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BREACH OF TRUST IN HOSTILE TAKEOVERS

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ABSTRACT

The paper questions the common view that share price increases of firms involved in hostile takeovers measure efficiency gains from acquisitions. Even if such gains exist, most of the increase in the combined value of the target and the acquiror is likely to come from stakeholder wealth losses, such as declines in value of subcontractors' firm-specific capital or employees' human capital. The use of event studies to gauge wealth creation in takeovers is unjustified.

The paper also suggests a theory of managerial behavior, in which hiring and entrenching trustworthy managers enables shareholders to commit to upholding implicit contracts with stakeholders. Hostile takeovers are an innovation allowing shareholders to renege on such contracts ex post, against managers' will. On this view, shareholder gains are redistributions from stakeholders, and can in the long run result in deterioration of trust necessary for the functioning of the corporation.

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Corporate restructurings through hostile takeover, merger or management buyout are wealth enhancing in the sense that the combined market values of the acquiring and acquired companies usually rises. Many economists, notably Jensen (1984), have argued that the large premia received by corporate shareholders reflects the improved management and increased efficiency brought about by restructurings. They point to the increase in market value created by takeovers as evidence of the magnitude of these efficiency gains. And they suggest effects on market value as a touchstone for evaluating the social desirability of various tactics for launching and defending against hostile takeovers.

Jensen (1984) captures this view by stating: "Positive stock price changes indicate a rise in the profitability of the merged companies. Furthermore, because evidence indicates it does not come from the acquisition of market power, this increased profitability must come from the company's improved productivity."

Many businessmen and some academic commentators (Drucker, 1986; Lowenstein, 1985; Law, 1986) have dissented sharply from this view, arguing that takeovers create private value by capturing rents but create little or no social value. Their argument is that shareholders' gains come from the exploitation of financial market misvaluations, from the usage of tax benefits, and from rent expropriation from workers, suppliers and other corporate stakeholders. They suggest that the disruption costs of at least some hostile takeovers may well exceed their social benefit.

This paper examines theoretically and empirically the elements of truth in the improvement and the redistribution views of the sources of takeover premia. We show how hostile takeovers can be privately beneficial and take

place even when they are not socially desirable. Our argument does not invoke tax, financial markets, or monopoly power considerations.

Instead, we start with the insight of Coase (1937) and Fama and Jensen (1983) that corporations represent a nexus of contracts, some implicit, between shareholders and stakeholders. As argued by Williamson (1985), many observed institutions are designed to minimize the problems associated with opportunistic behavior where contracts are implicit. We argue that hostile takeovers facilitate opportunistic behavior at the expense of stakeholders. In this way, hostile takeovers enable shareholders to transfer wealth from stakeholders to themselves more so than to create it. The available empirical evidence suggests that redistributions associated with takeovers can be large and that perhaps some inefficiencies result as well. It is then incorrect to gauge the efficiency gains from takeovers by looking at event study measures of increases in shareholder wealth.

The paper is organized as follows. Section I distinguishes between the value creating and value redistributing effects of hostile takeovers and argues that the latter are likely to be of dominant importance. The succeeding three sections treat three questions that are central to the argument that takeover gains come largely from breaching implicit contracts. First, what is the value of to shareholders of being able to enter implicit contracts with stakeholders? Second, how does trust support such implicit contracts? Third, how can hostile takeovers breach this trust and thus enable shareholders to realize the gains from default on stakeholder claims? These three questions are taken up in Sections II, III, and IV. Having described the role of breach and redistributions in hostile takeovers, we turn to a more systematic examination of their welfare properties in Section

V. Section VI then examines some empirical evidence shedding light on this theory of takeovers, while Section VII concludes.

I. VALUE CREATION VS. REDISTRIBUTION

Consider three scenarios. In Scenario A, Boone Pickens takes over Plateau Petroleum and immediately lays off 10,000 workers who immediately find work elsewhere at the same wage. He also stops purchasing from numerous suppliers who find that they can sell their output without any price reduction to other customers. The stock of Plateau Petroleum rises by 25 percent.

In Scenario B, Frank Lorenzo takes over Direction Airlines and immediately stares down the union so that wages of existing workers are reduced by 30 percent and that ten percent of the labor force is laid off and unable to find subsequent employment at more than 50 percent of their previous wage. He does not change the airline's route structure or flight frequency. The stock of Direction Airlines rises by 25 percent.

In Scenario C, Carl Icahn takes over USZ. He closes down the corporate headquarters and lays off thousands of highly paid senior employees who had previously been promised lifetime employment by the now displaced managers. He also shuts down the factories which dominate several small towns. As a consequence numerous stores, restaurants and bars go bankrupt. The stock of USZ goes up by 25 percent.

All three takeovers yield equal private benefits to the shareholders in the target firms. Yet their social consequences are very different. In

Scenario A, society is better off as resources are diverted from less to more productive uses. The increased value of Plateau Petroleum approximately reflects the value of this gain. In Scenario B, society is about equally well off. The gains to Direction shareholders are approximately offset by the losses to the human wealth of Direction employees. The redistribution is probably anti-egalitarian. On the other hand, it may ultimately lead to advantages for customers of the airline. In Scenario C, society is worse off. The gains to USZ shareholders are offset by losses incurred by laid off employees and by the firms with immobile capital whose viability depended on the factories remaining open. And other firms find that their workers seeing what happened at USZ become less loyal and require higher wages to compensate them for a reduction in their perceived security. They also find it more difficult to induce suppliers to make fixed investments on their behalf.

These three examples make it clear that increases in share values in hostile takeovers in no way measure or demonstrate their social benefits. Scenario A is the only one where share price increases capture the elimination of waste and the gains in social welfare. In contrast, shareholder gains in Scenarios B and C to a large extent come from losses of the value of employees' human capital. Even if some efficiency is realized from wages coming more into line with marginal products, this is only a second order effect relative to the transfer from employees to shareholders. In Scenario C, in addition, there are external effects of the acquisition which, while not resulting in gains to the acquiror, should enter the social calculation. The claim that the 25% takeover premium in Scenarios B and C measures social gains is simply incorrect.

