The Fixed Income Digest

Strategic overweight duration, MBS

14 March 2024

United States

Chris Flanagan
FI/MBS/CLO Strategist
BofAS
+1 646 855 6119
christopher.flanagan@bofa.com

Alvin Fung
ABS Strategist
BofAS
+1 646 855-9091
alvin.fung@bofa.com

View change: strategic overweight duration, MBS

In the context of this being a monthly report (inherently less tactical), we are changing our view to recommend strategic (6-12 months horizon) overweights of rate duration and agency MBS. Tactically, for short horizon, we remain neutral. Very near term (say 2-10 weeks), partial retraces higher in 10y yield (to north of 4.3%) and MBS spread (to north of 150 bps) are expected: this should be viewed as an attractive entry opportunity for the overweights. After recommending a "nibble" on duration and MBS basis at 4.3% 10y UST yield in last month's report, the market took a quick trip to 4.03% 10y, before bouncing back to 4.19% post-February CPI. The swiftness of the recent rally frustrated us on the brevity of the buy opportunity but gives us confidence that the next leg of the 10y rally is ready to unfold or has already begun. That confidence is bolstered by the recent rollover of the Citi economic surprise index, which peaked concurrent with the 10y yield in mid-February. We recommend moving to a duration overweight in the weeks ahead (at 10y yield > 4.3%) and see potential for the 10y yield to rally to the 3.25% area in the second half of 2024. Fed rate cuts likely are coming soon, starting in June. As the rate cuts draw closer, we look for investors to gradually rotate out of short duration (at least partially) into long duration, providing fuel to the rally. Agency MBS spreads should narrow into the bond rally: overweight MBS at CC spread > 150 bps.

Credit spreads: low for long likely

Part of what makes quality duration relatively attractive currently is the tightness of credit spreads. Compensation for the credit risk is exceptionally low by historical standards, even if the risk is low. Given economic resilience (BofA Economics recently revised 2024 GDP growth forecast from 1.2% to 2.1%), we do not expect a significant widening of spreads anytime soon. Rather, we think they can grind even tighter in the very near term and remain in a narrow range for the next 9-12 months. This simply means that rate duration (rather than spread compression) is ready to become a more significant driver of positive total return in fixed income. Given our benign view of fundamentals, we like BBB corporates and taxable munis as a source of rate duration.

Large bank preferreds attractive; reduce lev loan exposure

Exhibit 1 shows leveraged loans and preferreds continuing to deliver relatively strong total returns since January 31. Equities continue to sharply outperform fixed income. Looking forward, we expect the return performance profile to gradually shift in favor of extending duration and moving up in quality. This suggests that reducing leveraged loan exposure makes sense. Meanwhile, mega-cap bank preferreds continue to look attractive. Stay the course on this sector.

Exhibit 1: Total returns since January 31 and 2024 YTD

FX Preferred Stocks leads monthly total returns as of 3/12/24.

Sector (Eff Dur, Eff Yld)	Total Return (%) Since 1/31	YTD
S&P 500 (NA, 1.4%)	7.0	8.8
Nasdaq 100 (NA, 0.8%)	6.5	8.5
FX Preferred Stocks (6.7, 4.8%)	1.9	5.6
EM External Debt Govt. (7.0, 6.6%)	1.6	0.4
Leveraged Loans (0.1, 10%)	1.4	2.1
BBB CMBS (3.2, 15.7%)	1.2	8.4
FL Preferred Stocks (0.3, 4.6%)	1.2	3.7
US HY Corp. (3.3, 7.5%)	1.0	1.1
EM Corp. (4.8, 6.3%)	0.8	1.0
US Municipal Securities (6.7, 3.1%)	0.5	0.2
Global Govt. Excluding the US (8.2, 2.3%)	0.0	-0.9
Agency CMBS Index (4.4, 4.7%)	-0.4	-0.1
US IG Corp. (6.7, 5.4%)	-0.5	-0.3
US Inflation-Linked Treasury (5.8, 2.0%)	-0.5	-0.1
US Broad Index (6.1, 4.9%)	-0.6	-0.7
US MBS (5.6, 5.0%)	-0.6	-1.0
US Treasury & Agency (6.3, 4.4%)	-0.7	-0.9

Source: Ice Data Indices, LLC, Bloomberg
BofA GLOBAL RESEARCH

Timestamp: 14 March 2024 11:27AM EDT

Strategic overweight duration, MBS

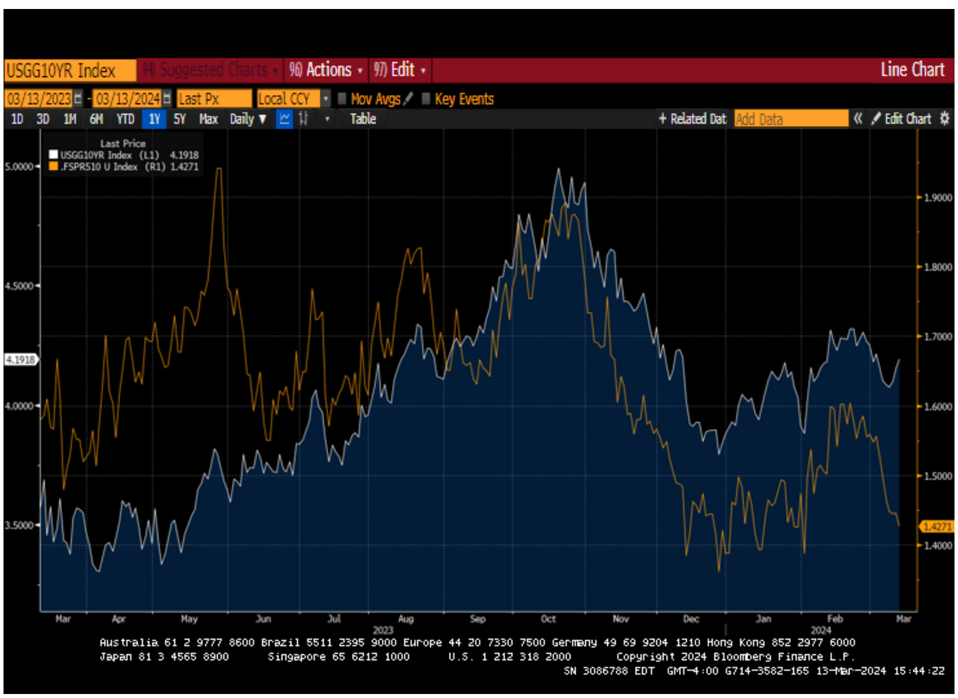
View change: strategic overweight duration, MBS for 10y rally to 3.25%

In the context of this being a monthly report (inherently less tactical), we are changing our view to recommend strategic (6-12 months horizon) overweights of rate duration and agency MBS. Tactically, we remain neutral. Very near term (say 2-10 weeks), partial retraces higher in 10y yield (to north of 4.3%) and MBS spread (to north of 150 bps) are expected: this should be viewed as an attractive entry opportunity for the overweights.

After recommending a "nibble" on duration at 4.3% 10y UST yield in [last month's report](), the market took a quick trip to 4.03%, before bouncing back to 4.19% post-February CPI (Exhibit 2). The swiftness of the recent rally frustrated us on the brevity of the buy opportunity window but gives us confidence that the next leg of the 10y rally is ready to unfold or has already begun. That confidence is bolstered by the recent rollover of the Citi economic surprise index, which peaked concurrent with the 10y yield in mid-February (Exhibit 3). We recommend moving to a duration overweight in the weeks ahead (at 10y yield > 4.3%) and see potential for the 10y yield to rally to the 3.25% area in the second half of 2024. Fed rate cuts likely are coming soon, starting in June. As the rate cuts draw closer, we look for investors to rotate out of short duration (at least partially) into long duration, providing fuel to the rally. Agency MBS spreads should narrow into the bond rally: overweight MBS at CC spread > 150 bps.

Exhibit 2: 10y UST yield (white) v Agency MBS current coupon spread to 5y/10y UST (.FSPR510, amber)

10y UST yield moved from 4.3% to 4.18%. We moved to neutral before the recent gaps wider and tighter. If 10y UST eventually rallies below 4%, we expect more MBS spread tightening.

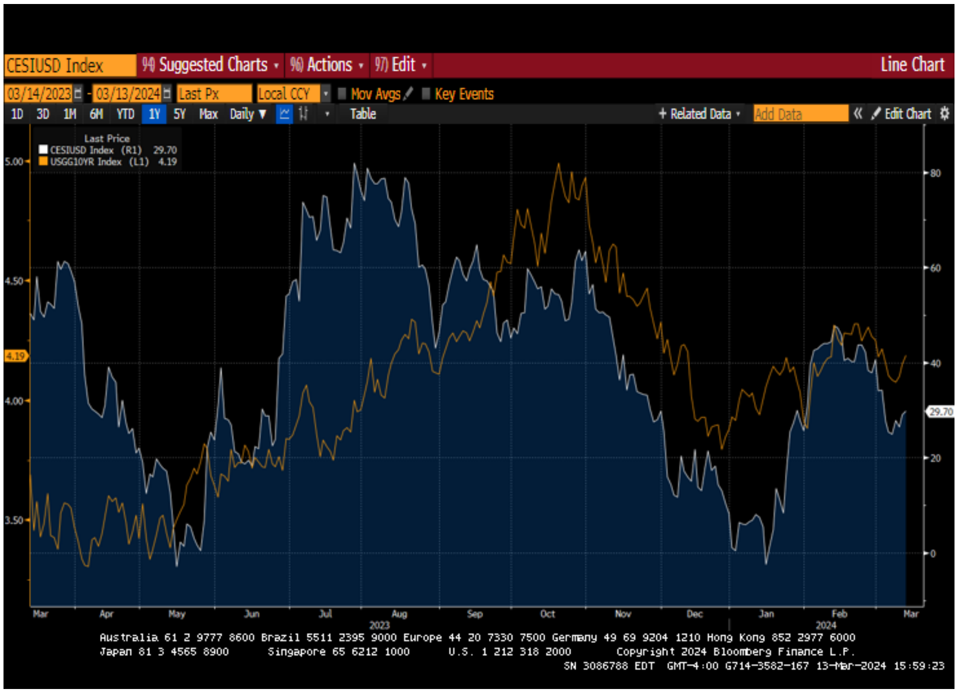


Source: Bloomberg

BofA GLOBAL RESEARCH

Exhibit 3: Citi economic surprise index (CESIUSD) v 10y UST yield (USGG10YR)

Although still positive, upside economic surprises rolled over in mid-February. We are not surprised to see an associated rollover in the 10y UST yield. We are at inflection point: will surprises move to the downside, bringing 10y yields lower? Eventually that should happen.



