

# Discounts and Other Mysteries of Corporate Finance

Richard A. Booth

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# Discounts and Other Mysteries of Corporate Finance

Richard A. Booth†

*Two major theories attempt to explain why companies are often undervalued by the stock market and thus ripe for takeover attempts: the market hypothesis, which postulates that the market tends to price stocks below asset value, and the misinvestment hypothesis, which postulates that investors bid down share prices because they cannot trust managers to invest optimally. Both of these theories are believable, but they have very different implications for legal regulatory schemes. Professor Booth argues that both theories are correct and are nothing more than alternative formulations of the same basic truth: stocks, like all commodities, have downward-sloping demand curves, and their price, like the prices of other goods, is set at the margin. The downward-sloping demand hypothesis explains a wide variety of market phenomena, including why companies are often undervalued by the stock market, why the "irrelevance proposition" is untenable, and why big dividends are used to fight takeovers. Downward-sloping demand also has implications for securities regulation, particularly for the regulation of the market for corporate control. Professor Booth argues that takeover defense regulation should be more stringent for large companies than for small ones, that it may be wrong for the law to seek to treat all shareholders equivalently, and that rather than focusing on an objectively fair price for stock in corporate controversies, the law should inquire whether the parties reached a bargain that would have been expected after fair negotiation. Downward-sloping demand also suggests that stock market efficiency is an important policy goal because stock primarily functions as a dynamic indicator of value and adequacy of capitalization rather than as a static source of capital. Finally, the downward-sloping demand hypothesis also suggests that federal securities regulation acts as an elaborate price-fixing scheme that unnecessarily makes market volatility an inexplicable and sinister mystery. In sum, Professor Booth concludes that downward-sloping demand necessitates a critical reevaluation of virtually all areas of securities regulation.*

## INTRODUCTION

Companies are often undervalued by the stock market. While such an assertion may sound like heresy to a true believer in the sacrosanct efficient market hypothesis, the frequency with which tender offers arise

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† Professor of Law, The University of Maryland, School of Law. A.B. 1973, University of Michigan; J.D. 1976, Yale University.

at substantial premiums over market price is proof enough that the market is often wrong.<sup>1</sup> In fact, the hefty premiums paid to shareholders do not even reflect the entire discount. Successful takeovers are often followed by the breakup of the company and the piecemeal sale of the parts at *still greater* profit to the bidder.<sup>2</sup> What can possibly account for such gains if the stock market is efficient? If the market cannot be beaten even by highly sophisticated investors, and the market price thus constitutes the single best guess as to the value of a company's stock, how can it be that the market is so often incorrect?<sup>3</sup>

Commentators have recently addressed the mystery of discounts, and two major theories have emerged to explain them. One is the market hypothesis: stocks often trade at prices below the per-share value of the company's underlying assets because the market tends to price stocks below asset value.<sup>4</sup> The other is the misinvestment hypothesis: investors bid down share prices because they cannot depend on managers to invest available cash flows optimally.<sup>5</sup>

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1. Premiums have in fact grown steadily over the last thirty years, averaging around 75% over pre-bid market price during the period from 1974-85. See Nathan & O'Keefe, *The Rise in Takeover Premiums: An Exploratory Study*, 23 J. FIN. ECON. 101, 101 (1989).

2. See generally Lipton, *Corporate Governance in the Age of Finance Corporatism*, 136 U. PA. L. REV. 1 (1987) (discussing the advent and difficulties of a third stage of corporatism, "finance corporatism," wherein large pools of capital managed by institutional investors create pressure for managers to seek short-term profits). On reflection this is only to be expected: a bidder would not make a bid for a target company unless a successful bid was expected to be profitable. This means that the price paid for the target must be somewhat less than what the bidder expects to realize from instituting operating changes or selling off assets. If the incumbent management were to take the same steps, the shareholders would enjoy *all* the proceeds.

3. For a concise explanation of the efficient market theory in all its forms, see J. LORIE, P. DODD & M. KIMPTON, *THE STOCK MARKET: THEORIES AND EVIDENCE* 55-79 (2d ed. 1985).

4. Kraakman, *Taking Discounts Seriously: The Implications of "Discounted" Share Prices as an Acquisition Motive*, 88 COLUM. L. REV. 891, 898-901 (1988).

5. *Id.* at 897-98. Several other explanations have been offered for why tender offers arise. The bidder may offer superior management, or the existing management may be slack. See Easterbrook & Fischel, *The Proper Role of a Target's Management in Responding to a Tender Offer*, 94 HARV. L. REV. 1161, 1168-71 (1981) (arguing that the tender-offer bidding process polices managers whether or not a tender offer occurs, and disciplines or replaces them if they stray from the service of the shareholder). Bidders may habitually overpay because of the so-called "winner's curse" (i.e., the obvious fact that the most optimistic bidder typically wins), or simply because of hubris (i.e., the overestimation by the bidder of his or her own managerial skills). See Black, *Bidder Overpayment in Takeovers*, 41 STAN. L. REV. 597, 624-26 (1989). The premiums offered to shareholders may merely be transfers of possibly excessive returns previously paid to other constituents such as managers, employees, or bondholders. See Shleifer & Summers, *Breach of Trust in Hostile Takeovers*, in *CORPORATE TAKEOVERS: CAUSES AND CONSEQUENCES* 33, 34-37 (A. Auerbach ed. 1988); McDaniel, *Bondholders and Stockholders*, 13 J. CORP. L. 205 (1988). But see Marais, Schipper & Smith, *Wealth Effects of Going Private for Senior Securities*, 23 J. FIN. ECON. 155, 186 (1989) (study of going-private proposals made from 1974 to 1985 does not indicate that wealth is being transferred from one group of security holders to another). The desire to substitute deductible interest payments for nondeductible dividend payments may provide the motivation for a tender offer. However, this argument is undermined by the fact that the target company could do the same thing just as easily. See Gilson, Scholes & Wolfson, *Taxation and Dynamics of Corporate*

The market hypothesis makes sense because no single valuation model may be appropriate for both shares and assets. For example, shareholders generally do not have the power to sell the underlying assets. They may, therefore, discount share value to compensate for the absence of this power.<sup>6</sup> Alternatively, the trading process may create noise or bias. For example, some (perhaps much) trading may be prompted by traders watching other traders' behavior or focusing on widely accepted but possibly flawed indicators of value.<sup>7</sup>

The misinvestment hypothesis is also believable. This theory does not imply that managers necessarily mismanage their firms by failing to wring the maximum return available from assets, but rather that they tend to reinvest available cash instead of declaring payouts in the form of dividends, share repurchases, or liquidation, even when the return on reinvested cash is lower than the return on existing operations.<sup>8</sup>

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*Control: The Uncertain Case for Tax Motivated Acquisitions*, in *KNIGHTS, RAIDERS, AND TARGETS: THE IMPACT OF THE HOSTILE TAKEOVER* 271, 293-94 (J. Coffee, L. Lowenstein & S. Rose-Ackerman eds. 1988) [hereinafter *KNIGHTS, RAIDERS, AND TARGETS*] (to sustain the claim that interest deductibility encourages acquisitions, one must demonstrate why deductibility is more valuable when debt proceeds are used to make acquisitions than when proceeds are used to make any other investment).

6. See Kraakman, *supra* note 4, at 899 ("share prices of firms holding liquid assets might discount asset values if traders placed an intrinsic value on the right to liquidate firms in the asset market"); Shubik, *Corporate Control, Efficient Markets, and the Public Good*, in *KNIGHTS, RAIDERS, AND TARGETS*, *supra* note 5, at 31, 45-48 (noting that the right to dispose of physical property ceases to be held by the shareholder in the highly liquid stock market, causing the stock market to value the shares less highly than the market for corporate control); see also Lowenstein, *Pruning Deadwood in Hostile Takeovers: A Proposal for Legislation*, 83 COLUM. L. REV. 249, 259-60 (1983) ("The traditional logic of property is simply not useful in a situation where ownership and control have been so largely divorced."); *infra* text accompanying note 76 (discussing the concept that control has value).

7. See Kraakman, *supra* note 4, at 899-900 (arguing that large-scale noise trading, arising from misconceived strategies, erroneous valuation assumptions, fashions and fads, or simple pleasure in trading, might distort share prices and generate discounts or premiums through the slicer pressure of trading); see also Gilson & Kraakman, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549, 573-79 (1984) (discussing the process of derivatively informed trading to explain how new information enters the market). While this explanation may once have seemed a bit tenuous, the 1987 crash of the stock market makes it quite believable. One journalist has suggested that it is unimportant whether traders correctly anticipate the future course of the economy, as long as they know what their fellow traders are doing at any given moment. However, "when traders' opinions on the workings of the economy are taken seriously by policymakers and the financial press, dangerous things can happen." Webb, *To Understand the Economy, Ignore Traders*, *Wall St. J.*, Aug. 24, 1989, at A10, col. 3.

8. See Kraakman, *supra* note 4, at 897-98 (suggesting that under the misinvestment hypothesis, "[i]f managers are reluctant to distribute these cash flows and are unable—or unwilling—to discover profitable new investments, shareholders must inevitably price firms at below informed appraisals of their asset values"); see also Coffee, *Shareholders Versus Managers: The Strain in the Corporate Web*, 85 MICH. L. REV. 1, 21-22 (1986) (citing studies that suggest managers are overly biased toward earnings retention, with the rate of return on internally generated funds well below that on debt or equity); Jensen, *Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers*, 76 AM. ECON. REV. 323, 328 (1986) (proposing free cash flow theory, which implies that managers of firms with unused borrowing power and large free cash flows are more likely to

Both of these explanations are consistent with market efficiency in the sense that the market immediately assimilates all available information, thus making it impossible to identify "misvalued" stocks. However, the two theories lend different degrees of support to the idea that market price constitutes the best guess as to a company's true value.<sup>9</sup> The market hypothesis runs counter to the idea of market accuracy in suggesting that equilibrium prices may be set by a mixture of accurate and inaccurate signals. On the other hand, the misinvestment hypothesis seems to support the idea of market accuracy because, although shareholders might prefer payouts over the investment strategies pursued by managers, the less preferred strategies can nonetheless be valued.

The two hypotheses also have very different implications for how tender offers and defensive tactics should be regulated. If the misinvestment hypothesis is correct, tender offers should be encouraged and defensive tactics condemned since such a policy would encourage distributions and discourage reinvestment of available funds at inferior returns. If the market hypothesis is correct, a contrary policy would seem to be more appropriate because discounts arise as a result of peculiarities of market mechanisms and through no fault of managers.

The thesis of this Article, however, is that *both* explanations are correct, and indeed that both explanations are nothing more than alternative formulations of the same basic truth: stocks, like other commodities, have downward-sloping demand curves.<sup>10</sup> In other words, the price of a share for purposes of the trading market is established by the lowest-valuing current shareholder or, stated another way, the highest-valuing potential shareholder while the price of a share for the purposes of a tender offer or other acquisition is set by the highest-valuing current

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undertake low-benefit or even value-decreasing mergers and acquisitions); Lehn & Poulsen, *Free Cash Flow and Stockholder Gains in Going Private Transactions*, 44 J. FIN. 771 (1989) (providing empirical evidence suggesting that going-private transactions are triggered by undistributed cash flow).

9. For other works striking a distinction between these two ideas of efficiency, see Booth, *Management Buyouts, Shareholder Welfare, and the Limits of Fiduciary Duty*, 60 N.Y.U. L. REV. 630, 633-38 (1985) (discussing these concepts in the context of a management buyout); Gordon & Kornhauser, *Efficient Markets, Costly Information, and Securities Research*, 60 N.Y.U. L. REV. 761, 770 (1985) (explaining that prices are efficient in two senses: (1) the current price of a security best predicts its future price, and (2) the prevailing price immediately assimilates all available information); Wang, *Some Arguments that the Stock Market Is Not Efficient*, 19 U.C. DAVIS L. REV. 341, 344 (1986) (distinguishing "information arbitrage" efficiency from "fundamental valuation" efficiency). But cf. Stout, *The Unimportance of Being Efficient: An Economic Analysis of Stock Market Pricing and Securities Regulation*, 87 MICH. L. REV. 613, 696-706 (1988) (blurring the distinction between the two types of market efficiency and arguing that market efficiency should make little difference as to how the securities markets are regulated).

10. Regarding the concept of demand generally, see R. POSNER, *ECONOMIC ANALYSIS OF LAW* 4-5 (3d ed. 1986).

shareholder or highest-valuing bidder. In short, the price of stock, like the prices of other goods, is set at the margin.

The downward-sloping demand hypothesis predicts that most shareholders value their shares at a price that is higher than the market price. In other words, the market may be said *naturally* to undervalue shares. Downward-sloping demand also implies a good deal of shareholder distrust of management. The more stock a company wants or needs to sell, the greater the discount it must offer because each next investor is slightly more pessimistic about the company's prospects. That is, the market undervalues stock because the last share is necessarily sold to an investor who perceives the greatest risk, *including* the risk of managerial malfeasance.

Surprisingly, the idea that individual stocks have downward-sloping demand is quite controversial.<sup>11</sup> It is generally assumed within the academic community that a well-diversified investor who follows the dictates of the efficient market theory will be indifferent among various stocks. Such an investor is a rational price-taker who declines to waste time and effort in the futile attempt to pick undervalued stocks. Further, it is argued that a rational investor would choose to sell for any premium that might be offered unless market imperfections, such as defensive tactics and laws that discourage takeovers, make it rational to hold out for a bigger premium.

All this has been taken to mean that the demand curve for stocks is horizontal, or, if one prefers, that the supply curve is vertical. According to this premise, investors will buy large amounts of stock from an issuer without bidding down the price, and will likewise tender large quantities of stock to an offeror without bidding up the price. Moreover, since the rational investor diversifies, one stock is a pretty good substitute for any other. Thus, purchases and sales of a particular stock should have little if any effect on the price of that stock.<sup>12</sup>

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11. For a more detailed discussion of the theory that stocks have a horizontal demand curve, see *infra* notes 69-71 & 81-82 and accompanying text.

12. Despite the general acceptance of this theory, there is a growing body of work implicitly based on the idea that stocks do or may have downward-sloping demand. See, e.g., M. FOX, FINANCE AND INDUSTRIAL PERFORMANCE IN A DYNAMIC ECONOMY 23-24 (1987) (rejecting the neoclassical assumption of homogenous expectations between management and participants in the financial process); Baysinger & Butler, *Antitakeover Amendments, Managerial Entrenchment, and the Contractual Theory of the Corporation*, 71 VA. L. REV. 1257, 1283-88 (1985) (arguing that due to shareholder heterogeneity, tender offers have differential welfare effects on different shareholders); Bebehuck, *Toward Undistorted Choice and Equal Treatment in Corporate Takeovers*, 98 HARV. L. REV. 1693, 1719-20 (1985) (explaining that when there is a tender offer, shareholders differ in their estimates of the independent target's value); Brudney & Chirelstein, *A Restatement of Corporate Freezeouts*, 87 YALE L.J. 1354, 1359 (1978) (in a two-step merger, stockholders of the acquired company will hold heterogeneous views on the intrinsic value of its shares); Burnovski, *Reverse Price Tender Offers*, 56 GEO. WASH. L. REV. 295, 302-07 (1988) (adopting the upward-sloping supply curve to describe reverse-price tender offers); Carney, *Fundamental Corporate Changes, Minority*

It is not so clear, however, that even well-diversified investors do or should remain indifferent when a stock they hold is "in play."<sup>13</sup> The logic of the efficient market and diversification does not apply to the bidders who buy control of whole companies. Bidders expect increased

*Shareholders, and Business Purposes*, 1980 AM. B. FOUND. RES. J. 69, 112-18 [hereinafter *Fundamental Changes*] (analyzing gains and losses to shareholders in squeeze-out mergers, assuming an upward-sloping supply curve); Carney, *Shareholder Coordination Costs, Shark Repellents, and Takeout Mergers: The Case Against Fiduciary Duties*, 1983 AM. B. FOUND. RES. J. 341, 353-57 (arguing that perfectly elastic supply curve does not fully explain target shareholder behavior); Chazen, *Fairness from a Financial Point of View in Acquisitions of Public Companies: Is "Third-Party Sale Value" the Appropriate Standard?*, 36 BUS. LAW. 1439, 1479-81 (1981) (proposing that an evaluation of the financial fairness of a tender offer must include an estimate of the price range within which the company could be sold to other prospective purchasers); Coffee, *Regulating the Market for Corporate Control: A Critical Assessment of the Tender Offer's Role in Corporate Governance*, 84 COLUM. L. REV. 1145, 1178-83 (1984) (arguing that the market for corporate control is inelastic); Fischel, *Efficient Capital Market Theory, the Market for Corporate Control, and the Regulation of Cash Tender Offers*, 57 TEX. L. REV. 1, 19 (1978) (discussing the effect in a free market economy of incremental differences in price on the willingness of stockholders to sell); Kanda & Levmore, *The Appraisal Remedy and the Goals of Corporate Law*, 32 UCLA L. REV. 429, 437-41 (1985) (explaining how the appraisal remedy protects inframarginal valuations understated by market price); Levmore, *Efficient Markets and Puzzling Intermediaries*, 70 VA. L. REV. 645, 651-57 (1984) (arguing that there is no evidence for elasticity of demand for inframarginal shares, and that elasticity of demand is reduced by disparate tastes for risk diversification, tax advantages, and particular management strategies); Stout, *supra* note 9, at 687-88 (noting that refusing to sell at the current market price is how current shareholders state that they think the value of their shares exceeds the market value); Stout, *Are Takeover Premiums Really Premiums? Market Price, Fair Value, and Corporate Law*, 99 YALE L.J. 1235, 1244-52 (1990) [hereinafter *Takeover Premiums*] (rejecting belief that investor demand is nonexistent at prices above the current market price and infinite at prices below); *see also* Booth, *Is there Any Valid Reason Why Target Managers Oppose Tender Offers?*, 14 SEC. REG. L.J. 43, 50 (1986) ("Presumably, stocks—like everything else—have downward-sloping demand curves . . ."); Booth, *supra* note 9, at 633-38 (vast majority of shareholders must believe that their stock is worth more than the market price, with management's valuation the highest because of reduced risk exposure); Booth, *The New Law of Freeze-Out Mergers*, 49 MO. L. REV. 517, 544 & u.155 (1984) [hereinafter *Freeze-Out Mergers*] (stating that in order for stock market to function, there must be a range of values perceived by traders and potential traders); Booth, *The Problem with Federal Tender Offer Law*, 77 CALIF. L. REV. 707, 716 & n.32 (1989) [hereinafter *Federal Tender Offer Law*] (arguing that stocks subject to takeover bids have downward-sloping demand curves).

Professor Coffee has discussed the implications of an upward-sloping supply curve, describing the inclination of shareholders to tender as dependent on the premium offered. Coffee, *supra*, at 1185; *see also* *Fundamental Changes*, *supra*, at 112-15 (using upward-sloping supply curve to measure losses to target shareholders in squeeze-out merger). Coffee's supply curve and my demand curve are nothing more than two different perspectives: he views the shareholders as supplying increasing quantities of shares for increasing premiums offered, while I view the shareholders as demanding higher premiums as publicly held shares are tendered and become scarce. I must admit that I originally thought of the curve as an upward-sloping supply curve. *See Freeze-Out Mergers*, *supra*, at 551-53. However, I find that a maximum tender price is more realistically estimated by the point on a demand curve where supply equals zero, than the point on a supply curve where shareholders could continue, at ever-increasing prices, to tender shares that do not exist. Moreover, the demand curve more effectively explains why new issues of stock have a price-depressing effect. But whatever one calls it, the idea is the same. *See Takeover Premiums*, *supra*, at 1247 (arguing that demand for stock is downward-sloping from the perspective of buyers, and upward-sloping from the perspective of sellers); Stout, *supra* note 9, at 688 n.373 (same).

13. "In play" is industry jargon meaning that the company is up for sale.



company-specific returns to compensate them for forgoing valuable diversification. Thus, bidders generally believe that target companies are undervalued. And as for investors, when there is a bidder or potential bidder lurking about who is interested in gaining control of a target company, investors may act, quite rationally, on the basis of the value believed to be perceived by the bidder. In other words, when a contest for control arises, demand is no longer horizontal and supply is no longer vertical.<sup>14</sup>

The notion that there is a single correct price for a share of stock is usually associated with the efficient market hypothesis. There is, however, nothing inconsistent between the idea that the market is efficient, in the sense that it cannot be beaten, and the idea that shareholders may hold different opinions about the value of a particular stock. There is no reason why, other things being equal, very different equilibrium prices would not be established for the same security at different levels of supply. Indeed, ultimately it is the idea that a company cannot be worth more than its market price that does not withstand analysis.

Even if downward-sloping demand implies that the misinvestment hypothesis and the market hypothesis are simply different ways of looking at the same phenomenon, and that there is no need to choose between the two hypotheses, it is not clear whether tender offers should be encouraged or discouraged. Rather the downward-sloping demand for stocks suggests a whole new set of regulatory solutions that are missed, or at least misunderstood, if one insists on viewing tender offers from one or the other of the alternative explanations.

This Article proceeds first by presenting in Part I an extended example of how downward-sloping demand can explain a common tactic used by target companies to defend against hostile takeover bids, namely financial restructuring involving large borrowings and hefty one-time dividends. This Part begins with the "irrelevance proposition," a virtual axiom of modern financial theory, which holds that a shareholder is indifferent to dividends. According to this theory, borrowing on the part of the target in order to pay a big dividend should have no effect on the outcome of a takeover battle. The central problem with the irrelevance proposition, however, is that it assumes that the next share of stock can be sold without any effect on market price. Thus, when downward-sloping demand is taken into consideration, it becomes apparent that dividends often do matter to shareholders.

