Allowing price-decreasing insider trading could signal when equities are overvalued.

A Middle Ground on Insider Trading

BY THOMAS A. LAMBERT

University of Missouri

or more than four decades, corporate law scholars have debated whether government should prohibit insider trading, commonly defined as stock trading on the basis of material, nonpublic information. Participants in this long-running debate have generally assumed that trading that decreases a stock's price should be treated the same as trading that causes the price to rise: either both forms of trading should be regulated or neither should. I argue for a middle-ground position in which "price-decreasing insider trading" (sales, short sales, and purchases of put options on the basis of negative information) is deregulated, while "price-increasing insider trading" (purchases of stock and call options on the basis of positive information) remains restricted.

The reason for the proposed asymmetric treatment is that price-decreasing insider trading provides significantly more value to investors than price-increasing insider trading. Price-decreasing insider trading provides an effective means of combating the problem of overvalued equity – i.e., a stock price so high that it cannot be justified by expected future earnings. As Harvard's Michael Jensen has argued, overvalued equity increases the probability that corporate managers will engage in value-destroying actions. Deregulation of price-decreasing insider trading would allow corporate insiders – those in the best position to know when a stock is overvalued — to signal the market that the price is too high. Deregulation of price-increasing insider trading could similarly remedy undervalued equity, but undervaluation causes fewer problems than overvaluation and there are numerous other mechanisms for addressing that sort of mispricing. Moreover, the potential investor losses resulting from priceincreasing insider trading are higher than those caused by price-decreasing trading.

Thomas A. Lambert is associate professor of law at the University of Missouri. This article draws on the author's paper "Overvalued Equity and the Case for an Asymmetric Insider Trading Regime," Wake Forest Law Review, Vol. 41 (2006).

THE INSIDER TRADING DEBATE

Ever since Henry Manne published his classic book Insider Trading and the Stock Market, scholars have debated whether insider trading has net benefits. Critics of insider trading attribute to it both distributional and efficiency costs. The main distributional claim is that there is something fundamentally wrong with traders using an informational advantage to profit at the expense of other traders, particularly when the advantaged traders are corporate insiders who are supposed to be acting as agents for those who lack the informational advantage. As for efficiency costs, the critics make several claims:

- Insider trading discourages equity investment by uninformed outsiders because they fear trading with informed insiders, which reduces the liquidity of capi-
- Insider trading encourages insiders to delay disclosures and to make management decisions that increase share price volatility but do not maximize firm value.
- Insider trading increases the "bid-ask" spread of stock specialists, who systematically lose on trades with insiders (whom they cannot identify ex ante) and who will thus tend to "insure" against such losses by charging a small premium on each trade.
- Banning insider trading protects the corporation's property rights over valuable information regarding firm prospects.

Proponents of deregulating insider trading discount those arguments. Regarding the normative claim that insider trading is simply wrong, they argue that insider trading cannot be "unfair" to investors because they trade with full knowledge of the possibility of insider trading. The proponents dismiss the efficiency criticisms with a mixture of empirical evidence and theory. With respect to concerns that insider trading increases bid-ask spreads, empirical evidence suggests that any increases are small. While in theory the ability to engage in insider trading might encourage managers to delay disclosures or make management decisions aimed solely at increasing share price volatility, deregulation advocates contend such mismanagement is unlikely. They observe that managers generally work in teams and the theoretical mismanagement described by ban proponents would require the explicit unethical collusion of many managers, which is unlikely. Finally, deregulation proponents assert that a corporate "property right" to material nonpublic information need not be a nontransferable interest granted to the corporation; efficiency considerations may call for the right to be transferable and/or

Deregulation advocates further maintain that corporations ought to be allowed to adopt liberal insider trading policies because competition in the labor and capital markets will lead corporations to adopt efficient insider trading policies. The market for managerial labor may reward corporations with liberal insider trading policies because the right to make money through insider trading is valuable to potential managers. But capital market pressures will prevent corporations from adopting insider trading policies that are, on balance, harmful to investors. Thus, deregulation advocates maintain, the interaction of the labor and capital markets will incentivize



initially allocated to a different party (e.g., to insiders).

