

Returns to Bidding and Target Firms in Hostile Takeovers: Some UK Evidence

SHAMSHER MOHAMAD and ANNUAR MD. NASSIR

Department of Accounting and Finance

Faculty of Economics and Management

Universiti Pertanian Malaysia

43400 UPM Serdang, Selangor Darul Ehsan, Malaysia.

Key words: takeovers, bidders, targets, abnormal returns, combined gains.

ABSTRAK

Kajian ini mengkaji kesan pengumuman pengambilalihan terhadap pulangan firma pembidaan dan firma sasaran dan kekayaan bersama dalam bida pengambilalihan bersetujuan di UK. Penemuan kajian ini menunjukkan bahawa firma bida memperoleh pulangan abnormal negatif yang signifikan manakala firma sasaran memperoleh pulangan positif yang signifikan. Penemuan ini adalah tekal dengan penemuan dari kajian yang serupa di pasaran saham Amerika Syarikat. Kekayaan kombinasi yang positif dan signifikan menyiratkan bahawa aktiviti pengambilalihan adalah pelaburan yang menguntungkan dan tekal dengan bayangan bahawa para pengurus menjalankan aktiviti pengambilalihan untuk memaksimakan kekayaan dan bukan saiz firma.

ABSTRACT

This paper explores the returns to bidding and target firms in hostile takeovers and their combined wealth effects on the announcement of the offer in the UK. The findings reveal that bidder firms earn negative and significant abnormal returns, whereas target firms earn positive and significant abnormal returns. The gains to target firms more than compensate the losses suffered by bidders as the combined gains are positive and significant. These findings are consistent with those documented in the US. The positive and significant combined gains imply that takeovers are wealth-creating investments, which is consistent with the notion that managers pursue takeovers to maximise wealth rather than size of their firm.

INTRODUCTION

Previous studies on acquisitions in the UK by Newbould (1970), Singh (1971), Utton (1974), Franks *et al.* (1977), Firth (1980), Barnes (1978, 1984) and Dodd and Quek (1985) concentrated on returns to bidders and targets in mergers rather than takeovers. This could have been due to the availability of data on mergers and/or the popularity of this technique at that time. These studies which used different methodologies on different samples of firms in different time periods concluded that mergers in general did not create any wealth for the bidder shareholders though the target shareholders always gained.

At present, hostile takeovers are as popular as mergers, but little research has been done on firms

involved in takeovers. This study intends to explore the behaviour of announcement period returns and the combined wealth effects of bidders and targets involved in takeovers in the UK.

Total Bidder Returns

At the announcement of the bid, the bidder is expected to offer a price above the current market price of the target firm but below the bidder's estimated value for the target.

If the successful bidder has a high chance of acquiring the target firm at a price below the estimated value for the target, part of the potential gains from the takeover identified by the bidder should accrue to the bidder's shareholders. The

expected gains should be discounted in the bidder's share price and the bidder's shareholders should earn positive abnormal returns at the announcement of the offer.

Finance theory predicts that firms pursue new capital investments when the investments have positive effects on their market value. McConnell and Muscarella (1985) provide evidence in support of this view, reporting a significant positive share price reaction for a sample of industrial firms which announced an increase in planned capital expenditures. Acquisitions are also capital investments and if the acquisition has any wealth-creating effect for the bidder firm, the bidder returns at the announcement of the offer should be positive.

Evidence from the US on bidder returns in takeovers show mixed results. For example, Asquith's (1983) study showed that the two-day announcement abnormal returns for bidders are positive but not significantly different from zero. Dodd's (1980), and Asquith and Kim's (1982) studies showed that bidders in takeovers earn significant negative returns at the two-day announcement period, whereas Bradley (1980) and Bradley *et al.*'s (1983) studies showed that bidders in takeovers earn significant positive abnormal returns at the two-day announcement period.

Generally, most findings on daily and monthly returns to bidders in takeovers in the US tend to be either negative or insignificantly positive (Jensen and Ruback 1983, Rappaport 1987).

In the UK, Franks *et al.*'s (1988) comparative study of firms involved in takeovers in the UK and US provided some evidence with respect to the effect of the form of payments on bidder and target returns in the UK, but not total returns and combined wealth effects. To fill the gap, this study ascertains the behaviour of returns to 90 bidder firms involved in hostile takeovers in the UK at the announcement of the offer.

