



*A discussion paper
from Clearstream
and SWIFT*

Industry challenges

- Pressure to decrease cost, in response to economic downturn;
- Cost drivers are unchanged:
 - number of instruments
 - number of events
 - number of markets served
- Operational risk ever present.

Standardising corporate actions: Can you afford to wait?

Why the global financial crisis makes industry-wide adoption of corporate actions standards a top priority for 2009

Corporate actions risk on the rise: the challenge of “doing more with less”

In the current economic climate, the pressure for financial institutions to cut operational costs is intense. Back office headcounts are being squeezed - but while the volumes of corporate actions that need to be processed are not getting any smaller, the complexity of corporate events continues to increase.

So although skilled corporate actions resources are being limited, the workload and risks associated with corporate actions are not diminishing at all. In fact, while manually processing corporate actions has always been a highly risky business, since the global financial crisis hit it has become riskier still. The volatile prices in a fast-changing market mean the timeliness of deadlines for voluntary events is crucial – and any mistakes made threaten to be doubly damaging.

This paper argues that the only effective response to this challenge is to eliminate costly, risky, resource-intensive manual processing of corporate actions and implement straight-through processing (STP), by relying on ISO standard messaging. Many individual firms have generated internal efficiencies already by implementing corporate actions STP – and some have worked with their networks of partners, customers and counterparts to extend those benefits beyond the enterprise. The full benefits of

industry-wide STP will come when we reach the point of universal adoption of industry standards for communication between all participants in the corporate actions chain.

Standardising and automating corporate actions processing: a no-brainer?

The drivers for standardising and automating corporate actions processing have been well-known and understood for a number of years:

- Corporate actions are complex – there are more than 60 corporate event types, and they may dictate a mandatory action, or offer voluntary participation with multiple options.
- The corporate actions process is also complex. Different counterparties communicate with each other at different stages of the process, generating a complex web of communication.
- And the use of proprietary formats and manual work makes the synchronising of corporate actions information difficult. Processing corporate actions manually places a heavy drain on expensive resources, and risks introducing errors into the process that can – and do – result in significant financial losses.

Introducing standardisation and automation for corporate actions enables

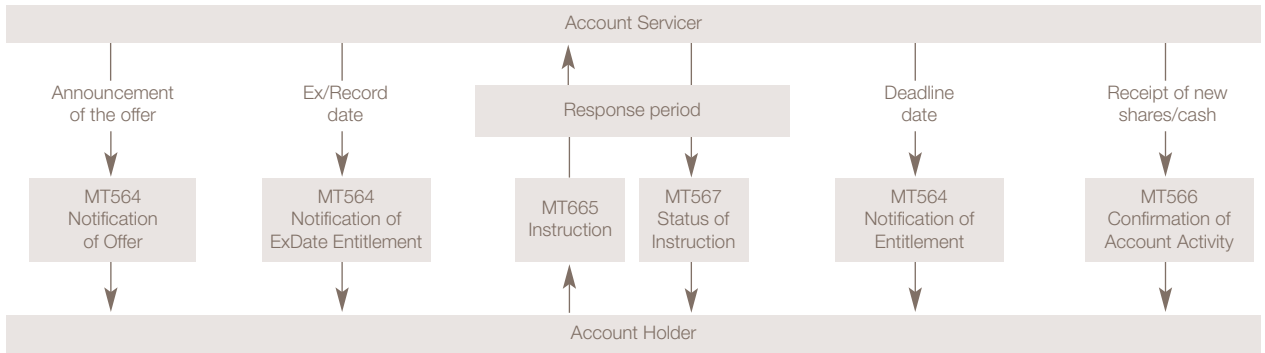


Figure 1: Message flow example for an event with options such as a Warrant Exercise

financial institutions to reduce risk, cut operational costs and scale their processing capabilities. Many financial markets players are now reaping significant benefits from implementing ISO standard corporate actions messages over SWIFT to support streamlined, automated communication throughout the corporate action lifecycle.

The ISO messages enable the standardisation of corporate actions communication flows between information sources, market infrastructures, local agents, global custodians and investment managers. Using the ISO corporate actions messages over SWIFT enables market participants to reuse their existing SWIFT infrastructure to communicate with the entire SWIFT community with guaranteed security and resilience.

