

The impact of acquisitions on firm performance: A review of the evidence

Christian Tuch and Noel O'Sullivan¹

This paper presents a review of empirical research on the impact of acquisitions on firm performance. The evidence suggests that, in the short run, acquisitions have at best an insignificant impact on shareholder wealth. Long-run performance analysis reveals overwhelmingly negative returns, while the evidence using accounting performance measures is mixed. The review also examines the impact of bid characteristics on performance. The acquisition of hostile targets, transactions that are paid for with cash and acquisitions of larger targets are associated with superior (or at least less negative) performance, while there is mixed evidence on the benefits of related acquisitions. A number of recent studies find that acquirers with superior pre-bid performance tend to experience significant underperformance in the post-bid period.

Introduction

Takeovers are an important aspect of the corporate environment. Over the past three decades UK listed companies have spent billions of pounds on acquisitions.² In most instances the rationale of the acquirer is based on the promise of increasing shareholder wealth from a variety of sources, ranging from greater synergy from the combined organization to the replacement of underperforming managers. Regardless of the justification, the overriding argument put forward by managers is that takeovers result in greater corporate efficiency and, ultimately, in wealth increases

for shareholders in the acquiring company. In practice, however, the promised gains to shareholders in acquiring companies are not easily identified. A stream of empirical research has examined the post-acquisition performance of bidders and has generally failed to find consistent evidence of improvements in shareholder wealth after acquisitions. These findings appear to hold both in the short run (Firth 1980; Franks and Harris 1989; Holl and Kyriazis 1997; Higson and Elliot 1998) and in the long run (Gregory 1997; Kennedy and Limmack 1996; Limmack 1991; Sudarsanam and Mahate 2003). From a management perspective these findings are troublesome

The impact of acquisitions on firm performance: A review of the evidence

and raise important questions about the wisdom of takeover activity. Despite the disappointing evidence on bidder performance, there is no evidence that past failure to generate positive shareholder returns has had an impact on the volume of merger and acquisition activity.³

The purpose of this paper is to present a comprehensive review of the empirical evidence on the impact of acquisitions on the performance of acquiring companies. The focus on performance serves to limit the extent of the review to studies in the area of accounting and finance. However, we extend the review to include some discussion of research on market efficiency, as this is a fundamental assumption of the event-study research methodology which is commonly used in takeover studies. We also consider some of the weaknesses of the research methodologies employed in the assessment of post-acquisition performance, especially in relation to long-run event studies. The review does not include all the empirical papers on this subject as some of the research findings and the methodologies used are repetitive. We have attempted to include the key earlier studies that set the agenda for this area of research and then seek to emphasize how the literature has developed over the years, particularly as more recent research focuses on the impact of specific issues that may help to explain acquirer performance.

The paper is organized as follows: We begin by describing the measures of performance used in this line of research and summarizing the main findings using each methodology. The existing literature addresses acquirer performance in two ways: share price performance and accounting performance. Research on share price performance allows the analysis of both short-run (up to three months after the bid) and long-run (up to five years after the bid) event windows of acquirer performance. Studies using accounting performance use statutory accounting returns and, consequently, use a minimum period of 12 months after the bid and, in some

instances, track performance up to seven years afterwards. An important consideration in reviewing research in this area is an appreciation of the weaknesses associated with the different methodologies used. We include a brief discussion of these weaknesses, paying particular attention to the known shortcomings of long-run event studies. The third section reviews studies that have incorporated bid characteristics in seeking to explain acquirer performance. This includes an examination of the performance impact of characteristics such as the mood of the bid, the payment method, the relative size of bidder and target and the industrial relatedness of the two companies. The fourth section examines evidence on the impact of the pre-bid performance of the bidder on post-acquisition performance. The fifth section contains a discussion of the main findings and attempts to summarize the current state of knowledge on the impact of acquisitions on acquirer performance. The final section presents conclusions and identifies a number of opportunities for further research.

A Review of Acquirer Performance

Evidence from Event Study Research

The use of event study research implies that the appropriate measure of performance should reflect changes in shareholder wealth. This is based on the belief that shareholders are the ultimate holders of the rights to organizational control and therefore must be the focal point of any discussions concerning it (Jensen 1984). Share-price performance of acquiring firms is typically measured using event-study methodology, owing to the importance of a pre-specified event period around the announcement date. Event studies have been used to analyse the impact of takeovers on shareholder wealth in both the short run and the long run.

The use of event-study methodology requires an assumption of market efficiency, namely that share prices react in a timely and unbiased manner to new information and that

the extent of the gains reflect the value of the firm in forthcoming periods (Fama 1970; Roberts 1967). This assumption has allowed researchers to measure the share price reaction of acquiring companies around a takeover and, subject to controls for other factors, use this share price reaction to identify the expected present value of the change in cash flows resulting from the takeover. In addition to a belief in the efficiency of the stock market, researchers using this methodology also need to decide on two further conditions for their research: an appropriate 'event window' for the examination of share price returns and an appropriate 'benchmark' to calculate abnormal returns. Even though there is no overall consistency between the event windows chosen in existing studies, they can be broadly classified as being either short run or long run. Short run refers to days or months around the announcement of the bid, while long run refers to periods of months or years. The choice of appropriate performance measure also varies considerably between studies (Barber and Lyon 1997; Gregory 1997; Kennedy and Limmack 1996; Lyon *et al.* 1999, Sudarsanam and Mahate 2006).⁴

Owing to the large number of empirical studies, as well as the variety of samples and sampling techniques used, it is useful to summarize the main findings in table format. The subsequent discussion therefore focuses on highlighting the main findings and identifying how specific studies have contributed to our understanding of measures of acquirer performance and the factors that influence it. Table 1 contains a summary of studies examining the short-run impact of acquisitions, while Table 2 includes details on long-run studies.

Short-run event studies

The 'short-run' event period over which the performance of bidding companies is measured varies considerably between studies (see Table 1) with some studies incorporating performance comparisons as much as four months prior to the bid announcement (Franks

and Harris 1989) and up to three months afterwards (Higson and Elliot 1998). Despite the event window chosen, however, the overall evidence suggests little if any positive returns to shareholders in acquiring companies. Of the studies summarized in Table 1, only the early studies in the US by Asquith *et al.* (1983) and in the UK by Franks and Harris (1989) find significant positive returns to acquirers. It should be noted though that both of these studies included takeovers in the 1950s (in the case of Franks and Harris) and the 1960s (in the case of Asquith *et al.*) when takeovers appear to have been more beneficial to acquiring firm shareholders (Bradley *et al.* 1988; Bruner 2002). The remaining studies from both the UK and US find either no significant difference in the returns of acquirers or find significantly negative returns around the bid announcement. Furthermore, as can be seen from Table 1, more recent research appears to document increasingly negative performance of acquirers, a finding consistent with evidence presented by Andrade *et al.* (2001). It is also worth noting that recent evidence from other countries tends to be more positive than findings documented for UK and US. For example, Campa and Hernando (2004) report insignificant gains from a sample of Continental European takeovers, while Ben-Amar and Andre (2006) report positive announcement returns from a sample of listed Canadian acquirers.

Sudarsanam and Mahate's (2003) study provides a useful insight into the short-run performance of a sample of 519 UK acquirers between 1983 and 1995. The authors report significantly negative abnormal returns of 1.4% (over the -1 to +1 day period) with only a third of acquirers experiencing wealth gains. This evidence is broadly consistent with other UK studies by Sudarsanam *et al.* (1996) and Holl and Kyriazis (1997). For the extended post announcement period (+2 to +40 days), Sudarsanam and Mahate (2003) also report generally negative abnormal returns but do not find the differences to be statistically significant – findings broadly similar to Limmack

Table 1. Evidence from short-run event studies

| Author(s) (year) | Period of study | Details of sample | Country | Event window | Main findings |
|------------------------------|-----------------|---|---------|--|---|
| Firth (1980) | 1969–1975 | 642 takeovers | UK | Announcement month | <ul style="list-style-type: none"> • Average cumulated residuals of -0.045 during the announcement month (statistical significance not reported). |
| Dodd (1980) | 1970–1977 | 151 takeovers | US | -40 to $+40$ days | <ul style="list-style-type: none"> • Bidders earn -0.23% (insignificant) at the announcement date from completed bids. |
| Bradley <i>et al.</i> (1983) | 1962–1980 | 241 successful bidders and targets, 94 unsuccessful bidders | US | -20 to $+20$ days | <ul style="list-style-type: none"> • Unsuccessful bidders gain, on average, 2.32% over -20 to $+1$ day, but lose -2.96% as soon as the bid failure is revealed ($+2$ to $+20$ days). Both statistically significant. • Unsuccessful bidders exhibit insignificant gains of -0.64% over -20 to $+20$ day period. |
| Franks and Harris (1989) | 1955–1985 | 1058 bidders, 1898 target firms (all successful) | UK | -4 to $+1$ months | <ul style="list-style-type: none"> • Bidders earn around 1% average abnormal returns during the announcement month (significant). • During the period -4 to $+1$ month, bidders gain between 2.4% and 7.9% depending on the abnormal returns measure (both significant). |
| Lang <i>et al.</i> (1989) | 1968–1986 | 87 targets and bidders from successful tender offers | US | -5 to $+5$ days | <ul style="list-style-type: none"> • Negative impact on bidder returns when the bid is made by a low Tobin's q firm. • Acquirers earn 0.8% from unopposed bids and -0.14% from opposed bids (neither is significant). |
| Mitchell and Lehn (1990) | 1980–1988 | 228 hostile targets, 240 friendly targets, 232 bidders | US | -1 to $+1$ days | <ul style="list-style-type: none"> • Abnormal returns of -1.66% to acquiring firms that are restructured following the bid and 0.70% to acquiring firms that are not restructured in the post-bid period (both significant). |
| Lang <i>et al.</i> (1991) | 1968–1986 | 87 targets and bidders from successful tender offers | US | -5 to $+5$ days | <ul style="list-style-type: none"> • Negative abnormal returns ranging from -6% to -7% from single, opposed bids (significant). • Insignificant abnormal returns to multiple, opposed bids. • Bidders lose -0.23% over -1 to 0 days (significant). |
| Smith and Kim (1994) | 1980–1986 | 177 bidders and targets | US | 5 days before the initial bid and 5 days after the final bid | <ul style="list-style-type: none"> • Bidders lose -0.23% over -1 to 0 days (significant). |
| Holl and Kyriazis (1997) | 1979–1989 | 178 successful bids | UK | 0 to $+2$ months | <ul style="list-style-type: none"> • Negative abnormal returns of -1.25% to bidders two months after the bid announcement (significant). |
| Higson and Elliot (1998) | 1975–1990 | 1660 acquirers and targets | UK | 0 to $+3$ months | <ul style="list-style-type: none"> • Insignificant gains between announcement until completion. • Negative acquirer returns of -1.70% (significant) from the acquisition of large targets (i.e. $>25\%$ of acquirer's market capitalization). |