Target Returns

Evidence from the US in general has consistently shown that the two-day announcement abnormal returns of target firms in hostile takeovers are positive and statistically significant (Asquith 1983; Dodd 1980; Asquith and Kim 1982; Bradley *et al.* 1983; Bradley 1980 and Jarrell and Poulsen 1989).

The shareholders of the target firm earn positive abnormal returns possibly reflecting the expected gains of the combined firm and the large premiums offered by the bidder at the announcement.

In the UK, there is no published evidence on returns to targets in hostile takeovers. Franks

et al.'s (1988) study provides evidence on returns to targets in takeovers classified according to the means of payments offered to their targets but not on total returns of targets in takeovers. Therefore this study aims to ascertain the effect of takeover announcements on the target firms involved in hostile bids in the UK. The returns behaviour of target firms involved in hostile takeovers was observed at the announcement of the offer.

Combined Gains

An attempt by a bidding firm to gain control of the target's resources and implement a higher valued strategy is assumed to create wealth through synergistic effects. Synergy is realised when an increase in the aggregate market value of the two firms is more than a simple sum of market value of each firm (Weston and Copeland 1988).

If bidder managers seek to maximise their shareholders' wealth, their takeover activity can be justified only if there is some form of synergy present which will contribute towards the creation of such wealth. Synergy may manifest itself in the form of increase in market power, possession of a new technology, superior research and development facilities, better distributional facilities, skilled management, production and sales economies of scale or any other form which will help towards the creation of more wealth.

The presence and the potential of exploiting these expected synergies explain partly the rationale for bidders willing to pay large premiums for their targets.

In the UK, there is no published evidence of combined returns of firms in takeovers at the announcement of the offer, but findings on combined returns to bidders and targets in mergers have been reported by Firth (1980) and Franks *et al.* (1977). Firth (1980) found that the combined gains of bidders and targets in mergers in the announcement month were virtually zero. However, Franks *et al.* (1977) found that combined gains were positive, implying the presence of synergy for firms merging within the brewing and distilling sector.

In US, studies on takeovers by Dodd and Ruback (1977), Bradley (1980), Bradley *et al.* (1983), Schipper and Thomson (1983) found large and significant positive abnormal returns for target shareholders and small but significant positive abnormal returns to bidding firms' shareholders, implying that the positive combined gains are in support of the synergy hypothesis. Mandelker's study (1974) concluded that bidding firms earned normal returns whereas abnormal returns from mergers

accrue to target shareholders, implying positive combined gains.

However, when the combined gains to target and bidding firms' shareholders are not positive, it implies that there is merely a transfer of existing rights of ownership from target to the bidder. Roll (1986) in his analysis of successful takeovers in US suggested that gains by targets are a simple wealth transfer from bids that are more than their worth (also known as the Hubris Hypothesis).

Dodd (1980) found significant negative returns for bidders and positive returns to target firm's shareholders at the announcement of the bid and concluded that gains arising from the acquisition to the target shareholders were at the expense of the bidding firms's shareholders.

In ascertaining the presence of synergy in takeovers using the abnormal returns analysis, it is difficult to identify the particular type of synergy present. The presence of synergy is detected if the combined abnormal returns of bidders and targets in the takeover offer are significantly positive at the announcement of the offer.

To ascertain the presence of expected synergy in takeovers, the combined returns to bidders and targets at the two-day announcement period were calculated and the results are presented in Table 3.

MATERIALS AND METHODS

Data

The data analysed in this study were drawn from public announcements of proposals to acquire a target firm by means of a takeover. The sample contains bidder and target firms engaged in successful takeovers for the years 1985 to 1988, for which daily share returns were calculated for eleven days surrounding the announcement day. The announcement day is the day of the most recent offer for the target. The takeover offer was considered successful when the bidding firm acquired the required interest in the target firm's common equity (i.e. equal to, or more than, 30 per cent). The offers studied were not preceded by a merger attempt.