Source: Bloomberg

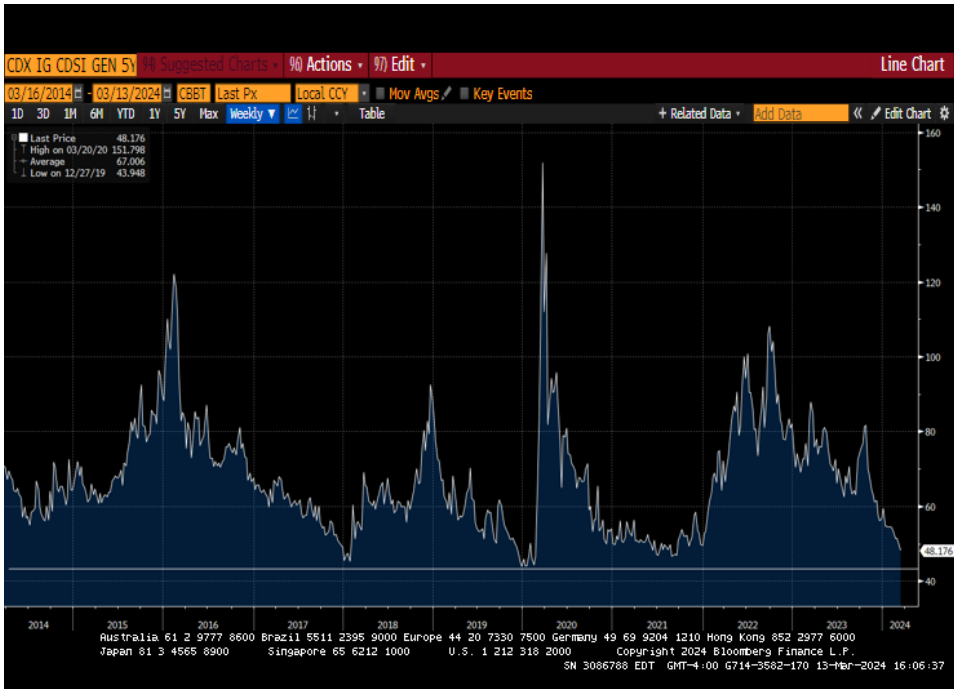
BofA GLOBAL RESEARCH

Credit spreads: low for long likely

Compensation for credit risk is exceptionally low by historical standards (Exhibit 4), even if the risk is low. Part of what makes quality duration relatively attractive currently is the tightness of credit spreads: for example, the HY CDX spread of 322 bps is just 76.9% of the 10y yield, the lowest percentage in the HY CDX spread history (Exhibit 5). Given economic resilience (BofA Economics recently revised 2024 GDP growth forecast from 1.2% to 2.1%), we do not expect a significant widening of spreads anytime soon. Rather, we think they can grind even tighter in the very near term and remain in a narrow range for the next 9-12 months, meaning the spread-10y yield anomaly will become even greater. Eventually, this relationship should reverse and normalize, meaning that rate duration will eventually outperform credit. This simply means that rate duration (rather than spread compression) is ready to become a more significant driver of positive total return in fixed income. Given our benign view of fundamentals, with minimal expectation of spread widening, we like BBB corporates and taxable munis as a source of rate duration.

Exhibit 4: IG CDX spread

Credit spreads have tightened dramatically since the October 2023 high, approaching the lows of the past 10 years. We won't be surprised to see a new low in the months ahead and subsequently trade in narrow range, but compensation for risk is obviously very low by historical standards

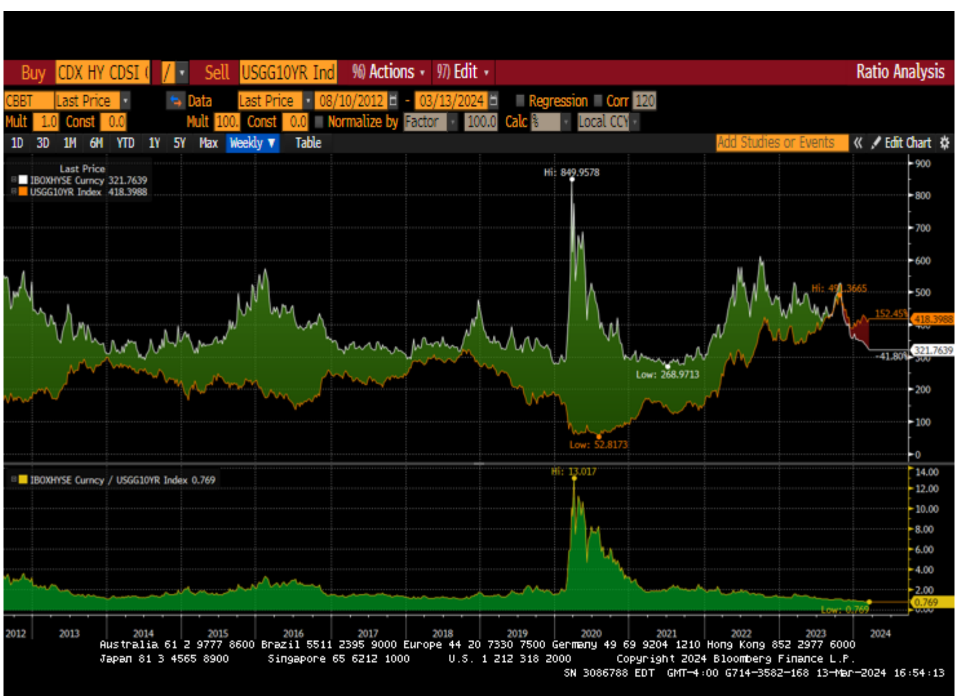


Source: Bloomberg

BofA GLOBAL RESEARCH

Exhibit 5: HY CDX spread (white) v 10y yield (amber, USGG10YR), in bps

Compensation for credit risk relative to the 10y yield is at multi-year lows, suggesting rotation out of credit and into duration increasingly is attractive. The high yield CDX spread of 322 bps is now just 76.9% of the 10y yield, the lowest ratio in the CDX spread history. Makes sense just to own the 10y.



Source: Bloomberg

BofA GLOBAL RESEARCH

Large bank preferreds attractive; reduce lev loan exposure

Exhibit 1 and Exhibit 6 shows leveraged loans and preferreds continuing to deliver relatively strong total returns since January 31 yet again. Equities continue to sharply outperform fixed income. Looking forward, we expect the return performance profile to gradually shift in favor of extending duration and moving up in quality. This suggests that reducing leveraged loan exposure makes sense. Meanwhile, mega-cap bank preferreds continue to look attractive. Stay the course on this sector.

Exhibit 6: Total returns sorted by YTD
BBB CMBS leads YTD returns as of 3/12/24.

	Total Returns (%)				
Sector (Eff Dur, Eff Yld)	**December**	**Since 3/23/20**	**Last 3M**	**2024 YTD**	**Last 12M**
S&P 500 (NA, 1.4%)	5.3	146.3	11.8	8.8	36.1
Nasdaq 100 (NA, 0.8%)	5.4	168.5	11.6	8.5	55.3
BBB CMBS (3.2, 15.7%)	0.6	11.1	10.9	8.4	8.9
FX Preferred Stocks (6.7, 4.8%)	1.3	38.6	8.7	5.6	10.7
FL Preferred Stocks (0.3, 4.6%)	0.8	61.6	5.0	3.7	12.6
Leveraged Loans (0.1, 10%)	0.9	55.8	3.2	2.1	11.8
US HY Corp. (3.3, 7.5%)	0.3	43.3	4.0	1.1	12.5
EM Corp. (4.8, 6.3%)	0.1	10.0	3.4	1.0	7.4
EM External Debt Govt. (7.0, 6.6%)	0.5	11.1	3.7	0.4	10.2
US Municipal Securities (6.7, 3.1%)	0.0	12.6	2.1	0.2	5.4
Agency CMBS Index (4.4, 4.7%)	-1.0	0.1	1.7	-0.1	3.7
US Inflation-Linked Treasury (5.8, 2.0%)	-1.1	4.9	1.9	-0.1	2.0
US IG Corp. (6.7, 5.4%)	-1.4	10.3	2.3	-0.3	6.0
US Broad Index (6.1, 4.9%)	-1.4	-4.6	1.7	-0.7	3.1
Global Govt. Excluding the US (8.2, 2.3%)	-0.6	-11.1	0.8	-0.9	2.0
US Treasury & Agency (6.3, 4.4%)	-1.3	-12.3	1.4	-0.9	1.3
US MBS (5.6, 5.0%)	-1.6	-7.4	1.7	-1.0	2.9

Source: Ice Data Indices, LLC, Bloomberg

BofA GLOBAL RESEARCH

Forecasts and yields

The BofA economics and rates forecasts can be seen in Exhibit 7 through Exhibit 9. Recession is no longer expected. The baseline view is that the Fed has successfully executes a soft landing and will cut three times in 2024. The strength of the labor and inflation reported led BofA Economics to recently reduce its rate cut expectations from 4 to 3 and to push out the end of QT to the second half of 2024. The near-term risk to the rate forecast is to the upside. We would take advantage of yield spikes by adding duration.

Exhibit 10 and Exhibit 11 show yields in low yield and high yield sectors over time. Yields moved higher over the past month, making them very attractive from a longer-term perspective.