| | | | | | |
|------------------------------|-----------|--|--------|-----------------|---|
| Walker (2000) | 1980–1996 | 278 acquisitions, 230 mergers, 48 tender offers | US | –2 to +2 days | <ul style="list-style-type: none"> • Negative market adjusted abnormal returns of –0.84% (significant). • No significant abnormal returns based on the industry and size matched benchmark portfolios. |
| Sudarsanam and Mahate (2003) | 1983–1995 | 519 listed acquirers | UK | –1 to +1 day | <ul style="list-style-type: none"> • Bidders earn abnormal returns of between –1.39% and –1.47% (all significant) using a variety of benchmarks. |
| Gupta and Misra (2004) | 1980–1998 | 285 mergers and acquisitions | US | –10 to +10 days | <ul style="list-style-type: none"> • Bidders lose a significant 1.57% over the –1 to 0 day period. Returns for the –10 to –2 days or +1 to +10 days are insignificant. The returns are calculated from a market model, based on an equally weighted market index. • A regression of the sub-samples of bids with positive returns and those with negative returns shows that in the negative return regression, relative size does not matter. In the positive return regression, bids for targets with relatively high transaction values impact positively on announcement returns. |
| Song and Walking (2004) | 1985–2001 | 5726 mergers and acquisitions | US | –1 to 0 days | <ul style="list-style-type: none"> • Acquiring firms with a period of more than a year of ‘dormant’ bid activity receive a positive abnormal return of about 1%. Acquirers with a ‘dormant’ period of less than a year earn insignificant returns. |
| Campa and Hernando (2004) | 1998–2000 | 262 European mergers and acquisitions | EU | –30 to +30 days | <ul style="list-style-type: none"> • Regulated EU acquirers lose –1.96% over 60 days around the bid announcement. Bidders from unregulated industries do not earn significant returns for the same period. |
| Ben-Amar and Andre (2006) | 1998–2000 | 238 mergers and acquisitions by 138 Canadian firms | Canada | –1 to +1 days | <ul style="list-style-type: none"> • Acquiring firms earn 1.6% over 3 days. Returns are calculated using the market model. |

Table 2. Evidence from long-run event studies

| Author(s) (year) | Period of study | Details of sample | Country | Event window | Main findings |
|------------------------------|-----------------|---|---------|-------------------|---|
| Firth (1980) | 1969–1975 | 642 takeovers | UK | –48 to +36 months | <ul style="list-style-type: none"> • –1.0% to unsuccessful and –4.8% to successful bidders over 84 months around the announcement date (statistical significance not reported). |
| Asquith (1983) | 1962–1976 | 285 takeovers | US | +1 to +240 days | <ul style="list-style-type: none"> • Losses of –7.2% to successful bidders and –9.6% to unsuccessful bidders in the post-outcome period (both significant). |
| Bradley <i>et al.</i> (1983) | 1962–1980 | 241 successful and 94 unsuccessful bidders | US | –6 to +60 months | <ul style="list-style-type: none"> • No significant gains to unsuccessful bidders over the period –20 to +180 days following the bid announcement. |
| Malatesta (1983) | 1969–1974 | 256 acquiring firms | US | –60 to +12 months | <ul style="list-style-type: none"> • 0.043% average abnormal return from –60 months until the announcement month (significant). –0.054% average abnormal return (significant) from month 1 after the bid until 6 months afterwards. |
| Franks and Harris (1989) | 1955–1985 | 1058 bidders, 1898 target firms, all successful | UK | 0 to +24 months | <ul style="list-style-type: none"> • –12.6% significant average abnormal return from the market model. • +4.5% average abnormal return (significant) from the CAPM. |
| Limmack (1991) | 1977–1986 | 529 mergers and acquisitions | UK | 0 to +24 months | <ul style="list-style-type: none"> • Insignificant –1.66% from month 0 to 12 months after the bid and insignificant –4.67% over 24 months (CAPM). • –5.55% (significant) after 12 months and –14.96% (significant) after 24 months (Market Model). |
| Agrawal <i>et al.</i> (1992) | 1955–1987 | 937 mergers and 227 tender offers | US | 0 to +5 years | <ul style="list-style-type: none"> • Abnormal returns of –10.26% (significant) to acquirers 5 years following the bid. • Mergers exhibit significantly negative abnormal returns of –10% while tender offers show insignificant abnormal returns up to 5 years after the bid. |
| Gregory (1997) | 1955–1985 | 420 UK takeovers with bid values >£10 million | UK | 0 to +24 months | <ul style="list-style-type: none"> • Different benchmark methods controlling for firm size, risk and growth opportunities reveal significant abnormal returns from –8.15% to –11.25% over the 24-month post-acquisition period. Between 31% and 37% of firms earn positive abnormal returns. |

| | | | | | |
|-----------------------------------|-----------|---|-------------------|-----------------|---|
| Loughran and Vijh (1997) | 1970–1989 | 434 mergers and tender offers | US | 0 to +5 years | <ul style="list-style-type: none"> • Average acquirer losses of –6.5% (insignificant) 5 years after the bid. |
| Higson and Elliot (1998) | 1975–1990 | 1660 acquirers and targets | UK | 0 to +3 months | <ul style="list-style-type: none"> • Insignificant gains of –0.74% over +1 to +12 months, –0.14% after 24 months, +0.83% after 36 months (all insignificant). |
| Sudarsanam and Mahate (2003) | 1983–1995 | 519 listed acquirers | UK | +1 to +750 days | <ul style="list-style-type: none"> • Significant abnormal returns of between –8.71 and –21.89% (all significant) based on size and MTB ratio portfolio return adjustment, market return and mean adjustment. |
| Gregory and McCorriston (2005) | 1984–1992 | 197 bids by UK acquirers on US targets, 97 bids by UK acquirers on EU targets and 39 bids by UK acquirers on targets from countries other than US or EU | US, EU, Non-US/EU | 0 to +5 years | <ul style="list-style-type: none"> • Significant abnormal return of –9.36 and –27% over years +3 and +5 respectively in the US. • No significant abnormal returns from EU bids, but positive gains from bids other than EU countries or the US. |
| Conn <i>et al.</i> (2005) | 1984–1998 | 131 cross border public targets, 1009 cross border bids on private targets, 2628 bids on domestic private targets | UK | 0 to +36 months | <ul style="list-style-type: none"> • Public domestic bidders lose –19.78% on average over 36 months. The BHAR returns are control firm adjusted (matched by size and MTB ratios). |
| Alexandritis <i>et al.</i> (2006) | 1991–1998 | 179 successful public acquiring firms | UK | 0 to +36 months | <ul style="list-style-type: none"> • Abnormal loss of between –0.55% to 1.02% (all significant) from the CAPM and Fama and French models. Both based on equally weighted and value weighted portfolios. |

The impact of acquisitions on firm performance: A review of the evidence

(1991) and Gregory (1997). However, almost 50% of acquirers are shown to experience wealth losses over the extended event window.

Long-run event studies. The long-run post-acquisition performance of bidders has also attracted a great deal of research. Much of this has been motivated by early studies suggesting that takeovers may have a negative impact on the long-run wealth of shareholders (Asquith 1983; Malatesta 1983). However, as pointed out by Agrawal and Jaffe (2000), many of the early studies (i.e. in the 1970s and 1980s) examined the post-acquisition performance of bidders as part of a more comprehensive analysis of takeovers, while the past decade has seen more studies focusing exclusively on bidder performance.

As shown in Table 2, recent studies suggest that takeovers generate either insignificant or negative abnormal returns in the long run. In the UK, for example, Limmack (1991) reports significantly negative returns for a sample of 448 takeovers between 1977 and 1986. Kennedy and Limmack (1996) report significantly negative returns to bidders involved in takeovers during the 1980s. Gregory (1997), in a study of takeovers between 1984 and 1992, reports significant negative post-takeover returns. Finally, Sudarsanam and Mahate (2003, 2006) also find significant negative returns in the post-bid period. Table 2 shows that recent evidence from US studies is broadly consistent with the UK findings cited above, with Agrawal *et al.* (1992), Loughran and Vijh (1997) and Rau and Vermaelen (1998) reporting significant negative returns. A recent study by Alexandridis *et al.* (2006) uses the three-factor model devised by Fama and French (1993) and the traditional capital asset pricing model (CAPM) method. Both models result in a negative abnormal return of around -1%, which is robust when returns are calculated from equally weighted and from value weighted portfolios. Gregory and McCorriston (2005) find that bidders lose -9.36% and -27% in years +3 and +5 following the announcement. There were no significant

returns for years 0 to +2. Bootstrapped skewness adjusted *t*-tests were used to avoid bias in the measurement of abnormal returns (Lyon *et al.* 1999). Conn *et al.* (2005) calculate abnormal returns for a sample of UK firms. The authors find that acquirers lose around 20% over three years. Hence, the overwhelming consensus is that shareholders in acquiring companies suffer significant wealth losses when long-run returns are considered.

While we are discussing the findings of event-study research, it should be noted that this particular research approach is associated with a number of methodological problems. Even though short-run studies are relatively straightforward and trouble free (Kothari and Warner 2004), it should be appreciated that they are at risk from bias, since announcement returns tend to reflect the expectations of investors. Long-run event studies are associated with more significant problems. First, the interpretation of research findings is not so straightforward, as all tests are essentially joint tests of: (a) whether abnormal returns are zero and (b) whether the assumed model of expected returns (i.e. CAPM, market model, etc.) is correct. Secondly, ordinary *t*-tests require data that are normally distributed. Since long-run share price returns tend to be skewed, alternative tests have been developed in an attempt to take this skewness into account. Thirdly, the reliability of long-run event studies may also be undermined by thin trading and the overlapping of event periods. Thin trading refers to extended periods where a particular stock is not traded. Overlapping events are a particularly acute problem in assessing the long-run performance of acquiring firms as, over a period of years, a range of company-specific events (including subsequent acquisitions) may influence the share price returns. One way of dealing with these complications is to run the analysis without firms experiencing thin trading and by excluding bidders undertaking other bids within a certain period of the event under investigation (Gao and Sudarsanam 2004). Fourthly, much of this research uses the CAPM as a benchmark

measure for abnormal returns. Some researchers have shown that the time series properties of the estimators for risk are spurious (Blume 1971, 1975; Gonzales-Riviera 1997). There is evidence that the time series properties improve when a longer period is used (currently 5 years of monthly data is the rule of thumb (Groenewold and Fraser 2000)). The instability of the time series estimators also tends to be stronger for individual stocks, rather than portfolios of stocks (Groenewold and Fraser 2000).⁵

Evidence from Accounting Research

Most of the research on takeover performance has focused on the use of share price data. One reason for this is the susceptibility of accounting information to managerial manipulation through earnings management and changing accounting policies (Stanton 1987). Accounting performance measures are also harder to compare. An additional difficulty arises in attempting to ascertain a valid combined performance measure for the bidder and the target, as the target either ceases to exist or remains an independent subsidiary of the bidder. In both cases, the financial reporting of the holding, combined firm or target will be different (Powell and Stark 2005). Despite this, a number of researchers prefer to use accounting information in attempting to measure the long-run impact of acquisitions on operating performance, arguing that any benefits arising from takeovers will eventually appear in the firm's accounting records. Table 3 presents a review of accounting studies.

