FUND*MARKET* INSIGHT REPORT

LSEG LIPPER RESEARCH SERIES

JULY 31, 2023

The Month in Closed-End Funds: July 2023

Performance

For the second month in a row, equity closed-end funds (CEFs) on average posted plus-side returns on a net-asset-value (NAV) and market basis, gaining 2.69% and 3.56%, respectively, for the month. Meanwhile, also for the second consecutive month, their fixed income CEF counterparts witnessed monthly gains on a NAV basis (+1.03%) and a market basis (+2.13%) for July. Year to date, both equity and fixed income CEFs posted plus-side returns on a NAV basis, rising 7.68% and 5.74%, respectively.

U.S. markets gave up some ground in the beginning of July, with all three broad-based U.S. indices sliding after the Department of Labor reported the U.S. economy added 209,000 new jobs in June—the smallest increase in two-and-a-half years, coming in below analysts' expectations of 240,000. However, the unemployment rate edged down to 3.6%. The Bureau of Labor Statistics reported that wage growth rose to 0.4%, with a year-over-year rise of 4.4%. According to the CME FedWatch tool, fed-fund futures traders pushed the probability of a 25-basis point (bp) hike in July to 92.4%.

U.S. stocks rose the following week, with the Dow climbing for five consecutive sessions after the June consumer price index report showed inflation on the decline and the University of Michigan's survey of consumer sentiment preliminary reading for July soared to 72.6 from 64.4 the month before. Despite consumer inflation expectations ticking up for the month, sentiment hit its highest level since September 2021. Investors pushed markets higher earlier in the week after JPMorgan, Wells Fargo, and Citigroup all reported earnings and revenue that beat analysts' expectations. Improving the mood, the S&P 500 broke above the 4,500 mark for the first time since April 2022.

While the Dow posted it tenth straight winning session at the end of the following week—its longest winning streak since August 7, 2017—tech issues witnessed declines the day before after Netflix (NFLX) released its Q2 earnings report which showed revenue fell short of expectations. Adding to the pain, semiconductor shares took a beating after Taiwan Semiconductor Manufacturing (TSM), while beating Q2 earnings expectations, reported contracting margins and provided downbeat guidance. According to our Refinitiv I/B/E/S team, of the 89 S&P 500 constituents that had reported earnings, 73% beat analyst expectations. However, year-over-year Q2 blended earnings growth estimates, excluding the energy sector, came in at negative 2.2%.

On July 26, the Dow booked its thirteenth straight advance, logging its longest winning streak since 1987, after the Fed hiked its key lending rate by a broadly anticipated 25 bps to a range of 5.25% and 5.50%—its highest level in 22 years. The Fed signaled it is prepared to do more to get inflation down to its 2% target—casting a slight pall over the market on Thursday. U.S. economic data released at week's end showed the cost of goods and services rose a mild 0.2% in June, with the core personal consumption expenditures index, which excludes volatile food and energy costs, slowed to a year-over-year rate of slightly less than 4.1% in June from 4.6% the month before.

On the last trading day of the month, stocks ended slightly higher—with the Nasdaq and the S&P 500 posting their fifth straight monthly gain as investors embraced a better-than-expected Q2 earnings season so far and on hopes the Federal Reserve Board can orchestrate a soft landing for the U.S. economy while still fighting inflation.

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- For the second consecutive month, equity CEFs (+2.69% on a NAV basis) on average chalked up plus-side performance while their fixed income CEF cohorts (+1.03%) also posted gains for the second month in a row.
- At month end, 13% of all CEFs traded at a premium to their NAV, with 14% of equity CEFs and 12% of fixed income CEFs trading in premium territory. The world income CEFs macro-classification witnessed the largest narrowing of discounts for the month among Lipper's CEF macro-groups—227 bps to a 6.48% median discount.
- For the first month in six, Emerging Markets CEFs (+5.95%) outperformed the other classifications in the equity CEF universe for July.
- For the first month in three, High Yield (Leveraged) CEFs (+1.89%) outperformed or mitigated losses better than the other classifications in the domestic taxable fixed income CEF universe.
- For the third month running, the world income CEFs macro-group (+1.73%) outpaced its domestic taxable bond (+1.40%) and municipal debt (+0.20%) CEF counterparts.

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With the Fed hiking its key lending rate during the month, the yield curve shifted up for all maturities except the one-year Treasury yield which declined three bps for the month, closing at 5.37%. Yields remained inverted for all maturities from the one-month to the seven-year yield, with the 10-year Treasury yield rising 16 bps to 3.97%. The two- and 10-year Treasury yield spread narrowed 15 bps from its June month-end closing value at minus 91 bps. The one-month Treasury yield witnessed the largest increase, rising 24 bps to 5.48%.