In addition to rebutting the arguments for regulation, proponents of deregulation have offered affirmative arguments for liberalizing insider trading. First, they maintain that insider trading should generally be permitted because it increases stock market efficiency (i.e., the degree to which stock prices reflect fundamental value), which promotes efficient resource allocation. Corporate insiders, after all, generally know more about their company's prospects than anyone else. When they purchase or sell their company's stock, thereby betting their own money that the stock is mispriced, they convey valuable information to the marketplace. Assuming their trades somehow become public, other rational investors will likely follow their lead, which will cause stock prices to reflect more accurately the underlying value of the firm. More efficient stock prices will then lead to a more efficient allocation of productive resources throughout the economy.

firms to adopt insider trading policies that are, on the whole, value-maximizing.

Not surprisingly, the affirmative case for liberalizing insider trading has not gone unchallenged. Ban defenders retort that trading by insiders conveys information only to the extent it is revealed, and even then the message it conveys is "noisy" or ambiguous. Insiders may trade for a variety of reasons, many of which are unrelated to their possession of inside information. Ban defenders further maintain that insider trading is an inefficient, clumsy, and possibly perverse compensation mechanism.

One of the most striking aspects of the well-worn insider trading debate is its starkness. Assuming that insider trading must be treated as a whole, ban defenders and opponents have argued over liberalization in all-or-nothing terms; they have not considered whether some species of insider trading should be treated differently than others.

This article attempts to demonstrate that price-decreasing insider trading, which consists of trading by insiders on the basis of negative nonpublic information, provides greater net benefits to investors than price-increasing insider trading, which consists of trading by insiders on the basis of positive nonpublic information. Accordingly, the law should treat price-decreasing insider trading less harshly than priceincreasing insider trading.

PERSISTENCE OF OVERVALUATION

Stock overvaluation is more likely to persist than undervaluation and tends to cause greater harm to investors when it occurs. Accordingly, insider trading that reduces the price of overvalued equity toward fundamental value will provide greater investor benefits than will insider trading that increases stock prices.

Empirical evidence suggests that the bulk of securities mispricing occurs in the direction of overvaluation rather than undervaluation. This should not be surprising because the two groups of individuals most likely to provide the information that would correct stock mispricing - corporate managers and professional stock analysts - are more likely to emphasize positive than negative information about future corporate profits. Let us consider these two groups, to see why this would be.

CORPORATE MANAGERS Scholars have argued that corporate managers, seeking to protect their reputations for trustworthiness, have a tendency toward candor. But there are numerous reasons to believe that managers tend to be systematically optimistic in their portrayals of their corporations' prospects and thus are less likely to correct overpricing than underpricing.

First, corporate managers may fail to be forthcoming with stock price-correcting bad news because they face "last period" and "multiple audience" problems. The last period problem exists when the undisclosed news is so bad that it might cause insolvency or some kind of managerial shake-up. If senior managers think the undisclosed bad news will result in company insolvency or employment demotion or termination, they may rationally decide that the costs to them of misleading disclosures (or omissions) are less than the costs to them of candor. The multiple audience problem results from the fact that corporate managers cannot make targeted disclosures of negative information only to shareholders. When managers make a corporate disclosure, they inform not only shareholders, but also such corporate constituencies as consumers, employees, and suppliers. Managers may wish to conceal price-decreasing information in order to protect relationships with those constituencies, despite the managers' interest in maintaining a reputation for candor.

