

Takeovers: Their Causes and Consequences

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Economic analysis and evidence indicate that the market for corporate control is benefiting shareholders, society, and the corporate form of organization. The value of transactions in this market ran at a record rate of about \$180 billion per year in 1985 and 1986, 47 percent above the 1984 record of \$122 billion. The gains to shareholders from these transactions have been huge. The gains to selling firm shareholders from mergers and acquisition activity in the ten-year period 1977–86 total \$346 billion (in 1986 dollars).¹ The gains to buying firm shareholders are harder to estimate, and no one to my knowledge has done so as yet, but my guess is that they will add at least another \$50 billion to the total. These gains, to put them in perspective, equal 51 percent of the total cash dividends (valued in 1986 dollars) paid to investors by the entire corporate sector in the past decade.²

These corporate control transactions and the restructurings that often accompany them are frequently wrenching events in the lives of those linked to the involved

¹Estimated from data in Grimm (1986). Grimm provides total dollar values for all M & A deals for which there are publicly announced prices amounting to \$500,000 or 10 percent of the firm in which at least one of the firms was a U.S. company. Grimm also counts in its numerical totals deals with no publicly announced prices that it believes satisfy this criteria. I assumed that the deals with no announced prices were on average equal to 20 percent of the size of the announced transactions.

²Total dividend payments by the corporate sector, unadjusted for inflation, are given in Weston (1986, p. 649). I extended these estimates to 1986.

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organizations: the managers, employees, suppliers, customers and residents of surrounding communities. Restructurings usually involve major organizational change (such as shifts in corporate strategy) to meet new competition or market conditions, increased use of debt, and a flurry of recontracting with managers, employees, suppliers and customers. This activity sometimes results in expansion of resources devoted to certain areas and at other times in contractions involving plant closings, layoffs of top-level and middle managers, staff and production workers, and reduced compensation.

Those threatened by the changes that restructuring brings about argue that corporate restructuring is damaging the American economy, damaging the morale and productivity of organizations, and pressuring executives to manage for the short-term. Further, they hold that the value restructuring creates does not come from increased efficiency and productivity; instead, the gains come from lower tax payments, broken contracts with managers, employees and others, and mistakes in valuation by inefficient capital markets. Since the benefits are illusory and the costs are real, they argue, takeover activity should be restricted.

The controversy has been accompanied by strong pressure on regulators and legislatures to enact restrictions that would curb activity in the market for corporate control. Dozens of congressional bills in the last several years have proposed new restrictions on takeovers, but none have passed as of this writing. The Business Roundtable, composed of the chief executive officers of the 200 largest corporations in the country, has pushed hard for restrictive legislation. Within the past several years the legislatures of New York, New Jersey, Maryland, Pennsylvania, Connecticut, Illinois, Kentucky, Michigan, Ohio, Indiana and Minnesota have passed antitakeover laws. The Federal Reserve Board implemented new restrictions in early 1987 on the use of debt in certain takeovers.

In all the controversy over takeover activity, it is often forgotten that only 40 (an all-time record) out of the 3,300 takeover transactions in 1986 were hostile tender offers. There were 110 voluntary or negotiated tender offers (unopposed by management) and the remaining 3,100-plus deals were also voluntary transactions agreed to by management, although this simple classification is misleading since many of the voluntary transactions would not occur absent the threat of hostile takeover. A major reason for the current outcry is that in recent years mere size alone has disappeared as an effective takeover deterrent, and the managers of many of our largest and least efficient corporations now find their jobs threatened by disciplinary forces in the capital markets.

Economists have accumulated considerable evidence and knowledge on the effects of the takeover market. Most of the earlier work is well summarized elsewhere (Jensen and Ruback, 1983; Jensen, 1984; Jarrell, Brickley and Netter in this symposium). Here, I focus on current aspects of the controversy. In brief, the previous work tells us the following:

1. Takeovers benefit shareholders of target companies. Premiums in hostile offers historically exceed 30 percent on average, and in recent times have averaged about 50 percent.

2. Acquiring-firm shareholders on average earn about 4 percent in hostile takeovers and roughly zero in mergers, although these returns seem to have declined from past levels.

3. Takeovers do not waste credit or resources. Instead, they generate substantial gains: historically, 8 percent of the total value of both companies. Those value gains represent gains to economic efficiency, not redistribution between various parties.

4. Actions by managers that eliminate or prevent offers or mergers are most suspect as harmful to shareholders.

5. Golden parachutes for top-level managers do not, on average, harm shareholders.

6. The activities of takeover specialists (such as Icahn, Posner, Steinberg, and Pickens) benefit shareholders on average.

7. Merger and acquisition activity has not increased industrial concentration. Indeed, over 1,200 divestitures valued at \$59.9 billion occurred in 1986, also a record level (Grimm, 1986).

8. Takeover gains do not come from the creation of monopoly power.

The market for corporate control is creating large benefits for shareholders and for the economy as a whole by loosening control over vast amounts of resources and enabling them to move more quickly to their highest-valued use. This is a healthy market in operation, on both the takeover side and the divestiture side, and it is playing an important role in helping the American economy adjust to major changes in competition and regulation of the past decade.

The Market for Corporate Control

The market for corporate control is best viewed as a major component of the managerial labor market. It is the arena in which alternative management teams compete for the rights to manage corporate resources (Jensen and Ruback, 1983). Understanding this point is crucial to understanding much of the rhetoric about the effects of hostile takeovers.

Managers often have trouble abandoning strategies they have spent years devising and implementing, even when those strategies no longer contribute to the organization's survival. Such changes can require abandonment of major projects, relocation of facilities, changes in managerial assignments, and closure or sale of facilities or divisions. Takeovers generally occur because changing technology or market conditions require a major restructuring of corporate assets, and it is easier for new top-level managers with a fresh view of the business and no ties with current employees or communities to make such changes. Moreover, normal organizational resistance to change is commonly significantly lower early in the reign of new top-level managers. For example, the premium Carl Icahn was able to offer for TWA and his victory over Texas Air for the acquisition of TWA were made possible in part by the willingness of TWA unions to negotiate favorable contract concessions with

Icahn—concessions that TWA management was unable to win prior to the takeover conflict. On the other hand, lack of detailed knowledge about the firm poses risks for new managers and increases the likelihood of mistakes.

A variety of political and economic conditions in the 1980s have created a climate where economic efficiency requires a major restructuring of corporate assets. These factors include the relaxation of restrictions on mergers imposed by the antitrust laws, withdrawal of resources from industries that are growing more slowly or that must shrink, deregulation in the financial services, oil and gas, transportation, and broadcasting markets, and improvements in takeover technology, including a larger supply of increasingly sophisticated legal and financial advisers, and improvements in financing technology such as the strip financing commonly used in leveraged buyouts and the original issuance of high-yield non-investment-grade bonds.

Each of these factors has contributed to the increase in total takeover and reorganization activity. Moreover, the first three factors (antitrust relaxation, exit, and deregulation) are generally consistent with data showing the intensity of takeover activity by industry. For example, the value of merger and acquisition transactions by industry in the period of 1981–84 given in Table 1 indicates that acquisition activity was highest in oil and gas, followed by banking and finance, insurance, food processing, and mining and minerals. For comparison purposes, the last column of the table presents data on industry size measured as a fraction of the total value of all firms. All but two of the industries, retail and transportation, represent a larger fraction of total takeover activity than their representation in the economy as a whole, indicating that the takeover market is concentrated in particular industries, not spread evenly throughout the corporate sector.

