

Morgan Stanley

Journal of Applied Corporate Finance

SPRING 1995

VOLUME 8.1

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Financial economists have long been perplexed by discounts on closed-end funds. Closed-end funds are public corporations that invest in the securities of other corporations. In general, the only significant asset owned by a closed-end fund is its portfolio of marketable securities. The value of this portfolio, called its "net asset value," is reported weekly in the financial press. Thus, it is difficult to understand why the market value of the fund would differ systematically from the market value of the assets that it owns. Yet, many funds trade at substantial discounts to their net asset values.

These discounts are perplexing partly because it appears they can easily be eliminated by opening or liquidating the fund. Some have argued that closed-end funds are seldom opened because of a conflict of interest between shareholders and managers.¹ If managers own little of the fund, they would not benefit appreciably from the elimination of the discount, but would probably lose their jobs if the fund were opened. Consequently, managers resist open-ending proposals and the discounts persist. This reasoning leads to the prediction that discounts will decline as managerial stock ownership increases.

We find precisely the opposite relation between discounts and managerial stock ownership in our sample of closed-end funds between 1979 and 1989. The average discount for funds with blockholders is 14.2%, whereas the average discount for funds

without blockholders is only 4.1%. (Moreover, the relation between discounts and concentrated ownership is robust over time and insensitive to statistical specifications that control for other variables that are likely to affect the discounts.)

We argue that the observed relation between discounts and concentrated ownership stems from a conflict of interest *between large and small shareholders*. Large shareholders can use their voting power to secure private benefits that do not accrue to other shareholders. Although blockholders could immediately increase the value of their shares by opening the fund, they typically choose not to do so in order to preserve these private benefits. Thus, discounts persist because blockholders can veto any open-ending proposals.

To investigate whether blockholders receive private benefits from their control of closed-end funds, we examined press reports and corporate documents for all funds in our sample with blockholders in 1989. These reports suggest that blockholders receive a variety of private benefits. Some blockholders receive direct pecuniary transfers from the fund, including management fees, payments for financial research, and commissions on trades made by the fund. Similarly, relatives and close associates of the blockholder are often employed by the fund. Other benefits are nonpecuniary. For example, the fund may carry the blockholder's name, promoting family pride and prestige.

*This article is a shortened, less technical version of "Private Benefits from Block Ownership and Discounts on Closed-End Funds," *Journal of Financial Economics* (1993).

1. See, for example, Gregory A. Brauer, "Open-ending Closed-end Funds," *Journal of Financial Economics* 13 (1984), 461-507; and Rex Thompson, "The

Information Content of Discounts and Premiums on Closed-end Fund Shares," *Journal of Financial Economics* 6 (1978), 151-186.

The relation between ownership concentration and discounts on closed-end funds has implications for three areas of interest to researchers and practitioners. First, researchers have had difficulty in identifying significant cross-sectional determinants of closed-end fund discounts. The relation we document is both empirically robust and intuitively appealing. Second, our evidence that blockholders use their voting power to secure private benefits complements previous studies that find evidence of private benefits from control of more traditional corporations.² Finally, our results are relevant to the more general debate on the relation between concentrated stock ownership and firm value. We establish that different blockholders have different effects on the value of closed-end funds. Some blockholders accumulate a block and attempt to open the fund. If they succeed, they increase firm value. Management-affiliated blockholders, by contrast, often appear to consume private benefits and resist open-ending attempts. These blockholders tend to decrease firm value.

EMPIRICAL EVIDENCE ON DISCOUNTS AND CONCENTRATED OWNERSHIP

To obtain a sample of closed-end funds, we started with all funds listed in *Barron's* during 1979, 1984, or 1989. We excluded municipal-bond funds, dual-purpose funds, foreign funds, and funds that were scheduled to be opened. We then recorded the shareholdings of officers and directors, and the identity and shareholdings of blockholders who own 5% or more of the fund's common stock. Our final sample consists of 111 funds in 1989, 41 funds in 1984, and 48 funds in 1979. In all, we studied 138 different funds.

Friendly and Hostile Blockholders in Closed-End Funds

There are two distinct motives for holding a large-percentage block of a closed-end fund. The relation between block ownership and discounts is likely to depend on which motive predominates. Consequently, we separated our blockholders into two groups.

One motive for holding a large-percentage block in a closed-end fund is to acquire private benefits from controlling the fund. Blockholders motivated by private benefits are typically closely affiliated with management; and because they are receiving private benefits, they hold their blocks for long periods. We expect funds with blockholders who are consuming private benefits to trade at discounts because these blockholders have incentives to resist open-ending proposals.

Other blockholders accumulate their shares as part of an attempt to open the fund, with the objective of gaining the difference between the purchase price of their shares and net asset value. If these investors are attracted to the funds with the largest discounts, there will be a positive relation between the size of the discount and the likelihood of a block accumulation. As the blockholder's intention becomes known, however, discounts typically shrink or disappear, reflecting the increased likelihood that the fund will be opened. Thus, the expected cross-sectional relation between discounts and blocks motivated by potential open-ending proposals is unclear.

