Collateral Thinking

Defaults and downgrades to decline amid improving credit conditions

Top of the stack

Recent Feb economic data, though mixed, has brought welcome relief to jittery markets, quelching reacceleration concerns. Credit stands to benefit from rate cuts, though we remain cognizant of existing lofty valuations in HY and IG, where spreads have absorbed the YTD rate rise, helping yields remain near their local troughs. Total returns across credit are expected to remain high amid strong demand for yield, even as excess spreads in fixed-rate credit disappoints. If this is accompanied by sustained improvement in LevFin fundamentals, our base case, then lower quality credit could drive the next leg up in returns. We expect Loans to outperform on both on total and excess return basis.

Default and downgrade pressures to recede

In this report we discuss current default and downgrade trends, and the improved backdrop for US corporates amid loosening credit conditions, decreasing dispersion and profit recovery. Access to capital for LevFin issuers across public and private sources has increased amid strong demand from CLOs and yield sensitive HY buyers. Given these tailwinds, we expect default and downgrade pressures to recede from current levels. We lower our '24 default estimate to 3.3%, and now expect our first positive NTM net-upgrades since 2021. We think meaningful incremental pressure on CLO CCC buckets is unlikely and expect the buckets to top out at ~8.5%.

Market Technicals

In the three weeks ending March 8th, demand for loans totaled $16.3bn, a decline from $27.2bn demand seen in the prior three weeks. CLO creation and Coupon payments decreased by $8.3bn and $3.1bn respectively, while retail flows increased $537mn.

Rating Actions

In the past month, we have seen rating actions across 40 distinct issuers. A total of 23 issuers were downgraded by 41 notches and 17 issuers upgraded by 23 notches. In terms of sectors, Cable and Media contributed 33% and 17% of total downgrades in the past month whereas Real estate and Media contributed 20% and 24% to upgrades respectively. Overall, we see net downgrades of $14.2bn over the last month.

Return Performance

Loans in the LCD index returned 0.81% in three weeks ending March 8th, up from the -0.50% cumulative return seen in the prior three weeks. Across asset classes, YTD loan returns are at 2.2%, HY returns are at 1.2% and IG returns are at -0.4%.

Primary Activity

YTD global and US issuance totals $132bn and $113bn, with a total of 199 and 154 loans launched respectively in the primary market thus far. In total, YTD 2024 has surpassed YTD 2023 in both global and US issuance.

Timestamp: 14 March 2024 11:31AM EDT

14 March 2024

Leveraged Loan Strategy
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Exhibit 1: Loan performance
YTD Loan return is at 2.2%

Index	Level	1wk Δ	2wk Δ	YTD Rtn
All Loan	96.7 pts	+0.2	+0.3	2.2%
BBs	99.5 pts	+0.0	+0.1	1.6%
Bs	98.5 pts	+0.1	+0.2	2.2%
CCCs	81.4 pts	-0.2	-0.1	5.3%

Source: S&P LCD

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Exhibit 2: HY performance
YTD HY return is at 1.2%

Index	Level	1wk Δ	2wk Δ	YTD Rtn
US HY	315 bps	-12	-16	1.2%
BBs	194 bps	-10	-10	0.6%
Bs	308 bps	-15	-17	1.3%
CCCs	849 bps	-20	-37	3.4%

Source: BofA Global Research

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Exhibit 3: Fund flows ($mn)
YTD loan inflows are at 2,406mn

Asset	1wk	2wk	YTD	LTM
Loans	+564	+611	+2,406	-6,988
US HY	+930	-891	+5,511	+8,945
US IG	+8,844	+2,968	+65,212	+183,134

Source: EPFR Global

See glossary of abbreviations and terms in the Glossary section

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Top of the stack

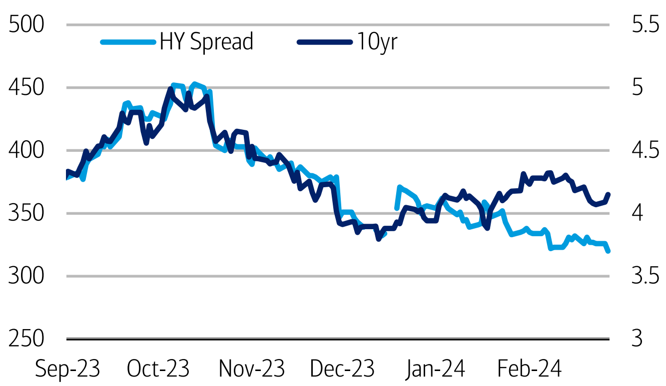
Recent Feb economic data, though mixed, has brought welcome relief to jittery markets following the unequivocal strength of Jan data which sparked reacceleration concerns. Jan has since proven to be an outlier due to year end seasonality instead of presenting a new trend upward.

CPI data for Feb showed the much-needed disinflation in services, and reversal of Jan OER spike, though offset by an increase in goods prices. Payroll data was also mixed with firmer hiring but lower wage growth. PCE came in on top of estimates. In addition, key data such as new home sales, durable goods, consumer confidence, UMich sentiment, Chicago PMI were all sequentially lower underscoring a slowing economy. Revised Q4 GDP estimate came in at 3.2% vs 3.3% expected and Q1 GDP is on track for a 2-handle print. Softer data means softer landing, and that is buoying risk sentiment.

