual processing are all too commonplace. But because this is a US-centric requirement, it is neither obvious nor inevitable that international adoption of this standard will be forthcoming, leaving US companies better automated but operating in isolation, if not a global vacuum.

Given that the desired end result of semantic interoperability between XBRL and ISO is the achievement of touchless corporate actions processing regardless of which 'language' the issuer speaks, the DTCC proposal is logical and reasonable, and as such should be feasible. And success in the initial target segment (for example, the handful of corporate actions types that are subject to SEC regulation) would logically lead to further development efforts, an expanded lexicon and greater automation.

Lancaster: Yes, we obviously believe XBRL is feasible and will be successful, because it attacks the root cause of the issue. The ultimate source of all corporate action announcements is the issuer, or the issuer's agent. The issuer has an obligation and a desire to effectively disseminate the corporate action to the marketplace, and this is typically achieved by issuing either a press release or a formal prospectus.

Press releases and prospectuses are physical paper documents that describe in words the underlying details of the corporate action announcement. They are written in free text, without recourse to formal standards or market practice and without the data elements being 'fielded'. This is the originating source of corporate actions risk, and this needs to be fixed.

Within the US, the regulatory body, the Securities and Exchange Commission (SEC), is enforcing the delivery of "meaningful, accurate, timely, easy to use data" for the entire financial services industry. At a higher level than just corporate actions, in May 2008, the SEC, under the stewardship of chairman Cox, undertook a rule filing for the top 500 companies in the US to "field" and "electronically tag" all data elements within GAAP financial reports, using XBRL. The expectation is that this will become mandatory for all US companies by the end 2010.

Similarly, it is expected that SEC will turn its attention towards one of the largest risk areas remaining in the industry – corporate actions. To that end, the DTCC, XBRL, Swift Standards and representatives from the industry are starting to work with the SEC to ultimately mandate issuers to electronically 'field' all corporate actions data within the press release or the proxy document, aligned to the ISO standard and using the XBRL technology.

It is expected that 'plug-in' extensions that enable 'XBRL for corporate actions' will be available for Microsoft Word and other word processors. The issuer, agent or publisher will be able to simply highlight and tag all relevant data elements within MS Word as they are writing the press release or prospectus. The electronically tagged data elements are stored as machine readable fields when the document is saved as a PDF document, and these data elements can easily be extracted when the document is machine 'read'.

If achieved, this SEC requirement would ensure that all US corporate action announcements are sourced directly from the source, in machine readable format, according to the industry standard. Following this path will fundamentally change the corporate action industry. The result will be extremely high STP rates, a lower rate of manual exceptions and lower risk.

Will they gain traction outside of the US market? Why/not? If not, how else can issuers be involved in the automation process?

Lancaster: XBRL will have complete semantic interoperability with the global ISO standard and could be used by any issuer, inside or outside of the US market. 'Gaining traction' within a market is likely to depend on enforcement by the local regulator, and XBRL, as a non-profit consortium of companies, organisations and government agencies, has deep representation across US, Europe and Asia. Outside of the US, there are already pockets of activity. For example, China is forging ahead using XBRL with the creation of corporate actions taxonomy for five event types.

Assuming success with the SEC for the US market, it is likely that XBRL will work with the regulators, banks, stock exchanges and industry bodies within the local markets to seek local enforcement, using the US experience as the template.

What impact will the plans of the European CSDs, Euroclear and Clearstream, in the issuer agent space have on the corporate actions landscape?

Lancaster: The development of ISO 20022 Issuer/Agent messages by Euroclear begins to address the need to expand corporate action automation and standards upstream to the issuer and their agents, and thereby helping improve the STP chain. The new ISO 20022 Issuer/Agent messages focus upon the communication between issuers/agents and their CSD, which can be adopted by any market missing direct messaging links between the two parties for all aspects of corporate actions processing.

With the introduction of the issuing community to standards, we can raise issuer awareness about the importance of providing electronic data for consumption by the market.

The good news for issuers is that much of the work has been done. By defining standards and the accompanying market practice documentation, issuers are provided with detailed templates about the needs of the financial services firms and their investing community.

Once we can couple the Euroclear initiative with others that are addressing issuer driven corporate action announcements, such as the potential of XBRL, we can begin to visualise a world where the issuers themselves provide structured data electronically, not just to CSDs, but directly to their investors and all other interested parties.

Mansur: The addition of more automated issuer services can only add value to improve corporate actions processing. This is the last frontier for asset servicing. Hopefully the mutual benefit of engaging issuers is enough to make it happen without threat of regulatory action. I believe a lot more planning is needed but the potential exists and all eyes will be on Euroclear to see how their implementation of issuer agent messaging works beyond the fairly closed circle of former Crest players in the UK.

Madigan: Both Euroclear and Clearstream have announced plans to launch initiatives aimed at improving settlement times and increasing post-trade efficiency. This can only improve the corporate actions landscape by pushing the entire industry toward a 'real-time' environment.

