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The Closed-End Fund Market, 2022

KEY FINDINGS

- » **Total closed-end fund assets were \$252 billion at year-end 2022.** Total assets decreased 19 percent from their level at year-end 2021, primarily driven by sharp downturns in both equity and bond markets.
- » **Price deviations from net asset values on closed-end funds widened somewhat in 2022.** Closed-end fund discounts have persisted over time, and the majority of closed-end funds generally trade at a discount.
- » **Overall investor demand for closed-end fund shares weakened in 2022.** Closed-end fund shares experienced net redemptions of \$489 million in 2022 compared with strong net issuance of \$17.2 billion in 2021.
- » **Competitive dynamics have prevented any single closed-end fund sponsor from dominating the closed-end fund market.** At year-end 2022, there were 91 closed-end fund sponsors competing in the US market.
- » **The majority of closed-end funds employed structural leverage, portfolio leverage, or both in 2022.** Closed-end funds had \$49 billion outstanding in preferred shares and other structural leverage at year-end 2022. Portfolio leverage consisting of reverse repurchase agreements and tender option bonds amounted to \$18 billion.
- » **Closed-end fund investors tended to have above-average household incomes and express more willingness to take financial risk.** An estimated 3.8 million US households held closed-end funds in 2022. These households tended to be headed by individuals who owned a range of equity and fixed-income investments.

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James Duvall, Economist, and Irina Atamanchuk, Senior Research Associate, prepared this report.

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For a complete set of data files for each figure in this report, see www.ici.org/files/2023/per29-05-data.xlsx.

The following, unless otherwise specified, apply to all data in this report: (1) funds of funds are excluded from the data to avoid double counting, and (2) dollars and percentages may not add to the totals presented because of rounding.

What Is a Closed-End Fund?

Closed-end funds are one of four main types of investment companies registered under the Investment Company Act of 1940, along with mutual funds, exchange-traded funds (ETFs), and unit investment trusts (UITs). Closed-end funds generally issue a fixed number of shares that are listed on a stock exchange or traded in the over-the-counter market.¹ The assets of a closed-end fund are professionally managed in accordance with the fund's investment objectives and policies and may be invested in stocks, bonds, and other assets. The market price of a closed-end fund fluctuates like that of other publicly traded securities and is determined by supply and demand in the marketplace.

A closed-end fund is created by issuing a fixed number of common shares to investors during an initial public offering. Subsequent issuance of common shares can occur through secondary or follow-on offerings, at-the-market offerings, rights offerings, or dividend reinvestments. Closed-end funds are also permitted to issue one class of preferred shares in addition to common shares. Holders of preferred shares are paid dividends but do not participate in the gains and losses on the fund's investments.² Issuing preferred shares allows a closed-end fund to raise additional capital, which it can use to purchase more assets for its portfolio.

Some closed-end funds may adopt stock repurchase programs or periodically tender for shares; however, once issued, shares of a closed-end fund are generally not purchased or redeemed directly by the fund. Rather, shares are bought and sold by investors in the open market. Because a closed-end fund does not need to maintain cash reserves or sell securities to meet redemptions, the fund has the flexibility to invest in less-liquid portfolio securities. For example, a closed-end fund may invest in securities of very small companies, municipal bonds that are not widely traded, or securities traded in countries that do not have fully developed securities markets.

Closed-End Fund Pricing

More than 95 percent of exchange-listed closed-end funds calculate the value of their portfolios every business day, while others calculate their portfolio values weekly or on some other basis. The net asset value (NAV) of a closed-end fund is calculated by subtracting the fund's liabilities (e.g., fund expenses) from the current market value of its assets and dividing by the total number of shares outstanding. The NAV changes as the total value of the underlying portfolio securities rises or falls, or the fund's liabilities change.

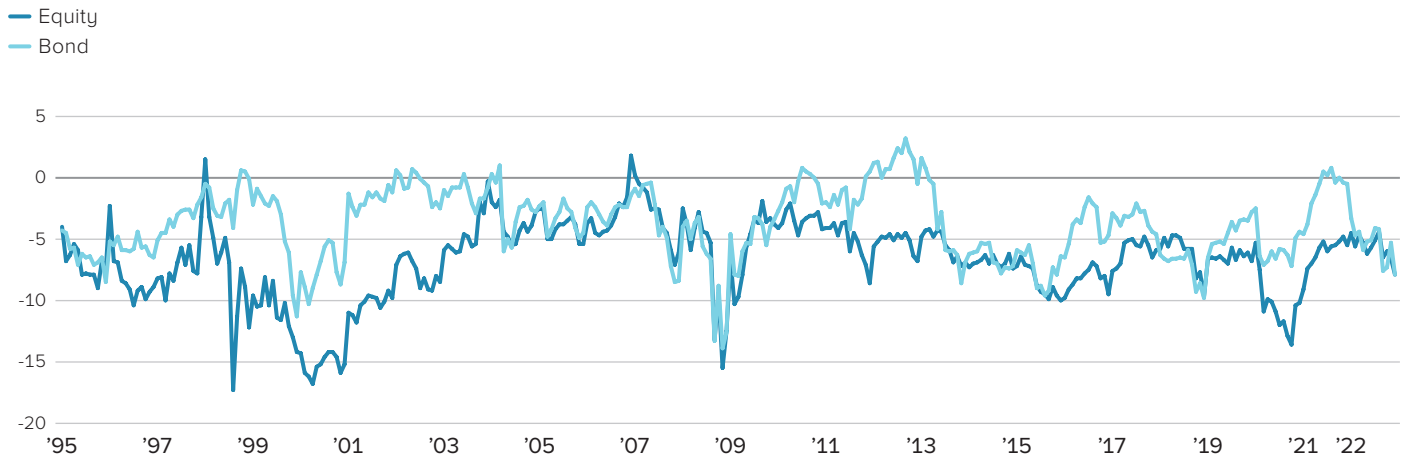
Because an exchange-listed closed-end fund's shares trade based on investor demand, the fund may trade at a price higher or lower than its NAV. A closed-end fund trading at a share price higher than its NAV is said to be trading at a "premium" to the NAV, while a closed-end fund trading at a share price lower than its NAV is said to be trading at a "discount." Funds may trade at premiums or discounts to the NAV based on market perceptions or investor sentiment.³ For example, a closed-end fund that invests in securities that are anticipated to generate above-average future returns and are difficult for retail investors to obtain directly may trade at a premium because of a high level of market interest. In contrast, a closed-end fund with large unrealized capital gains may trade at a discount because investors will have priced in any perceived tax liability.

Closed-end fund price deviations widened somewhat in 2022 (Figure 1, top panel). Although discounts fluctuated over the course of the year, they averaged 5.7 percent for equity funds and 5.0 percent for bond funds in 2022. Generally, the majority of closed-end funds trade at a discount in any given month (Figure 1, bottom panel).