Exhibit 7: US GDP forecast

GDP forecast as of 3/8/24

	Historical				Quarterly Forecast								Average Quarterly			
	1Q 23	2Q 23	3Q 23	4Q 23	1Q 24	2Q 24	3Q 24	4Q 24	1Q 25	2Q 25	3Q 25	4Q 25	2022	2023	2024	2025
Real GDP (QoQ, % SAAR)	2.2	2.1	4.9	3.2	2.5	2.0	2.0	2.0	2.0	2.0	1.5	1.5	1.9	2.5	2.7	1.9
Real GDP (YoY)	1.7	2.4	2.9	3.1	3.2	3.1	2.4	2.1	2.0	2.0	1.9	1.7				

Source: BofA US Economics Research

BofA GLOBAL RESEARCH

Exhibit 8: Other key macro indicators and inflation forecasts

Forecasts are as of 3/8/24

	Historical				Quarterly Forecast								Average Quarterly			
Monthly Averages	1Q 23	2Q 23	3Q 23	4Q 23	1Q 24	2Q 24	3Q 24	4Q 24	1Q 25	2Q 25	3Q 25	4Q 25	2022	2023	2024	2025
Nonfarm Payrolls (Avg mom ch, 000s)	305	274	213	227	175	150	125	125	100	100	100	100	377	255	144	100
Civilian Unemployment Rate (%)	3.5	3.6	3.7	3.8	3.8	3.8	3.9	3.9	4.0	4.0	4.0	4.1	3.6	3.6	3.9	4.0
Civilian Participation Rate (%)	62.5	62.6	62.7	62.6	62.6	62.7	62.7	62.7	62.6	62.6	62.6	62.6	62.2	62.6	62.6	62.6
Core PCE Chain Prices (% YoY)	5.0	3.7	2.0	2.1	3.1	2.6	2.4	2.2	2.3	2.3	2.3	2.2	5.2	4.1	2.6	2.3
CPI, Consumer Prices (% YoY)	3.8	2.7	3.4	2.7	3.8	3.5	2.4	1.9	2.6	2.5	2.6	2.4	8.0	4.1	3.2	2.5
CPI ex Food & Energy (% YoY)	5.0	4.7	3.0	3.4	4.0	3.3	3.0	2.8	2.7	2.6	2.6	2.5	6.2	4.8	3.5	2.8

Source: BofA US Economics Research

BofA GLOBAL RESEARCH

Exhibit 9: Rates forecast

Forecasts are as of 3/8/24

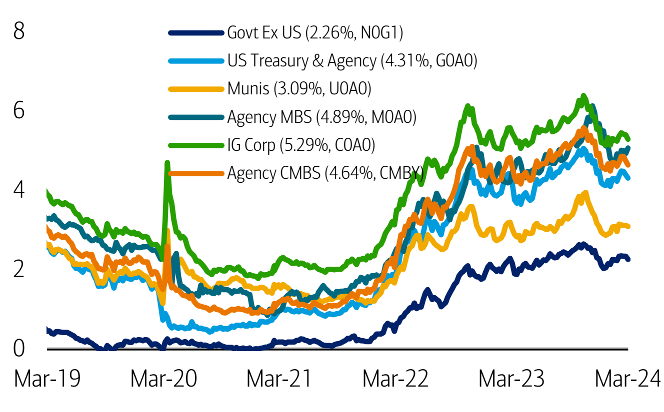
	Historical			Quarterly Forecast				
(% EOP)	2021	2022	2023	Q1 24	Q2 24	Q3 24	YE 24	YE 25
Fed Funds	0.00-0.25	4.25-4.50	5.25-5.50	5.25-5.50	5.00-5.25	4.75-5.00	4.50-4.75	3.50-3.75
Fed effective	0.13	4.38	5.38	5.38	5.13	4.88	4.63	3.63
2-Year T-Note	0.50	4.50	4.75	4.75	4.50	4.25	4.00	3.75
5-Year T-Note	1.25	4.25	4.30	4.50	4.40	4.25	4.15	4.00
10-Year T-Note	1.51	3.88	3.88	4.40	4.30	4.25	4.25	4.25
30-Year T-Bond	2.10	4.10	4.20	4.70	4.65	4.65	4.75	4.75

Source: BofA US Rates Research

BofA GLOBAL RESEARCH

Exhibit 10: Yields on high quality sectors

IG Corp leads yields as of 3/8/24 at 5.3%

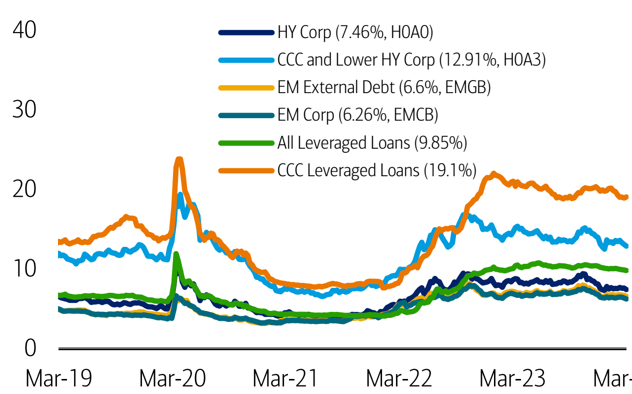


Source: ICE Data Indices, LLC

BofA GLOBAL RESEARCH

Exhibit 11: Yields on HY bonds and loans

CCC Leveraged Loans leads yields as of 3/8/24 at 19.1%



Source: ICE Data Indices, LLC

BofA GLOBAL RESEARCH

New issue debt market volumes slow – US treasury issuance high

Exhibit 12 shows gross and net supply numbers across various fixed income sectors, as well as forecasts for 2024. This does not account for runoff of the Fed balance sheet due to QT.

Exhibit 12: US Fixed Income Gross and Net Issuance ($bn)

YTD FI total supply was $1.23tn

	TSY	Munis	Tax Exempt	Taxable	AMT	Agency Debt	Agency MBS	Agency CMBS	ABS	US CLO	USD HG Corp	USD HY Corp	USD Lev Loans	Total Securitized Products	US Fixed Income Issuance
Gross Issuance ($bn)															
2011	2,135	287	247	32	8	966	1,131	90	125	13	770	208	231	1,392	5,988
2012	2,153	380	334	33	13	840	1,663	102	201	56	969	322	295	2,074	7,032
2013	2,140	334	286	38	10	591	1,544	102	179	84	1,024	312	456	2,018	6,876
2014	2,215	337	303	27	8	482	923	87	205	124	1,105	292	377	1,475	6,284
2015	2,119	399	362	31	6	551	1,251	114	195	98	1,264	252	257	1,818	6,660
2016	2,019	452	409	31	12	794	1,472	134	195	71	1,289	228	337	1,996	7,114
2017	2,047	449	393	39	16	596	1,304	157	239	117	1,396	271	503	2,003	7,265
2018	2,388	339	295	33	11	546	1,174	157	244	121	1,237	162	438	1,923	7,033
2019	2,692	422	330	71	22	816	1,531	158	242	115	1,198	228	311	2,298	7,965
2020	3,434	474	319	145	9	923	3,158	183	183	90	1,851	390	289	3,789	11,149
2021	4,405	479	345	120	14	455	3,482	183	284	185	1,495	455	607	4,509	12,405
2022	3,305	385	310	53	22	738	1,674	128	253	128	1,216	106	225	2,427	8,401
2023	3,268	376	323	37	16	1,220	1,000	120	274	117	1,214	174	229	1,627	8,109
2024 YTD	452	45	43	2	0	103	100	13	56	25	278	51	88	213	1,231
2024 Forecast	4,308	400	340	45	15	1,300	1,056	133	270	110	1,330	165	240	1,716	9,459
Net Issuance ($bn)															
2011	1,326	-160	-130	3	-33	-207	15	45	-60	-17	335	-7	19	-264	1,042
2012	1,008	-104	-73	-1	-30	-245	33	60	-2	21	367	72	34	-117	1,014
2013	853	-123	-111	12	-23	-53	232	60	30	29	570	82	131	186	1,648
2014	783	-67	-42	-8	-17	-45	69	49	44	76	617	74	150	174	1,685
2015	632	-26	-13	5	-17	-55	164	59	-1	53	724	-3	41	200	1,513
2016	411	33	49	2	-19	-41	229	83	9	18	752	-67	8	199	1,294
2017	421	32	27	14	-8	-53	315	96	13	56	782	5	75	411	1,672
2018	754	-75	-75	2	-2	-105	276	79	20	82	627	-78	192	512	1,827
2019	987	39	3	30	6	-30	224	79	-6	88	574	30	46	456	2,103
2020	1,734	47	-26	78	-5	-163	508	88	-69	63	757	173	0	572	3,121
2021	819	111	44	63	4	-249	878	71	29	116	425	131	148	1,200	2,585
2022	1,540	-36	-51	12	3	208	496	32	18	88	383	-52	75	680	2,798
2023	1,002	41	40	-1	2	189	235	51	7	68	454	64	-	344	2,093
2024 YTD	76	7	10	-1	-2	10	10	10	18	11	160	38	-	46	335
2024 Forecast	1,538	-16	-	-	-	500	321	107	58	35	384	-10	-10	497	2,883

BofA GLOBAL RESEARCH

Next we summarize highlights and themes from colleagues in BofA Economics and Strategy.

Economics –Michael Gapen, Aditya Bhave, Stephen Juneau, Shruti Mishra, Jeseo Park

US Watch: February CPI Inflation: Services inflation softens, but goods surprise to the upside

- The February Consumer Price Index topped expectations, with the headline and core CPI both rising by 0.4% m/m.
- Core services slowed to 0.5% m/m in February, while core goods prices surprised to the upside (0.1% m/m).
- Overall, we view the February inflation data as continuing to support our outlook for a rate cut cycle that starts in June.

Morning Market Tidbits: Today's answers to yesterday's questions

- We think activity & inflation data will point towards a resilient but not re-accelerating economy, allowing for a June cut.
- The February CPI report should alleviate concerns that inflation is reaccelerating after the January report.
- While headline inflation likely accelerated to 0.4% m/m, we look for core inflation to slow to 0.3% m/m.

Labor Market Watch: The labor market continues to cool, but has a long way to go

- Labor market conditions cooled in February, but remain near prior cycle highs. Restoring balance will take time
- Labor market momentum improved in February on stronger hours. However, momentum has been negative for 22 straight months
- We think the Fed will begin easing in June, but policy needs to remain restrictive to cool labor markets further

US Watch: February US employment: Resilience, but not overheating

- The February employment report eased concerns that the labor marketing was tightening and wage inflation was accelerating.
- Strength of hiring and nominal income growth also suggest labor market fundamentals remain supportive of consumption.
- We think the data should incrementally increase the confidence of the Fed. We maintain our outlook for the first cut in June.

US Economic Weekly: Household net worth surges

- Household net worth rebounded in 4Q (+$5 trillion). Together with excess saving, net worth supports our view of a resilient consumer.
- The US House passed a spending bill to fund half of the federal government. The remainder needs to be funded by March 22.
- We think next week's CPI report will confirm that inflation remains on a downward trend, though services inflation is sticky.

Investment Strategy – Michael Hartnett, Elyas Mahmoud Galou, Anya Shelekhin, Myung-Jee Jung

The Flow Show: "We're Not Far From It..."

