STOCK BUYBACKS: MISUSED OR MISUNDERSTOOD?

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STOCK BUYBACKS: MISUSED OR MISUNDERSTOOD?

Panelists and Moderator:

- Jesse M. Fried, Dane Professor of Law, Harvard Law School
- Ken Bertsch, Executive Director, Council of Institutional Investors
- Lisa M. Fairfax, Alexander Hamilton Professor of Business Law, George Washington University Law School
- Bruce Dravis, Chair of Corporate Governance Committee, ABA Business Law Section
STOCK BUYBACKS: MISUSED OR MISUNDERSTOOD?

Dilution, Disclosure, Equity Compensation and Buybacks

- Quantifies the inter-relationship of equity compensation and buybacks
- Review of 10 years of financial statements for 59 Fortune 100 companies (Sample Companies)
- Review conducted across industries: Financials, technology, retail, manufacturing, consumer goods were all represented
- Study covered $1.2 trillion of buybacks, of which $454 billion reversed equity compensation issuances
- Equity compensation buybacks of $454 billion were offset by equity compensation inflows of $279 billion
STOCK BUYBACKS: MISUSED OR MISUNDERSTOOD?

Legislators and other critics claim
- Buybacks divert cash that could be used to improve employee wages
- Buybacks divert cash from productive investments
- Buybacks can manipulate metrics used in executive compensation

Proponents claim
- Buybacks are tax efficient distributions to shareholders
- Shareholders who do not sell reap the benefits over time
STOCK BUYBACKS:
MISUSED OR MISUNDERSTOOD?

One unexamined aspect of buybacks:
The inter-relationship of buybacks and equity compensation

- Relationship is denominated in shares and in dollars
- Equity compensation, acting alone, creates share dilution and lowers EPS; buybacks deflate share count
- Equity compensation is cash flow positive for companies, partially offsetting the buyback expenditures
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Pro Forma Share Growth from Equity Compensation Only v. Actual Change in Share Count

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<th>Change from Baseline</th>
<th>Pro Forma</th>
<th>Actual</th>
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<td></td>
<td>7.6%</td>
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Among Sample Companies, the cumulative pro forma equity comp dilution was calculated using year 1 outstanding shares, not including any shares issued in secondaries or M&A.

Lowest individual company pro forma equity comp dilution was 0.1%; largest was 27.9%.

Shareholders are required to approve equity compensation plans:

- No disclosures required on fully diluted impact to shareholders (compare VC funding).
- ISS sets a level of 2% annually as “de minimis” dilution.
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Total Repurchase Dollars v. Compensation Equity
Compensation Repurchase Dollars (Including Cash Offsets from Option Exercises and Tax Benefits)

- Non-compensation repurchases
- Comp inflow offsetting repo
- Comp repo spending not offset by inflows
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Sample Companies made aggregate buybacks of $1.2 Trillion over sample period

- By company, total shares repurchased divided into equity compensation shares issued shows the percentage of buybacks that merely unwound equity compensation dilution (“Comp Repo %”)
- By company, Comp Repo % multiplied by dollars spent on buybacks generates an estimated dollar amount spent to unwind equity compensation dilution (Comp Repo $)
- By company, Comp Repo $ were offset by tax effects and issuance proceeds
Aggregate Sample Company Comp Repo % was 36.9% of all repurchases

- In other words, on average, the first 36.9% of buybacks brings share dilution to zero

Comp Repo $ totaled $ 454 Billion

- Offsets to Comp Repo $ were 279 Billion
  - 61.4% of Comp Repo dollar cost
  - 22.7% of all repurchase dollars

Figures are 10-year aggregates, not year by year comparisons
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Equity compensation is a four-party transaction

- Company issues options or restricted stock to employee
- If options, employee purchases shares for cash (vesting for restricted stock)
- Market buys shares to provide cash to employee
- Company receives tax benefit for share compensation

**NOTE:** This discussion excludes phantom stock or other plans settled in cash but denominated in shares
STOCK BUYBACKS: MISUSED OR MISUNDERSTOOD?

Equity compensation is a cash positive event for the company

- The company doesn’t part with cash (directly) to compensate the employee
- The company fulfills its compensation obligation by delivering shares
- The company receives cash for option exercises or ESPP purchases
- The company gets tax benefit (avoids cash payment) for compensation expense
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Buyback/Equity Compensation timing and amounts are asymmetric

- Equity compensation has a grant date, a vesting date, and exercise date (for options)
- Maximum share issuance amount per employee is fixed at the time of grant
- Actual issuance depends on vesting and option exercise
- Timing and amount of shares in buybacks are discretionary
- No obligation for buybacks to match equity compensation share issuances, or to be limited to equity compensation share issuances
Companies are not obligated to buyback stocks

- However, most do

Even though companies settle an equity compensation obligation in shares, and then at a different point in time part with cash to repurchase those shares, buybacks don’t have liability treatment

- Share buybacks are not an obligation, therefore not a liability

- Compensation expense is based on equity compensation grant date value calculations, disconnected from buybacks
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Does GAAP compensation expense predict buyback cash expenditure rates or amounts?

- No

In the Sample Companies, compensation expense v. Comp Repo $ varied widely

- Lowes compensation expense represented 8% of its compensation buyback dollar expenditures
- Google took in more equity compensation cash than it spent on buybacks, so compensation expense overstated its actual expenditures by 660%
Stock Buybacks: Misused or Misunderstood?

Addressing Buyback Critiques:

- Employee pay—Buybacks reduce the impact to other shareholders of equity compensation, providing significant financial benefits to employees
- Crowding out investment—See Jesse Fried data and presentation
- Manipulate executive compensation metrics—Boards can, and should, discount impact of buybacks when metrics are set, to avoid manipulation; other executive compensation issues are not, per se, buyback issues
Informed Trading and False Signaling with Open Market Repurchases

Jesse M. Fried

Public companies in the United States and elsewhere increasingly use open market stock buybacks, rather than dividends, to distribute cash to shareholders. Academic commentators have emphasized the possible benefits of such repurchases for shareholders. However, little attention has been paid to their potential drawbacks. This Article shows that managers use open market repurchases to indirectly buy stock for themselves at a bargain price. Managers also boost stock prices by announcing repurchase programs they do not intend to execute, enabling them to unload their own shares at a higher price. Such bargain repurchases and inflated-price sales systematically transfer significant amounts of value from public investors to managers and distort managers' payout decisions. The Article concludes by proposing a new approach to regulating open market repurchases: requiring firms to disclose specific details of their buy orders in advance. This pre-repurchase disclosure rule, the Article shows, would undermine managers' ability to use repurchases for informed trading and false signaling, thereby reducing the resulting distortions and costs to shareholders. Moreover, it would achieve these objectives without eroding any of the potential benefits of repurchases.

INTRODUCTION

Publicly traded U.S. firms distribute between $300 and $400 billion to their own shareholders annually. Managers have two options for paying out this cash: dividends—pro rata distributions to shareholders—or share repurchases. Until the early 1980s, 80% to 90% of cash payouts took the form of dividends. However, the use of share repurchases to distribute cash has since grown substantially in the United States, increasing from $6.6 billion in 1980 to almost $200 billion in 2000. In that year, more than...
50% of the cash paid out by publicly traded firms was distributed through stock buybacks. The focus of this Article is open market repurchases, the most common form of buyback, in which a corporation uses a broker to purchase its own stock in the public market over an extended period of time.

The explosive growth of repurchases has attracted considerable attention from financial economists. In general, these economists have assumed that managers use repurchases to benefit shareholders and have sought to


5. See Grullon & Ikenberry, supra note 3, at 33-34. This Article is part of a larger project on firms' use of share repurchases to acquire stock from public shareholders. See Jesse M. Fried, Insider Signaling and Insider Trading with Repurchase Tender Offers, 67 U. CHI. L. REV. 421, 453-65 (2000) (showing that managers' tendering, selling, and disclosure behavior is consistent with the use of repurchase tender offers for insider trading) [hereinafter Fried, Insider Signaling]; Jesse M. Fried, Open Market Repurchases: Signaling or Managerial Opportunity?, 2 THEORETICAL INQUIRIES L. 865, 879-81 (2001) (demonstrating that managers do not use open market repurchases to signal that the stock is underpriced) [hereinafter Fried, Open Market]. This Article does not discuss the repurchase of shares from select shareholders (including greenmail transactions). Nor does it address repurchases by closed-end investment funds, which raise different issues than repurchases by operating companies and are governed by a different set of regulations. See Tamar Frankel & Ann Taylor Schwing, 3 THE REGULATION OF MONEY MANAGERS: MUTUAL FUNDS AND ADVISERS § 26.03 (2d ed. 2001 & Supp. 2004) (discussing closed-end investment companies that sell and repurchase their securities).

identify the possible advantages of repurchases over dividends. These include repurchases’ ability to: (1) distribute excess cash more tax-efficiently than dividends; (2) pay out transient cash flows more cost-effectively than dividends; (3) acquire shares for use in employee stock option plans; and (4) boost liquidity. However, little attention has been paid to the potential economic costs to public shareholders when managers use repurchases, rather than dividends, to distribute cash.

The Article shows that managers commonly use open market buybacks to enrich themselves at public investors’ expense. The Article demonstrates that a repurchase has the same economic effects as the following two-part transaction: (1) non-selling shareholders buy shares directly from sellers at the repurchase price, and (2) the firm then issues a dividend. Thus, when a stock is trading below its actual value, managers can use a repurchase to buy shares for themselves and other non-selling shareholders at a bargain price. Managers of repurchasing firms own, on average, 15% to 20% of their firms’ outstanding shares. As a result, managers repurchasing underpriced stock capture a significant fraction of the value transferred from sellers. Indeed, as the Article explains, there is considerable evidence that managers frequently use private information to conduct repurchases at a bargain price.

Some economists have argued that managers seeking to serve public shareholders use repurchase announcements to signal that their stock is underpriced. According to this account, which I call “faithful signaling,” managers who believe that their stock is underpriced and who wish to credibly communicate this belief to shareholders do so by promising to repurchase stock and retain their own shares. Managers making this double commitment essentially promise to indirectly buy shares at the repurchase price, which would make them worse off if, in fact, the stock is currently overpriced.

The Article presents empirical data indicating that managers do not actually engage in faithful signaling. Indeed, these same data suggest that managers engage in what I call “false signaling”: they announce repurchases they have no intention of conducting in order to inflate the stock price, enabling them to unload their own shares at a higher price. The Article also explains that bargain repurchases and false signaling are synergistic. Bargain repurchases make it easier for managers to boost the stock price with misleading repurchase announcements. And false signaling makes it easier for managers to profit from bargain repurchases.

7. The potential benefits of repurchases are described infra Part I.B.
8. In this Article, I use the term “managers” to refer to a firm’s high-level executives, directors, and (if there is one) the controlling shareholder that has appointed them.
10. See infra Part II.A.2.
The Article demonstrates that managers' opportunistic use of repurchases and misleading repurchase announcements is likely to impose substantial costs on public shareholders. I estimate that managers make as much as several billion dollars annually from bargain repurchases alone. And I show that each dollar of these profits comes, directly or indirectly, at public shareholders' expense.

The fact that managers use nonpublic information to conduct bargain repurchases should not be surprising. After all, managers frequently employ inside information to trade personally in their own firms' shares. For example, managers often buy firm stock in advance of good news and sell before the release of bad news. In earlier work, I estimated that managers use private information to make about $5 billion annually trading personally in their own firms' shares.11

There is, however, a critical difference between managers' own trading and the use of bargain repurchases to indirectly acquire stock at a low price. Unlike managers' personal buying and selling, their use of repurchases to exploit inside information requires them to manipulate the timing and form of corporate cash payouts. Therefore, managers' ability to use repurchases to buy stock at a bargain price generates more costs than personal insider trading: it can directly distort payout policy, shrinking the corporate pie and further reducing public shareholders' returns.

The Article shows that bargain repurchases can lead to three types of payout distortions. First, managers able to use repurchases for informed trading may have an incentive to hoard cash—that is, delay paying out cash when an immediate distribution would benefit shareholders as a group. In particular, managers who believe their firm's stock is likely to become underpriced may have an incentive to retain cash to preserve their ability to conduct bargain repurchases even though an immediate payout would maximize aggregate shareholder value. In this scenario, managers' ability to use repurchases to buy stock at a bargain price causes them to pay out too little.

Second, managers aware that their stock is underpriced may have an incentive to squander cash, that is, buy back stock with cash that should, from an aggregate shareholder perspective, be invested in the firm. In this second scenario, managers' ability to conduct bargain repurchases causes them to pay out too much. In both the cash-hoarding and cash-squandering scenarios, managers' ability to engage in bargain repurchases leads them to make payout decisions that reduce aggregate shareholder value.

Third, managers' ability to use repurchases for informed trading may distort their choice of payout mechanism. As the Article explains, the

transaction costs of a repurchase may sometimes exceed those of a dividend by a substantial amount, making dividends the most efficient form of payout in certain situations. However, managers’ incentive to profit from a low-price buyback may cause them to use a repurchase even in those situations where a dividend would be more efficient.12

After analyzing these three types of payout distortions, I turn to consider two arguments that bargain repurchases might actually improve payout policy and increase aggregate shareholder value: (1) bargain repurchases might mitigate managers’ tendency to retain excess cash; and (2) repurchase announcements’ generally positive effect on stock prices suggests that bargain repurchases benefit shareholders. However, I show that bargain repurchases are unlikely to significantly benefit shareholders by reducing excess cash retention. I also demonstrate that bargain repurchases’ effects on stockholders as a group cannot be inferred from the stock market’s reaction to repurchase announcements. Indeed, repurchase announcements could boost the stock price even in a world where all repurchases reduce aggregate shareholder value.

Having identified the costs bargain repurchases and misleading repurchase announcements impose on public shareholders, the Article proposes a new regulatory approach designed to reduce these costs. Under the proposed approach, managers would be required to disclose the exact details of their firm’s repurchase orders before they are executed by brokers. Once announced, the orders could not be cancelled.

I show that pre-repurchase disclosure would reduce managers’ ability to profit from bargain repurchases. Market participants would use disclosed repurchase orders to update their assessment of the stock’s actual value, taking into account the firm’s repurchase history, its financial condition, and managers’ contemporaneous trading. To the extent the disclosure signals that the stock is likely to be underpriced, market participants will bid up the price before the repurchase order is executed, reducing managers’ profits from each bargain repurchase. Managers with a history of bargain repurchases will face substantial adjustments even when they buy back stock for other reasons, forcing them to “give back” over time part of their profits from previous bargain repurchases.

As bargain repurchases become less profitable, managers will conduct fewer such repurchases. And as the number of bargain repurchases declines, it will be harder for managers to inflate the stock price by

12. Managers’ use of bargain repurchases might give rise to other costs as well. For example, bargain repurchases, like personal insider trading, can be profitable only to the extent managers have private information. Thus bargain repurchases, like personal insider trading, might lead managers to make investment and disclosure decisions designed to increase information asymmetry rather than maximize aggregate shareholder value. Cf. Fried, Reducing the Profitability, supra note 11, at 306. However, the focus of this Article is on those costs and distortions that are unique to bargain repurchases.
announcing repurchase programs they have no intention of carrying out. Pre-repurchase disclosure can therefore reduce the transfer of value from public shareholders to managers and increase aggregate shareholder value by improving corporate payout decisions.

Of course, not all buybacks are designed to enrich managers at public investors' expense. For example, managers may conduct some buybacks to acquire stock for employee option programs, or to distribute cash tax-efficiently. Importantly, pre-repurchase disclosure does not hinder the use of repurchases for such shareholder-benefiting purposes. Nor will it discourage managers from conducting shareholder-serving repurchases. Pre-repurchase disclosure can therefore reduce the costs associated with the opportunistic use of buybacks and misleading repurchase announcements without undermining repurchases' potential benefits.13

Before proceeding, I would like to make explicit my normative framework. I consider managers' decisions to be "desirable" or "efficient" when they maximize what I call "aggregate shareholder value"—the present value of the cash flowing to the firm's current and future shareholders over time. Under this framework, an action that reduces the total amount of value available to shareholders is undesirable, even if it makes current shareholders better off.

It is also worth stating the assumptions about securities pricing under-lying my analysis. When analyzing securities pricing, economists and legal academics have often assumed that the market price is the best possible estimate, based on public information, of a stock's value. As a result, investors' demand curve for the stock is essentially horizontal—there is infinite demand for the stock at or below the market price, and no demand above.14

However, there is considerable evidence that investors hold different views about the value of publicly traded stock. In the presence of such

13. This Article builds on my earlier work on open market repurchases. See Fried, Open Market, supra note 5. In that article, I systematically critique the "faithful signaling" explanation for repurchases advanced by some economists and sketch out the argument, which I develop more fully here, that managers use open market buybacks for informed trading and misleading repurchase announcements to boost the stock price before selling their shares. Unlike this Article, however, Open Market does not estimate the value diverted to managers through bargain repurchases, identify and systematically analyze the payout distortions resulting from the use of buybacks for informed trading, or offer a proposal designed to reduce managers' ability to engage in bargain repurchases and inflated-price sales. In a contemporaneously written article, Bill Bratton also expresses a skeptical view about the desirability of open market repurchases. See William W. Bratton, The New Dividend Puzzle, 93 GEO. L.J. (forthcoming 2005). Bratton points out that by reducing the number of outstanding shares, repurchases can be used to mask the cost of option compensation and distort reported earnings per share. In light of these potential problems, he urges boards to carefully consider whether, especially after the recent dividend tax cut, repurchases make shareholders better off. However, Bratton does not systematically analyze the economic costs of bargain repurchases and false signaling or propose a regulatory solution to reduce these costs, as I seek to do in this Article.

14. See Fried, Insider Signaling, supra note 5, at 434.
heterogeneous beliefs, the demand curve for stock slopes downward. The highest-valuing investor would be willing to hold the stock even if it were to trade at a price much higher than the current market price. At lower prices, more and more investors would be willing to own the shares. If the demand curve for a given stock slopes downward, the stock will trade at a price reflecting the subjective valuation of the firm's lowest-valuing (or "marginal") shareholder.\textsuperscript{15}

When the demand curve for stock slopes downward, managers can boost the stock price not only by announcing a repurchase program but also by repurchasing shares from low-valuing shareholders. Thus, managers wishing to unload their own shares at a higher price may have an incentive to use repurchases to exert upward pressure on the price.\textsuperscript{16} The use of repurchases to exert price pressure would create payout distortions in addition to those I identify in this Article. For example, managers seeking to boost the stock price before selling their shares might repurchase shares with funds that can generate more value invested in the firm, even when the stock is overpriced.

Because I wish to focus on managers' use of repurchases for informed trading and false signaling—forms of opportunism that can arise whether stock demand curves are horizontal or downward sloping—I will generally assume, as is common in most of the literature, that the market price is the best possible estimate of a stock's value and that the demand curve is horizontal. My aim is to show that, even under such market conditions, managers' use of repurchases can transfer value from public shareholders and lead to payout distortions that reduce aggregate shareholder value.\textsuperscript{17}

The remainder of the Article proceeds as follows. Part I describes the importance of corporate payout policy and the growing use of open market repurchases to distribute cash. It then identifies and explains the potential advantages of these stock buybacks to shareholders and describes how they are currently regulated.

Part II shows that managers are currently able to misuse open market repurchases for informed trading, thereby enriching themselves at the expense of public shareholders. It begins by demonstrating that a repurchase has the same economic effects as a two-part transaction in which nonselling shareholders buy stock from sellers at the repurchase price, and the firm then issues a dividend. Thus, managers who are aware the stock is underpriced can use a repurchase to indirectly buy bargain-price shares

\textsuperscript{15} Id. at 434-35.
\textsuperscript{16} Id. at 435-36.
\textsuperscript{17} In future work, I plan to analyze the additional payout distortions that are likely to arise from managers' use of repurchases in markets where either stock demand curves slope downward or investors are myopic.
from selling shareholders. It then presents evidence that managers frequently conduct such bargain repurchases.

Part II also considers managers' opportunistic use of repurchase announcements. It shows that the available data indicate that managers do not, as many economists have argued, use repurchase announcements to credibly signal that the stock is underpriced. Rather, those data are consistent with managers using misleading repurchase announcements to boost the stock price before selling their own shares. Part II concludes by explaining how each form of opportunism—bargain repurchases and false signaling—facilitates the other.

Part III provides a tentative estimate of managers' profits from bargain repurchases: approximately several billion dollars annually. It then explains how these profits come, directly or indirectly, at public investors' expense.

In Part IV, I show that the cost to public investors of managers' opportunistic use of stock buybacks is not limited to managers' profits. Bargain buybacks distort firms' payout decisions, reducing aggregate shareholder value and further diminishing public investors' returns. Part IV also explains why bargain repurchases are unlikely to mitigate managers' tendency to retain too much cash and why the effect of repurchases on public shareholders cannot accurately be gauged by the market's reaction to repurchase announcements.

Part V proposes the pre-repurchase disclosure approach to regulating buybacks. It shows that pre-repurchase disclosure would reduce managers' bargain repurchase profits, their incentive to conduct bargain repurchases, and their ability to benefit from false signaling. Pre-repurchase disclosure would thereby reduce the amount of value diverted from public shareholders to managers as well as improve corporate payout policy, further increasing public shareholders' returns. Part V also considers the potential costs of pre-repurchase disclosure and explains why they are likely to be minimal. A brief conclusion follows.

I

Repurchases: Use, Benefits, and Regulation

A. Corporate Payout Policy and the Increasing Use of Repurchases

Publicly traded U.S. firms annually generate hundreds of billions of dollars in earnings. Each year, managers must decide how much of their firms' retained earnings should be distributed to shareholders. In 2000,
U.S. managers distributed over $350 billion to their own shareholders through dividends and repurchases.\footnote{Id.}{19}

In a world of perfect capital markets, payout decisions might not be particularly important. Corporations could obtain financing for any project with a positive net present value. Thus, a firm's ability to invest in desirable projects would not depend on having cash on hand. If the firm required additional funding, it could simply tap the equity or debt markets for the necessary capital. Similarly, shareholders' ability to invest in projects outside the firm would not depend on their personal cash holdings. They too could easily raise additional financing for any profitable venture.

However, capital markets are not perfect. Neither firms nor shareholders always can obtain outside financing for projects with positive net present value. As a result, payout decisions affect firms' ability to fund existing and new projects as well as shareholders' ability to invest in ventures outside of their firms. Payout decisions also affect a firm's debt/equity ratio (or "leverage"), which might influence firm value. Thus, payout policy can have substantial economic effects.

From an aggregate shareholder perspective, the optimal payout policy is one that maximizes the present value of the cash flowing to the firm's current and future shareholders over time. A firm should distribute one dollar to shareholders if and only if, on the margin, investing that dollar outside the firm would yield higher returns than investing it in the firm. When the dollar would generate a return of 15% in the firm and 10% outside of the firm, the firm should retain the cash. If, on the other hand, that dollar would generate a return of 5% in the firm and 10% outside, the firm should pay it out.

Managers must decide not only how much cash to distribute to shareholders but also the manner in which the cash should be paid out—through dividends, share repurchases, or both. Given the widespread use of both dividends and repurchases to distribute cash, it is unlikely that either form of payout is always better for shareholders. From an optimal payout perspective, managers should choose not only the payout amount that is best for shareholders, but also the payout form that maximizes aggregate shareholder value.

During the last several decades, many firms began using repurchases as their exclusive means of distributing cash.\footnote{See id. at 1662.}{20} In addition, many traditionally dividend-paying firms began also to repurchase shares.\footnote{Id. at 1659-60; see also Eugene F. Fama & Kenneth R. French, Disappearing Dividends: Changing Firm Characteristics or Lower Propensity to Pay?, 60 J. FIN. ECON. 3, 19 (2001) (finding a lower propensity to pay dividends among public firms).}{21} As a result, the use of share repurchases to distribute cash has increased substantially in

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\footnote{19. Id.}{\footnote{20. See id. at 1662.}}\footnote{21. Id. at 1659-60; see also Eugene F. Fama & Kenneth R. French, Disappearing Dividends: Changing Firm Characteristics or Lower Propensity to Pay?, 60 J. FIN. ECON. 3, 19 (2001) (finding a lower propensity to pay dividends among public firms).}
both relative and absolute terms. While in 1980 there were only $13 of share repurchases for every $100 of dividends, by 2000 there were $113.\textsuperscript{22} During the 1980s and 1990s, the annual volume of share repurchases increased from $6.6 billion to almost $200 billion.\textsuperscript{23} Most shares are repurchased by firms that also issue dividends.

Share repurchases can take the form of either an open market repurchase (OMR) or a repurchase tender offer (RTO). In an OMR, the firm buys its own stock on the market through a broker. In an RTO, the firm offers to buy back its own stock directly from shareholders, usually at a premium over the market price.\textsuperscript{24} OMRs, the focus of this Article, are used to acquire 90% to 95% of the shares repurchased annually.\textsuperscript{25}

As I describe in more detail below, firms announcing board authorization of an OMR program are not required to indicate the number or amount of shares they intend to repurchase.\textsuperscript{26} Nor are they obligated to repurchase a single share. Those firms announcing OMR programs and disclosing the amount of shares targeted have indicated they may acquire, on average, 7% of outstanding shares.\textsuperscript{27} Not all announcing firms actually repurchase the targeted amount. Firms that actually buy back shares following OMR announcements tend to acquire shares over periods ranging from several months to several years.\textsuperscript{28} Companies announcing OMRs and disclosing the target amount usually buy back 70% to 80% of the targeted number of shares during the repurchase period.\textsuperscript{29} Until recently, firms were not required to disclose the number of shares actually repurchased, and generally did not volunteer this information.\textsuperscript{30} These figures are thus merely estimates.

\textsuperscript{22} Grullon & Michaely, Dividends, supra note 1, at 1655.
\textsuperscript{23} Id.
\textsuperscript{24} See Fried, Insider Signaling, supra note 5, at 428.
\textsuperscript{25} Grullon & Ikenberry, supra note 3, at 33-34 (reporting that between 1980 and 1999, open-market programs comprised about 92% of the total share repurchase announcements and 91% of the total value of all repurchase announcements).
\textsuperscript{26} See infra Part I.C.3
\textsuperscript{27} See Ikenberry et al., Market Underreaction, supra note 6, at 185 (reporting that the average percentage of outstanding shares sought in all of the open market repurchases announced between January 1980 and December 1990 by firms listed on the American Stock Exchange (ASE), New York Stock Exchange (NYSE), and the National Association of Securities Dealers Automated Quotation System (NASDAQ) was 6.6%).
\textsuperscript{28} See Stephens & Weisbach, supra note 6. In contrast, RTOs, which on average target twice as many shares as open market repurchases, are usually completed within one month. See Fried, Insider Signaling, supra note 5, at 428.
\textsuperscript{29} See Stephens & Weisbach, supra note 6, at 314. Estimated program completion rates ranged from 53% to 72% for the period 1985-1996. See Jagannathan et al., Financial Flexibility, supra note 6, at 357.
\textsuperscript{30} See infra Part I.C.3, which discusses the current disclosure requirements for open market repurchases.
B. Potential Benefits of Repurchases

Optimal payout policy requires managers to choose not only the amount of cash distribution that maximizes aggregate shareholder value but also the most beneficial form of payout: dividend or stock buyback. Many academic commentators have viewed the increased use of open market repurchases as desirable because they offer a number of possible advantages over dividends. This Section considers four potential benefits of repurchases: their ability to (1) pay out excess cash more tax-efficiently than dividends; (2) distribute transient cash flows more cost-efficiently than dividends; (3) provide shares needed for employee stock option plans; and (4) increase liquidity.

Before proceeding to describe each possible benefit, I wish to emphasize two points. First, I make no claim about the magnitude of any of these benefits. Indeed, I believe the magnitude of these benefits is likely to be quite modest. Second, even if these benefits make repurchases superior to dividends in certain cases, they are unlikely to make repurchases the most efficient form of payout in every case. Indeed, the continued widespread use of dividends—often by the same firms that repurchase shares—suggests that dividends are often a more efficient form of payout than repurchases. My purpose here is simply to describe the potential benefits attributed to repurchases by others.

1. Tax-Favored Distribution of Excess Cash

From shareholders’ perspective, managers should distribute “excess cash”—cash that can earn higher returns for shareholders outside the firm—in the most tax-efficient manner. Historically, repurchases have been a much more tax-efficient means of distributing excess cash than dividends. The tax advantages of repurchases have diminished, however, because of the 2003 dividend tax cuts. Indeed, as I explain below, in certain situations dividends may now be more tax-efficient.

Unless a shareholder is exempt from tax, she generally pays tax when she receives a dividend or sells her shares for a profit. Historically, profits on long term capital gains have been taxed far less heavily than dividends. Before the 2003 dividend tax cut, for example, dividend income was

31. See Douglas O. Cook et al., On the Timing and Execution of Open Market Repurchases, 17 Rev. Fin. Stud. 463 (2004) (describing the liquidity-enhancing benefits of repurchases) [hereinafter Cook et al., On the Timing]; Grullon & Michaely, Dividends, supra note 1, at 1650 (discussing the tax benefits of repurchases); Jagannathan et al., Financial Flexibility, supra note 6 (detailing the use of open market repurchases to distribute transient cash flows); Kahle, supra note 6 (considering the use of repurchases to acquire shares for employee stock option programs).

32. In Part IV, I explain that managers’ ability to use buybacks for informed trading may cause them to use repurchases even when dividends would better serve shareholders, thereby reducing aggregate shareholder value.

33. See, e.g., Bratton, supra note 13, at 12.
treated as ordinary income, potentially subject to the highest marginal federal tax rate of 35%. In contrast, the highest marginal federal rate for long-term capital gains was 20%. However, the 2003 tax cuts lowered the highest marginal rate on both qualifying dividends and long-term capital gains to 15%. In fact, qualifying dividends are now taxed less heavily than short-term gains, which continue to be taxed at ordinary income rates.

In some cases, however, repurchases may still be slightly more tax-efficient than dividends for shareholders. First, repurchases tend to shift the tax burden to shareholders with lower marginal rates. When a firm issues a dividend, all taxable shareholders are taxed on their pro rata share of the dividend. In contrast, when the firm repurchases shares, only those shareholders who choose to sell their shares are taxed. To the extent higher-bracket shareholders avoid selling their shares, leaving the selling to lower-bracket (or tax-exempt) shareholders, the aggregate tax burden on shareholders is reduced.

