The Advantages and Risks of Closed-End Funds II



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Closed-end Fund (CEFs) Recap

- Exchanged-traded CEFs.
 - CEFs trade on a stock exchange between investors.
 - oCEFs have **premiums/discounts**, which adds an extra dimension to enhance returns.
 - Leverage (investing borrowed money) is another feature.

CEF Premium/Discounts

Premiums/Discounts

- OA CEF's Net Asset Value (NAV) is the same as an open-end mutual fund.
- CEFs also trade at a market price.
- If market price > NAV, CEF trades at a premium
- If market price < NAV, CEF trades at a discount
- Most CEFs trade at discount → buying opportunities

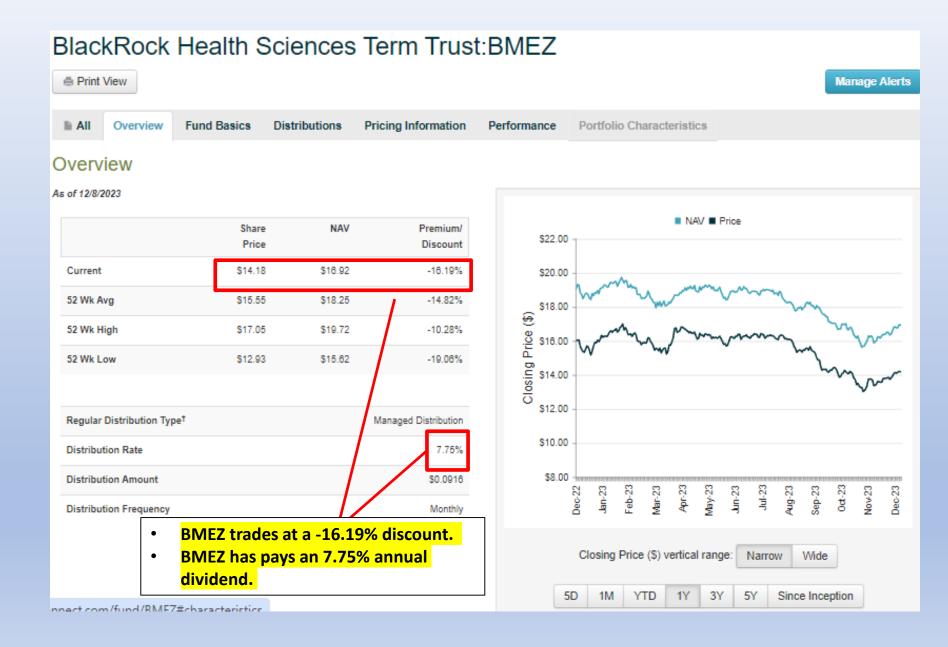
Premiums/Discounts II

- A CEF's premium/discount reflects the trading demand for the fund.
- Factors influencing demand include
 - Historical fund performance
 - Management fees (higher fees = bigger discount)
 - Investor sentiment for CEF asset class
 - General market conditions (bear market = discounts)

Analyzing CEFs

- Go to <u>cefconnect.com</u> to get general data on a CEF.
- cefconnect.com also has a fund screener
- Go to the CEF manager's website for further information on holdings, performance, fees, etc.
 - Google the ticker or fund name and "fact sheet"
 - Look for the website address of the fund manager.
 - OData from the manager itself is the most accurate.

Example <u>cefconnect.com</u> fund page



Finding Attractive CEFs

- Discount-related factors to look for in choosing a CEF
 - Large discount the larger discount the better the deal. However, some funds trade at large discounts because they stink.
 - Negative z-score A negative z-score indicates a fund is trading cheaper than normal.
 - **Limited Term** some funds pay you back NAV after a fixed term. That means the discount should go to 0 over time.
 - **Shareholder activism** if an activist investor owns the fund, the activist may get the company to reduce the discount.

