

# ICI RESEARCH PERSPECTIVE

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## The Closed-End Fund Market, 2021

### KEY FINDINGS

- » **Total closed-end fund assets were \$309 billion at year-end 2021.** Total assets increased 10 percent from their level at year-end 2020, driven by rising US stock prices and a surge in demand for both equity and bond closed-end funds.
- » **The share of assets in bond closed-end funds was 60 percent of all closed-end fund assets at year-end 2021, compared with 61 percent at year-end 2011.** This share has remained relatively stable over the past decade.
- » **Price deviations from net asset values on closed-end funds narrowed in 2021.** The average discount for equity closed-end funds narrowed from 10.2 percent at year-end 2020 to 5.5 percent at year-end 2021. The average discount for bond closed-end funds narrowed from 4.4 percent at year-end 2020 to 0.5 percent by year-end 2021.
- » **Overall investor demand for closed-end fund shares surged in 2021.** Net issuance of closed-end fund shares was \$16.8 billion in 2021 compared with \$2.7 billion in 2020.
- » **Competitive dynamics have prevented any single closed-end fund sponsor from dominating the closed-end fund market.** At year-end 2021, there were 93 closed-end fund sponsors competing in the US market.
- » **Sixty-one percent of closed-end funds employed structural leverage, portfolio leverage, or both in 2021.** Closed-end funds had \$52.0 billion outstanding in preferred shares and other structural leverage at year-end 2021. Portfolio leverage consisting of reverse repurchase agreements and tender option bonds amounted to \$24.7 billion.
- » **Closed-end fund investors tended to have above-average household incomes and financial assets.** An estimated 3.5 million US households held closed-end funds in 2021. These households tended to be headed by college-educated individuals who owned a range of equity and fixed-income investments.

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For a complete set of data files for each figure in this report, see [www.ici.org/files/2022/per28-05\\_data.xls](http://www.ici.org/files/2022/per28-05_data.xls).

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.<sup>1</sup> 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.<sup>2</sup> 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 generally are 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.

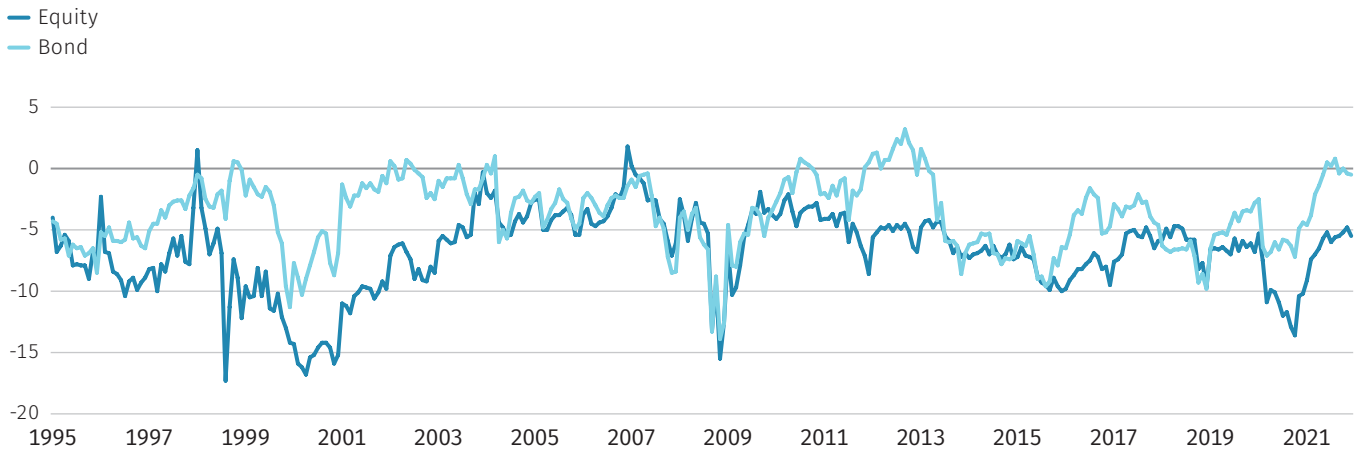
Because an exchange-listed closed-end fund's shares trade based on investor demand, the fund may trade at a price higher or lower than its NAV. A closed-end fund trading at a share price higher than its NAV is said to be trading at a "premium" to the NAV, while a closed-end fund trading at a share price 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.<sup>3</sup> 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 narrowed significantly in the first half of 2021. For equity closed-end funds, the average discount narrowed from 10.2 percent in December 2020 to 5.2 percent at the end of June 2021, while bond closed-end funds went from an average discount of 4.4 percent to an average premium of 0.5 percent over that same period (Figure 1, top panel). Average discounts remained relatively stable for the rest of the year, with the average discount of equity closed-end funds ending the year at 5.5 percent, while bond closed-end funds ended the year with an average discount of 0.5 percent.

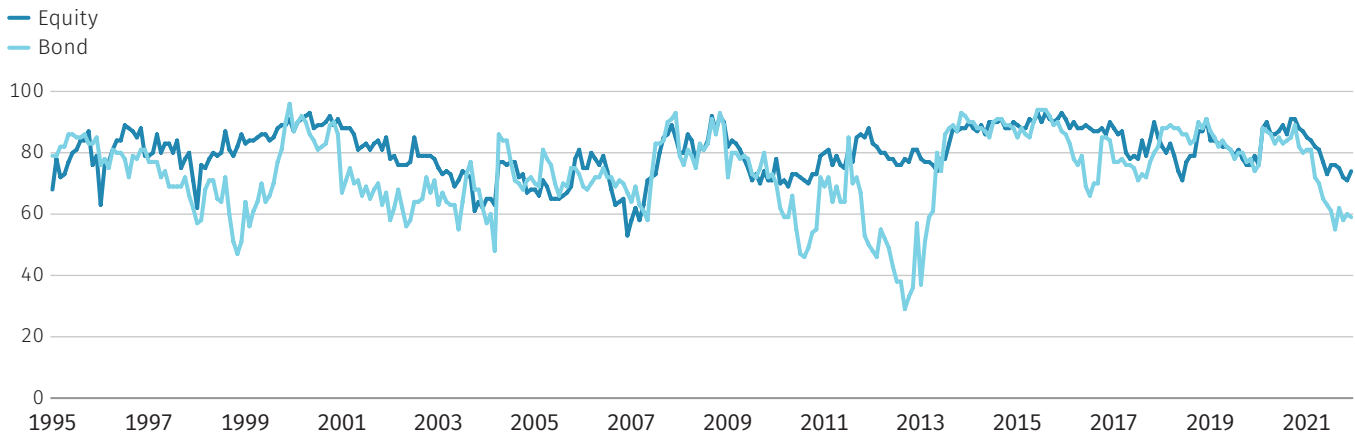
Generally, the majority of closed-end funds trade at a discount in any given month (Figure 1, bottom panel). Between 1995 and 2021, the percentage of equity closed-end funds trading at a discount ranged between 53 percent and 93 percent of funds and averaged

80 percent. Over the same period, the percentage of bond closed-end funds trading at a discount ranged between 29 percent and 96 percent and averaged 74 percent.

