

Mergers and Takeovers—The Value of Predators' Information

Mack Ott and G. J. Santoni

If \$150 is the proper "free market" value of a share of CBS, isn't there something fundamentally wrong with a system that values a share at barely half that unless some buccaneer comes along?

— Michael Kinsley

SKEPTICISM about the efficiency of capital markets causes people to be uneasy about corporate mergers and acquisitions.¹ In many cases corporate takeovers have been criticized for stripping management, labor and owners of career, livelihood and wealth.² Even the jargon that is used to describe this method of changing corporate ownership is notable for its value-laden terms (see "The Language of Corporate Takeovers" on opposite page). It creates the impression, perhaps deliberately so, of innocence on the part of the target — e.g., maiden, defense, white knight — and evil on the part of the buyer — e.g., raider, stripper, pirate.

Why is all of this brouhaha being raised now? Is the rate or size of corporate takeovers much larger in the 1980s than in the past and, if so, why? Are takeovers harmful — to the efficient operation of targeted firms,

to stockholders' wealth, or to third parties? This article addresses each of these questions.

MERGERS AND ACQUISITIONS — AN HISTORICAL PERSPECTIVE

Economic historians identify three major merger waves from 1893 to 1970:³

- (1) 1893–1904 — horizontal mergers for monopoly following the Sherman Antitrust Act of 1890, which outlawed collusion, but not mergers; ended by the Supreme Court's *Northern Trust* decision in 1904 which "made it clear that this avenue to monopoly was also closed by the antitrust laws."⁴
- (2) 1926–30 — horizontal mergers resulting in oligopolies in which a few large firms dominated an industry; ended by collapse of securities markets associated with the Depression.
- (3) mid-1950s–1970 — conglomerate mergers in which corporations diversified their activities through mergers; driven by the Celler-Kefauver Merger Act (1950) which "had a strongly adverse effect upon horizontal mergers" and the financial theory of diversification; the merger wave ended in 1970 with the decline in the stock market, which eroded the equity base for the leveraged purchases.⁵

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¹Kinsley's statement contrasts with the conventional view of economists and financial analysts that stock markets are "efficient" in the sense that asset prices reflect all publicly available information. Changes in individual asset prices, therefore, are caused by changes in information. See, Fama, Fisher, Jensen and Roll (1969); Jensen (1983), (1984); and Jensen and Ruback (1983).

²See Grossman (1985), Lipton (1985), Sandler (1985), Sloan (1985), Werner (1985); for examples of legislative or regulatory proposals, see Rep. Leach on "Talking Takeovers" (1985), Domenici (1985), Rohatyn (1985) and Martin (1985).

³Simic (1984), pp. 2–3; Greer (1980), pp. 142–46.

⁴Stigler (1968), p. 100.

⁵Stigler, p. 270.

The Language of Corporate Takeovers

Crown Jewel: The most valued asset held by an acquisition target; divestiture of this asset is frequently a sufficient defense to dissuade takeover.

Fair Price Amendment: Requires super majority approval of non-uniform, or two-tier, takeover bids not approved by the board of directors; can be avoided by a uniform bid for less than all outstanding shares (subject to prorationing under federal law if the offer is oversubscribed).

Going Private: The purchase of publicly owned stock of a company by the existing or another competing management group; the company is delisted and public trading in the stock ceases.

Golden Parachutes: The provisions in the employment contracts of top-level managers that provide for severance pay or other compensation should they lose their job as a result of a takeover.

Greenmail: The premium paid by a targeted company to a raider in exchange for his shares of the targeted company.

Leveraged Buyout: The purchase of publicly owned stock of a company by the existing management with a portion of the purchase price financed by outside investors; the company is delisted and public trading in the stock ceases.

Lockup Defense: Gives a friendly party (see White Knight) the right to purchase assets of firm, in particular the crown jewel, thus dissuading a takeover attempt.

Maiden: A term sometimes used to refer to the company at which the takeover is directed (target).

Poison Pill: Gives stockholders other than those involved in a hostile takeover the right to purchase securities at a very favorable price in the event of a takeover.

Proxy Contest: The solicitation of stockholder votes generally for the purpose of electing a slate of directors in competition with the current directors.

Raider: The person(s) or corporation attempting the takeover.

Shark Repellants: Antitakeover corporate charter amendments such as staggered terms for directors, super-majority requirement for approving merger, or mandate that bidders pay the same price for all shares in a buyout.

Standstill Agreement: A contract in which a raider or firm agrees to limit its holdings in the target firm and not attempt a takeover.

Stripper: A successful raider who, once the target is acquired, sells off some of the assets of the target company.

Target: The company at which the takeover attempt is directed.

