

Closed End Funds

If they don't cut, we sell

Closed-End Fund

Fewer cuts mean more risks

Our year ahead report said that "If they can cut, we buy" leveraged CEFs. (see Closed End Funds: Year Ahead 2024). Last year, CEF managers raised their distributions aggressively because they expected lower interest rates. However, robust growth and inflation data has delayed the anticipated start of Fed cuts from March to June and inflation could reaccelerate later this year. Investors should trade leveraged products carefully until a path for Fed cuts is clearer.

This is how deep value becomes a value trap

40 net distribution raises in the past 6 months are among the fastest increases in history and reflect rising confidence among CEF portfolio managers that leverage costs will fall (Exhibit 1). High payouts and wide discounts look like a "deep value" opportunity. But this could all prove to be a value trap if these higher payouts cannot be sustained.

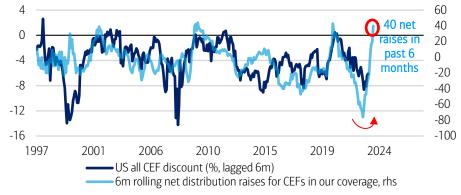
Watch NAV returns and discounts for bullish confirmation

Strong NAV returns in preferreds, MLPs, covered call, and tax advantaged funds indicate underlying portfolio strength (Exhibit 2). Muni NAV returns have been less impressive with real estate funds recording the only YTD losses. Muni bond discounts were stretched 2sd below norms for 125 days until last week, suggesting that investors are not yet convinced by higher distributions (Exhibit 5).

Munis & MLPs for value, loans for yield

Muni funds (MFM, MUA, NZF) and MLPs (NML, KYN) still offer the best value across our coverage while senior loan funds (VVR, EFT, FRA) have maintained the most attractive yield (Exhibit 3). Covered call (NFJ, BXMX, CII) discounts look wide, and arguably have some of the strongest distribution stability. Full ratings in Exhibit 6 & 7.

Exhibit 1: Fastest pace of distribution raises in 25 years suggests discounts will tighten CEF discounts vs net distribution raises in our coverage



Source: BofA Global Research, Morningstar, Bloomberg. Note: US CEF is 60% US Fixed Income CEFs & 40% Equity CEFs. BofA GLOBAL RESEARCH 20 February 2024

United States

Table of Contents

Less cutting, less buying

Fund ratings

lared Woodard

Investment & ETF Strategist **BofAS** +1 646 855 2600 jared.woodard@bofa.com

John Glascock

Investment & ETF Strategist **BofAS** +1 646 855 3402 john.glascock@bofa.com

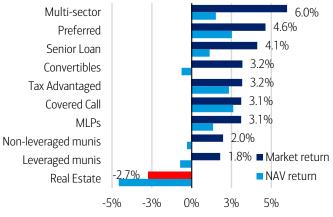
BofA Securities does and seeks to do business with issuers covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision. Refer to important disclosures on page 7 to 9. Analyst Certification on page 6.

Less cutting, less buying

CEFs have had a strong start to 2024 with multi-sector (+6%) and preferred funds (4.6%) leading the way. Loans (+4.1%) have benefited from the strong economy while covered call (+3.9%) & tax advantaged (+3.6%) equity funds have seen NAVs improve.

Muni bond CEFs have outperformed Treasuries YTD, but underlying portfolio returns are negative (Exhibit 2). Discounts have narrowed to start the year but remain stretched vs history (Exhibit 3). MLP discounts are the tightest they've been in nearly four years as the outlook continues to improve. Covered call fund discounts have gotten more attractive to start the year and are on our radar given strong distribution stability.

Exhibit 2: Better NAV returns needed to confirm rally YTD market & NAV returns for CEFs in our coverage



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 3: Munis & MLPs best value; loans have best yieldAverage discount & yield stats for CEF categories in our coverage

	Disco (lower is		Yield (higher is better)		
CEF Category	%	z-score	%	z-score	
Munis	-10.6	-1.9	6.9	-1.4	
MLPs	-11.5	-1.1	8.3	0.0	
Covered Call	-8.4	-0.9	7.7	-0.9	
Non-leveraged munis	-6.5	-0.8	6.2	-1.1	
Preferred	-7.4	-0.7	7.6	-0.1	
Tax Advantaged	-10.2	-0.7	7.3	-1.1	
All US CEFs	-6.0	-0.6	7.6	0.8	
Senior loan	-4.1	0.1	11.9	2.6	
Real Estate	-5.3	0.2	9.2	0.9	
Multi-sector	5.6	0.3	11.0	1.6	
Convertibles	3.1	0.9	12.0	0.9	

Source: BofA Global Research, Morningstar. Note: Discounts & yield use broad Morningstar indiceswhere available. Muni yield is tax-equivalent yield using a 37% tax rate; As of 2/16/2024.

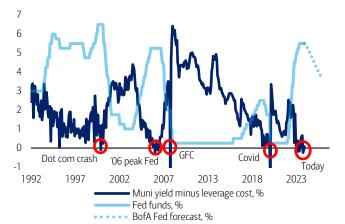
BofA GLOBAL RESEARCH

Fed cuts are a pre-requisite for leveraged funds to take off

Leveraged muni CEFs still offer attractive value, but some investors might think they're "cheap for a reason." Still-elevated leverage costs cut into portfolio earnings and have the potential to threaten distribution cuts until the Fed starts lowering policy rates.