Many sectors of the U.S. economy have been experiencing slowing growth and, in some cases, even retrenchment. This phenomenon has many causes, including substantially increased foreign competition. This slow growth has increased takeover activity because takeovers play an important role in facilitating exit from an industry or activity. Major changes in energy markets, for example, have required a radical restructuring and retrenchment in that industry and takeovers have played an important role in accomplishing these changes; oil and gas rank first in takeover activity, with twice their proportionate share of total activity. Managers who are slow to recognize that many old practices and strategies are no longer viable are finding that takeovers are doing the job for them. Exit is cheaper to accomplish through merger and the orderly liquidation of marginal assets of the combined firms than by disorderly, expensive bankruptcy in an industry saddled with overcapacity. The end of the competitive struggle in such an industry often comes in the bankruptcy courts, with the unnecessary destruction of valuable parts of organizations that could be used productively by others.

Similarly, deregulation of the financial services market is consistent with the number 2 rank of banking/finance and the number 3 rank of insurance in Table 1. Deregulation has also been important in the transportation and broadcasting industries. Mining and minerals have been subject to many of the same forces impinging on the energy industry, including the changes in the value of the dollar.

Table 1

Intensity of industry takeover activity as measured by the value of merger and acquisition transactions in the period 1981–84 (as a percent of total takeover transactions for which valuation data are publicly reported) compared to industry size (as measured by the fraction of overall corporate market value)

<i>Industry classification of seller</i>	<i>Percent of total takeover activity^a</i>	<i>Percent of total corporate market value^b</i>
Oil and gas	26.3%	13.5%
Banking and finance	8.8	6.4
Insurance	5.9	2.9
Food processing	4.6	4.4
Mining and minerals	4.4	1.5
Conglomerate	4.4	3.2
Retail	3.6	5.2
Transportation	2.4	2.7
Leisure and entertainment	2.3	.9
Broadcasting	2.3	.7
Other	39.4	58.5

^aGrimm, 1984, p. 41.

^bAs of 12/31/84. Total value is measured as the sum of the market value of common equity for 4,305 companies, including 1,501 companies on the NYSE, 724 companies on the ASE plus 2,080 companies in the over-the-counter market (*The Media General Financial Weekly*, December 31, 1984, p. 17).

The development of innovative financing vehicles, such as high-yield non-investment-grade bonds (junk bonds), has removed size as a significant impediment to competition in the market for corporate control. A 1987 update by the Investor Responsibility Research Center of an earlier SEC study finds that the investment grade and high yield debt issues combined were associated with 9.8 percent of all tender offer financing from January 1981 through September 1986. Even though not yet widely used in takeovers, these new financing techniques have had important effects because they permit small firms to obtain resources for acquisition of much larger firms by issuing claims on the value of the venture (that is, the target firm's assets) just as in any other corporate investment activity.

Managerial Myopia vs. Market Myopia

It has been argued that far from pushing managers to undertake needed structural changes, growing institutional equity holdings and the fear of takeover cause managers to behave myopically and therefore to sacrifice long-term benefits to increase short-term profits. The arguments tend to confuse two separate issues: 1) whether managers are shortsighted and make decisions that undervalue future cash flows while overvaluing current cash flows (myopic managers); and 2) whether

security markets are shortsighted and undervalue future cash flows while overvaluing near-term cash flows (myopic markets).

There is little formal evidence on the myopic managers issue, but I believe this phenomenon does occur. Sometimes it occurs when managers hold little stock in their companies and are compensated in ways that motivate them to take actions to increase accounting earnings rather than the value of the firm. It also occurs when managers make mistakes because they do not understand the forces that determine stock values.

There is much evidence inconsistent with the myopic markets view and no evidence that indicates it is true.

First, the mere fact that price-earnings ratios differ widely among securities indicates the market is valuing something other than current earnings. For example, it values growth as well. Indeed, the essence of a growth stock is one that has large investment projects yielding few short-term cash flows but high future earnings and cash flows. The continuing marketability of new issues for start-up companies with little record of current earnings, the Genentechs of the world, is also inconsistent with the notion that the market does not value future earnings.

Second, McConnell and Muscarella (1985) provide evidence that (except in the oil industry) stock prices respond positively to announcements of increased investment expenditures and negatively to reduced expenditures. Their evidence is also inconsistent with the notion that the equity market is myopic, since it indicates the market values spending current resources on projects which promise returns in the future.

Third, the vast evidence on efficient markets indicating that current stock prices appropriately incorporate all currently available public information is also inconsistent with the myopic markets hypothesis. Although the evidence is not literally 100 percent in support of the efficient market hypothesis, no proposition in any of the sciences is better documented.³

The large positive stock price reactions to announced restructurings in the oil industry are inconsistent with the notion that the market values only short-term earnings, because the restructurings involve large write-offs that reduce accounting earnings in the year. ARCO's stock price, for example, increased by 30 percent when it announced its major restructuring in 1985. The market responded positively even though ARCO simultaneously announced a \$1.2 billion write-off.

Fourth, recent versions of the myopic markets hypothesis emphasize increases in the amount of institutional holdings and the pressures they face to generate high returns on a quarter-to-quarter basis. It is argued that these pressures on institutions are a major cause of pressures on corporations to generate high current earnings on a quarter-to-quarter basis. The institutional pressures are said to lead to increased takeovers of firms (because institutions are not loyal shareholders) and to decreased research and development expenditures. It is hypothesized that because R&D expenditures reduce current earnings, firms making them are therefore more likely to be taken

³For an introduction to the literature and empirical evidence on the theory of efficient markets, see Elton and Gruber (1984), Chapter 15, p. 375ff. and the 167 studies referenced in the bibliography. For some anomalous evidence on market efficiency see Jensen (1978), Shiller (1981a,b). Merton (1985) provides an excellent discussion of the current state of the efficient market hypothesis.

over, and that reductions in R&D are leading to a fundamental weakening of the corporate sector of the economy.

A study of 324 firms by the Office of the Chief Economist of the SEC (April 1985) finds substantial evidence that is inconsistent with this version of the myopic markets argument. The evidence indicates the following: increased institutional stock holdings are not associated with increased takeovers of firms; increased institutional holdings are not associated with decreases in research and development expenditures; firms with high R&D expenditures are not more vulnerable to takeovers; stock prices respond positively to announcements of such increases in R&D expenditures.

Moreover, total spending on R&D is increasing concurrent with the wave of merger and acquisition activity. Total spending on R&D in 1984, a year of record acquisition activity, increased by 14 percent according to *Business Week's* annual survey. This represented "the biggest gain since R&D spending began a steady climb in the late 1970's." All industries in the survey increased R&D spending with the exception of steel. In addition, R&D spending increased from 2 percent of sales, where it had been for five years, to 2.9 percent. In 1985 and 1986, two more record years for acquisition activity, R&D also set new records. R&D spending increased by 10 percent (to 3.1 percent of sales) in 1985, and in 1986, R&D spending again increased by 10 percent to \$51 billion (to 3.5 percent of sales), in a year when total sales decreased by 1 percent.⁴

Bronwyn Hall (1987), in a detailed study of all U.S. manufacturing firms in the years 1976–85, finds in approximately 600 acquisitions that firms which are acquired do not have higher R&D expenditures (measured by the ratio of R&D to sales) than firms in the same industry which are not acquired. Also, she finds that "firms involved in mergers showed no difference in their pre- and post-merger R&D performance over those not so involved."

I know of no evidence that supports that argument that takeovers reduce R&D expenditures, even though this is a prominent argument among many of those who favor restrictions on takeovers.

A simple alternative hypothesis explains the current facts, including the criticisms of managers, quite well. Instead of supposing that the myopic market is punishing managers for their foresightedness and for being right, suppose some managers are simply mistaken—that is, their strategies are wrong—and that the financial markets are telling them they are wrong. If they don't change, their stock prices will remain low. If the managers are indeed wrong, it is desirable for the stockholders and for the economy to remove them to make way for a change in strategy and more efficient use of the resources.