After demonstrating how the downward-sloping demand hypothesis explains why big dividends are used to fight takeovers, Part II addresses the prevailing view that the demand for stock must be level because

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14. See *infra* text accompanying notes 69-71.

diversified investors who accept the efficient market hypothesis will regard many stocks as good substitutes for each other. This Article will show that both controlling and noncontrolling shareholders may, quite rationally, be less diversified than theory often assumes, and thus may be more concerned with company-specific risk than theory would predict.

Part III of the Article then proceeds to explain how the downward-sloping demand curve can be applied to account for a wide variety of other market phenomena. The list includes stock repurchases designed to increase market price, the underpricing of initial public offerings, tender offer premiums, the fact that stocks of different companies have differing sensitivities to market risk, and certain marketwide phenomena such as the permanent price increases that accompany inclusion of a stock in the Standard & Poors 500 (S&P 500). The conclusion is that many of these phenomena cannot be explained well *other* than by the downward-sloping demand hypothesis.

Finally, Part IV discusses the implications that downward-sloping demand may have for securities regulation. Of particular importance are its implications for the regulation of the market for corporate control.

## I

### DIVIDENDS AND DISCOUNTS

Defensive financial restructurings in response to takeover bids provide a dramatic example of shareholder preference for dividends and ultimately for the idea that market prices are set at a discount from underlying value. In a typical restructuring, the target takes on large amounts of debt to finance a large one-time dividend.<sup>15</sup> For example, during the 1988 bid for Kraft, Inc., Kraft responded with a defensive proposal for a one-time \$98 per share dividend to be financed with a new issue of debt.<sup>16</sup> Shortly thereafter, Sears, perhaps fearing that it was no longer too big to be a target, proposed a similar move.<sup>17</sup> These deals suggest that somehow the payout of large sums of cash can counteract a market-price discount.<sup>18</sup> However, the premise that dividends are dis-

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15. See, e.g., Prentice, *Front-End Loaded, Two-Tiered Tender Offers: An Examination of the Counterproductive Effects of a Mighty Offensive Weapon*, 39 CASE W. RES. L. REV. 389, 422 (1989) (discussing Newmont Mining Corporation's use of a one-time dividend as part of a strategy to fend off a takeover bid T. Boone Pickens orchestrated for a company called Gold Field).

16. Wall St. J., Oct. 24, 1988, at A3, col. 1 (\$9.8 billion debt increase to finance dividend to shareholders, consisting of \$84 in cash and \$14 in junk bonds, to defend against Philip Morris tender offer).

17. See Wall St. J., Nov. 1, 1988, at A3, col. 1 (sale of Sears Tower to finance repurchase of 10% of stock to boost earnings and stock prices).

18. See Kraakman, *supra* note 4, at 914-20 (arguing that discounts arising under the misinvestment hypothesis or the market hypothesis are eliminated by disbursements to shareholders).

count-motivated runs counter to the belief held by financial economists that dividends are, or should be, irrelevant to shareholders.

### A. *The Irrelevance Proposition*

Although the conventional wisdom among market professionals is that dividends are important to shareholders,<sup>19</sup> in a landmark 1961 article Professors Miller and Modigliani demonstrated (at least to the satisfaction of most academics) that a company's dividend policy should be irrelevant to the company's value and therefore a matter of indifference to its shareholders.<sup>20</sup> They essentially argued that if a company can reinvest free cash at a return equal to the company's current return, then the shareholders should be indifferent to whether the company pays a dividend or reinvests the available cash.

For example, assume the company generates \$100 in cash per year that it ordinarily pays out as a dividend. Assume further that a 10% capitalization rate is appropriate, making the company worth \$1,000.<sup>21</sup> Now suppose the company discovers an investment opportunity that would require an investment of \$100 and would generate a perpetual 10% return, the same return it is currently generating on \$1,000. If the company pays the dividend, the shareholders would have \$100 in cash plus the old business worth \$1,000. If the company keeps the cash and makes the investment, the shareholders now have stock worth \$1100. Either way, the shareholders are equally well off.

Moreover, the decision to pay or reinvest is completely independent of whether the company undertakes the project or disburses cash to shareholders. If the company retains the cash, the shareholder who wants a dividend can sell some stock.<sup>22</sup> Suppose in the given example

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19. See, e.g., V. BRUDNEY & M. CHIRELSTEIN, *CASES AND MATERIALS ON CORPORATE FINANCE* 528-33 (3d ed. 1987) (plan to replace cash dividend with stock dividend withdrawn after complaints by trusts, banks, and securities firms).

20. Miller & Modigliani, *Dividend Policy, Growth, and the Valuation of Shares*, 34 J. BUS. 411 (1961).

21. The value of a going concern is generally calculated by dividing the income of the firm by an interest rate, often called the capitalization rate, which is equal to the rate of return that would be required by investors given the riskiness of the enterprise. For an explanation of valuation, see W. KLEIN & J. COFFEE, *BUSINESS ORGANIZATION AND FINANCE* 241-62 (2d ed. 1986); J. LORIE, P. DODD & M. KIMPTON, *supra* note 3, at 88-95.

22. Needless to say, a shareholder will only be able to sell some shares if the company is publicly traded. Moreover, by selling a few shares the shareholder will dilute whatever controlling interest she has in the company. Thus, the irrelevance proposition has little application for closely-held corporations. Indeed, much of the recent evolution in the law regarding closely-held corporations is based on the recognition that a shareholder in such an enterprise has no access to financial return if the company does not make distributions. See, e.g., *Wilkes v. Springside Nursing Home, Inc.*, 370 Mass. 842, 849-50, 353 N.E.2d 657, 662-63 (1976) (noting that since there is no ready market for minority stock in a close corporation, terminating a minority stockholder's employment effectively denies an equal return on investment).

there was only one shareholder. She could sell \$100 worth of stock to raise the cash and still keep stock worth \$1,000. If on the other hand the company paid the dividend, it could still undertake the investment by issuing another \$100 worth of stock. Within this model, therefore, dividends are irrelevant.<sup>23</sup>

It is important to note that the irrelevance proposition is not a theory founded on the unrealistic assumption that there are no transaction costs. Rather the transaction costs involved appear roughly to balance regardless of whether the company chooses to pay dividends. If the company pays dividends and issues more stock to fund its investment opportunity, it must pay an investment banker to do so. If the company retains its cash and the shareholder sells some shares to obtain a cash return, the shareholder must pay brokerage commissions. Either way, there are significant expenses.<sup>24</sup>

The irrelevance proposition is at odds with the idea that a large dividend can be used to defend against a takeover. Target management hopes that payment of a dividend will be more attractive to the shareholder than a takeover premium. Yet the irrelevance proposition tells us that shareholders do not care about dividends. Thus, it seems to imply that financial restructuring cannot work to fend off a bidder. But sometimes it does. A question therefore naturally arises: what is wrong with the seemingly unassailable logic of the irrelevance proposition?

### B. *Standard Responses to the Irrelevance Proposition*

The irrelevance proposition has generated considerable controversy, and numerous theories have been advanced to disprove it.<sup>25</sup>

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23. For other similar characterizations of the irrelevance proposition, see V. BRUDNEY & M. CHIRELSTEIN, *supra* note 19, at 488-92; W. KLEIN & J. COFFEE, *supra* note 21, at 303-06 (arguing that the total value of a firm is determined by investment policy, not dividend policy); Brudney, *Dividends, Discretion, and Disclosure*, 66 VA. L. REV. 85, 86-87 (1980) (suggesting that dividend policy is simply the residual of investment policy and, as such, irrelevant to share prices); Fischel, *The Law and Economics of Dividend Policy*, 67 VA. L. REV. 699, 701 (1981) ("Because a firm's dividend policy . . . is simply a decision as to how the firm's real value should [sic] be packaged for distribution, it should have no effect on share prices.").

24. See Fischel, *supra* note 23, at 704 (arguing that in the aggregate, transaction costs will not cause shareholders consistently to prefer either dividends or retention).

25. See, e.g., Brudney, *supra* note 23, at 85-97 (discussing the irrelevance proposition in light of opposing theories and empirical evidence, and concluding that shareholders are not indifferent to dividends); Fischel, *supra* note 23, at 701-09 (addressing the irrelevance proposition and various theories that have been advanced in opposition, but concluding that, apart from the effect suggested by the signaling hypothesis, dividend policy has no impact on stock prices and therefore shareholders should be indifferent to dividends).

### 1. *The Bird-in-the-Hand Theory*

It has been suggested that shareholders prefer dividends over retention of funds by a corporation because dividends are a "bird-in-the-hand." The idea is that it is safer to take a cash dividend than to leave funds invested in the company.<sup>26</sup> The fatal flaw in this reasoning, however, is that risk has already been factored into the equation.

Consider the choice between a \$1,000 investment in a common stock paying a \$100 annual dividend over time versus \$1,000 deposited in a guaranteed savings account paying \$100 annually in interest. Over the last five years the stock has paid \$100, \$80, \$100, \$120, and \$100 in dividends. Clearly the savings account is preferable because even though the \$100 dividend is the very best estimate of what the stock will pay there is some chance it will pay less, although on average it will not pay more. The rational, risk-averse investor would always choose the savings account. As a result, the stock could not be sold for \$1000, but would be discounted in the market to make up for its relative unpredictability. Risk is thus built into the value of an investment and the argument that dividends are a bird-in-the-hand is, in the end, nothing more than sleight of hand. It amounts to a denial that the investment in the corporation is really worth as much as it is worth.<sup>27</sup>

### 2. *The Clientele Effect*

A second and somewhat more persuasive argument for shareholder preference for dividends is that investors are attracted to particular stocks on the basis of personal payout preferences, including the income, growth, or tax status of payouts. This is known as the clientele effect.<sup>28</sup> It stands to reason that, other things being equal, a high-tax-bracket investor may prefer to invest in companies that retain their cash, allowing the payment of tax to be postponed until sale of the appreciated stock. Conversely, a low-tax-bracket investor may prefer the cash dividend. Although the taxation of dividends is commonly used to illustrate the clientele effect, it is not the only factor that may attract a particular

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26. See Fischel, *supra* note 23, at 702-03.

27. See *id.* at 703-04 (contending that the bird-in-the-hand theory is erroneous because shareholders who actually preferred a bird-in-the-hand dividend to the corporation's investments in terms of risk would reduce their investment in the firm by selling part or all of their holdings). For a discussion of the definition of investment risk, see W. KLEIN & J. COFFEE, *supra* note 21, at 190-98. On the measurement of risk, see J. LORIE, P. DODD & M. KLIMPTON, *supra* note 3, at 108-31.

28. See Fischel, *supra* note 23, at 704-06. Several empirical studies purport to support the clientele effect, although the evidence is in conflict. *Id.* at 706-08. The problem with these and all empirical studies is that if the phenomenon in question exists, it may be impossible to pick it out of the background. That is, the clientele effect could be so overwhelmingly strong (and the market so efficient) that deviations from it virtually never occur and when they do, they are so well anticipated that the eventual announcement of the dividend range is anticlimactic.

investor to a particular stock. Investors may prefer cash or growth simply because they do or do not depend on their stocks for current income. Even a casual look at the financial press reveals that investments are promoted to investors on the basis of such characteristics.<sup>29</sup>

The clientele effect is based on the assumption that investors with similar preferences are attracted to similar types of stocks. Management thus becomes implicitly bound to satisfy the investors it has attracted in an effort to prevent them from selling their holdings and driving down the price of the stock. This theory has intuitive appeal. However, it is difficult to believe that shareholders of a dividend-paying company would prefer to have the company forgo an attractive investment opportunity so as to pay a current dividend.

For example, imagine a shareholder with 10,000 shares of stock in some company. The current market price is \$10 per share and the company pays a \$1 per share annual dividend. If the company omits the dividend to finance a new project, the shareholder must sell 1,000 shares to generate the equivalent of a dividend. The commission on the sale at 0.5% will be \$50. In order for the shareholder to break even, the company's new project need only be worth \$1,050 for each \$1,000 invested. Assuming the company's existing operations generate the same 10% return as is paid out in dividends, the new project need only yield 10.5% in order to keep the shareholders happy. Thus, with current brokerage commissions of as little as 0.5%, there is little reason for a shareholder to object to a company's withholding of dividends.

Furthermore, if the shareholders have invested in a portfolio of stocks, as is the rational thing to do, it may not even be necessary to sell a few shares to replace a missing dividend. In all likelihood there will be some companies paying higher dividends than expected to balance out those paying lower dividends. However, no such cushioning effect will protect a dividend-paying company that must issue new shares to raise needed capital. That is, the underwriting fees that must be paid to issue stock are an absolute loss to shareholder wealth. Thus, other things being equal, it is preferable to use internal funds for new investment, and the clientele effect, if it exists at all, must be weak indeed.

### 3. *The Signaling Hypothesis*

A third argument against the irrelevance proposition is that dividends convey otherwise unobtainable information to shareholders about a company's prospects.<sup>30</sup> The notion is that other forms of information

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29. For example, the Wall Street Journal reports Lipper Indexes daily for growth funds, growth and income funds, equity income funds, balanced funds, gold funds, science and technology funds, and international funds. See, e.g., Wall St. J., Apr. 15, 1991, at C18, col. 3.

30. See Brudney, *supra* note 23, at 108-14 (citing the potential for sending misleading signals

about a firm's prospects are less reliable than changes in dividend policy. To be sure, both financial accounting and the prosaic projections of management are subject to a good deal of manipulation, and management can be expected to make things look as good as possible. But dividends, and in particular *changes* in dividends, require a company to put its money where its mouth is.<sup>31</sup> Any company can claim financial health, but a company that is really doing better ought to be able to extract more cash and pay it out.<sup>32</sup> By the same token, a reduction in dividends, that is, a failure to keep up the announced payout pace, is an undeniable signal that things may be taking a turn for the worse. Indeed, Miller and Modigliani themselves acknowledged the possibility that the message implicit in dividend changes may cause a reaction in the stock market.<sup>33</sup>

The signaling hypothesis has turned out to be consistent with empirical data.<sup>34</sup> Changes in dividend policy do indeed affect stock prices. That does not necessarily mean, however, that the information content of dividends triggers price changes. The more likely explanation is the simpler one, that shareholders prefer bigger dividends. But that, of course, directly contradicts the irrelevance proposition itself.<sup>35</sup>

Empirical studies aside, the signaling hypothesis is open to serious

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through dividend policy); Fischel, *supra* note 23, at 708-09 (arguing that changes in dividend policy can send signals to investors about the firm's prospects, thereby affecting share prices).

31. Although the irrelevance proposition speaks to the issue of the existence of a general shareholder preference for dividends, the key issue is how shareholders react to *changes* in dividend policy. Presumably no one would fault a company that has successfully reinvested its funds at returns in excess of the dividend rate it could have paid. Similarly, no one would disagree that a company that has no use for its funds as attractive as its current operations should pay maximum dividends. See *infra* text accompanying note 64. The only true issue then is whether shareholders prefer dividends or growth in companies that face growth opportunities exactly equal to their current rate of return. The question is this: how would the shareholders react to a *new* policy of withholding dividends in favor of new investment, or vice versa?

32. In addition, a company that plans new investment while maintaining dividend payments generally must issue new stock or debt, resulting in close scrutiny of the company's financial condition through the rigorous registration process or the in-house review conducted by commercial lenders. See T. COPELAND & J. WESTON, *FINANCIAL THEORY AND CORPORATE POLICY* 496 (2d ed. 1983). For a discussion of the theory that shareholders prefer stable dividends so as to require a complete accounting for any new investment through the registration process, see *infra* text accompanying notes 43-46.

33. See Miller & Modigliani, *supra* note 20, at 418-19 (cautioning that uncritical application of the "stream of dividends" approach to stock valuation leads to the unwarranted inference that a firm's dividend policy will affect the current price of shares); see also Norris, *Market Place: On Dividends, Some Fresh Hope*, Wall St. J., Jul. 2, 1991, at D8, col. 2 (discussing the reluctance of corporate boards to change dividend structure because of the potentially negative impact on the price of stock if dividends must ultimately be adjusted downward); Hilder, *Manufacturers Hanover Hints It May Cut Dividend*, Wall St. J., Oct. 26, 1990, at C8, col. 5 (describing substantial decline in price of Manufacturers Hanover stock resulting from announcement).

34. See Fischel, *supra* note 23, at 709 (describing the results of several studies testing the signaling hypothesis).

35. Although the irrelevance proposition has never been proven empirically, several studies have failed to find any shareholder preference for dividends. See *id.* at 706-07.

question. First, it is unclear how manipulable earnings really are. Although the precise net income figure ultimately announced by a company and its accountants is subject to a wide variety of discretionary choices largely within management control, typically there is enough raw information available for an analyst to refigure the bottom line based on an alternative accounting method regarded by the analyst as more appropriate.<sup>36</sup> Indeed, studies indicate that accounting methods have little or no effect on the market price of a company's stock.<sup>37</sup>

Second, dividends themselves are subject to a good deal of manipulation. Legally, a corporation may pay dividends in most states as long as its balance sheet shows an excess of assets over liabilities and stated capital plus capital surplus. That is, a company may ordinarily pay dividends as long as it shows retained earnings or other surplus and as long as the dividend payment does not render the company unable to pay its bills as they become due.<sup>38</sup> Thus, for example, a company with a long history of profitability may be able to increase its dividend payout even though its business has not changed or is on the downturn.<sup>39</sup>

Third, it is unclear what information a dividend conveys. If with-

36. See generally J. LORIE, P. DODD & M. KIMPTON, *supra* note 3, at 96-107 (discussing the divergence between economic and accounting conceptions of earnings); S. SIEGEL & D. SIEGEL, *ACCOUNTING AND FINANCIAL DISCLOSURE: A GUIDE TO BASIC CONCEPTS* 105-17 (1983) (describing the most commonly used analytical tools for evaluating the financial condition of a firm).

37. See P. GRIFFIN, *USEFULNESS TO INVESTORS AND CREDITORS OF INFORMATION PROVIDED BY FINANCIAL REPORTING* 176-81 (Fin. Accounting Standards Bd. 2d ed. 1987) (reporting that studies on the price effects of accounting-method changes fail to show a definite correlation); J. LORIE, P. DODD & M. KIMPTON, *supra* note 3, at 96-107; cf. Nathan, *Do Firms Pay to Pool?: Some Empirical Evidence*, 7 J. ACCT. & PUB. POL'Y 185 (1988) (arguing that the rule restricting the accounting method for assets of a target company has no effect on the stock price of the target company).

There is nothing at all mysterious about the market's ability to see through accounting conventions and changes in them. For example, the Financial Accounting Standards Board recently proposed that greenmail payments in excess of the fair value of the stock repurchased, if paid in compensation for other rights such as the abandonment of acquisition plans, must be regarded as a current expense rather than simply a retirement of stock. See *FASB Issues Final Technical Bulletin on Accounting for Greenmail Purchases*, 18 Sec. Reg. & L. Rep. (BNA) No. 2, at 55 (Jan. 10, 1986). Under the rule, any such payment has the effect of reducing current earnings. There is absolutely no reason, however, to think that the accounting treatment of greenmail affects the perception of market analysts as to the impact that the transaction may have on the financial health of the company. Nevertheless, the popular press as well as academic commentators and the courts continue to focus on "earnings" as perhaps the primary determinant of stock prices without recognizing that, as a measure of a firm's performance, it is at best an approximation that ought to be approached critically whenever there appears to be a potential for manipulation of the bottom line. See, e.g., *Smith v. Van Gorkom*, 488 A.2d 858 (Del. 1985) (in light of the possibility that the market's focus on earnings may have ignored the greater cash-flow value of the target company, the target's directors were liable for failing to evaluate and test adequacy of market-based offering price); *Kamin v. American Express Co.*, 86 Misc. 2d 809, 383 N.Y.S.2d 807 (N.Y. Sup. Ct.), *aff'd*, 54 A.D.2d 654, 387 N.Y.S.2d 993 (1976) (finding directors not liable for forgoing opportunity to reduce tax liability in order to present higher corporate earnings figures).

38. See, e.g., REVISED MODEL BUSINESS CORP. ACT § 6.40(c) (1984).

39. See *infra* text accompanying notes 186-92; see also Turner, *Disney Increases Dividend*,



holding dividends is a cheaper way to raise capital than a new issue of stock, as is widely thought,<sup>40</sup> then, far from indicating that the company's prospects are good, the dividend may simply mean the company cannot find a good use for its money.<sup>41</sup> In other words, while a dividend might intuitively seem to signal good news, it might, in fact, signal bad news.

Fourth, a company whose prospects are good and whose profits are growing cannot always pay a dividend and remain solvent without selling more stock. Because earnings are accounted for by the accrual method whereas dividends are paid in cash, a growing company may need its cash, for example, to pay for the increased inventory that has been ordered to replace the sold inventory that generated the profit on which the dividend was based.<sup>42</sup> Thus, dividends are not only manipulable by a company with a profitable past; they are often unwise for a company with a profitable future.

Finally, consider the theory that stockholders prefer dividends because they like to see companies run the gauntlet of registration when making new investments.<sup>43</sup> The theory is based on the assumption that the quality of disclosure is better for new issues than it is for routine reporting about existing operations. Although that theory once may have been true, it is unclear that it now is. The legal penalties for misstatements continue to be most severe in connection with a new issue.<sup>44</sup> However, companies that are already publicly traded, and hence widely followed in the market, are now free to sell additional stock with minimal new disclosures beyond normal periodic reports.<sup>45</sup> These reforms in the

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*Warns Growth Could Slow*, Wall St. J., Mar. 20, 1991, at B3, col. 3 (reporting increase in dividends coupled with a prediction that earnings would be disappointing).