**FIGURE 1**  
**Closed-End Funds' Premium/Discount Rate**  
 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 tabulations of Bloomberg 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 shareholders—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 is increasingly prominent in the closed-end fund market. Over the past five years, the number of beneficial ownership and contested proxy solicitation filings indicating activist shareholder activity nearly doubled from the number of similar filings between 1997 and 2001. This increase occurred despite there being fewer exchange-listed closed-end funds in the 2017–2021 period.

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

*Continued on the next page*

## Shareholder Activism CONTINUED

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.

Figure 2 groups the total number of these filings<sup>4</sup> into five periods between 1997 and 2021.<sup>5</sup>

During the 1997–2001 period, there were 82 beneficial ownership and related contested proxy solicitation filings, compared with 149 from 2017 through 2021. 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 61 closed-end funds between 1997 and 2001 compared with 114 between 2017 and 2021. 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 2001, there were 490 exchange-listed closed-end funds, almost the same as the 451 exchange-listed closed-end funds at year-end 2021.

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](http://www.ici.org/pdf/20_ltr_cef.pdf).

FIGURE 2

### Activist Shareholder Involvement in Closed-End Funds Was Highly Concentrated Between 2017 and 2021

| Period    | Number of filings | Number of distinct closed-end funds with filings | Five activist shareholders with most filings<br>Percentage of filings |
|-----------|-------------------|--|---|
| 1997–2001 | 82                | 61   | 55%   |
| 2002–2006 | 113               | 69   | 62  |
| 2007–2011 | 146               | 119  | 86  |
| 2012–2016 | 101               | 81   | 70  |
| 2017–2021 | 149               | 114  | 91  |

**Memo:**

Number of exchange-listed closed-end funds at year-end 2001: **490**

Number of exchange-listed closed-end funds at year-end 2021: **451**

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

Source: Investment Company Institute tabulations of SEC EDGAR data

## Assets in Closed-End Funds

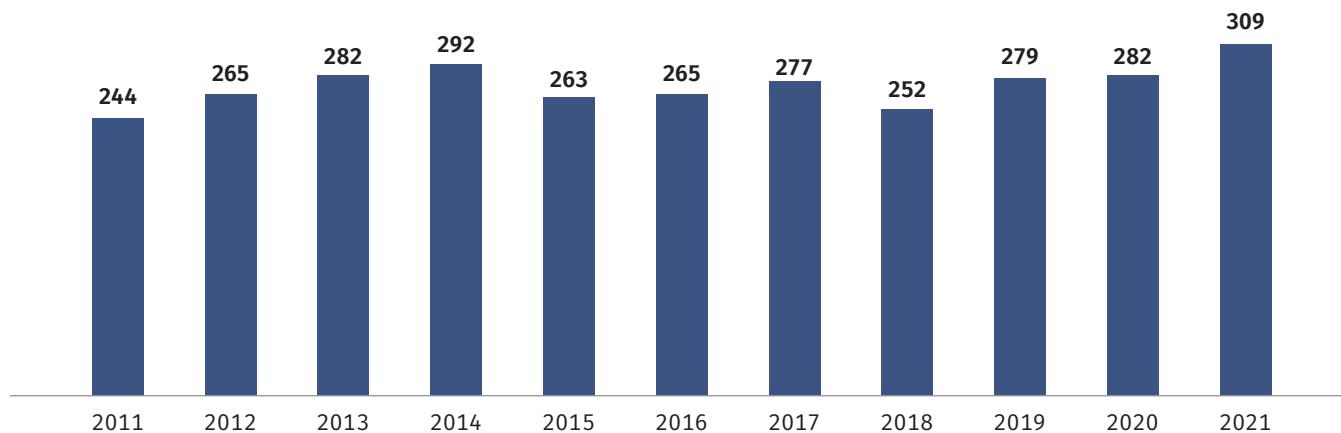
At year-end 2021, 461 closed-end funds had total assets<sup>6</sup> of \$309 billion (Figure 3), which is a 10 percent increase from year-end 2020, and was largely driven by two factors. Returns on US equities had another strong

year in 2021, with total returns of 26.7 percent.<sup>7</sup> In addition, net issuance of both equity and bond closed-end funds surged in 2021 to its highest level in more than a decade.

FIGURE 3

### Total Assets of Closed-End Funds Were \$309 Billion at Year-End 2021

Billions of dollars, year-end



### Number of closed-end funds

| Year | Number of closed-end funds |
|------|----------------------------|
| 2011 | 634                        |
| 2012 | 604                        |
| 2013 | 601                        |
| 2014 | 570                        |
| 2015 | 561                        |
| 2016 | 534                        |
| 2017 | 532                        |
| 2018 | 504                        |
| 2019 | 501                        |
| 2020 | 492                        |
| 2021 | 461                        |