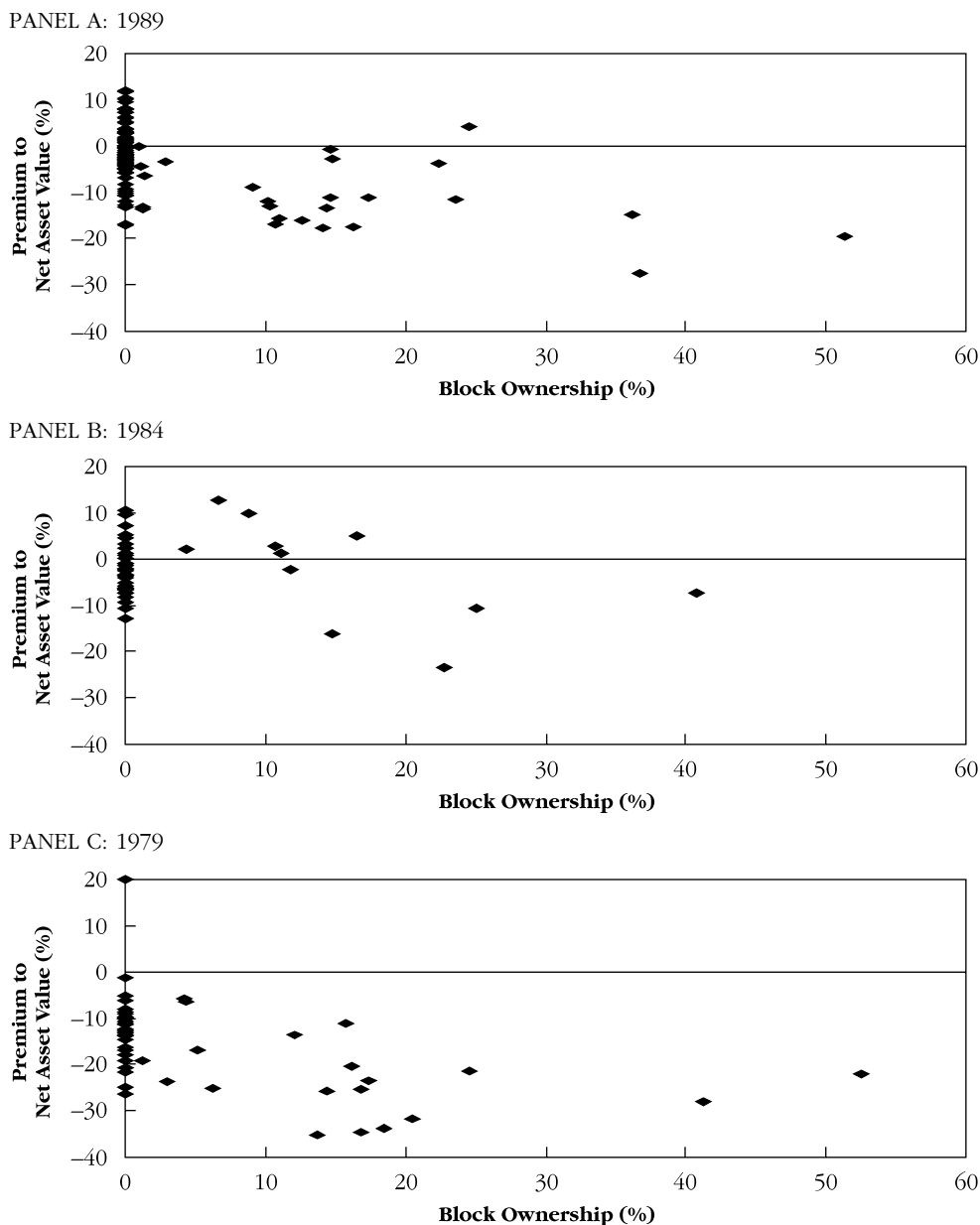
To avoid the ambiguity associated with blocks accumulated to open a fund, we attempted to identify such blocks by searching the Dow Jones News Retrieval Service and *The Wall Street Journal Index*. If a news release suggested that a blockholder might try to open the fund, we classified that blockholder as hostile toward management. Eight funds in our sample had hostile blockholders. All other blockholders were classified as friendly toward management.

Summary Statistics

Many of our key empirical findings are evident in the scatter plots in Figure 1. First, the motivation for our study was the seemingly anomalous observation that funds with concentrated ownership typically trade at substantial discounts, even though blockholders in these funds could eliminate the discount by voting to open the fund. In all sample years, we found that each fund with blockholdings in excess of 30% traded at a large discount. Moreover, the scatter plots suggest a systematic relation between blockholdings and discounts on closed-

2. Michael J. Barclay and Clifford G. Holderness, "Private Benefits from Control of Public Corporations," *Journal of Financial Economics* 25 (1989), 371-397.

