Spotlight on leverage in closed-end funds

BlackRock®

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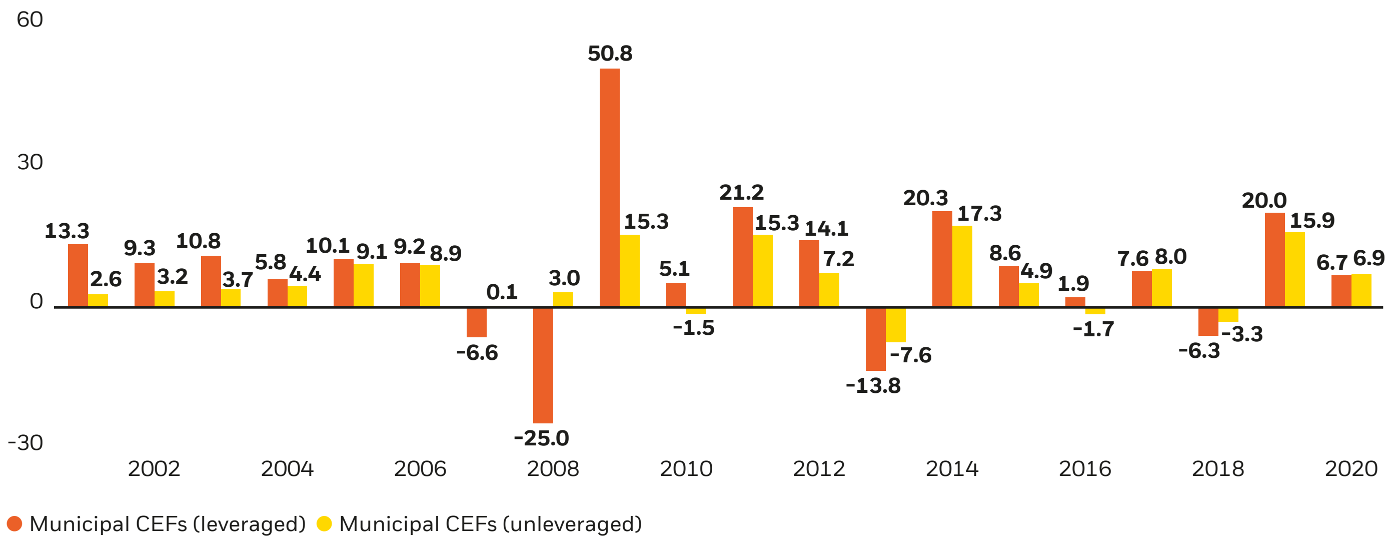
Leverage is a strategy that can be employed by closed-end funds ("CEFs") in an effort to potentially increase income and enhance returns. The use of leverage is subject to risks, including the potential for higher net asset value ("NAV") and market price volatility and fluctuations of distributions. It is important to understand why and how funds employ this strategy along with the potential benefits and risks associated with the use of leverage.

Why do CEFs use leverage?

CEF's generally use leverage as a way to increase earnings and potentially enhance returns of a fund. The CEF structure is ideal for using leverage given its "fixed" asset base. Typically, a CEF raises capital by selling a fixed number of shares through an initial public offering ("IPO") and invests the proceeds from the IPO in a portfolio of securities. After the IPO period, the CEF trades on a national stock exchange and typically does not offer further subscriptions for, or redemptions of, its shares.[1] This feature limits the ability of the CEF to raise capital following the IPO but provides the portfolio managers with greater investment flexibility in the portfolio as the portfolio managers are not required to manage daily inflows and outflows of assets like open-end mutual funds. Given this relatively stable asset base, CEFs can seek to utilize leverage to potentially increase earnings and potentially enhance returns. Leverage adds a multiplier effect to the portfolio and will magnify both returns and losses. As illustrated below, over the long term, leveraged municipal CEFs have outperformed unleveraged municipal CEFs in 15 of the last 20 years. While total returns for leveraged municipal CEFs have been lower during periods of heightened volatility in the last 20 years, the use of leverage generally helped enhance total returns over that time frame.

Leveraged municipal CEFs have had higher NAV total returns than unleveraged municipal CEFs in 15 of the last 20 years



Source: Lipper as of 2/28/2021. Past performance does not guarantee or indicate future results. Total returns are annualized and based on NAV. Municipal CEFs (leveraged) are represented by the General & Insured Municipal (leveraged) Lipper Category. Municipal CEFs (unleveraged) are represented by the General & Insured Municipal (unleveraged) Lipper Category.

1 In order to increase net assets, a CEF may be able to issue new shares through an at-the-market equity shelf offering program, overnight follow-on offering or rights offering. In certain circumstances, CEFs may be able to reduce shares outstanding through open market share repurchases or tender offers.

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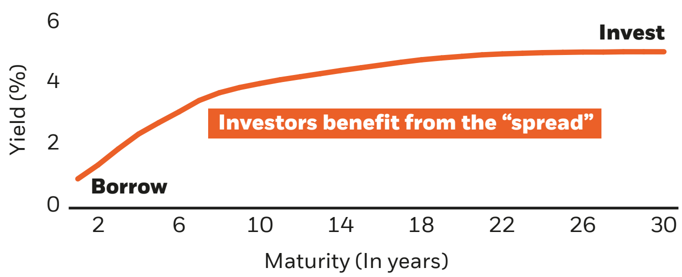
How does leverage work?