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

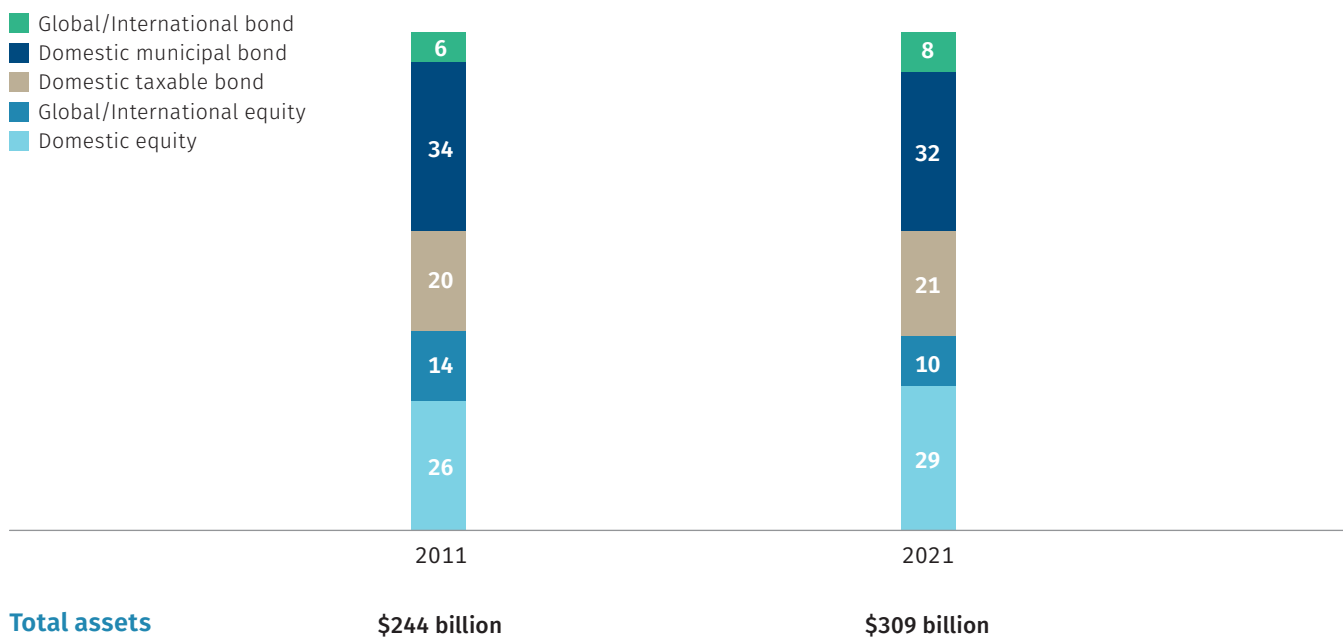
Historically, bond funds have accounted for a large share of assets in closed-end funds. At year-end 2011, 61 percent of all closed-end fund assets were held in bond funds, with the remainder held in equity funds (Figure 4). A decade later, assets in bond closed-end funds were \$186 billion, or 60 percent of closed-end fund assets, and assets in equity closed-end funds

totaled \$123 billion, or 40 percent of closed-end fund assets. These shares have remained relatively stable, in part because of two offsetting factors. Over the past 10 years, cumulative net issuance of bond closed-end fund shares exceeded that of equity fund shares—offsetting the total returns of US stocks,<sup>8</sup> which exceeded those of US bonds during this time.<sup>9</sup>

FIGURE 4

### Composition of the Closed-End Fund Market by Investment Objective

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



Source: Investment Company Institute



## Net Issuance of Closed-End Funds

Net issuance of closed-end fund shares was \$16.8 billion in 2021, compared with \$2.7 billion in 2020 (Figure 5). The surge in investor demand for closed-end funds in 2021 was concentrated in domestic equity and domestic taxable bond closed-end funds.

Equity closed-end funds had positive net issuance of \$7.6 billion in 2021, a sharp increase from \$1.9 billion in 2020. With total returns on US stocks having another strong year, demand for domestic equity closed-end funds followed with net issuance of \$6.0 billion in 2021. However, global/international closed-end funds also had relatively strong demand (\$1.6 billion in net issuance), even though total returns on international stocks were lower at 8.3 percent in 2021.<sup>10</sup>

Bond closed-end funds had positive net issuance of \$9.2 billion in 2021—with net issuance of \$6.3 billion coming from domestic taxable bond funds; \$2.1 billion from global/international bond closed-end funds; and \$739 million from domestic municipal bond funds. While the bond market was relatively stagnant in 2021, investor demand for bond closed-end funds continued. Demand for bond closed-end funds has historically been positive because of their ability to invest in less-liquid securities, which helps boost the income yield that the closed-end funds can generate and distribute to investors in comparison to other fund products.

FIGURE 5

### Closed-End Fund Net Share Issuance

Millions of dollars

| Year | Total  | Equity |          |                          | Bond   |                     |                       |                          |
|------|--------|--------|----------|--------------------------|--------|---------------------|-----------------------|--------------------------|
|      |        | Total  | Domestic | Global/<br>International | Total  | Domestic<br>taxable | Domestic<br>municipal | Global/<br>International |
| 2012 | 11,385 | 2,953  | 2,840    | 113                      | 8,432  | 3,249               | 3,102                 | 2,081                    |
| 2013 | 14,515 | 3,605  | 4,097    | -491                     | 10,909 | 3,921               | 530                   | 6,459                    |
| 2014 | 4,935  | 4,314  | 3,819    | 494                      | 621    | 266                 | 567                   | -212                     |
| 2015 | 1,859  | 1,267  | 224      | 1,043                    | 592    | 708                 | -11                   | -104                     |
| 2016 | 829    | 58     | 242      | -184                     | 771    | 1,437               | -168                  | -498                     |
| 2017 | 678    | -548   | -147     | -401                     | 1,226  | 758                 | 231                   | 237                      |
| 2018 | 1,869  | -412   | -352     | -60                      | 2,280  | 300                 | 1,985                 | -4                       |
| 2019 | 5,882  | 2,633  | 828      | 1,805                    | 3,249  | 1,311               | 1,674                 | 265                      |
| 2020 | 2,737  | 1,901  | 1,977    | -76                      | 837    | 560                 | -316                  | 593                      |
| 2021 | 16,762 | 7,612  | 6,013    | 1,599                    | 9,150  | 6,281               | 739                   | 2,131                    |

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 2021, there were 93 closed-end fund sponsors competing in the US market (Figure 6), compared with 94 closed-end fund sponsors at year-end 2020. Overall, in the past decade, 33 closed-end fund sponsors left the business while 34 firms entered.

