Credit Market Strategist

What's working

What's working

IG corporate bond spreads reached new cyclical tights of 93bps on the ICE BofA US IG index. After adjusting for dollar prices and index composition, that's 34th percentile since 2021, the tightest level since February 2022 and 21bps off the 2021 tights (vs. 7bps off the 2021 tights without adjustments). While we look for demand to remain robust, the almost indiscriminate buying from the first half of February should ease. That means although the spread tightening likely overshot a bit so far in February, we look for IG spreads to remain near the tight end of our expected 100 – 120bps range. As a result, trades that have worked in February may still have more room to run for both financials over industrials and BBBs over single-As. We estimate the spread compression for financials and BBBs has already tightened the overall IG index spread by 6bps. A full compression to the long-term medians could be worth another 6bps.

What's tight

Single-A industrial spreads have reached new tights since 2010 of 63bps. Adjusting for the dollar price shows the US IG index spread at 9th percentile since 2010, while single-A industrials are at 4t percentile (so still a bit off record tights).

What's compressing

By now the big six US banks have almost completely compressed to single-A industrials. We estimate only 3bps of further compression before the spread ratio reaches the historical median level.

From buying the dip to just buying

On Tuesday Treasury yields were stable, stocks lower, supply heavy and IG corporate bond spreads 1 to 4bps tighter. This price action suggests the demand for IG corporate bonds is getting unusually strong. Such supportive technicals currently are unlikely to be sustainable in the longer term.

The IMR impact on valuations, volumes

In August 2023 a regulatory rule change made it easier for life insurance companies to sell underwater bonds. Valuations cheapened for bonds trading at low dollar prices to just 4th percentile since 2010.

IG market technicals

Supply: $60.3bn of issuance this week, expect $35-40bn next week. **Flows**: +$2.96bn inflow this past week ending on February 21. **Weekly technicals**: expect $9.1bn of coupon payments, $0.6bn of calls to become effective next week. Bond maturities: $3.9bn this week, $20.8bn next week. **Dealer inventories**: +$3,864mn past week ended Thu. Details inside.

We published the weekly CMS data and charts in Situation Room.

23 February 2024

Credit Strategy
United States

BofA Data Analytics

Yuri Seliger
Credit Strategist
BofAS
+1 646 855 7209
yuri.seliger@bofa.com

Jean-Tiago Hamm
Credit Strategist
BofAS
jean-tiago.hamm@bofa.com

Srini Talagadadeevi
Credit Strategist
BofAS
sreenivasa.rao@bofa.com

Recent credit strategy research

Publication	Name
Situation Room	Situation Room: Inflows to HG moderate
Situation Room	Situation Room: The IMR impact on valuations, volumes
Situation Room	Situation Room: From buying the dip to just buying
Monthly HG Market Review	Monthly HG Market Review: Jan '24: More goldilocks
Credit Market Strategist	Credit Market Strategist: Demanding yield
Credit Market Strategist	Summer 2023 snapshot of US IG market

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 19 to 21. 12663428

Timestamp: 23 February 2024 04:39PM EST

US IG key views

- **US IG spread view.** Our 6M IG spread target is 100 – 120bps, compared to 93bps currently. The key risk to IG spreads are lower interest rates on the back of weaker than expected US economic growth. On the other hand, higher growth / higher rates / fewer Fed cuts are benign for IG spreads. Given the strong US economic momentum currently we look for IG spreads to remain near the tighter end of the expected range in the near term.

- **Quality.** We prefer BBB over single-A industrials. BBB spreads screen cheap relative to the big rally in spreads over the past six months (see Situation Room: Soft landing = buy BBBs). At the same time single-A issuers are subject to rising re-leveraging risk (see Credit Market Strategist: The return of re-leveraging).

- **Sectors.** Our biggest sector conviction is US banks over industrials. Despite the recent outperformance banks continue to trade cheap. We also expect banks to outperform in the risk scenario of lower yields / weaker growth, as tail risk related to the Fed hiking cycle decline (see Situation Room: Bank risks vs the Fed). We also like Healthcare and Utilities on valuations.

- **Curve.** US IG corporate spread curves are flat on the lack of supply in the back end and strong investor demand. Recent increase in 30yr issuance and investor re-positioning into shorter maturities (potentially to reduce duration risk) has re-steepened IG spread curves. However, we look for IG spread curves to remain flat as long as Treasury yields remain elevated, which should continue given the strong recent US data (see Situation Room: No escape from flatland).

- **Sector views matrix.** (For more details see Situation Room: Sector outlook 15 November 2023).

Exhibit 1: High Grade Sector Views Summary
US IG credit strategy sector views matrix

Overweight	View	Market weight	View	Underweight	View
Aerospace/Defense	Over	Automobiles	Market	Consumer Products	Under
Banks/Brokers	Over	Basic Materials	Market	Food, Bev, & Bottling	Under
Energy	Over	Chemicals	Market	Industrial Products	Under
Oil & Gas	Market	Metals & Mining	Market	Railroads	Under
Pipelines	Over	Insurance	Market	Retail	Under
Health Care	Over	Life Insurance	Market	Discounters	Under
REITs	Over	P&C & Reinsurance	Market	Non-Discounters	Under
Telecom	Over	Media & Entertainment	Market	Technology	Under
Utilities	Over	Tobacco	Market		

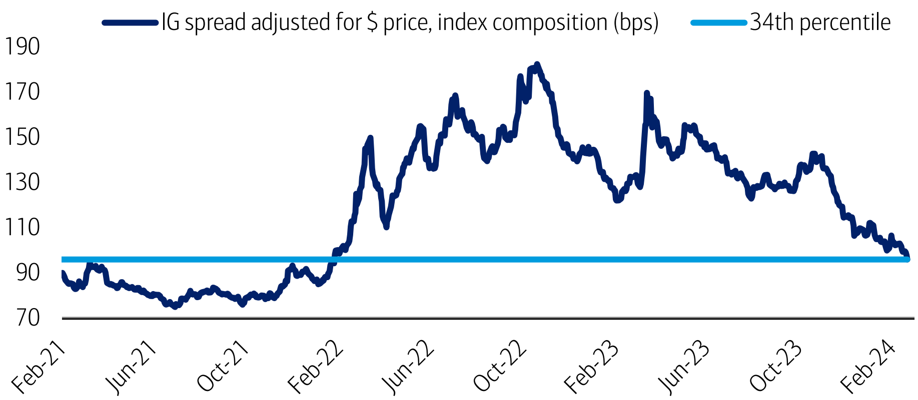
Source: BofA Global Research

BofA GLOBAL RESEARCH

What's working

IG corporate bond spreads reached new cyclical tights of 93bps on the ICE BofA US IG index. After adjusting for dollar prices and index composition, that's 34th percentile since 2021, the tightest level since February 2022 and 21bps off the 2021 tights (vs. 7bps off the 2021 tights without adjustments). While we look for demand to remain robust, the almost indiscriminate buying from the first half of February should ease. That means although the spread tightening likely overshot a bit so far in February, we look for IG spreads to remain near the tight end of our expected 100 – 120bps range. As a result, trades that have worked in February may still have more room to run for both financials over industrials and BBBs over single-As. We estimate the spread compression for financials and BBBs has already tightened the overall IG index spread by 6bps. A full compression to the long-term medians could be worth another 6bps.

Exhibit 2: After adjusting for composition and $ prices, IG spread is 34th percentile since 2021
The adjusted IG spread is 21bps off 2021 tights.



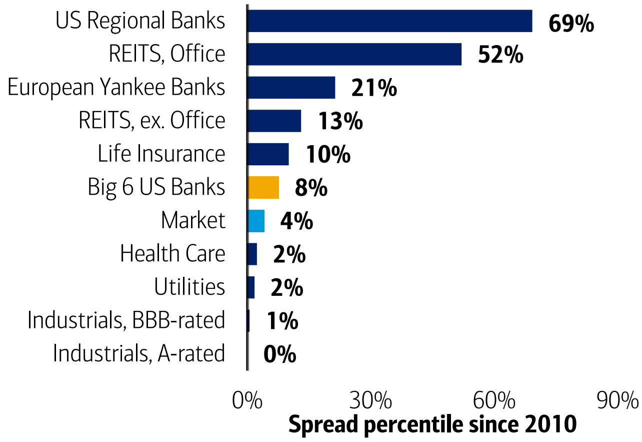
Source: BofA Global Research, ICE Data Indices, LLC

BofA GLOBAL RESEARCH

What's tight

By now single-A industrial spreads have reached new record tights since 2010 of 63bps (Exhibit 3). However, spreads are currently distorted by historically low bond dollar prices (see [Situation Room: An apples-to-apples comparison to 2021 IG tights](#)). Adjusting for the dollar price shows the US IG index spread at 9th percentile since 2010, while single-A industrials are not at record tights yet, although not by much (4th percentile). Most spread value in IG continues to be concentrated in financials, including Life Insurance (18th percentile), REITs ex. office (20th percentile) and European Yankee banks (25th percentile, Exhibit 4).