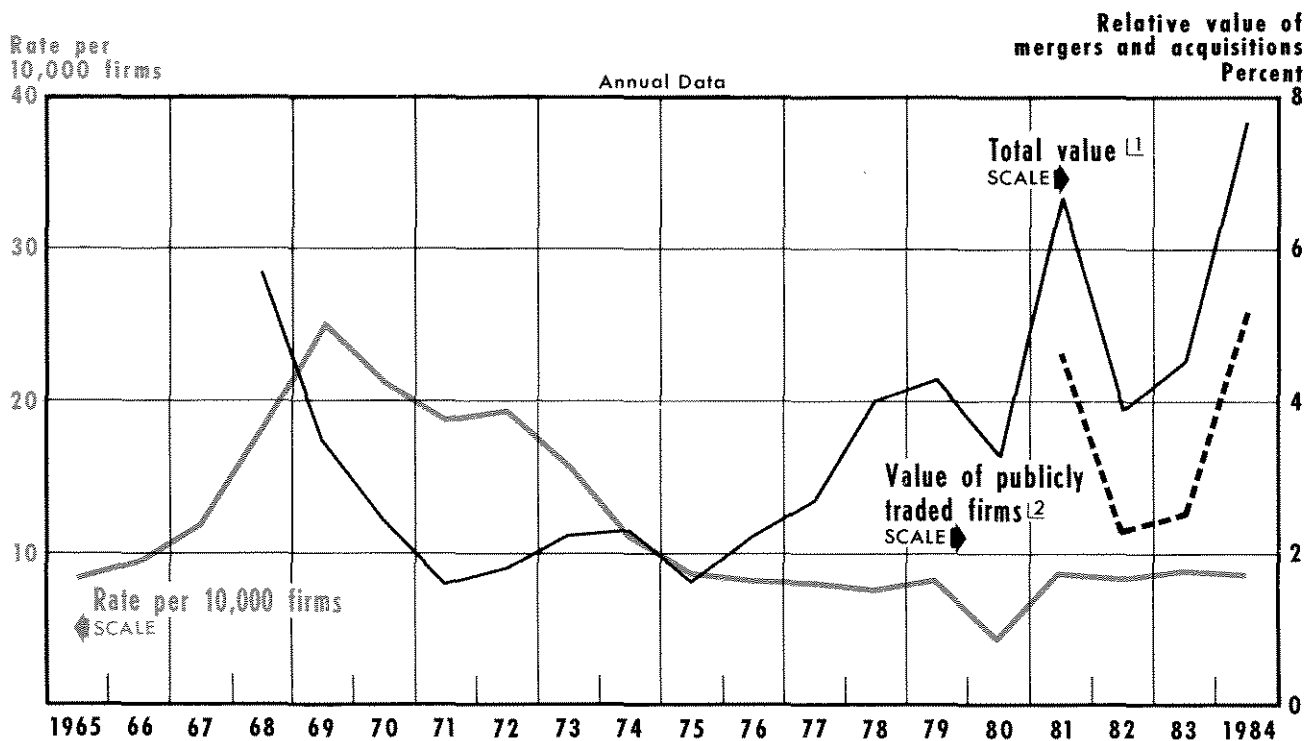
Targeted Repurchase: A repurchase of common stock from an individual holder or a tender repurchase that excludes an individual holder; the former is the most frequent form of greenmail, while the latter is a common defensive tactic.

Tender offer: An offer made directly to shareholders to buy some or all of their shares for a specified price during a specified time.

Two-Tier Offer: A takeover offer that provides a cash price for sufficient shares to obtain control of the corporation, then a lower non-cash (securities) price for the remaining shares.

White Knight: A merger partner solicited by management of a target who offers an alternative merger plan to that offered by the raider which protects the target company from the attempted takeover.

Chart 1
Merger and Acquisition Activity



Sources: W.T. Grimm and Company and U.S. Securities and Exchange Commission.

- [1] Ratio of the dollar value of total mergers and acquisitions to the total dollar value of common and preferred stock of all publicly traded domestic firms.
- [2] Ratio of the dollar value of mergers and acquisitions of publicly traded firms to the total value of common and preferred stock of all publicly traded domestic firms.

Some have suggested a fourth major wave in the 1980s, perhaps beginning at the end of the 1970s.⁶ Yet, as can be seen in chart 1, the overall rate of U.S. mergers and acquisitions per 10,000 firms peaked in 1969 at 25. From 1969 to 1975, it declined to slightly less than 10 and has remained there.

An alternative measure of merger and acquisition activity is its share as a percentage of the total value of common and preferred stock listed on U.S. exchanges. While this measure also declined sharply at the end of the 1960s, after a trough in 1975, it increased from less than 2 percent to nearly 8 percent in 1984.⁷ For the four years of available data, chart 1 also shows the mergers of listed firms in relation to the value of listed stock; as

can be seen, it follows the pattern of total mergers. Consequently, while this latest merger wave is not as widespread as was the conglomerate merger wave in terms of the rate per 10,000 firms, it is notable for the number of very large transactions.

DEREGULATION AND THE CURRENT MERGER WAVE

There are basically two explanations that economists and other analysts have offered for the current wave of mergers: (1) the removal of the U.S. Justice Department's antitrust rules against vertical mergers in 1982 and the relaxing of rules against horizontal mergers in 1984; (2) the deregulation of specific industries since 1978.⁸

⁶Simic, p. 3; Jensen (1984), p. 109.

⁷The figures for the first half of 1985 imply a similar rate for 1985; see *Acquisition/Divestiture Weekly*, p. 2095.

⁸Council of Economic Advisers (1985), pp. 192-95.

Antitrust

In 1982, the U.S. Justice Department repealed restrictions against vertical mergers, that is, between suppliers and customers. Summarizing this policy, Assistant Attorney General William F. Baxter asserted that "mergers are never troublesome except insofar as they give rise to horizontal problems."⁹ In the same year, constraints on horizontal mergers — mergers between competitors — also were relaxed.

Nonetheless, the standard measure of concentration by which the Justice Department assessed the monopoly power in potential mergers continued to be criticized by economists as inefficiently restrictive:

But while horizontal mergers have the clearest anti-competitive potential, there are also potential efficiency gains from such mergers that the new anti-merger policy may sacrifice. In addition to the obvious possibility of complementarities in production and distribution, managers in the same industry may have a comparative advantage at identifying mismanaged firms. By foreclosing these managers from the market for corporate control, an anti-horizontal merger policy may impair efficient allocation of managerial talent and, perhaps more importantly, weaken significantly the incentive of incumbent managers to maximize the value of their firms.¹⁰

Consistent with view, the Justice Department further relaxed its restrictions on horizontal mergers in June 1984. The Department's new test for anticompetitive effects takes into account the market shares of all significant competitors, including foreign sellers.¹¹ Moreover, the new guidelines consider merger-related efficiencies as a positive criterion that may counterbalance a rise in market concentration. Finally, the new guidelines "permit failing divisions to be sold to direct competitors if the units face liquidation in the near future and a noncompetitive acquirer can't be found."¹²

⁹Quoted in Stillman (1983), p. 225.

¹⁰Stillman, p. 226.