Second, repurchases allow tax-free recovery of “basis.” A shareholder receiving a dividend is taxed on the entire amount. By contrast, a selling shareholder is not taxed on the full amount of the sale proceeds but only on the capital gains (the difference between the sale proceeds and the shareholder's cost basis in the stock). For example, a shareholder who sells $100 worth of shares that were purchased for $60 pays tax on only $40. And if the shares' basis exceeds the sale price—that is, the shareholder sells at a loss—the shareholder can use the loss to offset other capital gains and, to a limited extent, ordinary income. The tax-free recovery of basis, together with the bracket-shifting effect described earlier, can make repurchases more tax efficient than dividends, even when the tax rates on dividend income and capital gains are the same.

Nevertheless, the potential tax efficiency of repurchases should not be overstated. Many institutional shareholders, such as state and corporate pension funds, are tax exempt. Individual investors often own stock (directly, in their own brokerage accounts, or indirectly, through mutual funds) in tax-favored accounts that either exempt dividend and capital gains income from tax or subject both forms of income to the same tax rate. The substantial presence of tax-exempt and tax-indifferent investors

35. See I.R.C. §§ 1(h)(1)(C), 1(h)(11), 55(b)(3)(c) (West Supp. 2004). Certain dividends do not qualify for the 15% tax rate, which lapses on January 1, 2009 unless it is extended. Id.
36. In principle, the IRS could treat non-selling shareholders as constructively receiving a taxable “stock” dividend (even though they do not receive any shares) because their percentage interest in the company increases. See id. §§ 302(b)(2), 305(b). But, to my knowledge, the IRS has never taken such a position with respect to shareholders of public companies.
37. For example, over 40 million individuals hold investments totaling almost $2 trillion dollars in 401(k) plans. See Sarah Holden & Jack VanDerhei, 401(k) Plan Asset Allocation, Account Balances,
may well explain why managers do not appear to heavily weigh the shareholder-level tax implications of their payout policies. Thus, while repurchases may still offer tax advantages over dividends in certain situations, the magnitude of these benefits is likely to be quite small.

2. Efficient Distribution of Transient Cash Flows

Apart from repurchases' possible tax benefits, buybacks may provide a more efficient method of distributing transient (non-recurring) excess cash flows, especially relatively small amounts. Managers seeking to distribute transient cash flows would not wish to initiate regular dividends or increase the firm's current dividend. Such steps might inadvertently signal a commitment by managers to continue paying dividends (or larger dividends) in the future.

Managers could avoid sending such a commitment signal by either repurchasing shares or by issuing a so-called "special" dividend. By designating the dividend as "special," managers make clear that they do not intend to regularly pay such a dividend. Special dividends were common in the past, but are less widely used today.

However, a stock repurchase might involve lower transaction costs than a special dividend, especially for small payouts. When a firm distributes cash through a repurchase, both the firm and selling shareholders incur brokerage fees. If the trade is mediated through a market maker, the parties also bear the cost of the bid-ask spread. Thus, the transaction costs of a repurchase increase with the amount repurchased. In contrast, the transaction costs of a dividend are fixed. When a firm issues a dividend, it must compute the dividend for each shareholder and mail out checks. These expenses are largely independent of the total amount distributed. The cost of mailing a $10,000 dividend to shareholders is likely to be the same as the cost of mailing a $10,000,000 dividend. If the amount distributed is sufficiently large, a dividend is likely to involve lower per-dollar transaction costs than a repurchase. However, for small amounts, a repurchase will be a more cost-effective method of distributing transient excess cash flows than a dividend.


39. See, e.g., Jagannathan et al., Financial Flexibility, supra note 6, at 356.

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3. **Supplying Employee Stock Option Plans**

Another advantage of repurchases over dividends is that they enable firms to provide shares for increasingly popular employee stock option programs. A large portion of executive compensation comes in the form of stock options. Options are also widely used to compensate and motivate lower-ranking employees. Under these plans, employees are given options to buy the firm's stock at a certain strike price (usually equal to the grant-date market price). The options cannot be exercised until the end of their vesting period. Upon exercise, the firm sells shares to the employee for the strike price, and the employee then typically sells those shares in the market. Employee stock option programs thus require a steady supply of shares. Repurchases can provide those shares; dividends cannot.

It is far from clear, however, that repurchases are always necessary to support shareholder-serving employee stock option programs. A board could simply print and issue new shares for its stock option program. Of course, the corporate charter might limit the number of shares the board is permitted to issue. But in such a case the board could always seek shareholder approval to amend the charter and raise that limit to provide additional shares for employees. Shareholders would presumably approve such an increase if the employee stock option program served their interests. Nevertheless, if for some reason managers could not operate shareholder-serving employee option plans without repurchasing shares, buybacks would provide this additional benefit.

4. **Liquidity Support**

Some economists have argued that repurchases can benefit shareholders by improving liquidity—that is, reducing the costs incurred by shareholders in buying and selling shares. Investors often do not trade directly with each other. Rather, they trade with market makers, who continuously offer to buy certain securities at the "bid price" and to sell those securities at the higher "ask price." The bid-ask spread compensates the market maker for the various costs associated with market making and provides a

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42. For a general overview of stock option compensation, see Kevin J. Murphy, Executive Compensation, in 3B HANDBOOK OF LABOR ECONOMICS 2485, 2507-10 (Orley Ashenfelter & David Card eds., 1999).
43. Indeed, there is some evidence of a connection between repurchases and the use of employee stock options. In particular, the number of shares repurchased by firms is correlated with the number of exercisable employee options. See Kahle, supra note 6, at 239. For an argument that repurchases can obscure the costs of option compensation, see Bratton, supra note 13, at 39.
44. See, e.g., Cook et al., On the Timing, supra note 31.
45. I use the term "market makers" to refer generally to all parties that intermediate between buyers and sellers. I will discuss this study in more detail. See infra Part III.B.2.
profit. The lower the bid-ask spread, the cheaper it is for shareholders to trade the stock, and the more "liquid" the stock is said to be.

Repurchases might narrow the bid-ask spread and increase the stock’s liquidity by reducing market makers’ costs. For example, market makers incur "inventory costs," that is, the costs associated with holding shares for sale to buyers. The higher their inventory costs, the larger the bid-ask spread must be, everything else being equal. The increase in trading volume caused by a repurchase might make it easier for the market maker to reverse a position in the stock, reducing her holding costs and thereby enabling her to narrow the bid-ask spread.46 In fact, there is evidence that (non-bargain) repurchases can reduce the bid-ask spread.47 The lower bid-ask spread, in turn, increases shareholders’ net returns. Accordingly, another advantage of repurchases over dividends is that they can, in certain situations, increase liquidity.

C. Regulation

Having explained the possible advantages of repurchases over dividends, I now describe the three most important elements of the current regulatory framework governing repurchases in the United States:48 (1) stock exchange and securities law disclosure requirements; (2) the anti-manipulation provisions of securities laws, including the Rule 10b-18 safe harbor; and (3) the insider trading prohibition under Rule 10b-5. As we will see, these rules leave managers with considerable opportunity to use bargain repurchases and misleading repurchase announcements to enrich themselves at the expense of public shareholders.

1. Disclosure Requirements

Firms conducting OMRs are subject to disclosure requirements imposed by stock exchanges and the Securities and Exchange Commission (SEC). All major U.S. stock exchanges require a listed firm to announce the board’s approval of an open market buyback program.49 However, neither the stock exchanges nor the SEC require an announcing firm to indicate the number (or dollar amount) of shares to be repurchased. Nor must a firm indicate the expiration date of its buyback program. As a result, many

46. See Ajai Singh et al., Liquidity Changes Associated with Open Market Repurchases, 23 FIN. MGMT. 47, 50-51 (1994).
47. See Cook et al., On the Timing, supra note 31, at 485-86 (finding, among a sample of firms, that bid-ask spreads narrowed when firms repurchased stock). I discuss this study in more detail infra Part III.B.2.
announcing firms fail to disclose either the targeted amount or the expiration date. Some firms disclose neither. Even if the firm does volunteer a repurchase target, it will make clear that the number of shares actually repurchased will depend on market conditions. Consequently, firms announcing repurchases are not obligated to buy back any stock. In fact, many do not repurchase a single share.

For many years, neither the stock exchanges nor the SEC required firms to indicate how many shares they had actually repurchased. However, in 2003 the SEC promulgated regulations requiring after-the-fact disclosure of firms' buyback activities. In their quarterly public filings, firms are now required to disclose, among other things: (1) the total number of shares repurchased during the previous quarter; (2) the average price paid for those shares; (3) the number of shares that were purchased in the preceding quarter as part of a publicly announced plan; and (4) the maximum number of shares, or approximate dollar value, that may yet be repurchased under any share repurchase program.

Importantly, the SEC's disclosure requirements are retrospective. Investors may not learn about a firm's repurchases until several months later. As we will see in Part II, allowing managers to buy back shares secretly makes it easier for them to profit from bargain repurchases and misleading repurchase announcements.

2. **Stock Manipulation Liability and the Rule 10b-18 Safe Harbor**

Corporations, like individuals, are subject to the anti-manipulation provisions of Section 9(a)(2) of the Securities Exchange Act of 1934. These provisions make it illegal to conduct a series of transactions creating actual or apparent active trading in a security to induce others to buy or sell the security. Purchases of a firm's own shares could be considered manipulative if the intent of the repurchase is to drive up the stock price by making it appear there is unusually heavy demand for the stock.

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50. See Jagannathan et al., *Financial Flexibility*, supra note 6, at 358-60; Stephens & Weisbach, supra note 6, at 317.
52. See Stephens & Weisbach, supra note 6, at 314.
53. Purchases of Certain Equity Securities by the Issuer and Others, Exchange Act Release Nos. 33-8335, 34-48766 (2003) (codified at 17 C.F.R. pts. 228, 229, 240, 249, 270, 274) [hereinafter Purchases of Certain Equity], available at http://www.sec.gov/rules/final/33-8335.htm. Firms must also disclose the terms of any publicly announced share repurchase program, including (1) the date of announcement; (2) the specific share or dollar amount approved (if any); (3) the expiration date of the repurchase plan (if any); and (4) each share repurchase plan that has expired during the previous quarter, as well as those under which the firm does not intend to make any future purchases. *Id.*
55. *Id.*
In 1982, the SEC adopted Rule 10b-18, which provides repurchasing firms a “safe harbor” from anti-manipulation liability when they repurchase their shares in accordance with the rule’s “manner, timing, price, and volume” conditions. Among other things, Rule 10b-18 generally requires a firm seeking safe harbor to: (1) limit the number of shares it purchases on the open market each day to 25% of the average daily trading volume of the previous month; and (2) not offer a price that exceeds the highest independent bid or the last independent transaction price on the exchange (if any), whichever is higher. The rule went into effect in 1983 and appears to have made management more willing to engage in open market repurchases: the volume of repurchases increased sharply shortly after the rule became effective.

However, firms are not required to abide by Rule 10b-18’s guidelines and many firms fail to comply with the requirements of the safe harbor. Not surprisingly, firms engaging in open market repurchases have been able to accumulate shares relatively quickly. One study found that firms repurchase over half the targeted shares within three to six months of the announcement date. Thus, Rule 10b-18 has not prevented managers from rapidly repurchasing shares that are temporarily underpriced.

3. Insider Trading Liability and Rule 10b-5

The third element of the regulatory framework governing stock buybacks is insider trading law. Corporations trading in their own shares are subject to Rule 10b-5, the most important restriction on insider trading. Rule 10b-5 requires insiders—including the firm and its officers and directors—to refrain from trading in the firm’s shares while in possession of “material” nonpublic information regarding their value.

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57. Rule 10b-18 and Purchases of Certain Equity Securities by the Issuer and Others, Exchange Act Release No. 34-46980 (2002). The rule also provides that an issuer will not be liable under Rule 10b-5 solely by reason of the manner, timing, price, or volume of its repurchases if the issuer repurchases its common stock in accordance with the safe harbor. Purchases of Certain Equity, supra note 53.
58. However, a firm may make a block-size purchase one day per week under Rule 10b-18 as long as it does not make any other purchases that day under Rule 10b-18, and as long as the block purchase is excluded from the calculation of average daily trading volume. 17 C.F.R. § 240.10b-18(b)(4).
59. Id. § 240.10b-18(b)(3).
60. See Grullon & Michaely, The Information Content, supra note 4, at 659 (reporting that the amount of repurchases had tripled one year after Rule 10b-18 went into effect).
62. See Stephens & Weisbach, supra note 6, at 323.
64. See, e.g., McCormick v. Fund Am. Cos., 26 F.3d 869, 876 (9th Cir. 1994) ("[T]he corporate issuer in possession of material nonpublic information...must, like other insiders in the same...")
Rule 10b-5 appears to prohibit a firm from repurchasing shares when its managers have private information indicating the stock is underpriced. However, it cannot always prevent firms and their managers from trading profitably on nonpublic information. The rule prohibits trading on inside information only when that information is legally "material." Internal projections and other forms of "soft" information are not considered legally material even though they may be important and of great interest to investors. As a result, managers are free to conduct share repurchases without disclosing a wide range of valuable inside information. Moreover, courts have been reluctant to find even non-soft information "material" unless it concerns a "bombshell event," such as an imminent takeover offer, the announcement of which will dramatically change the stock price. As we will see in Part II.A.2, the high threshold for materiality permits insiders to trade indirectly through repurchases on important non-public information.

II
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Part I explained that repurchases may benefit shareholders by more tax-efficiently distributing excess cash, reducing transaction costs for small payouts, acquiring shares for employee stock option programs, and increasing liquidity. This Part shows that managers also are able to misuse repurchases for informed trading and false signaling. Part II.A demonstrates that managers aware their firms' stock is underpriced can, and do, use bargain repurchases to enrich themselves. Part II.B describes how managers can use misleading repurchase announcements to boost the stock price before unloading their own shares. It also explains how bargain repurchases and false signaling form a synergetic relationship: bargain repurchases facilitate false signaling, and vice versa.

66. See Mitu Gulati, When Corporate Managers Fear a Good Thing is Coming to an End: The Case of Interim Nondisclosure, 46 UCLA L. REV. 675, 682 (1999) (reporting that recent case law and the SEC's position do not oblige companies to disclose forecasts).
67. See Fried, Reducing the Profitability, supra note 11, at 310; ROBERT CLARK, CORPORATE LAW 507-08 (1986) (noting that managers may have access to bits of information that are not important enough individually to be considered legally material but that in aggregate are very valuable); Donald Langevoort, Rereading Cady, Roberts: The Ideology and Practice of Insider Trading Regulation, 99 COLUM. L. REV. 1319, 1335 (1999) ("Insiders at almost all times have the advantage of superior insight and a sense of which way things are going even if they do not possess a fact that a court would call material and nonpublic.").
A. Informed Trading

Managers who are aware their stock is undervalued have the ability and incentive to use repurchases to indirectly buy stock for themselves at a low price. And there is a considerable amount of empirical evidence that managers conduct such bargain repurchases.

1. Managers' Ability and Incentive

Corporate managers have access to important private information relating to firm value by virtue of their positions within their firms. They use this information while trading personally in shares of their own firms. Managers increase their selling before releasing “bad news” and increase their buying before releasing “good news.”69 In addition, corporate insiders as a group consistently earn excess returns in their personal trading.70 In earlier work, I estimated that managers have been making approximately $5 billion in extra profits each year trading on inside information.71

Managers may well be able to earn these insider trading profits without breaking the law. As I explained earlier, the law prohibits trading on inside information only when that information is legally “material.”72 And certain types of information are not considered legally material even though they would be of great interest to investors.73 As a result, managers are permitted to personally trade on a wide range of valuable inside information.

I will now explain how managers with such inside information can use share repurchases to indirectly buy stock at a bargain price. Diagram 1 helps show that a share repurchase has the same effects as the following three-step transaction (ignoring taxes and transaction costs): (1) nonselling shareholders directly purchase shares from sellers at the repurchase price; (2) the firm issues a dividend equal to the dollar amount of the repurchase; and (3) the firm effects a reverse stock split.


70. See Fried, Reducing the Profitability, supra note 11, at 321-23 (collecting and summarizing studies). One study found that in managers' personal trading between 1984 and 1989, which presumably includes trades not based on inside information (for example, liquidity-driven sales), they annually earned excess returns averaging 7%. See H. Nejat Seyhun, The Effectiveness of Insider Trading Sanctions, 35 J.L. & ECON. 149, 158-60 (1992).

71. See Fried, Reducing the Profitability, supra note 11, at 323.

72. See supra Part I.C.3.

73. See Fried, Reducing the Profitability, supra note 11, at 310.
Suppose that XYZ Corporation has five shares outstanding. Four are held by non-selling shareholders, collectively designated as "NS"; one is held by a seller, designated as "S." The figure to the left of the equality symbol ("=") shows a stock repurchase in which XYZ repurchases S’s single share for $100. The effect of the repurchase is that S has exchanged his share for $100, XYZ has distributed $100 in cash, and NS owns four (100%) of XYZ’s four outstanding shares.

The figures to the right of the equality symbol show three transactions: (1) NS buys S’s share for $100, and now holds five shares; (2) XYZ distributes a dividend of $100 to NS; and (3) XYZ effectuates a reverse stock split, converting NS’s five existing shares into four new shares. The results of these three transactions are identical to those of the repurchase on the left: S has exchanged his share for $100, XYZ has distributed $100 in cash, and NS owns four (100%) of XYZ’s four shares.

Because the third step of the three-step transaction—the reverse stock split—is merely a nominal change with no economic significance, we can ignore it and focus only on the first two transactions: (1) the shareholder stock transaction, in which non-selling shareholders buy stock from the seller; and (2) the payout. Thus, again ignoring taxes and transaction costs, the economic effects of a repurchase are the same as a two-step transaction in which non-selling shareholders buy stock directly from sellers at the repurchase price and the firm then issues a dividend to non-selling shareholders.

Consider the distributional effects of these two transactions. The second transaction—the dividend payout to remaining shareholders—has no distributional effect among shareholders because the seller no longer has an
economic interest in the firm and the dividend affects all non-selling shareholders equally. However, the first transaction—the shareholder-level trading transaction—can redistribute value among shareholders. If the purchase price is less than the stock's actual value, the shareholder-level trading transfers value from the seller to non-selling shareholders. Because the economic consequences of a repurchase are identical to the economic effects of this two-step transaction, it follows that repurchasing stock for a price below the stock's actual value transfers value from sellers to non-selling shareholders. In effect, non-selling shareholders buy shares from the sellers at a bargain price.

In general, the value transferred to non-selling shareholders equals the difference between the actual value of the stock and the repurchase price, multiplied by the number of shares repurchased. Non-selling shareholders benefit in the transfer pro rata. Thus, the more shares managers own, the more value they can capture from selling shareholders, and the greater is their incentive to conduct bargain repurchases.

In fact, managers of U.S. firms announcing repurchases tend to own a substantial fraction of the firms' shares before the repurchase—an average of 15% to 20%. If managers own (and retain) 15-20% of a repurchasing firm's shares, they capture an average of one out of every five or six dollars of value transferred from sellers to non-selling shareholders. Accordingly, managers can benefit significantly from bargain repurchases.

To be sure, managers buying shares for their own account capture 100% of any insider trading profits. Thus, one might wonder why managers ever bother to use a repurchase to indirectly buy underpriced stock. Personal insider trading would appear to be a more efficient way for managers to exploit private information indicating that the stock is underpriced.

However, a number of factors may make it easier for managers to use repurchases to acquire underpriced stock than to buy shares directly for their own accounts. First, managers facing liquidity constraints might find it difficult to buy as many shares as they would like. Such managers might purchase as many shares as they can directly in the market, given their liquidity constraints, and then, after they have reached those limits, conduct a repurchase. In fact, managers frequently buy shares for their own accounts before announcing repurchases.

Second, Section 16(b) of the Securities Exchange Act of 1934, which prohibits managers from making what are commonly referred to as "short-swing profits," prevents managers from directly buying shares in many circumstances. A corporate insider makes a short-swing profit if

74. See William J. McNally, Open Market Stock Repurchase Signaling, 28 FIN. MGMT. 55, 59 (1999); Vafeas, supra note 6, at 112-13.
75. See Raad & Wu, supra note 6, at 57.
she buys and sells stock within a six-month period and the purchase price is lower than the sale price. Thus, a manager who either has sold shares at a higher price within the previous six months or expects to sell shares at a higher price within the next six months will face Section 16(b) liability if she buys stock directly in the market. In contrast, Section 16(b) does not apply to indirect purchases through stock buybacks.

Third, many firms impose “trading-windows” and “blackout” periods, which limit managers’ trading to certain prescribed periods throughout the year. These restrictions may prohibit some managers from buying stock at a time when they believe that the stock is underpriced. During these no-trade periods, the managers can use the firm to indirectly buy low-price shares they could not purchase directly.

Of course, managers do not have unlimited ability to use repurchases for informed trading. Managers do not always have private information indicating that the firm’s stock is significantly underpriced. Even if managers know the stock is a bargain, the firm may lack sufficient cash to buy back stock. Managers might also be reluctant to repurchase shares when their private information is clearly “material” under the insider trading laws. Nevertheless, these constraints do not appear to prevent managers from frequently engaging in bargain repurchases, as the evidence below makes clear.

2. Evidence

Having shown that managers have the ability and incentive to conduct bargain repurchases, I now turn to the considerable empirical evidence indicating that managers often use repurchases to indirectly buy stock at a low price. The evidence can be divided into two categories: (1) managers’ behavior and statements; and (2) stock price movements around and following repurchase program announcements.

a. Manager Behavior

Managers’ behavior and statements before, during, and after buyback program announcements are consistent with the use of repurchases for informed trading. To begin, the relationship between managers’ equity stakes and their incentive to conduct bargain repurchases suggests that managers with larger ownership interests are not only more likely to

77. Id. The rule applies not only when the purchase precedes the sale, but also when the sale precedes the purchase. Id.


79. Managers of an underpriced firm might be able to raise funds by issuing debt, but there is likely to be a time lag, during which the stock might become fairly priced (or even overpriced). In addition, the costs to managers of issuing additional debt, such as the pressure to make interest and principal payments, might exceed the expected benefit to them of a bargain repurchase.
conduct repurchases, but also more likely to conduct them when stock is underpriced. A stock is likely to have been underpriced if, after the repurchase, its price experiences positive abnormal (i.e., market-adjusted) returns. Thus, one would expect a positive correlation between managerial ownership and post-repurchase stock returns. Indeed, there is a positive relationship between pre-repurchase managerial percentage ownership and post-repurchase stock appreciation.  

Managers’ behavior after repurchase announcements is also consistent with the use of repurchases for informed trading. In particular, managers are more likely to follow a repurchase program announcement with actual repurchases if the stock subsequently performs poorly. Focusing on “value firms”—firms with a high book-to-market ratio—that had announced repurchases, one study found that among the firms in which managers subsequently repurchased shares, four-year post-announcement abnormal returns were 25%, compared to 0% for firms that did not subsequently repurchase any shares. A recent study of repurchases on the Hong Kong Stock Exchange, where repurchasing firms must report the date, volume, and price of each repurchase, also concluded that managers were using inside information to make repurchase decisions.

Survey data from the last several decades further support the conclusion that managers frequently use repurchases to buy stock they know is underpriced. According to the authors of a major 2004 survey of financial executives regarding their firms’ payout policies, “the most popular response for all repurchase questions on the entire survey is that firms repurchase when their stock is a good value, relative to its true value: 86.4% of all firms agree or strongly agree with this supposition. The study reported that 50% of CFOs “say that their firm tracks repurchase timing and that their firm can beat the market.” According to the survey’s organizers, “executives tell us that they accelerate (or initiate) share repurchases when their stock price is low.” Earlier studies yielded similar responses. When asked in an anonymous 1988 survey what was the most important circumstance precipitating a repurchase, 66% of the surveyed managers responded “low stock price,” six times as many as the next most popular

80. See Raad & Wu, supra note 6, at 57 (1995) (finding that abnormal returns following repurchases are positively correlated with pre-buyback management ownership).
81. See Stephens & Weisbach, supra note 6.
84. Brav et al., supra note 38, at 17-18.
85. Id. at 18.
86. Id. at 17.
answer, "need for treasury stock." The correlation between managerial ownership and post-repurchase stock price appreciation, managers' post-announcement buyback decisions, and managers' own statements about their motives in repurchasing stock all point to the frequent use of repurchases to buy stock at a bargain price.

b. Stock Price Behavior

Stock price behavior during and after repurchase announcements also suggests that inside information drives many repurchases. Consider first stock price movements around the time of repurchase announcements. If managers often use repurchases to buy stock at a low price, a repurchase announcement will tend to signal that the expected value of the stock is higher than the current market price. Indeed, when a repurchase is announced the market reacts to the announcement by bidding up the price of the stock. Repurchase announcements are associated with short-term abnormal price increases averaging 3% to 4% in the 1980s and 1% to 2% in the 1990s.

Moreover, stock price movements are more extreme around announcements that are likely to reflect information-based trading. Firms that repurchase shares consistently—and are therefore likely to be buying shares for ongoing employee stock option programs rather than engaging in informed trading—experience much lower announcement returns than firms that announce a repurchase for the first time or are infrequent repurchasers. Infrequent repurchase announcers—those more likely to be engaged in bargain repurchasing—also tend to have higher levels of managerial ownership.

Consider also post-announcement returns. If managers use repurchases to buy stock at a low price, the stock prices of firms announcing repurchases should, on average, outperform those of firms not announcing

88. See, e.g., Ikenberry et al., Market Underreaction, supra note 6 at 190. A stock's value depends on the expected value of its future cash flows, which in turn is a function of the amount and timing of those cash flows as well as the interest rate appropriate for discounting the cash flows. The higher the volatility, the higher the discount rate. Thus, managers can reap profits by trading based on private information about the amount, timing, or volatility of future cash flows. Indeed, there is substantial evidence that repurchasing firms have much lower future volatility than the market had assumed. See Grullon & Michaely, The Information Content, supra note 4, at 678.
89. See Ikenberry et al., Market Underreaction, supra note 6, at 190 (reporting that the average market reaction to OMR announcements for all of the OMRs announced between January 1980 and December 1990 by firms listed on the ASE, NYSE, and NASDAQ was 3.54%).
90. See Kahle, supra note 6, at 245-46 (finding that between 1991 and 1996 the average abnormal return around the announcement of open market repurchases by firms in the Execucomp database was 1.6%).
91. See Jagannathan & Stephens, supra note 6, at 71-72.
92. Id.
repurchases in the post-announcement period. Indeed, stock prices of repurchasing firms increase faster than stock prices of similar firms that are not conducting repurchases. A recent study found that shares of firms announcing repurchases earn abnormal returns of 6.7% in the first year following the announcement and 23.6% over the subsequent four years.\(^9\) These post-repurchase returns strongly suggest that, as a group, the shares of firms announcing OMRs are underpriced at the time repurchase programs are announced.\(^9\)

To be sure, each of these stock price patterns could have an explanation other than the use of repurchases for informed trading. Consider, for example, the market’s positive reaction to repurchase announcements. While it is consistent with the stock of repurchasing firms being, on average, underpriced, it is also consistent with traders learning that managers may distribute the firm’s excess cash rather than continue to hoard it. However, the overall pattern of stock price movements around repurchases, along with managers’ behavior and their own accounts of why they repurchase shares, collectively provide extremely strong evidence that managers often use repurchases to indirectly buy underpriced stock.

Before proceeding, it is worth noting that the stock market’s positive reaction to a repurchase program announcement will—when the stock is underpriced—narrow the gap between the share price and its actual value. The price increase following the announcement, in turn, will reduce managers’ profits from bargain repurchases.

However, when the stock is underpriced, the stock price increase following a repurchase announcement is unlikely to close, or even substantially reduce, the underpricing gap. The market understands that boards may authorize a buyback even when the stock is not underpriced. For example, the board might approve a repurchase so that managers can acquire shares for an employee stock option program. Moreover, as we will shortly see, managers might announce a repurchase program they have no plan to conduct simply to boost the stock price, perhaps to unload their own shares at a higher price. Thus, a repurchase announcement does not clearly signal that the stock is underpriced. The likelier it is that a repurchase

\(^9\) See Konan Chan et al., Economic Sources of Gains in Stock Repurchases, 39 J. Fin. Quantitative Analysis 461 (2004); see also Chan et al., supra note 82, at 2 (examining 5,508 repurchase announcements between 1980 and 1996 and finding abnormal stock price performance of 5% the first year and 22% over four years among firms repurchasing shares, and a four-year abnormal return of 25% among value firms.).

\(^9\) The fact that managers have inside information they can use in repurchasing shares does not mean that every repurchase will, ex post, turn out to transfer value from sellers to non-selling shareholders. Managers with firm-specific inside information suggesting that the stock is underpriced may buy stock shortly before an unexpected large interest rate increase, slowdown in the economy, or adverse change in the firm’s industry that cause the stock price to fall. However, managers repurchasing on inside information can realistically expect to transfer value from sellers and, on average, are likely to do so.
announcement does not reflect underpricing, the more muted will be the market’s response to such an announcement, and the more repurchasing managers can profit when the stock is in fact underpriced.

B. False Signaling

Managers can enrich themselves not only through bargain repurchases, but also by “false signaling”—making misleading repurchase authorization announcements to inflate the stock price before selling their own shares. I will now describe false signaling in greater detail, and show that it forms a synergetic relationship with bargain repurchases. Before doing so, however, I briefly present and critique the standard signaling explanation for open market repurchases found in the economics literature, which I call “faithful signaling.”

I. The Faithful Signaling Story

A number of economists have argued that managers use open market repurchases to credibly signal that their firm’s stock is underpriced. Specifically, managers who have private information indicating that the stock is underpriced and who wish to send a credible signal to that effect can do so by committing to repurchase stock while not selling their own shares.96

As we saw, a repurchase is distributionally equivalent to non-selling shareholders buying sellers’ shares. Thus, when managers make such a double commitment—first, to have the firm repurchase shares, and second, not to sell their own shares until the underlying good news emerges—they effectively commit to indirectly buy their pro-rata portion of the acquired shares at the repurchase price. If the stock is actually worth less than the repurchase price, the repurchase makes managers worse off because it causes them to indirectly buy shares at an inflated price. Thus, by committing to repurchase stock and not to sell their own shares, managers can send a credible signal that share value exceeds the repurchase price.