Investor hesitation is clear. Muni discounts were >2sd below historical norms for 125 consecutive days until last week, eclipsing prior stretches of just 14-16 days during the GFC and dot com bubble (Exhibit 5). Discounts could still widen if distributions are cut again, and investors should be prepared to deal with some volatility.

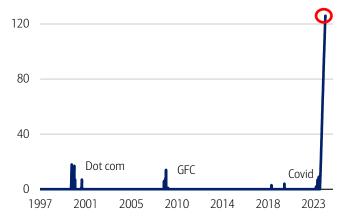
Exhibit 4: Fed cuts required for distributions to look safeMuni yield minus minimum leverage cost vs Fed funds rate & BofA forecast



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 5: Muni discounts were below historical extremes for 125 days # of consecutive trading days municipal bond CEF discounts at or below 2sd



Source: BofA Global Research, Morningstar

BofA GLOBAL RESEARCH



Fund ratings Muni CEF ratings

Exhibit 6: National and State Tax-exempt Muni CEFs

Fund ratings, prices, premium/discount, and yields

Ticker Leverag	Rating ged National Mu		Prem (Disc.)	10y sd discount	Dist. Rate	Tax equivalent dist. rate	Duration	Ticker	Rating	Price	Prem (Disc.)	10y sd discount	Dist. Rate	Tax equivalent dist. rate	Duration
CEFs	,							Non Lev	eraged Na	tional M	ıni CEFs				
MFM	Buy	5.27	-12.6%	-1.2	3.9%	6.2%	13.9	NXP	Buy	14.57	0.1%	0.8	4.0%	6.3%	7.8
NZF	Buy	11.89	-13.6%	-1.3	4.5%	7.1%	15.5	MHF	Buy	6.63	-10.2%	-1.1	3.6%	5.7%	8.0
NMZ	Buy	10.27	-7.4%	-1.9	4.6%	7.3%	14.7	NUV	Neutral	8.82	-6.0%	-0.9	3.7%	5.9%	8.4
MUA	Buy	11.08	-2.4%	-0.2	5.9%	9.3%	15.2	NUW	Neutral	13.78	-10.0%	-1.6	3.3%	5.3%	8.5
IIM	Buy	11.78	-12.8%	-1.6	4.4%	7.0%	14.1	Californi	a Muni CE	Fs					
OIA	Buy	6.28	-1.6%	-0.1	5.5%	8.7%	16.4	MUC	Buy	11.11	-12.1%	-0.9	4.6%	7.3%	16.1
NVG	Buy	11.82	-14.3%	-1.4	4.4%	7.0%	15.7	NAC	Neutral	11.03	-13.7%	-1.5	4.1%	6.5%	14.4
CXE	Buy	3.60	-13.3%	-1.3	4.0%	6.4%	15.8	PZC	Neutral	7.68	-1.9%	-1.4	4.6%	7.2%	18.5
NAD	Buy	11.34	-14.1%	-1.6	4.0%	6.4%	14.1	VCV	Neutral	9.76	-14.0%	-1.7	3.9%	6.2%	15.8
BKN	Buy	12.10	-7.3%	-0.6	5.2%	8.3%	15.0	CEV	Neutral	10.59	-9.9%	-0.1	4.4%	7.0%	16.1
BFK	Neutral	10.32	-10.4%	-1.3	5.2%	8.3%	14.7	New Yor	k Muni CE	Fs					
VKQ	Neutral	9.56	-13.3%	-1.5	4.3%	6.8%	14.6	NAN	Buy	10.94	-13.0%	-1.0	4.1%	6.5%	14.9
MMU	Neutral	10.26	-13.1%	-1.7	4.2%	6.7%	11.2	NRK	Buy	10.71	-11.6%	-0.5	4.1%	6.4%	15.5
MYD	Neutral	11.08	-9.7%	-1.1	5.2%	8.2%	15.6	VTN	Buy	10.51	-12.5%	-1.0	3.9%	6.2%	15.6
MUI	Neutral	11.75	-11.3%	-0.6	5.0%	7.9%	13.6	PNI	Neutral	7.54	-10.9%	-1.7	4.2%	6.6%	19.5
NMCO	Neutral	10.29	-10.0%	-1.6	4.8%	7.6%	17.4	BNY	Neutral	10.49	-13.2%	-1.3	4.3%	6.8%	16.4
MVF	Neutral	7.03	-11.9%	-1.4	4.5%	7.2%	16.4	MHN	Neutral	10.52	-13.4%	-1.3	4.3%	6.8%	15.6
MQY	Neutral	12.27	-7.2%	-0.4	5.3%	8.4%	14.3	MYN	Neutral	10.27	-12.8%	-1.1	4.5%	7.2%	15.2
VGM	Neutral	9.85	-13.1%	-1.4	4.1%	6.5%	14.9	ENX	Neutral	9.77	-10.3%	-0.2	4.4%	6.9%	25.9
MVT	Neutral	10.84	-12.8%	-1.7	4.9%	7.8%	17.0	New Jers	sey Muni (EFs					
MYI	Neutral	11.44	-9.2%	-0.6	5.3%	8.4%	14.3	NXJ	Neutral	12.07	-12.8%	-0.1	3.0%	4.8%	9.0
MHD	Neutral	11.99	-11.8%	-1.5	4.6%	7.4%	15.4	MUJ	Neutral	11.53	-12.3%	-0.7	4.6%	7.3%	11.9
NEA	Neutral	11.07	-13.7%	-1.5	4.0%	6.3%	14.0								
VKI	Neutral	8.54	-12.5%	-1.3	4.3%	6.8%	15.1								
VMO	Underperform	9.64	-12.2%	-1.2	4.2%	6.7%	15.3								
PML	Underperform	8.59	-3.3%	-1.4	5.3%	8.5%	17.5								
EIM	Underperform	10.43	-9.8%	-0.5	4.9%	7.7%	16.6								
PMF	Underperform	9.46	-0.7%	-1.6	5.3%	8.4%	17.5								