Well-documented cognitive biases may also lead managers to overemphasize good news. Individuals unconsciously construe information and events in a manner that confirms their prior beliefs, attitudes, and impressions. Corporate managers may strongly resist evidence that previously selected courses of action were ill-chosen. In addition, managers may be falsely optimistic because they officially "control" corporate endeavors. Psychologists have concluded that individuals systematically overrate their own abilities and achievements. Thus, corporate managers overestimate the chances of success of the businesses under their control.

The incentives faced by lower-level managers and workers exacerbate the good-news bias of senior executives. Each information-provider will be tempted to tweak his message to conform to his self-interest. By the time the price-affecting information reaches the senior managers in charge of corporate disclosure, it is likely to have been "massaged" so as to make underlings look good.

Finally, even if corporate managers were as likely to perceive overvaluation as undervaluation and were equally motivated to correct both forms of mispricing, they would be more likely to correct undervaluation than overvaluation because they can do so more easily. Consider a manager confronted with evidence that her company is undervalued. She might issue a press release explaining why the market was undervaluing her firm, or she could initiate a stock repurchase, thereby signaling management's strong belief that the stock is undervalued. Managers finding undervalued equity to be a chronic problem could adopt equity-based compensation schemes for executives (e.g., payment in stock or stock options).

A manager confronting overvalued equity, by contrast, has few effective options. As a practical matter, managerial candor is not an option because a manager who directly announces to the market that his corporation's stock is overpriced probably would not remain employed for very long. Nor could the manager correct the mispricing by engaging in a sale transaction that would send the reverse signal of a stock repurchase. The signal sent by a stock buy-back is relatively unambiguous. In contrast, a sale transaction designed to signal overvaluation (e.g., an equity offering or a sale of treasury shares the corporation previously purchased) is much noisier. It could easily be interpreted as a means of raising capital for some sort of corporate undertaking. And, of course, equity-based compensation, which helps prevent undervaluation, exacerbates overvaluation by inducing managers to drive the share price higher even when they know the company is overvalued. There is thus an asymmetry in the degree to which managers and market forces are able to correct the different species of mispricing: the primary options available to correct negative mispricing are not practically available when the mispricing is in the positive direction.

STOCK ANALYSTS Stock analysts, the other individuals who are well-positioned to identify and correct stock mispricing, also are less likely to correct overvaluation than undervaluation. Consider the optimism bias exhibited in the Enron debacle. In the autumn of 2001, just weeks before Enron's December 2, 2001 bankruptcy, each of the 15 largest Wall Street firms covering Enron's stock had buy recommendations in place. And as late as October 26, 2001 — after Enron's chief financial officer had been forced to resign, the SEC had initiated an investigation, and the Wall Street Journal had run several stories about Enron's earnings management problems — 10 of the 15 largest Wall Street firms covering Enron maintained buy recommendations, as did 15 of 17 top Wall Street analysts surveyed by Thompson Financial/First Call. Sadly, Enron

was no outlier. The ratio of buy to sell recommendations has recently been as high as 100-to-1, and in the period immediately preceding a 60 percent drop in the NASDAQ, only 0.8 percent of analysts' recommendations were sell or strong sell. Thus, the evidence suggests that analysts, quick to report undervaluation by issuing buy recommendations, are less responsive to mispricing in the positive direction.

Empirical evidence suggests that analysts' employers have structured their promotion and compensation schemes to favor overvaluation. Harrison Hong and Jeffrey Kubik, for example, analyzed the earnings forecasts and employment histories of 12,000 analysts working for 600 brokerage houses between 1983 and 2000. They found that analysts were systematically rewarded for being optimistic as long as the optimism was within a range of accuracy that maintained the credibility of the analysts. Hong and Kubik also found that relatively optimistic analysts were much less likely to be fired or to leave a top brokerage house, were much more likely to be hired by a better house, and were given better assignments than their more pessimistic (realistic?) colleagues. Thus, analysts face personal incentives to issue enthusiastic and optimistic recommendations, and are not likely to provide investors with the "bad news" necessary to correct instances of overvalued equity.