While all risk markets stand to benefit from rate cuts, we have to balance that with existing lofty valuations in some parts of credit. For example, as rates rallied in Dec, both HY and IG yields declined reaching local troughs. This trajectory did not reverse despite the rates backup in Jan-Feb, instead spreads absorbed the rates move upwards, keeping yields close to tights. This is why though rates have rallied on Feb data, HY/IG yields and prices have not reacted favorably.

We can visualize this by looking at HY/IG reaction function to rates (Exhibit 4 and Exhibit 5). In 2H '23 spreads were positively correlated to rates, ie if rates sold off, spreads increased as well due to risk-aversion in a "good news is bad news" world, pushing HY/IG yields up by >1:1. However, YTD we have seen reaction function reverse to a negative correlation, ie spreads are now offsetting rate movements keeping yields relatively unchanged in either direction, a more typical behavior expected from fixed rate credit.

Exhibit 4: HY spread vs 10yr treasury yield
In 2H'23 HY/IG spreads were positively correlated to rates



Source: BofA Global Research, ICE, Bloomberg

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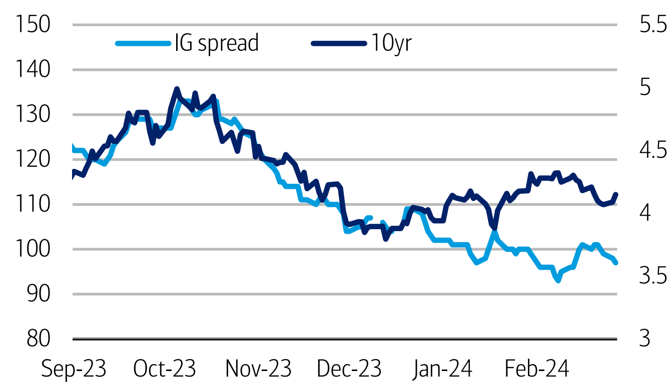
Exhibit 5: IG spread vs 10yr treasury yield
YTD spreads are negatively correlated to rates



Source: BofA Global Research, ICE, Bloomberg

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This change explains the record tights reached mid-Feb and wider spreads recently. Under normal circumstances, the relationship between rates and spreads should be an inverse one. In a world where good news really is good news, rising rates usually represent a better economy and thus lower risk premium/tighter spreads. The fact that today credit is back to demonstrating its natural relationship to rates is likely a function of improving corporate fundamentals in a not-so-hot economy, ie credit Goldilocks.

There are several implications for credit. First, demand is expected to remain solid given attractive yields driving strong total returns this year. Second, lower quality could see its next leg up as credit conditions continue to loosen and further proof of fundamental improvement presents itself. Third, excess returns in HY/IG will be lackluster as spreads have reached a floor in the context of currently visible fundamental trajectory. Fourth, loans are likely to outperform both on a total return and excess return basis given historically attractive spread and yield levels, which will rally further with rate cuts.

Given these tailwinds, we lower our default and downgrade forecasts for '24. Access to capital for issuers has increased, dispersion has improved and loss pressures have decreased as a new cycle of profit recovery takes hold.

Topical:

A quick note about BofA Loan Default Rates

In Jan we changed our methodology for calculating default rates to follow best practices across a wide array of data sources. Defining defaults: a novel approach to calculating loan default rates. In a nutshell, our new BofA Loan default rates provide the following 3-fold improvement over default rate data series currently available for loan investors:

a) Includes events and transactions only where an observable and calculable loss has been registered for a loan investor. Our process includes distressed exchanges but excludes noise from amend/extends and cross-defaults not impacting loan investors.

b) Is based on Markit US loan index- a universe more reflective of loan investor portfolios with its higher proportion of CCCs/2Ls and lower proportion of BBBs.

c) Follows a rigorous multi-pronged methodology to address data quality issues around missed defaults and stale/missing ratings. Approx, 10% of defaults are missed annually due to loans falling out from indices just before defaulting. The % is higher due to sometimes stale ratings data. This creates a suboptimal situation where investors suffer the par losses without it being captured in headline default rates.

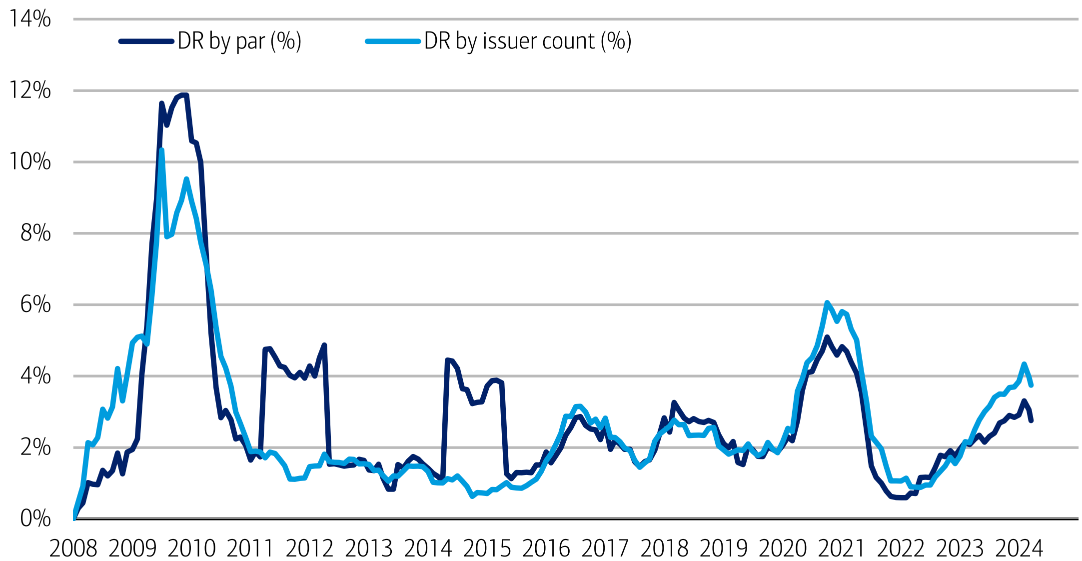
BofA Loan default rates correct for the above issues. We also have the advantage to slice and dice defaults into ratings, tenors, sectors, price buckets etc, and are able to produce these series in real time without the delay generally accompanying traditional default data across vendors. Exhibit 6 shows a time-series of issuer and par based default rates as measured by our process, calculated to March 13th.