FIGURE 1

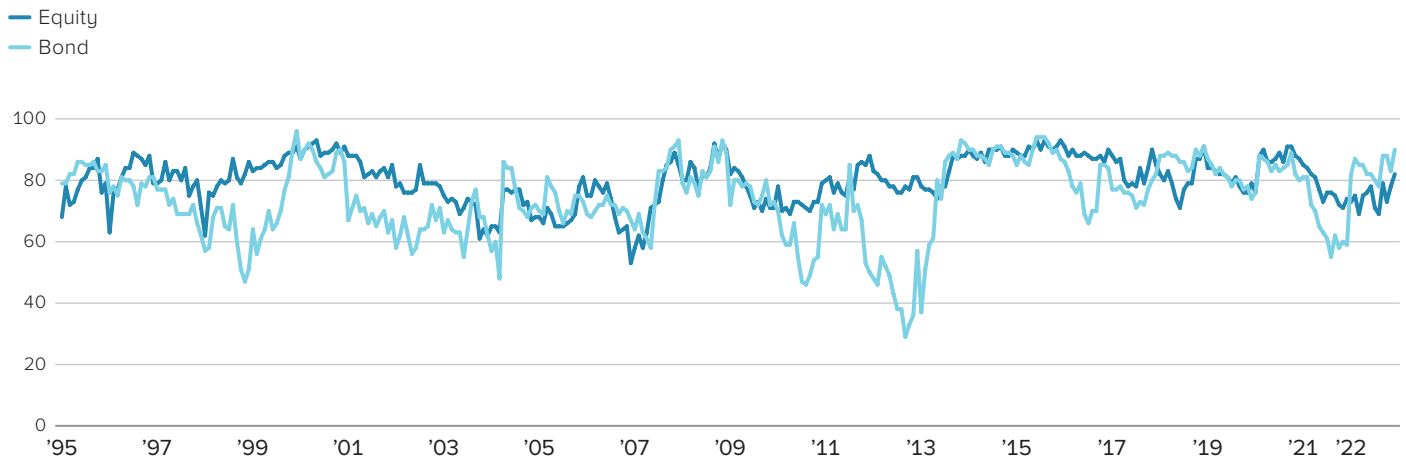
Closed-End Fund Discounts Widened in 2022

Percent, month-end



Majority of Closed-End Funds Generally Trade at a Discount

Percentage of total closed-end funds trading at a discount, month-end



Note: The premium/discount rate is the simple average of the percent difference between the share price and NAV at month-end.

Source: Investment Company Institute calculations of Bloomberg and Refinitiv data

Shareholder Activism

The persistence and prevalence of discounts (see Figure 1 on page 4)—in combination with trading on the secondary market—provide closed-end fund shareholders the ability to realize gains through changes in the fund’s market price. For example, if a closed-end fund is trading at a discount and a shareholder expects that discount to narrow over some period, then the shareholder may attempt to capture a gain by buying the shares of the closed-end fund at the lower price with the intent of selling them at a higher price in the future.

Closed-end funds can also conduct certain liquidity events to provide shareholders with the difference between the fund’s market price and its NAV. Closed-end funds may repurchase shares at, or close to, NAV through share repurchases or tender offers. Additionally, if a closed-end fund liquidates, then shareholders will receive a cash distribution equal to NAV for all common shares; and if a closed-end fund converts to (or merges with) an open-end fund, then shareholders will have the option to redeem their shares at NAV. The availability of these liquidity

events makes closed-end funds susceptible to activist investors—shareholders whose primary objective is to capture short-term profits by purchasing a stake in a fund at a discount and using their voting power to have the fund take an action that results in one of these liquidity events.

How Prevalent Are Activist Shareholders in the Closed-End Fund Market?

Shareholder activism has become more common and concentrated in the closed-end fund market (Figure 2). Over the past five years, the number of beneficial ownership and contested proxy solicitation filings indicating activist shareholder activity⁴ has grown from the number of similar filings between 1998 and 2002.⁵ This increase occurred despite there being fewer exchange-listed closed-end funds in the 2018 through 2022 period. Additionally, 95 percent of these filings were concentrated among just five activist shareholders in the 2018 through 2022 period compared with 53 percent in the 1998 through 2002 period.

Continued on the next page

FIGURE 2

Activist Shareholder Involvement in Closed-End Funds Was Highly Concentrated Between 2018 and 2022

Period	Number of filings	Number of distinct closed-end funds with filings	Five activist shareholders with most filings Percentage of filings
1998–2002	80	57	53%
2003–2007	124	77	60%
2008–2012	132	107	90%
2013–2017	128	105	73%
2018–2022	129	93	95%

Memo:

Number of exchange-listed closed-end funds at year-end 2002: **543**

Number of exchange-listed closed-end funds at year-end 2022: **435**

Note: Filings include Schedule 13D and Schedule 14A (PREC14A) submissions. Data include only traditional exchange-listed closed-end funds.

Source: Investment Company Institute calculations of SEC EDGAR data

Sometimes the same activist shareholder(s) made filings regarding the same fund in successive years, or different activist shareholders each made filings in the same year with respect to the same fund. Among distinct closed-end funds with beneficial ownership and contested proxy solicitation filings, activist shareholders targeted 57 closed-end funds between 1998 and 2002 compared with 93 closed-end funds between 2018 and 2022. While the number of closed-end funds with activist shareholder involvement has increased between the two periods, it is important to note that this difference is not a function of the

number of funds available to investors. At year-end 2022, there were 20 percent fewer exchange-listed closed-end funds than at year-end 2002—435 funds compared to 543 funds.

For more information on shareholder activism and the defenses closed-end funds have available to manage activist shareholder involvement, see “Recommendations Regarding the Availability of Closed-End Fund Takeover Defenses” at www.ici.org/pdf/20_ltr_cef.pdf.

