Oxera

Agenda

Advancing economics in business

Corporate actions and stock markets: is there a link?

Stock markets usually react fairly consistently to takeover announcements, and various trading strategies have been developed in an attempt to exploit share price movements around such announcements. But do markets respond in a predictable way to other corporate actions, and could timely information about these events benefit financial organisations and their customers?

Besides such highly visible corporate actions as takeovers, there are numerous, more 'routine', corporate actions such as dividend payments, stock splits and rights issues. These events often involve complex processes with predictable intermediate stages—for example, ex dates and record dates (see box below). If these other corporate actions and dates also have a reasonably systematic impact on the stock market, the whole arena of corporate actions may be of interest to the front office, as well as to those responsible for processing the actions and ensuring that shareholders can exercise their rights and receive what is due to them.

Oxera was commissioned by the Depository Trust & Clearing Corporation (DTCC) to refine estimates of potential financial risks associated with corporate actions from the trading—or front office—perspective, including an examination of price movements and trading activity over the corporate action processing cycle. The overall objective of the study was to consider the ways in which accurate and timely corporate action information could benefit financial organisations and their customers by improving the effectiveness of their trading strategy and quality of advice offered to their clients. This research follows a study undertaken by Oxera in 2004, which

Corporate actions

Takeovers	**An offer made to shareholders requesting them to sell (tender) their shares for a specified price, usually at a premium over prevailing market prices. The objective of a tender offer is typically to take control of the target company**
Spin-offs	**A distribution of subsidiary stock to shareholders of the parent company without a surrender of shares or payment. Spin-offs represent a form of divestiture, resulting in an independent company. Shareholders may be given the option to determine the securities to be received**
Forward stock splits	**An increase in the company's number of outstanding shares of stock without any change in the shareholders' equity or the aggregate market value at the time of the split. The stock price is normally reduced**
Exchange offers	**A mandatory or voluntary swap of securities for cash, shares, or a combination thereof**
Rights issues	**Allotment of rights that grants the option to existing shareholders to purchase additional shares. The event is accompanied by a corresponding 'subscription offer' event, which provides details relating to the exercising of the rights**

Source: DTCC.

Significant dates in the corporate action processing cycle

Announcement date	**The date on which a particular corporate action is announced**
Record date	**The date on which the ownership of securities is recorded**
Effective date	**The date on which the corporate action becomes effective**
Ex date	**The first date on which shares are purchased without the entitlement of corporate action**

This article is based on Oxera (2006), 'Share Prices and Trading Activity over the Corporate Action Processing Cycle', May, prepared for the Depository Trust & Clearing Corporation. Available at www.oxera.com.

provided one of the first systematic attempts to quantify the major risks involved in processing corporate actions, focusing on the risks and costs arising within back office operations.[1]

This article sets out the key results of the 2006 study, and discusses the economic rationale behind the observed systematic impact on share prices, share price volatility and trading turnover.

Corporate actions, share prices and investor behaviour

Corporate actions may have significant implications for the financial risks faced by market participants. In particular, such actions often contain new information about the current and expected profitability and growth prospects of firms, or they can result in changes in firms' operations and financial structure. At the same time, corporate actions can constitute a transfer of wealth between shareholders and bondholders, alter trading costs in secondary markets, and have other direct and indirect effects on a firm's value. Oxera's study analysed the effects of corporate actions associated with different critical dates (announcement date, record date, effective date and ex date) using three market-based measures.

- *Average share price returns*—average returns around critical dates provide evidence on the extent to which the particular corporate action type is associated with a positive or negative average share price effect around these specific dates in the corporate action processing cycle.

- *Share price return volatility*—estimation of return volatility around critical dates signals the changes in return characteristics and potential risks around specific dates in the corporate action processing cycle.

- *Trading velocity*—estimation of trading velocity (trading activity or volume) around various critical dates provides an indication of the extent to which corporate actions alter investor behaviour, thereby (among other effects) changing the level of liquidity that investors may experience in the secondary market.