40. See *infra* note 49 and accompanying text.

41. See Holusha, *Are We Eating Our Seed Corn?*, N.Y. Times, May 13, 1990, § 3 (Business), at 1 (arguing that companies that buy back their own stock lack long-term thinking and competitiveness because there are more productive things to do with the money, such as investing it in research and development of new technology).

42. See S. SIEGEL & D. SIEGEL, *supra* note 36, at 118-19 ("Despite substantial net income, a company with continued negative cash flow may face bankruptcy, since it may be incapable of paying its creditors on time.").

43. See *supra* note 32.

44. See, e.g., Securities Act of 1933, 15 U.S.C. § 77k(a) (1988) (requiring a higher burden of proof when the securities were acquired after the issuer has made "generally available to its security holders an earning statement covering a period of at least twelve months beginning after the effective date of the registration statement").

45. Some companies that are required to file periodic reports may use the more abbreviated registration Forms S-2 and S-3 when issuing new stock. See Securities Act Form S-2, General Instructions, reprinted in 2 Fed. Sec. L. Rep. (CCH) ¶ 7142, at 6231-32 (1990); Securities Act Form S-3, General Instructions, reprinted in 2 Fed. Sec. L. Rep. (CCH) ¶ 7152, at 6251-52 (1990). Under these forms, companies may incorporate (by reference) the information in their annual and quarterly reports. Securities Act Form S-2, Item 12, reprinted in 2 Fed. Sec. L. Rep. (CCH) ¶ 7143, at 6234-35; Securities Act Form S-3, Item 12, reprinted in 2 Fed. Sec. L. Rep. (CCH) ¶ 7153, at 6255. All

registration system affect the largest public companies<sup>46</sup> that, because they are most distant from their investors, are presumably the same companies to which the signaling hypothesis is said to apply. In short, for larger companies the kind of disclosure required in connection with a new issue of stock varies little from the kind of disclosure that is already required on a routine basis.

### C. *The Downward-Sloping Demand Hypothesis*

None of the foregoing arguments against the irrelevance proposition is persuasive. Yet the irrelevance proposition still seems paradoxical. First, the irrelevance proposition is at odds with the idea that it is cheaper to raise new capital internally than it is to sell new stock. Common sense suggests that for the company to attract new investors, it must offer its stock at a somewhat lower price than the prevailing market price. After all, if the old business had been attractive enough for new investors they already would have bought in.

Second, the irrelevance proposition is at odds with the idea that dividends are the only way a shareholder can participate financially in a company short of liquidation.<sup>47</sup> To be sure, one may be able to sell one's shares at a gain, but the only reason that other investors are willing to buy is that shares carry the right to dividends.<sup>48</sup> This suggests that one of the crucial assumptions underlying the irrelevance proposition may be false, namely that a shareholder can always sell a few shares to generate a

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that must be set forth expressly in the registration statement is a description of the securities offered and uses to which the proceeds will be put. See Securities Act Form S-2, Items 4, 9, *reprinted in* 2 Fed. Sec. L. Rep. (CCH) ¶ 7143, at 6232-33 (1990); Form S-3, Items 4, 9, *reprinted in* 2 Fed. Sec. L. Rep. (CCH) ¶ 7153, at 6254 (1989).

Furthermore, stock may be sold for up to two years, virtually eliminating any particularized disclosure as to use of proceeds in connection with the new stock. See 17 C.F.R. § 230.415 (1990) (requirements for registering securities for a delayed offering). See generally Banoff, *Regulatory Subsidies, Efficient Markets, and Shelf Registration: An Analysis of Rule 415*, 70 VA. L. REV. 135 (1984) (presenting arguments for and against Rule 415, and concluding that the Rule serves the public interest); Fox, *Shelf Registration, Integrated Disclosure, and Underwriter Due Diligence: An Economic Analysis*, 70 VA. L. REV. 1005 (1984) (responding to Banoff, and arguing that Rule 415 diminishes the quality of information available to the public and the benefits accruing therefrom); Note, *Auctioning New Issues of Corporate Securities*, 71 VA. L. REV. 1381, 1392-96 (1985) (analyzing the potential legal impact of Rule 415 disclosure requirements on securities auctions).

46. For example, Rule 415 allows for the shelf registration of common stock by companies that are eligible to use Form S-3. 17 C.F.R. § 230.415(a)(1)(x) (1990). Those companies must have been registered with the SEC for purposes of continuous reporting for three years, and have 150 million dollars in aggregate market value of common stock outstanding (or 100 million dollars with annual trading volume of three million shares or more). Securities Act Form S-3, General Instructions, *supra* note 45.

47. See W. KLEIN & J. COFFEE, *supra* note 21, at 252-53.

48. See *id.* (arguing that the value of a share of common stock is most often determined solely by the amount of the expected stream of dividend payments: "In the absence of an expectation of growth in dividends there would be no reason for succeeding purchasers to bid up the price of the stock.").

cash return equal to the withheld dividend. If a significant number of shareholders do in fact sell in order to gain current income, then the market price may be forced downward and later-selling shareholders may not be able to generate a dollar-for-dollar cash return by selling their shares. This result may be particularly likely where the sales are perceived to have been in reaction to an omitted dividend.

Both of these anomalies suggest that stocks, like other commodities, have downward-sloping demand curves. Simply put, in order to induce the next person to buy something, it must be offered at a slightly lower price. The idea that new stock could be sold to new investors without some added incentive assumes, in effect, that there are no differences in investor opinions, and that there is an unlimited supply of substitute investors to replace those who sell to generate a cash return.

### 1. *Why Internal Capital Is Cheaper*

Recent research demonstrates that a new issue of stock does indeed result in a decrease in market price.<sup>49</sup> Arguably the sale of additional stock to the public indicates that management believes the existing stock is overvalued, and that the price depression results from the information content of the offering.<sup>50</sup> These factors are consistent with the downward-sloping demand hypothesis. That is, one would expect the price of any commodity to fall a bit as new supply is added.

Other studies indicate that secondary offerings in the form of block sales by large shareholders cause a significant price depression.<sup>51</sup> The wisdom on the street had been that such sales create price pressure because buyers demand an incentive or sweetener. Because the value of

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49. See Asquith & Mullins, *Equity Issues and Offering Dilution*, 15 J. FIN. ECON. 61, 61-66 (1986) (study of announcement-day and issue-day price effects of primary and secondary issues of equity, demonstrating that equity issues reduce stock prices); Masulis & Korwar, *Seasoned Equity Offerings: An Empirical Investigation*, 15 J. FIN. ECON. 91, 91-94 (1986) (study demonstrating a significant negative price change associated with the announcement of equity offerings); Mikkelsen & Partch, *Valuation Effects of Security Offerings and the Issuance Process*, 15 J. FIN. ECON. 31, 31-34 (1986) (study finding statistically significant negative valuation effect at the announcement of common stock and convertible debt offerings).

The idea that inside money is cheaper than outside money is usually based on the simple observation that raising external capital involves flotation costs. See J. WESTON & E. BRIGHAM, *MANAGERIAL FINANCE* 602-03 (5th ed. 1975). These flotation costs are roughly accounted for under the irrelevance proposition, since investors who prefer dividends must pay broker's commissions. On the other hand, a shareholder who wants to maintain his or her relative stake in a dividend-paying company that chooses to issue new stock must bear the expense of brokerage commissions, in addition to the indirect expense of the flotation expenses incurred by the company.

50. This is analogous to the idea that repurchases of stock indicate that management believes the stock to be undervalued.

51. See Dann, Mayers & Raab, *Trading Rules, Large Blocks and the Speed of Price Adjustment*, 4 J. FIN. ECON. 3 (1977); Kraus & Stoll, *Price Impacts of Block Trading on the New York Stock Exchange*, 27 J. FIN. 569, 570-71 (1972); Scholes, *The Market for Securities: Substitution Versus Price Pressure and the Effects of Information on Share Prices*, 45 J. BUS. 179, 180-81 (1972).

the company was presumably the same before and after the block sale, the lore was that the stock would soon rebound, and that a trader could make a profit by buying immediately after such a sale, holding for a few hours or days, and then reselling.<sup>52</sup> Instead it turns out that secondary sales lead to a permanent depression in price.<sup>53</sup> An alternative explanation is that the sale signals a downturn in the fortunes of the company, which the market immediately impounds. Indeed, the studies indicate that the price effect differs depending on whether the block seller was an insider or a large institution, as opposed to a trust or estate, because the former are more likely to have information about the company's prospects.<sup>54</sup> Nevertheless, while the identity of the seller does make some difference, a permanent price depression results no matter who the seller is.<sup>55</sup> A block sale, therefore, in addition to having a signalling effect, creates price pressure consistent with the downward-sloping demand hypothesis.<sup>56</sup>

The argument against paying dividends when there is a need for capital thus appears quite strong considering that one of the crucial assumptions underlying the irrelevance proposition—that new stock can be sold at the old price to raise the necessary cash—appears open to serious question.<sup>57</sup> If internal capital is indeed cheaper, then existing share-

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52. See J. LORIE, P. DODD & M. KIMPTON, *supra* note 21, at 68-70.

53. See Kraus & Stoll, *supra* note 51, at 570-71 (block sales result in a change in the expected rate of return and a permanent decrease in the equilibrium price).

54. Scholes, *supra* note 51.

55. See Dann, Mayers & Rabb, *supra* note 51.

56. The recently proposed rights offering by Time Warner provides a striking example of the effect that a new issue of stock may have on the price of stock outstanding. In June, the company proposed an offering of rights to purchase new stock to its existing shareholders. The price at which the stock could be purchased was dependent on the number of rights exercised: the more rights exercised, the higher the exercise price. The market price of Time Warner stock declined 20% in the week following announcement of the plan. Kneale & Dorfman, *Time Warner Vows to Pursue Offering Despite 20% Stock-Price Drop in Week*, Wall St. J., June 10, 1991, at B5, col. 2. Some investors argued that the offering was designed to coerce them into buying shares in order to maintain their relative stake in the company. See Landro & Anders, *Time Warner's Rights-Offering Plan Greeted by 10% Plunge in Stock Price*, Wall St. J., June 7, 1991, at A3, col. 2. The simpler explanation is that the offering threatened to increase the supply of stock, and thus to depress its price. Moreover, the offering required existing shareholders, who had already determined how much Time Warner stock they desired to hold, to buy more or see it sold to others at bargain prices. If the level-demand hypothesis were correct, the offering should have had no effect on stock prices, other than perhaps as a result of upsetting the diversification of portfolios that contained Time Warner stock. In the end, the offering was substantially revised. See Smith, *Managers of Time Warner Revised Offer May Reap Higher Fees by Buying Rights*, Wall St. J., July 22, 1991, at B4, col. 5; Landro & Smith, *After Stock Debacle Some Ask: Will Hubris Undo Time Warner?*, Wall St. J., July 19, 1991, at A1, col. 6; Smith & Landro, *Time's Decision to Revise Offer Boosts Its Odds*, Wall St. J., July 15, 1991, at A3, col. 1; Smith, *SEC Said to Object to Price Mechanism in Time Warner Stock-Rights Offering*, Wall St. J., July 11, 1991, at A2, col. 5; Landro & Smith, *Time Warner Mulls Revising Rights Offering*, Wall St. J., July 10, 1991, at A4, col. 3.

57. Moreover, the lower price at which new stock must be sold harms all existing shareholders, including those who decline to sell. For example, if a company has 100 shares outstanding that are

holders should prefer its use to new issues of stock. Yet the irrelevance proposition is founded in part on the idea that paying dividends will not preclude the company from undertaking new projects at least as attractive as current operations. Clearly, if outside capital is more expensive than inside capital, the dividend and investment decisions are not wholly independent.

## 2. *Why Investors Often Prefer Dividends*

If, in fact, internal funds are a cheaper source of capital, shareholders should be distinctly *averse* to dividends, at least when the company is in need of capital.<sup>58</sup> In other words, the idea that internal funds are cheaper than external funds offers no explanation for why shareholders would ever prefer dividends. But if there is no reason to believe that investors do sometimes prefer dividends, then there is no reason to think, for example, that a company's borrowing to make a hefty distribution will have any defensive effect in the face of a hostile bid.

This suggests that there may be another unrealistic assumption behind the irrelevance proposition, namely that management can communicate adequately with shareholders about the plans it has for any cash retained. Indeed, this assumption is quite explicit. Miller and Modigliani themselves indicated that the irrelevance proposition holds only if the firm's investment policies are known to the shareholders.<sup>59</sup>

Adequately publicizing a company's plans for the future is not a simple matter. Because predictions for the company's future are often self-serving, realistically the most reliable information a shareholder has about the future is the company's past. This is true whether the company has a history of paying maximum dividends, or a record of successful reinvestment and growth. Thus, when a company announces a change in dividend policy, shareholders are naturally skeptical.

However, there is more than mere skepticism at work here. First, it is fairly well established that the stock market is efficient, at least in the sense that it is impossible for any shareholder to beat the market consistently without inside information.<sup>60</sup> Second, rational shareholders diversify. By buying a portfolio of stocks, an investor avoids the risks

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trading for \$10 per share and new shares can be sold to new shareholders at only \$9 per share, and if the company chooses to pay a dividend of \$100 and sell \$100 worth of new stock, a shareholder owning a single share of the original issue would find that the \$11 in value (the original \$10 plus a capital gain of \$1) is now only worth \$9 plus a \$1 dividend, or \$10 altogether.

58. See Brudney, *supra* note 23, at 91-92 & n.18 (noting the differences between transaction costs incurred by the corporation to issue more stock, and those incurred by investors who receive dividend payments).

59. Miller & Modigliani, *supra* note 20, at 414.

60. See J. LORIE, P. DODD & M. KIMPTON, *supra* note 3, at 55-79 (discussing the efficient-market hypothesis).

attending the business of individual companies without sacrificing any return.<sup>61</sup> The clear implication for the investor is that time and money should not be wasted on attempts to pick individual stocks. Rather, the investor should determine the level of risk and return desired, and construct a portfolio accordingly. This reasoning applies whether the investor is making a new purchase of stock or considering a sale of stock. Thus, a rational shareholder is not likely to pay much attention to management's claims that it is undertaking a new and attractive investment program. Such claims, after all, are tantamount to predictions that the company's stock will do better than the market.<sup>62</sup> But there is no reason to believe that management is any better at predicting the effect of a given disclosure on the stock market than anyone else, even when the prediction involves its own operations.<sup>63</sup>

There is, however, a still more powerful reason why dividend omissions for new investment are more likely to be viewed negatively by shareholders. Professors Klein and Coffee have put it most succinctly:

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61. See *id.* at 108-31 (discussing the theory of portfolio management).

62. Of course, whatever management says about the company becomes part of the information that the market digests, and thus will have an effect on the efficient market price, presumably because investors *do* pay attention. See Gilson & Kraakman, *supra* note 7, at 622-23 (noting that according to the "efficiency paradox" there is no incentive to gather information when the market is perfectly efficient since it can never be beaten, and yet when information-gathering stops, the market becomes inefficient). This paradox can be resolved quite simply for present purposes by recognizing that the market may well react to some of the harder facts management discloses, while ignoring those that are merely predictive.

63. The situation is somewhat different, of course, if the new investment is for the expansion of existing business. In that case, market efficiency would argue that the best guess as to the value of the new business is the value of the current business, although the law of diminishing returns might suggest some discount from previous levels of return. Nevertheless, management's naked claims that its business will improve are unlikely to be believed.

The omission of a dividend, on the other hand, may affect the market. First, if the company is a poor discloser, the dividend omission may indicate lower returns than previously expected by investors. Second, the omission may increase risk in and of itself: skipping a payout means that cash returns to shareholders have become more erratic, which is the very essence of increased risk. See W. KLEIN & J. COFFEE, *supra* note 21, at 190-92. There is, admittedly, some tension between this point and the earlier refutation of the bird-in-the-hand argument. Nevertheless, it seems reasonable that an investor would assess the dividend omission and the new investment program independently. Indeed, the independence of the two is one of the most commonly noted implications of the irrelevance proposition itself. See *id.* at 303-06. Yet the independence of the two decisions also means that the investor may decide that the increased volatility of returns weighs more heavily than future prospects in the overall assessment of the company's value.

The traditional view is that companies that pay generous and stable dividends are more highly valued in the market than companies that do not. In addition to the counterarguments offered by the irrelevance proposition, this view may be questioned because cash dividends create the appearance of volatility. When the dividend record date arrives for a stock, its price naturally falls in the market by the amount of the distribution. One way to avoid this drop may be to pay a stock dividend, which increases the number of shares over which the ultimate right to the accumulated value is spread. Still another means to avoid the drop and to create the appearance of a rising price is to use the accumulated cash to make repurchases. Either of these methods would seem to reduce the danger that price fluctuations owing to cash payments would be misread as volatility.

A firm with substantial earnings is likely to generate spare cash—that is, cash that is not needed to maintain the existing level of investment. Most mature firms have limited opportunities to earn acceptable returns by expansion of their existing business or by entering new businesses and are reluctant to invest in the securities of other firms. When such mature firms retain their spare cash rather than paying it out as dividends, they will therefore be likely to invest that cash in projects with low rates of return. Accordingly, the shareholders will gain from a policy of generous dividend payments. Shareholders are inconvenienced by irregular cash flows and corporate managers can without great difficulty adjust their cash resources so as to pay steady dividends. Thus, dividends should be not only generous but stable.<sup>64</sup>

If anything, Klein and Coffee understate the case. Imagine a company valued in the aggregate at \$1,000 by the stock market. The company makes \$100 per year and pays it all out in dividends. Management discovers a new process that reduces costs dramatically. Annual dividends increase to \$200. Although for a fleeting instant the company's yield has increased to 20%, the market value of the firm will quickly jump to \$2,000 and the yield will fall back to 10%. The same forces will operate quickly to reduce the extraordinary returns from any improvement back to market rates. This means that the company can never enjoy permanently enhanced returns, and any further investment in the business must be judged solely on its own merits. These observations may seem obvious or even trivial, but they have profound implications. The fact that the extraordinary returns of any innovation are quickly dissipated means that competition among managers for opportunities must be keen indeed. Investors are thus quite justified in their skepticism of management claims.

Recent research also bears out the idea that investors are naturally skeptical of management claims. Studies indicate that bad news has a greater effect on market prices than does good news.<sup>65</sup> This is a surpris-

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64. *Id.* at 300. See also Brudney, *supra* note 23, at 95 ("Possibly a mature firm's capacity to expand tends to be limited, so that at the margin new investment will produce a lower return than the existing business." (footnote omitted)).

65. See De Bondt & Thaler, *Does the Stock Market Overreact?*, 40 J. FIN. 793, 799 (1985) (investor overreaction to unexpected and dramatic news "is asymmetric; it is much larger for losers than for winners."); De Bondt & Thaler, *Further Evidence on Investor Overreaction and Stock Market Seasonality*, 42 J. FIN. 557 (1987) (same). There are at least two other possible explanations for why investors might react more strongly to bad news. First, bad news may be inherently more believable than good news because it would seem less likely that bad news has been fabricated. On the other hand, there are any number of reasons to fabricate bad news too. For example, management may wish to buy back the company's shares at lower prices. However, the legal disincentives for misrepresentation are substantial. See Securities Act of 1933, 15 U.S.C. §§ 77k, 77l (1988). Second, the market may react more strongly to bad news because various rules and regulations inhibit the downward movement of prices in normal circumstances. For example, it is illegal to sell a stock short when the most recent change in price was downward. See generally Macey, Mitchell & Netter, *Restrictions on Short Sales: An Analysis of the Uptick Rule and Its Role in*

ing finding. A diversified investor ought to be indifferent to developments at a particular company since bad news at one will be offset by good news at another. That is, a diversified investor ought to be risk-neutral with respect to company-specific risks. Thus, the fact that market prices react *at all* to company-specific news indicates that shareholders do not, in fact, behave as prevailing theory would suggest. On reflection, the idea that investors should not care about company-specific risk is clearly paradoxical. If investors did not care about company-specific events, then stock prices would not move in reaction to them. But the efficient market hypothesis, from which model investor behavior is derived, holds, in part, that all available information is absorbed almost instantaneously into the price of each stock, as well as the market as a whole, by the interaction of competing traders.<sup>66</sup>

The paradox is to some extent illusory, however. The idea that a diversified investor is risk-neutral with respect to company-specific risks is not the same as the idea that the investor ignores such risk altogether. A risk-neutral investor is simply not risk-averse. Such an investor will adjust his or her opinion of the value of a company in proportion to the newly discovered risk or lack of it. Risk-neutrality only means that the investor will not *overreact* to the news.<sup>67</sup>

The fact that market prices react more strongly to negative news

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*View of the October 1987 Stock Market Crash*, 74 CORNELL L. REV. 799 (1989). When the investors responding to negative news are institutional investors, the effect can be rather dramatic. *See, e.g.,* Ingrassia, *Polaroid Falls 22% on Negative News*, Wall St. J., Oct. 16, 1990, at C7, col. 2 (22% drop in price coincided with a lower-than-expected damage award in Polaroid's patent suit against Kodak); Steptoe, *Riskier Ride: OTC Stocks Attract Institutional Investors, Become More Volatile*, Wall St. J., July 26, 1989, at A1, col. 6 (lower-than-expected quarterly earnings of Price Co. resulted in a 14% drop in price, with 57% of the volume in blocks of 10,000 shares or more). Conversely, a company may make strategic use of bad news by intentionally understating its earnings projections. If done properly, a company's stock will rise sharply in response to its announcement of higher-than-predicted earnings. Cohen, *"Low-Balling": How Some Companies Send Stocks Aloft*, Wall St. J., May 6, 1991, at C1, col. 3.