Total Assets of Closed-End Funds

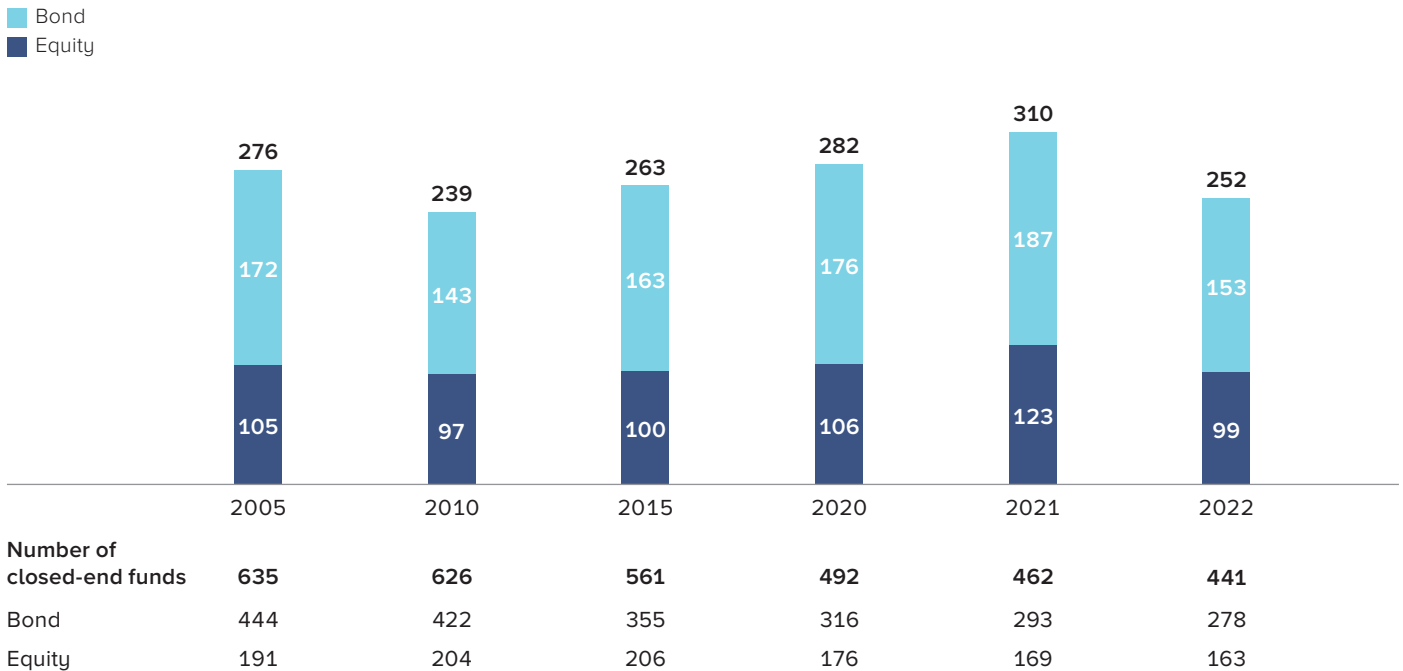
At year-end 2022, 441 closed-end funds had total assets⁶ of \$252 billion (Figure 3)—a decrease of 19 percent from year-end 2021 that was primarily driven by sharp downturns in equity and bond markets. Total returns

on US equities were down 19 percent in 2022, while US bonds experienced capital losses of 12 percent (including interest income).⁷ In line with this poor market performance, closed-end funds experienced net redemptions for the first time since 2009.

FIGURE 3

Total Assets of Closed-End Funds Declined in 2022

Billions of dollars, year-end



Note: *Total assets* is the fair value of assets held in closed-end fund portfolios funded by common and preferred shares less any liabilities (not including liabilities attributed to preferred shares).

Source: Investment Company Institute

Historically, bond funds have accounted for the majority of assets in closed-end funds. At year-end 2022, bond closed-end funds accounted for 61 percent of all closed-end fund assets compared with 60 percent at year-end 2010 (Figure 3). These shares have remained relatively stable, in part because of two offsetting factors. Since 2010, cumulative net issuance of bond closed-end fund shares exceeded that of equity fund shares—offsetting the total returns of US stocks, which exceeded those of US bonds during this time.

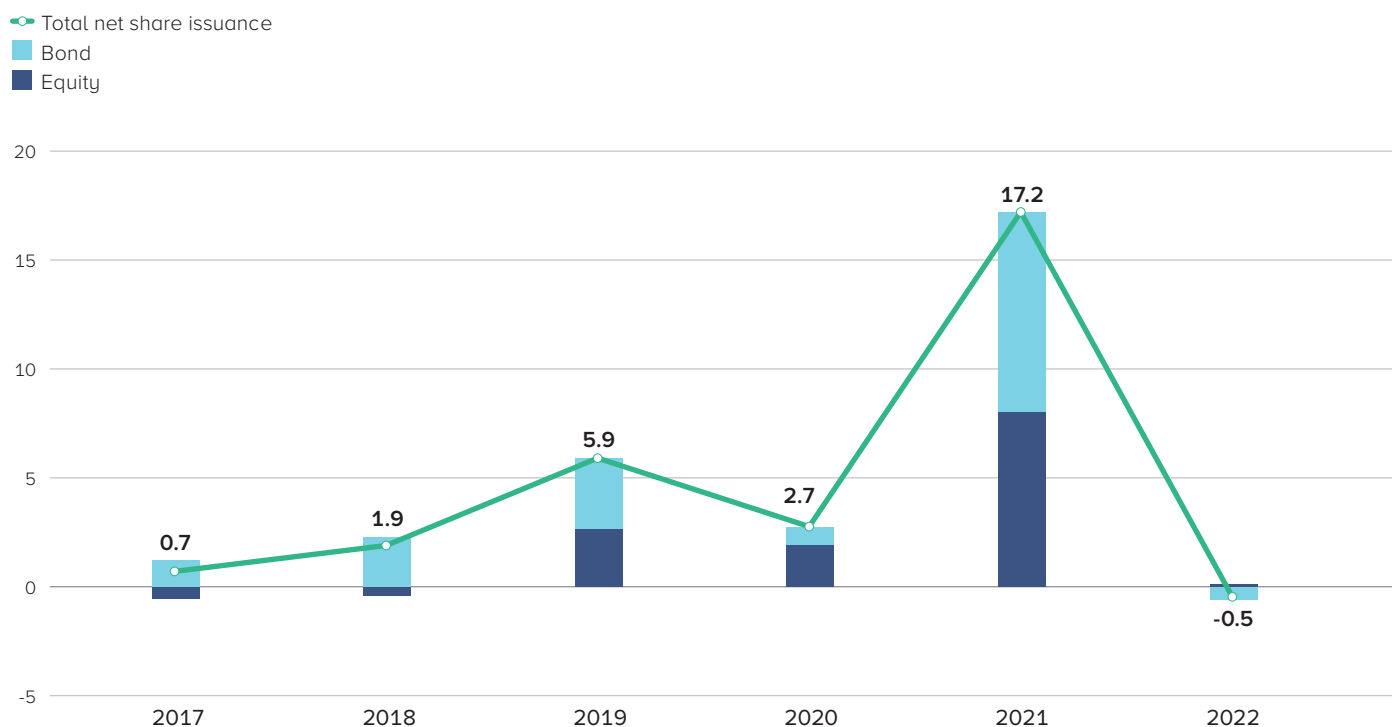
Net Issuance of Closed-End Funds

Closed-end funds had negative net share issuance of \$489 million in 2022, compared with positive net issuance of \$17.2 billion in 2021 (Figure 4). In 2022, equity closed-end funds had positive net issuance of \$135 million, while bond closed-end funds had negative net issuance of \$623 million. Negative returns on stocks around the world and capital losses on US bonds likely contributed to the weakened demand for closed-end funds in 2022.

