FUNDMARKET INSIGHT REPORT

LSEG LIPPER RESEARCH SERIES

MAY 31, 2023

The Month in Closed-End Funds: May 2023

Performance

For the third month in four, equity closed-end funds (CEFs) on average posted negative returns on a net-asset-value (NAV) and market basis, declining 1.96% and 2.79%, respectively, for the month. Meanwhile, for the first month in three, their fixed income CEF counterparts witnessed monthly losses on a NAV basis (-0.66%), but for the third month in four posted a negative return on a market basis (-1.87%) for May. Year to date, both equity and fixed income CEFs posted plus-side returns on a NAV-basis, rising 1.06% and 2.92%, respectively.

U.S. markets generally finished lower at the beginning of May, even after the Dow and S&P 500 snapped a four-day losing streak after investors digested a better-than-expected nonfarm payrolls report and Apple (AAPL) announced a 4% dividend hike and an extension of its stock buyback program in addition to beating analyst expectations for its Q1 earnings report. The Department of Labor reported the U.S. economy added 253,000 new jobs in April, beating economists' expectations of 180,000, with the unemployment rate dropping to 3.4%, while wages rose 0.5%, bucking the Federal Reserve's hopes for a larger slowdown in jobs growth. The one-month Treasury yield rose 124 basis points (bps) on the week to 5.59% on debt ceiling and interest rate hike concerns.

The Dow and the S&P booked back-to-back weekly losses after a poor consumer confidence report raised recessionary concerns—although the tech-heavy Nasdaq Composite notched its third consecutive weekly gain. The University of Michigan's preliminary index of consumer sentiment declined to 57.7 in May from its April reading of 63.5, its lowest level since November. Economic data showed some weakening in the labor market, with first-time jobless claims from the prior week rising to 264,000—its highest level since October 2021. Nonetheless, the 10-year Treasury yield still rose two bps for the week to settle at 3.46%.

Despite a rising debt ceiling and regional-bank concerns, U.S. stocks posted weekly gains the following week as investors' interest in artificial intelligence issues and large tech stocks buoyed the U.S. market. Indirectly helping the rally, former Fed Chair Ben Bernanke said, "Our policy rate may not need to rise as much as it would have otherwise to achieve our goals," given tighter credit conditions were likely to slow economic growth, hiring, and inflation. The 10-year Treasury yield still closed the week up 24 bps to 3.70%.

Stocks rose sharply ahead of the Memorial-Day weekend as investors were cheered by reports that Congress was closer to a deal to raise the U.S. debt ceiling, with the tech-heavy Nasdaq once again leading the way. Investors appeared to largely ignore news from the Bureau of Economic Analysis that showed the core personal consumption expenditures (PCE) price index for April rose 0.4%. On a year-over-year basis, core inflation rose 4.7%, up from the 4.6% rate in March. The PCE data also showed consumer spending rose 0.8% in April, its largest rise in three months. The 10-year Treasury yield closed the week up 10 bps to 3.80%.

On the last trading day of the month, U.S. stocks ended lower ahead of a debt ceiling vote in the House of Representatives. However, comments by Federal Reserve officials that the central bank might skip an interest rate hike at their June meeting helped keep the carnage in check. Philadelphia Fed President Patrick Harker said, "I am in the camp increasingly coming into this meeting thinking that we really should skip, not pause, but skip an increase." As a result, fed-fund futures traders pushed the probability of a 25-bps hike in June to 33.2% from 70% earlier in the morning, according to the CME FedWatch tool.

The Month in Closed-End Funds: May 2023

- For the third month in four, equity CEFs (-1.95% on a NAV basis) on average witnessed downside performance while their fixed income CEF cohorts (-0.66%) posted losses for the first month in three.
- At month end, 9% of all CEFs traded at a premium to their NAV, with 10% of equity CEFs and 8% of fixed income CEFs trading in premium territory. The world equity CEFs macro-classification witnessed the largest narrowing of discounts for the month among Lipper's CEF macro-groups—29 bps to a 14.49% median discount.
- For the first month since August 2020, Convertible Securities CEFs (+0.07%) outperformed the other classifications in the equity CEF universe for May.
- For the first month in three, Loan Participation CEFs (-0.08%) mitigated losses better than or outperformed the other classifications in the domestic taxable fixed income CEF universe.
- The world bond CEFs macro-group (-0.19%) outpaced its domestic taxable bond (-0.46%) and municipal debt (-1.11%) CEF counterparts.

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The broad-based U.S. indices finished the month mixed with the Nasdaq Composite rising 5.80%, followed at a distance by the S&P 500 (+0.25%) and the Dow Jones Industrial Average (-3.49%).