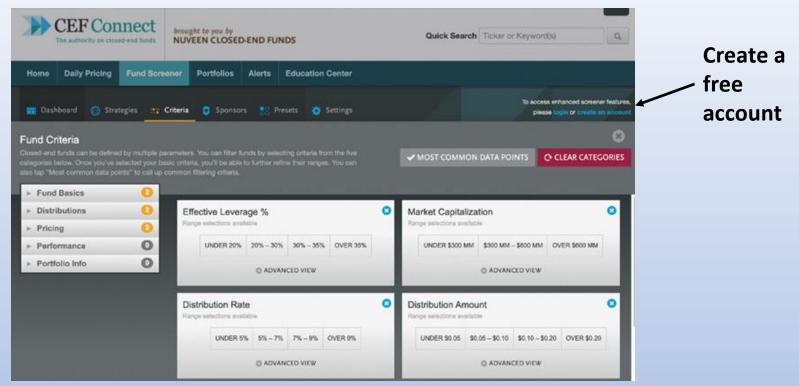
Finding Attractive CEFs Part II

- Other factors to look for in choosing a CEF
 - Low expense ratio hard to find, since closed-end funds have high fees.
 - Good long-term performance versus benchmark
 - Strong earnings and undistributed investment income
 - **High yield** Investors love funds with high dividends

Finding Attractive CEFs Part II

- Running the CEF screener
- Bond CEFs
- Recent case study investment example

Using the CEF Fund Screener



- Create a free account to use the screener
- Click Strategies to choose a fund strategy
- Click Criteria to select criteria. I focus on Pricing Discount / Premium and Pricing Z-Scores but also look stuff like at Performance Annualized Return on NAV, and Distributions Distribution Rate
- Click View Funds at bottom to see the funds. Click a column to sort in ascending/descending order.

CEF Screening for an Equity CEF

- Fund Screener Click Start New Search
- Strategies Select all Equity Select All.
- Click Tab Settings
 - Change Fund Name to "When Selected" from "Hide"
 - Click Save Display Settings
- Click Tab Criteria to select criteria.
- Click Fund Basics
 - I unselect Baseline Expense because that field is not working (blank).
 - I unselect Effective Leverage

Click Distributions

- I unselect Distribution Frequency.
- I keep/add Distribution Rate

Pricing

- Keep/add Discount /Premium keep/add
- Add Pricing Z-score 3-month (cheap vs. last 3 months?)
- Add Pricing Z-score 1-year (cheap vs. last year)

Performance

- Add 3 Year Annualized Return on NAV
- Add 5 Year Annualized Return on NAV
- Click View Funds at bottom right to see the funds.
- Click **Discount/Premium** column to sort in ascending/descending order.

Screen Results

133 I	3 Funds Found! Results are based on closing price as of 01/17/2024					RESET FUND SCREENER					
•	PORTFOLIOS	TICKER	FUND NAME	DISTRIBUTION RATE	DISCOUNT / PREMIUM	Z-SCORE 3 MONTH	Z-SCORE 1 YEAR	3 YEAR ANNUALIZED RTN ON NAV	5 YEAR ANNUALIZED		
	0 .	FXBY	FOXBY CORP	2.09%	-42.74%	0.02	-0.79	13.95%	15.12%		
	O -	MXE	Mexico Equity & Income	2.85%	-26.22%	1.14	1.06	10.18%	7.02%		
	O -	TEAF	Ecofin Sustainable and Social Impact	9.54%	-23.46%	-1.56	-2.40	3.22%			
	O •	BSTZ	BlackRock Science and Technology Term	7.48%	-21.41%	-0.31	-1.41	-10.57%			
	O •	STEW	SRH Total Return Fund	4.03%	-21.06%	-2.12	-2.02	11.84%	10.20%		
	0 .	TWN	Taiwan Fund	1.30%	-20.17%	0.36	-0.36	15.48%	25.80%		
	0 .	CET	Central Securities Corporation	8.89%	-20.11%	-1.96	-2.23	11.85%	14.84%		
	O -	CUBA	Herzfeld Caribbean Basin	20.75%	-19.94%	1.28	0.46	-6.02%	0.11%		
	O •	KF	Korea Fund	16.02%	-19.72%	-0.94	-1.74	-5.64%	4.38%		
	O •	MXF	Mexico Fund	4.95%	-18.72%	0.36	0.67	17.80%	13.34%		
	O .	GRX	Gabelli Healthcare & Wellness Trust	6.35%	-18.25%	1.06	-0.38	-0.44%	6.49%		
	0 -	GAM	General American Investors	6.28%	-18.08%	-0.83	-0.88	9.05%	13.07%		
	O -	NBXG	Neuberger Brmn Nxt Gnrtn Cnnctvty	10.96%	-17.67%	0.52	0.62				
	O -	IIF	Morgan Stanley India Investment	14.15%	-17.53%	1.85	0.95	12.20%	8.71%		
	O •	BIGZ	BlackRock Innovat and Growth Term Trust	7.49%	-17.51%	-0.70	-0.23				
	O -	TTP	Tortoise Pipeline & Energy	8.38%	-17.01%	0.43	-0.41	26.79%	1.64%		
	O -	GLQ	Clough Global Equity	12.26%	-16.90%	1.33	-0.27	-13.87%	0.96%		
	O -	SPE	Special Opportunities	9.58%	-16.59%	0.57	-0.05	5.54%	9.85%		
	O -	TYG	Tortoise Energy Infrastructure Corp.	9.99%	-16.58%	1.16	0.62	18.38%	-9.47%		
	O -	NTG	Tortoise Midstream Energy Fund	8.97%	-16.35%	1.13	0.27	23.96%	-13.90%		