Source: BofA Global Research, Morningstar, Bloomberg; tax equivalent distribution rate uses a 37% tax rate. Note: We calculate leverage and derivative adjusted duration based on portfolio holdings.

BofA GLOBAL RESEARCH



Non-muni CEF ratings

Exhibit 7: Non-municipal bond CEFs

Fund ratings, prices, premium/discount, and yields

Ticker	Rating	Price	Prem (Disc.)	10y sd discount	Dist. Rate	Duration	Ticker	Rating	Price	Prem (Disc.)	10y sd discount	Dist. Rate	Duration
Real Est	tate CEFs						US Covered	d Call CEFs					
RQI	Buy	11.68	-5.5%	0.4	7.8%	5.8	NFJ	Buy	12.29	-14.8%	-1.1	6.8%	0.0
RNP	Buy	19.97	-1.0%	1.5	8.1%	6.4	BXMX	Buy	13.16	-8.7%	-1.2	6.5%	0.0
IGR	Neutral	5.06	-9.1%	0.7	12.8%	0.0	CII	Buy	19.19	-5.5%	0.2	5.9%	0.0
AWP	Neutral	3.73	-8.4%	0.5	11.8%	4.0	BDJ	Neutral	7.90	-10.7%	-0.6	7.6%	0.0
Convert	ible CEFs						EOI	Neutral	17.79	-2.9%	0.3	7.1%	0.0
CHI	Buy	11.00	9.5%	1.7	11.3%	2.1	EOS	Neutral	19.81	-4.8%	-0.5	6.6%	0.0
CCD	Buy	21.16	8.8%	1.5	12.0%	1.7	Global Cove	ered Call CEFs					
CHY	Neutral	12.02	13.1%	2.4	11.3%	2.1	ETW	Buy	7.97	-12.6%	-1.8	7.6%	0.0
NCV	Neutral	3.25	-11.9%	-1.4	11.0%	2.1	IGD	Buy	5.07	-13.2%	-1.2	8.2%	0.0
NCZ	Neutral	2.85	-13.4%	-1.3	10.9%	2.0	BGY	Neutral	5.31	-13.7%	-1.6	6.6%	0.0
Multi-se	ector												
CEFs							BOE	Neutral	10.09	-14.9%	-1.7	6.4%	0.0
PHK	Buy	4.88	6.7%	-1.1	12.5%	4.9	EXG	Neutral	7.91	-11.8%	-1.6	7.4%	0.0
BTZ	Buy	10.74	-5.8%	1.1	8.9%	5.9	Preferred (EFs					
AWF	Buy	10.46	-6.0%	0.6	7.1%	3.4	HPS	Buy	14.89	5.1%	1.4	9.4%	5.4
GOF	Neutral	13.73	13.4%	0.3	18.1%	5.0	HPI	Buy	16.05	1.3%	0.2	9.4%	5.4
PDI	Neutral	19.25	12.2%	1.0	15.5%	3.6	HPF	Buy	16.21	3.5%	0.7	9.5%	5.4
CSQ	Neutral	15.67	-2.2%	0.4	7.7%	2.1	JPC	Buy	7.03	-10.2%	-1.0	7.3%	6.4
Senior I	Loan CEFs						PTA	Buy	18.83	-6.6%	0.0	8.0%	8.6
VVR	Buy	4.15	1.7%	1.9	12.7%	2.4	FFC	Neutral	14.16	-12.7%	-2.5	6.3%	6.3
FRA	Buy	12.83	-2.1%	1.3	11.3%	3.0	FLC	Neutral	14.93	-13.7%	-2.2	6.0%	6.2
EFT	Buy	13.37	0.1%	1.3	10.6%	2.9	FPF	Underperform	17.22	-8.2%	-0.6	8.8%	5.0
FCT	Neutral	10.10	-9.0%	-0.4	10.5%	2.4	LDP	Underperform	19.32	-6.9%	-0.5	7.6%	4.3
BSL	Neutral	13.90	-5.9%	-0.4	9.2%	3.4	PSF	Underperform	19.30	-6.5%	-0.9	7.3%	6.3
JFR	Neutral	8.49	-7.8%	-0.1	11.1%	4.1	US Tax Adv	antaged CEFs					
MLP CE	Fs						GDV	Buy	21.93	-15.4%	-1.6	5.1%	0.6
NML	Buy	6.8	-13.5%	-0.3	8.9%	0.0	HTD	Buy	19.05	-8.9%	-0.6	8.0%	3.5
KYN	Buy	8.9	-15.3%	-1.1	8.4%	0.0	EVT	Neutral	22.42	-8.8%	-1.0	7.2%	8.2
TYG	Neutral	29.8	-16.4%	-0.9	8.0%	0.0	ETY	Neutral	12.94	-5.6%	-0.4	7.0%	0.0
CEM	Neutral	42.1	-7.8%	0.1	6.8%	0.0	Global Tax	Advantaged CEF	S				
							AGD	Buy	9.41	-14.4%	-1.0	7.1%	0.0
							ETG	Buy	17.69	-11.2%	-1.4	6.0%	8.2
							ETO	Neutral	24.47	-8.9%	-1.2	6.1%	8.5