FIGURE 1
 PREMIUMS TO NET ASSET
 VALUE AGAINST THE
 FRACTIONAL SIZE OF
 LARGE-PERCENTAGE
 BLOCKS IN CLOSED-END
 FUNDS



end funds: the larger the blockholdings, the larger the discount.³ Indeed, the funds in our sample with blockholders had an average discount of 14.2%. Funds without blockholders, in contrast, had an average discount of only 4.1%. (This difference is statistically significant.)

Regression Analysis

We next used regression analysis to estimate the effect of friendly blockholdings on the value of closed-end funds. A simple regression (regression 1 in Table 1) of the premiums to net asset value on the fractional

3. Although blocks that are hostile toward management are excluded from the scatter plots, seven of the eight funds with hostile blockholders also trade at a discount.

The average discount for funds with blockholders is 14.2%, whereas the average discount for funds without blockholders is only 4.1%. (Moreover, the relation between discounts and concentrated ownership is robust over time and unaffected by controls for other variables likely to affect the discounts.)

TABLE 1
ORDINARY-LEAST-SQUARES
REGRESSIONS OF THE
PREMIUMS TO NET ASSET
VALUE FOR 200 CLOSED-
END FUNDS ON THE
FRACTIONAL OWNERSHIP
OF LARGE-PERCENTAGE
BLOCKHOLDERS FRIENDLY
TO MANAGEMENT AND
OTHER FUND
CHARACTERISTICS*

| | Regression Number | | | | | | |
|-----------------------------|-------------------|-------------------|------------------|-------------------|-------------------|-------------------|-------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| Intercept | -2.07 (-2.96) | -6.08 (-5.53) | -6.64 (-6.04) | -12.04 (-3.82) | -12.19 (-3.96) | -14.33 (-4.80) | -12.18 (-3.71) |
| 1979 Dummy | -11.78 (-9.51) | -11.01 (-9.24) | -10.79 (-9.2) | -11.01 (-9.36) | -11.03 (-9.41) | -10.62 (-9.07) | N.A. |
| 1984 Dummy | 0.52 (0.40) | 0.94 (0.75) | 1.39 (1.13) | 1.56 (1.33) | 1.54 (1.31) | 1.74 (1.51) | N.A. |
| Bond Fund Dummy | | 5.32 (4.62) | 5.82 (5.07) | 6.19 (5.83) | 6.21 (5.85) | 6.32 (6.04) | 7.33 (5.52) |
| Friendly Blockholdings | -0.39 (-7.19) | -0.25 (-4.18) | -0.25 (-4.19) | -0.21 (-3.60) | | -0.19 (-3.24) | -0.24 (3.28) |
| Hostile Blockholdings | | | 0.30 (2.69) | -0.14 (-1.04) | | -0.11 (-0.83) | -0.13 (-1.04) |
| Total Blockholdings | | | | | -0.20 (-3.65) | | |
| Expense Ratio | | | | 1.37 (1.51) | 1.50 (1.70) | 1.56 (1.74) | 1.92 (2.11) |
| Log of NAV | | | | 0.74 (1.64) | 0.74 (1.65) | | 0.40 (0.76) |
| Diffusely Held Shares | | | | | | 1.13 (2.57) | |
| Turnover Ratio | | | | | | | 0.01 (1.00) |
| Restricted Securities Dummy | | | | | | | -1.98 (-0.69) |
| Number of Observations | 200 | 200 | 200 | 193 | 193 | 193 | 109 |
| Adjusted R ² | .46 | .51 | .52 | .58 | .59 | .59 | .46 |

*t-statistics in parentheses. Data from *Thomas J. Herzfeld 1990/1991 Encyclopedia of Closed-End Funds*, Barron's, annual proxy statements, and Dow Jones News Retrieval.
N.A. Not Applicable (Data available for 1989 only)

size of the friendly blockholdings (and dummy variables for 1979 and 1984) showed that a one percentage point increase in blockholdings increases the expected discount by 0.46 percentage points.

We then used multiple regressions to attempt to control for other factors that could affect the magnitude of premiums. Among the variables we controlled for are the following: a fund's holding of restricted securities, a fund's expense ratio, the size of a fund, the liquidity of a fund's common stock, and

our classification of friendly and hostile blockholders. Even after controlling for these variables (see regressions 2-7 in Table 1), the coefficient for block size remains negative, significant, and approximately the same size as in the simple regression.

A Closer Examination of Fund Expenses

A blockholder can extract private benefits from a closed-end fund by paying himself and his associ-

ates large salaries, generating large brokerage commissions and other expenses by excessive trading, or consuming perquisites such as a lavish office. Because these direct pecuniary benefits should show up in the fund's expenses, we examined the expense ratio more closely. As with previous academic research, we failed to find a systematic relation between discounts and fund expenses. Furthermore, we found no evidence that funds with blockholders have higher average expense ratios than funds without blockholders.