One of the earliest studies of post-bid accounting performance was undertaken by Meeks (1977), who examined the performance of 233 UK acquirers between 1964 and 1972. Meeks (1977) finds that profitability increased in the year of the takeover but decreased in each of the five subsequent years. In a subsequent study, Ravenscroft and Scherer (1987) examine target firm profitability over the period 1975–77 using accounting data for 471 companies between 1950 and 1976 by the

business segments in which the firms operated. The authors report that the target lines of business suffered a loss in profitability following the merger. The authors suggest that this evidence is consistent with mergers' destroying value. Dickerson *et al.* (1997) examine the performance of bidders using a sample of 2941 UK acquisitions between 1948 and 1977. Dickerson *et al.* (1997) find that acquirers earn significantly lower returns than both non-acquirers and their own earnings prior to the acquisitions. Furthermore, the authors estimate that firm profitability reduces, on average, by approximately 2.04% per annum in the post-bid period. For every subsequent acquisition, the authors estimate that firm profitability reduces by a further 2.03% per annum. As illustrated by the findings of Chatterjee and Meeks (1996), changes in the treatment of goodwill arising from acquisitions has a significant impact on the findings of accounting studies. Healy *et al.* (1992) examine post-merger operating performance for the largest 50 mergers between 1979 and 1984. They conclude that acquirers experience improvements in asset productivity, leading to higher operating cash flows relative to their industry peers. Interestingly, Healy *et al.* (1992) find that the post-acquisition performance of acquirers decreases after the takeover but is still better than their sector counterparts, suggesting that acquisitions serve to lessen the impact of poor performance.

Andrade *et al.* (2001) examine the post-acquisition performance of approximately 2000 US mergers between 1973 and 1998. The authors find that post-merger operating margins (measured as cash flow to sales) improve relative to industry benchmarks. The authors conclude that 'the combined target and acquirer operating performance is strong relative to their industry peers prior to the merger, and improves slightly subsequent to the merger transaction' (p. 116). Lu (2004) reports a negative industry adjusted return on assets and return on equity for several time periods from –60 months to +60 months following the bid. The industries were defined

Table 3. Evidence from accounting studies

| Author(s) (year) | Period of study | Details of sample | Country | Time period | Main findings |
|--------------------------------|-----------------|---|---------|----------------|--|
| Meeks (1977) | 1964–1972 | 233 mergers and acquisitions | UK | 0 to +7 years | <ul style="list-style-type: none"> • Positive abnormal profits from the combined firm in the merger year of 0.114% (significant). • Abnormal profits of between –0.035 and –0.109% (all significant) over +1 to +5 years. Returns in years 6 and 7 following the bid are insignificant. |
| Herman and Lowenstein (1988) | 1975–1983 | 56 hostile tender offers | US | –3 to +3 years | <ul style="list-style-type: none"> • ROE of 14.8% during the merger year and 15.3% in year +1 for the 1975–1978 period. ROE of 4.3% and 9.3% (year 0 and +1) for the 1981–1983 period (statistical significance not reported). • ROE for bids made between 1975 and 1978 varies between 11.4% and 16.9% (years –3 to +3) and between 4.3% and 15.6% for years 1981–1983 (statistical significance not reported). |
| Healy <i>et al.</i> (1992) | 1979–1984 | 50 largest mergers | US | 0 to +5 years | <ul style="list-style-type: none"> • The combined firm exhibits median operating cash flow return on actual market value of assets of 2.8% over 5 years following the bid (significant). • 2.4% increase in post-merger cash flow returns, while controlling for pre-merger performance (significant). |
| Healy <i>et al.</i> (1997) | 1979–1984 | 50 largest industrial takeovers | US | –5 to +5 years | <ul style="list-style-type: none"> • Significant median industry-adjusted cash flow return on assets of 2.8% from 5 years when no bid premium is paid to target shareholders compared with an insignificant 2.1% when a premium is paid. • 73% of firms have positive, industry-adjusted cash flow returns assuming that there is no target premium 5 years after the bid. |
| Dickerson <i>et al.</i> (1997) | 1948–1977 | 2941 acquisitions | UK | 0 to +18 years | <ul style="list-style-type: none"> • Non-acquiring firms outperform acquirers by 2.4% per annum (significant). |
| Ghosh (2001) | 1981–1995 | 315 cash, stock and mixed financed transactions | US | –3 to +3 years | <ul style="list-style-type: none"> • Median difference between merged firm and matched firm sales growth insignificant for year –3 and year +3. For year +1 +0.08% (significant). • Insignificant difference in median and mean operating expenses between merged and matched firms over years –3 to +3. Increase by 8% (significant) in year 1 following the bid. • No significant difference in the employee to sales relationship between the merging and matched firms over 6 years around the bid. |

| | | | | | |
|---------------------------|-----------|--|----------|----------------|---|
| Linn and Switzer (2001) | 1967–1987 | 413 mergers and acquisitions | US | –5 to +5 | <ul style="list-style-type: none"> • Average 1.81% industry-adjusted combined firm cash flow return over the –5 to +5 year period (significant). • 2.89% mean adjusted and 2.20% industry-adjusted increases in operating cash flow for the combined firms (both significant). |
| Rahman and Limmack (2004) | 1988–1992 | 94 quoted acquiring and 113 private target firms | Malaysia | –4 to +5 years | <ul style="list-style-type: none"> • Operating performance mean of between –1.51% to +4.40% over years –4 to –1 and average returns between 2.75% and 11.23% over years +1 to +5. The return is calculated as the pre-tax operating cash flow return on operating assets. |
| Lu (2004) | 1978–1996 | 592 completed bids | US | 0 to +5 years | <ul style="list-style-type: none"> • Significant negative impact of the bid on acquiring firm return on assets and return on equity for periods –12 to +12; –24 to +24; –36 to +36; –48 to +48; and –60 to +60 months. |
| Bild <i>et al.</i> (2005) | 1985–1996 | 303 acquisitions | UK | 0 to +4 years | <ul style="list-style-type: none"> • Abnormal ROE between –1.47% and 0.99% for years –3 to –1 and abnormal ROE of 17.24% to 21.50% for years 0 to +3. 'Raw' ROE is control firm adjusted. • No abnormal valuation differences between control firms and acquirers over years –1 to –4. Post-bid valuation difference of 5.62% for years +1 to +4. Post-bid valuation difference of 5.62% for years +1 to +4. Fundamental firm value is determined on the basis of the book value, forecast dividends and residual income. |

The impact of acquisitions on firm performance: A review of the evidence

according to the two-digit SIC classification. Ghosh (2001) has shown that an industry adjustment of raw return on equity used by Healy *et al.* (1992) might produce positively biased estimates. Powell and Stark (2005) argue that this bias could be limited by introducing size or performance benchmarks instead of the currently used industry benchmark. Bild *et al.* (2005) report an abnormal return on equity of between -1.47% and 0.99% for the years -3 to -1 and between 17.24% and 21.50% for the years 0 to $+3$. Research in this area is still developing, and findings are difficult to compare as the methodologies still vary widely. Overall, however, when conventional accounting measures are used, the evidence is somewhat mixed but there is no clear evidence of improved post-acquisition performance.

The Impact of Bid Characteristics on Performance

The relatively inconclusive evidence on acquirer returns has encouraged researchers to investigate bid characteristics in an attempt to see whether announcement returns are sensitive to different types of takeovers. This has resulted in an attempt to relate acquirer returns to a number of bid characteristics. Research in this area has focused on analysing characteristics such as: the impact of the mood of the bid, the method of financing used by the acquirer, the relative size of acquirer and target and the industrial relatedness of the two companies on subsequent performance. The following sections discuss the main findings of research in each of these areas. We include the details and principal findings of relevant studies in Tables 4–6.

The Mood of the Acquisition

The takeover literature has devoted significant attention to the mood of takeover bids. Takeovers are typically categorized as being either friendly or hostile. In friendly (agreed) acquisitions, the board of the target company

agrees to recommend the acceptance of the bid to the shareholders. Hostile bids arise when such a recommendation does not happen, and the bidder still seeks to win shareholder approval in the presence of managerial opposition.⁶ The mood of takeovers has attracted attention for two reasons. First, earlier studies of takeovers suggested that managerial hostility was likely to be motivated by managerial self-interest (Jensen 1988; O'Sullivan and Wong 2005; Weisbach 1993). Specifically, it was suggested that managers resisting a bid were those who had underperformed and were more likely to be replaced following a successful bid (Jensen 1993; Manne 1965). As a result, hostile takeovers were viewed as disciplinary, targeting companies where managers had failed to achieve shareholder objectives. Friendly takeovers, in contrast, were viewed as being synergistic (Morck *et al.* 1988). Secondly, studies examining the consequences of managerial hostility have identified greater takeover premiums accruing to shareholders in targets of hostile bids, suggesting that managerial hostility may actually increase shareholder wealth and, consequently, be in the interests of shareholders (Cotter *et al.* 1997; Healy *et al.* 1997). From the acquirer's perspective, these consequences of hostility may be seen as a double-edged sword. Of course, takeover targets that have not sought to maximize shareholder wealth have the potential to provide the acquirer with increased opportunity for wealth creation, and it is expected that a significant portion of this should materialize in improved performance (reflected both in increased share returns and accounting performance) for shareholders. However, if takeover premiums paid to target shareholders are greater in hostile bids, a greater proportion of the acquirer's wealth is likely to be spent on the actual acquisition, and this may have a negative impact on the post-acquisition performance of the acquirer. For example, Varaiya and Ferris (1987) find that acquirers perform worse when excessive acquisition premiums are paid. A crucial question therefore is whether the expected