The internal control mechanisms of corporations, operating through the board of directors, should encourage reluctant managers to restructure. But when the internal processes for change in large corporations are too slow, costly, and clumsy to bring about the required restructuring or change in managers efficiently, the capital

⁴The "R&D Scoreboard" is an annual survey covering companies that account for 95 percent of total private-sector R&D expenditures. The three years referenced here can be found under "R&D Scoreboard" (1985, 1986, 1987) in the reference list. In 1984 the survey covered 820 companies; in 1985, it covered 844 companies; in 1986, it covered 859 companies.

markets, through the market for corporate control, are doing so. The takeover market serves as an important source of protection for investors in these situations. Other management teams that recognize an opportunity to reorganize or redeploy an organization's assets and thereby create new value can bid for the control rights in the takeover market. To be successful, such bids must be at a premium over current market value. This gives investors an opportunity to realize part of the gains from reorganization and redeployment of the assets.

Free Cash Flow Theory

More than a dozen separate forces drive takeover activity, including such factors as deregulation, synergies, economies of scale and scope, taxes, the level of managerial competence, and increasing globalization of U.S. markets (Roll, forthcoming). One major cause of takeover activity, the agency costs associated with conflicts between managers and shareholders over the payout of free cash flow, has received relatively little attention. Yet it has played an important role in acquisitions over the last decade.⁵

Managers are the agents of shareholders, and because both parties are self-interested, there are serious conflicts between them over the choice of the best corporate strategy. Agency costs are the total costs that arise in such arrangements. They consist of the costs of monitoring and bonding managerial behavior (such as the costs of producing audited financial statements and devising and implementing compensation plans that reward managers for actions that increase investors' wealth) and the efficiency losses that are incurred because the conflicts of interest can never be resolved perfectly. When these costs are large, the threat or actuality of takeovers can reduce them.

Free cash flow is cash flow in excess of that required to fund all of a firm's projects that have positive net present values when discounted at the relevant cost of capital. Such free cash flow must be paid out to shareholders if the firm is to be efficient and to maximize value for shareholders.

However, payment of cash to shareholders reduces the resources controlled by managers, thereby reducing the power of managers and potentially subjecting them to the monitoring by capital markets that occurs when a firm must obtain new capital. Further, managers have incentives to expand their firms beyond the size that maximizes shareholder wealth.⁶ Growth increases managers' power by increasing the

⁵This discussion is based on Jensen (1986).

⁶Gordon Donaldson (1984), in a detailed study of twelve large Fortune 500 firms, concludes that managers of these firms were not driven by maximization of the value of the firm, but rather by the maximization of "corporate wealth." He defines corporate wealth (p. 3, emphasis in original) as "*the aggregate purchasing power available to management for strategic purposes during any given planning period. . . . this wealth consists of the stocks and flows of cash and cash equivalents (primarily credit) that management can use at its discretion to implement decisions involving the control of goods and services.*" He continues (p. 22), "In practical terms it is cash, credit, and other corporate purchasing power by which management commands goods and services."

resources under their control, and changes in management compensation are positively related to growth.⁷ Moreover, the tendency of firms to reward middle managers through promotion rather than year-to-year bonuses also creates an organizational bias toward growth to supply the new positions that such promotion-based reward systems require (Baker, 1986).

Conflicts of interest between shareholders and managers over payout policies are especially severe when the organization generates substantial free cash flow. The problem is how to motivate managers to disgorge the cash rather than invest it at below the cost of capital or waste it through organizational inefficiencies.

The theory developed here offers a seeming paradox. Increases in financial flexibility that give managers control over free cash flow may actually cause the value of the firm to decline. This result occurs because it is difficult to assure that managers will use their discretion over resources to further the interests of shareholders.

The theory explains: (1) how debt for stock exchanges reduces the organizational inefficiencies fostered by substantial free cash flow; (2) how debt can substitute for dividends; (3) why "diversification" programs are more likely to be associated with losses than are expansion programs in the same line of business; (4) why mergers within an industry and liquidation-motivated takeovers will generally create larger gains than cross-industry mergers; (5) why the factors stimulating takeovers in such diverse businesses as broadcasting, tobacco, cable systems, and oil are essentially identical; and (6) why bidders and some targets tend to show abnormally good performance prior to takeover.

The Role of Debt in Motivating Organizational Efficiency

The agency costs of debt have been widely discussed (Jensen and Meckling, 1976; Smith and Warner, 1979), but, with the exception of Grossman and Hart (1980), the benefits of debt in motivating managers and their organizations to be efficient have largely been ignored.

Debt creation, *without retention of the proceeds of the issue*, enables managers effectively to bond their promise to pay out future cash flows. Thus, debt can be an effective substitute for dividends, something not generally recognized in the corporate finance literature.⁸ Debt reduces the agency cost of free cash flow by reducing the cash flow available for spending at the discretion of managers. By issuing debt in exchange for stock, managers bond their promise to pay out future cash flows in a way that simple dividend increases do not. In doing so, they give shareholder-recipients of the debt the right to take the firm into bankruptcy court if they do not keep their promise to make the interest and principal payments.

⁷Where growth is measured by increases in sales (Murphy, 1985). This positive relationship between compensation and sales growth need not imply, although it is consistent with, causality.

⁸Literally, principal and interest payments are substitutes for dividends. Dividends and debt are not perfect substitutes, however, because interest is tax-deductible at the corporate level and dividends are not.

Of course, managers can also promise to pay out future cash flows by announcing a “permanent” increase in the dividend.⁹ But because there is no contractual obligation to make the promised dividend payments, such promises are weak.¹⁰ The fact that capital markets punish dividend cuts with large stock price reductions (Charest, 1978; Aharony and Swary, 1980) can be interpreted as an equilibrium market response to the agency costs of free cash flow.

Issuing large amounts of debt to buy back stock sets up organizational incentives to motivate managers to pay out free cash flow. In addition, the exchange of debt for stock helps managers overcome the normal organizational resistance to retrenchment that the payout of free cash flow often requires. The threat of failure to make debt-service payments serves as a strong motivating force to make such organizations more efficient.

Increased leverage also has costs. As leverage increases, the usual agency costs of debt, including bankruptcy costs, rise. The incentives to take on projects that reduce total firm value but benefit shareholders through a transfer of wealth from bondholders is one source of these costs. These costs put a limit on the desirable level of debt. The optimal debt/equity ratio is the point at which firm value is maximized, the point where the marginal costs of debt just offset the marginal benefits.

The debt created in a hostile takeover (or takeover defense) of a firm suffering severe agency costs of free cash flow need not be permanent. Indeed, sometimes “overleveraging” such a firm is desirable. In these situations, leveraging the firm so highly that it cannot continue to exist in its old form creates the crisis to motivate cuts in expansion programs and the sale of those divisions that are more valuable outside the firm. The proceeds are used to reduce debt to a more normal or permanent level. This process results in a reexamination of an organization’s strategy and structure. When it is successful, a much leaner, more efficient, and competitive organization results.

This control hypothesis does not imply that debt issues will always have positive control effects. For example, these control effects will not be as important for rapidly growing organizations with large and highly profitable investment projects but no free cash flow. Such organizations will have to go regularly to the financial markets to obtain capital. At these times the markets have an opportunity to evaluate the company, its management, and its proposed projects. Investment bankers and analysts

⁹ Rozeff (1982) and Easterbrook (1984a) argue that regular dividend payments can be effective in reducing agency costs with managers by assuring that managers are forced more frequently to subject themselves and their policies to the discipline of the capital markets when they acquire capital.

¹⁰ Interestingly, Graham and Dodd (1951, Chapters 32, 34, and 36) place great importance on the dividend payout in their famous valuation formula $V = M(D + .33E)$. V is value, M is the earnings multiplier when the dividend payout rate is a “normal two-thirds of earnings,” D is the expected dividend, and E is expected earnings. In their formula, dividends are valued at three times the rate of retained earnings—a proposition that has puzzled many students of modern finance (at least of my vintage). The agency cost of free cash flow that leads to over-retention and waste of shareholder resources is consistent with the deep suspicion with which Graham and Dodd viewed the lack of payout. Their discussion (chapter 34) reflects a belief in the tenuous nature of the future benefits of such retention. Although they do not couch the issues in terms of the conflict between managers and shareholders, the free cash flow theory explicated here implies that their beliefs, sometimes characterized as a conviction that “a bird in the hand is worth two in the bush,” were perhaps well founded.

play an important role in this monitoring, and the market's assessment is made evident by the price investors pay for the financial claims.