While the Treasury yield shifted up during the month, yields remained inverted for all maturities from the one-month to the seven-year yield. The two- and 10-year Treasury yield spread widened 16 bps from its April month-end closing value at minus 0.76 bps. The one-month Treasury yield witnessed the largest increase, rising 93 bps to 5.28%, while the 30-year yield saw the smallest gain, 18 bps to 3.85%

During the month, the dollar strengthened against the euro (+3.56%), the pound (+1.44%), and the yen (+2.50%). Commodity prices declined for the month, with front-month gold prices falling 1.32% to close the month at $1,963.90/oz. and front-month crude oil prices plummeting 11.32% to close at $68.09/bbl.

For the month, 23% of all CEFs posted NAV-based returns in the black, with only 21% of equity CEFs and 24% of fixed income CEFs chalking up returns in the plus column. For the first month in three, Lipper's mixed-assets CEFs (-0.71%) macro-group mitigated losses better than or outpaced its two equity-based brethren: domestic equity CEFs (-2.16%) and world equity CEFs (-2.48%).

For the first month since August 2020, the Convertible Securities CEFs classification (+0.07%, April's laggard) moved to the top of the equity leaderboard, followed by Income & Preferred Stock CEFs (-0.97%) and Sector Equity CEFs (-1.17%). Utility CEFs (-6.31%) was the laggard in the equity universe and was bettered by Natural Resources CEFs (-5.63%) and Energy MLP CEFs (-4.51%). For the remaining equity classifications, returns ranged from negative 3.85% (Developed Markets CEFs) to minus 1.30% (Options Arbitrage/Options Strategies CEFs).

Two of the five-top performing equity CEFs for May were warehoused in Lipper's Sector Equity CEFs classification. However, at the top of the leaderboard was **Taiwan Fund Inc.** (**TWN**, housed in the Emerging Markets CEFs classification), rising 11.34% on a NAV basis and traded at a 19.78% discount on May 31. Following TWN were **RENN Fund** (**RCG**, warehoused in the Global CEFs classification), gaining 10.05% and traded at a 19.18% discount at month end; **Columbia Seligman Premium Technology Growth Fund** (**STK**, housed in the Options Arbitrage/Options Strategies CEFs classification), gaining 8.06% and traded at an 8.92% premium on May 31; **ARK Venture Fund** (**ARKVX**, an interval hybrid CEF housed in the Sector Equity CEFs classification), rising 7.17%; and **Neuberger Berman Next Generation Connectivity Fund** (**NBXG**, also warehoused in Lipper's Sector Equity CEFs classification), returning 7.02% and traded at a 21.34% discount on May 31.

For the month, the dispersion of performance in individual equity CEFs—ranging from negative 10.00% to positive 11.34%—was wider than April's spread and

CLOSED-END FUNDS LAB

TABLE 1 CURRENT-MONTH PERFORMANCE, P&D, P&D SHIFTS (% OF UNIVERSE)

	NAV RETURNS	PREMIUM/DISCOUNT		NOW TRADING AT	
	POSITIVE	BETTER	WORSE	PREMIUM	DISCOUNT
Equity CEFs	21	39	61	10	90
Bond CEFs	24	27	73	8	92
ALL CEFs	**23**	**32**	**68**	**9**	**91**

TABLE 2 AVERAGE NAV RETURNS, SELECTED PERIODS (%)

	MAY	YTD	3-MONTH	CALENDAR-2022
Equity CEFs	-1.96	1.06	-1.56	-9.85
Bond CEFs	-0.66	2.92	0.74	-12.21
ALL CEFs	**-1.22**	**2.12**	**-0.25**	**-11.18**

TABLE 3 NUMBER OF IPOs, YTD VERSUS PRIOR YEAR

	MAY 31, 2023	CALENDAR-2022
Conventional CEFs	0	5
Interval CEFs	13	22

TABLE 4 AVERAGE SIZE OF IPOs, SELECTED PERIODS, $MIL

THREE MONTHS THROUGH 04/30/2023	0
COMPARABLE YEAR-EARLIER THREE MONTHS	305
CALENDAR 2022 AVERAGE	202

TABLE 5 NUMBER OF MERGERS & LIQUIDATIONS, YTD VERSUS PRIOR YEAR

	MAY 31, 2023	CALENDAR-2022
ALL CEFs	**10**	**21**

TABLE 6 MEDIAN PREMIUMS AND DISCOUNTS (%)

	28-FEB	31-MAR	28-APR	31-MAY
Equity CEFs	-9.65	-10.73	-11.63	-12.55
Bond CEFs	-8.19	-9.88	-10.29	-11.01
ALL CEFS	**-8.60**	**-10.08**	**-10.62**	**-11.56**

Source: LSEG Lipper

skewed more to the downside. The 20 top-performing equity CEFs posted returns at or above positive 1.55%, while the 20-lagging equity CEFs were at or below negative 7.02%.