While it is theoretically possible to use repurchases for such faithful signaling, there is little evidence that managers actually do so.98 When announcing repurchase programs, managers do not commit to purchase a minimum number of shares.99 In fact, about 25% of announcing firms do

95. See, e.g., McNally, supra note 74, at 56.
96. See, e.g., Buckley, supra note 6, at 539.
97. See id.
98. See Fried, Open Market, supra note 5, at 879-81; see also Ok-Rial Song, Hidden Social Costs of Open Market Share Repurchases, 27 IOWA J. CORP. L. 425 (2002). For an explanation of why the same credible signal can be sent without an OMR, and why it is against managers’ self-interest to engage in faithful signaling with or without an OMR, see Fried, Open Market, supra note 5, at 875-79.
not buy back a single share. Moreover, managers neither promise nor implicitly commit to retain their own shares. Indeed, managers frequently sell shares around repurchase announcements. The selling is so heavy that both mean and median managerial ownership (as a percentage of outstanding shares) fall around the time of repurchase announcements. Thus, even if there were a commitment on the part of the firm to buy back shares, the repurchase announcement would still not credibly signal underpricing. However, as I will shortly explain, managers' selling behavior following repurchase program announcements is completely consistent with false signaling.

2. False Signaling with Misleading Repurchase Announcements

Managers wishing to sell their own shares at a higher price may have an incentive to announce a share repurchase they do not intend to conduct to boost the stock price. And there is evidence consistent with such false signaling.

a. Managers’ Incentive and Ability

We have seen that repurchase program announcements are generally greeted favorably by the market. Market participants know that many repurchases are information driven. Thus, an announcement signals that the stock might be undervalued, causing investors to bid up the price.

Managers can exploit the market's predictable reaction to repurchase announcements by announcing the authorization of buyback programs they have no intention of conducting and then unloading their shares at the higher post-announcement price. Most managers receive a substantial portion of their compensation in the form of stock options that give them the right to purchase the corporation's shares at a discounted price. After the options vest, managers exercise them and sell most or all of the underlying stock. Managers sell for many different reasons. Some wish to diversify or gain liquidity. Others may be aware of "bad news" that is likely to cause

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101. See Vafeas, supra note 6.

102. See supra Part II.A.2.b.

103. There are, of course, other reasons why market participants might react favorably to a repurchase program announcement besides the signal it sends about the stock's actual value. For example, investors might bid the price up because they believe the firm will now distribute excess cash that it had been inefficiently hoarding. For our purposes, what is important is that at least part of the stock price reaction reflects the possibility of underpricing.

104. See Murphy, supra note 42, at 2507-10.

the stock price to drop.\textsuperscript{106} Whatever the motivation, however, managers intending to sell shares wish to dispose of them at the highest possible price. Given the effect of repurchase announcements on stock prices, managers may sometimes have an incentive to announce a repurchase solely to boost the price of the stock before selling their shares, even if they have no immediate intention of repurchasing any shares.

By announcing a repurchase program without any intent to repurchase stock, managers about to sell their own shares essentially attempt to “mimic” managers of underpriced firms who use repurchases to buy stock at a low price. This mimicking appears to be successful: there is no difference in market reaction between announcements followed by repurchase activity and announcements not followed by actual buybacks.\textsuperscript{107}

To the extent that managers use misleading repurchase announcements to sell their shares for more than their actual value, they transfer value from the parties buying their shares—either public investors or market makers. The amount transferred is simply the difference between the sale price and the stock’s actual value, multiplied by the number of shares sold.

To be sure, average stock price reactions to repurchase announcements are fairly modest: only several percent.\textsuperscript{108} But these figures are averages; in some cases, an announcement might be expected to boost the stock price substantially. Moreover, for managers who are either selling millions of dollars of stock or exercising expiring options with strike prices near the pre-announcement market price, the ability to sell shares for even a slightly higher price may be important. As we will now see, the evidence is consistent with managers’ use of repurchase announcements to boost the stock price for this purpose.

\textbf{b. Evidence}

The empirical evidence that discredits the faithful signaling story is consistent with managers announcing repurchase programs they have no intention of executing simply to increase the stock price before selling their own shares. False signaling would predict that many firms announcing repurchase programs do not repurchase many (or any) shares. In fact, 25\% of announcing firms do not repurchase a single share.\textsuperscript{109} If firms announced

\textsuperscript{106} For an explanation of the limited effect that insider trading laws have on managers’ ability to trade on inside information, see \textit{supra} Part I.C.3. For a summary of empirical studies finding that managers sell before the release of bad news, see Fried, \textit{Reducing the Profitability}, \textit{supra} note 11, at 317-20.

\textsuperscript{107} See Bhattacharya & Dittmar, \textit{supra} note 100, at 27.

\textsuperscript{108} See Kahle, \textit{supra} note 6, at 245-46 (finding that between 1991 and 1996 the average abnormal return around the announcement of open market repurchases by firms in the Execucomp database was 1.6%).

\textsuperscript{109} See Bhattacharya & Dittmar, \textit{supra} note 100.
share repurchase authorizations only to conduct low-price repurchases or to use repurchases for one of the shareholder-serving reasons described in Part I.B, one would expect most buyback program announcements to be followed by at least some repurchases. The fact that a substantial fraction of announcing firms do not buy back stock suggests that these repurchase program announcements may serve another purpose: to boost the stock price.\footnote{10}

False signaling would also predict that, around misleading repurchase program announcements, there is large-scale selling by managers. In fact, there is considerable selling activity around repurchase program announcements generally. One study found that the selling is heavy enough to cause both mean and median managerial ownership to decline.\footnote{11} The study does not distinguish between announcing firms that subsequently repurchased shares and announcing firms that did not. Thus, its findings do not directly indicate whether, as the false signaling explanation would predict, the observed post-announcement managerial selling is heavily concentrated in announcing firms that do subsequently buy back stock.

However, other findings suggest that there is likely to be a strong negative correlation between post-announcement selling and subsequent buyback activity. Managers generally earn abnormal positive returns trading in their own firms’ stock—that is, they tend to buy when the stock is underpriced and sell when it is overpriced.\footnote{12} And, as we have seen, managers are more likely to repurchase shares after a repurchase announcement if the stock is underpriced.\footnote{13} One would therefore not expect post-announcement managerial selling to be randomly distributed among repurchasing and non-repurchasing firms. Instead, these studies predict that post-announcement selling is likely to be disproportionately heavy in firms that subsequently do not repurchase shares, which is consistent with the use of buyback announcements for false signaling.

False signaling also predicts that the shares of some repurchase-announcing firms are likely to be overpriced; managers simply wish to boost the stock price further before unloading their shares. It also suggests

\footnote{10. Directors might also authorize the managers to buy back shares when the stock is not underpriced so that—should the stock become underpriced in the future—managers can quietly conduct bargain repurchases without first making any public announcement. \textit{See generally} Ikenberry & Vermaelen, \textit{supra} note 51. Such option-creating announcements will not be followed by an actual repurchase unless managers subsequently learn that the stock is underpriced and have cash available to buy back stock. It is possible, then, that at least some of repurchase program announcements not followed by actual buybacks have a purpose other than price-boosting. However, unlike false signaling, the option explanation for such announcements cannot account for a variety of findings I now turn to discuss, including the finding that there is heavy managerial selling around repurchase program announcements.}

\footnote{11. \textit{See} Vafeas, \textit{supra} note 6.}

\footnote{12. \textit{See} Fried, \textit{Reducing the Profitability}, \textit{supra} note 11, at 317-20 (collecting and summarizing studies).}

\footnote{13. \textit{See}, e.g., Konan Chan et al., \textit{supra} note 82, at 2-3.
that false-signaling managers may simultaneously take other steps to inflate the stock price. In fact, a recent study finds that managers who announce that they are repurchasing stock because the stock is underpriced, and who thus may be attempting to boost the stock price, tend to manipulate earnings upward around the time of the announcement.\textsuperscript{114} Although the market reacts positively to these announcements, with average abnormal returns of almost 3\% around the announcement date, these stocks experience large negative abnormal returns over subsequent months, suggesting that the firms were overpriced at the time of the repurchase announcements.\textsuperscript{115}

Finally, managers themselves admit that they sometimes announce repurchase programs simply to boost the stock price. Following the 1987 stock market crash, for example, many firms announced repurchase programs to show confidence in their stock and bolster stock prices.\textsuperscript{116} However, the number of outstanding shares declined for only 41\% of the NYSE and AMEX firms announcing repurchases and for only 33\% of the OTC firms announcing repurchases.\textsuperscript{117} After Arkansas Best announced an intention to repurchase two million shares, one manager was quoted in \textit{The New York Times} as saying, “I don’t think we ever intended to repurchase two million shares. We did it to build confidence.”\textsuperscript{118} According to a vice president at Standard & Poor’s, a credit rating agency, “A problem with repurchase announcements is that companies have informed S&P that they have little intention of implementing the authorizations. In fact, many firms made big repurchase announcements after the crash, and then ran over to S&P in an effort to protect their credit rating.”\textsuperscript{119} Thus, by managers’ own accounts, they announce repurchases without any intent to buy back stock, solely to boost the stock price.

Given the available data, it is difficult to know how many repurchase announcements are made opportunistically to boost the stock price before managers sell their shares. Nevertheless, the data on post-announcement repurchase activity and managerial selling, along with managers’ own accounts, are all consistent with managers using repurchase announcements to boost stock prices, which in turn enables them to sell their own shares at a higher price. I will now explain how false signaling can provide another,


\textsuperscript{115} See id. at 6.


\textsuperscript{117} Beverly Kracher & Robert R. Johnson, Repurchase Announcements, Lies and False Signals, 16 J. BUS. ETHICS 1677, 1678 (1997).

\textsuperscript{118} Palmer, supra note 116, at 21.

\textsuperscript{119} I. Picker, Are Those Buyback Programs for Real?, INSTITUTIONAL INVESTOR, Mar. 1988, at 151.
indirect benefit to managers: increasing their profits from bargain repurchases.

3. Bargain Repurchases and False Signaling: The Synergy

Although both bargain repurchases and false signaling arise from public firms' use of buybacks to distribute cash, the two forms of opportunism are in some ways quite different. One involves buying stock at a low price; the other, selling at a high price. However, it turns out that these differences give rise to a useful synergy. The more bargain repurchases managers conduct, the easier it is for them to profit from false signaling. And the more false signaling there is, the larger managers' bargain repurchase profits can be.

It is perhaps easiest to see that the widespread use of information-driven buybacks facilitates managers' use of misleading repurchase program announcements to boost stock prices. Consider a world in which managers can engage in false signaling but not bargain repurchases. In such a world, a repurchase announcement would not signal underpricing; the stock price would therefore increase little, if at all, in response to such an announcement. And managers would find it difficult to sell their own shares at an inflated price. However, if managers can engage in bargain repurchases as well as false signaling, a repurchase program announcement now indicates that the stock may be underpriced, boosting the stock price more, and making it easier for managers to profit from inflated-price sales.

Similarly, the use of misleading repurchase announcements makes it easier for managers to profit from information-based repurchases. Consider a world in which managers can engage in bargain repurchases but not false signaling. In such a world, a repurchase announcement would send a stronger signal of underpricing. Investors would bid the stock price higher, reducing managers' profits from their bargain repurchases. But if managers can engage in false signaling as well as bargain repurchases, it is less likely that a particular announcing firm's stock is actually underpriced. As a result, the reaction to repurchase program announcements will be more muted, and it will be easier for managers of underpriced firms to announce repurchase programs and then buy shares at a low price.

Bargain repurchases and false signaling are synergetic because the presence of both forms of opportunism, rather than only one, reduces the information content of a repurchase program announcement. This, in turn, increases the gap between the post-announcement stock price and its actual value, strengthening managers' ability to profit from both bargain repurchases and inflated-price sales. Because an announcement could mean either that the stock is underpriced or that managers are seeking to boost the price before unloading their shares, the market will bid the price up somewhat (more than it would in a world without bargain repurchases), but not
that much (not as much as it would in a world without false signaling). Thus, whether the stock is initially underpriced, correctly priced, or overpriced, the post-announcement stock price is likely to deviate from the stock’s actual value. This increases managers’ ability to profit either from a bargain repurchase or by selling their shares at an inflated price. We now turn to consider the potential magnitude of these profits, and at whose expense they are made.

III
MANAGERS’ PROFITS, PUBLIC INVESTORS’ LOSSES

We have seen that managers opportunistically use low-price buybacks and misleading repurchase program announcements to enrich themselves at others’ expense. This Part begins by estimating the potential magnitude of managers’ profits from bargain repurchases: as much as several billion dollars annually. It then explains that the diversion of value through bargain repurchases and inflated-price sales directly and indirectly reduces public investors’ returns. As a result, public shareholders earn less, on average, than they would in a world where managers do not use repurchases for informed trading and false signaling.

Throughout this Part, I assume for simplicity that managers’ opportunistic use of repurchases does not affect aggregate shareholder value—that is, the present value of the cash flowing to the firm’s shareholders over time. In other words, I assume that managerial value diversion is zero-sum: the cost it imposes on other market participants is limited to managers’ gains. In the next Part, I will explain how managers’ opportunistic use of repurchases is likely to distort payout decisions and thereby reduce aggregate shareholder value, further diminishing public shareholders’ returns.

A. Bargain Repurchase Profits

When managers use repurchases to buy stock at a bargain price, they enrich themselves at the expense of other market participants. As Part III.B will explain, the costs of managerial value diversion are ultimately borne by the firm’s public investors. For now, however, I will set aside the issue of incidence to focus on the magnitude of managers’ profits from bargain repurchases, which the analysis below suggests may be quite large.

Calculating the amount diverted by managers through a bargain repurchase is, at least conceptually, straightforward. First, one calculates the dollar volume of shares that managers indirectly acquire through the repurchase. Second, one determines the amount of underpricing—that is, the

120. There are not enough data available to construct even a rough estimate of managers’ profits from inflated-price sales following misleading repurchase program announcements.
difference between the repurchase price(s) and the stock’s actual value. Third, one multiplies the volume of managers’ indirect purchases by the amount of underpricing.

In practice, however, calculating managers’ bargain repurchase profits is far from easy. Historically, firms were not required to report—and did not voluntarily disclose—how many shares they had repurchased or the prices at which these shares were acquired. Managerial ownership, which is more readily ascertainable, may change over the course of the buyback. Finally, and perhaps most importantly, it is extremely difficult—if not impossible—to ascertain the actual value of a particular firm’s stock.

Nevertheless, it is possible to get a sense of managers’ potential bargain repurchase profits from market-wide data. One can obtain a rough estimate of the amount of shares managers indirectly purchase each year by multiplying their percentage ownership of repurchasing firms by total repurchase volume. Recall that U.S. companies repurchase approximately $200 billion of shares per year. Managers of repurchasing firms own an average of 15% to 20% of these firms’ equity. If managers own 15% of every repurchasing firm’s shares, and these firms collectively buy back $200 billion of stock per year, managers would indirectly buy $30 billion of shares annually through repurchases.

The difference between the repurchase price and the stock’s actual value cannot be measured directly. However, the underpricing gap can be estimated from the abnormal stock price returns that follow repurchase program announcements. Researchers studying repurchases interpret positive post-announcement abnormal returns to mean that the shares were underpriced at the time of the repurchase program announcement. Recent studies have found that firms announcing repurchase programs and then repurchasing shares within the first year exhibit cumulative abnormal returns of 20% to 25% in the four years following the announcement. These results suggest that the actual value of these firms’ stock was, on average, 20% to 25% higher than the pre-announcement trading price.

Multiplying the dollar volume of managers’ indirect purchases by these abnormal returns yields an estimate of managers’ bargain repurchase profits. If managers indirectly buy $30 billion of shares each year through repurchases, firms conduct their share repurchases at the time they announce the buyback, and all repurchasing firms experience the same post-announcement abnormal returns, managers would earn 20% to 25% abnormal profits on their $30 billion per year of indirect share repurchases, or $6 to $7.5 billion annually.

121. See supra Part I.C.1.
122. See supra Part I.A.
123. See McNally, supra note 74, at 59; Vafeas, supra note 6, at 112-13.
124. See Chan et al., supra note 82, at 2-3.
Of course, firms announcing buyback programs do not acquire all the shares repurchased under the program immediately following the announcement. They typically repurchase shares over a several year period. Because the stock prices of these firms exhibit abnormal price increases in each of the four years following the announcement, the last shares repurchased are not as underpriced as the first. However, most shares are repurchased within several months of the repurchase program announcement, and most of the abnormal stock price returns occur after that period. Thus, even though the stock is not all repurchased immediately after the buyback program announcement, managers could well be making several billion dollars of profits each year from bargain repurchases—the same order of magnitude as the approximately $5 billion they appear to be making each year using inside information in their personal trading.

Obviously, this very preliminary estimate is subject to many caveats. The analysis assumes that economists are properly measuring post-announcement abnormal returns. If abnormal returns were in fact lower, managers’ bargain repurchase profits would be lower as well. It also assumes that post-announcement abnormal returns and managerial ownership are identical across all repurchasing firms. If most repurchased shares (by dollar volume) are acquired by firms whose post-announcement abnormal returns or managerial ownership are relatively low, the actual amount diverted by managers may be lower. If, on the other hand, most repurchased shares are acquired by firms whose post-announcement abnormal returns and managerial ownership are relatively high, the amount diverted by managers may be even larger. The important point, however, is that the amount of value managers divert through bargain repurchases could be quite large—on the order of several billion dollars per year. And this amount does not include managers’ profits from selling their shares at inflated prices following misleading repurchase announcements.

While managers’ ability to profit from bargain repurchases might be thought of as a form of executive compensation, this form of compensation is unlikely to serve public shareholders’ interest. Like managers’ gains from personal insider trading, their profits from bargain repurchases are in large part a function of managers’ access to inside information, not the amount of aggregate shareholder value they create. Indeed, as I explain in

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125. See Stephens & Weisbach, supra note 6, at 323.
126. Id.
127. See Chan et al., supra note 82, at 27.
128. See Fried, Reducing the Profitability, supra note 11, at 323.
129. As I explained in the Introduction, for purposes of this Article I generally assume that stock demand curves are horizontal and that repurchases therefore cannot be used to exert price pressure. But if stock demand curves slope downward, enabling managers to boost the stock price by eliminating low-value shareholders, part of the observed post-announcement abnormal returns may be due to price pressure rather than to underpricing.
Part IV, bargain repurchases are likely to reduce aggregate shareholder value by distorting the firm’s payout policy.

This form of compensation does, however, serve managers’ interests. Bargain repurchases, like personal insider trading, provide managers with substantial value in a form that is likely to go unnoticed by shareholders.130 In any given firm, the profits are difficult to detect and measure. Needless to say, the profits never appear in any of the firm’s publicly disclosed accounting statements or summary executive compensation tables.

To be sure, managers are not the only ones benefiting from bargain repurchases. Non-selling public shareholders also benefit by indirectly acquiring stock for a low price. Indeed, if managers owned 15% of each repurchasing firm’s equity, these public shareholders collectively would capture 85% of bargain repurchase profits. On this assumption, if managers capture $5 billion annually in bargain repurchase profits, non-selling public shareholders would capture at least $25 billion. Thus, one might argue that bargain repurchases are not analogous to managers’ trading personally on inside information: unlike the case of personal insider trading, managers conducting low-price buybacks “create” value not only for themselves but for other shareholders as well.

The problem, however, is that the bargain repurchase profits flowing to managers and other non-selling shareholders do not result from value creation but rather come at the expense of other parties. And, as I now turn to explain, these other parties are the public shareholders who buy and sell the firm’s shares. Thus, if managers capture $5 billion of bargain repurchase profits and non-selling public shareholders capture $25 billion, other public shareholders must lose $30 billion. On balance, public shareholders as a group would lose exactly the amount that managers gain: $5 billion.

B. The Bid-Ask Spread and the Cost to Public Shareholders

Managers’ profits from bargain repurchases and sales at inflated prices following misleading repurchase announcements must come at someone’s expense. I first explain in more detail how the costs of value diversion are borne directly by public shareholders or indirectly, through a higher bid-ask spread. I then present evidence indicating that bargain repurchases and inflated-price sales increase the bid-ask spread.

1. Theory

We saw in Part II that bargain repurchases transfer value from parties selling shares to the firm. Similarly, profits from the sale of shares at a price above their actual value come at the expense of those buying the stock. There are two types of parties transacting directly with the firm and

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130. For a discussion of the importance to executives of camouflaging their compensation, see BEBCHUK & FRIED, supra note 41, at 67, 182.
its managers: public investors and market makers, the professionals who facilitate trading in a firm's stock by continuously offering to buy and sell shares.

Consider the situation in which the parties directly selling low-price stock to a repurchasing firm are public shareholders. In this situation, bar- gain repurchase profits come immediately at the expense of public investors. Similarly, when those buying inflated-price stock from managers are public shareholders, the cost of value diversion is borne, in the first in- stance, by public shareholders. In both cases, the transactions transfer value directly from public investors.

When the parties transacting with the repurchasing firm or managers are market makers, the analysis is more complicated. In these cases, bar- gain repurchases and inflated-price sales do not directly transfer value from public investors. Rather, they transfer value, in the first instance, from market makers. However, as we will see, the cost imposed on market mak- ers by bargain repurchases and inflated-price sales is eventually passed on to public investors through a wider bid-ask spread. Thus, in the end, public shareholders bear the cost of value diversion through reduced liquidity.

We saw earlier that the bid-ask spread compensates the market maker for the various costs associated with market making and provides the market maker with a profit. Repurchases may have liquidity-increasing ef- fects—effects that tend to reduce the bid-ask spread. For example, by increasing trading volume, buybacks may lower market makers' inventory costs, enabling them to narrow the spread, everything else being equal. Indeed, there is evidence that, in certain cases, repurchases do narrow the bid-ask spread.

But when repurchases are used for informed trading, and repurchase program announcements are used to allow managers to sell at inflated prices, there is likely to be an additional effect—called adverse selection—that tends to increase market makers' costs, and therefore the bid-ask spread. Adverse selection arises when market makers trade with better-informed parties, such as firms conducting bargain repurchases and managers selling at a high price. On average, market makers lose money trading with such parties. Market makers must widen their bid-ask spread to compensate for these losses. In turn, this increases public shareholders' trading costs, reducing their net returns. To the extent market makers trading with the firm and its managers pass on the cost of adverse selection

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133. See Barclay & Smith, supra note 6, at 66, 71 (concluding that in OMRs, the bid-ask spread widens, liquidity is reduced, and the firm suffers, on average, a reduction in equity value of 8% because managers use OMRs to transfer value from public shareholders).
to public investors through a higher bid-ask spread, public investors indirectly pay for the profits managers capture directly from market makers.  

To be sure, public shareholders do not bear the entire cost of a higher bid-ask spread. When managers buy or sell shares themselves, or indirectly acquire shares through a repurchase, they bear part of this cost. And to the extent managers absorb part of this cost, their net profits from bargain repurchases and inflated-price sales decline. However, managers' personal and indirect trades are likely to represent only a tiny fraction of total trading volume. One study, for example, reports that in U.S. public firms, manager trades make up only about 1.5% of total trading volume.  

Accordingly, the cost of the higher bid-ask spread can be expected to fall mostly on public shareholders. Thus, either directly or indirectly, managers' profits from bargain repurchases and inflated-price sales come largely at public investors' expense.

2. Evidence

There are several studies examining the effect of repurchases on the bid-ask spread. These studies' findings are consistent with bargain repurchases and inflated-price sales increasing the bid-ask spread and reducing public shareholders' net returns.

As Part III.B.1 explained, repurchases can influence the bid-ask spread through a variety of mechanisms. Some of repurchases' effects tend to increase liquidity. For example, by increasing trading volume, a repurchase can lower market makers' inventory costs, allowing them to narrow the bid-ask spread, everything else being equal. To the extent bargain repurchases create adverse selection, however, that effect will tend to increase the bid-ask spread, everything else being equal. Because non-bargain repurchases do not give rise to adverse selection, one would expect them to have only liquidity-increasing effects. Accordingly, their use can be expected to reduce the bid-ask spread. Indeed, there is evidence consistent with non-bargain repurchases reducing the bid-ask spread.  

However, a priori, one cannot make the opposite prediction about bargain repurchases. Although bargain repurchases' adverse selection effect

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134. Market makers would bear any of the costs not passed along to public investors.
135. See Seyhun, supra note 70, at 168.
136. See Cook et al., On the Timing, supra note 31, at 485-86 (finding that bid-ask spreads decreased when certain firms repurchased shares). The study looks at repurchase transactions that were disclosed voluntarily by a small group of US firms. Id. at 463-66. The researchers solicited repurchase data for 478 firms identified as announcing repurchase programs between March 10, 1993 and March 4, 1994. Only sixty-eight responded, and of those, four indicated that they were unable or unwilling to provide the data, leaving only sixty-four firms in the sample. Managers engaging in informed trading are unlikely to disclose trading data, even to researchers, because of the risk (however small) of insider trading liability or bad publicity. Accordingly, the 15% or so of the firms that responded positively to requests for such information are likely to be firms that were not using repurchases to engage in informed trading.
INFORMED TRADING AND FALSE SIGNALING

...tends to widen the bid-ask spread, everything else being equal, these repurchases are also likely to reduce market makers' inventory costs, which could have a countervailing effect. If the inventory-cost effect is sufficiently strong, even bargain repurchases might, like non-bargain repurchases, reduce the bid-ask spread. (They would, of course, not reduce the bid-ask spread by as much as non-bargain repurchases.) Accordingly, one could not conclude from a finding that bargain repurchases reduce the bid-ask spread that there is no adverse selection effect on the bid-ask spread; the bid-ask spread—and shareholders' trading costs—could have been even lower absent the insider-trading effect of the bargain repurchases.

Similarly, if repurchases in aggregate—which consist of both bargain and non-bargain repurchases—tend to reduce the bid-ask spread, one could not conclude that bargain repurchases do not give rise to an adverse selection effect. Such a finding could indicate that the liquidity-reducing adverse selection effect of bargain repurchases is overwhelmed by the inventory-cost (and any other liquidity-increasing) effects of both bargain and non-bargain repurchases. Absent adverse selection, the effect of aggregate repurchases on the bid-ask spread would have been even more positive.

Nevertheless, a finding that repurchases in aggregate do not reduce the bid-ask spread would indicate not only that bargain repurchases create an adverse selection effect but that this spread-widening effect offsets the inventory-cost (and possible other liquidity boosting) effects of both bargain and non-bargain repurchases. And a finding that repurchases in the aggregate increase the bid-ask spread would mean that bargain repurchases' adverse selection effect actually overwhelms the liquidity boosting effects of both bargain and non-bargain repurchases. Thus, while a finding that aggregate repurchases narrow the bid-ask spread does not rule out the possibility of adverse selection, a finding that aggregate repurchases increase the bid-ask spread strongly suggests that there is not only an adverse selection effect but that the effect is extremely strong.

In fact, all of the studies exploring the effect of repurchase activity indicate that, in the aggregate, the adverse selection effect of bargain repurchases either offsets or overwhelms any liquidity-boosting effects of both bargain and non-bargain repurchases. Three studies focus on changes in the bid-ask spread in the period following repurchase program announcements by U.S. firms, when presumably many of the announcing firms have begun repurchasing shares. Two studies find no change in the bid-ask spread, suggesting that the adverse selection effect of bargain

137. See Singh et al., supra note 46 (examining 181 repurchase announcements during the period between 1983 and 1990 and finding that the bid-ask spread did not change when firms announced repurchases); see also James M. Miller & John M. McConnell, Open-Market Share Repurchase
repurchases offsets the potential liquidity-boosting effects of bargain and non-bargain repurchases; one finds an increase in the bid-ask spread, suggesting that the adverse selection effect of bargain repurchases outweighs the aggregate liquidity-increasing effects of bargain and non-bargain repurchases.

Because U.S. firms are not required to report their daily repurchase activity, there is little evidence on how actual repurchase activity in U.S. markets affects the bid-ask spread. However, evidence from two foreign markets where all firms must report daily repurchases suggests that the adverse selection effect of bargain repurchases more than offsets any liquidity-enhancing benefits that bargain and non-bargain repurchases might offer. A study of repurchases in Hong Kong found that the bid-ask spread widens by an average of 10% on the days that firms repurchase shares. Similarly, a recent study of repurchases on the Paris Stock Exchange found that repurchase activity widens bid-ask spreads by 6% to 15%. These two studies indicate that not only do bargain repurchases generate an adverse selection effect but that the effect is large enough to swamp the otherwise liquidity-enhancing effects of bargain and non-bargain repurchases. In short, all of the empirical studies point to the insider-trading effect of bargain repurchases increasing the bid-ask spread, thereby shifting to public shareholders market makers’ adverse selection costs. We now turn to consider the additional costs that bargain repurchases can impose on public shareholders.

IV ADDITIONAL COSTS: PAYOUT DISTORTIONS

We have seen that managers can and do use bargain repurchases and misleading repurchase announcements to systematically transfer value from public shareholders. If such opportunistic behavior did not affect aggregate shareholder value, it would merely effect a zero-sum wealth transfer. Public shareholders’ losses would equal insiders’ gains—as much as several billion dollars annually from bargain repurchases alone.

However, as this Part shows, the use of low-price repurchases is likely to distort corporate payout and investment decisions, substantially reducing

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138. See Barclay & Smith, supra note 6, at 66, 71 (finding that the bid-ask spread widened, on average, following 244 repurchase announcements by 198 NYSE-listed firms between 1970 and 1978).

139. The one U.S. study that looks at actual repurchases is the Cook et. al. study, which relies on voluntary reporting and is therefore not a random sample of repurchasing firms. See Cook et al., On the Timing, supra note 31, at 485-86.

140. Trading depth (the number of shares offered or sought at the ask and bid prices, respectively) also drops significantly on the day of the repurchase. Brockman & Chung, supra note 83, at 441.

aggregate shareholder value and imposing additional costs on public shareholders. In other words, every $1 billion of managerial profits is likely to cost public shareholders much more than $1 billion.