The control function of debt is more important in organizations that generate large cash flows but have low growth prospects, and it is even more important in organizations that must shrink. In these organizations the pressure to waste cash flows by investing them in uneconomic projects is most serious.

Leveraged Buyouts and Free Cash Flow Theory

Many of the benefits in going-private and leveraged buyout transactions seem to be due to the control function of debt. These transactions are creating a new organizational form that competes successfully with the open corporate form because of advantages in controlling the agency costs of free cash flow. In 1985, going-private and LBO transactions totaled \$37.4 billion and represented 32 percent of the value of all public acquisitions. In 1986, the total value increased to \$44.3 billion representing 39 percent of all public acquisitions (Baker, 1986; Grimm, 1986). Average premiums paid for publicly held firms have exceeded 50 percent.

Desirable leveraged buyout candidates are frequently firms or divisions of larger firms that have stable business histories, low growth prospects and high potential for generating cash flows; that is, situations where agency costs of free cash flows are likely to be high.

Leveraged buyouts are frequently financed with high debt; 10:1 ratios of debt to equity are not uncommon, and they average 5.25:1 (Schipper and Smith, 1986; Kaplan, 1987; DeAngelo and DeAngelo, 1986). Moreover, the use of "strip financing" and the allocation of equity in the deals reveal a sensitivity to incentives, conflicts of interest, and bankruptcy costs. Strip financing, the practice in which risky nonequity securities are held in approximately equal proportions, limits the conflict of interest among such securityholders and therefore limits bankruptcy costs. Top managers and the sponsoring venture capitalists hold disproportionate amounts of equity.

A somewhat oversimplified example illustrates the organizational effects of strip financing. Consider two firms identical in every respect except financing. Firm A is entirely financed with equity, and Firm B is highly leveraged with senior debt, subordinated debt, convertible debt, and preferred as well as common equity. Suppose Firm B securities are sold only in strips; that is, a buyer purchasing a certain percent of any security must purchase the same percent of all securities, and the securities are "stapled" together so they cannot be separated later. Security holders of both firms have identical unlevered claims on the cash flow distribution, but organizationally the two firms are very different. If Firm B managers withhold dividends to invest in value-reducing projects or if they are incompetent, stripholders have recourse to remedial powers not available to the equityholders of Firm A. Each Firm B security specifies the rights its holder has in the event of default on its dividend or coupon payment—for example, the right to take the firm into bankruptcy or to have board representation. As each security above equity goes into default, the stripholder receives new rights to intercede in the organization. As a result, it is quicker and less expensive to replace managers in Firm B.

Moreover, because every securityholder in the highly levered Firm B has the same claim on the firm, there are no conflicts between senior and junior claimants

over reorganization of the claims in the event of default; to the stripholders it is a matter of moving funds from one pocket to another. Thus, Firm B will not go into bankruptcy; a required reorganization can be accomplished voluntarily, quickly, and with less expense and disruption than through bankruptcy proceedings.

Securities commonly subject to strip practices are often called "mezzanine" financing and include securities with priority superior to common stock yet subordinate to senior debt. This arrangement seems to be sensible, because several factors ignored in our simplified example imply that strictly proportional holdings of all securities is not desirable. For example, IRS restrictions deny tax deductibility of debt interest in such situations and bank holdings of equity are restricted by regulation. Riskless senior debt need not be in the strip because there are no conflicts with other claimants in the event of reorganization when there is no probability of default on its payments.

Furthermore, it is advantageous to have top level managers and venture capitalists who promote the transactions hold a larger share of the equity. Top level managers on average receive over 30 percent of the equity, and venture capitalists and the funds they represent generally retain the major share of the remainder (Schipper and Smith, 1986; Kaplan, 1987). The venture capitalists control the board of directors (in fact, they often *are* the board) and monitor managers directly. Large equity claims by managers and venture capitalists give them a strong interest in making the venture successful because their equity interests are subordinate to other claims.

Leveraged buyouts increased dramatically in the last decade from \$1.2 billion in 1979, when W. T. Grimm began collecting the data, to \$44.3 billion in 1986. Less than a handful of these management buyouts have ended in bankruptcy, although more have gone through private reorganizations. A thorough test of this organizational form requires the passage of time and recessions.

Some have asserted that managers engaging in a buyout of their firm are insulating themselves from monitoring. The opposite is true in the typical leveraged buyout because the venture capitalist is generally the largest stockholder and controls the board of directors. The venture capitalist therefore has both greater ability and greater incentive to monitor managers than do directors with little or no equity who represent diffuse shareholders in the typical public corporation.

Applying Free Cash Flow Theory to Takeovers

Free cash flow theory is consistent with a wide range of previously unexplained data. Here I sketch some empirical predictions of the free cash flow theory for takeovers and mergers and some of the facts that lend it credence.

The Oil Industry

The importance of takeovers and the relevance of free cash flow theory in motivating change and efficiency are particularly clear in the oil industry. Radical changes in the energy market from 1973 to the late 1970s meant that a major restructuring of the petroleum industry had to occur. The optimal level of refining and distribution capacity and crude reserves fell over this period; as of the late 1970s,

the industry was plagued with excess capacity, although this was not generally recognized at the time. Reserves are reduced by reducing the level of exploration and development, and it pays to concentrate these reductions in high-cost areas such as the United States.

Substantial reductions in exploration and development and in refining and distribution capacity meant that some firms had to leave the industry. This is especially true because holding reserves is subject to economies of scale, while exploration and development are subject to diseconomies of scale.

At the same time price increases generated large cash flows, creating a particularly puzzling period in the oil industry because at the same time that change in the environment required a reduction of capacity, cash flows and profits were high; 1984 cash flows of the ten largest oil companies were \$48.5 billion, 28 percent of the total cash flows of the top 200 firms in *Dun's Business Month* (July 1985) survey. This condition, in which high profits coincided with the necessity to shrink the industry, is somewhat unusual. It was caused by an increase in the average productivity of resources in the industry while the marginal productivity decreased.¹¹ However, management did not pay out the excess resources to shareholders. Instead, the industry continued to spend heavily on exploration and development even though the returns on these expenditures were below the cost of capital.

Paradoxically, the profitability of oil exploration and drilling activity can decrease even though the price of oil increases, if the value of reserves in the ground falls. This decrease can occur when the price increase is associated with reductions in consumption that make marketing newly discovered oil difficult. In the late 1970s the increased holding costs associated with higher real interest rates, reductions in expected future oil price increases, increased exploration and development costs, and contrived reductions in current supply (and thus larger future potential supply) combined to make many current exploration and development projects uneconomic. The industry, however, continued to spend heavily on such projects.

The waste associated with excessive exploration and development expenditures explains why buying oil on Wall Street was considerably cheaper than obtaining it by drilling holes in the ground, even after adjustment for differential taxes and regulations on prices of old oil. Wall Street was not undervaluing the oil; it was valuing it correctly, but it was also correctly valuing the wasted expenditures on exploration and development that oil companies were making. When these managerially imposed "taxes" on the reserves were taken into account in stock prices, the net prices of oil on Wall Street was low. This low price provided incentives for firms to obtain reserves by purchasing other oil companies and reducing expenditures on non-cost-effective exploration. In this way the capital markets provided incentives for firms to make adjustments that were not effectively motivated by competition in the product markets.