These three facets of 'market conditions' during the corporate action processing cycle may have significant implications for the profitability of certain trading strategies, and for intermediaries' supply of trading services to their clients. Therefore, accurate and timely corporate action information, which is available in a user-friendly format, might give financial intermediaries and investors an informational advantage that could improve their trading strategies and reduce risks associated with corporate actions.

What was the coverage?

The aim of the study was to consider the broader range of corporate action types, and to seek evidence on whether the share price and trading activity effects can be observed in a wider spectrum of actions, over and above the well-known impact of takeovers. The full study provides assessment of the following corporate action types (see box above):

- takeovers;
- spin-offs;
- forward stock splits;
- exchange offers;
- rights issues.

For each corporate action type, the analysis was based on a large sample of US events (the only exception being rights issues, where the analysis covered events from the USA, UK, France, Germany, Japan, Singapore, and Hong Kong) between 2003 and 2005.

What are the effects?

The results of the analysis suggest that most of the corporate actions analysed can have significant implications for share prices and trading activity in secondary markets. Figures 1 and 2 show average abnormal returns resulting from spin-offs and rights issues for a period between the announcement day and 30 days thereafter.[2] The figures suggest that these corporate actions result in significant share price reactions (both positive and negative), and that this impact is not reflected in the prices immediately.

The corporate actions analysed in Oxera's research affect not only average share price returns, but also often have statistically significant effects on share price return volatility and trading activity. These effects are observable on various critical dates in the corporate action cycle.

The effects documented can be summarised as follows.

- There is strong evidence that announcement dates of corporate actions often result in significant and systematic share price movements. The significance of the impact differs depending on the type of action. For example, announcements of takeovers, spin-offs and stock splits result in a statistically significant positive movement in share prices, while announcements of rights issues result in a statistically significant negative movement in share prices. The exchange offer event does not appear to be

Figure 1 Spin-offs: cumulative difference between average daily and historical share price returns (%)

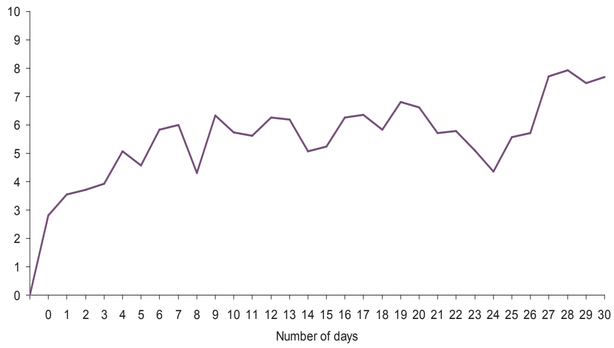
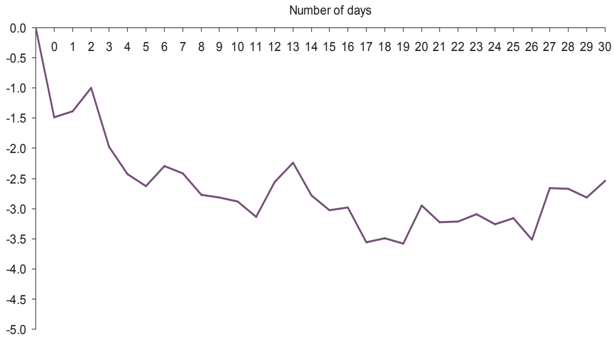


Figure 2 Rights issues: cumulative difference between average daily and historical share price returns (%)



Sources: DTCC, Bloomberg, Datastream and Oxera calculations.

associated with any systematic movements in share prices.

– Announcement dates are also associated with significant increases in both volatility in share prices and volume of trading. Similar to the trends in average returns, the implications of different corporate action types can often vary significantly in magnitude.

– The effect of corporate actions on share prices and trading activity extends beyond the announcement date. The results suggest that, in some instances, corporate actions appear to lead to systematic share price movements, higher-than-average volatility, and increased trading activity around other important dates (eg, the record date and ex date) in the corporate action cycle.