In the remainder of the paper we develop issues raised by Scenarios B

and C. Why are there implicit contracts which it pays to breach? Why are raiders willing but incumbents unwilling to breach implicit contracts? What are the transfers accompanying such breach? What are the social costs of the breach of implicit contracts? Before taking up these questions, we stress an a priori consideration suggesting that Scenarios B and C have much more to do with observed takeover premia than does Scenario A.

Consider a rather stylized firm which has a capital stock worth \$100, hires 14 workers at \$5 a year, purchases \$20 worth of materials and has sales of \$100 a year. Its profits are \$10 a year and its cost of capital is .10, so its market value will be \$100. The ratios of market value, earnings, and payroll are roughly accurate as representations of typical firms in the American economy. Imagine that the firm is in steady state. Suppose the firm, because of an excess of free cash flow, starts to invest excessively rather than keeping its capital stock constant, and so invests half its profits in projects with a present value of .5. If the market expects this practice to continue indefinitely, the firm's value will fall by 25 percent. Eliminating this rather disastrous policy of excessive reinvestment in terrible projects could presumably produce a takeover gain of about 25 percent.

Now suppose that the firm invests rationally but because of agency problems involving management's greater loyalty to their employees than to their shareholders overpays the workforce by 5 percent. To put this figure in perspective note that the unions typically raise labor costs by about 15 percent, and that firms in the same industry in the same city typically pay wages to workers in the same detailed occupational category which differ by 50 percent or more (Krueger and Summers, 1987). This overpayment of labor,

if expected to endure, will reduce profits by \$3.50 a year leading to a reduction in market value of 35 percent. To the extent that the cash flows obtainable by cutting wages are safer than the firm's profit stream, this figure is an underestimate.

The point of these examples is simple. Since firms' labor costs far exceed their profits and since even poor capital investments yield some returns, very small differences in firms' success in extracting rents from workers and other corporate stakeholders are likely to be much more important in determining market value than differences in corporate waste associated with differences in firms' volume of reinvestment. An intermediate case is provided by changes in the level of employment. Here the reduction in payroll is likely to be offset by some loss of product, so that it is more difficult to raise value by increasing efficiency in this way. Moreover, some rent extraction is involved since the appropriate opportunity cost for laid off labor is likely to be less than its wage.

These considerations suggest that takeovers that limit managerial discretion increase the target's market value primarily by redistributing wealth from corporate stakeholders to share owners. To this extent, the existence and magnitude of takeover premia is not probative regarding the social costs and benefits of takeovers. Rather, the social valuation of hostile takeovers must turn on the impact of these redistributions on economic efficiency, which will obviously vary from case to case.

In this paper, we focus on one particular efficiency aspect of hostile takeovers that captures the concerns of many observers, namely their impact on the ability of firms to contract efficiently. Our motivation is twofold. First, we show that the arguments of those who see hostile takeovers as

destructions of valuable "corporate cultures" are coherent. Second, and much more tentatively, we suggest that the reputational externalities associated with hostile takeovers may in fact have extremely serious allocative consequences.

II. THE VALUE OF IMPLICIT CONTRACTS

A corporation is a nexus of long term contracts between shareholders and stakeholders. Because the future contingencies are hard to describe, complete contracting is costly. As a result, many of these contracts are implicit, and the corporation must be trusted to deliver on such contracts even without enforcement by courts. To the extent that long term contracts reduce costs, such trustworthiness is a valuable asset of the corporation. Shareholders own this asset and are therefore able to hire stakeholders using implicit long term contracts.

The principal reason why long-term contracts between shareholders and stakeholders are needed is to promote relationship-specific capital investments by the latter (Williamson, 1985). Thus an employee will spend time and effort to learn how to do his job well only if he knows that his increased productivity will be subsequently rewarded. A subcontractor exploring for oil will buy site-specific new equipment only if he believes that the oil firm would not try to squeeze his profits once he sinks the cost. A salesman will service past customers only if he is assured that he will continue to benefit from their loyalty. In these and other cases it is important to shareholders that stakeholders do a good job, but shareholders might be unable to describe what specific actions this calls for, let alone

to contract for them.

The necessary arrangement to ensure appropriate investment by stakeholders is a long-term contract, which allows them to collect some of the rewards of doing good work over time.¹ The expense of writing a complete contingent contract ensures that these long-term contracts are implicit. Examples of such contracts include hiring an oil exploration company for the long haul, so that it acquires the equipment best suited for the long-term customer, lifetime employment for workers who then learn how to do the job efficiently, and surrender of customer lists to salesmen who can then profit from repeated buys (Grossman and Hart, 1986).

Even when no capital investments are required, long-term contracts can be used as effort elicitation devices (Lazear, 1979) or risk-sharing arrangements (Harris and Holmstrom, 1982). While such long-term contracts are usually thought of as covering managers or employees, they also commonly apply to customers and suppliers. Such contracts are beneficial both to stakeholders and to shareholders, as they split the ex ante gains from trade. Shareholders in particular benefit since no easy alternative arrangements would ensure that stakeholders do a good job.

III. THE IMPORTANCE OF TRUST.

While both shareholders and stakeholders benefit ex ante from implicit long term contracts, ex post it might pay shareholders to renege. For example, it will pay shareholders to fire old workers whose wage exceeds their marginal product in a contract, which for incentive reasons, underpaid

them when young. Or, shareholders might profit from getting rid of workers whom they insured against uncertain ability and who turned out to be inept. Or, shareholders might gain from refusing to compensate a supplier for investing in the buyer-specific plant, after this plant is built. Or an insurance company can repossess its salesman's customer list. In all these cases implicit contracts specify actions that ex post reduce the firm's value, even though agreeing to these actions is ex ante value maximizing. Breach can therefore raise shareholder wealth, and the more so the greater is the burden of fulfilling past implicit contracts. Conversely, the value of workers' human capital or of suppliers' relationship-specific capital stock suffers a loss.

To take advantage of implicit contracts, shareholders must be trusted by potential stakeholders. Otherwise, stakeholders would expect breach whenever it raises the firm's value, and would never enter implicit contracts. To convince stakeholders that implicit contracts are good, shareholders must be trusted not to breach contracts even when it is value maximizing to do so.

