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Some Intersections

Richard A. Posner*

Manuel Cohen, in whose memory this lecture series was established, was a distinguished securities lawyer, both as an official (and ultimately chairman) of the Securities and Exchange Commission and later as a partner in the distinguished Washington law firm of Wilmer, Cutler & Pickering. So it is altogether fitting that I should talk about some of the intersections between law and the theory of finance—the body of economic theory that is revolutionizing scholarship on the law of corporations, investment, securities, and much else besides.

I will not try to define "finance," any more than I would try to define "law." But I cannot resist repeating the surprisingly pertinent definition in Ambrose Bierce's Devil's Dictionary: "FINANCE, n.—The art or science of managing revenues and resources for the best advantage of the manager. The pronunciation of this word with the i long and accent on the first syllable is one of America's most precious discoveries and possessions."²

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* Judge, United States Court of Appeals for the Seventh Circuit; Senior Lecturer, University of Chicago Law School. This is the text of the Manuel F. Cohen Memorial Lecture given at the George Washington University National Law Center on November 14, 1985. The research assistance of Stacy Dulberg and the comments of Gregory Barton, Frank Easterbrook, Daniel Fischel, and Randal Picker on an earlier draft are gratefully acknowledged.

1. For a brief and very simple sketch of the basic theory, see R. Posner, Economic Analysis of Law § 15.1 (3d ed. 1986). The readings listed at the end of Chapter 15 provide some ways into the scholarly literature for those wanting a deeper immersion. See id. at 426-27.

2. A. Bierce, The Devil's Dictionary, in The Collected Writings of Ambrose
Until recently the theory of finance focused rather narrowly on the behavior of investors in securities markets. An important finding in the early literature was that such markets were efficient in the sense that prices in them impounded all or at least most information knowable about the companies whose securities were being traded, and about the economy as a whole. Thus it was hard, and perhaps for institutional investors impossible, consistently to beat the market, whether by picking undervalued securities to buy or overvalued ones to sell or by spotting impending markets turns. Hence the rational strategy was passive, a "buy and hold" strategy that minimizes transaction and administrative costs and maximizes diversification. The growth of the index or market fund attests to the growing acceptance of the efficient-markets concept in the practical world, and has challenged accepted notions of trust-investment law.3

But as the theory of finance has broadened, the scope of its potential legal applications has grown dramatically, as I shall illustrate with a series of examples that will initially seem more diverse than they are — examples drawn from tort law as well as corporation and trust law, examples that will as a by-product illustrate some surprising parallels among these fields. The examples are: calculating lost future earnings in a personal-injury case; deciding when a board of directors shall be allowed to dismiss a derivative suit; computing damages in securities fraud cases; and evaluating the propriety of trustees' engaging in "social investing." I shall try through these examples to bring out the basic principles of the theory of finance as well as to illustrate the practical application of those principles; but the treatment is not intended to be exhaustive, and the reader is asked to remember that this paper was originally delivered as a lecture.

I. Risk Adjustment in Discounting Lost Earnings to Present Value

Some readers may be unaware that professors of finance, and economic consultants using the tools of finance theory, have found a cozy niche for themselves as expert witnesses in personal-injury cases. They estimate the present value of future earnings that have been lost because of a disabling injury or some other cause. The estimation is necessary, of course, because legal damages are awarded in a lump.

Although the choice of discount rate is often critical in present-value calculations,4 two central insights of the modern theory of

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4. A "discount rate" is simply an interest rate used to translate a future sum of money into its equivalent in present value.
finance, perhaps the two central insights, are neglected in these cases. The first is the positive relationship between risk and return. Suppose you were asked whether you would be willing to stake your entire wealth in exchange for a fifty-percent chance of doubling it. Probably you would refuse on the ground that if you lost everything (call it $X) you would incur a disutility greater than the utility you would gain from having another $X. If this is indeed how you would feel, then you are risk averse and would demand compensation for taking such a chance; you might for example demand that the payoff be $6X rather than $2X. The opposite of risk aversion is risk preference. A gambler might stake his entire wealth in exchange for a ten-percent chance of doubling it. But most people are risk averse with regard to substantial stakes. The widespread purchase of insurance and the behavior of the securities markets, where riskier investments command higher expected returns than less risky ones, are important evidence for this point.