FIGURE 4

Closed-End Fund Net Share Issuance Weakened Substantially in 2022

Billions of dollars, annual



Note: Net share issuance is the dollar value of gross issuance (proceeds from initial and additional public offerings of shares) minus gross redemptions of shares (share repurchases and fund liquidations).

Source: Investment Company Institute

Competition in the Closed-End Fund Industry

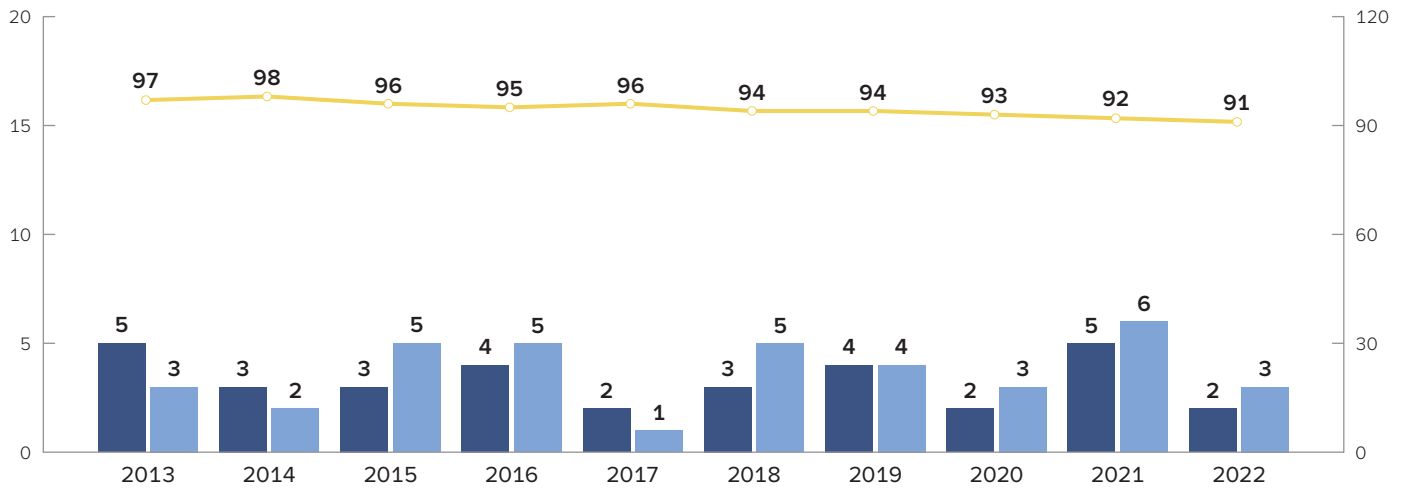
At year-end 2022, there were 91 closed-end fund sponsors competing in the US market (Figure 5). Overall, in the past decade, 37 closed-end fund sponsors left the business while 33 firms entered.

FIGURE 5

Number of Closed-End Fund Sponsors

Entry, exit, and total number of closed-end fund sponsors

- Total number of closed-end fund sponsors at year-end (right axis)
- Closed-end fund sponsors entering (left axis)
- Closed-end fund sponsors exiting (left axis)



Source: Investment Company Institute

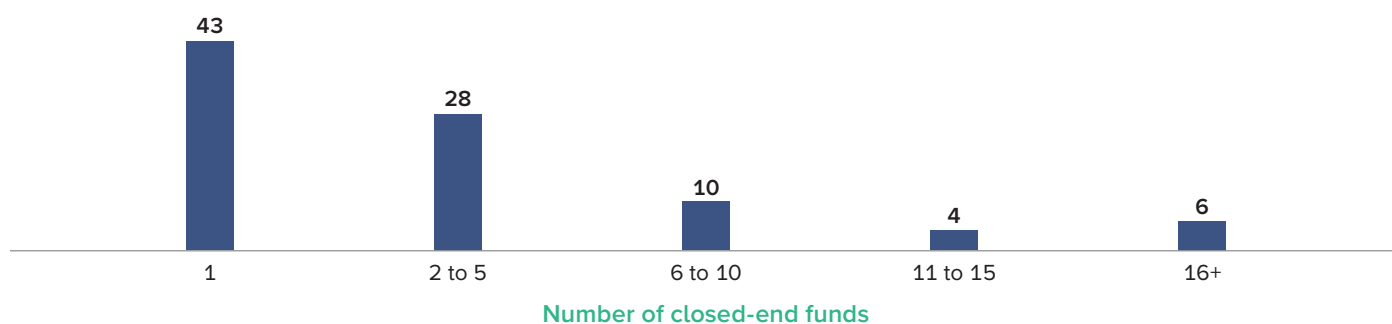
Competitive dynamics have prevented any single sponsor or group of sponsors from dominating the closed-end fund market. For example, in 2022, only 10 sponsors offered more than 10 closed-end funds, whereas 43 sponsors offered only one closed-end fund, and 28 sponsors offered two to five closed-end funds (Figure 6). The largest 25 complexes held 87 percent

of closed-end fund assets in 2022,⁸ and of the largest 25 closed-end fund complexes in 2012, only 16 remained in this group at year-end 2022. In addition, the 441 closed-end funds must compete with other registered investment companies—8,763 mutual funds, 3,966 UITs, and 2,989 ETFs.⁹

