

# Corporate action processing: Complexity and risk<sup>1</sup>

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In the securities industry, the processing of corporate action events probably ranks last in terms of efficiency, automation, and standardization. Close to one million corporate actions take place every year worldwide.<sup>2</sup> They happen each time a change is made to the capital structure or financial position of an issuer that affects any of the securities it has issued. Dividend payments, rights issues, tender offers, conversions, takeovers, mergers, and early redemptions are just a few examples.

A single event may involve hundreds of different market participants (including custodians, fund managers, broker/dealers, and depositories), ultimately cascading down to tens of thousands of investors. Each of these participants faces high risk because corporate action processing is complicated, deadline-driven, not standardized, and to a large extent still manual.

In this article we describe how the risks in corporate action processing arise and provide some indications of the magnitude of these risks. We explain that corporate actions not only involve processing risks in the back office, but also significant trading risks in the front office. We conclude the article with a discussion of possible improvements to the system.

## A long chain of intermediaries

In theory, corporate actions ought to be simple information or money flows between an issuer and its investors. In reality, however, each event involves a range of intermediaries. Figure 1 presents an illustration of the various participants in the corporate action chain. Information and instruction flows, which are not shown<sup>3</sup>, add to the complexity. Furthermore, the illustration represents a domestic chain. Cross-border transactions typically involve a larger number of custodians (or 'sub-custodians') and other intermediaries.

## Scrubbing to get the information right

The large number of corporate actions and long chain of intermediaries mean that every day financial institutions around the globe are flooded with millions of faxes, phone calls,

e-mails, and letters carrying news of various corporate action events. The information comes from a diverse range of sources, including custodians, broker/dealers, depositories, and exchanges as well as news journals, wire services, and data vendors. The information may be ambiguous, contradictory, outdated, and sometimes just wrong.

Part of the problem is inherent to the nature of corporate actions: terms and conditions can be complex and highly event-specific, and may even be modified several times (i.e. in a takeover bid). In addition, there is no current standard for corporate action communiqués and most require some manual processing. For cross-border events, terminology and practices differ across markets. For example, what is described in the U.K. as a 'one-for-one' share distribution (whereby holders of a security receive one new share for each share held) is known as a 'two-for-one' stock distribution in the U.S.

Responsibility for failures in the information flow usually cannot be passed on to the direct source of the information. Thus, ultimately, each party in the chain is responsible for getting the information right. This is why the industry spends considerable resources on various, often duplicative, external data sources and internal data scrubbing efforts. These resources clearly represent inefficiencies and costs in the system.

## Failures in the processing of complex corporate actions

For more complex, voluntary events, such as rights issues or takeovers, the investor is given a number of options to choose from within a set timeframe. If the investor is not given timely, accurate notification or the decision is not relayed by expiration, the financial institution processing the event may have to pay a substantial sum to cover losses. Around 10%-15% of all corporate actions are of a voluntary nature, translating into 100,000 to 150,000 complex events each year.

The scope for failures in the processing of complex corporate actions is high, for various reasons:

1 The opinions expressed in this article are those of the authors alone. The support from our colleagues at DTCC and Oxera is gratefully acknowledged.

2 This figure comes from DTCC data. It does not include the over three million scheduled fixed-rate interest payments and scheduled maturities that occur every year.

3 Kindly note that the arrows in the figure show the contractual/business relationships between the participants. The corporate action information and instruction flows are not shown. The illustration is largely based on the U.K. model, but the structure in other markets is similar in terms of the level of complexity and types of intermediaries involved.