But (and this is the second insight) not every type of risk is compensated. Diversifiable risk is not. By the pooling of many independent risks, a large risk can be transformed into a near certainty. This is what an insurance company does when it sells fire or life or liability or other insurance, and it is what the holder of a diversified investment portfolio does. Diversifiable risk is not compensated by a higher return because it can be eliminated so easily—that is, by diversification.

These points are typically neglected, however, when it comes to figuring out the lump sum that will compensate a tort victim for lost future earnings. The tendency is to use a riskless interest rate in discounting lost future earnings to present value, and this is incorrect. The present value that will be awarded as damages is a sum certain that can be invested at the riskless rate to yield a guaranteed stream of earnings equal to what was lost (I abstract from the problem of inflation, which is distinct). But the stream that the present-value estimation is designed to value was not a guaranteed amount. The expert witness may compute the actuarial value of the stream correctly, by estimating mortality and...
unemployment probabilities for each year in the stream; but if the plaintiff whose lost earnings are being valued is risk averse, he will prefer a sum certain to its actuarial equivalent since he could not have diversified away the risk in his earnings stream. "Human capital" (here meaning earning capacity) is not diversifiable—you cannot hold a diversified portfolio of jobs. Hence the use of the riskless discount rate to calculate the present value of the lost future earnings overcompensates.

The practical problem is to figure out a personal risk-adjusted discount rate. It would be easy enough to determine the risk premium that the average investor in the stock market demands to assume an investment risk equal to that of the victim's expected earnings stream, but the tort victim may not be anything like the average investor. He may have been in an economically risky occupation that would horrify the average, risk-averse investor—he may have been an actor or a professional athlete or a commodities broker. And he may have been in such an occupation precisely because he likes risk. In that event, he would not consider a smaller earnings stream generated by a lump sum invested in risk-free United States' government securities the equivalent of what he has lost. His risk premium may even be negative. On the other hand he may have chosen a risky occupation not because he liked risk but because his earnings in that occupation (for which his talents may have specially suited him) compensated him for bearing unwanted risk.

In short, used for purposes of compensating for lost earnings, the risk-free interest rate could be too low, just right, or too high. But it usually will be too low. Most people have more risk in their earnings stream than they want. Stated otherwise, if most people are risk averse with regard to large stakes, as is generally believed (on much evidence, including the prevalence of insurance and the behavior of investors), then most wages contain compensation for economic risk. When a worker is disabled in circumstances under which he receives compensation for lost earnings, the economic risk—a cost of work—is eliminated, and this should be reflected in deciding what interest rate to use in computing that compensation. On average, then, the risk-free interest rate will be too low. How much higher it should be could be estimated from comparisons of wages in more and in less (economically) risky occupations, holding constant other variables besides risk. Empirical work on this subject is just beginning, but the early indications are that the risk component is substantial.

Here two caveats must be entered. First, understand that the risk under discussion is economic rather than physical risk. A literature stretching back all the way to Adam Smith documents

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8. See, e.g., LORIE & HAMILTON, supra note 5, at 198-227.
that workers demand a higher wage (other things being equal) to assume a risk of death or physical injury. 10 This premium, however, will be automatically built into the wage estimates used to figure the discounted present value of the plaintiff's lost earnings. Second (and related), risk in the sense of uncertainty must be distinguished from risk in the sense of an expected loss. The latter will again be built into the wage estimate. Suppose, to take a very simple example, that a truck driver will be laid off ten percent of the time, and his wage is $20,000. Then his expected earnings are not $20,000 but $18,000, and that is the figure to use in deciding what his lost wages are. But this adjustment abstracts from risk aversion. Most people would prefer a guaranteed $18,000 a year to having a ninety-percent chance of earning $20,000 and a ten-percent chance of earning nothing. That is what risk aversion means. Hence a truck driver whose earnings are $20,000 (if he earns them) will actually be receiving a lower wage in terms of net utility than a civil servant guaranteed to earn $18,000, unless the truck driver is risk neutral or risk preferring. This is the point that the courts have missed.