Other Possible Fund Basics to Add to Screen

Market Capitalization (e.g. avoid < \$100 million).</p>

Term Y/N (Y is preferable)

Leverage Y/N or Leverage %

CEFConnect Screener Disclaimer

- The CEFconnect.com screener is a first step.
- Don't buy CEFs from the screener without researching them further.
- You must still do your own due diligence!
- Check the CEF holdings, expenses, trading volume, performance, news, etc.
- Avoid cheap CEFs with upcoming rights offerings, as shareholders get diluted by new shares.

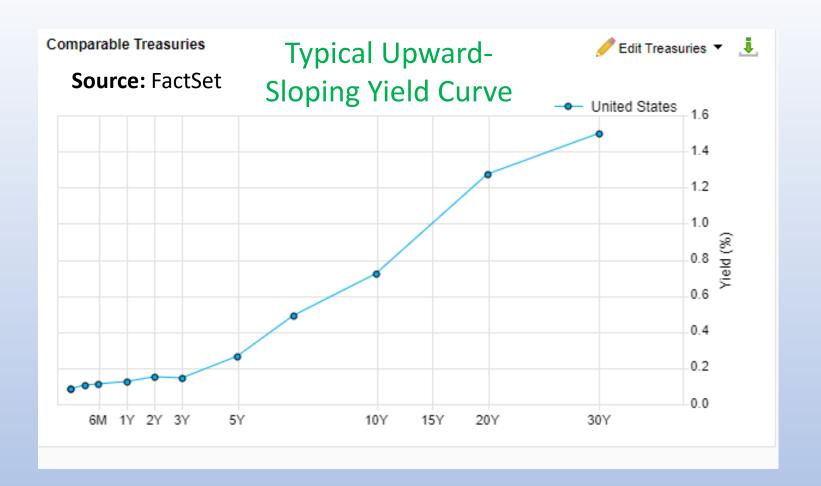
Leverage and Bond CEFs

• Unlike open-end mutual funds, CEFs can use leverage (borrowed money) to invest.

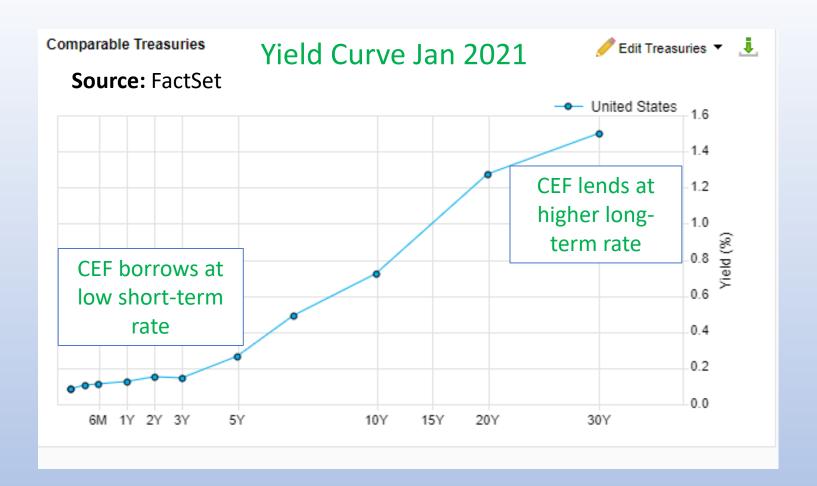
- This can make bond CEFs attractive
 - Leveraged bond CEFs usually offer higher yields to their investors
 - Funds borrow at low rates and invest at higher rates.
 - Funds borrow at cheaper rates than you can borrow at your broker.