Competitive dynamics have prevented any single sponsor or group of sponsors from dominating the closed-end fund market. For example, in 2021, only 10 sponsors offered more than 10 closed-end funds, whereas 43 sponsors offered only one closed-end fund, and 30 sponsors offered two to five closed-end funds (Figure 7). The share of assets managed by the largest 25 complexes in 2021 (87 percent) is slightly higher than in 2011 (86 percent),<sup>11</sup> and of the largest 25 closed-end fund complexes in 2011, only 16 remained in this group at year-end 2021. In addition,

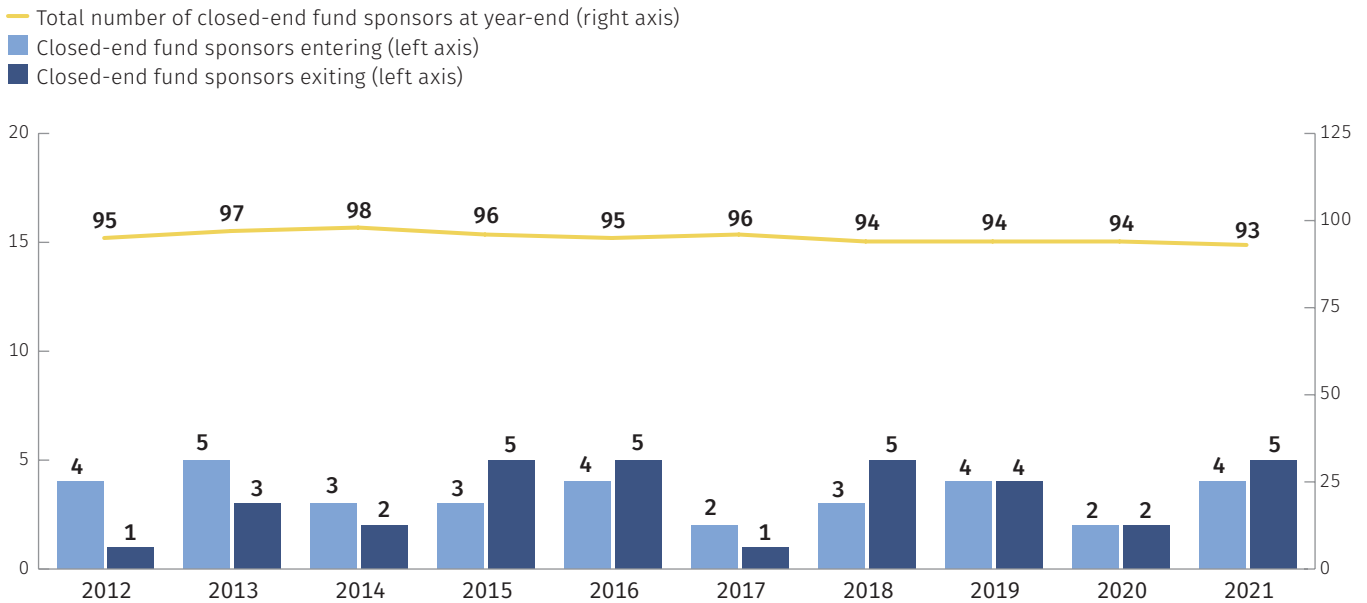
the 461 closed-end funds must compete with other registered investment companies—nearly 8,900 mutual funds, more than 4,100 UITs, and nearly 2,700 ETFs.<sup>12</sup>

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. Consequently, the number of closed-end funds available to investors has declined steadily since 2011. From 2012 through 2020, 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. In 2021, 13 closed-end funds were launched compared with 11 in 2020, while the number of closed-end fund mergers and liquidations was 30 in 2021 compared with 11 in 2020 (Figure 8).

FIGURE 6

### Number of Closed-End Fund Sponsors

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

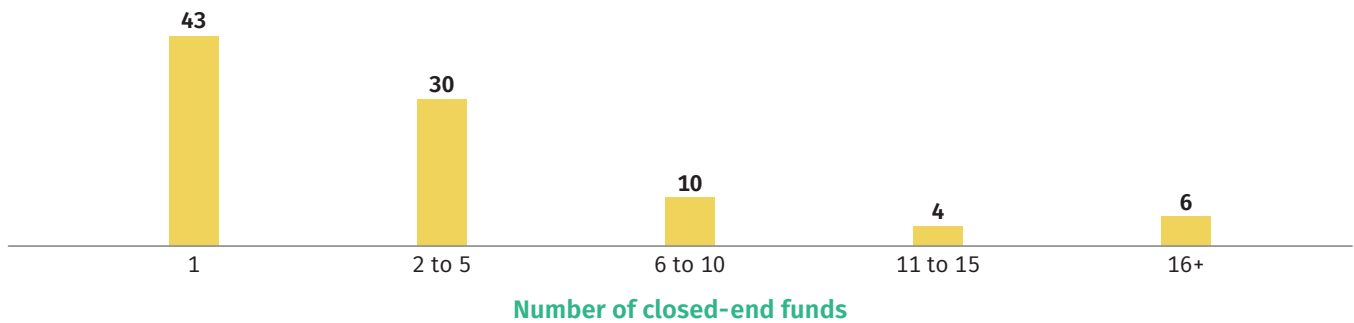


Source: Investment Company Institute

FIGURE 7

**Distribution of Closed-End Funds Across Sponsors**

Number of fund sponsors, year-end 2021



**Share of Closed-End Fund Assets at Largest Complexes**

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

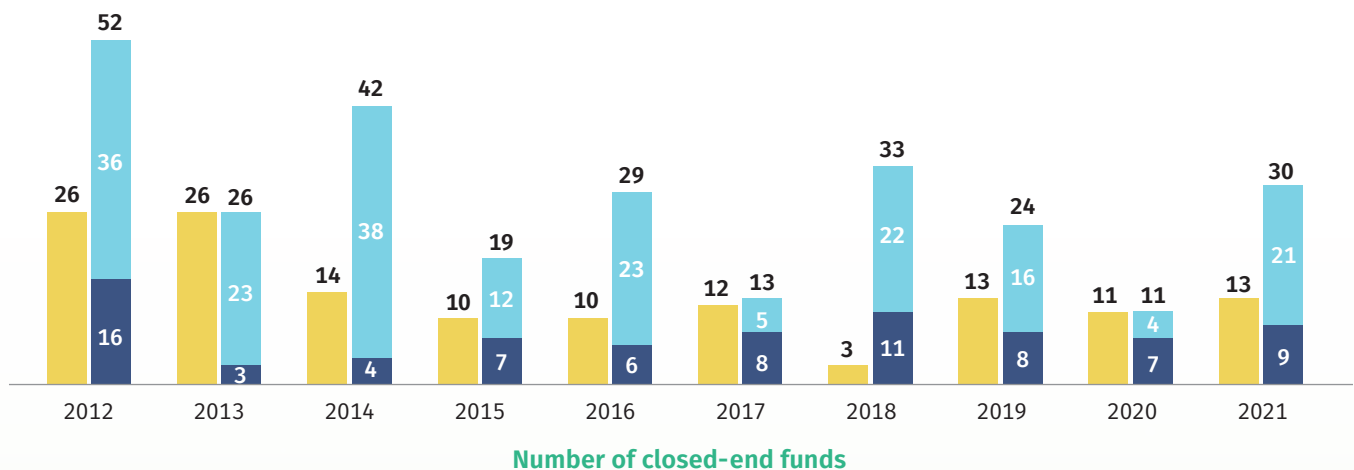
|                      | 2011 | 2013 | 2015 | 2017 | 2019 | 2020 | 2021 |
|----------------------|------|------|------|------|------|------|------|
| Largest 5 complexes  | 53   | 51   | 52   | 52   | 54   | 56   | 56   |
| Largest 10 complexes | 65   | 64   | 65   | 65   | 67   | 71   | 72   |
| Largest 25 complexes | 86   | 84   | 84   | 83   | 85   | 87   | 87   |

