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# TAKEOVER PREMIUMS, APPRAISAL RIGHTS AND THE PRICE ELASTICITY OF A FIRM'S PUBLICLY TRADED STOCK

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## INTRODUCTION

If the price of a good rises or falls when a particular firm expands or restricts output, economists say that the firm faces a demand curve that is downward-sloping, and the demand for the firm's product is price-inelastic. For example, OPEC can restrict oil production and cause the world price of oil to rise. If, on the other hand, a firm's output decisions do not affect the price that it can fetch for its product, the firm is said to face a perfectly elastic demand curve and have price-elastic demand. The textbook example is an individual wheat farmer, whose production is too minuscule to affect the market price of wheat. If instead the product under consideration is the common stock of a particular publicly traded corporation, such as General Motors, would we expect the demand that an investor faces for his shares to be relatively price-inelastic or relatively price-elastic? Financial economists generally believe that the demand for a specific publicly traded stock is virtually perfectly price-elastic. This proposition has significant implications for many rules of corporate law that concern the "correct" value of the corporation.

Professor Lynn Stout argues in a recent article in the *Yale Law Journal* that the demand curve for the common stock of a publicly

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traded corporation is downward-sloping.<sup>1</sup> She claims that a critical assumption underlying the capital asset pricing model (CAPM) is that investors have homogeneous expectations about a stock's value, and that this assumption implies that the CAPM will predict each stock to have infinitely (perfectly) price-elastic demand.<sup>2</sup> Stout asserts, however, that this conclusion about infinite elasticity must be false because the assumption of homogeneous expectations is false.<sup>3</sup> She argues that her hypothesis that investors have heterogeneous beliefs about a stock's value "provides a theoretical foundation for the claim that stock market prices may be an unreliable measure of value"<sup>4</sup> and that her related hypothesis that each stock has a downward-sloping demand curve "is not only a viable alternative to the CAPM's horizontal-demand hypothesis," but "a superior alternative."<sup>5</sup>

Stout draws sweeping implications from her conjecture about demand inelasticity. She asserts: "If investor demand for stocks is not perfectly elastic, the arguments of those who call for legal rules prohibiting target management from pursuing defensive tactics in response to premium bids are seriously flawed."<sup>6</sup> She further claims that the substantial premiums that bidders pay in unsolicited corporate control transactions result not from the expectation of operating the target corporation more productively, but simply from the target's share price being bid up as its shares become more scarce in response to the bidder's purchases.<sup>7</sup> Acquisition premiums are "virtually worthless as evidence of the social consequences of takeovers," and the "decade of commentary that attempts to gauge the value of acquisitions by examining their ap-

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<sup>1</sup> Stout, *Are Takeover Premiums Really Premiums? Market Price, Fair Value, and Corporate Law*, 99 *YALE L.J.* 1235, 1239 (1990).

<sup>2</sup> *Id.* at 1245. "Demand is described as 'perfectly elastic' when even a slight rise in price causes consumer demand to fall to zero, while a slight price decline causes demand to expand infinitely." *Id.* at 1239. The CAPM is a general equilibrium model that predicts the average return to a risky security to be a function of, and only of, the riskless rate of interest and the covariance of the security's returns with those of the market portfolio. *See infra* text accompanying notes 21-22. The powerful framework that the CAPM provides and the empirical success that it enjoys make the CAPM one of the most successful models in all of the social sciences.

<sup>3</sup> Stout, *supra* note 1, at 1238-39.

<sup>4</sup> *Id.* at 1289.

<sup>5</sup> *Id.* at 1258.

<sup>6</sup> *Id.* at 1269.

<sup>7</sup> *Id.* at 1263-65.

parent returns to target shareholders has, quite simply, been looking in the wrong place."<sup>8</sup>

Instead, Stout argues, one must compare the welfare gains to those shareholders who choose to sell at a premium with the welfare loss of each especially optimistic shareholder who declines to tender because he subjectively values his shares even more highly than the bidder's price.<sup>9</sup> Stout applies this model of subjective valuation to the appraisal remedy.<sup>10</sup> Although Stout concedes the practical impossibility of an appraisal rule based on subjective value, she nonetheless disputes the correctness of the stock market exception to the appraisal remedy, under which dissenting shareholders of publicly traded corporations listed on national exchanges are entitled to being bought out only at the market price, which will tend to be the (premium) price paid to tendering shareholders. With no evident theoretical basis, Stout then proposes that minority shareholders should be compensated according to the "objective estimates of experts," which estimates presumably lie somewhere between the post-announcement market price and the reservation price of some, if not all, of the inframarginal shareholders.<sup>11</sup> What Stout fails to provide, however, is an explanation for why any departure from market value is appropriate for the appraisal remedy as applied to publicly traded corporations.

Most of Stout's claims are wrong. She misinterprets much of the last thirty years of thinking and research in corporate finance and misses some of the more important facts and ideas that illuminate the issues that she addresses. In Part I of this Article, we show that Stout's claim of less-than-infinite price elasticity does not ad-

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<sup>8</sup> *Id.*

<sup>9</sup> *Id.* at 1267, 1270-71.

<sup>10</sup> The appraisal remedy "available to shareholders who dissent from a merger or other organic corporate change is fundamentally concerned with the relationship between the market price for a stock and its intrinsic value." *Id.* at 1284-85. "The typical appraisal statute entitles shareholders who dissent from a merger, reorganization, or sale of substantially all the corporation's assets to reject the express terms of the transaction approved by the majority and demand payment from the corporation of the 'fair value' of their shares as determined in a judicial proceeding." *Id.* at 1285-86.

<sup>11</sup> *Id.* at 1292. The marginal investor is the investor who is willing to pay today's price for a security, but not more. If the price rises, other things being equal, he will sell the stock and invest elsewhere. The inframarginal investor believes the stock to be worth more than today's price and consequently will continue holding until the price rises to his subjective value, at which point he becomes the marginal investor. Unless otherwise indicated, the relevant market price to which we refer is the post-announcement tender offer price.

vance her thesis that the market price of a security is an unreliable and unfair measure of value. Infinite price elasticity of a firm's stock is not implied by either the CAPM or the efficient capital market hypothesis (ECMH). The new-information hypothesis of stock price changes offers a more plausible explanation for events that Stout claims are more readily explained by price pressure resulting from less than infinitely elastic demand. In Part II, we explain why the appraisal remedy, and the stock market exception to it, are wealth-maximizing features of corporate law that enhance the liquidity of ownership and control of the publicly traded corporation. We further explain that Stout's appraisal rule, which would ignore market value even for publicly traded corporations, is flawed in theory and unworkable in practice. If adopted, Stout's rule would diminish the liquidity (and hence the value) of corporate ownership and control, make management's performance of its fiduciary duty in unsolicited corporate control transactions nonfalsifiable and, thus, diminish shareholder wealth.

### I. THE FINANCIAL RUDIMENTS OF CORPORATE LAW

Five months after the publication of Stout's article, Harry Markowitz and William Sharpe were awarded the Nobel Prize in economics for their contribution to the theory of finance.<sup>12</sup> Their contribution has greatly shaped scholarly thought on corporate law in the past two decades. Stout argues that she has devised a superior alternative to the model developed by Markowitz and Sharpe for the pricing of capital assets and that her model yields startling results. We disagree and believe instead that Stout's ambitious claims reveal a misunderstanding of the theory of corporate finance.

#### A. *Efficient Markets, Portfolio Theory and the Capital Asset Pricing Model*

The work on efficient markets pre-dates the CAPM, and even portfolio theory, by half a century. A capital market is said to be "efficient" if the strategy of "buy and hold" cannot be outdone by buying and selling securities on the basis of various sorts of infor-

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<sup>12</sup> The third co-winner was Merton Miller. See Jarrell, *En-Nobeling Financial Economics*, Wall St. J., Oct. 17, 1990, at A14, col. 4.

mation.<sup>13</sup> The earliest efficient-market studies—all empirical analyses of the serial properties of asset prices—examined whether past price and volume information could be used to predict future prices. The first well-known paper, by Louis Bachelier, asked whether security prices exhibited zero serial correlation or, alternatively, a random walk.<sup>14</sup> The research, conducted mostly by statisticians, continued in this same vein until the 1950s. The explanation of the observed results was so simple that it defies identification with any individual theorist: There is no serial correlation in returns on securities—nor any predictable patterns in prices—because, “If we knew that the price would rise, it would have already risen.” If price patterns existed, investors would buy (or sell short) securities to exploit those patterns and continue buying (or selling) until the patterns were no longer present—and consequently until the information, having been fully exploited, was no longer useful.

This early research addressing the question of whether one could beat the market using price and volume information came to be called the “weak form” of the ECMH. Next came the “semi-strong form,” which hypothesized that not only were price and volume information useless in devising superior investment strategies, but all *publicly available* information was useless as well. The story was the same: If we knew that the price would rise (due to some piece of information), it would have already risen. At the same time, researchers began developing a “strong form” hypothesis that addressed the question of whether prices reflect all information, public or not.<sup>15</sup>

Once research shifted to these event-oriented versions of the ECMH, the appropriateness of the assumption of instantaneous reaction of markets to news could be examined. The earliest studies of stock splits, earnings announcements and other price-influencing events showed that many announcements do generate an

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<sup>13</sup> See Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 J. FIN. 383 (1970); Gilson & Kraakman, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549, 554-65 (1984). This usage of “efficiency” differs from the word’s usage in price theory, where efficiency implies that all resources are allocated to their highest-valued use.