Not Great Time For Bond CEF Leverage

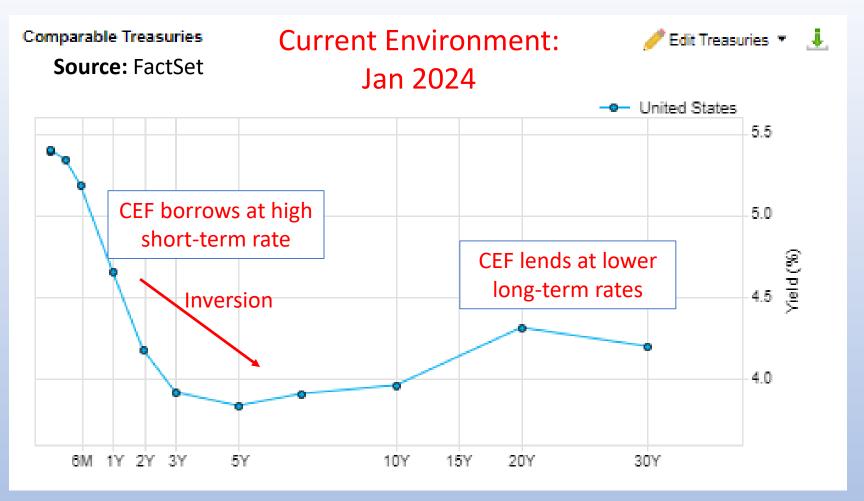
- With Fed Funds rate > long-term rates, leveraged bond
 CEFs are less attractive now (Jan 2024).
 - High Fed Funds rate means high CEF borrowing expenses and lower dividends.
 - Leverage also adds risk.
 - Fed rate cuts could change the outlook.
 - Requires discussion of the yield curve



- The yield curve is a chart of the interest rate the US government currently pays to borrow money as a function of maturity.
- Usually, yield curve slopes upward
- See https://www.ustreasuryyieldcurve.com/ for current yield curve



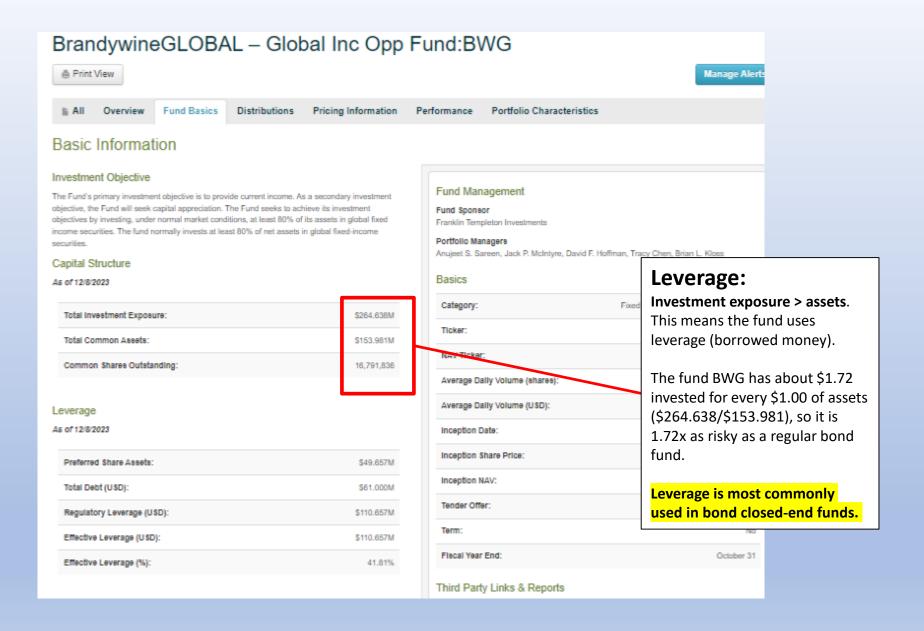
- Leveraged CEF borrows at low short-term rates
- Leveraged CEF lends at higher long-term rates (plus credit spread for lending to riskier companies)
- Leveraged CEF income > open-end bond mutual fund



- Leveraged CEF borrows at high short-term rates
- Leveraged CEF lends at lower long-term rates
- Long-term lending rates are increased by lending to riskier companies but often not enough to offset the fund's expense ratio
- → Leveraged CEF earnings may not be better than open-end bond fund.

