

Understanding closed-end fund premiums and discounts

Bottom line

- Closed-end fund (“CEF”) valuations are cyclical in nature with fluctuations in premium or discount driven by several factors, including, but not limited to, investor and market sentiment, fund-specific characteristics and/or manager recognition.
- Given the significant influence of market and investor sentiment on CEF valuations and potential inefficiencies in the trading of CEF shares, investors should expect funds to trade at a premium or discount over time, potentially at extreme valuations driven by elevated market volatility or investor exuberance.
- Importantly, the presence of a discount should not be considered a “negative” in all cases as CEFs have historically fluctuated between premiums and discounts and may present a higher potential for capital appreciation if the discount narrows. Purchasing at a discount can increase a fund’s distribution rate and may present a higher potential for capital appreciation if discounts narrow.

The basics of premiums and discounts

When the market price of a CEF is **above** its net asset value (NAV), the fund is said to be trading at a premium. Conversely, when a fund’s market price is **below** NAV, the CEF is trading at a discount. Based on these definitions, the common assumption is that premiums are advantageous, while discounts are viewed unfavorably. However, this assumption is rather oversimplified as neither premium nor discount pricing alone tells a complete story.

Consider the CEF hypothetical example in the chart below (Exhibit 1). ABC trades at a 10% discount to its NAV and

XYZ trades at a 10% premium to its NAV. If the NAV for each fund grows from \$10 to \$11, the result is a NAV return of 10%. If, during the same time, ABC’s discount narrows and XYZ’s premium is not sustained and both funds trade in line with the NAV of \$11 per share, the investor experience is quite different.

In this example, both funds experienced the same NAV performance, but the CEF purchased at a **discount** delivered a 22% total return while the fund purchased at a **premium** was flat.

Exhibit 1: Hypothetical return example (assumes no dividends paid)

		ABC	XYZ
Starting	NAV	\$10	\$10
	Market price	\$9	\$11
	Discount/premium	-10%	10%
Ending	NAV	\$11	\$11
	Market price	\$11	\$11
	Discount/premium	0%	0%
NAV return		10%	10%
Market price return		22%	0%

Drivers of premiums and discounts

Several factors can impact whether a CEF trades at a premium or discount and how a CEF trades relative to its historical premium or discount range – these factors fall across multiple categories including, but not limited to, investor and market sentiment, fund-specific characteristics and manager recognition (Exhibit 2). Among these, market and investor sentiment stand out as the primary drivers since a large proportion of premium or discount fluctuations occurs due to movements in equity volatility, interest rate volatility, credit spreads and interest rate levels.

Exhibit 2: Some potential drivers of premiums and discounts

Market sentiment	Investor sentiment	Fund specific	Manager & firm
<ul style="list-style-type: none"> • Macroeconomic conditions • Asset class performance • Market volatility • Interest rates 	<ul style="list-style-type: none"> • (Mis)Perception of fund performance • Demand for investment strategy • Year-end tax loss selling • Recent fund issuance 	<ul style="list-style-type: none"> • Performance and distribution rate • Degree and sources of leverage • Historical premium/discount • Corporate actions 	<ul style="list-style-type: none"> • Manager track record • Firm reputation • Secondary market support • Research coverage

The value of a discount

From an investor’s perspective, it feels instinctive to anticipate long term underperformance from a fund that trades at a large discount. However, the philosophy of value investing – i.e., purchasing assets at a discount to their intrinsic value – helps make a case for *not* overreacting to discounts.