<sup>14</sup> L. BACHELIER, *THEORY OF SPECULATION* (1900), reprinted in *THE RANDOM CHARACTER OF STOCK MARKET PRICES* 17 (P. Cootner ed. 1964).

<sup>15</sup> The literature presenting and supporting the weak, semi-strong and strong forms of the ECMH is surveyed in Fama, *supra* note 13, and Gilson & Kraakman, *supra* note 13.

immediate flurry of trading, often accompanied by an unusually high return variance for a day or two.<sup>16</sup> But neither during nor after that flurry is it possible to predict the future movement of the price contingent on the event. The correct interpretation of evidence on the weak and semi-strong versions of the ECMH is not that all securities prices are "right" at all times, but that prices are unbiased predictors of future values. Securities on average are priced correctly as present values of the cash flows currently expected to be received on them. Sometimes they may be too high or too low, but mere mortals cannot tell when; the prices are sufficiently accurate in reflecting currently available public information, thus allowing no systematic strategy for predicting which way prices will subsequently move.

Although research supports the hypothesis that securities markets are efficient in the weak and semi-strong form, research has refuted the strong-form hypothesis. Information that is not publicly available can be used to earn abnormally high returns.<sup>17</sup> The many semi-strong form studies of various sorts of announcements imply forcefully that someone possessing information before its public announcement could earn abnormal returns by buying or shorting before the announcement is made. For example, studies of price movements before tender offers show that prices and volumes both rise, suggesting strongly that information is leaking out and being acted upon.<sup>18</sup> Prices do not necessarily reflect everything known by insiders; inside information may not be reflected at all, or only partially reflected, in securities prices.

This research on the ECMH subsequently led to the formation of efficient portfolio theory and the CAPM. Harry Markowitz's pioneering insight was to exploit the covariances among security returns to identify those portfolios having the maximum expected return for a given risk (variance of return) or the minimum variance for a given expected return.<sup>19</sup> Markowitz called these portfo-

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<sup>16</sup> See generally Ball & Brown, *An Empirical Evaluation of Accounting Income Numbers*, 6 J. ACCT RES 159 (1968); Fama, Fisher, Jensen & Roll, *The Adjustment of Stock Prices to New Information*, 10 INT'L ECON. REV. 1 (1969).

<sup>17</sup> E.g., Seyhun, *Insider's Profits, Costs of Trading, and Market Efficiency*, 16 J. FIN. ECON. 189, 196-99, 210-11 (1986).

<sup>18</sup> Jarrell & Poulsen, *Stock Trading Before the Announcement of Tender Offers: Insider Trading or Market Anticipation?*, 5 J. LAW, ECON. & ORG. 225, 226-29 (1989).

<sup>19</sup> Markowitz, *Portfolio Selection*, 7 J. FIN. 77, 79-82 (1952).

lios "efficient,"<sup>20</sup> but this portfolio theory was not a theory of prices or returns. It was simply an algorithm for computing an optimal portfolio given estimates of the means, variances and covariances of returns on individual securities. The CAPM was the natural extension of Markowitz's portfolio theory. William Sharpe, John Lintner and Jack Treynor—each of whom derived the CAPM independently<sup>21</sup>—simply posed the following questions: What if everybody follows Markowitz's method for computing an optimal portfolio? What will be the nature of the resulting equilibrium?<sup>22</sup> In order to make such a model tractable, it was assumed that everyone in the market has the same opinions on means, variances and covariances of returns. This simplification has come to be called the "homogeneous beliefs" assumption.

The CAPM yielded a startling insight: Average return will indeed be related to risk if market participants are risk averse; but only nondiversifiable risk matters. A security that is risky in isolation, but uncorrelated with the market, has nothing but diversifiable risk, and it will earn a return on average no higher than the return on riskless investments. The value of the CAPM lies not in the veracity of the assumptions used to derive it, such as homogeneous beliefs, but rather in its success in helping to explain and understand the pricing of securities. Can investors who are not insiders improve on the strategy of buying and holding a fully diversified portfolio? According to the voluminous efficient markets literature made possible by the CAPM, the answer is a resounding no.

### B. Stout's Understanding of Finance

Stout's assault on the proposition that market prices are fair prices turns on establishing that the price elasticity of demand for securities is not infinite. Stout claims victory after she has (in her view) falsified the proposition that the demand for a particular security is infinitely price-elastic. Stout, however, seems confused

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<sup>20</sup> *Id.* at 82.

<sup>21</sup> Lintner, *The Valuation of Risk Assets and the Selection of Risky Investments in Stock Portfolios and Capital Budgets*, 47 *REV. ECON. & STATISTICS* 13 (1965); Sharpe, *Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk*, 19 *J. FIN.* 425 (1964). Treynor's article was not published. See R. BREALEY & S. MEYERS, *PRINCIPLES OF CORPORATE FINANCE* 129 n.17 (2d ed. 1984).

<sup>22</sup> Lintner, *supra* note 21, at 13-15; Sharpe, *supra* note 21, at 426-27.



about which tenet of finance implies perfectly elastic demand. She asserts: "The hypothesis that investor demand for particular stocks should be perfectly elastic (also called the 'horizontal demand' hypothesis) is a necessary corollary of the CAPM."<sup>23</sup> Taken by itself, the CAPM in no way implies perfect elasticity. The CAPM would be empty without risk aversion; and with risk aversion, any formal derivation of demand for an individual security would show a clearly less than infinitely elastic demand curve. Stout seems to understand that risk aversion implies imperfectly elastic demand,<sup>24</sup> but not that the CAPM entails risk aversion.

1. *Financial Substitutes*. Although the CAPM does not imply perfect elasticity of demand for financial securities, elasticity depends on the availability of substitutes, and the only qualities that matter in comparing financial substitutes are mean and covariance. Indeed, the great success of the CAPM lies in its having identified covariance as the only factor that explains average return. With several thousand publicly traded securities available, the departure from perfect elasticity for any one such security that could be accounted for by risk aversion must be minimal.

Stout, however, believes that "the idea of perfect substitutability [of securities] is counterintuitive" because "IBM and ITT are very different firms, with different products, management, and prospects."<sup>25</sup> This statement confuses substitutability in the capital market with substitutability in the goods market and in the labor market. The demand for residual net cash flows having a particular mean and covariance with the market should be unrelated either to the specific assets owned or employed by the corporation or to the demand elasticity for the goods produced by the corporation.<sup>26</sup> There is no reason to suppose that a firm with a monopoly over the production of a particular good will have a stock with mean and covariance that make it an imperfect substitute for the stocks of many other corporations. Moreover, the premise of Stout's argument ignores that even a firm differentiated from its nearest com-

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<sup>23</sup> Stout, *supra* note 1, at 1239.

<sup>24</sup> *Id.* at 1247.

<sup>25</sup> *Id.* at 1243.

<sup>26</sup> Cf. Stillman, *Examining Antitrust Policy Towards Horizontal Mergers*, 11 J. FIN. ECON 225 (1983) (finding, in a study of 11 transactions, virtually no evidence of positive abnormal returns in the stocks of firms that entered into horizontal mergers that assertedly reduced competition).

petitors in the goods market does not necessarily wield market power there. The price elasticity of demand for a firm's product is a function of the price elasticity of demand for the market as a whole, the firm's share of that market (however narrowly or broadly defined) and the concomitant price elasticity of supply for the fringe of actual or potential competing firms.<sup>27</sup> Similarly, there is no reason to suppose that the value of firm-specific assets will not be reflected in the mean and covariance of the firm's stock. MCA owns large tracts of Los Angeles real estate, and Upjohn owns the patent for an anti-baldness drug. Whether an investor regarded MCA stock (before its acquisition by Matsushita) as a financial substitute for Upjohn stock would not have required the investor to ponder the relative merits of baldness remedies and real estate overlooking the Hollywood Freeway. The relevant question was which of the two stocks had a higher mean return for a given covariance with the market.

The vast number of financial substitutes provides an additional insight on the limited degree to which risk aversion implies price-inelastic demand for a firm's stock. Even an individual investor who concludes that ten percent of his diversified portfolio should be in stocks of electric utilities can choose between Southern California Edison, Pacific Gas & Electric and scores of other corporations. Although the investor may be disinclined to buy any additional shares of, for example, PG&E after he has filled ten percent of his portfolio with such shares, his antecedent decision to buy PG&E stock rather than the stock of another electric utility will have reflected the high degree of demand substitutability among electric utility stocks, a phenomenon that is fundamentally inconsistent with this investor facing a demand curve for PG&E stock that is downward-sloping to any significant degree.

2. *Risk Aversion.* The principle of portfolio diversification provides Stout her strongest argument that there exists—for an individual investor—a downward-sloping demand curve for a corporation's stock. Stout argues correctly that a downward-sloping demand curve can be inferred from the need to compensate individual investors for the risk-bearing entailed in underdiversifying their portfolios. She asserts that, although an individual risk-averse investor

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<sup>27</sup> Landes & Posner, *Market Power in Antitrust Cases*, 94 HARV. L. REV. 937, 945 (1981).

may consider a particular stock to be significantly underpriced, at some point the benefits of buying more of it are no longer enough to compensate her for the increased risk of concentrating her portfolio. She will stop buying the stock although she still perceives it to be underpriced. . . . To induce such an investor to purchase more, the price of the stock must be lowered further.<sup>28</sup>

Stout is describing the principle of marginal variance: An investor's demand to hold more shares of a specific corporation is inversely related to the current degree of firm-specific risk in his portfolio.<sup>29</sup> Marginal variance is analogous to a tax on the price of a firm's stock—a tax whose rate varies from one investor to the next, declining exponentially with the number (and covariance) of different stocks in the investor's portfolio. An investor's demand to hold a particular stock, therefore, depends not only on the price of that stock, but also on the rate at which the purchase of that stock taxes his overall portfolio by making it riskier. Thus, an individual investor's demand for a particular stock is really a function of the stock price and its marginal contribution to the variance of that investor's portfolio. But the empirical question then arises: How large must an investor's portfolio be before this implicit tax on the price of a particular stock becomes *de minimis*? What scale must the investor's portfolio have in order to permit the investor to acquire additional shares of that particular stock without compromising diversification to an appreciable extent?

