Unexpected Returns
How Closed-End Funds Have Defied Conventional Wisdom on Yields and Discounts

Doug Bond, Executive Vice President and Portfolio Manager

Valuation and income potential are good places to start when evaluating closed-end funds, but investors who rely on them as an indicator of future performance are likely to be disappointed.

Closed-end funds have become a staple of the retail investment community, offering access to a wide range of asset classes and investment strategies wrapped in packages that have the potential to generate high levels of income. Distribution rates for the taxable closed-end fund market currently average 7.5% at a time when attractive yields are hard to find. Furthermore, 82% of all closed-end funds are trading below their net asset value (NAV) amid uncertainty over interest rates, giving closed-end-fund investors an additional source of opportunity.

Understanding the yield and the discount (or premium) of a closed-end fund is an important part of assessing the appeal of a potential investment. However, we believe it is critical to look beyond yields and discounts, as our analysis shows that these factors have been remarkably bad fortune tellers.

We examined historical performance for closed-end funds in three categories—equity, taxable fixed-income and tax-exempt fixed-income—to see if there were discernible relationships between various yields and valuations relative to forward 12-month returns. In other words, given a particular yield or discount, how have closed-end funds performed on average over the ensuing 12 months?

The analysis revealed that performance generally ran counter to what investors might have expected. In fact, some of the best returns followed when yields were relatively modest, or when funds were trading at average premiums to NAV. We believe this confirms our view that there is more to understanding opportunities in closed-end funds than searching for high yield or comparing market price to NAV.

(1) At September 30, 2018. Source: Cohen & Steers and Morningstar. Unless otherwise noted, closed-end funds in this report are represented by the Morningstar U.S. All Taxable Ex-Foreign Equity Closed-End Fund Index. Yield for closed-end funds refers to the distribution rate, which is calculated by dividing the last distribution paid per share (annualized) by the market price. See page 7 for index and distribution rate definitions.
The Yield and Discount Value Propositions

A Potential Income Advantage Over Stocks and Bonds

Income-seeking investors currently have their choice of hundreds of closed-end funds paying distribution rates over 7%. It is no wonder, then, that closed-end funds have remained popular, especially considering the substantial income needs of baby boomers, who are retiring at a time when yields on investment-grade bonds are meager at best. Many closed-end funds also offer the potential for capital appreciation, further enhancing their appeal to growth-and-income investors.

Closed-end funds continue to offer a meaningful income advantage over stocks and bonds, due mostly to the use of leverage in their capital structure. As of September 30, 2018, taxable closed-end funds had an average distribution rate of 7.5%, compared with a 4.1% yield on U.S. corporate bonds and 3.1% for 10-year Treasury notes (Exhibit 1). Meanwhile, the S&P 500 featured an average dividend yield of 1.8%. For a $100,000 investment, this translates into an additional $4,550 in potential annual income compared with a 50/50 mix of stocks and corporate bonds. The tax-exempt market offers a similar advantage, with national municipal closed-end funds averaging 1.6% more than municipal bonds.

Distribution rates currently exceed 7% for the vast majority of closed-end funds

Exhibit 1: Closed-End Funds Offer the Potential for Attractive Income

<table>
<thead>
<tr>
<th>Average Yield</th>
<th>Current</th>
<th>10-Year Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxable Closed-End Funds</td>
<td>7.5%</td>
<td>8.1%</td>
</tr>
<tr>
<td>Stocks</td>
<td>1.8%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Corporate Bonds</td>
<td>4.1%</td>
<td>3.8%</td>
</tr>
<tr>
<td>10-Year Treasury</td>
<td>3.1%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Municipal Closed-End Funds</td>
<td>5.1%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Municipal Bonds</td>
<td>3.5%</td>
<td>3.6%</td>
</tr>
</tbody>
</table>


Data quoted represents past performance, which is no guarantee of future results.

(a) Distribution rate, Morningstar U.S. All Taxable Ex-Foreign Equity Closed-End Fund Index. (b) Average trailing 12-month dividend yield, S&P 500 Index. (c) Yield to maturity, ICE BofAML Corporate Master Index. (d) Federal Reserve 10-year Treasury constant maturity rate. (e) Distribution rate, Morningstar U.S. National Municipal Closed-End Fund Index. (f) Yield to maturity, ICE BofAML Municipal Master Index. See page 7 for index definitions and additional disclosures.