However, while much progress has been made, it is clear there are still gaps in the take-up of ISO messaging across the industry. The full benefits of standardisation – not only within individual firms but industry-wide – will only be achieved when corporate actions

standards are adopted by all players. And the turmoil unleashed by the global financial crisis means that securing the benefits of standardisation industry-wide must be addressed without delay.

Corporate actions STP – a high priority for the industry

In the current environment, the operational risks and costs associated with proprietary and manual processing of corporate actions are becoming less and less acceptable. The findings of the Corporate Actions 2008 CityIQ survey – carried out in association with SWIFT – prove that the industry’s interest in improving corporate actions automation remains high. Respondents identified the most important drivers for automation as being to reduce operating costs, to eliminate losses and to cope with volume growth.

Although a significant majority – 81 per cent – of respondents have already implemented some degree of automation for corporate actions, the level of

automation is seldom comprehensive. The benefits of automation were ranked as improved STP, reduced costs, reduced losses and reduced headcount.

Standardisation in practice: Clearstream’s experience

As an important market infrastructure, Clearstream is one of the leaders both in the definition and adoption of custody standards, including corporate actions.

“The industry has experienced a steep learning curve in corporate event standardisation and automation,” says Michael Jaeggi, Head of Product Management and Design Core Products and Member of the Executive Board, Clearstream. “As an early adopter of standards for custody automation, progress has taken many years and has been costly, but we have no regrets. In order to realise the benefits you must first integrate standards lifecycle steps and processes throughout your back-end processing systems and those of your network partners. Although the journey

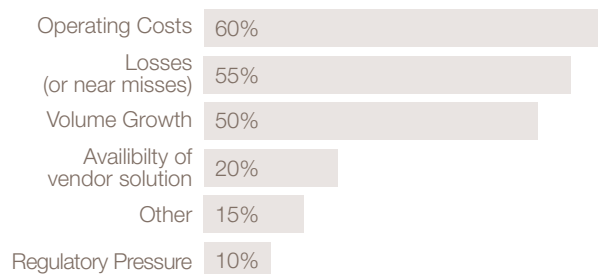


Figure 2: Automation Influences

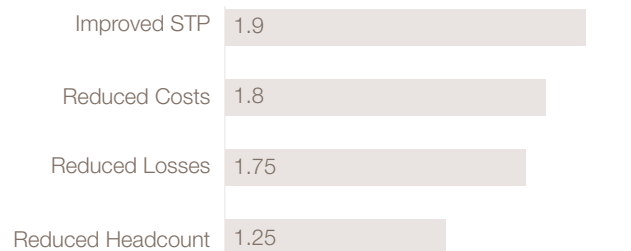


Figure 3: Weighted Benefits

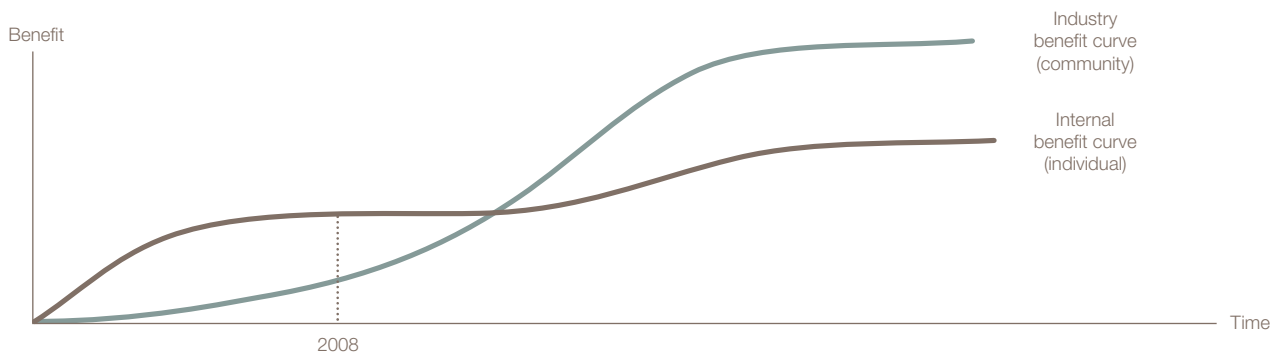


Figure 4: Clearstream's assessment of the benefits of adopting CA standards

has been difficult, Clearstream has benefited internally, and throughout our network we are starting to see the industry-wide benefits these standards deliver," Jaeggi adds.