OVERVALUATION AND INVESTOR HARM

Not only is overvaluation more likely than undervaluation to occur and persist, it also tends to cause greater harm to investors. Perhaps most importantly, overvaluation creates much larger agency costs than undervaluation. Agency costs are the sum of the contracting, monitoring, and bonding costs incurred to reduce the conflicts of interest between principals and agents, plus the residual loss that occurs because it is generally impossible to perfectly harmonize the behavior of agents with the interests of their principals. While capital markets generally operate as a powerful tool for minimizing agency costs (because firms that have developed effective mechanisms for lowering such costs will be most attractive to investors), recent economic developments suggest that, when equity becomes overvalued, securities markets tend to exacerbate agency costs.

Before examining why overvaluation creates substantial agency costs, consider why undervaluation does not do so. When a firm's equity is undervalued, the incentives of shareholders and managers are likely to be closely aligned: both groups will usually want to increase the stock price toward fundamental value. Shareholders prefer that result because price appreciation increases their long-term wealth and enhances the corporation's overall health (and thus its value) by making it easier for the firm to raise funds in the capital markets. Managers also prefer to increase share price because a higher stock price enhances their job prestige and (most likely) their compensation, and enables the corporation to be more flexible (because it can use its high-priced stock as currency or raise more money for expansion in the capital markets). Given the overlap in shareholders' and managers' interests, it is unlikely that undervaluation results in managerial behavior that diverges from shareholder interests.

In contrast, when a firm's stock is overvalued, the interests of shareholders and managers are likely to diverge substantially. Managers are unlikely to prefer that the stock price fall to fundamental value because they receive benefits from a high stock price. While most managers realize that overvaluation cannot last forever and that price correction is likely to occur eventually, they are unlikely to take steps to reduce price to fundamental value. Their tendencies toward optimism push them to believe either that they can eventually cause the firm to generate cash flows that will justify the currently inflated price or that they will be able to exit the corporation (by resigning their positions and selling their stock) prior to the inevitable price correction.

On first glance, one might suppose that shareholders would similarly prefer that equity overvaluation persist; after all, the higher the stock price, the greater a shareholder's wealth. Because overvaluation tends to be corrected eventually, however, medium- to long-term shareholders generally cannot capture the transitory wealth increase stemming from overvaluation and thus will not care to extend periods of overvaluation. While short-term shareholders may be able to profit from transitory periods of overvaluation, they can do so only if they sell their stock prior to the inevitable price correction. Such a "bail before correction" strategy is much riskier for shareholders than for managers because shareholders know little about corporate events that may reveal overvaluation and are thus more likely to delay too long before selling their stock. Moreover, shareholders possess neither actual nor apparent control over the events likely to reveal overvaluation and will thus tend to be less optimistic than managers about their ability to sell their stock before the inevitable price correction. Accordingly, even short-term stockholders will value periods of overvaluation less than managers will.

In addition, any upside experienced by shareholders during periods of overvaluation is likely to be offset by a significant downside: managers who seek to maintain stock prices at artificially high levels tend to engage in value-destroying actions. In order to protect their jobs and reputations, managers of overvalued firms often need to "buy time" — i.e., to trick the market into maintaining the high stock price until they can exit the firm (both as shareholders and as managers) or can produce the corporate performance required to justify the stock price. Consider, for example, this account of Enron's collapse from Bethany McLean and Peter Elkind's 2003 book *The Smartest Guys in the Room*:

Enron's accounting games were never meant to last forever.... The goal was to maintain the impression that Enron was humming until [CEO Jeff] Skilling's next big idea kicked in and started raking in *real* profits.... In Skilling's mind, though, there was no way he was going to fail. He had always succeeded before, and his successes had transformed the company. Why would it be any different [this time]?

Such continued trickery requires beating analysts' expectations because the capital markets routinely punish firms that fail to meet such expectations.

