Oxera

Agenda

Advancing economics in business

Blocking the deal: how do merger decisions affect share prices?

A merger reference for second-phase competition investigation is likely to have a negative effect on any transaction, since it will affect the timing, or even the ultimate closing, of the deal. But how much impact does such a reference actually have on share prices? Are more mergers being referred for in-depth inquiry than in the past? And does a referral affect the share price of the bidder, or the target? Oxera presents quantitative evidence on the cost to shareholders of a failure to achieve first-phase merger clearance

In recent years several high-profile deals have foundered during the merger control process, including GE/Honeywell, Airtours/First Choice, Interbrew/Bass, and the Tesco/Sainsbury/Asda bids for Safeway, showing that merging companies and their shareholders must pay attention to the risk of a competition authority 'blocking the deal'. The cases mentioned have all undergone a lengthy process of antitrust examination, starting with a first-phase investigation by the relevant competition authority, followed by an in-depth second-phase investigation—typically lasting six months or longer—and subsequent appeals. Merger control is clearly relevant to investors, including risk arbitrage, since it affects the timing and even the ultimate closing of the deal.

The recent growth in mergers and acquisitions activity has created an increasing workload for competition authorities worldwide, with, for example, the merger caseload of the UK Office of Fair Trading (OFT) rising from 127 cases in 2003 to 190 cases in 2005,[1] and the number of Competition Commission merger inquiries rising by a similar proportion. But how have shareholders reacted to clearances and referrals at the first phase of competition investigation?

Market reaction to a referral decision: Oxera's findings

- **The market's reaction to a second-phase referral is highly negative (–8% to –12% on average) for merger targets, and mixed for bidders (–3% to +1% on average).**
- **The reaction to an OFT merger clearance is muted (±0.5% on average for bidders, +0.5% to +0.8% for targets), indicating that the market expects most mergers to be cleared at the first stage.**
- **There is no evidence that the market can fully anticipate a referral decision, but there is some evidence of a general presumption towards OFT merger clearance.**

At first glance, the market reaction to some UK referrals to the Competition Commission has been significant, as shown in Figure 1 below. For example, in December 2005, the share price of Ottakar's fell by 14% following the OFT's referral decision over the bid by HMV. In 2004, Johnston Group stock fell by almost 20% following a reference to the Competition Commission concerning the proposed merger with Anglo American.[2]

Although the overall number of Competition Commission referrals provides a relatively small sample from the perspective of statistical analysis, Oxera has undertaken a systematic study of the market reaction to a referral by the OFT of a merger for second-phase investigation. Selected findings are reported in this article.

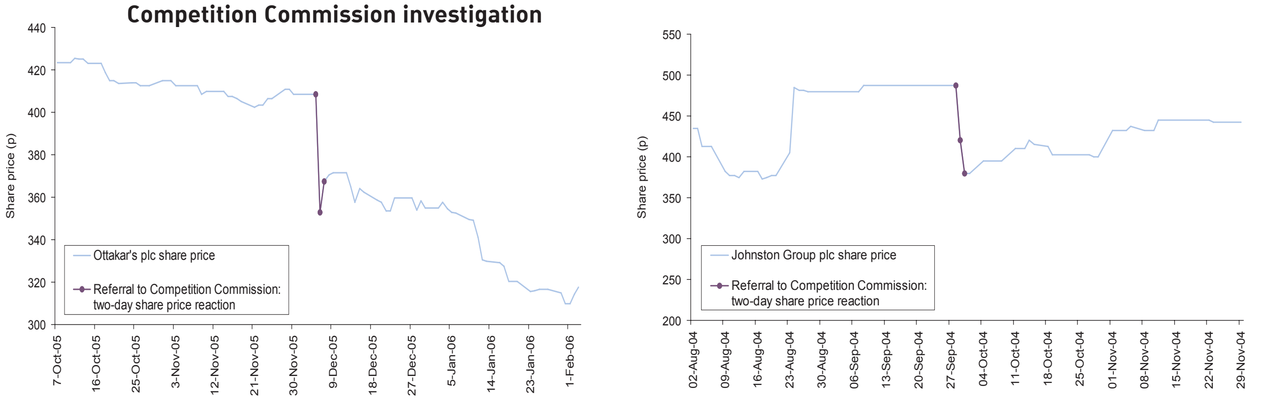
The article begins with a brief discussion of methodology, and then presents the main results of the share price analysis. This is followed by a commentary on the lack of reaction to clearance decisions, and quantitative evidence on the proportion of mergers that have been cleared by the OFT.