Is the worst behind us?

Current default trends

BofA loan DR has been on a steady rise since 2022 on the back of deteriorating fundamentals in higher for longer rate environment. While default pressures today remain higher than any prior non-recessionary period (Exhibit 6), we think the worst could be behind us. Loan DR peaked in Jan at 4.3% on an issuer basis (close to our 4.5% forecast) and 3.3% on a par-basis, and has since eased to 3.7% and 2.8% respectively as of last week (March 13). Though it's natural for the DR time-series to be jagged, the decline from Jan to Feb was substantial at -30bps, and the first of its kind since defaults started increasing in '22.

Exhibit 6: BofA loan default rates by par and issuer
Loan DR currently stands at 3.7% by issuer and 2.8% by par as of last week (March 13)



Source: BofA Global Research, Markit, LCD

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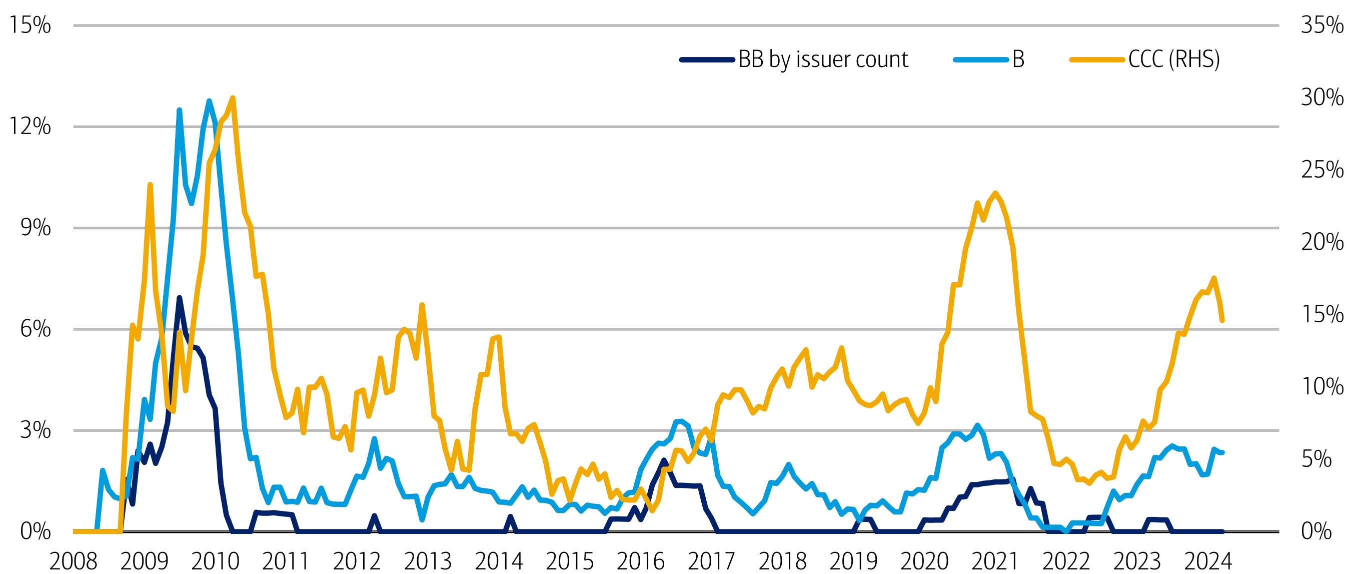
Most help has come from CCCs, as it should with improving conditions. Exhibit 7 shows default rates by broad rating category over time. As expected, CCCs carry the burden of defaults - an average of 10% default annually, with percentages touching 20% at peaks. Year to date, CCC issuer DR has declined 1.9% from 16.5% to 14.6% as of March 13th, while par rate has declined even more given its higher absolute levels. B default pressures however have remained flat, while BBs remain immune as expected.