II. Dismissing Derivative Suits: Should the Board's Decision be Final?

Corporation law has long been concerned with the problem that used to be called the problem of separation of ownership and control, that finance theorists discuss under the name of "agency costs," 11 but that Ambrose Bierce described more directly in the quotation with which I began. In the corporate setting, it is the problem of the conflict of interest between a corporation's managers and its shareholders and is acute when share ownership is widely dispersed, which creates serious free-rider problems. Although there is a market in managers, a capital market, and of course the corporation's product markets, the constraints exerted by these markets may not be strong enough to prevent management from pursuing its personal gain at the expense of the shareholders; in due course I shall consider some evidence that they indeed are not strong enough. The electoral route—the proxy fight—is not sufficient either; indeed, it is the electoral setting that creates a free-rider problem in the first place. No shareholder with a small holding has much incentive to inform himself about how he should vote, because his vote will have little (if he is


a small enough shareholder, practically zero) influence on the outcome of the election. Why should he read proxy literature carefully?

One possible source of conflict of interest between managers and shareholders should be mentioned specifically, because it links up nicely with the discussion in Part I. Human capital, as we saw there, is hard to diversify; an investment portfolio is not. To the extent that managers acquire human capital specific to the firm, which is to say human capital that would be worth less in another firm, they will have a nondiversifiable asset, and this will lead them (if risk averse) to manage the corporation conservatively. The shareholders, however, may be effectively risk neutral by virtue of holding a diversified portfolio of stock and other securities, and if so they will not want the managers to manage the firm conservatively; they will want it to take some risks.

In any event, an important doctrine of corporation law is the fiduciary principle, which imposes on the manager a duty to manage the corporation as if he had goals identical to those of the shareholders and which is enforced by the shareholders’ derivative suit—a suit brought in the name of the corporation by a shareholder rather than by the corporation itself (which is to say, rather than by the corporate management) against the allegedly unfaithful manager. The derivative suit can be used to enforce not only the duty of loyalty but also the duty of care. If an officer or other corporate employee has squandered corporate assets in some feckless venture he can be sued, and if the suit succeeds he will be ordered to make good the corporation’s losses. But there are serious problems in asking a court to second-guess business decisions, and the law’s response has been the business judgment rule, under which the courts defer broadly to a corporate management’s purely business judgments. The courts’ deference to corporate management prevents derivative suits from effectively remedying the conflict of interest that arises from different risk preferences of managers and shareholders. Hence the principal importance of the derivative suit is in connection with disloyalty, which is to say conflicts of interest, such as a manager’s seizing a corporate opportunity for private gain. The derivative suit is a monument to the problem of agency costs; it would make no sense to allow a shareholder to bypass corporate management in bringing a suit against an officer if we were confident that management always acted in the shareholder’s interests.

The specific question I want to discuss is, if the board of directors votes to dismiss a derivative suit (and let us assume that any member of the board who is a defendant in the suit will not be allowed to vote), should that be the end of the matter—should the case be dismissed? Or should the court make an independent judgment on whether the suit has merit—and dismiss only if it

concludes it does not? I am going to defend the conventional legal position and argue "no" to the first question and "yes" to the second and thereby expose myself to the academic equivalent of being accused of sniffing cocaine—of being said to have succumbed to the "Nirvana fallacy," the "belief that if a given practice is costly or imperfect then some alternative must be better."  

First of all, the court will not be asked to make an impossible judgment—namely, could the defendant manager have managed the corporation better? The business judgment rule should rule out that kind of silly inquiry. The court will not even be asked, not yet anyway, whether the defendant was guilty of a conflict of interest, though that should not be a completely unmanageable judicial inquiry. All the court will be asked to do is decide whether the suit has enough arguable merit to be worth prosecuting. That is the kind of question courts answer all the time—though perhaps not with great distinction—when called on to approve settlements in class-action or other settings where judicial approval of a settlement is required.

Second, the board of directors cannot be fully trusted to assess the merits of the suit impartially. The defendant may be one of the directors, hence a friend or at least a colleague of the others, or he may have engaged in a practice that the directors would like to engage in or that they have engaged in before. This problem is well understood and the usual solution is to confine the decision on whether to drop the suit to a "special litigation committee" composed entirely of outside directors. But precisely because they are outsiders and therefore largely dependent on manage-