Theory

The existence of takeover premia is well established. On average, shareholders of target firms benefit from a 20–40% uplift relative to the pre-announcement price.[3] However, research has also demonstrated that returns to bidding firms from takeovers are, on average, close to zero. Bruner (2001), comparing results across 41 studies, and Jensen and Ruback (1983), comparing 18 studies, both find average near-zero excess returns to bidders in completed mergers.[4]

In principle, therefore, there may be little impact of a second-phase competition investigation on a bidding firm's share price, but in individual cases, bidders' market value can be at significant risk, depending on the

Figure 1 Share price reactions for Ottakar's plc and Johnston Group plc to the referral of a merger for Competition Commission investigation



Source: Oxera analysis of share price data from Datastream.

market's perception of the value of the transaction to the bidding firm. A further complication is introduced by the mix of completed and non-completed mergers in the OFT's casework, since the greater cost to the bidding firm of unwinding an agreed transaction should in theory be reflected in the difference between market reactions to OFT decisions on completed and non-completed deals.

For the target firm's shareholders, however, the second-phase investigation may be a consistent and high-profile threat, since an in-depth antitrust investigation could erode the takeover premium in the target's share price.

Data and methodology

Oxera's analysis includes all OFT merger announcements from June 2000 to February 2006, a sample of 876 merger decisions.[5] The sample selection process reduced the sample to around 250 cases, since the analysis considers only transactions concerning UK listed companies, excluding deals that relate to subsidiaries, non-UK firms, or private companies. A distinction is made between completed and non-completed ('anticipated') transactions,[6] and between acquisitions and other transactions, such as joint ventures. Around 40% of the mergers considered by the OFT over the 2001–05 period were completed deals, and around 60% were anticipated transactions.[7]

In line with previous economic research, Oxera has calculated abnormal share price returns in relation to a market benchmark.[8] Excess returns around an OFT merger decision are calculated over three periods, as illustrated in Figure 2:

1) between days –1 and 0, to assess share price reaction on the day of the announcement;[9]
2) between days –3 and 0, to test for leakages of information to the market (which would be indicated if significant differences emerge between this result and reaction on the day of the announcement); and
3) between days –1 and +3, to check if reaction to the decision extends beyond the day of announcement (which would be indicated if the magnitude of this result is greater than the one-day reaction).

T-values are used to check the significance of excess returns. The small statistical significance of these results indicated by the t-values is to be expected given the small number of observations. Future research may extend and refine these findings by controlling for transaction size, using different beta assumptions, and analysing the specific impact of competition decisions on merger premia.

Results and commentary

Uncertainty about the outcome of a merger creates an arbitrage opportunity in the window before the transaction closes between the bidding company's stock and the target company's stock. This pricing disparity is often exploited by merger arbitrage hedge funds.[10] Even after a transaction is completed, acquiring firms are still at risk from merger investigation, since they can be required to unwind the transaction completely or divest key parts of the acquired business.

In line with this risk to acquiring firms, Oxera's research indicates consistently positive, but not statistically significant, excess returns of around +0.5% for OFT

Figure 2 Timeline of analysis

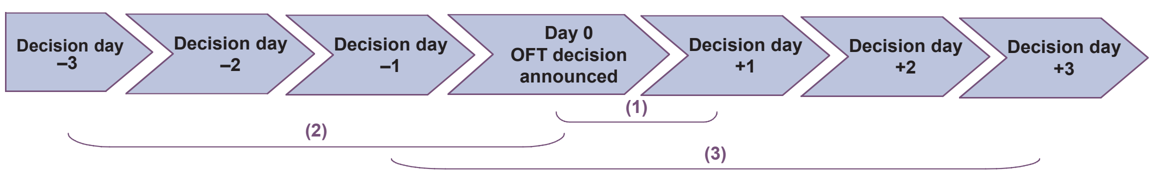


Table 1 Transactions cleared by the OFT: abnormal return (%) and t-value (shown in parentheses)