¹¹This new test employs the Herfindahl-Hirschman Index of market concentration which is calculated by summing the squares of the individual market shares of all of the firms (domestic and foreign) included in the market. Unlike the four-firm concentration ratio previously used, the new test reflects both the distribution of the market shares of the top four firms and the composition of the market outside these firms.

¹²Simic, p. 125. In addition, he notes that divestitures have amounted to between one-third and one-half of corporate acquisitions during the last 10 years (p. 78). Thus, the relaxed antitrust policy has led to greater specialization, a movement exactly opposite to the conglomerate merger wave of the 1960s; see Toy (1985).

Industry-Specific Deregulation¹³

Beginning in the late 1970s, a sequence of changes loosened restrictions in a number of industries. The Natural Gas Policy Act of 1978 lessened restrictions on the setting of well-head gas prices and set in motion their phaseout for most natural gas by 1984; crude oil prices were deregulated by an executive order in 1981.

The Depository Institutions Deregulation and Monetary Control Act of 1980 and the Depository Institutions Act of 1982 made banking and finance more competitive. These acts deregulated interest rates on deposits and allowed thrifts to offer checking accounts, money market accounts and consumer loans. In addition, decisions by the Comptroller of the Currency (1982) and Federal Reserve Board (1983) permit banks to engage in some insurance activities and to own discount security brokerages. Finally, the Supreme Court has upheld the constitutionality of regional interstate banking pacts, which permit combinations of banks in member states.

The transportation industry was changed more fundamentally by deregulation than any industrial group beginning with the Airline Deregulation Act of 1978. Deregulation of railroad, trucking and household movers followed in 1980. These acts reduced entry restrictions in these industries and made it easier to change prices and routes.

Beginning in 1982, a sequence of Federal Communications Commission decisions eased ownership transfers in the broadcasting industry. In addition, rules were relaxed on children's programming in 1983 and public service or local programming in 1984. Time and frequency restrictions on commercials were eliminated in 1984. In December of that year, the commission replaced its 7-7-7 rule with a 12-12-12 rule — allowing a single corporation to own as many as 12 TV, 12 FM, and 12 AM stations as long as the combined audience reached is less than 25 percent of all television viewers and radio listeners.

Mergers and Acquisitions, 1981-84

The 1985 *Economic Report of the President* points out that "these recently deregulated industries [bank-

¹³Details on these deregulatory acts and decisions are contained in the following sources: for the oil and gas industry, Executive Order 12287 (1981), pp. B1-B2; for banking and financial services, Gottron (1981), vol. V, pp. 261-65, also Fischer, et al (1985) and Garcia (1983); for the insurance and insurance agency industries, Felgran (1985), pp. 34-49; for the transportation industry, Gottron, vol. V, pp. 311-13, 331-34, 336-39; for the broadcasting industry, Wilke, et al (1985) and Saddler.

Table 1

Value of Merger and Acquisition Transactions by Industry, 1981-84
(dollar figures in millions)

Industry	1981	1982	1983	1984	1981-84	Percent of total	Cumulative percentage
Oil and Gas	\$22,921.6	\$ 9,165.5	\$12,075.8	\$ 42,981.8	\$ 87,144.7	26.3%	26.3%
Banking, Finance and Real Estate	4,204.4	5,605.3	13,628.3	5,846.3	29,284.3	8.8	35.1
Insurance	7,862.5	5,717.8	2,966.1	3,005.9	19,552.3	5.9	41.0
Food Processing	3,800.0	3,075.2	1,163.6	7,094.8	15,133.6	4.6	45.6
Conglomerate	809.4	3,973.6	2,745.1	6,982.9	14,511.0	4.4	49.9
Mining and Minerals	10,850.6	355.2	2,946.2	346.7	14,498.7	4.4	54.3
Retail	1,844.4	1,948.1	1,489.0	6,673.2	11,954.7	3.6	57.9
Transportation	475.3	1,074.4	5,254.6	1,251.8	8,056.1	2.4	60.3
Leisure and Entertainment	2,150.4	1,082.1	1,797.4	2,580.7	7,610.6	2.3	62.6
Broadcasting	1,060.1	787.2	3,747.1	1,917.9	7,512.3	2.3	64.9
Other	26,638.9	20,970.1	25,267.3	43,541.7	116,418.0	35.1	100.0
Total	\$82,617.6	\$53,754.5	\$73,080.5	\$122,223.7	\$331,676.3	100.0%	

SOURCE: Simic, Tomislava, ed. *Mergerstat Review*, (W.T. Grim and Company, 1984), p. 41.

ing, finance, insurance, transportation, brokerage and investment) accounted for about 25 percent of all merger and acquisition activity between 1981 and 1983.¹⁴ Table 1 shows that deregulated industries continued to dominate the merger and acquisition totals through 1984. Moreover, divestiture sales by conglomerates reflect a general move away from diversification and toward specialization, a consequence of relaxed antitrust constraints.¹⁵ Thus, eight of the 10 industrial groupings in table 1 reflect some form of deregulation. During 1981-84, these industries accounted for 58.2 percent of the value of all reported mergers and acquisitions.

OBJECTIONS TO MERGERS AND ACQUISITIONS

The recent objections to corporate mergers and acquisitions encompass three fundamental complaints. Some have claimed that mergers are "totally nonproductive."¹⁶ Others have claimed that stock-

holders are harmed.¹⁷ Still others have argued that there are significant third-party effects — such as employment losses, higher interest rates or reduced research activity.¹⁸

Are Mergers and Takeovers Unproductive?

Mergers and takeovers are simply a change in the corporation's ownership. Because these transactions are voluntary, they occur only if the buyer and the seller expect to profit from the transaction. The buyer believes that the firm's assets can be used to generate a greater return than they are producing under the current owners. Consequently, the buyer will offer to

¹⁴Council of Economic Advisers (1985), pp. 194-95.