In retrospect, it may not be surprising that it is difficult to identify a relation between expense ratios and discounts. Investors use expense ratios to evaluate a fund's management. In addition, under the Investment Company Act of 1970, high expense ratios can trigger legal action; thus fund managers have an incentive to keep their expense ratios within industry standards. In addition, not all fund expenses are siphoned off as private benefits. Research and trading expenses, for example, can improve portfolio performance.

Given the problems associated with the expense ratio's visibility, blockholders are more likely to consume private benefits by diverting existing expenses from profitable activities than by increasing the overall level of expenses. For example, a blockholder may manage the fund's portfolio himself rather than hiring a more competent manager. If blockholders are more likely to divert the fund's expenses from productive activities, the discounts on funds with blockholders should be more sensitive to the level of expenses than the discounts on funds without blockholders.

We tested this hypothesis using regression analysis by including an interactive term that is the product of the blockholder variable and the expense ratio. The interactive term in this regression (not reported) was negative and statistically significant, suggesting that expenses are a better predictor of discounts for funds with blockholders than for funds without blockholders. This finding in turn suggests that market participants are not worried about expenses in diffusely held funds. If the expenses become excessive, outsiders can accumulate a block and open the fund. But if fund managers own a sufficiently large block of stock, this control mechanism cannot operate. Consequently, market participants do seem to be concerned when a fund with concentrated ownership has large expenses.

PRIVATE BENEFITS FROM CONTROL OF CLOSED-END FUNDS

If all shareholders received the same proportional benefits from their investments in closed-end funds, it would be difficult to understand why blockholders veto open-ending proposals when funds are trading at substantial discounts. After all, a blockholder presumably would benefit most from eliminating the discount. On the other hand, if blockholders are receiving private benefits from a fund, their efforts to maintain the fund's closed-end status can be seen as rational attempts to preserve those benefits.

We explored the issue of private benefits by using public documents to investigate the funds in our sample that had large-block shareholders in 1989. By examining these documents, we hoped to illuminate both the nature and pervasiveness of the possible private benefits. The results of our investigation are discussed below (and summarized in Table 2).

Direct Pecuniary Transfers

In at least 13 of the 19 funds with friendly blockholders, the blockholder was receiving direct pecuniary transfers from the fund. In seven cases, the blockholder received a salary; and in six additional cases, he owned a firm that received management fees, payments for financial research, or commissions on trades made by the fund.

We do not imply that any of these payments were improper, but the circumstances surrounding a number of them raise questions. For example, 37% of Central Securities' common stock is owned by the Christian A. Johnson Foundation, which makes charitable grants in the New York area. The late Christian Johnson was the founder of Central and the benefactor of the foundation. His widow, who owns 9% of the company, and daughter are two of the foundation's four trustees. The current chief executive officer of Central Securities is Wilmot H. Kidd. In 1970, Mr. Kidd married Mrs. Johnson's daughter. Two years later, at the age of 32, he joined the firm and immediately became the CEO, replacing a person who had held the position for only one year. At the time of Mr. Kidd's ascendance, a member of the Johnson family was serving as both a director of Central and a trustee of the foundation.

A blockholder can extract private benefits from a closed-end fund by paying himself and his associates large salaries, generating large brokerage commissions and other expenses by excessive trading, or consuming perquisites.

TABLE 2

DESCRIPTION OF POTENTIAL PRIVATE BENEFITS RECEIVED BY BLOCKHOLDERS FRIENDLY TO MANAGEMENT IN CLOSED-END FUNDS AND A LIST OF FUNDS IN WHICH BLOCKHOLDERS ARE POTENTIALLY RECEIVING THESE BENEFITS*

| Description of Private Benefits Received by Blockholders | Funds in which Blockholders Are Potentially Receiving these Benefits |
|---|---|
| Blockholder receives compensation as an employee of the fund | Baker, Fentress and Company; Central Securities; Cypress Fund; General American Investors Company; Niagara Share Corporation; Nicholas Applegate Growth Equity Fund, Inc.; Petroleum & Resources Corporation; Schafer Value Trust Inc.; Z-Seven Fund Inc. |
| Blockholder owns a company that is receiving fees for management or administration of the fund, payment for financial research, or commissions on trades made by the fund | Bergstrom Capital Corporation; Castle Convertible Fund; Engex; Liberty All Star Equity Fund; Morgan Grenfell SMALLCap Fund; UFS&G Pacholder Fund |
| Fund employs relative or close associate of the blockholder | Baker, Fentress and Company; Castle Convertible Fund; Central Securities; Niagara Share Corporation; Z-Seven Fund, Inc. |
| Fund carries the blockholder's family name | Baker, Fentress and Company; Bergstrom Capital Corporation; Morgan Grenfell SMALLCap Fund; Schafer Value Trust, Inc. |
| Blockholder benefits from voting rights associated with equity securities in the fund's portfolio | Baker, Fentress and Company |
| Fund used to purchase securities from initial public offerings underwritten by the blockholder | Engex |
| Costly actions financed by the fund to resist an open-ending proposal | Baker, Fentress and Company; Cypress Fund; Liberty All-Star Equity Fund; Schafer Value Trust, Inc. |
| Large block of the fund's stock owned by a nonprofit organization | Bergstrom Capital Corporation; Central Securities; Morgan Grenfell SMALLCap Fund; Nicholas-Applegate Growth Equity Fund, Inc.; Royce Value Trust |

*Information from *Thomas J. Herzfeld 1990/1991 Encyclopedia of Closed-End Funds*, Barron's, Dow Jones News Retrieval, and annual proxy statements.