The problem is that managers of overvalued firms cannot perpetually meet analysts' expectations by exploiting legitimate value-creating opportunities. Once those options have been exhausted, managers will eventually turn to gimmicks that are designed to produce numbers that appease the market but actually reduce long-term firm value.

ACQUISITIONS Because corporate acquisitions create the appearance of growth (and thus may fool the market for at least a while), corporate managers who have exhausted other growth options may find such acquisitions attractive, even if they are ultimately value-reducing. Consider, for example, recent findings by Sara Moeller, Frederick Schlingemann, and René Stulz, who compared the effect of merger announcements on the stock prices of acquiring firms during the 1998-2001 period, a period of significant equity overvaluation, with the acquiring-firm price effects of merger announcements in the 1980s. The authors discovered that, for the 1998-2001 period, the value of acquiring firms declined by a total of \$240 billion in the three-day periods surrounding announcements of acquisitions. During all of the 1980s, by contrast, the loss in value of acquiring firms during the three-day period surrounding merger announcements was only \$4.2 billion. While the acquirers' losses in the 1980s were offset by gains to acquirees for a net synergy gain of \$11.6 billion, such an offset did not occur in the 1998-2001 period; instead the losses to acquirers exceeded acquirees' gains for a net synergy loss of \$134 billion.

Equity overvaluation seems to have influenced this value destruction. Most of the value losses were attributable to 87 "large loss" transactions in which the loss to each acquiring firm exceeded \$1 billion. "Wealth destruction on a massive scale" appears to have occurred because overvalued bidders used their high-priced stock to finance deals that, from an investor's perspective, should not have been pursued.

INVESTMENTS Equity overvaluation also tends to destroy firm value by leading managers to pursue certain greenfield investments that have a negative net present value (NPV) and to avoid other investments that have a positive NPV. When equity is overvalued, firm managers effectively have more capital to invest. Most obviously, they may pay for expenses using their firm's inflated stock as currency. In addition, they can raise more cash by issuing new equity at prices reflecting their firm's overvaluation. Empirical data indicate that managers do, in fact, take advantage of periods of overvaluation by issuing equity. Equity overvaluation thus increases the resources with which managers may pursue firm expansion, creating a version of what Jensen has termed the "agency costs of free cash flow." Because firm expansion often provides managers with private benefits that are not available to shareholders (e.g., greater job prestige, perhaps higher compensation), managers have an incentive to pursue expansion beyond the value-maximizing point - the point at which the corporation's marginal benefit created equals its marginal cost of expansion. Overvalued equity exacerbates those agency costs by expanding the resources with which managers may pursue firm expansion.

In addition to causing active value destruction through imprudent acquisitions and unwise greenfield investments, overvaluation may cause passive value destruction by encouraging managers to forgo positive NPV projects. Because the dominant strategy of managers of overvalued firms is, in Jensen's words, to "postpone the day of reckoning until [they] are gone or [they] figure out how to resolve the issue," they will look for opportunities to conceal their firm's overvaluation from the market. One way to do so is to delay value-enhancing investment expenditures in order to meet quarterly earnings expectations and avoid the value reassessment that accompanies missing such an expectation. Research suggests that this sort of value-sacrificing behavior is widespread. In a recent survey, 80 percent of corporate CFOs stated that they would be willing to delay discretionary expenditures on research and development, advertising, and maintenance in order to meet earnings expectations, and over 55 percent stated that they would "delay starting a new project even if this entails a small sacrifice in value" in order to meet a target.

PRICE-DECREASING INSIDER TRADING

In addition to providing greater investor benefits than priceincreasing insider trading, price-decreasing insider trading is also likely to impose lower investor costs. To see why this is so, consider how insider trading may cause harm to the corporation and how the law affords asymmetric treatment to the use of different types of secret information.