The significance of portfolio scale calls attention to an important caveat needed when drawing conclusions about the aggregate demand elasticity for a particular stock. The statistical properties of covariance imply that firm-specific risk in an equal-weighted portfolio will decrease, but at a rapidly decreasing rate, with the number of stocks. Thus, a portfolio's minimum scale for diversifying away a large specified percentage (for example, ninety percent) of firm-specific risk is relatively small. Consequently, it is one thing to say that, due to portfolio diversification constraints, an individual investor has a price-inelastic demand to hold additional shares of a specific corporation; it is quite another thing to say, as Stout

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<sup>28</sup> Stout, *supra* note 1, at 1246-47.

<sup>29</sup> W. SHARPE, INVESTMENTS 155-56 (3d ed. 1985).

does, that the aggregate demand (summed over all investors) for that same stock is price-inelastic. Stout asserts that, because "the individual demand functions of even optimistic investors are downward-sloping" and "[b]ecause total market demand is nothing more than the sum of individual demand curves, the aggregate demand function must be downward-sloping as well."<sup>30</sup> Stout, however, mistakenly assumes that all investors have portfolios of the same relatively small scale. To the contrary, the existence of mutual funds makes it unnecessary for individual investors to construct their own diversified portfolios. Indeed, the investors most likely to have price-inelastic demand functions for a particular stock due to risk diversification considerations are the small investors who can benefit most from investing through a mutual fund and dispensing with investing directly in individual stocks.

Consequently, when we horizontally sum, on a value-weighted basis, the demand curves of individual investors for the stock of a specific corporation, we would expect the aggregate demand curve to be highly elastic over a substantial range—because mutual funds and pension funds will be able to hold relatively large numbers of such shares due to the enormous scale of their diversified portfolios. For these institutional investors, the marginal variance for their portfolios of acquiring additional shares of a particular stock is negligible. In short, given the relative magnitude of the portfolios of institutional investors, the goal of portfolio diversification does not necessarily imply that the aggregate demand curve for a particular stock—which is the relevant demand curve for determining market price—will be price-inelastic to any significant degree.

3. *Price Pressure or New Information?* A recurring problem raised by the empirical studies upon which Stout relies is whether the perceived price effects of large stock transactions (and other atypical events) are evidence of a price-inelastic demand for the firm's stock or whether such transactions in themselves constitute important pieces of new information that signal to the market the firm's future net cash flows. The difficulty of distinguishing the new-information hypothesis from the price-pressure hypothesis is twofold. First, the events in question generate price movements in the same direction for either theory. Second, the price-pressure hy-

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<sup>30</sup> Stout, *supra* note 1, at 1247 n.62.

pothesis begs the question as to why there is new price pressure. Suppose a firm buys back its own stock. The price-pressure theory would predict that, because there is a new buyer, the price should rise. But why should there be a new buyer? The most direct answer is that the buyer has a new opinion (has learned) that the stock is undervalued. But if so, we have returned to the new-information theory.

Although Stout concedes that it is difficult to distinguish price pressure from new information,<sup>31</sup> she nonetheless asserts that "the empirical evidence provides strong support for the downward-sloping demand hypothesis."<sup>32</sup> That claim is false. Except for the studies examining the inclusion of a corporation's stock in the S&P 500 Index, all of the studies that Stout cites as empirical evidence supporting her theory of downward-sloping demand in fact comport with hypotheses that rely on, rather than reject, the CAPM.<sup>33</sup>

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<sup>31</sup> *Id.* at 1253.

<sup>32</sup> *Id.* at 1257.

<sup>33</sup> Stout begins her empirical argument by citing Myron Scholes' study of secondary distributions of outstanding stock held by large shareholders. Scholes, *The Market for Securities: Substitution Versus Price Pressure and the Effects of Information on Share Price*, 45 *J. Bus.* 179 (1972). Stout concedes that "Scholes concluded that new information and not price pressure caused the stock price declines he documented, because the size of the trade did not seem correlated with the degree of price shift observed and because the price change appeared to be permanent." Stout, *supra* note 1, at 1253 n.91 (citing Scholes, *supra*, at 193-95). Yet Stout evidently believes that Scholes erroneously interpreted his own empirical results.

Stout also implies that "[c]orporations repurchase their own shares in order to raise prices." Stout, *supra* note 1, at 1243. She ignores that stock repurchases are a substitute for dividends and may enable managers to dispose of free cash flows in the manner most likely to maximize shareholder wealth. See Jensen, *Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers*, 76 *AM. ECON. REV. PAPERS & PROC.* 323 (1986) [hereinafter Jensen, *Agency Costs of Free Cash Flow*]. The announcement of a stock repurchase, therefore, is itself a new piece of information to the market that indicates that its valuation of the firm has been too low in view of what management, as insiders, know about the firm's future net cash flows. Asquith & Mullins, *Equity Issues and Offering Dilution*, 15 *J. FIN. ECON.* 61 (1986); Asquith & Mullins, *Signalling with Dividends, Stock Repurchases and Equity Issues*, 15 *FIN. MGMT.* 27 (Autumn 1986); Barclay & Smith, *Corporate Payout Policy: Cash Dividends versus Open-Market Repurchases*, 22 *J. FIN. ECON.* 61 (1988); Netter & Mitchell, *Stock-Repurchase Announcements and Insider Transactions After the October 1987 Stock Market Crash*, 18 *FIN. MGMT.* 84 (Autumn 1989). Stout also cites studies on the seasoned issuance of stock by the corporation—Asquith & Mullins, *Equity Issues and Offering Dilution*, *supra*; Kraus & Stoll, *Price Impacts of Block Trading on the New York Stock Exchange*, 27 *J. FIN.* 569 (1972)—that are consistent with a new-information hypothesis. Stout, *supra* note 1, at 1253 nn.91-93.

Stout asserts that "studies have found that 'neglected stocks' which are not closely fol-

At first, the results of the index-inclusion studies seem anomalous in light of the evidence supporting the CAPM. Andrei Shleifer discovered that stocks that are newly included in the S&P 500 Index earn a statistically significant positive abnormal return at the announcement of the inclusion.<sup>34</sup> Shleifer regarded this empirical result as being consistent with the hypothesis that the aggregate demand curve for a particular stock is downward-sloping, and inconsistent with the hypothesis that inclusion of the stock in the Index conveyed new information to the market about the future net cash flows of the issuing corporation.<sup>35</sup> However, the cumulative abnormal return that Shleifer observed declines both in magnitude and in statistical significance at five, ten, twenty and sixty days after the date of the stock's inclusion in the S&P 500 Index; the cumulative abnormal return ceases to be statistically significant by the twenty-first day of the stock's inclusion.<sup>36</sup> A similar study of changes in the S&P 500 list, also cited by Stout, found that a 3% price increase was almost fully reversed after two weeks.<sup>37</sup>

Stout maintains that the price changes in the index-inclusion studies "are unlikely to be the result of new information."<sup>38</sup> Even if that claim were true, these studies do not substantiate Stout's downward-sloping demand hypothesis. If price pressure from excess demand to hold a stock included in the S&P 500 Index really caused the abnormal returns observed in Shleifer's study, one would expect those scarcity rents to last more than three weeks—since the stock almost certainly would continue to be in-

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lowed by investors or analysts provide higher risk-adjusted returns than stocks that are more widely followed," and that "[w]hile those findings conflict with the CAPM, they make sense under the downward-sloping demand hypothesis." *Id.* at 1256. The principal study upon which she relies, however, contains no empirical evidence. *Id.* at 1256 n.110 (citing Miller, *Bounded Efficient Markets: A New Wrinkle to the EMH*, 13 J. PORTFOLIO MGMT. 4, 9 (Summer 1987)). Similarly, Stout asserts that empirical evidence on the underperformance of new issues supports her hypothesis of the downward-sloping demand curve, Stout, *supra* note 1, at 1257, yet she cites no empirical studies on the subject.

<sup>34</sup> Shleifer, *Do Demand Curves for Stocks Slope Down?*, 41 J. FIN. 579 (1986).

<sup>35</sup> *Id.* at 586.

<sup>36</sup> *Id.* at 583 & Table II. Stout acknowledges this aspect of Shleifer's results, but she does not recognize that it undermines her claim of significant price pressure. Stout, *supra* note 1, at 1254 n.94.

<sup>37</sup> Harris & Gurel, *Price and Volume Effects Associated with Changes in the S&P 500 List: New Evidence for the Existence of Price Pressures*, 41 J. FIN. 815 (1986).

<sup>38</sup> Stout, *supra* note 1, at 1258.

cluded in the Index longer than that short period of time.