Source: BofA Global Research, Morningstar, Bloomberg. Note: We use Bloomberg's measure of OAS effective duration. MLP CEFs use Effective Leverage.

BofA GLOBAL RESEARCH

Exhibit 8: CEFs mentionedPrices and ratings for CEFs mentioned in this report

BofA	Bloomberg
+i-l-	tickou

DUIA	Diddilinei	8		
ticke	r ticker	Name	Price	Rating
AGD	AGD US	abrdn Global Dynamic Dividend	9.42	F-1
AWF	AWF US	AllianceBernstein Global High Income Fund Inc	10.42	F-1
AWP	AWP US	abrdn Global Premier Propertie	3.72	F-2
BDJ	BDJ US	BlackRock Enhanced Equity Dividend Trust	7.89	F-2
BFK	BFK US	BlackRock Municipal Income Trust	10.33	F-2
BGY	BGY US	BlackRock Enhanced International Dividend Trust	5.29	F-2
BKN	BKN US	Blackrock Investment Quality Municipal Trust Inc/The	12.2	F-1
BNY	BNY US	BlackRock New York Municipal Income Trust	10.49	F-2
BOE	BOE US	BlackRock Enhanced Global Dividend Trust	10.03	F-2
BSL	BSL US	Blackstone Senior Floating Rate 2027 Term Fund	13.96	F-2
BTZ	BTZ US	BlackRock Credit Allocation Income Trust	10.71	F-1
BXMX	BXMX US	Nuveen S&P 500 Buy-Write Income Fund	13.16	F-1
CCD	CCD US	Calamos Dynamic Convertible & Income Fund	21.09	F-1
CEM	CEM US	ClearBridge MLP & Midstream Fund Inc	42.2	F-2
CEV	CEV US	Eaton Vance California Municipal Income Trust	10.56	F-2
CHI	CHI US	Calamos Convertible Opportunities and Income Fund	10.99	F-1
CHY	CHY US	Calamos Convertible and High Income Fund	12.02	F-2
CII	CII US	BlackRock Enhanced Capital and Income Fund Inc	19.13	F-1
CSQ	CSQ US	Calamos Strategic Total Return Fund	15.6	F-2