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15. See, e.g., Donovan v. Robbins, 752 F.2d 1170, 1176-77 (7th Cir. 1985) (reversing and remanding district court's rejection of a proposed consent decree); see also Fed. R. Civ. P. 23(e) (requiring judicial approval of dismissals of class actions). The test for dismissing a derivative suit was stated by Judge Winter in Joy v. North as follows: "Where the court determines that the likely recoverable damages discounted by the probability of a finding of liability are less than the costs to the corporation in continuing the action, it should dismiss the case." 692 F.2d 880, 892 (2d Cir. 1982), cert. denied, 460 U.S. 1051 (1983). In other words, if the net expected value of litigation is negative, dismiss. This is very similar to the test for approving a proposed settlement: Is the net expected value of litigation less than the amount of the settlement? Cf. United States v. City of Miami, 614 F.2d 1322, 1334-35 (5th Cir. 1980) (noting that the expense of litigation and the likely outcome of the suit are factors in a district court's decision whether to approve a consent decree), modified on other grounds, 625 F.2d 435 (5th Cir. 1981) (en banc).
ment for information about the company’s affairs, they may lack good information about the merits of the suit. And unless they dominate the board, they may find themselves expelled from their lucrative directorships if they refuse to dismiss the suit. Indeed, maybe directors who get a reputation as hard-liners don’t get offered many directorships, though on the other hand outside directors who get a reputation for cravenness will cease to have much value to the corporation.

All this would be of no importance if the various market limitations on agency costs were highly effective and if the fiduciary principle—which is, as I said, what the derivative suit enforces—were therefore unimportant; but it is not clear just how effective those controls are. Granted, much of the “evidence” of disparities between managerial and shareholder objectives is superficial—not only the evidence in the popular literature, which focuses on what appear to be inflated managerial salaries and perquisites without considering whether the requisite managerial talents may not be as rare as those of champion athletes, movie stars, and best-selling authors, but also the evidence that consists of the increasing use by management of defensive tactics against hostile takeovers, such as “golden parachutes” (generous severance pay that becomes an obligation of an acquiring firm). Some of these tactics may benefit the shareholders by converting a tender offer into a bidding contest that will drive up the ultimate acquisition price of the firm; others (the “golden parachute” in particular) may benefit them by reducing managers’ opposition to a takeover.

These benefits must be compared with the cost of making a tender offer less likely by increasing the cost and therefore decreasing the profitability to the offeror. The costs are direct as well as indirect—not only a higher cost of acquisition but also the loss of advantage to tender offerors if a tender offer serves merely to generate additional bids, so that the tender offeror may by his research on finding undervalued firms have conferred an uncompensated benefit on other takeover artists. The evidence on whether on balance shareholders gain is mixed.

Some of the antitakeover devices—the “poison pill,” for example—seem a lot less innocent than others (the “golden parachute,” for example); but innocent or not, the fact remains that

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18. A complicating factor is that because all corporations are subject to the fiduciary principle, one cannot readily determine the independent effects of the market constraints.


20. A “poison pill” is in its simplest form a right that shareholders can exercise upon a triggering event such as the purchase of a large position in the firm’s stock. The exercise of the redemption right increases the cost to the purchaser of obtaining control of the firm.

tender offers are made at very high premiums over the current market price of the target firm's stock—thirty percent being a generally accepted average figure. This suggests a large margin within which managers can divert wealth from the shareholders to themselves without worrying about inviting a takeover that may cost them their jobs.

If the question were, should we invent a new legal remedy, the derivative suit, to provide an added check on managerial disloyalty, I would hesitate to answer “yes” on the basis of our severely incomplete knowledge about the actual gravity of the conflicts of interest between managers and shareholders in the large publicly held firm. But given that we have the derivative suit, the burden of proof shifts to the abolitionists, and in my opinion has not yet been met. Assigning the burden of proof to the advocates of change may seem rather a facile means of dealing with ignorance about the actual balance of costs and benefits, but I think not. Any serious proposal for legal change requires a substantial expenditure of intellectual resources, jostles other proposals on the crowded agenda of legal reform, and in short imposes substantial opportunity costs that are not worth undertaking without confidence that the net benefits of the reform will exceed the costs of achieving it.

To summarize, if present knowledge does not allow us to conclude with any confidence that corporate management, including the board of directors, is a reliable fiduciary of the shareholders, there is a place for the derivative suit; and if there is to be a derivative suit, then it seems to me, for the reasons indicated, that the board of directors should not be allowed to terminate it without judicial review. Indeed, it is a contradiction in terms to say that we shall have the derivative suit, but shall allow the board to dismiss it. If all litigation against management is to be controlled by the board, there is no need for the derivative suit; the corporation, which is to say the board of directors, can always sue an unfaithful employee.