- March 10th 2000: Nasdaq bubble peaked; SOX/SPX relative just hit highest level since Mar'00
- March 9th 2020: 10-year UST yield hit 0.3%, all-time low; wars, deficits, inflation...historic bond bear market past 4 years
- March 9th 2023: SVB collapsed & kick-started Silicon Valley bull with aid of Fed-Wall St "bromance" & AI

- **The Biggest Picture**: "hard" landing probability (5%) very low vs "soft" (75%) & "no" (20%); yet slumping "quits ratio" (lowest since Jun'20 - Chart 2) consistent with Fed cuts & says "labor market risk" growing; Feb payrolls >225k = no landing, 175-200k soft landing, but <100k likely kick-starts bonds & hard landing price action

Investment Strategy – Jared Woodard, John Glascock

[Quick RIC: Tax-efficient upgrades hiding in plain sight]

- This "year of the bond" is belied by higher growth & inflation; we stay in quality stocks, Prudent Yield credit & commodities
- Tax day is coming. After $1tn of household bond buys in '23, the bill coming due may spark a retreat to equities. Some tips:
- Own 1. ETFs > mutual funds; 2. stocks > bonds; 3. Prudent Yield > benchmarks; 4. buybacks > dividends; 5. MLPs, QDI, CEFs

Rates – Mark Cabana, Ralph Axel, Bruno Braizinha, Meghan Swiber, Katie Craig, Caiyi (Anna) Zhang, Paul Ciana

Global Rates Weekly: Double WAMmy

- US rates reflect ongoing dip buying, though the NFP & CPI double whammy is a risk. Fed UST WAM shortening unlikely near term
- In the absence of clear signals from the data, markets seem intent to search out vulnerable consensus trades.
- US rates reflect ongoing dip buying, though the NFP & CPI double whammy is a risk. We expect see a shift in curve bear steepening dynamic if 3y1y >3.7%. Fed UST WAM shortening unlikely in near term, may disappoint recent 2Y moves.
- Technicals: US yields test/hold key levels into US data. Heading into US data, yields hold key levels and may resume Q1 rise while US 2y > 4.48-4.50%, US 5Y > 4.06-4.10%, US 10y > 4.10% and US 30Y > 4.19%.

Municipals – Yingchen Li, Ian Rogow

Municipals Weekly: Taxable munis are where it's at

- Taxable munis are outperforming Treasuries and corporates; more OAS spread value in the 1-10yr part of the curve.
- 2024 year end forward curves also suggest that 1-10yr taxable munis are where the values are.
- Vs tax-exempts on a taxable equivalent basis, taxable munis inside 16yrs look more attractive, particularly from 6-11yrs.
- Our views are summarized in Exhibit 13
-

Investment Grade Strategy – Yuri Seliger

Situation Room: Feb CPI: cooler where it matters

- In terms of 2024 demand for IG bonds, the strongest buying has been among 10+yr industrial bonds rated single-A or better.
- Hence so far in March the A-rated industrial 10s30s IG spread curve flattened, while that for BBBs remained little changed.
- A-rated 30yr spreads outperformed despite more A-rated than BBB 30yr supply in February and so far in March.

Credit Market Strategist: Supply off trend

- IG new issue supply likely overshot in February and year-to-date.

- The pace of YtD issuance is consistent with year 2021 in terms of net supply, which should be unsustainable in 2024.
- We look for supply volumes to slow in the second half of March, supporting the IG market technicals.

High Yield Strategy – Oleg Melentyev

High Yield Strategy: Not So Magnificent

- Credit market stalls; judges prospects of the steepest rate hiking campaign being followed by the shallowest cutting path.
- Funding availability returns to more normalized levels post-Jan burst; cracks in the Mag 7 provide more reasons for caution.
- The barbell of elevated cash + low quality tilt has worked well ytd and should continue to do so.

Leveraged Loan Strategy – Neha Khoda

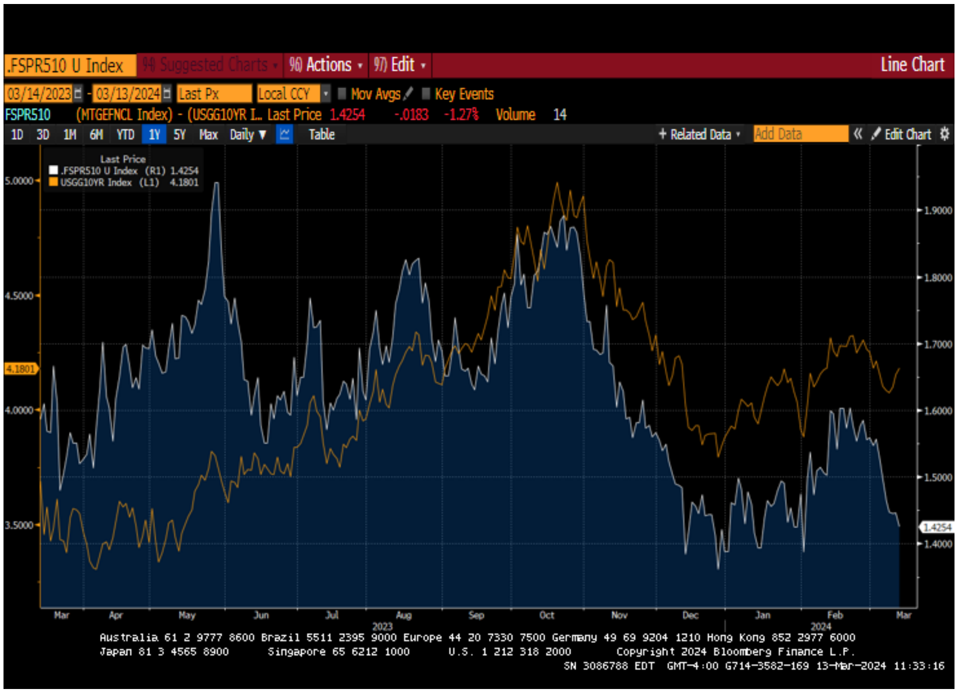
Collateral Thinking: Earnings at an inflection point

- Despite rates reaching Nov highs, credit market conditions remain very strong, with HY Bs setting a new post GFC record.
- A first look at Q4 earnings suggests that EBITDA growth might be at an inflection point, with Q1 potentially reaching 5%.
- Continued profit recovery could justify tight HY spreads and facilitate a loan risk rally.

Agency MBS – Chris Flanagan, Jeana Curro

- Agency MBS rallied recently but is still the worst sector performer in fixed income in 2024 (-1.0%). We remain neutral on the sector. Until 10y yield finds a near term top, MBS performance is likely to be weak.
- MBS current coupon spread retraced sharply tighter recently, to 142 bps, as 10y UST yield moved from 4.3% to 4.18% (Exhibit 14). We moved to neutral before the recent gaps wider and tighter. If 10y UST eventually rallies below 4%, we expect more MBS spread tightening.
- MBS value proposition: still cheap to corporates, even after recent OAS tightening. Agency MBS index OAS (46 bps) is 59% wider since Jan 1, 2022, when the Fed shifted to aggressive policy tightening. IG (93 bps) and HY OAS (308 bps) are only 0% and 11% wider, respectively (Exhibit 15).

Exhibit 14: Agency MBS current coupon spread to 5y/10y UST (.FSPR510) v 10y UST yield
MBS current coupon spread retraced sharply tighter recently, to 142 bps, as 10y UST yield moved from 4.3% to 4.18%. We moved to neutral before the recent gaps wider and tighter. If 10y UST eventually rallies below 4%, we expect more MBS spread tightening.

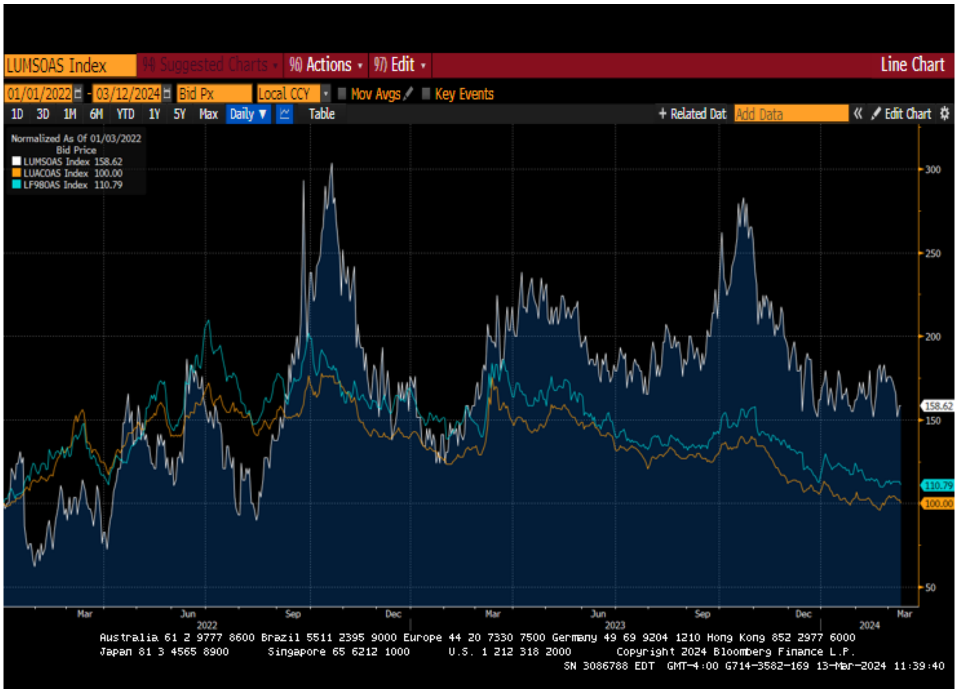


Source: Bloomberg

BofA GLOBAL RESEARCH

Exhibit 15: Normalized index OAS since 1/1/22: agency MBS (white), high grade (amber), high yield (blue)

MBS value proposition: still cheap to corporates, even after recent OAS tightening. Agency MBS index OAS (46 bps) is 59% wider since Jan 1, 2022, when the Fed shifted to aggressive policy tightening. IG (93 bps) and HY OAS (308 bps) are only 0% and 11% wider, respectively.