(1) Assumes constant distributions (reinvested) based on the distribution rate of the Morningstar U.S. All Taxable Ex-Foreign Equity Closed-End Fund Index, versus the average yield for an even mix of stocks (represented by the S&P 500 Index) and investment-grade corporate bonds (represented by the ICE BofAML Corporate Master Index). Actual distribution rates typically vary. See page 7 for index definitions.
Buying Assets at a Discount

Another quality that investors value in closed-end funds is the opportunity to buy shares at a discount to NAV. Over the long term, discounts have averaged -5.1% for equity funds and -3.1% for taxable fixed income funds. However, discounts have widened over the past year, particularly among municipal bond funds, as concerns about continued Federal Reserve interest rate hikes stoke fears for investors in these funds. As of September 30, 2018, 82% of the taxable closed-end-fund market traded below NAV, with discounts averaging -3.5% and -3.7% for equity and taxable fixed income funds, respectively. Municipal bond funds ended the period trading at an -8.2% discount to NAV, more than twice their long-term average discount of -3.9%.

It is not uncommon for market prices of closed-end funds to lag NAV returns in periods of rising rates. This is because higher borrowing costs can make it harder for funds to sustain their distributions. This was the case back in 2015, when discounts to NAV widened meaningfully in anticipation of the first interest-rate hike in years. After the Fed finally raised rates in December of that year, discounts narrowed substantially. Since that initial rate hike, the Fed has been consistently raising overnight rates, a dynamic likely to continue in the coming year. With that, we expect closed-end funds’ borrowing costs to keep rising, but remain moderate when compared to history.

In an environment of slow but positive economic growth and gradually rising rates, we believe many segments of the closed-end-fund market could see discounts gradually move toward their historical averages. In the case of equity funds where valuations have already moved beyond average, we see this as a sign that retail investors are comfortable owning equities. Without the historically stabilizing force of a new issue primary market to bring new supply to the closed end fund market, we believe these relatively rich valuations could persist until the broader equity market cycle takes a material turn.

Yields and Discounts Are the Beginning, Not the End, of Analysis

Income potential and discounts (or premiums) are just two of the many factors to consider when evaluating closed-end funds. In our experience, it is often other factors—such as the relative value of the underlying asset class and the skill of the fund manager—that typically have the largest influence on a fund’s long-term performance. Unfortunately, many investors will buy a closed-end fund simply because it has a high yield and/or a deep discount, believing this gives them the best expected return.

We examined historical returns to see if the evidence supports our view that discounts and yields have only a tangential effect on performance. What we found is that the relationship often contradicts what an investor might expect.

(1) Equity funds represented by the Morningstar U.S. All Equity & Hybrid Ex-Foreign Equity Closed-End Fund Index; fixed income funds represented by the Morningstar U.S. All Taxable Fixed Income Closed-End Fund Index. Index average discounts calculated using index data from January 1, 1997 to September 30, 2018. See page 7 for index definitions.
Unexpected Returns

How to read the charts: For our analysis, we used all available data for closed-end funds going back to 1997 for valuations (discounts/premiums) and 2003 for distribution rates (yields) through September 2018. At each day, we noted the current discount/premium and yield and the forward 12-month return. Each chart represents a simple average of forward 12-month returns (X axis) for all days beginning at various ranges of valuations and yields (Y axis), providing an indication of how funds in the given category typically performed based on where they began.

Wider Discounts Do Not Necessarily Mean Better Returns

For taxable fixed income funds, the best returns were associated with buying at extremely deep discounts. However, outside of those extreme cases, there is very little discernable difference between buying at premiums, small discounts and modest discounts. In periods when funds traded below NAV, forward returns were the same +6.7% following small discounts (0.0% to -4.5%) and following modest discounts (-4.5% to -9.0%). Buying when the funds traded at premiums would have realized +6.0% forward returns on average—slightly lower, but well within the realm of statistical noise.

Equity funds also had their strongest returns during periods of extremely deep discounts. However, much like the taxable fixed income funds, outside those extreme periods, similar forward returns would have been achieved buying at premiums, small discounts and more modest discounts. In periods when the equity funds traded at premiums (0.0% to 4.5%) and modest discounts (-4.5% to -9.0%) forward returns were an identical +5.9%. Returns were slightly better at +6.6% after buying funds at smaller discounts (0.0% to -4.5%), but again, far from a reliable association with forward returns.