66. The paradox is similar to the one in which an economist who spots a twenty-dollar bill lying on the sidewalk declines to pick it up, on the theory that if it were really there, someone else already would have taken it. For a general discussion of the efficiency paradox, see Gilson & Kraakman, *supra* note 7, at 622-26.

67. Thus, the idea that the rational investor will ignore company-specific news does not follow from the idea that a diversified investor is risk-neutral. Nevertheless, in order to deal with the contradiction implicit in shareholder indifference to company-specific news, it has been suggested that the rational investor will ignore newly discovered company-specific risk as long as the variation from earlier expectation is within an expected range. In other words, the idea is that investors do or should ignore company-specific risk, unless it is significant. But this solution itself destroys the proposition. At the very least, it means that investors must determine whether the addition or subtraction of a particular risk rises to the level of significance required to trigger a reevaluation of the stock in question. Thus, the investor "cares" about risk in some sense of the word, and has spent resources in analyzing it. Moreover, and more to the point, to say that investors care about risks that rise to some level of significance is simply to affirm the idea that investors care about company-specific risk.



than they do to positive news indicates that investors are risk-averse with respect to company-specific risks. The inescapable conclusion is that investors care about company-specific risk. And, although the connection may not be immediately apparent, if investors do care about company-specific risk, then it almost certainly follows that stocks have downward-sloping demand. When investors attempt to assess company-specific risk, they undoubtedly reach different conclusions about how much risk attends an investment in any given company. If investors have heterogeneous opinions about company-specific risk, then those who perceive less risk will be willing to invest at higher share prices than those who perceive more risk. Moreover, the fact that investors appear to be risk-averse with respect to company-specific risk suggests that the divergence of opinion is even greater than might be expected if shareholders were merely risk-neutral.

To sum up the argument thus far, the irrelevance proposition suggests that investors are indifferent to dividends and should be unimpressed by a target company's undertaking to distribute a big dividend as a way of fending off a hostile bid. Yet the several arguments that have traditionally been advanced to disprove the irrelevance proposition are all unconvincing. The downward-sloping demand hypothesis, however, quite neatly explains why shareholders prefer dividends, and thus why a large, one-time distribution of cash may have the effect of discouraging a takeover.<sup>68</sup>

## II

### DISPARATE VALUATION

Although few would deny that most goods have downward-sloping demand, the idea that stocks do too is quite controversial. It is generally argued that a well-diversified investor who follows the dictates of the efficient market theory will be indifferent among various stocks.<sup>69</sup> Such

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68. One other possible reason why shareholders (and managers) may favor dividends is that a stock that pays dividends is much more difficult to sell short because the short-seller must pay the lender the dividend out of her own pocket, and once having sold the stock the borrower gets nothing from the declaring corporation. See *Selling a Stock Short Is a Lot Riskier Than Buying, But the Way It Is Done Can Make It Very Profitable*, Wall St. J., Sept. 5, 1985, at 25, col. 1. Since there is reason to think that short selling may sometimes evolve into downward manipulation of a stock's price, see Rothart, *Market Hardball: Aggressive Methods of Some Short Sellers Stir Critics to Cry Foul*, Wall St. J., Sept. 5, 1985, at 1, col. 6, there is reason to think that managers and shareholders would value dividend-paying stock, which is resistant to short sales.

69. See, e.g., Cohen, *Why Tender Offers? The Efficient Market Hypothesis, the Supply of Stock, and Signaling*, 19 J. LEGAL STUD. 113, 131-32 (1990) (arguing that investors who believe that a company's stock is worth its market price will also believe that "each company's stock is a substitute for many others"); cf. Schwartz, *The Fairness of Tender Offer Prices in Utilitarian Theory*, 17 J. LEGAL STUD. 165, 188-91 (stating that in the absence of a sentimental attachment to a particular stock, a shareholder derives the same benefit from owning a particular stock as owning its cash equivalent). The notion that shareholders are indifferent among various stocks follows quite simply

an investor is a rational price-taker who declines to waste time and effort attempting to pick undervalued stocks to buy, or overvalued stocks to sell. Moreover, since the rational investor diversifies, one stock is a pretty good substitute for any other. Purchases and sales of a particular stock should, therefore, have little if any effect on that stock's price, because there are always other stocks to buy and sell. Further, in the absence of market imperfections, the rational investor should choose to sell for any premium that might be offered.<sup>70</sup> All of this has been taken to mean that the demand curve for stocks is horizontal or that the supply curve is vertical.<sup>71</sup> In other words, a company may issue large amounts of new stock without depressing the stock price, and likewise an offeror may purchase virtually all of a company's stock at a small premium over market without having to increase the offered price to obtain more and more shares. In short, while there is evidence supporting the downward-sloping demand hypothesis, and while virtually every other commodity is thought to have a downward-sloping demand curve, there are some good arguments for the level-demand hypothesis in the context of stock.

Although one might not bother to elaborate in the case of commodities such as pork bellies or soybeans, the idea that stocks have downward-sloping demand requires explanation because the behavior of rational shareholders would seem to result in level demand. There are, in fact, at least two good explanations. The first is that control has value. Shares are more valuable to a shareholder who has control in a company than to one without such control. The second is that, even among non-controlling shareholders, some investors are more fully diversified than

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from the efficient-market hypothesis and portfolio theory. That is, because the market price for a share of stock is the best guess as to its value, and because shareholders can eliminate company-specific risk by investing in a portfolio of shares, it follows that nothing about a particular share of stock should matter much in making an investment decision. In any case, commentators have argued that for such reasons shareholders will likely tender for any premium, and that any effort by management to buy out its shareholders is suspect.

70. Professor Schwartz has argued that shareholders faced with a tender offer or other takeover bid behave much the same as they do in an ordinary market: they become price-takers because they do not know how the other shareholders will react. See Bebchuk, *The Sole Owner Standard for Takeover Policy*, 17 J. LEGAL STUD. 197, 198, 221-26 (1988) (calling for a higher regulatory standard to protect shareholders against such coercion); Schwartz, *supra* note 69, at 179-83 (shareholders may be coerced into selling during a tender offer because they do not know what the other shareholders will do); Schwartz, *The Sole Owner Standard Reviewed*, 17 J. LEGAL STUD. 231, 232-33 (1988) (responding to Bebchuk). Indeed, many shareholders do sell in the open market to arbitrageurs during a bid instead of tendering the shares themselves, thereby avoiding the risk that they may tender too soon or too late, or that the bid may fail. See *Federal Tender Offer Law*, *supra* note 12, at 716 ("arbitrageurs often purchase shares from skittish shareholders during the pendency of a tender offer").

71. For example, Professor Kraakman contrasts "downward sloping demand curves for equity," implied by heterogeneous demand, with "the horizontal demand curves predicted by common forms of the efficient capital markets hypothesis." Kraakman, *supra* note 4, at 899 n.25; see also Gilson & Kraakman, *supra* note 7, at 570 & n.67 (presenting evidence of horizontal demand).

others. Clearly there is no excuse for the failure of a purely passive investor to diversify. However, it is not necessarily irrational to opt for less than complete diversification. There is every reason to believe that, even among purely passive shareholders, opinions about the value of any given company may legitimately differ. Therefore, an investor may decide not to diversify completely, choosing instead to consider some company-specific risks in making investment decisions.

### A. *The Value of Control*

The owner of control is privileged within broad limits to run the company as she sees fit.<sup>72</sup> The controlling shareholder thus faces less risk because there is no chance that management will ever make a disagreeable decision. Other things being equal, less risk means that the same investment is worth more.<sup>73</sup> Moreover, the freedom of a controlling shareholder to make self-serving choices for the company within broad legal limits creates some additional risk for noncontrolling shareholders, inasmuch as policies may turn out to be other than those they might have preferred. In short, a controlling shareholder's shares are by definition worth more than a noncontrolling shareholder's shares. To put it starkly, some level of looting is to be expected and tolerated. No one would buy control of a company unless control was worth something over and above the value of the shares themselves as passive financial claims against the wealth of the company. Yet by definition any such excess value is denied to the remaining shareholders.

To some extent this argument applies to all large shareholders who are in a position to affect the company's policies. Only a large shareholder has any incentive to monitor management.<sup>74</sup> The fewer shares one owns, the less one has to gain by keeping a close watch on management behavior, since most of the benefits of monitoring will be captured by others who own more shares. But even the larger shareholder, who may have a sufficient interest to make monitoring worthwhile, will realize that monitoring efforts inure to the benefit of other shareholders as well, and will seek to capture part of that benefit by whatever favored treatment may be had. And rightfully so—monitors deserve to be paid like any other provider of services.<sup>75</sup> Moreover, even if a monitor does

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72. See, e.g., *Sinclair Oil Corp. v. Levien*, 280 A.2d 717 (Del. 1971) (a parent-subsidary transaction without self-dealing by the parent is evaluated by the lower business judgment standard rather than the higher intrinsic-fairness standard).

73. See generally W. KLEIN & J. COFFEE, *supra* note 21, at 189-98 (discussing expected return, risk, yield, risk premium, risk aversion, and volatility risk).

74. For a general discussion of monitoring by shareholders, see Levmore, *Monitors and Freeriders in Commercial and Corporate Settings*, 92 YALE L.J. 49, 59-75 (1982).

75. See *id.* (describing incentives to monitor and rewards for performance); see also PRINCIPLES OF CORPORATE GOVERNANCE: ANALYSIS AND RECOMMENDATIONS 11-16 (Tent.

not seek to be paid specially, the controlling shareholder will likely make a point of seeking to please any shareholder who is in a position to monitor. Thus, large blocks of stock that carry such perquisites tend to sell for more than smaller blocks.

The idea that control has value is strongly supported by the fact that controlling shareholders tend to be less well diversified than other investors.<sup>76</sup> There are two fundamentally different reasons why investors invest: passive financial return, and financial return in connection with active management. The passive shareholder operating in an efficient market is a rational price-taker who considers it a waste of time and money to try to outguess the market. This is so not only because the market cannot consistently be beaten, but also because a diversified portfolio of investments, selected on the basis of offsetting risks rather than on predictions as to which companies will perform best, minimizes the investor's overall risk.

The logic of diversification does not apply, however, to controlling shareholders, to those seeking control, or even to arbitrageurs who effectively broker the sale of control. The manager-investor is vitally interested in the fortunes of the subject company precisely because she is actively involved in its management. Moreover, the manager-investor often *cannot* diversify. In the first place, one would need to be fabulously wealthy to form a balanced, diversified portfolio, given the large financial investment required for the controlled company alone. Second, and more important, much of a manager's investment is in the form of human capital such as knowledge, skills, contacts, and other intangibles that are not easily transferable. Finally, the manager may have agreed, precisely for the passive shareholders' benefit, to forgo current compensation as a way of bonding performance, thus accumulating a still greater undiversified investment in the form of deferred compensation.

At first blush the inability of manager-investors to diversify suggests that their investments ought to be *less* valuable than those of diversified investors. That clearly cannot be the case, however, or no one would invest in control. Thus, it must be that controlling shareholders tend to value their companies much more highly than do passive investors since

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Draft No. 8, 1988) (discussing derivative suits and reasons for compensating successful plaintiffs); Booth, *The Promise Of State Takeover Statutes*, 86 MICH. L. REV. 1635, 1643 (1988) (noting that shareholders benefit from two-tier tender offers).

76. See Coffee, *supra* note 8, at 16-24 (noting the greater diversification of shareholders as compared to managers).

the value seen in the company must at least compensate the controlling shareholder for the additional risk taken by forgoing diversification.

### B. *The Value of Diversification*

To explain why the demand for stock is downward-sloping, it is not enough to show how opinions about a stock's value may differ between controlling and non-controlling shareholders—although certainly such differences of opinion would account for takeover premiums. Much of the evidence suggesting that stocks have a downward-sloping demand curve involves the way shareholders at the margin react to events such as new issues of stock or bad news. Why do opinions differ among these purely passive investors who have no interest in control? The differing opinions that such investors appear to have about the value of their investments suggest either that such investors are not as well diversified as they should be, or that they behave under some circumstances as if they are less well diversified than they are.

In all likelihood both explanations contain an element of truth. It may be that the market is made up of both modestly diversified investors and completely diversified or "indexed" investors.<sup>77</sup> For most investors, the only way to achieve full diversification is by investing in a mutual fund. But, as one would expect with any valuable product, mutual funds charge for their services. All funds pay advisory fees and brokerage commissions at the fund level that reduce investor return; some charge sales and redemption fees; and some fund advisers charge promotion and distribution expenses to the fund.<sup>78</sup> Thus, for the investor who is in a position to hold a portfolio of, say, thirty stocks, the question becomes whether the marginal reduction in risk that comes with investing in a mutual fund is worth the marginal reduction in return. It is not immedi-

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77. It is unclear how much diversification is enough. Although an investor must hold something between 200 and 300 different issues to eliminate all company-specific risk, a portfolio with as few as 16 to 32 issues will eliminate 90% to 95% of such risk. See J. LORIE, P. DODD & M. KIMPTON, *supra* note 3, at 21-24 (showing the relative dispersion of risk over a range of portfolio sizes); Langbein & Posner, *Market Funds and Trust-Investment Law*, 1976 AM. B. FOUND. RES. J. 1, 11 (portfolio of 32 stocks is 95% correlated with the S&P 500); Bines, *Modern Portfolio Theory and Investment Management Law: Refinement of Legal Doctrine*, 76 COLUM. L. REV. 721, 795 (1976) (portfolio of 50 stocks may still differ from market return by four percent a year); Pozen, *Money Managers and Securities Research*, 51 N.Y.U. L. REV. 923, 951 (1976) (most commentators recommend portfolios of 40 to 50 stocks); see also Note, *Broker Investment Recommendations and the Efficient Capital Market Hypothesis: A Proposed Cautionary Legend*, 29 STAN. L. REV. 1077, 1096-99 (1977) (authored by John M. Salmanowitz) (methods of calculating desirable diversification); Note, *The Efficient Capital Market Hypothesis, Economic Theory and the Regulation of the Securities Industry*, 29 STAN. L. REV. 1031, 1037 n.29 (1977) (authored by Christopher Paul Saari) (describing formulas for calculating risk and return).

78. See Investment Company Act of 1940, 17 C.F.R. § 270.12b-1 (1990) (requiring written plan describing allowable distribution expenditures by investment companies, with shareholder approval needed for material increases).

ately clear that it is.<sup>79</sup> Investors who quite rationally choose to manage their own portfolios are in a very different position from the hypothetical rational and fully diversified investors who are the foil for much current academic work. Unlike the "fully diversified investor," the modestly diversified investor is capable of following the companies in her portfolio. Some stock picking may, therefore, be perfectly justifiable. After all, diversification is a two-way street: a well-diversified investor is largely free to play her hunches without fear that guessing wrong will lead to a major loss. The same is true of the decision to tender or sell in the open market.

Moreover, if modestly diversified investors are more active traders than fully diversified investors, as seems likely, it follows that market prices will more strongly reflect the beliefs of modestly diversified investors. In other words, it may be that market prices are effectively set by modestly diversified and therefore somewhat risk-averse investors. These risk-averse investors are likely to respond more strongly to bad news than to good news. However, existing investors who are moved by bad news to sell must sell to investors who were reluctant to buy at the old price, and who may be even more reluctant after disclosure of the bad news.<sup>80</sup>

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79. A recent study by the SEC indicates that returns from funds whose advisers are allowed to charge promotion and distribution expenses to the fund (12b-1 funds) are as much as two to three percent lower than those which do not make such charges to the fund. Gould, *The 12b-1 Disadvantage*, N.Y. Times, July 15, 1990, § 3 (Money), at 14, col. 1; see also Winslow & Anderson, *A Model for Determining the Excessive Trading Element in Churning Claims*, 68 N.C.L. REV. 327 (1990) (proposing a comparison of the frequency of trading by mutual funds under the assumption that mutual funds experience optimal turnover rates).

Stock brokers are fairly well attuned to the trade-offs between the benefits of added diversification and the additional costs involved. During my involvement in one recent case, the broker told me that he had recommended that his customer open a margin account. By borrowing, the customer would be able to diversify to a much greater extent, the advantages of which would more than offset the interest payable on the margin loan.

Judge Posner argues that full diversification is well worth the cost. See R. POSNER, *supra* note 10, at 405-10. His argument appears to be seriously flawed, however, in that he equates percentage reductions in risk with percentage reductions in return. Thus, the fact that one may still assume, say, 5% of the avoidable risk with a modestly diversified portfolio does not mean that an expected return of 10% will vary between 5% and 15%. Assuming that there is a direct relationship between risk and return, which is far from clear, the expected variation on a portfolio with an expected return of 10% would be plus or minus 0.5%. That is, one would expect to see returns as low as 9.5% and as high as 10.5%. Moreover, diversification depends on more than the number of stocks in one's portfolio. It also depends on the relative market capitalization of the stocks that one picks. A portfolio of 30 stocks made up of very large companies would thus carry far less risk than a 30-stock portfolio made up of very small companies. One need only compare the movements of the Dow Jones Industrials, which consist of a mere 35 stocks, with the S&P 500 to see that there is hardly ever a significant difference between the two.

80. One other reason why investors might hold different opinions about value is taxes. If investors are in different businesses or tax brackets, if they have offsetting losses, or if they have different bases in their stock, they may have different preferences for sale and different reservation prices.

Advocates of the level demand curve support their hypothesis with the observation that shareholders do not react to the divergence between what the market says a company's stock is worth and what its managers say the stock is worth. Citing the efficient market for the proposition that there is one best estimate of the value of a company under incumbent management, commentators of very different leanings have suggested that claims by managers that the company is undervalued (and therefore an appropriate candidate to be taken private in a management buyout) or that the company is really worth more than some suitor is offering (and that therefore a tender offer must be resisted) are unworthy of belief.<sup>81</sup> Professors Easterbrook and Fischel have argued in effect that shareholder demand curves must be flat, or "perfectly elastic," because if shareholders had varying opinions of the value of the same share of stock, those who held higher values would buy from those who held lower values, perhaps even if they had to borrow to do so.<sup>82</sup> It might also be argued that if any investors honestly believe a stock is undervalued, they would be willing to borrow to buy it, and that as a result the price would be driven up to reflect their beliefs.

The value of diversification provides two answers to this argument. First, rational shareholders value diversification and will not sacrifice it under ordinary circumstances. Even if they genuinely believe that a particular stock is undervalued in the market, they will not act on that belief and buy the stock beyond the point that the cost of decreasing diversification exceeds the gain of holding the undervalued stock.<sup>83</sup> Clearly, this is true of the fully diversified investor—indeed it would seem to be true by definition. Furthermore, there is no reason to believe that it is not true with respect to the modestly diversified investor. Again, the choice of the latter to manage his or her own portfolio is not irrational. To the contrary, to forgo a marginal amount of diversification rather than pay for it is a perfectly rational choice. There is no reason to ascribe to such an investor the tendency to engage in irrational stock-picking. It could even

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81. See Carney, *Controlling Management Opportunism in the Market for Corporate Control: An Agency Cost Model*, 1988 WIS. L. REV. 385, 393 & n.26 (arguing that information needed to evaluate a firm's prospects may be masked by "strategic posturing"); Gordon & Kornhauser, *supra* note 9, at 824 (suggesting that management's credibility is undermined by self-interest); cf. Oesterle, *Target Managers as Negotiating Agents for Target Shareholders in Tender Offers: A Reply to the Passivity Thesis*, 71 CORNELL L. REV. 53, 70-73 (concluding that misbehavior by target managers facing a tender offer is neither "so frequent nor so difficult to penalize effectively that the judiciary . . . cannot control it").

82. See Easterbrook & Fischel, *supra* note 5, at 1165-68. It bears noting that this argument for the irrelevance of shareholder demand itself assumes that shareholder demand would operate to eliminate divergent opinions about the stock in question.

83. See Schwartz, *supra* note 69, at 190-91 (explaining how the transaction cost of replacing stock in order to maintain the desired level of diversity reduces the value of a tender offer). On the other hand, the investor might consider going into the arbitrage business.

be argued that such an investor has demonstrated a bit more rationality than many mutual fund investors, who overlook not only the hidden fees but also the disclosed ones.

Second, the decision to sell one's stock in the event of a tender offer stands on a very different footing from the decision to buy up a supposedly undervalued stock. When a tender offer or other bid is being made for the whole company, target shareholders know that they are negotiating with a bidder who seeks their shares as a means to gain control, and not as a passive financial investment. In other words, they are dealing with someone who does not value diversification in the same way they do, and the situation is ripe for capturing some of the bidder's perceived gain.<sup>84</sup>

Moreover, there is no sacrifice of diversification by failing to tender. While it is easy to see why a shareholder would not act on the belief that a particular company is overvalued or undervalued if it meant sacrificing diversification, that argument misses the mark in the context of a tender offer. In a tender offer, the shareholder who starts out with an adequately diversified portfolio of fifteen to thirty issues will have no more than 3% to 7% of her holdings in any particular stock. The decision the investor faces during a tender offer is whether to sell or hold that portion of the portfolio, not whether to put all of her eggs into one basket.

Professors Gilson and Kraakman have asked whether there is "an important distinction between arbitrage within the securities market and arbitrage across the securities and asset markets" that might help to explain how discounts arise.<sup>85</sup> The fact that bidders and investors place different values on diversification seems to answer their question. The evidence that diversification in the real asset market is value decreasing rather than value increasing is considerable.<sup>86</sup> Indeed, although the idea

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84. Professor Cohen has offered a somewhat similar analysis in explaining the existence of tender offers. The problem he sees is that a bidder will find it difficult to buy enough shares on the open market to gain control, because relatively few investors are ready to sell at any given moment, and because the rapidly increasing premiums that would need to be offered to climb the almost vertical supply curve would make the offer prohibitively expensive. Thus, tender offers operate as a signal to investors, who would not otherwise be in the market, that a buyer for the assets has emerged. In other words, they smoke out the investors who would otherwise prefer to live in ignorance of the underlying value of the firm and continue to take the price offered by the ordinary trading market. As Professor Cohen sees it, a tender offer has the effect of turning the almost vertical supply curve into an almost horizontal one. Cohen, *supra* note 69, at 126-32.