*C. Do Takeover Premiums Reflect Value Creation?*

Through an evolutionary process, firms gravitate toward efficient ownership structures.<sup>39</sup> In particular, it is efficient to divide functions between investors and managers even though investors consequently must expend resources to specify and monitor the performance of managers.<sup>40</sup> Someone possessing capital may lack management expertise, and someone possessing management expertise may lack capital or may wish to avoid the risks of owning the productive assets that he manages. Separating ownership from control also facilitates risk diversification, since an investor can reduce the specific risk facing his portfolio by placing a relatively small share of his investment capital in each of a large number of investments. However, the more that an investor reduces the financial risk facing his portfolio by spreading his funds across many firms that seek investment capital, the smaller will be the proportion of his total wealth that depends on the performance of any given firm and the smaller, therefore, will be his incentive to oversee or participate in the management decisions facing any one of those numerous firms. "Since he holds the securities of many firms precisely to avoid having his wealth depend too much on any one firm," Eugene Fama observes, "an individual security holder generally has no special interest in personally overseeing the detailed activities of any firm."<sup>41</sup>

The separation of ownership and control, of course, does not preclude the firm's owners from designing the compensation for its managers to be an increasing function of the firm's net cash flows, an objective that could be achieved by giving these managers stock.<sup>42</sup> The purpose of such stock ownership by management is to

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<sup>39</sup> There is a burgeoning literature in this area. For the pioneering works, see Alchian, *Uncertainty, Evolution, and Economic Theory*, 58 J. POL. ECON. 211 (1950); Coase, *The Nature of the Firm*, 4 *ECONOMICA* (n.s.) 386, 404-05 (1937). For an exhaustive synthesis surveying several decades of thought, see O. WILLIAMSON, *THE ECONOMIC INSTITUTIONS OF CAPITALISM* (1985).

<sup>40</sup> See Fama & Jensen, *Separation of Ownership and Control*, 26 J. LAW & ECON 301 (1983); Jensen & Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305, 308-10 (1976).

<sup>41</sup> Fama, *Agency Problems and the Theory of the Firm*, 88 J. POL. ECON. 288, 291 (1980).

<sup>42</sup> See generally Demsetz & Lehn, *The Structure of Corporate Ownership. Causes and Consequences*, 93 J. POL. ECON. 1155 (1985); Jensen & Murphy, *Performance Pay and Top-*

align managers' incentives with those of the firm's shareholders, thereby reducing moral hazard. But another important mechanism for reducing moral hazard associated with the separation of ownership and control is the market for corporate control, in which management can be displaced by investors who acquire enough voting shares to elect a majority of the corporation's directors.

An extensive literature maintains that potential competition from alternative management teams is an important means to induce managers to maximize share value.<sup>43</sup> In anticipation of improving share value, bidders are willing to offer premiums to the target's shareholders. The value-creation hypothesis of takeover premiums is often oversimplified to imply that takeovers principally dislodge managers who are incompetent, indolent or disloyal. A more provocative rationale not dependent on self-dealing or sloth is Michael Jensen's theory of the agency costs of free cash flow.<sup>44</sup> Curiously, Stout never discusses Jensen's theory in her examination of the rationales for why takeover premiums represent the creation of value.

Jensen defines free cash flow as "cash flow in excess of that required to fund all of a firm's projects that have positive net present values when discounted at the relevant cost of capital."<sup>45</sup> He further posits that "[s]uch free cash flow must be paid out to shareholders if the firm is to be efficient and to maximize value for shareholders."<sup>46</sup> The payout to shareholders of free cash flow reduces the amount of corporate resources subject to management's discretion and obligates management to submit to the scrutiny of the capital markets in the future when seeking funding for entirely new projects. Similarly, debt-for-stock exchanges can substitute for dividend payouts and reduce the agency costs of free cash flow. Thus, takeovers and going-private transactions may create value by causing management (either incumbent managers or the bidder's newly installed managers) to leverage the corporation

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*Management Incentives*, 98 J POL ECON. 225 (1990).

<sup>43</sup> The pioneering work is Manne, *Mergers and the Market for Corporate Control*, 73 J. POL. ECON. 110 (1965). For a survey of subsequent literature, see Jensen, *Takeovers: Their Causes and Consequences*, 2 J ECON. PERSPECTIVES 21 (1988).

<sup>44</sup> Jensen, *Agency Costs of Free Cash Flow*, *supra* note 33.

<sup>45</sup> Jensen, *supra* note 43, at 28.

<sup>46</sup> *Id.*



and thus commit itself to paying out future free cash flow.<sup>47</sup>

Why would a bidder make such a discretion-reducing commitment? The successful takeover bidder is future insider: Only she knows what she is going to do differently in the management of the target to justify the share premium that she is willing to pay. It is simply false for Stout to assert that in an efficient market "no rational buyer would offer to pay more" than the current market price for the target corporation.<sup>48</sup> In making a bid, the would-be insider is making an important announcement, and the rise in the target's market price is just as easily explained by new information as by price pressure.

Why, though, do the gains from a takeover go to the target's shareholders? Because, especially since the enactment of the Williams Act,<sup>49</sup> the market for takeovers is competitive. If some innovation will raise the value of the target, the suggestion to that effect implied by the bid stirs curiosity and speculation until the price of the target rises to the full value (on average, but with considerable inaccuracy or variation around that average) of such innovation. The bidder thus pays a competitive price. Stout, however, asserts: "If premiums reflect the bidding firm's ability to improve the target's earnings, there seems to be no reason why bidders should voluntarily pass those gains on to target shareholders."<sup>50</sup> Bidders do not *voluntarily* pass on the gains to target shareholders—they have no choice. Unless a bidder bids full value for the target with the innovation, someone will outbid him. In short, the observation that the gains from an unsolicited tender offer predominantly redound to the target's shareholders is not a puzzle.

Stout asks why reduced agency costs are not discernible in the post-takeover operating results of targets. She asserts that "[a]ccounting studies have failed to produce evidence that takeover targets become either more or less profitable under new management."<sup>51</sup> This assertion is no longer true, however, as several recent studies relying on accounting data have found improved

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<sup>47</sup> *Id.* at 30; Lehn & Poulsen, *Free Cash Flow and Stockholder Gains in Going Private Transactions*, 44 J. FIN. 771 (1989).

<sup>48</sup> Stout, *supra* note 1, at 1259.

<sup>49</sup> Pub. L. No. 90-439, 82 Stat. 454 (1968) (codified as amended at 15 U.S.C. §§ 78m(d)-(e), 78n(d)-(f) (1988)).

<sup>50</sup> Stout, *supra* note 1, at 1262-63.

<sup>51</sup> *Id.* at 1262.

profitability following a control transaction.<sup>52</sup> Even before these recent studies, Richard Roll tested and rejected the hypothesis that some corporate acquisitions are motivated by the hubris of senior management, who in their inflated self-confidence overpay for their targets.<sup>53</sup> If the hubris hypothesis were correct, then some takeover premiums would be, after nontrivial transactions costs had been deducted, merely wealth transfers from the bidder's shareholders to the target's shareholders.

Although Stout correctly disputes the plausibility of bidder overpayment, she nonetheless asks "why an efficient market would not penalize bidders for such profligate behavior" and asserts that "[o]verpriced bids should trigger declines in the bidding firm's stock; yet, acquiring firms' shares appear to be largely unaffected by acquisitions."<sup>54</sup> Simply paying a competitive price is not, however, profligate; and paying too high a price is penalized. Stout evidently is unaware that bidders that bid too much pay the ultimate price of becoming targets themselves. To test this hypothesis, Mark Mitchell and Kenneth Lehn studied a portfolio in which each firm had an abnormal negative return on the date that it announced its offer for another firm. They found that firms in this portfolio subsequently were more likely than other publicly traded firms to receive unsolicited takeover bids.<sup>55</sup> Another empirical study supports the related hypothesis that management is less likely to undertake value-reducing acquisitions if managers themselves own large amounts of their firms' equity; the percentage of equity held by management of the bidding corporation is positively correlated with positive abnormal returns for the bidding corporation in takeovers.<sup>56</sup>

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<sup>52</sup> See, e.g., Kaplan, *The Effects of Management Buyouts on Operating Performance and Value*, 24 J. FIN. ECON. 217 (1989); Lichtenberg & Siegel, *The Effect of Ownership Changes on the Employment and Wages of Central Office and Other Personnel*, 33 J. LAW & ECON. 383 (1990); Muscarella & Vetsuypens, *Efficiency and Organizational Structure: A Study of Reverse LBO's*, 45 J. FIN. 1389 (1990); Smith, *Corporate Ownership Structure and Performance: The Case of Management Buyouts*, 29 J. FIN. ECON. (forthcoming 1991).

<sup>53</sup> Roll, *The Hubris Hypothesis of Corporate Takeovers*, 59 J. BUS. 197 (1986).

<sup>54</sup> Stout, *supra* note 1, at 1263.

<sup>55</sup> Mitchell & Lehn, *Do Bad Bidders Become Good Targets?*, 98 J. POL. ECON. 372 (1990). See also Jarrell & Poulsen, *The Returns to Acquiring Firms in Tender Offers: Evidence from Three Decades*, 18 FIN. MGMT., Autumn 1989, at 12, 14.

<sup>56</sup> Lewellen, Loderer & Rosenfeld, *Merger Decisions and Executive Stock Ownership in Acquiring Firms*, 7 J. ACCT. & ECON. 209 (1985).

In short, Stout's concerns about takeover premiums can be addressed as follows. Does it make sense for bidders to pay more than the pre-announcement market price? Yes. Does it make sense that, on average, all of the gains go to the target firm? Again, yes, because the takeover market is just a variation on the competitive stock market. Are bidders penalized for paying too much? Again, yes, because bidders whose acquisitions perform poorly become targets themselves. And, finally, what, if anything, distinguishes profitable from unprofitable bidder firms? Their managers have substantial personal stakes in them.