¹⁵In particular, sales of divisions by conglomerate corporations first rose to prominence in 1982, then doubled in 1984, the two years of significant antitrust changes discussed above. For more detail regarding the divestiture side of recent mergers and acquisitions, see Toy; also Council of Economic Advisers, p. 195.

¹⁶Lipton; see also Werner, and Sloan. Jensen (1984) quotes the New York investment banker Felix Rohatyn as asserting: "All this frenzy may be good for investment bankers now, but it's not good for the country or investment bankers in the long run."

¹⁷For examples, see Lipton, Minard (1985), p. 41, and Sloan, p. 137. Sloan provides evidence that purports to show that a target's shareholders are often better off when takeovers are unsuccessful (p. 139):

We studied 39 cases in which companies successfully resisted hostile tenders. In 17 cases, the value of the target's stock at year-end 1984 exceeded what a shareholder would have if the offer had succeeded and the proceeds had been reinvested in the S&P's 500 Index. (Where a company defeated one offer but was later bought, our calculations run through the acquisition date.)

However, if the corporations that were taken over in subsequent attempts (28 of the 39) are excluded from the analysis, the average annual yield to stockholders of the 11 resisting corporations was negative, -3.2 percent.

¹⁸See Lipton and "Talking Takeovers."

purchase the firm at a price high enough to induce the current owners to sell (the seller's reservation price), but low enough not to exceed the expected value of the firm to the buyer under his ownership (the buyer's reservation price).¹⁹

Buyers and sellers value the firm differently (have different reservation prices) because they have different expectations about the stream of earnings that can be produced with the corporate assets. In part, these expectations depend upon the information that people have about current opportunities as well as forthcoming events that will affect the demand for the corporations' product or its cost of production.

Such information is neither uniformly distributed across individuals nor weighted with the same subjective likelihood about its validity or usefulness. Consequently, people will have different reservation prices for the same firm. In fact, if everyone had the same reservation price, there would be no inducement to trade.

Thus, information is the key to understanding merger or takeover activity.²⁰ In some cases, this information may concern the "crown jewel," that is, a particular asset of the firm that the bidder believes could be employed more profitably in some other use. The bidder may plan to gain control of the firm and strip off (liquidate) the asset.²¹ On the other hand, this infor-

mation may be a plan to reduce the firm's cost of production or to change its product line.²²

Capitalizing on the bidder's information requires a plan to reorganize the corporation. Only in this way can the bidder obtain the expected increase in the value of the firm. In essence, the bidder's information can be thought of as a way to make the firm more productive or efficient.²³ The increase in productivity or efficiency can arise from one of three sources. First, the reorganization may permit greater output from the existing resources with no change in output prices. Second, the reorganization may exploit a change in regulatory constraints in the form of production or permitted market share. Third, the reorganization may permit a greater value of output because the current management has not responded appropriately to a change in relative prices. Each of these is discussed more formally in the appendix.

Whichever the source, the fact that the bidder offers to purchase the firm at a price attractive to the current owners can be explained by an increase in the target firm's profitability under the planned reorganization. Moreover, by observing the movements of stock prices during and after takeover attempts, the hypothesis of expected increased profitability under reorganization can be tested. If it is valid, there should be significant differences between the price movements of firms that are taken over and those that successfully resist takeovers.

Table 2 is a summary of a number of individual studies that examine the effect of takeovers on stock prices. The data are abnormal percentage changes in stock prices for both targets and bidders involved in corporate takeovers. Abnormal changes are those that exceed general movements in stock prices. The data are broken down by the type of takeover technique employed (tender offer, merger, proxy contest) and by the success of the takeover attempt.

The individual studies summarized differ in terms of the period over which the returns are measured. For

¹⁹A reservation price is the capitalized value of the future stream of earnings that the buyer (seller) expects the firm to generate. Generally, the capitalized value of an expected future receipt is calculated by dividing the expected future receipt by the discount factor $(1+r)^t$, where r is the market annual rate of interest and t is the number of years in the future until the income will be received. In the case of an asset that generates a stream of receipts, summing all such discounted future receipts gives the present value of the asset, V :

$$V = \frac{S_1}{(1+r)} + \frac{S_2}{(1+r)^2} + \frac{S_3}{(1+r)^3} + \frac{S_4}{(1+r)^4} + \frac{S_5}{(1+r)^5} + \dots + \frac{S_n}{(1+r)^n} + \dots$$

If the annual receipt is expected to be constant and perpetual, the above equation reduces to $V = s/r$.

²⁰Indeed, Kinsley quotes James Tobin as offering this explanation: "Takeover mania is testimony to the failure of the market on this fundamental-valuation criterion. . . . Takeovers serve a useful function if they bring prices closer to fundamental values." The market price in an efficient market incorporates all publicly available (and some private) information; Tobin's indictment notwithstanding, the market's nonincorporation of all private information (prior to someone revealing it) cannot be classified as failure.

²¹For example, Crown Zellerbach's timber holdings appeared to be the "jewel" in James Goldsmith's plan for the firm. In the case of Trans World Airlines, it was the PARS reservation system and the overseas air routes.

²²An example of reduced production cost is Carl Icahn's renegotiation of TWA's labor contracts. It is estimated that, had these renegotiated contracts been in place during the past year, TWA would have reported a \$70 million profit rather than a \$56 million loss; see Burrough and Ziemann (1985).

²³The analysis in this paper assumes that the rise in the value is not due to obtaining monopoly power through merger. All mergers of publicly traded corporations are subject to Justice Department review to determine possible anticompetitive effects; mergers found to imply anticompetitive conditions are either enjoined or the corporations are compelled to divest those subsidiaries resulting in the anticompetitive condition. Conversely, research into recent mergers blocked by the Justice Department suggests that, if anything, anti-trust review has been too strict, not too lax; see Stillman.

Table 2

Abnormal Percentage Stock Price Changes Associated with Attempted Corporate Takeovers

Takeover technique	Successful		Unsuccessful	
	Target	Bidders	Target	Bidders
Tender offers	30%	4%	-3%	-1%
Mergers	20	0	-3	-5
Proxy contests	8	N.A.	8	N.A.