Table 4. Evidence by mood of acquisition

| Author(s) (year) | Period of study | Details of sample | Country | Time period | Main findings |
|-----------------------------|-----------------|--|---------|--|---|
| Dodd and Ruback (1977) | 1958–1978 | 124 tender offers | US | 0 to +12 months | <ul style="list-style-type: none"> • Significantly abnormal returns of +2.83% for successful tender offers at the announcement month. • Insignificant abnormal returns for unsuccessful tender offers. |
| Bradley (1980) | 1962–1977 | 161 successful tender offers | US | –2 to +2 months | <ul style="list-style-type: none"> • Tender offers exhibit on average 4% excess bidder gains (0 to +5 days after announcement) which increase to 5% 40 days after the offer (significance level not reported). |
| Lang <i>et al.</i> (1989) | 1968–1986 | 87 tender offers | US | –5 to +5 days | <ul style="list-style-type: none"> • Insignificant gains to bidders from opposed and unopposed bids 5 days before and after the announcement. • High Tobin's <i>q</i> bidder performs well in hostile takeovers, when a target with a Tobin's <i>q</i> greater than 1 is acquired. |
| Franks <i>et al.</i> (1991) | 1975–1984 | 93 contested bids, 306 uncontested bids, 101 opposed bids, 298 unopposed bids | US | 0 to +36 months | <ul style="list-style-type: none"> • Mean excess return of 1.32% in hostile bids (significant). • 0.26% abnormal returns (significant) from friendly bids from the value weighted index, all other benchmark portfolio return adjusted models reveal insignificant returns for friendly mergers. |
| Smith and Kim (1994) | 1980–1986 | 177 successful and unsuccessful tender offers | US | 5 days before the initial bid and 5 days after the final bid | <ul style="list-style-type: none"> • Insignificant abnormal returns to both successful and unsuccessful bidders in tender offers. |
| Healey <i>et al.</i> (1997) | 1979–1984 | 50 largest industrial takeovers | US | –5 to +5 years | <ul style="list-style-type: none"> • 2.6% ($p < 0.05$) median industry-adjusted cash flow returns on assets compared with insignificant returns from hostile takeovers. • 4.2% ($p < 0.01$) from friendly mergers when the effect of the target premium is taken out. |
| Walker (2000) | 1980–1996 | 278 acquisitions | US | –2 to +2 days | <ul style="list-style-type: none"> • No significant bidder gains from tender offers. • Mergers exhibit significantly negative gains of –1.13% for 5 days around the announcement day |
| Tse and Soufani (2001) | 1990–1996 | 124 takeovers | UK | 0 to +3 months | <ul style="list-style-type: none"> • 20.75% abnormal returns (significant) to bidders during the announcement month from hostile takeovers. • Insignificant 2.68% for (+1 to +3 month) from successful hostile takeovers. |

Table 4. Continued

| Author(s) (year) | Period of study | Details of sample | Country | Time period | Main findings |
|------------------------------|-----------------|--|---------|--------------------------------|--|
| Cosh and Guest (2001) | 1985–1996 | 64 hostile, 139 friendly and 117 uncompleted takeovers | UK | 0 to +3 years | <ul style="list-style-type: none"> • Hostility is strongly correlated with the method of payment, but less important in explaining profitability improvements. Significant profitability improvement for cash transactions ($p < 0.10$), compared with insignificant impact of hostility. • Hostile takeovers improve firm profitability over a 3-year post-bid period by 4.9% each year compared with –0.7% for friendly takeovers. • Asset disposals following hostile takeovers are the main source of an improvement in operating profit margins. |
| Goergen and Renneboog (2004) | 1993–2000 | 158 mergers and acquisitions | EU | –1 to 0 days | <ul style="list-style-type: none"> • There is a negative impact of target hostility on acquiring firm performance. • Hostile bids lose –2.51% and –3.43% over the –1 to 0 and –2 to +2 day period respectively. |
| Dong <i>et al.</i> (2005) | 1978–2000 | 2922 successful and 810 unsuccessful bids | US | –1 to +1 days | <ul style="list-style-type: none"> • Insignificant impact of target hostility (<i>t</i>-statistic: 5.21) on the bid premium (ratio of the last price offered by the bidder to the target stock price 5 days before announcement). • Positive impact of tender offers on the bidder long-run (0, +5 years) abnormal returns (<i>t</i>-statistic: 1.63). |
| Sudarsanam and Mahate (2006) | 1983–1995 | 519 successful takeovers | UK | –1 to +1 days +41 to +750 days | <ul style="list-style-type: none"> • Single, hostile bids with only insignificant returns outperform friendly mergers, white knight bids and multiple hostile bids (all with significant, negative abnormal returns). |

efficiency gains from targets counterbalance the increased premiums typically paid to target company shareholders in hostile bids.

The available evidence suggests that returns to acquirers involved in hostile bids may be more positive than for those companies completing unopposed takeovers. Early short-run event studies reveal positive abnormal returns from opposed bids (Bradley *et al.* 1983; Jarrell and Bradley 1980). More recent work by Walker (2000) reveals significantly negative short-run returns for unopposed bids, while returns from tender offers are insignificantly different from zero. Goergen and Renneboog (2004) report negative abnormal returns from hostile bids and positive abnormal returns from mergers. Taking a longer-term perspective, Agrawal *et al.* (1992) and Loughran and Vijh (1997) find no evidence that abnormal returns to acquirers in tender offers are statistically different from zero over five years after the acquisition. However, subsequent studies by Rau and Vermaelen (1998) report higher returns for acquirers in tender offers. These findings appear to be mirrored in the UK, where studies by Kennedy and Limmack (1996), Gregory (1997) and Cosh and Guest (2001) report that hostile acquisitions improve firm profitability over a three-year post-bid period by 4.9% each year compared with -0.7% for friendly takeovers. More recently, Sudarsanam and Mahate (2006) report insignificant short-run returns for hostile bidders making a single bid compared with significantly negative returns to friendly, white knight and multiple hostile bidders. Furthermore, in the long run, abnormal returns to single hostile bidders are less negative compared with all other bidder types. This evidence suggests that shareholders in single hostile acquisitions fare best, but on no occasion does Sudarsanam and Mahate's (2006) study identify significantly positive returns for bidders, even those undertaking a single hostile bid. It should be noted though that, since the mid-1990s, the likelihood of target hostility has reduced significantly (Dong *et al.* 2005). Furthermore, owing to the use of different

secondary data sources for acquisitions, there exists a range of different definitions of 'hostility', and this makes the comparison of research findings more difficult (Schwert 2000).

Method of Payment

The evidence cited above suggests that acquirers involved in hostile takeovers may actually gain more in the long run, but lose during the announcement period. However, a number of researchers report that hostile takeovers and tender offers are more likely to be financed with cash, while friendly takeovers are more likely to include a significant equity component (Agrawal *et al.* 1992; Rau and Vermaelen 1998; Travlos 1987). Most of the research focuses on whether cash offers or equity offers are value maximizing. There is reasonably consistent evidence that cash bids are associated with better performance in both the short run (Dong *et al.* 2005; Draper and Paudyal 1999; Travlos 1987; Walker 2000) and the long run (Cosh and Guest 2001; Linn and Switzer 2001; Loughran and Vijh 1997). One reason for this may be that acquirers decide on their payment method, depending on whether they expect higher or lower performance in the forthcoming periods. Hence, acquirers will pay in cash if they believe their shares are undervalued, and they will choose equity if they think their shares are overvalued. Cash payments might serve as a signal to the market that acquiring firm management expects an increase in firm value over the post-acquisition period (Myers and Majluf 1984). Transactions paid with equity will result in a dilution of the share price, as the number of outstanding shares increases, while the value of the firm remains the same until expected synergies take effect (Mitchell *et al.* 2004).

Chatterjee and Kuenzi (2001) is one of the few studies that report positively significant announcement returns from equity transactions. Aware that their findings are at odds with previous research, the authors suggest that takeovers occurring during the period of

Table 5. Evidence by payment method

| Author(s) (year) | Period of study | Details of sample | Country | Time period | Main findings |
|------------------------------|-----------------|--|---------|----------------|---|
| Travlos (1987) | 1973–1982 | 167 mergers and tender offers | US | –1 to 0 days | <ul style="list-style-type: none"> • –2.09% abnormal returns from equity transactions (significant). Insignificant 0.37% from cash transactions. |
| Loughran and Vijh (1997) | 1970–1989 | 788 mergers and 135 acquisitions | US | 0 to +5 years | <ul style="list-style-type: none"> • Bidders that acquire with stock instead of cash experience underperformance 5 years after the bid has occurred. 111 out of 135 hostile takeovers have cash as the payment method. |
| Walker (2000) | 1980–1996 | 278 acquisitions, 230 mergers, 48 tender offers | US | –2 to +2 days | <ul style="list-style-type: none"> • No significant abnormal returns from share offers but +2.38% (significant) from cash offers. |
| Linn and Switzer (2001) | 1967–1987 | 413 mergers and acquisitions | US | –5 to +5 years | <ul style="list-style-type: none"> • Cash acquisitions exhibit a significant increase of 3.14% median industry-adjusted cash flow returns. |
| Cosh and Guest (2001) | 1985–1996 | 64 hostile, 139 friendly and 117 uncompleted takeovers | UK | 0 to +3 years | <ul style="list-style-type: none"> • 6.32% (significant) abnormal profit returns from friendly takeovers that offer 100% cash alternative. No significant gains from hostile bids that offer a 100% cash alternative. • Hostile takeovers improve firm profitability over a 3-year post-bid period by 4.9% (significant) each year compared with an insignificant –0.7% for friendly takeovers. Asset disposals following hostile takeovers are the main source of improvement in operating profit margins. |
| Song and Walkling (2004) | 1985–2001 | 5726 mergers and acquisitions | US | –1 to 0 days | <ul style="list-style-type: none"> • There is a positive impact of cash on acquirer performance and a negative impact if shares are used as a payment method for bidders that leave at least 12 months between each acquisition made. |
| Antoniou and Zhao (2004) | 1991–1998 | 179 successful UK acquirers | UK | 0 to +3 years | <ul style="list-style-type: none"> • Bidders that offer an equity bid significantly underperform in the year following the bid. This finding still holds when cumulative abnormal returns are compared with buy and hold abnormal returns. Cash bids and bids that involve a combination of both methods of payment did not exhibit significant abnormal returns. |
| Moeller <i>et al.</i> (2004) | 1980–2001 | 9712 mergers and acquisitions | US | –1 to +1 days | <ul style="list-style-type: none"> • Large cash bidders gain 0.693% and large equity bidders lose –0.96 over three days (significant) if they bid for both private and public companies • Large acquirers of public targets lose –2.45% if paying with equity and lose only –0.747% if paying with cash. Small bidders gain 2.843% if they pay with cash and lose –0.418% if they pay with shares on bids for public targets. |

| | | | | | |
|------------------------------|-----------|---|----|------------------|--|
| Dong <i>et al.</i> (2005) | 1978–2000 | 2922 successful and 810 unsuccessful bids | US | –1 to +1 days | <ul style="list-style-type: none"> • Companies that pay for the acquisition with shares exhibit an average value weighted (size) book/market ratio of –0.75% (significant) over –1 to +1 days around the announcement. Low (insignificant) but positive b/m ratio of 0.10 of bidders that acquire with shares. • Negative impact of payment with shares (significant) on bidder returns. Positive impact of payment with cash (significant) on bidder returns. |
| Sudarsanam and Mahate (2006) | 1983–1995 | 519 successful takeovers | UK | +41 to +750 days | <ul style="list-style-type: none"> • Equity bids lose –12.6% over +41 to +500 days and –21.6% over +41 to +750 days (both significant). |

The impact of acquisitions on firm performance: A review of the evidence

their study (1991–99) were dominated by bids for high-technology firms (i.e. biotechnology and internet providers). They argue that, in this specific environment, payments with equity served as a means of incentive creation rather than a valuation signal to the market. Antoniou and Zhao (2004) report from a sample of 179 successful British bids that equity bids tend to underperform significantly in the first and second years following the bid. No significant abnormal returns were found for a combination of shares and cash and for cash-only bids. Moeller *et al.* (2004) take into account the size effect when comparing the announcement effect of equity and cash bids. Large Acquirers of public targets lose -2.45% if paying with equity and lose only -0.75% if paying with cash. Small acquirers gain 2.84% if they pay with cash and lose -0.42% if they pay with shares. Conn *et al.* (2005) find that bids financed with any payment method other than cash lose -0.47% over 36 months following the announcement. Bids financed with cash experience insignificant losses. Overall therefore, the available evidence suggests that cash acquisitions perform better than equity bids.