Managers' ability to use repurchases for informed trading may lead to three types of payout decisions. Part IV.A describes how the prospect of future bargain repurchases can cause managers to hoard cash they should distribute to shareholders. Part IV.B shows that managers' ability to use repurchases for informed trading can also lead to cash squandering and underinvestment. Part IV.C explains that managers may also have an incentive to use repurchases when dividends would be more efficient.

I conclude in Part IV.D by considering two possible arguments that bargain repurchases might improve payout policy and actually increase aggregate shareholder value: (1) that bargain repurchases may mitigate managers' tendency to retain too much cash; and (2) that share repurchase announcements' positive effects on stock prices suggest that bargain repurchases benefit all shareholders. I show that managers' use of repurchases for informed trading is unlikely to benefit shareholders by reducing excess cash retention, and that bargain repurchases' effects cannot be inferred from the market's average reaction to share repurchase announcements. Indeed, I show that repurchase announcements could boost the stock price even in a hypothetical world where all repurchases reduce aggregate shareholder value.

A. Cash Hoarding

I have shown that a repurchase is economically equivalent to nonselling shareholders acquiring stock from sellers and the firm then issuing a dividend.\textsuperscript{142} Thus, like a dividend, a repurchase moves cash from firm projects to investments outside the firm. But unlike a dividend, a repurchase also transfers value between sellers and non-selling shareholders whenever the stock is mispriced. If the stock is overpriced, the repurchase transfers value to sellers from non-selling shareholders. If the stock is underpriced, the repurchase transfers value from sellers to non-selling shareholders.

From an aggregate shareholder perspective, a firm should distribute cash, whether through a repurchase or a dividend, only if the cash can generate higher returns outside the firm. If the firm uses a repurchase, any value-transferring effect should be disregarded. It merely shifts wealth from one set of shareholders to another without increasing value for shareholders as a group.

However, in making payout decisions, managers are likely to focus not on aggregate shareholder value but rather on what benefits them personally. And managers can profit by retaining their shares and having the

\textsuperscript{142.} See supra Part II.A.1.
firm buy stock at a low price. Thus, managers with inside information have an incentive to manipulate the timing and amount of cash distributions, causing payout policy to deviate from what would maximize aggregate shareholder value.

The first potential distortion to payout policy is that the prospect of future bargain repurchase opportunities might lead managers to retain rather than distribute excess cash. By hoarding cash, managers give themselves the ability to repurchase shares in the future should the stock become underpriced. Thus, in deciding whether to pay out cash now, managers will take into account the possible private benefit of retaining the cash for future bargain repurchases. The prospect of such opportunities, in turn, can bias managers toward retaining excess cash rather than paying it out.

To be sure, the anticipated private benefits from future bargain repurchases may not always be sufficiently large to induce managers to retain cash. If the cash would generate very low returns trapped in the firm, the prospects of underpricing are not great, or the returns from investing the cash outside the firm are sufficiently high, managers will distribute the cash even though it reduces their ability to later engage in bargain repurchases. However, on the margin, retaining the ability to buy the stock at a bargain price may cause managers to inefficiently hoard cash.

A simple numerical example illustrates this point. Suppose that managers own 20% of ABC Corporation’s shares. ABC has $100 million in idle cash that earns the firm 5% annually in a money market account. If the cash were distributed, shareholders could invest it in projects that would earn 10% per year. The managers must decide whether to distribute the $100 million on January 1 or at the end of the year, on December 31. Shareholders would enjoy an aggregate benefit of $5 million ($10 million less $5 million) if the money were distributed on January 1. Suppose further that on December 31 of that year, the stock might be underpriced or overpriced. If ABC were to keep the $100 million in cash, assume there would be a 40% chance that it could buy back $100 million of stock that is actually worth $125 million.

For ABC shareholders as a group, ABC’s decision to buy $125 million of stock from sellers for $100 million has an expected value of $0. To the extent that the sellers are the firm’s own investors, the bargain repurchase represents a mere transfer of value among shareholders. To the extent that the sellers are market makers, they will raise their bid-ask spread to compensate themselves for the expected loss from selling at a low price to the firm, passing the costs on to the firm’s shareholders when they sell or buy more stock. Therefore, from an aggregate shareholder perspective, the value-maximizing strategy would be to distribute the cash on January 1 so that it could earn shareholders an extra $5 million.
Now consider managers' incentives. If ABC were to issue a $100 million dividend on January 1, managers would receive $20 million (20% of $100 million) and invest it at 10% during the year, leaving them with $22 million on December 31. If ABC were to retain the cash, the firm would earn $5 million in interest on the funds, of which managers' pro rata share would be $1 million. But, with 40% probability, managers and remaining shareholders could use the $100 million at the end of the year to purchase $125 million in stock from sellers, yielding an additional $25 million (20% of $125 million) for managers. With 60% probability, the firm will simply retain the $100 million, of which managers' pro rata share is $20 million. Thus, the expected value to managers of retaining the $100 million of cash is $23 million ($1 million + 40% x $25 million + 60% x $20 million), which exceeds by $1 million the value to managers of distributing the cash on January 1.143

This example also illustrates how the use of bargain repurchases imposes costs on shareholders beyond the value transferred to managers. The repurchase itself transfers $25 million from sellers to managers and other remaining shareholders, of which managers capture 20%, or $5 million. Thus, the repurchase directly or indirectly transfers $5 million from public shareholders to managers. However, managers' ability to engage in bargain repurchases costs public shareholders far more than $5 million. The prospect of such a repurchase causes managers to retain $100 million that could be earning $5 million more outside of the firm. Public shareholders own 80% of the firm and, accordingly, bear an opportunity cost of $4 million. Thus, if managers engage in a bargain repurchase, the total cost to public shareholders is $9 million, almost twice as much as the amount of value transferred to managers through the repurchase.

**B. Cash Squandering and Underinvestment**

Just as future bargain repurchases can cause managers to retain cash that, from an aggregate shareholder perspective, should be distributed immediately, the possibility of immediate profits from informed repurchasing can cause managers to distribute cash that should be invested in the firm's own projects. Thus, the second problem with linking payout policy to the

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143. If capital markets were perfect, this payout distortion would not arise. With frictionless capital markets, ABC's managers could distribute the $100 million on January 1, enabling shareholders to earn higher returns on the cash outside the firm, and then—if the stock were underpriced—borrow $103 million on December 31 to fund a repurchase. However, as economists have long understood, capital markets do not work perfectly. Borrowing takes time, involves transaction costs, and is not always feasible. For example, loan covenants with existing lenders might bar ABC from borrowing an additional $100 million. Risk-averse managers fearful of financial distress may prefer not to increase the firm's debt and interest burden. Thus, managers hoping to engage in informed trading with stock buybacks cannot always expect to borrow the necessary funds should a bargain repurchase opportunity arise. As a result, they will have an incentive to retain excess cash even when distributing the cash to shareholders would increase aggregate shareholder value.
stock price is that it can encourage managers to “squander cash”—that is, to pay out too much.

Again, in making payout decisions, managers focus on making themselves better off, not on maximizing aggregate shareholder value. In deciding whether to pay out excess cash, managers consider whether their private information indicates that the stock is underpriced. If so, this may lead them to buy back stock even when the cash would generate more value for shareholders as a group if left in the firm.

Consider a variation on the previous example. Again, suppose that managers own 20% of ABC’s shares; ABC has $100 million of cash; and managers must decide whether to distribute the $100 million on January 1 or at the end of the year, on December 31. Now suppose, however, that if the money remains in the firm, ABC could invest it in projects that would earn 10% during the year. If the cash were distributed on January 1, shareholders could earn a return of 5% outside the firm. Retaining the cash would thus increase shareholder value by $5 million. Suppose further that on January 1, the stock is underpriced: with the $100 million ABC could buy back stock worth $125 million.

Again, for shareholders as a group, the ability of the firm to buy $125 million of stock from sellers for $100 million has an expected value of $0. To the extent that the sellers are the firm’s own investors, the bargain re-purchase represents a mere transfer of value among shareholders. To the extent the sellers are market makers, they will raise their bid-ask spread to compensate themselves for the expected loss from selling at a low price to the firm, passing the cost onto the firm’s shareholders. From an aggregate shareholder perspective, the value-maximizing strategy would be to retain the cash and invest it in ABC’s projects to earn shareholders an extra $5 million.

Consider managers’ incentives. If on January 1, ABC repurchases for $100 million stock worth $125 million, managers reap $5 million of profit (20% of $25 million). If ABC retains the cash, the firm earns a return of $10 million on the funds, of which managers’ pro rata share is $2 million. Thus, it is in managers’ interest to repurchase the stock even though—from an aggregate shareholder perspective—it is desirable for ABC to retain the cash. 144

As in the case of cash hoarding, the cost to public shareholders from cash squandering exceeds the amount of value transferred to managers. Returning to the example, ABC’s repurchase transfers $5 million from

144. Of course, a firm might be able to borrow money to fund the repurchase, which would ameliorate the problem of distributing cash that would be better invested in the corporation. But as I have explained, borrowing might be difficult, impossible, or take so much time that the underpricing might disappear. Even if borrowing were possible, managers might prefer not to increase the firm’s debt burden and the likelihood of financial distress, which are sometimes personally costly for them.
public shareholders to managers. But the cost to shareholders as a group (including managers) of distributing cash prematurely is $5 million. Of this $5 million cost, public shareholders bear 80% (or $4 million). Thus, managers’ $5 million in insider-trading profits cost public shareholders a total of $9 million.

There is evidence consistent with at least some repurchases squandering cash. After repurchases, operating profits tend to decline. Moreover, the operating profits of firms that are more likely to be engaged in information-based trading—that is, those that repurchase infrequently, have greater information asymmetry, and have more managerial ownership—tend to decline more than others.145 Economists have found it “surprising” that there is no evidence of improved operating performance following repurchases.146 The analysis I offer suggests that this could be the consequence of cash squandering.

C. Distorted Form of Payout

The use of repurchases for informed trading can distort not only the amount and timing of cash distributions, but also the form these payouts take. In particular, managers may choose to use repurchases to distribute cash rather than dividends, even when dividends would be more efficient.

As we saw in Part I.B, repurchases may sometimes offer advantages over dividends. Repurchases may be more tax efficient for shareholders. For small, non-recurring payouts, a buyback may also involve lower transactions than dividends. Repurchases, unlike dividends, can also be used to acquire shares for employee stock option programs.

However, the continuing widespread use of dividends suggests that dividends are often more efficient than repurchases. Managers are biased toward repurchases because repurchases can provide private benefits that dividends cannot, such as informed trading profits.147 Thus, managers will choose dividends over repurchases only when dividends are substantially more efficient than repurchases. The fact that firms continue to use dividends—indeed, most firms that repurchase shares also issue dividends148—suggests that, at least in some cases, the efficiency advantages of dividends may be substantial.

While a full discussion of dividends’ possible advantages is beyond the scope of this Article, it is worth noting one such advantage: that,

145. See Jagannathan & Stephens, supra note 6, at 83.
146. See id.
147. Repurchases are likely to provide managers other private benefits. If the demand curve for shares slopes downward, managers can use repurchases to boost the stock price before selling their own shares. And, because of the structure of managers’ options, the distribution of cash through repurchases tends to increase the value of their equity compensation while dividends reduce it. See Weisbenner, supra note 6, at 9-10; Fenn & Liang, supra note 6; Jolls, supra note 6, at 22-24.
148. See Grullon & Michaely, Dividends, supra note 1.
particularly for larger payouts, dividends are likely to involve significantly lower transaction costs than repurchases. As noted in Part I.B.2, when a firm distributes cash through a repurchase, it incurs brokerage fees. So do selling shareholders. If the repurchase is mediated through a market maker, the firm and selling shareholders also bear the cost of the bid-ask spread. These transaction costs tend to increase with the dollar amount of the payout.

In contrast, the transaction costs associated with dividends are largely fixed. Firms must compute the amount to be paid to each shareholder and mail out the checks. These costs, which are modest, do not increase with the dollar amount distributed. In fact, employees of the investor relations and shareholder services departments of a number of publicly traded firms report that the cost of issuing dividends is too small to track.149 For large payouts, then, dividends are likely to involve lower per-dollar transaction costs than repurchases.

To be sure, there may well be cases where a dividend is more transaction-cost efficient but a repurchase still makes shareholders better off because of one of its other advantages. The important point, however, is that the widespread use of dividends suggests that, in many cases, dividends are a more efficient payout form than repurchases. And, to the extent managers can profit from bargain repurchases, they may decide to use repurchases even when dividends are more efficient. In such a case, managers’ ability to engage in bargain repurchases may lead not only to cash squandering or cash hoarding, but also to the use of an inefficient payout form.

D. Could Bargain Repurchases Actually Improve Payout Policy?

We now turn to consider two possible arguments that bargain repurchases might in fact improve payout policy and increase aggregate shareholder value: (1) that bargain repurchases may mitigate managers’ tendency to retain excess cash; and (2) that share repurchase announcements’ positive effect on stock prices suggests that bargain repurchases benefit all shareholders. As we will see, however, managers’ use of repurchases for informed trading is unlikely to benefit shareholders by reducing excess cash retention, and bargain repurchases’ effects cannot be inferred from the market’s average reaction to share repurchase announcements.

149. Some economists have argued that dividends impose transaction costs on shareholders by forcing non-liquidity seeking shareholders to reinvest the cash in stock of either that firm or another firm. See Edwin J. Elton & Martin J. Gruber, The Effect of Share Repurchase on the Value of the Firm, 23 J. FIN. 135 (1968). Distributing cash through a repurchase instead of a dividend might reduce the transaction costs borne by this group of shareholders. However, institutional investors (such as mutual funds) constantly distribute cash to and receive cash from investors. Thus, the marginal transaction cost of processing cash dividends is likely to be trivial. The widespread availability of dividend reinvestment programs also makes it easy for shareholders who do not want liquidity to avoid the transaction costs associated with reinvesting unwanted cash.
Indeed, I show that repurchase announcements could boost the stock price even in a hypothetical world where all repurchases reduce aggregate shareholder value.

1. Inducing the Distribution of Excess Cash

Managers generally have a strong incentive to retain excess cash—cash not needed to fund any desirable investment opportunities the firm might have—rather than distribute it to shareholders. The cash enables them to expand their corporate empire and thereby increase their perks and prestige. The funds also provide a cushion in the event of a downturn, reducing the cost to managers of performing poorly.

Managers' ability to profit from bargain repurchases might counteract their tendency to retain excess cash by "rewarding" them for distributing it. Distributing excess cash imposes a cost on managers by reducing their ability to build empires and cushion themselves from poor performance. But in some cases managers' profits from low-price repurchases might be high enough to offset these costs, motivating managers to distribute the cash.

One cannot rule out the possibility that, at least in some cases, bargain repurchases reduce excessive cash retention. However, both theory and empirical data suggest that bargain repurchases are unlikely to substantially mitigate this problem market-wide. As a matter of theory, tying payout policy to managers' inside information can lead both to cash squandering—the problem of over-payout—and to cash hoarding—the problem of under-payout. To the extent that the prospect of future bargain repurchase opportunities lead to cash hoarding, managers' ability to engage in such repurchases does not mitigate the problem of free cash retention. Indeed, it exacerbates the problem.

Empirically, there is little evidence indicating that the increasing use of repurchases over the last twenty years (many of which have been information-driven) has led to a reduction in excess cash holdings. If the use of repurchases caused managers to distribute more excess cash than the use of dividends, one would expect payout rates to have increased as managers substituted repurchases for dividends. However, aggregate payout data suggest that the increasing use of share repurchases is not boosting payouts. Between 1974 and 1998, the average repurchase-payout to earnings ratio across firms—the amount of cash distributed through share repurchases divided by earnings—increased from 3.7% to 13.6%, and the average dividend-payout to earnings ratio declined from 22.3% to 13.8%.

151. See Grullon & Ikenberry, supra note 3, at 41.
Yet the average (total) payout to earnings ratio for publicly traded U.S. firms remained fairly constant during that period, hovering around 26% to 28%.\textsuperscript{152} Thus, the data do not appear to indicate that bargain repurchases have reduced managers’ incentive to retain too much cash.\textsuperscript{153} On balance, then, information-driven repurchases are likely to worsen, rather than improve, corporate payout policy.

2. Bargain Repurchases' Desirability: What Can Announcement Returns Tell Us?

I have explained how the use of bargain repurchases not only systematically diverts value from public shareholders, but is also likely to distort managers’ payout and investment decisions, shrinking the size of the pie. One might wonder how this finding can be reconciled with the fact that, on average, repurchase program announcements boost the stock price, albeit only slightly. Below, I explain why the market’s reaction to such announcements provides little information on bargain repurchases’ desirability. Indeed, I show that stock prices could rise following repurchase program announcements even in a world where all buybacks are known to be bargain repurchases that destroy large amounts of aggregate shareholder value.

The market’s slightly positive reaction to repurchase program announcements sheds little light on the way bargain repurchases and inflated-price sales affect aggregate shareholder value for three reasons. First, it is unlikely that all repurchase program announcements herald bargain repurchases (or inflated-price sales). As I indicated in the Introduction, many repurchases may well be shareholder serving. Accordingly, in any given sample of repurchase announcements, there are likely to be at least some shareholder-serving repurchases. The fact that repurchase program announcements are greeted positively on average could at most mean that the expected benefits of shareholder-serving repurchases slightly outweigh the costs of bargain repurchases (and managers’ inflated-price sales that might follow these announcements). It certainly does not mean that market participants believe that every repurchase benefits shareholders. Thus, the market’s slightly positive reaction (on average) to repurchase program

\textsuperscript{152} \textit{Id.}

\textsuperscript{153} To be sure, the fact that the payout to earnings ratio has remained stable for twenty-five years does not necessarily mean that managers’ tendency to hoard excess cash has remained unchanged. During this period, managers may have been able to find more productive uses for their firms’ cash. Thus, the amount of excess cash at managers’ disposal might have declined even as payout rates stayed constant, which would be consistent with repurchases boosting payouts of excess cash. However, the opposite story could be true. Excess cash may have increased over time, in which case constant payout rates would be consistent with repurchases reducing payouts. The important point is that aggregate payout data do not provide any prima facie evidence that the increasing use of repurchases has reduced the problem of excessive cash retention.
announcement is not inconsistent with bargain repurchases imposing costs on shareholders—or even with those costs being quite large.

Second, managers' use of information-based repurchases can give rise to costs, such as cash hoarding, that are incurred even before a repurchase occurs and thus are not reflected in the market's reaction to a repurchase program announcement. As we saw in Part III.A, managers who believe their stock is likely to become underpriced may have an incentive to retain cash that should, from an aggregate shareholder perspective, be distributed immediately to shareholders. The cost to shareholders of this cash hoarding is incurred before any repurchase is actually announced. Should the firm announce a repurchase program, this ex ante cost would therefore not be reflected in the market's reaction to the announcement. Indeed, the higher this cash-hoarding cost is, the stronger the stock market's reaction to the announcement will be; the announcement will signal not only that the stock is underpriced, but also that the excess cash that has been sitting idly in the firm will finally be distributed to investors. Paradoxically, then, the greater the cost that cash hoarding imposes on shareholders, the more positive the stock market's reaction to a repurchase announcement will be. As a result, the price reaction to the announcement will fail to reflect the overall effect of bargain repurchases on aggregate shareholder value. Thus even in a world consisting only of bargain repurchases, one could not infer from the stock market's slightly positive reaction to repurchase program announcements that managers' ability to conduct these repurchases benefits shareholders.

Third, even if share repurchases did not give rise to any ex ante costs such as cash hoarding, the market's slightly positive reaction to share repurchase announcements would not mean that share repurchases, even on average, increase aggregate shareholder value. In fact, the market's positive reaction could be consistent with all share repurchases destroying aggregate shareholder value. To see this, consider a world in which all announced repurchases are bargain repurchases that cause managers to squander cash that, from an aggregate shareholder perspective, should be retained by the firm. Even in such a world, a share repurchase announcement could cause the stock price to increase. The reason is as follows: the stock market's reaction to a repurchase program announcement reflects at least two things: (1) the arrival of new information indicating that the company is likely worth more than was previously believed; and (2) the perceived effect of the announced repurchase on the company's value. As long as the cash-squandering repurchase destroys less value than the amount of underpricing revealed by the announcement, the stock market's reaction will be positive. Thus, one cannot infer from the price-boosting effect of repurchase announcements that the announced repurchases increase value.
To see how the announcement of a value-destroying repurchase could boost the stock price, consider the following example. Suppose XYZ Corporation's shares are worth either $8 or $12, with equal probability. Assume that if the stock is worth $12, there is a 30% chance that XYZ will announce a repurchase tomorrow and then repurchase shares. If the stock is worth $8, there is a 10% chance that XYZ will announce a repurchase tomorrow to boost the stock price so that managers can sell their shares. Finally, suppose that if XYZ actually conducts a repurchase, it will reduce the value of each share from $12 to $11 by squandering needed cash.

If the firm announces a repurchase, the market will infer that the expected value of the stock is $10.25. If the firm fails to announce a repurchase, the stock price will drop to $9.75. There is an 80% likelihood of no repurchase announcement and a 20% likelihood of a repurchase announcement. The stock will therefore trade at $9.85 per share today. As a result, the stock price will rise $0.40—from $9.85 per share to $10.25 per share—if the repurchase is announced tomorrow. This increase occurs even though the market understands that, should the firm repurchase shares, per share value will decrease from $12 to $11.

I am not claiming that all (or even most) repurchases reduce aggregate shareholder value; rather, my claim is that when repurchases can be used to buy stock at a low price, managers may have an incentive to squander cash, and that, even in a hypothetical world in which all repurchases squander cash and thus reduce aggregate shareholder value, repurchase announcements might nevertheless elicit a positive reaction from investors. Thus, the increase in stock price that typically follows a repurchase announcement does not demonstrate that bargain repurchases (or repurchases on average) actually increase aggregate shareholder value.

V

PRE-REPURCHASE DISCLOSURE

We have seen that managers can and do use bargain repurchases and misleading repurchase announcements to enrich themselves at other investors' expense, which can lead to distorted payout decisions and lower aggregate shareholder value. This Part puts forward a new approach to regulating repurchases that would substantially diminish managers' ability to profit from bargain repurchases and misleading repurchase announcements and thereby improve corporate payout policy. Part V.A describes the

154. The expected value of XYZ's stock, given the repurchase announcement, is $11 + $8)/(0.30 + 0.10).
155. The expected value of ABC's stock, given the lack of a repurchase announcement, is $12 + $8)/(0.70 + 0.90).
156. The likelihood of a repurchase announcement is (0.50)(0.30) + (0.50)(0.10), or 20%. The likelihood of no announcement is therefore 80%.
proposed rule: requiring firms to disclose the exact details of repurchase orders before their brokers execute them. Part V.B explains how pre-repurchase disclosure would make it more difficult for managers to use repurchases for informed trading and misleading repurchase announcements to artificially boost the stock price before selling their shares. As Part V.C explains, the potential costs of the proposed rule are minimal. Pre-repurchase disclosure would neither undermine the potential benefits of share repurchases nor discourage managers from undertaking shareholder-serving buybacks.

A. The Proposed Rule

Firms are currently required to announce intended repurchases only when their boards approve a buyback program.157 These announcements are often vague and never commit the firm to a specific course of action. Firms sometimes indicate the number of shares targeted, the approximate amount to be spent on repurchases, or the anticipated length of the repurchase program. But these details—if they are offered at all—do not commit managers to repurchase a single share, let alone indicate the price at which shares would be acquired. Indeed, many firms announce a repurchase and then fail to buy back a single share.158

My proposal would require managers to provide detailed information to the public about repurchases before they conduct them. In particular, managers would announce the specific purchase instructions given to their firm’s broker before the broker executes the buy order. For example, a firm wishing to instruct its broker to “buy up to 200,000 shares over the next five trading days at a price of $25 or better” would disclose that exact instruction to the market before the broker could begin buying shares. In addition, firms would be required to file pre-repurchase announcements with the SEC’s publicly-accessible Electronic Data Gathering and Retrieval System (EDGAR).

When announcing a repurchase order, managers could include any other information that they wished to communicate to the market. For example, managers could announce that the repurchase was intended to acquire shares for employee stock option programs. To the extent market participants consider this additional information credible, they might respond differently to the announced order. Managers could also use the required pre-repurchase announcement to make binding commitments about future buybacks. For example, managers could indicate that they will not repurchase more than a certain amount of shares over a specified period.

As Part V.B explains in greater detail, market participants would use the disclosed repurchase orders, along with any other information provided

158. Id.
by the firm, to update their assessment of the stock's actual value, taking into account the firm's repurchase history and financial condition, as well as managers' credibility and their contemporaneous and previous personal trading. To the extent a disclosure signals that the stock is underpriced, market participants would bid up the price of the stock before the repurchase order is executed. This adjustment would, in turn, reduce managers' bargain repurchase profits.

Enforcement of the rule would be straightforward. Firms would be required to report each completed transaction on the SEC's EDGAR system, including the price at which the repurchase was executed and the order with which it was associated. Substantial discrepancies between trades and announced orders could give rise to penalties.

The information, if any, transmitted by a pre-repurchase announcement may not be instantly incorporated into the stock price. Disclosure should thus be made at least several days in advance of trade execution. The more efficient the market is at reacting to this type of information, the shorter the notice period need be, everything else being equal. As I now turn to explain, the market's reaction to repurchase orders will, over time, reduce the costs to public shareholders of bargain repurchases and inflated-price sales following misleading repurchase announcements.

**B. Benefits of Pre-Repurchase Disclosure**

This Part describes the benefits of pre-repurchase disclosure. It first shows that pre-repurchase disclosure decreases managers' profits from each bargain repurchase, reduces the number of bargain repurchases, and makes it more difficult for managers to gain from false signaling. It then explains how these effects both reduce managerial value diversion and improve payout decisions, thereby increasing aggregate shareholder value and benefiting public investors.

1. **Reducing Managers' Profits**

   The analysis of the proposed rule's effects on managers' profits from informed trading and false signaling proceeds in three steps. First, I show that pre-repurchase disclosure reduces managers' profits from any bargain repurchase they conduct. Thus, pre-repurchase disclosure would reduce managers' profits even if the volume of bargain repurchases remains constant. Second, I explain that, as the expected profitability of bargain repurchases declines, managers' incentive to use repurchases for informed trading diminishes, and the frequency of such repurchases drops. Pre-repurchase disclosure thus curbs managers' bargain repurchase profits by both decreasing per-repurchase profits and lowering the total number of such repurchases. Third, I show that, as the frequency of bargain repurchases drops, misleading repurchase announcements have a smaller effect.
on the stock price, reducing managers' profits from selling their own shares at an inflated price.

a. Profits Per Bargain Repurchase

As I explain below in more detail, pre-repurchase disclosure reduces managers' expected profit from a contemplated bargain repurchase in two ways. First, the rule increases the price at which the firm buys back shares during the bargain repurchase, reducing the immediate profit from the buyback. Second, if managers conduct the bargain repurchase, market participants are more likely to believe that the firm's future buybacks are also information driven, even when they are not. Thus, if managers conduct the contemplated low-price repurchase, they are likely to face larger price increases in future buybacks—both those that are information driven and those that are not. These expected price adjustments, both current and future, reduce the anticipated profits from the contemplated bargain repurchase.

Pre-repurchase disclosure affects the repurchase price by communicating information about the likely value of the stock to the market before the repurchase is executed. To the extent market participants believe that the firm is attempting to buy back stock at a bargain price, they will bid up the price of the stock, forcing the firm to complete its repurchase at a less favorable price.

Before examining in more detail how a pre-repurchase announcement is likely to be interpreted by the market, it is worth considering how investors currently respond to news about managers' own trades. Market participants know that managers often have inside information bearing on the value of their firm's shares, and attempt to infer this information by studying managers' behavior. For example, investors closely follow managers' post-trading disclosures made pursuant to Section 16(a) of the Securities Exchange Act of 1934, which currently requires corporate insiders to report their trades by the end of the second business day after the trade date. Heavy net buying is often considered an indication that the stock is undervalued; heavy net selling is often interpreted to mean the opposite. Among the factors investors take into account in "decoding" a particular trade are the amount of the trade, the size of the trade relative to the insider's holdings and previous trades, the degree to which the insider's previous trades correlate with subsequent stock price movements, and recent trades by other company insiders.

In the same manner that market participants follow and respond to corporate insiders' post-trading reports, investors and market makers will focus on a firm's pre-repurchase announcements and attempt to interpret

159. See Fried, supra note 14, at 324.
160. Id. at 323-25.
these announcements in light of the firm's repurchase history and other relevant information. Has the firm tended to repurchase shares prior to abnormal stock price increases, or have the firm's previous repurchases not correlated with future price movements? Is the repurchase made pursuant to a mechanical trading plan that was entered into years ago, in which case it is unlikely to be information based? Or has the firm been repurchasing unusually heavily in recent months? The answers to these types of questions, along with information about managers' personal trading, will lead investors to adjust the terms on which they are willing to buy and sell shares. To the extent that the pre-repurchase announcement signals that the stock is likely to be underpriced, market participants can be expected to bid up the stock price. This forces the firm to trade at a less favorable price.

Of course, market participants can never know the exact motives for a particular repurchase order. As a result, the price adjustment following a pre-repurchase announcement will never precisely reflect the inside information (if any) behind a repurchase. Instead, the adjustment will capture the expected value of the inside information communicated by the announcement. Over time, however, the aggregation of all of these price adjustments will substantially reduce managers' profits from bargain repurchases.

Naturally, markets may not be completely efficient at absorbing information of the type transmitted by pre-repurchase disclosure. Even if information is disclosed substantially in advance of a repurchase, adjustments might be somewhat smaller than in a world of perfectly efficient markets. Nevertheless, a firm with a history of well-timed buybacks is likely to face substantial adjustments when it announces future repurchase orders. Over time, these adjustments are likely to significantly reduce the value that managers can expect to transfer from public shareholders through bargain repurchases.

b. Frequency of Bargain Repurchases

As we have seen, pre-repurchase disclosure will reduce managers' profits from each bargain repurchase. It will force managers indirectly to buy shares at a higher price when they conduct a bargain repurchase. And it will force managers indirectly to buy shares at a higher price in subsequent repurchases, even those that are not information driven. The anticipation of these price adjustments will reduce managers' expected net benefit from conducting a bargain repurchase. The prospect of lower profits will, in turn, make managers more reluctant to conduct certain bargain

repurchases. As a result, pre-repurchase disclosure is likely to reduce not only the profitability of bargain repurchases but also their frequency.