SOURCE: Jensen, Michael, and Richard S. Ruback, *Journal of Financial Economics*, (April 1983), pp. 7-8.

NOTE: Abnormal price changes are price changes adjusted to eliminate the effects of marketwide price changes.

successful tender offers, the period was roughly one month before to one month after the offer. For successful mergers, the price change was measured from about one month before the offer to the offer date. For unsuccessful takeovers, the measurement period runs from about one month before the offer through the announcement that the offer had been terminated.

The data indicate a statistically significant increase in the stock prices of targets when the takeover was successful.²⁴ The above discussion suggests that the rise in capital value can be explained by an increase in the firm's future stream of profits that investors expect to result from its reorganization by the bidder. Rudely stated, the rise in value is *not* simply the result of a speculative craze induced by the knowledge that an outside bidder is attempting to gain control of the firm. The latter explanation is lurking in Kinsley's critique.

Fortunately, there is some evidence that helps discriminate between the two alternative explanations. First, in a proxy contest, there is no outside bidder to start a "speculative" snowball. Rather, a proxy contest is an internal takeover attempt by some of the existing stockholders. An alternative slate of directors is proposed and its proponents attempt to oust the existing board. Yet successful proxy contests result in a statisti-

cally significant abnormal return for the firm (see table 2).²⁵ Second, in contrast to unsuccessful mergers and tender offers, which leave the stock prices of targets statistically unchanged, unsuccessful proxy contests result in statistically significant positive abnormal returns.

These contrasting results are important because they illuminate the role played by information in changing the stock price. In the case of an outside takeover attempt, the bidder has every incentive to keep his special information or reorganization plan secret so that he may acquire the stock cheaply. Consequently, if the target is not taken over (either initially or in subsequent attempts), the price of the stock returns to its original level since other investors have learned nothing in the process (see footnote 24). In contrast, in a proxy contest, the cost to the instigators of revealing their special information is lower. Since they own substantial shares of the firm they are less likely to be concerned about acquiring additional shares and revealing their plan may aid in obtaining support from other stockholders. Thus, the special information is more likely to be revealed in proxy contests, and it is this information that raises the firm's present value even though the contest may not have succeeded in ousting the existing board.

Are Stockholders Harmed by Mergers and Takeovers?

The evidence reviewed above shows that the values of target firms rise in takeover attempts, implying that owners of targeted firms experience wealth gains in the event of a successful takeover. On these grounds, it

²⁴Each of the individual studies summarized in table 2 found statistically significant positive abnormal returns. See Jensen and Ruback (1983), pp. 7-16. Furthermore, Bradley, Desai, and Kim (1983), one of the studies summarized in table 2, conduct a detailed study of unsuccessful tender offers, segmented into those targets that did and did not receive offers during the subsequent five years. They found that the cumulative average abnormal return for the targets that received subsequent offers is 57.19% ($t = 10.39$). In contrast, the average abnormal return over the same period for targets that did not receive subsequent offers is an insignificant -3.53% ($t = -0.36$); this return includes the announcement effects.

²⁵See Jensen and Ruback, p. 8.

is difficult to claim, as some have, that existing owners are harmed by successful takeovers. Nor does it appear to be the case that the owners of targeted firms are harmed by unsuccessful takeovers (the small negative abnormal returns earned by targets in unsuccessful tender offers and mergers are not statistically significant). Targets of unsuccessful proxy contests earn significantly positive abnormal returns. While this evidence is inconsistent with shareholder harm, some have criticized takeovers on other grounds. These are considered below.

Two-tier offers. Since mergers and takeover attempts are aimed at acquiring corporate control, the bidder frequently offers a higher price, in cash, for shares necessary to obtain a majority holding, then a lower price, in securities, for the remaining shares. Some allege that this two-tier offer is an attempt to frighten shareholders into tendering their shares rather than holding on for a possibly higher-valued offer later. Yet, even if this were true, the value of the stock will rise relative to its pre-takeover level so the issue is the distribution of the gain among shareholders, not of harm.²⁶

Management Self-Interest and Golden Parachutes. Management will seek the highest bid for the firm's shares if their wealth depends heavily on this effort. Generally this is the case; most of top management's compensation is in equity terms, not cash salary.²⁷ Moreover, the so-called golden parachute

may be thought of as a guarantee that management will be rewarded for obtaining a high bid (one that is acceptable to the owners). Its purpose is to assure that management will not impede the auction.

Corporate Charter Changes — Shark Repellants. If takeover attempts were harmful to shareholder interests, changes in corporate charters that make takeovers more difficult should raise the share prices of firms passing these amendments. A recent study by the Securities and Exchange Commission, however, finds a statistically significant 3.0 percent decline in the average price of 162 corporations passing certain kinds of antitakeover amendments.²⁸

Role of Institutions and Other Fiduciaries. A final piece of evidence suggesting that takeovers do not harm shareholders is the voting behavior of institutional holders and other trustees. The SEC study just cited found that "institutional stockholdings are lower on average for firms proposing the most harmful amendments." That is, the institutional holdings of stock were smaller in corporations proposing anti-takeover restrictions than in corporations that had not proposed such restrictions.²⁹

Recently, administrators of pension fund investments have begun to favor rather than oppose the auction process entailed in a takeover attempt. In particular, California's state treasurer, Jesse Unruh, has formed a Council of Institutional Investors (CII) to combat antitakeover abuses, which he views as depriving the institutional funds of profitable opportunities.³⁰ As CII co-chairman Harrison Goldin, New York City comptroller, put it, "Should Mr. Pickens, Mr. Icahn, the Bass brothers or others care to hold an open auction for any of the stocks held by my pension funds, I would not want to restrain them."³¹

Furthermore, fiduciaries opposing takeover bids have been held liable for the loss of stock value:

... a judge ruled that trustees who helped Grumman Corp. frustrate a takeover bid by LTV Corp. in 1981

²⁶Council of Economic Advisers (1985), pp. 204–05:

In addition, two-tier tender offers can be desirable for target stockholders and managements. SEC data show that two-tier offers are used in friendly takeovers about as often as they are used in hostile takeover attempts. There are at least two reasons that target stockholders could prefer a two-tier bid. If a two-tier offer is properly structured, target stockholders who accept securities in the back end of the transaction may be able to defer tax due on the appreciated value of their shares. In addition, the acquirer may find that it is easier to finance the transaction by issuing securities for the back end than by borrowing funds from banks or through other financing mechanisms. If these savings induce the bidder to offer a higher blended premium, then the two-tier offer can also be beneficial for the target's stockholders.