	Completed acquisitions: bidders	Anticipated acquisitions: bidders	Anticipated acquisitions: targets
Day –1 to day 0 (one-day reaction)	0.5%	0.3%	0.5%
	(0.20)	(0.12)	(0.18)
Day –3 to day 0 (anticipation of the decision)	0.4%	0.2%	0.8%
	(0.19)	(0.08)	(0.29)
Day –1 to day +3 (after-effects of the decision)	0.4%	–0.5%	0.7%
	(0.17)	(–0.24)	(0.25)
Number of observations	66	70	62

Note: None of the results in this table are statistically significant at a 95% confidence interval.
Source: Oxera analysis of share price data from Datastream.

clearance decisions on completed acquisitions (see Table 1). For anticipated acquisitions, there is a mixture of positive and negative average reactions for bidding firms, but the reactions are not significantly different from zero, suggesting that the market view on the value of these acquisitions to the acquiring firms is on average neutral.

In the case of target companies, the assessment of the probability of a merger's success or failure is more critical: if the deal is blocked, the upside for shareholders may be lost. For merger arbitrage funds in particular, if a merger encounters unexpected antitrust problems, their profit opportunity is potentially wiped out.

For target companies, Oxera's research indicates that average excess returns to clearance decisions are positive and slightly stronger (+0.5% to +0.8%) than in the case of bidding firms. Note that there is no consistent pattern in the results to suggest that the market correctly anticipates OFT decisions, since the average price reactions on the announcement day are very similar to changes in share prices between day –3 and the announcement day. There is also no consistent pattern to suggest that the market takes more than one day to adjust to the news of the decision, since the 'after-effects' reaction is not systematically stronger than the one-day reaction.

A much stronger reaction is observed for acquisitions that are referred for second-phase competition investigation (see Table 2). For the limited number of acquisitions of listed companies in the sample that have been referred to the Competition Commission, the share price reaction for target firms is consistently and strongly negative, ranging from –3% to –37%, and averaging between –8% and –12%. Across this small number of transactions, market value declined by a combined total of almost £1 billion on the days of the OFT's referral decisions. Note that no significant difference is observed between the one-day reaction and the change in the share price between days –3 and 0, again indicating that the market had no advance warning in this period of bad news.

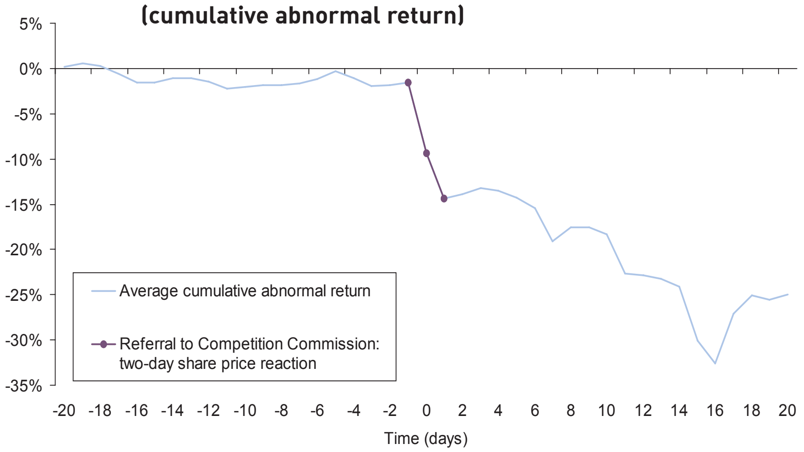
For bidding firms in referral decisions, the market reaction is less dramatic, and indeed consistently negative only for completed transactions, for which the average one-day share price reaction is around –2.5%. This is in line with expectations that the target firm's shareholders absorb most of the value from a merger, and that the prospect for a bidding firm of unwinding a