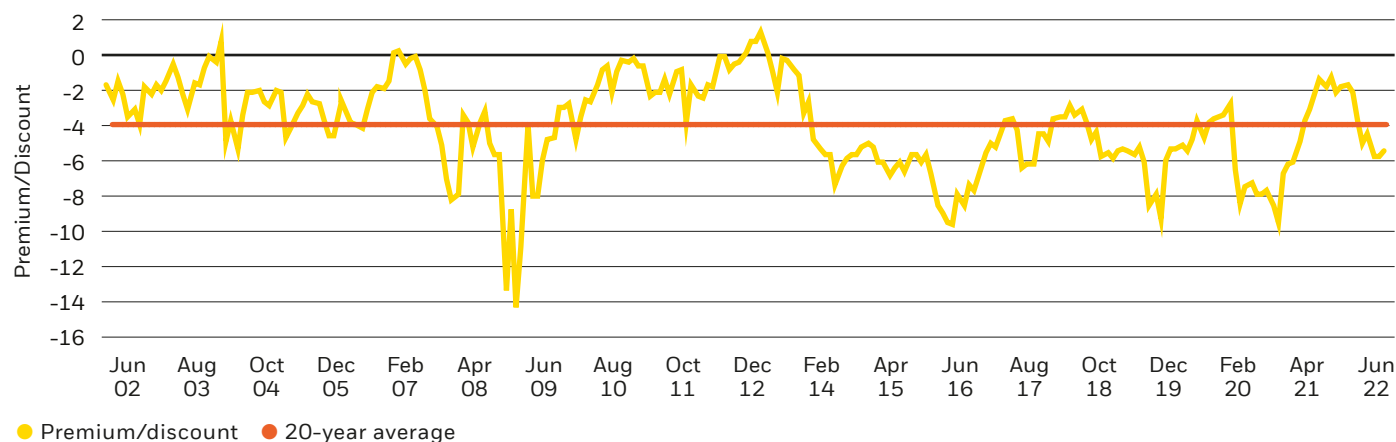
BlackRock believes that it may be advantageous to purchase a fund when it is trading at a discount, as each dollar invested purchases more than a dollar of assets, presenting a value opportunity and compensating investors with a potentially higher distribution rate while they wait. If the discount begins to narrow, investors may have a higher

potential for capital appreciation. Importantly, as we’ll discuss in the next section, these value opportunities can be uncovered in CEFs that trade at a premium or discount given the tendency for individual CEFs to establish trading ranges over time.

Discovering value opportunities

For the greater part of the last two decades, the majority of CEFs have traded at a discount, on average.¹ However, as shown in the chart below, the average has fluctuated significantly during this time. Additionally, the average doesn’t tell the whole story as many CEFs have traded at a premium over this time.²

Exhibit 3: 20-year Historical Premium/Discount of U.S. CEFs



Source: Morningstar as of 6/30/2022. Average premium/discount of all listed U.S. CEFs.

¹ This information is based on Morningstar data (June 2022).

² This information is based on Morningstar data (June 2022).

Individual CEFs tend to establish a specific premium/discount trading range over time. CEF investors should consider a fund's short term (i.e., 3- and 12-month) as well as longer term (i.e., 3- and 5-year) historical trading patterns. Many professional investors use the **z-score** to assess a CEF's valuation over various timeframes. In simple terms, the z-score illustrates whether a fund is trading above (positive) or below (negative) its average valuation over a specific period and the magnitude of that deviation represented by the current premium or discount. For example, a z-score of -2 means that the CEF's current premium/discount is cheaper than ~98% of the observations over the reference period. Investors can access a fund's z-score over the 3-, 6- and 12-month periods for free on cefconnect.com.

Exhibit 4: Z-score table³

Z-score	Translation
Negative	Premium/discount is cheap relative to the average over the period
0	Premium/discount is equal to the average during the period
Positive	Premium/discount is rich relative to the average over the period

One thing to keep in mind is that deviations from historical trading ranges do occur, typically during periods of investor exuberance or elevated market volatility, due to fluctuations in market and investor sentiment and the fund specific factors highlighted above. Additionally, catalysts such as improved performance, a change in distribution policy or other corporate action may alter a CEF's future trading pattern.