(unpublished manuscript prepared for the University of Chicago & the Securities and Exchange Commission) (manuscript on file at the George Washington Law Review).


24. For a forcefully argued contrary conclusion, buttressed by some (but quite limited) evidence of the ineffectuality of derivative suits in constraining managers, see Fischel & Bradley, The Role of Liability Rules and the Derivative Suit in Corporate Law: A Theoretical and Empirical Analysis, 71 CORNELL L. REV. 261 (1986). Fischel and Bradley would, however, retain the derivative suit for cases of actual fraud, while jettisoning it for forms of disloyalty that cannot be characterized as fraudulent. See id. at 299-426 for extensive comments and discussion on the Fischel-Bradley article.
Bradley and Fischel point out that allowing a very small shareholder to sue in the corporation’s name could impose an externality. The shareholder might be interested in pursuing some objective contrary to the preferences of the other shareholders. He might be an “ideological” shareholder (to glance ahead at my last topic) who wanted to harass managers engaged in lucrative but perhaps unlawful behavior, such as bribing foreign officials. But the plaintiff does not determine the outcome of the suits he brings, and there are devices (which probably should be used more widely) for reducing the problem that Bradley and Fischel have identified, such as requiring that the plaintiff post a bond to make good the expenses of the defense if the suit fails.

III. Optimal Damages in Securities Fraud Cases

Under conventional principles of fraud, a misrepresentation, to be actionable, must actually have been relied on by the allegedly defrauded person; otherwise the fraud is harmless. Suppose therefore that a misrepresentation in a prospectus for a new issue of stock leads brokers who read the prospectus to recommend that their customers buy large amounts of the stock. As a result the price rises. Suppose that someone who has no knowledge of the prospectus—in fact has no idea why the stock’s price has risen—buys it at its higher price. Later the fraud is unmasked and the price falls. Should this buyer be allowed to sue the issuer? The courts are coming around to the view that he should be. The result, which the courts call “fraud on the market,” is economically correct. The fraud is effectively impounded in the market price, and the person who buys without knowledge of the prospectus is acting on false information to the same extent as those who buy with knowledge. This is a direct application of the efficient-markets component of the theory of finance.

Now consider what the measure of damages should be in such a case. At first blush it might seem obvious: it should be the losses of those who bought at prices inflated by the false prospectus, after eliminating other possible nonfraudulent causes of the drop in the stock’s price. But what about innocent people who profited from the fraud? Suppose that a person who is misled by the prospectus buys the stock as its price is rising but unloads it at a profit before the bubble bursts. Unless he is made to disgorge his profit, the corporation that issued the misleading prospectus will be forced to pay damages in excess of the net harm inflicted by the fraud. Because there is no legal or practical basis for forcing those shareholders who were unjustly but innocently enriched by the

25. Id. at 271-74.
26. For an excellent discussion, see Fischel, Use of Modern Finance Theory in Securities Fraud Cases Involving Actively Traded Securities, 38 Bus. LAW. 1, 9-10 (1982).
27. For an analysis independent from but parallel to my own, see Easterbrook & Fischel, Optimal Damages for Securities Cases, 52 U. CHI. L. REV. 611 (1985).
fraud to make restitution to the corporation, there is a danger of overdeterrence.

A stronger statement is possible, is it not? Often the net measurable damages from a stock fraud will be zero. Suppose the managers of a corporation unjustifiably delay disclosing bad news about the corporation's prospects in the vain hope that some miracle will restore those prospects. By doing this they stave off for two weeks a plunge in the price of the corporation's stock. People who buy the stock during this period will be hurt, but those who sell it to them will be benefited, because if they had held on to the stock longer they would have suffered the loss that instead their buyers suffered. If the managers themselves profited by selling their stock before the bad news hit the market, there would be no problem in forcing them to disgorge their gains (i.e., the losses they avoided). But suppose they didn't. Then what would be the basis for awarding damages based on the losses of some of the shareholders?