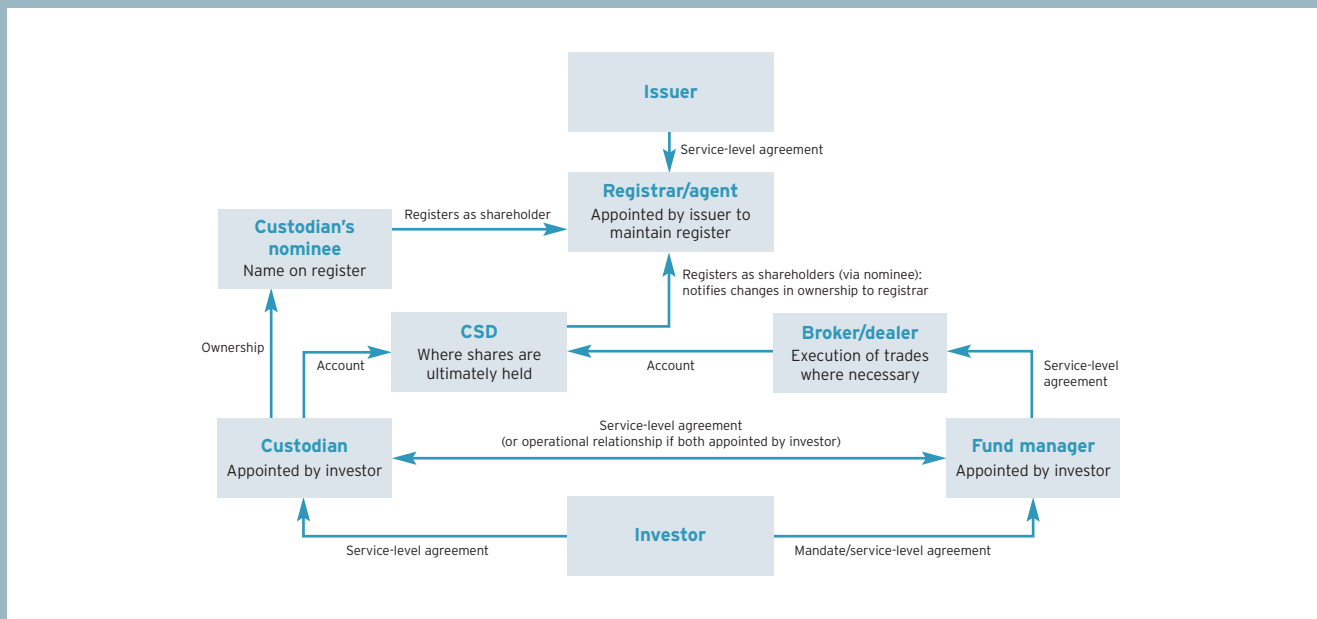


Figure 1: Participants in the corporate action chain

- The sheer number of different intermediaries and investors means there is a large number of instructions for each event.
- Most instructions are sent via fax, telex, or unformatted email, and processed manually, resulting in some potential for misinterpretation or mishandling.
- The more intermediaries in the chain, the tighter the deadline for the ultimate decision-maker, since each intermediary sets its own deadline to allow sufficient time to handle processing/communications.
- Fund manager or investor decisions are sometimes changed before the deadline, and the custodian will receive a second instruction for the same client.

In practice, the liability for processing failures is usually borne by the market participant where the failure arises. This participant will typically have to incur the cost of compensating the client for losses incurred, or re-establishing the position in

which the client would have been, had the instruction been processed correctly. For example, if, for a scrip dividend, the investor (or its portfolio manager) opts for cash, but due to an error by the fund manager or the custodian, the investor ends up with extra stock, the cost by the party responsible for the error would basically be the loss incurred when selling the stock for cash after the event, potentially at a lower price.<sup>4</sup>

A recent study by Oxera estimates that the direct risks to any individual firm involved in the corporate action processing chain can be very significant.<sup>5</sup> Failure in handling a single, complex event has the potential to result in losses running into tens of millions of euros. These estimates are in line with risk assessments that some firms have made internally. The risk is highest for individual custodian firms because they safeguard large amounts of assets on behalf of many investors, but brokers, fund managers, and other financial intermediaries also face risks.

4 In this example, there is only a cost to the investor if the stock price is lower after the event. If the stock price turns out to be higher, the client is better off because of the mistake, and no compensating action may need to be taken.

5 Oxera, 2004, 'Corporate action processing: What are the risks?', report sponsored by DTCC, May. The report is available on [www.oxera.co.uk](http://www.oxera.co.uk) and [www.dtcc.com](http://www.dtcc.com).

The same study suggests that actual losses due to processing failures are somewhat lower, precisely because firms in the industry spend very large sums on failure prevention. Available data on the European fund management industry indicates that firms in Europe incur total actual costs in the region of €65 million to €140 million per year.

### Trading risks to the front office

A corporate action announcement often represents new information about an issuer and therefore may impact the market value of securities. Corporate action events thus create (temporary) arbitrage opportunities for brokerage and fund management firms trading either on behalf of investors or their own proprietary account. This is illustrated by the fact that some firms have specialized traders attempting to gain from arbitrage opportunities arising from corporate actions.