The sample was identified by a search of various financial publications such as 'Acquisition Monthly', 'Investors Chronicle', 'Business Research Index', 'Fair and Trade Publications', 'Stock Exchange Yearbook' and financial newspapers. The sampled firms were subjected to the following requirements:

- (a) The takeover offer was considered successful if it was declared unconditional as to acceptances.
- (b) Bidder and target firms were listed on the

London Stock Exchange and only alpha and some beta stocks were sampled to mitigate the non-synchronous trading problem.

- (c) To filter the confounding effects of exogenous events on bidder returns during the eleven days surrounding the event, the bidders and targets sampled did not experience any major corporate event at the time of the announcement of the offer. Major corporate events were defined as death or appointment of key executives, announcement of financial reports or new investment programmes (except for the takeover offer under study) for the eleven days surrounding the announcement.
- (d) Daily share prices for each firm were available for at least 58 days before and 58 days after the announcement day.

The final sample contained 90 bidder and 90 target firms.

Methodology

The research hypotheses examined were tested by applying an event-type methodology similar to that described in Fama *et al.* (1969) and Travlos (1987). The ordinary-least squares coefficients of the market model regression were estimated over the period $n = -58$ to $n = -6$ and $n = +6$ to $n = +58$ relative to the day of the initial announcement. Daily abnormal common stock returns were calculated for each firm i over the interval $n = -5$ to $n = +5$.

$$\text{Abnormal Return} = R_{in} - (\alpha + BR_{mn}) \tag{li}$$

For a sample of N firms, daily average abnormal returns (AR) for each day n are computed by

$$AR_n = \sum_{i=1}^N \frac{\ell_i}{N}$$

or

$$AR_n = \frac{1}{N} \sum_{i=1}^N (R_{in} - \alpha - BR_{mn})$$

$n = -5, \dots, 0, \dots, +5$ N = the number of firms

where R_{in} is the returns for common stock of firm i , R_{mn} is return for the market approximated by the overall market index on day n, α, β are ordinary-least squares estimates of the market model parameters (adjusted for non-synchronous trading problem using Dimson's (1979) aggregated coefficient approach). The daily returns were calculated from stock prices after adjustment for capital changes such as dividends and stock splits.

The returns for each firm were also adjusted for any significant first-order auto-correlation using Cochrane-Orcutt's (1949) quasi-first-difference approach before calculating the abnormal returns.

The AR for each firm were adjusted for the difference in size of bidders and targets. Size was measured in terms of the total market value of the firms at the announcement day. Average cumulative abnormal returns (CAR_{T1T2}) were also derived by summing the AR over the eleven days surrounding the announcement. The expected values of AR_n^* and CAR_{T1T2} are zero in the absence of abnormal performance.

The test statistics of AR_n^* and CAR_{T1T2} are based on the average standardized abnormal returns and the average standardized cumulative abnormal returns respectively, where

$$AR_n^* = \frac{AR_n}{S_{in}} = \frac{1}{N} \sum_{i=1}^N \left(\frac{R_{in} - \alpha - BR_{mn}}{S_{in}} \right)$$

$$CAR_{T1T2} = \sum_{t=T1}^{T2} AR_{n_t}^*$$

The estimation period is from $n = -58$ to $n = -6$ and $n = +6$ to $n = +58$ and the analysis period is from $n = -5$ to $n = +5$. The standardizing factor S which takes into account the problem of non-constant variance of the residuals in the estimation and analysis period, was computed as follows:

$$S_{in} = \left[S_i^2 \left(1 + \frac{1}{L} + \frac{(R_{mn} - \bar{R}_m)^2}{\sum_{k=-1}^L (R_{mk} - \bar{R}_m)^2} \right) \right]^{1/2}$$

where S_i^2 is the residual variance for security i from the market model regression, L is the number of observations during the estimation period (i.e. 106 days), R_{mk} is the return on the market index for the k day of the estimation period, R_{mn} is the return on the market index for day n in the analysis period, and \bar{R}_m is the average return of the market index (i.e. market portfolio) for the estimation period.