Table 2 Transactions referred to the Competition Commission: abnormal return (%) and t-value (shown in parentheses)

Abnormal return (%), t-value	Completed acquisitions: bidders	Anticipated acquisitions: bidders	Anticipated acquisitions: targets
Day –1 to day 0 (one-day reaction)	–2.4%	0.4%	–7.8%**
	(–1.06)	(0.16)	(–3.03)
Day –3 to day 0 (anticipation of the decision)	–3.0%	0.6%	–7.5%*
	(–1.33)	(0.25)	(–2.90)
Day –1 to day +3 (after-effects of the decision)	–0.4%	–0.5%	–11.6%***
	(–0.20)	(–0.22)	(–4.50)
Number of observations	5	16	7

Note: * significant at a 97.5% confidence interval. ** significant at a 99% confidence interval. *** significant at a 99.5% confidence interval.
Source: Oxera analysis of share price data from Datastream.

Figure 3 Average target firm price reaction for the referred mergers (cumulative abnormal return)



Source: Oxera analysis of share price data from Datastream.

completed transaction is more costly than the prospect of having an anticipated deal blocked.

This analysis suggests that a full assessment of the antitrust implications of deals involving competing firms is important for investors. In particular, a second-phase competition investigation appears to have a very negative impact for shareholders of a target firm in an anticipated takeover. Although these results should be seen as indicative rather than statistically robust, due to the limited sample, they clearly suggest that a Competition Commission referral substantially increases the risk that an acquisition/merger will not be completed. Figure 3 shows the pattern of market reaction for target firms over a 40-day period, averaging across the daily abnormal returns in these cases. It indicates that the 'bad news' reaction is not a temporary phenomenon.

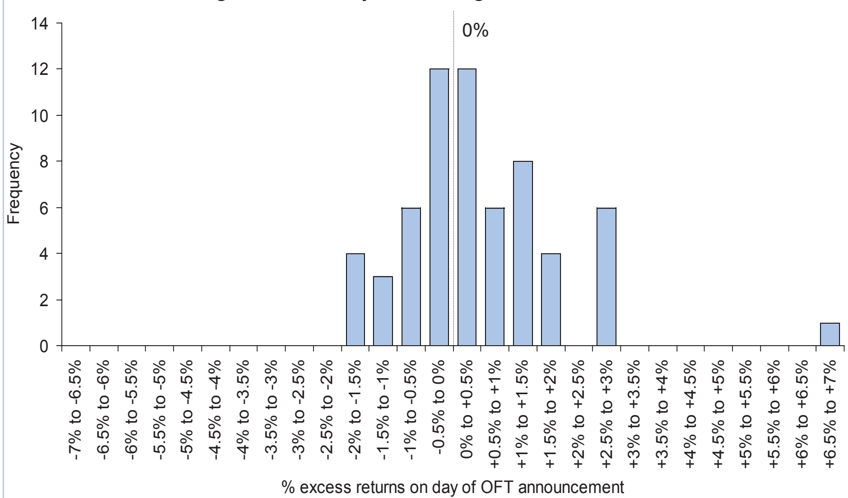
Symmetry of reactions to clearances and referrals

Another interesting feature of this analysis is the limited market reaction by target firms to clearance decisions, as shown in Table 1. Although, on average, around 85% of transactions are cleared at the OFT stage (as discussed below), it is clear that some mergers present more challenging competitive overlaps (ie, companies that compete head to head in the same economic market) than others, and therefore stand at greater risk of referral.

For mergers that are 'in the balance' for clearance or referral, the target's share price may be expected to react strongly to the OFT's decision, whether it is to clear or refer the deal. However, Oxera's analysis found little evidence of such strong reactions to clearance decisions. For example, Figure 4 shows the distribution of one-day returns on clearances for target firms. It shows, counterintuitively, a number of clearance decisions that have resulted in zero or negative abnormal share price movements, providing an important indication that the market may not have fully priced in the risk of Competition Commission referral in these cases.