Source: Investment Company Institute

FIGURE 8

**Number of Closed-End Funds Entering and Exiting the Industry**

- Launched closed-end funds
- Merged closed-end funds
- Liquidated closed-end funds



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

Other measures also indicate that no one firm or group of firms dominates the closed-end fund market. One such measure of market concentration is the Herfindahl-Hirschman Index, which weighs both the number and the relative size of firms in the industry.<sup>13</sup> Index numbers smaller than 1,000 indicate that an industry is unconcentrated, index numbers between 1,000 and 1,800 indicate moderate concentration, and index numbers greater than 1,800 indicate that an industry is highly concentrated. At year-end 2021, the closed-end fund industry had a Herfindahl-Hirschman Index number of 913 (Figure 9).<sup>14</sup>

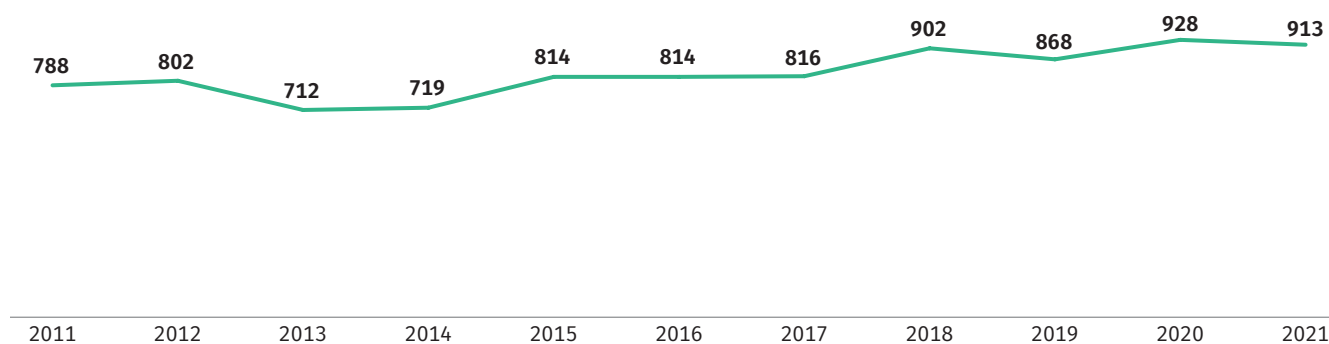
## Closed-End Fund Distributions

In 2021, closed-end funds distributed an estimated \$16.4 billion to shareholders (Figure 10). Closed-end funds may make distributions to shareholders from three possible sources: income from interest and dividends, realized capital gains, and return of capital. Income from interest and dividends accounted for 70 percent of closed-end fund distributions, capital gains distributions for 13 percent, and return of capital for 17 percent.

FIGURE 9

### Closed-End Fund Industry Found Competitive

Herfindahl-Hirschman Index,\* year-end



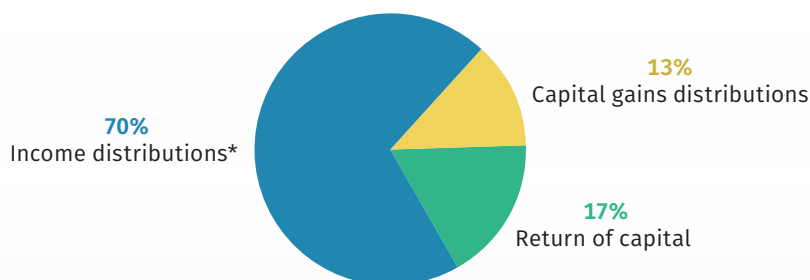
\* The Herfindahl-Hirschman Index weighs both the number and relative size of firms in the industry to measure competition. Index numbers less than 1,000 indicate that an industry is unconcentrated.

Source: Investment Company Institute

FIGURE 10

### Closed-End Fund Distributions

Percentage of closed-end fund distributions, 2021



**Total closed-end fund distributions: \$16.4 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.<sup>15</sup> 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.<sup>16</sup>

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.<sup>17</sup>

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.<sup>18</sup>

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.<sup>19</sup>

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

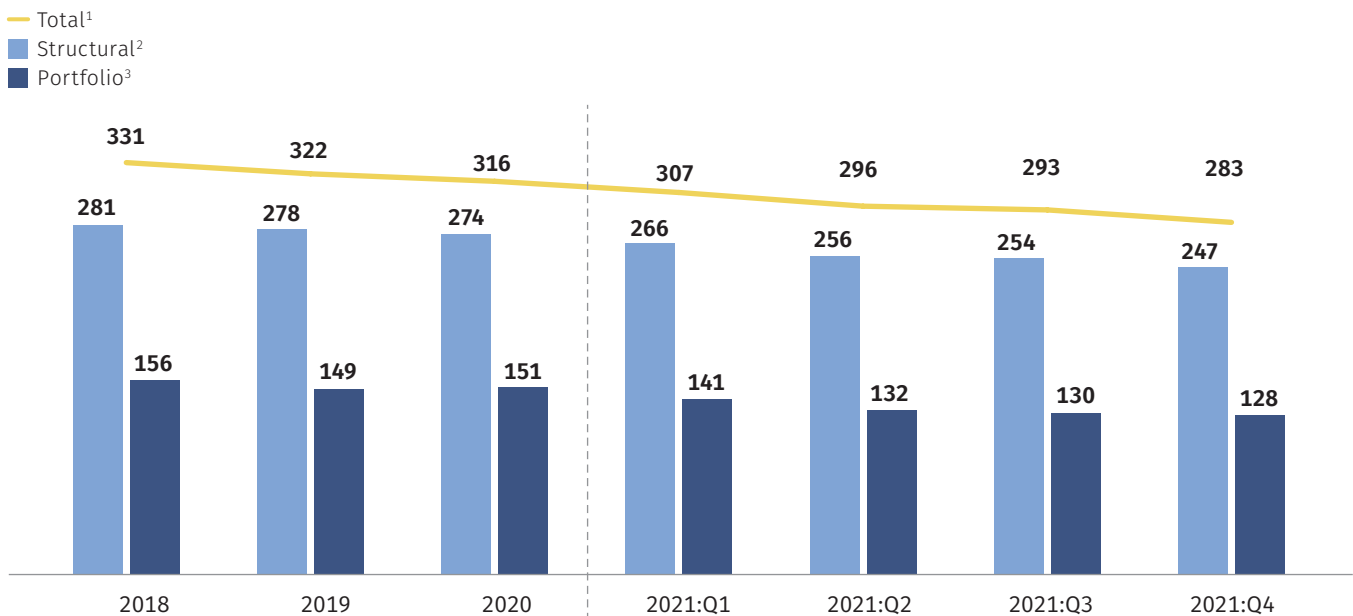
Closed-end funds have the ability, subject to strict regulatory limits, to use leverage as part of their investment strategy.<sup>20</sup> The use of leverage by a closed-end fund can enable it to achieve higher long-term returns but also increases risk and the likelihood of share price volatility. Closed-end fund leverage