85. R. GILSON & R. KRAAKMAN, *THE LAW AND FINANCE OF CORPORATE ACQUISITIONS* 57 (Supp. 1989) (describing the market version of the discount hypothesis).

86. See, e.g., Note, *The Conflict Between Managers and Shareholders in Diversifying Acquisitions: A Portfolio Theory Approach*, 88 YALE L.J. 1238 (1979) (recommending stricter judicial scrutiny of acquisitions to protect shareholders' interests); Jarrell, *For a Higher Share Price, Focus Your Business*, Wall St. J., May 13, 1991, at A14, col. 3 (arguing that stock performance is better for focused rather than diversified corporations); Melloan, *Why FMC Let Shareholders Do the Diversifying*, Wall St. J., Aug. 16, 1988, at 29, col. 3 (distribution of capital to shareholders improved



behind many conglomerate mergers was that the same principles of diversification applied to real assets and financial assets, diversification at the company level has been blamed for much of the recently abated takeover wave.<sup>87</sup> In hindsight, the flaw in the logic of conglomerate mergers seems evident. After all, why should investors pay anything extra for a collection of companies chosen by management, when the investor could concoct any combination of businesses virtually instantaneously and at minimal cost by composing a portfolio of stock in selected companies?<sup>88</sup>

At first blush, these phenomena seem more consistent with, and thus supportive of, the misinvestment hypothesis than with the market hypothesis. On the other hand, it may simply be that as a company's management makes more elaborate choices for its investors, there will naturally be fewer investors who find the precise choices made to their liking. In the end, the point is the same as that made in connection with dividends. When it is easy for the shareholder to achieve the same effect as a corporate-level transaction, the shareholder will be indifferent to whether the corporation undertakes it—unless, of course, other costs, such as transaction costs, make it more expensive to achieve the same result in one or the other way.<sup>89</sup> Since diversification can achieve virtually any investment mix at the portfolio level, theory predicts that the shareholder should care little about diversification at the company level.

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firm's economic outlook); Colvin, *The Bigness Cult's Grip on Beatrice Foods*, *FORTUNE*, Sept. 20, 1982, at 122-23 (ten-year average rate of return for extensively diversified Beatrice Foods was 2.5%, before inflation).

87. See Porter, *From Competitive Advantage to Corporate Strategy*, *HARV. BUS. REV.*, May-June 1987, at 43, 43-52 (diversification mistakes make companies vulnerable to corporate raiders).

88. This may also explain why closed-end mutual funds routinely sell at a discount from net asset value. See Kraakman, *supra* note 4, at 902-08 (exploring reasons for this practice). The discount at which closed-end funds trade is particularly remarkable, given that the value of underlying assets is readily ascertainable. At least one study has concluded that the reason why closed-end funds trade at a discount from the underlying assets is because investors hold heterogeneous views about the value of the fund. Thompson, *The Information Content of Discounts and Premiums on Closed-End Fund Shares*, 6 *J. FIN. ECON.* 151, 181 (1978) (describing variations in shareholder preferences about timing, magnitude, and tax status of dividends). In other words, demand for such funds slopes downward. Again, the connection between heterogeneous opinions as to value and downward-sloping demand is fairly straightforward. Only a very small number of investors will completely agree at any given time with the composition of the portfolio. The reason for the discount may be the same as the reason for deconglomeration: namely, that investors do not value prepackaged diversification. Whatever the reason for the discount suffered by closed-end funds, the SEC has recently proposed that prospectuses for them carry a warning that the price of the fund is likely to fall in the aftermarket. Registration Form for Closed-End Management Investment Companies, Securities Act Release No. 6,842, [1989 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 84,433, at 80,331 (July 28, 1989).

89. See *supra* text accompanying notes 19-24. This suggests several further empirical inquiries and lines of analysis. For example, is the per-share cost of the typical merger more than the cost of commissions for an investor who effects her own merger by adding the company to her portfolio? Are junk bonds in effect a cheaper way of buying on margin? Or does buying on margin affect the riskiness of the stock bought on margin? Is it possible that fee-seeking investment bankers were the prime movers behind conglomerate mergers, and if so, what should be done about them?

Finally, the argument that a well-diversified, rational shareholder who believes in the efficient market should therefore sell for any premium simply proves too much. It is well known that a tender offer causes the price of the stock in the target to rise, often to a level that is as high or higher than the offered price. A well-diversified investor who follows a rational buy-and-hold strategy would, according to such logic, seldom, if ever, tender. But the market price will rise only *because* some investors will in fact compare the price offered with their own reservation price. No doubt, too, many investors will seek out information about what other investors are doing, causing the market to leap suddenly to a new price to reflect the offer adjusted by the effective consensus concerning the likelihood of success and competing offers. But the speed with which the market works does not imply that it mysteriously divines a new price utterly without the help of the interplay of supply and demand as determined by the differing opinions of investors.<sup>90</sup>

There are few reasons for even well-diversified investors to remain indifferent when a stock they hold is in play. The logic of the efficient market and diversification does not apply with any force to the bidders who buy whole companies. Clearly, the bidder would not be bidding unless she believed that the target was undervalued. Why then should an investor (even one who is ordinarily a passive price-taker) sell shares for a minimal premium? In short, when there is a bidder or potential bidder lurking about who is interested in managing or liquidating the target company, the logic of the efficient market and diversification no longer applies, even for the passive investor who must decide whether to sell out or hold out. Rather, in such situations investors may act, quite ration-

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90. How does the market know when supply has been reduced? Do market forces somehow convey this information when, for example, traders discover that it takes more phone calls to find a seller? Or do traders depend on overt disclosures emanating from the company or a major investor who is required to disclose that additional supply has been or will be injected into the market? If the latter, it could be argued that the price effect of sales and repurchases is likely to be a result of new information implicit in such moves by the company and insiders. But, as with the evidence relating to secondary offerings, even if such moves have informational value, there is no reason to think they do not also affect the equilibrium price by what might be called technical forces. One likely answer for how the market knows when supply is reduced is that specialists and market-makers pick up on imbalances in their long and short positions. Moreover, there is reason to believe that traders monitor the activities of other traders, looking for indications of hidden value, and that some trades thus have an impact on the market far beyond the value of the shares in that trade alone. See W. BAUMOL, *THE STOCK MARKET AND ECONOMIC EFFICIENCY* 51-53 (1965) (traders react to conspicuous external signals in trying to anticipate one another's behavior), quoted in V. BRUDNEY & M. CHIRELSTEIN, *supra* note 19, at 128-30; Gilson & Kraakman, *supra* note 7, at 572-79 (uninformed traders observe transactions of informed traders to gain information). Finally, traders and portfolio managers are reluctant to be seen performing less well than the competition, and therefore will tend to follow the lead of other influential traders and advisers even if they do not necessarily believe the others' information or strategies to be superior to their own. See, e.g., Dorfman, "Window Dressing" Ritual Can Aid Small Investors, *Wall St. J.*, Mar. 29, 1991, at C1, col. 5.

ally, on the basis of differing opinions as to the value of a company's stock or the value believed to be perceived by the other party to the trade. When such situations arise, demand is no longer horizontal.

Thus, although it is tempting to assume that because the stock market is efficient there is a single correct or at least best-guess price for a stock, there is nothing inconsistent between the idea that the market is efficient in the sense that it cannot be beaten, and the idea that shareholders may hold different opinions as to the value of a particular stock. Again there is no reason why very different equilibrium prices would not be established for the same security at different levels of supply. But the clear implication of downward-sloping demand is that a company can be, and indeed ordinarily is, worth more than the market price of its stock times the number of shares outstanding.<sup>91</sup>

### III

#### OTHER EVIDENCE OF DOWNWARD-SLOPING DEMAND

Numerous economic phenomena support the theory that stocks have downward-sloping demand curves. As already noted, the downward-sloping demand hypothesis is directly supported by the fact that new issues of stock and block sales by existing investors tend to force stock prices down. The theory is further supported by the fact that investors appear to react more strongly to bad news than they do to good news. One need not dig too deeply to find additional evidence.

##### A. Share Repurchases

It is well known that companies often repurchase their own stock in order to support or increase the market price.<sup>92</sup> This phenomenon is persuasive evidence of the downward-sloping demand hypothesis: if the demand curve for stock were horizontal, such repurchases would not

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91. The question remains, however, why arbitrage does not arise in anticipation of a takeover bid, thus erasing the discount before a bid can ever get going. That question, however, almost answers itself. Such arbitrage no doubt occurs to some extent. Indeed, it is quite common to hear that trading activity in a particular stock was prompted by takeover speculation. But if arbitrage eliminated discounts completely, the takeover bid would never arise. And if the arbitrageur did not have reason to believe that a bid would arise, there would be nothing to arbitrage.

92. See Kraakman, *supra* note 4, at 916-20 (discussing equity conversions, especially recapitalizations, as takeover defenses); Palmer, *Promises, Promises: Or What Happened to All Those Post-Crash Buybacks?*, BARRON'S, Apr. 25, 1988, at 13; Wallace, *Takeovers and Buybacks Propping Up Stock Prices*, N.Y. TIMES, June 20, 1988, at D1, col. 1 (late city final ed.). Consider, for example, Sears' recently announced massive repurchase of stock (together with the sale of such notable assets as the Sears Tower) because of fears that its stock was too cheap and that it might become the target of a takeover attempt. See *supra* text accompanying note 17. For empirical evidence concerning the effect of repurchases on stock price, see generally Dann, *Common Stock Repurchases: An Analysis of Returns to Bondholders and Stockholders*, 9 J. FIN. ECON. 113 (1981); Masulis, *The Impact of Capital Structure Change on Firm Value: Some Estimates*, 38 J. FIN. 107 (1983); Smith, *Investment Banking and the Capital Acquisition Process*, 15 J. FIN. ECON. 3 (1986).

have any tendency to raise the market price, nor would remaining shareholders enjoy any benefit. On the other hand, the downward-sloping demand hypothesis makes it easy to see how such price adjustments and shareholder benefits arise.

During the 1987 stock market crash, numerous companies repurchased their own shares pursuant to existing and newly announced repurchase plans. The Securities and Exchange Commission (SEC) report on the crash indicates that during the week of October 19, 1987, there were 129 companies among the S&P 500 that repurchased shares, with the median company repurchasing almost 13% of its outstanding shares.<sup>93</sup> Among repurchasing companies, share prices fell 17.5% during the first two days of the week compared with a fall of 19.6% for other companies.<sup>94</sup> For the entire week they fell 15% compared to 16.5% for other companies.<sup>95</sup> When price changes are adjusted for the riskiness of individual stocks, the results are even more dramatic.<sup>96</sup> Moreover, the companies that repurchased a larger percentage of outstanding shares saw their shares fall significantly less than those that repurchased smaller amounts.<sup>97</sup>

It is unlikely that this price effect was a result of some signal communicated to the market by the announcement of the repurchase program. Ninety percent of the shares repurchased were repurchased by companies with existing repurchase programs, or by companies that had announced their programs on an earlier day of the week.<sup>98</sup> Typically, once the program is announced there is no announcement for individual repurchase transactions.<sup>99</sup>

Arguably, it is not entirely fair to count share repurchases as an additional example of downward-sloping demand because they are, after all, substantially equivalent to dividends.<sup>100</sup> Sometimes repurchase programs are even announced in lieu of regular dividends.<sup>101</sup> In recognition of this similarity, state corporation law regulates the two transactions in a very similar manner; some jurisdictions, in fact, draw no distinction between the two.<sup>102</sup> Nevertheless, share repurchases are different from

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93. See DIV. OF MKT. REG., SEC, THE OCTOBER 1987 MARKET BREAK 6-5 (1988).

94. *Id.*

95. *Id.*

96. *Id.* at 6-5, 6-6.

97. *Id.* at 6-6.

98. *Id.* at 6-4. At the beginning of the week, 101 companies had previously announced repurchase programs, and during the week 57 companies announced new or accelerated repurchase programs. *Id.*

99. *Id.* at 6-9 n.8.

100. See R. CLARK, CORPORATE LAW 626-27 (1986).

101. See V. BRUDNEY & M. CHIRELSTEIN, *supra* note 19.

102. See, e.g., REVISED MODEL BUSINESS CORP. ACT § 6.40 (Supp. 1989) (including purchases and redemptions in definition of distribution).

dividends in that they are, by definition, not pro rata.

The downward-sloping demand hypothesis is the only logical explanation for the fact that repurchases tend to cause an increase in the market price of the subject stock. After all, only selling shareholders get the money. Thus, even if shareholders prefer dividends because they are concerned that management will misinvest available cash, that hardly explains why repurchases of other shareholders' shares are viewed favorably by *nonselling* shareholders. The straightforward explanation would seem to be that the lowest-valuing shareholders have been eliminated and that the equilibrium price of the shares has worked its way up the demand curve.<sup>103</sup>

Remarkably, there has been little protestation that repurchase programs constitute manipulation. No doubt the silence is due in part to the fact that corporate treasurers, who are sensitive to the charge of manipulation, deny that the reason for repurchases is to raise prices. Rather, they almost invariably claim that the reason is that the repurchases act as a signal to the market, or that the stock is underpriced and therefore a good investment.<sup>104</sup> These explanations are at best thinly veiled. If the stock is a good investment, whether for the company or anyone else, and the company has the cash, presumably it will repurchase shares until the price reaches an acceptable level. The idea that the repurchase was not intended to raise the price would, as the saying goes, hardly stand up in court. Nevertheless, what protest there has been about repurchases has been based on the notion that repurchase programs may be unfair to selling shareholders who might be more inclined to retain their shares if they knew that the issuing company was buying its own shares in the open market.<sup>105</sup> It has thus been argued that repurchase programs should be well disclosed so as to give all shareholders the opportunity to make a rational choice to hold or sell.<sup>106</sup> Yet if demand were horizontal, disclosure would be irrelevant because the repurchase would not be expected to have any effect.

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103. Of course, it could be that the issuer's announcement that it stands ready to buy shares encourages investors to invest. But that in itself is nothing but an expression of the downward-sloping demand hypothesis insofar as the reason investors are more willing to invest is that they need not worry as much about future sales driving the price of the stock much below levels prevailing at the time of the announcement.

104. See Wansley, Lane & Sarker, *Management's Views on Share Repurchase and Tender Offer Premiums*, 18 FIN. MGMT. 97 (1989); see also Cohen, *Why Companies Buy Their Stock High, Then Sell Low*, Wall St. J., July 15, 1991, at C1, col. 3.

105. See R. CLARK, *supra* note 100, at 629 (arguing that stock repurchases may mislead shareholders into thinking that active trading is motivated by "favorable nonpublic information").

106. See Bradley & Rosenzweig, *Defensive Stock Repurchases*, 99 HARV. L. REV. 1377, 1385-87 (1986) (arguing that stock repurchase programs should be required to proceed as self-tender offers under SEC rule 13e-4); see also V. BRUDNEY & M. CHIRELSTEIN, *supra* note 19, at 476-84 (discussing generally the issues of manipulation, stabilization, and corporate repurchases).

In 1982, the SEC responded to these concerns with a new rule, Rule 10b-18, which creates a safe harbor for issuer repurchases in the open market.<sup>107</sup> The rule provides that an issuer repurchasing its own shares will not be deemed to be manipulating the market if four conditions are met. First, purchases, excluding block purchases, may not exceed 25% of the average daily volume in the company's shares. Second, purchases may not be made at the opening of the market or in the half hour before the close. Third, the price paid must be the market price. Fourth, all repurchases on any given day must be made through a single broker-dealer.

What is odd about Rule 10b-18 is what it does not say. It does not say that the repurchase plan must be disclosed. Of course, it may be that the plan must be disclosed for other reasons if its existence rises to the status of a material fact. But Rule 10b-18 provides that an issuer shall not be deemed to have violated either Section 9 or Rule 10b-5 solely by virtue of repurchases carried out according to the terms of Rule 10b-18. The rule is, thus, narrowly crafted to protect against the possibility that issuer repurchases might lead the market or create the appearance of more disinterested trading activity than actually exists.

Regulatory nonchalance about the manipulation apparently inherent in open-market share repurchases is quite consistent with the downward-sloping demand theory. If shareholders hold differing views of share prices, repurchases must be viewed very differently than if repurchases are primarily interesting to shareholders as a matter of information. If the former is the case, the issuer's taking advantage of such differences by reabsorbing the lower-priced shares, and thus raising the market price, is simply not the same thing as manipulating shareholder opinion.

Although the vast majority of issuer repurchases are made in the normal course of trading, underwriters acting on behalf of an issuer sometimes repurchase shares during an offering to support or "stabilize" the market price. The SEC has reacted to this practice by promulgating detailed rules about what an issuer or underwriter may do to stabilize the price of a stock during a new offering.<sup>108</sup> In essence, an issuer or underwriter may purchase shares at a price less than or equal to the price at which they are being offered.<sup>109</sup> This allows for stabilizing purchases that follow the market down but not up.<sup>110</sup> Stabilization is allowed dur-

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107. Sec. Exch. Act Rule 10b-18, 17 C.F.R. § 240.10b-18 (1990).

108. 17 C.F.R. §§ 240.10b-6 to -8 (1990); see T. HAZEN, *THE LAW OF SECURITIES REGULATION* 173-77 (1985) (explaining the SEC's regulations on price stabilization in the context of public offerings).

109. See 17 C.F.R. § 240.10b-7(j).

110. 17 C.F.R. § 240.10b-7(c) ("No stabilizing bid or purchase shall be made except for the purpose of preventing or retarding a decline in the open market price of a security.").

ing "fixed-price" offerings,<sup>111</sup> but is completely forbidden in "at-the-market" offerings.<sup>112</sup> However, because fixed-price offerings are the rule and at-the-market offerings are the exception, this limitation has little practical significance.<sup>113</sup>

If demand for stock were perfectly elastic, stabilization would be wholly unnecessary and, indeed, would not be worrisome. However, the number of regulations aimed at stabilization,<sup>114</sup> and the scholarly criticisms pointing out the dangers of stabilization,<sup>115</sup> belie such a sense of security, as does the fact that share repurchases *do* tend to inflate the price of the stock.<sup>116</sup> The problem is that fixed-price offerings are utterly inconsistent with the reality of downward-sloping demand. As a result, stabilization is an evil needed to make fixed-price offerings work. In other words, the practice of stabilization is tolerated because of fixed-price offerings, but fixed-price offerings are themselves a suspect institution.

### B. Initial Public Offerings

Today, the stabilization problem seems to have taken care of itself, although the cure may be worse than the disease. The use of stabilization has diminished because underwriters have become more adept at selling out new issues quickly.<sup>117</sup> There is, however, a sinister explanation for the efficiency of underwriters. Numerous studies have shown that stocks sold in initial public offerings (IPOs) frequently carry higher risk-adjusted returns than other stocks.<sup>118</sup> In other words, IPOs are system-

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111. A "fixed-price" offering is one made at a single, predetermined price.

112. 17 C.F.R. § 240.10b-7(g) (1990) (explicit rule against any open-market purchases of stock by an issuer or underwriter during an at-the-market offering). An "at-the-market offering" is an offering for which there is no set price.

113. Indeed, as one leading text on securities regulation puts it, it is impossible to read the Securities Act of 1933 and not come to the conclusion that fixed-price offerings were what Congress had in mind. R. JENNINGS & H. MARSH, *SECURITIES REGULATION: CASES AND MATERIALS* 595 (6th ed. 1987). In any case, there can be little doubt that the securities industry is organized around the fixed-price offering. The standard operating procedure is for the underwriter to set a price for the shares, buy them wholesale from the issuer at an agreed discount, and resell them to the public at the full fixed price per share. Indeed, the National Association of Securities Dealers has a strict rule against reselling shares in a fixed-price offering at any price other than the stated fixed price. See *Practices in Fixed Price Offerings*, Securities Act Release No. 15,807, [1979 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 82,073, at 81,763-64 (May 9, 1979) [hereinafter *Fixed Price Offerings*]; *In re National Association of Securities Dealers, Exchange Act Release No. 17,371*, Fed. Sec. L. Rep. (CCH) ¶ 82,705, at 83,871-73 (Dec. 12, 1980).

114. See *supra* note 108.

115. For example, Professor Stout characterizes stabilization as an artificial propping up of market price, and argues that it is inconsistent with the philosophical underpinnings of most of securities regulation—that efficiency should be encouraged above all else. Stout, *supra* note 9, at 664, n.265.

116. See *supra* notes 92-97 and accompanying text.

117. See R. JENNINGS & H. MARSH, *supra* note 113, at 601-02.

118. See Ibbotson, *Price Performance of Common Stock New Issues*, 2 J. FIN. ECON. 235 (1975)

atically underpriced. One likely explanation for such underpricing is that underwriters are more concerned with selling out the issue quickly and avoiding the risk that market conditions may change than they are about getting top dollar for issuers. Thus, IPOs are priced below the anticipated equilibrium price in the aftermarket.<sup>119</sup> Professors Gilson and Kraakman argue that underpricing is simply a way for underwriters to invest in their customer base.<sup>120</sup> That is, the underwriter is able to place stock for issuers because it has a stable of investors and keeps them happy by giving them bargains. But it is unclear why issuers are willing to have their stock sold for less than it is worth. Moreover, it is unclear why investors need a bonus at all, unless they are somehow coerced at other times to buy overpriced products. The most likely explanation for underpricing of IPOs is the downward-sloping demand hypothesis. If indeed stocks have downward-sloping demand, then underwriters must price shares so as to sell to the lowest valuing investor.