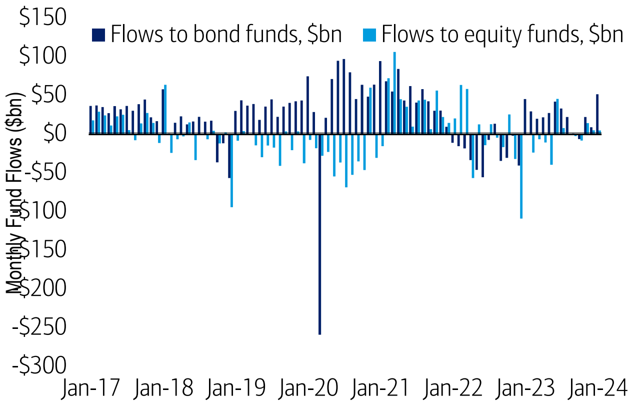


Source: Bloomberg

BofA GLOBAL RESEARCH

Mutual fund flows

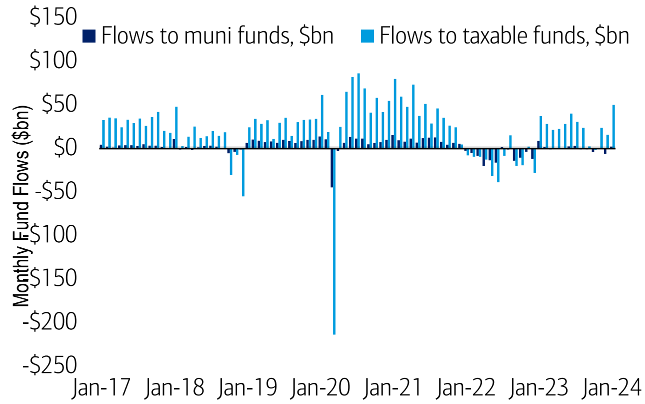
Exhibit 16: Equity vs Fixed Income fund flows ($bn)
Data as of 1/31/2024; Fund flows have been mixed this year



Source: EPFR

BofA GLOBAL RESEARCH

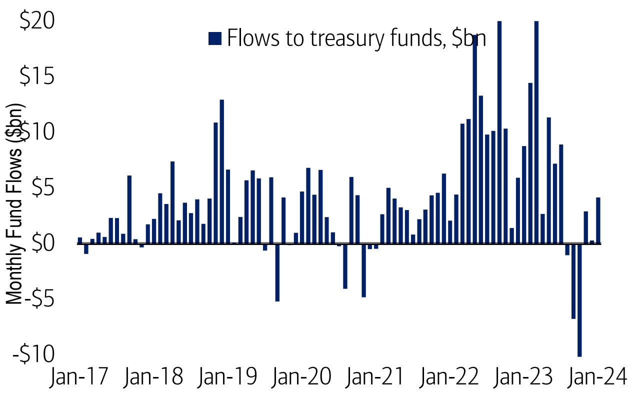
Exhibit 17: Taxable vs Municipal fund flows ($bn)
The data is as of 1/31/2024. Fund flows have been mixed this year.



Source: EPFR

BofA GLOBAL RESEARCH

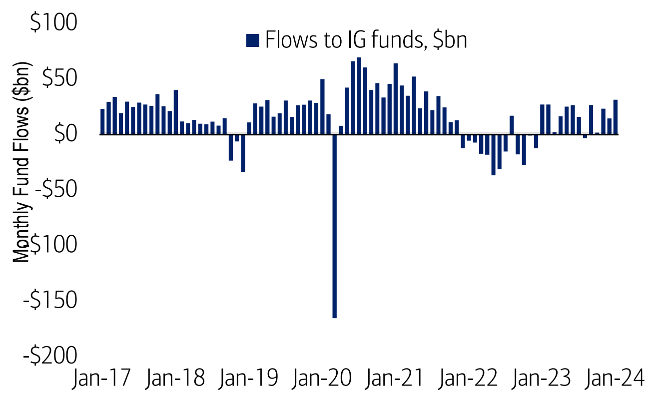
Exhibit 18: Treasury fund flows ($bn)
The data is as of 1/31/2024. Fund flows have been strong this year but started to weaken towards the end of 2023.



Source: EPFR

BofA GLOBAL RESEARCH

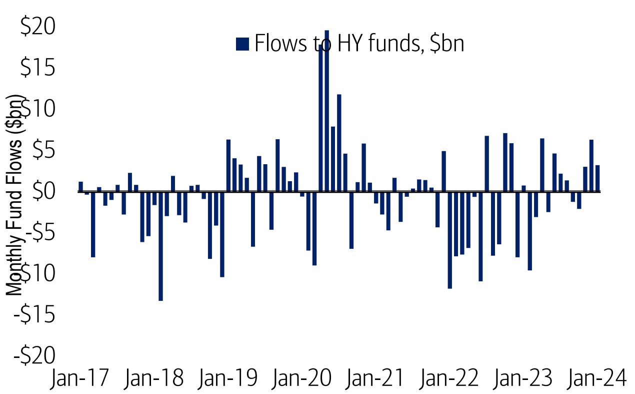
Exhibit 19: Investment grade fund flows ($bn)
The data is as of 1/31/2024. Fund flows have been mixed this year.



Source: EPFR

BofA GLOBAL RESEARCH

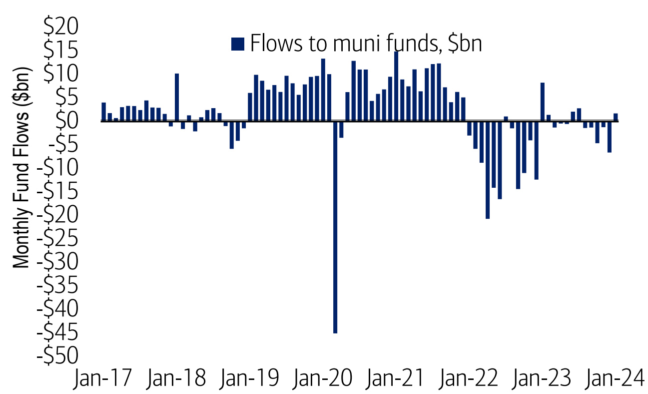
Exhibit 20: High yield corporate fund flows ($bn)
The data is as of 1/31/2024. Fund flows have been mixed this year.



Source: EPFR

BofA GLOBAL RESEARCH

Exhibit 21: Municipal fund flows ($bn)
The data is as of 1/31/2024. Fund flows have been mostly outflows this year.



Source: EPFR

BofA GLOBAL RESEARCH

Exhibit 22: Market total returns (%)

S&P 500 leads YTD returns as of 2/29/2024

		As of 2/29/2024								
Index	**Ticker**	**1mo**	**3mo**	**12mo**	**YTD**	**2020**	**2021**	**3yr[2]**	**5yr[2]**	**10yr[2]**
US Treasury	G0Q0	-1.4	1.8	2.7	2.3	8.2	-14.9	-3.4	0.1	1.0
US 3-Month Treasury Bill	G0O1	0.4	1.3	5.2	5.9	0.7	1.5	2.4	2.0	1.3
Current 2-year Treasury	GA02	-0.5	1.0	3.8	3.4	3.0	-4.7	-0.5	0.9	0.8
Current 10-year Treasury	GA10	-2.1	1.7	1.5	0.5	10.6	-19.4	-5.2	-0.5	0.7
Current 30-year Treasury	GA30	-2.2	3.5	-3.5	-3.2	18.6	-36.5	-11.3	-3.1	0.6
US Composite Agency	UAGY	-0.7	1.6	4.9	4.5	5.7	-9.3	-1.3	1.1	1.5
US Inflation-Linked Treasury	G0QI	-1.1	1.8	2.7	2.9	11.5	-7.3	-0.9	2.7	2.1
US Corporate	C0A0	-1.4	2.7	6.7	7.0	9.8	-16.2	-2.5	1.9	2.6
AAA US Corporate	C0A1	-1.9	1.8	4.2	4.0	12.2	-20.9	-4.5	0.8	2.1
AA US Corporate	C0A2	-1.5	2.1	5.0	4.9	9.5	-17.2	-3.3	0.7	1.9
Single-A US Corporate	C0A3	-1.4	2.5	5.9	6.1	9.8	-16.2	-2.7	1.5	2.3
BBB US Corporate	C0A4	-1.3	3.1	7.8	8.3	9.8	-16.0	-2.2	2.4	2.9
US High Yield	H0A0	0.3	4.0	11.2	13.8	6.2	-6.5	1.9	4.0	4.3
BB US High Yield	H0A1	-0.2	3.1	10.0	11.3	8.6	-6.5	1.3	4.3	4.6
Single-B US High Yield	H0A2	0.4	4.1	11.4	14.5	3.7	-6.2	2.2	3.7	3.9
CCC & Lower US High Yield	H0A3	2.3	7.9	15.4	22.7	2.9	-7.6	2.9	3.3	4.0
Leveraged Loans	SPBDAL	0.9	3.3	11.5	15.1	3.1	4.4	5.9	5.3	4.5
BB Loans	SPBDBB	0.7	2.4	9.2	11.5	0.8	6.0	5.5	4.5	4.1
Single-B Loans	SPBDBL	0.9	3.4	12.5	16.6	3.8	3.9	6.2	5.6	4.8
US Mortgage Backed Securities	M0A0	-1.6	2.1	3.1	2.9	4.1	-12.9	-3.4	-0.3	1.0
Fixed Rate Preferred Securities	P0P1	0.8	6.5	7.2	14.2	6.9	-12.7	0.8	3.1	4.8
DRD Eligible Preferred Securities	P0D0	0.7	6.4	6.4	12.7	7.3	-10.9	0.8	3.3	4.7
Hybrid Preferred Securities	P0H0	1.5	6.9	10.1	20.3	7.3	-18.6	0.8	2.7	4.6
REIT Preferred Securities	P0N0	0.7	6.5	12.3	21.1	8.3	-25.0	-1.9	1.6	4.3
American Depository Shares Preferred Securities	P0S0	2.6	8.7	9.7	21.5	6.0	-21.7	-0.3	2.3	4.3
Adjustable Rate Preferred Securities	P0A0	0.8	5.1	11.0	16.0	8.0	4.3	6.7	7.4	6.6
US Fixed Rate Asset Backed	R0A0	0.0	2.2	6.1	7.0	3.8	-4.1	0.8	2.0	1.9
US Municipal Securities	U0A0	0.0	2.2	5.8	6.3	5.3	-7.4	-0.2	2.0	2.7
Taxable equivalent[1]	U0A0*	0.3	3.0	8.9	9.9	8.1	-2.4	2.6	4.8	5.7
US General Obligation Municipal Securities	U0AG	0.0	1.8	5.1	5.3	5.3	-6.6	-0.2	1.8	2.3
Taxable equivalent[1]	U0AG*	0.2	2.6	8.2	8.9	8.1	-1.6	2.6	4.6	5.2
US Revenue Municipal Securities	U0AR	0.0	2.3	6.0	6.6	5.3	-7.6	-0.2	2.0	2.9
Taxable equivalent[1]	U0AR*	0.3	3.1	9.1	10.2	8.1	-2.7	2.6	4.8	5.8
US Pre-refunded Municipal Securities	U0AF	0.1	0.8	3.3	3.0	2.4	-2.9	0.1	1.0	1.0
Taxable equivalent[1]	U0AF*	0.4	1.6	6.5	6.7	5.5	2.8	3.1	4.0	4.2
1-5 Year US Municipal Securities	UVA0	0.1	1.0	3.7	3.6	2.8	-3.0	0.2	1.2	1.2
Taxable equivalent[1]	UVA0*	0.4	1.8	6.7	7.1	5.8	2.4	3.1	4.1	4.2
5-10 Year US Municipal Securities	U6AX	0.0	1.9	4.4	4.8	5.0	-5.8	-0.1	1.8	2.3
Taxable equivalent[1]	U6AX*	0.3	2.7	7.4	8.2	7.9	-0.8	2.7	4.5	5.1
10+ Year US Municipal Securities	U9AX	0.0	2.8	7.0	7.8	6.2	-9.8	-0.5	2.2	3.3
Taxable equivalent[1]	U9AX*	0.2	3.5	10.1	11.5	9.0	-5.0	2.3	5.0	6.3
Global Government Excluding the US Index	N0G1	-1.8	0.3	-0.2	-1.6	9.8	-29.3	-10.2	-4.4	-2.3
Emerging Markets										
BBB & Lower Sovereign USD	IGOV	1.0	4.8	11.4	12.3	4.8	-20.5	-2.4	0.3	2.6
Local Debt Markets Plus Index	LDMP	0.0	1.9	7.1	8.6	4.5	-17.5	-2.3	0.8	0.7
Emerging Markets Corporate Plus Index	EMCB	0.1	3.5	7.1	8.1	7.8	-16.5	-3.1	1.1	2.4
S&P 500	SPXT	5.3	12.0	31.1	35.3	18.4	5.4	12.9	14.8	12.7
US CPI Urban Consumers NSA	CPURNSA	0.5	0.0	3.1	10.6	1.4	13.9	5.6	4.1	2.8
BBG GOLD TR Index	BCOMGCTR	-0.2	0.2	10.8	11.8	20.9	-5.0	2.9	8.1	3.6
VIX Index	VIX	-6.6	3.7	-34.9	-38.2	65.1	-4.7	-26.0	-1.9	-0.4