Exhibit 8: CEFs mentionedPrices and ratings for CEFs mentioned in this report

BofA	Bloomberg			
	ticker	Name	Price	Rating
CXE	CXE US	MFS High Income Municipal Trust	3.6	F-1
EFT	EFT US	Eaton Vance Floating-Rate Income Trust	13.38	F-1
EIM	EIM US	Eaton Vance Municipal Bond Fund	10.42	F-3
ENX	ENX US	Eaton Vance New York Municipal Bond Fund	9.835	F-2
EOI	EOI US	Eaton Vance Enhanced Equity Income Fund	17.81	F-2
	EOS US	Eaton Vance Enhanced Equity Income Fund II	19.72	F-2
ETG	ETG US	Eaton Vance Tax-Advantaged Global Dividend Income Fund	17.63	F-1
ETO	ETO US	Eaton Vance Tax-Advantaged Global Dividend Opportunities Fund	24.28	F-2
ETW	ETW US	Eaton Vance Tax Managed Global Buy Write Opportunities Fund	7.97	F-1
ETY	ETY US	Eaton Vance Tax-Managed Diversified Equity Income Fund	12.91	F-2
EVT	EVT US	Eaton Vance Tax-Advantaged Dividend Income Fund	22.37	F-2
EXG	EXG US	Eaton Vance Tax-Managed Global Diversified Equity Income Fund	7.89	F-2
FCT	FCT US	First Trust Senior Floating Rate Income Fund II	10.05	F-2
FFC	FFC US	Flaherty & Crumrine Preferred and Income Securities Fund Inc	14.17	F-2
FLC FPF	FLC US	Flaherty & Crumrine Total Return Fund Inc First Trust Intermediate Duration Preferred & Income Fund	15.03	F-2 F-3
FRA	FPF US FRA US		17.24 12.81	F-1
GDV	GDV US	BlackRock Floating Rate Income Strategies Fund Inc Gabelli Dividend & Income Trust/The	22.25	F-1
GOF	GOF US	Guggenheim Strategic Opportunities Fund	13.75	F-1 F-2
HPF	HPF US	John Hancock Preferred Income Fund II	16.23	F-1
HPI	HPI US	John Hancock Preferred Income Fund	15.97	F-1
HPS	HPS US	John Hancock Preferred Income Fund III	14.89	F-1
HTD	HTD US	John Hancock Tax-Advantaged Dividend Income Fund	18.94	F-1
IGD	IGD US	Voya Global Equity Dividend and Premium Opportunity Fund	5.09	F-1
IGR	IGR US	CBRE Global Real Estate Income Fund	5.12	F-2
IIM	IIM US	Invesco Value Municipal Income Trust	11.83	F-1
	JFR US	Nuveen Floating Rate Income Fund/Closed-end Fund	8.45	F-2
JPC	JPC US	Nuveen Preferred & Income Opportunities Fund	7.05	F-1
KYN	KYN US	Kayne Anderson Energy Infrastructure Fund	8.97	F-1
LDP	LDP US	Cohen & Steers Limited Duration Preferred and Income Fund Inc	19.33	F-3
MFM	MFM US	MFS Municipal Income Trust	5.25	F-1
MHD	MHD US	BlackRock MuniHoldings Fund Inc	11.98	F-2
MHF	MHF US	Western Asset Municipal High Income Fund Inc	6.651	F-1
MHN	MHN US	BlackRock MuniHoldings New York Quality Fund Inc	10.545	F-2
MMU	MMU US	Western Asset Managed Municipals Fund Inc	10.295	F-2
MQY	MQY US	BlackRock MuniYield Quality Fund Inc	12.27	F-2
	MUA US	BlackRock MuniAssets Fund Inc	11.07	F-1
	MUC US	BlackRock MuniHoldings California Quality Fund Inc	11.12	F-1
MUI	MUI US	BlackRock Municipal Income Fund Inc	11.72	F-2
	MUJ US	BlackRock MuniHoldings New Jersey Quality Fund Inc	11.52	F-2
MVF	MVF US	BlackRock MuniVest Fund Inc	7.03	F-2
MVT	MVT US	BlackRock MuniVest Fund II Inc	10.83	F-2
	MYD US	BlackRock MuniYield Fund Inc	11.11	F-2
MYI	MYI US	BlackRock MuniYield Quality Fund III Inc	11.43	F-2
MYN	MYN US	BlackRock MuniYield New York Quality Fund Inc	10.3	F-2
NAC	NAC US	Nuveen California Quality Municipal Income Fund	11.01	F-2
NAD	NAD US	Nuveen Quality Municipal Income Fund	11.33	F-1 F-1
NAN NCV	NAN US NCV US	Nuveen New York Quality Municipal Income Fund Virtus Convertible & Income Fund	10.92 3.24	F-1 F-2
NCZ	NCZ US	Virtus Convertible & Income Fund II	2.86	F-2
NEA	NEA US	Nuveen AMT-Free Quality Municipal Income Fund	11.03	F-2
NFJ	NFJ US	Virtus Dividend Interest & Premium Strategy Fund	12.26	F-1
	NMCO US	Nuveen Municipal Credit Opportunities Fund	10.32	F-2
NML	NML US	Neuberger Berman Energy Infrastructure and Income Fund Inc	6.84	F-1
	NMZ US	Nuveen Municipal High Income Opportunity Fund	10.27	F-1
NRK	NRK US	Nuveen New York AMT-Free Quality Municipal Income Fund	10.71	F-1
NUV	NUV US	Nuveen Municipal Value Fund Inc	8.8	F-2
	NUW US	Nuveen AMT-Free Municipal Value Fund	13.83	F-2
NVG	NVG US	Nuveen AMT-Free Municipal Credit Income Fund	11.81	F-1
NXJ	NXJ US	Nuveen New Jersey Quality Municipal Income Fund	12.07	F-2
NXP	NXP US	Nuveen Select Tax-Free Income Portfolio	14.62	F-1
NZF	NZF US	Nuveen Municipal Credit Income Fund	11.86	F-1
OIA	OIA US	Invesco Municipal Income Opportunities Trust	6.27	F-1