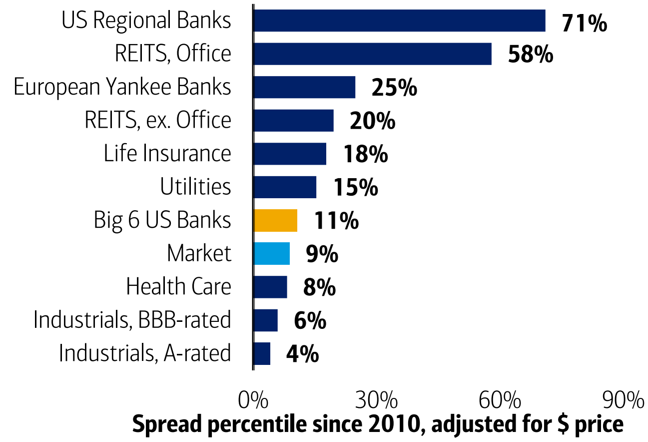
Exhibit 3: IG spread percentiles, spreads as reported
A-rated industrials have reached new tights since 2010.



Source: BofA Global Research, ICE Data Indices, LLC

BofA GLOBAL RESEARCH

Exhibit 4: IG spread percentiles, spreads adjusted for $ prices
After adjusting for $ prices the IG spread is currently at 9th percentile historically.



Source: BofA Global Research, ICE Data Indices, LLC

BofA GLOBAL RESEARCH

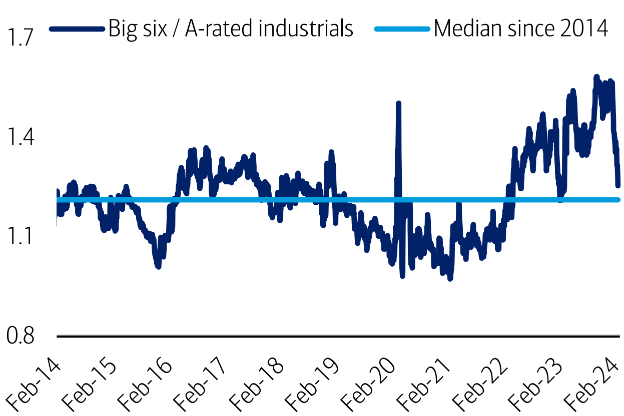
What's compressing

Some of the biggest outperformers since late January / early February has been big six US banks (Exhibit 5) and BBB industrials (Exhibit 8). On the other hand Yankee banks (Exhibit 6) and non-bank financials lagged (Exhibit 7).

By now the big six US banks have almost completely compressed to single-A industrials. We estimate only 3bps of further compression before the spread ratio reaches the historical median level. We continue to like banks as a hedge for the lower US growth / lower yields scenario (see, for example, [Situation Room: Talking about cuts]).

In contrast BBB-rated industrials still have 10bps of outperformance before reaching the typical valuation vs. single-A industrials. The potential outperformance for Yankee banks and non-bank financials is even larger at about 15bps (Exhibit 9).

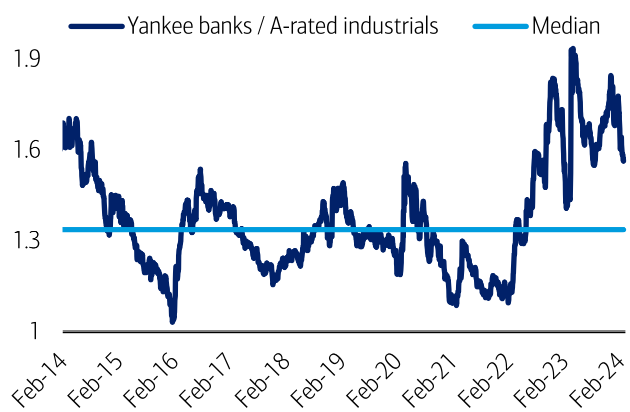
Exhibit 5: The big six US bank spreads have almost fully compressed
The ratio of the big six US bank to single-A industrials has compressed to 1.25 – similar to 1.21 median since 2014.



Source: BofA Global Research, ICE Data Indices, LLC

BofA GLOBAL RESEARCH

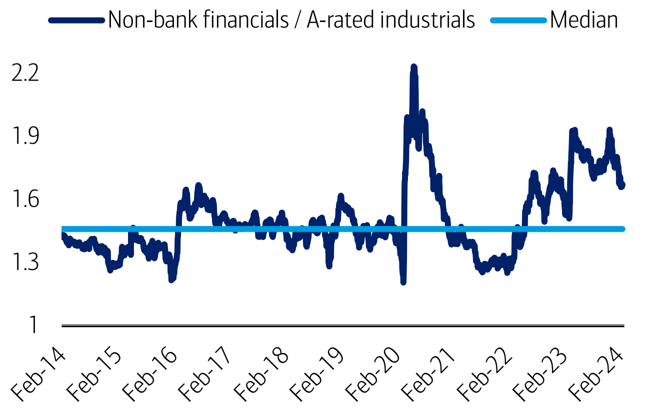
Exhibit 6: Yankee banks vs. single-A industrials
The ratio of Yankee bank spreads to single-A industrial remains evelated.



Source: BofA Global Research, ICE Data Indices, LLC

BofA GLOBAL RESEARCH

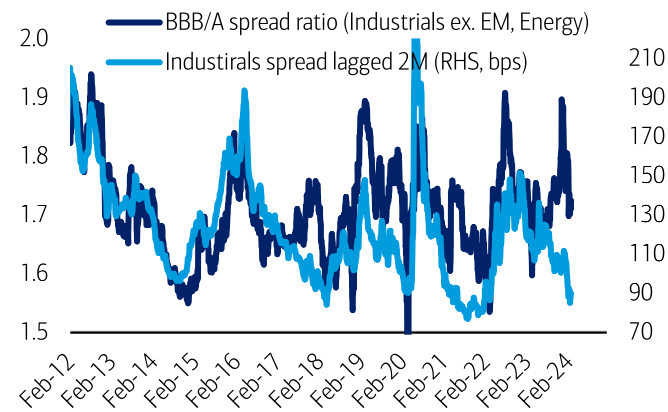
Exhibit 7: Non-bank financials vs. single-A industrials
Non-bank financials continue to trade wide to industrials



Source: BofA Global Research, ICE Data Indices, LLC

BofA GLOBAL RESEARCH

Exhibit 8: BBBs remain cheap vs. single-As
The ratio of BBB to single-A industrial spreads continues to lag the rally in spreads



Source: BofA Global Research, ICE Data Indices, LLC

BofA GLOBAL RESEARCH

Exhibit 9: Spread compression index impact
Spread compression YtD has tightened the IG index spread by 6bps. Further compression to historical medians could be worth another 6bps of index tightening.

		Spread ratio to single-A industrials			Spread compression			Index spread impact	
Sector	**Spread**	**Current**	**2024 peak**	**Historical median**	**From 2024 peak to current**	**From current to median**	**Sector index share**	**From 2024 peak to current**	**From current to median**
Big six US banks	83	1.25	1.57	1.21	-21	**-3**	9.5	-2.0	-0.3
Yankee banks	103	1.56	1.78	1.34	-14	**-15**	11.2	-1.6	-1.7
Non-bank financials	111	1.67	1.80	1.46	-9	**-14**	12.6	-1.1	-1.8
BBB Industrials	103	1.72	1.81	1.55	-5	**-10**	24.8	-1.2	-2.6
Total							**58.0**	**-5.9**	**-6.3**

Note: BBB vs. single-A industrial spread ratio is ex. EM and Energy, the median is adjusted for the current level of spread as in Exhibit 8.
Source: BofA Global Research.

