provides an interesting contrast. The term appears in lists of takeover words but the authors of this article have never heard anyone use it. It is not surprising that the term was

The New Palgrave Dictionary of Money & Finance

Edited by: Peter Newman, Murray Milgate, & John Eatwell

#3(N-Z)

The Macmillan Press Limited, London

The Stockton Press, New York

©1992

(pp. 638-645)

Pac-Man' takeover defense. *Legal Times*, 18 April: 27.
Herzel, L. and Shepro, R.W. 1990. *Bidders and Targets: Mergers and Acquisitions in the U.S.* Oxford and Cambridge, Mass.: Basil Blackwell.
Lewis, M. 1989. *Liar's Poker*. New York: W.W. Norton.
Mortimer, J. 1988. Rumpole and the barrow boy. In *Rumpole and the Age of Miracles*, London: Penguin Books.
Observer. 1987. Serious moneyspeak. *Observer*, 29 March, London.

takeovers. A takeover is a transaction that transfers ownership of a firm, often changing its management and policies. Takeovers have effected major organizational restructuring in different industries and periods. Whether these changes are on the whole desirable has been the topic of contentious debate. Takeovers are also of great scientific interest: since both initiation and resistance decisions have large effects on a firm's value, takeovers generate unique data about agency problems and cognitive biases in managers' decisions.

Important forms of takeover are merger, tender offer and leveraged buyout (LBO). While merger bids to target management are 'friendly', tender offers to shareholders can be used to bypass management. Leveraged buyouts are often management-led, but hostile LBOs occur as well.

This essay will address some important issues associated with takeovers, focusing primarily on the situation in the United States. First, what explains the salient fact that sellers ('targets') on average earn large stock returns over the transaction period (on the order of 20–30 percent), while bidder returns are relatively small, with both positive and negative means reported in different samples? Second, is the underlying value of the cash flows of the combined entity increased by takeovers? Third, do takeovers redistribute wealth between different security holders or stakeholders? Fourth, what explains waves of takeovers during different periods? And fifth, how does regulation of the takeover process, including bidder strategies and target resistance, affect the outcome of the takeover process and the welfare of those involved?

I will begin by discussing the reasons for and consequences of takeovers in Section 1. Section 2 examines the estimation of takeover gains. Section 3 examines strategic issues in the takeover process. Section 4 concludes.

1 REASONS FOR AND CONSEQUENCES OF TAKEOVERS

VALUE IMPROVEMENT. *Scale economies and complementarities.* Takeovers can exploit 'synergies' (scale economies or complementarities) from combining a 'target' (seller) and a 'bidder' (buyer). Alternatives to takeover are the purchase of the target's assets and headhunting of its employees. A takeover transaction, however, preserves indivisible organizational capital.

Complementarity should generally (though not always) be most important for firms in closely-related businesses. Thus, the two major waves of US takeover activity in recent decades – the conglomerate wave of the 1960s, in which large firms were formed that combined divisions in diverse lines of business, and the wave of hostile bust-up takeovers and LBOs with asset sales that occurred in the mid-1980s – are not explained by complementarity.

Scale economies provide a second possible motive for takeover if there are benefits from eliminating duplication in R&D, distribution and marketing. Consistent with this idea, the 1960s conglomerate merger wave occurred during a period of strict antitrust restrictions on horizontal mergers.

Dissimilarity leads to a third motive: diversifying risks. This should enable the firm to reduce costs of financial distress, and obtain greater interest tax deductions by increasing debt. Evidence of greater leverage after merger without bondholder losses (from default risk) is consistent with this effect, but also with other sources of value increase from merger (Kim and McConnell 1977).

Fourth, diversification may offer advantages in capital allocation. Financing a growing division from the revenues of a mature 'cash cow' division provides a personal tax-deferral benefit compared to the payment of taxable dividends for reinvestment in a separate growth firm. Furthermore, the central office of a conglomerate may be better-positioned to supervise divisions and make capital supply decisions than would outside investors in stand-alone divisions. However, such a gain to conglomeration could easily be outweighed by the additional agency or adverse selection

problem at the level of the central office, which itself may require outside supervision.

None of these scenarios explains the empirical finding that most or all takeover gains accrue to targets, not bidders. Thus, these explanations would seem to be incomplete. In summary, while technical efficiencies and tax benefits are important for some takeovers, it is unlikely that these explain the two major waves of takeovers in recent decades.

Remedying inefficient target behaviour. The most important role of takeovers is probably to remedy inefficient behaviour by target managers. For example, target managers may over-expand their domains of power and multiply perquisites and privileges. Even apart from a conflict of goals between managers and shareholders, some managers are prone to mistakes. Compensation contracts and supervision by the board of directors help to motivate managers. However, these mechanisms are imperfect. The theory of contracts suggests that inefficiencies are unavoidable because of the private information of managers, their risk aversion, wealth constraints and ability to switch jobs.

Furthermore, contracts and dismissal policies are themselves designed by the board of directors. The board usually cooperates with managers (as constrained by shareholder lawsuit, proxy fight or takeover). Since dismissals are rare, managers tend to be insulated from the consequences of poor performance.

Since diffuse shareholders are only weakly motivated to evaluate the firm's policies, managers under shelter of the business judgement rule can over-indulge in profit-reducing activities. Takeovers are an important substitute for supervision by the board of directors. Hostile takeovers are most likely to occur when the firm and its industry do poorly, suggesting that takeovers force the firm to cut slack (e.g., Morck et al. 1988). In fact, ownership changes in manufacturing plants have remedied low productivity, and have reduced the ratio of central-office to plant employees (Lichtenberg and Siegel 1987).