Why then does the price later *rise* in the aftermarket? One explanation, proposed by Easterbrook and Fischel, is that higher-valuing shareholders buy from lower-valuing shareholders, and thus drive the price up.<sup>121</sup> On the one hand, such aftermarket reallocation is consistent with the downward-sloping demand hypothesis. On the other hand, it means that underwriters consistently misjudge how low the price must be set in order to sell out the issue. Thus, the downward-sloping demand hypothesis would seem to offer, at best, an incomplete explanation for underpricing of IPOs.

Another plausible explanation for the postoffering price rise is that underwriters cannot be content with finding just enough investors to buy the new issue. No doubt some investors will renege on their promises to buy—indeed, such promises are unenforceable under the Securities Act of 1933. It is illegal to sell securities before the registration statement has become final, at which time the price of a fixed-price offering has been set.<sup>122</sup> As a result, it is far too dangerous from the underwriter's point of view to assume that every customer who has indicated an interest in purchasing some shares will in fact do so.<sup>123</sup>

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(examining the risk and performance of new issues offered from 1960-69); Ritter, *The "Hot Issue" Market of 1980*, 57 J. Bus. 215, 215-16 (1984) (analyzing why high risk initial public offerings are underpriced).

119. Needless to say, investors are therefore quite anxious to be allotted a few shares, since the price can be expected to rise immediately.

120. Gilson & Kraakman, *supra* note 7, at 621 n.197.

121. See *supra* text accompanying note 82.

122. Securities Act of 1933, 15 U.S.C. § 77e.

123. The underwriter generally assumes the risk of loss accruing from an incompletely sold-out offering. See generally *Fixed Price Offerings*, *supra* note 113, at 81,756-59. Although the underwriter may retaliate in the future by not selling the next issue to an undependable customer, the costs are too high in each individual offering to depend on this as an effective enforcement tool.



Through regulation, the SEC and the National Association of Securities Dealers (NASD) may have further exacerbated the problem of systematic underpricing. The Commission has worried itself more than once about IPOs, especially in so-called "hot issue" markets when investors appear ready and willing to buy vast quantities of risky stocks. Yet the SEC has never taken a firm position on what causes hot issues and how to fix the problem. The price run-up in the aftermarket is thought to be caused by a restriction of the supply of shares actually sold to something less than the number stated in the prospectus. The unsold shares, which may have been allotted to various insiders, then flood the market at the higher aftermarket price, which promptly collapses, but only after the insiders have been able to sell their shares.<sup>124</sup> The SEC has warned that such practices may constitute manipulation and that failure to sell the issue to bona fide investors may render the prospectus and registration statement false and misleading.<sup>125</sup> For its part, the NASD has adopted rules that limit to 10% of the issue the amount of stock an underwriter may retain as compensation for the underwriting.<sup>126</sup>

The SEC's hot issue scenario is premised on downward-sloping demand since otherwise the supply of stock would have no effect on market price. It is therefore curious that neither the SEC nor the NASD has suggested that fixed-price offerings themselves might have something to do with making hot issues hot. The reason may be that fixed-price offerings are more profitable for underwriters.<sup>127</sup> After all, as the name suggests, they are a form of price fixing.

For whatever reason, the SEC and the NASD have ignored the obvious solution of encouraging at-the-market offerings. Instead, both apparently believe that assuring as wide a distribution as possible of newly issued shares will avoid the potential for a flood of sell orders after

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124. The practice of "flipping" new issues may also contribute to the aftermarket price drop. Lowenstein & Donnelly, *Hot IPOs Best Played by Those With Cool Heads*, Wall St. J., May 10, 1991, at C1, col 3; see also Lowenstein, *Caution Flags Rise in New-Stock Boom*, Wall St. J., June 27, 1991, at C1, col. 4.

125. See *In re Shearson, Hammill & Co.*, 42 S.E.C. 811, 821 (1965) (citing 17 C.F.R. § 240.10b-6); The Obligations of Underwriters, Brokers and Dealers in Distributing and Trading Securities, Particularly of New High Risk Ventures, Exchange Act Release No. 5,725, [1972 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 4,506B, at 4060-61 (July 26, 1972) [hereinafter Hot Issue Release]; Preliminary Report on Practices in Distribution of Hot Issues, Securities Act Release No. 4,150, [1959 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 76,671 (Oct. 23, 1959); see, e.g., Hagedorn & Newman, *Highflying Broker: Blair New Issues Defy Gravity—With Help from J. Morton Davis*, Wall St. J., May 6, 1991, at A1, col. 6. (reporting an informal investigation by the SEC of a particularly successful IPO underwriter in response to allegations of manipulation). See generally T. HAZEN, *supra* note 108, at 177-79 (generally discussing "hot issues").

126. See *"Free Riding and Withholding,"* N.A.S.D. Manual (CCH) ¶ 2151, at 2046 (Oct. 1987).

127. See Banoff, *supra* note 45, at 146 (explaining that underwriters of fixed-price offerings are compensated for the risk that the issue will not sell out).

the price rises in the aftermarket.<sup>128</sup> In fact, distributing offered shares too broadly may be part of the problem.

In the first place, those closest to the offering presumably know the most about the offering and the company. Thus, it seems likely that insiders such as employees of the underwriting firm and of the various broker-dealers who make up the underwriting and selling groups will count among the highest-valuing investors. This is not to suggest they have inside information, however. Rather, because they know relatively more about the issuer, insiders are able to avoid some of the risk that the public perceives in newly offered shares. Thus, insiders would be expected to value the offered shares a bit higher than other investors.

Second, a broader offering, involving many smaller purchasers, eliminates the worry that a larger purchaser who chooses to resell will be deemed an underwriter. If this happens, the offer will be considered still underway during these later sales, even though the issuer and the official underwriters consider it completed. To avoid this result, underwriters may prefer to sell new issues to more customers for a lower price, than to the smaller number who would pay top dollar. If so, it is only to be expected that the highest-valuing investors will turn to the market for the additional shares they want, naturally driving the price up.

Professors Chalk and Peavy have offered another intriguing explanation for the underpricing of IPOs that also draws on the possibility that stocks have downward-sloping demand. They argue that underpricing arises because, despite outward appearances, IPOs are sold in discriminatory rather than competitive auctions.<sup>129</sup> Underwriters typically establish a price for an offering by polling or "circling" customers to determine investor interest before undertaking to prepare and file a registration statement with the SEC. Then, between the filing date and the effective date of the registration statement, the underwriter promotes the offering by distributing a preliminary prospectus, which describes the company and the reasons for the offering but does not set a price. While an investor who indicates a willingness to buy at a particular price during the preeffective period is not legally bound to do so, the investor is practically bound: if she backs out, the underwriter is unlikely to make future offerings available to her. Thus, the investor must carefully assess the merits of the offering without the help of an active market that continuously sets an equilibrium price for the shares. From the investor's point of view, the worry is that she will pay too much relative to the aftermarket price. Thus, each investor's bid will be discounted to com-

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128. See Hot Issue Release, *supra* note 125, at 4159-61; see also "Free Riding and Withholding," *supra* note 126.

129. Chalk & Peavy, *Understanding the Pricing of Initial Public Offerings*, 8 RES. IN FIN. 203, 215-17 (1990).

pensate for the added risk of overpaying. When the shares are finally issued and begin to trade, however, that aspect of the risk is eliminated and the price naturally rises.

This explanation is especially interesting because it blends the downward-sloping demand hypothesis with the level-demand hypothesis. The essential reason for underpricing is that a discriminatory or stair-step auction, in which each investor must establish a reservation price in isolation, is transformed into a competitive auction, in which everyone has the benefit of knowing the latest trade or at least a current quote. Ultimately it may be that the episodic transformation of one sort of market into another will allow the downward-sloping demand hypothesis to be reconciled with the level-demand hypothesis.

If indeed downward-sloping demand explains the behavior of the market in connection with the issuing of securities, and if fixed-price offerings allow underwriters to capture bigger profits, then presumably issuers are anxious to capture as much of the underpricing surplus as possible. There are signs that issuers have taken steps to do just that. "Dutch auctions" have grown in popularity over the last few years, both in connection with new issues of securities and in connection with repurchases. In a Dutch auction, the issuer sells first to the highest bidder, second to the next highest bidder, and so on until the issue is sold out.<sup>130</sup> The technique has been used in connection with the sale of United States Treasury securities for many years,<sup>131</sup> and has also recently arisen in connection with repurchases of both corporate stock and debt.<sup>132</sup>

### C. Tender Offers

While the large premiums paid in tender offers are probably the most dramatic evidence of the downward-sloping demand hypothesis, tender offers provide other kinds of evidence supporting the hypothesis. For example, the more shares one seeks in a tender offer, the more one

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130. See Banoff, *supra* note 45, at 147 (reviewing the procedures involved in the "Dutch auction"). See generally Note, *supra* note 45, at 1384-89 (explaining different types of auctions).

131. In the case of Treasury securities, the bids are sealed and one may opt to purchase in the so-called competitive auction whereby a certain percentage—typically about 25%—of the securities are sold at a fixed price established by reference to the Dutch-auction price. For a discussion of government securities auctions in connection with the recently breaking scandal at Salomon Brothers, see Macey, *Don't Blame Salomon, Blame the Regulators*, Wall St. J., Aug. 19, 1991, at A8, col. 3; Friedman, *How to Sell Government Securities*, Wall St. J., Aug. 28, 1991, at A8, col. 3.

132. These have been dubbed "blue light specials" after the short-term promotions at discount department stores. Whether the name is meant to convey some sense of the quality of the securities being repurchased is unclear, though it has often been used in offers to repurchase stock with junk bonds. There are, however, other motivations for using a Dutch auction or variable price range in connection with a repurchase of stock. One is that by not setting a firm price, the issuer avoids indicating to potential bidders that the company might be bought at that price. See, e.g., Landro, *CBS Inc. Is Said to Be Weighing Stock Buy-Back*, Wall St. J., Nov. 29, 1990, at A3, col. 1.

must pay per share. Indeed, it has been established empirically that tender offers for larger percentages of shares carry larger premiums.<sup>133</sup> This fact has been attributed to the coercive effect that partial tender offers have on target shareholders, causing them to tender for a smaller premium than they would otherwise demand.<sup>134</sup> This phenomenon is also consistent with downward-sloping demand.

In connection with bids for any or all of the shares of a target company, it is sometimes necessary to increase the offer in order to induce sufficient tenders.<sup>135</sup> While some of these price increases are clearly attributable to the emergence of a competing bid, others occur in the absence of such a bid.<sup>136</sup> Of course, it could be argued that the reluctance of shareholders to tender is attributable to the *expectation* that another bid will arise. However, this is just another way of saying that many shareholders believe the offer is too low and that other bidders will appear. In other words, it proves the point: people may have different opinions about the value of a share of stock.

Management buyouts provide further food for thought in connection with downward-sloping demand. The downward-sloping demand hypothesis suggests that premiums should be smaller in management buyouts than in third-party takeovers. During a management buyout, it is presumably the highest-valuing shareholders—current management—that are purchasing the company. Because management does not need to buy its own shares, the downward-sloping demand hypothesis suggests that it should not need to offer as high a price to complete the buyout. In practice, however, premiums in management buyouts appear to be as large as premiums in third-party offers.<sup>137</sup> This may be because manage-

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133. See Office of the Chief Economist, SEC, *The Economics of Any-or-All, Partial, and Two-Tier Tender Offers*, 24 (April 19, 1985); SEC, *THE ECONOMICS OF PARTIAL AND TWO-TIER TENDER OFFERS*, 49 Fed. Reg. 26,751 (1984).

134. Booth, *supra* note 75, at 1640-43.

135. See, e.g., *Hanson Trust PLC v. SCM Corp.*, 774 F.2d. 47, 50-51 (2d Cir. 1985) (in bidding contest for control, bidder first offered \$60 per share and later increased the offer to \$72 per share).

136. For example, in the ongoing bid by AT&T to take over NCR, AT&T increased its bid from \$90 to \$110 per share, even though no competing offeror emerged. Shapiro, *A.T. & T. Raises Bid for NCR*, N.Y. Times, Apr. 22, 1991, at C1, col. 6. Similarly, the French company Schneider S.A. increased its offer to Square D Co. from \$78 to \$88 per share in order to overcome opposition to the acquisition. Miller, *Square D Accepts Sweetened Bid of \$2.23 Billion from Schneider*, Wall St. J., May 13, 1991, at A3, col. 1; see also Nathan & O'Keefe, *supra* note 1, at 119 (speculating that the increase in takeover premiums from 1974 to 1985 was due to an increase in "the heterogeneity of investors' beliefs about firm value, [which caused] an increase in the slope of the transactions supply curves for securities").

137. See DeAngelo, DeAngelo & Rice, *Going Private: Minority Freezeouts and Stockholder Wealth*, 27 J.L. & ECON. 367, 401 (1984) (going-private transactions studied did not result in systematic exploitation of minority shareholders); Lowenstein, *Management Buyouts*, 85 COLUM. L. REV. 730, 736 (1985) (the larger the company, the more likely it is that a proposed buyout will trigger third-party offers to create an auction beneficial to shareholders); see also Coffee, *supra* note 8, at 86-93 ("price" of buyout may be lower because of lower risk involved).

ment seeks to preempt the possibility of a higher outside bid. Or it may be that investors hold out for larger premiums because they realize that a third-party bidder is likely to bid more than management.<sup>138</sup>

In any case, the downward-sloping demand hypothesis suggests that if the premiums paid to shareholders in management buyouts are indeed equal to those paid in connection with third-party offers, shareholders are receiving a windfall in connection with completed offers.<sup>139</sup> This, in turn, unduly discourages management offers by requiring that they be made at higher premiums than shareholders would voluntarily accept if management were not effectively required to pay outsider prices.<sup>140</sup>

#### D. Market Mechanisms

Certain mechanisms built into the stock market itself offer still more evidence in support of the downward-sloping demand hypothesis.

##### 1. Limit Orders

Traders frequently enter orders with exchange specialists to buy or sell when a particular stock reaches a designated price.<sup>141</sup> Stock exchanges have well-established procedures to deal with these "limit orders," and recently the over-the-counter markets have taken steps to handle such orders as well.<sup>142</sup> In short, the stock markets are organized, in part, on the assumption that investors have different opinions about the proper price for a given share of stock.

The importance of the limit-order process, and the increasing controversy surrounding it, demonstrates further that investors take very seriously their individual pricing beliefs. The importance attached to such orders is supported by the fact that the duty to record and execute such orders is assigned to the "exchange specialist," the key player in charge of maintaining an orderly market.<sup>143</sup> Furthermore, it is noteworthy that such orders have priority over other orders, and are required to be executed first.<sup>144</sup> Perhaps most telling of all is that knowledge of the contents of the limit order book is closely guarded and apparently quite

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138. Note that the law requires management to open up the bidding to all comers once the company is put up for sale to any bidder. See *Revlon, Inc. v. MacAndrews & Forbes Holdings*, 506 A.2d 173, 184 (Del. 1983) (finding that management may not deal preferentially with any one bidder; if the other bidders are not hostile, market forces should be able to operate freely).

139. See Booth, *supra* note 9, at 653-56.

140. *Id.*

141. See generally Poser, *Restructuring the Stock Markets: A Critical Look at the SEC's National Market System*, 56 N.Y.U. L. REV. 883, 927-31 (1981) (discussing proposed nationwide protection of limit orders).

142. *Id.*

143. *Id.* at 928.

144. *Id.* at 928-29.

valuable.<sup>145</sup> Indeed, when Congress enacted legislation in 1975 to establish a national market system, one of the primary goals was to achieve nationwide protection against the execution of limit orders at an inferior price, irrespective of the particular exchange on which the limit order was booked.<sup>146</sup> This particularly controversial reform is probably the single least implemented directive in the 1975 legislation, in large part because it is unclear how to afford access to the limit order book and how to compensate New York Stock Exchange (NYSE) specialists for the loss of their monopoly in that regard.<sup>147</sup> While none of this directly proves that investors actually hold differing opinions as to the value of the same share of stock, it does suggest that investors and market professionals believe that stocks have downward-sloping demand.

## 2. *Shareholder Vote Requirement for Certain Large Issues*

Other evidence supporting the downward-sloping demand hypothesis is found in certain exchange rules regulating new issues of stock. The NYSE, for example, requires a shareholder vote for any new issue of shares in excess of 18.5% of the quantity of shares outstanding.<sup>148</sup> The American Stock Exchange has a similar restriction, requiring a vote if the issuing company proposes to increase its outstanding stock by more than 20%.<sup>149</sup> In both cases, the vote is required regardless of what state corporation law may allow. Although the exchanges have traditionally promulgated listing rules that regulate aspects of corporate governance, such as the one-share, one-vote rule, the theory behind the new-issue rule is unclear. Most listing rules are probably intended to make shares somewhat more uniform in the rights they carry, and thus more readily tradable.<sup>150</sup> It is, however, difficult to justify the rules relating to new issues on this basis.

A much more likely rationale for these rules is that they are designed to avoid what might be called "supply shock," a price depression that arises when significant amounts of new stock are floated onto the market. Once again, unless the downward-sloping demand hypothesis is correct, such rules would hardly be necessary. In a world of level demand, the new issue of stock should have no effect on market price.

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145. See *id.* at 928 (suggesting that politics slowed the establishment of a centralized system, because exchange specialists, who derived significant income from executing the limit orders in their separate books, would no longer control the execution of their orders).

146. *Id.* at 928-29.

147. See *supra* note 145.

148. NEW YORK STOCK EXCHANGE, LISTED COMPANY MANUAL § 312.00 (1983).

149. AMERICAN STOCK EXCHANGE, COMPANY GUIDE § 712 (1983).

150. By ensuring a minimum level of uniformity, the exchange relieves investors and member firms from the need for extensive research about what rights a given share of stock carries, and allows them to concentrate on the financial performance of the issuing company. See *Federal Tender Offer Law*, *supra* note 12, at 756 (discussing the one-share, one-vote rule for tender offer regulation).

Thus, at the very least, exchange rules dealing with new issues of shares indicate that those who trade shares most actively believe in downward-sloping demand.<sup>151</sup>

### E. Company-Specific Phenomena

#### 1. Increase Accompanying Listing on the Standard & Poors 500

Recent studies indicate that stocks that are added to the S&P 500 enjoy an immediate and permanent gain, presumably as a result of being associated with the other 499 stocks.<sup>152</sup> While this gain no doubt arises at least in part because investors and traders depend on the S&P 500 to formulate portfolios, thus generating more demand for the included stocks, that is precisely the point. Unless demand for stocks tends to slope downward, increased demand would have no effect on price. A similar effect might be expected in connection with the listing of shares for trading on an exchange. Indeed, it would not be surprising if listing on a more prestigious exchange, like the NYSE, led to a greater increase in price than listing on a less prestigious exchange. Curiously, such effects have not been conclusively found. One possible explanation for why listing does not, in and of itself, attract new investors is that listing provides no new information about the company nor does it implicate the stock for any widely used investment strategy.<sup>153</sup>

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151. A phenomenon that artificially inflates the supply of available stock is short selling. Investors, betting that a stock's price will fall, "borrow" shares for immediate sale. Replacement stock must eventually be purchased to replace the "borrowed" shares, but in the meantime the short seller is in a position to drive down the price of the stock by flooding the market with the borrowed shares. The SEC is currently considering whether to require investors to disclose when they have a short position of a significant percentage of a company's shares. Salwen, Torres & Newman, *SEC Thinking About Making Short-Sellers Go Public*, Wall St. J., May 24, 1991, at C1, col. 3.

152. See Shleifer, *Do Demand Curves for Stocks Slope Down?*, 41 J. FIN. 579 (1986) (attributing the significant abnormal return generated by stocks that are newly included onto the S&P 500 to the downward-sloping demand hypothesis). Stocks are occasionally added to the index when vacancies occur because a formerly listed company has been taken over or bought out and is thus no longer traded publicly. A company may also gain entry to the index by displacing a smaller company.

153. There is considerable disagreement as to whether listing on an exchange (or on a particular exchange) affects stock prices. See Voting Rights Listing Standards—Proposed Disenfranchisement Rule, Exchange Act Release No. 24,623, [1987 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 84,143 (June 22, 1987) (summarizing studies indicating that listing and delisting do not result in gains and losses in share prices). These studies are not necessarily dispositive of the idea that listing on an exchange could generate real gains, however. Evolution in the trading market has proceeded at such a rapid pace over the past twenty years that existing studies are clearly outdated. *Id.*; see also Norlin Corp. v. Rooney, Pace Inc., 744 F.2d 255, 267-69 (2d Cir. 1984) (delisting constitutes irreparable harm for purposes of granting injunction). Moreover, because the exchanges have more or less abdicated their role as monitors of, or reputational intermediaries for, listed companies in recent years (if they ever really performed it), there is no reason to expect existing studies to show a significant price effect associated with listing on an exchange or on a particular exchange. See, e.g., *Federal Tender Offer Law*, *supra* note 12, at 756-58 (discussing the decision by the NYSE to abandon its one-share, one-vote requirement for listing). It may be too that the exchanges have been upstaged by the indexes. See White, *Mid-Size Stocks Seen Rating New Respect as S&P Unveils the*

## 2. *Differing Sensitivities to Market Risk of Larger and Smaller Companies*

The downward-sloping demand hypothesis also suggests an explanation for the continued liquidity of larger companies during the 1987 market crash.<sup>154</sup> If demand for stock does in fact slope downward, then different companies' demand curves presumably have different slopes. It seems only natural that shareholder opinions will differ less markedly in connection with larger companies than in connection with smaller companies since dramatic changes in fortune are less likely in larger companies. Therefore, the demand curves of larger companies will likely have a gentler slope, will enjoy more continuous markets, and will continue to trade even under volatile market conditions.