During the month, the dollar weakened against the against the euro (-0.92%), the pound (-1.16%), and the yen (-1.62%). Commodity prices rose for the month, with front-month gold prices rising 2.57% to close the month at $1,970.50/oz. and front-month crude oil prices jumping 15.80% to close at $81.84/bbl.

For the month, 92% of all CEFs posted NAV-based returns in the black, with 91% of equity CEFs and 93% of fixed income CEFs chalking up returns in the plus column. For the second month in a row, Lipper's world equity CEFs (+3.69%) macro-group outpaced its two equity-based brethren: mixed-assets CEFs (+2.63%) and domestic equity CEFs (+2.38%).

For the first month in six, the Emerging Markets CEFs classification (+5.95%) moved to the top of the equity leaderboard, followed by Energy MLP CEFs (+5.06%) and Natural Resources CEFs (+5.00%). Once again, Real Estate CEFs (+0.66%), was the relative laggard in the equity universe and was bettered by Utility CEFs (+2.14%) and Options Arbitrage/Options Strategies CEFs (+2.32%). For the remaining equity classifications, returns ranged from 2.50% (Sector Equity CEFs) to 3.52% (Developed Markets CEFs).

Three of the five-top performing equity CEFs for July were warehoused in Lipper's domestic equity CEFs macro-classification. At the top of the leaderboard was **John Hancock Financial Opportunities Fund** (**BTO**, housed in the Sector Equity CEFs classification), rising 16.89% on a NAV basis and traded at an 8.87% premium on July 31. Following BTO were **China Fund Inc.** (**CHN**, warehoused in the Emerging Markets CEFs classification), gaining 12.02% and traded at a 13.43% discount at month end; **Templeton Dragon Fund Inc.** (**TDF**, also housed in the Emerging Markets CEFs classification), gaining 9.77% and traded at a 13.61% discount on July 31; **Tortoise Energy Independence Fund** (**NDP**, housed in the Natural Resources CEFs classification), rising 7.75% and traded at a 14.57% discount at month end; and **ARK Venture Fund** (**ARKVX**, an interval hybrid CEF warehoused in Lipper's Sector Equity CEFs classification), returning 7.73%.

For the month, the dispersion of performance in individual equity CEFs—ranging from negative 1.12% to positive 16.89%—was narrower than June's spread and skewed slightly less to the plus side. The 20 top-performing equity CEFs posted returns at or above positive 5.78%, while the 20-lagging equity CEFs were at or below negative 0.20%.

CLOSED-END FUNDS LAB

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

	NAV RETURNS POSITIVE	PREMIUM/DISCOUNT		NOW TRADING AT	
		BETTER	WORSE	PREMIUM	DISCOUNT
Equity CEFs	91	53	37	14	86
Bond CEFs	93	83	17	12	88
ALL CEFs	**92**	**69**	**31**	**13**	**87**

TABLE 2 AVERAGE NAV RETURNS, SELECTED PERIODS (%)

	JULY	YTD	3-MONTH	CALENDAR-2022
Equity CEFs	2.69	7.68	4.34	-9.85
Bond CEFs	1.03	5.74	2.04	-12.21
ALL CEFs	**1.74**	**6.59**	**3.04**	**-11.18**

TABLE 3 NUMBER OF IPOs, YTD VERSUS PRIOR YEAR

	JULY 31, 2023	CALENDAR-2022
Conventional CEFs	0	5
Interval CEFs	21	22

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

THREE MONTHS THROUGH 06/30/2023	0
COMPARABLE YEAR-EARLIER THREE MONTHS	0
CALENDAR 2022 AVERAGE	202

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

	JULY 31, 2023	CALENDAR-2022
ALL CEFs	**16**	**21**

TABLE 6 MEDIAN PREMIUMS AND DISCOUNTS (%)

	28-APR	31-MAY	30-JUN	31-JUL
Equity CEFs	-11.63	-12.55	-11.92	-11.41
Bond CEFs	-10.29	-11.01	-10.10	-9.43
ALL CEFS	**-10.62**	**-11.56**	**-10.79**	**-10.15**

Source: LSEG Lipper

For the month, only 24 CEFs in the equity universe posted returns in the red. The worst-performing funds were housed in Lipper's Real Estate CEFs classification. At the bottom of the pile was **PREDEX T Share Class** (**PTDEX**, an interval hybrid CEF), shedding 1.12% of its June closing NAV. The second worst-performing equity CEF was **PREDEX I Share Class** (**PRDEX**, an interval hybrid CEF), posting a 1.09% loss.