For the month, only 55 CEFs in the equity universe posted returns in the black. The two worst-performing funds were housed in Lipper's Emerging Markets CEFs classification. At the bottom of the pile was **Templeton Dragon Fund Inc.** (**TDF**), shedding 10.00% of its April closing NAV and traded at a 14.49% discount on May 31. The second worst-performing equity CEF was **China Fund Inc.** (**CHN**), posting a 9.80% loss and traded at a 14.62% discount at month end.

The U.S. Treasury yield curve remained inverted but rose at all maturities of the curve during the month. The one-month yield witnessed the largest gain, rising 93 bps in May to close at 5.28%, followed by the three-month yield, which rose 42 bps to 5.52%. All yields with maturities less than 10 years remained above the 10-year Treasury yield (+3.64%), with the 30-year yield witnessing the smallest increase (+18 bp) to 3.85%. At month end, the two- and 10-year Treasury yield spread (-76 bps) widened 16 bps for May after hitting negative 77 bps on May 30—its widest value since March 10, 2023.

For the first month in five, the world income CEFs macro-group mitigated losses better than or outpaced the other two macro-groups in the fixed income universe, posting a 0.19% loss on average, followed by domestic taxable bond CEFs (-0.46%) and municipal debt CEFs (-1.11%).

For the first month in three, investors pushed Loan Participation CEFs (-0.08%) to the top of the domestic taxable fixed income leaderboard, followed by General Bond CEFs (-0.21%) and High Yield CEFs (-0.32%). Corporate Debt BBB-Rated (Leveraged) CEFs (-1.88%) posted the group's largest declines and was bettered by Corporate Debt BBB-Rated CEFs (-1.25%). On the world bond CEFs side, the relatively strong performance from Global Income CEFs (-0.08%) helped neutralize the losses from Emerging Markets Hard Currency Debt CEFs (-0.60%), but the subgroup managed to move to the top of the fixed income universe for the month.

The municipal debt CEFs macro-group was the worst performing macro-group for the second month in a row, posting a 1.11% loss on average, with none of the nine classifications in the group posting plus-side returns for May. The General & Insured Municipal Debt CEFs (-0.72%) classification did the best job of mitigating losses of the group, followed by Intermediate Municipal Debt CEFs (-0.94%) and New York Municipal Debt CEFs (-1.06%), while Pennsylvania Municipal CEFs (-1.49%) once again was the group laggard. National municipal debt CEFs (-1.06%) mitigated losses better than their single state municipal debt CEF counterparts (-1.20%) by 14 bps.

Four of the five top-performing individual fixed income CEFs were interval hybrid CEFs housed in Lipper's Loan Participation CEFs classification. **Bluerock High Income Institutional Credit Fund, Class A Shares** (**IIMAX**) rose to the top of fixed income leaderboard, posting a 2.03% return, followed by **Bluerock High Income Institutional Credit Fund, Class C Shares** (**IIMCX**), chalking up a 1.99% return; **Bluerock High Income Institutional Credit Fund, Class F Shares** (**IIMFX**), gaining 1.99%; **Bluerock High Income Institutional Credit Fund, Class I Shares** (**IIMWX**), rising 1.95%, and **BlueBay Destra Intl Event-Driven Credit Fund, Class I Shares** (**CEDIX**, an interval hybrid CEF housed in the Global Income CEFs classification), returning 1.23%.

For the remaining funds in the fixed income CEF universe, monthly NAV-based performance ranged from negative 4.01% for **Franklin Universal Trust** (**FT**, housed in Lipper's High Yield CEFs [Leveraged] classification and traded at a 9.51% discount on May 31) to positive 1.19% for **BlueBay Destra Intl Event-Driven Credit Fund, Class T Shares** (**CEDTX**, an interval hybrid CEF housed in the Global Income CEFs classification). The 20 top-performing fixed income CEFs posted returns at or above positive 0.85%, while the 20 lagging CEFs posted returns at or below negative 1.91% for the month. For May, only 81 of the 342 fixed income CEFs witnessed plus-side NAV-based performance.