BofA GLOBAL RESEARCH

Previously published here
Situation Room: From buying the dip to just buying

From buying the dip to just buying

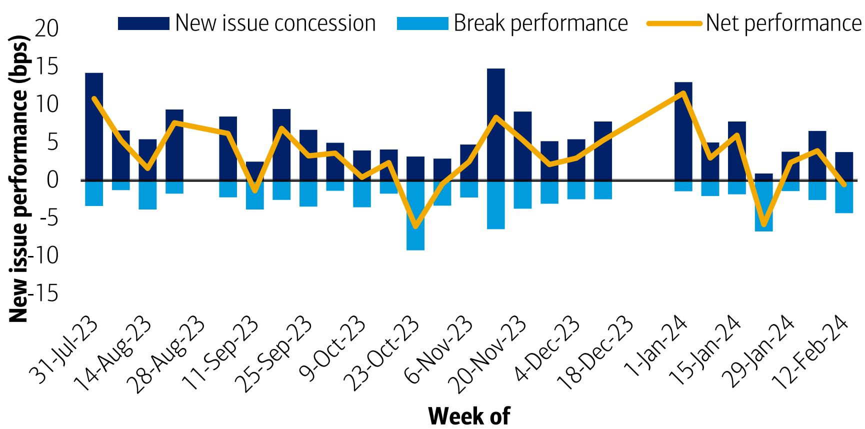
Today on Tuesday Treasury yields were relatively stable, S&P 500 index was down 0.6%, IG new issue supply was a heavy $14.3bn. Unchanged yields and heavy supply would normally be a spread widener. Instead, IG corporate bond spreads closed 1 to 4bps tighter. This price action suggests the demand for IG corporate bonds is getting unusually strong. Note that the demand for bonds already pushed the net performance of new issues (new issue concession less break performance) close to flat last week (Exhibit 10). We highlighted in Credit Market Strategist: Demanding yield that IG spreads have been negatively correlated with Treasury yields so far in 2024 (higher yields = tighter spreads, Exhibit 11). That suggests a "buy the dips" strategy. Today we saw a "just buy" strategy, as Treasury yields were little changed (and even lower in the front-end), while the demand accelerated further.

Bubbly conditions

The unusually supportive technicals currently are unlikely to be sustainable in the longer term. That creates the risk that IG spread tightening overshoots in February. Note that new issue supply should remain seasonally strong into March.

Exhibit 10: IG new issue supply performance was already strong last week

The net performance of new issues (new issue concession less break performance) was -0.6bps last week, down from +3.9bps for the week of February 5.

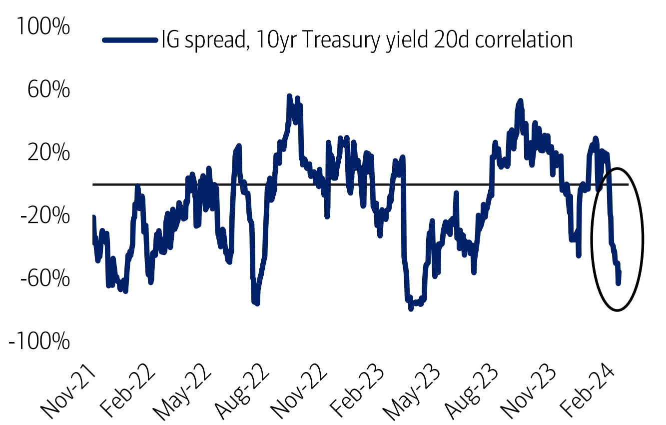


Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 11: IG spreads benefit from higher Treasury yields …

The correlation between IG spreads and 10yr Treasury yields is close to the levels post the SVB in March.

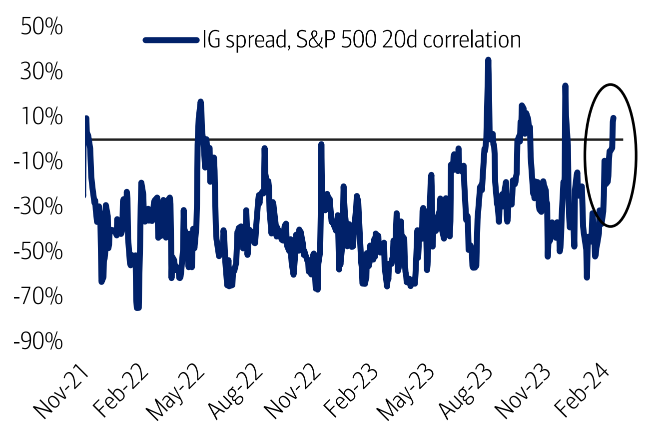


Source: BofA Global Research, Bloomberg.

BofA GLOBAL RESEARCH

Exhibit 12: … regardless of the reaction in equity prices

The correlation between IG spreads and the S&P 500 index is currently close to zero.



Source: BofA Global Research, Bloomberg.

BofA GLOBAL RESEARCH

Previously published here

[Situation Room: The IMR impact on valuations, volumes]

The IMR impact on valuations, volumes

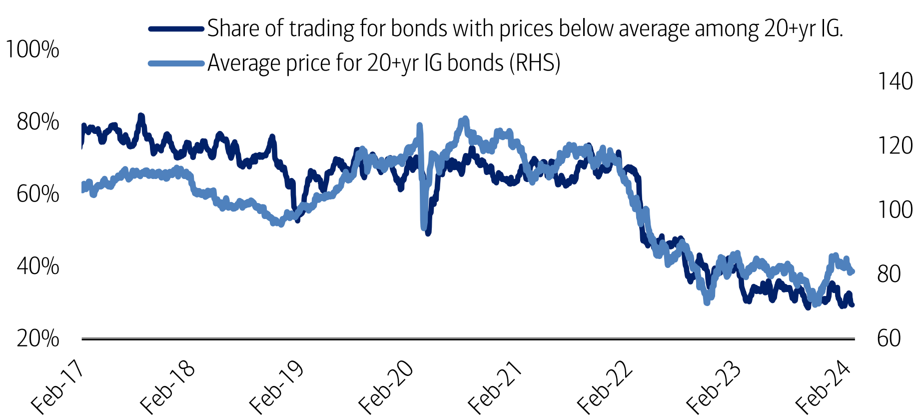
In August 2023, the NAIC (National Association of Insurance Commissioners) relaxed a restriction on so called negative IMR (Interest Maintenance Reserves). The change made it easier for life insurance companies to sell bonds that had declined in value due to the increase in interest rates. In other words, the rule change helped unfreeze holdings of low-coupon, low-dollar price, long-duration (30yr) corporate bonds that otherwise could be stuck on insurance company balance sheets. With the restrictions eased, life insurance companies could be incentivized to increase the average yield of their investment portfolios by rotating out of the low book yield bonds and into more recently issued bonds with higher coupons and yields. Still, trading volumes in low dollar price bonds remained low, but the spread premium for low dollar prices has compressed.

Trading volumes: little impact

Despite the rule change, trading volumes for low-dollar priced back-end bonds remains low. In Exhibit 13 below we plot the share of trading volumes for back-end IG corporate bonds that trade at below-average dollar prices (vs. the total trading volumes for back-end IG bonds). The share dropped significantly in 2022 as off-the-run bonds shifted from trading at a premium to trading at a discount. However, the share did not change much in late 2023 and into 2024, even as the average price increased. At the same time, the overall trading in back-end bonds remained relatively stable, as a share of the total (Exhibit 14).

Exhibit 13: No increase in trading volume of low-price back-end IG bonds recently

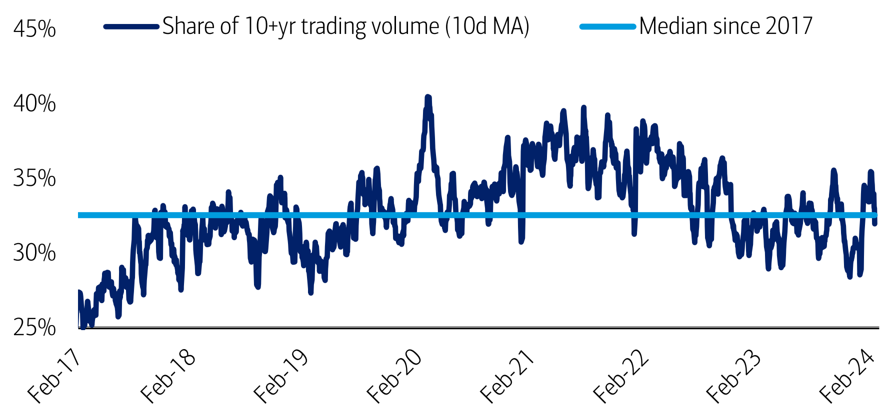
The share of trading in back-end low-dollar price bonds remained relatively stable in late 2023 and into 2024.



Source: BofA Global Research, TRACE, ICE Data Indices, LLC

BofA GLOBAL RESEARCH

Exhibit 14: The overall trading volumes for IG back-end corporate bonds remained steady
Currently the share of IG corporate bond trading volumes for bonds 10yr and longer is 32% -- similar to the median since 2017.