Consider the following example. Suppose managers owning 10% of ABC Corporation know that the stock is underpriced by 20%. They contemplate a repurchase of $1 billion worth of shares, which would yield $200 million of profit for non-selling shareholders if effected at the current price. Suppose also that the cash used for the repurchase could, if invested in the firm, generate $150 million more in earnings for shareholders than if it were distributed and invested by shareholders outside the firm. The repurchase would therefore reduce aggregate shareholder value by $150 million.\footnote{The $200 million of insider trading profits are zero-sum. Managers and other non-selling shareholders make $200 million, but those selling stock to ABC lose an equivalent amount. As Part III.B explained, the $200 million gained by managers and non-selling public shareholders comes either directly or indirectly at public shareholders’ expense. From an aggregate shareholder perspective, the profits from the bargain repurchase should therefore be ignored.}

In the absence of pre-repurchase disclosure, ABC’s managers have an incentive to conduct the bargain repurchase even though it reduces aggregate shareholder value by $150 million. The repurchase would cost managers their pro rata share (10%) of $150 million in foregone earnings but yield managers their pro rata share (10%) of $200 million in insider trading profits. On balance, managers benefit from this bargain repurchase even though it squanders cash and reduces aggregate shareholder value.

Pre-repurchase disclosure makes managers more reluctant to undertake such a value-reducing repurchase. Pre-repurchase disclosure would boost the stock price, reducing the degree of underpricing and the amount of expected insider trading profits from this particular repurchase. Moreover, if the firm conducts this bargain repurchase, market participants are more likely to believe that future repurchases—whatever the motivation—are information driven, and thus bid up the price at which the firm must repurchase shares in the future. Over time, managers and other non-selling shareholders will be forced to “give back” to the market some or all of the $200 million in insider trading profits the managers hope to make with this particular bargain repurchase. If managers expect these price adjustments to be large enough, they will refrain from conducting the bargain repurchase.

Suppose, for example, that aggregate current and future adjustments are expected to force managers and non-selling shareholders to give back $100 million of the $200 million in insider trading profits. That is, the market is expected to be only 50% efficient in “penalizing” ABC’s managers for this bargain repurchase. Given these expected adjustments, a repurchase of $1 billion worth of stock that is actually worth $1.2 billion will, over time, generate only $100 million of profits for managers and other
non-selling shareholders. These profits will be less than the $150 million in profits foregone by squandering ABC's cash on the repurchase. As a result, managers will have no incentive to engage in the bargain repurchase. In short, pre-repurchase disclosure will cause managers to abstain from certain bargain repurchases that they currently have an incentive to undertake. Managers' profits from bargain repurchases would thus decline for two reasons: (1) expected profits per bargain repurchase, taking into account both current and future price adjustments, would drop; and (2) the number of bargain repurchases would decline.

c. False Signaling Profits

Pre-repurchase disclosure does not prevent managers from announcing that the board has authorized a repurchase program, even when they have no intention of buying back any shares. However, it reduces managers' ability to profit from inflated-price stock sales following misleading repurchase announcements. Under pre-repurchase disclosure, low-price buybacks are likely to become less common. Accordingly, the probability that a repurchase program announcement is information motivated is likely to be lower than it is now, and such an announcement will send a weaker signal of underpricing. As a result, the market's reaction to announcements by firms that their boards have approved share repurchase programs should be less positive. This, in turn, will make it more difficult for managers to use misleading repurchase announcements to boost the stock price before selling their own shares.

As Part III.B.3 explained, there is a synergy between bargain repurchases and false signaling. When managers undertake more bargain repurchases, the stock price reaction to repurchase announcements is stronger. It is thus easier for managers to use misleading announcements to boost the stock price before unloading their own shares. Thus, it should not be surprising that reducing managers' ability to conduct bargain repurchases is also likely to reduce their ability to profit from false signaling.

To be sure, pre-repurchase disclosure would not completely eliminate managers' ability to profit from misleading repurchase announcements to boost the stock price. A repurchase announcement might cause the stock price to increase for reasons other than underpricing. For example, market participants may believe that—if the firm actually follows through on the repurchase—it will distribute excess cash that managers have been hoarding. Managers will thus still be able to boost the stock price by announcing repurchase programs they have no intention of effecting, and then unload their shares. Nevertheless, pre-repurchase disclosure is likely to substantially reduce profits from such inflated-price sales.163

163. One could reduce these profits further by requiring managers to disclose all trades in their firm's stock—both sales and purchases—in advance, as I have already proposed. See Fried, Reducing
2. Increasing Shareholder Returns

As Parts II and III explained, managers’ opportunistic use of repurchases and false repurchase announcements imposes costs on investors. Both bargain repurchases and inflated-price sales following misleading repurchase announcements systematically transfer value from public shareholders to managers. The use of bargain repurchases also adversely affects firm payout decisions, further reducing public shareholder returns.

By reducing managers’ profits from bargain repurchases, pre-repurchase disclosure increases public shareholders’ returns through two mechanisms. First, it reduces the amount of value diverted from public investors to managers. Second, by reducing the frequency of bargain repurchases, pre-repurchase disclosure is likely to improve firm payout policy, increasing aggregate shareholder value.

We have seen that pre-repurchase disclosure curbs managers’ profits in three ways: by (1) reducing managers’ expected profits from each bargain repurchase through current and future price adjustments; (2) lowering the frequency of such repurchases; and (3) diminishing managers’ profits from false signaling. To the extent managers profit less from transactions in which the managers or their firms trade directly with public investors, public investors directly benefit. To the extent managers’ profits are made in the first instance at market makers’ expense, the reduction in managers’ profits will enable market makers to lower their bid-ask spread, indirectly benefiting public investors. Pre-repurchase disclosure thus benefits shareholders by reducing the extent of the value transfer to managers.

More importantly, pre-repurchase disclosure improves payout policy, increasing aggregate shareholder value. Because pre-repurchase disclosure reduces the profitability of bargain repurchases, managers will have less incentive to inefficiently hoard cash to give themselves the option of conducting bargain repurchases in the future. Managers will also have less incentive to engage in cash-squandering bargain repurchases when they know that the current and future adjustments caused by pre-repurchase disclosure will substantially reduce their insider trading profits from the bargain aspect of the repurchase. Managers will also have less incentive to use repurchases to distribute cash in situations where dividends are more efficient for shareholders. As pre-repurchase disclosure mitigated these distortions, there would be more value available to shareholders as a group. And,
as I will now explain, pre-repurchase disclosure can achieve these benefits at low cost.

C. Costs

This Part considers three possible costs to pre-repurchase disclosure: that such a rule might (1) reduce the usefulness of repurchases; (2) cause managers to use dividends even when repurchases are more efficient; and (3) provide managers with a new false signaling mechanism for selling their own shares at inflated prices. None of these costs, I show, is likely to be significant.

1. Impairing Benefits of Repurchases

Pre-repurchase disclosure will not interfere with any of the potential benefits of repurchases. The rule would not affect the potential tax advantages of repurchases over dividends. The mechanical costs associated with pre-repurchase disclosure—public dissemination of buyback orders and electronic transmission of the information to the SEC—would be trivial. Thus, pre-repurchase disclosure does not hinder the use of buybacks when a repurchase would distribute cash more tax-efficiently or cost-effectively than a dividend. Similarly, pre-repurchase disclosure will not affect firms’ ability to use repurchases to provide shares for employee stock option programs. Finally, pre-repurchase disclosure will not impede the use of repurchases to boost liquidity by, for example, stimulating trading and lowering market maker’s inventory holding costs.

2. Use of Inefficient Dividends

Although it should be clear that pre-repurchase disclosure would not impair any of the potential benefits attributed to repurchases, such as their ability to distribute excess cash tax-efficiently, one might worry that pre-repurchase disclosure would cause managers to use dividends when share repurchases would be more efficient. In particular, the pre-repurchase disclosure required to effect a buyback might boost the stock price before the firm’s broker begins executing the buy order, causing the firm to acquire shares for more than the pre-disclosure price. The anticipated price adjustment could, in turn, discourage managers from distributing cash through repurchases even when repurchases are more efficient for shareholders than dividends. Instead, managers might distribute the cash through a less efficient dividend.

However, there may not be many circumstances in which repurchases are more efficient for shareholders than dividends. Because many shares are held in tax-free or tax-deferred accounts, dividends and repurchases are often taxed at an identical rate, and even outside of these accounts, their tax treatment is (at least currently) essentially the same. And for large payouts,
dividends are likely to involve lower transaction costs. Thus, repurchases are likely to be more efficient only when a firm pays out small amounts of cash at a time.

Moreover, in those situations where repurchases are likely to be more efficient—small payouts—managers are unlikely to be discouraged from distributing cash through repurchases. Small buybacks cannot transfer much value to managers. As a result, market participants will understand that these repurchases are unlikely to be motivated by underpricing. Thus, they will not bid up the price and force the firm to buy the shares at a higher price.

Nevertheless, let us assume for argument's sake that, in some cases, repurchases are more efficient for distributing large amounts of cash. Even in this situation, pre-repurchase disclosure is unlikely to prevent managers from efficiently distributing cash through a repurchase. To begin, consider firms that, prior to the introduction of a pre-repurchase disclosure rule, tended to repurchase shares at their actual value. That is, the firm's repurchases had, on average, not preceded large run-ups in the stock price. Market participants will bid up the stock price following a pre-repurchase disclosure only if they have reason to believe, based on the firm's repurchase history and other factors, that the buyback is information driven. There is little reason to believe that, with respect to firms that have tended to buy shares at their actual value, the market will adjust the price in response to the disclosure of even a large repurchase order.

Next consider firms that, prior to the introduction of a pre-repurchase rule, had a history of conducting bargain repurchases. If managers do not take steps to signal that the contemplated repurchase is not information-driven, they are likely to face a significant adjustment when the repurchase order is announced. However, managers can easily avoid—or at least reduce the size of—the market's adjustment by committing to repurchase a certain number or dollar amount of shares every period, regardless of the stock price. On average, such a program will result in repurchases of shares at a "fair" price and, over time, not redistribute value among shareholders. The market will infer from such a commitment that the managers are unlikely to be conducting a bargain repurchase and, accordingly, adjust the price less, if at all, in response to individual order announcements. 164 As a result, managers who wish to distribute cash through a repurchase rather than through a dividend will not be deterred from doing so.

164. In 2000, the SEC promulgated Rule 10b5-1, which creates a safe harbor from Rule 10b-5 liability for a repurchasing firm that assigns repurchase decisions to a third party lacking access to material inside information. See 17 C.F.R. § 240.10b5-1 (2004). The safe harbor also extends to trades conducted according to a pre-arranged plan, a binding contract, or irrevocable instructions that were not created at a time when the firm's management had material nonpublic information. A firm acquiring stock under a Rule 10b5-1 repurchase plan is unlikely to face much, if any, adjustment when individual purchase orders made pursuant to the plan are announced.
In sum, managers are likely to face price adjustments when they announce a repurchase order only to the extent that market participants believe, based on the managers' repurchase history and other factors, including the size and structure of the order, that the buyback is information motivated. To the extent that managers have not used repurchases to indirectly buy stock for a low price, use repurchases to buy back small amounts of stock, or commit to repurchase according to a pre-specified schedule, market participants will not respond to buyback orders by increasing the stock price. Thus, managers wishing to use repurchases for shareholder-serving purposes will not be discouraged from doing so.

3. Strategic Pre-Repurchase Announcements

We saw that managers not intending to repurchase a single share may currently have an incentive to announce a share repurchase program solely to boost the stock price before selling their own shares. These announcements tend to boost the stock price because many repurchases are information driven. By reducing the frequency of bargain repurchases, pre-repurchase disclosure will reduce the signaling strength of buyback program announcements. In turn, managers will find it more difficult inflate the stock price by announcing repurchase programs that they have no intention to execute.

However, one might worry that, under a pre-repurchase disclosure regime, managers may be tempted to conduct repurchases in the hope that the required pre-repurchase disclosure boosts the stock price, allowing them to sell their own shares at a price higher than the stock's actual value. There is, however, an important difference between current non-binding repurchase program announcements and the pre-repurchase disclosure rule I propose: pre-repurchase disclosure would be followed by an actual repurchase. Thus, an inflated-price repurchase will impose a cost on managers to the extent that they continue to own stock in the company. In effect, managers will buy sellers' shares at a price above their actual value. Managers bear no such cost when they use a misleading repurchase program announcement to boost the stock price. Thus, this manipulation strategy would be profitable only if managers sell more shares than they indirectly buy through the repurchase.

In any event, the strategic use of repurchase orders to boost the stock price could easily be prevented. In particular, managers of repurchasing firms could be required to disclose their own intended trades, or at least their sales, in advance—a rule that I have suggested be applied to managers whenever they trade in their own firms' shares. Pretrading disclosure of repurchasing managers' own trades would reveal to the market the net

165. See Fried, Reducing the Profitability, supra note 11.
direction of managers’ direct and indirect trades, allowing the market to draw appropriate inferences about the actual value of stock. This would eliminate managers’ ability to artificially boost the stock price by announcing repurchase orders.

CONCLUSION

Public companies in the United States and elsewhere are increasingly using open market repurchases, rather than dividends, to distribute cash to shareholders. This trend has generally been seen as desirable for shareholders. Stock buybacks may enable firms to distribute cash more tax-efficiently and cost-effectively than dividends. Repurchases can also be used to acquire shares for employee stock option plans and, under certain conditions, to increase liquidity.

This Article has shown, however, that managers also use repurchases to enrich themselves at public investors’ expense. Managers aware that their stock is underpriced frequently conduct repurchases to indirectly buy shares for themselves at a bargain price. And managers announce repurchases they have no intention of conducting in order to boost the stock price, enabling them to unload their own shares at a higher price.

The use of repurchases for informed trading and false signaling imposes substantial costs on public investors. Managers’ profits from the opportune use of repurchases and misleading repurchase announcements may be as high as several billion dollars annually—all of which comes, directly or indirectly, at public shareholders’ expense. Moreover, tying the firm’s payout policy to the stock price can distort managers’ payout and investment decisions, shrinking the size of the corporate pie and further diminishing public investors’ returns. Managers’ ability to conduct bargain repurchases can lead to cash hoarding in some cases, cash squandering in other cases, and the use of repurchases when dividends would be a more efficient distribution mechanism.

The Article has also proposed a new approach to regulating repurchases that would impair managers’ ability to use buybacks for informed trading and false signaling: requiring a repurchasing firm to disclose the exact details of its buy orders before its broker executes them. Under a pre-repurchase disclosure regime, market participants will use disclosed repurchase orders to update their assessment of the stock’s actual value, taking into account the firm’s repurchase history, its financial condition, and managers’ contemporaneous trading. If the disclosure signals that the stock is likely to be underpriced, market participants will bid up the price of the stock before the repurchase order is executed, reducing managers’ profits from the bargain repurchase. Over time, these price adjustments will reduce managers’ profits from any given bargain repurchase and diminish the number of such repurchases. Managers’ ability to use misleading
repurchase announcements to sell stock at inflated prices will, in turn, decline. Public shareholders’ returns will increase as managers divert less value and the firm’s payout decisions improve.

The costs of pre-repurchase disclosure will be minimal. Requiring firms to disclose their repurchase orders in advance will not undermine any of the potential benefits of repurchases, such as their ability to distribute cash more tax-efficiently than dividends or acquire stock for employee option programs. Nor will it cause managers to use dividends to distribute cash when repurchases would be more efficient. Regulators wishing to protect public investors and improve corporate payout and investment decisions should therefore impose a pre-repurchase disclosure requirement on publicly traded companies.
ARTICLE

INSIDER TRADING VIA THE CORPORATION

JESSE M. FRIED†

A U.S. firm buying and selling its own shares in the open market can trade on inside information more easily than its own insiders because it is subject to less stringent trade-disclosure rules. Not surprisingly, insiders exploit these relatively lax rules to engage in indirect insider trading: they have the firm buy and sell shares at favorable prices to boost the value of their own equity. Such indirect insider trading imposes substantial costs on public investors in two ways: by systematically diverting value to insiders and by inducing insiders to take steps that destroy economic value. To reduce these costs, I put forward a simple proposal: subject firms to the same trade-disclosure rules that are imposed on their insiders.

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INTRODUCTION

Publicly traded U.S. firms buy and sell a staggering amount of their own shares in the open market each year. Open-market repurchases (OMRs) alone total hundreds of billions of dollars per year; in 2007, they reached $1 trillion. Firms are also increasingly selling shares in the open market through so-called “at-the-market” issuances (ATMs).

For a U.S. firm trading in its own shares, trade-disclosure requirements are minimal. The firm needs to report, at most, aggregate monthly trading activity, and may wait until well into the next quarter before doing so. Thus, the firm is permitted to buy and sell its own shares secretly in the open market for months and withhold the exact details of its trades from shareholders and regulators.

The trade-disclosure requirements imposed on U.S. firms are quite lax relative to those imposed on firms listed on some of the largest overseas stock markets. For example, the United Kingdom and Hong Kong require firms trading in their own shares to disclose the details of their trades by the morning of the next business day, while Japan requires same-day disclosure. In Switzerland, firms commonly repurchase shares through a second, dedicated trading line, thereby making trade disclosure instantaneous.

More important, the trade-disclosure requirements imposed on U.S. firms are substantially less stringent than those imposed on insiders of those firms. Since the 1930s, insiders of a U.S. firm have been required to report the specific details of each trade in the firm’s shares. Before the Sarbanes–Oxley Act of 2002, insiders typically had until the tenth day of the following month to disclose such trades. Today, an insider’s trades in firm shares must be reported within two business days.

The strict trade-disclosure rules for insiders reflect a strong, longstanding consensus in the United States that a corporation’s insiders—its officers, directors, and controlling shareholder (if any)—should not be permitted to profit freely from their access to inside information about the firm. These rules are part of an elaborate set of regulations designed to reduce insiders’

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1 See infra Section II.A.
2 See infra Section III.A.
3 See infra subsection II.B.3.
4 See infra Section V.A.
5 Id.
6 See infra subsection I.B.2.
8 See infra subsection I.B.2.
9 Id.
ability to engage in insider trading: buying and selling a firm’s shares on inside information.\footnote{10}

Unfortunately, U.S. policymakers have failed to grasp that when insiders are subject to strict trade-disclosure requirements and firms are not, insiders have a strong incentive to exploit the relatively lax trade-disclosure rules that apply to firms in order to engage in indirect insider trading: having the firm buy and sell its own shares at favorable prices to increase the value of the insiders’ equity. Such indirect insider trading—made possible by insiders’ control over the firm’s assets—can generate substantial profits for insiders. If, for example, insiders own 10% of a firm’s equity, they will capture approximately $1 out of every $10 in insider-trading profits generated by the firm when it buys and sells its own shares on inside information.

Although U.S. firms are commonly thought to have relatively diffuse ownership, average insider ownership in publicly-traded firms is, in fact, surprisingly high. For example, one study of 375 randomly selected publicly traded firms found that directors and officers own an average of 24%-32% of a firm’s equity (depending on the measurement methodology).\footnote{11}

To be sure, larger firms tend to have a lower percentage of insider ownership.\footnote{12} Thus, average insider ownership on a value-weighted basis may be less than 25%. Nevertheless, insiders’ percentage ownership is likely to be substantial in many cases.

Not surprisingly, insiders use their control of the firm to engage in indirect insider trading.\footnote{13} Insiders acknowledge using repurchases to buy stock that they believe is underpriced and equity issuances to sell stock that they believe is overpriced.\footnote{14} There is also a substantial body of empirical work in the finance literature documenting that repurchases and equity issuances are

\footnote{10} See generally Jesse M. Fried, Reducing the Profitability of Corporate Insider Trading Through Pretrading Disclosure, 71 S. CAL. L. REV. 303, 329-48 (1998) [hereinafter Fried, Reducing the Profitability] (describing the regulations used to reduce corporate insider trading and the limitations of those regulations). I use the term “insider trading” to mean insiders buying or selling shares on inside information, whether that trading is legal or illegal.

\footnote{11} Clifford G. Holderness, The Myth of Diffuse Ownership in the United States, 22 REV. FIN. STUD. 1377, 1382-83 (2009). This figure does not include insiders’ stock options, which would further increase their effective equity ownership. See also Ronald C. Anderson et al., Founders, Heirs, and Corporate Opacity in the United States, 92 J. FIN. ECON. 205, 207 (2009) (reporting that of the 200 largest industrial U.S. firms, 22.3% are founder-controlled and 25.3% are heir-controlled firms, with average equity stakes of approximately 18% and 22% respectively); Yoser Gadhoum et al., Who Controls USF, 11 EUR. FIN. MGMT. 339, 344-52 (2005) (reporting that 59.74% of U.S. corporations have controlling shareholders who hold at least 10% of the voting shares).

\footnote{12} See Holderness, supra note 11, at 1378.

\footnote{13} See infra note II.D & III.C.

\footnote{14} Id.
frequently driven by insiders’ desire to indirectly buy stock at a low price or sell stock at a high price.\textsuperscript{15}

Such indirect insider trading likely imposes considerable costs on public investors in two ways. First, just like ordinary “direct” insider trading, indirect insider trading secretly redistributes value from public investors to insiders.\textsuperscript{16} To be sure, much of the indirect insider-trading profits generated by firms are shared with some public investors. But on average, public investors lose and insiders profit to the tune of several billion dollars per year.\textsuperscript{17}

Second, the use of the corporation as a vehicle for insider trading can lead insiders to waste economic resources. For example, indirect insider trading can distort capital deployment decisions by reallocating capital between the shareholders and the firm in a way that destroys economic value.\textsuperscript{18} Thus, indirect insider trading can diminish the value flowing to investors over time by far more than the profits reaped by insiders.

The purpose of this Article is threefold: (1) to demonstrate that insiders have an incentive to (and do in fact) exploit the relatively lax trade-disclosure rules applicable to firms to enrich themselves via indirect insider trading; (2) to describe the costs of such indirect insider trading to public shareholders; and (3) to put forward a proposal that, I show, would substantially diminish insiders’ ability to engage in indirect insider trading and reduce the resulting costs to public investors: subject firms to the same two-day disclosure rule applied to their insiders.

The remainder of the Article is structured as follows: Part I briefly describes the insider-trading regulations applicable to insiders, the means by which firms trade in their own shares on the open market, and the relatively lax insider-trading regulations imposed on these firms. Part II examines how insiders use share repurchases to engage in indirect insider trading; Part III explains how insiders use equity issuances to engage in indirect insider trading. Part IV identifies the cost to public investors of indirect insider trading. Finally, Part V describes my proposal that firms be subjected to the same trade-disclosure rules as insiders.

\textsuperscript{15} Id.
\textsuperscript{16} See infra subsection IV.A.1.
\textsuperscript{17} Id.
\textsuperscript{18} See infra Section IV.B.
I. DIRECT INSIDER TRADING AND ITS REGULATION

This Part briefly reviews the economics and regulation of direct insider trading by persons controlling a firm. Section A discusses the costs imposed by direct insider trading on public investors. Section B describes the main insider-trading regulations applicable to insiders trading personally in their firms’ shares.

A. Costs of Direct Insider Trading

Direct insider trading by those individuals controlling the firm imposes costs on public investors by (1) systematically diverting value from public shareholders to insiders, and (2) undermining and distorting insiders’ incentives to generate economic value, thereby reducing the size of the pie. As we will see in Part IV, these two types of costs also arise from indirect insider trading.

1. Diversion of Value

When insiders use private information to time their personal trades, they directly reduce public shareholders’ returns. Each dollar reaped by insiders comes at public investors’ expense. In an earlier article, I calculated that such trading puts at least several billions of dollars into the pockets of insiders each year. This diversion of value reduces public investors’ expected returns and increases firms’ cost of capital.

One might argue that insider-trading profits are just another form of compensation. In principle, for example, firms could reduce other components of executives’ and directors’ compensation arrangements to offset

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20 See Fried, Reducing the Profitability, supra note 10, at 323 (estimating that corporate insiders make almost $5 billion each year in insider-trading profits).

expected insider-trading profits. But insider-trading profits are a peculiar
type of pay. They are tied to insiders’ informational advantage and their
ability to control the flow of information to the market, not to their contribu-
tion to economic-value creation by the firm. Permitting insiders to make
such gains is an inefficient way to reward them for performance. Indeed, as
I explain in the following subsection, these profits provide insiders with
incentives to take steps that may destroy economic value.

2. Weakening and Distortion of Incentives

In addition to diverting value directly from public investors to firm in-
siders, insider trading may reduce the total amount of value to be shared
between public investors and insiders. First, it can decrease insiders’
motivation to generate value with the firm’s assets. For example, permitting
insiders to sell before their firm discloses bad news reduces the financial
payoff differential between good and poor performance, thereby underm-
ing insiders’ incentive to increase value.

Second, insider trading can create perverse incentives. For example,
insiders who are free to sell large amounts of shares may seek to raise short-
term stock prices by running the firm in a way that improves short-term
results at the expense of long-term economic value. Insiders may also have
incentives to choose less transparent (and less valuable) projects because the
lack of transparency enables insiders to profit more from insider trading.

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22 See, e.g., Dennis W. Carlton & Daniel R. Fischel, The Regulation of Insider Trading, 35
STAN. L. REV. 857, 881 n.80 (1983) (arguing that in a competitive labor market, the salary of a
manager who cannot trade on inside information will be higher than that of a manager who can).
23 See, e.g., Lucian Arye Bebchuk & Chaim Fershtman, Insider Trading and the Managerial
Choice Among Risky Projects, 29 J. FIN. & QUANTITATIVE ANALYSIS 1, 12-13 (1994) (explaining that
total compensation paid to insiders must be increased when insider trading is permitted); Frank
H. Easterbrook, Insider Trading, Secret Agents, Evidentiary Privileges, and the Production of Infor-
mation, 1981 SUP. CT. REV. 309, 332 (explaining why insider trading is an inefficient compensation
scheme for corporate managers).
24 See infra subsection I.A.2.
25 See Fried, Reducing the Profitability, supra note 10, at 362 (explaining how executives’ ability
to profit from short-term stock-price fluctuations can reduce long-term value); see also Mark
Bagnoli & Naveen Khanna, Insider Trading in Financial Signaling Models, 47 J. FIN. 1905, 1921-22
(1992) (explaining how managers may have an incentive to act inefficiently to make insider-
trading profits).
26 See Oren Bar-Gill & Lucian Arye Bebchuk, The Costs of Permitting Managers to Sell
programs/corp_gov/papers/03.Bar-Gill.Bebchuk.cost-permitting.pdf (presenting a formal model
showing why managers who are free to unload their stock based on private information have an
incentive to make such information unobservable to the market). For a contrary view that insider
trading improves incentives, see Carlton & Fischel, supra note 22, at 866-72. For a critique of this
contrary view, see Fried, Reducing the Profitability, supra note 10, at 314-15.
The main regulations governing trading by insiders in their own firms’ shares are Rule 10b-5, which prohibits trading on certain kinds of information, and Section 16(a), which requires insiders to disclose such trades.

1. Rule 10b-5 and its Limits

Rule 10b-5, promulgated by the Securities and Exchange Commission (SEC) under Section 10 of the Securities Exchange Act of 1934 (the 1934 Act), requires that certain persons possessing “material” nonpublic information disclose that information or abstain from trading. Among the individuals subject to Rule 10b-5 are persons considered to owe a preexisting fiduciary duty to the counterparty of the (potential) trade. Because a firm’s officers and directors are considered to owe a fiduciary duty to the firm’s shareholders under corporate law, Rule 10b-5 applies to a firm’s officers and directors when they trade in the firm’s shares. For similar reasons, Rule 10b-5 would also be expected to apply to a firm’s controlling shareholder.

While Rule 10b-5 substantially reduces the amount of direct insider trading, it cannot prevent insiders from trading on valuable inside information in many cases for two reasons. First, Rule 10b-5 applies only when insiders trade on information that is considered “material.”

Carlton and Fischel also claim that insider trading enables information to be transmitted to the market more quickly, thereby making stock prices more accurate, or “efficient.” Carlton & Fischel, supra note 22, at 866-68. But the ability to engage in insider trading may cause insiders to withhold information from the market, making markets less efficient. See, e.g., Easterbrook, supra note 23, at 333 (noting that the “prospect of insiders’ gains may lead the firm to delay the release of information”); Michael J. Fishman & Kathleen M. Hagerty, Insider Trading and the Efficiency of Stock Prices, 23 RAND J. ECON. 106, 106-07 (1992) (using a formal model to explain how insider trading can decrease price efficiency); Naveen Khanna et al., Insider Trading, Outside Search, and Resource Allocation: Why Firms and Society May Disagree on Insider Trading Restrictions, 7 REV. FIN. STUD. 575, 576 (1994) (observing that insider trading may increase the cost to liquidity traders without generating more price efficiency because it reduces trading by informed outsiders). In this Article, I assume that insider trading—direct or indirect—has neither a net-negative nor a net-positive effect on price efficiency.

Cf. Chiarella v. United States, 445 U.S. 222, 227-29 (1980) (stating that a corporation’s officers and directors must disclose material inside information or abstain from trading in the firm’s shares under Rule 10b-5 because they are in a relationship of trust and confidence with the firm’s shareholders).


17 C.F.R. § 240.10b-5(b).
facts" are those to which a "reasonable man would attach importance . . . in determining his choice of action in the transaction in question."33 While this definition would appear to suggest that any valuable information is material, the Supreme Court has also held that information does not become material merely because an insider can financially benefit at the expense of other shareholders from not disclosing it.34 Moreover, lower courts have been reluctant to find information material unless the announcement of that information would have caused the stock price to move sharply.35 As a result, insiders can profit legally by trading on many types of valuable, "sub-material" information.16

Second, a prohibition on trading on "material" nonpublic information may not always deter such trading. The SEC has limited resources, making it difficult for the agency to monitor the hundreds of thousands of trades conducted by insiders each year.37 The probability of detection and punishment is often very low, even though the trade-disclosure rules imposed

33 SEC v. Tex. Gulf Sulphur Co., 401 F.2d 833, 849 (2d Cir. 1968) (quoting List v. Fashion Park, Inc., 340 F.2d 457, 462 (2d Cir. 1963)). In interpreting the term "material" under a related statute, the Supreme Court provided a similar definition. See TSC Indus., Inc. v. Northway, Inc., 426 U.S. 438, 449 (1976) ("An omitted fact is material if there is a substantial likelihood that a reasonable shareholder would consider it important in deciding how to vote.").