Clearstream's assessment of the benefits of adopting CA standards

Clearstream's assessment of industry status, notionally represented in the above diagram is manifold.

- First, considerable benefit is achievable at an internal level. Individual companies integrating the corporate actions ISO 15022 lifecycle into their internal systems profit from tangible internal benefits.
- Second, the pace of progress at industry level is accelerating as more and more counterparties adopt these standards. Industry issues, such as the timeliness of custody information flowing through the processing chain, start to diminish as more firms automate. As automation brings consistent quality data transfers between providers, the industry as a whole benefits, thus improving service levels and reducing risk.
- Third, increased industry adoption brings a new wave of internal benefits for companies. As an example, today Clearstream receives 50 per cent of corporate actions instructions from customers as free format, non automatable MT599s. As the MT565 is more widely used, investment in automation delivers greater benefits.

"A thorough assessment of the industry's corporate actions processing capabilities shows

persistent issues with timeliness, quality, accuracy and deadlines," says Mark Gem, Head of Business Management and Member of the Executive Board, Clearstream. "However, we see the pace of progress increasing. Past investments were justified to deliver cost and scale benefits. We now see the larger domestic agents and global custodians applying these same investments in standards in order to offer vastly enhanced service levels. Customer demand and competitive pressures will create a dynamic to fuel additional benefits at an industry level," Gem says.

Internal benefits realised by Clearstream:

- Operational efficiency: Clearstream processes 40 per cent of its income events in a full STP mode. It identifies past events that were accurately and timely processed and then flags them for future STP processing. This allows Clearstream to rely thereafter on automation for these events and re-focus skilled resources on events of greater complexity.
- Volume scalability: As an ICSD in 2005 Clearstream processed 229,000 income events (coupons and early redemptions). This figure increased to 370,000 in 2008. Only because of Clearstream's investment in standards was the increase possible.
- Complexity scalability: The characteristics of instruments have become increasingly complex in recent years. In 2008 only 25 per cent of coupon payments were

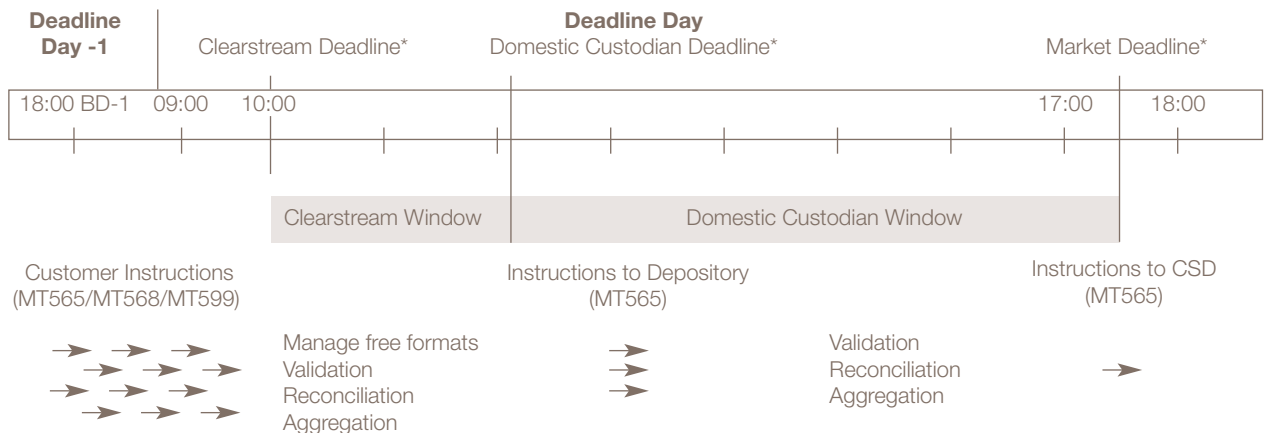
characterised as fixed rate and 75 per cent were variable rate, while in 2006 35 per cent of coupon payments were fixed rate and 65 per cent were variable rate.