Premium and Discount Behavior

For May, the median discount of all CEFs widened 94 bps to 11.56%—wider than the 12-month moving average median discount (8.86%). Equity CEFs' median discount widened 92 bps to 12.55%, while fixed income CEFs' median discount widened 72 bps to 11.01%. The world equity CEFs macro-group's median discounts witnessed the largest narrowing among the CEF macro-groups—29 bps to 14.49%—while the world income CEFs macro-group witnessed the largest widening of discounts—252 bps to 9.26%.

Gabelli Utility Trust (**GUT**, housed in the Utility CEFs classification) traded at the largest premium (+107.45%) in the CEF universe on May 31, while **Destra Multi-Alternative Fund** (**DMA**, housed in the Income & Preferred Stock CEFs classification) traded at the largest discount (-46.53%) at month end.

For the month, 32% of all closed-end funds' discounts or premiums improved, while 68% worsened. In particular, 39% of equity CEFs and 27% of fixed income CEFs saw their individual discounts narrow, premiums widen, or premiums replace discounts. The number of funds traded at premiums on May 31 (39) was 11 less than the number on April 28 (50).

CEF Events and Corporate Actions
IPOs

Calamos Investments LLC announced it has partnered with Aksia to launch **Calamos Aksia Alternative Credit and Income Fund** (**CAPIX**), a closed-end interval fund providing all investors with access to the broad spectrum of private credit investments. The fund began accepting allocations from clients beginning on June 1, 2023. CAPIX is advised by Calamos Advisors LLC with Aksia LLC as subadvisor, combining the complementary expertise of Calamos, a leader in liquid alternatives, and Aksia, a leader in institutional alternatives and private credit.

Fidelity Investments announced the launch of **Fidelity Multi-Strategy Credit Fund** (**Classes A**, **C**, **I**, and **L**; **FMSJX**, **FMSKX**, **FMSMX**, and **FMSNX**, respectively), expanding its alternative investments (alts) product lineup which now includes 35 funds and $9.8 billion in assets under management as of March 31, 2023. As a closed-end interval fund, Fidelity Multi-Strategy Credit Fund will not provide for daily redemptions but will conduct quarterly repurchase offers between 5% and 25% of the fund's outstanding shares at NAV. The fund was available on May 25, 2023, for financial advisors on https://institutional.fidelity.com/app/item/RD_9902264.html. Fidelity Multi-Strategy Credit Fund seeks to provide a high level of current income and capital appreciation through investments across a variety of high-income oriented asset classes, including both liquid and illiquid securities. The fund intends to pursue these objectives by opportunistically rotating across the entire credit spectrum based on the current and expected macro environment. The fund will seek to allocate to foundational credit, which includes direct lending, leveraged loans, and high yield bonds, and opportunistic investments such as stressed and distressed investments, convertible bonds, preferred stock, real estate debt, commercial mortgage-based securities, investment grade bonds, collateralized obligations, and emerging markets debt.

Rights, Repurchases, Tender Offers

abrdn Emerging Markets Equity Income Fund, Inc. (**AEF**) announced that its board of directors have adopted a policy pursuant to which it will cause the fund to conduct a one-time tender offer for 20% of its then issued and outstanding shares of common stock on or before December 31, 2025, if the fund's total return investment performance measured on a NAV basis does not equal or exceed the total return investment performance of the MSCI Emerging Markets Index (Net) during the period commencing on October 1, 2022, and ending on September 30, 2025. The price at which shares are to be tendered and other terms and conditions of such tender offer would be determined by the board in its discretion based on its review and consideration of the then-current size of the fund, market conditions and other factors it deems relevant.

Neuberger Berman High Yield Strategies Fund Inc. (**NHS**) announced approval of the terms of the issuance of transferable rights ("rights") to the holders of the fund's common stock as of the record date, May 23, 2023. Holders of these rights will be entitled to subscribe for additional shares of common stock at a discount to market price. Holders of common stock on the record date will receive one right for each outstanding share of common stock owned on the record date. The rights entitle the holders to purchase one new share of common stock for every three rights held (one-for-three); however, any record-date stockholder who owns fewer than three shares of common stock as of the record date will be entitled to subscribe for one share of common stock. Fractional shares of common stock will not be issued.

The subscription price per share of common stock will be determined by the fund on the expiration date of the offer, which is currently expected to be June 21, 2023, unless extended by the fund. The subscription price will be equal to 92.5% of the average of the last reported sales price of a share of common stock of the fund on the NYSE on the expiration date and each of the four immediately preceding trading days (the "formula price"). If, however, the formula price is less than 89% of the fund's NAV per share of common stock at the close of trading on the NYSE on the expiration date, the subscription price will be 89% of the fund's NAV per share of common stock at the close of trading on the NYSE on that day.