Relative Size of Target and Bidder

In addition to the mood of the bid and the method of payment, the performance of acquirers may also be influenced by the joint characteristics of the target and bidder firms. Researchers have proposed a number of reasons why acquiring larger targets might result in better post-acquisition performance. First, larger targets are more difficult to assimilate into a combined organization, so the pool of potential acquirers is expected to be smaller. This may result in acquirers being able to acquire large targets on more advantageous terms (Roll 1986). Secondly, the economic impact of acquiring a large target is likely to have a stronger impact on the post-bid performance of the combined firm (Bruner 2002). Finally, Moeller *et al.* (2004) argue that the contrasting findings from some studies examining the impact of size arise as a

result of the different levels of care exercised by smaller bidders in the acquisition process. Small acquirers need to be more careful when making a potentially risky bid, as there will be a relatively larger economic impact on their company. The authors therefore argue that the size effect is due to smaller acquirers rather than to larger targets.

Asquith *et al.* (1983) were the first researchers to incorporate size effects in their analysis. The authors report that the relative size of the target to the bidding firm has a strong impact on bidder gains at the announcement period. Asquith *et al.* (1983) find that bids for targets half the bidder's size result in returns 1.8% greater than a bid for a target one-tenth the bidder's size. Roll (1986) contends that the greater gains from acquiring large targets found by Asquith *et al.* (1983) are consistent with the fact that larger targets might sell less to the market. Franks and Harris (1989) point out that the large size of the bidder in relation to the target may create ambiguities about the gains and losses from the merger. Bids for targets between 50 and 100% of the acquirer's size exhibit positive abnormal returns over the -4 to $+1$ month announcement period, even though the authors found no impact of size during the announcement month. Jarrell and Poulsen (1989) report a positive impact of relative target size to the bidder on acquirer announcement gains over -10 to $+20$ days around the announcement. This contrasts with Sudarsanam *et al.* (1996), who report that bids involving smaller targets raise average abnormal returns by 1% over -20 to $+40$ days around the announcement.

Franks *et al.* (1991) build a sub-sample according to relative acquirer and target size. Post-merger performance is significantly higher for bidding firms that acquire large targets. However, when multi-factor models are used, the significance of the size effect disappears. Higson and Elliot (1998) report negative and significant abnormal returns of -1.7% during the bid month in the case of bids for targets of at least 25% of the market capitalization of the bidder. Dong *et al.* (2005)

report that target size significantly reduces bidder announcement returns. This implies that there are negative gains in the short run but positive gains in the long run from acquiring large targets. The picture is complicated further by the findings of both O'Sullivan and Wong (1998) and Powell (1997), who report that hostile targets have a significantly larger market capitalization than do friendly targets. As discussed earlier, hostile bids yield higher gains to acquirers. Hence, hostility may also partly explain the relative size effect identified in the literature.

Industrial Relatedness of the Bidder and Target

An important motivation for takeover activity is the potential for synergies between bidder and target that are expected to result in efficiencies which should ultimately provide positive returns for shareholders. The potential for such efficiencies is less easily identified in the case of takeovers where different industrial sectors are involved. Singh and Montgomery (1987) argue that related acquisitions provide greater scope for economies of scale and scope, while unrelated acquisitions are, at best, likely to produce financial and administrative synergies. There may also be corporate control benefits associated with related acquisitions, as it is more difficult to access the performance of managers in diversified company structures. Poorly performing divisions might be subsidized by better performing parts of the company (Shin and Stulz 1998). Not surprisingly, the industrial relatedness of both firms involved in acquisitions has attracted some academic attention. The findings are summarized for short-run and long-run studies separately. Morck *et al.* (1990) report that returns tended to be higher during the 1980s than during the 1970s for related acquisitions. Even though there is a consensus that diversifying acquisitions were more acceptable during the 1970s, Morck *et al.* (1990) provide only weak evidence for such a proposition. Matusaka (1993) reports positive market

adjusted returns of 1.2% for the announcement period from diversifying acquisitions. Hubbard and Palia (1999) report positive abnormal returns of 1.62% from related and insignificant abnormal returns from diversifying acquisitions from five days before the announcement date until five days after the announcement. Walker (2000) reports significantly positive abnormal returns of 1.6% over four days around the announcement for acquirers pursuing related acquisitions. Bidders pursuing overlapping diversification strategies face average losses of -3.35% two days around the announcement date. With a few exceptions, it can be argued that investors seem to distrust the synergistic opportunities of unrelated acquisitions.

Evidence from research on long-run returns tends to be even more conclusive. Gregory (1997) reports that conglomerate acquisitions exhibit significantly negative abnormal returns of -11.33% over 24 months compared with an insignificant -3.48% for non-conglomerate acquisitions. Limmack (1997) suggests that the use of a comparison of the first two digit codes (SIC) of both firms, as in the case of Gregory (1997), does not sufficiently measure the extent of relatedness in an acquisition. Maquieira *et al.* (1998) define a non-conglomerate acquisition when the core business of both parties is located in the same industry, therefore adopting a broader definition than the conventional SIC classification. Using this classification, non-conglomerate acquisitions exhibit a 6.2% higher combined market value increase for shareholders compared with conglomerate mergers.

Previous research has focused mostly on ascertaining whether or not related acquisitions create wealth. It seems there is some support for a positive effect on wealth creation through a better strategic fit between the target and the bidder. Recent studies, however, contest the belief that the performance consequences of diversifying takeovers are of such importance. Park (2002) examines 229 related and unrelated acquisitions between 1959 and 1986 in the US and finds that pre-bid industry

Table 6. Evidence on the industrial relatedness of bidder and target

| Author(s) (year) | Period of study | Details of sample | Country | Time period | Main findings |
|---------------------------------|-----------------|--|---------|--|---|
| Morck <i>et al.</i> (1990) | 1975–1987 | 326 acquisitions | US | –1 to +1 days | <ul style="list-style-type: none"> • Mean return difference between related and unrelated acquisitions is –6.97% (significant) between 1980 and 1987. • Target's past 5 year sales growth impacts significantly negatively on bidder gains |
| Healy <i>et al.</i> (1992) | 1979–1984 | 50 largest acquisitions | US | 5 years and 1 year before and after the bid | <ul style="list-style-type: none"> • Transactions with high business overlap (relatedness) have 5.1% improvements in median annual cash-flow return 5 years before and 5 years after the bid (significant). |
| Sudarsanam <i>et al.</i> (1996) | 1980–1990 | 429 bids by listed companies | UK | +40 to –40 days | <ul style="list-style-type: none"> • No effect of industry relatedness on bidder gains, but positive abnormal returns of 4% (significant) from related acquisitions between 1980 and 1985 over –20 to +40 day period. • No significant impact of relatedness on acquiring firm CAR over –20 to +40 days around the announcement date. |
| Maquieira <i>et al.</i> (1998) | 1963–1996 | 260 stock paid acquisitions, 135 conglomerate takeovers and 125 non-conglomerate takeovers | US | –2 to +2 months | <ul style="list-style-type: none"> • Significantly negative abnormal returns of –4.79% to bidder shareholders from conglomerate acquisitions when the transaction is paid for as a share exchange. • Non-conglomerate bids exhibit significantly positive abnormal returns of 6.14%. |
| Walker (2000) | 1980–1996 | 278 acquisitions, | US | –2 to +2 days | <ul style="list-style-type: none"> • Significantly positive abnormal returns from related bids of 1.59%. • Unrelated acquisitions exhibit significant losses of –1.6%. |
| Park (2002) | 1959–1986 | 121 related and 108 pun-related acquisitions | US | –3 to +3 years | <ul style="list-style-type: none"> • Positive impact of pre-acquisition 3 year average ROA (significant) on the probability that a related bid is made. |
| Burch <i>et al.</i> (2004) | 1978–1997 | 1000 observations (50 largest industries over 20 years) | US | Industry excess value, static cross sectional analysis | <ul style="list-style-type: none"> • Low growth opportunities and high industry concentration raise the extent of conglomeration within an industry. • The 'fitted' conglomeration variable (based on growth opportunities and industry concentration) impacts positively on firm performance (significant). |

profitability has a negative impact on industry relatedness. The author argues that firms diversify when their main market is saturated, rather than diversification impacting on performance. Much of this research has departed from using a sample of takeovers and examines whether or not diversified firms perform better, irrespective of whether they undertake acquisitions. Campa and Kedia (2002), for example, find that the diversification discount is partially the result of endogeneity. The authors find that firms diversify because of poor performance and not that diversification causes poor performance. Burch *et al.* (2004) find that few growth opportunities and high concentration increases the extent of conglomeration in an industry. The extent of conglomeration is measured by the sum of divisions within an industry relative to the number of divisions and single segment firms in the industry. Conglomeration positively relates to firm value when compared with single segment firms in highly concentrated industries with low growth opportunities. There is still an ongoing debate on the impact of diversification on post-acquisition returns with recent studies using static data to investigate the relationship (Berger and Ofek 1995; Buch *et al.* 2003; Campa and Kedia 2002; Park 2002), but with a decreasing focus on takeovers.

The Role of Pre-Bid Performance

Much of the research in this area has focused on the impact of pre-bid acquiring firm performance on post-bid performance (see Table 7). This research can be divided into two streams. The first examines the impact of the market value of acquirers on post-acquisition performance. The market value of acquirers is measured by P/E and MTB ratios⁷ (e.g. Rau and Vermaelen 1998; Sudarsanam and Mahate 2003). The second approach examines the impact of aggregated stock-market performance or merger waves on bidder gains. These studies compare abnormal returns in the post-bid period with reference to the bid timing

during booming or depressed market periods (Coakley and Thomas 2004; Gugler *et al.* 2003; Shleifer and Vishny 2003). Taking into account that high P/E, MTB ratios and a market boom are generally regarded as positive (i.e. that companies are doing well), it seems surprising that acquirers perform particularly badly if their pre-bid performance is good. Hence, much research cites Roll (1986), who suggested a 'hubris' explanation for acquisitions stating that acquiring firm managers are unaware of how bad their acquisitions are. The main argument is that individual managers seem to become over-optimistic and misguided when their company has a strong market value.