– Although the data used in this study was derived largely from the USA, the effect of corporate actions does not appear to be limited to the US markets. Analysis of rights issues based on a sample of firms from the USA, Europe (UK, France and Germany) and Asia (Japan, Hong Kong, and Singapore) yields significant share price and trading activity effects during the rights issues processing cycle.

What are the economic causes of these effects?

The effects of the corporate action types analysed in this study can be divided into two categories: direct effects on the cash flows of the firm; and the provision of signals about the firm's future cash flows. In addition, corporate actions can have further impacts on share prices and trading activity, including changes in trading costs in the secondary market, and the transfer of wealth between equity- and debt-holders in the firm.

For example, a takeover is one corporate action with clear implications for a firm's cash flows. Following the takeover, firms may alter their activities and financing structure, often resulting in cost and/or revenue synergies. For example, acquisitions can create synergies by:

– eliminating staff duplication;
– combining facilities, allowing excess property and equipment to be sold;
– creating economies of scale in purchasing, marketing and R&D;
– reducing the cost of capital.

On the day when an acquisition is announced, these implications for firms' cash flows would be (partly) incorporated into the share prices. Although, over recent years, there has been considerable debate about the actual merits of mergers and acquisitions, empirical evidence suggests that, on average, they have a positive effect on the combined value of the two firms.

Academic literature has provided a considerable amount of evidence on the asymmetry of information held by the managers of the firm and its investors. In particular, managers are sometimes unable to (credibly) communicate information about the current and future profitability of the firm to its investors. Therefore, in general, managers have more extensive and better information about the current profitability and future prospects of the firm than its investors.

In the context of this study, since corporate actions provide signals about the current and future profitability of firms, they can also result in considerable share price movements and changes in trading activity. For example, consistent with Myers and Majluf (1984), announcements of rights issues are likely to be interpreted as a negative signal about the firm's profitability.[3] Therefore, on average, such announcements are likely to be associated with negative share price reactions, increased volatility and trading activity, as confirmed in the study.

In addition to the direct impact on firms' cash flows and signalling about their current and future profitability, corporate actions can have further effects on share prices and trading activity. One example is the link between the nominal value of stock and trading costs in the secondary market. In particular, forward stock splits can alter trading costs in two ways. On the one hand, they reduce the nominal value of shares, thereby potentially making trading more accessible to retail investors. On the other hand, an increase in the total number of shares could have an adverse impact on direct trading costs (eg, exchange fees) incurred by investors in the secondary markets.

Conclusion

Corporate actions have a statistically significant effect on share prices and trading activity of stocks, and these effects often emerge in a predictable manner around various critical corporate action processing dates. These findings are consistent with the notion that corporate actions often affect share prices by altering a firm's cash flows, providing signals about its profitability, or changing the trading costs in the secondary markets.

However, the full extent of the interaction between corporate events and the market is still unknown. The research undertaken thus far has examined only a limited number of corporate actions over a limited number of market metrics. Analysis of other corporate actions and metrics—for example, the bid–offer spread—could reveal further significant and potentially predictable market impacts.

Since corporate actions often carry information about the current and future profitability of firms, their impact may go beyond the relevant cash equity market. For example, there could be an impact on the bond markets and on the market for relevant derivatives. Only further systematic research—potentially using similar methodologies—on the full range of corporate actions, and across all the related markets, can fully illuminate the interaction between corporate actions and the financial markets.

The extent to which the systematic and statistically significant impacts revealed by the current research can be successfully translated into profitable trading strategies remains to be established, and would require rather different research. However, the establishment of statistically significant impacts at least opens up the possibility that these market impacts could be profitably exploited.

[1] Oxera (2004), 'Corporate Action Processing: What are the Risks?', May, report prepared for the DTCC. Available at www.oxera.com.
[2] In the case of share price returns, the returns measure is defined as the difference between average daily share price returns over a given event window and average daily share price returns measured over a 90-day period between 95 days and six days prior the announcement of the corporate action. For the purposes of statistical testing, the study uses abnormal returns that are estimated using the market model approach.
[3] Myers, S. and Majluf, N. (1984), 'Corporate Financing and Investment Decisions when Firms have Information that Investors do not have', *Journal of Financial Economics*, **13**.