In the world of financial markets every millisecond counts. All of us in the corporate actions industry have an obligation to ensure that we are helping our clients gain every possible advantage when it comes to their corporate actions data.

Kumar: The efforts of the European CSDs, Euroclear and Clearstream to raise STP rates by establishing standards for the issuance and servicing of international securities should go a long way towards the automation of corporate actions data.

With the goal being to standardise dissemination of information on public offerings and corporate actions, it is widely believed that industry-wide best practices will be in place to ensure standardised market practices in the international securities business.

Is greater standardisation in this area always the right answer - is there a part to

play for flexibility of formats? How will the planned migration from ISO 15022 to ISO 20022 impact this area?

Lancaster: Greater standardisation is a necessary, but not a sufficient, condition. Currently, the global standard for corporate actions is ISO 15022. We would argue that ISO 15022, in its present form, is a good start, but does not cover all the corporate action event types and does not cover all the necessary data elements to be considered complete. We believe ISO 15022 does, perhaps, 70% of the job needed.

For the standard to be complete, and, importantly, for the standard to be actually used, sweeping changes will have to take place within the industry. These changes can only be addressed by big, bold, industry-wide initiatives. This is a challenging objective, but the tide is turning.

Firstly, industry organisations such as the DTCC, Swift Standards, Market Practice Group ISITC, Sifma and key global custodians and broker-dealers are actively working with the ISO organisation to enhance ISO 15022. There are currently ~200 data elements that will need to be added to the existing standard, over the next few releases. However, this number may grow as all stakeholders identify their specific needs.

Once this work is complete, ISO 15022 will be replaced with ISO 20022. ISO 20022 will be the holistic, global standard that will be entirely based on ISO 15022 fields and structure, but will use XML messaging rather than a file-based format. The first release of ISO 20022 is currently targeted for 2010/11, and there will be a coexistence period with ISO 15022 of at least three years.

Secondly, to address the US market, DTCC is undertaking its Corporate Actions Re-engineering Initiative. This is a major, multi-year, project to rewrite all DTCC's corporate action systems, covering announcements, elections and payments. Initially, the new system will create corporate action announcements in both ISO 15022 and XML formats, with the aim of migrating to ISO 20022.

This change is important, because it ensures that all of DTCC's participant clients, who are essentially all of the North American market, will actively use international standards. The first release is scheduled for 2010. These initiatives ensure that standardisation is global and holistic, and, at least in the North American market, that standardisation is actively used, rather than ignored.

Mansur: Of course greater standardisation is the right answer. And, by greater, I am thinking wider, deeper and better standardisation that is inclusive and efficient. Adoption of standards should become ubiquitous to all players, a commodity of sorts with clear disadvantages where proprietary standards are used. Standards should be adaptable and support flexibility where needed, but discarding a standard is never flexibility in the long run.

The migration and coexistence period for ISO 15022 and ISO 20022 will serve to bring many aspects of the industry into far more consensus in messaging than we have ever seen. It is already opening up the issuer side and removing barriers to interoperability. I should further serve to improve quality and consistency of messaging to accelerate straight through processing – corporate actions should become, in the next few years, where settlement and clearing messages are today.

Once the MX messages are de facto, the discussion should change from how to fix corporate actions to how to enhance the value and usefulness of the corporate event.

Price: While ISO 15022 is still the industry's primary focus, we are starting to see interest in ISO 20022. The industry has to be aware of the challenge involved in approaching market participants with the notion of moving to ISO 20022, given that it very recently had to undertake a lot of integration work in order to comply with ISO 15022.

Replacing MT564 with an MX series of messages raises two central issues. The first is the effect of this announcement on the current adoption of standards in the corporate actions world.

The concern is that current projects striving to achieve greater STP may find it harder to secure continued funding given that a new corporate actions standard is now on the horizon.

The longer term effects of this potential replacement are also an issue. It may present a great opportunity to move toward real world interoperability – the opportunity to reduce the overall number of permutations to the core elements of the corporate actions messages that need to be conveyed.

Madigan: Standardisation makes data more efficient but without any formalised way to enforce its usage, the industry will never see full adoption rates. Flexibility and standards are contradictory so there really is no room for flexibility of formats. A standard is built upon a base platform, which will support the needs of the majority but once in the hands of end users, there will always be a need for customisation.

As the migration to ISO 20022 begins, the industry can expect issues similar to those experienced initially with 15022, including low adoption rates, mapping issues and the need to educate users on the new format. Swift will have to work through these challenges and it will take some time to fully address them.

Kumar: Standardisation of corporate actions data will clearly eliminate some of the obstacles to automating corporate actions. However, with ever growing complexity of investments and the natural extension to the corporate actions landscape, there will continue to be a reliance on vendor formats. Vendors such as Telekurs will continue to go a long way towards automation and there could also be a greater reliance on 'golden copy' services.

Currently, the belief is that ISO 15022 would continue to be used for the near future, but there are indications that the XML based ISO 20022 messages will start replacing the MT564s.

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