Assuming that individual abnormal returns are approximately normally distributed and independent across time and across securities, the statistic t and t_{T1T2} which follow unit-normal distribution (Dodd and Warner 1983) are used to test the hypothesis that the average standardized abnormal returns (AR_n^*) and average cumulative standardized abnormal returns (CAR_{T1T2}) equal zero, where

$$t = \sqrt{N} * AR_n^*$$

and

$$t_{T1T2} = \frac{\sqrt{N}}{\sqrt{T2 - T1 + 1}} \sum_{t=T1}^{T2} AR_{n_t}^*$$

RESULTS

Total Bidder Returns

This section presents the average abnormal returns and the cumulative abnormal returns for all the bidders in takeovers for the eleven days surrounding the announcement. The details are presented in Table 1 (A) in the Appendix and the summary of the two-day announcement period returns form this table is presented in Table 1 below.

TABLE 1

Summary of the average abnormal returns (AR) and the cumulative abnormal returns (CAR) of bidders in takeovers at the two-day announcement period. The t-statistics are in parentheses.

	Event Day	AR
	-1	-0.1005 (-0.954)
Bidders	0	-0.8915 (-8.457)**
Bidder CAR (-1,0)	-0.992 (-6.65)**	

** Significantly different from zero at 1% level

For bidders, the abnormal return on day-1 is negative ($AR = -0.1005$) but not significantly different from zero ($t = -0.954$) at 1% level, whereas the announcement day abnormal return is negative ($AR = -0.8915$) and significantly different from zero at 1% level ($t = -8.457$) (Table 1). The two-day announcement CAR is also negative ($CAR = -0.992$) and significantly different from zero at 1% level ($t = -6.65$). The results indicate that bidders' shareholders in takeovers suffer losses at the announcement of the offer. The findings of negative abnormal returns to bidders are apparently not consistent with the view that acquisitions are wealth-creating investments. However, there might be other factors dominating the positive wealth effect of acquisitions at the announcement of the offer. For example, in the enthusiasm to take over the target resources, the bidder management may have overstretched its financial and management resources result in some loss of efficiency in its current business activities, which is reflected in the share price.

There is also a possibility that bidders offer premiums that are higher than those expected

TABLE 1 (A)

Average abnormal returns (AR) and cumulative abnormal returns (CAR) of all ninety bidders for the eleven days surrounding the initial announcement.

Years 1985 through 1988.			
Day	AR	t-Score	CAR
-5	0.1017	0.965	0.1017
-4	0.1729	1.641	0.2746
-3	0.1394	1.323	0.4140
-2	0.1789	1.697	0.5929
-1	-0.1005	-0.954	0.4924
0	-0.8915	-8.457**	0.1801
1	-0.0367	-0.348	0.2167
2	-0.0743	-0.706	-0.2911
3	0.0365	0.346	-0.2546
4	0.0323	0.306	-0.2223
5	0.0823	0.782	-0.1400

** Significantly different from zero at 1% level.

by the market for targets at the announcement of the offer. Large premiums are perceived by the market as increasing the chances of the bidder not being able to realise positive expected returns in the post-acquisition period, which consequently exerts a selling pressure on the bidder shares. The pre-takeover share price can be assumed to reflect an expectation that the bidding firm will pursue investments, including acquisitions, yielding a rate of return above the minimum acceptable or the cost-of-capital rate. Thus, if the market believes that the acquisition will at best only earn the cost-of-capital, the share price can be expected to decline.

The short-selling of bidders' shares around the announcement of the takeovers by arbitrageurs could have contributed to the significant negative abnormal returns at the two-day announcement period. This action on the part of arbitrageurs exerts a downward pressure on the bidders' share price.

The significant negative abnormal returns for all bidders at the two-day announcement period in this study are not comparable with that of Barnes (1978, 1984), Dodd and Quek (1985), Utton (1974), and Franks *et al.*'s (1977) findings on returns to bidder firms in the UK, because they studied a sample of mergers rather than takeovers.

The findings are also not comparable to Franks *et al.*'s (1988) findings on bidder returns in takeovers because their sample of bidders was classified according to means of payments, and not on total bidder returns.

However, the negative announcement day returns for all bidders in this study are consistent with

the evidence from the US. For example, Langetieg (1978) Asquith (1983), Eger (1983) and Malatesta (1983) used different samples for different time periods and concluded that bidder firms earned significantly negative abnormal returns at the announcement of the offer.