34 See Basic Inc. v. Levinson, 485 U.S. 224, 240 n.28 (1988) (citing Pavlidis v. New England Patriots Football Club, Inc., 737 F.2d 1227, 1231 (1st Cir. 1984), for the proposition that "[a] fact does not become more material to the shareholder's decision because it is withheld by an insider, or because the insider might profit by withholding it").

35 See Fried, Reducing the Profitability, supra note 10, at 336.

36 See ROBERT CHARLES CLARK, CORPORATE LAW 507-08 (1986) (noting that managers may have access to bits of information that are not important enough individually to be considered legally material but that, in the aggregate, are very valuable); Donald C. Langevoort, Rereading Cady, Roberts: The Ideology and Practice of Insider Trading Regulation, 99 COLUM. L. REV. 1319, 1335 (1999) ("Insiders at almost all times have the advantage of superior insight and a sense of which way things are going even if they do not possess a fact that a court would call material and nonpublic.").

One might argue that the high bar for "materiality" reflects a judgment that there is no cost to investors when insiders trade on certain kinds of private information. But from an economic perspective, there is little difference between trading on material information and trading on submaterial information, as participants on both sides of the insider-trading debate have long recognized. See, e.g., Carlton & Fischel, supra note 22, at 861 (concluding that "[f]or purposes of analyzing whether insider trading is beneficial or detrimental, nothing turns on whether a particular trade is illegal"); Reiner Kraakman, The Legal Theory of Insider Trading Regulation in the United States (noting that both legal and illegal insider trading reduce returns for outsiders, decrease liquidity, and curtail the incentive for outsiders to invest in information acquisition), in EUROPEAN INSIDER DEALINGS 39, 48-49 (Klaus J. Hopt & Eddy Wymeersch eds., 1991). A more likely explanation for the adoption of a high materiality bar for Rule 10b-5 is that the litigation and transaction costs of subjecting insiders—who always possess inside information—to a low bar would exceed the benefits of reducing their ability to engage in insider trading.

37 See Fried, Reducing the Profitability, supra note 10, at 331-35 (describing the impediments to the SEC's successful investigation of potential violations of insider-trading laws).
on insiders are relatively strict. The fact that insiders are often found to have violated Rule 10b-5 indicates that deterrence is far from perfect.38

2. Section 16(a)’s Trade-Disclosure Rule

Because Rule 10b-5 by itself cannot prevent insiders from trading on valuable inside information, it is complemented by a trade-disclosure rule: Section 16(a) of the 1934 Act. Section 16(a) requires top executives, directors, and any person owning more than 10% of the shares of a publicly traded firm (a “10% shareholder”) to report the details of each purchase and sale of the firm’s shares after the transaction.39

Before 2002, Section 16(a) required insiders to report most of their trades by the tenth day of the following month, enabling them to wait as many as forty days before reporting these trades.40 After it came to light that the executives of Enron and other troubled firms secretly sold shares on inside information, Congress amended Section 16(a) via the Sarbanes–Oxley Act of 2002 to require executives to report every trade to the SEC by the end of the second business day following the transaction.41

Section 16(a) complements Rule 10b-5 in two crucial ways. First, by requiring insiders to report the details of each trade, Section 16(a) increases the likelihood that a trade on material inside information in violation of Rule 10b-5 will be investigated and the offending insider will be sanctioned. The increased probability of sanction strengthens Rule 10b-5’s deterrence effect, reducing the likelihood that an insider will trade on material inside information. Second, whether an insider trades on material or valuable but sub-material information, a Section 16(a) report alerts public investors within two days of the trade to the possibility that the insider has private information indicating that the stock is mispriced. Investors may use this information to adjust the price at which they are willing to buy or sell shares. This price adjustment, in turn, reduces the insider’s ability to use

40 Id.
inside information to profit on subsequent, post-disclosure transactions, thereby diminishing his insider-trading profits.

To be sure, insiders can still profit from their access to inside information notwithstanding Section 16(a).42 Among other things, insiders can trade secretly for two days without facing any price adjustment due to trade disclosure. However, absent Section 16(a)’s trade-disclosure requirement, insiders’ ability to profit from trading on inside information would be far greater.

II. INSIDER BUYING VIA THE CORPORATION

Having seen how insiders are subject to various insider-trading rules, including the two-day disclosure rule of Section 16(a), we will now see why insiders have an incentive to use open-market repurchases (OMRs) to engage in indirect insider trading. Section A describes the growing use of OMRs to distribute cash to shareholders. Section B describes the insider-trading regulations applicable to firms conducting OMRs and explains why they are more lax than the insider-trading regulations imposed on insiders themselves. Section C shows that insiders have an incentive to exploit these relaxed regulations to cause their firms to buy stock at a cheap price. Section D provides considerable evidence that insiders frequently engage in such “bargain” repurchases.

A. Open Market Repurchases

Publicly traded U.S. firms generate hundreds of billions of dollars in earnings annually.43 Each year, boards must decide how much, if any, of their retained earnings should be distributed to shareholders rather than be reinvested in the firm. Boards must also decide the form that such distribution should take: dividends, repurchases, or a combination of both.44

42 Cf. Lauren Cohen, Christopher Malloy & Łukasz Pomorski, Decoding Inside Information, 67 J. FIN. 1009, 1024 (2012) (finding that “opportunistic” corporate insiders make abnormal returns on their trades even though the median trade was reported within three days). In unreported results, the authors found that corporate insiders’ ability to generate abnormal trades declined (but did not disappear) after 2002, when the two-day disclosure rule for Section 16(a) was adopted. See Email from Christopher Malloy, Professor of Bus. Admin., Harvard Bus. Sch., to Author (May 24, 2012, 3:54 PM) (on file with Author).


44 See Douglas J. Skinner, The Evolving Relation Between Earnings, Dividends, and Stock Repurchases, 87 J. FIN. ECON. 582, 592 fig.3 (2006) (comparing the percentages of firms that paid dividends, firms that repurchased shares, and firms that did both from 1980 to 2005).
Repurchases can provide a number of benefits that dividends cannot. In particular, repurchases enable many shareholders to avoid taxable income (by not selling their shares), permit the firm to acquire shares for employee stock option plans, and can increase liquidity.\footnote{See Jesse M. Fried, Informed Trading and False Signaling with Open Market Repurchases, 93 CALIF. L. REV. 1323, 1328, 1336-40 (2005) [hereinafter Fried, Informed Trading] (exploring and analyzing the reasons for the popularity of repurchases).} Not surprisingly, share repurchases have become increasingly common, and they exceed dividends as a form of cash payout.\footnote{See Skinner, supra note 44, at \$82-83 n.1 (reporting that, by 2004, repurchases exceeded dividends).} Over 90% of U.S. public firms that distribute cash engage in repurchases.\footnote{See id. at \$83 (explaining that, by 2005, only 7% of firms paid dividends and did not distribute any cash through repurchases).} In 2007, S&P 500 firms distributed almost $600 billion through repurchases,\footnote{STANDARD & POOR’S, Buybacks Set Record of $589 Billion in 2007, in 2 MORNING BRIEFING 3, 3 (Apr. 7, 2008), available at https://reports.standardandpoors.com/aidata/dynamic/jolt_040708noon.pdf.} and total marketwide repurchases reportedly reached almost $1 trillion.\footnote{Paul A. Griffin & Ning Zhu, Accounting Rules? Stock Buybacks and Stock Options: Additional Evidence, 6 J. CONTEMP. ACC. & ECON. 1, 1 (2010).} The overwhelming majority of repurchases take the form of an OMR, in which the firm buys its own stock on the market through a broker.\footnote{See Monica L. Banyi et al., Errors in Estimating Share Repurchases, 14 J. CORP. FIN. 460, 460 (2006) (noting that, by value, 89% of repurchases were OMRs). Most other repurchases take the form of a repurchase tender offer (RTO), in which the firm offers to buy back its own stock directly from shareholders, usually at a premium over the market price. RTOs can also be used for insider trading via the corporation. See generally Jesse M. Fried, Insider Signaling and Insider Trading with Repurchase Tender Offers, 67 U. CHI. L. REV. 421 (2000) (describing RTOs and explaining how they are a particularly effective vehicle for insider trading by a firm’s insiders).} 

B. Regulation of OMRs

We now turn to the insider-trading regulations applicable to firms conducting OMRs. They include (1) an announcement requirement; (2) Rule 10b-5’s prohibition against repurchasing shares on material nonpublic information; and (3) post-repurchase disclosure requirements.\footnote{Firms trading in their own shares are also subject to the antimanipulation provisions of Section 9(a)(2) of the 1934 Act, including the Rule 10b-18 safe harbor for firms repurchasing shares. See Fried, Informed Trading, supra note 45, at 1341-42 (discussing 15 U.S.C. \$ 78(a)(2) (2012) and 17 C.F.R. \$ 240.10b-18 (2013) respectively). These rules do not reduce a corporation’s ability to trade on inside information, id. at 1342, so I do not discuss them here.}
1. Announcement Requirement

Before it can begin buying back shares in an OMR, a firm traded on NASDAQ or another stock exchange is required to announce its board’s decision to approve an open-market buyback program.52 But such an announcement need not provide specific details about the program.53 A firm is not required to indicate the number or dollar amount of shares to be repurchased. Nor must the firm indicate the expiration date of its buyback program.54 Even if a firm voluntarily indicates a repurchase target, it will typically state that actual repurchases will depend on market conditions.55 As a result, firms do not commit—and are not obligated—to buy back any stock.56 In fact, one study found that almost 30% of firms announcing repurchases do not buy back a single share during the fiscal year in which the repurchase announcement occurs, with about 15% not buying back any shares within four fiscal years of the announcement year.57

2. Rule 10b-5

As discussed in Section I.B, Rule 10b-5 requires that a firm’s insiders, because they are considered to owe a preexisting fiduciary duty to the firm’s shareholders, disclose any material nonpublic information that they possess or abstain from trading in the firm’s shares. The SEC takes the position

52 See, e.g., NASDAQ RULE §230(b)(1) (2014) (requiring prompt disclosure of any material information that would reasonably be expected to affect the value of the securities, including repurchase plans).
53 Cf. Clifford P. Stephens & Michael S. Weisbach, Actual Share Reacquisitions in Open-Market Repurchase Programs, 53 J. FIN. 333, 337 (1998) (describing how over 130 of the 944 OMR announcements made between 1983 and 1990 had to be excluded from the study’s initial sample because they were too vague).
55 See David L. Ikenberry & Theo Vermaelen, The Option to Repurchase Stock, FIN. MGMT., Winter 1996, at 9, 12 (explaining that, by indicating that actual repurchases will depend on “market conditions,” managers give themselves the option to repurchase stock if it turns out to be cheap).
56 Id. at 10 (explaining that the lack of commitment to buy shares in the repurchase announcement obscures the managers’ actual intentions).
57 See Utpal Bhattacharya & Stacey Jacobsen, The Share Repurchase Announcement Puzzle: Theory and Evidence 3-4 (Nov. 2013) (unpublished manuscript), available at http://ssrn.com/abstract=250049 (noting that 27% of the firms announcing repurchases in the study’s 1985 to 2012 sample appear not to have repurchased any stock in the same fiscal year as the announcement, and 15% do not repurchase any stock within four fiscal years following the announcement year or before dropping out of Compustat).
that Rule 10b-5 also applies to a firm buying its own shares.\textsuperscript{58} The doctrinal basis for the SEC’s position, however, is somewhat shaky: although a corporation’s insiders clearly owe a fiduciary duty to shareholders, the corporation itself may not.\textsuperscript{59} Nevertheless, I assume here that a firm, like its insiders, is prohibited by Rule 10b-5 from buying its own shares while in possession of material inside information.\textsuperscript{60}

However, as we saw in Section I.B, even if Rule 10b-5 were to apply to a firm when it repurchases shares, it cannot by itself prevent trading on all valuable inside information.\textsuperscript{61} First, the courts’ high materiality threshold permits trading on many types of important but sub-material information.\textsuperscript{62} Second, a prohibition against trading on “material” nonpublic information may not always deter such trading because of detection and enforcement problems.\textsuperscript{63}

As noted earlier, detecting a violation of Rule 10b-5 by a firm’s insiders is difficult even though they must report their trades under Section 16(a).\textsuperscript{64} As discussed below, the trade-disclosure rules for the firm itself are more lax than Section 16(a)’s disclosure requirement for insiders. Thus, it is even more difficult to detect a violation of Rule 10b-5 by a firm that repurchases its own shares while in possession of material inside information.

3. Repurchase-Disclosure Rules

A firm buying its own shares on the open market is not subject to Section 16(a)’s two-day disclosure requirement; that requirement applies only to firm insiders, not to the firm itself.\textsuperscript{65} Indeed, before 2003, a firm did not have to disclose any information regarding repurchases.\textsuperscript{66} Since 2003, however, the SEC has required a repurchasing firm to report, in its quarterly

\textsuperscript{59} See id. at 47-53 (describing the conflicting decisions on the question of whether a corporation owes a state-law fiduciary duty to its shareholders when it repurchases its own stock, and the implications of those conflicting decisions for the applicability of Rule 10b-5 to a corporation trading in its own shares).
\textsuperscript{60} If Rule 10b-5 were interpreted to permit a firm to repurchase its shares on material inside information, the problem of indirect insider trading described in this Article would be even more severe.
\textsuperscript{61} See supra subsection I.B.1.
\textsuperscript{62} See id.
\textsuperscript{63} See id.
\textsuperscript{64} See id.
\textsuperscript{65} See supra subsection I.B.2.
\textsuperscript{66} See Fried, Informed Trading, supra note 45, at 1340-41 (comparing the pre- and post-2003 SEC reporting requirements for share repurchases).
Form 10-Q (or Form 10-K) filing with the SEC, the number of shares repurchased in each month of that quarter and the average price paid for each share.67 Because such filings can be made a month or so after the end of the quarter, investors cannot be expected to learn about share repurchases in the prior quarter until one to four months after they occur.68

It should be easy to see that the SEC’s 2003 trade-disclosure rules for a firm repurchasing its own shares are more lax than those applied to the firm’s insiders in two respects. First, individual transaction details need not be disclosed.69 A firm’s ability to hide the details of each trade makes it difficult to determine whether a particular trade was illegal because the firm possessed material inside information at the time of the transaction. Trades on material inside information are therefore more likely to occur.

Second, while insiders must disclose a trade within two days, a firm repurchasing its own shares can wait months to report the transactions. As a result, investors cannot use the information about the actual value of the firm’s stock that would be signaled by the repurchase disclosures to adjust their assessment of the stock’s value until long after this information becomes stale. The firm thus has months to trade secretly on inside information without facing any adjustment in the stock price arising from the disclosure of its trades.

C. Insiders’ Incentive to Engage in Bargain Repurchases

We have just seen that a firm buying its own shares in the market is subject to much less stringent trade-disclosure requirements than a firm insider who personally buys those shares. We will now see that insiders have an incentive to exploit these weak disclosure requirements to use repurchases for indirect insider trading.

Our focus will be on a “bargain repurchase”—a buyback conducted when those controlling the firm believe that the stock price is less than the stock’s actual value. A bargain repurchase transfers value from selling shareholders

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68 See Form 10-Q, SEC, http://www.sec.gov/answers/form10q.htm (last visited Feb. 21, 2014) (stating that the Form 10-Q filing deadline is 40–45 days after the end of the quarter and that the Form 10-K filing deadline is 60–90 days after the end of the year).

69 See Item 703 of Regulation S-K, 17 C.F.R. § 229.703 (2013) (requiring public companies to provide in their quarterly filings a table showing, on a month-by-month basis, the total number of shares repurchased during the covered quarter and the average price per share).
to nonselling shareholders pro rata. Thus, to the extent insiders own shares in the firm and decline to sell their shares at a cheap price, they will benefit from a bargain repurchase.

Insiders of U.S. firms announcing repurchases tend to own a substantial fraction of the firms’ shares before the repurchase—an average of 15%-20%—which is roughly the same as the average insider ownership across all firms. Thus, when insiders know that stock prices are low, they have a strong incentive to conduct a bargain repurchase to transfer value from selling shareholders to themselves and other nonselling shareholders.

To see how a bargain repurchase transfers value to insiders and other nonselling shareholders, consider ABC Corporation (ABC). Suppose that ABC currently has six shares outstanding and that it will be liquidated on a future Liquidation Date. Five shares are held by public shareholders; one share is held by Insider. Assume that ABC does not issue any dividends or sell any equity before Liquidation Date.

There are two scenarios:

No-Transaction Scenario: If ABC does not repurchase any of its equity prior to Liquidation Date, it will distribute $60 to the holders of its six shares at Liquidation Date. The no-transaction value of each of ABC’s six shares at Liquidation Date is thus $10.

Repurchase Scenario: Now suppose that ABC conducts a repurchase before Liquidation Date when the stock trades at $6 ($4 less than its actual value of $10), buying back a single share at that price. Assume that the $6 spent on the repurchase reduces ABC’s Liquidation-Date value from $60 to $54 (no economic value is created or destroyed by the repurchase).

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70 See Fried, Informed Trading, supra note 45, at 1344-47 (explaining how a bargain repurchase is economically equivalent to nonselling shareholders buying stock at a cheap price from selling shareholders and then receiving a dividend from the firm equal to the amount paid to selling shareholders). When a firm buys stock at a price below its actual value, the precise distributional effects depend on whether the selling shareholders would otherwise sold their shares to new investors for the same price. If so, the selling shareholders cannot be said to “lose” any value as a result of the bargain repurchase. Instead, the bargain repurchase deprives would-be new investors of a gain. For simplicity, however, I assume that it is the selling shareholders that lose money as a result of the bargain repurchase. This assumption does not affect the analysis.

71 See William J. McNally, Open Market Stock Repurchase Signaling, FIN. MGMT., Summer 1999, at 55, 59 tbl.1 (finding that insiders in repurchasing firms own an average of 18% of the firm’s shares before the repurchase announcement); Nikos Vafeas, Determinants of the Choice Between Alternative Share Repurchase Methods, 12 J. ACCT. AUDITING & FIN. 101, 112-13, tbl.1 (1997) (finding that insiders in repurchasing firms own an average of 15.0% to 22.6% of firm equity). These figures do not include insiders’ stock options, which effectively increase their proportional ownership of a firm’s equity.

72 See Holderness, supra note 11, at 1382-83 & tbl.1 (finding average insider ownership in a sample of publicly traded U.S. firms to be in the range of 24% to 32%).
When ABC repurchases a share, Insider does not sell because he is aware that the stock is underpriced. Thus, the repurchased share is acquired from a public shareholder. At Liquidation Date, the value of each of ABC’s five remaining shares, including the one owned by Insider, is $10.80 ($54/5).

By assumption, the economic value created by the firm in both scenarios is the same. In the No-Transaction Scenario, $60 flows to all the shareholders at Liquidation Date. In the Repurchase Scenario, $6 flows to one shareholder during the repurchase and $54 flows to the remaining shareholders at Liquidation Date. In both cases, there is $60 of economic value flowing to shareholders.

But the bargain repurchase shifts value from public shareholders as a group to Insider. In the No-Transaction Scenario, Insider gets $10 and public shareholders get $50. In the Repurchase Scenario, Insider gets $10.80 and public shareholders get $49.20 ($43.20 received by the four nonselling public shareholders plus $6 received by the selling public shareholder). Thus, Insider reaps an extra $0.80 even though no economic value is created by the repurchase. The results are summarized in Table 1 below.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Total Value</th>
<th>All Public</th>
<th>Nonselling Public</th>
<th>Selling Public</th>
<th>Insider</th>
</tr>
</thead>
<tbody>
<tr>
<td>No-Transaction</td>
<td>$60.00</td>
<td>$50.00</td>
<td>$50.00</td>
<td>n/a</td>
<td>$10.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(5 x $10.00)</td>
</tr>
<tr>
<td>Repurchase</td>
<td>$60.00</td>
<td>$49.20</td>
<td>$43.20</td>
<td>$6.00</td>
<td>$10.80</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(4 x $10.80) (1 x $6.00)</td>
</tr>
</tbody>
</table>

D. Evidence of Bargain Repurchases

Having seen that insiders have an incentive to engage in bargain repurchases, we now turn to the considerable evidence that they actually engage in such indirect insider trading. This evidence includes (1) insiders’ own statements and behavior and (2) stock-price movements following repurchases.

1. Executives’ Own Statements and Behavior

Insiders admit that they frequently use repurchases to buy cheap stock indirectly. Economists who conducted a 2005 survey of executives regarding

\[73\] All examples in this Article ignore the time value of money, or alternatively, assume it is zero. This assumption, made purely for convenience, does not affect the analysis.
firms’ payout policies noted that “[t]he most popular response for all repurchase questions on the entire survey is that firms repurchase when their stock is a good value, relative to its true value: 86.4% of all firms agree or strongly agree with this supposition.” Indeed, some firms openly state that their share-repurchase programs are designed to acquire stock at a low price for the benefit of long-term shareholders.

Until the SEC began requiring limited disclosure of OMR transactions in 2003, it was difficult for economists to confirm that insiders of U.S. firms used inside information to time actual repurchase transactions. But a relatively recent study using post-2003 data found that firms systematically buy stock at low prices within each quarter, often using inside information to redistribute large amounts of value from selling to nonselling shareholders. This study also found that insiders’ tendency to exploit information in timing repurchases increases with insider equity ownership.

2. Post-Repurchase Stock Returns

Stock price movements following repurchases also suggest that the desire to engage in indirect insider trading drives many repurchases. Several studies have found that U.S. companies announcing OMRs experience, on average, cumulative abnormal (market-adjusted) returns of approximately 25% over the next four years. These findings suggest that firms announcing repurchases when their stock is a good value, relative to its true value: 86.4% of all firms agree or strongly agree with this supposition.”

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75 See, e.g., UnitedHealth Group Board Increases Shareholder Dividend 32%; Renews Share Repurchase Program, UNITEDHEALTH GROUP (June 5, 2013), available at http://www.unitedhealthgroup.com/Newsroom/Articles/Feed/UnitedHealth%20Group/2013/06/05/32%20Shareholder%20Dividend.aspx (reporting that the “renewed share repurchase program strengthens and extends our ability to repurchase shares at favorable prices for the benefit of long term shareholders”).
76 See Amedeo De Cesari et al., The Effects of Ownership and Stock Liquidity on the Timing of Repurchase Transactions, 18 J. CORP. FIN. 1023, 1034 (2012) (“Overall we find that companies time OMRs both by buying shares at a relatively low price within each month in which the company repurchases shares and by buying more shares during months when prevailing market prices are relatively low.”).
77 Id. at 1038–39.
OMRs were, on average, 25% undervalued at the time of the OMR announcement. These studies have led economists to conclude that repurchasing stock at a low price has become a widespread practice.  

As noted earlier, many firms announcing OMRs do not actually buy back any stock after the announcement. There are two reasons why managers may make repurchase announcements even though they have no concrete plans to repurchase any stock. First, insiders might announce a repurchase program with no intention to repurchase any stock to boost the stock price so that they can unload their own shares at a higher price. Second, insiders might announce OMRs to give themselves the option to acquire stock at a low price in the future. If the stock price does not subsequently turn out to be low, relative to its actual value, then insiders will not repurchase stock. Thus, one should not be surprised if any given repurchase announcement is not followed by an actual repurchase of shares.

Because there is no reason to believe that firms announcing but then not conducting OMRs are undervalued, we would expect the subset of firms that announce OMRs and then actually repurchase shares to be more undervalued than the entire set of firms that announce OMRs. Indeed, one study found that certain firms conducting OMRs—firms with a high book-to-market ratio that announced repurchases and subsequently repurchased more than 4% of their shares in the post-announcement year—experienced abnormal returns of around 57% in the four years following the announcement. By contrast, firms that did not subsequently repurchase shares did not appear to experience post-announcement abnormal returns. These post-repurchase returns constitute strong evidence (along with insiders’ own statements and behavior) that insiders often use repurchases to buy underpriced stock indirectly.

The fact that many OMR announcements occur when the stock is not currently undervalued makes it easier for insiders to use OMRs to indirectly buy cheap stock. In particular, the use of OMR announcements for many

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80 See supra subsection II.B.1.

81 See Fried, Informed Trading, supra note 45, at 1351–57 (explaining that executives can use repurchase announcements for false signaling and providing anecdotal accounts of such false signaling); see also Konan Chan et al., Share Repurchases as a Potential Tool to Mislead Investors, 16 J. Corp. Fin. 137, 139 (2010) (finding evidence consistent with executives of some poorly performing firms making share repurchase announcements without an intention to repurchase shares).


83 Id. at 2688.
different purposes reduces the undervaluation-signaling effect of any given OMR announcement. This, in turn, causes the market to react relatively weakly to such an announcement. One study found that OMR announcements were associated with short-term abnormal price increases of only about 2%. The more muted the market’s response to a repurchase announcement, the greater the profits insiders can reap by repurchasing underpriced stock.

III. INSIDER SELLING VIA THE CORPORATION

Part II explained that insiders use OMRs to engage in indirect insider buying via the firm. This Part discusses the use of at-the-market (ATM) issuances to engage in indirect insider selling via the firm. Just as insiders can use an OMR to buy underpriced stock through their firm, they can also use an ATM to sell overpriced shares through their firm. Section A describes the growing use of ATMs. Section B discusses the relatively lax insider-trading regulations applicable to firms conducting ATMs. Section C explains why insiders have an incentive to exploit these relatively lax regulations to engage in indirect insider trading.

A. At-the-Market Issuances

The typical publicly traded firm issues a considerable amount of shares between the time it goes public and the time it ceases trading. From 1993

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84 See Peyer & Vermaelen, supra note 78, at 1697-98 & tbl.1 (finding that, in a sample of OMR announcements from 1991 to 2001, there were average abnormal returns of 2.39% in the three days around the announcement). Not surprisingly, the market reacts more strongly to OMR announcements when insiders own more stock and the likelihood of indirect insider trading is higher. See Elias Raad & H.K. Wu, Insider Trading Effects on Stock Returns Around Open-Market Stock Repurchase Announcements: An Empirical Study, 18 J. FIN. RES. 45, 56 (1995) (finding a positive association between insider stock ownership and market reaction to repurchase announcements).

85 The use of OMRs to engage in indirect insider trading would be expected, everything else equal, to increase the bid–ask spread. See Gustavo Grullon & David L. Ikenberry, What Do We Know About Stock Repurchases?, 13 J. APPLIED CORP. FIN. 31, 42 (2000). While a lack of adequate disclosure of U.S. firm trades makes it difficult to study the effect of OMRs on the bid–ask spread as shares are being repurchased, studies of OMRs in foreign markets with better disclosure requirements find that the bid–ask spread widens when firms repurchase their own shares in the market. See Paul Brockman & Dennis Y. Chung, Managerial Timing and Corporate Liquidity: Evidence from Actual Share Repurchases, 61 J. FIN. ECON. 417, 438 (2001) (Hong Kong); Edith Ginglinger & Jacques Hamon, Actual Share Repurchases, Timing and Liquidity, 31 J. BANKING & FIN. 915, 936 (2007) (France).

to 2002, an average of 66.5% of large firms made net stock issues—issuances less repurchases—each year during that period.\(^{87}\) Strikingly, these net stock issues averaged 7.5% of assets, which is on the same order of magnitude as net debt issuances.\(^{88}\)

A seasoned equity offering (SEO), in which a firm sells stock to investors for cash, is one of the most important forms of equity issuance.\(^{89}\) Until relatively recently, SEOs were almost always “firm-commitment”: the corporation arranges to sell a specified number of shares at a fixed price through an underwriter that guarantees to sell the shares at that price and then offers the shares to investors.\(^{90}\) When the market learns of a firm-commitment SEO, the stock price tends to fall.\(^{91}\) The market’s reaction to SEO announcements is not surprising, as an issuance may signal that the stock is overvalued.

In part due to the adverse effect of firm-commitment SEOs on the stock price, firms have taken advantage of recent regulatory changes to issue stock via so-called “at-the-market” SEOs (ATMs).\(^{92}\) In an ATM, shares are sold directly (and quietly) on the market through a sales agent.\(^{93}\) A firm need not—and typically does not—announce these sales as they are occurring, much as firms do not announce OMR transactions as they are occurring.

Indeed, ATMs are marketed as a way for firms to issue shares quickly when the price appears favorable without alerting the market to the issuance in real time\(^{94}\) (which might cause the stock price to fall). As several securities

\(^{87}\) Id. at 551, 564 tbl.4.

\(^{88}\) Id. at 574, 577 tbl.6.

\(^{89}\) Other types of stock issuances include issuances to employees exercising options and issuances to shareholders of a target firm in exchange for the target’s assets.

\(^{90}\) See B. Espen Eckbo et al., Security Offerings (reporting that firm-commitment underwritings are “the primary choice of publicly traded U.S. firms” and explaining that an underwriter syndicate guarantees the proceeds of the issue), in 1 HANDBOOK OF CORPORATE FINANCE: EMPIRICAL CORPORATE FINANCE 233, 243 (B. Espen Eckbo ed., 2007).

\(^{91}\) See id. at 315-18 (surveying studies of firm-commitment SEOs in the United States and reporting that, on average, there are significantly negative stock-price reactions to announcements of these transactions).

\(^{92}\) See Matthew T. Billett et al., At the Market (ATM) Offerings 2 n.1, 5-6 (Nov. 12, 2013) (unpublished manuscript), available at http://ssrn.com/abstract=2178052 (describing how regulatory changes in 2005 and 2008 led to ATM issuances increasing from 1% of total SEO value in 2008 to 10% of total SEO value in 2012).