- Risk reduction: Strict standards make it increasingly easy to map and normalise more data from multiple data vendors and therefore achieve greater consistency in terms of completeness, accuracy and timeliness.
- Technical cost reduction: Templates for the harmonisation of interfaces to external parties and to back-end systems exist. This creates a strict definition that simplifies development.

Clearstream's positive outlook on industry benefits

The effective processing of corporate actions is the co-ordinated processing of multiple intermediaries. Automation and standardisation were created to deliver an environment that effectively supports the end to end processing chain. An objective evaluation of whether the industry as a whole has reached this target is based upon the simple set of service level goals below:

- Same day as market corporate action notification;
- Same day as market corporate action instruction deadline;
- Income payments correctly pre-advised five days prior to pay date;
- Income payment paid correctly first time;
- Income payments paid on correct value date.



* Differs per market and per event

Figure 5: Deadline Day

Clearstream addressed the issue from a supply chain management perspective. It set out to demand highest service levels from both internal and external suppliers; for suppliers to satisfy these service requests, by definition they must have standards at the heart of their data transfer and data processing.

Clearstream's supplier management programme addressed four streams and set strict objectives:

- Network Management: Agents support a standardised information flow with a couple of hours' lead time both for information out and the processing of instructions in.
- Internal Operational Management: Remove internal bottlenecks to allow timely processing of inbound and outbound information flows.
- Performance Management: Detailed performance measurement that

makes the network's and internal supplier's management measurable and objective.

- Industry Initiatives: Support for longer term initiatives aimed at breaching discontinuities in data processing flow and quality issues in data flow.

As an example, sub-custodians in Clearstream's biggest European domestic markets are consistently delivering deadlines for instructions input within a few hours to market. In October 2008, Clearstream's French domestic agent provided it with a deadline of within five hours to market for 100 per cent of corporate actions requiring investor instruction. In partnership with its suppliers, Clearstream is currently achieving this standard 80 per cent of the time for seven of its 10 largest domestic agents and all are showing improved performance over time. Each supplier faces its own constraints but Clearstream is seeing the fruition of realistic plans for improved performance.

"Clearly we are still working to achieve our service level goals," Jaeggi says. "But what we can identify is that leading custodians with SWIFT capabilities, online pre-populate instruction input tools, and full ISO 15022 lifecycle back-end capabilities are beginning to become a market reality. We are observing heightened industry focus on service level standards, with leading custodians now competing on these levels of service.

Competition advances the various programmes for industry harmonisation, the removal of internal processing bottlenecks and the realisation of industry benefits from standardisation," he concludes.

From internal benefits to industry-wide: identifying and overcoming the impediments to full adoption of standards

Many market participants – including Clearstream and its customers – are already reaping the benefits of implementing the ISO messages and automating corporate actions processing. But it is clear that there is still some way to go before the full benefits of corporate actions STP can be felt industry-wide.

As respondents to the CityIQ survey identified, there remain a number of impediments to automation: they cited the most significant barriers as "competing priorities", "a lack of available vendor solutions" and "difficulty in building a business case" – and the business climate in 2009 could make the business case challenge tougher still.

However, this paper argues that many of the perceived problems with implementing ISO standards for corporate actions have in fact already been solved.

Corporate actions suppliers with SWIFTReady labels:

- CheckFree (eVent)
- Information Mosaic (CAMA)
- Tata Consultancy Services (BaNCS Corporate Actions)
- Vermeg (MegaCor)
- XSP (XSP)

Debunking some common corporate actions standards myths

Perceived problem

Existing ISO standards for corporate actions are too difficult to implement

Solution

Efforts to simplify ISO implementation are bearing fruit – and firms can now tap into a great deal of expertise in the marketplace

There is no point investing in ISO 15022 corporate actions messages now, because ISO 20022 is on the horizon

SWIFT is working to ensure a smooth migration, preserving levels of automation already achieved using existing messages. ISO 15022 corporate actions messages have been reverse engineered to create ISO 20022 messages that will support equivalent business functionality. The two standards will coexist for a period and translation tools will be provided to ease migration