Total Target Returns

This section presents the average abnormal returns and the cumulative abnormal returns for all targets in takeovers for the eleven days surrounding the announcement. The details are presented in Table 2(A) and the summary of the two-day announcement abnormal returns is presented in Table 2 below.

For target firms (Table 2), the abnormal returns on day - 1 (AR = 1.4322) and the announcement day (AR = 2.0534) are positive and significantly different from zero at 1% level. The two-day announcement CAR is also positive (CAR = 3.486) and significant different from zero at 1% level (t= 23.385). These results indicate that the target shareholders earn significant positive abnormal returns at the announcement of the offer.

TABLE 2

Summary of the average abnormal returns (AR) and the cumulative abnormal returns (CAR) of targets in takeovers at the two-day announcement period. The t-statistics are in parentheses.

	Event Day	AR
Targets	-1	1.4322 (7.844)**
	0	2.0534 (11.250)**
Target CAR (-1,0)	3.486 (23.385)**	

**Significantly different from zero at 1% level.

The positive abnormal returns to target shareholders at the announcement of the offer might be due to the expected benefits of the takeover and the large premiums offered by the bidders. Two days prior to the official announcement there is evidence of positive abnormal returns (AR = 0.2658) which are significantly different from zero at 5% level (t = 2.521), which could be due to information leakage about the offer. However this seems to be a one-sided leakage as there is no evidence of abnormal share price activity for bidders during the same period. The positive and significant two-day announcement period abnormal returns for targets in takeovers in the UK are consistent with the

TABLE 2 (A)

Average abnormal returns (AR) and cumulative abnormal returns (CAR) of all ninety bidders for the eleven days surrounding the initial announcement.

Years 1985 through 1988			
Event	Day AR	t-Score	CAR
-5	-0.0226	-0.215	-0.0226
-4	0.0400	0.380	0.0174
-3	0.1139	1.081	0.1313
-2	0.2658	2.521*	0.3971
-1	1.4322	7.844**	1.8293
0	2.0534	11.250**	3.8827
1	0.0377	0.358	3.9204
2	-0.0087	-0.082	3.9117
3	-0.0094	-0.090	3.9023
4	0.0250	0.237	3.9273
5	0.0080	0.076	3.9353

** Significantly different from zero at 1% level

* Significantly different from zero at 5% level.

findings of announcement period target returns in takeovers in the US.

Combined Total Returns

For the total sample of 90 bidders and 90 targets, shareholders of bidding firms earned significant negative abnormal returns whereas shareholders of target firms earned significant positive abnormal returns for the two-day announcement period (Table 3). The gains to target shareholders more than compensated the losses to bidder shareholders and the combined gains were positive (AR = 2.494) and significant at 1% level ($t = 4.67$). These findings are consistent with the notion that

the market recognises expected benefits from takeovers at the announcement of the offer, although a major portion of the benefits seems to accrue to the target shareholders. The distribution of expected benefits at the announcement of the offer could have been influenced by a combination of factors such as competition for the target, target management's resistance, and lack of information about the target firm and its industry.

It is expected that when the bidder is successful in acquiring the target resources and able to implement a higher valued operating strategy to exploit the expected benefits from the takeover, it will be able to earn the expected returns on its investment, which is reflected in the share price at the announcement of the offer.

However, the positive effects of expected benefits might be overshadowed by the effects of other factors operating simultaneously such as competition, target resistance, valuation error and means of payment.

The bidder's ability to realise the potential synergies in the post-takeover period will depend on how well it is able to integrate the target resources in its own organisation which requires experienced and skilful management. The market, however, gauges the bidder's ability to realise the expected benefits from the takeover from its past experience, which is discounted in the bidder's share price at the announcement of the offer.

In essence, the findings of positive combined returns in takeovers imply that the intense takeover activity in recent years is not without purpose, as wealth is created in the process which is socially and economically desirable. The positive combined

TABLE 3

Summary of the two-day announcement cumulative abnormal returns (CAR) and combined returns for targets and bidders in the cash, shares and combination offers respectively and for total targets and bidders. The t-statistics are in parentheses.