The idea that demand curves for different stocks vary in slope is consistent with one of the basic tenets of modern finance theory: all stocks tend to move with the market, but to varying degrees. The tendency of each stock to move with the market has been quantified. A stock that has a history of moving by the same percentage as the market, whether up or down, is said to have a "beta" coefficient of 1.0. A stock that moves only half as much as the market has a beta of 0.5, while a stock that moves twice as much as the market has a beta of 2.0.<sup>155</sup> There is, however, a contradiction in the financial theory from which such arguments flow. The problem is that if the level-demand hypothesis is correct, then there is no reason why stocks should have varying beta coefficients. If investors invest only in portfolios and are indifferent to various stocks other than with regard to the fit of a particular stock in a portfolio, then stocks would not have varying tendencies to move with the market.

The notion that companies have different sensitivities to market risk—that is, different beta coefficients—is difficult to explain unless stocks have downward-sloping demand. The downward-sloping demand hypothesis suggests that an outside event, such as changing interest rates or increased worry over the state of the economy, will have varying effects on the stock prices of companies with differently sloping demand

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400 in *Its Latest Index*, Wall St. J., Jun. 5, 1991, at C1, col. 3 (discussing an apparent demand for new indexes); White, *The Index Boom: It's No Longer Just the S&P 500-Stock Index*, Wall St. J., May 29, 1991, at C1, col. 4 (same). However, if stock exchange listing rules were well crafted and effectively insured that listed companies had a particular set of characteristics valuable to investors, there is no reason to believe that being listed on a particular stock exchange would not enhance the value of a stock. Thus, as I have suggested elsewhere, the stock exchanges could in theory regulate takeovers quite thoroughly and effectively by setting up listing categories that are responsive to the peculiar threats faced by companies in different stages of development. See *Federal Tender Offer Law*, *supra* note 12, at 758-61.

154. See generally SEC, *supra* note 93 (discussing the market impact of issuer repurchases in the wake of the 1987 crash).

155. See J. LORIE, P. DODD & M. KIMPTON, *supra* note 3, at 33-41.



curves. This would be true even though the new information was the same for all companies. For example, if a particular piece of news affected the perceptions of, say, 10% of the investor population, and the entire 10% at the margin were thus induced to buy or sell, one would expect a more dramatic price change in a company with a steeper curve than in a company with a flatter curve. If, on the other hand, demand curves are perfectly flat as others have suggested, it would be hard to see any reason why in a world of well-diversified investors some companies would change in value more than others.

Probably the single greatest point of contention as to the validity of the downward-sloping demand hypothesis is that if it is true, it contradicts the idea that investors do not (and should not) trade on the basis of company-specific information. Indeed, downward-sloping demand depends directly on the fact that there are a significant number of investors who trade on the basis of beliefs about the value of individual companies. This is intriguing because it seems to suggest mass irrational behavior. It has been fairly well proven that the market cannot be beaten, and thus that the market does not compensate investors for company-specific or "alpha" risk.<sup>156</sup>

Yet casual empiricism suggests that many investors do invest on the basis of company-specific information. Moreover, studies show that alpha risk accounts for about two-thirds of price movement.<sup>157</sup> It seems incredible that, if such a large proportion of price movement is attributable to company-specific factors, there are not investors who make significant returns trading on it. Indeed, where does so much company-specific volatility come from if there is not a good deal of company-specific trading going on?

There is something slightly backward about the assertion that so many investors behave irrationally. We can call traders who trade individual stocks irrational, but that does not change the fact that they do it. The real challenge is to explain why apparently irrational behavior persists. The answer is really fairly simple. The market *is* the traders who compose it, and the average return on stocks is ultimately the average of what thousands of well-informed (as well as misinformed) traders do. Thus, the notion that one can beat the market consistently is rather like the idea that all the children in Lake Wobegon are above average. In

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156. See, e.g., R. POSNER, *supra* note 10, at 405-15. This is not to say that investors who engage in stock-picking necessarily lose money in absolute terms. Clearly, the market goes up over time. Thus, even an investor who picks individual stocks will typically make money over time. What this means, however, is that the market does not compensate for alpha risk, and that on average no one consistently makes returns in excess of the market rate. Therefore, stock-picking investors tend on average not to make as much money as they would if they simply "bought the market" by investing in, say, an index fund.

157. See J. LORIE, P. DODD & M. KIMPTON, *supra* note 3, at 38.

short, there is nothing at all surprising about the fact the no one beats the market consistently. But it does not necessarily follow that it is irrational to try.

### F. Marketwide Phenomena

Finally, there is plenty of anecdotal evidence suggesting that supply and demand affect stock prices generally, as opposed to the prices of individual stocks. There is also evidence that supply and demand affect the prices of other financial instruments. For example, it has been argued that the most recent bull market was fueled in part by the declining supply of equities.<sup>158</sup> The decline itself was presumably due in part to buyouts and the use of debt financing both by primary issuing companies and by bidders for purposes of financing takeovers. More recently it was predicted that the junk bond market itself would be affected by the recent wave of buyouts. The thought was that interest rates on high-risk debt would likely rise because of the increased supply being floated onto the market.

Interestingly, the idea that the prices of equities and debt as whole classes are affected by supply and demand is much less controversial than the idea that such forces affect individual securities.<sup>159</sup> Indeed, many commentators who argue that individual stocks have level demand seem to assume that there are many close substitutes for any given share of stock.<sup>160</sup>

Nevertheless, the more fundamental arguments for why stocks have level demand should apply both to individual stocks as well as to stocks

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158. See, e.g., Winans, *Stock Market Loses Vital Corporate Crutch*, Wall St. J., July 23, 1990, at C1, col. 3 (declining supply of equities from 1984 through 1989 reduced aggregate value of NYSE issues by an average of 6.5% per year, accounting for more than one-fifth of the 115% increase in market prices over the same period). The Winans article was itself identified as a cause of the 56-point drop in the Dow Jones Industrial Average on the day it appeared. See also Torres, *Rapid Stock-Supply Shrinkage Continues*, Wall St. J., July 14, 1989, at C1, col. 3 (attributing the bullish stock market to the reduced supply of equities); Newman & Torres, *Corporate America's Equity Avalanche Continues to Build at Breakneck Pace*, Wall St. J., May 10, 1991, at C1, col. 3 ("thirst for equity is adding inomentum to the avalanche of new stock issues"). But see Newman, *New-Stock Sales Spree Continued in May, but Some Prices Are Cut*, Wall St. J., May 31, 1991, at C1, col. 3 ("surge in new stock offerings reverses the trend of the 1980s"); Lowenstein, *Goldman Study of Stocks' Rise in '80s Poses a Big Riddle*, Wall St. J., June 6, 1991, at C1, col. 3 (expressing doubt that the total amount of shares outstanding shrank sufficiently to cause a scarcity of shares). See generally Jensen, *Eclipse of the Public Corporation*, HARV. BUS. REV., Sept.-Oct. 1989, at 61 (describing the trend away from public ownership of corporate equity).

159. See, e.g., Coffee, *supra* note 12 (discussing downward-sloping demand for equity in general). For some anecdotal evidence that supply and demand affect the prices of whole categories of investments, see Siconolfi, *First-Half Stock, Bond Offerings Soared 59%*, Wall St. J., July 1, 1991, at C1, col. 3; Newman & White, *Big Money Is Fueling Small-Stock Rally*, Wall St. J., April 22, 1991, at C1, col. 3; Anders, *RTC Is Unloading Its Junk Bonds at Furious Pace in a Seller's Market*, Wall St. J., April 15, 1991, at C1, col. 4.

160. See *supra* note 69.

as a class. The argument is essentially that since it is impossible to beat the market consistently, it is not only impossible to pick misvalued stocks, but also impossible to predict whether the market as a whole will go up or down. Those who argue that demand is level as to particular stocks but downward-sloping as to the market as a whole implicitly accept one idea of efficiency while rejecting another. Although consistency may well be the hobgoblin of little minds, it is nonetheless unclear why the efficient market should imply one thing for individual stocks and the exact opposite for stocks as a class.

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To sum up, in addition to the evidence that new issues and block sales of stock force down prices, and that investors seem to care more about bad news than good news, there are other market phenomena that support the downward-sloping demand hypothesis. Issuers repurchase their shares in a variety of circumstances to raise or support the price of their shares. Bidders pay huge premiums for target shares, and pay larger premiums for larger percentages of shares. The markets themselves are organized on the assumption that the downward-sloping demand hypothesis is correct. Finally, evidence indicates that on both a company-specific and a market-wide basis, demand for various kinds of securities slopes downward. All of these rather simple facts strongly suggest that shareholders, and indeed all investors, have differing opinions as to what their shares and other investments are worth. In other words, there is every reason to believe that stocks are like other commodities.

#### IV

##### THE IMPLICATIONS OF DOWNWARD-SLOPING DEMAND

As noted at the outset, the market hypothesis and the misinvestment hypothesis suggest different theories as to how tender offers and defensive tactics should be regulated. If the misinvestment hypothesis is correct, tender offers should be encouraged and defensive tactics condemned. If the market hypothesis is correct, a contrary policy would seem more appropriate. But, if the two are in fact one, as the evidence in support of the downward-sloping demand hypothesis seems to indicate, then perhaps neither of the polar policy alternatives is indicated.

Ultimately, the downward-sloping demand hypothesis is more consistent with the market hypothesis, as it has typically been set forth, than it is with the misinvestment hypothesis. This is not to deny that the two are in fact one. The downward-sloping demand curve can be characterized as arising from the fact that each next stockholder is naturally less confident of management, in the obvious sense that each next stockholder is willing to invest only at a slightly lower per share price. And

one can therefore argue that this view is more akin to the mismanagement hypothesis than it is to the market hypothesis. But in the end, the important difference between the two views is that the market hypothesis suggests that undervaluation arises naturally, whereas the mismanagement hypothesis suggests that undervaluation can be avoided by better management. The thesis here is that what appears to be mismanagement is simply the natural outgrowth of having sold too much stock or having failed to repurchase it when conditions changed. The discussion that follows explores this concept, as well as the implications of the downward-sloping demand curve in several important regulatory contexts.

### *A. Implications for Tender Offer Regulation*

#### *1. The Law Should Treat Large and Small Companies Differently*

One interesting implication of downward-sloping demand is that takeover defense regulation should perhaps be more stringent for large companies than for small ones. In other words, it may be that takeover defenses that are appropriate for one sort of company may be abusive for another.

Professor Gilson notes that the managements of large and small companies tend to use different mechanisms in order to secure control. Management of a mature company is more likely to use a leveraged buyout to go private, while management of a growing company is more likely to use a dual-class recapitalization to reduce the voting rights of a substantial portion of the outstanding shares.<sup>161</sup> As Gilson points out, "[b]oth transactions accomplish the desired goal of shifting or fixing control."<sup>162</sup>

Gilson surmises that the differing preferences are the result of differing agency costs present in mature and growing companies. In the mature firm, with few growth prospects and little need for new capital, management may be tempted to slack off and extract high salaries and benefits. It need not please its shareholders except in order to avoid a takeover. Because of this, the shareholders of the mature company require a firm commitment either in the form of cash or debt securities.<sup>163</sup>

On the other hand, in a company with growth potential, manage-

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161. See Gilson, *Evaluating Dual Class Common Stock: The Relevance of Substitutes*, 73 VA. L. REV. 807, 824-31 (1987). In a dual class recapitalization, the company issues nonvoting stock or reduces the voting rights of public shareholders, while preserving the option to raise additional equity capital. As Gilson points out, in the end the two transactions are economically equivalent for the outside shareholders, in that they either receive a larger stream of dividends in exchange for their voting rights or they receive a premium for their shares sold in a leveraged buyout. See *id.* at 813-14.

162. *Id.* at 813.

163. *Id.* at 823-25.

ment's interests are more likely to coincide with those of the shareholders. There is every reason to keep the shareholders happy and stock prices up in order to raise new capital. Furthermore, there are also good reasons for management to work hard and to keep salaries and perquisites to a minimum, if such forgone consumption can, in effect, be reinvested in the company and withdrawn later as deferred compensation in the form of higher-priced and liquid publicly held shares.<sup>164</sup> The shareholders in the growth company are thus less concerned about management's agenda and are relatively happy to trade in their voting stock for nonvoting stock.<sup>165</sup>

The differences that Professor Gilson has outlined also suggest that demand for the stock of smaller and newer companies slopes more steeply than demand for the stock of mature companies. While agency costs may be lower in smaller and newer companies, that does not necessarily mean that the stock of such companies is less likely to be discounted in the market. Indeed, it may mean just the opposite. Because agency costs are less of a worry, the price of the stock may be *more* sensitive to fluctuations in the fortunes of the company. A mature company with relatively slack management may be able to respond to adversity by tightening its belt, whereas a smaller and newer company that is already operating with a fairly tight belt may not be able to smooth out its results so readily.<sup>166</sup>

Similarly, a smaller and newer company can grow at a far faster pace than can a larger company; any given dollar increase in earnings or cash flow or asset value will represent a larger percentage of a smaller beginning number. It stands to reason, then, that an investor will receive a dramatically varied return on a share of stock in a smaller and newer company than the return from an investment in the stock of a mature company. For that reason alone, investors are much more likely to hold more widely varying views as to the value of the shares of a company. Moreover, smaller companies are less actively traded, and the market for the stock of such companies is presumably less efficient. Thus, shareholders in such companies are likely to differ more in their opinions of what constitutes an adequate offer.

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164. *Id.* at 825-32.

165. See *Federal Tender Offer Law*, *supra* note 12, at 748. A preliminary study recently prepared by one of my students determined that passage of the Maryland business combination statute had less of a negative impact on the price of shares of smaller companies than it did on the share price of larger ones. C. Rudolphi, *The Maryland Business Combination Act and Shareholder Wealth* (1991) (unpublished manuscript) (on file with the author). The findings of the study support the idea that takeovers are perceived as more of a threat to shareholder wealth in smaller companies. It may be, too, that smaller companies are naturally more likely to have the potential for exploiting economies of scale, and thus have a more believable need for capital than larger companies. See text accompanying note 64, *supra*.

166. See Black, *supra* note 5, at 609-10.

These observations about the likely slope of shareholder demand curves suggest that the potential for abuse differs for different-sized companies in the context of tender offers. Therefore, tender offer rules should also vary with a company's size. For smaller, riskier companies with steeper curves, partial and two-tier bids are potentially most coercive. Shareholders at the upper end perceive that they have more to lose (and gain) by holding out. Moreover, the danger of looting after control is achieved would seem to be enhanced. The smaller the target, the more susceptible it is to being operated as a captive subsidiary. Thus, the shareholders justifiably fear the consequences of a partial bid and are more likely to tender early for what they perceive to be a less attractive offer than would the shareholders in a larger company. The indication is thus to prohibit coercive offers for small companies or at least to permit more potent defenses.<sup>167</sup>

On the other hand, shareholders in larger companies with flatter curves are far less subject to coercion. They stand to lose less by missing the chance to tender, and the potential for looting a large company is usually smaller. The indication, then, is to allow a wider range of bids for larger companies and to restrict permissible defensive tactics.

## 2. *The Misguided Quest for Equal Treatment of Shareholders*

The essential idea behind the downward-sloping demand hypothesis is that different shareholders place different values on their stock. Therefore, it may be wrong for the law to seek to treat all shareholders equivalently. One interesting angle from which to consider this is the management buyout. Critics have argued that if management is willing to pay a premium for the company because the company is really worth more than the market indicates, then management is implicitly in breach of its fiduciary duty by failing to pursue that value for all the shareholders and instead capturing it for itself.<sup>168</sup> On the other hand, if demand curves do in fact slope downward, there will always be a differential in perceived value, and those on the upper part of the slope will naturally, and quite innocently, be interested in buying out those on the lower part

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167. If managers of growing companies have fewer conflicts of interest with their shareholders, a takeover bid is much more likely to depend on coercive techniques since the offered premium is less likely to be motivated by slack management. Management resistance to a takeover is therefore much more justified.

168. See, e.g., Brudney, *A Note on "Going Private,"* 61 VA. L. REV. 1019, 1038 (1975); Brudney & Chirelstein, *supra* note 12, at 1359. It bears noting, however, that some of the same commentators have also argued that any peculiar regulation of sales of control at a premium will impede the transfer of corporate assets to their highest-valuing owner, and will thus be inefficient. Compare Easterbrook & Fischel, *Corporate Control Transactions*, 91 YALE L.J. 698, 726-27 (1982) (efficient market means that management buyout at premium represents gain for shareholders), with Easterbrook & Fischel, *supra* note 5, at 1194-99 (efficient market correctly prices shares, and shareholders would therefore tender for minimal premium).

of the slope. As previously noted, the downward-sloping demand hypothesis suggests that buyouts would naturally occur at lower premiums than third-party sales because in a buyout the bid need not be high enough to satisfy management and other major shareholders.<sup>169</sup> The downward-sloping demand hypothesis thus suggests that management buyouts are a good deal more defensible than has been argued.

Similarly, the downward-sloping demand hypothesis suggests that sales of control at a premium are perfectly legitimate. While the active market for corporate control has made this old issue seem quaint, the fact remains that outside the downward-sloping demand hypothesis, no one has satisfactorily explained why a controlling shareholder should be privileged to sell out at a bonus and should not be required to share the premium with the remaining shareholders. The downward-sloping demand hypothesis offers an explanation of the source of the additional value perceived by a controlling shareholder.<sup>170</sup>

In sum, the downward-sloping demand hypothesis raises general questions about the value of equal treatment as a norm of corporate law. It suggests that statutory schemes such as the Williams Act, which are designed to assure equal treatment among shareholders, are wrong-headed. Indeed, given that downward-sloping demand emanates from shareholders themselves, the rules of law that impose equal treatment may actually detract from shareholder wealth.<sup>171</sup> That is, such rules may sometimes get in the way of transactions that shareholders and other potential parties would like to see consummated.<sup>172</sup>

### 3. *The Fallacy of the "Fair Price"*

Much of the current law addressing the various controversies arising in connection with corporate-control transactions is based on the assumption that there exists some objectively fair price for a share of stock.<sup>173</sup> The downward-sloping demand hypothesis, however, suggests that this approach is misguided; such disputes should instead be resolved by focusing on whether the parties reached a bargain that could have been expected after fair negotiation. Although such an inquiry can be difficult where one side is a collection of investors with discrepant opin-

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169. See *supra* text accompanying notes 137-39.

170. See Booth, *A Note on Individual Recovery in Derivative Suits*, 16 PEPPERDINE L. REV. 1025, 1037-41 (1989).

171. Fischel, *supra* note 12, at 19.

172. *Federal Tender Offer Law*, *supra* note 12, at 713-15.

173. See, e.g., *infra* notes 181-84 and accompanying text (discussing *Armstrong v. Marathon Oil*, 32 Ohio St. 3d 397, 513 N.E.2d 776 (1987)); see also *TSC Indus. v. Northway, Inc.*, 426 U.S. 438 (1976); *Mills v. Electric Auto-Lite Co.*, 552 F.2d 1239 (7th Cir.), *cert. denied*, 434 U.S. 922 (1977).

ions as to value, the group can be treated fairly on the average.<sup>174</sup> Furthermore, the other party, whether management or outside bidder, should not necessarily be required to disgorge all of the profit it anticipates.<sup>175</sup> A comparison of two opinions, *Weinberger v. UOP, Inc.*<sup>176</sup> and *Armstrong v. Marathon Oil*,<sup>177</sup> demonstrates the current disagreement over underlying theory, and how this has, in turn, led to dramatic differences in the ways courts resolve these issues.

The 1983 Delaware Supreme Court decision in *Weinberger* is probably the most striking example of judicial acceptance of the downward-sloping demand hypothesis in this context. The court in that case stated that a cash-out merger was presumed fair if it had been ratified by a fully informed majority-of-the-minority vote.<sup>178</sup> The decision reflects the recognition that a cash-out merger should be treated as a negotiation between two parties holding different opinions as to the value of the same good.

Perhaps most important is the court's accommodation of different shareholder opinions through the medium of the minority vote. The vote would be a futile gesture if there were no reason to expect minority shareholders ever to vote down the sale of their shares at the typically substantial premiums offered. Moreover, the vote also accommodates the fact that there is no single fair price even as among the minority shareholders. All that is required is that minority shareholders be satisfied *on the average*.<sup>179</sup> Finally, in the same case the Delaware court modified the long-standing approach to the appraisal of dissenters' shares, effectively ridding Delaware law of the presumption that market price is adequate compensation if the stock is actively traded.<sup>180</sup>

In stark contrast, the Ohio Supreme Court in *Armstrong* ignored altogether the possibility that the market can be wrong. The case grew out of the earlier takeover of Marathon Oil by United States Steel, which

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174. See, e.g., Stout, *supra* note 9, at 685-90 (arguing that the law should seek to insure that a tender-offer premium accurately reflects the average reservation price of the population of target shareholders rather than the efficient-trading market price). I have argued elsewhere that rules governing tender offers suffer from precisely the problem that Stout identifies. *Federal Tender Offer Law*, *supra* note 12, 739-48.

175. See generally Booth, *supra* note 9, at 639-45.

176. 457 A.2d 701 (Del. 1983).

177. 32 Ohio St. 3d 397, 513 N.E.2d 776 (1987).

178. *Weinberger*, 457 A.2d at 703.