## II. THE IMPLICATIONS FOR SHAREHOLDER WEALTH OF BASING APPRAISAL IN PUBLICLY TRADED CORPORATIONS ON A PRICE EXCEEDING MARKET VALUE

Stout is concerned that bidders exploit a target's minority shareholders and that prevailing doctrines of corporate law fail to provide minority shareholders adequate appraisal rights in tender offers. She believes that the stock market exception, which limits the appraisal remedy to shareholders of firms not listed on national exchanges, is "an unwise doctrinal development."<sup>57</sup> Instead, Stout proposes an appraisal rule for a publicly traded corporation based on the corporation's "intrinsic worth," to be determined by the "objective estimates of experts,"<sup>58</sup> and she states that this value "can differ from the merger price approved by a controlling majority, the prevailing market price, *and* the subjective expectations of shareholders."<sup>59</sup> Presumably, professors of finance and economics would be retained in all cases to opine on the fairness of appraisals, for Stout concludes: "It is this 'fair'—that is to say, expert—valuation to which dissenting shareholders are entitled."<sup>60</sup>

### A. *Stout's Subjective Welfare Tradeoff*

Stout believes that, as a theoretical matter, each shareholder's subjective valuation must be fully compensated in a freezeout transaction before it can be concluded that a corporate control transaction has increased social welfare. She regards the forced

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<sup>57</sup> Stout, *supra* note 1, at 1287.

<sup>58</sup> *Id.* at 1292.

<sup>59</sup> *Id.*

<sup>60</sup> *Id.*

buyout of the optimistic inframarginal shareholders as coercive and she asks how many of the target's shareholders believe that their shares are worth even more than the premium price—and who therefore would not sell were it not for the fact that they are frozen out once the bidder has acquired enough voting control to approve single-handedly a merger of the target corporation into the bidder corporation.<sup>61</sup> Suppose that the target is currently trading at \$100 per share and receives a tender offer for 51% of its shares at \$150 per share. Suppose further that the bidder announces that the remaining 49% of the target's shares will be acquired in a freezeout merger that will distribute \$150 per share to minority shareholders. The fact that all tendering shareholders (even the optimistic inframarginal dissenting shareholders) will reap a \$50 per share premium over the pre-announcement market price is, from Stout's perspective, inconclusive. If a shareholder subjectively values each of his shares at \$500, and if this shareholder is forced to accept \$150 per share in a freezeout merger, it is Stout's contention that the change in corporate control has actually "destroyed" value for this shareholder in the amount of \$350 per share, notwithstanding that he received the same price paid to all shareholders who initially tendered their shares.<sup>62</sup> Shareholders with "more-optimistic estimates of their stock's value become the victims of a less-optimistic majority's rule,"<sup>63</sup> such that the relevant question of welfare economics—a question actually posed ten years earlier by William Carney<sup>64</sup>—is whether the consumer surplus "destroyed" among optimistic shareholders with subjective values exceeding the premium price exceeds the consumer surplus realized from all tendering shareholders who valued their shares more than the pre-announcement price but less than the premium price of the tender offer.

#### *B. Strategic Holdout and the Corporate Analogue to Eminent Domain*

Stout's argument ignores that the appraisal remedy maximizes

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<sup>61</sup> *Id.* at 1264-68 & n.170 (fig. 3).

<sup>62</sup> *Id.* at 1267.

<sup>63</sup> *Id.*

<sup>64</sup> Carney, *Fundamental Corporate Changes, Minority Shareholders, and Business Purposes*, 1980 AM B FOUND. RES. J. 69, 114-15 & n.185. Carney argued that *supply* curves for stocks of individual firms may be inelastic over some range.

wealth by enhancing the liquidity of ownership and control of the publicly traded corporation. An individual who buys a share of stock in a publicly traded corporation acquires, in addition to his expectancy of residual net cash flows, the expectancy of receiving a control premium if a control transaction occurs. The investor, however, does not know whether his subjective valuation of the stock exceeds that of other current or subsequent shareholders of the firm, let alone the relative magnitudes of these differences in valuation. He does not know whether a future bidder for the firm, whose identity and business strategies are not yet known or knowable, will bid more or less than this shareholder's subjective valuation. Under these conditions of uncertainty, it is efficient (and, we would think, fair) for the shareholder to agree *ex ante* when he buys his shares that no single shareholder should be permitted to use his unusually high subjective valuation of the firm's stock to block a control transaction that would offer shareholders a premium over the pre-announcement market price.

If this rule or expectation applies, investors avoid the cost of searching for investments in which fellow investors have similar and relatively homogeneous subjective valuations of the firm. Obviating search enhances liquidity. Indeed, borrowing Armen Alchian's insight, liquidity is a condition in which an asset's value (in this case, voting stock) does not increase with incremental investment in search.<sup>65</sup> If every shareholder knows that a bidder for his corporation will not be held up by a dissenting minority shareholder who claims a high subjective value to his shares, then the first shareholder will be willing to pay more for his shares originally, knowing that the idiosyncrasies of the other passive shareholders (whom he does not even know) will not impede the alienability (and hence reduce the market value) of the firm's shares. Liquidity of ownership and control is not made to depend on the predilections of other individual shareholders.

In this respect, the function of the stock market exception to the appraisal remedy is similar to that of limited liability and to shareholder anonymity.<sup>66</sup> Of course, if some rule different from the stock

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<sup>65</sup> A. ALCHIAN, *Information Costs, Pricing and Resource Unemployment*, in *ECONOMIC FORCES AT WORK: SELECTED WORKS BY ARMEN A. ALCHIAN* 37, 43 (1977).

<sup>66</sup> See Sidak & Woodward, *Corporate Takeovers, the Commerce Clause, and the Efficient Anonymity of Shareholders*, 84 *NW U.L. REV.* 1092, 1096-1100 (1990); Woodward, *Limited*

market exception is subsequently believed to enhance shareholder wealth even more, the risk-bearing between majority and minority shareholders envisioned in the standard corporate contract can always be altered in a particular corporation by an express redrafting of the buyout procedures and price for dissenting shareholders. Shareholders can and do decide to amend their corporate charters by adopting a variety of supermajority voting rules in anticipation of buyout situations that differ in strength from firm to firm, presumably in relationship to the expected benefits and costs to shareholders of such rules.

Under the corporate laws of Delaware, a majority shareholder may force minority shareholders to sell their shares for any reason.<sup>67</sup> Richard Posner has described this power of the majority as one "of eminent domain with respect to the minority's shares."<sup>68</sup> Thus, a shareholder who does not tender to the bidder in a tender offer for less than 100% of the corporation's stock may be forced out anyway in a freezeout merger. The appraisal rights of such minority shareholders raise two questions identical in principle to those associated with real property owners who are forced to sell to the government through eminent domain. First, should the political constitution allow for eminent domain and, analogously, should a corporate constitution allow for forced buyouts? Second, in each case, what should the compensation be? The case in favor of eminent domain in both public governance and corporate governance is straightforward. A rule that requires unanimity for any collective action (like building a road on property currently private or, in the case of a firm, completing a merger or a going-private transaction) can be very expensive due to holdout shareholders or voters who refuse to approve the collective action except for a payment regarded as exorbitant by the other participants to the decision. If the demands of the holdouts truly reflected their subjective valua-

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*Liability in the Theory of the Firm*, 141 J INSTITUTIONAL & THEORETICAL ECON/ ZEITSCHRIFT FÜR DIE GESAMTE STAATSWISSENSCHAFT 601 (1985) (explaining the advantage of limited liability is its function in enabling unlimited transferability of shares and, consequently, its impact on maximizing firm value); see also Alchian & Woodward, *The Firm is Dead, Long Live the Firm*, 26 J ECON. LIT. 65 (1988); Alchian & Woodward, *Reflections on the Theory of the Firm*, 143 J. INSTITUTIONAL & THEORETICAL ECON./ZEITSCHRIFT FÜR DIE GESAMTE STAATSWISSENSCHAFT 110 (1987).

<sup>67</sup> *Weinberger v. UOP, Inc.*, 457 A.2d 701, 715 (Del. 1983).

<sup>68</sup> R. POSNER, *ECONOMIC ANALYSIS OF LAW* § 14.9, at 390 (3d ed. 1986).

tions of the property in question, at least we could justify the payments on the basis of Pareto optimality—the transaction would make no one worse off.

The real problem, however, is not the holdouts who demand their true subjective value, but the strategic holdouts who bet on what the transaction is worth to the other parties. An example of a strategic holdout is someone whose subjective valuation is \$10, but who believes that the buyer is willing to pay \$100, and therefore holds out for the \$100 bid, increasing the costs of negotiation and decreasing the possibility of a mutually beneficial transaction. Both public and corporate constitutions contain provisions that enable holdouts to be overruled. Each shareholder (or citizen) trades the *ex post* opportunity to be a holdout for the increased likelihood *ex ante* that a beneficial transaction will not be blocked by other shareholders (or citizens).<sup>69</sup> In making such tradeoffs, we should have much more confidence in the correctness of the eminent domain provisions in corporation charters and by-laws than in state and federal constitutions: A shareholder unhappy with the corporation's constitution can simply sell her shares; a citizen unhappy with her constitution must engage in political efforts to change it or undertake a costly move to another state or nation.