High leverage can also reduce perquisite-taking and excess investment (Grossman and Hart 1982; Jensen 1986). Takeover is often associated with increased debt. A possible explanation is that prior to takeover target managers kept debt low to preserve the financial capacity to over-spend. In the 1980s many potential targets increased leverage to pre-empt the threat of takeover. Leveraged buyouts, which are often initiated when an outside bid is impending, seem to reduce the agency problems associated with free cash flow (Lehn and Poulsen 1989; Opler and Titman 1991).

It has been alleged that corporations tend to over-invest free cash flow, and that takeovers help remedy this problem. On the other hand, takeovers have been blamed for causing 'short-termism', that is, an excessive preference for current over future cash flows, presumably leading to *under*-investment. In reality, the hostile takeovers of the 1980s were not on average followed by reduced investment (Bhide 1989; Bhagat et al. 1990). The effect of takeovers in general on R&D spending is unclear. One study found that R&D spending was reduced only to the extent that it was associated with increases in leverage (Hall 1990). However, management-led LBOs were associated with cuts in capital expenditures, but not in advertising, maintenance or R&D (Smith 1990). A likely explanation is that the debt used in LBOs is usually paid down rapidly through asset sales. In summary, the evidence suggests that the economies achieved by hostile takeovers come from cutting costs and reallocating resources rather than cutting total investment levels.

REASONS FOR VALUE-REDUCING TAKEOVERS. Like surgery, takeovers can kill as well as cure.

Bidder agency problems and hubris. Takeover itself may be a managerial indulgence, or may result from over-optimism. Acquirers whose stock prices react negatively to offer announcements often themselves become targets of hostile offers later, suggesting that some takeovers are perceived by the market as errors (Mitchell and Lehn 1990).

Most bidders probably do not knowingly make bad acquisitions, since most bidder managers increase their personal shareholdings prior to acquisition (Seyhun 1990). Nevertheless, proper motivation of managers of bidding firms seem to be a serious problem, since bidder stock returns are higher when bidder management shareholdings are greater (Lewellen et al. 1985).

The above study illustrates that one way to identify the factors leading to good and bad takeovers is to relate stock returns either to prior performance or to measures of the severity of agency problems. A weakness of such tests is that stock returns reflect not only takeover gains, but information revealed about stand-alone value (see Section 2). Nevertheless, several studies are suggestive.

Both bidder and target returns are highest when the bidder's prior performance or its quality as perceived by the market is high, when the target's performance or perceived quantity is low, and when the target's rate of growth is low (Lang et al. 1989; Morck et al. 1990). These results suggest that good bidders improve bad targets, while bad bidders inefficiently prefer rapidly growing targets.

The suspicion that bidding managers have non-value motives is strong for diversifying acquisitions, because these help diversify a manager's human capital risk, and because a closely-related bidder can probably supervise a target more expertly. In one study, diffusely-owned firms were more likely to diversify than firms with a large shareholder to monitor decisions (Amihud and Lev 1981). Several studies find lower average bidder returns in acquisitions of dissimilar targets. Conversely, firms that narrowed their focus to fewer lines of business in the 1980s on average earned positive abnormal returns (Comment and Jarrell 1991).

There are, however, alternative explanations for low bidder returns in acquisitions of dissimilar targets and of high-growth or high-performance targets. First, even good managers may be more error-prone in such acquisitions. Second, such acquisitions may reveal the bad news that the bidder lacks investment opportunities in its current business. Third, acquisitions that entail long-term strategic shifts may defer resolution of uncertainty about the skill of bidding management. If so, then for reputational reasons low-ability managers (or managers of bad firms) will be more disposed to make such acquisitions, so the announcement will be bad news (Hirshleifer and Chordia 1991).

If raising capital is costly, then bidders with more cash will

be more prone to make bad acquisitions, and to pay too much for them. (This is one possible rationale for the free cash flow theory of Jensen 1986.) On the other hand, such firms will also have lower financing costs, so the relation between bidder cash flow and stock returns is not obvious. Higher bidder cash flow seems to be associated with lower bidder stock return among bidders with poor investment opportunities, but does not raise the targets' returns (Lang et al. 1991).

Evidence relating to divestitures gives a further indication that diversifying acquisitions were based in part on non-value motives. The assets of hostile targets in the mid-1980s were often detached or sold to firms with related assets (Bhagat et al. 1990). The large profits reaped by managers and shareholders in LBOs designed to effect asset sales indicate that, prior to buyout, managers had knowingly remained over-diversified. Similarly, target managers often block bust-up bids that would greatly increase target shareholder wealth, presumably to preserve personal control benefits. So it seems likely that such managers were also willing to impose costs on shareholders in the process of building their control benefits by diversifying.

Although divestiture can reveal failure of the original acquisition, the two should not be equated. Complementarities may be transient, and a poorly-run division can be revitalized and sold. Furthermore, acquisition can be profitable in anticipation even if later failure is common. In fact, many acquisitions divested in the 1980s seem to have been successful (Kaplan and Weisbach 1992). Nevertheless, the failure of some acquisitions seems to be predicted by the market (the bidder's initial stock price declines). The completion of such acquisitions suggests that many managers have non-value motives, or cannot recognize their errors.

In summary, managerial motives or biases do seem to drive bad acquisitions, but the statistical evidence is mostly indirect. More specific empirical work is needed to link the success of takeovers to particular managerial motives and cognitive limitations.