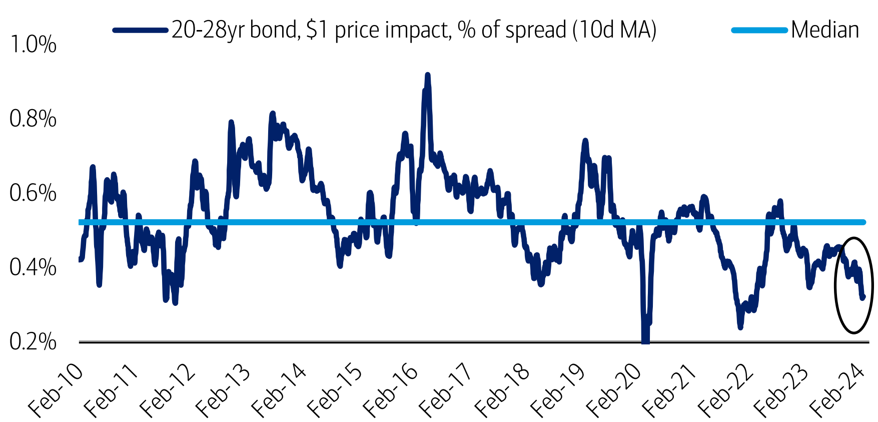
Source: BofA Global Research, TRACE, ICE Data Indices, LLC

BofA GLOBAL RESEARCH

Valuations: cheaper

Unlike trading volumes, valuations cheapened for bonds trading at low dollar prices. We estimate that investors currently pay 0.32% of spread for each $1 of price discount for back-end bonds. That is just 4th percentile since 2010 and notably below 0.52% median since 2010. The dollar price premium was already below average in late 2023 and declined further in 2024 (Exhibit 15). That suggests net selling by insurance companies has potentially impacted valuations, making discount bonds attractive from a relative value perspective.

Exhibit 15: Discount bonds are trading cheap
The average premium for back-end bond low dollar prices has declined to 0.32% of spread for each $1 of price, which is just 4th percentile since 2010.



Note: for the details of the calculation see: Credit Market Strategist: Price fall
Source: BofA Global Research, ICE Data Indices, LLC

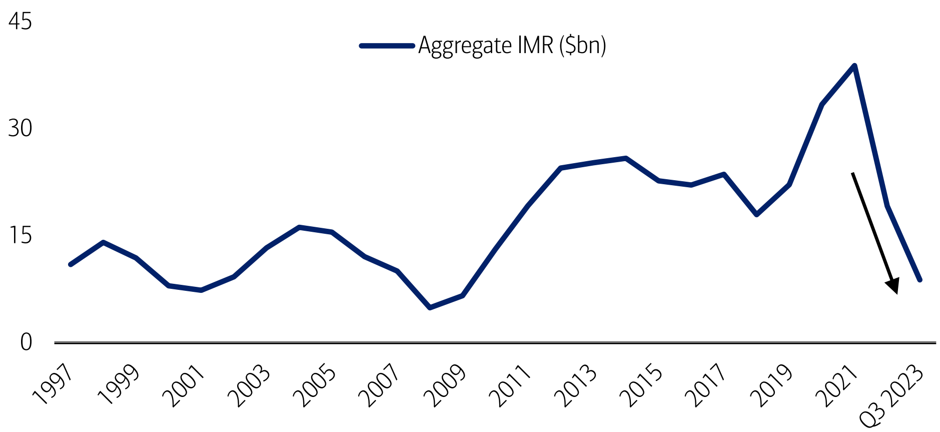
BofA GLOBAL RESEARCH

What is IMR

IMR (Interest Maintenance Reserves) is a statutory accounting concept for US life insurance companies. It effectively allows gains or losses on bond sales due to changes in interest rates to be amortized over the duration of the bond. Mechanically, the IMR is positive when the sale of a bond generates a gain and negative – when the sale generates a loss. However, the original rule did not allow for a negative aggregate IMR. In other words, when the aggregate dropped below zero, insurance companies could no longer amortize losses, and the entire loss amount would directly reduce statutory capital. The new rule removes this restriction under certain circumstances (up to 10% of the adjusted statutory surplus, only if risk-based capital ("RBC") ratio remains above 300%, the change is currently set to expire on January 1, 2026).

Therefore, on balance the updated IMR rule makes it easier for life insurance companies to sell underwater bonds. Note that life insurance companies were able to sell underwater bonds even before the change if, for example, they had a positive IMR balance (about 70% of companies as of 3Q-2023) or could take a hit to capital. As a result, estimating the potential impact of the rule is complicated. Prudential, for example, stated on their 3Q-2023 earnings call that they were able to "admit" $1.3bn of additional IMR due to the rule change. That would correspond to the ability to sell $6.5bn of back-end IG bonds, assuming the average price of $80. Prudential had one of the largest negative IMR balances, according to SNL data.

Exhibit 16: The aggregate life insurance IMR balance declined in 2023.
The aggregate IMR for life insurance companies declined to $8.8bn by 3Q-2023 from the highs of $39bn in 2021.



Source: SNL

BofA GLOBAL RESEARCH

Previously published here
[Situation Room: Inflows to HG moderate]

Flows

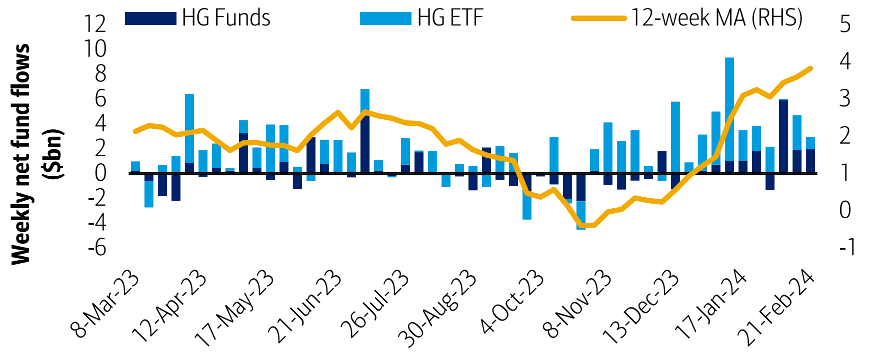
Inflows to HG moderate

Inflows to US HG bond funds and ETFs moderated this past week ending on February 21 with a +$2.96bn inflow, down from +$4.70bn in the prior week. This week's inflow was split between HG funds (to +$1.99bn from +$1.91bn the prior week), and HG ETFs (to +$0.97bn from +$2.80bn). Short-term HG flows were near flat (to -$0.06bn from +$0.63bn), while inflows continued ex. short-term (to +$3.03bn from +$4.07bn).

Strong inflows for stocks

This past week inflows accelerated for equities (to +$12.71bn, the strongest inflow in eight weeks, from +$10.37bn the prior week). They also improved for HY (to +$0.70bn from +$0.08bn) and for munis (to +$0.57bn from +$0.00bn). Flows were flat for loans (to +$0.01bn from +$0.27bn) while outflows from global EM bonds accelerated (to -$0.74bn from -$0.58bn). Finally, money markets reported a +$1.73bn inflow this past week, following a +$1.91bn inflow a week earlier.

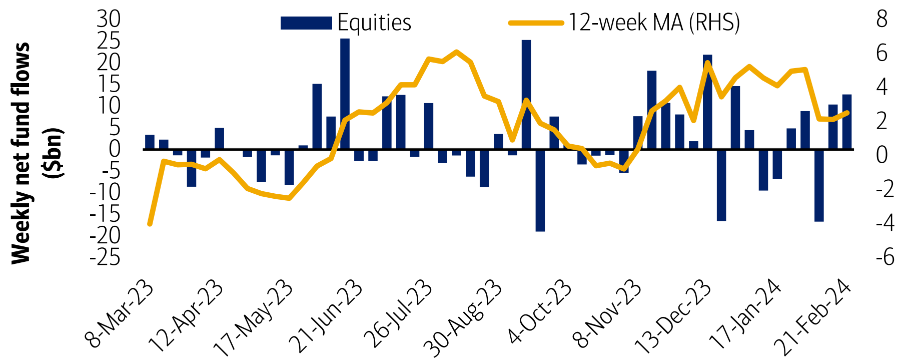
Exhibit 17: Weekly high grade fund flows, $bn
HG ETF +$0.97bn, HG Funds +$1.99



Source: EPFR Global. Note: data are for US-domiciled funds only.

BofA GLOBAL RESEARCH

Exhibit 18: Weekly equity fund flows, $bn
Equities +$12.71bn



Source: EPFR Global. Note: data are for US-domiciled funds only.