That some shareholders tender and some do not when a tender offer is made is itself evidence of heterogeneous beliefs and, by implication, a demand curve for the corporation's stock that is less than perfectly elastic. This observation, however, in no way undermines the efficiency or fairness of using the market price (post-tender offer, in the case of tender offers) as the measure of compensation for corporate eminent domain. Certainly in the usual context of eminent domain, we would expect both heterogeneous subjective values and downward-sloping demand for the real property at issue. The justification for using market value as the compensation to those whose property is taken is simply the difficulty of using any other value. If any value less than market were chosen, the property owner would be exploited, because he would be forced to sell to the government for less than he could get from someone else. If a price higher than market were paid, the govern-

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<sup>69</sup> See Easterbrook & Fischel, *Corporate Control Transactions*, 91 *YALE L.J.* 698, 705-06 (1982); Fischel, *The Appraisal Remedy in Corporate Law*, 1983 *AM. B. FOUND. RES. J.* 875, 885-89.

ment would be exploited, and the decision as to how much higher than market the buyout price should be would invite holdouts and costly negotiation.

If anything, the use of market value is more justifiable when compensating outside shareholders than when compensating real property owners for two reasons. First, as we explained in Part I, with respect to securities overwhelming evidence proves that publicly available information cannot be used to put a more "appropriate" price on a security than the market puts on it at any point in time. Second, although one can easily sympathize with a homeowner whose life is disrupted by the government's exercise of eminent domain and acknowledge that the value of the house and its situation to that owner is likely to be truly greater than market value, such a case is very hard to make with respect to securities. Outside security holders—mere investors—should rationally have no interest in their security holdings other than their risk and return (because no variables other than risk and return explain security prices), and these investors should have no rational basis for expecting one security to be a better investment than any other. Property owners, however, have considerable "specific capital"—that is, knowledge about their neighborhoods and alterations to their property for their own use and tastes that will be lost and have to be re-created with their new property. For these property owners, a compensation higher than market value could be justified as fair. Stated differently, a buyout price higher than market value could be necessary to compensate real property owners for (and to encourage them to make) nonsalvageable, asset-specific investments that are complementary to their property. Because it seems implausible that outside shareholders make nonsalvageable, asset-specific investments that are complementary to their ownership of shares of a particular stock, this rationale for pricing corporate eminent domain at higher than market value vanishes. Consequently, using market value as an appraisal remedy properly compensates dissenting shareholders and averts strategic holdout.<sup>70</sup>

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<sup>70</sup> There are, however, some shareholders with specific capital. Inside shareholders (that is, officers and directors who own shares) have, along with their investment in the shares in the firm, investments in their own human capital in the form of knowledge and skills that they acquired in order to be effective managers of the firm. This human capital may be only



C. *The Peculiar Assumptions and Implications of Stout's Subjective Value Model*

The strategic holdout problem implies that Stout's model of subjective value would be unworkable in practice because of the impossibility of falsifying *ex post* a shareholder's claim of subjective value. Even if it were possible to falsify a strategic claim of subjective value, Stout's model has peculiar theoretical assumptions and implications that limit its usefulness.

1. *Shape and Slope of the Demand Curve.* Stout assumes that the demand curve for a corporation's stock exhibits constant price elasticity of demand and that this constant elasticity is equal to negative one (-1), which is commonly called unitary elasticity.<sup>71</sup> Stout bases her assumption of constant unitary elasticity on the results of the various empirical studies that she cites in support of her theory of a downward-sloping demand curve for a firm's publicly traded stock.<sup>72</sup> Given that these studies do not support Stout's claim of a downward-sloping demand curve, it follows a *fortiori* that they do not support Stout's conjecture of constant price-elasticity, whether it is of unitary magnitude or otherwise.

Stout's conjecture of constant unitary elasticity is critical to the plausibility of her model of subjective valuation. The assumption of constant elasticity of demand guarantees, as a mathematical necessity, that the demand curve for a firm's stock will be convex toward the origin. This means that, the closer one gets to low quantities of shares (where inframarginal shareholders would be depicted), the more area there is under the demand curve relative to the area that would be found under a linear demand curve (which cannot have constant elasticity of demand). It is this inframarginal portion of the demand curve that drives Stout's trade-off between the gains to shareholders who sell out in tender offers and the "destruction" of the subjective valuation of dissenting inframarginal shareholders. In effect, Stout's assumption of unitary elasticity ensures that there will be a greater area under the in-

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useful in that specific firm. Corporate constitutions treat such inside investors fairly through provisions for allowing the corporation to buy them out at prices above the prevailing market price when they leave the firm.

<sup>71</sup> Stout, *supra* note 1, at 1251 & n.79 ("[E]mpirical evidence suggests that investor demand for stocks on average displays roughly 'unit' elasticity consistent with a convex demand function whose slope increases as it approaches the origin.").

<sup>72</sup> *Id.* at 1253 & n.90, 1255, 1256 & nn.105-06, 1257-58, 1264 n.152, 1279 n.235.

framarginal portion of the demand curve than if the demand curve is closer in shape to a linear demand curve. William Carney recognized this point in 1980,<sup>73</sup> and Stout concedes that this area under the demand curve is essential to her calculation of the consumer surplus of inframarginal shareholders: "Evidence of approximately unit elasticity is important not because it allows us to anticipate the price behavior of any individual stock, but because it supports the heterogeneous beliefs model's prediction of a convex demand function whose slope increases as it approaches the origin."<sup>74</sup> In a similar respect, Stout's welfare tradeoff is also served by her unsupported claim of a constant elasticity of negative one (-1) rather than, say, a constant elasticity of negative two (-2). A constant elasticity of negative two (-2) would flatten the demand curve and cause the consumer surplus of inframarginal shareholders to be smaller than Stout assumes it to be.

These two rather technical issues regarding demand functions demonstrate how Stout's welfare tradeoff of subjective valuation can appear either significant or trivial, depending on the empirical magnitudes used when drawing the demand curve for a firm's stock. The potential for dispute over these empirical magnitudes would complicate any proceeding in which a court or other tribunal attempted to apply Stout's welfare tradeoff in a controversy over corporate control. We quite agree with Stout when, rather oddly, she concedes: "Because the slope of the demand function is uncertain and may change over different portions of the demand curve, there is no way to be sure of the relationship between surplus and loss."<sup>75</sup>

2. *When Is Subjective Value Relevant?* Stout asserts: "Announcement of the bidder's intentions may also cause the target's shareholders to raise their estimates of share value and their subjective reservation prices."<sup>76</sup> We agree. If new, publicly disseminated information changes the valuations of marginal shareholders (whose transactions determine the current market price of shares), is there any reason to believe that such new information does not

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<sup>73</sup> Carney, *supra* note 64, at 114-15 & n.185.

<sup>74</sup> Stout, *supra* note 1, at 1256.

<sup>75</sup> *Id.* at 1273-74 n.204. See also *id.* at 1282 n.252 ("[T]he exact shape and slope of the demand function for the target's stock is unknown.")

<sup>76</sup> *Id.* at 1265 n.155.

also change (on a nonstrategic basis) the subjective valuations of inframarginal shareholders? We cannot think of any reason. Curiously, however, while Stout asserts that "announcing a bid may shift outwards that portion of the demand function which lies below the offering price,"<sup>77</sup> she takes the contrary view with respect to inframarginal shareholders, asserting: "No rational shareholder would adjust his reservation price *above* the level of the bid."<sup>78</sup>

Although there is no way of knowing the degree to which subjective valuation changes when market value changes, it seems more reasonable than not to presume that the inframarginal shareholder is not a contrarian and that his subjective valuation is, therefore, a continuously increasing function of market price. If so, Stout's model of subjective valuation presents a conundrum. Subjective value will not remain constant in the face of a market price that is rapidly rising due to the announcement of an intended takeover. Even if one believes that Stout's model of subjective value is a theoretically correct starting point for assessing the net benefits to shareholders from corporate control transactions, one still must determine at what point in time such subjective value is relevant. Subjective value held before the announcement of a takeover bid must be distinguished from subjective value held afterward. Similarly, the inframarginal shareholder's subjective valuation before a bidder files a Schedule 13D<sup>79</sup> must be distinguished from the same investor's subjective valuation thereafter. It would be ironic indeed if Stout would expect the bidder to have to compensate dissenting shareholders for increases in their subjective valuations due to the bidder's actions suggesting, or his announcement declaring, that he intended to acquire control of the target.

3. *Mitigation of Welfare Loss.* Stout's subjective welfare tradeoff overlooks that the extent to which consumer surplus truly is "destroyed" for inframarginal shareholders depends on the amount of consumer surplus that these same shareholders can derive from substitute goods purchased with the proceeds from the forced sale of their shares. An inframarginal shareholder who values a stock at

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<sup>77</sup> *Id.*

<sup>78</sup> *Id.*

<sup>79</sup> Section 13(d) of the Securities Exchange Act of 1934, as amended, requires the purchaser of more than 5% of an equity security in one company to disclose certain information regarding the purchase by filing a Schedule 13D within ten days after such acquisition. 15 U.S.C.A. § 78m(d) (West 1981 & Supp. 1990).

\$500 and who receives \$150 per share in a freezeout merger may be able to buy stock in another company for \$150 per share that he subjectively values at \$499 per share; in that case, his forced buyout has only "destroyed" \$1 per share of value, setting to one side transactions costs and taxes. This possibility could substantially change the net welfare gains to all shareholders from the \$50 share premium used in the earlier numerical example.