Except in extreme conditions, discounts have had little connection with how closed-end funds performed over the forward 12-month period.

Exhibit 2: Discounts/Premiums and Forward 12-Month Returns, 1997–Q3 2018

Taxable Fixed Income Funds

<table>
<thead>
<tr>
<th>Discount</th>
<th>1.5% to 4.5%</th>
<th>0.0% to 1.5%</th>
<th>-1.5% to 0.0%</th>
<th>-3.0% to -1.5%</th>
<th>-4.5% to -3.0%</th>
<th>-6.0% to -4.5%</th>
<th>-7.5% to -6.0%</th>
<th>-9.0% to -7.5%</th>
<th>&lt; -9.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premium</td>
<td>20.0%</td>
<td>0%</td>
<td>2%</td>
<td>4%</td>
<td>6%</td>
<td>8%</td>
<td>10%</td>
<td>12%</td>
<td>14%</td>
</tr>
</tbody>
</table>

Fixed income funds had slightly better average returns after trading at small to modest discounts.

Equity Funds

<table>
<thead>
<tr>
<th>Discount</th>
<th>1.5% to 4.5%</th>
<th>0.0% to 1.5%</th>
<th>-1.5% to 0.0%</th>
<th>-3.0% to -1.5%</th>
<th>-4.5% to -3.0%</th>
<th>-6.0% to -4.5%</th>
<th>-7.5% to -6.0%</th>
<th>-9.0% to -7.5%</th>
<th>&lt; -9.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premium</td>
<td>17.5%</td>
<td>0%</td>
<td>2%</td>
<td>4%</td>
<td>6%</td>
<td>8%</td>
<td>10%</td>
<td>12%</td>
<td>14%</td>
</tr>
</tbody>
</table>

The strong performance of equity funds following instances of high premiums coincided with returns from 2003–2004, a favorable period for closed-end funds.


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(a) Average total return over the forward 12 months for all days between January 1, 1997 and September 30, 2018, on which the end-of-day valuation was within the specified range; taxable fixed-income funds represented by the Morningstar U.S. All Taxable Fixed Income Closed-End Fund Index; equity funds represented by the Morningstar U.S. All Equity & Hybrid Ex-Foreign Equity Closed-End Fund Index. See page 7 for index definitions and additional disclosures.
Chasing Yield May Also Be the Wrong Approach

Exhibit 3 shows a similar analysis, using current distribution rates rather than valuation. Within fixed income funds, yields above 9% were most often followed by negative returns, whereas an environment of lower yields was generally more favorable. Equity funds also exhibited more favorable returns when yields were at the lower end of the range, but the relationship was similarly incoherent.

Exhibit 3: Distribution Rate and Forward 12-Month Returns, 2003–Q3 2018(a)

<table>
<thead>
<tr>
<th>Distribution Rate</th>
<th>Taxable Fixed Income Funds</th>
<th>Equity Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.00% to 10.25%</td>
<td>8.75% to 9.00%</td>
<td></td>
</tr>
<tr>
<td>9.75% to 10.00%</td>
<td>8.50% to 8.75%</td>
<td></td>
</tr>
<tr>
<td>9.50% to 9.75%</td>
<td>8.25% to 8.50%</td>
<td></td>
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<tr>
<td>9.25% to 9.50%</td>
<td>8.00% to 8.25%</td>
<td></td>
</tr>
<tr>
<td>9.00% to 9.25%</td>
<td>7.75% to 8.00%</td>
<td></td>
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<tr>
<td>8.75% to 9.00%</td>
<td>7.50% to 7.75%</td>
<td></td>
</tr>
<tr>
<td>8.50% to 8.75%</td>
<td>7.25% to 7.50%</td>
<td></td>
</tr>
<tr>
<td>8.25% to 8.50%</td>
<td>&lt; 7.25%</td>
<td></td>
</tr>
</tbody>
</table>

Historically, fixed income funds often had negative returns when yields were above 9% but below 10%, while more modest yields generally led to consistently better results.

Equity funds have historically performed the best when yields have been at the lower end of the range.