In practice, trading desks within these firms tend not to rely on the corporate action chain depicted in Figure 1 for information. This chain is simply too slow. Rather, information on events tends to come through the newspapers, newswires, as well as word of mouth and rumors. Only at a later stage (often a few days after) does the more formal, detailed notice of the action come through, which is relied on by the back office to process the event.

The lack of up-to-date information or misinformation can lead to sub-optimal trading decisions. Two types of cost are likely to flow from this. Firstly, the trades themselves incur transaction costs, which can be significant. Average transaction costs in the major stock markets currently range from around 20 basis points in Japan and Switzerland to 60 basis points in Taiwan, South Korea and Malaysia.<sup>6</sup> This includes trading fees, brokerage commissions, and market impact costs. For round-trip trades, i.e., when the mistaken trade needs to be unwound, this cost is incurred twice. Secondly, misinformed traders run the risk of adverse market movement. If the stock price does not instantaneously incorporate the information contained in a corporate action announcement, the failure by individual traders to understand the corporate action places them at an

informational disadvantage to the rest of the market. This disadvantage means that the stock price will have systematically moved against them when they attempt to unwind their mistaken trade.

The aforementioned Oxera report provides an estimate of the order of magnitude of these trading risks. The estimate is based on a number of conservative assumptions, for example, that only a subset of complex corporate actions have the potential to move stock prices significantly (including takeovers, mergers, and rights issues), and that only a very small proportion of traders will be misinformed at any point in time. Nevertheless, the total trading risk on a global scale ranges between €1.6 billion and €8.0 billion every year.

Trading losses due to corporate action information failure are reflected in lower returns to fund managers and investors, and reduced net trading income to brokers. As a result, although the direct costs of failure in the dissemination of corporate action information may not be directly observable, they are nevertheless real costs to their business, profitability in the case of brokers and success in the marketplace for fund managers.

### Towards greater standardization and efficiency

In pursuit of greater efficiencies, lower costs, and stronger risk management, industry groups and policymakers are focused on post-trade activities, including corporate action processing. Indeed one of the recommendations in a Group of 30 report (January 2003) is to automate and standardize asset-servicing processes, including corporate actions.<sup>7</sup> Underpinning the G30's recommendation is the observation that, 'Corporate actions, across the market, are the major source of financial losses attributable to operational failure.' Likewise, the second Giovannini report (April 2003), for the European Commission, stated that there are significant national differences in the rules and practices governing corporate actions within the E.U.<sup>8</sup> These differences may act as a barrier to efficient cross-border securities transactions, and possibly the integration of European equity markets.

<sup>6</sup> These figures are from the Elkins/McSherry Global Universe Ranking (Q4 2003).

<sup>7</sup> G30 (2003), 'Global Clearing and Settlement: A Plan of Action,' January.

<sup>8</sup> Giovannini Group (2003), 'Second Report on EU Clearing and Settlement Arrangements,' April.

Several major industry initiatives are concentrating on corporate actions. There is a push under way to achieve what is called 'at source' standardization, targeted to address the integrity of corporate action announcements at the point of origin or creation. The ultimate goal of at source is twofold. One is to streamline communications between the issuer or company initiating the corporate action and the investor. The other is to allow for the electronic distribution of corporate action information, so that it is possible to eliminate the error-prone messaging by fax, phone, and email that plagues the industry today.

Both the International Securities Services Association (ISSA) and the Securities Industry Association (SIA) in the U.S. are promoting initiatives to provide clear, consistent, and uniform corporate action information in prospectuses and proxies. Other organizations are also involved in this, while securities markets groups all around the world are working to develop best practice guides for the use of the ISO corporate action message standards.

Recognizing that technology can be a catalyst for change, a series of automation and straight-through processing (STP) initiatives on corporate actions are also being pursued. These projects are aimed at improving the quality of corporate action information, streamlining processing, eliminating redundancies and duplication of effort, and advancing standards and best practices industry wide.

What is clear from all these initiatives, studies, and reports is that great challenges face the industry globally in dealing with corporate actions. Not only are volumes growing, but the fact is that more and more corporate action events occur cross borders. Thus, no single approach will result in a complete solution. While national and regional initiatives are important to improve the way corporate actions are handled, a global perspective is critical to guide development overall. Clearly, a confluence of efforts, ideas, and technical expertise by market participants and industry groups, working within national markets and globally, is the only way to bring stronger risk management, greater efficiencies, and STP for corporate actions.