Wealth redistribution from target shareholders, bondholders and other stakeholders. Given the large premia obtained by target shareholders, it is unlikely that they are often hurt by takeover. Bidders could try to select targets that are grotesquely undervalued. But if this were the primary motive for takeover, then defensive measures (such as poison pills) that hindered low-priced sales would be good news, which is not the case. Only for management buyouts (MBOs), in which the offer comes from a team led by target management, does redistribution away from target shareholders seem like a significant possibility.

Bondholders could be hurt by increased leverage in takeovers but could gain from risk diversification. Early studies found little evidence of bondholder losses. LBOs in the 1985–8 period hurt bondholders, though by less than shareholders gained (Asquith and Wizman 1990; Warga and Welch 1991).

Stakeholders of the firm who do not hold securities, such as suppliers, employees, customers and tax collectors, may also be hurt by takeovers. Workers and pensioners are sometimes hurt by takeovers, though the evidence is mixed. Generally there is little evidence of blue-collar lay-offs and wage cuts; studies of hostile takeovers find cutbacks in white-collar employment, though these explain a fairly small part of premia. Cutbacks presumably improve efficiency as well as transferring wealth.

If stakeholders make non-recoverable specific investments and lack contractual protection, they may subsequently be expropriated by the firm. For example, a firm can fire workers, cut their wages or reduce their pension benefits. The ability to commit to implicit contracts can then increase a firm's value by promoting firm-specific investments by workers. Equityholders can commit by hiring managers who are benevolent toward stakeholders. Takeovers can remove such managers in order to breach implicit contracts with stakeholders. While efficient *ex post*, this is undesirable *ex ante* (Shleifer and Summers 1988).

The importance of implicit commitment is hard to assess. The mere fact of wage cuts and lay-offs after some hostile takeovers says little about the validity of the breach-of-promise theory. Pay and job security can, after all, be guaranteed explicitly. To confirm the theory, it must be determined whether protection is both desirable and non-contractable.

Takeovers can also shift wealth from consumers to sellers in oligopolistic markets. Although the issue of market power in general is much debated, the evidence from stock price reactions to announcements in merger transactions suggests little anti-competitive effect (Eckbo 1985).

Taxes can be reduced by merging a high-earnings firm with one with losses or expiring tax credits. Higher debt levels increase corporate interest deductions, raise personal interest and reduce dividends and capital gains. Greater efficiency and profits will increase corporate taxes. Some studies have found tax considerations to be an important source of takeover gains, although the topic is debated.

In conclusion, takeovers, being vehicles for major economic restructuring, have important distributive effects. Since improvement requires change, this should not be viewed as a ruinous drawback, so long as redistribution away from stakeholders remains only a secondary consideration. Of course, if takeover premia represent redistribution from *bidder* shareholders, as discussed in the section on bidder agency problems above, then the transactions would be inefficient.

TAKEOVER THREATS. The takeover market profoundly affects many non-transacting firms. Takeover threats can distort the behaviour of potential targets by motivating managers to build a good reputation in the short run, even at the expense of long-run profitability. It has frequently been alleged that such threats cause 'short-termism' among potential targets (Stein 1988). However, the very limited available evidence does not support this view, and there are reasons to expect that takeover threats will sometimes pressure managers to favour *long-term* cash flows (see REPUTATION, INCENTIVES AND MANAGERIAL DECISIONS).

The threat of takeover also affects supervision by directors, who could become more lenient in order to exploit acquirers' information, or stricter in order to avoid dismissal (Hirshleifer and Thakor 1991). The most important effect of takeover threats is probably the deterrence of expensive managerial indulgences. Deterrence is socially cheaper than

takeover but occasionally target managers may need to be beheaded 'pour encourager les autres'.

2 ESTIMATING TAKEOVER GAINS

INTERPRETING STOCK RETURNS. Care is required in drawing inferences from stock returns about underlying value improvements from takeovers. First, the stock market can be wrong, particularly over short time periods. Second, takeover announcements are often anticipated, as evidenced by substantial target price run-ups prior to offer announcements, and bidder stock price increases on announcements of acquisition programmes (Schipper and Thompson 1983). Third, stock price movements reflect a revelation effect, about the firm's stand-alone value, of the takeover bid. This last point is crucial, because it means that even if the weighted average of bidder and target stock returns is positive, the underlying improvement in the value of cash flows brought about by takeover could be negative (or *vice versa*). I therefore discuss next what information a takeover bid can reveal about targets and bidders.

If bidders are skilful at locating undervalued targets, then a bid will cause a rational stock market to revise upwards its assessment of the stand-alone value of the target. Evidence from both stock prices and earnings forecasts suggests that this does not occur on average (Bradley et al. 1983; Pound 1988).

A bidder is of course more likely to convey information about itself than about the target, simply because its managers are better informed about their own firm than any other. The very fact that the bidder can afford the offer is likely to be good news. An offer could be good or bad news about the bidder's management. The desire of a bidder to pay with equity shares may indicate pessimism about the value of its shares. In fact, the generally negative stock returns of US equity issuers carries over to equity-financed takeovers (Franks et al. 1988 and references therein).

MAGNITUDE OF TAKEOVER LOSSES OR GAINS. The 'hubris hypothesis' asserts that takeovers result solely from bidders mistakenly overvaluing targets, and that takeovers do not improve underlying value (Roll 1986). Despite the large returns to targets over the transaction period, it is not obvious that this contention can be rejected. Since bidders are on average several times larger than their targets, measured target gains might come at the expense of bidding shareholders.