Source: ICE Data Indices, LLC; [1]Assumes a 40.8% Federal tax bracket. [2]Three-year, five-year and 10-year returns are annualized. *Price return index

BofA GLOBAL RESEARCH

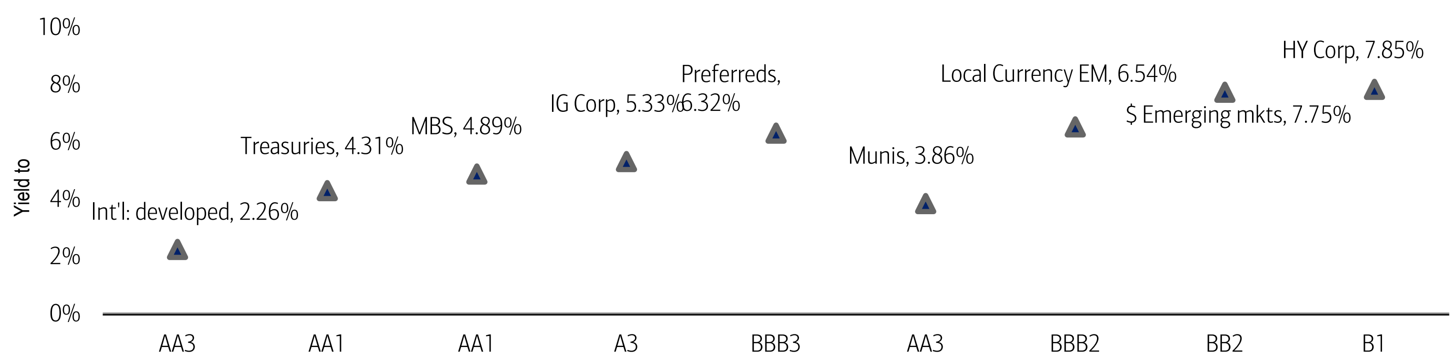
Exhibit 23: Sector yields, duration and credit ratings
Data as of 3/08/2024. Sectors have higher yields as credit risk increases.

	Effective yield*	Effective Duration*	Average Credit Rating	% of US taxable market
Treasuries				
US Treasury	4.31	6.34	AA1	42.9%
1-5 Year	4.39	2.59	AA1	23.2%
5-10 Year	4.08	6.19	AA1	9.4%
10-15 Year	4.07	10.15	AA1	0.4%
15+ Year	4.35	15.14	AA1	9.9%
US Inflation-Linked Treasury	1.87	5.80	AA1	4.9%
US Agency	4.47	3.30	AA1	0.8%
US Mortgage Backed Securities	4.89	5.61	AA1	22.4%
IG Corporates				
US Corporate	5.29	6.70	A3	24.9%
1-5 Year	5.19	2.52	A3	10.2%
5-10 Year	5.24	6.03	A3	6.8%
10-15 Year	5.40	8.73	A3	1.3%
15+ Year	5.48	13.61	A3	6.5%
Core Plus Fixed Rate Preferred Securities	4.67	6.64	BBB3	0.3%
High Yield				
US High Yield	7.46	3.27	B1	3.8%
1-5 Year US Cash Pay HY	7.63	2.24	B1	2.1%
5-7 Year US Cash Pay HY	7.21	4.06	B1	1.2%
7-10 Year US Cash Pay HY	6.73	5.16	BB3	0.4%
10-15 Year Cash Pay HY	7.60	7.75	BB3	0.0%
15+ Year US Cash Pay HY	7.14	11.24	BB2	0.0%
				100.0%
International				
Global Government Excluding the US	2.26	8.26	AA3	
EM				
Sovereign	7.72	6.94	BB2	
BBB-B Sovereign USD External Debt	6.55	7.16	BB1	
Local Debt Markets Plus Index	6.54	5.91	BBB2	
Emerging Markets Corporate Plus Index	6.26	4.80	BBB2	
Municipals				**% of Muni Market**
Municipals	3.09	6.72	AA3	100.0%
US Municipal Securities	2.97	2.44	AA2	21.4%
1-5 Year US Municipal Securities	2.81	4.97	AA3	19.5%
5-10 Year US Municipal Securities	2.90	6.58	AA3	13.5%
10-15 Year US Municipal Securities	3.31	9.52	AA3	45.6%

Source: ICE Data Indices, LLC . *Effective yield and duration adjust for call options

BofA GLOBAL RESEARCH

Exhibit 24: Yield to maturity vs. credit rating
Data as of 3/08/2024. The data is showing sector, effective duration, yield-to-maturity



Source: ICE Data Indices, LLC

BofA GLOBAL RESEARCH

Profile of taxable & tax-exempt bond markets

Exhibit 25: Sensitivity of total returns on Treasuries to yield changes. 1-year horizon*

Data As of 3/07/2024. High maturity has high sensitivity to yield changes.

	Change in yield				
Treasury maturity	**-2%**	**-1%**	**0**	**+1%**	**+2%**
2-Year	NA	NA	4.5%	2.6%	0.8%
5-Year	NA	8.7%	4.1%	-0.3%	-4.4%
10-Year	NA	12.6%	4.1%	-3.7%	-10.7%
30-Year	NA	23.3%	4.2%	-10.8%	-22.7%

Source: BofA Global Research. *Approximate total return (income plus price change) over a one-year horizon for the given change in yield. Excludes the effect of rolling down the yield curve.

BofA GLOBAL RESEARCH

Exhibit 26: Sensitivity of total returns on municipals to yield changes. 1-year horizon*

Data As of 3/07/2024. High maturity has high sensitivity to yield changes.

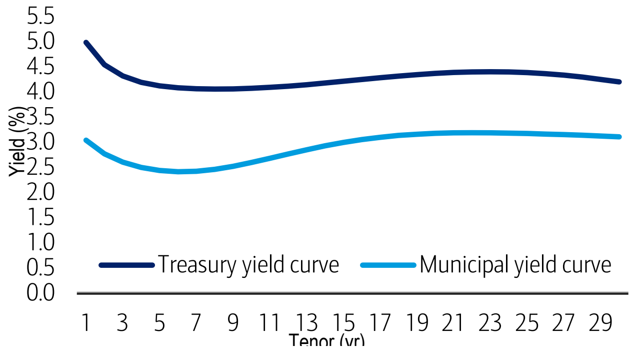
	Change in yield				
Municipal maturity	**-2%**	**-1%**	**0**	**+1%**	**+2%**
2-Year	NA	NA	2.7%	0.8%	-1.1%
5-Year	NA	7.6%	2.4%	-2.2%	-6.5%
10-Year	NA	12.2%	3.2%	-4.8%	-12.2%
30-Year	NA	24.4%	3.6%	-12.7%	-25.4%

Source: BofA Global Research. *Approximate total return (income plus price change) over a one-year horizon for the given change in yield. Excludes the effect of rolling down the yield curve.

BofA GLOBAL RESEARCH

Fixed Income Chartbook

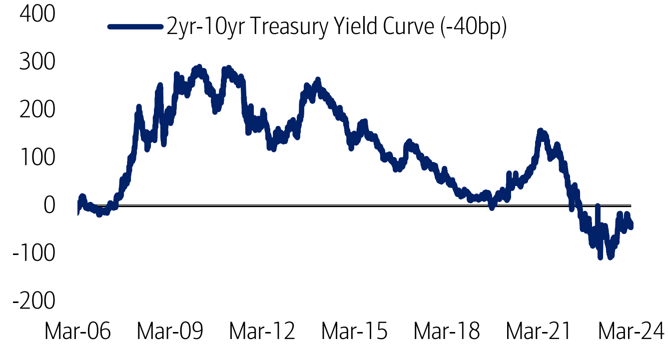
Exhibit 27: Treasury and municipal yield curves (%)
As of 3/08/2024, Treasury and municipal yields by tenor; yields converge at the long end



Source: ICE Data Indices, LLC

BofA GLOBAL RESEARCH

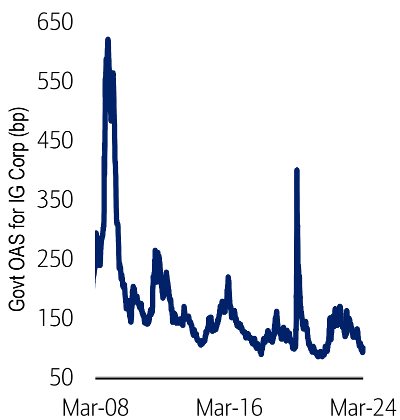
Exhibit 28: Historical 2yr / 10yr Treasury yield spread (bps)
Data as of 3/08/2024.The 2/10yr treasury curve is inverted.