A standard solution to the problem of how implicit contracts are maintained is the theory of rational reputation formation, described most notably by Kreps (1984). On this theory managers adhere to implicit contracts because such adherence enables them to develop a reputation for trustworthiness, and thus to benefit from future implicit contracts. If violating an implicit contract today prevents the manager from being trusted in the future, he will uphold the contract as long as the option of entering future contracts is valuable enough. Conversely, if it is not important for the manager to be trusted in the future, i.e. a reputation is not valuable, he will violate current implicit contracts. Formally, a rational reputation

is modeled as a small probability that the manager is irrationally honest, sustained by honest behavior on the part of the manager.

The position that the sole reason to trust a manager (or anyone else for that matter) is his reputation is not plausible. People commonly trust other people even when no long-run reputations are at stake. Most people do not steal not only because they fear punishment, but because they are simply honest. Those who leave their cars unlocked do so more in reliance on people's integrity than on police powers. Waiters rely on the expectation that most people tip in restaurants even when they expect never to come back. In fact, evidence shows that travellers' tips are not even smaller than those of patrons (Kahneman, Knetch and Thaler, 1986). Even more strikingly, people believe that a garage mechanic is as likely to cheat a tourist as a regular customer, thus defying importance of reputation (Kahneman, Knetch and Thaler, 1986).

Like the rest of us, managers often fail to take advantage of others they deal with just because this would violate an implicit trust. One example in which such trust appears to us more germane to managerial behavior than pursuit of a rational reputation is pensions. First, a large part of the retirees' benefits often takes the form of medical and insurance benefits that are not explicitly contracted for and are not protected by ERISA (Congressional Hearings on H 341 - 38.1, 1985). Pensioners clearly count on companies to provide them with these benefits without explicit contracts. In the case of pension benefits themselves, most defined benefit pension plans raised the payments to their beneficiaries after the inflation of the late 1970's even though they were not under contract to do so (Allen, Clark, and Sumner, 1984).² Moreover, the stock market recognizes that such increases

are forthcoming, and does not regard excess pension fund assets to be the property of shareholders. When firms remove excess assets from their pension funds, the market greets the news with a share price increase (Alderson and Chen, 1986). The market expects that managers do what employees trust them to do.

To dispel the fear of breach on the part of stakeholders, shareholders will find it value maximizing to seek out or train individuals who are capable of commitment to stakeholders, elevate them to management, and entrench them. To such managers, stakeholder claims, once agreed to, are prior to shareholder claims. Even when a rational reputation is not of high enough value to shareholders to uphold the implicit contracts with stakeholders, as would be the case if the company suffers a large permanent decline in demand, trustworthy managers will respect stakeholder claims. From the ex ante viewpoint, such dedication to stakeholders might be a value-maximizing managerial attribute (not choice!) In the world without takeovers, potential stakeholders counting on such managers to respect their claims will enter into contracts with the firm.

How, then, can shareholders appoint as managers individuals whom stakeholders can trust? It is probably most likely that prospective managers are trained/or brought up to be committed to stakeholders. For example, in a family enterprise, offspring could be raised to believe in the company's paternalism toward all the parties involved in its operation. Alternatively, a person who spends twenty or thirty years with the company prior to becoming a CEO, will have spent all this time being helped by the stakeholders in his ascent, and becomes committed to them. These are examples in which managers pass through a "loyalty filter," using Akerlof's (1984) phrase, prior to

getting to the top. Having done so, stakeholder welfare now enters their preferences, and thus makes them credible upholders of implicit contracts.³ Whatever the exact mechanism, it is essential to see that shareholders deliberately choose as managers individuals for whom value maximization is subordinate to satisfaction of stakeholder claims, and then surrender to them control over the firm's contracts.

This characterization of managers has an interesting connection with Kreps' (1984) theory of rational reputation. On that theory, the world is inhabited by a minor fraction of randomly located trustworthy individuals, and stakeholders start out with the view that there is a small chance that the managers are of this irrational type. This small chance nonetheless suffices to entice them to enter into the implicit contract. By mimicing the behavior of the irrationally trustworthy individual, the rational manager maintains stakeholder suspicion that he might be trustworthy, thereby ensuring their agreement to the implicit contract. In contrast to this theory, our argument says that shareholders actually locate (or train) the trustworthy types, and install them as managers because it is ex ante value maximizing to do so.

It is natural to ask why shareholders appoint these truly trustworthy people, rather than the deceptive type who just pretend to be trustworthy (as in Kreps, 1984) but then maximize value when push comes to shove. The primary answer is that trustworthiness is correlated with other personal characteristics and actions, which shareholders and stakeholders can learn about. With the wealth of information at hand, genuinely trustworthy people can be selected. Managers who are trusted per se can enter into more efficient contracts than those who must rely on reputation. Alternatively,

Akerlof (1984) argues that it is so costly to learn to be deceptive that one might as well not be. Lastly, CEOs by the time they come to power have a long public record of conduct vis a vis commitments. There are no lifetime moles.

IV. BREACH OF TRUST IN HOSTILE TAKEOVERS.

In some circumstances, upholding the implicit contracts with stakeholders becomes a liability to shareholders. The incumbent managers are nonetheless committed to upholding stakeholder claims. In these cases, ousting such managers is a prerequisite to realizing the gains from breach. This is precisely what hostile takeovers can accomplish. As the incumbent managers are removed subsequent the takeover, control reverts to the bidder who is not committed to upholding the implicit contracts with stakeholders. Shareholders can then renege on these contracts and expropriate rents from stakeholders. The resulting wealth gains show up as the takeover premia. Hostile takeovers thus enable shareholders to redistribute wealth from stakeholders to themselves.

Managers committed to upholding stakeholder claims will not concede to such redistributions. They will resist them, even though shareholders at this point will withdraw their support for the managers in order to realize the ex post gain.⁴ Not surprisingly then, takeovers that transfer wealth from stakeholders to shareholders must be hostile.

The importance of transfers in justifying the takeover premium does not imply that breach of implicit contracts is always the actual takeover motive. Breach can be the motive, as for example is the case in some takeovers

explicitly aiming to cut wages. Other times the acquisition is motivated by the overinvestment or other free cash flows of the target. Even in these takeovers, much of the gain must come from reducing the wealth of stakeholders who have not counted on changes in operations when agreeing to work for the firm. Take for example a railroad whose management invests in upgrading and extending the tracks when the investment has a negative net present value. The management's goal is to provide jobs for railroad employees and other stakeholders who count on continuation of this business. When a hostile acquiror cuts off these investments, shareholders gain. To a large extent, however, these gains come at the expense of losses of employment and wages of railroad employees.