The U.S. Treasury yield curve remained inverted during the month, rising at all maturities except the one-year Treasury yield. The one-month yield witnessed the largest gain, rising 24 bps in July to close at 5.48%, followed by the 30-year yield, which rose 17 bps to 4.02%. All yields with maturities less than 10 years remained above the 10-year Treasury yield (+3.97%), with the four-month yield witnessing the highest absolute rate, coming in at 5.56%. At month end, the two- and 10-year Treasury yield spread (-91 bps) narrowed 15 bps for July.

For the third month in a row, the world income CEFs macro-group outpaced or mitigated losses better than the other two macro-groups in the fixed income universe, posting a 1.73% gain on average, followed by domestic taxable bond CEFs (+1.40%) and municipal debt CEFs (+0.20%).

For the first month in three, investors pushed High Yield (Leveraged) CEFs (+1.89%) to the top of the domestic taxable fixed income leaderboard, followed by Loan Participation CEFs (+1.58%) and High Yield CEFs (+1.45%). Corporate Debt BBB-Rated CEFs (+0.45%) posted the group's smallest gain and was bettered by U.S. Mortgage CEFs (+0.68%). On the world bond CEFs side, the strong performance from Emerging Markets Hard Currency Debt CEFs (+2.69%) and Global Income CEFs (+1.54%) kept the world income CEFs macro-group at the top of the fixed income universe for the month.

The municipal debt CEFs macro-group posted plus-side returns for the second month in a row, returning 0.20% on average, with eight of the nine classifications in the group posting positive returns for July. The High Yield Municipal Debt CEFs (+0.41%) classification chalked up the strongest return of the group, followed by New Jersey Municipal Debt CEFs (+0.37%) and General & Insured Municipal Debt (Unleveraged) CEFs (+0.36%), while New York Municipal Debt CEFs (-0.06%) witnessed the only declines of the group. National municipal debt CEFs (+0.26%) outshined its single-state municipal debt CEF counterpart (+0.08%) by 18 bps.

Three of the five top-performing individual fixed income CEFs were housed in Lipper's domestic taxable bond CEFs macro-classification. **XAI Octagon Floating Rate & Alternative Income Term Trust** (**XFLT**, housed in the Loan Participation CEFs classification) rose to the top of fixed income leaderboard, posting a 4.65% return and traded at a 2.88% premium on July 31. XFLT was followed by **FS Credit Opportunities Corp.** (**FSCO**, warehoused in the General Bond CEFs classification), chalking up a 4.64% return and traded at a 27.06% discount at month end; **City National Rochdale Strategic Credit Fund** (**CNROX**, an interval hybrid CEF housed in the Loan Participation CEFs classification), gaining 3.81%; **Templeton Emerging Markets Income Fund** (**TEI**, warehoused in Lipper's Emerging Markets Hard Currency Debt CEFs classification), rising 3.62% and traded at a 11.21% discount at month end; and **Virtus Stone Harbor Emerging Markets Income Fund** (**EDF**, also housed in the Emerging Markets Hard Currency Debt CEFs classification), returning 3.52% and traded at a 10.25% premium on July 31.

For the remaining funds in the fixed income CEF universe, monthly NAV-based performance ranged from negative 4.80% for **Ecofin Tax-Exempt Private Credit Fund** (**TSIFX**, an interval hybrid CEF housed in the General & Insured Municipal Debt [Leveraged] CEFs classification) to positive 3.40% for **Saba Capital Income & Opportunities Fund** (**BRW**, housed in Lipper's Loan Participation CEFs classification and traded at a 8.06% discount on July 31). The 20 top-performing fixed income CEFs posted returns at or above positive 2.43%, while the 20 lagging CEFs posted returns at or below negative 0.06% for the month. For July, only 24 of the 355 fixed income CEFs witnessed negative NAV-based performance.

Premium and Discount Behavior

For July, the median discount of all CEFs narrowed 65 bps to 10.15%—wider than the 12-month moving average median discount (9.48%). Equity CEFs' median discount narrowed by 51 bps to 11.41%, while fixed income CEFs' median discount narrowed by 67 bps to 9.43%. The world income CEFs macro-group's median discounts witnessed the largest narrowing among the CEF macro-groups—227 bps to 6.48%—while the domestic equity CEFs macro-group witnessed the smallest narrowing of discounts—34 bps to 10.21%.