Exhibit 8: CEFs mentioned

Prices and ratings for CEFs mentioned in this report

BofA Bloomberg									
ticke	rticker	Name	Price	Rating					
PDI	PDI US	Pimco Dynamic Income Fund	19.21	F-2					
PHK	PHK US	PIMCO High Income Fund	4.88	F-1					
PMF	PMF US	PIMCO Municipal Income Fund	9.47	F-3					
PML	PML US	PIMCO Municipal Income Fund II	8.6	F-3					
PNI	PNI US	PIMCO New York Municipal Income Fund II	7.56	F-2					
PSF	PSF US	Cohen & Steers Select Preferred and Income Fund Inc	19.36	F-3					
PTA	PTA US	Cohen & Steers Tax-Advantaged Preferred Securities & Income Fund	18.96	F-1					
PZC	PZC US	PIMCO California Municipal Income Fund III	7.69	F-2					
RNP	RNP US	Cohen & Steers REIT and Preferred and Income Fund Inc	19.99	F-1					
RQI	RQI US	Cohen & Steers Quality Income Realty Fund Inc	11.63	F-1					
TYG	TYG US	Tortoise Energy Infrastructure Corp	29.71	F-2					
VCV	VCV US	Invesco California Value Municipal Income Trust	9.78	F-2					
VGM	VGM US	Invesco Trust for Investment Grade Municipals	9.85	F-2					
VKI	VKI US	Invesco Advantage Municipal Income Trust II	8.56	F-2					
VKQ	VKQ US	Invesco Municipal Trust	9.55	F-2					
VMO	VMO US	Invesco Municipal Opportunity Trust	9.63	F-3					
VTN	VTN US	Invesco Trust for Investment Grade New York Municipals	10.52	F-1					
VVR	VVR US	Invesco Senior Income Trust	4.16	F-1					

Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Analyst Certification

I, Jared Woodard, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

Special Disclosures

BofA Securities is currently acting as Financial Advisor to Athora Holding Ltd in connection with its proposed acquisition of a closed book portfolio of deferred annuities and endowments of the former DBV-Winterthur Life (DWL) from AXA Germany, which was announced on July 14, 2022.

BofA Securities is currently acting as Financial Advisor to Blackstone Inc in connection with its proposed arrangement agreement under which Blackstone Real Estate Partners X LP together with Blackstone Real Estate Income Trust Inc will acquire Tricon Residential Inc, which was announced on Jan 19, 2024. The proposed transaction is subject to approval by shareholders of Tricon Residential Inc. This research report is not intended to provide voting advice, serve as an endorsement of the proposed transaction, or result in the procurement, withholding or revocation of a proxy.

BofA Securities is currently acting as a Financial Advisor to Canadian Solar Inc in connection with its subsidiary Recurrent Energy LLC's secured preferred equity investment commitment, convertible into common equity, for Recurrent Energy BV from BlackRock Inc through a fund managed by its Climate Infrastructure business, which was announced on January 23, 2024.



Disclosures

Important Disclosures

Closed End Funds Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	42	41.58%	Buy	31	73.81%
Hold	52	51.49%	Hold	39	75.00%
Sell	7	6.93%	Sell	5	71.43%

R1 Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only closed end funds. A closed end fund rated Neutral is included as a Hold, and a closed end fund rated Underperform is included as a Sell.

Closed-end Fund Investment Opinion Key: The Opinion key includes an identifier and an investment rating. The identifier, "F," denotes a closed-end fund and the number is a fund's investment rating, which is based on our 12 month expectation of stability of the Fund's distributions (including net investment income, short and long term capital gains and return of capital) and stock price from the date of the initial rating, with 1 - Buy indicating that distributions are expected to be the same or increase and that the stock price is expected to be stable or increase; 2 - Neutral, indicating that distributions are expected to remain the same or decrease and that the stock price is expected to be stable; and 3 - Underperform, indicating that distributions are expected to decrease and that the stock price is expected to decline.

Price Charts for the securities referenced in this research report are available on the Price Charts website, or call 1-800-MERRILL to have them mailed.

BofAS or one of its affiliates acts as a market maker for the equity securities recommended in the report: AB Glbl Hi Inc, AberdeenGlobDiv Fund, Allianz Cnv/Inc, Alpine Global Pr, BlackRock CovCallCEF, BlackRock Enhanced, BlackRock Global Div, Blackrock Inv Mu, BlackRock Loan CEF, BlackRock Muni, Blackrock Muni I, BlackRock Muni, Blackrock-Muni I, Blackrock-Muni V, Blac

BofAS or an affiliate was a manager of a public offering of securities of this issuer within the last 12 months: Allianz, Axa, BlackRock, Inc., Manulife, Sun Life.

The issuer is or was, within the last 12 months, an investment banking client of BofAS and/or one or more of its affiliates: Abrdn Plc, Allianz, Axa, BlackRock, Inc., Blackstone Group, CBRE Group Inc., Cohen & Steers, Franklin Resources, GGCP, Guggenheim Capital, Invesco, Kayne Anderson Cap, Manulife, Morgan Stanley, Neuberger Berman, Sun Life, Voya.

BofAS or an affiliate has received compensation from the issuer for non-investment banking services or products within the past 12 months: Abrdn Plc, Allianz, Axa, BlackRock, Inc., Blackstone Group, Calamos Partner, CBRE Group Inc., Cohen & Steers, Flaherty & Crumrine, Franklin Resources, GGCP, Guggenheim Capital, Invesco, Kayne Anderson Cap, Manulife, Morgan Stanley, Neuberger Berman, Sun Life, Voya.