Bond Price Risk

- Bond prices go down when interest rates go up
 - New bonds issued in the market pay a higher coupon than "old" bonds in your portfolio
 - → Prices of bonds in your portfolio go down
- Bond prices go up when interest rates go down
 - Bonds in your portfolio pay a higher coupon than new bonds issued in the market
 - → Prices of bonds in your portfolio go up
- This bond price risk is called duration.
- Because leveraged CEFs own more bonds their price risk (duration) is amplified.



Subtle Point on Bond Risk

- Bond prices are sensitive only to the market rate of their same maturity.
- Bond CEFs typically own long-term bonds
 - Exception: Loan CEFs and limited-duration CEFs.
- Thus, bond-CEF NAVs are typically sensitive to the 10-30 year rates on the yield curve.
- These NAVs could decline even as the Federal Reserve cuts short-term rates.



- Don't assume Fed rate cuts will lead to a rally in bonds. It could, but it is not 100% guaranteed!
- Long-term rates have already decreased about 1% (5%ish to 4% on 10-year U.S. Treasury).

My Bond CEF Market Outlook

- Not an attractive environment to own leveraged bond CEFs unless you expect several Fed rate cuts or long-term rates to decline further.
- Fed rate cuts will improve CEF dividends, but cuts take time to filter through into earnings
 - One or two cuts won't make a huge difference.
 - Also, cuts can take a few months to filter into higher earnings/income.
 - Speaking of which, CEF earnings reports are a great report for predicting future CEF dividends.

CEF Earnings and UNII Reports

- Bond CEFs publish their earnings per share, which you can compare to dividend per share to see if a fund is overearnings or underearning its dividend
 - Earnings > dividend → possible future dividend increase
 - Earnings < dividend → possible future dividend decrease
- Bond CEFs also publish **UNII** (Undistributed Net Investment Income) which is income that has been "banked" to pay for future dividends.
 - A CEF with earnings < dividend but a large positive UNII can delay cutting its dividend.
 - A CEF with earnings < dividend and negative UNII is most at risk for dividend cuts, although funds can still delay making cuts.

PIMCO Califiornia Municipal Income Fund (PCQ)



- Huge drop on a dividend cut from \$0.065 to \$0.036 per month.
- Extreme example serves as a cautionary tale

Finding CEF Earnings and UNII Reports

- Large CEF managers like Nuveen, Blackrock, and PIMCO publish monthly earnings and UNII reports for all their funds.
 - Find on the fund manager website.
- Some smaller CEF managers only publish their data in annual and semi-annual reports
 - Check fund manager website or go to SEC filing N-CSR (like a 10-K/10-Q for stocks)

Case Study PDI Earnings

- Several Seeking Alpha authors recommend PIMCO
 Dynamic Income Fund (Ticker: PDI)
 - PIMCO is a skilled bond CEF manager
 - PDI has an eye-popping 14% yield.
 - PDI's leverage enhances returns if bonds continue to rally.
 - Large allocation to mortgage bonds that undervalued.
 - PDI has a history of paying special dividends.

 These authors miss a concerning earnings/UNII report with PDI trading near a 10% premium.

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Municipal CEFs										
PIMCO California Municipal Income Fund	PCQ	31-Dec-23	\$0.56	(\$0.16)	\$0.0538	\$0.0360	80.60%	77.67%	77.46%	
PIMCO California Municipal Income Fund II	PCK	31-Dec-23	\$0.35	(\$0.09)	\$0.0332	\$0.0215	86.24%	81.59%	80.37%	
PIMCO California Municipal Income Fund III	PZC	31-Dec-23	\$0.42	(\$0.10)	\$0.0392	\$0.0295	77.96%	75.02%	75.49%	
PIMCO Municipal Income Fund	PMF	31-Dec-23	\$0.60	(\$0.17)	\$0.0557	\$0.0420	77.46%	75.64%	75.90%	
PIMCO Municipal Income Fund II	PML	31-Dec-23	\$0.52	(\$0.14)	\$0.0489	\$0.0395	82.50%	80.28%	79.04%	
PIMCO Municipal Income Fund III	PMX	31-Dec-23	\$0.50	(\$0.11)	\$0.0462	\$0.0330	85.44%	83.16%	82.49%	
PIMCO New York Municipal Income Fund	PNF	31-Dec-23	\$0.41	(\$0.23)	\$0.0383	\$0.0335	67.58%	65.25%	64.50%	
PIMCO New York Municipal Income Fund II	PNI	31-Dec-23	\$0.47	(\$0.13)	\$0.0428	\$0.0295	79.33%	77.24%	78.73%	
PIMCO New York Municipal Income Fund III	PYN	31-Dec-23	\$0.37	(\$0.17)	\$0.0338	\$0.0248	68.48%	67.48%	68.53%	