For breach to be an important source of gains, hostile takeovers must come as a surprise to stakeholders who entered implicit contracts expecting firms to be run by trustworthy managers. For if hostile takeovers are anticipated, the stakeholders will realize that the trustworthiness of incumbents is worthless, since they will be duly removed when shareholder interest so demands. Implicit contracts based on trust are feasible only in so far as managers upholding them are entrenched enough to retain their jobs in the face of a hostile threat.

The elements of the story now fall into place. In the world without takeovers, shareholders hire or train trustworthy managers who on their behalf enter into implicit contracts with stakeholders. Subsequently, some or many of these contracts become a liability to shareholders, who however cannot default on them without replacing incumbent managers. Managers are hard to replace internally, because to a large extent they control the board, their own compensation scheme, and the proxy voting mechanism (Shleifer and

Vishny, 1987). This failure of internal controls might in fact be in shareholders' ex ante interest, since it can be the only way to assure commitment by shareholders to stakeholders in the absence of takeovers.

Hostile takeovers are external means of removing managers upholding stakeholder claims. Takeovers then allow shareholders to appropriate stakeholders' ex post rents in the implicit contracts. The gains are split between the target's and the acquirer's shareholders. At least in part, therefore, these gains are wealth redistributed and not wealth created.

V. WELFARE ANALYSIS.

As described in Section 1, contract breach accompanying takeovers allows for a redistribution of rents from stakeholders to shareholders. To some extent, takeovers in this case are rent seeking, and not value creating exercises, with investment bankers' fees and management time representing wasted resources. If this is the scenario capturing reality, then shareholder wealth gains in takeovers are not an appropriate measure of value gains. Even if the combined value of the target and the acquiror rises as a result of a merger, at least part of value increase is offset by stakeholder wealth losses.

Even if there are some efficiency gains from a takeover, they may pale by comparison with transfers. Consider the case of disciplinary takeovers, in which target managers who are failing to run their firm to maximize its value are forcibly removed. Subsequent to an acquisition of this type, the buyer usually cuts wages, lays off a lot of employees, raises leverage,

eliminates executive perks, and in general significantly tightens operations. Because such changes increase profitability, hostile takeovers designed to eliminate a firm's free cash flows are taken as paradigmatic case of efficiency-improving transactions.

Although there probably are some efficiency gains in such takeovers, it is also the case that employees and suppliers lose a great deal of their previous rents with the firm. Much of the shareholder gains in this case are stakeholder losses. The argument is similar to elimination of monopoly in a market. While there is an efficiency gain equal to the Harberger triangle, by far the biggest impact of going from monopoly to competition is a transfer of rents from profit owners to consumers. Just as it is inappropriate to measure the efficiency gains from eliminating monopoly by the trapezoid under the demand curve, it is incorrect to measure efficiency gains from removing incompetent managers by shareholder wealth gains. And just as it would be inappropriate to gauge the benefit of banning monopoly by the willingness of consumers to pay for the ban, it is incorrect to measure efficiency gains from takeovers by share price increases on the announcement of the deal.

Transfers from stakeholders can also lead to important welfare losses that mediate against welfare gains in some disciplinary takeovers. As we show below, they can lead to ex post inefficient resource allocation if efficient contracting is impaired in the post breach environment. In addition, by limiting the scope for contracting, takeovers can reduce ex ante welfare.

A. Ex Post Efficiency

So far we have only shown that the transfer component of shareholder

wealth increase should not be counted as value created (scenario B), and that such transfers can be large relative to the total shareholder gain. Breach can in addition entail efficiency losses. In some cases, when the acquiror and stakeholders renegotiate after the breach, they might be unable to do so efficiently. As the following examples show, the magnitude of efficiency losses depends on whether conditions needed for the Coase theorem to hold obtain in the post breach environment. If they do, breach is just a transfer; if they do not, it entails some ex post inefficiencies.

Consider first an example of asymmetric information between the acquiror and the employees of the target. To be specific, suppose Carl Icahn takes over TWA and breaches the agreement that flight attendants be paid \$15 per hour. Let the marginal product of these experienced flight attendants, who have made an investment in their TWA jobs, be \$10, but let this be known to Icahn only. Let these flight attendants' opportunity wage at the outside be \$5, which is also the cost and the marginal product of their replacements at TWA. As long as Icahn pays the old flight attendants below \$10, he can make money. Unfortunately, flight attendants do not know that their productivity is \$10, and might insist on a higher wage. If no agreement is reached in this situation of asymmetric information, then stewardesses quit and go to work at \$5, and gains from trade are not realized.

Note that the takeover by Icahn has two implications. First shareholders regain extra \$5 that they were overpaying flight attendants under the old regime, which is just a transfer. Second, however, because of asymmetric information in the ex post contracting environment, the takeover entailed a misallocation of resources as the TWA-specific capital of flight attendants went to waste. The second problem is not unique to takeovers; it

occurs in many environments with asymmetric information. Takeovers, however, can exacerbate this inefficiency by moving negotiations into the environment of less trust and greater informational asymmetries.

The second reason for the failure of the Coase theorem that can lead to the inefficiency in the ex post contracting environment is the free rider problem. Suppose that in Bartersville, Oklahoma, residents earn some rents from the presence of Phillips Petroleum in their town, perhaps because it distributes charity there or indirectly subsidizes some businesses. If Pickens takes Phillips over, he would recapture these rents, perhaps by moving out. It is possible that Bartersville residents would choose to pay him to stay, but doing so requires collective action which they might be unable to mount. This again leads to an ex post efficiency loss in addition to a transfer from Bartersville residents -- who are Phillips stakeholders -- to the shareholders.

Both of these examples are manifestations of ex post inefficiencies accompanying takeovers. The source of these inefficiencies is the failure of the Coase theorem in the ex post environment, so that gains from trade are not realized. While takeovers are not responsible for this failure of the Coase theorem, they are responsible for creating the environment where it is likely to fail.

The implications of these welfare losses for share price behavior are ambiguous, since that depends on how much is lost by shareholders and how much by stakeholders. What is unambiguous, however, is that, in general, these welfare losses will not be taken into account by looking at the change in value of the acquirer and the target. We already see, therefore, two sources of miscalculation: first, transfers from stakeholders cannot be

counted as value created and second, combined value changes do not reflect the part of efficiency loss not borne by shareholders.