In principle, it might be expected that this chart would also show some evidence of strong share price reactions to clearance decisions, as was apparent in Table 2 for referral decisions. However, only one merger clearance decision resulted in a large jump in the share price (>5%), suggesting that the market could be predisposed to expect a clearance, even for mergers that present significant risks to competition (ie, where referral is the most likely outcome).

Figure 4 Distribution of one-day excess returns on OFT clearances for targets on anticipated mergers



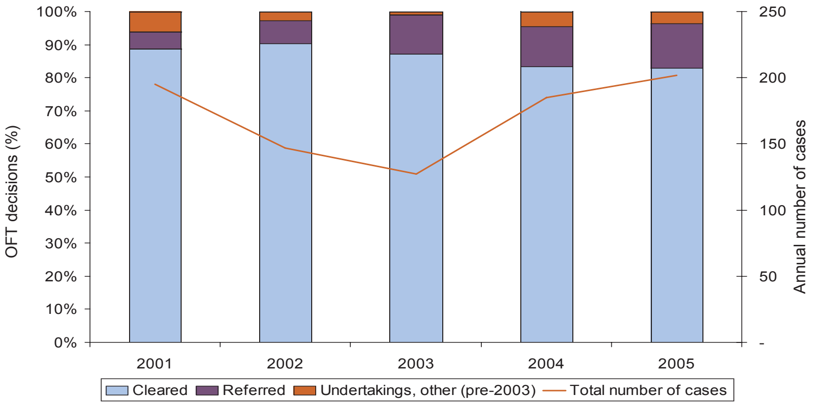
Source: Oxera analysis of share price data from Datastream.

Since it is not possible to calculate for each transaction the probabilities of referral, this analysis is necessarily subjective, but similar results to Figure 4 have been picked up in a broader analysis by Oxera of the distribution of returns (not illustrated here).

How many mergers are referred?

The OFT is a 'first screen' for merger control, and in the context of the Competition Appeal Tribunal (CAT) decision on iSOFT/Torex,[11] and

Figure 5 Proportion of mergers cleared and referred by the OFT, and total number of mergers notified to the OFT (right-hand scale)



Source: Oxera analysis of OFT data.

subsequent decisions by the Court of Appeal,[12] the OFT's criteria for making a Competition Commission referral have been subject to much debate. It has been suggested that the OFT is now in a position where it may refer more mergers to the Competition Commission than before the CAT and Court of Appeal rulings. As Figure 5 shows, the proportion of referrals has indeed increased, doubling from 7% in 2002 to 14% in 2005, suggesting that the risk of referral has increased over time—either due to a tighter competition regime or an increased number of transactions which present antitrust issues.

Figure 5 also shows that, since 2003, the number of mergers and acquisitions notified to the OFT has risen markedly, with a 59% increase in the competition authority's caseload over the past two years. In the past five years, the annual proportion of mergers referred to the Competition Commission has varied from 5% to 15%, but between 2003 and 2005 a relatively stable 12–14% of mergers qualifying for scrutiny have been referred to the Commission. Note also that the offer of undertakings in lieu of referral has remained a constant theme of competition enforcement practice since 2001, although fewer cases were handled in this way in 2003.[13]

Overall, the number of mergers referred to the Competition Commission has doubled since 2001, highlighting the need for merging parties and their investors to examine regulatory competition issues that could affect the timing and outcome of the merger or acquisition in prospect.

Conclusions

The evidence suggests that the market cannot correctly anticipate OFT decisions, since the reaction to referrals is consistently strong and negative for target companies (based on a small number of observations). The small reaction to merger clearance decisions, relative to the reaction to referrals, further indicates that there could be a general market perception that mergers will be cleared—that is, the market may expect a merger to clear because a large proportion (around 85%) have been cleared in the past, even in certain high-risk cases presenting competition problems. An unexpected finding is that a number of clearance decisions result in negative share price reactions, suggesting that the risk of Competition Commission referral was not fully priced into the target's stock.