²⁷Lewellen (1971) found that after-tax executive compensation for large U.S. manufacturing firms for both chief executives and the top five executives was primarily from (1) stock-based remuneration, (2) dividend income, and (3) capital gains, with (4) fixed dollar remuneration being relatively minor in comparison. In particular, over the period 1954–63 the average annual ratio of [(1) + (2) + (3)]/(4) ranged from 2.123 to 7.973 for chief executives and from 1.753 to 8.669 for the top five executives in large U.S. manufacturing corporations (Lewellen, pp. 89–90). Moreover, these executives, on average, had large stock holdings in their own corporations — \$341,437 to \$3,033,896 during 1954–63 — and were not active sellers (Lewellen, p. 79).

²⁸Jarrell, Poulsen, and Davidson (1985). The study distinguishes between "fair price amendments" (requiring super majority shareholder approval in the case of a two-tier offer) and other shark repellants — classified boards, authorization of blank-check preferred stock, and super majority amendments for approval of any merger or tender offer regardless of whether it is a two-tier offer. The fair price amendments had no effect on stock prices while the others lowered stock prices significantly.

²⁹Jarrell, Poulsen, and Davidson (1985), pp. 44–46.

³⁰Smith (1984).

³¹Makin (1985), p. 212.

were personally liable for damages because they didn't act in the best interests of family beneficiaries for whom they held Grumman stock in trust.³²

Third-Party Effects

Critics of the recent wave of mergers and takeovers frequently allege that they have "third-party" effects that damage the economy, individuals or regions in ways not measured by changes in corporate value or stockholder returns.³³ To a certain extent, this is true but such costs typically accompany innovations:

For example, innovations that increase standards of living in the long run initially produce changes that reduce the welfare of some individuals, at least in the short run. The development of efficient truck and air transport harmed the railroads and their workers; the rise of television hurt the radio industry. New and more efficient production, distribution, or organizational technology often imposes similar short-term costs.

The adoption of new technologies following takeovers enhances the overall real standard of living but reduces the wealth of those individuals with large investments in older technologies. Not surprisingly, such individuals and companies, their unions, communities, and political representatives will lobby to limit or prohibit takeovers that might result in new technologies. When successful, such politics reduce the nation's standard of living and its standing in international competition.³⁴

Labor Displacement. The argument that employment is lowered by mergers and takeovers appears to be based on the belief that plant closings and consolidations inevitably follow and that labor demand must therefore decline.³⁵ However, if output expands as a result of the reorganization, wages as well as the number of jobs may increase. Even when employment cutbacks are associated with mergers and takeovers, such effects apparently have been overcome by other forces: Payroll employment growth during the current expansion has been at a 3.68 percent rate (November 1982–October 1985) compared with a 3.39 percent rate

during economic expansions over the 1970–81 period.³⁶

Adverse Effects on Capital Markets. One allegation frequently made about the impact of takeovers on capital markets is that the extra demand for credit to finance takeovers raises interest rates and crowds out productive investment. This critique is specious. Takeovers and mergers are productive (in that asset values rise). Any crowding out that occurs is of less productive investment. Moreover, the funds obtained by the bidders are transferred to the sellers who can reinvest them. Consequently, there is no reason to expect interest rates to change.³⁷

Neglect of Long-Term Planning. Several critics have argued that takeover threats force management to concentrate on projects that raise earnings in the near term at the cost of long-range planning, in particular, research and development. For example, the chairman of Carter-Hawley-Hale department stores said that takeover activity causes management to "take the short-term view and to neglect what builds long-term values."³⁸ This implies a serious inefficiency in capital markets, since capital values are expected *future* returns discounted to the present.

This short-term focus is said to be imposed by institutional shareholders who view current earnings as more important than capital appreciation; evidence, however, demonstrates the opposite. Jarrell and Lehn of the SEC found that institutional investors tended to prefer higher rather than lower research and investment expenditures. More to the point, they found that, of the 217 firms that were takeover targets during 1981–84, 160 reported that research and development expenditures were "not material," while the remaining 57 had research and development expenditure rates less than half the averages in their respective industries.

Finally, Jarrell and Lehn also found significant announcement effects attending new research and development projects:

Our study examined the net-of-market stock price reaction to 62 *Wall Street Journal* announcements

³²Stewart and Waldholz (1985), p. 13.

³³The "lost jobs" argument has been raised by Rep. Leach; in "Talking Takeovers"; the "financial destabilizing" argument by Rohatyn (1985), Domenici, Lipton, and President Hartley of Unocal Corp in Minard (1985); the "shortened planning horizon" by Lipton (1985), Hartley, and Leach.

³⁴Jensen (1984), p. 114.

³⁵In some cases, wage, salary and benefit schedules exceeding labor productivity may be the cause of low corporate value. The potential for reorganization through a takeover and an increase in efficiency would then entail either a reduction in wages or a reduction in labor use. In the TWA takeover, it was the former (see footnote 22); in the AMF takeover by Minstar Corp., it was the latter. See Ehrlich (1985).

³⁶Payroll employment growth rates during each of the preceding economic expansions of the 1970–81 period were as follows: 3.48 percent during November 1970–November 1973; 3.62 percent during March 1975–January 1980; 2.00 percent during July 1980–July 1981.