Stout ignores this opportunity to mitigate "harm," implicitly assuming that the inframarginal shareholder who is bought out does not use his cash (or stock, in a stock-for-stock transaction) to acquire an asset for which that shareholder has a reservation price exceeding the buyout price for his shares in the target. This is a very odd implicit assumption for a model that depends in the first instance on a substantial number of investors having extraordinary reservation prices for such homogeneous assets as the common stocks of publicly traded corporations.

4. *Compensating the Disappointed Majority.* Why should inframarginal shareholders not be required to compensate the disappointed majority in a thwarted control transaction? If it is worth more to minority inframarginal shareholders to defeat an "inadequate" tender offer than it is worth to the tendering majority for the offer to succeed, then why should inframarginal shareholders not compensate the majority shareholders for their forgone consumer surplus from the defeated offer? Stout does not explain why, if inframarginal shareholders can make a corporation more valuable in her peculiar welfare-economic sense, they should be entitled to keep all of the benefits of doing so for themselves rather than share those benefits with the majority shareholders who do not otherwise benefit from the defeat of the tender offer. Put more precisely, Stout does not explain why there should not be a Kaldor-Hicks welfare determination that is followed by actual (as opposed to merely potential) compensation being paid by the minority shareholders to the disappointed majority.<sup>80</sup>

This lacuna in Stout's argument is ironic, for while she expresses disapproval of the current law and theory on takeovers because they ignore that inframarginal shareholders who are frozen out are

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<sup>80</sup> See, e.g., R. POSNER, *supra* note 68, at 12-14. A Kaldor-Hicks transaction is one which creates a benefit greater to at least one party than the harm that is done to others. See *id.* at 12; see also J. COLEMAN, *MARKETS, MORALS AND THE LAW* 84 (1988).

being made "the victims of a less-optimistic majority's rule,"<sup>81</sup> she does not appear ever to have considered the likelihood that, under her subjective valuation model, the minority would victimize the majority. Inframarginal minority shareholders would "freeze in" the majority in the sense that these more numerous shareholders would be denied their takeover premium and would have no remedy under corporate law even approaching the stock market exception to the appraisal remedy, which Stout considers to be so inequitable in its protection of shareholder expectations.

5. *The Curious Convertibility of Residual Claims.* Finally, Stout fails to explain as a matter of legal theory by what alchemy a corporate control transaction should transmute a shareholder's optimistic valuation of his shares (or at least some significant fraction of it under Stout's expert-opinion rule) from whimsy to a legally enforceable property right. Before the corporate control transaction, the minority shareholder surely had no legally enforceable property right to receive the subjective valuation he attached to his shares—or indeed any price exceeding the market price. After the control transaction, the minority shareholder would have such a property right.

This aspect of Stout's model is revolutionary because it would fundamentally alter the contingent nature of equity ownership. A person buying a share of common stock acquires the expectancy, not the guaranty, of a positive future net cash flow. If, short of selling his shares, the shareholder could convert that expectancy into a guaranteed stream of payments, he would cease to be a residual claimant and become someone whose contractual relationship to the corporation more resembles that of a creditor. Common stock held by inframarginal shareholders would become an equity instrument convertible, upon a change in control, into a highly preferential category of debt. Without characterizing her expert-opinion appraisal rule in such terms, Stout has proposed the ultimate poison pill.

#### *D. Two-Tier Front-Loaded Tender Offers: Coercive Strategies and Counterstrategies*

Stout's concern about the welfare of the optimistic inframarginal

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<sup>81</sup> Stout, *supra* note 1, at 1267.

shareholder stems from her belief that the two-tier front-loaded tender offer is coercive. Before evaluating the validity of Stout's concern, it is useful to clarify why minority shareholders need to be frozen out at all, given that the new majority shareholder indisputably will control the corporation's management. Sanford Grossman and Oliver Hart argue that a problem of free-riders and collective action exists because the announcement of a tender offer signals to all shareholders that the corporation is worth more than the shareholders had believed until that moment.<sup>82</sup> Shareholders therefore infer that the corporation must be worth even more than the bid price, since the bidder could not expect to profit from the takeover if it offered its full reservation price for the firm. In that case, each individual shareholder could decline to tender and instead free-ride on the bidder's discovery of the firm's hidden value, knowing that competing tender offers might come from bidders who did not have to invest resources to discover why the target had been undervalued and who, therefore, could afford to bid shareholders a higher price than the initial bid. If at least 50% of the target's shareholders declined to tender for this reason, the tender offer would fail. This free-rider problem would reduce the incentive for other potential bidders to make initial tender offers.

Lucien Bebchuk, however, has argued that the two-tier front-loaded tender offer is too potent a remedy for this problem, because it induces shareholders to stampede to tender for too low a front-end price for fear of being stuck with a substantially lower back-end price once voting control shifts to the bidder and a freezeout merger is inevitable.<sup>83</sup> Suppose the bidder makes a \$120 tender offer for 51% of the target's stock, which is substantially higher than its current market price of \$100; but at the same time the bidder informs shareholders that a subsequent tender offer of only \$60 will be made for the remaining 49% of the stock. The blended price of the two bids is \$90.60 (that is,  $(.51 \times \$120) + (.49 \times \$60)$ ). Thus, the blended price is less than the current market price. In this situation, individual shareholders might rush to tender at \$120 in order to avoid being left with shares for which a

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<sup>82</sup> Grossman & Hart, *Takeover Bids, the Free-Rider Problem, and the Theory of the Corporation*, 11 BELL J. ECON. 42 (1980).

<sup>83</sup> Bebchuk, *Toward Undistorted Choice and Equal Treatment in Corporate Takeovers*, 98 HARV L. REV. 1693, 1717-33 (1985).

back-end tender offer of only \$60 will be made. On the other hand, if shareholders could collectively deliberate, they would recognize that the blended bid of \$90.60 would give each shareholder a lower expected share price (not even considering discounting the second-tier price for futurity) than would the current market price of \$100. Thus, they might collectively refuse to tender.

How likely is it that this scenario would really occur? It is remarkable that, although the danger of coercion animates Stout's case against the significance of tender offer premiums and the propriety of legal doctrines affecting takeovers, she concedes that "front-loaded offers are rare."<sup>84</sup> It seems rather flimsy for Stout, after having acknowledged the rarity of two-tier front-loaded tender offers, to continue to claim that their putative coercion justifies the conclusion that takeover premiums are a misleading indicator of shareholder welfare.<sup>85</sup> And while Stout repeatedly warns that minority shareholders are being harmed in freezeout transactions, she does not discuss the empirical evidence to the contrary.<sup>86</sup> Nor does Stout rebut the argument that a corporation is always free, long before it becomes identified as a takeover target, to adopt a fair-price amendment by which shareholders who tender in the second tier are guaranteed to receive the same price as those who tender in the first.<sup>87</sup>

Furthermore, the remaining 49% of the target's stock, still widely held after control has transferred by virtue of the first stage of the tender offer, will have a value that depends not only on the value of control, but also on the expected residual net cash flows of the corporation; the fact that the first component has no value for minority shareholders does not mean that the second component of value is somehow extinguished. Stated differently, it is unclear how it could possibly benefit the bidder to buy a majority stake in the corporation and then intentionally diminish the present value of the firm's expected residual net cash flows.

Moreover, what prevents idiosyncratic shareholders from investing to protect their subjective value in the corporation? The dan-

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<sup>84</sup> Stout, *supra* note 1, at 1266 n.161.

<sup>85</sup> *Id.* at 1267 n.168, 1273 n.200.

<sup>86</sup> See DeAngelo, DeAngelo & Rice, *Going Private: Minority Freezeouts and Stockholder Wealth*, 27 J. LAW & ECON. 367 (1984).

<sup>87</sup> See Carney, *Shareholder Coordination Costs, Shark Repellents, and Takeout Mergers: The Case Against Fiduciary Duties*, 1983 AM B FOUND. RES. J. 341.

ger that two-tier tender offers can be used to coerce shareholders into selling for less than their shares (collectively) would be worth can be mitigated by the potential for a superior counterbid having a higher price for the first tier.<sup>88</sup> A price of \$140 for the first tier in the hypothetical described above would produce a blended price of \$100.80. This rival bid could come either from a third party, from the target's own management or from a consortium organized by inframarginal shareholders (perhaps in cooperation with incumbent management) who believed that the takeover premium being offered was inadequate relative to their subjective valuations. By so doing, inframarginal shareholders in effect would buy out the (relatively) pessimistic majority of the corporation's shareholders. If inframarginal shareholders were unable to convince financiers to back their counterbid for the firm at a price that was closer to their subjective valuation, that fact would be at least *prima facie* evidence that their subjective valuation, while earnest, was unrealistic in the view of sophisticated and disinterested third parties.

Inframarginal shareholders do not actually have to buy 51% of the corporation in order to defend the subjective value that they attach to their shares. They merely need to inform the market of why they hold high subjective valuations of the corporation relative to the valuations made by marginal shareholders and reflected in the market price. As a kind of "hostile management consultant," inframarginal shareholders can disclose to incumbent management, to the unsolicited bidder and to the capital markets generally why the corporation's stock should approximate their subjective valuations rather than the considerably lower tender offer price.<sup>89</sup> Of course, by doing so, inframarginal shareholders will keep for themselves at most 49% of the value of this new information; their disclosures are a public good whose benefits accrue for the most part to other shareholders. Despite this nonexcludability characteristic,

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<sup>88</sup> See, e.g., Fischel, *From MITE to CTS: State Anti-Takeover Statutes, the Williams Act, the Commerce Clause, and Insider Trading*, 1987 SUP. CT. REV. 47, 61; OFFICE OF THE CHIEF ECONOMIST, SECURITIES AND EXCHANGE COMMISSION, *THE ECONOMICS OF ANY-OR-ALL, PARTIAL, AND TWO-TIER TENDER OFFERS*, reprinted in *Two-Tier Tender Offer Pricing and Non-Tender Offer Purchase Programs—Advance Notice of Possible Commission Action*, [1984 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 83,637, at 86,920 (1984); see also Comment & Jarrell, *Two-Tier Negotiated Tender Offers: The Imprisonment of the Free-Riding Shareholder*, 19 J. FIN. ECON. 283 (1987).