Combined bidder/target returns were indeed positive and constant from 1963 to 1984 (Bradley et al. 1988), suggesting superficially that takeovers improve underlying value. However, these returns might merely reflect favourable reassessment of the bidder's stand-alone value.

A purer estimate of an initial bidder's gain from takeover can be obtained from its stock price change on the arrival of a competing offer, since this event should not cause reassessment of the initial bidder's stand-alone value. Estimates based on competing bids indicate that tender offers lead on average to substantial improvements in the underlying value of the combined firm (Bhagat and Hirshleifer 1991).

DIVISION OF TAKEOVER LOSSES OR GAINS. A plausible explanation for the unequal division of gains between bidder and target is that managers value control. Bidders pay to build empires, while target managers demand a high price to relinquish control. Alternatively, bidders may be too optimistic. The negative average stock returns to merger bidders associated with successful completion of their offers tends to suggest that the market believes that bidders are paying too much, but results for tender offers are mixed (Roll 1986). Bidder returns are negatively correlated with the premium, suggesting that when they pay a lot they pay too much (Firth 1980). There also seems to be a winner's curse in bank auction acquisitions that becomes more damning when there are more bidders (Giliberto and Varaiya 1989).

3 THE TAKEOVER PROCESS

THE FREE-RIDER PROBLEM IN TENDER OFFERS. Suppose there is a bidder who can improve the value of a target. Because of a free-rider problem, target shareholders may rationally reject a bid even at a substantial premium over the current market price (Grossman and Hart 1980). Paradoxically, if the bidder expects a profit from buying a target share, then a target shareholder who is too small to affect the outcome can similarly profit by retaining that share instead of tendering. Thus, the only way for a bidder to succeed in the face of this free-rider problem is to offer a price so high that his expected profits (net of costs) are negative.

There are three key assumptions of this argument. First, that the target is so diffusely held that a single shareholder's decision to tender has virtually no effect upon the probability of the bidder obtaining control. A large blockholder will tender his shares more cheaply, because his individual failure to tender would reduce the expected value of his shares by reducing the probability of the bidder obtaining control. Second, that the bidder cannot dilute the value of untendered shares after takeover. In reality, opportunities for substantial dilution are usually present: by forcing a merger at a low price ('freeze-out merger'), sale of the target's assets to the bidder at low prices, and restricting target output in a market shared by the bidder. The threat of dilution encourages shareholders to tender at a lower price. The third assumption is that the bidder is initially not a shareholder of the target. If he is, then even if he does not on average profit on the additional purchased shares, he can gain by improving the value of the shares owned prior to the tender offer (Shleifer and Vishny 1986). However, estimates suggest that such profits seldom cover the costs of the tender offer (Bhagat and Hirshleifer 1991).

Since the bidder generally knows his plans for reorganization better than target shareholders, he will usually be better-informed about the post-takeover value of the target (Shleifer and Vishny 1986). If so, then a target shareholder cannot be sure whether it is in his interest to tender. Informational asymmetry, by making shareholders sceptical about the adequacy of the offer, thus tends to cause offer failure. A bidder who can effect only a small improvement would be expected to offer a low price, which is frequently rejected. Since failure is more costly to a high-improvement bidder than a low one, a high bidder should offer more to ensure success (Hirshleifer and Titman 1990). The

equilibrium based on this notion is consistent with evidence that a high offer premium, large initial bidder shareholding, and solicitation activity all promote offer success (Walkling 1985).

COMPETITIVE BIDDING. Takeovers often involve auctions in which two or more bidders compete for a target. The possibility of competition has important effects on the strategies of the initial bidder and target management. Most research on bidder competition has focused on merger bids rather than tender offers, ruling out the free-rider problem. Instead, it is assumed that the target accepts the highest offer so long as the premium is positive.

If bidders have common valuations, a target may find that uninformed bidders are reluctant to compete against an informed one. Thus, the target may gain from restrictions on counter-offers by the informed bidder (Giammarino and Heinkel 1986), which provides a possible justification for target managers to resist offers.

Fishman (1988) provides a theory of competition in which a first bidder can bid high to deter costly investigation by a second bidder. The second bidder's investigation gives him information about his private valuation of the target. A first bidder with low valuation will bid low, leading to investigation and competition by the second bidder. A first bidder with high valuation bids just enough to pre-empt investigation. This analysis explains why first bidders offer substantial premia rather than bidding low until competitors arrive.

Takeover auctions have often been viewed as so-called English auctions, in which an object is sold to the highest-valuation bidder at a price close to the second-highest valuation. This occurs because losing bidders costlessly bid up to their valuations. A line of research following Fishman's model has assumed that once a second bidder investigates, the English auction solution obtains.

This solution, being based on small bidding increments, may be a poor approximation for the takeover bidding process, which usually involves large discrete jumps (even after the first bid). Analytically, the outcome of bidding contests changes radically if there are even small positive costs of bidding and rebidding (Hirshleifer and Png 1990). Such costs include financing, underwriting, legal and accounting expenses, plus the opportunity cost of managers' time. This point is easiest to illustrate in an example with complete information. Suppose two bidders have known valuations of \$100 and \$50 for a target whose current market value is normalized at zero. In the conventional solution, the target is sold for \$50. But with a bid cost of \$1, the target will be sold at a price of \$0, because there is no reason for the \$50 bidder to incur the \$1 cost when he is sure to lose.