The issuer is or was, within the last 12 months, a non-securities business client of BofAS and/or one or more of its affiliates: Abrdn Plc, Allianz, Axa, BlackRock, Inc., Blackstone Group, Calamos Partner, CBRE Group Inc., Cohen & Steers, Franklin Resources, GGCP, Guggenheim Capital, Invesco, Kayne Anderson Cap, Manulife, Morgan Stanley, Neuberger Berman, Sun Life, Voya. BofAS or an affiliate has received compensation for investment banking services from this issuer within the past 12 months: Abrdn Plc, Allianz, Axa, BlackRock, Inc., Blackstone Group, CBRE Group Inc., Franklin Resources, GGCP, Guggenheim Capital, Invesco, Kayne Anderson Cap, Manulife, Morgan Stanley, Neuberger Berman, Sun Life, Voya.

BofAS or an affiliate expects to receive or intends to seek compensation for investment banking services from this issuer or an affiliate of the issuer within the next three months: Abrdn Plc, Allianz, Axa, BlackRock, Inc., Blackstone Group, CBRE Group Inc., Cohen & Steers, Franklin Resources, GGCP, Guggenheim Capital, Invesco, Kayne Anderson Cap, Manulife, Morgan Stanley, Neuberger Berman, Sun Life, Voya.

BofAS together with its affiliates beneficially owns one percent or more of the shares of this fund. If this report was issued on or after the 9th day of the month, it reflects the ownership position on the last day of the previous month. Reports issued before the 9th day of the month reflect the ownership position at the end of the second month preceding the date of the report: AB Glbl Hi Inc, AberdeenGlobDiv Fund, Allianz Conv/Inc, BlackRock CovCallCEF, BlackRock Loan CEF, BlackRock Muni, BlackRock MuniAssets, Blackrock-Mu Y Q, Blackrock-Muh Ca, Blackrock-Muh Ca

BofAS or one of its affiliates is willing to sell to, or buy from, clients the common equity of the issuer on a principal basis: AB Glbl Hi Inc, AberdeenGlobDiv Fund, Allianz Cnv/Inc2, Allianz Conv/Inc, Alpine Global Pr, BlackRock Growth, BlackRock CovCallCEF, BlackRock Enhanced, BlackRock Global Div, Blackrock-Inv Mu, BlackRock Loan CEF, BlackRock Muni, Blackrock Muni I, Blackrock Muni I, Blackrock-Mun Y I, Blackrock-Mun Y Q, Blackrock-Mun Y LD, Blackrock-Muh NJ, Blackrock-Mun II, Blackrock-Mun II, Blackrock-Munive, Blackstone SL, BR Crdt alloc, BR Muni NY Quality, BR MuniVield NY, BR NY Muni Inc, C&S Tax-Adv Pref, Calamos Conv & High, Calamos Dynamic, Calomas-St To R, Clearbridge MLP, Clms Conv/Inc, Cohen & Steers, CohenSteers REITCEF, CS Limit Dur Pref, CS Select Pref, Eaton Va-El II, Eaton Va-El Rt I, Eaton Van Ca Mun, Eaton Van Ins My, Eaton Van Tax, Eaton Van-Ca Tax, Eaton Van-CTA, EatonVance GlobalTax, EatonVanceTaxMng CEF, EV TxMgd Glbl B/W Fd, First Tst/Fo S 2, Flaherty & Crumrine, FT Interm Dur Pref, Gabelli Div&Inc, Guggenheim Multi CEF, Ing Cl Gl R/E I, Invesco Invesco Muni Inc CEF, Invesco Muni Irust, John Han Inc III, John Hancock Pfd, John Hancock Tax Adv, Kayne Anderson MLP, MFS High Income Muni, MFS Muni Income CEF, Neuberger Berman MLP, NFJ Dvd In& Pre, Nuveen AMT-Free Muni, Nuveen CA Qual Muni, Nuveen Dvd Ad 3, Nuveen Dvd Ad 4, Nuveen Ins, Nuveen Ins, Nuveen Muni Ceft, Nuveen Muni Ceft, Nuveen Muni Val, Nuveen Ny DivAdv, Nuveen NY Muni, Nuveen Pref & Inc, Nuveen QualMuni Fund, Nuveen Tax-Free CEF, NuveenMuni High Inc, Nvn Eqty Prem Inc Fd, NvnFltRtInc, Pimco CA Mun III, PIMCO Dynamic Income, Pimco High Inc, Pimco Muni Inc, PIMCO Municip II, Pimco NY Mun II, Tortoise Energy, Van Kamp ADV MU2, Van Kamp Ca Val, Van Kamp Mun Opp, Van Kamp Muni Tr, Van Kamp Senior, Van Kamp TR INV, VoyaGlbEqyDiv&PrmOpp, Western Asset, Western Asset Muni.

The issuer is or was, within the last 12 months, a securities business client (non-investment banking) of BofAS and/or one or more of its affiliates: Abrdn Plc, Allianz, Axa, BlackRock, Inc., Blackstone Group, Calamos Partner, CBRE Group Inc., Cohen & Steers, Flaherty & Crumrine, Franklin Resources, GGCP, Guggenheim Capital, Invesco, Kayne Anderson Cap, Manulife, Morgan Stanley, Neuberger Berman, Sun Life, Voya.