In Mr. Kidd's first three years as chief executive, Central lost 70% of its market value.⁴ Under his leadership from 1972 to 1989, Central Securities' stock underperformed the value-weighted market index by 148 percentage points. In 1989 Mr. Kidd's salary was \$120,000.

The family aspect of Central Securities is not unique. For example, Baker, Fentress and Company has a history of employing relatives and close friends of large shareholders. James Fentress, son of one of the fund's founders, led the company from 1960 until his death in 1987. Both the fund's present chairman

and a director are brothers-in-law of James Fentress, and another director is his son-in-law. Similarly, Paul A. Schoelkoph, chairman of the board of Niagara Share Corp., owns 13% of that fund's common stock; and Schoelkoph's nephew is the vice chairman of the board and another of his relatives is also a director. In yet another case, the president of Z-Seven Fund, Barry Ziskin, owns 21% of its common stock. Ziskin's younger sister, a student, has been on the board of directors since 1989.

In several cases in which the blockholder advises the fund, there have been allegations of

4. The return on the stock market index over this period was -27%.

excessive management fees or portfolio churning. In some of these cases, the blockholder receives substantial management fees without making any investment decisions. For example, Liberty Asset Management Company (solely owned by Liberty Mutual Insurance Co., a 13% blockholder) receives 60% of all management fees paid by Liberty All Star Fund, yet all investment decisions are made by subadvisors.⁵ Similarly, Bergstrom Advisors subcontracts 84% of all investment decisions for Bergstrom Capital Corp. Erik Bergstrom owns all of Bergstrom Advisors and 21% of Bergstrom Capital.

Other Benefits

Not all benefits for blockholders stem from employment agreements. Other benefits are less systematic and depend on the particular circumstances of the fund or its blockholders. For example, Morton Davis, chairman of a fund called Engex, also owns an investment bank, D. H. Blair & Company, and derives most of his income from underwriting initial public offerings for small companies. On several occasions, in possible violation of federal securities law, Engex purchased shares from D. H. Blair while Blair was in the process of underwriting them. In 1987, the SEC ordered D. H. Blair to make up any losses incurred by Engex on IPOs underwritten by Blair.⁶ Presumably, the SEC was concerned about the potential for Davis to subsidize his investment banking firm at the expense of the closed-end fund by directing Engex to purchase undersubscribed issues that Blair was underwriting.

In other cases, blockholders in closed-end funds apparently received private benefits from the voting rights associated with the securities in the fund's portfolio. For example, Alger Chaney was the CEO of Medford Corp., an Oregon timber and plywood company. Chaney was also a senior vice president and the largest shareholder of Baker,

Fentress and Co. When Amalgamated Sugar attempted to take over Medford in 1984, Baker, Fentress used its 28% block of Medford stock in an attempt to defeat the takeover and thus preserve Chaney's position at Medford. Only after Baker, Fentress was itself in danger of being taken over by Amalgamated did it agree to sell its Medford stock.

Medford was eventually taken over by Amalgamated and Chaney was relieved as CEO. He remains a senior vice president at Baker, Fentress, however, and has been able to perform his duties for the Chicago-based fund from his residence in Pebble Beach, California.

Efforts by Blockholders to Maintain the Fund's Closed-end Status

Indirect evidence consistent with our proposition that blockholders receive private benefits comes from the intensity with which blockholders fight to maintain a fund's closed-end status. For example, in 1987 the Vanguard Group proposed converting Liberty All Star to an open-end investment company. Vanguard claimed this would produce an immediate gain of \$90 million for shareholders. Vanguard further proposed that it would provide all management and administrative services for the fund for only \$600,000 per year, reducing the annual administrative expenses by \$1.8 million.

After several years of fighting, Liberty Asset Management and its parent, Liberty Mutual Insurance Co., defeated the Vanguard proposal. The fund's directors, one of whom was a full-time employee of Liberty Management and the other three who served as directors of other Liberty Mutual investment funds, rejected Vanguard's proposal as "inconsistent with the fundamental premises on which [the fund] was structured and its shares sold to the public...and not in the best interest of shareholders."⁷

5. Liberty Management is further compensated for "payment of brokerage fees and commissions, audits, transfer and custodian fees, record-keeping, legal fees, quotation fees, fidelity bonds," and many other expenses, including "any extraordinary expense of a nonrecurring nature." *Barron's*, March 7, 1988, p. 9. It is interesting that Liberty Management's compensation is based on net asset value, rather than on the market value of the fund itself. This arrangement, which is typical with closed-end funds, reduces Liberty Management's incentive to eliminate any discount.