FIGURE 6

Distribution of Closed-End Funds Across Sponsors

Number of fund sponsors, year-end 2022



Share of Closed-End Fund Assets at Largest Complexes

Percentage of total closed-end fund assets, year-end

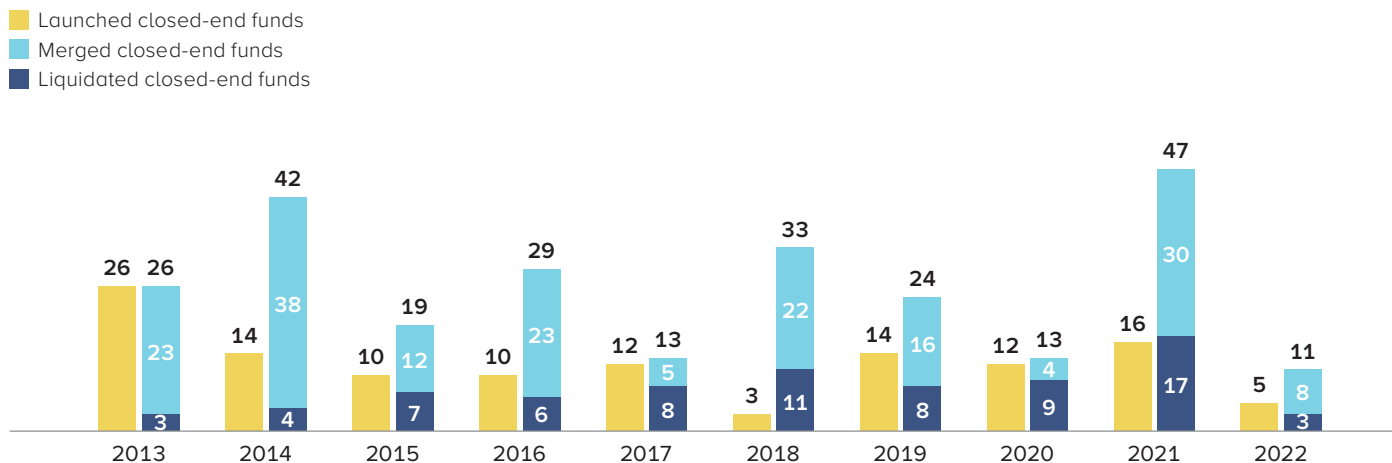
	2012	2014	2016	2018	2020	2021	2022
Largest 5 complexes	54	50	52	53	56	56	56
Largest 10 complexes	66	63	66	66	71	72	71
Largest 25 complexes	86	83	83	84	87	87	87

Source: Investment Company Institute

Competitive dynamics also affect the number of closed-end funds offered in any given year. In particular, closed-end fund sponsors launch new closed-end funds to meet investor demand, and they merge or liquidate closed-end funds that do not attract sufficient investor interest. In recent years, closed-end fund sponsors have also merged funds with similar strategies to

improve trading efficiency and build economies of scale. Consequently, the number of closed-end funds available to investors has declined steadily since 2013. From 2013 through 2022, more closed-end funds were merged or liquidated, and others converted into open-end mutual funds or ETFs, than new closed-end funds were launched (Figure 7).

FIGURE 7
Number of Closed-End Funds Entering and Exiting the Industry



Note: Data include closed-end funds that do not report statistical information to the Investment Company Institute and closed-end funds that invest primarily in other closed-end funds.

Source: Investment Company Institute

Closed-End Fund Distributions

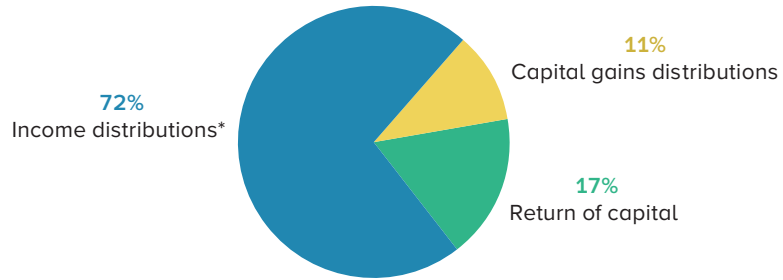
In 2022, closed-end funds distributed an estimated \$16.7 billion to shareholders (Figure 8). Closed-end funds may make distributions to shareholders from three possible sources: income distributions, which are payments from interest and dividends that the fund earns

on its investments in securities; realized capital gains distributions; and return of capital. Income distributions accounted for the majority (72 percent) of closed-end fund distributions. Capital gains distributions accounted for 11 percent of closed-end fund distributions and return of capital for 17 percent.

FIGURE 8

Most Closed-End Fund Distributions Are From Income Distributions

Percentage of closed-end fund distributions, 2022



Total closed-end fund distributions: \$16.7 billion

* Income distributions are paid from interest and dividends that the fund earns on its investments in securities.
Source: Investment Company Institute

Some closed-end funds follow a managed distribution policy, which allows them to provide predictable, but not guaranteed, cash flow to common shareholders. The goal of a managed distribution policy is to reduce the uncertainty regarding future cash flows for common shareholders. The payment from a managed distribution policy is typically paid to common shareholders on a monthly or quarterly basis and can be a regular fixed cash payment or an amount based on a percentage of a fund's assets.¹⁰ Managed distribution policies are used most often in multi-strategy or equity-based closed-end funds where capital appreciation is an important part of a fund's expected total return.¹¹

Closed-end fund managed distribution policies may have potential advantages for common shareholders. First, a closed-end fund with a managed distribution policy can be an important tool for investors seeking steady income or cash flow. Second, a managed distribution policy permits a fund to offer regular cash flow from strategies not typically associated with regular income. Third, having a managed distribution policy in place may help support the fund's share price and may help reduce any discount between the closed-end fund's share price and its NAV.¹²

Closed-end fund managed distribution policies may also have disadvantages for common shareholders. Regular distributions provide common shareholders with predictable cash inflows but also result in consistent cash outflows from the fund. This reduces the amount of assets available for investment by a fund's adviser and may cause a fund to hold a larger cash position than otherwise necessary in order to pay regular distributions.

In addition, if a closed-end fund consistently pays distributions that are greater than the fund's total return, a portion of the distributions will be made from a return of capital, and the fund eventually will deplete its capital.¹³

Return of capital distributions from closed-end funds may result from unrealized capital gains, pass-through return of capital from underlying holdings, or just the return of investors' own capital. In order to avoid selling securities that are expected to continue to appreciate, a closed-end fund may use cash holdings to pay a distribution based on the expected capital gains. In this scenario, the fund's total return would exceed the distribution rate if the expected gains were realized.

Certain types of portfolio securities, such as master limited partnerships (MLPs), generate return of capital through their ordinary business operations. MLPs generally do not pay taxes as they pass through income and gains to investors. MLPs pay distributions based on their cash flow, but, because MLPs tend to be focused on energy-related operations, they typically have large depreciation and amortization costs that offset the income. Therefore, the cash that is generated from operations is issued as a return of capital from the MLP, and a closed-end fund holding these types of securities must pass through the return of capital to its shareholders.¹⁴

When a closed-end fund maintains a distribution rate that exceeds income generated from interest income, dividends, and capital gains, then the excess will result in a return of the investors' own capital, which will decrease the assets available to the fund to generate income.

