

# CEF relative discounts and premiums

Relative discounts/premiums are relative to the average discount of the particular closed-end fund (CEF) being considered.



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This article presumes an understanding of *absolute* discounts and premiums. If you need a refresher on absolute discounts, please see [Closed-end fund discounts and premiums](#). Here we'll consider *relative* discounts and relative premiums.

In truth, all discounts and premiums are relative to another number. Absolute discounts/premiums are relative to the net asset value (NAV). Relative discounts/premiums are relative to the average discount of the particular closed-end fund (CEF) being considered. Because absolute discounts and absolute premiums tend to persist, relative discounts and relative premiums matter. Academic studies have shown that current discounts/premiums converge to their average discounts/premiums much more regularly than they converge to their NAVs.

## Measuring relative discounts/premiums

To measure relative discounts, we use a z-score:

$$z = (\text{current discount} - \text{average discount}) / \text{standard deviation of the discount}$$

A negative z-score indicates that the current discount is lower than its average.

A positive z-score indicates that the current premium is higher than average.

In our opinion, a z-score of less than  $-2$  signals that a fund is relatively inexpensive, and a z-score greater than  $+2$  signals that a fund is relatively expensive.

### Example 1

Current discount =  $-8\%$

Average 1-year discount =  $-15\%$

1-year standard deviation of discount/premium =  $2$

z-score =  $(-8 - (-15)) \div 2 = (-8 + 15) \div 2 = 7 \div 2 = 3.5$

With a z-score of  $3.5$ , this fund would be considered relatively expensive. But this doesn't necessarily mean that the CEF is overvalued.

### Example 2

Current discount =  $-15\%$

Average 1-year discount =  $-10\%$

1-year standard deviation of discount/premium =  $2$

z-score =  $(-15 - (-10)) \div 2 = (-15 + 10) \div 2 = -5 \div 2 = -2.5$

With a z-score of  $-2.5$ , this fund would be considered relatively inexpensive. But this doesn't necessarily mean that the CEF is undervalued.

**Learn how to locate the z-score available in the Morningstar Research Report on Fidelity.com**

## Why are relative discounts helpful?

For one, they can help you avoid value traps. Let's look at the mythical CEF trading at a  $15\%$  discount. According to the oft-cited "CEF wisdom," this would be a good trade because the market is offering investors  $\$1.00$  of assets at the bargain price of  $\$0.85$ . (Forget the fact that the  $\$1.00$  worth of assets may fall in value to  $\$0.85$ !) Consider this:

3-year average absolute discount = -25%.

Current absolute discount = -15%

Standard deviation over the certain time period = 2

z-score =  $(-15 - -25) \div 2 = (-15 + 25) \div 2 = 10 \div 2 = +5$ .

A z-score of +5 indicates that, far from being relatively inexpensive—as CEF wisdom would have it—his CEF is relatively expensive. It could represent a classic value trap.

Z-score can also help investors uncover potentially truly undervalued and overvalued CEFs. If the z-score is greater than +2 or less than -2, more research would be warranted. Using relative discounts/premiums is a bit of an art. The time period analyzed is a large factor in the z-score. The same CEF may look relatively expensive on a 6-week basis and relatively cheap on a 3-year basis. Even though the CEF may look relatively expensive or relatively cheap, it may not be truly overvalued or undervalued.

Consider a CEF that is going to liquidate in one month. Liquidation is a method of making a CEF's share price converge with its NAV. All assets are sold and the remaining capital is distributed to shareholders. At the point of liquidation, the discount will be 0.

Current discount = -2% (in anticipation of the pending liquidation)

1-year average discount = -12%

1-year standard deviation = 1.5

z-score =  $(-2 - -12) \div 1.5 = (-2 + 12) \div 1.5 = 10 \div 1.5 = +6.7$

This CEF is relatively expensive, but with very good reason: A corporate action has narrowed the discount. If an investor attempted a short sale of this CEF in the market, the likely outcome would be a capital loss.

There could be a fundamental reason behind a high or low z-score. Do not buy or sell a CEF simply because of its z-score. Further analysis as to why the current discount has deviated so far from its historic average is warranted.

## Key takeaways

Buy-and-hold investors can use z-scores to determine whether the absolute discount/premium is truly signaling that the CEF is under- or overvalued or whether the absolute discount/premium could be a value trap.

Trading-oriented investors can use z-scores to find candidates for buying or selling short. (In practice, this is the most common use of relative discounts/premiums.)

Regardless of how they are used, z-scores are no guarantee of future investment gains. All that matters once a CEF is purchased is the subsequent total return. Just as absolute discounts/premiums can converge to NAV with no gain for the shareholder, so too can relative discounts/premiums.

It is important to understand why a CEF is trading at a current discount/premium that is widely divergent from its historic average. There could be a very good reason, aside from market sentiment.

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