Income

(MIII)

UNII

Fiscal

Year

End

Ticker

Estimated

Net

Income (NII) Dividend

Taxable CEFs									
PCM Fund Inc.	PCM	30-Jun-24	\$0.24	(\$0.16)	\$0.0520	\$0.0800	64.97%	60.51%	60.65%
PIMCO Corporate & Income Opportunity Fund	PTY	30-Jun-24	\$0.48	(\$0.28)	\$0.0936	\$0.1188	73.82%	72.84%	77.55%
PIMCO Corporate & Income Strategy Fund	PCN	30-Jun-24	\$0.40	(\$0.25)	\$0.0839	\$0.1125	73.32%	71.21%	71.51%
PIMCO Dynamic Income Fund	PDI	30-Jun-24	\$0.77	(\$0.77)	\$0.1589	\$0.2205	72.043	62.042	71.62%
PIMCO High Income Fund	PHK	30-Jun-24	\$0.20	(\$0.01)	\$0.0431	\$0.0480	85.73%	75.13%	80.20%
PIMCO Income Strategy Fund	PFL	30-Jun-24	\$0.35	(\$0.13)	\$0.0736	\$0.0814	85.20%	74.73%	79.70%
DIMCO Is annual Street and Front III									
PIMCO Income Strategy Fund II	PFN	30-Jun-24	\$0.30	(\$0.18)	\$0.0641	\$0.0718	82.43%	72.77%	75.76%
PIMCO Strategic Income Fund, Inc.	PFN RCS	30-Jun-24 30-Jun-24	\$0.30 \$0.24	(\$0.18) (\$0.16)	\$0.0641 \$0.0482	\$0.0718 \$0.0510	82.43% 94.49%	72.77% 81.68%	75.76% 93.77%

• All PIMCO CEFs at risk of dividend cuts.

PIMCO CEF Earnings Report

Fund Name

• PDI too risky for me to own or recommend to others.

