Thomas J. Herzfeld Advisors, Inc.
Specialists in closed-end funds for five decades.

THE USE OF LEVERAGE BY CLOSED-END FUNDS

Advisor Summit on Closed-End Funds
October 9, 2013

Presented by

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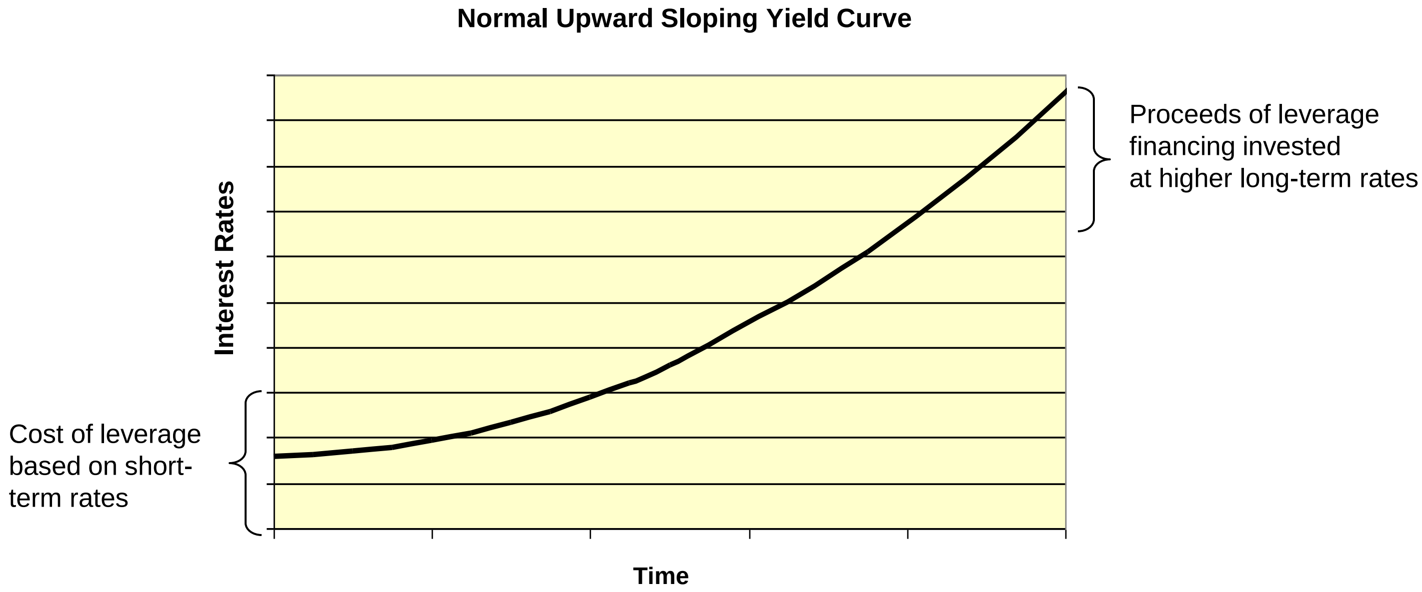
Reasons Closed-End Funds Use Leverage

Leverage is one of the fundamental advantages of the closed-end fund structure. Over the past few decades, much of the growth among closed-end funds can be attributed to the ability of funds to use leverage.

- ***Leverage magnifies changes in net asset value***, exaggerating both gains and losses
- ***Leverage boosts yield to common shareholders***, as illustrated below