How CEF sponsors seek to address discounts

With the understanding that market and investor sentiment will be the primary drivers of CEF valuations, the ways in which sponsors of CEFs approach discounts can provide good insight for investors. While there is no "silver bullet" to narrowing discounts, we believe CEF sponsors can be proactive and employ various tools to help funds trade more efficiently and improve secondary market liquidity. BlackRock continuously assesses premium and discount levels, including regular discussions with each fund's board of directors. This process helps inform us when we believe it

is appropriate and what action(s) to implement. For example, BlackRock has taken several strategic actions and employs certain tactical tools to help support CEFs on the secondary market and enhance shareholder value, including:

- **Distribution increases:** BlackRock employs a managed distribution plan for all equity and taxable fixed income CEFs seeking to deliver to investors a consistent monthly distribution rate that is competitive with peers.⁴ Other strategies may include increasing the degree and/or source of leverage or allocating to securities that offer the potential for higher distribution rates or returns, however, these decisions should consider the incremental risk to the fund. Importantly, we believe CEF distribution rates should be in line with a fund's total return as overpaying could deteriorate the NAV over time.
- **Private markets access:** The "closed" structure permits investment in less liquid assets such as private equity or debt that provide the potential to generate higher returns and pay higher income relative to publicly traded securities. CEFs do not charge performance fees and offer simplified tax reporting (1099) with intra-day liquidity relative to unregistered funds that typically charge performance fees, have more complicated tax reporting (K-1) and offer limited liquidity.
- **IPO structure innovation:** BlackRock was a pioneer in driving significant changes to the CEF IPO structure to benefit investors. For CEF IPOs since 2019, BlackRock paid all of the upfront costs to launch a CEF, allowing investors to purchase at NAV similar to the institutional share class for mutual funds but without the high minimums. Additionally, shareholders will receive 100% liquidity at NAV via a tender offer and, if cancelled, receive 100% liquidity at NAV via termination.⁵
- **Mergers:** We continually seek opportunities to realize scale benefits for our shareholders through fund mergers. BlackRock believes larger funds are beneficial to shareholders in cases where there is the potential for lower expenses, higher earnings and improved secondary market liquidity.
- **Investment policy changes:** We continually seek opportunities to adapt fund strategies to changes in market trends or investor preferences.

³ This table assumes a normal distribution.

⁴ In general, CEF distributions may be sourced from net investment income, qualified dividend income, realized gains and return of capital. For specific information about a fund's distribution sources, visit the fund sponsor's website.

⁵ Within twelve months prior to the termination date, at the discretion of the board, a fund may conduct a tender offer to purchase 100% of the then outstanding common shares at a price equal to the NAV per common share on the expiration date of the tender offer. Following the completion of the tender offer, if the fund has at least \$200 million of net assets, the board may eliminate the termination date and convert the fund to a perpetual fund. If the fund would have less than \$200 million of net assets following the tender offer, the tender offer will be canceled, no shares will be repurchased, and the fund will terminate as scheduled.

- **Share repurchases:** All BlackRock CEFs are authorized to repurchase up to 5% of their outstanding common shares (through November 2022, unless extended). When a CEF purchases its shares at a discount to NAV, those shares are retired and the difference is added to the fund's NAV. Additionally, share repurchases introduce liquidity into the secondary market. That being said, however, we don't believe share repurchases, including one-time tender offers, are effective at narrowing a fund's discount longer term and the potential benefits must be weighed against the reduction in net assets which may increase expenses and reduce liquidity over time.
- **Secondary market support:** BlackRock offers a public website that provides monthly portfolio updates, fund resources and educational tools. Additionally, we periodically host events for investors to discuss fund and market updates and increase education on the CEF landscape.

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Disclosure

Investment return, price, yields (i.e., distribution rate) and NAV will fluctuate with changes in market conditions. At the time of sale, your shares may have a market price that is above or below net asset value and may be worth more or less than your original investment. There is no assurance that a fund will meet its investment objective. Closed-end fund shares are not deposits or obligations of, or guaranteed by, any bank and are not insured by the FDIC or any other agency. Investing involves risk, including possible loss of principal amount invested. This is not a prospectus intended for use in the purchase or sale of any fund's shares.