The fact that oil industry managers tried to invest funds outside the industry is also evidence that they could not find enough profitable projects within the industry to use the huge inflow of resources efficiently. Unfortunately these efforts failed. The

¹¹More detailed analysis of this point is available in Jensen (1987).

diversification programs involved purchases of companies in retailing (Marcor by Mobil), manufacturing (Reliance Electric by Exxon), office equipment (Vydec by Exxon), and mining (Kennecott by Sohio, Anaconda Minerals by ARCO, Cyprus Mines by Amoco). These acquisitions turned out to be among the least successful of the last decade, partly because of bad luck (like the collapse of the minerals industry) and partly because of a lack of managerial expertise outside the oil industry. In sum, the stage was set for retrenchment in the oil industry in the early 1980s. Yet the product and capital markets could not force management to change its strategy because the industry's high internal cash flows insulated them from these pressures.

Ultimately the capital markets, through the takeover market, forced managers to respond to the new market conditions. T. Boone Pickens of Mesa Petroleum perceived early that the industry had to be restructured. Partly as a result of Mesa's efforts, firms in the industry were led to merge, and in the merging process they paid out large amounts of capital to shareholders, reduced excess expenditures on exploration and development, and reduced excess capacity in refining and distribution. The result has been large gains in efficiency. Total gains to shareholders in the Gulf/Chevron, Getty/Texaco and Du Pont/Conoco mergers, for example, were over \$17 billion. Much more is possible. Jacobs (1986) estimates total potential gains of approximately \$200 billion from eliminating the inefficiencies in 98 petroleum firms as of December 1984.

Recent events indicate that actual takeover is not necessary to induce the required adjustments; the Phillips, Unocal and Arco restructurings all involve large stock repurchases with debt and cash, increases in dividend payments, and reductions in exploration and development. They generated increases of 20 percent to 35 percent in market value, totaling \$6.6 billion.

Other Industries in Theory and Practice

Acquisitions are one way managers spend cash instead of paying it out to shareholders. Free cash flow theory implies that managers of firms with unused borrowing power and large free cash flows are more likely to undertake low-benefit or even value-destroying mergers. Diversification programs generally fit this category, and the theory predicts that they will generate lower total gains. Thus, some acquisitions are a solution to the agency problem of free cash flow while others, such as diversification programs, are symptoms of those problems.

The major benefit of diversification mergers may be that they involve less waste of resources than if the funds had been invested internally in unprofitable projects. Acquisitions made with cash or securities other than stock involve payout of resources to shareholders of the target company, and this can create net benefits even if the merger creates operating inefficiencies. To illustrate, consider an acquiring firm with substantial free cash flow that the market expects will be invested in low-return projects with a negative net present value of \$100 million. If this firm uses up its free cash flow (and thereby prevents its waste) by acquiring another firm that generates zero synergies, the combined market value of the two firms will rise by \$100 million. The market value increases because the acquisition eliminates the expenditures on internal investments with negative market value of \$100 million.

Because the bidding firms are using funds that would otherwise have been spent on low or negative-return projects, the opportunity cost of the funds is lower than their cost of capital. As a result, they will tend to overpay for the acquisition and thereby transfer some, if not all, of the gains to the target firm's shareholders. In extreme cases they may pay so much that the bidding firm's share price falls, in effect giving the target shareholders more than 100 percent of the gains. These predictions are consistent with the evidence that shareholders of target companies reap most of the gains from a takeover.

Low-return mergers are more likely to occur in industries with large cash flows whose economics dictate retrenchment. Horizontal mergers (where cash or debt is the form of payment) within declining industries will tend to create value because they facilitate exit—the cash or debt payments to shareholders of the target firm cause resources to leave the industry directly. When Socal acquired Gulf in 1984 for \$13.2 billion in cash, the oil industry shrank by \$13.2 billion as soon as the checks were mailed. Mergers outside the declining industry are more likely to have low or even negative returns because managers are likely to know less about managing such firms. Oil fits this description, and so does tobacco. Tobacco firms face declining demand as a result of changing smoking habits but generate large free cash flow and have been involved in major diversifying acquisitions, as in the \$5.6 billion purchase of General Foods by Philip Morris. The theory predicts that these acquisitions in nonrelated industries are more likely to reduce productivity, although the positive total gains to buyers and sellers indicate these negative productivity effects are outweighed by the reductions in waste from internal expansion.

Forest products is another industry with excess capacity and acquisition activity, including the acquisition of St. Regis by Champion International and Crown Zellerbach by Sir James Goldsmith. Horizontal mergers for cash or debt in such an industry generate gains by encouraging exit of resources (through payout) and by substituting existing capacity for investment in new facilities by firms that are short of capacity. Food industry mergers also appear to reflect the expenditure of free cash flow. The industry apparently generates large cash flows with few growth opportunities. It is, therefore, a good candidate for leveraged buy-outs, and these are now occurring; the \$6.3 billion Beatrice LBO is the largest ever.

The broadcasting industry generates rents in the form of large cash flows on its licenses and also fits the theory. Regulation limits the overall supply of licenses and the number owned by a single entity. Thus, profitable internal investments are limited, and the industry's free cash flow has been spent on organizational inefficiencies and diversification programs, making these firms takeover targets. The CBS debt-for-stock exchange and restructuring as a defense against the hostile bid by Turner fits the theory, and so does the \$3.5 billion purchase of American Broadcasting Company by Capital Cities Communications. Complete cable systems also create agency problems from free cash flows in the form of rents on their franchises and quasi rents on their installed capital and are likely to generate free cash flow problems. Drug companies with large cash flows from previous successful discoveries and few potential future prospects are also candidates for large agency costs of free cash flow.

Free cash flow theory predicts that many acquirers will tend to perform exceptionally well prior to acquisition. Empirical evidence from studies of both stock prices and accounting data indicates exceptionally good performance for acquirers prior to acquisition (Magenheim and Mueller, 1985; Bradley and Jarrell, 1985). This exceptional stock price performance is often associated with increased free cash flow, which is then used for acquisition programs as observed in the oil industry. Targets will be of two kinds: firms with poor management that have done poorly before the merger, and firms that have done exceptionally well and have large free cash flow that they refuse to pay out to shareholders. Both kinds of targets seem to exist.¹²

The theory predicts that takeovers financed with cash and debt will create larger benefits than those accomplished through exchange of stock. Stock acquisitions do nothing to take up the organizations' financial slack and are therefore unlikely to motivate managers to use resources more efficiently. The recent evidence on takeover premiums is consistent with this prediction.¹³

In the best study to date of the determinants of takeover, Palepu (1986) finds strong evidence consistent with the free cash flow theory of mergers. He studied a sample of 163 firms acquired in the period 1971–79 and a random sample of 256 firms that were not acquired. Both samples were in mining and manufacturing and were listed on either the New York or American stock exchange. He finds that firms with a mismatch between growth and resources are more likely to be taken over. These are firms with high growth (measured by average sales growth), low liquidity (measured by the ratio of liquid assets to total assets) and high leverage, and firms with low growth, high liquidity, and low leverage. He also finds that poor prior performance (measured by the net of market returns in the four years before the acquisition) is significantly related to the probability of takeover and, interestingly, that accounting measures of past performance such as return on equity are unrelated to the probability of takeover.

Free cash flow is only one of the many factors that go into a takeover decision. But the evidence indicates that it is an important factor and provides a useful perspective on the conflict.

Controversial Issues from an Agency Perspective

High-Yield, Non-Investment Grade Bonds: "Junk" Bonds

The past several years have witnessed a major innovation in the financial markets—the establishment of active markets in high-yield bonds. These bonds, rated below

¹²Asquith (1983) finds evidence of below-normal stock price performance for 302 target firms in the 400 days before 20 days prior to the takeover bid. Mandelker (1974) finds negative abnormal performance for target firms in the period from 40 months before until 9 months before the outcome of the merger bid is known. Langtieg (1978) reports significant negative returns in the period from 72 months before until 19 months before the outcome date, but positive abnormal returns in the 19 months preceding the merger date.