can be classified as either structural leverage or portfolio leverage. At year-end 2021, at least 283 funds—61 percent of closed-end funds—were using structural leverage, portfolio leverage consisting of tender option bonds or reverse repurchase agreements, or both (Figure 11).<sup>21</sup>

FIGURE 11

### Closed-End Funds Are Employing Structural and Some Types of Portfolio Leverage

Number of funds, end of period



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

<sup>2</sup> 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.

<sup>3</sup> 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

## 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.<sup>22</sup> 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 2021, 247 funds had a total of \$52.0 billion in structural leverage, with the majority (56 percent) of those assets from preferred shares (Figure 12); 44 percent came from other types of structural leverage. The average leverage ratio<sup>23</sup> across those

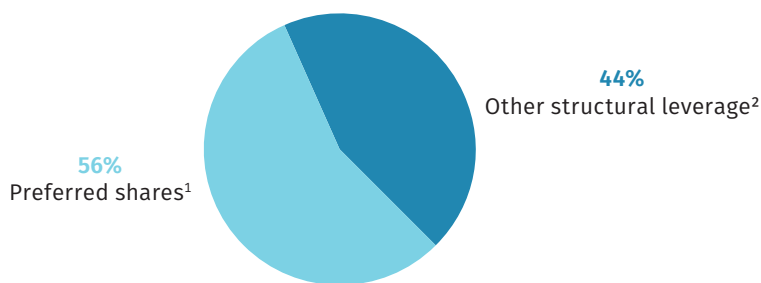
closed-end funds employing structural leverage was 27 percent at year-end 2021; among these funds, the average leverage ratio for bond funds was somewhat higher (28 percent) than that of equity funds (24 percent).

At year-end 2021, 9 percent of the \$309 billion in closed-end fund total assets was funded by proceeds from preferred shares, with bond funds accounting for 93 percent of outstanding preferred share assets (Figure 13). 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.<sup>24</sup> 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.

FIGURE 12

### Preferred Shares Constituted the Majority of Closed-End Fund Structural Leverage

Percentage of closed-end fund structural leverage, year-end 2021



**Total closed-end fund structural leverage: \$52.0 billion**

<sup>1</sup> 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.

<sup>2</sup> *Other structural leverage* includes bank borrowing and other forms of debt.