\(^{93}\) For a discussion of these offerings and their requirements, see James D. Small III et al., The Resurgence of United States At-the-Market Equity Offerings to Raise Capital in Volatile Equity Markets, 4 CAP. MARKETS L.J. 290, 295-300 (2009).

lawyers have put it: an ATM enables "the issuer [to] opportunistically take advantage of stock price movements."95

B. Regulation of ATMs

We now turn to consider the insider-trading regulations applicable to firms conducting ATMs, which are analogous to the insider-trading regulations applicable to firms conducting OMRs. The regulations include: (1) pretransaction filing requirements; (2) a prohibition on issuing shares when the firm is in possession of “material” nonpublic information; and (3) post-issuance disclosure requirements.

1. Filing Requirements

Before conducting an ATM, the firm must first have an effective shelf registration statement (which includes a prospectus) on file with the SEC.96 In these disclosures, the firm must indicate the maximum number of shares to be sold or the maximum aggregate gross proceeds from such sales, and the sales agent.97

However, these pretransaction disclosures do not provide much useful information to investors. First, these disclosures can be updated at any time to increase the ceiling on the number of shares to be sold. As a result, investors do not know the maximum number or value of shares that will actually be sold. Second, the filing of these disclosures does not compel the firm to enter into a single transaction. Thus, like an OMR announcement, an ATM filing gives a firm the option, but not the obligation, to trade in its shares on the open market.

2. No Trading on Material Inside Information

Various provisions of the federal securities laws require a firm selling its own shares in a public offering (including an ATM) to disclose any material nonpublic information it possesses.98 Thus, while there may be some legal uncertainty about whether a firm buying its shares in an OMR must disclose

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95 Small et al., supra note 93, at 291.
96 Id. at 295-96.
97 Id. at 296.
98 See, e.g., Securities Act of 1933, § 12(a)(2), 15 U.S.C § 77l(a)(2) (2012) (providing shareholders a right to sue for a misstatement or omission of material fact in a prospectus used to offer or sell securities to the public).
material nonpublic information, the requirement for a firm selling its shares via an ATM is considered to be unambiguous.

However, as we saw in the case of OMRs, a prohibition on a firm trading in its own shares on material inside information cannot, by itself, prevent the firm from exploiting valuable inside information when trading in its own stock. First, the high threshold for “materiality” actually applied by the courts allows legal trading on many types of valuable but sub-material information. Second, a prohibition on trading on material nonpublic information may not always deter such trading because of the difficulties of detection and proof—difficulties that are exacerbated when (as in the case of OMRs) individual trades need not be disclosed. As discussed below, the trade-disclosure rules applicable to firms conducting ATMs are, if anything, even more lax than those applicable to firms conducting OMRs.

3. Trade-Disclosure Rules for ATMs

Like firms conducting OMRs, firms conducting ATMs need not publicly disclose any information about ATM transactions until after the end of the quarter in which the transactions took place. But while firms conducting OMRs must disclose the number of shares repurchased in each month of the preceding quarter and the average price paid for each share, no such breakdown is required for ATMs. In general, firms need report, for the preceding quarter, only the total number of shares issued and the proceeds from those sales.

As in the case of OMR trade-disclosure rules, ATM trade-disclosure rules are more lax than those applied to insiders themselves in two ways. First, the information provided does not include the dates and prices of individual trades. This makes it difficult to determine whether a particular trade was illegal—that is, whether the firm was in possession of material

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99 See supra subsection II.B.2.
100 See Small et al., supra note 93, at 301 (noting that if an issuer conducting an ATM possesses material nonpublic information it must suspend the ATM or reveal the information); see also Adam Fleisher et al., Alternatives to Traditional Securities Offerings, CLEARY GOTTLYEB ALERT MEMO, Mar. 19, 2013, at 6, available at http://www.cglaw.com/files/News/56b6d45-955-et-48yb5f72-e784f3f5ca/Presentation/NewsAttachment/f789c35b-8619-4811-915f-a65049444/Alert%20Memo%20-%20Alternatives%20to%20Traditional%20Securities%20Offerings.pdf (explaining that a domestic issuer in possession of material nonpublic information should suspend the program until the information is disclosed, typically via a press release coupled with a filing on a Form 8-K).
101 See supra subsection II.B.2.
102 See Small et al., supra note 93, at 302 (noting a general practice among firms conducting ATMs of disclosing information only on quarterly Form 10-Q filings).
103 See supra subsection II.B.3.
104 Small et al., supra note 93, at 302.
inside information at the time of the trade. As a result, trades on material inside information are more likely to occur.

Second, while insiders must disclose a trade within two days, firms buying or selling their shares can wait several months before publicly reporting their transactions. Accordingly, investors cannot easily use the information communicated by the firm’s trades to adjust their valuation of the stock until long after the information has become stale. The firm thus can have months to trade stealthily on inside information without the public disclosure of its trades causing an adjustment in its stock price.

C. Insiders’ Incentive to Engage in Inflated-Price ATMs

Having seen that a firm selling its own shares in the market is subject to more lax trade-disclosure requirements than an insider of the firm selling those shares, we now turn to examine insiders’ incentive to use equity issuances to engage in indirect insider trading.

Our focus will be on inflated-price issuances—issuances conducted when the stock price exceeds the stock’s actual pretransaction value. An inflated-price issuance transfers value from buying shareholders to nonbuying shareholders pro rata. Thus, insiders who conduct an inflated-price issuance (and decline to buy shares in the issuance) benefit to the extent they own shares in the firm. For instance, if insiders in a firm own 25% of the firm’s equity before the issuance, they will capture 25% of the value transferred to nonbuying shareholders. Since, as noted earlier, average inside ownership in U.S. firms ranges between 24% and 32%,105 the value transfer to insiders can be quite significant. In a firm where insiders own 25% of the equity before the issuance, they will capture 25% of the value transferred to nonbuying shareholders.

To see how an inflated-price equity issuance transfers value to insiders (and, incidentally, to other nonbuying shareholders), consider again ABC Corporation (ABC). Suppose that ABC currently has five shares outstanding and is liquidated on a future Liquidation Date. Four shares are held by public shareholders; one share is held by Insider. Assume that ABC does not issue any dividends or repurchase any equity before Liquidation Date.

There are two scenarios:

No-Transaction Scenario: If ABC does not issue any equity prior to Liquidation Date, it will distribute $50 to the holders of its five shares at Liquidation Date. The no-transaction value of each of ABC’s five shares at Liquidation Date is thus $10 ($50/5).

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Equity-Issuance Scenario: Now suppose that ABC conducts an equity issuance before Liquidation Date when the stock trades at $16 ($6 more than its pretransaction value of $10), selling a single share at that price. Assume also that no economic value is created or destroyed by the equity issuance, so the $16 received for the share increases ABC’s Liquidation-Date value by $16, from $50 to $66. Insider will refrain from purchasing the new share, knowing that it is overvalued. At Liquidation Date, the value of each of ABC’s six shares, including that owned by Insider, is $11 ($66/6).

By assumption, the economic value created by the firm in both scenarios is the same. In the No-Transaction Scenario, $50 flows to all the shareholders at Liquidation Date. In the Equity-Issuance Scenario, $16 flows from shareholders during the issuance and $66 flows back to shareholders at Liquidation Date, for a net outflow of $50. In both cases, there is $50 of net economic value to be allocated to shareholders.

However, the equity issuance shifts value from public shareholders as a group to Insider. In the No-Transaction Scenario, Insider gets $10 and public shareholders get $40. In the Equity-Issuance Scenario, Insider gets $11 and public shareholders get $39 ($55–$16). Thus, Insider reaps an extra $1 even though no economic value is created by the equity issuance. The results are summarized in Table 2 below.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Total Value</th>
<th>All Public</th>
<th>Nonbuying Public</th>
<th>Buying Public</th>
<th>Insider</th>
</tr>
</thead>
<tbody>
<tr>
<td>No-Transaction</td>
<td>$50.00</td>
<td>$40.00</td>
<td>$40.00</td>
<td>n/a</td>
<td>$10.00</td>
</tr>
<tr>
<td>Equity-Issuance</td>
<td>$50.00</td>
<td>$39.00</td>
<td>$44.00</td>
<td>-$5.00</td>
<td>$11.00</td>
</tr>
</tbody>
</table>

There is considerable evidence that insiders deliberately use equity issuances to transfer value from buying shareholders. For one thing, executives themselves acknowledge that they issue shares when they believe their firms’ stock prices are “high.”106 In addition, a large body of studies has found that insiders tend to conduct traditional SEOs when their firms’ shares are overpriced,107 thereby enabling insiders to substantially boost the

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107 See, e.g., Tim Loughran & Jay R. Ritter, The New Issues Puzzle, 50 J. FIN. 23, 47 (1995) (examining 3702 SEOs between 1970 and 1990 and finding evidence that firms announce stock issues when their stock is grossly overvalued, the market does not revalue the stock appropriately,
value flowing to them and other nonbuying shareholders.\textsuperscript{108} Importantly, and not surprisingly, the propensity to engage in inflated-price issuances appears to increase with insider equity ownership.\textsuperscript{109}

Although ATMs are relatively new, the evidence now emerging is consistent with insiders using private information to sell overvalued equity in ATMs. For example, one recent study found that ATMs are announced after significant stock price runups and that the market reacts negatively to their announcement.\textsuperscript{110} It also found that actual sales under ATM programs are effected after the stock price has recently risen and market conditions are thus relatively favorable.\textsuperscript{111}

IV. COSTS TO PUBLIC INVESTORS

As Part I explained, when insiders engage in direct insider trading, public investors are hurt in two ways: (1) value is systematically diverted from public investors to insiders; and (2) public investors lose additional value when the overall pie shrinks due to the weakening and distortion of insiders’ incentives.

As this Part explains, indirect insider trading also hurts public investors in these two ways. Section A explains how indirect insider trading, like direct insider trading, systematically transfers value from public shareholders to insiders. Section B explains how indirect insider trading causes insiders to act in ways that destroy economic value.


\textsuperscript{109} See Eric R. Brisker et al., Executive Compensation Structure and the Motivations for Seasoned Equity Offerings, 40 J. BANKING & FIN. 330, 331 (2014) (finding that managers owning relatively large amounts of equity are more likely to engage in inflated-price issuances than other managers); cf. Sudip Datta et al., Executive Compensation Structure and Corporate Equity Financing Decisions, 58 J. BUS. 1859, 1886-87 (finding, in a sample of 444 SEO announcements occurring between 1992 and 1999, that the market reacted more negatively to announcements by firms in which managers owned more equity).

\textsuperscript{110} See Billett et al., supra note 92, at 17-18 (finding, in a sample of ATMs between 2008 and 2012, that ATMs are announced following abnormal stock price increases and that their announcements are associated with an average negative abnormal stock decline of 3%).

\textsuperscript{111} See id. at 23-24 (finding that more positive stock returns in the prior quarter lead to larger actual issuances in the current quarter).
A. Value Diversion

This Section (1) provides an estimate of the value diversion to insiders from indirect insider trading; (2) shows that this value diversion hurts public shareholders as much as value diversion via direct insider trading; and (3) explains why insiders bother to engage in indirect insider trading when direct insider trading appears to be a much more “efficient” strategy for diverting value.

1. The Amount of Value Diversion

Insiders systematically divert value from public investors through both bargain repurchases and inflated-price equity issuances. In prior work, I used publicly available data to form a crude estimate of insiders’ annual profits from bargain repurchases alone: between $6 and $7.5 billion. This amount is comparable to insiders’ profits from direct insider trading.\(^\text{112}\) And, importantly, it does not include profits from inflated-price issuances.

A more recent study by Richard Sloan and Haifeng You provides additional evidence that insiders’ profits from bargain repurchases and inflated-price issuances are likely to be substantial.\(^\text{113}\) Sloan and You estimate that, over the last 40 years, an aggregate of $2.2 trillion has been transferred to long-term shareholders through bargain repurchases and inflated-price issuances.\(^\text{114}\) That works out to about $50 billion per year. If insiders were to capture 15% of that $50 billion, their indirect insider-trading profits would be $7.5 billion annually.

While the actual amount diverted may be greater or less than these rough estimates, it is likely that bargain repurchases and inflated-price ATMs together yield insiders at least several billion dollars per year.

As Section I.A explained, academics who favor insider trading argue that direct insider-trading profits are a reasonable form of compensation. Similarly, insiders’ ability to profit from indirect insider trading might be defended as a form of compensation for those controlling the firm—executives, directors, and large shareholders. But indirect insider-trading profits, like direct insider-trading profits, are a very odd form of compensation. Gains from direct or indirect insider trading are a function of access to inside information, not the creation of economic value. As explained below,

\(^{112}\) See Fried, Informed Trading, supra note 45, at 1357-60 (deriving an estimate of insiders’ profits from bargain repurchases and explaining the limitations of the methodology).


\(^{114}\) Id. at 3.
indirect insider trading, like direct insider trading, can be expected to reduce the value flowing to all shareholders over time by causing insiders to take steps that destroy economic value.

2. Are Indirect Insider-Trading Profits Different?

A reader may wonder whether a useful distinction can be drawn between direct and indirect insider-trading profits. In particular, while the former are captured only by insiders, the latter are shared pro rata with those public shareholders who do not sell when the firm conducts a bargain repurchase or buy when the firm conducts an inflated-price issuance. Thus, insiders gain from indirect insider trading only if certain public shareholders also benefit.

Indeed, it would be entirely correct to say that indirect insider trading increases the firm’s long-term stock price and benefits the firm’s long-term shareholders. When the firm buys shares at a low price, it increases the long-term value of all the remaining shares. When the firm sells shares at a high price, the firm increases the long-term value of all preexisting shares. In other words, indirect insider trading (unlike direct insider trading) appears to boost value for long-term shareholders. What could be wrong with that?

The answer is as follows: whether insider trading is done directly or indirectly via the firm, public shareholders buying and selling the firm’s shares systematically lose. Thus, on average, public shareholders can expect to profit less from investing in the firm’s shares. As public investors’ expected returns decline, it is more difficult for a firm to raise equity capital in the public markets.

To see why direct and indirect insider trading have the same distributional effects for public investors as a whole, it might be helpful to consider again ABC Corporation. Suppose that, at the beginning and at the end of the year, Insider of ABC owns 20% of ABC’s equity. Assume that Insider’s personal trading does not affect ABC’s per-share value. Consider two scenarios:

Scenario 1: Insider buys X shares and later sells X shares on inside information during the course of the year, generating direct insider-trading profits of $2. Insider engages in no other purchases or sales, so Insider’s proportional ownership is the same on December 31 as it is on January 1. Because there is no effect on ABC’s value from Insider’s trading, the only effect of Insider’s use of private information is to shift $2 from public investors trading in ABC’s shares to Insider.
Scenario 2: Insider uses private information to have ABC buy $5X$ shares and sell $5X$ of its own shares during the course of the year. Assume that ABC does not engage in any other share transactions and that Insider does not personally trade. Thus, Insider’s proportional interest remains at 20% at the end of the year, and those ABC shareholders not buying or selling shares during the year capture an extra $10 as a result of this trading. ABC’s per-share value increases from the beginning until the end of the year because the corporation has $10 of extra cash and the number of shares outstanding does not change. Insider captures $2$, and the remaining $8$ goes to public shareholders holding their shares of ABC.\footnote{Note that Scenario 2 has similar distributional effects to a scenario in which Insider first generates $10 in direct insider-trading profits and then donates the $10 to ABC, capturing $2 for himself and sharing $8 with certain public shareholders.}

These two scenarios are reflected in Table 3 below.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Insider Makes $2 Trading Directly</th>
<th>All Public Shareholders</th>
<th>Nontrading Public Shareholders</th>
<th>Trading Public Shareholders</th>
<th>Share Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insider Has ABC Make $10 Trading Profits</td>
<td>$2.00</td>
<td>-$2.00</td>
<td>$8.00</td>
<td>-$10.00</td>
<td>Higher</td>
</tr>
</tbody>
</table>

Although Scenario 2 leads to a higher share value for ABC than Scenario 1 (because it is ABC rather than Insider that engages in insider trading), there is no difference for public shareholder value in the aggregate. In both scenarios, Insider diverts $2$ from public investors buying or selling ABC’s shares; public shareholders as a group are made worse off by $2$.

3. Why Bother with Indirect Insider Trading?

It would certainly seem simpler for an insider to engage in direct insider trading rather than to use the corporation for indirect insider trading. But recall that firms are subject to relatively lax trading-disclosure rules. In particular, the corporation—unlike its insiders—need not disclose the details of individual trades and can wait months before disclosing aggregate trading data.\footnote{See supra subsections II.B.3 & III.B.3.} This opacity makes it easier for the corporation to generate profits for insiders by trading illegally on material inside information and
legally on valuable but sub-material inside information. While indirect insider trading is more complicated for insiders, it can also be more rewarding.

In addition, U.S. insiders are likely to channel at least some of their insider trading activity through the corporation for two other important reasons. First, the reputational consequences for an insider of corporate liability for violating the securities laws pale in comparison with the reputational consequences of personal liability. From an insider’s perspective, it is one thing for the corporation to be charged with a violation of the securities laws; it is quite another for the insider himself to be a defendant in an insider trading case.

Second, insiders are subject to Section 16(b) of the 1934 Act, which prohibits executives, officers, and persons owning more than 10% of a firm’s shares from making what are commonly referred to as “short-swing profits.” An insider makes a short-swing profit if she buys and sells stock within a six-month period and the purchase price is lower than the sale price. However, Section 16(b) does not apply to indirect purchases made by insiders through share repurchases or indirect sales made by insiders through equity issuances. Thus, a trade that would trigger Section 16(b) liability if done directly may be done indirectly without triggering such liability. In short, from an insider’s perspective, the corporation will often be an attractive vehicle for insider trading.

B. Destruction of Value

Indirect insider trading, like direct insider trading, can also lead those controlling the corporation to engage in two types of activities that destroy economic value: costly stock-price manipulation and capital misdeployment.

1. Costly Stock-Price Manipulation

When insiders cause a firm to buy shares at a low price or sell shares at a high price, they have an incentive to manipulate the stock price to increase the value flowing to themselves, even if some economic value must be destroyed in the process. I call value-destroying stock price manipulation “costly stock-price manipulation.”

Costly stock-price manipulation hurts public shareholders as a group in two ways. First, it increases the amount of value flowing from public

118 Id.
investors to insiders. Second, it destroys value that might have otherwise been captured (at least in part) by public shareholders.

There is considerable evidence that insiders manipulate prices before and during repurchases, actively driving down earnings and the stock price to increase the value transferred to themselves and other nonselling shareholders.119 Such earnings manipulation is more aggressive when the CEO’s equity ownership is higher, providing additional evidence that insiders conduct repurchases to buy stock indirectly at a cheap price.120

Similarly, insiders manipulate stock prices upward around the time of equity offerings to increase the amount transferred from investors buying stock to nonbuying shareholders.121 Insiders often achieve this manipulation through real-earnings management, deliberately sacrificing some of the firm’s long-term cash flow to report higher earnings.122

2. Capital Misdeployment

Insiders engaging in indirect insider trading may also have an incentive to destroy value by misdeploying a firm’s capital. Below, I highlight how bargain repurchases can destroy value by diverting cash from value-increasing projects.123

To understand the potentially value-destroying effect of a bargain repurchase, consider again ABC Corporation. As before, ABC currently has six shares outstanding and is liquidated on a future Liquidation Date. Public shareholders hold five shares; Insider holds one share. Assume that ABC does not issue any dividends or sell any equity before Liquidation Date.

There are two scenarios:

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119 See Guojin Gong et al., Earnings Management and Firm Performance Following Open-Market Repurchases, 63 J. FIN. 947, 962 (2008) (finding that even managers take steps to reduce reported earnings prior to open-market repurchases).
120 Id. at 968-70 & tbl.4 (reporting association between pre-repurchase negative abnormal accruals and CEO stock ownership).
121 See, e.g., Siew Hong Teoh et al., Earnings Management and the Underperformance of Seasoned Equity Offerings, 50 J. FIN. ECON. 63, 64-65, 82 (1998) (reporting that seasoned equity issuers alter discretionary accruals in order to raise reported earnings, and that this manipulation may partially explain poor post-offering returns).
123 The use of repurchases for indirect insider trading can also destroy economic value in other ways. In particular, it can: (1) lead to excessive cash holding in anticipation of future bargain-repurchase opportunities; and (2) cause a firm to use repurchases when dividends would be a more efficient distribution mechanism. See Fried, Informed Trading, supra note 45, at 1364-70.
No-Buyback Scenario: As before, if ABC does not repurchase any of its equity prior to Liquidation Date, it will distribute $60 to the holders of its six shares at Liquidation Date. The no-transaction value of each of ABC’s six shares at Liquidation Date is thus $10.

Buyback Scenario: Now suppose that ABC conducts a repurchase before Liquidation Date when the stock trades at $5 ($5 less than its actual value of $10), buying back a single share at that price.

Now assume that had the $5 not been spent on the repurchase, it instead would have been invested in a project that yielded a 50% return. Under this assumption, the repurchase reduces ABC’s Liquidation-Date value not by $5, but by $7.50, to $52.50; the $5 would have been invested in a project that yielded a 50% return. As a result, $2.50 of economic value is lost.124

Insider will not sell because he is aware the stock is underpriced; the share is thus purchased from a public shareholder. At Liquidation Date, the value of each of ABC’s five remaining shares, including Insider’s share, is thus $10.50 ($52.50/5).

By assumption, the repurchase destroys $2.50 of economic value. In the No-Buyback Scenario, $60 flows to all the shareholders at Liquidation Date. In the Buyback Scenario, $5 flows to shareholders during the repurchase, and $52.50 flows to shareholders at Liquidation Date, for a total of $57.50.

But the bargain repurchase enriches Insider by shifting value from public shareholders to Insider. In the No-Buyback Scenario, Insider gets $10 and public shareholders get $50. In the Buyback Scenario, Insider gets $10.50 and public shareholders get $47 ($42 + $5). Thus, Insider reaps an extra $0.50 even though the repurchase destroys economic value. The results are summarized in Table 4 below.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Total Value</th>
<th>All Public</th>
<th>Nonselling Public</th>
<th>Selling Public</th>
<th>Insider</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Buyback</td>
<td>$60.00</td>
<td>$50.00</td>
<td>$50.00</td>
<td>n/a</td>
<td>$10.00</td>
</tr>
<tr>
<td>Buyback</td>
<td>$57.50</td>
<td>$47.00</td>
<td>$42.00</td>
<td>$5.00</td>
<td>$10.50</td>
</tr>
</tbody>
</table>

To be sure, if capital markets functioned perfectly, ABC could borrow $5 so that it could both buy back one share for $5 and pursue the profitable project. But various market imperfections may make it difficult for ABC to both engage in the bargain repurchase and pursue all of its desirable projects.\textsuperscript{125}

Intriguingly, empirical studies suggest that firms that increase repurchases cut back on potentially desirable investment. A recent study found that repurchases, especially those that appear to be driven by insider stock ownership, have a significantly negative effect on a firm's investments in research and development.\textsuperscript{126} The study found that, holding everything else equal, doubling share repurchases led to an 8% reduction in research and development expenditures.\textsuperscript{127} An earlier study reached similar conclusions.\textsuperscript{128} While these studies, by themselves, do not demonstrate that insiders destroy value to engage in bargain repurchase, they do suggest that repurchases may well divert cash from potentially productive activities inside the firm.\textsuperscript{129}

Finally, it is worth noting that this particular type of distortion—capital misdeployment—can arise from indirect insider trading, but not direct insider trading. While insiders can engage in direct insider trading without altering the firm’s capital structure, indirect insider trading via bargain repurchases requires moving cash out of the corporation, with potential adverse consequences for the firm’s value-creating activities.

\textsuperscript{125} Market imperfections that could prevent a firm from simultaneously exploiting desirable investment opportunities and buying back cheap stock include: (i) information asymmetry between financers and the firm; and (ii) debt-covenant renegotiation costs. For a discussion of these imperfections, see Jesse M. Fried, Share Repurchases, Equity Issuances, and the Optimal Design of Executive Pay, 89 TEX. L. REV. 1123, 1125-26 (2011) [hereinafter Fried, Share Repurchases].

\textsuperscript{126} See Alok Bhargava, Executive Compensation, Share Repurchases and Investment Expenditures: Econometric Evidence from US Firms, 40 REV. QUANTITATIVE FIN. & ACCT. 419, 419-20 & tbl.6 (2013) (reporting that share repurchases negatively affected research and development expenditures, presumably because fewer funds were available for these expenditures).

\textsuperscript{127} Id. at 419.

\textsuperscript{128} See Daniel A. Bens et al., Real Investment Implications of Employee Stock Option Exercises, 40 J. ACCT. RES. 359, 383 (2002) (finding evidence consistent with firms exhibiting poor performance due to the diversion of cash from productive investments to fund share repurchases).

\textsuperscript{129} It is worth noting that insiders’ use of a dividend to distribute cash would not give rise to the same type of capital-misallocation problem. Because the dividend is pro rata, it would ensure that insiders and public shareholders are in the same position. Thus, a dividend that reduced public shareholders’ wealth would also reduce insiders’ wealth.
V. TOWARD REDUCING INDIRECT INSIDER TRADING

Parts III and IV discuss how firms trading in their own shares are subject to trade-disclosure rules that are much less stringent than those applied to their own insiders, and that insiders can exploit these relatively lax rules to engage in indirect insider trading. Such indirect insider trading imposes costs on public shareholders by systematically transferring value to insiders and by causing insiders to sacrifice economic value to boost their insider-trading profits.

This Part puts forward a proposal to reduce these costs. Under this proposal, a firm, like its insiders, would be required to disclose precise details of trades in its own stock within two days. Section A describes the proposed two-day rule. Section B explains how such a two-day rule would reduce the costs associated with indirect insider trading and increase public shareholders’ returns.

A. The Proposed Two-Day Rule

Section 16(a) of the 1934 Act currently requires insiders to provide detailed information about any trade in their firm’s shares within two business days. Firms trading in their own shares, by contrast, may wait months until they disclose the existence of trading activity in their own shares and can get away with providing only aggregate data. These lax trade-reporting rules make it easier for insiders to trade indirectly on inside information, imposing potentially large costs on public shareholders.

These costs would be reduced if a firm were subject to the same trade-disclosure requirements as its insiders. In particular, a corporation should be required to disclose each trade in its own shares within two business days of the transaction. This two-day rule would improve transparency and provide public investors with a timely, accurate, and comprehensive picture of insiders’ trading, both direct and indirect.

Importantly, this two-day rule should also cover indirect trading by a firm in its own shares. That is, the rule should apply to trades in a firm’s shares made by the firm’s direct or indirect subsidiaries. Otherwise, a firm could evade the two-day rule by trading indirectly through its subsidiaries, much as insiders currently avoid Section 16(a)’s two-day disclosure requirement by trading indirectly through their firms.

130 See supra subsection I.B.2.
131 See supra subsections II.B.3 & III.B.3.
132 For similar reasons, the proposed two-day rule should cover transactions in options or other derivatives that are economically similar to purchases or sales of the firm’s stock.
The proposed two-day rule would not unduly burden firms, just as Section 16(a) has not unduly burdened insiders. Indeed, the largest stock markets outside the United States already require even more timely disclosure by firms of trades in their own shares. For example, in the United Kingdom and Hong Kong, publicly traded firms must report all share repurchases to the stock exchange before trading begins the next business day.\textsuperscript{133} Japan requires same-day disclosure.\textsuperscript{134} In Switzerland, a firm trading in its own shares commonly does so through a separate trading line, and the transaction is instantaneously disclosed to all market participants.\textsuperscript{135} If firms in Hong Kong, Japan, and the United Kingdom can disclose open-market transactions by the end of the trading day or by the next morning, U.S. firms should be able to disclose their trades within two days without too much difficulty.

B. Benefits of the Two-Day Rule

The two-day rule would boost public shareholder returns by reducing both the diversion of value to insiders and the destruction of economic value that arises as a byproduct of indirect insider trading.

1. Reduced Diversion of Value to Insiders

The two-day rule would reduce the value diverted to insiders by illegal and legal indirect insider trading.

a. Reduced Illegal Insider-Trading Profits

As Parts II and III explain, a firm is not permitted to trade in its own shares on the open market when it possesses material inside information.\textsuperscript{136} But enforcing this prohibition is far from easy. It is especially difficult when, as now, firms need not disclose the details of individual transactions

\textsuperscript{133} See Financial Services Authority Handbook: Listing Rules R. 12.4.6 (Apr. 2013) (U.K.), available at http://fsahandbook.info/FSA/html/handbook/LR/12/4 (requiring that repurchase trades be reported no later than 7:30 AM on the business day following the purchase); Paul Brockman & Dennis Y. Chung, Managerial Timing and Corporate Liquidity: Evidence from Actual Share Repurchas-


\textsuperscript{136} See supra subsections II.B.2 & III.B.2.
in their own shares. Absent such information, one could not even figure out what trades should be investigated.

The two-day rule would require firms trading in their own shares to provide the details of each day’s trades. Specific information about daily trades would make it easier for regulators to investigate potentially illegal trades by the corporation and, where appropriate, sanction the firm or those responsible for the trading. Better enforcement can be expected to increase deterrence, thereby reducing the amount of value diverted by insiders through illegal insider trading by the firm.

Of course, one might believe that firms currently do not trade in their own shares when in possession of material inside information. However, this belief cannot be tested without specific information about firms’ trades in their own shares. In some jurisdictions, including Hong Kong and the United Kingdom, such information has long been available to regulators and shareholders. In the United States, unfortunately, it is not. Firms’ trades in their own shares are largely hidden from public view.

b. Reduced Legal Insider-Trading Profits

The two-day rule would also reduce the amount of value diverted to insiders via legal insider trading by their firms. As I explain in more detail below, it would do so in two ways. First, the two-day rule would reduce the value diverted to insiders for any given volume of information-driven firm trading. Second, the two-day rule would reduce the volume of information-driven firm trading.

i. Reduced Profits Per Trade

Suppose that insiders engage in indirect insider trading by having their firm buy or sell \$X of its own shares on inside information over a week-long period. Under the proposed rule, the firm must begin disclosing the transactions within two days of the first trade. If market participants believe that the firm is attempting to buy or sell stock at a favorable price, they will adjust their valuations of the stock.\textsuperscript{137} This adjustment will cause the stock price to move against the firm. As a result, the firm will execute its trades

\textsuperscript{137} For a discussion of how market participants currently analyze and respond to Section 16(a) trade disclosures by insiders, see Fried, \textit{Reducing the Profitability}, \textit{supra} note 10, at 324. Market participants could be expected to apply the same methodology to decoding trades by a firm in its own shares.
after the second day on less favorable terms. Insiders will therefore capture less value through a firm’s legal insider trading than they do currently.\textsuperscript{138}

To be sure, market participants will not know the exact motives for a particular repurchase or equity issuance. As a result, the price adjustment following trade disclosures by the firm will never precisely reflect the inside information that may be behind the transactions. Instead, the adjustment can capture at most the expected value of the inside information communicated by the disclosures. Over time, however, these price adjustments can be expected to reduce substantially insiders’ profits from indirect insider trading—even if the volume of indirect insider trading is unaffected by the two-day rule.\textsuperscript{139}

ii. Reduced Trade Volume

The two-day rule would also reduce insiders’ indirect insider-trading profits by reducing the frequency of bargain repurchases and inflated-price ATMs. As explained above, the stock price will adjust to trade disclosures as the trades are occurring, thereby reducing indirect insider-trading profits. Thus, the expected benefit to insiders of conducting bargain repurchases and inflated-price equity issuances will decline under a two-day rule. As a result, they are likely to engage in fewer such transactions. Thus, the two-day rule is likely to reduce not only the profits associated with any given information-driven trade, but also the volume of such trades.