Investors should carefully consider the Funds' investment objectives, risk factors, and charges and expenses before investing. This and other information can be found in the Funds' prospectuses or, if available, the summary prospectuses, which may be obtained by visiting the iShares Fund and BlackRock Fund prospectus pages.

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Some BlackRock CEFs may utilize leverage to seek to enhance the yield and net asset value of their common stock, through bank borrowings, issuance of short-term debt securities or shares of preferred stock, or a combination thereof. However, these objectives cannot be achieved in all interest rate environments. While leverage may result in a higher yield for the fund, the use of leverage involves risk, including the potential for higher volatility of the NAV, fluctuations of dividends and other distributions paid by the fund and the market price of the fund's common stock, among others. Certain funds may invest assets in securities of issuers domiciled outside the United States, including issuers from emerging markets. Foreign investing involves special risks, including foreign currency risk and the possibility of substantial volatility due to adverse political, economic or other developments.

Some BlackRock CEFs make distributions of ordinary income and capital gains at calendar year end. Those distributions temporarily cause extraordinarily high yields. There is no assurance that a fund will repeat that yield in the future. Subsequent monthly distributions that do not include ordinary income or capital gains in the form of dividends will likely be lower. Fund details, holdings and characteristics are as of the date noted and subject to change.

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General market and credit risks: Debt instruments are subject to credit and interest rate risks. Credit risk refers to the likelihood that an obligor will default in the payment of principal or interest on an instrument. Financial strength and solvency of an obligor are the primary factors influencing credit risk. In addition, lack or inadequacy of collateral or credit enhancement for a debt instrument may affect its credit risk. Credit risk may change over the life of an instrument and debt instrument that are rated by rating agencies are often reviewed and may be subject to downgrade. Interest rate risk refers to the risks associated with market changes in interest rates. Interest rate changes may affect the value of a debt instrument indirectly (especially in the case of fixed rate obligations or directly (especially in the case of instrument whose rates are adjustable). In general, rising interest rates will negatively impact the process of a fixed rate debt instrument and falling interest rates will have a positive effect on price. Adjustable-rate instruments also react to interest rate changes in a similar manner although generally to a lesser degree (depending, however, on the characteristics of the reset terms, including the index chosen, frequency of reset and reset caps or floors, among other factors).

Municipal market risks: There may be less information available on the financial condition of issuers of municipal securities than for public corporations. The market for municipal bonds may be less liquid than taxable bonds. A portion of the income may be taxable. Some investors may be subject to Alternative Minimum Tax (AMT). Capital gain distributions, if any, are taxable. The Fund may utilize leveraging to seek to enhance the yield and net asset value of its common stock, as described in the Fund's prospectus. These objectives will not necessarily be achieved in all interest rate environments. The use of leverage involves risk, including the potential for higher volatility and greater declines of the Fund's net asset value, fluctuations of dividends and other distributions paid by the Fund and the market price of the Fund's common stock, among others.

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Private securities risks: Restricted and Illiquid Investments Risk. Certain CEFs may invest without limitation in illiquid or less liquid investments or investments in which no secondary market is readily available, or which are otherwise illiquid, including private placement securities. CEFs may not be able to readily dispose of such investments at prices that approximate those at which the fund could sell such investments if they were more widely traded and, as a result of such illiquidity, a fund may have to sell other investments or engage in borrowing transactions if necessary to raise cash to meet its obligations. Limited liquidity can also affect the market price of investments, thereby adversely affecting a fund's NAV and ability to make dividend distributions. The financial markets in general, and certain segments of the mortgage-related securities markets in particular, have in recent years experienced periods of extreme secondary market supply and demand imbalance, resulting in a loss of liquidity during which market prices were suddenly and substantially below traditional measures of intrinsic value. During such periods, some investments could be sold only at arbitrary prices and with substantial losses. Periods of such market dislocation may occur again at any time. Privately issued debt securities are often of below investment grade quality, frequently are unrated and present many of the same risks as investing in below investment grade public debt securities.

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