Fiscal

YTD

Coverage

Ratio

Coverage

Ratio

3 Month

Coverage

Ratio

Monthly

	Net Asset Value Beginning of Year	Net Investment Income	Net Realized/ Unrealized	Total	From Net Investment	From Net Realized Capital Gains	Tax Basis Return of	Total
Selected Per Share Data for the Year or Period Ended^:	or Period(x)	(Loss)(b)	Gain (Loss)	Total	Income	Gains	Capital	Total
PCM Fund, Inc.	f 7.00	6.0.03	£ (0.04)	£ 0.01	£ (0.73)	£ 0.00	£ (0.22)	£ (0.00
06/30/2023	\$ 7.69	\$ 0.82	\$ (0.81)	\$ 0.01	\$ (0.73)	\$ 0.00	\$ (0.23)	\$ (0.96
06/30/2022	9.52	0.79	(1.66)	(0.87)	(0.93)	0.00	(0.03)	(0.96
06/30/2021	8.47	0.97	1.04	2.01	(0.96)	0.00	0.00	(0.96
06/30/2020	10.19	0.86	(1.62)	(0.76)	(0.95)	0.00	(0.01)	(0.96
06/30/2019	10.23	0.69	0.23	0.92	(0.96)	0.00	0.00	(0.96
PIMCO Global StocksPLUS® & Income Fund 06/30/2023	\$ 7.27	\$ 0.77	\$ 0.08	\$ 0.85	\$ (0.83)	\$ 0.00	\$ 0.00	\$ (0.83
06/30/2022	10.44	0.87	(3.21)	(2.34)	(0.83)	0.00	0.00	(0.83
06/30/2021	7.47	0.95	2.85	3.80	(0.83)	0.00	0.00	(0.83
06/30/2020	9.89	1.10	(2.42)	(1.32)	(0.85)	0.00	(0.25)	(1.10
06/30/2019	10.50	1.11	(0.34)	0.77	(1.20)	0.00	(0.18)	(1.38
PIMCO Strategic Income Fund, Inc. 06/30/2023	\$ 4.68	\$ 0.39	\$ (0.14)	\$ 0.25	\$ (0.61)	\$ 0.00	\$ (0.00)	\$ (0.61
06/30/2022	6.55	0.61	(1.87)	(1.26)	(0.60)	0.00	(0.01)	(0.61
06/30/2021	5.94	0.58	0.64	1.22	(0.41)	0.00	(0.20)	(0.61
06/30/2020	7.12	0.74	(1.20)	(0.46)	(0.49)	0.00	(0.23)	(0.72)
06/30/2019	7.32	0.60	0.03	0.63	(0.61)	0.00	(0.22)	(0.83
PIMCO Access Income Fund (Consolidated) 06/30/2023	\$ 17.20	\$ 1.81	\$ (1.90)	\$ (0.09)	\$ (2.25)	\$ 0.00	\$ 0.00	\$ (2.25
01/31/2022 - 06/30/2022	20.00	0.45	(2.78)	(2.33)	(0.47)	0.00	0.00	(0.47)
PIMCO Dynamic Income Fund (Consolidated) 06/30/2023	\$ 19.72	\$ 2.23	\$ (1.56)	\$ 0.67	\$ (3.30)	\$ 0.00	\$ 0.00	\$ (3.30
06/30/2022	25.23	2.84	(5.77)	(2.93)	(2.65)	0.00	0.00	(2.65
06/30/2021	22.59	2.51	2.57	5.08	(2.52)	0.00	(0.13)	(2.65
06/30/2020	28.29	2.92	(5.80)	(2.88)	(3.07)	0.00	0.00	(3.07
06/30/2019	28.98	2.73	(0.37)	2.36	(3.15)	0.00	0.00	(3.15
06/30/2018	28.32	2.95	0.18	3.13	(2.65)	0.00	0.00	(2.65
06/30/2017	26.56	2.60	3.18	5.78	(4.10)	0.00	0.00	(4.10
06/30/2016	31.38	3.87	(3.45)	0.42	(4.25)	(0.99)	0.00	(5.24
04/01/2015 - 06/30/2015(9)	30.74	0.80	0.47	1.27	(0.63)	0.00	0.00	(0.63
03/31/2015	32.11	3.25	(0.49)	2.76	(4.13)	0.00	0.00	(4.13)

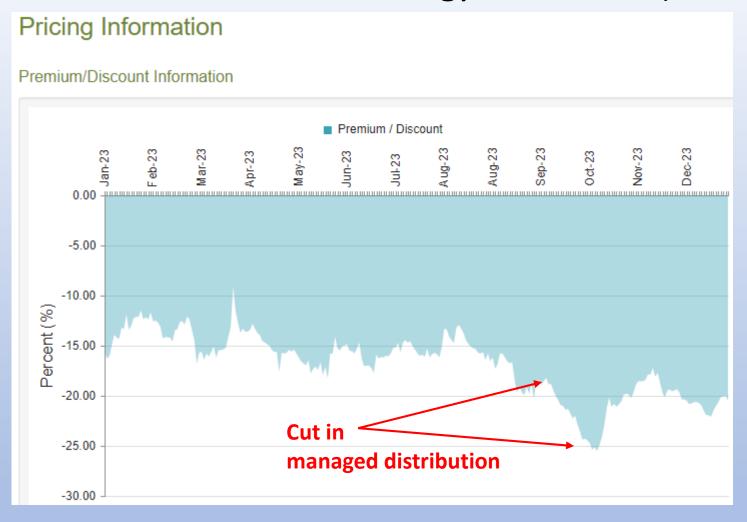
PDI data from N-CSR/Semi-annual report

- Out of date (6/30/2023) but has capital gains info
- Current dividend is \$2.754 (0.2205 x 12) versus \$2.23 in income.
- Notice how NAV declines from \$32.11 in 2015 (currently \$17.07).
- The core dividend has not changed at 0.2205 per month.