Exhibit 7: BofA issuer default rate by broad rating
CCC issuer DR has declined to 14.6%, while B default pressures have remained flat and BBs are near 0 as expected



Source: BofA Global Research, Markit, LCD

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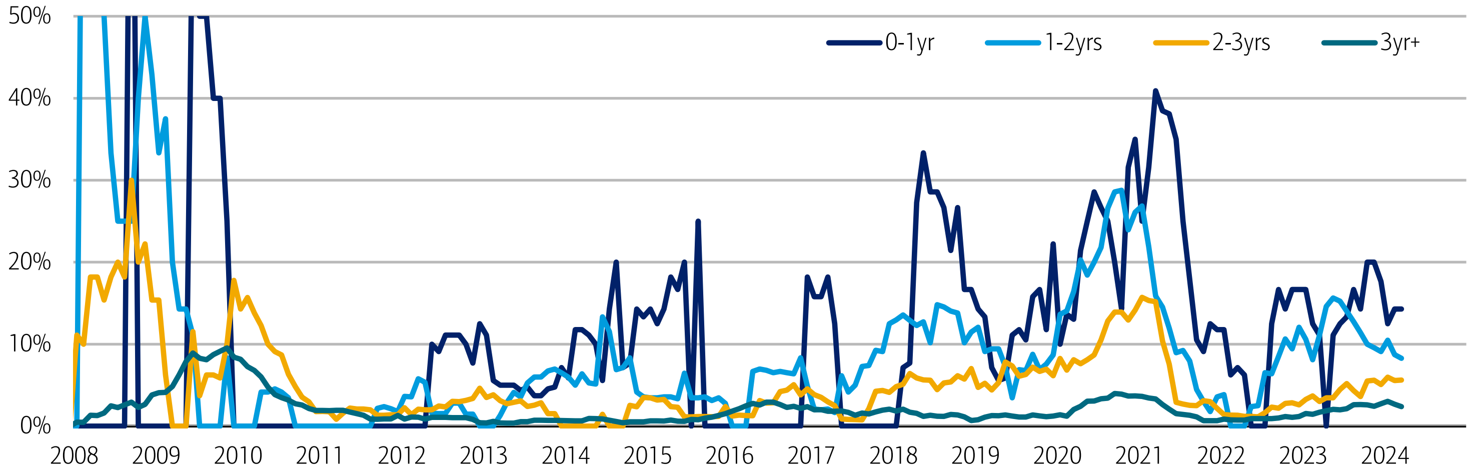
We also look at propensity to default by the amount of time left to loan maturity. The intuition being that the closer to maturity that a loan remains outstanding, the more precarious the issuer's conditions likely are. This is especially true when the remaining life of the loan is under 1. CFOs typically evaluate refinancing options at least 12-18 months before a loan's maturity. If a loan remains outstanding with <1yr left on its life that's usually indicative of the lack of investor appetite to fund the issuer thereby increasing its probability of default. We see this in Exhibit 8 where the DR in 0-1yr tenor dominates regardless of the economic environment. 1-2yr tenor is also elevated but more so during stressed times. Loans with >2yrs remaining generally don't need funding and thus are relatively immune from default pressures.

The strong correlation between remaining life and probability of default suggests that defaults generally happen when investors decide to stop funding a credit and not necessarily as an immediate result of fundamental decline.

Today's default levels suggest progress has been made along all fronts with the <1yr declining from 20% to 14%, and the 1-2yr rate decreasing from 15% to 8%. Looking ahead we think default pressures should continue to fall as credit environment becomes more conducive for LevFin issuers in the context of improving fundamentals. We discuss this later in the report.

Exhibit 8: BofA issuer default rate by remaining life

Loans with 0-1 tenor dominates the DR chart; 1-2yr tenor is also elevated but more so in stressed times



Source: BofA Global Research, Markit, LCD

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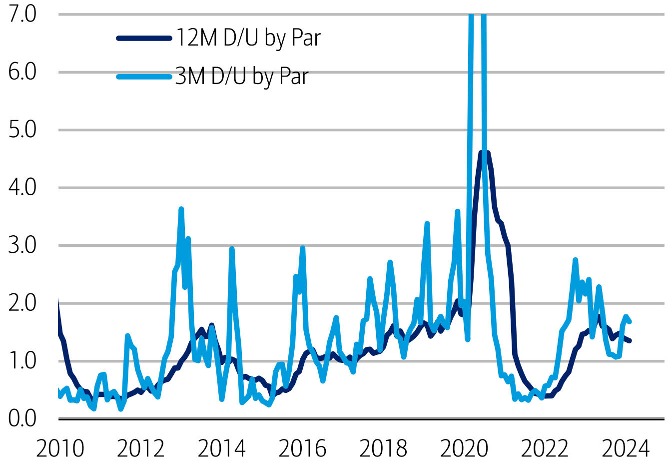
Current downgrade trends

Exhibit 9 shows loan migration pressures as calculated by the ratio of par downgrades to upgrades (D/U ratio). The 12M D/U ratio has been on a downward trend since May'23 currently standing at 1.4x. Total par downgraded on a rolling 12M basis has decreased for 8 consecutive months. The 3M D/U ratio is more volatile - after peaking near 3x in Oct'22, it has declined meaningfully, reaching 1.1x in Nov'23 before increasing to 1.7x today. That said, the recent increase is mainly a function of lower upgrade activity, as opposed to building up of downgrade pressures.

Breaking it down by rating we notice that CCC 12M D/U ratio has actually been worsening (Exhibit 10), contrary to the default trajectory. Year over year, total CCC downgrades as percentage of the CCC index remains roughly the same, whereas the percentage of upgrades has fallen off a cliff from 34% in Feb'23 to 9% in Feb'24. The current 9% level is even lower than the trough during Covid period, driving the CCC D/U ratio to increase from 0.7x to 2.8x YoY.