179. See generally Booth, *supra* note 9 (discussing management buyouts in light of the assumption that different shareholders value the stock differently, and thus there is no one fair price). See also PRINCIPLES OF CORPORATE GOVERNANCE: ANALYSIS AND RECOMMENDATIONS § 5.02(a)(1) comment at 30-31 (Tent. Draft No. 5, 1986) ("fairness is often a range, rather than a point"); REVISED MODEL BUSINESS CORP. ACT § 8.61 official comment (Supp. 1989) (same); Chazen, *supra* note 12, at 1439; *Takeover Premiums*, *supra* note 12, at 1249.

180. *Weinberger*, 457 A.2d at 712-15.



had come to Marathon's rescue after an unwanted bid by Mobil.<sup>181</sup> In *Armstrong* a group of Marathon shareholders had dissented from the merger between Marathon and United States Steel, and had opted to receive cash for their shares after judicial appraisal.<sup>182</sup> After an exhaustive (and indeed exhausting) review of theoretical literature, the court ruled that because Marathon stock was actively traded and presumably efficiently priced, the shareholders were entitled only to the market value of the shares before the announcement of the tender offer and subsequent merger.<sup>183</sup> While the decision is diametrically opposed to the Delaware court's landmark decision in *Weinberger* and is utterly inconsistent with the possibility of downward-sloping demand, it is perfectly consistent with the well-accepted notion that because the market is efficient, any premium over the market price ought to be enough to induce a shareholder to tender.<sup>184</sup>

It seems fair to say that *Weinberger* is more in keeping with the market hypothesis, while *Armstrong* is more in keeping with the misinvestment hypothesis. In any event, both of these *recent* cases cannot be correct.<sup>185</sup> The fact that they are both on the books demonstrates that there is considerable disagreement (or confusion) as to why takeovers arise and the source of takeover premiums. Most important, the disagreement illustrates that the way we regulate transactions involving corporate control is affected by the theory through which we view the facts. In light of the evidence in support of the downward-sloping demand hypothesis, this comparison suggests that a reevaluation of the case law in this area is appropriate.

### B. Implications for Regulation of Capitalization

The downward-sloping demand hypothesis has implications outside the area of corporate takeovers. One area of particular interest relates to capitalization levels.

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181. *Armstrong*, 32 Ohio St. 3d at 398-400, 315 N.E.2d at 778-80.

182. *Id.* at 400, 315 N.E.2d at 780.

183. *Id.* at 412-13, 315 N.E.2d at 789-91.

184. See *supra* text accompanying note 70; see also *TSC Indus. v. Northway, Inc.*, 426 U.S. 438, 462-63 (1976).

185. Although not enunciated in the case, one possible justification for the result in *Armstrong* is that the court may have viewed the dissenting shareholders as free riders who figured that in the end they could not get less than the price paid in the merger, but they might get more. As I have argued elsewhere, increasing reliance on shareholder voting may require that the appraisal remedy be somewhat curtailed to prevent shareholders from initially voting against a transaction, in order to have a shot at a still higher price. See Booth, *supra* note 9, at 657-58.

# 1. *The Link Between Shareholder Dividend Preferences and Optimal Capitalization Levels*

As should be clear from the earlier discussion of the irrelevance proposition, the downward-sloping demand hypothesis offers an explanation of why shareholders might value dividends, and, similarly, why share repurchases are a sensible use of company money.<sup>186</sup> The downward-sloping demand hypothesis suggests that investors may be averse to dividends in some cases, but have a strong preference for them in others.<sup>187</sup> Shareholders in a growing company that needs capital will generally be averse to dividends, while shareholders in a mature company that does not need capital will prefer dividends.<sup>188</sup>

Casual observation bears this out. Ordinarily investors react positively by bidding up the market price when a company announces a repurchase program, but on occasion they react negatively. Such price changes can be attributed to signaling. For example, on one occasion when IBM announced that it would begin to repurchase its stock, the price fell because, according to market analysts, the repurchase program indicated that the company did not have the growth potential that investors had thought it had.<sup>189</sup> Such signaling effects are perfectly consistent with the downward-sloping demand hypothesis. Downward-sloping demand derives from the fact that some shareholders care about company-specific risk.

Whether a company is growing or mature, however, the downward-sloping demand hypothesis suggests that shareholders will have a strong preference for issuers to keep the aggregate value of stock outstanding to a minimum. This can be done either through payment of dividends, which reduce the total dollar value of outstanding shares, or through stock repurchases, which reduce the number of shares outstanding. Since equity is the most expensive form of capital, the idea that shareholders prefer management to issue minimal amounts of stock only stands to reason.

By explaining how a company can become overcapitalized with common stock, the downward-sloping demand hypothesis may also solve a problem that has plagued discount theories generally: if discounts motivate takeovers, why do they disappear when the takeover occurs?<sup>190</sup>

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186. See *supra* notes 48-51 and accompanying text.

187. See *supra* notes 58-67 and accompanying text. In fact, this dichotomy may explain why it has never been proven one way or the other that shareholders do or do not have a preference for dividends. See Fischel, *supra* note 23, at 701-02.

188. Cf. *supra* text accompanying notes 161-67.

189. See *IBM's Cash Problem: Too Much to Handle*, BUS. WK., December 5, 1977, at 62; *IBM Says It Purchased 500,000 of Its Shares In First 2 Months of '78*, WALL ST. J., Mar. 9, 1978, at 15, col. 2 (discussing drop in share price after IBM instituted its stock repurchase plan).

190. After all, if they did not, the buyer would find itself discounted and would become a prime

The downward-sloping demand hypothesis suggests an answer to this mystery. It may be that takeover targets are simply overcapitalized with equity, and that savvy bidders use their own excess equity to finance the purchase of target equity, thus reducing the overall equity in the system. Moreover, if indeed shareholders care about how much stock a company has outstanding, several interesting possibilities follow.

## 2. *The Relationship Between Stock and Debt Capitalization*

Some commentators have suggested that takeover premiums are in fact redistributions of wealth from debtholders to stockholders. That is, stockholders are paid a premium for their shares because new management plans to pursue high-risk strategies that promise high profits to them but that also increase the risk of default for debtholders.<sup>191</sup> If the downward-sloping demand hypothesis is correct, however, the gains that come from mergers and acquisitions or restructurings financed by borrowing may not come at the expense of debtholders, even though it may well be true that debtholders are harmed in the process. The gains that shareholders enjoy may simply be an expression of the fact that the fewer shares outstanding, the higher their value. And, the fact that debtholders see the value of their investments fall may be nothing more than the result of the elimination of windfall gains from excess protection against default.<sup>192</sup>

As previously noted, the downward-sloping demand hypothesis explains why new capital is more expensive than existing capital. It also explains how a company can be overcapitalized with common stock, a state of affairs that has sometimes been used as a justification for green-mail.<sup>193</sup> Presumably the demand curve for stock is a good deal steeper than the demand curve for more senior securities, even of the same firm. Demand for all securities of any given issuer probably slopes downward along a continuum for the same reasons that demand for stock slopes downward: because each next unit must be sold to a more reluctant investor, and because each next junior security carries a bit more risk than the one before. Demand for stock probably slopes downward more steeply than demand for other instruments simply because there usually are fewer variables to worry about with regard to other instruments.<sup>194</sup>

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takeover target. Cf. Kraakman, *supra* note 4, at 920-25 (explaining how discounts invite takeover bids).

191. See McDaniel, *supra* note 5, at 304-07 (discussing fiduciary duty owed to bondholders by management in the event of a takeover bid).

192. See *In re Chicago, Mil., St. P. & Pac. R.R.*, 791 F.2d 524, 526-27 (7th Cir. 1986).

193. See, e.g., *Cheff v. Mathes*, 199 A.2d 548, 556 (Del. 1964).

194. See W. KLEIN & J. COFFEE, *supra* note 21, at 232-36 (only risk that matters with regard to traditional debt instruments is default risk, whereas risk of stock relates to volatility of residual returns).

Because of this steeper demand curve, the sale of additional stock will tend to be a much more costly way to raise new capital than the sale of other sorts of instruments. For the same reason, the recent trend toward issuing debt in the form of junk bonds to retire common stock may make more sense than is commonly thought. That is, arguably a company that is overcapitalized with common stock can achieve real gains by substituting the stock with debt capital. Thus, efforts to limit the amount and quality of debt, whether through administrative regulation, enforcement initiative, or expansion of fiduciary duty, should be carefully considered at the very least. Unless one is prepared to say that the market simply does not work in this arena—a highly doubtful proposition when it comes to anything so liquid as securities—the better course is to keep hands off.

### 3. *Regulating Capitalization Levels and the Importance of Efficiency*

If shareholders do indeed care about the quantity of stock outstanding, perhaps management should even be held accountable for issuing too much stock, or for allowing too much stock to remain outstanding when alternative sources of financing are available. However, the idea that there is an optimal mix of debt and equity for any given company, although well accepted by corporate financial officers, is quite controversial within the academy. Due largely to the wide acceptance of the irrelevance proposition, academics generally agree that there is no ideal mix of debt and equity. Indeed, shareholders can themselves adjust management's chosen mix by combining their investment in the company's stock with risk-free government securities, or by borrowing on margin. Yet, few investors can borrow at rates that are comparable to those available to corporations. This suggests that even if investors are indifferent to dividends, they may not be indifferent to how much debt a corporation carries.

The law is not, in fact, far from imposing such capitalization standards. For example, it has long been the rule that a corporation that admittedly has no need for available cash must distribute its cash to the shareholders.<sup>195</sup> A similarly long-standing rule is that management will be held liable for knowingly making investments that cannot generate a return.<sup>196</sup> Recent cases even suggest that the courts will seriously consider charges that management failed to invest at an adequate level of return.<sup>197</sup> However, it is unlikely that the courts will go much further to

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195. See, e.g., *Dodge v. Ford Motor Co.*, 204 Mich. 459, 499-510, 170 N.W. 668, 681-85 (1919).

196. See, e.g., *Litwin v. Allen*, 25 N.Y.S.2d 667, 677-78 (N.Y. App. Div. 1940) (corporate directors have a fiduciary duty to "exercise some degree of skill, prudence and diligence.").

197. See, e.g., *Joy v. North*, 692 F.2d 880, 896 (2d Cir. 1982), cert. denied sub nom. *Citytrust v. Joy*, 460 U.S. 1051 (1983); cf. *Smith v. Van Gorkom*, 488 A.2d 858, 890-93 (Del. 1985) (holding that

expand such standards. The issues involved are traditionally protected from prosecution except at the very edges by the business judgment rule. Because significant regulation is unlikely, market efficiency becomes a very important policy goal. In the absence of regulation, the market must regulate itself, and as a result, accurate indicators of value are important.

In a recent article, Professor Stout argues at length that, because stock does not function as a means of raising capital, efficiency is an unimportant policy goal.<sup>198</sup> She notes that "[t]he economic role which commentators most frequently ascribe to efficient markets is that of determining which firms can raise capital."<sup>199</sup> However, in light of the fact that firms tend to shun new issues of equity in favor of debt or internally generated funds,<sup>200</sup> she concludes that the efficiency of the stock market is unimportant. In fact, she understates the case. In recent years there has been a net decrease in the amount of equity outstanding. That is, in many years corporations have repurchased more shares than they have issued.<sup>201</sup>

Her conclusion, however, that the efficiency of the stock market is unimportant, is simply wrong. In the first place, the idea of the efficient market is not confined to the market for equity securities. It extends to the debt market, and indeed many of its implications depend on the interrelationships between the two markets.

Second, because Stout fails to realize that internal funds are part of equity, her notion that efficiency is unimportant, due to the relatively small market for new issues, is flawed. Equity holders are the residual claimants on the firm. Thus, whatever is left over after all the bills are paid belongs to them. The market determines the value not only of what the company can fetch for another unit of stock, but also of the existing units. And it is the existing units that represent ownership of the largest single source of funding: internally generated funds.

It is precisely because internally generated funds are such an impor-

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directors were liable for their failure to inform themselves of the risks obviously material to an investment decision).

198. Stout, *supra* note 9, at 648.

199. *Id.* at 693.

200. One reason for this is that in the case of companies with equity outstanding, management and investment bankers believe that a new issue has the tendency to depress the price of outstanding stock. *Id.* at 653. Professor Stout also points out that during the years 1965 through 1982, corporations obtained 61% of funding from operations and 36% from borrowing, leaving no more than 3% that may have come from issuing equity. *Id.* at 648 & nn.193-96. The fact that corporations are reluctant to resort to the equity market to raise capital is only natural. Equity holders are, after all, the residual claimants on the firm and therefore take the greatest risk. Moreover, the fact that new equity is more expensive than retained earnings is itself an expression of the downward-sloping demand hypothesis. See *supra* text accompanying notes 49-57.

201. See *supra* note 158.

tant part of equity that market efficiency is, and should be, a goal. Thus, the stock market may be better viewed as a tuning mechanism by which companies continually adjust the level of equity at risk, possibly even primarily for purposes of satisfying senior creditors. In other words, it is arguable that the primary function of stock is as a dynamic indicator of value, rather than as a static source of capital. If so, the efficiency of the stock market is even more important than has often been thought.

### *C. Regulating Market Manipulation*

#### *1. Explaining Stock-Specific Volatility*

With the advent of portfolio investing, which largely ignores the fortunes of particular companies in favor of the overall performance of baskets of stock, equity has become more like debt from the point of view of some investors, and ever fewer investors are willing to assess and assume company-specific risk. The growth of index funds, which eschew all effort to construct a portfolio on the basis of any search for undervalued companies, has been well documented. Given the tremendous influence of financial theory, and indeed its impeccable logic for most investors in most situations, it would be surprising if such a trend did not develop. It stands to reason, however, that if fewer stockholders trade on the basis of company-specific information, their opinions of value will vary more widely and, assuming that the downward-sloping demand hypothesis is correct, the demand curve will have a steeper slope. Thus, the downward-sloping demand hypothesis is much more consistent with market volatility than the level-demand hypothesis. Indeed, as previously noted, the level-demand hypothesis suggests that market volatility is an inexplicable mystery. The downward-sloping demand hypothesis, on the other hand, is consistent with apparently increasing volatility in individual stocks, even at a time when the market as a whole remains relatively stable. Thus, the downward-sloping demand hypothesis may even help explain stock market crashes.<sup>202</sup>

#### *2. Reforming the Law of Manipulation*

The downward-sloping demand hypothesis also explains why the law relating to manipulation has been so confused. Simply put, the courts as well as enforcement agencies have been torn, at least subconsciously, between the idea that stocks have one true price at any given

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202. See R. Booth, Program Trading and the Stock Market 11-13 (1990) (unpublished manuscript) (on file with the author). J. Grundfest, Remarks at the Annual Meeting of the Association of American Law Schools, Section on Business Associations, in Washington, D.C., Jan. 4, 1991 (suggesting theory that crash may have been caused by sudden realization of traders that much recent buying activity had been motivated by hedging strategies rather than by fundamental analysis).

moment, and the idea that the price is in part a reflection of the demand for or supply of the stock.

The Supreme Court's recent decision in *Basic Inc. v. Levinson*<sup>203</sup> asserts that the Securities Exchange Act of 1934 "was designed to protect investors against manipulation of stock prices."<sup>204</sup> However, very few cases of manipulation have been prosecuted. This is presumably because of the sheer difficulty of proving a manipulation case.<sup>205</sup> a multitude of other factors may have caused a stock's price to move.<sup>206</sup>

The real reason, however, for the small number of stock price manipulation cases may be that there are serious doubts about what constitutes manipulation. The Exchange Act only outlaws transactions for the purpose of "pegging, fixing, or stabilizing" the price of a security in contravention of SEC rules.<sup>207</sup> As Justice White points out in his dissent in *Basic*, Congress originally proposed to create a private cause of action for anyone who purchased or sold a security at a price *affected* by a misrepresentation.<sup>208</sup> That provision was omitted from the final act because it did not require reliance. But there was an additional and more fundamental problem with it: all sorts of things, including information, legitimately affect market prices. And often it is quite clear what effect disclosed information will have on the market. Does that mean that knowing disclosure of information that causes a reaction in the market constitutes manipulation? Hardly.<sup>209</sup>

In many cases, whether a given practice does or should constitute manipulation depends directly on whether one subscribes to the downward-sloping demand hypothesis or the level-demand hypothesis. If the downward-sloping demand hypothesis is correct, then a repurchase of shares designed to raise the price of the stock would hardly be thought to be manipulative. The repurchase would simply have the effect of eliminating the lowest valuing investors from the population of current stockholders. It would have no manipulative effect on what stockholders think about the company. On the other hand, if one subscribes to the

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203. 485 U.S. 224 (1988).

204. *Id.* at 230.

205. R. JENNINGS & H. MARSH, *supra* note 113, at 624.

206. *See id.* at 624-25; *cf.* Stout, *supra* note 9, at 696-98 (challenging the assumption that efficient markets accurately value stocks).

207. Securities Exchange Act, 15 U.S.C. § 78i(a)(6) (1988); *see also* Torres, *Are "Slam Dunks" on Troubled Stocks a Foul?*, Wall St. J., Feb. 1, 1991, at C1, col. 3 (regulators are scrutinizing "married puts," which are otherwise legitimate hedging trades that are subject to abuse when exercised in concert with release of bad news or a negative rumor about a company).

208. *Basic Inc. v. Levinson*, 485 U.S. 224, 257-58 (1988) (White, J., dissenting).

209. *See, e.g.*, *Hundahl v. United Benefit Life Ins. Co.*, 465 F. Supp. 1349, 1362 (N.D. Tex. 1979) (holding that market reaction to the information content of management decisions was not a product of manipulation); *see also* Ayers, *Back to Basics: Regulating How Corporations Speak to the Market*, 77 VA. L. REV. 945 (1991) (discussing implications of heterogeneous shareholder opinions for rules relating to corporate press releases).

level-demand hypothesis, the supply of, or demand for, a particular stock should have no effect on its price. Thus, an increase in the price traceable to repurchases might well be thought to be manipulative.

*D. The Fallacious Presumption in Favor of Fixed-Price Offerings*

Whether or not the downward-sloping demand hypothesis is correct, it seems clear that numerous practices and regulations are based on the notion that it is. On the other hand, there are also regulations that are based on the assumption that demand for stock is horizontal. As the preeminent textbook in the law of securities regulation points out, it is impossible to read the Securities Act of 1933 and to come to any conclusion but that Congress adopted the fixed-price offering as the model on which to base the entire disclosure scheme.<sup>210</sup> Moreover, after many years of agonizing, the SEC conferred the power to enforce underwriting agreements on the NASD, whereby all members of an underwriting group must refrain from affording any discount to particular purchasers.<sup>211</sup>

The bias for fixed-price offerings can be explained as rent seeking on the part of the securities industry. By arguing that fixed-price offerings are necessary to provide equal access for small investors, or to allow smaller regional brokerage houses to participate in offerings, the securities industry has prevailed on the regulators to enforce what amounts to a price-fixing scheme and has captured a monopoly-like license for itself.<sup>212</sup> But the fact that a regulatory scheme arises from rent seeking does not change the fact that it is there. Quite to the contrary, it suggests that a market based more on variable prices would emerge if allowed to. In other words, the distinct possibility that federal securities regulation (which in this regard is built on the assumption that demand for stocks is horizontal) acts as an elaborate price-fixing scheme, is, if anything, an

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210. See R. JENNINGS & H. MARSH, *supra* note 113, at 595. Consistent with that view, the SEC prohibited shelf registrations for years. See generally Banoff, *supra* note 45, at 135-45 (discussing the development of shelf registration).

211. See Fixed Price Offerings, *supra* note 113, at 81,761. In addition to fixed-price offerings, federal regulation of tender offers is quite clearly founded on the notion that there is or should be imposed a uniform price for all tendering shareholders. See *Federal Tender Offer Law*, *supra* note 12, at 712 (describing the attempt by Congress to ensure that shareholders faced with a tender offer would be treated equally).

It has also been suggested that the regulation of the securities markets is designed in part to support the price of stock. The relatively high margin requirements in the stock markets (compared to margin requirements in the futures markets) and the rules that restrict program selling seem to confirm this view. Booth, *supra* note 202, at 1-2. If it is the case that securities regulations provide a floor of sorts for the stock market, this too may enhance the illusion that demand for stocks is horizontal rather than downward-sloping.

212. See generally Banoff, *supra* note 45, at 155-76 (discussing the pros and cons of Rule 415).



additional reason to believe that the downward-sloping demand hypothesis may be correct.

### CONCLUSION

The thesis of this Article has been that both of the leading explanations for the discounts that give rise to takeovers are true, and indeed that both explanations are nothing more than alternative formulations of the same basic truth: stocks, like other commodities, have downward-sloping demand curves. If indeed stocks do have downward-sloping demand curves, then the price of a share is established by the opinions of the lowest-valuing current shareholder and the highest-valuing potential shareholder. That is, the price of stock, like other goods, is set at the margin.

The downward-sloping curve predicts that most shareholders, indeed virtually all shareholders, have opinions as to the value of their shares that are higher than the market price. In other words, the market may be said *naturally* to undervalue shares. Moreover, downward-sloping demand also implies a good deal of distrust of management by shareholders. In other words, it may be that the market undervalues stock because the last share is necessarily sold to an investor who is willing to assume the greatest risk of managerial malfeasance. This is to say no more than the obvious: the more stock a company wants or needs to sell, the greater the discount that must be offered. And the more stock a bidder wants to buy, the greater the premium that must be offered. In short, the idea of the downward-sloping demand curve suggests that the mismanagement hypothesis and the market hypothesis for discounts are simply different ways of looking at the same phenomenon.

However, this realization has serious ramifications for the way the securities markets should be regulated. Specifically, in light of the downward-sloping demand hypothesis, a critical reevaluation of tender offers, capitalization, and market manipulation would be a worthwhile undertaking.