If positive bidding costs (not just investigation costs) are added to Fishman's model, competition can occur even after a first offer is made at a substantial premium. In reality, this frequently occurs (Spatt 1989). Consistent with both a costless and a costly bidding analysis, higher bids are associated with a lower probability of competing offers (Jennings and Mazzeo 1991).

Fishman's theory further implies that a lower investigation cost increases the expected price at which the target is sold, because a first bidder is compelled more often to accommodate competition. This conclusion can fail when bidding is costly. Even if a competing bidder appears, the target may be sold cheaply because a bidder can be intimidated into withdrawing at a low price.

The Williams Act of 1968 and related legislation requires disclosure and delay by tender offer bidders, reducing competitors' cost of investigating. The Williams Act was followed by a decrease in premia paid in cash tender offers, although five years later a long-term trend in growth began, presumably owing to other causes (Nathan and O'Keefe 1989). The initial decrease is consistent with a costly-bidding model but not with the costless-bidding one.

In summary, bidding and defensive strategies are shaped by the possibility of competing offers. Efforts to understand these issues better should take into account costs of the bidding process.

PRE-OFFER SHARE ACQUISITION STRATEGIES. A bidder must disclose his shareholding in the target at the time of a tender offer. It would seem profitable for a bidder to accumulate target shares secretly before announcing his bid, as limited by market liquidity and disclosure rules (Kyle and Vila 1991). The failure of most acquirers to buy shares prior to an offer is therefore anomalous. At least three motivations for limiting share purchases have been offered: (1) to avoid seeming too eager, which could make a given offer price seem unattractive (Jegadeesh and Chowdhry 1990); (2) to keep the pre-offer share price low, if this price constrains dilution in a freeze-out merger (Ravid and Spiegel 1991); and (3) to signal friendly intent.

MANAGERIAL RESISTANCE. A vast array of defensive strategies have been developed, mostly in the last decade. Amendments to the corporate charter (shark repellents), which require shareholder approval, include super-majority rules, fair price amendments, dual-class recapitalizations, shifts to staggered board terms and shifts from a cumulative voting system. Other strategies can be adopted unilaterally by management, such as litigation against the bidder, targeted block stock repurchases (greenmail), poison pills, poison puts, campaigning for state anti-takeover regulation, share repurchase and leveraged recapitalization. Defensive restructuring (including lock-up agreements, acquisition to create antitrust problems for the bidder and the sale of assets) has important direct effects on a firm's activities even apart from control consequences.

Given large target gains from takeovers, one expects a negative stock price reaction to defensive measures that block takeover. However, resistance can also be used to bargain up the price. Furthermore, an anti-takeover proposal by target management may reveal that an offer is imminent. Empirical studies suggest that defensive measures tend to be associated with negative or zero abnormal returns, with a more negative tendency for measures that do not require shareholder approval. On average returns to anti-takeover charter amendments are negative (Bhagat and Jefferis 1991). Among unilateral measures, average returns are negative for greenmail and standstill agreements, share repurchases, defensive restructuring and poison pills (Bradley and Wakeman 1983; Denis 1990; Dann and DeAngelo 1988; Ryngaert 1988; Malatesta and Walkling 1988). The

anti-shareholder nature of poison pills is underscored by the low shareholdings of adopting managers.

It can be hard for shareholders to know if a manager is resisting takeover because of favourable information about value or to protect a control benefit. However, takeover resistance on average leads to a downward reassessment of the target's stand-alone earnings prospects (Pound 1988), possibly owing to costs of resistance. If resistance reveals adverse information, it is theoretically possible that defensive measures performed in shareholders' interests could be followed by a stock price drop. Nevertheless, the weight of the evidence on defensive strategies indicates that target managers resist even good takeovers. Furthermore, even defensive measures that benefit target shareholders *ex post*, by raising the premium, can hurt them *ex ante* by deterring an initial bid.

Defensive measures may be categorized according to their effects on the strategic structure of the tender offer game. Blocking strategies directly prevent acquisition; direct cost strategies impose contest-related costs on the bidder (e.g. litigation). Contingent cost strategies impose greater costs on the bidder if his offer succeeds. Examples include value-reduction strategies, which reduce the value of non-tendered target shares, and poison pills, which can increase the value of non-tendered shares.

These strategies affect the way that target shareholders evaluate an offer. A threat to block any bid below a critical value can force a high bid, making shareholders *more* willing to tender. A poison pill that redistributes wealth from the bidder to other shareholders in the event that the bid succeeds reduces the incentive to tender.

A value-reduction ('scorched earth') strategy that reduces post-takeover value will induce target shareholders to tender at a lower price. To the extent that information asymmetry is a cause of offer failure, a value-reduction strategy could either promote or hinder offer success depending on whether it eliminates a source of improvement whose value is known only by the bidder or is known by target shareholders as well (Hirshleifer and Titman 1990).

Pre-emption of a bidder's planned improvement also reduces the bidder's gain from succeeding. A possible example is defensive share repurchase, which distributes cash flow that might otherwise be used inefficiently. Thus, after an offer arrives, repurchase could increase the stand-alone value of the target, yet cause a stock price decrease by deterring takeover. Consistent with this possibility, even in contests where repurchase blocks takeover, final target value on average exceeds the pre-contest value. There are alternative signalling and market liquidity theories consistent with this result (Bagnoli et al. 1989; Bagwell 1991). However, consistent with the pre-emption theory, repurchases that block takeover are often followed by major target restructuring (Denis 1990).

MEANS OF PAYMENT. Paying with equity (or risky debt) rather than cash is cheaper for a bidder whose value or potential gain from takeover is low, so the offer of cash signals high value. Both equity and cash can have strategic advantages (Berkovitch and Narayanan 1990 and citations therein).