With this question we encounter the surprising capacity of economic concepts to illuminate connections between seemingly unrelated legal doctrines, here securities fraud and the "economic loss" doctrine of tort law. Consider the famous case of Rickards v. Sun Oil Co. 28 The plaintiffs, who were merchants, lost business when a ship owned by the defendant negligently collided with and put out of commission the only bridge connecting the island on which the plaintiffs' businesses were located to the mainland. Applying the doctrine that denies recovery of purely monetary losses in tort cases involving physical impact (the collision with the bridge), the court held that the plaintiffs could not recover damages for their injury. 29 The economist explains this result by noting that most and perhaps all of the plaintiffs' loss was balanced by gain to others, namely the mainland merchants whose businesses picked up when their competitors on the island were put out of the reach of consumers. Because there is no mechanism by which the defendant could have recouped the benefits it conferred on the mainland merchants, making the defendant liable for the losses it inflicted on the island merchants would result in a damage award greater than the net harm inflicted and could therefore result in overdeterrence of negligent conduct. 30 Why then should the victims of securities fraud in my hypothetical example be allowed to recover any damages?

A pragmatic basis is as follows: if the corporation is forced to pay the losses of those stockholders who were harmed by the de-

29. Id. at 91-95, 41 A.2d at 268-70.
lay in the release of the news, the corporation will have an incentive to police its managers more carefully in the future. This is true even though the cost to the corporation will be borne by its shareholders, most or all of whom were innocent. Making them liable will affect the incentives of the board of directors they elect. There was no parallel problem in *Rickards*, because the owner of the bridge had suffered a loss for which he could sue; indeed, if the gains to mainland merchants perfectly offset the loss to island merchants, the loss to the owner of the bridge would perfectly measure the net loss caused by the accident. But if the only possible plaintiffs in the securities fraud case are the people who were left holding the bag when the market for the stock collapsed, and if their losses are totally offset by the gains to the people who were benefited by the concealment of the bad news because it enabled those people to sell at a time when the price of the stock was still high, it seems that damages would be zero, and the fraud would go unpunished and undeterred.

This would be fine, at least from a narrow efficiency standpoint, if the only effect of the fraud were distributive, that is, if it just shuffled wealth among the shareholders without diminishing net social wealth. But there is a social cost from securities fraud, albeit not a cost equal to the losses of the shareholders who were hurt by the managers' concealment. Three kinds of social cost in fact are possible, though all are difficult to quantify. First, the managers may have expended real resources on concealing the bad news. Second, and related, if fraud is prevalent, investors will have an incentive to expend more resources on trying to find out the truth about firms, because they have to overcome the disinformational efforts of corporate managers. (This is a major reason, by the way, why theft is not a simple transfer payment, but inflicts net social costs.) Third, the prevalence of fraud may make the stock market more volatile, imposing disutility on the risk-averse investor.

Because there is at present no way to quantify these losses satisfactorily by the methods of litigation, it seems that the practical choice is between measuring damages by the losses of those investors who did lose from the fraud and awarding no damages at all. The first course seems preferable provided that we have some reasonable confidence that fraud occurred; or stated otherwise, provided that "fraud" is defined in terms of active, knowing misrepresentations, rather than in terms of failure to disclose everything that in hindsight seems material to an investor's decision. For the more narrowly and precisely the wrongful conduct is defined, thus reducing the risk of legal error, the safer we can feel in "throwing the book" at a violator; the less, in other words, we need fear inducing people to avoid lawful conduct in the neigh-

31. See Cenco, Inc. v. Seidman & Seidman, 686 F.2d 449, 455 (7th Cir.), *cert. denied*, 459 U.S. 880 (1982). Of course I am assuming here, in some tension with Part II, that the problem of managerial agency costs is not insurmountable.
bordorhood of unlawful conduct as a means of steering clear of a heavy punishment risk. A measure of damages that contains a punitive component—which is one way to describe a damage award in which the benefits that the defendant's misconduct has conferred on persons other than the victims of the fraud are not netted out—is unobjectionable if the case is suitable for punishment, which is to say, if it is a case of deliberate wrongdoing, for which punitive damages are conventionally awarded under tort principles. But if we are to award what in effect are punitive damages in the name of compensatory damages, we must be sure that the conduct being punished in this way is indeed deliberate wrongdoing; so we must not define fraud too broadly.