	Total Sample N= 90	Cash N=30	Shares N=30	Combination N=30
Bidders CAR (-1, 0)	-0.992 (-6.65)**	-0.257 (-0.995)	-1.256 (-4.86)**	-1.044 (-4.04)**
Targets CAR (-1, 0)	3.486 (23.385)**	3.874 (14.976)**	3.671 (14.211)**	2.911 (11.266)**
Combined Gains	2.494 (4.67)**	3.617 (3.42)**	2.415 (2.71)*	1.867 (2.03)*

** Significantly different from zero at 1% level

* Significantly different from zero at 5% level

returns also imply that takeovers are an effective means of employing resources to a higher value use and are consistent with the notion that they are an effective tool to discipline complacent managers.

The combined returns of bidders and targets in cash, share combination offers are positive and significant, implying that irrespective of the means of payment offered, takeovers are positive net present value investments.

Implication of Findings for Growth Maximisation Hypothesis

In recent years, we observe that takeovers are more frequent between firms in seemingly unrelated or loosely related businesses. Also, most acquired targets are left to operate as autonomous divisions run by the same management team that controlled them before the takeover. A probable reason for such behaviour on the part of active bidders is that firms could possibly be responding to the government's tough anti-competitive rules on takeovers.

When one firm takes over another firm in the same industry, the other firms in the industry may feel insecure and resort to defensive measures such as pursuing takeovers of other firms, even in unrelated or loosely related businesses. The process restores some sort of equilibrium in the industry in terms of relative firm size. There is an incentive to increase size because it becomes difficult and expensive for a potential bidder. The targets are usually left to manage their own business with minimum interference, possibly due to the bidder's lack of expertise in the target's business and/or the bidder's management style (i.e. strategic control or financial control type of management).

Marris (1964), Mueller (1969) and Murphy (1985) suggest that bidder managers pursue growth rather than profit objectives because size provides both pecuniary and non-pecuniary benefits to the bidder managers.

Wiedenbaum and Vogt (1987) argue that managers prefer to increase the size of their corporations because the ability of shareholders to monitor management decreases in larger and complex organisations. If most bidder managers pursue takeovers basically for growth purposes at the expense of their shareholders' interest, we can expect, on average, their combined gains to be either zero or negative.

The findings in Table 3 are not consistent with the growth maximisation hypothesis. The findings are consistent with the notion that bidders pursue takeovers with the intention of increasing wealth

rather than firm size. These findings are consistent with the activities of large conglomerates in the UK, such as BTR and Hanson Trust. Their success is attributable to the strong management team which effectively employs a 'financial-control' type of management style and pursues an effective rationalisation policy subsequent to taking control of the target resources. BTR and Hanson Trust take over firms in unrelated business, keep the most profitable part of the business and sell off the other parts which have very poor fit with their own business and are making losses. The proceeds from the sale help to recoup part of the purchase price.

In the UK, there is no published evidence of combined gains of bidders and targets in hostile takeovers, though there is evidence of combined gains of merging firms in the industrial sector provided by Firth (1980) and in the brewing and distilling sector by Franks *et al.* (1977).

However, it is not appropriate to compare the findings of combined gains of firms involved in hostile bids in this study with those of Firth or Franks *et al.* because mergers are technically different from hostile bids.

The positive significant combined gains of bidders and targets in this research do not support Roll's (1986) hubris hypothesis which postulates that takeovers are zero-sum game, that is gains to target shareholders are offset by the losses to bidder shareholders.

CONCLUSION

The two-day announcement cumulative abnormal returns of all bidders in the takeover sample is significantly negative and for targets, it is significantly positive. The negative and significant abnormal returns to bidder firms might have been due to one or more of the following factors: expected loss of efficiency in the bidder's current business operations due to management time and effort spent on pursuing the takeover; the takeover's lack of commercial or industrial logic as perceived by the market; excessive premiums offered to target at announcement which could have been due to the expected resistance from the target, competition from other potential bidders and lack of information about the target's business and its industry; short-selling of bidder's shares by arbitrageurs or due to specific-bid effect which seems not to fit into the bidder's business but is an essential part of the bidder's long-term financial strategy.