Closed-End Fund Leverage

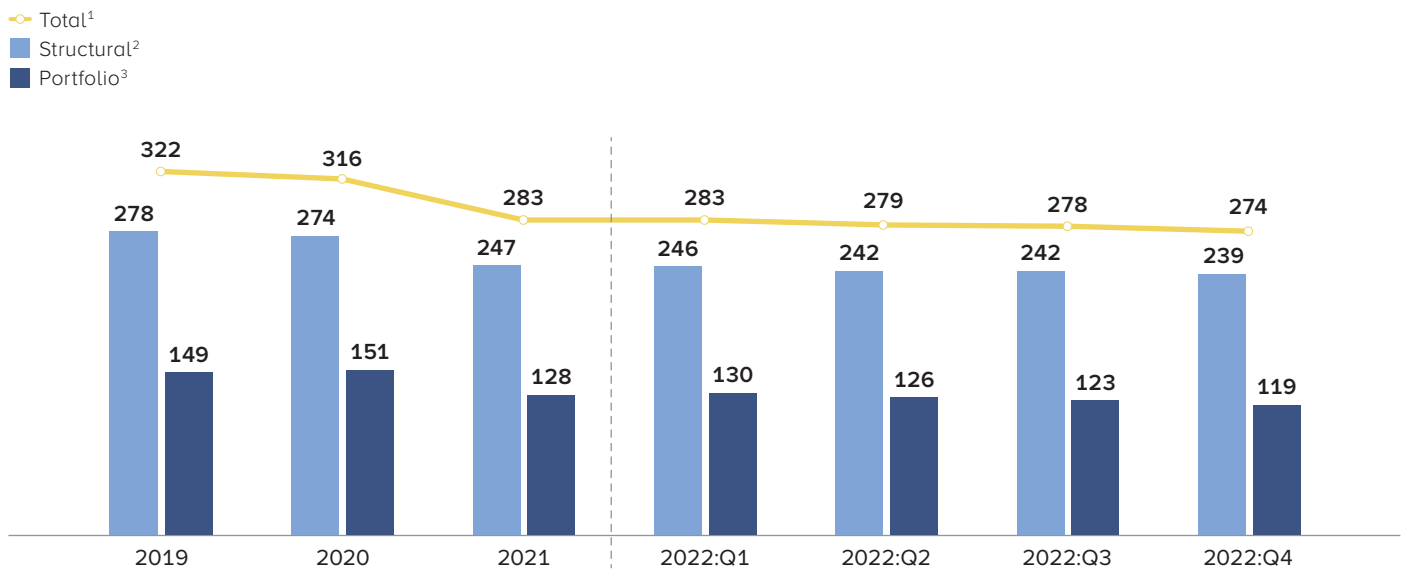
Closed-end funds have the ability, subject to strict regulatory limits, to use leverage as part of their investment strategy.¹⁵ The use of leverage by a closed-end fund can enable it to achieve higher long-term returns but also increases risk and the

likelihood of share price volatility. Closed-end fund leverage can be classified as either structural leverage or portfolio leverage. At year-end 2022, at least 274 funds—62 percent of closed-end funds—were using structural leverage, portfolio leverage consisting of tender option bonds or reverse repurchase agreements, or both (Figure 9).¹⁶

FIGURE 9

Closed-End Funds Are Employing Structural and Portfolio Leverage

Number of funds, end of period



¹ Components do not add to the total because funds may employ both structural and portfolio leverage.

² Structural leverage affects the closed-end fund's capital structure by increasing the fund's portfolio assets through borrowing capital and issuing debt and preferred shares.

³ Portfolio leverage is leverage that results from particular types of portfolio investments, including certain types of derivatives, reverse repurchase agreements, tender option bonds, and other investments or types of transactions. Data are available only for reverse repurchase agreements and tender option bonds. Given data collection constraints, and the continuing development of types of investments/transactions with a leverage characteristic (and the use of different definitions of *leverage*), actual portfolio leverage may be materially different from what is reflected above.

Source: Investment Company Institute

Structural Leverage

Structural leverage, the most common type of leverage used by closed-end funds, affects the closed-end fund's capital structure by increasing the fund's portfolio assets. Types of closed-end fund structural leverage include borrowing capital and issuing debt and preferred shares.¹⁷ Closed-end funds are subject to asset coverage requirements if they issue debt or preferred shares. For each \$1.00 of debt issued, the fund must have \$3.00 of assets immediately after issuance and at the time of dividend declarations (commonly referred to as 33 percent leverage). Similarly, for each \$1.00 of preferred stock issued, the fund must have \$2.00 of

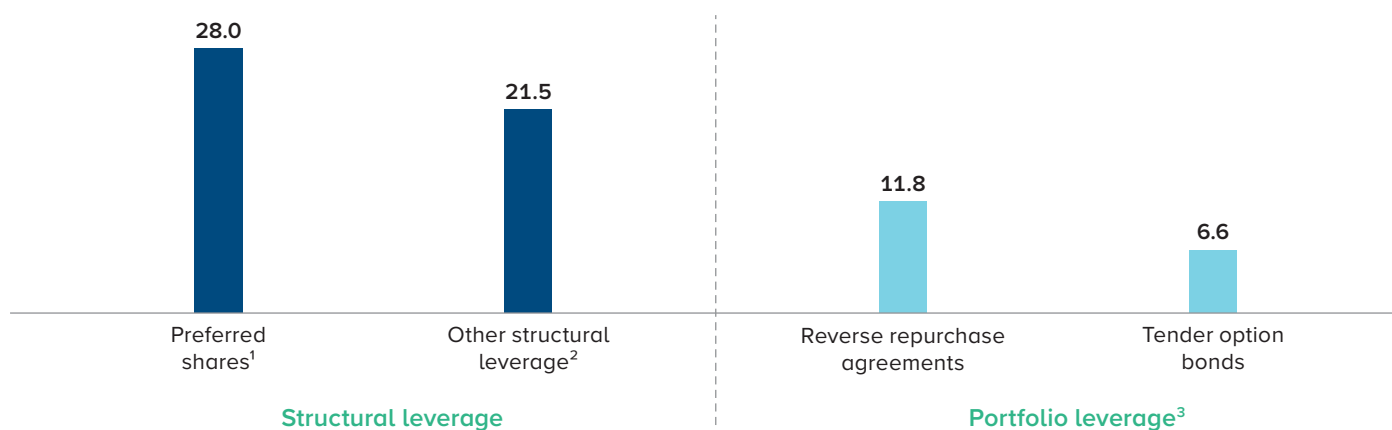
assets immediately after issuance and at the time of dividend declaration dates (commonly referred to as 50 percent leverage).

At the end of 2022, 239 funds had a total of \$49 billion in structural leverage, with \$28 billion from preferred shares and \$21 billion from other types of structural leverage (Figures 9 and 10). The average leverage ratio¹⁸ across those closed-end funds employing structural leverage was 30 percent at year-end 2022. Among closed-end funds employing structural leverage, the average leverage ratio for bond funds was somewhat higher (32 percent) than that of equity funds (26 percent).

FIGURE 10

Closed-End Funds Use Leverage

Billions of dollars, year-end 2022



¹ A closed-end fund may issue preferred shares to raise additional capital, which can be used to purchase more securities for its portfolio. Holders of preferred shares are paid dividends, but do not participate in the gains and losses on the fund's investments.

² *Other structural leverage* includes bank borrowing and other forms of debt.