Gabelli Utility Trust (**GUT**, housed in the Utility CEFs classification) traded at the largest premium (+110.64%) in the CEF universe on July 31, while **Destra Multi-Alternative Fund** (**DMA**, housed in the Income & Preferred Stock CEFs classification) traded at the largest discount (-53.01%) at month end.

For the month, 69% of all closed-end funds' discounts or premiums improved, while 31% worsened. In particular, 53% of equity CEFs and 83% of fixed income CEFs saw their individual discounts narrow, premiums widen, or premiums replace discounts. The number of funds traded at premiums on July 31 (54) was six more than the number on June 30 (48).

CEF Events and Corporate Actions IPOs

There were no CEF IPOs in July

Rights, Repurchases, Tender Offers

RiverNorth Capital and Income Fund, Inc. (**RSF**) announced the final results of its repurchase offer for up to 5% of its outstanding common shares. The repurchase offer expired on July 5, 2023. Based on information provided by DST Systems, Inc., the depositary for the repurchase offer, a total of 1,886,944 shares were submitted for redemption and 203,976 shares were repurchased. In accordance with the terms and conditions of the repurchase offer, because the number of shares submitted for redemption exceeds the number of shares offered to purchase, the fund will purchase shares from tendering shareholders on a pro rata basis (disregarding fractional shares). The purchase price of repurchased shares is equal to the fund's NAV per share calculated as of the close of regular trading on the New York Stock Exchange (NYSE) on July 5, 2023, which is equal to $16.68 per share.

Mergers, Liquidations, and Reorganizations

Nuveen Intermediate Duration Quality Municipal Term Fund (**NIQ**) completed its termination and liquidation following the close of business on June 30, 2023. The termination and liquidation were performed in accordance with the fund's investment objectives and organizational documents, consistent with the fund's previously announced liquidation plans. NIQ was designed to liquidate and distribute its then-current net assets to shareholders upon termination on or before June 30, 2023.

As previously announced, NIQ owned securities of Energy Harbor Corp. (ENGH) that represented approximately 4.4% of the fund's common assets as of June 30, 2023. The securities of ENGH, upon the fund's termination, were transferred to a liquidating trust intended to facilitate the orderly disposition of those assets. Upon the fund's termination, NIQ had a final extended NAV of $12.9850 per common share. In its liquidation, the fund paid a cash distribution of $12.4082 per common share to all fund shareholders. Additionally, the fund distributed one unit of Nuveen Intermediate Duration Quality Municipal Term Fund Liquidating Trust per common share of NIQ owned by each shareholder on the liquidation date. Upon its formation on June 30, 2023, the liquidating trust had a NAV equal to $0.5768 per unit.

Effective close of business on July 7, 2023, abrdn Inc. assumed responsibility for the management of the former **Delaware Investments National Municipal Income Fund** (**VFL**), from Delaware Management Company, a series of Macquarie Investment Management Business Trust. As noted within the fund's proxy statement, the fund's name changed simultaneously. In connection with the change in investment advisor, the fund amended its declaration of trust to change its name to **abrdn National Municipal Income Fund** effective after close of regular business on July 7, 2023. The fund's ticker symbol and CUSIP are not changing. The fund's primary investment objective, which is to seek to provide current income exempt from regular federal income tax, consistent with the preservation of capital, will remain unchanged. No changes to the investment policies and strategies of the fund are currently anticipated.

Virtus Stone Harbor Emerging Markets Total Income Fund (**EDI**) announced that its proposed reorganization with and into **Virtus Stone Harbor Emerging Markets Income Fund** (**EDF**), which was scheduled to occur on or about August 4, 2023, subject to certain closing conditions, will be delayed pending regulatory approval related to the transfer or sale of certain foreign assets. An update on the timing of the reorganization will be provided at a later date.

Western Asset Managed Municipals Fund Inc. (**MMU**) announced the results of the votes cast at MMU's special meeting of stockholders held on July 14, 2023. Stockholders of MMU voted to approve the merger of **Western Asset Intermediate Muni Fund Inc.** (**SBI**) with and into MMU and to approve the merger of **Western Asset Municipal Partners Fund Inc.** (**MNP**) with and into MMU in accordance with the Maryland General Corporation Law.

SBI and MNP each announced at SBI's and MNP's special meetings of stockholders held on July 14, 2023, that the special meetings of stockholders for each of SBI and MNP were being adjourned to permit further solicitation of proxies. The special meetings of stockholders for each of SBI and MNP are adjourned to August 11, 2023, at 10:00 a.m. Eastern Time at the offices of Franklin Templeton at 280 Park Avenue, 7th Floor, New York, New York 10017.