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(a) Average total return over the forward 12 months for all days between January 1, 2003 (first available data on closed-end-fund yields) and September 30, 2018, on which the end-of-day yield was within the specified range; taxable fixed-income funds represented by the Morningstar U.S. All Taxable Fixed Income Closed-End Fund Index; equity funds represented by the Morningstar U.S. All Equity & Hybrid Ex-Foreign Equity Closed-End Fund Index. See page 7 for index definitions and additional disclosures.

Municipal Closed-End Funds Have Exhibited More Consistent Relationships

In the world of taxable closed-end funds, the relationships of yields, discounts and forward returns has historically been erratic and often contradictory. By comparison, returns in the municipal closed-end-fund market have been much more consistent with intuitive expectations. As shown in Exhibit 4 on the following page, we see a consistent connection between wider discounts and higher returns. Conversely, municipal funds generally performed poorly after trading at average premiums. We see similar consistency with respect to yields, where better returns have typically followed periods of higher yield levels.

Given the seeming directness of these relationships, investors may be tempted to use yields and discounts mechanically as buy-and-sell guides for municipal funds. However, we are reminded of the oft-repeated dictum—past performance is not a guarantee of future investment results.
Unexpected Returns

Allocating to Closed-End Funds

In our view, the analysis presented here strongly suggests that the performance of closed-end funds does not necessarily line up with what a yield or discount might imply. Some of the best returns for both equity and taxable fixed income funds have come when funds have traded at premiums, and when yields are at the lower end of the spectrum. We would also note that except at the extremes, closed-end funds have repeatedly exhibited both positive and negative performance following a wide range of discounts and yields.

The most important considerations, in our view, should be an investor’s outlook for the underlying asset class and the quality of the fund manager. We believe these decisions should be made in conjunction with a financial advisor to determine whether an allocation to closed-end funds is appropriate.

As the closed-end-fund market has grown, more vehicles have been introduced to help investors take advantage of these opportunities.

Below are some of the ways investors can participate:

- **Individual closed-end funds**, purchased either through an initial public offering or in the secondary market
- **Unit investment trusts that invest in closed-end funds**, comprising a fixed portfolio with a finite life that is not actively managed
- **Exchange-traded funds of closed-end funds**, typically based on a passive index
- **Actively managed accounts that invest in closed-end funds**, offering the potential to exploit inherent inefficiencies in the closed-end market, with the benefit of professional management

- Mutual funds (open-end and closed-end)
- Institutional separate accounts
- Retail separate accounts
- Unified managed accounts (UMA)

Whichever approach investors choose, we believe closed-end funds can be a valuable part of a diversified portfolio, offering the potential for attractive income and capital appreciation through a wide range of strategies and asset classes.

Exhibit 4: Municipal Closed-End Funds and Forward 12-Month Returns

With municipal funds wider discounts have historically been followed by better returns on average.

Higher yields for municipal funds exhibited a relatively consistent relationship with higher forward returns, contrary to taxable and equity funds.


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(a) Based on the Morningstar U.S. National Municipal Closed-End Fund Index. Average total return over the forward 12 months for all days between January 1, 1997 and September 30, 2018, on which the end-of-day valuation was within the specified range. (b) Average total return over the forward 12 months for all days between January 1, 2003 (first available data on closed-end-fund yields) and September 30, 2018, on which the end-of-day yield was within the specified range. See page 7 for index definitions and additional disclosures.
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Risks of Investing in Closed-End Funds. Shares of many closed-end funds frequently trade at a discount from their net asset value. The funds are subject to stock market risk, which is the risk that stock prices overall will decline over short or long periods, adversely affecting the value of an investment in a fund.

Distribution Rate. The distribution rate is calculated by dividing the last distribution paid per share (annualized) by the market price. Note that the number of income distributions is based on the fund’s distribution payment frequency (i.e. monthly or quarterly). A fund may pay distributions in excess of its net investment company taxable income and, to the extent this occurs, the distribution yield quoted will include a return of capital. Under federal tax regulations, some or all of the return of capital distributed by a fund may be taxed as ordinary income. In addition, distributions for funds investing in real estate investment trusts (REITs) may later be characterized as capital gains and/or a return of capital, depending on the character of the dividends reported to each fund after year-end by REITs held by a fund.

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