Oxera's analysis also sought to identify evidence of information leakage prior to OFT announcement; however, no such evidence has been found. Further analysis has shown no systematic evidence of delays in the market reaction to OFT decisions, since the one-day share price reaction is broadly similar to the reaction between days –1 and +3.

Finally, this analysis has shown that the proportion of mergers referred to the Competition Commission has increased since 2002, highlighting the need for the risk of referral to be carefully assessed.

In summary, OFT referrals to the Competition Commission appear to have a consistently strong and negative impact on share prices for target firms. This is consistent with the literature on the distribution of value in mergers, which suggests that, in general, the target firm's shareholders absorb the value of a merger. Although the overall picture on the share price response to competition decisions will be clearer when more data is available, the balance of evidence presented here clearly indicates that merger arbitrage funds should pay close attention to regulatory antitrust issues, and that a first-phase merger clearance should be highly prized, particularly for shareholders in the target company.

[1] Source: Oxera analysis of OFT data.
[2] In the case of Johnston Group, the OFT referred the deal to the Competition Commission on September 29th, and the bid from Anglo American was withdrawn on September 30th. This is the reason for the two-day consecutive fall in the Johnston Group share price.
[3] Goergen, M. and Renneboog, L. (2003), 'Shareholder Wealth Effects of European Domestic and Cross-border Takeover Bids', European Corporate Governance Institute, working paper 08/2003, January. See also Mulherin, J. and Boone, A. (2000), 'Comparing Acquisitions and Divestitures', *Journal of Corporate Finance*, **6**, pp. 117–39.
[4] Bruner, R. (2001), 'Does M&A Pay? A Survey of Evidence for the Decision Maker', working paper, Darden Graduate School of Business, University of Virginia. Jensen, M. and Ruback, R. (1983), 'The Market for Corporate Control: The Scientific Evidence', *Journal of Financial Economics*, **11**, pp. 5–50.
[5] Data on OFT decisions was obtained from the OFT. Data on Competition Commission decisions was obtained from the Competition Commission. Share price data was obtained from Datastream.
[6] Transactions notified to the OFT as anticipated or proposed mergers are likely to be at different stages of completion depending on what proportion of stock is already owned by the bidder. It is difficult to control for this factor, but a competition inspection is likely to slow down the process of completing the deal, meaning that anticipated transactions in general may not complete until after regulatory clearance is granted.
[7] Source: Oxera analysis of OFT data.
[8] $AR_{it} = R_{it} - (\alpha_i + R_{market,t})$. Oxera's research uses the FTSE All-share index as a market benchmark. It makes the simplifying assumption that all stocks in the sample have a beta of 1 with respect to the FTSE All-share. Further research may use z-scores or alternative benchmarks, such as industry sector indices, and could potentially achieve more statistically significant results.
[9] The OFT does not appear to follow a set policy of announcing merger decisions before the market opens or after the market closes. In cases where the decision is announced after the end of the trading day (ie, after 16.00), the share price reaction will not occur on the day of the OFT announcement.
[10] A merger arbitrage fund will typically analyse announced transactions with the intention of taking a long position in the stock of the target company and a short position in the stock of the acquiring company. In general, the shares of the target firm will trade at a discount to the bid price until the deal is closed, and the merger arbitrage funds can profit on this spread if they correctly anticipate the outcome of the deal.
[11] CAT (2003), 'Case: 1023/4/1/03 between: IBA Health Limited and the Office of Fair Trading (Respondent Supported by iSOFT plc and TOREX plc', Judgement, December 3rd.
[12] Court of Appeal (Civil Division) (2004), 'Case No: C1/2003/2771, C1/2004/0036, C1/2003/2755, in the Supreme Court of Judicature Court of Appeal (Civil Division) on Appeal from Competition Appeal Tribunal Between Office of Fair Trading and Others and IBA Health Limited', EWCA CIV 142, Judgement, February 19th.
[13] Undertakings apply when the acquiring firm and the OFT agree to a remedy (eg, divesting a part of the acquired business) in lieu of reference to the Competition Commission.