Exhibit 9: Downgrade/Upgrade ratio by par
Today 3M D/U stands at 1.7x; 12M D/U stands at 1.4x



Source: BofA Global Research, LCD

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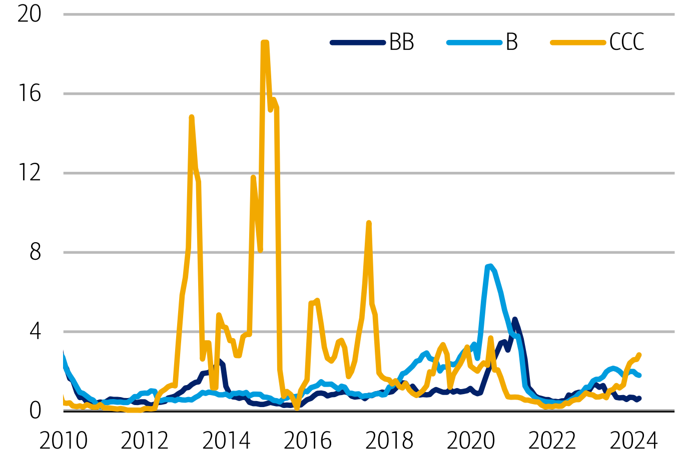
Exhibit 10: 12M Downgrade/Upgrade ratio by par across start ratings
12M D/U for CCC has been increasing whereas BB/B have been decreasing



Source: BofA Global Research, LCD

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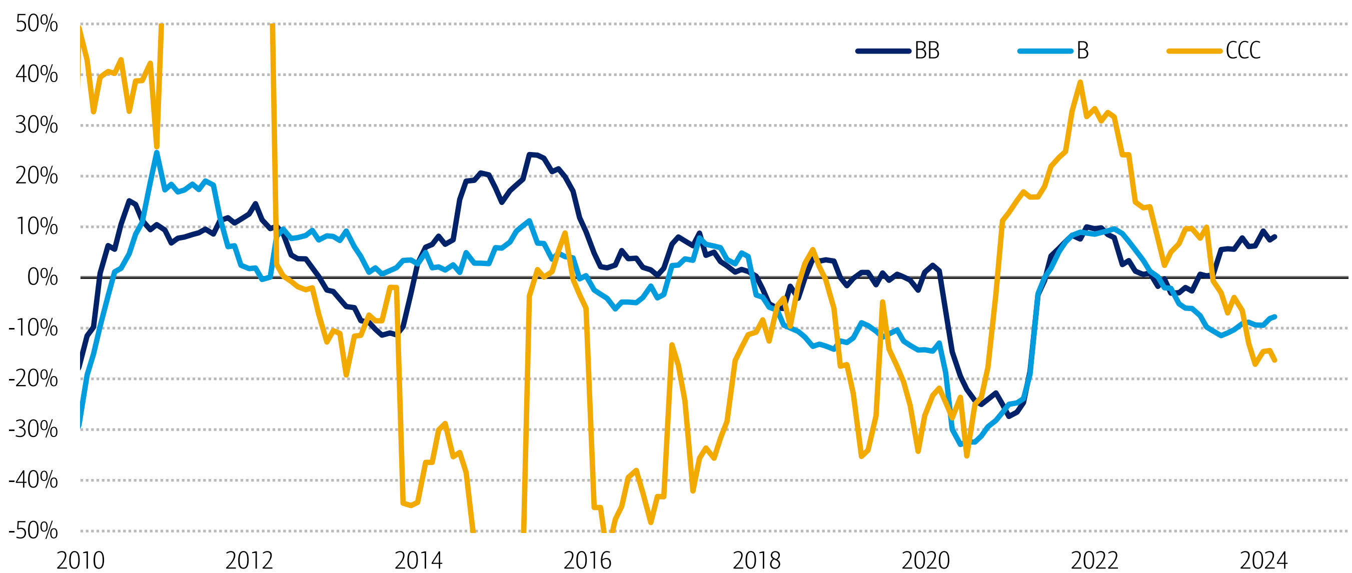
We also assess downgrade pressures by looking at net migration, defined as total dollar upgrades net total downgrades as percentage of index par. Exhibit 11 shows rating-wise LTM net migration. The consistent decline in CCC net migration corroborates the theme seen in CCC D/U ratio earlier. This goes to show that economic tailwinds have primarily benefited BBs thus far as reflected by the increasing net migration rates since Jan'23, whereas Bs are only recently gaining traction and CCCs still remain on the sidelines. However, if corporate profit recovery continues to pan out, both these rating buckets should be able to catch up.