Managed Dividends

- Several CEFs (including equity CEFs) have a "managed dividend" policy
 - They pay a fixed dollar amount or % of NAV out every year whether they earn it or not.
 - This dividend payout is safe until it isn't.
 - Cuts generally happen when the asset class in the CEF significantly underperforms.
- Example: Blackrock Science & Technology Term Trust (BSTZ)
 - Fund had paid \$0.1613 fixed dividend per month.
 - Announced dividend cut to 6% of NAV per month (\$0.1032)
 September 2023.

Blackrock Science & Technology Term Trust (BSTZ)



Discount widened on dividend cut and gloomy October outlook

Trading Case Study: BSTZ

- After the dividend cut, the BSTZ discount widened to over a 22% discount.
- Such a high discount is uncommon for a CEF from a well-known manager (Blackrock), particularly as the CEF has a term ending June 2031.
 - The discount should disappear by the end of the term.
 - Funds with terms tend not to go to huge discounts.
- Thus, the CEF seemed worthy of investigation.
- I'll highlight plusses and minuses in the buy decision.

Minuses

- High expense ratio of 1.33%.
- Complicated strategy, including selling covered calls and owning 25% in private equity.
 - Covered call funds tend to underperform straight stock funds.
 (Extra income does not offset loss of upside.)
 - Private securities are hard to value and sell.
- **Poor NAV track record**, significantly underperforming tech sector.
 - OSome underperformance I attributed to owning private equity during the bubble of low rates.
 - The other covered call during a volatile environment.
 - The third stock picking and a high expense ratio.
- Lacked the activism of its sister funds (ECAT, BMEZ, etc.) where SABA was a large holder.

Plusses

- 22%+ discount with less than 8-year term left.
- **Highly negative z-score** (discount wider than normal)
- Tech sector with some AI exposure
 - ONVIDIA is top holding.
 - Private investment includes some AI (see next page).
- Blackrock buying back shares
- CEF discounts tend to narrow seasonally going into Q1
 - Expected many investors selling to take tax losses.
- 6% NAV dividend payout (7.5% payout based on market price)
- Despite negatives, I expected to make at least 5% on the discount narrowing in a sector I liked.

Private Holdings in Literature – Private Investments

BlackRock Science and Technology Term Trust (BSTZ) *

Private investing snapshot

\$546m currently invested **
\$634 invested since inception **

22 current companies 31 companies total

14 industries

AUT O MATTIC





Invested Q3 2021

Technology

Software company providing open-source coding products and solutions

Application

Open source coding company as the tech backbone behind a number of different enterprises and applications – including WooCommerce, Jetpack, Simplenote, Longreads, Crowdsignal, and Tumblr.

Clients | Web-Based Enterprises

\$34m | Investment

Currently \$20m / 1.8%% of portfolio

Technology | Software

Invested Q4 2019

Technology

Cloud-based software that provides a unified platform for data, analytics, and artificial intelligence.

Application

Combines the best of data warehouses and data lakes – housing data in raw form – to offer an open and unified platform for data and artificial intelligence.

Clients | Global Enterprises

\$37m | Investment

Currently \$88m / 5.3% of portfolio

Technology I Software

Invested Q1 2020

Technology

Semiconductor technology that integrates artificial intelligence and machine learning capabilities directly into the hardware.

Application

Enables enterprises to accelerate and scale their Al capabilities across various applications including natural language processing, computer vision, and recommender systems.

Clients | Global Enterprises

\$41m | Investment

Past performance is no guarantee of future results

Currently \$59m / 3.6% of portfolio

Technology | Semiconductors

^{*} All companies held in BSTZ as of 6/30/23. Represent the largest private equity positions invested.

^{**} Represents the total amount invested in private securities since inception (see Page 39 for inception dates) and the current amount invested in private securities as of 6/30/2023.



Recap

- I showed how to run the CEF screener.
- Environment is not great for leveraged bond CEFs since short-term rates > long-term rates, and most CEFs are underearning dividends.
 - o Fed rate cuts could eventually change that.
 - Bond CEFs do offer a leveraged bet to profit from long-term rate declines.
 (not a bet I'm making)
- Earnings/UNII report is a good tool to predict dividend cuts/raises and thus better time your CEF purchases and sales.
- I provided a case study of a recent BSTZ trade including factors that I look at when placing a trade.