¹³See Wansley, Lane and Yang (1987) who find higher returns to targets and to bidders in cash transactions, and Wansley and Fayez (1986).

investment grade by the bond-rating agencies, are frequently referred to as junk bonds, a disparaging term that bears no relation to their pedigree. High-yield bonds are best viewed as commercial loans that can be resold in secondary markets. They are further evidence of the securitization that has converted formerly illiquid financial claims such as mortgages into marketable claims. Total publicly held high-yield bonds have risen from \$7 billion in 1970 to \$125 billion in 1986, or 23 percent of the total corporate bond market (Taggart, 1986; Drexel Burnham Lambert, 1987). By traditional standards they are more risky than investment-grade bonds and therefore carry interest rates 3 to 5 percentage points higher than the yields on government bonds of comparable maturity. In an early study, Blume and Keim (1984) find that the default rates on these bonds have been low and the realized returns have been disproportionately higher than their risk.

High-yield bonds have been attacked by those who wish to inhibit their use, particularly in the financing of takeover bids. However, companies commonly raise funds to finance ventures by selling claims to be paid from the proceeds of the venture; this is the essence of debt or stock issues used to finance new ventures. High-yield bonds used in takeovers work similarly. The bonds provide a claim on the proceeds of the venture, using the assets and cash flows of the target plus the equity contributed by the acquirer as collateral. Similarly, individuals purchase homes using the home plus their down payment as collateral for the mortgage. The structure of this contract offers nothing inherently unusual.

Some might argue that the risk of high-yield bonds used in takeover attempts is "too high." But high-yield bonds are less risky by definition than common stock claims on the same venture, since the claims of common stockholders are subordinate to those of the holders of high-yield bonds. Would these same critics argue that the stock claims are too risky and thus should be barred? The risk argument makes logical sense only as an argument that transactions costs associated with bankruptcy or recontracting are too high in these ventures or that the bonds are priced too high and that investors who purchase them will not earn returns high enough to compensate for the risk they are incurring. This overpricing argument makes little sense because there is vast evidence that investors are capable of pricing risks in all sorts of other markets.

In January 1986 the Federal Reserve Board issued a new interpretation of the margin rules that restricts the use of debt in takeovers to 50 percent or less of the purchase price. The rule has had little effect on takeovers because bidders otherwise subject to the constraint have instead used high-yield preferred stock rated below investment grade which is converted to debt after completion of the acquisition or bridge loans. This rule was apparently motivated by the belief that the use of corporate debt has become abnormally and dangerously high and was threatening the economy. This assessment is not consistent with the facts. Table 2 presents measures of debt use by nonfinancial corporations in the United State. The debt-equity ratio is measured relative to three bases: market value of equity, estimated current asset value of equity, and accounting book value of equity measured at historical cost.

Although debt-equity ratios were higher in 1985 than in 1961, they were not at record levels. The book value debt-equity ratio reached a high of 81.4 percent in 1984

Table 2
Debt-to-equity ratios: non-financial corporations

<i>Year</i>	<i>Book value</i>	<i>Current value</i>	<i>Market value</i>
1961	57.1%	41.1%	38.5%
1962	58.2	42.5	45.6
1963	59.6	44.5	41.7
1964	59.9	45.4	39.8
1965	61.1	46.5	40.0
1966	62.7	47.4	48.4
1967	64.7	48.7	41.3
1968	67.2	50.5	40.2
1969	68.1	50.3	50.3
1970	70.5	50.7	54.7
1971	70.4	50.7	50.0
1972	70.2	50.3	48.1
1973	70.9	48.9	67.7
1974	70.2	43.9	105.2
1975	66.7	41.6	79.5
1976	65.6	41.1	74.2
1977	67.7	41.4	87.6
1978	69.1	41.1	94.8
1979	69.9	39.9	88.7
1980	68.3	37.8	70.0
1981	71.0	38.3	82.7
1982	74.3	40.0	77.7
1983	73.0	40.6	69.2
1984	81.4	46.1	80.5
1985	78.0	46.5	60.8

Source: Federal Reserve Board (1986)

but declined to 78 percent in 1985. Debt-equity ratios measured on a historical cost basis are relatively high because of the previous decade of inflation. Maintenance of the same inflation-adjusted debt ratios in time of inflation implies that the book value ratio must rise because the current value of assets in the denominator of the inflation-adjusted ratio is rising. The current value ratio, which takes account of inflation, fell from 50.7 percent in 1970 to 46.5 percent in 1985. The market-value ratio rose from 54.7 percent in 1970 to 80.5 percent in 1984 and plummeted to 60.8 percent in 1985. The 1985 market-value ratio was 45 percentage points below its 1974 peak of 105.2 percent. Thus, the Federal Reserve System's own data are inconsistent with the reasons given for its restrictions on the use of debt.

High-yield bonds were first used in a takeover bid in 1984 and were involved in relatively few bids in total. In 1984, only about 12 percent of the \$14.3 billion of new high-yield debt was associated with mergers and acquisitions. In 1985, 26 percent of

the \$14.7 billion of new high-yield debt was used in acquisitions.¹⁴ According to *Mergers & Acquisitions*, 1986 acquisition-related high-yield debt still represents less than one of every 12 dollars in acquisition value. Nevertheless, high-yield bonds are an important innovation in the takeover field because they help eliminate size as a deterrent to takeover. They have been particularly influential in helping to bring about reorganizations in the oil industry.

Historical default rates on high-yield bonds have been low, but many of the bonds are so new that the experience could prove to be different in the next downturn. Various opponents (including executives who desire protection from the takeover market and members of the financial community, such as commercial banks and insurance companies, who want to restrict competition from this new financing vehicle) have backed regulations and legislation to restrict the issuance of high-yield bonds, to penalize their tax status, and to restrict their holding by thrifts, which can now buy them as substitutes for the issuance of nonmarketable commercial loans. These proposals are premature, to say the least.

Severance Contracts: "Golden Parachutes"

The increasing sophistication of takeover experts and the availability of high-yield bond financing for profitable takeover ventures means that the largest of the Fortune 500 companies are now potentially subject to takeover; mere size is no longer an effective defense. This susceptibility to takeover has created a new contracting environment for top-level managers. Roughly 50 percent of the top level managers of target firms are gone within three years of acquisition—either hostile or voluntary. Many managers are legitimately anxious, and it will take time for the system to work out an appropriate set of practices and contracts reflecting the risks and rewards of the new environment.

Unfortunately, a major component of the solution to the conflict of interest between shareholders and managers has been vastly misunderstood. I am referring to severance contracts that compensate managers for the loss of their jobs in the event of a change in control. These have been popularly labeled "golden parachutes."

These control-related contracts are beneficial when correctly implemented, because they help reduce the conflict of interest between shareholders and managers at times of takeover and therefore make it more likely that the productive gains stemming from changes in control will be realized. The evidence indicates that stock prices of firms that adopt severance-related compensation contracts for managers on average rise about 3 percent when adoption of the contracts is announced (Lambert and Larcker, 1985). There is no easy way to tell what proportion of the effect is due to the market interpreting the announcement as a signal that a takeover bid is more likely and what proportion is due to the reduction in conflict between managers and shareholders.

¹⁴Source: Drexel Burnham Lambert, private correspondence.

At times of takeover, shareholders are implicitly asking the top-level managers of their firm to negotiate a deal for them that frequently involves the imposition of large personal costs on the managers and their families. These involve moving costs, the loss of position, power and prestige, and even the loss of their jobs. Shareholders are asking the very people who are most likely to have invested considerable time and energy (in some cases a life's work) in building a successful organization to negotiate its sale and the possible redirection of its resources.

It is important to confront these conflicts and to structure contracts with managers to reduce them. It would make no sense to hire a realtor to sell your house and then penalize him for doing so. Yet that is the implication of many of the emotional reactions to control-related severance contracts. The restrictions and tax penalties imposed on these severance payments by the Deficit Reduction Act of 1984 are unwise interferences in the contracting freedoms of shareholders and managers and should be eliminated.