Exhibit 11: LTM net migration by rating
Economic tailwinds have primarily benefited BBs since Jan'23 whereas Bs are only recently gaining traction while CCCs remain sidlined



Source: BofA Global Research, LCD

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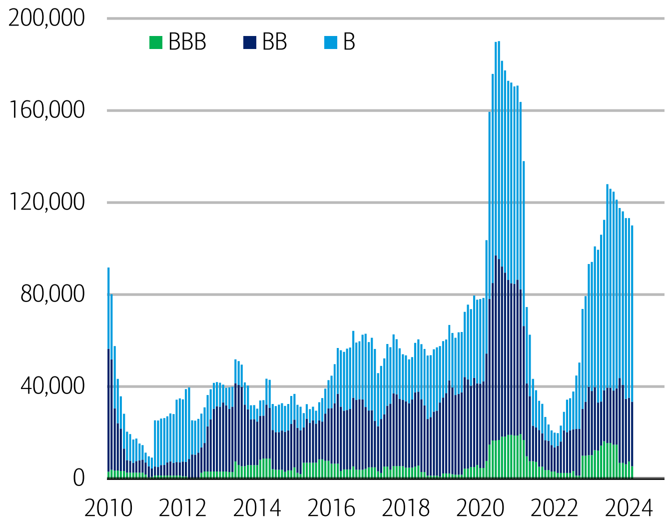
Exhibit 12 and Exhibit 13 show the LTM downgrades by start and end rating respectively. As is usually the case, most downgrades last year emanated from single Bs and landed in CCCs. LTM downgraded amount to CCC totals ~$80bn, accounting for 72% of all downgrade activity in loans. This has led the percentage of CCC loans in the index to increase from 8% to 11% YoY per the Markit index, resulting in widespread CLO CCC bucket breaches. Going forward we expect lesser CCC downgrade activity easing the pressure on CLOs. We discuss this in the forecasts section.

Exhibit 12: LTM par downgraded from
Most downgrades come from single Bs...



Source: BofA Global Research, LCD

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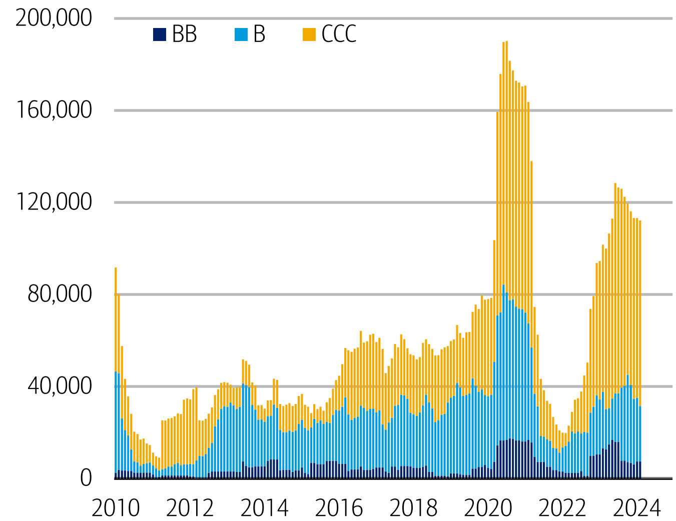
Exhibit 13: LTM par downgraded to
... and land in CCC bucket



Source: BofA Global Research, LCD

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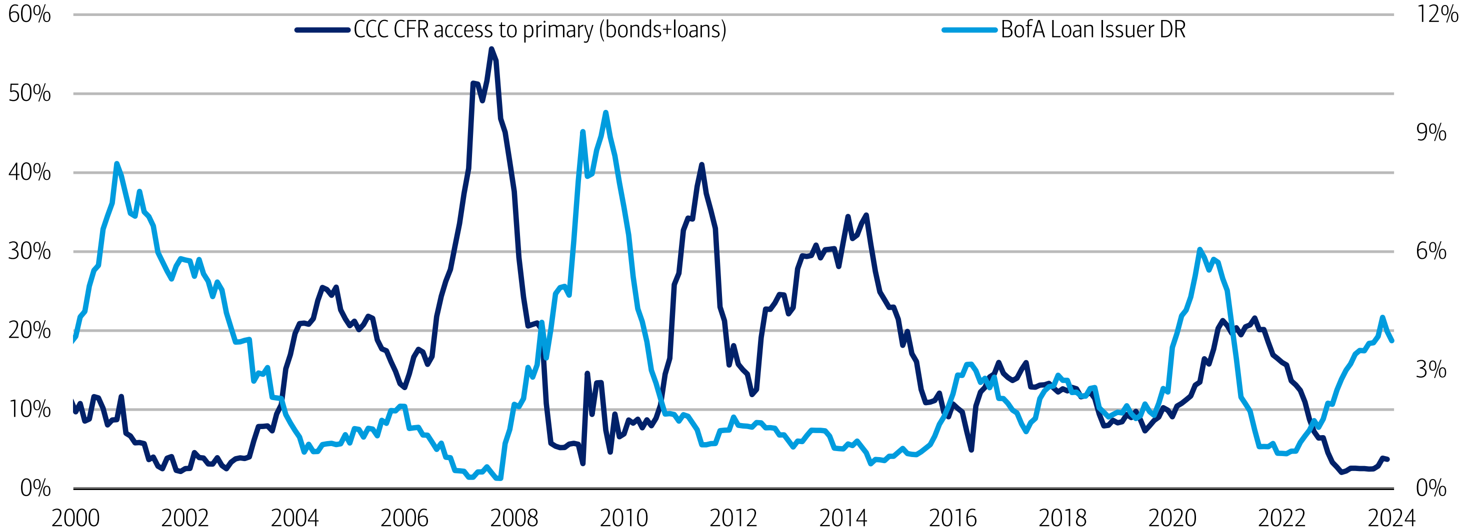
Improving credit backdrop for issuers

Better access to funding markets

Issuers default mainly because they lose access to funding. This is why we see a compelling inverse correlation between the proportion of lower quality issuers tapping the primary market vs realized default rates. Exhibit 14 shows the percentage of CCC rated issuers that have issued bonds or loans in any given LTM period. Every time this pct has dipped below 10% for a significant period, a default cycle has ensued. We find ourselves currently in the thick of one such period. However, there is hope for a turnaround. While on the 12mo scale we see only marginal improvement (from 2% to 4%), things have started to pick on a 3mo scale. The % of CCC issuers accessing primary over has increased to 7% from 0% over the last 3 months. Should this trajectory continue, we will see more material improvement in the 12mo numbers.