Vertical Capital Income Fund (**VCIF**) announced that it has changed its corporate name from VCIF to **Carlyle Credit Income Fund** (**CCIF**) in connection with the closing of the previously announced transaction with global investment firm, Carlyle (NYSE: CG), and will begin trading under its new corporate name effective July 18, 2023. The company will trade under the NYSE ticker symbol CCIF, effective before the market opens on July 27, 2023. As part of the transaction closing, the company will now focus on investing in equity and debt tranches of collateralized loan obligations ("CLOs") in order to drive potential shareholder value. See more details on the transaction in the "other" section below.

Neuberger Berman Municipal Fund Inc. (**NBH**), **Neuberger Berman California Municipal Fund Inc.** (**NBW**), and **Neuberger Berman New York Municipal Fund Inc.** (**NBO**) have announced that common and

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preferred stockholders of each fund have approved proposals to reorganize each of NBO and NBW with and into NBH, with NBH continuing as the surviving fund in each case. It is currently expected that the reorganizations will be completed prior to the funds' October 31, 2023, fiscal year-ends, subject to the satisfaction of certain customary closing conditions. Each transaction is expected to qualify as a tax-free reorganization for federal income tax purposes and will be affected at each fund's respective NAV at the time of the reorganization.

The mergers of **Nuveen Senior Income Fund** (**NSL**), **Nuveen Floating Rate Income Opportunity Fund** (**JRO**), and **Nuveen Short Duration Credit Opportunities Fund** (**JSD**) into **Nuveen Floating Rate Income Fund** (**JFR**) were successfully completed prior to the opening of the NYSE on July 31, 2023. The fund's newly consolidated portfolio contains approximately $2 billion in investments—the largest among listed senior loan closed-end funds.

Through the mergers, a wholly owned subsidiary of JFR acquired approximately all of the assets and liabilities of NSL, JRO, and JSD in tax-free transactions, and common shares of NSL, JRO, and JSD were converted to newly issued common shares of JFR in an aggregate amount equal to the value of the net assets of NSL, JRO, and JSD. The transactions took place based upon NSL's, JRO's, JSD's, and JFR's closing NAVs on Jul 28. The exchange ratios at which common shares of NSL, JRO, and JSD were converted to common shares of JFR are as follows: NSL: 0.58066176; JRO: 0.98666856; and JSD: 1.45917932.

Other

Vertical Capital Income Fund (**VCIF**) announced that after engaging a third-party broker and conducting an extensive competitive bidding process, it has selected two winning bidders for a significant majority of its investment portfolio. Each winning bidder has acquired a portion of the fund's investment portfolio in a sales process conducted to satisfy certain conditions to the closing of a previously announced and shareholder-approved transaction with an affiliate of global investment firm Carlyle (CG).

The fund will invest the sales proceeds in cash equivalents in anticipation of the closing of the transaction (which remains subject to other closing conditions). Consequently, the fund will generate reduced investment income while the proceeds are in cash equivalents. Based upon the expected proceeds from this sale, which resulted in aggregate proceeds lower than the book value of the combined assets due to the significant sale needed to facilitate the transaction, the fund has adjusted its NAV from $9.96 as last reported on June 30, 2023, to $8.27 as of July 11, 2023. Additionally, the current fund board has terminated the fund's managed distribution plan and suspended its existing distribution policy, and the fund did not declare its typical regularly scheduled July distribution in anticipation of a new dividend declaration that is expected to be made by Carlyle and the fund board before month's end following the closing of the transaction.

As part of the transaction with an affiliate of Carlyle, Carlyle Global Credit Investment Management L.L.C. ("CGCIM") will become the investment advisor to the fund. In addition, the fund's investment mandate will change to focus on investing in equity and debt tranches of collateralized loan obligations ("CLOs") in order to drive potential shareholder value.

Under the terms of the transaction agreement, if certain closing conditions are satisfied, at the closing of the transaction, CGCIM or an affiliate will make a special one-time payment to the fund's shareholders as of the closing date of $10 million, or approximately $0.96 per share. In addition, CGCIM or an affiliate will make a $40 million equity investment in the fund in multiple transactions, including (1) the purchase of up to $25 million of shares through a tender offer and (2) an investment of at least $15 million in newly issued shares and private share purchases. All transactions are expected to occur at prices that are equal to (or greater than) the fund's then-current NAV. As a result of these transactions and assuming the tender offer is fully subscribed, Carlyle is expected to own approximately 35% of the fund.

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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