Surprisingly, the US experience of low bidder returns for stock offers does not hold for offers in France, the UK or Canada (Eckbo et al. 1990 and citations therein). Since regulation delays stock offers more than cash offers, subtle interactions are likely between the means of payment and the prospect of resistance and competition.

THE STRATEGIC ROLE OF DEBT AND MANAGERIAL SHARE OWNERSHIP. Capital structure is strategically important in takeover contests, because: target debt makes it harder for the bidder to buy a majority of voting rights; debt reduces the gains that an acquirer can capture by improving the target; and bidder debt can commit the bidder to making a high bid.

Debt-financed repurchase can allow target management to hold a greater fraction of total votes with a given amount of invested wealth. In Harris and Raviv (1988), a higher managerial shareholding increases the incumbent's probability of retaining control, but also his monetary cost of retaining control. In Stulz (1988), as the manager's shareholding increases, other target shareholders lose from a reduced probability of takeover, but benefit from a higher premium in the event of success. In Israel (1991), risky debt forces the bidder to share gains with target debtholders.

Shareholders of the bidder can gain at the expense of old debtholders by issuing new debt for a risky acquisition. Thus, initial leverage commits the firm to bid aggressively, which can deter competing bidders. However, overbidding can occur if a competitor enters nevertheless (Chowdhry and Nanda 1991).

Share ownership has several interacting effects upon the incentives and capabilities of target managers: (1) it can motivate management, reducing the need for takeover, (2) it can entrench the manager, increasing the need for takeover, (3) it can motivate the manager to accept offers, and (4) it can increase the manager's ability to block a takeover.

It is not clear which of these effects is most important. Several studies have related management ownership to the probability of receiving an offer, resistance, offer success, and returns. The results with regard to (1)–(4) appear to conflict; but they are hard to interpret, given that ownership is itself determined by unmeasured parameters.

REGULATION OF THE TAKEOVER PROCESS. I focus here on the takeover process, and will not attempt to address anti-trust issues. The free-rider argument early in Section 3 suggests that it may not be profitable for a bidder to identify improvements and undertake a takeover. Opportunities for dilution have been reduced in recent years by the ability of target management to erect powerful defences (such as poison pills), and by recent state antitakeover laws. Furthermore, the disclosure and delay requirements of the Williams Act, as discussed earlier, help competing bidders identify the target by observing the initial bid instead of investigating independently. Since offers tend to arrive in clumps, such informational free-riding seems to be important.

In view of all these deterrents to initial takeover bids, the popularity of takeovers is impressive. A partial explanation may be that bidders are prone to errors and fads. A rather different explanation is that inefficiency is so widespread

that many large improvements can be identified at modest cost.

Given the arrival of an offer, management defensive activity is often not in the interest of target shareholders (see the section on managerial resistance above). Since defensive strategies are costly, and the benefit to target shareholders of driving up the price is a redistribution from the bidder, *a fortiori* much defensive activity is socially undesirable. From an *ex ante* viewpoint, the prospect of resistance deters investigation and offers. Thus, if (as seems likely) hostile takeovers are largely value-enhancing, then mild regulation of bidders and tough regulation of target resistance and delay may be in order.

4 CONCLUSION

Feeble supervision of corporations often leads to mismanagement. Takeovers are an imperfect treatment for this disease. Nevertheless, they play a crucial role in remedying poor performance. Thus, a vigorous takeover market may be an important safeguard against economic mediocrity.

DAVID HIRSHLEIFER

See also ACQUISITIONS; COMMON STOCK REPURCHASE; CORPORATE TAKEOVERS; FOREIGN TAKEOVERS; JUNK BONDS; LEVERAGED BUYOUTS; MANAGEMENT BUYOUTS; MARKET FOR CORPORATE CONTROL; MERGERS; REGULATION OF TAKEOVERS; REPUTATION, INCENTIVES AND MANAGERIAL DECISIONS; SHORT-TERMISM; STAKEHOLDERS; TAKEOVER DEFENCES; TENDER OFFERS; WINNER'S CURSE.

BIBLIOGRAPHY

Amihud, Y. and Lev, B. 1981. Risk reduction as a managerial motive for conglomerate mergers. *Bell Journal of Economics* 12: 605–17.

Asquith, P. and Wizman, T.A. 1990. Event risk, covenants and bondholder returns in leveraged buyouts. *Journal of Financial Economics* 27(1): 195–214.

Bagnoli, M., Gordon, R. and Lipman, B.L. 1989. Stock repurchase as a takeover defense. *Review of Financial Studies* 2(3): 423–43.

Bagwell, L.S. 1991. Share repurchases and takeover deterrence. *Rand Journal of Economics* 22(1): 72–88.

Berkovitch, E. and Narayanan, M.P. 1990. Competition and the medium of exchange in takeovers. *Review of Financial Studies* 3: 153–74.

Bhagat, S. and Hirshleifer, D. 1991. Estimating value improvements from takeover. Working paper, UCLA, August.

Bhagat, S. and Jefferis, R. 1991. Voting power in the proxy process: the case of antitakeover charter amendments. *Journal of Financial Economics*, forthcoming.

Bhagat, S., Shleifer, A. and Vishny, R. 1990. Hostile takeovers in the 1980s: the return to corporate specialization. *Brookings Papers on Economic Activity*, special issue: 1–72.

Bhide, A. 1989. The causes and consequences of hostile takeovers. *Journal of Applied Corporate Finance* 2: 36–59.