Rau and Vermaelen (1998) find that low MTB acquirers earn statistically significant gains of +16% in tender offers and +8% in mergers (over three years after the acquisition). Sudarsanam and Mahate (2003) use P/E and MTB ratios three months prior to the bid and assess their impact on bidder performance. The authors find that high P/E acquirers receive significantly negative returns of -4.49% 40 days after the bid has occurred, while the remaining three models are not significant. In the period from 41 days to 750 days, all other benchmark models result in significant losses ranging from 17.28% to 46.58% for the high P/E group and losses of between 2.04% and 8.63% for the low P/E group. In addition, there are -16.20% to -26.07% abnormal returns for high MTB firms for the same period, compared with returns for the low MTB firm group ranging from -11.07% to -16.16%. The authors argue that glamour acquirers (i.e. high P/E or MTB) are overvalued on the basis of superior past performance. Value acquirers (i.e. low P/E or MTB), however, were subject to poor performance in the past and therefore forced to evaluate acquisitions more carefully. Conn *et al.* (2005) transform the MTB ratio into a dummy variable and assign each bid in the fifth quintile with a dummy variable instead of using the MTB ratio itself. The authors report a stronger 'glamour effect' for cross-border

Table 7. Evidence on the impact of pre-bid performance on acquirer gains

| Author(s) (year) | Period of study | Details of sample | Country | Time period | Main findings |
|------------------------------|-----------------|--|---------|--|--|
| Malatesta (1983) | 1969–1974 | 336 completed mergers and acquisitions | US | –60 to 0 months | <ul style="list-style-type: none"> Acquiring firms with less than \$300 million total equity value earn significantly negative returns until 6 month after the announcement date. Acquirers earn +4.3% over –60 to 0 month. |
| Kennedy and Limmack (1996) | 1980–1989 | 345 friendly mergers and hostile takeovers | UK | –24 to +11 months | <ul style="list-style-type: none"> Bidder mean excess returns of +14.71% (significant) over –12 to –1 month and 14.77% over –24 to –13 months. |
| Rau and Vermaelen (1998) | 1980–1991 | 3169 mergers and 348 tender offers | US | +1 to +36 months | <ul style="list-style-type: none"> –17.26% abnormal losses to low b/m (glamour) acquirers in mergers. 4.25% (significant) returns from tender offers to low b/m acquirers. |
| Malmedier and Tate (2003) | 1980–1994 | 477 large publicly traded acquirers | US | –1 to +1 days | <ul style="list-style-type: none"> Negative abnormal returns to bidder shareholders where executives hold stock options until the year of expiration at some point during their tenure (overconfident executives). |
| Sudarsanam and Mahate (2003) | 1983–1995 | 519 | UK | 0 to +750 days | <ul style="list-style-type: none"> Bidders face abnormal returns of –1.4% at the bid announcement date and –15% in the post-acquisition period of three years. Over 41–750 days following the bid, glamour bidders lose between –17.28% and –46.58%, compared with value acquirers that lose between –2.04% and –8.63%. |
| Coakley and Thomas (2004) | 1985–2000 | 818 mergers and acquisitions | UK | 0 to 3 years | <ul style="list-style-type: none"> Bids announced during a hot market period gain during the announcement period, lose after 12 months, and are subject to a performance reversal gain after 3 years. |
| Conn <i>et al.</i> (2005) | 1984–1998 | 131 cross-border public targets, 1009 cross-border bids for private targets, 2628 bids on domestic private targets | UK | 0 to 36 months | <ul style="list-style-type: none"> Glamour acquisitions are subject to negative abnormal performance for both cross-border and domestic public bids. The effect is stronger in the case of cross-border bids. |
| Dong <i>et al.</i> (2005) | 1978–2000 | 2922 successful and 810 unsuccessful takeover bids | US | –1 to +1 days | <ul style="list-style-type: none"> Negative impact of target premium on acquirer announcement returns. Bids by undervalued (low residual income=overvaluation measure) acquirers exhibit positive abnormal returns in the long run. |
| Rosen (2006) | 1982–2001 | 6259 mergers and acquisitions | US | –2 days to +3 days, also –2 days to +3 years | <ul style="list-style-type: none"> Merger momentum is measured with the 5 day CAAR on merger announcements made 12 months prior to each of the sample bids. A 1% increase in the momentum variable significantly increases the 5 day CAAR by 0.384%. Bids announced during a hot market period are subject to a 3-year post-bid underperformance. |

acquisitions. It should be noted that their measure for glamour bids will have a stronger impact compared with results using actual MTB ratios.

As mentioned earlier, acquiring firm performance may also depend on the stock market cycle. Coakley and Thomas (2004) examine the impact of market momentum and investor sentiment on the performance of UK acquirers by dividing their sample into bids made during 'hot' and 'cold' market periods. They report positive announcement returns for the complete period, but negative abnormal returns 12 months after the bid when the announcement is made during the 'hot' market period. Similar research has been conducted on merger waves and acquiring firm performance (Gugler *et al.* 2006; Tse and Soufani 2001). Tse and Soufani (2001) find less negative returns to acquiring firms when the bid is made during periods of low acquisition activity.

Even though there seems to be no direct evidence that the hubris hypothesis is true, it remains the most likely explanation for the performance of glamour acquirers. There is evidence that acquirers with a high market value or bids made when the stock market is booming tend to perform badly. An alternative explanation could be that executives are under pressure to invest when their companies have a high market value. Competition among acquirers for targets could also be stronger during 'hot' market periods, therefore allowing management less time for a careful evaluation of bid decisions.

Discussion

This paper presents a review of empirical evidence on the impact of takeovers on the performance of acquiring companies. The review examines acquiring firm performance in the short and long run and includes both event study and accounting performance measures. Attempting to summarize our current understanding of acquirer performance is complex. As can be seen from the tables, an enormous empirical literature on this issue

exists, beginning in the 1960s and continuing right up to the present day, presenting us with a broad spectrum of results. The coexistence of market-based and accounting methodologies, each with their own limitations, makes consensus difficult. Within each methodology, researchers cover a range of time periods, use a variety of performance measures and employ different sample sizes, all of which potentially undermines our ability to generalize. Furthermore, we are not dealing with a static phenomenon with the intensity and nature of takeovers changing over time. For example, takeover intensity moves in 'waves', often following (or perhaps influencing) movements in stock markets. There is also variation in respect of takeover mood, with hostile takeovers being very common in the 1980s and early 1990s but becoming increasingly rare over the past decade. The popularity of different methods of payment and the acceptance or otherwise of diversifying acquisitions also changes over time.

A key question arising from a review such as this is why takeovers continue to occur, especially in the light of significant evidence of post-bid underperformance? A useful method of trying to answer this is by relating evidence cited here to established motives for acquisition. One perceived motive for acquisitions is based on the ability of bidders to undertake a governance role by acquiring firms that are not pursuing shareholder objectives and seek to extract greater wealth from the firm's assets for the benefit of acquiring shareholders (Manne 1965; Marris 1963). Such disciplinary acquisitions are typically associated with target hostility, as it is frequently suggested that managers resisting takeovers do so to protect their own interests rather than their shareholders'. The evidence reviewed here does provide some support for this hypothesis. There are a number of studies illustrating more positive (or at least less negative) returns to bidders making acquisitions despite target hostility. However, from the perspective of shareholders in bidding firms, this evidence needs to be viewed in the context of

The impact of acquisitions on firm performance: A review of the evidence

takeovers as a whole generally showing at best neutral and often negative returns. While there is some evidence of hostile bids doing better than other acquisitions, there is little to suggest that shareholders in hostile acquirers are better off afterwards than if the acquisition never occurred. It is also important to note that the incidence of hostility has decreased significantly since the mid-1990s. This may be due to a decline in the need for takeover governance (perhaps partly due to the recent increase in formalized internal governance structures) or it may suggest that managerial resistance no longer serves as an accurate proxy for governance-orientated acquisitions.

A second motive for takeovers may be managers pursuing their own interests at shareholders' expense (Jensen 1986; Roll 1986). Given that most studies appear to show that takeovers are performance-decreasing activities for shareholders, it is very tempting to view managerial self-interest as the primary objective for takeover activity. This may arise as a result of managers wishing to empire build or believing they will be more successful in achieving post-acquisition efficiencies than they actually are or as a result of perceived pressures in the managerial market to 'buy so not to be bought'. The latter reason may drive the more damaging takeovers documented towards the end of takeover cycles. The types of studies reviewed here are probably not capable of precisely identifying manager's motives for takeovers, except that negative findings are generally indicative of acquisitions not being pursued for shareholder interests. The most widely cited justification for takeover given by managers is the potential for corporate synergy between bidder and target and the potential for these eventually to manifest themselves in increased post-acquisition performance. However, the synergy motive is most likely to apply to takeovers of targets in the same industry and unlikely to be the motive for diversifying acquisitions. The evidence reviewed here does suggest that the performance of related acquisitions is less damaging to firm performance than

conglomerate acquisitions, so there is some support for the synergy hypothesis. However, the absence of identifiable market or accounting performance increases after acquisitions suggests otherwise. Furthermore, the particularly negative returns associated with friendly acquisitions, typically perceived as being strategic, suggests that strategic objectives are not actually being realized for the benefit of shareholders.

The method of payment used appears to be a crucial issue in this line of research. It has long been accepted that hostile acquisitions are more likely to be financed with cash, while friendly acquisitions tend to be financed with equity. This is not surprising, as reluctant targets are more likely to be convinced with the relative certainty of cash as opposed to having their wealth tied to the future performance of the acquirer. However, as mentioned earlier, it also appears that acquisitions financed with cash tend to exhibit less negative performance than those financed with equity. The standard explanation for this relates to the belief that equity-financed acquisitions have an adverse selection effect similar to a new share issue (i.e. the perception that managers may choose equity as the method of payment if they believe their shares are overvalued). Therefore, the choice of payment method, rather than the prospects of the acquisition itself, may be responsible for the negative reaction identified in the literature. In trying to improve our understanding of this observed financing impact on performance, we need to appreciate better the factors influencing a bidder's financing decision. In particular, as highlighted by Faccio and Masulis (2005), both financial and ownership/control issues seem to be important influences on the choice of finance decision.

It has long been appreciated that the intensity of merger activity varies over time. Not surprisingly, research has now begun to focus on the impact of acquisition timing on the subsequent performance of the acquirer. The identification of weaker post-bid performance for acquisitions undertaken towards

the end of merger waves seems to suggest managers of companies making such acquisitions may be less discriminating in choosing their targets. A related line of enquiry identifies a negative link between pre-bid performance and post-acquisition performance, suggesting that managers in companies with relatively high market valuation appear to pursue particularly damaging acquisitions. This evidence suggests that such managers may be overconfident in their own abilities. Of course, highly valued companies are also viewed as having significant growth opportunities (future earnings potential) so perhaps managers in such companies feel that acquisitions may provide the basis for the achievement of the market's expectations. The main findings identified here suggest that such expectations are typically not achieved.