B. Ex Ante Efficiency

The discussion has so far been concerned solely with the ex post consequences of unanticipated takeovers. To this end, we assumed that people contracted as if takeovers never took place, and then traced the distributional and efficiency consequences of breach. In fact, it seems quite plausible that hostile takeovers and the attendant opportunities for breach of implicit contracts came as a surprise to many American workers and managers.

While the ex post analysis is the one that sheds light on the interpretation of event studies, it leaves open the question of contracting in the environment where takeovers do occur. This is the question of ex ante welfare implications of breach of trust through takeovers, which we take up next.

If potential stakeholders believe that their contracts will be violated for sure whenever they collect more from the firm than they put in, they will not agree to implicit contracts. Potential suppliers will not invest in relationship-specific capital, the young will shirk if they expect no raise in the future, and firms will be unable to reduce labor costs by offering insurance against uncertain ability to their workers. Even if breach via takeover is not a certainty but only a possibility, the opportunities for long term contracting will be limited. To the extent that realization of gains from trade requires such contracting, these gains will remain unrealized and ex ante welfare will be reduced.

A common example of a post-acquisition change is consolidation of

headquarters, which usually results in dismissal of a number of highly paid employees of the target. This change can be viewed as a reduction of corporate slack of the target, since large corporate headquarters represent on-the-job consumption of top executives. But closing of headquarters can also be viewed as breach of contracts with long-term employees who work there; even when such employees do not produce much. An idle employee of corporate headquarters could be there to get his career-end reward for previous service to the company, or his consolation payment subsequent to losing the tournament for the top job. In either case, the employee is costing the company more than he is contributing at the moment, and therefore his dismissal is a gain to shareholders. It nonetheless might have been in the interest of shareholders to use an implicit long-term contract to attract this employee *ex ante*, and to get him to work hard or to participate in the tournament. In line with this interpretation, those fired after an acquisition often talk about broken promises (Owen, 1986) and claim they will never again trust a large corporation.

These considerations raise the important issue of the scope of fear of breach. That is, if some firms are taken over, how severely will this limit contracting opportunities at other firms? Such spread of fear that implicit contracts are worthless is an example reputational externalities (Zeckhauser, 1986), in that it concerns the extent to which events in some firms affect the expectations in others. The larger is the fear of takeovers spreading through the economy, the more severe are the limitations on contracting, and the larger is the welfare loss.

As we said at the start of this section, the ability to enter implicit contracts and to be trusted in abiding by them might be one of the most

valuable assets owned by shareholders. Takeovers might substantially reduce the value of these assets. In the popular literature, this phenomenon has been called the decline of corporate loyalty, which is widely cited as a cost to firms. This cost can show up as the appearance of explicit costly contracts with stakeholders (such as Labor Protection Provisions or LPPs), or as a need to pay them more now in return for their accepting the uncertainty about future payments, or simply as foregone profitable trade. Whatever form this cost takes, it should ultimately show in the declining value of corporate equity.

In summary, this section attempted to describe how shareholders can benefit in takeovers by defaulting on their implicit obligations to other stakeholders. In the situation of incomplete contracts or incomplete markets, it is incorrect to equate changes in shareholder wealth with value created in takeovers. Even taking ex post efficiency as the welfare index, shareholders' wealth change includes redistributions from stakeholders, and ignores efficiency losses that are not paid for by shareholders. Looking at shareholder wealth also completely ignores ex ante welfare costs of ex post opportunism, which could be very large.⁵

VI. EMPIRICAL EVIDENCE

In evaluating the importance of transfers from stakeholders to shareholders, we always compare them to efficiency gains whose significance has been emphasized in much of the literature (e.g. Jensen and Ruback, 1983). We proceed in four steps. First we show that presence of large redistributions is consistent with established statistical generalizations

about takeovers. Second we study a special case -- Carl Icahn's takeover of TWA -- in order to determine how much of the takeover premium can be accounted for by the expropriation of rents from corporate stakeholders. Third we look at the effects of a takeover of Youngstown Sheet and Tube on the welfare of stakeholders whose losses are not captured by the shareholders, namely the members of the local community. Last, we present some anecdotal evidence on the consequences of takeovers for employee morale.

A. Basic Facts

In this section, we note that the stylized facts of takeovers are consistent both with the prevalence of efficiency gains, and with prevalence of transfers. In reviewing the evidence, we come back to calling the first case Scenario A, and the second Scenario B or C.

Our theory clearly explains the takeover premia since some portion of stakeholder wealth is transferred to shareholders. More subtly, it explains why most of the wealth gains accrue to target shareholders. If it takes little skill to break implicit contracts, the market for corporate control is essentially a common values auction. In such a competitive auction, all the gains accrue to the seller, i.e. the target shareholders.

Managers would resist takeovers both if the gains come purely from eliminating their incompetence, as in Scenario A, or if they come from transfers from stakeholders, as in Scenarios B and C. In the former case, poor managers are reluctant to be exposed and lose control. In the case of breach, managers are reluctant to allow stakeholders' claims be ignored. This is confirmed especially by the common incidence of managers negotiating severance provisions for employees even after they know that the takeover

will occur (Commons, 1985). The existence of golden parachutes suggests that the managers do not forget themselves, as stakeholders, either.

Patterns of reorganization subsequent to a takeover can also be understood using either Scenario A or Scenarios B and C. Either efficient cost cutting or breach can justify employee dismissals, plant closings, project curtailment, divestments and subcontractor removals. To see whether the parties that lose association with the target suffer wealth losses, one must trace their subsequent employment. This is necessary, but not sufficient to establish breach, and hard to do empirically. Otherwise such separations could be efficient as in Scenario A (Jensen, 1984).

One striking fact militating in favor of the importance of transfers as opposed to pure efficiency gains is that an important fraction of hostile acquisitions are initiated and executed by a few raiders. It is hard to believe that Carl Icahn simultaneously has a comparative advantage at running a railcar leasing company (ACF), an airline (TWA) and a textile mill (Dan River). It is more plausible that his comparative advantage is tough bargaining and willingness to transfer value away from those who expect to have it. In fact, those who describe him (including himself) point to this as his special skill. The industrial diversity of many raiders suggests that their particular skill is value redistribution rather than value creation.⁶ It is not at all surprising, in this context, that many of these raiders have hardly any employees of their own.