Source: Investment Company Institute

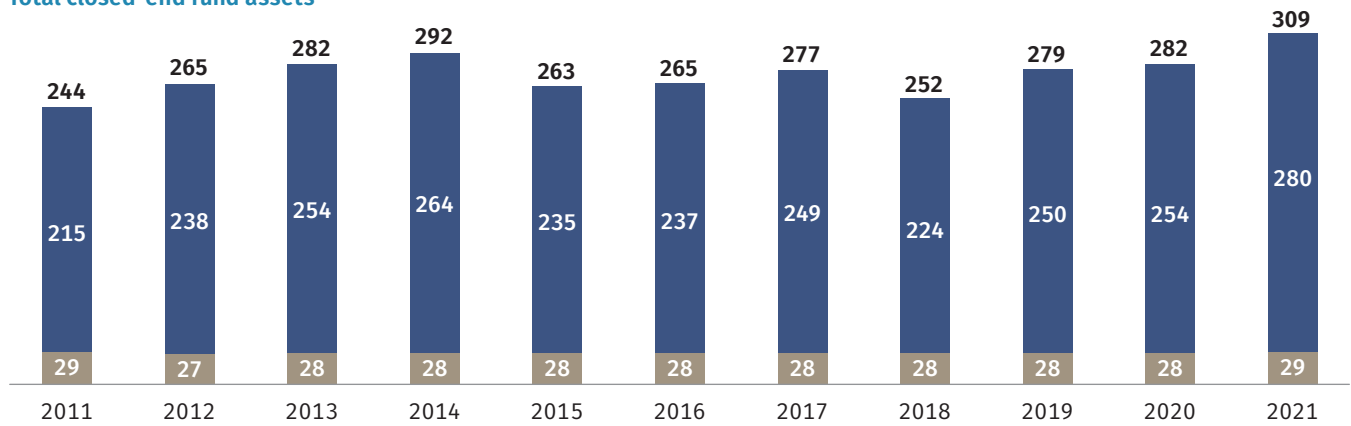
FIGURE 13

### Closed-End Fund Preferred Share Assets

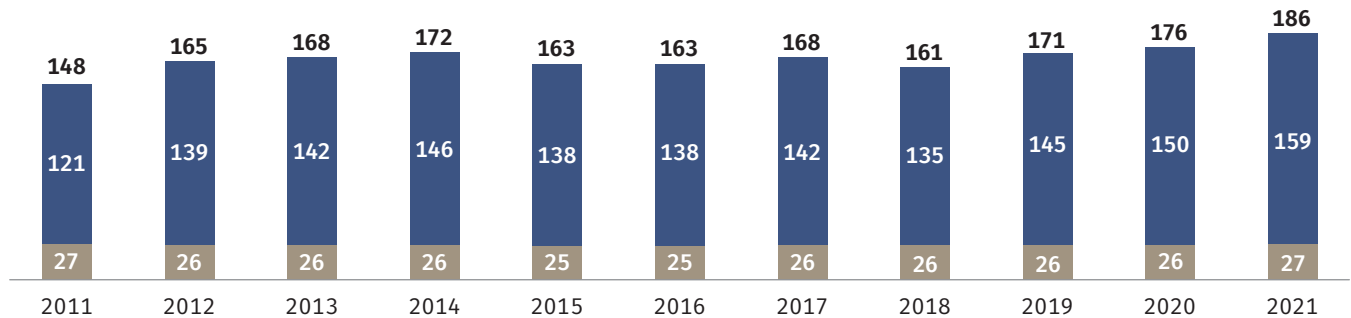
Billions of dollars, year-end

■ Common<sup>1</sup>  
■ Preferred<sup>2</sup>

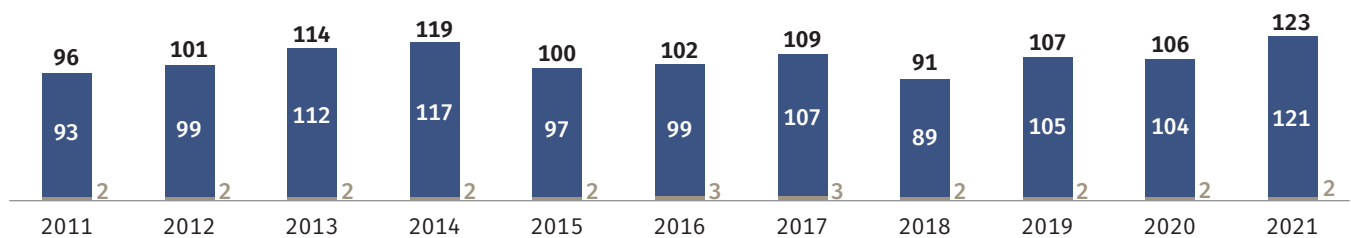
#### Total closed-end fund assets



#### Bond closed-end fund assets



#### Equity closed-end fund assets



<sup>1</sup> All closed-end funds issue common stock (also known as common shares).

<sup>2</sup> 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.

Source: Investment Company Institute



The vast majority (92 percent) of closed-end fund preferred share assets at year-end 2021 were floating-rate preferred shares (Figure 14). Puttable preferred shares, which include variable rate demand preferred shares, were 61 percent of closed-end fund preferred share assets; auction market preferred shares were 15 percent; and fixed-rate preferred shares accounted for 8 percent.

## Portfolio Leverage

Portfolio leverage is leverage that results from certain portfolio investments.<sup>25</sup> Types of closed-end fund portfolio leverage include some types of derivatives, reverse repurchase agreements, and tender option bonds. At the end of 2021, 128 closed-end funds used portfolio leverage in the form of tender option bonds and reverse repurchase agreements as part of their investment strategy (Figure 11). Closed-end funds had \$24.7 billion outstanding in reverse repurchase agreements and tender option bonds at year-end 2021 (Figure 15).

FIGURE 14

### Closed-End Fund Preferred Share Class Assets by Type

Percentage of closed-end fund preferred share class assets, year-end 2021

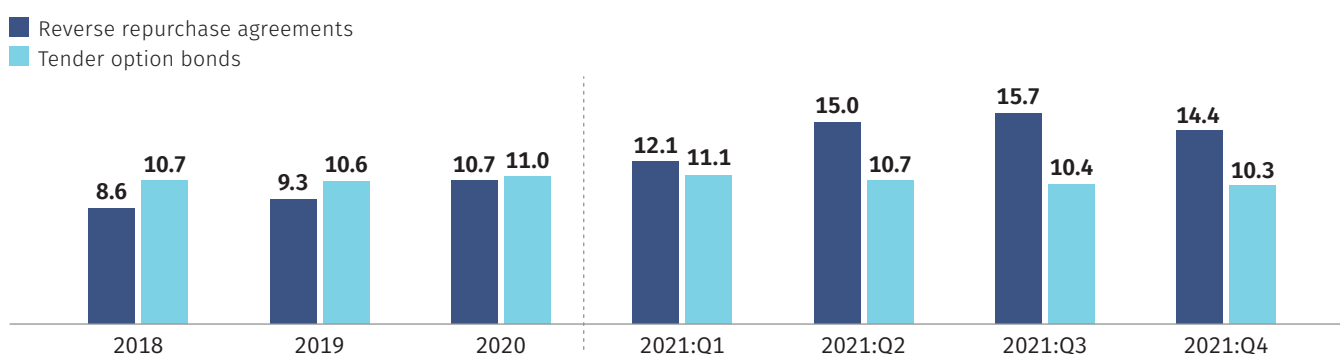
|   |           |
|---|-----------|
| <b>Floating-rate</b>                      | <b>92</b> |
| Auction market preferred                  | 15        |
| Puttable preferred                        | 61        |
| Mandatory redeemable (floating) preferred | 16        |
| <b>Fixed-rate</b>                         | <b>8</b>  |
| Mandatory redeemable (fixed) preferred    | 3         |
| Perpetual (fixed) preferred               | 5         |

Source: Investment Company Institute

FIGURE 15

### Use of Portfolio Leverage

Billions of dollars, end of period



Note: 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 options 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 than what is reflected above.

Source: Investment Company Institute

## Characteristics of Closed-End Fund Investors

An estimated 3.5 million US households owned closed-end funds in 2021.<sup>26</sup> These households tended to include investors who owned a range of equity and fixed-income investments. In 2021, 95 percent of households owning closed-end funds also owned

equity mutual funds, individual stocks, or variable annuities (Figure 16). Sixty-five percent of households that owned closed-end funds also held bond mutual funds, individual bonds, or fixed annuities. In addition, 62 percent of these households owned investment real estate.

FIGURE 16

### Closed-End Fund Investors Owned a Broad Range of Investments

Percentage of closed-end fund-owning households holding each type of investment, 2021

|  |           |
|--|-----------|
| <b>Equity mutual funds, individual stocks, or variable annuities (total)</b> | <b>95</b> |
| <b>Bond mutual funds, individual bonds, or fixed annuities (total)</b>       | <b>65</b> |
| <b>Mutual funds (total)</b>  | <b>85</b> |
| Equity   | 80        |
| Bond   | 57        |
| Hybrid   | 57        |
| Money market   | 65        |
| <b>Individual stocks</b>   | <b>82</b> |
| <b>Individual bonds</b>  | <b>41</b> |
| <b>Fixed or variable annuities</b>   | <b>43</b> |
| <b>Investment real estate</b>  | <b>62</b> |

Note: Multiple responses are included.