The demand tailwind for loans is being driven by CLOs, while for HY it's from yield sensitive buyers. We think CLO issuance could reach $130bn this year as CLO liabilities have tightened more than assets, improving arbitrage and driving issuance. This compares to $110bn in demand seen last year, which will keep the capital spigot for the loan asset class on. HY buying spree continues despite poor spreads because yields are still in their 70th percentile post-GFC, enticing yield sensitive investors to lock in attractive income levels for the next 3-5 years.

Exhibit 14: LTM percentage of CCC issuers tapping bond and loan primary markets vs BofA loan default rate
While we only see marginal improvements in the % of CCC issuers accessing primary over 12M, the % has increased to 7% from 0% over the last 3 months



Source: BofA Global Research, Markit, LCD

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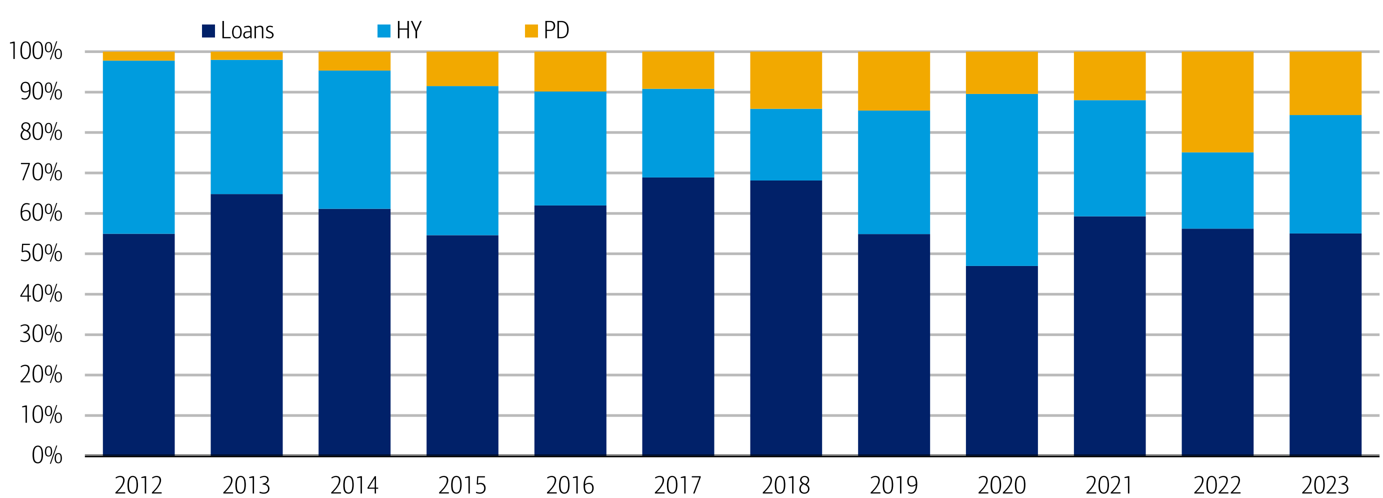
Another factor to consider is the availability of private capital which the above chart doesn't capture. Direct Lending capital has refinanced 10-15% of syndicated loan issuer debt annually, preventing struggling issuers from defaulting on the margin (average rating of loans refied out to Pvt markets last year was B3). Today Pvt Debt provides anywhere from 15-25% of overall financing needs of LevFin corporates (Exhibit 15).

All told, the increase in availability of capital through both public and private markets justifies a lower rate of default.

Exhibit 15: Distribution of LevFin debt raised across main funding channels
Private debt doubled its share of leveraged finance dollars in 2022 and accounted for 16% of LevFin funding in 2023



Source: BofA Global Research, LCD, ICE, Refinitiv

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Lower dispersion amid improving fundamentals

Dispersion has decreased rapidly, falling 10% pts over the last 3 months. While still historically high, we are approaching median levels, another sign that investors are willing to take on more credit risk. The gap between the haves and have nots has decreased, as the playing field (funding market, earnings) levels for all.

This has happened in large part due to improving issuer fundamentals. Last month in our report Earnings at an inflection point we noted how green-shoots are starting to form which if sustained can help drive down default and downgrade pressures. Since then, we have seen a few more weeks of earnings reports and the positive trajectory continues. Revenue growth stands at 4.9%, up from 3.5% in Q3. Adjusted EBITDA growth has increased to 6.2%, up from the 3.7% level in the previous quarter. Continued dissipation of cost headwinds have helped realize this strong-than-expected earnings growth. While coverage remains at the same 3.7x on a look-back basis, gross leverage has decreased to 5.3x in Q4 vs 5.5x in Q3. Total and Net debt growth is ~1%, lowest prints since '21. All indications suggest that the improvement witnessed in Q3 earnings was not a fluke but is likely to be a real trend.