Conclusions

This paper seeks to present a review of empirical evidence on the impact of acquisitions of firm performance. Despite the amount of research undertaken and the breadth of the research approaches used, a number of conclusions can be drawn from the studies reviewed in this paper. In respect of market-based performance, the evidence suggests that the announcement effect of takeovers is at best insignificant. Performance measured by long-run event studies is overwhelmingly negative, while the evidence using accounting performance measures is mixed. There is no evidence that takeover performance improves over time. Indeed, there is some evidence that more recent takeovers may have been the most detrimental to shareholder wealth. Given that not all takeovers perform badly, research has developed towards incorporating additional variables over time in an attempt to tease out further the drivers of differential performance. Hostile takeovers, transactions paid for in cash and bids where the target and the bidder are in the same industry are associated with superior (or at least not as negative) performance. The better results in respect of

hostility, despite the higher premiums that shareholders in hostile targets appear to receive, support the notion that hostile takeovers have a governance role in identifying and acquiring companies with greater wealth potential. The findings in respect of payment method are complicated somewhat by a positive association between payment with cash and hostile acquisitions. The more negative returns associated with equity payments may be partially explained by the belief that investors associate such issues with the firm being overvalued and discount the firm's stock accordingly.

Research on the impact of industrial relatedness on performance suggests that pursuing related acquisitions results in better performance, with conglomerate acquisitions showing more negative returns. More recently, researchers have begun to examine the direction of causality with studies showing that poor performance may influence the likelihood of firms undertaking unrelated acquisitions rather than the other way round. A main focus of current research is the impact of the bid's timing in the context of takeover waves with emerging evidence of better returns associated with takeovers undertaken at the beginning of takeover waves and less profitable acquisitions being made later in the period. A related issue is the pre-bid market performance of bidders with emerging evidence of 'glamour' acquirers making less profitable acquisitions. This strand of research also links in with the potential for overvalued equity being used to finance acquisitions and the negative performance impact of this. Current research incorporating the pre-acquisition performance of acquirers is also capable of providing further insights on the role of managerial hubris in acquisitions. Essentially, it appears that strong market performance may encourage managers to pursue an acquisition strategy in the belief that they can do no wrong but which is ultimately detrimental to shareholder wealth.

Despite the substantial amount of research reviewed here, there are still many research

The impact of acquisitions on firm performance: A review of the evidence

questions unanswered. A new direction for research has been given by Ghosh (2004), who examines the impact of changes in market share on performance. The author reports that bidders with a high pre-bid market share tend to acquire other firms to increase their market share further, which has a positive impact on performance. Although often a prime motive for takeovers in practice, few studies have examined the impact of market share on performance. Also the large proportion of takeovers that appear to reduce shareholder wealth raises significant questions regarding the quality of decision-making by company boards and the monitoring of these decisions by non-executives. While it appears that hubris may explain the continuing negative impact of acquisitions, relatively little research has sought to address the decision-making and monitoring of the board in takeover bids. For example, takeover bids are inevitably launched without significant discussion with shareholders and, consequently, the non-executive component of the board is a key governance mechanism in seeking to restrain hubris behaviour by executives. Future research could usefully examine the relationship between the monitoring potential of acquiring boards and subsequent performance. Finally, the vast majority of studies focus on the performance implications of successful acquisitions. However, a significant number of takeovers that are launched do not succeed. A comprehensive analysis of the performance implications of failed bids, incorporating the reasons for failure, is capable of improving our understanding of the impact of takeover activity on performance.

Notes

1 Address for correspondence: Noel O'Sullivan, Sheffield University Management School, 9 Mappin Street, Sheffield S1 4DT, UK. Tel: +44(0)114 2223487; Fax:+44 (0)114 2223348; e-mail: c.n.osullivan@sheffield.ac.uk. This paper has benefited from the comments of two anonymous reviewers.

- 2 For example, between 1990 and 1996, UK companies spent £10.3 billion on acquisitions (Office of National Statistics).
- 3 Between 1989 and 2001, there were 1055 takeover bids for UK listed companies (source: Acquisitions Monthly 1989–2001).
- 4 There are broadly four different types of performance measures used in empirical studies: (a) the market model is based on the return on the market for an estimation of abnormal returns; (b) the market adjusted model adjusts the firm share price returns for returns on the market; (c) the capital asset pricing model takes company risk into account; (d) the return from reference portfolios for the calculation of abnormal returns.
- 5 Kothari and Warner (2004) provide a very useful summary of known problems and potential solutions to long-run event study methodologies.
- 6 Tender offers arise when a bidder makes a bid directly to shareholders without consulting company management. Tender offers are therefore similar to hostile takeovers and tend to be treated accordingly in the literature.
- 7 The P/E (price/earnings) ratio=Share price divided by earnings (per share) after tax before interest. The MTB (Market to book) ratio=Market Value divided by the book value of assets. High P/E or MTB ratios indicate a high valuation on the stock market.

References

- Agrawal, A. and Jaffe, J.F. (2000). The post-merger performance puzzle. *Advances in Mergers and Acquisitions*, **1**, 7–41.
- Agrawal, A., Jaffe, J.F. and Mandelker, G. (1992). The post merger performance of acquiring firms. *Journal of Finance*, **47**, 1605–1621.
- Alexandridis, G., Antoniou, A. and Zhao, H. (2006). Valuation effect of institutional ownership: the case of corporate takeovers. *European Financial Management*, forthcoming.
- Andrade, G., Mitchell, M.L. and Stafford, E. (2001). New evidence and perspectives on mergers. *Journal of Economic Perspectives*, **15**, 103–120.
- Antoniou, A. and Zhao, H. (2004). Long-run post takeover stock return: the impact of over-lapping return, takeover premium and method of payment, Working Paper, Centre for Empirical Research in Finance, University of Durham Business School.

- Asquith, P. (1983). Merger bids, uncertainty and stockholder returns. *Journal of Financial Economics*, **11**, 51–83.
- Asquith, P., Bruner, R. and Mullins, D. (1983). The gains to bidding firms from merger. *Journal of Financial Economics*, **11**, 121–139.
- Barber, B.M. and Lyon, J.D. (1997). Detecting long run abnormal stock returns: the empirical power and specification of test statistics. *Journal of Financial Economics*, **43**, 341–372.
- Ben-Amar, W. and Andre, P. (2006). Separation of ownership from control and acquiring firm performance: the case of family ownership in Canada. *Journal of Business Finance and Accounting*, **33**, 517–543.
- Berger, P.G. and Ofek, E. (1995). Diversification's effect on firm value. *Journal of Financial Economics*, **37**, 39–65.
- Bild, M., Guest, P. and Runsten, M. (2005). The effect of takeover on the fundamental value of acquirers. Working Paper, ESRC Centre for Business Research, University of Cambridge.
- Blume, M. (1975). Betas and their regression tendencies. *Journal of Finance*, **30**, 785–795.
- Blume, M.E. (1971). On the assessment of risk. *Journal of Finance*, **26**, 1–10.
- Bradley, M. (1980). Inter-firm tender offers and the market for corporate control. *Journal of Business*, **37**, 39–65.
- Bradley, M., Desai, A. and Kim, E.H. (1983). The rationale behind inter-firm tender offers. *Journal of Financial Economics*, **11**, 183–206.
- Bradley, M., Desai, A. and Kim, E.H. (1988). Synergistic gains from corporate acquisitions and their divisions between stockholders of target and acquiring firms. *Journal of Financial Economics*, **21**, 3–40.
- Bruner, R. (2002) Does M&A Pay? A survey of evidence for the decision maker. *Journal of Applied Finance*, **12**, 48–68.
- Burch, T.R., Nanda, V. and Narayanan, M.P. (2004). Industry structure and value motivated conglomeration. Working Paper, University of Michigan Business School.
- Campa, J.M. and Kedia, S. (2002). Explaining the diversification discount. *Journal of Finance*, **57**, 1731–1762.
- Campa, J.M. and Hernando, I. (2004). Shareholder value creation in European M&A. *European Financial Management*, **10**, 47–81.
- Chatterjee, R. and Kuenzi, A. (2001). Mergers and acquisitions: the influence of methods of payment on bidder's share price, Research Papers in Management Studies, University of Cambridge.
- Chatterjee, R. and Meeks, G. (1996). The financial effects of takeover: accounting rates of return. *Journal of Business Finance and Accounting*, **23**, 851–868.
- Coakley, J. and Thomas, H.M. (2004). Hot markets, momentum and investor sentiment in UK acquisitions. Working Paper, University of Essex.
- Conn, C., Cosh, A., Guest, P. and Hughes, A. (2005). The impact on UK acquirers of domestic, cross border, public and private acquisitions. *Journal of Business Finance and Accounting*, **32**, 815–870.
- Cosh, A. and Guest, P. (2001). The long-run performance of hostile takeovers: UK evidence. Working Paper, ESRC Centre for Business Research, University of Cambridge.
- Cotter, J.F., Shivadasani, A. and Zenner, M. (1997). Do independent directors enhance target shareholder wealth during tender offers? *Journal of Financial Economics*, **43**, 195–218.
- Dickerson, A., Gibson, H. and Tsakalotos, E. (1997). The impact of acquisitions on company performance: evidence from a large panel of UK firms. *Oxford Economic Papers*, **49**, 344–361.
- Dodd, P. (1980). Merger proposal, management discretion and stockholder wealth. *Journal of Financial Economics*, **8**, 105–138.
- Dodd, P. and Ruback, R. (1977). Tender offers and shareholder returns: an empirical analysis. *Journal of Financial Economics*, **5**, 351–373.
- Dong, M., Hirshleifer, D., Richardson, S. and Teoh, S.H. (2005). Does investor misvaluation drive the takeover market? *Journal of Finance*, **61**, 725–762.
- Draper, P. and Paudyal, K. (1999) Corporate takeovers: method of payment, returns and trading activity. *Journal of Business Finance and Accounting*, **26**, 521–558.
- Faccio, M. and Masulis, R. (2005). The choice of financing method in European mergers and acquisitions. *Journal of Finance*, **60**, 1345–1388.
- Fama, E. (1970). Efficient capital markets: a review of theory and empirical work. *Journal of Finance*, **25**, 383–417.
- Fama, E.F. and French, K. (1993). Common risk factors on the returns on stocks and bonds. *Journal of Financial Economics*, **33**, 3–56.
- Firth, M. (1980). Takeovers, shareholder returns and the theory of the firm. *Quarterly Journal of Economics*, **94**, 235–260.
- Franks, J. and Harris, R.S. (1989). Shareholder wealth effects of corporate takeovers: the U.K. experience