Source: Investment Company Institute Annual Mutual Fund Shareholder Tracking Survey

Because a large number of households that owned closed-end funds 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 be headed by college-educated individuals and tended to have household incomes above the national median (Figure 17).

Nonetheless, households that owned closed-end funds exhibited certain differences. For example, although households with closed-end funds tended to have similar household financial assets as those owning individual stocks, they had greater household financial assets than households owning mutual funds (Figure 17). Also, 31 percent of individuals heading households that own closed-end funds were retired from their lifetime occupations, compared with 24 percent for those owning individual stocks and those owning mutual funds.

FIGURE 17

**Closed-End Fund Investors Had Above-Average Household Incomes and Financial Assets**  
2021

|   | All US Households | Households owning closed-end funds | Households owning mutual funds | Households owning individual stocks |
|---|-------------------|------------------------------------|--------------------------------|-------------------------------------|
| <b>Median</b>   |                   |                                    |                                |                                     |
| Age of head of household <sup>1</sup>                                 | 52                | 57                                 | 51                             | 49                                  |
| Household income <sup>2</sup>   | \$65,000          | \$110,000                          | \$104,900                      | \$113,000                           |
| Household financial assets <sup>3</sup>                               | \$100,000         | \$400,000                          | \$320,000                      | \$375,000                           |
| <b>Percentage of households</b>                                       |                   |                                    |                                |                                     |
| <i>Household primary or co-decisionmaker for saving and investing</i> |                   |                                    |                                |                                     |
| Married or living with a partner                                      | 55                | 62                                 | 70                             | 67                                  |
| College or postgraduate degree  | 39                | 61                                 | 57                             | 56                                  |
| Employed (full- or part-time)   | 60                | 72                                 | 75                             | 73                                  |
| Retired from lifetime occupation                                      | 29                | 31                                 | 24                             | 24                                  |
| <i>Household owns</i>   |                   |                                    |                                |                                     |
| IRA(s)  | 37                | 76                                 | 66                             | 59                                  |
| DC retirement plan account(s)   | 47                | 68                                 | 84                             | 68                                  |

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

<sup>2</sup> Total reported is household income before taxes in 2020.

<sup>3</sup> 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

## ***Additional Reading***

» **Closed-End Fund Resource Center**

[www.ici.org/cef](http://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](http://www.ici.org/faqs/faq/other/faqs_closed_end)

» **A Guide to Closed-End Funds**

[www.ici.org/cef/background/bro\\_g2\\_ce](http://www.ici.org/cef/background/bro_g2_ce)

» **Quarterly Closed-End Fund Asset Data**

[www.ici.org/research/stats/closedend](http://www.ici.org/research/stats/closedend)

## Notes

- <sup>1</sup> “Interval” funds represent a small 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.
- <sup>2</sup> 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.
- <sup>3</sup> For more information on closed-end fund discounts and premiums, see Lee, Shleifer, and Thaler 1991.
- <sup>4</sup> Specifically, these would include Schedule 13D filings and Schedule 14A filings identified as “PREC14A,” or preliminary contested proxy solicitation filings.
- <sup>5</sup> 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 an activist intent.
- <sup>6</sup> 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 \$280 billion at year-end 2021.
- <sup>7</sup> The total return on US stocks is measured by the Wilshire 5000 Total Market Index.
- <sup>8</sup> US stocks had an annualized total return of 16.4 percent during this period, as measured by the Wilshire 5000 Total Market Index.
- <sup>9</sup> US investment grade bonds had an annualized total return of 2.9 percent during this period, as measured by the FTSE US Broad Investment Grade Bond Index.
- <sup>10</sup> The total return on international stocks is measured by the MSCI All Country World Daily ex-US Gross Total Return Index.
- <sup>11</sup> By comparison, the share of mutual fund and ETF total net assets managed by the 25 largest firms was 83 percent at year-end 2021. See Investment Company Institute 2022.
- <sup>12</sup> See Investment Company Institute 2022 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.
- <sup>13</sup> See Cabral 2000 and US Department of Justice and the Federal Trade Commission 2010 for more information about the Herfindahl-Hirschman Index.
- <sup>14</sup> The mutual fund industry had a Herfindahl-Hirschman Index number of 785 as of December 2021. For additional discussion of the Herfindahl-Hirschman measure of mutual funds and other industries, see Stevens 2006.
- <sup>15</sup> 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.
- <sup>16</sup> According to Morningstar data, 25 percent of traditional exchange-listed closed-end funds had managed distribution policies as of March 2022—the vast majority of which were in multi-strategy or equity-based closed-end funds.
- <sup>17</sup> For more information on dividend policy and discounts on closed-end funds, see Johnson, Lin, and Song 2006.
- <sup>18</sup> For more information on closed-end fund distributions, see Gabelli Funds, LLC 2004 and Nuveen Investments, “Understanding Managed Distributions.”
- <sup>19</sup> For more information on MLPs, see Tortoise Capital Advisors 2018.
- <sup>20</sup> For additional information, see Investment Company Institute, “Frequently Asked Questions About Closed-End Funds and Their Use of Leverage.”

<sup>21</sup> 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.

<sup>22</sup> 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.”

<sup>23</sup> 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.

<sup>24</sup> See, e.g., Galley 2010 and Investment Company Institute, “Frequently Asked Questions About Closed-End Funds and Their Use of Leverage.”

<sup>25</sup> For more information on the types of closed-end fund leverage, see Nuveen Investments, “Understanding Leverage in Closed-End Funds.”

<sup>26</sup> The Investment Company Institute conducts the Annual Mutual Fund Shareholder Tracking Survey each year to gather information on the demographic and financial characteristics of mutual fund-owning households in the United States. The most recent survey was conducted from May to June 2021 and was based on a dual-frame telephone sample of 3,001 randomly selected US households. Of these, 1,351 households were from a landline random digit dial (RDD) frame and 1,650 households were from a cell phone RDD frame. All interviews were conducted with the investment decisionmaker, the person most knowledgeable about the household’s savings and investments. For additional information on the incidence of closed-end fund ownership across mutual fund-owning households by various demographic and financial characteristics, see Schrass and Bogdan 2021. For additional information on the Annual Mutual Fund Shareholder Tracking Survey, see Holden, Schrass, and Bogdan 2021.

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