BofA GLOBAL RESEARCH

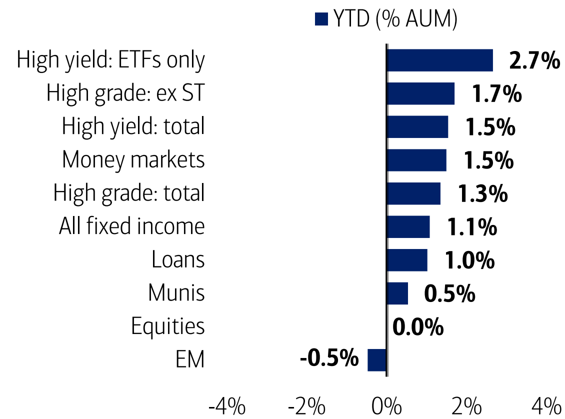
Exhibit 19: Fund flows summary
YTD fund flows summary by asset class

Asset class	Last week (% of AUM for weekly reporting funds/ETFs)	YTD (% of AUM for all funds/ETFs)	YTD ($bn)
High grade: total	0.14%	1.3%	52.7
High grade: ex short-term	0.19%	1.7%	53.7
High yield: total	0.27%	1.5%	5.5
High yield: ETFs only	0.48%	2.7%	2.0
Loans	0.01%	1.0%	1.2
EM	-0.16%	-0.5%	-3.1
Munis	0.10%	0.5%	5.0
All fixed income	0.12%	1.1%	69.7
Money markets	0.03%	1.5%	96.8
Equities	0.11%	0.0%	0.9

Note: Last week flow as % of AUM is based on AUM for weekly reporting funds / ETFs only. YTD flow as % of AUM is based on AUM for the full fund/ ETF universe as of December 31 2020. Global EM funds, US-domiciled funds only for other fund types.
Source: EPFR Global, BofA Global Research

BofA GLOBAL RESEARCH

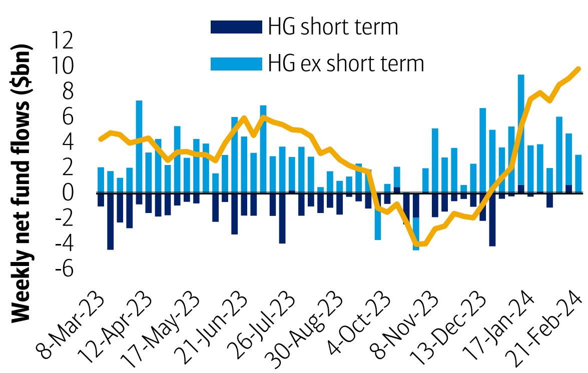
Exhibit 20: Year to date fund flows, % of AUM
EM has had the biggest outflows so far in 2023.



Note: Global EM funds, US-domiciled funds only for other fund types.
Source: EPFR Global, BofA Global Research

BofA GLOBAL RESEARCH

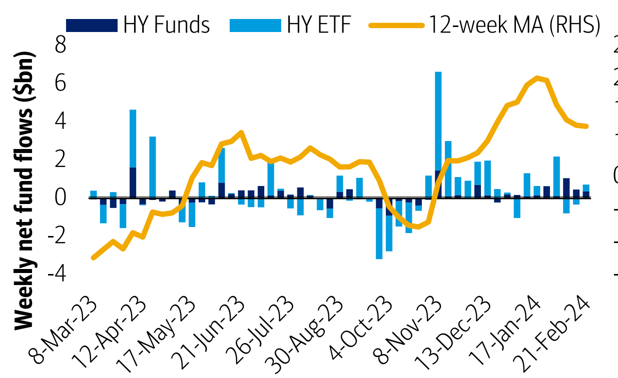
Exhibit 21: Weekly high grade fund flows, $bn
HG short-term -$0.06bn, HG ex short-term +$3.03



Source: EPFR Global. Note: data are for US-domiciled funds only.

BofA GLOBAL RESEARCH

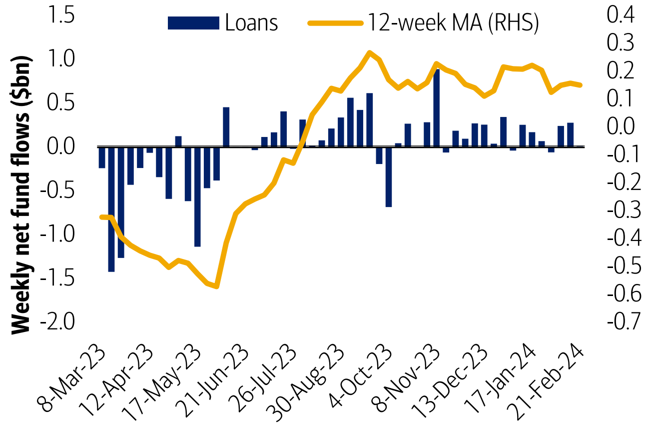
Exhibit 22: Weekly high yield fund flows, $bn
HY ETFs +$0.36bn, HY funds +$0.33



Source: EPFR Global. Note: data are for US-domiciled funds only.

BofA GLOBAL RESEARCH

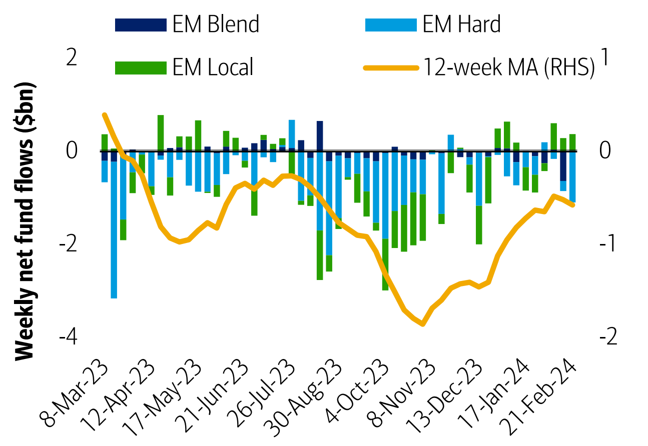
Exhibit 23: Weekly loan fund flows, $bn
Leveraged loans +$0.01bn



Source: EPFR Global. Note: data are for US-domiciled funds only.

BofA GLOBAL RESEARCH

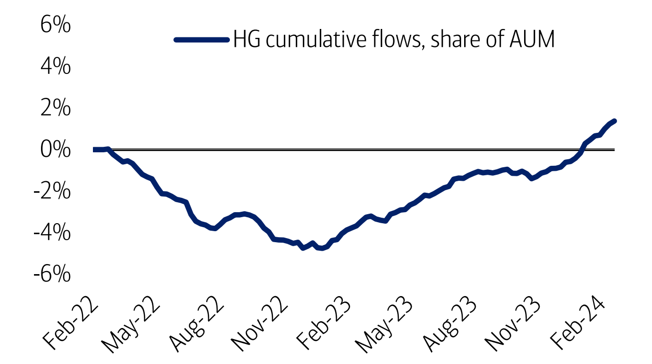
Exhibit 24: Weekly EM fund flows, $bn
Global EM bonds -$0.74bn



Source: EPFR Global. Note: data are for US-domiciled funds only.

BofA GLOBAL RESEARCH

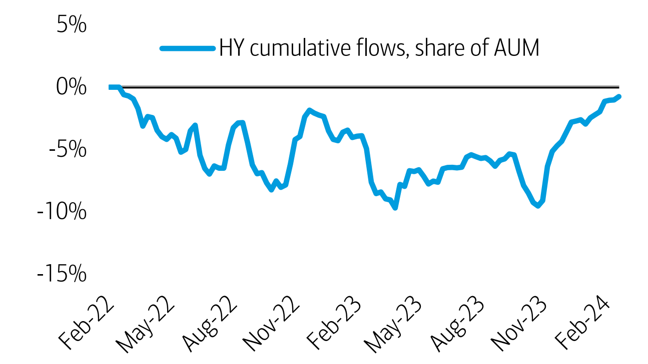
Exhibit 25: Cumulative % flows in HG over the last 2 years
Following large outflows in 2022, HG flows turn positive in 2023



Source: EPFR Global, BofA Global Research

BofA GLOBAL RESEARCH

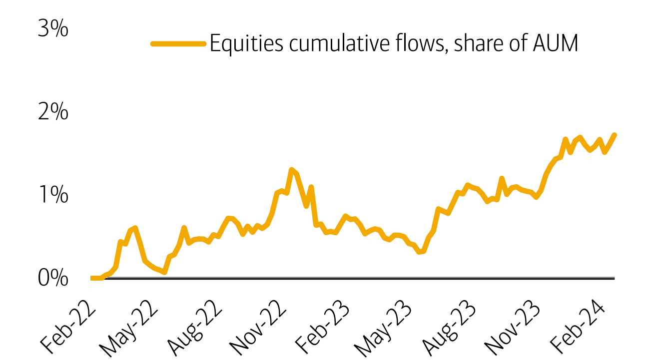
Exhibit 26: Cumulative % flows in HY over the last 2 years
2022 and 2023 have seen consequent outflows in HY