SQUANDERING OPPORTUNITIES The most plausible negative effect of insider trading is the thwarting of valuable corporate transactions that could otherwise be accomplished. Suppose, for example, that a mining corporation discovers a valuable ore deposit and wishes to purchase surrounding land. It will want to keep the ore discovery secret so as to procure a favorable price on the surrounding land. If insiders aware of the discovery begin buying the corporation's stock, thereby causing a precipitous price increase, landowners may become suspicious and raise their price demands. Priceincreasing insider trading could thereby squander a corporate opportunity.

Price-decreasing insider trading could also thwart valuecreating corporate transactions. The relevant situation would be one in which the corporation had an interest in keeping its stock's inflated price above its true value in order to accomplish some transaction. For example, the corporation might desire to use its overvalued stock as consideration for a purchase, to issue new equity at an inflated price, or to secure credit on favorable terms. Price-decreasing insider trading could squander such corporate opportunities.

VALUE VS. DEFECTS If both price-increasing and pricedecreasing insider trading have the potential to undermine worthwhile corporate projects, why ban only the price-increasing variety? The answer lies in the more general treatment of secret information by the law.

When it comes to a contracting party's use of secret information in executing a deal, the law generally distinguishes between secret "good news" (e.g., inside information about hidden value) and secret "bad news" (e.g., inside information about hidden defects). In order to encourage people to search out hidden value, the law permits the use of the former type of inside information, but it generally allows counter-parties to void transactions that involve the use of the latter sort of information. Thus, transactions involving the suppression of information about overvaluation (hidden defects) are not typically available to the corporation, but transactions involving suppression of information suggesting undervaluation (hidden value) are.

The upshot is that price-decreasing insider trading, unlike the price-increasing variety, generally cannot thwart otherwise available corporate opportunities. Price-decreasing insider trading thus imposes lower costs on investors.

Readings

CONCLUSION

- "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers," by Michael C. Jensen. *American Economics Review*, Vol. 76 (Papers and Proceedings) (1986).
- "Agency Costs of Overvalued Equity," by Michael C. Jensen. *Financial Management*, Vol. 34 (2005).
- "Analyst Forecasting Errors and Their Implications for Security Analysis," by David N. Dreman and Michael A. Berry. Financial Analyst Journal, Vol. 51 (1995).
- "Analyzing the Analysts: Career Concerns and Biased Earnings Forecasts," by Harrison Hong and Jeffrey D. Kubik. *Journal of Finance*, Vol. 58 (2003).
- "Bid, Ask and Transaction Prices in a Specialist Market with Heterogeneously Informed Traders," by Lawrence R. Glosten and Paul R. Milgrom. *Journal of Financial Economics*, Vol. 14 (1985).
- *Corporation Law and Economics*, by Stephen M. Bainbridge. Foundation Press, 2002.
- "Earnings Surprises, Growth Expectations, and Stock Returns, or Don't Let an Earnings Torpedo Sink Your Portfolio," by Douglas J. Skinner and Richard G. Sloan. *Review of Accounting Studies*, Vol. 7 (2002).
- "Enron, Fraud and Securities Reform: An Enron Prosecutor's Perspective," by John R. Kroger. *University of Colorado Law Review*, Vol. 76 (2005).
- "Equity Mispricing: It's Mostly on the Short Side," by Mark T. Finn et al. *Financial Analysts Journal*, Vol. 55 (1999).
- "From Fairness to Contract: The New Direction of the Rules Against Insider Trading," by Jonathan R. Macey. *Hofstra Law Review*, Vol. 13 (1984).
- "Gatekeeper Failure and Reform: The