Source: Bloomberg

BofA GLOBAL RESEARCH

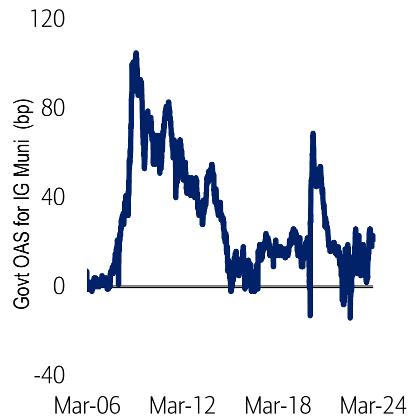
Exhibit 29: IG corporate Govt OAS spreads (bps)
Data as of 3/08/2024; Spreads have tightened this year.



Source: Ice Data Indices, LLC

BofA GLOBAL RESEARCH

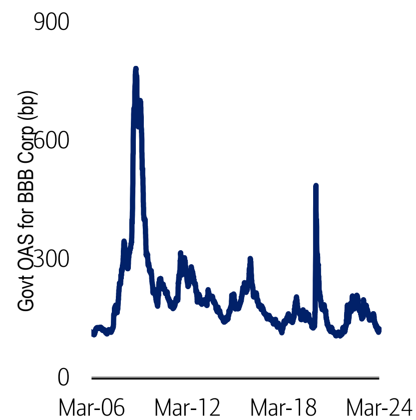
Exhibit 30: IG muni Govt OAS spreads (bps)
Data as of 3/08/2024 Spreads have widened this year



Source: Ice Data Indices, LLC

BofA GLOBAL RESEARCH

Exhibit 31: BBB corporate Govt OAS spreads (bps)
Data as of 3/08/2024; Spreads have tightened this year

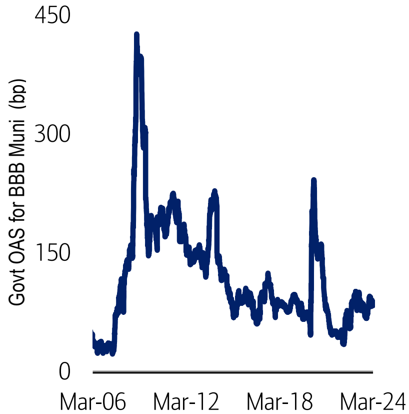


Source: Ice Data Indices, LLC

BofA GLOBAL RESEARCH

Exhibit 32: BBB muni Govt OAS spreads (bps)

Data as of 3/08/2024; Spreads have tightened this year

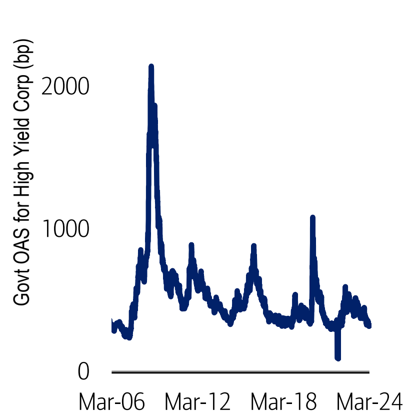


Source: Ice Data Indices, LLC

BofA GLOBAL RESEARCH

Exhibit 33: High yield corporate Govt OAS spreads (bps)

Data as of 3/08/2024; Spreads have tightened this year

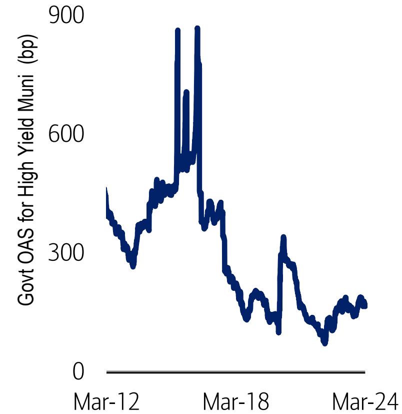


Source: Ice Data Indices, LLC

BofA GLOBAL RESEARCH

Exhibit 34: High yield muni Govt OAS spreads (bps)

Data as of 3/08/2024; Spreads have widened this year



Source: Ice Data Indices, LLC

BofA GLOBAL RESEARCH

Appendix: common acronyms

Table 1: Common Terminology – Multiple Sectors

.

Acronyms	Description
Multiple Sectors	
ABCP	Asset-backed commercial paper
AIFM	Alternative Investment Fund Managers
AIFMR	EU financial regulation of hedge funds, private equity, real estate funds and other alternative investment fund managers
ALS	Average Loan Size
AMF	Financial Markets Authority (France)
BaFin	Federal Financial Supervisory Authority (Germany)
BLS	Bureau of Labor Statistics
BPS	Basis points
BWIC	Bid Wanted In Competition
CDR	Constant default rate
CE	Credit Enhancement
CEE	Central and Eastern Europe
CFPB	Consumer Financial Protection Bureau
CLTV	Combined Loan-to-value ratio or Current Loan-to-value ratio
CPR	Constant prepayment rate
CQS	Credit quality step
CRD	Capital Requirements Directive (EU)
CRR	Capital Requirements Regulation (EU)
CRR	Conditional Repayment Rate
CRR	EU prudential regulation for credit institutions and investment firms
DD	Due diligence
DM	Discount Margin
DQ	Delinquency
DTI	Debt-to-Income ratio
EBA	European Banking Authority
EC	European Council (EU)
EComm	European Commission (EU)
EDSF	Euro Dollar Swap FRA
EL	Expected Loss
EP	European Parliament (EU)
ESAs	European Supervisory Authorities (EU)
ESG	Environmental, Social and Governance
ESMA	European Securities Market Authority
EU	European Union
Euribor	European interbank offered rate
FCA	Financial Conduct Authority (UK)
FCF	Front cash flow
Fed or FRB	Federal Reserve Board
FICO	Fair Isaac Corporation
FINRA	Financial Industry Regulatory Authority
FNMA	Federal National Mortgage Association
GDP	Gross domestic product
Ginnie Mae	Government National Mortgage Association
GNMA or GNR	Government National Mortgage Association
HAMP	Home Affordable Modification Program
HARP	Home Affordable Refinance Program
HY	High Yield
IAA	Internal Assessment Approach
IG	Investment grade
IO	Interest-only mortgages or tranches

Acronyms	Description
Multiple Sectors	
ISM	Institute for Supply Management
ITS	Implementing Technical Standards (EU)
JHF	Japanese Housing Finance Agency
LCF	Last cash flow
LGD	Loss Given Default
LIBOR	London Interbank Offered Rate
LTV	Loan-to-value ratio
MBS	Mortgage-Backed Security
MEP	Member of European Parliament (EU)
MoM	Month over Month
NR	Non-rated
NSFR	Net Stable Funding Ratio
N-Spread	Nominal spreads to swaps
NY Fed	The Federal Reserve Bank of New York
OAS	Option-adjusted Spreads
OC	Overcollateralization
OID	Original issue discount
OLTV	Original Loan-to-value ratio
OWIC	Offer wanted in competition
PRA	Prudential Regulation Authority (UK)
QE	Quantitative Easing
QM	Qualified Mortgages
R&W	Representation and warranty
REIT	Real estate investment trust
RTS	Regulatory Technical Standards (EU)
SEV	Severity
SOFR	The Secured Overnight Financing Rate
Solvency II	EU insurance regulation
SONIA	Sterling overnight interbank average rate
SRT	Significant Risk Transfer
SSM	Single Supervisory Mechanism (EU)
STC	Simple Transparent and Comparable Securitisation
STS	Simple Transparent and Standardised Securitisation
TRACE	Trade Reporting and Compliance Engine
UCITS	Undertakings for the Collective Investments in Transferable Securities
UST	United States Treasury
WAC	Weighted average coupon
WAL	Weighted average life
WALA	Weighted average loan age
WAM	Weighted Average Maturity
WAS	Weighted average spread
WAVG	Weighted average
WoW	Week over Week
YoY	Year over Year
YTD	Year to date
YTM	Yield to maturity

Source: BofA Global Research

BofA GLOBAL RESEARCH

Table 2: Common Terminology – Asset Backed Securities (ABS) and Collateralized Loan Obligations (CLO)

.

Acronyms	Description
Asset Backed Securities	
A&C	Agriculture and Construction
ABS	Asset Backed Securities
ABS	Absolute Prepayment Speed
CEU	Container shipping, Cost Equivalent Unit
CNL	Cumulative Net Loss
DPP	Device Payment Plan
ECASLA	The Ensuring Continued Access to Student Loans Act
ED	The Department of Education
EFC	Education Financial Council
FDLP	William D. Ford Federal Direct Loan Program
FFELP	The Federal Family Education Loan Program
HEA	Higher Education Act of 1965, as amended
IBR	Income based repayment
IDR	Income driven repayment
MPR	Monthly payment rate
NCHER	The National Council of Education Resources
PAYE	Pay As You Earn
REPAYE	Revised Pay As You Earn Plan
RV	Residual value (auto lease / loan)
SAARS	Seasonally adjusted annual rate
TEU	Container shipping, Twenty Foot Equivalent Unit
TIVAS	Title IV Additional Servicers
VT	Voluntary Termination (auto loan by borrower)
WBS	Whole business securitization
YSOC	Yield Supplement Overcollateralization

Acronyms	Description
Collateralized Loan Obligations	
A to E	Amend to extend
AMA	Asset manager affiliate
AUM	Assets under management
BDC	Business development company
BSL CLO	CLO backed primarily by broadly syndicated loans
CBO	Collateralized bond obligation
CDO	Collateralized debt obligation
CLO	Collateralized loan obligation
CMV	Capitalized management vehicle
Cov-Lite	Covenant-lite
CQT	Collateral quality tests
DIV	Diversity Score
EBITDA	Earnings before interest, tax, depreciation and amortization
ELLI	European Leveraged Loan Index
EOD	Event of default
IC	Interest coverage
ID	Interest diversion
IPO	Initial public offering
IRR	Internal rate of return
JR OC	Junior overcollateralization
LBO	Leveraged buyout
Liquidation NAV	NAV assuming portfolio can be liquidated immediately at its market value without any additional costs
LLI	Leveraged loan index
LTM	Last-twelve-months
M&A	Mergers and acquisitions
MM CLO	CLO backed primarily by middle-market loans
MOA	Majority owned affiliate
MVOC	Market value overcollateralization
NAV	Net asset value
O&G	Oil and gas
PIK	Payment in kind
PPT	Portfolio profile tests
RCF	Revolving credit facility
RP	Reinvestment Period
RR	Risk retention
SME	Small and medium enterprise
SR OC	Senior overcollateralization
TLA	Term loan A
TLB	Term loan B
TRUPS	Trust preferred securities
WAP	Weighted average price
WARF	Weighted average rating factor
WARR	Weighted average recovery rate
WAS	Weighted average spread

Source: BofA Global Research

BofA GLOBAL RESEARCH

Table 3: Common Terminology – Commercial Mortgage Backed Securities (CMBS)

.