Source: EPFR Global, BofA Global Research

BofA GLOBAL RESEARCH

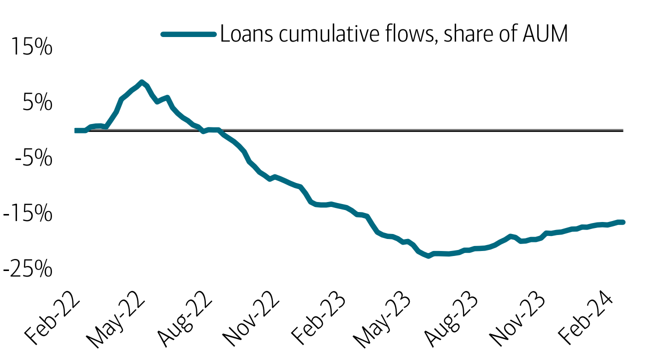
Exhibit 27: Cumulative % flows in equities over the last 2 years
Flows moderate in equities after two years of inflows



Source: EPFR Global, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 28: Cumulative % flows in loans over the last 2 years
After large inflows until mid-2021, loans subject to large outflows ever since



Source: EPFR Global, BofA Global Research

BofA GLOBAL RESEARCH

Appendix: defining high grade

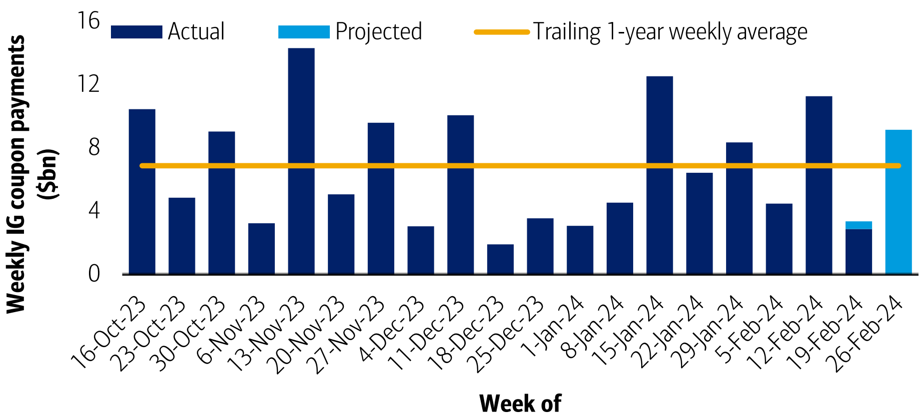
We define our high grade flows metric as a combination of "bond" and "corporate bond" fixed income funds and ETFs domiciled in the US (and investing in any currency, although the majority is invested in USD). We also exclude funds primarily focused on Government, HY, EM and MBS from the sample. The "bond" category refers to the broad high grade market, which includes Treasuries, mortgages and agencies in addition to corporate bonds. This category accounts for the majority of AUM and flows. On the other hand the dedicated corporate bond funds and ETFs are much smaller in terms of assets under management. We also include the "total return" bond category in our tracking of high grade flows. Finally note that "short-term" maturity refers to duration of 0 to 4 years.

Weekly technicals

The US IG corporate bond market is expected to generate $9.1bn in coupon payments next week, above the trailing 1-year weekly average of $6.9bn (Exhibit 29). In addition, $1.3bn of calls were settled and paid this week, while $0.6bn of calls are expected to become effective next week. Bond maturities: $3.9bn this week, $20.8bn next week.

Exhibit 29: Weekly US IG coupon payments

Expect $9.1bn of coupon payments next week, above the $6.9bn trailing 1-year weekly average.



Source: ICE Data Indices, LLC, BofA Global Research

BofA GLOBAL RESEARCH

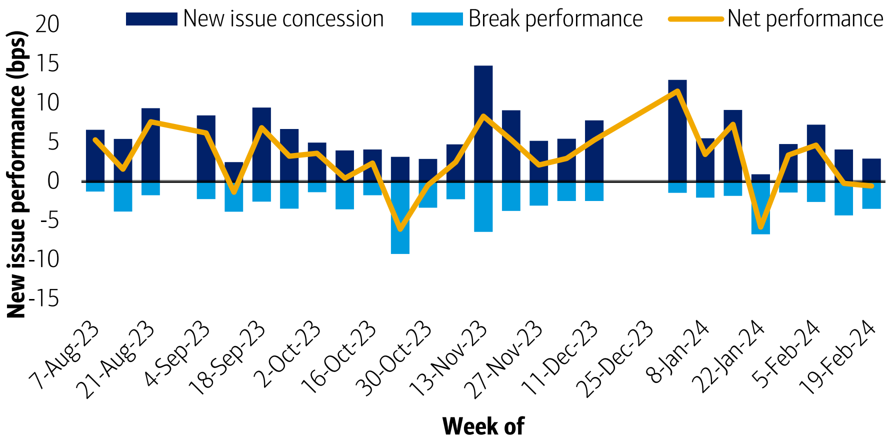
Supply

US IG gross issuance totaled $60.3bn this week, consisted of $3.0bn financials, $38.6bn high-quality industrials and $18.7bn BBB industrials. Given $145.3 bn of gross issuance, $53.1 bn of maturities and $2.4bn of additional redemptions, net issuance is tracking $89.8bn MTD. Supply was elevated this week due to a number of larger M&A deals, which is unlikely to continue next week. Hence we look for issuance to remain elevated but slow for the very heavy pace this week to $35 - $40bn range next week(Exhibit 31).

New issue performance remained strong at 0.6bps tighter this week. The average new issue concession decreased to 2.9bps from 4.1bps last week, while the average break performance weakened to 3.5bps tighter this week from 4.3bps tighter last week. As a result, the overall new issue performance, which we measure as new issue concession plus break performance, improved to 0.6bps tighter this week from 0.2bps tighter last week (Exhibit 30). This week's new issues are trading 5bps tighter on average from pricing.

Exhibit 30: Weekly new issue supply performance

For the week of Feb 19 2024: new issue concession = 2.9bps; break performance = -3.5bps; net performance = -.6bps.

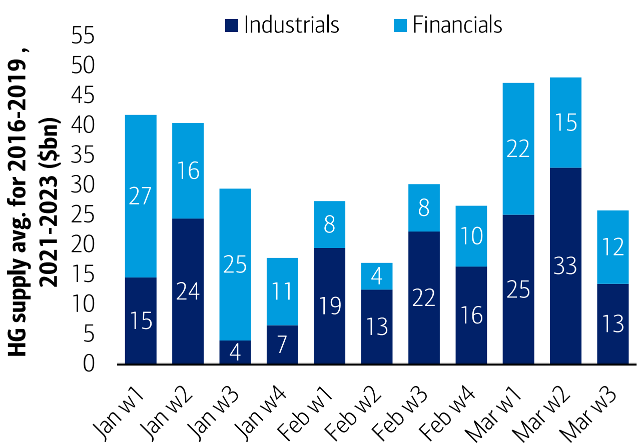


Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 31: Weekly Supply seasonality

Supply volumes pick tend to pick up 1st week of March.

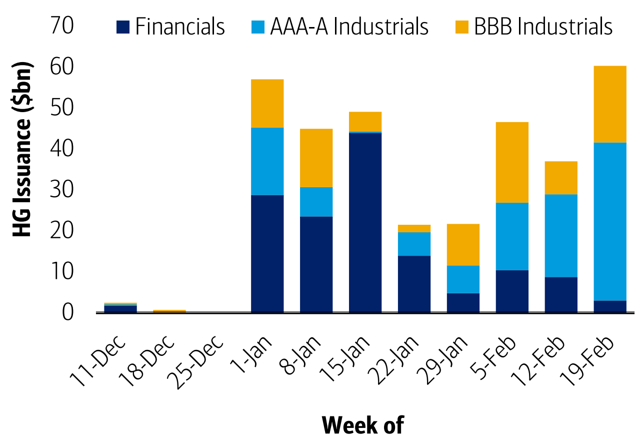


Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 32: Weekly Supply

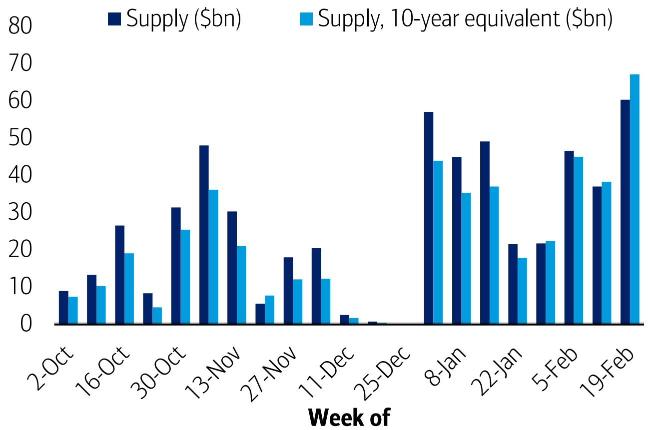
This week's supply consisted of $3.0bn financials, $38.6bn high-quality industrials and $18.7bn BBB industrials.



Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

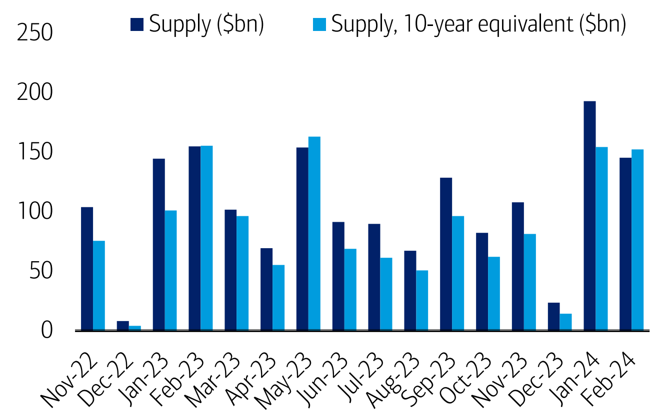
Exhibit 33: Weekly gross and 10-year equivalent supply volumes
10-year equivalent supply = $67.1bn WTD



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 34: Monthly gross and 10-year equivalent supply volumes
10-year equivalent supply = $152.2bn in February



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 35: Recent new issue pricing and new issue concessions
List of new issues in the IG corporate bond market today along with performance metrics.

Date	Ticker	Name	Tenor	Size ($mm)	Moody's/S&P Rating	Coupon (%)	Px Spread (bps)	New Issue Conc. (bps)	* Break performance	Current spread (bps)
2024-02-20	AWK	American Water Capital Corp	10	700	Baa1/A	5.15	92	n.a.	n.a.	92
2024-02-20	AWK	American Water Capital Corp	30	700	Baa1/A	5.45	107	n.a.	n.a.	107
2024-02-20	CBG	CBRE Services Inc	5	500	Baa1/BBB+	5.5	130	n.a.	-11	119
2024-02-20	DTE	DTE Electric Co	3	500	Aa3/A	4.85	47	n.a.	n.a.	42
2024-02-20	DTE	DTE Electric Co	10	500	Aa3/A	5.2	93	12	-2	90
2024-02-20	HCA	HCA Inc	7	1,000	Baa3/BBB-	5.45	120	n.a.	n.a.	112
2024-02-20	HCA	HCA Inc	10	1,300	Baa3/BBB-	5.6	135	4	n.a.	129
2024-02-20	HCA	HCA Inc	30	1,500	Baa3/BBB-	6	160	7	n.a.	157
2024-02-20	HCA	HCA Inc	40	700	Baa3/BBB-	6.1	170	n.a.	n.a.	167
2024-02-20	MAR	Marriott International Inc/MD	5	500	Baa2/BBB	4.875	90	6	-4	86
2024-02-20	MAR	Marriott International Inc/MD	10	1,000	Baa2/BBB	5.3	120	6	n.a.	119
2024-02-20	MIZUHO	Mizuho Financial Group Inc	6NC5	750	A1/A-	5.376	112	-8	n.a.	104
2024-02-20	MIZUHO	Mizuho Financial Group Inc	11NC10	750	A1/A-	5.579	130	5	n.a.	121
2024-02-20	SO	Georgia Power Co	3	500	Baa1/BBB+	5.004	62	n.a.	n.a.	56
2024-02-20	SO	Georgia Power Co	10	900	Baa1/BBB+	5.25	102	5	-3	98
2024-02-20	VZ	Verizon Communications Inc	30	1,000	Baa1/BBB+	5.5	115	n.a.	-2	111
2024-02-20	WSTPNZ	Westpac New Zealand Ltd	3	750	A1/AA-	5.132	75	n.a.	n.a.	69
2024-02-20	WSTPNZ	Westpac New Zealand Ltd	5	750	A1/AA-	5.195	95	n.a.	n.a.	87
2024-02-21	AZN	Astrazeneca Finance LLC	3	1,250	A2/A	4.8	42	5	n.a.	39
2024-02-21	AZN	Astrazeneca Finance LLC	5	1,250	A2/A	4.85	57	8	n.a.	54
2024-02-21	AZN	Astrazeneca Finance LLC	7	1,000	A2/A	4.9	62	8	-3	58
2024-02-21	AZN	Astrazeneca Finance LLC	10	1,500	A2/A	5	72	12	-4	68
2024-02-21	CMPCCI	Inversiones CMPC SA	10	500	NA/BBB	6.125	185	n.a.	n.a.	178
2024-02-21	CSCO	Cisco Systems Inc	2	1,000	NA/AA-	4.9	25	n.a.	-4	21
2024-02-21	CSCO	Cisco Systems Inc	3	2,000	NA/AA-	4.8	40	n.a.	-6	33
2024-02-21	CSCO	Cisco Systems Inc	5	2,500	NA/AA-	4.85	55	n.a.	-6	48
2024-02-21	CSCO	Cisco Systems Inc	7	2,500	NA/AA-	4.95	65	n.a.	-7	58
2024-02-21	CSCO	Cisco Systems Inc	10	2,500	NA/AA-	5.05	75	n.a.	-7	66
2024-02-21	CSCO	Cisco Systems Inc	30	2,000	NA/AA-	5.3	85	n.a.	-6	79
2024-02-21	CSCO	Cisco Systems Inc	40	1,000	NA/AA-	5.35	90	n.a.	-2	87
2024-02-21	NGGLN	Massachusetts Electric Co	30	400	Baa1/BBB+	5.867	165	-4	n.a.	138
2024-02-22	ABBV	AbbVie Inc	3	2,250	A3/A-	4.8	35	-9	n.a.	34
2024-02-22	ABBV	AbbVie Inc	5	2,500	A3/A-	4.8	50	0	4	49
2024-02-22	ABBV	AbbVie Inc	7	2,000	A3/A-	4.95	60	-7	n.a.	59
2024-02-22	ABBV	AbbVie Inc	10	3,000	A3/A-	5.05	75	-1	-1	74
2024-02-22	ABBV	AbbVie Inc	20	750	A3/A-	5.35	75	-5	n.a.	74
2024-02-22	ABBV	AbbVie Inc	30	3,000	A3/A-	5.4	95	13	n.a.	94

Exhibit 35: Recent new issue pricing and new issue concessions
List of new issues in the IG corporate bond market today along with performance metrics.

2024-02-22	ABBV	AbbVie Inc	40	1,500	A3/A-	5.5	105	n.a.	n.a.	104
2024-02-22	CAT	Caterpillar Financial Services Corp	2	600	A2/A	FRN	SOFR+46	n.a.	n.a.	n.a.
2024-02-22	CAT	Caterpillar Financial Services Corp	2	800	A2/A	5.05	35	8	-4	34
2024-02-22	CAT	Caterpillar Financial Services Corp	5	600	A2/A	4.85	55	6	n.a.	54
2024-02-22	EXC	Exelon Corp	5	650	Baa2/BBB	5.15	88	-1	2	90
2024-02-22	EXC	Exelon Corp	10	650	Baa2/BBB	5.45	115	-2	n.a.	115
2024-02-22	EXC	Exelon Corp	29	400	Baa2/BBB	5.6	130	-1	n.a.	132
2024-02-22	WHR	Whirlpool Corp	10	300	Baa2/BBB	5.75	145	8	n.a.	143
2024-02-22	XEL	Northern States Power Co/MN	30	700	Aa3/A+	5.4	97	1	n.a.	97
2024-02-23	SOLV	Solventum Corp	3	1,000	Baa3/BBB-	-	-	n.a.	n.a.	n.a.
2024-02-23	SOLV	Solventum Corp	5	1,500	Baa3/BBB-	-	-	n.a.	n.a.	n.a.
2024-02-23	SOLV	Solventum Corp	7	1,000	Baa3/BBB-	-	-	n.a.	n.a.	n.a.
2024-02-23	SOLV	Solventum Corp	10	1,650	Baa3/BBB-	-	-	n.a.	n.a.	n.a.
2024-02-23	SOLV	Solventum Corp	30	1,250	Baa3/BBB-	-	-	n.a.	n.a.	n.a.
2024-02-23	SOLV	Solventum Corp	40	500	Baa3/BBB-	-	-	n.a.	n.a.	n.a.