Inconsistencies in use by different players in different markets make the standards 'non-standard'

SMPG market practice, the Event Interpretation Grid and the D versus E guidelines have all been created to bring greater consistency to standards use, and to eliminate interpretation issues

Market practice may exist – but it is not consistently applied

STaQS for Corporate Actions eases the process of evaluating, self-policing and benchmarking compliance with market practice, including the EIG and DvE

The issuer community remains unengaged with standardisation and efforts to improve corporate actions STP

There are several initiatives to “close the loop” between issuers, their agents and the community – including the ISO 20022 Issuers' Agent Communications messages and efforts under way to enable issuers to disclose events by implementing ISO 20022 standards in XBRL syntax

Perceived problem 1 – The existing standards are too difficult or inadequate

Though standards do exist, as we've seen, and take-up is increasing, it is evident that not all market participants yet consider them straightforward to implement.

Solution – Simplifying ISO 15022 implementation

Since 2002 when widespread adoption of the ISO 15022 corporate actions messages began, much has been done to streamline the formats and make implementation easier. Firms deciding to adopt ISO 15022 for corporate actions today will find the process far smoother than did the early pioneers of the standard, and can tap into the now vast pool of ISO 15022 expertise built up within their own shops and those of their counterparts and service providers. They can also reap the benefits of industry defined market practice guidelines created under the auspices of the

Securities Market Practice Group (SMPG) (see below).

The community of corporate actions software vendors has also gained a great deal of experience and maturity in their ISO 15022 capabilities. Many of these solutions suppliers have worked to obtain SWIFTReady labels for corporate actions – indicating that their systems have a proven high level of compliance with ISO 15022 and strong capability to support SWIFT-based automation in this area. Not only can the systems themselves efficiently handle ISO 15022 messages, but the companies that provide them have created centres of ISO 15022 expertise to ensure the systems are kept up to date with any changes to the standards and market practice. These experts can also help their clients in their implementation of ISO 15022 – as can many of the leading consultancies that have also built up their ISO 15022 capabilities.

Perceived problem 2 – Resources spent on ISO 15022 will be wasted, because ISO 20022 is coming

There is a perception in some quarters that because work is under way on the next generation of ISO corporate actions messages – in advance of a migration from the existing ISO 15022 formats to the new ISO 20022 formats – there is little point in investing in implementing standards now because that investment will become redundant over time.

Solution – Ensuring a smooth migration to ISO 20022

The future of corporate actions messaging lies with ISO 20022 – and the ultimate aim is to replace the ISO 15022 messages with new ISO 20022 messages. However, the fact that there are new messages on the horizon should not act as a disincentive to invest in ISO today. SWIFT is working to ensure a smooth migration for market participants, preserving levels of automation already achieved using the existing messages. To this end, ISO 15022

corporate actions messages were reverse engineered to create ISO 20022 messages that will contain at a minimum equivalent business functionality. In addition, SWIFT will provide the translation rules to help the migration towards ISO 20022. A first draft of the new messages is now available for review. The documentation of the final version will be available end 2009 for live implementation on SWIFT end 2010.

For more information on ISO 20022 go to www.iso20022.org or www.swift.com/standards.

There is also a community of interested users sharing information on corporate actions at www.swiftcommunity.net.

Perceived problem 3 – Inconsistencies in use by different players, and across different markets, make the standards “non-standard”

The CityIQ survey respondents express concerns that existing standards are not sufficiently robust to cope with inconsistencies in corporate actions processes between different markets. They suggest that the all-important complement to standards – market practice, the rules that govern the use of standardised messages in practice – has not been totally effective so far.

Asked to relate the validity of the statement “Market practice guidelines are critical for achieving STP”, the vast majority of respondents strongly agreed or agreed – and a similarly ringing endorsement was given to the statement “Conforming to market practice could help if the industry would take market practice seriously”.

Solution – Tackling inconsistencies and interpretation issues in the ISO 15022 messages

The Securities Market Practice Group (SMPG) comprises representatives from the industry, and, with the help of national market practice groups from 39 markets, continually reviews all ISO 15022 messages and publishes usage guidelines.