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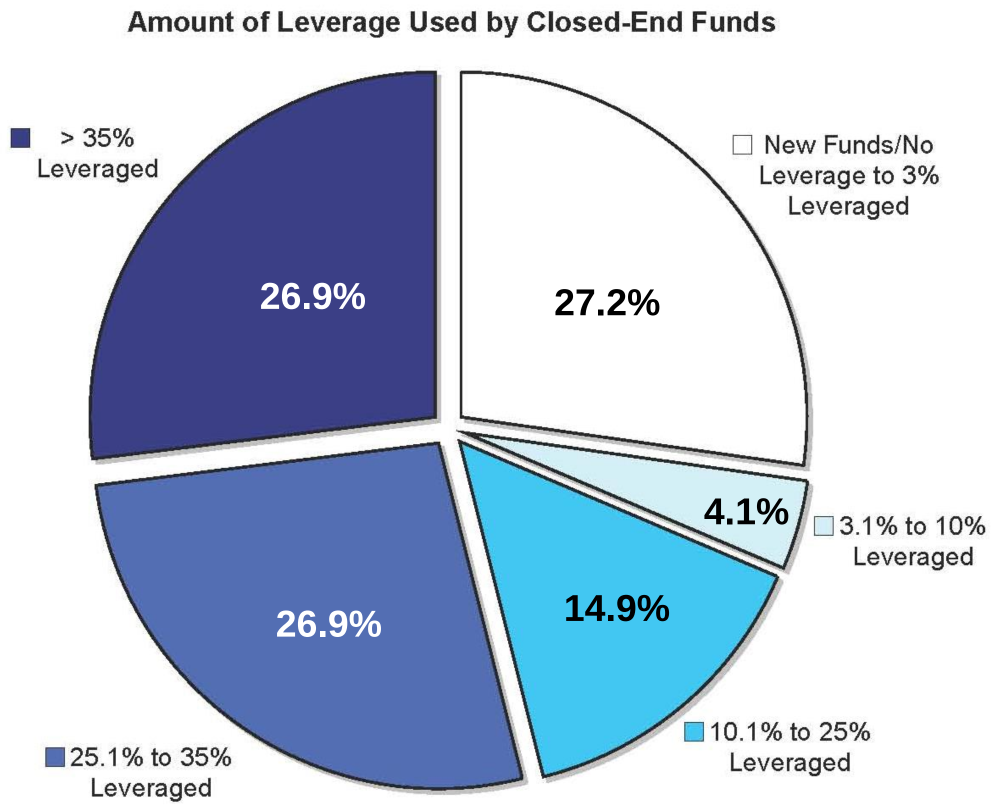
Prevalence of Leverage



72.8% of all funds use more than a token amount of leverage.

Average leverage levels by broad sector stand at:

- 34.3% Municipal bond funds
- 27.8% Convertible funds
- 24.1% Taxable bond funds
- 17.3% Equity funds

Calculating % Leverage Levels

$$\frac{\text{Total \$ Value of Leverage}}{\text{\$ Net Assets Common + \$ Value All Types of Leverage}} \times 100$$

***Source**: Thomas J. Herzfeld Advisors, Inc.*
Survey Compiled September 2013

Asset Coverage Requirements for Different Types of Leverage

Structural leverage: Regulated under the Investment Company Act of 1940 which requires that funds maintain asset coverage sufficient to ensure redemption or reduction of the leverage if markets move against the portfolio, decreasing net assets.

Asset Coverage Calculation for Structural Leverage

$$\frac{\text{\$ Value of Leverage + \$ Common Share Net Assets}}{\text{\$ Value of Leverage}} \times 100$$

Asset Coverage Requirement

- For equity forms of leverage, such as preferred shares, a fund must maintain 200% asset coverage, or $2 of assets for every $1 of leverage.
- For debt forms of leverage, such as a line of credit or notes, a fund must maintain 300% asset coverage, or $3 of assets for every $1 of leverage.

Asset Coverage Requirements for Different Types of Leverage

Derivative or economic leverage: Anything that creates the effect of leverage but does not fall into the definition of structural leverage.

Asset Coverage Requirement

- Economic leverage used by funds is currently subject to various regulations depending on its nature, but typically requires the exposure to be “covered” by depositing other liquid assets into a segregated account, or, in the case of more complex instruments such as swaps, segregating an amount equal to the fund’s daily mark-to-market liability.

Forms of Structural Leverage

Preferred shares

- Auction Rate Preferreds (ARPs)
- Exchange-listed fixed rate preferreds, with or without mandatory call dates, including MuniFund Term Preferred Shares (MTPs) and Mandatory Redeemable Preferreds (MRPs)
- Liquidity-enhanced, privately placed preferred shares such as:
  - Variable Rate Demand Preferred Shares (VRDPs)
  - Privately Placed Perpetual Preferreds (PPS)
  - Variable Rate MuniFund Term Preferred Shares (VMTPs)

Short-term debt

- Bank loans or lines of credit
- Prime brokerage arrangements
- Conduit financing
- Issuing commercial paper, or using a line of credit

Long-term debt

- Fixed rate notes
- Variable rate notes

Forms of Derivative/Economic Leverage

Tender option bond programs (TOBs) are a form of derivative leverage typically created using underlying municipal bonds in the funds' portfolios.

Reverse repurchase agreements and dollar rolls: Like TOBs, these are also forms of derivative leverage; these types of leverage are favored by taxable funds.

Buying derivative leverage such as swaps, forward contracts and inverse floaters, also called residual interest bonds. Residual interest bonds are a part of TOBs issued by *other companies.*

Using trading strategies or policies that have the same effect as leverage e.g., options, swaps, forward contracts, selling short and lending portfolio holdings.