³⁷See Martin, p. 2.

³⁸Work and Peterson (1985), p. 51; see also Drucker (1984), Lipton, Rohatyn, and Sloan.

between 1973–1983 that firms were embarking on new R&D projects. These tests show that, on average, the stock prices of these firms increased (1% to 2%) in the period immediately following the publication of these stories.³⁹

Thus, the market appears to reward rather than punish the long-term view; takeovers are most frequent in firms that have ignored the long term. As Joseph observes: "If you take the best-run companies, they typically make long-term commitments, and they sell at decent multiples. IBM is not a target. ITT is a target, because it hasn't managed its businesses very well. So ITT is complaining that it can't plan long term because of the sharks."⁴⁰

CONCLUSION

We have examined three criticisms of corporate takeovers: 1) that mergers and takeovers are unproductive, 2) that stockholders are harmed, 3) that third parties are harmed. Both theory and evidence suggest that resource values rise and, consequently, stockholders generally benefit from takeover activity. Both are consistent with the proposition that takeovers are expected to result in a more efficient use of the target's assets. As with any economic change, third-party effects probably exist. Negative employment effects, higher interest rates or neglect of long-term planning, however, do not seem to be caused by merger and takeover activity. These potential third-party effects do not appear to be important and do not establish a case for additional constraints on corporate ownership transfers. Since takeovers contribute to the efficient working of capital markets, policy or legislative initiatives to impede takeovers should bear the burden of proving the harm they propose to ameliorate.

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³⁹Jarrell and Lehn (1985).

⁴⁰Sloan, p. 139.

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APPENDIX

Bidder's Information, Productive Capacity, and Stock Values

There are three distinct cases in which the bidder's plan for reorganizing the corporation — based on the bidder's information — could increase the value of the corporation. These cases are: 1) using the corporation's physical capital more productively; 2) changing production techniques to reflect a change in regulatory constraints; 3) changing the output mix to one more profitable given changes in relative output prices.

In each of the three cases, the corporation is assumed to produce two goods, X and Y, with a concave production function continuously differentiable in the two factors capital (K) and labor (L). Capital, which is $e \times 100$ percent equity-financed and $(1-e) \times 100$ percent debt-financed, is assumed to be fixed, but some capital, K_0 , may be idle; labor is variable. Factor use is determined by wages, interest and product prices. The corporation is assumed to be a price taker in both factor and output markets.¹ Thus,

$$(1) Q = [X, Y] = F(\bar{K}, L)$$

$$(2) \bar{K} = K_x + K_y + K_0$$

¹The analysis ignores quirks in the tax code that may play a role in some takeovers. A uniform corporate income tax, however, has no qualitative effect on the results.

$$(3) \frac{\partial X}{\partial L} = \frac{W}{P_x'} \frac{\partial Y}{\partial L} = \frac{W}{P_y'} \frac{\partial X}{\partial K} = \frac{r}{P_x'}$$

$$\frac{\partial Y}{\partial K} = \frac{r}{P_y'}$$

These factor-use equations, (3), for labor in X and Y or capital in X and Y production imply

$$(4) \frac{dY}{dX} = - \frac{P_y}{P_x'}$$

and, combined with the fixed capital stock (2), allow us to represent the corporation's efficient production choice as in figure A1. The relationship shown is concave with respect to the origin. While our assumptions do not rule out a linear or convex relationship, these latter two configurations would imply corner solutions (the firm concentrates on one product). Most large corporations are multi-product producers implying a concave production frontier.

The relative price line tangent at E_0 is also the iso-value line whose X-axis intercept \hat{X}_0 multiplied by P_x gives the value of output at E_0 , $P_x \hat{X}_0$. At point E_0 , production is $[X_0, Y_0]$ and corporate economic profit is

$$(5) \pi_0 = P_y Y_0 + P_x X_0 - WL_0 - r\bar{K} = P_x \hat{X}_0 - WL_0 - r\bar{K}$$

Note that π_0 may be positive, zero or negative.

Figure A1

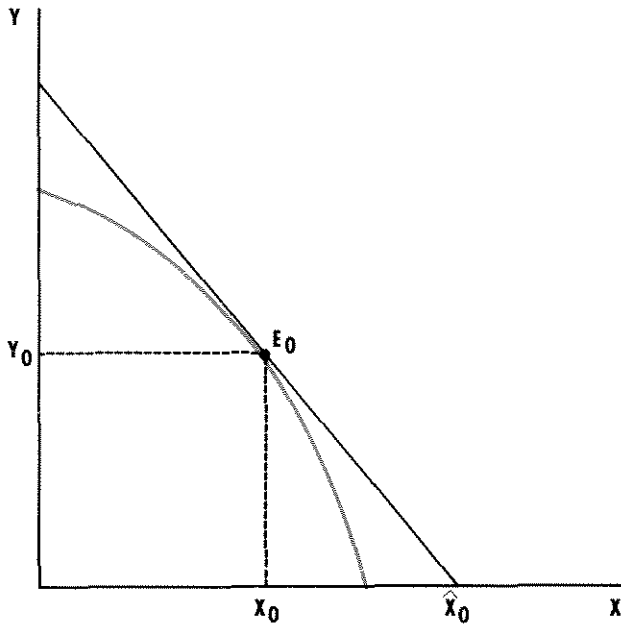
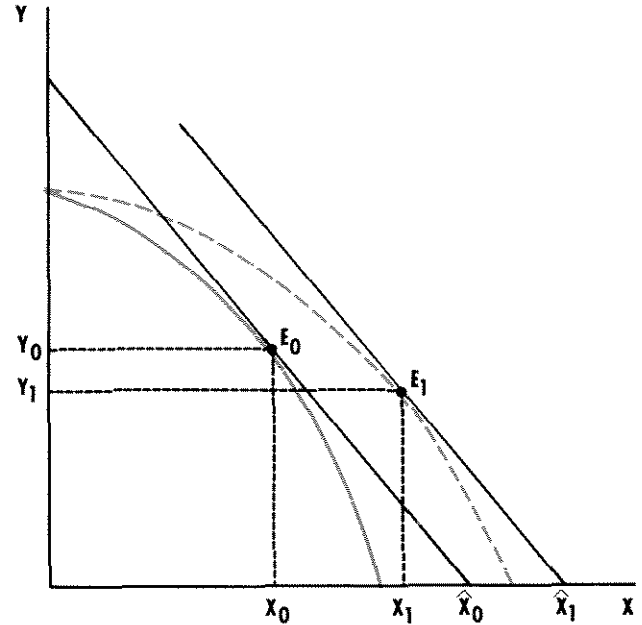