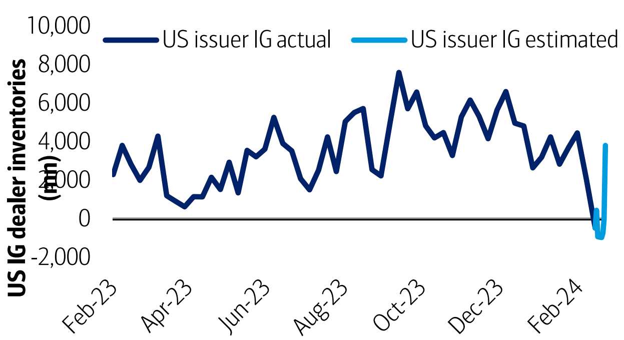
Note: We calculate new issue concessions by estimating the difference between new issue bond spread and interpolated G spread from comparable liquid secondary bonds of the same issuer prior to the new issue deal announcement, adjusted for the spread impact of dollar prices deviating from par. Break performance is computed as the difference between new issue pricing and secondary closing spread on the first day of trading.
Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Dealer inventories

Below we estimate dealer inventories for the IG corporate bonds based on TRACE data. The actual inventories of US issuer bonds based on NY Fed survey, as well as the estimated change since the latest Fed report are plotted in Exhibit 36 and Exhibit 37. We estimate the corresponding DV01 equivalent in Exhibit 37. More details by sector and maturity are available in Exhibit 38 and Exhibit 39. Finally, note that the data for the current date is through about 4:40 p.m. Eastern Standard Time.

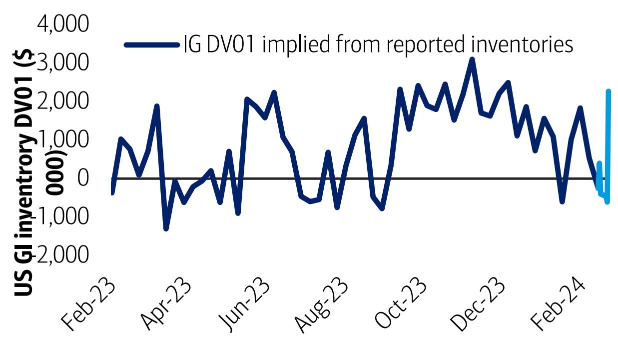
Exhibit 36: Estimated dealer inventories of IG corporate bonds.
We estimate IG dealer inventories of US issuer bonds increased to $3.8bn currently from -$0.5bn on Feb-14.



Note: data for US issuer bonds only, maturities 13M or longer. Actual dealer inventory data is from Primary Dealer Statistics survey by the NY Fed. The subsequent change in inventory is estimated based on TRACE.
Source: BofA Global Research, FINRA, TRACE, Federal Reserve

BofA GLOBAL RESEARCH

Exhibit 37: Estimated dealer inventory DV01 for IG corporate bonds.
We estimate IG dealer inventory DV01 of US issuer bonds increased to $2.3mn currently from -$0.3bn on Feb-14.



Note: data for US issuer bonds only, maturities 13M or longer. Actual dealer inventory data is from Primary Dealer Statistics survey by the NY Fed. The subsequent change in inventory is estimated based on TRACE.
Source: BofA Global Research, FINRA, TRACE, Federal Reserve

BofA GLOBAL RESEARCH

Exhibit 38: Estimated changes in IG dealer inventories by maturity and broad sector.

We estimate IG dealer inventories increased $4,906mn today and increased $3,864mn over the prior week.

	Net dealer buy ($mn)					Net dealer DV01 change ($thousand)					Trading volumes on 22-Feb-24 ($mn)			
Sector	22-Feb	21-Feb	1 W	2 W	4 W	22-Feb	21-Feb	1 W	2 W	4 W	Buy	Sell	Dealer	Total
High grade (13M+)	**4,906**	**509**	**3,864**	**5,117**	**1,408**	**3,570**	**-419**	**2,184**	**3,183**	**2,843**	**20,506**	**15,599**	**12,464**	**48,569**
<3yr	421	623	451	944	-230	97	114	90	148	-175	2,851	2,431	2,082	7,363
3-5yr	1,261	438	1,313	655	372	471	166	468	172	91	3,635	2,374	2,564	8,573
5-11yr	1,377	-285	897	913	-4,088	864	-245	500	448	-2,763	7,265	5,888	4,515	17,668
11+yr	1,847	-266	1,203	2,605	5,354	2,138	-454	1,126	2,415	5,690	6,754	4,907	3,303	14,965
Fin	1,606	0	401	-404	-3,660	1,003	-192	310	-129	-1,463	6,740	5,134	4,015	15,890
Non-Fin	3,301	510	3,463	5,521	5,068	2,567	-226	1,873	3,312	4,306	13,766	10,465	8,448	32,679
Fixed	4,939	545	3,956	5,156	1,806	3,602	-413	2,225	3,206	2,923	20,409	15,469	12,406	48,284
Floating	-33	-36	-92	-40	-398	-32	-5	-41	-23	-80	97	130	58	285
US issuers	3,848	692	3,367	4,268	1,102	2,879	-188	1,870	2,617	2,052	16,266	12,418	10,251	38,935
DM Yankees	824	-271	123	252	-733	555	-277	81	197	114	3,642	2,818	2,006	8,467
EM Yankees	234	88	374	596	1,039	136	46	232	369	676	597	363	206	1,167

Note: data for maturities 13M or longer. Changes in inventories are estimated based on TRACE.

Source: BofA Global Research, FINRA, TRACE.

BofA GLOBAL RESEARCH

Exhibit 39: Estimated changes in IG dealer inventories by sector.

We estimate today IG dealer inventories increased $1,074mn for Banks/Brokers and increased $223mn for Energy.

	Net dealer buy ($mn)					Net dealer DV01 change ($thousand)					Trading volumes on 22-Feb-24 ($mn)			
Sector	22-Feb	21-Feb	1 W	2 W	4 W	22-Feb	21-Feb	1 W	2 W	4 W	Buy	Sell	Dealer	Total
Aerospace/Defense	52	20	143	409	592	42	31	25	161	428	404	352	200	956
Automobiles	138	93	271	314	-152	89	26	147	200	-145	491	353	366	1,210
Banks/Brokers	1,074	-92	257	-203	-2,841	623	-214	91	-389	-1,706	4,554	3,481	2,738	10,773
Basic Materials	294	141	361	425	332	228	35	227	297	208	900	606	470	1,976
Commercial Services	117	17	72	44	-25	71	-4	34	76	97	329	212	136	677
Energy	223	234	263	241	-275	188	121	208	276	5	1,016	793	724	2,533
Finance	169	63	136	-30	-234	52	-13	60	12	-119	982	813	647	2,443
Food, Bev, & Bottling	163	5	113	388	-1	138	-15	25	286	-29	484	321	372	1,176
Health Care	511	-342	182	394	842	431	-538	-220	-108	811	2,506	1,995	1,675	6,176
Industrial Products	428	66	645	793	621	309	28	481	606	568	1,160	732	524	2,416
Insurance	271	-10	80	417	226	274	1	162	560	667	670	398	238	1,306
Media & Entertainment	25	-32	-166	-381	-521	8	-99	-182	-512	-574	607	583	436	1,626
REITs	92	39	-72	-588	-811	53	33	-3	-313	-305	533	442	393	1,368
Retail	137	133	138	175	501	112	123	116	181	462	581	443	358	1,381
Technology	330	152	609	407	749	248	29	477	138	695	1,080	750	660	2,490
Telecom	536	-4	400	613	168	306	-1	207	386	42	1,946	1,411	1,379	4,736
Tobacco	-12	-12	-9	332	299	-12	1	7	163	112	149	160	147	456
Transportation	9	49	53	278	476	48	69	65	324	536	287	278	115	680
Utilities	256	4	315	958	1,348	304	-36	235	732	960	1,517	1,261	676	3,454
Other	91	-15	74	130	114	55	3	21	107	130	307	216	212	735

Note: data for maturities 13M or longer. Changes in inventories are estimated based on TRACE.

Source: BofA Global Research, FINRA, TRACE.

BofA GLOBAL RESEARCH

Common abbreviations:
IG: Investment Grade
HG: High Grade
LQD: iShares iBoxx $ Investment Grade Corporate Bond ETF
DV01: Dollar value of a basis point
CDX IG: The Markit CDX North America Investment Grade Index
CDX HY: Markit CDX North America High Yield Index
ECB: European Central Bank
QE: Quantitative Easing
CSPP: corporate sector purchase programme
CPI: Consumer Price Index
FOMC: The Federal Open Market Committee

W

Disclosures

Important Disclosures

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.
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.
Information relating to Affiliates of BofAS, MLPF&S and Distribution of Affiliate Research Reports:
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.
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:

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 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.