It is important to emphasize at this point that our discussion of efficiency gains and of transfers concerns hostile takeovers. As stressed by Morck, Shleifer and Vishny (1987), these are disciplinary acquisitions designed to change the operations of the firm. They should be contrasted

with synergistic acquisitions, that are usually friendly, and that are motivated by market power, diversification or tax considerations. Morck, Shleifer and Vishny (1987) show that the two types of deals are targeted at very different companies, and hence should not be treated as examples of the same economic process.

A study by Brown and Medoff (1987) reveals how important this distinction can be. They look at a sample of several hundred acquisitions of small Michigan companies, and find that employment and wages rise subsequent to the sale of the firm. Given how small their companies are, it is pretty clear that their sample is one of friendly mergers, presumably serving as a means of expansion by the buyer. In fact, we doubt that they have any hostile deals in their sample at all. Our arguments for breach do not then apply to their results and vice versa. In this and other instances, it would be a serious conceptual mistake to use the data on friendly acquisitions to interpret theories of hostile takeovers.

A significant problem for virtually any theory of hostile takeovers that we know are acquisitions by white knights. These are companies that top the hostile offer and merge with the target in a friendly combination, often retaining the management. How can white knights pay more, and at the same time forego management improvement or contract breach? We suspect that white knights are not as friendly as they appear. For example, subsequent to a friendly rescue of CBS by Lawrence Tisch (who did not even buy the company to get control), he dismissed hundred of employees, sold several divisions, and instituted many cost-containment reforms. Even white knights have a shade of grey.

B. Case Study: Icahn's Takeover of TWA

Carl Icahn's takeover of TWA in 1985 has attracted enough attention and commentary to provide us with the data for assessment of stakeholder losses. In particular, Icahn's gain of control was accompanied by changes in compensation of the three major unions of TWA's labor force. From looking at changes in wages and benefits of TWA's workers, we can gauge stakeholder losses. At the same time, we acknowledge from the start that the case of TWA does not strictly fit our model. Wages for TWA unions were determined under regulation. The pre-Icahn management was not successful (or competent) to renegotiate them; for a variety of reasons TWA had bad labor relations. It is not, therefore, the case that TWA management resisted the acquisition to avoid breach. All the evidence suggests that managers wanted to keep their jobs and resisted acquisition for that reason. However, the main observation of this paper -- that takeover premia are often paid for by stakeholders -- is much more general than the particular model of managerial behavior we develop.

Before Icahn began investing in TWA on the open market, its 33 million shares traded at \$8. Icahn eventually bought 40 percent of the airline through open market purchases, and the rest through a (hotly contested) tender offer. While his cost per share on the open market varied from \$8 to \$24, the offer was completed at \$24 per share. At most, then, Icahn's premium was \$500 million. There is evidence, however, that he bought 20 percent of stock at an average price of \$12 and another 20 percent at the average price of \$16 to \$18. Icahn's overall average price therefore is \$20, putting the premium in the range between \$300 and \$400 million. This is consistent with estimates made in the popular press (Fortune, Business Week,

"Takeover").

TWA had three major unions: representing pilots, flight attendants, and machinists. Contracts signed between the pilots and Icahn basically prohibited significant trimming down of TWA operations, and in particular pilot layoffs or significant airplane sales. In fact, leases on three Boeing 747s were not renewed, and one was sold. There were also some, though not major, layoffs at TWA's St. Louis headquarters. Most of the action by far came from wage reductions of "production" workers, calculated below.

Prior to Icahn's gain of control, TWA paid its 3000 pilots an average of \$90,000 per year, including benefits. The agreement with Icahn cut this around 30 percent, for an annual savings of approximately \$100 million (Fortune, "Takeover"). TWA employed about 9000 machinists at an average cost of \$38,000, who agreed to a 15 percent cut. This saved around \$50 million per year. The story with flight attendants is more complicated, since no agreement was reached. On average, a TWA flight attendant made \$35,000 a year. Some of them (around 2500 out of 6000 within 3 months) were replaced by rookies paid the average of \$18,000 per year. This is essentially a transfer from old flight attendants who could presumably take entry level jobs to Icahn. In fact, some of them accepted wage cuts, and it appears that, over time, most who did not were replaced. Assuming conservatively that the average saving was \$10,000 per flight attendant, the total annual saving adds up to \$60 million. Since TWA's operating losses assured it a tax free status, these labor cost savings should be counted before tax.

The above analysis indicates that the average annual transfer from TWA unions amounted to at least \$200 million under Icahn.⁷ Since TWA is a very risky company (and Icahn was not diversified), the appropriate discount rate for these savings could be as high as 25 percent. This yields a present

value for the transfer of \$800 million, or at least twice Icahn's premium. On these very conservative estimates, the transfer from the three unions to Icahn amounted to double the takeover premium.

It is hard to gauge the efficiency consequences of Icahn's acquisition. There appears to be a consensus that previous TWA management was terrible. If the airline went bankrupt, some of the valuable assets of TWA (such as its name and goodwill) might have lost value, which is a social cost. Moreover, TWA can probably now make better investment decisions, since its labor costs more accurately reflect shadow prices. On the other hand, some inefficiencies might have resulted from the replacement of well-trained flight attendants by rookies. In addition, large time costs of Icahn and others as well as large transaction costs were incurred. Overall, we suspect efficiency has been gained. This is not the main point, though. The point is that at least twice the premium can be explained by transfers, which in this case were an explicit part of justification of the acquisition. Shareholders gained primarily because stakeholders lost.

C. Case Study: Youngstown Sheet and Tube.

Not all of the stakeholder losses in hostile takeovers are gains to shareholders. Stakeholder wealth losses can also lead to numerous externalities and losses by third parties that are not captured by shareholders. Consider, for example, a company town in which spending by employees of that company is a large source of demand in local stores. Such stores might simply be unable to cover their fixed costs if employees of the company are laid off and dramatically reduce their spending. The specific investments that these merchants have made in their businesses yield no

payoff in this case, and hence potentially productive capital becomes worthless. This is a case of a social loss and not of a redistribution, since merchants' losses are not captured by shareholders.

