

## More on CEFs

### Closed-End Funds Defined

Like open-end mutual funds, closed-end funds (“CEFs”) offer investors a convenient way of owning a portfolio of securities, except that CEF shares are traded on stock exchanges. Unlike open-end mutual funds, the number of shares outstanding in a closed-end fund is relatively stable. A closed-end fund is created by issuing a fixed number of common shares to investors during an initial public offering (IPO), although subsequent issuance of common shares can occur through secondary or follow-on offerings, at-the-market offerings, rights offerings, or dividend reinvestment. The fund price is set by supply and demand. Whereas open-end funds are traded at the net asset value (NAV) of the underlying portfolio of securities at the close of each trading day, closed-end fund prices may vary from the NAV, at times by a substantial amount. Typically, closed-end funds trade at a discount to their NAV.

### The Appeal of Closed-End Funds

Therein lies much of their appeal to us. A *price/NAV discount* of 10%, which is not that uncommon, means that an investor buys \$1 worth of assets for \$.90. Importantly, in addition to the absolute level of discount or premium, we compare the current discount to its historical average, seeking to buy when the discount is unusually large. Our CEF models measure the historical tendency of heavily discounted CEFs to revert back towards their average discount, and what that mean-reversion means in terms of additional return.

Another feature of CEFs is their use of *leverage*. Up to 50% of equity capital may be supplemented by leverage. Most CEFs that utilize leverage (some don’t) have leverage ratios of 20% to 40%, with an average of 33% at year-end 2017. Leverage amplifies the returns of a CEF, either positively or negatively. As long as the expense of the leverage is less than the return on the portfolio, the long-term effect of leverage is positive. Historically, leverage has boosted both the return and the volatility of CEFs. Most often the interest expense of leverage is tied to short-term rates, which while they have been lower than long-term rates historically, have been rising of late. The prospect of rising short-term rates no doubt helps to explain the recent increase in the discounts applied to many CEFs. In our view, the few heavily discounted CEFs in which we invest offer attractive return/risk tradeoffs, but we recognize that their leverage heightens their risk.

All CEFs are *actively managed*, and therefore tend to have much higher expense ratios than ETFs with similar strategies. Also, CEF expense ratios include the cost of leverage in most cases. We keep careful track of expense ratios in our security selection process and therefore tend to favor securities with low expenses. It takes a very high NAV discount to make a CEF competitive with a similar ETF.

Most CEFs have *fixed-income portfolios* rather than equity portfolios. Active management may be able to add value more easily in fixed-income portfolios than in equity portfolios. Capitalization-weighting bond indexes have the heaviest weighting in the most heavily indebted companies and governments—which may increase the risk of bond index funds relative to their actively managed counterparts. Also, some buyers of fixed income securities (central banks for example) are more driven by politics and regulations than by economics. This may distort prices of fixed income securities and introduce pricing inefficiency. Finally, fixed income securities often have limited liquidity in the secondary market, adding further pricing inefficiency.

Most CEFs have hefty dividend (or “distribution”) *yields* which are often paid monthly. Distributions can come from three sources: 1) income on the portfolio, 2) capital gains on the portfolio, or 3) return of capital (liquidation of the portfolio). CEFs are often bought because of their income generating capabilities.

Finally, perhaps because the ownership of CEFs is almost entirely retail rather than institutional, the price/NAV discount anomaly seems to persist. That is, discounts and premiums appear to arise for noneconomic reasons, often because of trend-following buying and selling based upon recent returns. Retail investors may not have the information necessary to identify unusually large discounts, or perhaps lack the inclination to seek out and use that information. This provides us with an unusually rich source of excess return which we seek to systematically exploit.