Record-date stockholders who fully exercise all rights issued to them can subscribe, subject to certain limitations and allotment, for any additional shares of common stock that were not subscribed for by other holders of rights at the subscription price. Investors who are not record-date stockholders but who otherwise acquire rights, including in the secondary market, are not entitled to subscribe for any additional shares of common stock. If sufficient shares of common stock are available, all record-date stockholders' oversubscription requests will be honored in full. If these requests exceed available shares of common stock, they will be allocated pro rata among those fully exercising record-date stockholders who oversubscribe based on the number of rights originally issued to them by the fund.

Rights are transferable and are expected to be admitted for trading on the NYSE under the symbol "NHS RT" during the course of the offer. The last day rights will trade one business day before the offer's expiration date (June 20, 2023, unless extended). During the course of the offer, record-date stockholders may choose to sell their rights. The offer will be made only by means of a prospectus supplement and accompanying prospectus. The fund expects to disseminate subscription certificates evidencing the rights and a copy of the prospectus supplement and accompanying prospectus for the offer to record-date stockholders shortly following the record date.

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Mergers, Liquidations, and Reorganizations

There were no mergers, liquidations, or reorganizations noted in May.

Other

Firsthand Technology Value Fund, Inc. (**SVVC**), a publicly traded venture capital fund that invests in technology and cleantech companies, announced that it received a written notice from the NASDAQ Stock Market LLC on April 27, 2023, indicating that the fund is not in compliance with the $1 closing-bid price requirement under Nasdaq Listing Rule 5550(a)(2).

The notification letter does not result in the immediate delisting of the fund's common stock and, at least until the expiration of the compliance period discussed below, Firsthand's common stock will continue to trade uninterrupted on the Nasdaq Global Market under the symbol "SVVC."

Nasdaq Listing Rule 5550(a)(2) requires listed securities to maintain a minimum closing bid price of $1 per share, and Nasdaq Listing Rule 5810(c)(3)(A) provides that a failure to meet the minimum bid price required exists if the deficiency continues for a period of 30 consecutive business days. Based on the closing bid price of the fund's common stock for the 30 consecutive business days from March 15, 2023, through April 26, 2023, the fund no longer met the minimum bid price requirement.

The notification letter does not impact the fund's listing on the Nasdaq Global Market at this time. In accordance with Nasdaq Listing Rule 5810(c)(3)(A), the fund has been provided 180 calendar days, or until October 24, 2023, to regain compliance with Nasdaq Listing Rule 5550(a)(2). To regain compliance, the fund's common stock must have a closing bid price of at least $1 for a minimum of 10 consecutive business days. In the event that the fund does not regain compliance by October 24, 2023, the fund may be eligible for additional time to regain compliance.

According to the press release, the fund's business operations are not affected by the receipt of the notification letter. The fund intends to monitor the closing bid price of its common stock and may, if appropriate, consider implementing available options, including, but not limited to, implementing a reverse share split of its outstanding common stock, to regain compliance with the minimum bid price requirement under the Nasdaq Listing Rules. The fund cannot at this time give any assurances about whether or how it will be able to address this requirement. The fund will issue a further announcement with respect to any change in status or proposed action.

The **Highland Income Fund** (**HFRO**) announced that the fund's board of trustees approved a repurchase program pursuant to which the fund may repurchase up to $100 million of its stock in open-market transactions over a two-year period. In conjunction with the repurchase program, the board approved modifications to the fund's investment objective. Under the modified investment objective, the fund will pursue growth of capital along with income. These changes expand the fund's universe of opportunistic investments and provide flexibility to seek growth of capital along with income opportunities. The fund will change its name to the **Highland Opportunities and Income Fund** to reflect the new investment objective. All changes will take effect on June 15, 2023.

The fund's strategy will not change materially as a result of the modifications to its investment objective. The fund will invest directly and indirectly (e.g., through derivatives that are the economic equivalent of direct investments) in the following categories of securities and instruments: (i) investments in securities or other instruments directly or indirectly secured by real estate, including real estate investment trusts ("REITs"), preferred equity, securities convertible into equity securities and mezzanine debt; (ii) other instruments, including, but not limited to, secured and unsecured fixed-rate loans and corporate bonds, distressed securities, mezzanine securities, structured products (including but not limited to mortgage-backed securities, collateralized loan obligations, and asset-backed securities), convertible and preferred securities, equities (public and private), and futures and options; and (iii) floating rate loans and other securities deemed to be floating rate investments.

For immediate assistance, feel free to contact Lipper Client Services toll-free at 877.955.4773 or via email at LipperUSClientServices@lseg.com. For more information about LSEG Lipper, please visit our website at lseg.com/en or lipperalphainsight.com

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