6. In 1987 Engex and Blair were ordered by the SEC "to enact an unusual indemnification agreement in which the brokerage firm promised to make up any losses that Engex incurred on four [stocks that Blair had underwritten]." *New York Times*, July 15, 1990, p. F13. The SEC asserted that it was a violation of securities laws for Engex to purchase shares when Blair was in the process of underwriting

them. The SEC also ordered Blair to refund to Engex \$157,410 in commissions on those trades. A Blair executive claimed that these problems stemmed from a mistake by the firm's lawyers and stated that corrective steps had been taken. Two years later, however, Engex reported that "as the result of a routine examination by the SEC, Blair reimbursed the Fund for losses incurred by the Fund on purchases by the Fund from Blair as principal. The reimbursement amounted to over \$75,000." Engex, Annual Report, March 19, 1990, p. 3. This time, the Blair executive said, the problem was a failure to segregate customers' orders properly: "If we do a trade for Engex, we can't do a markup, but if we do it for a customer, we can." *New York Times*, July 15, 1990, p. F13. The executive also remarked, "I don't really know [why Engex trades at a discount]. As far as I know, it has never traded at a premium." *New York Times*, July 15, 1990, p. F13.

7. *The Wall Street Journal*, December 24, 1987, p. 25.

In at least 13 of the 19 funds with friendly blockholders, the blockholder was receiving direct pecuniary transfers from the fund. In seven cases, the blockholder received a salary; and in six additional cases, he owned a firm that received management fees, payments for financial research, or commissions on trades made by the fund.

Schafer Value Trust was controlled by David Schafer, president and owner of 11.5% of the stock. When outside investors accumulated 29.4% of the fund and attempted to liquidate it in 1989, Schafer spent \$728,000 of the fund's resources on legal fees to stop the liquidation. These fees amounted to nearly 1% of the total value of the fund and were almost as large as the management fees paid to Schafer Capital Management (\$928,000 in 1989).

Nonprofit Ownership of Closed-end Funds

In five funds in our sample, nonprofit organizations own substantial blocks. The conflicts of interest between large and small shareholders are likely to be exacerbated when the large shareholder is a nonprofit organization. Since the trustees who vote these shares do not bear the wealth effects associated with the fund's performance, they face lower costs of consuming private benefits. For example, as noted earlier, the Christian A. Johnson Foundation owns 37% of Central Securities, and two of its four trustees are members of the Johnson family. Because the block is owned by a nonprofit organization, the Johnson family suffered few of the wealth consequences of the fund's 70% decline in value after Mrs. Johnson's son-in-law became chief executive officer. Moreover, if the fund were opened now, the foundation's block would increase in value by \$8.4 million. This increase would not go to the trustees, however, but to the charities that receive grants from the foundation.⁸

Differences between Equity and Bond Funds

Equity funds typically have more concentrated ownership and larger discounts than bond funds. Only 3 of the 119 bond funds in our sample have [had] blockholders, compared with 41 of the 81 equity funds. This suggests that there are fewer private benefits associated with control of closed-end bond funds. There are several important differences between equity and bond funds that result in more opportunities to consume private benefits among equity funds.

First, net asset values fluctuate more for equity funds than for bond funds. This greater volatility makes it more difficult to detect poor performance

generated by a blockholder's consumption of private benefits. If minority shareholders can impose costs on blockholders through lawsuits or proxy contests, blockholders whose private benefits are likely to result in poor performance will concentrate in equity funds, where performance evaluation is more difficult.

The voting rights associated with equity securities provide an additional source of private benefits that is not available with bond funds. Blockholders in equity funds can sometimes use the votes associated with the securities in the fund's portfolio to their private advantage. For example, as noted earlier, Baker, Fentress & Co. obstructed the takeover of Medford Corp., arguably to perpetuate the control of Medford by Baker's largest shareholder, Alger Chaney.

Summary of Private Benefits to Blockholders

Three major findings emerge from our examination of closed-end funds with large blockholders. First, blockholders often appear to receive private benefits from a variety of sources. As one further example, Fred M. Alger III controls 13.8% of Castle Convertible Fund. Alger is the president and chairman of the fund, his brother is the fund's executive vice president, and Alger's firm, Alger Associates, manages the fund's portfolio.

The second major finding is that it seems rational for self-interested blockholders to resist open-ending proposals to preserve their private benefits. For example, if Liberty All Star were opened and its stock price increased to net asset value, Liberty Mutual's block would increase in value by approximately \$10.7 million. Liberty Management's contract with the fund would also be terminated, however, costing Liberty Mutual the nearly \$3 million per year it receives for overseeing the five investment managers and administering the fund.⁹ Although we cannot determine whether Liberty Mutual has acted rationally in opposing three open-ending proposals (because we cannot be sure we have identified all of the private benefits and because we do not know Liberty Mutual's costs to administer the fund), the available information does not support the proposition that Liberty Mutual has made a mistake.