An example of community distress following a takeover in the case of the acquisition of Youngstown Sheet and Tube (YST) by Lykes Steamship Company in 1970, and the subsequent acquisition of the latter by LTV Steel in 1979. Between 1977 and 1979, over 6,000 YST employees have been laid off. One result of these layoffs, reported by Youngstown Chamber of Commerce (1983), has been a second tier increase in unemployment from businesses losing sales to the employees of YST. Perhaps even more telling are statistics on bankruptcies in Youngstown, which rise from 769 in 1977 to 1000 in 1979 and 1948 in 1981. While YST was only one of two or three steel mills in Youngstown area laying off employees, the effect of these steel layoffs on other businesses in the area has been large and protracted. Interestingly, when by 1982, other firms began moving into the Youngstown area and hiring the unemployed local labor, they did so at much lower wages, contrary to Scenario A (Youngstown Chamber of Commerce, 1983).

Perhaps the most telling evidence on the distress of Youngstown community from the layoffs at YST and other steel mills comes from sale prices of used homes (Federal Housing Administration Homes, 1968-1985). Between 1968 and 1980, sale prices of used homes in Youngstown-Warren county rose roughly at the same rate as those in the rest of Ohio and the US. In 1980, the median sale price of a used home was \$43,324 in the US as a whole, \$37,604 in Ohio, and \$32,400 in Youngstown-Warren county. In 1981, when the effects of layoffs really hit Youngstown, the median sale price of a used home rose slightly in the US to \$45,676, declined somewhat to \$35,168 in

Ohio, and plummeted to \$25,000 in Youngstown-Warren county. The last number reflects a decline of 23% in a single year! Arguably, this decline can reflect composition effects if the selling steelworkers own less than average houses. It should also be counterbalanced by house price increases in areas to which the departing Youngstown residents might move and buy houses.

With these caveats in mind, we note that Youngstown-Warren county had 148,000 single family housing units at that time, and hence, if the median sold house is representative of the housing stock as a whole, the latter could have declined in value by over \$1 billion. These wealth losses are not transfers to shareholders, and therefore, modulo the above caveats, represent social costs of the layoffs some of which resulted from the takeover.

It is quite possible that, from the point of view of steel production, takeovers have increased the efficiency of YST operations. Nevertheless, it is clear that YST employees suffered substantial wealth losses, as in Scenario B. Furthermore, the losses of wealth of other members of Youngstown community should also be counted in the social appraisal of the deal.

D. Reactions to Takeovers

We do not have information to verify the predictions of our theory for the ability of firms to contract ex ante. For to do this, we must analyze a world in which people trust each other less, workers are not loyal to firms, and spot market transactions are more common than they are now. (One can try to think of other cultures, although the comparisons are in many ways suspect. Banfield (1958) describes a village in Southern Italy where trust is absent, hardly any trade takes place, especially intertemporally, and where people vote for whichever party bribes them most and last, which leads

to alternating elections of communists and fascists. Nor surprisingly, the village is very poor.) We offer instead a brief survey of opinions expressed by employees of Trans Union Corp. subsequent to its merger with Pritzkers' Marmon group. The comments we present below are based on the privately printed "Autopsy of a Merger" by Willam M. Owen, whose title assures us of the book's impartiality.

Many of the former employees of Trans Union complained that the company violated an implicit understanding that adequate job performance guarantees continued employment. The virtually universal lesson that interviewees claim to have learned from their takeover experience is never again to trust a large corporation. One employee remarked that previously he felt that if he did a good job, he would be appreciated. Now, he thinks that "you have to look out for yourself. You really can't hold any loyalty to a corporation." The other offered his view of long-term contracts: To the average Joe, life in the business world can be compared to walking a tightrope across the Red Sea. It might break at any time, so don't get too comfortable." Many said that loyalty was killed, and that they developed a more cynical and cautious view of corporate America. As a result, some have reversed their prior belief that continued loyalty to a corporation would be rewarded.

What are the tangible results of this change of attitude? In the earlier discussion, we suggested that contracting can become more costly and that, in some cases, inferior outcomes can result. There is a bit of quotable evidence on each of these two points. One ex-employee of Trans Union looked "for an employer where I can participate in ownership." Evidently she sought equity because "employees got nothing out of the merger," and she wanted her contract to be explicit. Other people denied the

feasibility of the employment relationship. Of the many who sought self-employment, one thought he could not any more have a sense of security without his own business. Less dramatically, the other asked: How can you go to another company now and give 100 percent of your effort? While it is premature to interpret these quotes as foreshadowing the decline of the corporation, they do suggest a fairly pervasive scepticism about what in the U.S. is the most common form of the employment contract.

To acknowledge the merits of the alternative hypothesis, we also quote an employee who was doubtless familiar with a working paper by Jensen: "I think Trans Union was fat, dumb and happy and deserved to be acquired".

VII. CONCLUDING COMMENTS

In this paper, we stressed the role of transfers in hostile takeovers. Breach through takeover enables shareholders to capture the ex post rents from contracting with stakeholders, such as suppliers and employees. Two points made in the foregoing analysis should be sharply distinguished.

First, transfers from stakeholders to shareholders could make for a large part of the takeover premium. While redistributions from parties to implicit contracts are important, other transfers are also potentially significant. Tax savings accompanying some takeovers can be viewed as redistributions from the government. At least for some transactions, such as leveraged buyouts, tax savings can account for up to 80% of the takeover premium (Kaplan, 1987, also Shleifer and Vishny, 1986). If takeovers are motivated by stock market undervaluations of assets, then these transactions

are rent redistributions from the old shareholders to the acquiror. While evidence that such undervaluation is important is lacking, arguments that it is are not (Drucker, 1986). If, as appears to be the case, rent transfers form an important part of the takeover gains, then the combined share price change of the target and the acquiror vastly overstates the efficiency gains from takeovers.

It is also argued above, although with much less empirical support, that rent seeking takeovers may entail large efficiency losses in the long run. The breach of trust accompanying such deals might spread enough fear of further breach through the economy as to either vastly complicate or even prevent profitable trade. Managers worried that their stakeholders' claims will not be respected engage in defensive tactics such as restructurings or LBOs which themselves take away from stakeholders. This reorganization of the corporation into more of a spot market system can be socially very costly. To gauge this cost, however, would require an understanding of how trust facilitates contracting, which at this moment we do not have.