- Challenge of Fashioning Relevant Reforms," by John C. Coffee, Jr. *Boston University Law Review*, Vol. 84 (2004).
- "Information Effects on the Bid-Ask Spread," by Thomas E. Copeland and Dan Galai. *Journal of Finance*, Vol. 38 (1983).
- "Insider Trading in a Rational Expectations Economy," by Lawrence M. Asubel. *American Economic Review*, Vol. 80 (1990).
- "Insider Trading and the Bid-Ask Spread: A Critical Evaluation of Adverse Selection in Market Making," by Stanislav Dolgopolov. *Capital University Law Review*, Vol. 33 (2004).
- *Insider Trading and the Stock Market*, by Henry G. Manne. Free Press, 1966.
- "Insider Trading: Rule 10b-5, Disclosure and Corporate Privacy," by Kenneth E. Scott. *Journal of Legal Studies*, Vol. 9 (1980).
- Judgment in Managerial Decision Making, 3rd ed., by Max H. Bazerman. Wiley, 1994.
- "Mandatory Disclosure and the Protection of Investors," by Frank H. Easterbrook and Daniel R. Fischel. *Virginia Law Review*, Vol. 70 (1984).
- "Market Timing and Capital Structure," by Malcolm Baker and Jeffrey Wurgler. *Journal of Finance*, Vol. 57 (2002).
- "Organized Illusions: A Behavioral Theory of Why Corporations Mislead Stock Market Investors (and Cause Other Social Harms)," by Donald C. Langevoort. *University of Pennsylvania Law Review*, Vol. 146 (1997).
- "Predicting Individual Analyst Earnings Forecasts," by Scott E. Stickel. *Journal of Accounting Research*, Vol. 28 (1990).
- "Securities and Secrets: Insider Trading and the Law of Contracts," by Saul Levmore. Virginia Law Review, Vol. 68 (1982).

valuation. In the long run, undervaluation is unlikely to impose significant costs on investors, while overvaluation is likely to do so. Insider trading that pushes a stock's price

Undervaluation is more likely to be self-correcting than over-

likely to do so. Insider trading that pushes a stock's price upward toward actual value may cause harm to the corporation and its investors. Insider trading that pushes an inflated price downward toward value is unlikely to do so.

Taken together, these observations suggest that an asymmetric insider trading policy that permits some form of price-decreasing insider trading, while generally banning price-increasing insider trading, is the policy that investors and managers would likely bargain for were they able (practically and legally) to do so. Accordingly, the law should liberalize price-decreasing insider trading (subject only to contractual restraints imposed by corporations themselves), while continuing to regulate price-increasing insider trading.

- "Technology, Information Production, and Market Efficiency," by Gene D'Avolio et al. Harvard Institute for Economic Research, discussion paper 1929, 2001.
- "The Economic Implications of Corporate Financial Reporting," by John R. Graham, Campbell R. Harvey, and Shivaram Rajgopal. National Bureau of Economic Research, working paper 10550, 2005.
- "The Effect of Insider Trading Rules on the Internal Efficiency of the Large Corporation," by Robert J. Haft. *Michigan Law Review*, Vol. 80 (1982)
- "The Mechanisms of Market Efficiency," by Ronald J. Gilson and Reinier H. Kraakman. Virginia Law Review, Vol. 70 (1984).
- "The Regulation of Insider Trading," by Dennis W. Carlton and Daniel R. Fischel. Stanford Law Review, Vol. 35 (1983).
- "The Theory and Practice of Corporate Finance: Evidence from the Field," by John R. Graham and Campbell R. Harvey. *Journal of Financial Economics*, Vol. 60 (2001).
- "Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure," by Michael C. Jensen and William H. Meckling. *Journal of Financial Economics*, Vol. 3 (1976).
- "Unsafe at Any Price: A Reply to Manne, Insider Trading and the Stock Market," by Roy A. Schotland. Virginia Law Review, Vol. 53 (1967).
- "Vicarious Liability for Fraud on Securities Markets: Theory and Evidence," by Jennifer H. Arlen and William J. Carney. *University of Illinois Law Review*, 1992.
- "Wealth Destruction on a Massive Scale? A Study of Acquiring-Firm Returns in the Recent Merger Wave," by Sara B. Moeller, Frederik P. Schlingemann, and René M. Stulz. *Journal of Finance*, Vol. 60 (2005).