Finally, our evidence suggests that blockholders do not invest in closed-end funds to take advantage

8. In contrast, the value of the Johnson family's personal holdings would increase by only \$3.6 million.

9. Liberty All-Star's annual report indicates that Liberty Management has only six staff employees.

of the funds' superior expected future performance. Although funds that trade at premiums or lower-than-average discounts do tend to outperform the market for a time, a 1991 study by one of the current authors shows that the ability of discounts to predict future returns virtually disappears after five months.¹⁰ If blockholders were motivated by the prospect of these abnormal returns, we would not expect them to hold their blocks for long periods (sometimes decades); nor would we expect them to spend considerable resources to resist open-ending proposals. The evidence instead suggests that blockholders hold their blocks for long periods and resist open-ending proposals to consume private benefits.

IMPLICATIONS

Previous studies have had limited success in identifying cross-sectional determinants of the discounts on closed-end funds. For example, Burton Malkiel's 1977 study investigated fund payout policy, unrealized capital gains, holdings of restricted stock and other nontraded securities, holdings of foreign securities, fund performance, portfolio turnover, and management fees.¹¹ Of these factors, however, only unrealized capital gains and holdings of restricted stock have significant ability to explain discounts. Similarly, the 1991 study cited above finds no evidence that smaller discounts are followed by higher future returns.

In contrast, the relation we document between concentrated ownership and discounts is robust, stable over time, and insensitive to various model specifications that control for the variables used in previous attempts to explain the discounts. Combined with our direct evidence of private benefits, this relation between discounts and concentrated ownership suggests that private benefits accruing to blockholders can cause some funds to trade at discounts. In particular, we find that discounts on funds with blockholders are sensitive to the level of fund expenses.

Block ownership also helps explain why market participants seldom are able to eliminate dis-

counts by opening the fund. In contrast to shareholders in open-end funds, shareholders in closed-end funds cannot withdraw their assets if private benefits become excessive.¹² In addition, the presence of blockholders who want to preserve the fund's closed-end status makes it difficult for traders to eliminate discounts by buying shares and opening the fund. The larger the blockholdings, the lower the probability that the fund will be opened, and thus the larger the discount.

Others have tried to explain discounts by focusing on the traditional agency conflict between owners and managers. In their view, managers bear few of the wealth effects of discounts and resist open-ending to preserve their jobs. We argue that, to the contrary, managers or blockholders affiliated with them often bear a large percentage of the wealth effects of the discounts. Nevertheless, such blockholders rationally choose not to open the funds to preserve their private benefits.

But it is also important to recognize that there are several other puzzling aspects of closed-end funds that we do not address in our research. First, we do not claim that block ownership is the only factor associated with discounts on closed-end funds. In addition, we do not focus on how and why these discounts vary over time. Finally, we do not attempt to explain why discounts typically increase after initial public offerings¹³ or why some funds sell at premiums.

Private Benefits from Control of Public Corporations

Our findings also have more general implications for the division of corporate benefits among shareholders. The persistence of the discounts, the apparent unwillingness of many blockholders to open the funds, and the direct evidence from a close examination of individual funds suggest that some blockholders receive private benefits from control of closed-end funds. We also find that discounts on closed-end funds, and thus presumably the private benefits, increase with the fractional size of the block.

10. Jeffrey Pontiff, "Closed-end Fund Premia and Returns: Implications for Financial Market Equilibrium," Working paper (University of Washington, Seattle, WA, 1991).

11. Burton G. Malkiel, "The Valuation of Closed-end Investment Company Shares," *Journal of Finance* 32 (1977), 847-859.

12. For an explanation why the option of claimholders to withdraw funds is an important control mechanism in mutual organizations, see Eugene Fama and

Michael C. Jensen, "Agency Problems and Residual Claims," *Journal of Law and Economics* 26 (1983), 327-349.

13. See Kathleen Weiss, "The Post-offering Performance of Closed-end Funds," *Financial Management* 18 (1989), 57-67.

There is an inherent conflict associated with block ownership: Blockholders have an incentive to improve firm management and thus increase the value of their shares. At the same time, they also have an incentive to consume corporate resources to the exclusion of minority shareholders.

These findings complement the findings of a 1989 study (by two of the present authors)¹⁴ that provides evidence of private benefits from control of more traditional corporations. This study documents that trades of large-percentage blocks of stock are typically priced at substantial premiums to the exchange price as measured after the announcement of the trade. The study attributes those premiums to the private benefits that block purchasers expect to realize from their control of the corporation. Just as we find that discounts on closed-end funds increase with the fractional size of the block, the study of block trades documents that block premiums—and presumably the value of private benefits—increase with the fractional size of large blocks of stock in public corporations.