2. Less Value Destruction

As Part IV explains, the use of the firm for indirect insider trading can lead insiders to destroy economic value by manipulating the stock price or distributing cash that would generate greater social returns inside the

\textsuperscript{138} Most of the insider-trading profits currently generated by OMRs appear to come from firms choosing the right months to buy back shares, not the right days within any given month. See De Cesari et al., supra note 76, at 1034 (finding that the majority of trading gains from OMRs come from “between-month’ timing, i.e., concentrating repurchases in months during which prevailing market prices are relatively low”). If a two-day disclosure rule were adopted, the market reaction to repurchase announcements would make it more difficult for the firm to continue buying stock at a very low price during the remainder of the month, substantially reducing OMR insider-trading profits.

\textsuperscript{139} Instructively, the change in the disclosure deadline for Section 16(a) (from the tenth day of the following month to two business days following the trade) was accompanied by a decline in insiders’ per-trade profits. See Email from Christopher Malloy, supra note 42 (describing unreported results from a study of direct insider trading, which indicated that insiders’ ability to generate insider-trading profits declined after the change in Section 16(a)’s disclosure deadline). This finding suggests, as one would expect, that transparency reduces an insider’s ability to profit from his or her access to inside information.
By reducing insiders’ expected indirect profits from bargain repurchases and inflated-price equity issuances, the two-day rule would also reduce the likelihood that insiders engage in either type of value-destroying activity. The resulting increase in value would accrue in part to public shareholders, further increasing their returns.

3. A Step in the Right Direction

In this Article, I propose a two-day disclosure rule for firms trading in their own stock. But we have seen that other jurisdictions, such as the United Kingdom, require even more timely disclosure by firms of trades in their own shares. One might therefore wonder whether a two-day rule is optimal. Would even earlier disclosure be better? The answer is yes.

The two-day rule would still enable insiders to engage in some indirect insider trading, just as Section 16(a) permits insiders to engage in some direct insider trading. First, firms can trade secretly for two days before announcing their trades. During those two days, there will not be any adjustment in the stock price arising from public disclosure of the trading. Second, to the extent the market does not immediately adjust to the information communicated by a trade disclosure, but rather does so only over time, a firm can continue to trade profitably on inside information even after the market begins adjusting to the information provided by its trade disclosures.

Because of the limitations of a two-day rule, a one-day or same-day rule for both firms and insiders would be even better. Insiders would have less time to trade secretly—directly or indirectly. And stock prices would have more time to impound the information signaled by trade disclosures, reducing insider-trading profits on subsequent trades.

Indeed, I have proposed elsewhere that both insiders and firms be required to disclose their planned trades in advance. Such a pre-trading disclosure rule, I have shown, would substantially reduce the costs associated with direct and indirect insider trading. Thus, I do not claim that the

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140 See supra Section IV.B.
141 See supra Section V.A.
142 See Email from Christopher Malloy, supra note 42 (describing unreported results from a study of direct insider trading which indicated that insiders’ ability to generate insider-trading profits declined but did not disappear after the change in Section 16(a)’s disclosure deadline).
143 See Fried, Informed Trading, supra note 45, at 1375-76 (proposing a pre-trade disclosure rule for firms conducting OMRs); Fried, Reducing the Profitability, supra note 10, at 349-53 (proposing a pre-trade disclosure rule for corporate insiders).
144 See Fried, Informed Trading, supra note 45, at 1376-82 (explaining how a pre-repurchase disclosure rule would reduce managers’ profits from bargain repurchases); Fried, Reducing the
two-day rule proposed here is ideal. Rather, I see the adoption of such a rule as an easy (but important) step in the right direction—a measure that would harmonize insider-trading rules, improve transparency in the capital markets, and substantially reduce indirect insider trading and its costs.\textsuperscript{145}

**CONCLUSION**

Publicly held U.S. firms trading their own shares are subject to trade-disclosure rules that are much less stringent than those imposed on their own insiders trading these same shares. Insiders must report the specific details of each trade within two business days. Firms, by contrast, need to report only aggregate monthly or quarterly trading activity, and can wait for months after this activity to do so.

Not surprisingly, insiders exploit these relatively lax rules to engage in indirect insider trading. There is overwhelming evidence that insiders use private information to have firms secretly buy and sell their own shares at favorable prices. Given that the volume of repurchases and equity issuances is hundreds of billions of dollars annually, the volume of such indirect insider trading is likely to be substantial.

Such indirect insider trading can impose substantial costs on public investors. It systematically diverts value from public investors to insiders, who, in the average U.S. firm, own more than 20\% of the firm’s equity.\textsuperscript{146} Indirect insider trading can also lead insiders to misallocate the firm’s capital and engage in value-destroying stock-price manipulation.

To reduce these costs, I have put forward a simple proposal: subject firms to the same two-day trade-disclosure rules as their insiders. Other jurisdictions with developed stock markets, such as Hong Kong and the United Kingdom, already impose one-day trade-disclosure rules for firms. There is no reason to deny public investors in the U.S. market the benefits that would flow from a similar degree of transparency.

\begin{flushright}
\textsuperscript{145} In other work, I show that one could completely eliminate insiders’ ability to profit from direct and indirect insider trading through appropriately structured compensation arrangements. See Jesse M. Fried, *Hands-Off Options*, 61 VAND. L. REV. 453, 468-74 (2008) (describing an equity arrangement that would eliminate insiders’ ability to make direct insider-trading profits by taking control of the timing of sales out of their hands); Fried, *Share Repurchases*, supra note 125, at 1136-40 (describing an equity arrangement that would eliminate insiders’ ability to make indirect insider-trading profits by adjusting their equity position whenever the firm buys or sells its own shares).
\end{flushright}

\begin{flushright}
\textsuperscript{146} See supra notes 70-72 and accompanying text.
\end{flushright}
Restricting Stock Buybacks Will Hurt the Economy

Let companies decide for themselves the best way to use their profits.

By Joshua Bolten and Ken Bertsch
Mr. Bolten is president and chief executive of Business Roundtable. Mr. Bertsch is executive director of the Council of Institutional Investors.

March 4, 2019

In recent weeks, politicians have offered a range of proposals that would impose new government restrictions on how companies use stock buybacks and dividends. While the proposals are billed as solutions to promote inclusive economic growth and sound corporate governance, attempts to restrict buybacks and dividends are misguided. They would undermine economic security rather than enhance it.

Many companies rely on investments by individuals and institutions, such as pension funds, to finance their operations. Successful companies use this capital to generate profits, which they then deploy to expand, invest in research and development, attract and retain the best talent and invest in their communities. Companies also use profits to pay down debt or return capital to shareholders, via buybacks or dividends. This can make them more attractive to investors, and companies need investors’ confidence and support to flourish.

How do companies decide what to do with their profits? Companies are always looking for ways to invest profits to increase their future growth. At some point, they may run out of investment opportunities with enough growth potential to justify an investment. In those cases, companies often decide to use their profits in another way, to buy back shares of the company or to issue dividends. Making it harder for companies to do so could force them to sit on cash or waste it on projects with a low potential for success. This is often not the wisest use of a company’s profits, as it can hurt growth and erode investor confidence.

At the same time, returning some profits to shareholders is not necessarily a bad thing, either for the company or for society at large. Some critics of buybacks miss this point: Money returned to shareholders through buybacks and dividends does not disappear from
the economy. Individual investors can use it to purchase something they’ve been saving for. The money can be lent to other companies that are hiring and growing. It can be invested in new businesses as seed money for start-ups or financing for emerging technologies.

Moreover, it is a myth that buybacks and dividends displace investments that companies would otherwise make to grow or develop innovations. While there was a substantial increase in buybacks and dividends last year, business investment also increased substantially and grew at the fastest rate since 2011. American companies invested nearly $3 trillion in the economy during 2018, including $460 billion in research and development. And the firms doing the largest buybacks are also the ones doing the most capital investment. Among large public companies, those that repurchased stock in the first three quarters of 2018 tended to engage in more capital expenditures and research and development investment than those electing not to do buybacks, according to our analysis of Securities and Exchange Commission filings of companies in the S & P 500.

Not only do buybacks and dividends support a stronger and more dynamic economy, they also contribute to Americans’ retirement security. According to the Federal Reserve, the majority of American households have direct or indirect ownership of corporate stock through pensions, retirement accounts or investment accounts. Similarly, stocks are owned by thousands of pension funds and mutual funds, and millions of Americans benefit from asset price increases or when shares in those funds receive a dividend.

Of course buybacks, like other methods of raising and allocating capital, can be abused, as is the case when companies may attempt to artificially inflate their stock prices in the short term by buying back shares. To avoid such abuses, public companies should have strong corporate governance practices guiding how the decisions about stock buybacks and dividends are made, to ensure they are made with the long-term interests in mind.
By contrast, imposing federal limitations on how companies decide to use their capital would stifle innovation and opportunity in America. Recent proposals to restrict buybacks and dividends, while presumably made with the laudable intent of increasing wages and capital investment, will only make it more difficult to achieve sustained and inclusive economic growth in the United States.

Joshua Bolten is president and chief executive of Business Roundtable. Ken Bertsch is executive director of the Council of Institutional Investors.

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Senators Chuck Schumer of New York and Bernie Sanders of Vermont recently announced they would introduce legislation to prohibit a public firm from repurchasing its own stock, unless the firm first invests in employees and communities, including paying workers at least $15 per hour and offering “decent” pension and health benefits. Welcome to the newest form of virtue-signaling on Capitol Hill, in which Democratic
senators demonstrate their concern for employees by proposing bills that severely restrict — or even outlaw — buybacks. The proposals are based on misleading measures of corporate capital flows, as well as on a profound misunderstanding of how the US economy works. If enacted, such bills could threaten not only the capital markets but also the workers and communities the senators claim to care about.

Leading Senate Democrats appear to believe that repurchases, when added to existing levels of dividends, harm workers and impair long-term investment by starving firms of needed capital. The Schumer-Sanders bill would join legislation introduced by Schumer and Senator Tammy Baldwin of Wisconsin to give the Securities and Exchange Commission authority to reject buybacks that, in its judgment, hurt workers. It also would require boards to certify that a repurchase is in the “best long-term financial interest of the company.” Baldwin has introduced another bill, cosponsored by presidential candidate Senator Elizabeth Warren that goes even further: It bans all open-market repurchases.
It’s no secret that the American economy is suffering from the twin ills of slow growth and rising income inequality. Many lay the blame at the doors of America’s largest public corporations. The charge: These firms prefer to distribute cash generated from their businesses to shareholders through stock buybacks and dividends rather than invest for the long term, undermining job growth and putting our economic future at risk. Excessive distributions to shareholders, it’s further claimed, also increase inequality: They cause wages to stagnate while enriching shareholders and executives.

Buybacks in particular have attracted the ire of corporate America’s critics. Larry Fink, CEO of the investment management firm BlackRock, for example, warned corporate leaders against seeking to “deliver immediate returns to shareholders, such as buy-backs...while underinvesting in innovation,
skilled workforces or essential capital expenditures necessary to sustain long-term growth.” Former U.S. Vice President Joseph Biden recently claimed that the high level of buybacks “has led to significant decline in business investment” with “most of the harm...borne by workers.” Critics often point to the high ratio of shareholder payouts to net income. As William Lazonick of the University of Massachusetts noted in these pages, stock repurchases and dividends totaled 91% of net income in S&P 500 firms from 2003 to 2012.

These claims are at odds with corporate leaders’ public statements about their commitment to long-term success. Boeing CEO Dennis Muilenburg, for example, notes that “Boeing has won in the marketplace for 100 years because of innovation, and we need to continue to invest in innovation for the future.” Amazon CEO Jeff Bezos sums up his philosophy in six words: “It’s all about the long term.” More significantly, publicly available data on corporate R&D expenditures and cash balances suggests that S&P 500 corporations are in fact spending considerable sums on innovation, in line with the priorities articulated by management—and have ample cash to spend even more.

To understand the disconnect, we decided to examine how S&P 500 companies are actually allocating capital between shareholders and internal investment. We found that these firms are in fact plowing substantial amounts of capital into R&D and capital expenditures. To be sure, the ratio of dividends and stock repurchases to net income is high, reaching 96% during the period from 2007 to 2016. But that ratio is misleading, because it ignores two important factors: First, much of the capital distributed by S&P 500 firms to shareholders via repurchases is returned to the firms, directly or indirectly, via equity issuances—that is, these companies buy back stock from shareholders, but they also sell new stock directly to investors, or grant equity to employees who then sell the shares to investors. Taking these inflows into account substantially changes the picture. Indeed, net shareholder payouts of the S&P 500 firms—which include not just buybacks and dividends but also equity issuances—amounted to only about 50% of net income during the period from 2007 to 2016.

To assess the impact of stock buybacks on the economy, we must look beyond the S&P 500. Second, net income is a poor metric of income potentially available for investment, because it measures what’s left after R&D investments and many other future-oriented expenditures have already been deducted. A better measure is what we call R&D-adjusted net income: the sum of R&D
and net income. If we use R&D-adjusted net income rather than net income in the denominator of our ratio, we see that net shareholder payouts by the S&P 500 from 2007 to 2016 were only about 41%.

The alarm over S&P 500 shareholder payouts reflects not only a misunderstanding of capital flows between those companies and their shareholders but also an exaggerated view of the S&P 500’s role in the nation’s economy. S&P 500 firms account for less than 50% of business profits and less than 20% of employment. To properly assess how net shareholder payouts by S&P 500 firms affect the long-term health of the U.S. economy overall, one must consider their effect on all companies. Capital flowing to S&P 500 shareholders does not go down the economic drain: Shareholders use much of the cash, we know, to invest in smaller public and private firms, supporting innovation and job growth throughout the economy.

The charge that S&P 500 shareholder payouts are starving the U.S. economy of investment does not stand up to the data. In this article, we examine that data, beginning with an analysis of capital expenditures and R&D investment in the S&P 500 over the past decade.

**The True Picture**

Make no mistake: The proportion of net income distributed to the shareholders of S&P 500 corporations is indeed high. From 2007 to 2016, the S&P 500 firms paid out $7 trillion to shareholders—$4.2 trillion through repurchases and $2.8 trillion through dividends—representing 96% of net income. Microsoft was one of the top cash distributors, paying out a total of $188 billion to shareholders.

**Shareholder Payouts Appear Excessive**

Critics’ claims that S&P 500 companies are being starved of investment capital are often supported by data showing that the ratio of shareholder payouts to net income is very high—96% during the period from 2007 to 2016. Stock repurchases, in particular, are lightning rods for controversy. The
year-to-year and cumulative charts below illustrate the critics’ case.

Those numbers appear to provide evidence that S&P 500 firms are draining themselves of capital for the long term: If firms are distributing almost all their net income through dividends and buybacks, the argument goes, how could they not be underinvesting? A closer examination of the data calls that conclusion into question, for two reasons.

**Internal investment is rising.**

If companies are distributing nearly all their net income to shareholders, one would expect to see little corporate investment. However, when we look at CAPEX and R&D as a percentage of revenue (a standard gauge of investment intensity used by economists) over the past 25 years, we see that the
overall investment intensity of S&P 500 firms, while quite volatile on a year-to-year basis, has been rising over the past decade, and is now near peak levels not seen since the late 1990s. Clearly, S&P 500 firms have found substantial capital for investment, notwithstanding large shareholder payouts.

**Investment Spending Nears a Record High**

Far from letting investment languish, S&P 500 firms have increased their R&D and capital expenditures as a percentage of revenue (a standard gauge of investment intensity). In fact, R&D spending is at a record high, and total investment is near peak levels last seen in the late 1990s.

![Graph showing investment spending](image)

**Cash balances are robust.**

Even though the investment intensity of the S&P 500 has been steadily rising, one could argue that it might be even higher if firms did not distribute so much capital to shareholders. But corporate cash stockpiles are huge and growing. In 2007 the S&P 500 firms held $2.8 trillion in cash plus cash-equivalent short-term investments. Over the next decade, they accumulated significantly more, ending up with $4.3 trillion in 2016—an increase of about 50%. As a proportion of total assets, cash
holdings increased by about 30% during this period. To be sure, some of this cash is held abroad and would be taxed if repatriated for investment. But we estimate that both domestic and foreign cash balances have either remained stable or increased during this time frame. And even if we assume that all the cash in 2016 was held abroad and would have been taxed on repatriation at the highest possible rate (35%), that would have left approximately $2.8 trillion available to S&P 500 firms in 2016 for internal investment.

**Cash Stockpiles Are Growing**

Cash plus cash-equivalent short-term investments of the S&P 500 have been steadily increasing from 2007 to 2016. As a proportion of total assets, cash holdings increased by about 30% during this period.

Solving the Puzzle
So what is causing the disconnect between robust investment and cash stockpiles, on the one hand, and claims of excessive shareholder payouts, on the other? The main problem lies in the ratio itself. It fails to account for offsetting equity issuances and assumes incorrectly that none of the expenses subtracted from revenue to arrive at net income is investment-related.

**Accounting for equity issuances.**

To properly understand how much capital is flowing between companies and shareholders, one must look at net shareholder payouts—dividends and repurchases minus equity issuances.

Some equity issuances are direct: The firm sells stock directly to public investors in exchange for cash, through an underwritten or at-the-market offering. But many equity issuances are indirect: The firm gives shares to a nonshareholder party in exchange for noncash economic consideration, and the nonshareholder party in turn sells the shares to public investors for cash. The economic consideration might be assets (for example, an acquiring firm issues its own equity to shareholders of the target firm) or services (a firm uses equity to compensate its employees, for instance). Our research shows that most equity issuances are indirect. About 50% of total equity issuances are to firms’ own employees, with the vast majority (85%) of those shares going to nonexecutive employees.

From an economic perspective, direct issuances and indirect ones are equivalent. Suppose a firm wishes to pay an employee $100 but has no cash available for that purpose. It could choose to give a share worth $100 to the employee, who could then sell the share to investors for $100 and pocket the cash. Or the firm could sell a share directly to shareholders for $100 and give the employee the cash. The two transactions have exactly the same effect on the firm, the employee, and shareholders.

Taking equity issuances into account has a dramatic effect. For example, we estimate that Microsoft’s net shareholder payouts from 2007 to 2016 totaled $139 billion—about 26% less than the $188 billion the firm distributed in repurchases and dividends. Microsoft is not an outlier. Across all S&P 500 firms, we estimate that direct and indirect equity issuances from 2007 to 2016 totaled $3.3 trillion—about 79% of the $4.2 trillion in repurchases over this period. As a proportion of net income, shareholder payouts for the S&P 500 totaled 96%, but net shareholder payouts totaled a much more modest 50%.
The Right Payout Measure

The “shareholder payouts” measure, commonly used to show that payouts are excessive, is flawed, because it fails to account for equity issuances. As a proportion of total net income generated by S&P 500 firms during 2007 to 2016, shareholder payouts totaled 96%, but “net shareholder payouts,” which includes equity issuances, totaled a more modest 50%.

Accounting for R&D.

In addition, net income, against which shareholder payouts are often compared, is a poor measure of the income available for internal investment. Why? Because it assumes that the expenses deducted to arrive at net income are entirely unrelated to future-oriented investment. But one of the major expense items deducted is R&D, which by its very nature is future oriented. At most, therefore, net income indicates the amount available for CAPEX and additional R&D.
We calculate that total R&D expenditures amounted to about 28% of total net income for S&P 500 firms from 2007 to 2016. When we add R&D expenses (net of tax effects) back into net income to arrive at R&D-adjusted net income, and then take into account equity issuances as well as shareholder payouts, the overall picture looks very different. From 2007 to 2016, net shareholder payouts by the S&P 500 constituted only 41.5% of R&D-adjusted net income. That left the S&P 500 with $5.2 trillion available for CAPEX, R&D, and other investments.

Measuring Investment Capacity

Just as “shareholder payouts” is a flawed measure, so too is “net income.” A more accurate measure is “R&D-adjusted net income,” which accounts for R&D expenditures. Thus, a better way to measure investment capacity is to subtract net shareholder payouts from R&D-adjusted net income. Here we see that from 2007 to 2016, S&P 500 firms had $5.2 trillion in R&D-adjusted net income remaining after net shareholder payouts.

Looking Beyond the S&P 500
The claim that excessive shareholder payouts by the S&P 500 harm the American economy suffers from another flaw: It assumes their shareholders do not put the funds they receive to productive use. We decided to investigate whether non-S&P 500 public firms—which are generally younger and faster growing—were absorbing some of the net shareholder payouts by S&P 500 firms, to fuel investment, innovation, and job creation. That is exactly what we found: Non-S&P 500 public firms were net importers of equity capital. In every single year of the 2007-2016 period, there were net shareholder inflows (that is, negative net shareholder payouts) in those firms. Over the decade, net shareholder inflows amounted to approximately $407 billion, or 11% of the $3.67 trillion in net shareholder payouts by S&P 500 firms.

We then looked at net shareholder payouts by all public companies, integrating data from both S&P 500 and non-S&P 500 firms from 2007 to 2016. These payouts amounted to $3.26 trillion, or 41% of net income (compared with 50% for the S&P 500) and 33% of R&D-adjusted net income (compared with 41% for the S&P 500).

**The Big Picture: Beyond the S&P 500**

Using the more accurate measures of net shareholder payouts and R&D-adjusted net income, and looking beyond the S&P 500 to all public firms, we see a new economic picture emerge. Net shareholder payouts amounted to $3.26 trillion during 2007 to 2016, which was only 33% of R&D-
It doesn’t end there. Just as a good portion of the net shareholder payouts by S&P 500 firms flows to smaller public firms, a considerable portion of the net shareholder payouts by all public companies is reinvested in firms raising capital through IPOs and in nonpublic businesses backed by venture capital and private equity. Although tracing capital flows into such companies is difficult, we do know that VC and PE funds are now raising more than $200 billion a year—a substantial fraction of the net shareholder payouts generated by all public firms—for investment in private firms.

These firms are vital to the U.S. economy. They account for more than 50% of nonresidential fixed investment, employ almost 70% of U.S. workers, and generate nearly half of business profits. And historically, private firms funded by VC and PE funds, including Silicon Valley start-ups, have generated tremendous innovation and job growth in the United States. Indeed, much of the critical innovation in our economy—including breakthroughs in pharmaceuticals and information
technology—takes place in small private firms. Even in the more “blue collar” field of energy, the most valuable and transformative innovations over the past decade have come out of small firms funded by PE and VC investors, not out of publicly traded firms, and have created millions of high-paying jobs. In short, one cannot assess the economic effects of net shareholder payouts by the S&P 500 without understanding how these flows affect all businesses in the economy.

**Income Effects: Winners and Losers**

Another criticism of S&P 500 shareholder payouts is that they increase the gulf between the haves and the have-nots. Buybacks, in particular, are thought to enrich executives and shareholders at the expense of regular employees. In fact, there is little reason to believe that these payouts have much effect on overall income inequality, although it is true that executives sometimes use repurchases to improperly benefit themselves. Let’s look at each group of stakeholders in turn.

**Employees.**

Employees of S&P 500 firms are unlikely to be systematically hurt by either dividends or buybacks. As we’ve seen, less than half of R&D-adjusted net income in S&P 500 firms is allocated to shareholders, with the remainder used for investment or to add to ever-growing cash stockpiles. Thus, when an S&P 500 firm sheds employees, it’s doubtful the downsizing is driven by lack of cash. A more likely culprit is changing business conditions. In our dynamic market economy, firms frequently expand and contract, with employees and assets moving from shrinking enterprises to growing ones. Indeed, if a firm is seen distributing cash to shareholders and laying off workers, the most plausible explanation is that it cannot efficiently utilize either all its cash or all its employees, not that the payout itself is causing the layoff.

Of course, an S&P 500 firm with promising business prospects might one day find itself too short on funds to retain or hire needed workers, perhaps because it made substantial cash payouts to shareholders in the past. But in such a case, the company could issue equity to raise cash. Or it could give employees more equity as part of their compensation packages to reduce cash outlays per worker. For any public firm, additional financing is easily available through direct and indirect equity issuances.
Finally, even if one believes that employees of S&P 500 firms are hurt by shareholder payouts, as critics claim, one should not assume that the effect on the nation’s workforce is damaging. To understand the payouts’ overall impact, one must consider their effect on the 80% of the workforce employed by private and non-S&P 500 firms. These workers could well benefit as the capital flowing from the S&P 500 is invested in the firms that employ them.

**Shareholders.**

When it comes to S&P 500 shareholders’ income, the effect of dividends and buybacks is more subtle than it might seem. From shareholders’ perspective, payouts merely convert one form of wealth (equity value) into another (cash). They alter the *timing of income*—shareholders get cash in their pocket this year rather than at some time in the future—but their overall wealth is unchanged. Thus, payouts’ effect on shareholders should not create persistent and systematic distributional effects in society.

Of course, a particular payout could increase shareholders’ total income over time if the returns the cash yields outside the firm are greater than those it would have yielded inside the firm. But such an occasion should be celebrated, not mourned. It is better to have a larger economic pie than a smaller one.

**Executives.**

When it comes to S&P 500 executives, the situation is also complex. Corporate leaders can profit from a payout even if there is no economic benefit to shareholders from distributing the cash, especially when the payout takes the form of a buyback. For example, a repurchase can enable executives to hit EPS bonus targets or engage in indirect insider trading. Such payout manipulation comes largely at the expense of public shareholders, who pay (directly or indirectly) for every extra dollar an executive takes home. It would not affect employees (except to the extent that they are also shareholders). Shareholders would lose even more if the cash distributed to boost an executive’s pay would have earned them a higher return inside the firm than outside it.

Payout manipulation by corporate leaders could increase income inequality by shifting income from high-income shareholders to even-higher-income executives. However, the effect on society overall is likely to be marginal. To start, although in certain circumstances payout manipulation might increase an S&P 500 executive’s pay substantially in any given year (by, say, 20% or more), the average effect of such manipulation on executive incomes will be much smaller. More important,
S&P 500 executives make up only a tiny minority of the top 0.1% of the U.S. economy (120,000 households) and account for an even smaller fraction of the top 1% (1.2 million households). Even if shareholder payouts improperly boosted each S&P 500 executive’s pay by 20% every year, they would barely cause America’s inequality needle to budge. There’s no question that executives’ opportunistic use of payouts is troubling, but the costs are borne by shareholders, not employees, and the effects on society-wide income inequality are likely to be imperceptibly small.

**CONCLUSION**

There is little evidence that buybacks and dividends by the S&P 500 are hurting the economy by depriving firms of capital they would otherwise use for investment and paying workers. Far from being starved of resources, S&P 500 companies are at near-peak levels of investment and have huge stockpiles of cash available for even more. Our analysis shows that the proportion of income available for investment that went to shareholders of the 500 over the past 10 years was a modest 41.5%—Less than half the amount claimed by critics. One must also recognize that some of the capital flowing to S&P 500 shareholders is then reinvested in smaller public companies and private firms, fueling growth and employment outside the S&P 500. And payouts don’t appear to meaningfully contribute to income inequality. There may well be severe corporate governance problems in the S&P 500, but the data suggests that excessive shareholder payouts is not one of them.

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PANELISTS AND MODERATOR:

Panelists and Moderator:
- Jesse M. Fried, Dane Professor of Law, Harvard Law School
- Ken Bertsch, Executive Director, Council of Institutional Investors
- Lisa M. Fairfax, Alexander Hamilton Professor of Business Law, George Washington University Law School
- Bruce Dravis, Chair of Corporate Governance Committee, ABA Business Law Section

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“Are Buybacks Really Shortchanging Investment?” by Jesse M. Fried and Charles C.Y. Wang

“Informed Trading and False Signaling with Open Market Repurchases,” Jesse M. Fried

“Insider Trading Via The Corporation,” Jesse M. Fried

“Senators take aim at the buyback boogeyman,” by Jesse M. Fried and Charles C.Y. Wang

“Restricting Stock Buybacks Will Hurt the Economy,” by Joshua Bolten and Ken Bertsch
ABSTRACT

Even though the multi-trillion dollar practice of public corporations repurchasing their shares has garnered academic and bi-partisan political criticism, imposing blanket restrictions on buybacks could have unintended consequences, because corporate finance questions and the role of buybacks in capital management for any individual company, are complex.

The program will consider that complexity in discussing various policy proposals being advanced to restrict or regulate stock buybacks.

Prof. Fried has written on how the idea that corporate expenditures replace expenditures for capital equipment and productive investment does not match to reality. He has also written critiques about the impact of buybacks on executive compensation practices.

Ken Bertsch, Executive Director of the Council of Institutional Investors, writes and speaks on the multiple, and occasionally conflicting, perspectives on buybacks held by institutional investors.

In “Dilution, Disclosure, Equity Compensation and Buybacks,” Mr. Dravis described how buybacks and equity compensation are complementary, but their connection is obscured by the asymmetrical timing, approval processes, and securities and financial disclosures for each. His article describes these differences, and quantifies the share-denominated and dollar-denominated effects of buyback and equity compensation transactions over a 10-year period for selected Fortune 100 companies.

Prof. Fairfax, in addition to serving as moderator for the panel, may speak to governance and corporate law issues relating to buybacks.