Golden parachutes can be used to restrict takeovers and to entrench managers at the expense of shareholders. The key to deciding whether a contract is well-designed is whether it helps solve the conflict-of-interest problem between shareholders and managers. Solving this problem requires extending control-related severance contracts beyond the chief executive to those members of the top-level management team who must play an important role in negotiating and implementing any transfer of control. Contracts that award severance contracts to substantial numbers of managers beyond this group are unlikely to be in the shareholders' interest. Beneficial Corp. awarded such contracts to over 200 of its managers (Morrison, 1982). These are likely to be difficult to justify as in the shareholders' interests.

Severance-related compensation contracts are particularly important in situations where it is optimal for managers to invest in organization-specific human capital; that is, in skills and knowledge that have little or no value in other organizations. Managers will not so invest where the likelihood is high that their investment will be eliminated by an unexpected transfer of control and the loss of their jobs. In such situations, the firm will have to pay for all costs associated with the creation of such organization-specific human capital, and it will be more costly for the firm to attract and retain highly talented managers when they have better opportunities elsewhere. In addition, contracts that award excessive severance compensation to the appropriate group of managers will tend to motivate managers to sell the firm at too low a price.

No simple rules can be specified that will easily prevent the misuse of golden parachutes because the appropriate solution will depend on many factors that are specific to each situation (like the amount of stock held by the managers and the optimal amount of investment in organization-specific human capital). In general, contracts that award inappropriately high payments to an excessively large group will reduce efficiency and harm shareholders by raising the cost of acquisition and by transferring wealth from shareholders to managers. The generally appropriate solution is to make the control-related severance contracts pay off in a way that is tied to the premium earned by the stockholders. Stock options or restricted stock appreciation rights that pay off only in the event of a change in control are two options that have

some of the appropriate properties. In general, policies that encourage increased stock ownership by managers and the board of directors will provide incentives that will tend to reduce the conflicts of interests with managers.

Targeted Repurchases: "Greenmail"

Most proposals to restrict or prohibit targeted repurchases (transactions pejoratively labeled "greenmail") are nothing more than antitakeover proposals in disguise. Greenmail is actually a targeted repurchase, an offer by management to repurchase the shares of a subset of shareholders at a premium, an offer not made to other shareholders. Greenmail is an appellation that suggests blackmail; yet the only effective threat possessed by a greenmailer is the right to offer to purchase stock from shareholders at a substantial premium. The "damage" to shareholders caused by this action is difficult to find. Those who propose to "protect" shareholders by paying greenmail hide this fact behind emotional language designed to mislead. But management can easily prohibit greenmail without legislation: it need only announce a policy that prohibits the board or management from making such payments.

The ease with which managers can prevent targeted repurchases makes it clear that the problem lies with managers who use such payments to protect themselves from competition in the market for corporate control. Three careful studies of these transactions indicate that, when measured from the initial toehold purchase to the final repurchase of the shares, the stock price of target firms rises (Holderness and Sheehan, 1985; Mikkelson and Ruback 1985, 1986). Therefore, shareholders are benefited, not harmed, by the whole sequence of events. However, when greenmail is used to buy off an acquirer who has made an offer for the firm, shareholders are harmed by the loss of the takeover premium. There is some indication that the stock price increases represent the expectation of future takeover premiums in firms in which the targeted repurchase was not sufficient to prevent ultimate takeover of the firm (see Mikkelson and Ruback, 1986). If so, then, as in the final defeat of tender offers found by Bradley, Desai and Kim (1983), all premiums are lost to shareholders in firms for which the repurchase and associated standstill agreements successfully lock up the firm, preventing any voluntary reorganization.

Problems in the Delaware Court: "Poison Pills"

Delaware courts have created over the years a highly productive fabric of corporate law that has benefited the nation. The court is having difficulty, however, sorting out the complex issues it faces in the takeover area. The result has been a confusing set of decisions that, in contrast to much of the court's previous history, appears to make little economic sense.¹⁵

¹⁵See, for example, *Moran v. Household Intl., Inc.*, 490 A.2d 1059 (Del. Ch. 1985) aff'd 500 A.2d 1346 (Del. 1985) (upholding poison pill rights issue), *Smith v. Van Gorkom*, 488 A.2d 858, (holding board liable for damages in sale of firm at substantial premium over market price), *Unocal v. Mesa*, 493 A.2d 946, 954 (Del. 1985) (allowing discriminatory targeted repurchase that confiscates wealth of largest shareholder), *Revlon Inc. v. MacAndrews & Forbes Holdings Inc.* 506 A.2d 173, (Del. 1986) (invalidation of Revlon's lockup sale of a prime division to Forstmann Little at a below-market price).

One key case involved a unilateral decision from the board of directors of Household International to change the nature of the contractual relationship with Household's shareholders in a fundamental way. Effectively, the board restricted the alienability of the common stock by prohibiting shareholders from selling their shares, without permission of the board, into a control transaction leading to merger at a premium over market value lower than about \$6 billion. Since Household had a market value of about \$2 billion at the time, this step prevented its shareholders from accepting any premium less than 200 percent—more than four times the average takeover premium of 50 percent common in recent times. This decision is difficult to justify as in the shareholders' interests, but the Delaware Supreme Court upheld in November 1985 the right of the board to take such action.

The Delaware court's model of the corporation is founded in the business judgment rule—the legal doctrine that holds that unless explicit evidence of fraud or self-dealing exists the board of directors is presumed to be acting in the interests of the shareholders. In particular, the board is presumed to act altruistically and never out of incentives to preserve the interests of managers or their own positions as board members.

The altruistic model of the board that is the implicit foundation of the business judgment rule is obviously incorrect as a description of human behavior. But in spite of its falsity, the altruistic model has been sufficiently robust to yield good law for a wide range of cases for many years. Alternative agency models of the corporation that incorporate conflicts of interest between board members and shareholders are much more complicated.¹⁶ The court is now being forced to deal with these complexities, but it is doing so with an inadequate analytic foundation.

To illustrate the problem the Delaware court is facing, consider the simple situation in which a principal (stockholder) hires an agent (managers and board of directors) to take some actions on his or her behalf. To effect this arrangement, the principal delegates to the agent a set of decision rights. On entering the relationship, the principal wants the courts to enforce the contract that delegates decision rights to the agent. One of the primary purposes of the business judgment rule is to keep the courts out of the business of second-guessing the agent's decisions and holding the agent liable for damages. Doing so would make it difficult or impossible for principals to hire agents in the first place, which would eliminate the benefit of specialization. Under this rule, the court refused to second-guess the decision of the Household board of directors.

The principal may want to delegate a wide range of decision rights to the agent. In no event, however, will it be sensible for the principal to delegate the ultimate control rights to the agent: the rights to hire, fire, and set the compensation of the agent (Fama and Jensen, 1985). If the principal were to delegate the control rights to the agent, the agent could not be fired and would have the right to set his own compensation. In this circumstance the agent would become the effective owner of the decision rights (although he probably could not alienate them) and could be expected to use them in his own interests.

¹⁶Easterbrook (1984b) and Jensen and Smith (1985) provide summaries of much of the work in the area.

If the business judgment rule is applied to conflicts over control rights between principals and agents, the courts are effectively giving the agent the right to change the control rights unilaterally. In the long run, this interpretation of the contract will destroy the possibility of such cooperative arrangements, because it will leave principals with few effective rights.

The courts have applied the business judgment rule to conflicts between management and shareholders over the issuance of poison pill preferred stock, poison pill rights, and discriminatory targeted repurchases, and have given managers and boards the rights to use these devices.¹⁷ Poison pill securities change fundamental aspects of the corporate rules that govern the relationship between shareholders, managers, and the board of directors when a control-related event occurs. They are called "poison pills" because they alter the company to make it indigestible to an acquirer. In doing so, the courts are essentially giving the agents (managers and the board) the right to change unilaterally critical control aspects of the contract, in particular, the right to prevent the firing of the agents.