The impact of acquisitions on firm performance: A review of the evidence

- 1955–1985. *Journal of Financial Economics*, **23**, 225–249.
- Franks, J., Harris, R.S. and Titman, S. (1991). The post-merger share price performance of acquiring firms. *Journal of Financial Economics*, **29**, 81–96.
- Gao, L. and Sudarsanam, S. (2004). Value creation in UK high technology acquisitions. Working Paper, School of Management, Cranfield University.
- Ghosh, A. (2001). Does operating performance really improve following corporate acquisitions? *Journal of Corporate Finance*, **7**, 151–178.
- Ghosh, A. (2004). Increasing market share as a rationale for corporate acquisitions. *Journal of Corporate Finance*, **11**, 209–256.
- Goergen, M. and Renneboog, L. (2004). Shareholder wealth effects of European domestic and cross-border takeover bids. *European Financial Management*, **10**, 9–45.
- Gonzales-Riviera, G. (1997). The pricing of time varying beta. *Empirical Economics*, **22**, 345–363.
- Gregory, A. (1997). An examination of the long run performance of UK acquiring firms. *Journal of Business Finance and Accounting*, **24**, 971–1007.
- Gregory, A. and McCriston, S. (2005). Foreign acquisitions by UK limited companies: short- and long-run performance. *Journal of Empirical Finance*, **12**, 99–125.
- Groenewold, N. and Fraser, P. (2000). Forecasting beta: how well does the five year rule of thumb do? *Journal of Business Finance and Accounting*, **27**, 953–982.
- Gugler, K., Mueller, D.C., Yurtoglu, B.B. and Zulehner, C. (2003). The effects of mergers: an international comparison. *International Journal of Industrial Organisation*, **21**, 625–653.
- Gugler, K., Mueller, D.C. and Yurtoglu, B.B. (2006). The determinants of merger waves. Working Paper, Department of Economics, University of Vienna.
- Gupta, A. and Misra, L. (2004). Deal size, premium paid and the gains in financial mergers: the impact of managerial motivation. Working Paper, Bentley College of Business.
- Healy, P.M., Palepu, K.G. and Ruback, R. (1992). Does corporate performance improve after mergers? *Journal of Financial Economics*, **31**, 135–175.
- Healy, P.M., Palepu, K.G. and Ruback, R. (1997). Which takeovers are profitable? Strategic or financial? *Sloan Management Review*, (Summer), 45–57.
- Herman, E.S. and Lowenstein, L. (1988). The efficiency effects of hostile takeovers. In Coffee, J.C., Lowenstein, L. and Rose-Ackerman, S. (eds), *Knights, Raiders and Targets*. Oxford: Oxford University Press.
- Higson, C. and Elliot, J. (1998). Post-takeover returns: the UK evidence. *Journal of Empirical Finance*, **5**, 27–46.
- Holl, P. and Kyriazis, D. (1997). Wealth creation and bid resistance in UK takeover bids. *Strategic Management Journal*, **18**, 483–498.
- Hubbard, R.G. and Palia, D. (1999). A re-examination of the conglomerate merger wave in the 1960s: an internal capital markets view. *Journal of Finance*, **54**, 1131–1152.
- Jarrell, G.A. and Bradley, M. (1980). The economic effects of state federal regulations of cash tender offers. *Journal of Law and Economics*, **23**, 371–407.
- Jarrell, G.A. and Poulsen, A.B. (1989). The returns to acquiring firms in tender offers: Evidence from three decades. *Financial Management*, (Autumn), 12–19.
- Jensen, M.C. (1984). Takeovers: folklore and science. *Harvard Business Review*, (Nov.–Dec.), 109–121.
- Jensen, M.C. (1986). Agency costs of free cash flow, corporate finance and takeovers. *American Economic Review*, **76**, 323–329.
- Jensen, M.C. (1988). Takeovers: their causes and consequences. *Journal of Economic Perspectives*, **2**, 21–48.
- Jensen, M.C. (1993). The modern industrial revolution. *Journal of Finance*, **48**, 831–880.
- Kennedy, V.A. and Limmack, R.J. (1996). Takeover activity, CEO turnover and the market for corporate control. *Journal of Business Finance and Accounting*, **23**, 267–285.
- Kothari, S.P. and Warner, J.B. (2004). *Econometrics of Event Studies*. In Eckbo, B.E. (ed.), *Handbook of Corporate Finance: Empirical Corporate Finance*. Amsterdam: Elsevier/North-Holland.
- Lang, L., Stulz, R.M. and Walking, R.A. (1989). Managerial performance, Tobin's q and gains from successful tender offers. *Journal of Financial Economics*, **24**, 137–154.
- Lang, L., Stulz, R.M. and Walking, R.A. (1991). A test of the free cash flow hypothesis: the case of bidder returns. *Journal Financial Economics*, **29**, 315–335.
- Limmack, R.J. (1991). Corporate mergers and wealth effects: 1977–86. *Accounting and Business Research*, **21**, 239–251.

- Limmack, R.J. (1997). Discussion of an examination of the long run performance of UK acquiring firms. *Journal of Business Finance and Accounting*, **27**, 1003–1007.
- Linn, S.C. and Switzer, J.A. (2001). Are cash acquisitions associated with better postcombination operating performance than stock acquisitions? *Journal of Banking and Finance*, **25**, 1113–1138.
- Loughran, T. and Vihj, A.M. (1997). Do long term shareholders benefit from corporate acquisitions? *Journal of Finance*, **52**, 1759–1790.
- Lu, Q. (2004). Do mergers destroy value? Evidence from failed bids. Working Paper, Kellogg School of Management, Northwestern University.
- Lyon, J.D., Barber, B.M. and Tsai, C.L. (1999). Improved methods for tests of long run abnormal stock returns. *Journal of Finance*, **52**, 164–201.
- Malatesta, P. (1983). The wealth effects of merger activity and the objective function of merging firms. *Journal of Financial Economics*, **11**, 155–181.
- Malmendier, U. and Tate, G. (2005). Who makes acquisitions? CEO overconfidence and the market's reaction, Working Paper, Stanford University.
- Manne, H. (1965). Mergers and the market for corporate control. *Journal of Political Economy*, **73**, 110–120.
- Maquieria, C., W. Megginson and L. Nail (1998). Wealth creation versus wealth redistributions in pure stock for stock mergers. *Journal of Financial Economics*, **48**, 3–33.
- Marris, R. (1963). A model of the managerial enterprise. *Quarterly Journal of Economics*, **77**, 185–209.
- Matusaka, J.G. (1993). Takeover motives during the conglomerate merger wave' *Rand Journal of Economics*, **24**, 357–379.
- Meeks, G. (1977). *Disappointing Marriage: Gains from Mergers*. Cambridge: Cambridge University Press.
- Mitchell, M.L. and Lehn, K. (1990). Do bad bidders become good targets. *Journal of Political Economy*, **98**, 372–398.
- Mitchell, M.L., Pulvino, T. and Stafford, E. (2004). Price pressure around mergers. *Journal of Finance*, **59**, 31–63.
- Moeller, S.B., Schlingemann, F.P. and Stulz, R.M. (2004). Firm size and the gains from acquisitions. *Journal of Financial Economics*, **73**, 201–228.
- Morck, R.A., Shleifer, A. and Vishny, R.W. (1988). Management ownership and market valuation: an empirical analysis. *Journal of Financial Economics*, **20**, 293–315.
- Morck, R.A., Shleifer, A. and Vishny, R.W. (1990). Do managerial objectives drive bad acquisitions? *Journal of Finance*, **45**, 31–48.
- Myers, S. and Majluf, N. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, **12**, 187–221.
- O'Sullivan, N. and Wong, P. (1998). Internal versus external control: an analysis of board composition and ownership in UK takeovers. *Journal of Management and Governance*, **2**, 17–35.
- O'Sullivan N. and Wong, P. (2005). *The Governance Role of Takeovers*. In Keasey, K., Thompson, S. and Wright, M. (eds), *Corporate Governance: Accountability, Enterprise and International Comparisons*. Chichester: Wiley.
- Park, C. (2002). The effects of prior performance on the choice between related and unrelated acquisitions: implications for the performance consequences of diversification strategy. *Journal of Management Studies*, **39**, 1003–1019.
- Powell, R. (1997). Modelling takeover likelihood. *Journal of Business Finance and Accounting*, **24**, 1009–1030.
- Powell, R. and Stark, A.W. (2005). Does operating performance increase post-takeover for UK takeovers? A comparison of performance measures and benchmarks. *Journal of Corporate Finance*, **11**, 293–317.
- Rahman, R.A. and Limmack, R.J. (2004). Corporate acquisitions and the operating performance of Malaysian companies. *Journal of Business Finance and Accounting*, **34**, 359–400.
- Rau, P.R. and Vermealen, T. (1998). Glamour, value and the post-acquisition performance. *Journal of Financial Economics*, **49**, 223–253.
- Ravenscroft, D. and Scherer, F.M. (1987). Life after takeovers. *Journal of Industrial Economics*, **36**, 147–156.
- Roberts, V. (1967). Statistical versus clinical prediction of stock market. CRSP Working Paper, University of Chicago.
- Roll, R. (1986). The hubris hypothesis of corporate takeovers. *Journal of Business*, **59**, 197–216.
- Rosen, R.J. (2006). Merger momentum and investor sentiment: the stock market reaction to merger announcements. *Journal of Business*, **79**, 987–1017.
- Schwert, G.W. (2000). Hostility in takeovers: in the eyes of the beholder? *Journal of Finance*, **55**, 2599–2640.
- Shin, H.H. and Stulz, R.M. (1998). Are internal capital markets efficient? *Quarterly Journal of Economics*, **113**, 531–552.

The impact of acquisitions on firm performance: A review of the evidence

- Shleifer, A. and Vishny, R.W. (2003). Stock market driven acquisitions. *Journal of Financial Economics*, **70**, 295–311.
- Singh, H. and Montgomery, C.A. (1987). Corporate acquisition strategies and economic performance. *Strategic Management Journal*, **8**, 377–387.
- Smith, A. and Kim, J. (1994). The combined effects of free cash flow and financial slack on bidder and target stock returns. *Journal of Business*, **67**, 281–310.
- Song, M.H. and Walking, R.A. (2004). Anticipation acquisitions and the bidder return puzzle. Working Paper, Ohio State University.
- Stanton, R.L. (1987). Accounting rates of return as measures of post merger performance. *Australian Journal of Business*, **12**, 293–394.
- Sudarsanam, S. and Mahate, A.A. (2003). Glamour acquirers, method of payment and post-acquisition performance: the UK evidence. *Journal of Business Finance and Accounting*, **30**, 299–341.
- Sudarsanam, S. and Mahate, A.A. (2006). Are friendly acquisitions too bad for shareholders and managers? Long-term value creation and top management turnover in hostile and friendly acquirers. *British Journal of Management*, **17** (special issue), S7–S29.
- Sudarsanam, S., Holl, P. and Salami, A. (1996). Shareholder wealth gains in mergers: effect of synergy and ownership structure. *Journal of Business Finance and Accounting*, **23**, 673–698.
- Travlos, N. (1987). Corporate takeover bids, methods of payment and bidding firms' stock returns. *Journal of Finance*, **42**, 943–963.
- Tse, T. and Soufani, K. (2001). Wealth effects of takeovers in merger activity eras: empirical evidence from the UK. *International Journal of the Economics of Business*, **8**, 365–377.
- Varaiya, N.P. and Ferris, K.R. (1987). Overpaying in corporate takeovers: the winner's curse. *Financial Analysts Journal*, (May–June), 64–70.
- Walker, M. (2000). Corporate takeovers, strategic objectives and acquiring firm shareholder wealth. *Financial Management*, **20**, 53–66.
- Weisbach, M. (1993). Corporate governance and hostile takeovers. *Journal of Accounting and Economics*, **16**, 199–208.

Christian Tuch and Noel O'Sullivan are from Sheffield University Management School, 9 Mappin Street, Sheffield S1 4DT, UK