³ Portfolio leverage is leverage that results from particular types of portfolio investments, including certain types of derivatives, reverse repurchase agreements, tender option bonds, and other investments or types of transactions. Data are only available for reverse repurchase agreements and tender option bonds. Given data collection constraints, and the continuing development of types of investments/transactions with a leverage characteristic (and the use of different definitions of *leverage*), actual portfolio leverage may be materially different from what is reflected above.

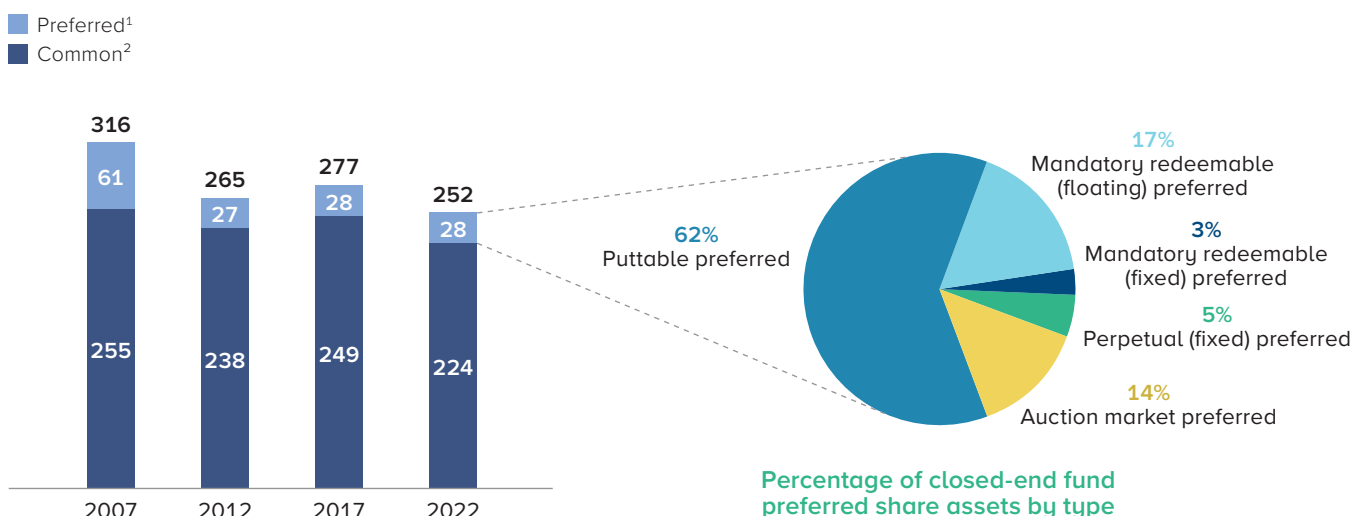
Source: Investment Company Institute

At year-end 2022, 11 percent of the \$252 billion in closed-end fund total assets was funded by proceeds from preferred shares (Figure 11), with bond funds accounting for the vast majority of preferred share assets. The dollar amount of outstanding closed-end fund preferred shares has declined since auction market preferred stock, once a common type of preferred share, suffered a liquidity crisis in mid-February 2008.¹⁹ Since then, closed-end funds have replaced auction market preferred stock with alternative forms of structural and portfolio leverage, such as bank loans, lines of credit,

tender option bonds, reverse repurchase agreements, puttable preferred shares, mandatory redeemable preferred shares, or extendible notes.

At year-end 2022, 93 percent of closed-end fund preferred share assets were floating-rate preferred shares, which include puttable preferred shares (including variable rate demand preferred shares), auction market preferred shares, and mandatory redeemable (floating) preferred shares.

FIGURE 11
Preferred Share Assets Accounted for 11 Percent of Closed-End Fund Total Assets at Year-End 2022
 Billions of dollars, year-end



¹ A closed-end fund may issue preferred shares to raise additional capital, which can be used to purchase more securities for its portfolio. Holders of preferred shares are paid dividends, but do not participate in the gains and losses on the fund's investments.

² All closed-end funds issue common stock (also known as common shares).

Source: Investment Company Institute

Portfolio Leverage

Portfolio leverage is leverage that results from certain portfolio investments,²⁰ such as certain types of derivatives, reverse repurchase agreements, and tender option bonds. At the end of 2022, 119 closed-end funds had \$18 billion outstanding in reverse repurchase agreements and tender option bonds (Figures 9 and 10).

Characteristics of Closed-End Fund Investors

An estimated 3.8 million US households owned closed-end funds in 2022.²¹ These households tended to include investors who owned a range of equity and fixed-income investments (Figure 12). More than nine in 10 households owning closed-end funds also owned mutual funds, and more than six in 10 also owned ETFs. Six in 10 households owning closed-end funds also invested in individual stocks.

FIGURE 12

Closed-End Fund Investors Owned a Broad Range of Investments

Percentage of closed-end fund–owning households holding each type of investment, 2022

Equity mutual funds, individual stocks, or variable annuities (total)	88
Bond mutual funds, individual bonds, or fixed annuities (total)	56
Mutual funds (total)	91
Equity	79
Bond	40
Hybrid	39
Money market	59
Exchange-traded funds (ETFs)	62
Individual stocks	60
Individual bonds	16
Fixed or variable annuities	23
Investment real estate	28

Note: Multiple responses are included.

Source: Investment Company Institute Annual Mutual Fund Shareholder Tracking Survey

Because households that owned closed-end funds often also owned individual stocks and mutual funds, the characteristics of each group were similar in many respects. For instance, households that owned closed-end funds (like households owning individual stocks and mutual funds) tended to have household incomes and financial assets above the national median or tended to own retirement accounts (Figure 13). Nonetheless, households that owned closed-end funds

exhibited certain differences. For example, 39 percent of closed-end fund–owning households were retired from their lifetime occupations compared with about one-third of those owning individual stocks or mutual funds. Households owning closed-end funds also expressed more willingness to take financial risk, as 49 percent were willing to take above-average or substantial risk, compared with 34 percent of mutual fund–owning households.

FIGURE 13

Closed-End Fund Investors Had Above-Average Household Incomes and Financial Assets

2022

	All US Households	Households owning closed-end funds	Households owning mutual funds	Households owning individual stocks
Median				
Age of head of household ¹	52	50	54	53
Household income ²	\$69,000	\$100,000	\$100,000	\$125,000
Household financial assets ³	\$87,500	\$323,000	\$250,000	\$375,000
Percentage of households				
Household primary or co-decisionmaker for saving and investing				
Married or living with a partner	64	69	71	72
College or postgraduate degree	39	50	54	61
Employed (full- or part-time)	56	59	64	64
Retired from lifetime occupation	32	39	34	33
Household owns				
IRA(s)	42	71	67	69
DC retirement plan account(s)	57	78	81	79
Household's willingness to take financial risk				
Substantial risk for substantial gain	5	12	6	7
Above-average risk for above-average gain	19	37	28	37
Average risk for average gain	39	33	47	44
Below-average risk for below-average gain	11	11	11	8
Unwilling to take any risk	26	7	8	4

¹ Age is based on the sole or co-decisionmaker for household saving and investing.