The negative abnormal returns to bidders at announcement, however, cannot imply that bidder

management are not acting in the best interests of their shareholders, because the findings do not account for the long term effect of takeovers but just the two-day announcement returns. There is also no evidence to indicate that the loss to shareholders benefits the management. It is naive to assume that bidder managers are consistently making irrational investment decisions, because if they are then they are jeopardizing own position as they would become the target of other bidders. It might be that the majority of the bidders are pursuing targets merely as a long term strategy to gain a competitive advantage in their respective markets or industries.

This view is supported by the fact that the combined gains of bidders and targets are significantly positive implying that takeovers do create wealth for the shareholders of the combined firms.

ACKNOWLEDGEMENTS

The authors acknowledge the helpful comments of Professor Simon Keane, Department of Accounting and Finance, University of Glasgow in the preparation of this paper.

REFERENCES

- Acquisitions Monthly Magazine*. January 1985 to December 1988.
- ASQUITH, P. 1983. Mergers, Bids, Market Uncertainty and Stocholder Returns. *J. Finan. Econs.* **11**: 51-83.
- ASQUITH, P. and H. KIM. 1982. The Impact of Merger Bids on the Participating Firms' Security Holders. *J. Finan.* **37**: 1209-1228.
- BARNES, P. 1978. The Effect of Mergers on Share Price of Bidding Firms. *Acc. and Bus. Res.* **9**: 162-165.
- BARNES, P. 1984. The Effect of a Merger on the Share Price of the Attacker, Revisited. *Acc. and Bus. Res.* **15**: 45-49.
- BRADLEY, M. 1980. Inter-firm Tender Offers and the Market for Corporate Control. *J. Bus.* **53**: 345-375.
- BRADLEY, M., A. DESAI and H.E. KIM. 1983. The Rationale Behind Interfirm Tender Offers: Information or Synergy? *J. Finan. Econs.* **11**: 183-206.
- BREALEY, R.A. 1979. The Efficiency of the British Capital Market, in *City Lights: Essays on Financial Institutions and Markets in the City of London*, p 20-37. London: The Institute of Economic Affairs.
- BROWN, S. J. and J.B. WARNER. 1980. Measuring Security Price Performance. *J. Finan. Econs.* **8**: 205-258.
- BROWN, S. J. and J. B. WARNER. 1985. Using Stock Returns: The Case of Event Studies. *J. Finan. Econs.* **14**: 3-31.
- COCHRANE, D. and G. H. ORCUTT. 1949. Application of Least Squares Regression to Relationships Containing the Autocorrelated Error Terms. *J. Amer. Stat. Assoc.* **44**: 32-61.
- DIMSON, E. 1979. Risk Measurement When Shares are Subjected to Infrequent Trading. *J. Finan. Econs.* **7**: 197-226.
- DODD, P. 1980. Merger Proposals, Management Discretion and Shareholder Wealth. *J. Finan. Econs.* **8**: 105-137.
- DODD, J.C. and J.P. QUEK. 1985. Effect of Mergers on the Share Price Movement of the Acquiring Firms: A U.K. Study. *J. Bus. Finan. and Acc.* **12**: 285-296.
- DODD, P. and RUBACK, R.S. 1977. Tender Offers and Stockholder Returns. *J. Finan. Econs.* **5**: 351-373.
- DODD, P. and J. WARNER. 1983. On Corporate Governance: A Study of Proxy Contests. *J. Finan. Econs.* **11**: 401-438.
- DURBIN, J. and G.S. WATSON. 1951. Testing for Serial Correlation in Least Squares Regressions. *Biometrika* **38**: 159-178.
- EGER, C. 1983. An Empirical Test to the Redistribution in Pure Exchange Mergers. *J. Finan. and Quant. Anal.* **18**: 547-572.
- FAMA, E.F., L. FISHER, M.C. JENSEN and R. ROLL. 1969. The Adjustments of Stock Prices to New Information. *Int. Econ. Rev.* **10**: 1-21.
- Financial Times Newspaper*. 1985 to 1988.
- FIRTH, M. 1980. Takeovers, Shareholder Returns and Theory of the Firm. *Quar. J. Econ.* **94**: 235-260.
- FRANKS, J. R., J.E. BROYLES and M.J. HECHT. 1977. Industry Study of the Profitability of Mergers in the United Kingdom. *J. Finan.* **32**: 1525-1531.
- FRANKS, J.R., R.H. HARRIS and C. MAYER. 1988. Means of Payment in Takeovers: Results from the U.K. and the U.S. *Nat. Bureau of Econ. Res.* p 221-258.
- GRAY, S.J. and M.C. McDERMOTT. 1989. *Mega-merger Mayhem* London: Paul Chapman.
- HUANG, Y.S. and R.A. WALKING. 1987. Target Abnormal Returns Associated with Acquisition Announcements: Payment, Acquisition Form and