Notice also that if punitive damages are built in as it were to an award of ostensibly compensatory damages, there is no good reason to award punitive damages in addition, and federal securities law does not (RICO, however, is changing that). Finally, if the managers derive a measurable pecuniary benefit from the fraud (maybe they are among the shareholders who sell before the news hits the market), a restitutionary recovery is unproblematic. The problem discussed above arises only when the benefited shareholders are innocent bystanders, like the mainland merchants in Rickards—and perhaps shareholders should never be considered totally innocent, because they elected the board of directors that hired (or included) the malfeasant managers.

IV. Social Investing

My last topic is much in the news these days. It is "social investing," for example, selling shares of corporations that do business in the Republic of South Africa and buying securities of corporations and other institutions in declining regions of this country. The issue of whether social investing is a good thing is, in lay circles, usually cast as a conflict between morality and greed. I don't know about the morality, but I question how important greed is in the picture. A portfolio manager who decides to cast out of his portfolio the shares of corporations that have offices in South Africa, or to include some shares of corporations in the "rust belt," will not, contrary to popular belief, necessarily reduce the

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expected return of the portfolio, just as trustees need not fear that if they hold shares in bankrupt corporations the average return of their portfolio will be below average. The market will bid the prices of all these concerns up or down until their expected return, correcting for differences in systematic risk, is the same as that of alternative investments. Only one condition is necessary: some investors must be willing to own stock in these firms. At the margin all stocks yield the same risk-adjusted expected return, for, if they did not, there would be trading until the returns were equalized.

This is a central implication of the theory of efficient markets. When Penn Central stock, before its collapse, was selling at $70 a share, it was, based on the information then known, as good an investment as any other stock on the New York Stock Exchange; had it not been, owners of the stock would have sold it and invested the proceeds in superior-seeming investments, until the expected returns of all stocks were again equalized at the margin, taking account of risk. After the collapse, when Penn Central was trading at $6, it was just as good an investment as before, even though the company was broke. The company’s value was much smaller, but its price had been bid down to the point where it was as good an investment as any other stock in its risk class; otherwise it would have had no takers at $6. Applied to social investing, this analysis teaches that it makes no difference whether companies that do business in South Africa have better than average prospects or worse than average prospects (perhaps because the future of South Africa is as dim as critics of the South African government contend); the prices of their stocks will be bid up in the first case and down in the second until they yield the same expected returns as the other stocks of their risk class. The expected return of a portfolio with no South African stocks should be the same as that of a portfolio with nothing but South African stocks.

Social investing has costs, in fact three costs—just not the costs that persons ignorant of the theory of finance focus on. The first cost is the cost of identifying companies to exclude or include on social-investing grounds—a slight cost, if only because the grounds are so nebulous that they do not invite costly research. The second is the cost of underdiversification of uncompensated risk. Third, and related, are higher trading costs.

The cost of underdiversification is the main economic worry in social investing. Whether it is a large or small cost depends on how many companies are proscribed. If the number is large, the costs to investors could be very substantial. A recent study finds that if all 152 of the firms in the Standard and Poor’s “500” that have employees in, or business relations with, South Africa were cast out of an investment portfolio and replaced by firms without South African connections, the portfolio would exhibit dramatically higher risk and lower diversification, as well as higher trad-
The reason is that the firms that do business with South Africa tend to be the larger firms in the market, and when they are replaced in a portfolio the portfolio becomes heavily weighted with smaller, riskier firms, which in turn raises the portfolio manager’s trading costs.

This finding casts some oblique light on the issue of morality. It seems that the companies that do not do business in South Africa are by and large simply those that are too small to be international corporations, or that do not produce anything for which there is an overseas market, or a South African market. It seems, then, that companies are to be rewarded by social investors for their lack of commercial success—for not participating in international trade—and this at a time when many people are worried about our international trade deficit. Notice also that wholesale divestment may confer capital gains on the buyers (who need not be Americans) of the divested shares.

Perhaps an even greater danger to adequate diversification comes from the dying-region type of social investing. If a portfolio is heavily concentrated in a declining region of the country, the expected return will not be depressed, as I have said, but the diversifiable, and therefore uncompensated, risk borne by the portfolio may be considerable.

Conclusion

This paper has not attempted to educate the reader in the theory of finance; it is much too short for that. It has had the more modest task of stimulating the lawyer’s interest in the subject, by illustrating the surprising range of fruitful applications that the theory has to the law and by showing its power not merely to cast new light on problems both old and new but also to display the unity of the law, the commonality of fields as disparate as torts and securities: a unity that I believe is fundamentally economic.