² Total reported is household income before taxes in 2021.

³ Household financial assets include assets in employer-sponsored retirement plans but exclude the household's primary residence.

Source: Investment Company Institute Annual Mutual Fund Shareholder Tracking Survey

Notes

- ¹ “Interval” funds represent a subset of closed-end funds. These funds, under Rule 415 and Rule 486 under the Securities Act of 1933 and Rule 23c-3 under the Investment Company Act of 1940, may continuously offer their shares and make offers to repurchase shares at NAV at periodic intervals.
- ² Section 18 of the Investment Company Act of 1940 provides that preferred shareholders, voting as a class, are entitled to elect at least two directors at all times and to vote along with common shareholders on the remaining directors. In addition, preferred shareholders, voting as a class, are entitled to elect a majority of the directors if at any time the dividends on the preferred shares are unpaid in an amount equal to two full years’ dividends on the preferred shares; they continue to be entitled to elect a majority of the directors until all dividends in arrears are paid.
- ³ For more information on closed-end fund discounts and premiums, see Lee, Shleifer, and Thaler 1991.
- ⁴ The Securities and Exchange Commission (SEC) requires any person (or group of persons) who directly or indirectly acquires, or has beneficial ownership of, more than 5 percent of a class of a fund’s securities to file beneficial ownership reports on Schedule 13D or the more-abbreviated Schedule 13G. Investors holding more than 5 percent and less than 20 percent who have the intent of changing or influencing control of the fund must file Schedule 13D. Investors who own 20 percent or more—regardless of intent—also must file Schedule 13D. Passive investors who own more than 5 percent but less than 20 percent and claim to have no activist intent may file Schedule 13G. Investors must file Schedules 13D or 13G within 10 days of the date on which they exceed the 5 percent ownership threshold. Filers must amend Schedule 13D and 13G filings continuously. Additionally, the SEC requires any challenging shareholder who solicits votes for their own board candidates and proposals to file a contested proxy solicitation on Schedule 14A.
- ⁵ Some filings downloaded from the SEC’s Electronic Data Gathering, Analysis, and Retrieval (EDGAR) system were deleted from the final data set, including Schedule 13D filings by certain banks with no formal intent; Schedule 13D filings that appeared simply to be amendments to a previously filed Schedule 13D; Schedule 13D or PREC14A filings by affiliated persons; duplicate Schedule 13D or PREC14A filings made on the same day; and Schedule 13D and PREC14A filings that were duplicates of each other (i.e., their intent was assumed to be the same). Data may include a small number of Schedule 13D filings where shareholders did not disclose any formal intent.
- ⁶ For the purposes of this report, total assets are the fair value of assets held in closed-end fund portfolios funded by common and preferred shares less any liabilities (not including liabilities attributed to preferred shares). Total net assets are the assets of the fund available to common shareholders and are calculated for purposes of this report as total assets less the value of preferred shares. Total net assets of closed-end funds were \$224 billion at year-end 2022.
- ⁷ The total return on US stocks is measured using the Wilshire 5000 Total Market Index. The total return on US bonds is measured using the S&P US Aggregate Bond Index.
- ⁸ By comparison, the share of mutual fund and ETF total net assets managed by the 25 largest firms was 84 percent at year-end 2022. See Investment Company Institute 2023.
- ⁹ See Investment Company Institute 2023 for more information. The number of mutual funds includes mutual funds that invest primarily in other mutual funds. The number of ETFs includes ETFs not registered under the Investment Company Act of 1940 and ETFs that invest primarily in other ETFs.

¹⁰ In order to implement a managed distribution policy, a closed-end fund must apply for, and the SEC must provide, an exemption from Section 19(b) of the Investment Company Act of 1940 and Rule 19b-1 thereunder.

¹¹ According to Morningstar data, 27 percent of traditional exchange-listed closed-end funds had managed distribution policies as of April 2023—the vast majority of which were in multi-strategy or equity-based closed-end funds.

¹² For more information on dividend policy and discounts on closed-end funds, see Johnson, Lin, and Song 2006.

¹³ For more information on closed-end fund distributions, see Nuveen Investments, “Understanding Managed Distributions.”

¹⁴ For more information on MLPs, see Tortoise Capital Advisors 2018.

¹⁵ For additional information, see Investment Company Institute, “Frequently Asked Questions About Closed-End Funds and Their Use of Leverage.”

¹⁶ More closed-end funds may be using portfolio leverage, but data are available only on the use of reverse repurchase agreements and tender option bonds. Portfolio leverage is leverage that results from particular types of portfolio investments, including certain types of derivatives, reverse repurchase agreements, tender option bonds, and other investments or types of transactions.

¹⁷ For more information on the different types of closed-end fund preferred shares, see Investment Company Institute, “Frequently Asked Questions About Closed-End Funds and Their Use of Leverage.”

¹⁸ The *leverage ratio* is the ratio of the amount of structural leverage to the sum of the amount of common share assets and structural leverage.

¹⁹ See, e.g., Galley 2010 and Investment Company Institute, “Frequently Asked Questions About Closed-End Funds and Their Use of Leverage.”

²⁰ For more information on the types of closed-end fund leverage, see Nuveen Investments, “Understanding Leverage in Closed-End Funds.”

²¹ See Holden, Schrass, and Bogdan 2022.

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James Duvall

James Duvall is an economist in the industry and financial analysis section of ICI's research department. Since joining in 2012, Duvall has primarily participated in research examining US mutual fund fees across the industry and in retirement plans, and more recently, the costs and charges of UCITS. He also contributes to research on closed-end funds, worldwide regulated funds, and environmental, social, and governance (ESG) issues. He graduated from Virginia Tech with a BS in mathematics and a BA in economics and holds a master's degree in computer science from Johns Hopkins University.



Irina Atamanchuk

Irina Atamanchuk is a senior research associate in the industry and financial analysis section of ICI's research department. Since joining in 2019, Atamanchuk has participated in research examining trends in US mutual funds and ETFs and, more recently, US mutual fund fees. She also contributes to research on closed-end funds, worldwide regulated funds, and UCITS. She graduated from the American University with a BS in economics and is currently working toward an MS in finance from the Johns Hopkins Carey Business School.

Additional Reading

- » **Closed-End Fund Resource Center**
www.ici.org/cef
- » **Frequently Asked Questions About Closed-End Funds and Their Use of Leverage**
www.ici.org/faqs/faq/other/faqs_closed_end
- » **A Guide to Closed-End Funds**
www.ici.org/cef/background/bro_g2_ce
- » **Quarterly Closed-End Fund Asset Data**
www.ici.org/research/stats/closedend



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