- Managerial Resistance. *J. Finan. Econs.* **19**: 329-349.
- JARRELL, G.A. and A. B. POULSEN, 1989. The Returns to Acquiring Firms in Tender Offers: Evidence from Three Decades. *Finan. Mgt.* **18**: 12-19.
- JENSEN, M. and R.S. RUBACK. 1983. The Market for Corporate Control: The Scientific Evidence. *J. Finan. Econs.* **11**: 5-50.
- LANGETIEG, T.C. 1978. An Application to Measure Three Factor Performance Index to Measure Stockholder Gains from Mergers. *J. Finan. Econs.* **6**: 365-383.
- LIMMACK, R.J. 1989. *Corporate Mergers and Shareholders Wealth Effects: 1977-1986*. Draft report for the Economic and Social Research Council, Centre for Investment Management, University of Stirling.
- MADDALA, G. S. 1977. *Econometrics*. New York: McGraw Hill.
- MALATESTA, P.H. 1983. Wealth Effect of Merger Activity and the Objective Functions of Merging Firms. *J. Finan. Econs.* **11**: 151-181.
- MANDELKER, G. 1974. Risk & Returns: the Case of Merging Firms. *J. Finan. Econs.* **1**: 305-335.
- MARRIS, R. L. 1964. *The Economic Theory of Managerial Capitalism*. London: MacMillan.
- MCCONNELL, J.J. and C.J. MUSCARELLA. 1985. Corporate Capital Expenditure Decisions and the Market Value of the Firm. *J. Finan. Econs.* **14**: 399-422.
- MUELLER, D.C. 1969. Theory of Conglomerate Mergers. *Quar. J. Econs.* **83**: 643-659.
- MURPHY, K. J. 1985. Corporate Performance and Managerial Remuneration: An Empirical Analysis. *J. Acc. and Econs.* **7**: 11-42.
- NEWBOULD, G. D. 1970. *Management and Merger Activity*. Liverpool: Guthstead.
- RAPPAPORT, A. 1986. *Creating Shareholder Value: The New Standard for Business Performance*. London: Collier Macmillan Publishers.
- RAPPAPORT, A. 1987. Converting Merger Benefits to Shareholder Value. *Mergers and Acquisitions* **21**: 49-55.
- ROLL, R. 1986. The Hubris Hypothesis of Corporate Takeovers. *J. Bus.* **59**: 197-216.
- SCHIPPER, K. and R. THOMSON. 1983. Evidence on Capitalised Value of Merger Activity for Acquiring Firms. *J. Finan. Econs.* **11**: 85-119.
- SINGH, A. 1971. *Takeovers: Their Relevance to the Stock Market and the Theory of the Firm..* London: Cambridge University Press.
- SINGH, A. 1975. Takeovers Economic Natural Selection, and the Theory of the Firm: Evidence from the Post-war United Kingdom Experience. *Econ. J.* **85**: 497-515.
- TRAVLOS, N.G. 1987. Corporate Takeover Bids, Methods of Payments and Bidding Firm Stock Returns. *J. Finan.* **42**: 943-963.
- UTTON, M.A. 1974. On Measuring the Effects of Industrial Mergers. *Scot. J. Ptl. Econ.* **21**: 13-28.
- WESTON, J.F. and T.E. COPELAND. 1988. *Managerial Finance*. Adapted by R.J. Limmack and A.L. Fox, 2nd edn. London: Cassell Educational Limited.
- WIEDENBAUM, M. and S. VOGT. 1987. Takeovers and Stockholders: Winners and Losers. *Calif. Mgt. Rev.* **29**: 157-168.

(Received 20 June, 1991)