While previous academic work has tended to maintain that hostile takeovers are accompanied by increases in efficiency, it has rarely been successful in isolating the sources of such gains. Undoubtedly, efficiency gains might justify a large part of the takeover premium in some takeovers, such as those in the oil industry. Redistributions, in contrast, seem extremely important in the case of airlines. Unfortunately, to evaluate which of the two sources of gains is the more important one needs to look at stakeholder losses, which are much harder to measure than shareholder gains.

One important future strategy for testing the role of transfers is to look at cancellation of overfunded defined benefit pension plans, where

horror stories abound. We have already mentioned that many benefits that retirees receive are not part of the formal pension contract protected by ERISA, and that even the actual pension benefits are to a large extent set by the company without compulsion. Looking at pension plans after hostile takeovers might be a fruitful way of measuring transfers from stakeholders.

FOOTNOTES

¹Ownership of relationship specific assets by shareholders could promote efficient investment in these assets to some extent. If ownership entitles shareholders to residual right of control of relationship specific assets, then in some cases where contract is silent the right thing will be done (Grossman and Hart, 1986). But limits of shareholder knowledge and limits of the firm bound the applicability of ownership.

²This of course could be part of managers trying to maintain a rational reputation for being "nice guys."

³In a similar vein, we can say that managers become "addicted" to stakeholders who form such an important part of their life (in contrast to constantly changing shareholders). For an illuminating discussion of how such addiction could be rational, see Becker and Murphy (1986).

⁴The reason for this is that shareholders are anonymous, and even if they were not, the free rider problem absolves individual shareholders from the collective responsibility for breach.

⁵Arrow (1974) stresses the role of trust in the successful functioning of a market economy.

⁶The most famous undiversified raider is T. Boone Pickens, who specializes in prompting hostile acquisitions of oil companies. It is interesting that the case for efficiency gains in takeovers is probably the most compelling in the oil industry, where an acquisition is often accompanied by a cancellation of a wasteful exploration program.

⁷Some estimates in newspapers of total cost decreases after Icahn's acquisition give \$600 million, which we could not explain. In part, this includes an annual saving of \$100 million from lower fuel costs, and probably \$50 million from eliminating four 747's. The point is that \$200 million is a very conservative lower bound on transfers from the unions.

REFERENCES

- Akerlof, George A., 1983. "Loyalty Filters," American Economic Review 73 (March), 54-63.
- Alderson, Michael J., and K. C. Chen, 1986. "Excess Asset Reversions and Shareholder Wealth," Journal of Finance 41 (March), 225-242.
- Allen, Steven G., Robert L. Clark, and Daniel A. Sumner, 1984. "Post-Retirement Adjustments of Pension Benefits," NBER Working Paper 1364.
- Brown, Charles, and James Medoff, 1987. "The Effect of Firm Acquisitions on the Demand for Labor," forthcoming in Alan J. Auerbach, ed., The Economic Effects of Mergers and Acquisitions, University of Chicago Press.
- Coase, Ronald L., 1937. "The Nature of the Firm," Economica, N.S.4, 386-405.
- Commons, John L., 1985. Tender Offer, University of California Press.
- Congressional Information Service, 1985. "Employee Benefits Revisions Following Corporate Mergers," H341-38.1.
- Drucker, Peter F., 1986. "Corporate Takeovers -- What Is To Be Done?," The Public Interest 82 (Winter), 3-24.
- Fama, E. F., and M. C. Jensen, 1983. "Separation of Ownership and Control," Journal of Law and Economics 26 (June), 301-324.
- Grossman, S. J., and O. D. Hart, 1986. "The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration," Journal of Political Economy (August), 691-719.
- Harris, M., and B. Holmstrom, 1982. "Theory of Wage Dynamics," Review of Economic Studies 49, (July) 315-333.

- Jensen, M. C., 1984. "Takeovers: Folklore and Science," Harvard Business Review (November-December), 109-121.
- Jensen, M. C., and R. S. Ruback, 1983. "The Market for Corporate Control: The Scientific Evidence," Journal of Financial Economics 11 (April), 5-50.
- Johnston, Moira, 1986. Takeover, New York: Arbor House.
- Kahneman, Daniel, Jack Knetch and Richard Thaler, 1986. "Fairness as a Constraint on Profit Seeking," American Economic Review (September), 728-741.
- Kaplan, Steven, 1987. "Management Buyouts: Thoughts and Evidence," Mimeo.
- Kreps, D. M., 1984. "Corporate Culture and Economic Theory," Stanford University Graduate School of Business, Mimeo.
- Krueger, Alan, and Lawrence H. Summers, 1987. "Interindustry Wage Differentials," forthcoming, Econometrica.
- Law, Warren A., 1986. "A Corporation Is More Than Its Stock," Harvard Business Review (May-June).
- Lazear, Edward P., 1979. "Why Is There Mandatory Retirement," Journal of Political Economy (December), 1261-84.
- Lowenstein, Louis, 1985. "Management Buyouts," Columbia Law Review (May), 730-784.
- Morck, Randall, Andrei Shleifer, and Robert W. Vishny, 1987. "Characteristics of Hostile and Friendly Takeover Targets," forthcoming in Alan J. Auerbach, ed., The Economic Effects of Mergers and Acquisitions, University of Chicago Press.
- Owen, William M., 1986. The Autopsy of a Merger, Deerfield, IL: William M. Owen.

- Shleifer, Andrei and Robert W. Vishny, 1987. "Management Buyouts as a Response to Market Pressure," in Alan J. Auerbach, ed., Mergers and Acquisitions, University of Chicago Press.
- Shleifer, Andrei, and Robert W. Vishny, 1987. "Value Maximization and the Acquisition Process," Journal of Economic Perspectives, forthcoming.
- United States Department of Housing and Urban Development, 1968-1985. FHA Homes, Washington, D. C.
- Williamson, Oliver E., 1985. The Institutions of American Capitalism, New York: Basic Books.
- Youngstown Area Chamber of Commerce, 1983. Steel Industry -- Narrative of Change.
- Zeckhauser, Richard, 1986. "Reputational Externalities," Mimeo.

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