Bradley, M., Desai, A. and Kim, E.H. 1983. The rationale behind inter-firm tender offers: information or synergy? *Journal of Financial Economics* 11: 183–206.

Bradley, M., Desai, A. and Kim, E.H. 1988. Synergistic gains from corporate acquisitions and their division between the stockholders of target and acquiring firms. *Journal of Financial Economics* 21: 3–40.

Bradley, M. and Wakeman, L. 1983. The wealth effects of targeted share repurchases. *Journal of Financial Economics* 11: 301–28.

Chowdhry, B. and Nanda, V. 1991. The strategic role of debt in takeover contests. *Journal of Finance*, forthcoming.

Comment, R. and Jarrell, G.A. 1991. Corporate focus and stock returns. Working paper, University of Rochester, May.

Dann, L. and DeAngelo, H. 1988. Corporate finance policy and corporate control: a study of defensive adjustments in asset and ownership structure. *Journal of Financial Economics* 20: 87–127.

Denis, D.J. 1990. Defensive changes in corporate payout policy: share repurchases and special dividends. *Journal of Finance* 45(5): 1433–56.

Eckbo, B.E. 1985. Mergers and the market concentration doctrine: evidence from the capital market. *Journal of Business* 58: 325–49.

Eckbo, B.E., Giammarino, R. and Heinkel, R. 1990. Asymmetric information on and the medium of exchange in takeovers: theory and evidence. *Review of Financial Studies* 3: 651–76.

Firth, M. 1980. Takeovers, shareholder returns and the theory of the firm. *Quarterly Journal of Economics* 94: 235–60.

Fishman, M.J. 1988. A theory of pre-emptive takeover bidding. *Rand Journal of Economics* 19(1): 88–101.

Franks, J., Harris, R. and Mayer, C. 1988. Means of payment in takeovers: results for the United Kingdom and the United States. In *Corporate Takeovers: Causes and Consequences*, ed. A. Auerbach, Chicago: University of Chicago Press.

Giammarino, R.M. and Heinkel, R.L. 1986. A model of dynamic takeover behavior. *Journal of Finance* 41: 465–81.

Giliberto, S.M. and Varaiya, N.P. 1989. The winners curse and bidder competition in acquisitions: the evidence of failed bank auctions. *Journal of Finance* 44: 59–75.

Grossman, S.J. and Hart, O.D. 1980. Takeover bids, the free-rider problem, and the theory of the corporation. *Bell Journal of Economics* 11: 42–64.

Grossman, S.J. and Hart, O.D. 1982. Corporate financial structure and managerial incentives. In *The Economics of Information and Uncertainty*, ed. John J. McCall, Chicago: University of Chicago Press, 107–40.

Hall, B.H. 1990. The impact of corporate restructuring on industrial research and development. *Brookings Papers on Economic Activity*, special issue: 85–124.

Harris, M. and Raviv, A. 1988. Corporate control contests and capital structure. *Journal of Financial Economics* 20(1/2): 55–86.

Hirshleifer, D. and Chordia, T. 1991. Resolution preference and project choice. Working paper, UCLA, March.

Hirshleifer, D. and Png, I.P.L. 1990. Facilitation of competing bids and the price of a takeover target. *Review of Financial Studies* 2(4): 587–606.

Hirshleifer, D. and Thakor, A. 1991. Corporate control through board dismissals and takeovers. Working paper, UCLA, July.

Hirshleifer, D. and Titman, S. 1990. Share tendering strategies and the success of hostile takeover bids. *Journal of Political Economy* 98(2): 295–324.

Israel, R. 1991. Capital structure and the market for corporate control: the defensive role of debt financing. *Journal of Finance* 46(4): 1391–1410.

Jegadeesh, N. and Chowdhry, B. 1990. Optimal pre-tender offer share acquisition strategy in takeovers. Working paper, UCLA, March.

Jennings, R.H. and Mazzeo, M.A. 1991. Competing bids, target management resistance and the structure of takeover bids. Presented at WFA meetings, Grand Teton, Wyoming, June.

Jensen, M. 1986. Agency costs of free cash flow, corporate finance and takeovers. *American Economic Review* 76: 323–39.

Kaplan, S. and Weisbach, M.S. 1992. The success of acquisitions: evidence from divestitures. *Journal of Finance*, forthcoming.

Kim, E.H. and McConnell, J.J. 1977. Corporate mergers and the coinsurance of corporate debt. *Journal of Finance* 32: 349–65.

Kyle, A.S. and Vila, J.L. 1991. Noise trading and takeovers. *Rand Journal of Economics* 22(1): 54–71.