Due to the nature of strategic analysis, the issuers or securities recommended or discussed in this report are not continuously followed. Accordingly, investors must regard this report as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or securities.

BofA Global Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.



Other Important Disclosures

The covered issuer and/or one or more of its affiliates holds 5% or more of the total issued share capital of Bank of America Corporation: BlackRock, Inc.

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for any recommendation in relation to an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report and in relation to a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including BofA Securities trading desks.

The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.

Officers of BofAS or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments. Refer to BofA Global Research policies relating to conflicts of interest.

"BofA Securities" includes BofA Securities, Inc. ("BofAS") and its affiliates. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. "BofA Securities" is a global brand for BofA Global Research.

Information relating to Non-US affiliates of BofA Securities and Distribution of Affiliate Research Reports:

BofAS and/or Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA), BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudential et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF). BofA Securities Europe SA ("BofASE") with registered address at 51, rue La Boétie, 75008 Paris is registered under no 842 602 690 RCS Paris. In accordance with the provisions of French Code Monétaire et Financier (Monetary and Financial Code), BofASE is an établissement de crédit et d'investissement (credit and investment institution) that is authorised and supervised by the European Central Bank and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers. BofASE's share capital can be found at www.bofaml.com/BofASEdisclaimer; BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (Madrid): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch (Hong Kong): Merr (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSFC); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch (Canada): Merrill Lynch (Canada): Merrill Lynch (Mexico): Merrill Ly de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; BofAS Japan: BofA Securities Japan Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); Merrill Lynch (Israel): Merrill Lynch (Israel): Merrill Lynch (International (DIFC Branch), regulated by Israel Securities Authority; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch (Br Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This information: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSFC; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in Iniqual investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to "Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA Information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/dele

This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information. For clients that are not accredited investors, expert investors or institutional investors Merrill Lynch (Singapore) Pte Ltd accepts full responsibility for the contents of this information distributed to such clients in Singapore.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities. This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.

Securities and other financial instruments referred to herein, or recommended, offered or sold by BofA Securities, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. Digital assets are extremely speculative, volatile and are largely unregulated. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

This report may contain a short-term trading idea or recommendation, which highlights a specific near-term catalyst or event impacting the issuer or the market that is anticipated to have a



short-term price impact on the equity securities of the issuer. Short-term trading ideas and recommendations are different from and do not affect a stock's fundamental equity rating, which reflects both a longer term total return expectation and attractiveness for investment relative to other stocks within its Coverage Cluster. Short-term trading ideas and recommendations may be more or less positive than a stock's fundamental equity rating.

BofA Securities is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned herein. Investors in such securities and instruments, including ADRs, effectively assume currency risk.

BofAS or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. BofAS or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Securities, through business units other than BofA Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented herein. Such ideas or recommendations may reflect different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Securities is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this information. In the event that the recipient received this information pursuant to a contract between the recipient and BofAS for the provision of research services for a separate fee, and in connection therewith BofAS may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom BofAS has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by BofAS). If such recipient uses the services of BofAS in connection with the sale or purchase of a security referred to herein, BofAS may act as principal for its own account or as agent for another person. BofAS is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

For clients in Wealth Management, to the extent that the securities referenced in this report are ETFs or CEFs, investors should note that (1) the views and ratings presented by BofA Global Research personnel may vary from those of other business units of BofA Securities. including the Due Diligence group within the Chief Investment Office of MLPF&S ("CIO Due Diligence"); and (2) the CIO Due Diligence review process is used to determine the availability of an ETF or CEF for purchase through the Wealth Management division of MLPF&S and its affiliates.

Copyright and General Information:

Copyright 2024 Bank of America Corporation. All rights reserved. iQdatabase® is a registered service mark of Bank of America Corporation. This information is prepared for the use of BofA Securities clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BofA Securities. BofA Global Research information is distributed simultaneously to internal and client websites and other portals by BofA Securities and is not publicly-available material. Any unauthorized use or disclosure is prohibited. Receipt and review of this information constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained herein (including any investment recommendations, estimates or price targets) without first obtaining express permission from an authorized officer of BofA Securities. Materials prepared by BofA Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Securities, including investment banking personnel. BofA Securities has established information barriers between BofA Global Research and certain business groups. As a result, BofA Securities does not disclose certain client relationships with, or compensation received from, such issuers. To the extent this material discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this material. BofA Global Research personnel's knowledge of legal proceedings in which any BofA Securities entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this material is based on public inform

This information has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of BofAS any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Securities and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BofA Securities is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BofA Securities. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Securities is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of publication and are subject to change without notice. Prices also are subject to change without notice. BofA Securities is under no obligation to update this information and BofA Securities ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Securities will not update any fact, circumstance or opinion contained herein.

Subject to the quiet period applicable under laws of the various jurisdictions in which we distribute research reports and other legal and BofA Securities policy-related restrictions on the publication of research reports, fundamental equity reports are produced on a regular basis as necessary to keep the investment recommendation current.

Certain outstanding reports or investment opinions relating to securities, financial instruments and/or issuers may no longer be current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with BofAS or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Securities nor any officer or employee of BofA Securities accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this

information