The Delaware court decision upholding the decision of the board of Household International has unleashed a flood of poison pill adoptions by American corporations. Ryngaert (forthcoming) and Malatesta and Walkling (forthcoming) study the effects of over 300 of these plans adopted primarily in the period since the *Household* and *Unocal* decisions. They find statistically significant negative stock price effects on the announcement of the adoption of the plans; they find also that the plans tend to be implemented in firms in which managers own relatively little of their firm's stock. Malatesta and Walkling also find that firms adopting such plans are significantly less profitable than other firms in their industries in the year prior to adoption.

The court has erred in allowing the Household board, under the business judgment rule, to make the fundamental change in the structure of the organization implied by the rights issue without vote of its shareholders. Several other poison pill cases have been heard by the courts with similar outcomes, but one New Jersey and two New York courts have recently ruled against poison pills that substantially interfere with the voting rights of large-block shareholders.¹⁸ An Illinois district court recently voided a poison pill (affirmed by the Seventh Circuit Court of Appeals) and two weeks later approved a new pill issued by the same company.¹⁹

The problem with these special securities and the provision they contain is not with their appropriateness (some might well be desirable), but with the manner in which they are being adopted; that is, without approval by shareholders. Boards of directors show little inclination to refer such issues to shareholders.

The continued application of the business judgment rule to conflicts over control has far-reaching consequences. If the current trend continues, this process will erode

¹⁷*Moran v. Household Intl.*, and *Unocal v. Mesa*. Full citations provided in note 15.

¹⁸*Ministar Acquiring corp. v. AMF Inc.*, 621 Fed Sup 1252. Dis NY, 1985 *Unilever Acquisition Corp. v. Richardson-Vicks, Inc.*, 618 Fed Supp 407. So Dist. NY 1985, *Asarco Inc. v. M.R.H. Holmes a Court*, 611 Fed Sup 468. Dist. Ct. of NJ, 1985, and *Dynamics Corp. of America v. CTS Corporation*.

¹⁹*Dynamics Corp. of America v. CTS Corp., et al.* U.S. District Court, Northern District of Illinois, Eastern Division, No. 86 C 1624, (April 17, 1986), affirmed Seventh Circuit Court of Appeals Nos. 86-1601, 86-1608, and *Dynamics Corp. of America v. CTS Corp., et al.* (May 3, 1986).

the limits to judicial interference in the management of corporations historically provided by the business judgment rule and severely cripple the corporation in the competition for survival. Indeed, the protection afforded managers by the business judgment rule is already eroding.²⁰ The court seems to be imposing a higher standard on corporations that adopt a poison pill. This erosion of the business judgment rule appears to be motivated by the court's understanding that the pill gives management and the board great power. So the court is brought into the business of second-guessing managers' business decisions. The court currently seems to be inclined to give this scrutiny only to control transactions.

I believe that this erosion of the business judgment rule will be checked because the court will recognize the problems with its current approach. The easiest solution to the problem is for the court to deny protection under the business judgment rule to managerial decisions on control issues unless those decisions have been ratified by shareholder vote.²¹

SEC 13d Disclosure Rules and the Creation of Externalities

It has become popular to argue there is too much takeover activity. Yet the opposite is most likely true because of free-riding problems caused by the current regulations that require disclosure of holdings and intentions of the purchaser in SEC 13d reports.²² These reports must be filed within 10 days of acquisition of 5 percent or more of a company's shares and must disclose the number of shares owned, the identity of the owner, and the purpose of the acquisition. Current rules allow the acquiring firm to buy as many additional shares as it can in the 10-day window between the time the 5 percent filing barrier is reached and the time of filing. This rule allows buyers to acquire shares that average 13.9 percent of the target firm.²³

Since market prices adjust to the expected value of the takeover bid immediately after the 13d announcement, most of the acquirer's profits are made almost entirely on the difference between the price paid for the shares purchased prior to the filing of the 13d and their value after the acquisition. This drives a wedge, however, between the private benefits earned by the acquirer and the total social benefits of the acquisition; the acquirer pays 100 percent of the acquisition costs and, on average, captures less than 14 percent of the benefits. The remaining benefits go to the other shareholders. The activities of Mesa Petroleum, for example, have yielded benefits to

²⁰See *Revlon Inc. v. MacAndrews & Forbes Holdings Inc.*, 506 A.2nd 173, 180 (Del. 1986), in which the court seems to be reviewing very detailed aspects of the board's decision leading to the invalidation of Revlon's lockup sale of a prime division to Forstmann Little at a below-market price. The Court of Appeals for the Second Circuit in *Hanson Trust v. SCM Corp.*, (Nos. 85-7951, 85-7953, 2d Cir. Jan. 6, 1986) (written opinion filed Jan. 6, 1986), enjoined lockups given by SCM defending itself from takeover by Hanson Trust. See also Herzl, Colling, and Carlson (1986) for detailed analysis of these cases and lockups in general.

²¹See Koleman (1985) and Investor Responsibility Research Center (1985).

²²Grossman and Hart (1980) present an extensive discussion of the free-riding problem in corporate takeovers.

²³Mikkelson and Ruback (1985) show that average holdings for 397 initial 13d filings in 1928-80 is 20.9 percent. However, 120 of these 13ds (with average holdings of 37 percent) were filed simultaneously with announcement of a takeover. Eliminating these yields estimated average holdings for non-takeover filings of 13.9 percent.

the shareholders of companies involved in its transactions that exceed \$13 billion. Mesa itself has paid hundreds of millions of dollars in financing, legal, and investment banking fees and borne all the risks of loss. Yet it has earned only about \$750 million on these transactions.

Consider an acquisition that promises total expected gains of \$100 million. If the acquirer expects to capture only \$14 million of this amount if the bid is successful, the bid will occur only if the legal, investment banking, and other costs (including the required risk premium) are less than \$14 million. All such acquisitions that are expected to cost more than this will not be made, and shareholders and society are thus denied the benefits of those reorganizations. If the costs, for example, are expected to be \$15 million, the bid will not occur and the \$85 million benefit will not be realized.

The solution to this problem is to abolish the SEC 13d reporting requirement or to increase significantly the trigger point from the current 5 percent level. Unfortunately, current proposals in Congress to reduce the 10-day window to one or two days and to reduce the trigger point to 1 percent or 2 percent are moves in exactly the wrong direction. It is clear why antitakeover forces want such restrictive legislation. But the effect of this proposal is equivalent to that of an anti-patent law which requires public disclosure of all inventions and denies the inventor all but a one or two percent property right in the proceeds of his or her invention. Shareholders will clearly be harmed by such regulation.

Conclusion

Although economic analysis and the evidence indicate that the market for corporate control is benefiting shareholders, society, and the corporation as an organizational form, it is also making life more uncomfortable for top level executives. This discomfort is creating strong pressures at both the state and federal levels for restrictions that will seriously cripple the working of this market. In 1985, 1986 and 1987 there were dozens of bills in the congressional hopper proposing various restrictions on the market for corporate control. Others proposed major new restrictions on share ownership and financial instruments. Within the past several years the legislatures of numerous states have passed antitakeover laws and the Supreme Court has recently upheld the Indiana law that prohibits someone who purchases 20 percent or more of a firm's shares without permission of the board of directors from voting those shares unless such approval is granted by a majority vote of disinterested shareholders. The New York state law bars the purchaser of even 100 percent of a firm's shares from doing anything with the assets for five years unless permission of the incumbent board is obtained.

This political activity is another example of special interests using the democratic political system to change the rules of the game to benefit themselves at the expense of society as a whole. In this case, the special interests are top level corporate managers and other groups who stand to lose from competition in the market for corporate

control. If these special interests are successful, the results will be a reduction in efficiency and a significant weakening of the corporation as an organizational form.

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