For corporate actions, the SMPG created the Event Interpretation Grid (EIG) to clarify the use of mandatory-voluntary indicators and options across more than 60 event types defined in ISO 15022. The EIG

identifies a Global Grid of preferred practice and also deals with exceptions for 19 markets as defined by contributing national market practice groups. Overall, the EIG brings clarity on how to populate the ISO 15022 corporate actions messages, simplifying their implementation and minimising interpretation issues for announcements.

The SMPG also publishes market practice guidelines for element locations of dates, periods, rates and prices known as the D versus E guidelines (DvE). Referencing the technical blocks in the MT 564 and MT 566 message formats, the DvE guidelines recommend placement of elements in more specific locations to avoid doubt and to reduce multiple, conflicting entries in a message. These guidelines will also be included in the 2010 version of the ISO 15022 and ISO 20022 messages.

“The next challenge for the SMPG is to enhance further the EIG to include the key business data elements (dates/periods, rates/prices) for each event and provide their global usage guidelines and country specifics if applicable,” says Bernard Lenelle, co-chair of the CA SMPG working group and vice president at Clearstream Banking. “The future enhancement of the EIG coupled with the Standards Release 2010 clean up of the standards (unused qualifiers will be deleted to make messages simpler) will be the cornerstone of a further predictability increase in the corporate actions processing business... and predictability is what we are all looking for!” adds Lenelle.

Perceived problem 4 – The SMPG market practice is not consistently applied

The SMPG’s EIG and other guidelines have been around for a while, but no one implements them fully or in the same way. In some places, the EIG seems ambiguous and feedback is slow through the national groups.

Solution – Easing maintenance and monitoring of adherence to agreed market practices

Corporate actions messages compliant with market practices defined by the SMPG become more predictable, and easier for the industry to automate. But firms first need to achieve compliance, and then ensure they maintain it as market practices evolve. SWIFT’s

Simulation Testing and Qualification Service (STaQS) for Corporate Actions has been developed to support firms in conforming to market practice for their use of ISO 15022 corporate actions messages. The service compares Corporate Action Announcement and Corporate Action Confirmation messages to the EIG and DvE guidelines as defined by the SMPG.

STaQS for Corporate Actions eases the process of evaluating, self-policing and benchmarking compliance with market practice. By providing a single reference site for compliance testing, STaQS enables conflicting interpretation to be kept to a minimum. Regular updates help keep automated processing in step with global and local market practice as that practice is defined and published. With STaQS as a reference point for assessing compliance, inconsistency or ambiguity in the market practice definition will be readily and collectively identified for corrective action by the community. This moves market practice from being a “wish list” to being a practical and testable capability that improves overall performance across the community.

Perceived problem 5 – The issuers remain outside the standardisation fold

Respondents to the CityIQ survey also identified as an impediment to corporate actions STP the fact that issuers have not so far been very involved in the standardisation process, and continue to disseminate event information in primarily textual, non-standard and disparate information formats. This creates problems downstream when this information must be interpreted and consolidated – a time-consuming and error-prone activity – to generate data messages. At best the current process is inefficient and at worst significant risk is introduced.

Confirming their view of the magnitude of this problem, the vast majority of respondents agreed with the statements “The data quality problems of corporate actions directly reflect the problems with interpreting text from issuers” and “Full automation cannot be achieved for corporate actions until the issuer is responsible for initiating the process with ISO messaging”.

Solution – Engaging the issuers with corporate actions STP

The need for issuers to be brought into the corporate actions standardisation fold is clear, and the challenge of engaging this community in STP efforts should not be under-estimated. But progress is being made. Issuers globally are striving to meet the demand to provide greater levels of transparency on their processes, and since improving efficiency and standardisation is the key to transparency, the value of engaging with ISO standards is clear in this context.