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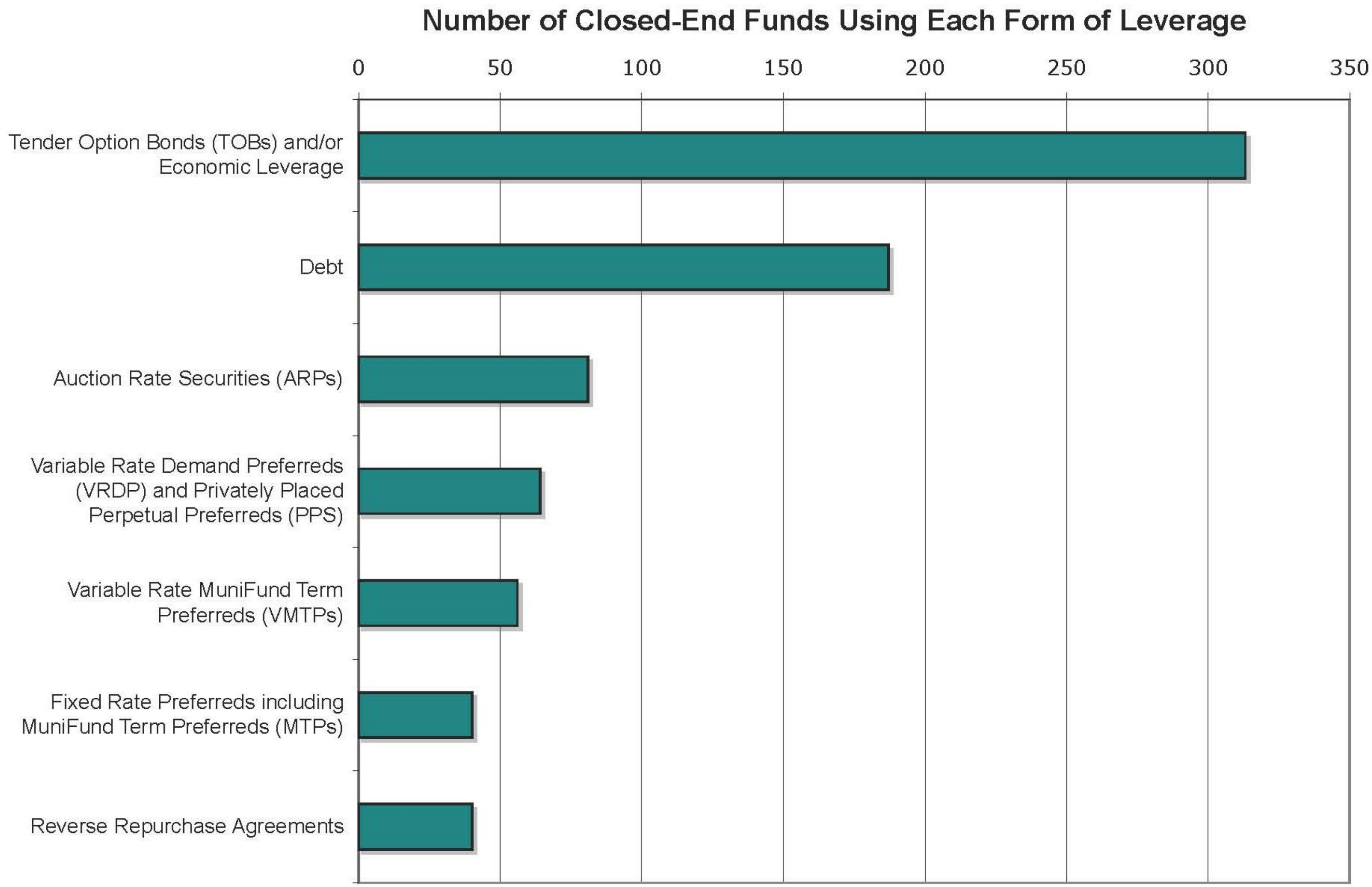
Predominant Forms of Leverage Used by Closed-End Funds



***Source**: Thomas J. Herzfeld Advisors, Inc.*
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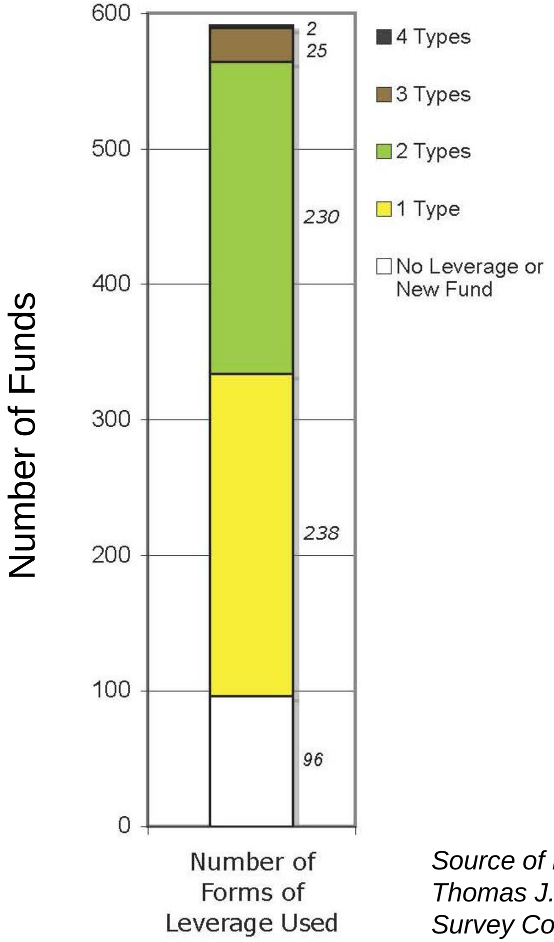
Using a Variety of Types of Leverage Can Give Closed-End Funds the Flexibility to Adapt to a Changing Interest Rate Environment