Leverage can come in a variety of forms including debt, preferred stock, and derivative instruments. The use of leverage seeks to profit from the spread between short-term (lower) and long-term (higher) interest rates. Assuming such an upward sloping yield curve, a CEF may borrow at lower short-term interest rates, and invest the proceeds of leverage in longer-term securities that typically pay higher rates of return. As a consequence, the use of leverage is more commonly employed in funds that invest in fixed or floating rate income securities. Although there are several potential benefits of using leverage, investors should consider the potential for increased risk and volatility prior to investing in a leveraged CEF.

The spread between short- and long-term interest rates may generate excess cash flow when the yield curve is positively sloped



For Illustrative Purposes Only. The above chart represents a positively sloped yield curve. There is no assurance that a fund’s leveraging strategy will be successful. Once a portfolio is leveraged, the NAV and market value of the common shares will be more volatile. While a common investment practice by many CEF managers, leverage cannot assure a higher yield or return to the holders of the common shares. Please refer to the section entitled “What are some of the risks of leverage?” for a summary of some of the risks involved in the use of leverage.

How do I calculate the amount of leverage in a CEF?

BlackRock believes it is important to consider leverage in the context of total managed assets (as defined herein). Calculating leverage based solely on net assets may overstate a fund’s leverage percentage.

- “Managed assets” typically refers to a CEF’s total assets (including any assets attributable to the use of leverage for investment purposes) minus the sum of the CEF’s accrued liabilities (excluding leverage used for investment purposes).
- “Net assets” typically refers to a CEF’s managed assets minus the value of the CEF’s assets attributable to leverage used for investment purposes.

To calculate a fund’s leverage percentage based on total managed assets, divide the dollar amount of leverage by the fund’s total managed assets as seen below:

% leveraged =

(Total managed assets – net assets) / Total managed assets

Example:

- Net Assets = $100 million
- Leverage Amount = $50 million
- Total Managed Assets = $150 million
  - % Leveraged based on net assets = 50%
  - % Leveraged based on total managed assets = 33.33%
- Asset Coverage = 300% ($150 million / $50 million)

For illustrative purposes only. The above does not represent an actual BlackRock fund.

Leverage can magnify both returns and losses

	Unleveraged fund	Leveraged fund
Net assets ($Millions)	$1,000	$1,000
Shares issued	100	100
NAV	$10.00	$10.00
Leverage	$0	$500
Total managed assets ($Millions)	$1,000	$1,500
Leverage ratio (Total managed assets – Net assets) / Total managed assets	0%	33%
Effects of a 5% increase in total assets	$50	$75
New total managed assets	$1,050	$1,575
New net assets	$1,050	$1,075
New NAV	$10.50	$10.75
Resulting increase in NAV	**5.00%**	**7.50%**
Effects of a 5% decrease in total assets	($50)	($75)
New total assets	$950	$1,425
New net assets	$950	$925
New NAV	$9.50	$9.25
Resulting decrease in NAV	**-5.00%**	**-7.50%**

For illustrative purposes only. Not indicative of future returns.

What are some of the risks of leverage?

Cost of Leverage: As short-term rates rise, the cost of leverage may increase, which could cause the spread earned between the cost of leverage and the income from investments to narrow or even become negative (i.e. leverage costs exceed income), which would reduce or eliminate the CEF's ability to use leverage to profit from the interest rate spread. When this occurs, a leveraged CEF would lose the income it would otherwise have received from the use of leverage and may be required to reduce its distributions.

Duration: A portfolio's interest rate risk, or "duration," generally increases with the use of leverage since the leverage strategy magnifies the CEF's investment exposure to its portfolio assets. Funds that employ leverage tend to exhibit greater NAV and market price volatility than nonleveraged funds. Due to their sensitivity to changes in interest rates, leveraged CEFs may experience larger declines in NAV compared to similar unleveraged CEFs as a result of a rise in interest rates. A reduction in the CEF's NAV may cause a reduction in the market price of its common stock.

Managing leverage risk: In seeking to mitigate interest rate risk, a portfolio manager may invest in shorter duration securities or seek to compensate for interest rate risk by balancing exposure to other factors such as credit risk. Additionally, the use of certain derivative instruments for hedging purposes, such as interest rate swaps or short Treasury future positions, may help manage interest rate sensitivity. When comparing leveraged and non-leveraged CEFs, it is important to view the duration of a CEF's portfolio in light of the fund's use of leverage. The exhibit (below) illustrates a simple calculation to make this adjustment:

Leveraged adjusted duration =

Non-leveraged duration / (1 - leverage %)

Example:

- Non-leveraged Duration: 5.5 years
- Leverage: 30.0%
- Leverage Adjusted Duration: 5.5 / (1 – 0.300) = 7.9 years

For illustrative purposes only. The above does not represent an actual BlackRock fund. Duration numbers published for BlackRock CEFs on BlackRock.com are adjusted for leverage.

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