Managerial Stock Ownership and Firm Value

The corporate finance literature advances two competing hypotheses about the relation between managerial stock ownership and firm value. The *convergence-of-interest* hypothesis holds that as management ownership increases, managers bear a larger fraction of the costs associated with non-value-maximizing behavior and thus are less likely to engage in it. This hypothesis predicts that, as management holdings increase, firm value will increase. The *entrenchment* hypothesis, on the other hand, holds that when managers have effective voting control of the corporation, they are able to consume private benefits with little fear of a hostile control contest. This hypothesis predicts that as management holdings increase, firm value will decrease.

Academic investigations attempting to distinguish between these two hypotheses have produced mixed results. Consistent with the entrenchment hypothesis, our study of closed-end mutual funds finds that as managerial stock ownership increases, firm value decreases (that is, discounts increase). One must be cautious, however, in applying this finding to blockholders in general. Closed-end funds have an inherent survivorship bias that is directly related to their ownership structure. More specifically, most samples of closed-end funds underrepresent funds with hostile blockholders who

engage in value-increasing open-ending attempts. When these hostile blockholders are successful, the fund is opened or liquidated, and it drops out of the sample. When they are unsuccessful, the hostile blockholders typically sell their stock and move on to other activities. Thus, the surviving sample tends to overrepresent both funds with diffuse ownership and funds with friendly inside blockholders who apparently consume private benefits.

To investigate the importance of this survivorship issue, we recently examined ten closed-end funds that were delisted from the New York or American Stock Exchange between 1970 and 1989. We found that every one of these funds had at least one blockholder when it was opened (in contrast, only 19% of the funds in our primary sample have blockholders).

Our investigation further revealed that open-ending proposals are typically initiated by outsiders who accumulate blocks with the express intent of opening the fund. Most of the hostile blockholders announce their intention to open the fund immediately after accumulating their blocks and either accomplish this goal or sell their shares within two years of their block accumulation.¹⁵

These results highlight an inherent conflict associated with block ownership.¹⁶ Blockholders have an incentive to improve firm management and thus increase the value of their shares. At the same time, they also have an incentive to consume corporate resources to the exclusion of minority shareholders. When interpreting our results, it is important to remember that these incentives are not mutually exclusive, and that the net effect of block ownership on firm value will depend on the net effect of these conflicting activities.

CONCLUSION

The central finding of our study of closed-end mutual funds is the strong relation between concentrated stock ownership and discounts on closed-end funds. The larger the percentage of stock owned by or affiliated with management, the larger the discount. This finding is not immediately intuitive, since one would expect blockholders to have both the

14. Michael J. Barclay and Clifford G. Holderness, "Private Benefits from Control of Public Corporations," *Journal of Financial Economics* 25 (1989), 371-397.

15. Other blockholders in this sample accumulated their shares after it became apparent that the fund would open. These blockholders are typically organizations

with low marginal tax rates (such as pension funds or nonprofits) that consequently have a comparative advantage in incurring the fund's capital gains tax liability.

16. This conflict is discussed in detail in Michael Barclay and Clifford G. Holderness, "The Law and Large Block Trades," *Journal of Law and Economics* (October 1992).

financial incentives and the voting power to open the fund and capture the discount.

We argue, however, that many blockholders rationally choose not to open funds because they are receiving private benefits. We support this argument by documenting a wide range of private benefits that blockholders receive. We also find that discounts are more sensitive to fund expenses for funds with blockholders than for funds without blockholders, which suggests that blockholders can divert some expenses from productive activities.

Our evidence on the relation between concentrated ownership and discounts on closed-end funds contributes to three areas of discussion in finance:

First, empirical tests have been largely unsuccessful in explaining the cross-sectional variation in closed-end fund discounts. The relation we find between discounts and ownership concentration is stable over time and unaffected by various model specifications that control for other variables that are likely to affect the discounts.

Second, we show that some blockholders apparently receive private benefits that do not accrue to other shareholders. These private benefits seem to be the logical explanation for blockholders' unwillingness to open funds that are trading at substantial discounts. Among the potential private benefits are the involvement of a blockholder and his relatives in the management of the fund, pecuniary transfers from the fund to companies controlled by the blockholder, and the personal promotion and advertising that result when the fund uses the blockholder's family name.

Third and finally, we add to the more general debate over the relation between ownership concentration and firm value. Consistent with the entrenchment hypothesis, we find a strong negative relation between management-affiliated stockholding and firm value in our sample of closed-end funds. Nevertheless, when outsiders accumulate large blocks, they often use their voting power to increase firm value by opening the fund.

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Journal of Applied Corporate Finance (ISSN 1078-1196 [print], ISSN 1745-6622 [online]) is published quarterly on behalf of Morgan Stanley by Blackwell Publishing, with offices at 350 Main Street, Malden, MA 02148, USA, and PO Box 1354, 9600 Garsington Road, Oxford OX4 2XG, UK. Call US: (800) 835-6770, UK: +44 1865 778315; fax US: (781) 388-8232, UK: +44 1865 471775, or e-mail: subscrip@bos.blackwellpublishing.com.

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