<sup>89</sup> See Macey & McChesney, *A Theoretical Analysis of Corporate Greenmail*, 95 YALE L.J. 13, 28-32 (1985) (discussing "selling" of information to potential managers).



such disclosure should constitute an important means by which parties other than unsolicited bidders can create value in the market for corporate control.<sup>90</sup>

Finally, and most conclusively, any remaining fear of shareholder coercion in two-tier tender offers would seem to have been assuaged by the SEC's modification of Rule 14d-8 in 1982.<sup>91</sup> The rule now requires that all partial tender offers provide proration rights to shares tendered during the entire length of the offer (twenty business days), not simply to shares tendered during the first ten calendar days of the offer. This extended proration period removes the advantage for a shareholder to be at the front of the queue for tendering shares to the bidder.<sup>92</sup> So long as the shareholder tenders during the twenty-business-day period that the offer is outstanding, she may participate in the share premium on a pro rata basis to the extent that the tender offer is oversubscribed. Stout's concern over shareholder coercion in two-tier tenders, therefore, seems entirely unsubstantiated.

#### *E. Fiduciary Duty and Nonfalsifiability*

Stout is vague about the legal rule that should guide a target's management in responding to an unsolicited control transaction. It would appear from her defense of a subjective welfare tradeoff that she prefers a rule under which the management of a target would attempt to extract from the bidder each shareholder's subjective valuation of the firm's stock. For example, Stout suggests: "Target management . . . may perceive a premium bid as contrary to the shareholders' interests if management believes that the subjective valuations which the shareholders currently attach to their stock substantially underestimate its actual value."<sup>93</sup> Such a rule has a serious potential for moral hazard, however, because of the diffi-

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<sup>90</sup> Haddock, Macey & McChesney, *Property Rights in Assets and Resistance to Tender Offers*, 73 VA L. REV 701, 708-12 (1987).

<sup>91</sup> Pro Rata Rule, 47 Fed. Reg. 57,679 (1982) (codified at 17 C.F.R. § 240.14d-8).

<sup>92</sup> This proration rule does create certain costs, however. As Chairman Shad noted in his dissent when the SEC adopted the new rule, the longer proration period creates an incentive for sophisticated investors to delay tendering until the final day of the tender offer, thus increasing uncertainty for shareholders and bidders alike. 47 Fed. Reg. 57,679, 57,681 (1982). And, by increasing uncertainty for initial bidders, the longer proration period could reduce the demand for tender offers and consequently reduce shareholder wealth. *Id.*

<sup>93</sup> Stout, *supra* note 1, at 1271.

culty of specifying the precise duty facing the target's management and then monitoring the performance of that duty. These difficulties arise because of the inherent indeterminacy of a shareholder's claim of subjective value. Because subjective valuations by shareholders are themselves nonfalsifiable *ex post* for the reasons that we explained earlier, it follows *a fortiori* that any defensive action taken by a target's management in the name of extracting from a bidder the subjective valuation for all of the target's shareholders also would be nonfalsifiable. Any fiduciary duty defined in terms of subjective value maximization would implicitly give the target's management the trump card against the bidder: The target's managers could claim that they, as insiders and fiduciaries, are more likely than the bidder to have the information from which to infer shareholders' subjective valuations; moreover, these managers could argue the bidder has an incentive to undercompensate the target's shareholders for their subjective value and, thus, that the bidder's estimates of subjective value are inherently suspect. How though, unless managers own all of the corporation's stock, could management ever identify these subjective valuations? And if market prices are not relevant signals of value, what data are?

The same problem of nonfalsifiability would hobble Stout's expert-opinion rule for appraisals in publicly traded corporations. Although Stout ultimately abandons subjective value as an appraisal rule due to the problem of strategic holdout,<sup>94</sup> the expert-opinion rule that she does propose lacks any rationale for a publicly traded corporation if not for her theoretical proposition regarding subjective value, for it too would award inframarginal shareholders a price exceeding the market price. Stout, however, fails to explain convincingly why *any* departure from market price is justified.

If one lacks indisputable tools with which to prove that an appraisal is wrong, how can one have any confidence that another appraisal is correct? Such nonfalsifiability raises the transactions costs for a majority shareholder to conduct a freezeout merger, since the cost of the conducting the appraisal (and defending one's own expert testimony while controverting the testimony of the opposing expert) is obviously higher than simply referring to the closing stock price quotation on the relevant date. Moreover, the expected value of the buyout price of necessity must exceed the

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<sup>94</sup> *Id.* at 1290.

prevailing market price (since the lower bound on the distribution of possible appraisal prices is the prevailing market price). All other factors being the same, these costs (relative to buyout at the market price) imply that fewer freezeout mergers will be undertaken and thus that the demand for tender offers will diminish.

#### CONCLUSION

Stout's theory that the common stock of each publicly traded corporation is differentiated from the stock of every other publicly traded corporation is highly reminiscent of the theory of monopolistic competition propounded in the 1930s by Edward Chamberlin, who thought that all firms have some degree of market power and hence downward-sloping demand curves in the goods market.<sup>95</sup> In 1949, George Stigler offered a critical assessment of Chamberlin's contribution to economic knowledge,<sup>96</sup> arguing that it is predictive power, and not the reasonableness of assumptions, that makes a theory valuable. He wrote:

The sole test of the usefulness of an economic theory is the concordance between its predictions and the observable course of events. Often a theory is criticized or rejected because its assumptions are "unrealistic." Granting for a moment that this charge has meaning, it burdens theory with an additional function, that of description. This is a most unreasonable burden to place upon a theory: the role of description is to particularize, while the role of theory is to generalize—to disregard an infinite number of differences and capture the important common element in different phenomena.<sup>97</sup>

Perhaps the principal reason that Stout is so errant in her analysis is that she does not start with this epistemological view of economic theory. Instead, she asserts at the outset: "As in the case of

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<sup>95</sup> E. CHAMBERLIN, *THE THEORY OF MONOPOLISTIC COMPETITION* (1933). Stout asserts, as a general matter of economic theory, that "price cuts spark additional purchases, but to a limited degree . . . because perfect substitutes are not available for most goods." Stout, *supra* note 1, at 1243 & n.42. "For example, consumers may even prefer one brand of an otherwise fungible commodity over another." *Id.* at 1243 n.42.

<sup>96</sup> G. STIGLER, *MONOPOLISTIC COMPETITION IN RETROSPECT* (1949), reprinted in *THE ORGANIZATION OF INDUSTRY* 309 (1968).

<sup>97</sup> *Id.* at 319.

any other economic theory, the validity of the CAPM depends upon the validity of its underlying assumptions."<sup>98</sup> This assertion is reminiscent of Stigler's observation that support for the theory of monopolistic competition "stems from the mistaken demand for correspondence between 'reality' and premises" and from "the erroneous view . . . that if the premises of competitive theory depart (in a descriptive sense) from the facts, the implications of that theory must be wrong."<sup>99</sup> Stigler argued that the theory of monopolistic competition, which he agreed was an "essentially correct" description of certain industries, should be incorporated into the theory of industrial organization "not if it is a more 'realistic' description of industries, but if it contains different or more accurate predictions (as tested by observations) than the theory of competition."<sup>100</sup> In the same respect, Stout cannot claim to have refuted the CAPM simply by demonstrating that her asset pricing model has more descriptive assumptions than the CAPM. To the contrary, the CAPM and the theories that build upon it should be rejected in favor of Stout's theory only if the latter predicts future phenomena better than the former.

To be sure, there is some plausibility to Stout's claim that the demand for a firm's publicly traded stock is price-inelastic, but the degree of inelasticity is likely to be small if not trivial. The phenomena that Stout claims are explained empirically by price pressure can be explained better by other hypotheses that do not require dismissing the reliability of market prices as measures of value. None of the theoretical or empirical arguments that Stout offers credibly explains why a downward-sloping demand curve for a corporation's publicly traded stock should invalidate the CAPM or threaten the logic of using market prices as indicators of a stock's value in tender offers and appraisal situations.

Unlike Stout, we hypothesize that it increases shareholder wealth for corporate law doctrines to ignore the subjective valuations that shareholders attach to their shares in publicly traded corporations. Ignorance of this sort makes common stock a more liquid instrument for transferring the ownership and control of the corporation. It is unclear whether Stout is unaware that the higher

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<sup>98</sup> Stout, *supra* note 1, at 1238.

<sup>99</sup> G. STIGLER, *supra* note 96, at 320.

<sup>100</sup> *Id.*

costs of her appraisal remedy based on the "objective estimates of experts" would reduce the demand for tender offers or whether she tacitly regards this ramification as the principal benefit that her proposal would produce. In any event, we doubt that it enhances the aggregate welfare of shareholders to deny a majority of shareholders a premium over the market price because a minority of shareholders of the same corporation cannot realize their subjective expectations of value.