Figure A2



The corporation's equity is just

$$\bar{K} - (1-e)\bar{K} = e\bar{K},$$

and the shareholders receive earnings, dividends plus retained earnings,

$$(7) s_0 = \pi_0 + re\bar{K}.$$

This implies a value (V) for the corporation of

$$(8) V_0 = \frac{s_0}{r} = \frac{\pi_0}{r} + e\bar{K}.$$

A corporation with negative π_0 is a candidate for takeover.

For a more detailed presentation, see Hirshleifer (1976), chapter 7, and appendix A3.

AI. Bidder's Information: Reorganize Production to Increase Output

The reorganization increases the corporation's capacity to produce X relative to Y as shown in figure A2. The output mix shifts from $[X_0, Y_0]$ to $[X_1, Y_1]$ entailing a decline in Y production. Corporate economic profit rises from π_0 in (5) to π_1 ,

$$(9) \pi_1 = P_Y Y_1 + P_X X_1 - WL_1 - r\bar{K} \\ = P_X \hat{X}_1 - WL_1 - r\bar{K},$$

and corporate value from V_0 to V_1 ,

$$(10) V_1 = \frac{\pi_1}{r} + e\bar{K};$$

from (5), (8), (9) and (10) this is an increase of

$$(11) \Delta V = \frac{1}{r} [P_X (\hat{X}_1 - \hat{X}_0) - \bar{W} (L_1 - L_0)],$$

which by (3) and the assumption of concavity must be positive.

III. Bidder's Information: Change Output Mix in Response to Deregulation

As shown in figure A3, deregulation — whether on input use or output mix — changes the production function from $F_R(\bar{K}, L)$ to $F(\bar{K}, L)$. That is, instead of being kinked at E_0 , the function is now smooth as the regulatory constraint is lifted. The adjustment from E_0 to E_1 results from the same logic as in AI. Also, the rise in value is formally as in (11).

III. Bidder's Information: Change in Output Mix in Response to Change in Relative Output Prices

As shown in figure A4, a change in relative output

Figure A3

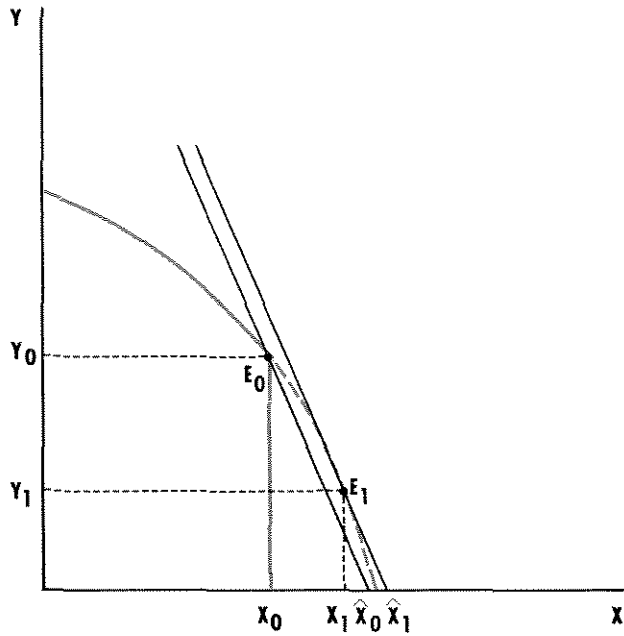
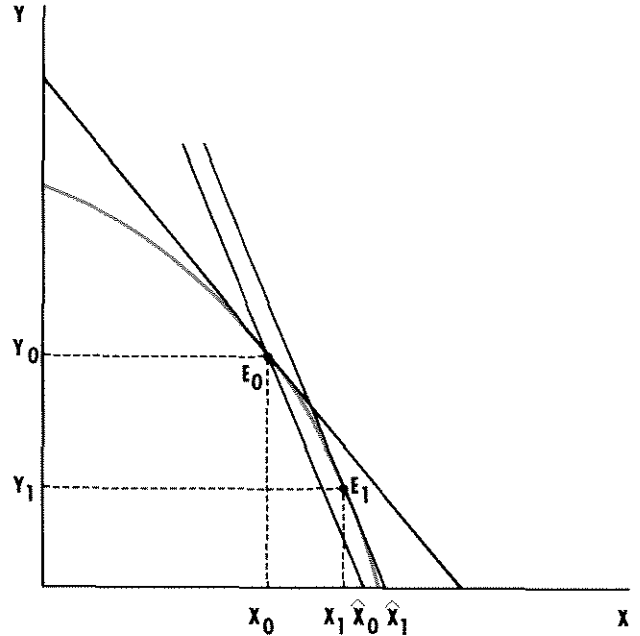


Figure A4



prices, where X rises in value relative to Y , should induce a shift in production and corporate organization from E_0 to E_1 . The adjustment from E_0 to E_1 follows the same logic as in AI and corporate value again rises according to (11). Note that this comparison is of production mixes *after* the price change. Thus, the value of output at E_0 is not as large as E_1

under the new prices; the value at E_0 at the old prices was greater than at E_1 at the old prices. Consequently, the rise in corporate value in reorganizing from E_0 to E_1 is due to E_0 not being a maximal value mix under the new prices and by existing management's failure to recognize it.