Lang, L., Stulz, R. and Walkling, R. 1989. Managerial

performance, Tobin's q, and the gains from successful tender offers. *Journal of Financial Economics* 24: 137–54.
Lang, L., Stulz, R. and Walkling, R. 1991. A test of the free cash flow hypothesis: the case of bidder returns. *Journal of Financial Economics*, forthcoming.
Lehn, K. and Poulsen, A.B. 1989. Free cash flow and stockholder gains in going private transactions. *Journal of Finance* 44(3): 771–87.
Lewellen, W.G., Loderer, C. and Rosenfeld, A. 1985. Merger decisions and executive stock ownership in acquiring firms. *Journal of Accounting and Economics* 7: 209–31.
Lichtenberg, F.R. and Siegel, D. 1987. Productivity and changes in ownership of manufacturing plants. *Brookings Papers on Economic Activity* 3: 643–73.
Malatesta, P.H. and Walkling, R.A. 1988. Poison pill securities: stockholder wealth, profitability and ownership structure. *Journal of Financial Economics* 20(1/2): 347–76.
Mitchell, M. and Lehn, K. 1990. Do bad bidders become good targets? *Journal of Political Economy* 98(2): 372–98.
Morck, R., Shleifer, A. and Vishny, R.W. 1988. Characteristics of hostile and friendly takeover targets. In *Corporate Takeovers: Causes and Consequences*, ed. A. Auerbach, Chicago: University of Chicago Press.
Morck, R., Shleifer, A. and Vishny, R.W. 1990. Do managerial objectives drive bad acquisitions? *Journal of Finance* 45(1): 31–48.
Nathan, K.S. and O'Keefe, T.B. 1989. The rise in takeover premiums: an exploratory study. *Journal of Financial Economics* 23(1): 101–19.
Opler, T. and Titman, S. 1991. The characteristics of leveraged buyout firms. Working paper, UCLA, May.
Pound, J. 1988. The information effects of takeover bids and resistance. *Journal of Financial Economics* 22(2): 207–28.
Ravid, A. and Spiegel, M. 1991. On toeholds and bidding contests. Working paper, Columbia University.
Roll, R. 1986. The hubris hypothesis of corporate takeovers. *Journal of Business* 59(2), part 1: 197–216.
Ryngaert, M. 1988. The effect of poison pill securities on shareholder wealth. *Journal of Financial Economics* 20(1/2), January–March: 377–417.
Schipper, K. and Thompson, R. 1983. Evidence on the capitalized value of merger activity for acquiring firms. *Journal of Financial Economics* 11(1–4): 85–120.
Seyhun, H.N. 1990. Do bidder managers knowingly pay too much for target firms? *Journal of Business* 63(4): 439–64.
Shleifer, A. and Summers, L. 1988. Breach of trust in hostile takeovers. In *Corporate Takeovers: Causes and Consequences*, ed. A.J. Auerbach, Chicago: University of Chicago Press, 33–56.
Shleifer, A. and Vishny, R.W. 1986. Large shareholders and corporate control. *Journal of Political Economy* 94(3), part 1: 461–88.
Smith, A.J. 1990. Corporate ownership structure and performance. *Journal of Financial Economics* 27(1): 143–64.
Spatt, C.S. 1989. Strategic analyses of takeover bids. In *Frontiers of Modern Financial Theory*, ed. S. Bhattacharya and G. Constantinides, vol. 2, Savage, Maryland: Rowman and Littlefield, 106–21.
Stein, J. 1988. Takeover threats and managerial myopia. *Journal of Political Economy* 96(1), February: 61–80.
Stulz, R. 1988. Managerial control of voting rights: financing policies and the market for corporate control. *Journal of Financial Economics* 20: 25–54.
Walkling, R. 1985. Predicting tender offer success: a logistic analysis. *Journal of Financial and Quantitative Analysis* 20(4): 461–78.
Warga, A. and Welch, I. 1991. Bondholder losses in leveraged buyouts. AGSM Working paper no. 14–90, UCLA, March.

tale. Payments into the exchequer were formerly made in one of two ways, *ad scalam* (or *ad pensum*), that is to say, *by weight* – when the money was weighed and the amount reckoned by its weight; or *numero*, that is by *Tale*, when the coin was simply counted, and each piece reckoned at its face value.

[A.E. STAMP]

Reprinted from *Palgrave's Dictionary of Political Economy*

See also RECOINAGES.

tap issues. *See* MONEY MARKETS.

target zones for exchange rates. The term 'target zones', at least as applied to exchange rates, seems to have been first used in the Guidelines for Floating drawn up by the IMF Executive Board in 1974 (see IMF 1974: 181–3). These rules, which were intended to proscribe antisocial manipulation of exchange rates, were commissioned by the Committee of Twenty following its recognition that it was not going to be able to restore an international monetary system based on 'stable but adjustable' exchange rates. The third Guideline recognized the possibility that a country with a floating exchange rate might wish 'to bring its rate within, or closer to, some target zone of rates', in which case it should consult with the Fund about the target and its adaptation to changing circumstances. If the Fund considered the rate to be 'within the range of reasonable estimates of the medium-term norm for the exchange rate in question', the country could act aggressively to move its rate towards that zone. Moreover, if an exchange rate moved outside what the Fund considered to be the range of reasonable estimates of the medium-term norm to an extent likely to be harmful to the interests of other countries, the IMF could even encourage the country to push its rate back toward the zone.

These guidelines were authored and steered through the IMF Board by J. Marcus Fleming, the Deputy Director of the Fund's Research Department. The third guideline was by far the most controversial, being opposed in particular by the United States. The US authorities appeared to believe that any recognition that it might be possible to form sensible estimates of medium-term norms for exchange rates could reopen the door to the fixed exchange-rate system that, with considerable satisfaction, they thought they had just consigned to the dustbin of history. It had previously been taken as axiomatic that floating rates precluded any attempt to formulate any official view of where an exchange rate ought to be; therefore, any intervention should be related only to the *change* rather than to the *level* of the exchange rate.

Thus the original concept of a target zone was of a range of reasonable estimates of the medium-term norm for a *floating* exchange rate. It was legitimate, and perhaps even desirable, for policy to push the rate toward or hold it within the target zone, but it was not obligatory. The idea of a system in which a country would have an *obligation* to hold its rate within a rather wide zone was already familiar at that time, but it had a different name: it was called the 'band