Acronyms	Description
Commercial Mortgage Backed Securities	
ACLI	American Council of Life Insurers
ADR	Average Daily Rate
ARA	Appraisal Reduction Amount
ARD	Anticipated Repayment Date
ASERs	Appraisal Subordinate Entitlement Reductions
Cap Rate	Capitalization rate
CapEx	Capital Expenditure
CBD	Central Business District
CMBS	Commercial mortgage backed security
CPY	Constant Prepayment Yield
CRE	Commercial real estate
Def	Defeasance
DSCR	Debt service coverage ratio
DUS	Fannie Mae delegated underwriting and servicing
DY	Debt yield
ERV	Estimated Rental Value
Fannie Mae GeMs	Fannie Mae Guaranteed Multifamily Structures
FRESB	Freddie Mac Small Balance Mortgage Transactions
Freddie K	Freddie Mac K deals
FT IO	Full term interest only loan
GFC	Global Financial Crisis
GLA	Gross Leasing Area
GSA	Green Street Advisors
HT	Hotel
IN	Industrial
L/O	Lockout
LC	Leasing Commissions
MCAS	Multifamily Connecticut Avenue Securities
Mezz	Mezzanine tranche
MF	Multifamily
MH	Manufactured Housing
MP3	Monetary Policy 3
MR	Most Recent
MX	Mixed Use
MU	Mixed Use
NAV	Net Asset Value
NCF	Net cash flow
NCREIF	National Council of Real Estate Investment Fiduciaries
NOI	Net operating income
OF	Office
OMV	Open Market Valuation
PL CMBS	Private Label CMBS
PT IO	Partial term interest only loan
RCA	Real Capital Analytics
RevPar	Revenue Per Available Room
RT	Retail
SASB	Single asset/single borrower
SBA	Small Business Administration
SBIC	Small Business Investment Company
SBL	Small balance loan

Acronyms	Description
Commercial Mortgage Backed Securities	
PSF	Per Square Foot
SH	Senior Housing
SPE	Special purpose entity
SS	Special Servicing
SS (Property Type)	Self-storage
TI	Tenant Improvements
TIC	Tenant-In-Common
UW	Underwriting/Underwritten
WAM	Weighted average maturity
WL	Watchlist
YM	Yield maintenance

Source: BofA Global Research

BofA GLOBAL RESEARCH

Table 4: Common Terminology – Agency MBS

.

Acronyms	Description
Agency MBS	
AFS	Available-for-sale
AOCI	Accumulated other comprehensive income
AOLS	Average original loan size
ARM	Adjustable-rate mortgage
BU/BD	Buy-up/Buy-down
CBR	Constant buyout rate
CC	Current coupon rate
CMO	Collateralized mortgage obligation
CPR	Cumulative prepayment rate
CSP	Common Security Platform
CSS	Common Securitization Solutions
EHS	Existing home sales
FG	Freddie Gold security (typically followed by a two-letter code: LMC, CI, etc.)
FHA	Federal Housing Administration
FHFA	Federal Housing Finance Agency
FHLB	Federal Home Loan Bank
FHLMC	Federal Home Loan Mortgage Corporation
FLS	Funding for Lending Scheme (FLS)
FN	Fannie Mae security (typically followed by a two-letter code: CL, CI, etc.)
FRM	Fixed-rate mortgage
GEO	Mortgages by state
G-Fee	Government-sponsored entity fee
GN, G2	Ginnie Mae security (typically followed by a two-letter code: SF, JO, etc.)
GSE	Government-sponsored entity
GWAC	Gross-weighted average coupon
HAC	Hedge-adjusted carry
HARP	Home Affordable Refinance Program
HECM	Home equity conversion mortgage
HELOC	Home equity line of credit
HERA	Housing and Economic Recovery Act of 2008
HFA	Housing Finance Authority
HLB	High loan balance MBS
HPA	Home price appreciation
HPI	Home price index
HTB	Help-to-Buy scheme
HQLA	High-quality liquid assets
HR	Hedge ratio
HTM	Held-to-maturity
HY CDX	High yield credit default swap index
IIO	Inverse interest-only securities
IO	Interest-only
IOS	Interest-only swap
IG CDX	Investment grade credit default swap index
JPY	Japanese Yen
LCR	Liquidity coverage ratio
LLB	Low loan balance MBS
MBS	Mortgage Backed Securities
LLPA	Loan-level pricing adjustment
MBA	Mortgage Bankers Association
MHA	Making Home Affordable program
MIP	Mortgage insurance premium
MLB	Mid loan balance MBS
MMI	Mutual Mortgage Insurance

Acronyms	Description
Agency MBS	
MPE	Mortgage payment to earnings ratio
mREIT	Mortgage real-estate investment trust
MSR	Mortgage servicing rights
NHS	New home sales
NTB	Net tangible benefit
OC	Overcollateralisation
OO	Owner-occupied
P/S spread	Primary/Secondary spread
PAC	Planned Amortization Class CMO
PIH	Office of Public and Indian Housing
PIW	Property Inspection Waiver
PLS	Private label security
PMI (or MI)	Private mortgage insurance
PMMS	Primary mortgage market survey rate
PO	Principal-only MBS
PSA	Public Securities Association
PT	Passthrough MBS
RELO	Relocation loan
RESPA	Real Estate Settlement Procedures Act
RF	Reserve Fund
RHS	Rural Housing Service
RMBS	Residential mortgage-backed security
RRP	Reverse repurchase agreement
SATO	Spread at origination
SCRT	Seasoned Credit Risk Transfer Trust
SEQ	Sequential CMO
SLR	Supplementary leverage ratio
SMM	Single monthly mortality
TAC	Targeted Amortization Class CMO
TBA	To be announced securities
TFS	Term Funding Scheme (UK)
TIC	Treasury International Capital System
TILA	Truth in Lending Act
TRID	TILA/RESPA integrated disclosure
UMBS	Uniform MBS
USD	United Stated Dollar
USDA	United States Department of Agriculture
VA	Veterans Affairs
VADM	Very Accurately Defined Maturity CMO
VPR	Voluntary prepayment rate
ZVOAS	Zero-volatility option-adjusted spreads

Source: BofA Global Research

BofA GLOBAL RESEARCH

W

Table 5: Common Terminology – Non-agency MBS

.

Acronyms	Description
Non-agency MBS	
5/1 ARM	Loan has a fixed interest rate for the first 5 years. After 5 years, the rate can change once every year for the remaining life of the adjustable-rate mortgage
60+	60 or more days delinquent
90+	90 or more days delinquent
AC	Always Current
ATR	Ability to Repay
CAS	Connecticut Avenue Securities
CBDB	Current but delinquent before
C-D	Current-to-delinquent roll rate
CRT	Credit Risk Transfer
Cum Default	Cumulative Default
Cum Loss	Cumulative Loss
Cum prepay	Cumulative Prepayment
D180	Delinquent for 180 days or more
ERR	Enhanced Relief Refinance program
FCLR	Foreclosure
FRM	Fixed rate mortgages
FstBuy	First time home buyer
HOA	Hybrid Option ARM
Home Eq	Home Equity Loans or Subprime Loans
HUD	United States Department of Housing and Urban Development
ILN	Insurance Linked Note
LTD Loss	Loss to date
MILN	Mortgage Insurance Linked Note
NAIC	National Association of Insurance Commissioners
Neg am	Negative amortization
NIW	New insurance written
Non-agency RMBS	Non-agency residential mortgage backed securities
Non-QM	Non-Qualified Mortgages
NPL	Non-performing loans (securities or loans)
PMIERs	Primary Mortgage Insurer Eligibility Requirements – requirements set by Fannie Mae and Freddie Mac to insure loans acquired by either GSE
POA	Pay Option ARM
REMIC	Real Estate Mortgage Investment Conduit
REO	Real estate owned
ReREMIC	Resecuritization of real estate mortgage investment conduits
RIF	Risk in Force
RPL	Re-performing loans (securities or loans)
SA	Servicer Advance
SFR	Single Family Rental Securitizations
SLST	Freddie Mac Seasoned Loan Structured Transaction
STACR	Freddie Mac Structured Agency Credit Risk debt notes
VPR	Voluntary Prepayment Rate
XoL	Excess of Loss reinsurance

Source: BofA Global Research

BofA GLOBAL RESEARCH

Analyst Certification

I, Chris Flanagan, 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.

Disclosures

Important Disclosures

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.
BofA Securities fixed income analysts regularly interact with sales and trading desk personnel in connection with their research, including to ascertain pricing and liquidity in the fixed income markets.

Other Important Disclosures

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.

This report may refer to fixed income securities or other financial instruments that may not be offered or sold in one or more states or jurisdictions, or to certain categories of investors, including retail investors. Readers of this report are advised that any discussion, recommendation or other mention of such instruments is not a solicitation or offer to transact in such instruments. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor for information relating to such instruments.
Rule 144A securities may be offered or sold only to persons in the U.S. who are Qualified Institutional Buyers within the meaning of Rule 144A under the Securities Act of 1933, as amended.
SECURITIES OR OTHER FINANCIAL INSTRUMENTS DISCUSSED HEREIN MAY BE RATED BELOW INVESTMENT GRADE AND SHOULD THEREFORE ONLY BE CONSIDERED FOR INCLUSION IN ACCOUNTS QUALIFIED FOR SPECULATIVE INVESTMENT.
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.
The securities or other financial instruments discussed in this report may be traded over-the-counter. Retail sales and/or distribution of this report may be made only in states where these instruments are exempt from registration or have been qualified for sale.
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.
This report, and the securities or other financial instruments discussed herein, may not be eligible for distribution or sale in all countries or to certain categories of investors, including retail investors.
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 Prudentiel 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 Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (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 Inc, regulated by the Canadian Investment Regulatory Organization; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa 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 Limited, 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 S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: 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 India by BofAS India; and is issued and distributed in Singapore to institutional 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 prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Securities group. You may be contacted by a different BofA Securities entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please refer to the Electronic Communications Disclaimers for further information.
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.

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.

This report may contain a trading idea or recommendation which highlights a specific identified near-term catalyst or event impacting a security, issuer, industry sector or the market generally that presents a transaction opportunity, but does not have any impact on the analyst’s particular “Overweight” or “Underweight” rating (which is based on a three month trade horizon). Trading ideas and recommendations may differ directionally from the analyst’s rating on a security or issuer because they reflect the impact of a near-term catalyst or event.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned in this report. Investors in such securities and instruments 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.

Copyright and General Information:

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 information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Securities in connection with the legal proceedings or matters relevant to such proceedings.

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.

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.