There are several initiatives to “close the loop” between issuers, their agents, and the community. ISO 20022 Issuers’ Agent Communications messages have been developed, specifically targeting communication between registrars and agents and CSDs. There are efforts under way to enable issuers to disclose corporate events by implementing ISO 20022 standards using the XBRL syntax (eXtensible Business Reporting Language), an initiative leveraging existing tools and regulations for corporate financial reporting. The issuers are becoming aware of the significant risk and inefficiency of the traditional text-based announcement of corporate actions. The regulatory and investor relations climate are also incentivising improvements in transparency, deadlines and efficiencies for investors. XBRL is willing to co-operate with ISO 20022 to ensure easy mapping between the XBRL data and the equivalent components of the ISO 20022 Data Dictionary.

Conclusion: Now is the time to get involved

If ever there were a time to extend the benefits of STP achieved in other areas of the securities markets to the corporate actions function, it is now. Processing corporate actions manually has always been risky, and in light of the global financial crisis, this risk has become unacceptable. The volatile prices in a fast-changing market mean the timeliness of deadlines for voluntary events is crucial – and any mistakes made threaten to be doubly damaging. STP, based on industry-wide adoption of ISO standard messaging, is the only effective answer.

Many industry players – including Clearstream, its suppliers and its customers – are already seeing gains from their investment in ISO corporate actions messaging over SWIFT. But many firms have yet to engage fully, and this is negatively impacting all firms: the key to building on the internal benefits that can be achieved through standards use is ensuring universal adoption of standards.

As the CityIQ survey demonstrates, there remain concerns in the industry about the ease of implementing ISO, the effectiveness of the standards in coping with different market practices and the different usage patterns of individual market participants.

In reality, solutions already exist to many of these problems, thanks to the efforts of the SMPG, guidelines such as the EIG and DvE, and tools such as STaQS for Corporate Actions. In addition, many third party solution providers have honed their expertise in the ISO messages to the point that they are well positioned to ease implementation for their customers.

Industry-wide corporate actions STP is needed today. The standards exist to achieve this, and in the current environment, the business case for reducing risk and costs is stronger than ever. It's time to get engaged.

Further information and contacts:

For further information on corporate actions STP see:

*www.swift.com/solutions/solutions/corporate_actions/index.page?
www.swift.com/standards
www.clearstream.com
www.smpg.info
www.iso20022.org*

To download the CityIQ corporate actions survey go to:

www.cityiq.com/34.html

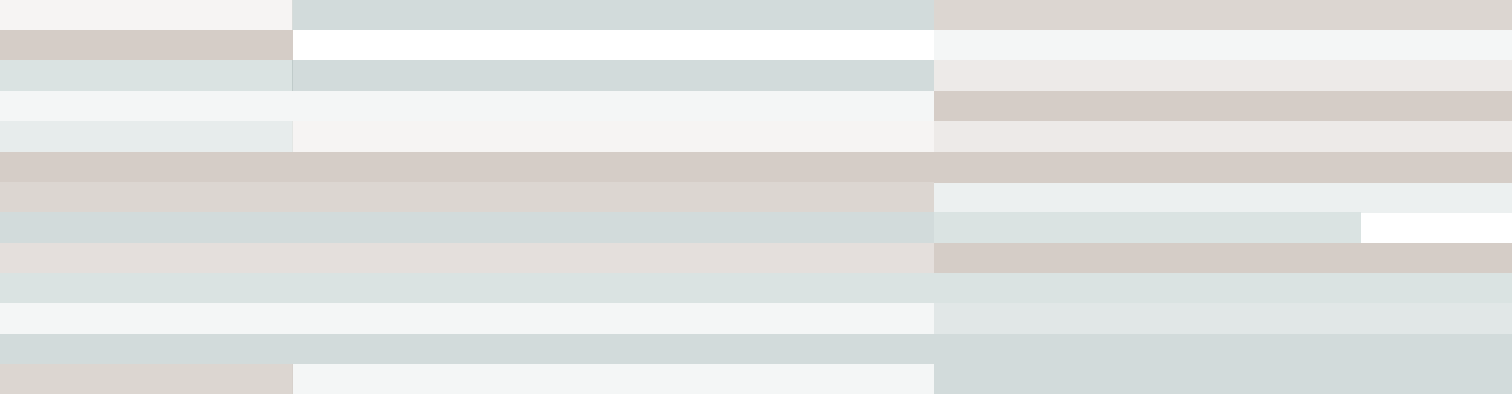
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