Breakdown of the Number of Forms of Leverage Used By Closed-End Funds



Source of Breakdown Graphic:
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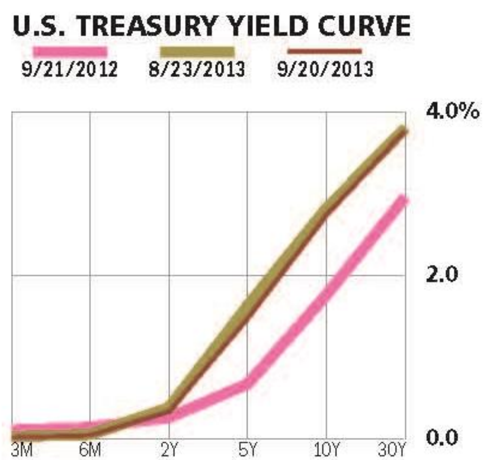
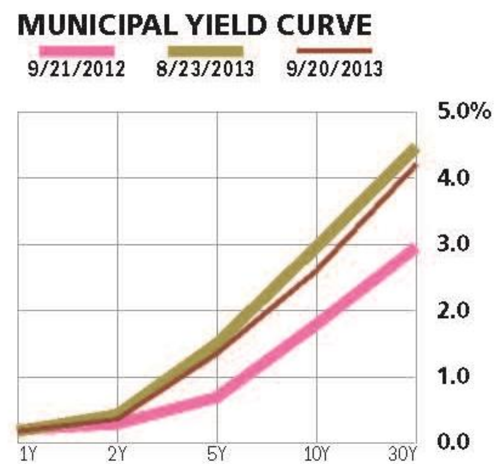
Yield Curves Have Steepened over the Past Year



Source: Barron's Statistics/Bloomberg



Source: Loop Capital

Yield Curve Graphics Courtesy of Barron's

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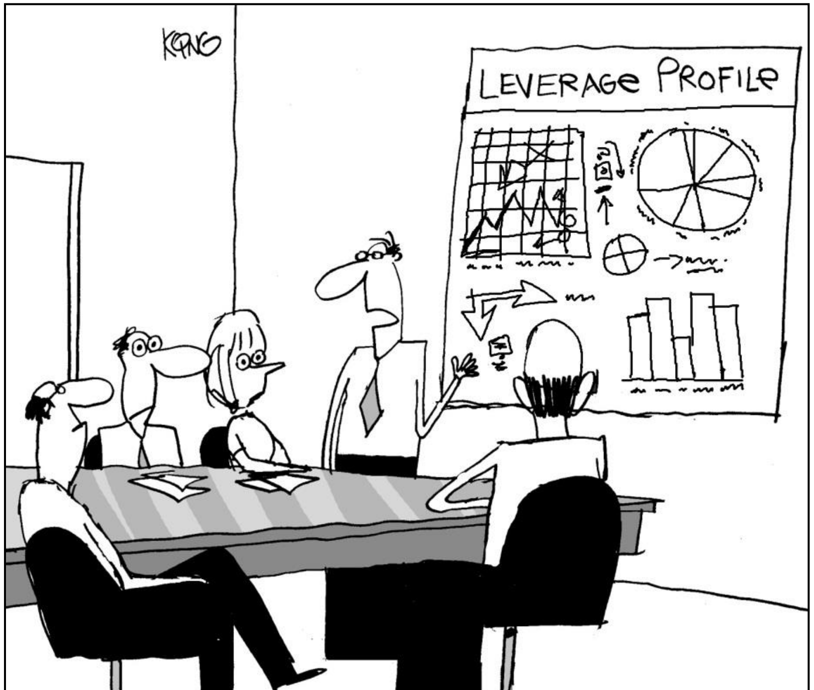

*"This chart is a **simple** depiction of the Fund's percentages of effective leverage, structural leverage, derivative leverage, imbedded leverage, economic leverage, auction rate leverage.."*

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