Exhibit 16: Dispersion amongst 1L performing loans
Dispersion has fallen 10% over the last 3 months

Source: BofA Global Research, Markit

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Our new default and downgrade forecasts for '24

Lowering our default forecast to 3.3%

In light of our new methodology, as well as relatively brighter fundamental prospects, we are lowering our default and downgrade forecasts for '24. While our revised calculations tend to push up realized and expected default rates, the trajectory is being more than offset by easing credit conditions that we think will prevail the remainder of this year.

Given the influence of ratings and remaining life on a loan's probability of default, we use a bottom's up analysis driven by both these factors to determine current default pressures in the loan market. We first estimate the NTM DR for each rating category/tenor based on credit and economic conditions, and then overlay this with the weight of that category in the index to gross up to an eventual market level default rate.

Exhibit 17 estimates rating wise default pressures. In determining these, we assume:

a) No default for BBs

b) Bs will improve marginally from current levels of 2.3% issuer and 1.7% par DR since they havn't registered improvement commensurate to CCCs yet. We pencil in B DR levels that last existed in '22.

c) CCCs will continue to default at the current (improved) rate of 15% issuer and 25% par. This is a conservative assumption since improving credit conditions will have the greatest impact on CCCs.

Applying their relative bucket weights and grossing up to market level, we get a loan DR estimate of 3.5% over the next 12 months.

Exhibit 17: Index weighted issuer defaults by rating
We assume DR for Bs will improve marginally and CCCs will stay at 15%

Rating	Est DR	Ind Wt	Weighted DR
BBB	0.0%	3%	0.0%
BB	0.0%	19%	0.0%
B	1.7%	55%	0.9%
CCC	15%	16%	2.4%
NR	2.0%	7%	0.1%
DR projection			3.5%

Source: BofA Global Research, Markit

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Exhibit 18: Index weighted issuer defaults by remaining life
We apply conservative assumptions for the groups most at risk: ie <2yr life

Life	Est DR	Ind Wt	Weighted DR
0-1yrs	20%	2%	0.4%
1-2yrs	10%	11%	1.1%
2-3yrs	3.5%	19%	0.7%
3+yrs	1.5%	68%	1.0%
DR projection			3.2%

Source: BofA Global Research, Markit

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We do a similar analysis by life of loan (Exhibit 18). Once again we apply relatively conservative assumptions for the groups most at risk: ie <2yr life.

i) For 0-1yr we assume an increase in defaults, since these are credits that likely cannot be salvaged.

ii) For 1-2yr tenor we assume no improvement in DR from current levels.

iii) For the longer-dated loans we assume DR reverting back to historical medians.

This leads us to a DR projection of 3.2% at the index level. We average the two DR estimates: by rating and life, to arrive at our NTM loan issuer default forecast of 3.3%, a substantial decline from our previous forecast of 4.5% which has since been reached.

We do a similar exercise to arrive at loan par DR estimate using appropriate historical realized DRs by rating (Exhibit 19) and tenor (Exhibit 20) to arrive at our par DR average estimate of 3.3% as well.

Exhibit 19: Index weighted par defaults by rating
We assume DR for Bs to be 1.5% and CCCs to be 25%

Rating	Est DR	Ind Wt	Weighted DR
BBB	0.0%	4%	0.0%
BB	0.0%	21%	0.0%
B	1.5%	60%	0.9%
CCC	25%	11%	2.7%
NR	2.0%	4%	0.1%
DR projection			3.7%

Source: BofA Global Research, Markit

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Exhibit 20: Index weighted par defaults by remaining life
We apply conservative assumptions for the groups most at risk: ie <2yr life

Life	Est DR	Ind Wt	Weighted DR
0-1yrs	35%	1%	0.5%
1-2yrs	7.0%	7%	0.5%
2-3yrs	4.0%	15%	0.6%
3+yrs	1.7%	76%	1.3%
DR projection			2.9%

Source: BofA Global Research, Markit

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We now expect net upgrades in ‘24

The large wave of downgrades that we called for more than 18 months ago is largely behind us now, in our opinion. Migration activity has primarily been driven by the state of corporate liquidity - which has since improved. Last year as interest rates increased in the backdrop of stagnant earnings, balance sheets came under pressure culminating in a large number of downgrades. A rate cut cycle was always considered the first and likely line of defense against further downgrade pressures. However, with hopes of a quick fed pivot receding, the likelihood of an earnings turnaround has become key for low quality issuers to keep their coverage ratios from deteriorating further. In addition, we are also seeing an increase in demand of loans, indicating greater availability of capital for distressed or special situations. Given these changing conditions, we think spreads will remain well supported as downgrades fade.

Exhibit 21: Net upgrades by rating
We expect a 7% net upgrades, the first positive print since late 2021

		Soft Landing					
Starting Loan Rating	Curr Size ($bn)	Downgrade		Upgrade		Net Upgrades	
		Pct	Par ($bn)	Pct	Par ($bn)	Pct	Par ($bn)
BBB	47	18%	8.29	13%	6	-5%	(2)
BB	267	18%	47	19%	51	1%	4
B	757	15%	111	21%	162	7%	51
CCC	137	8%	11	31%	43	23%	32
Total	**1,208**	**15%**	**177**	**22%**	**262**	**7%**	**85**

Source: BofA Global Research, Markit, Moody's

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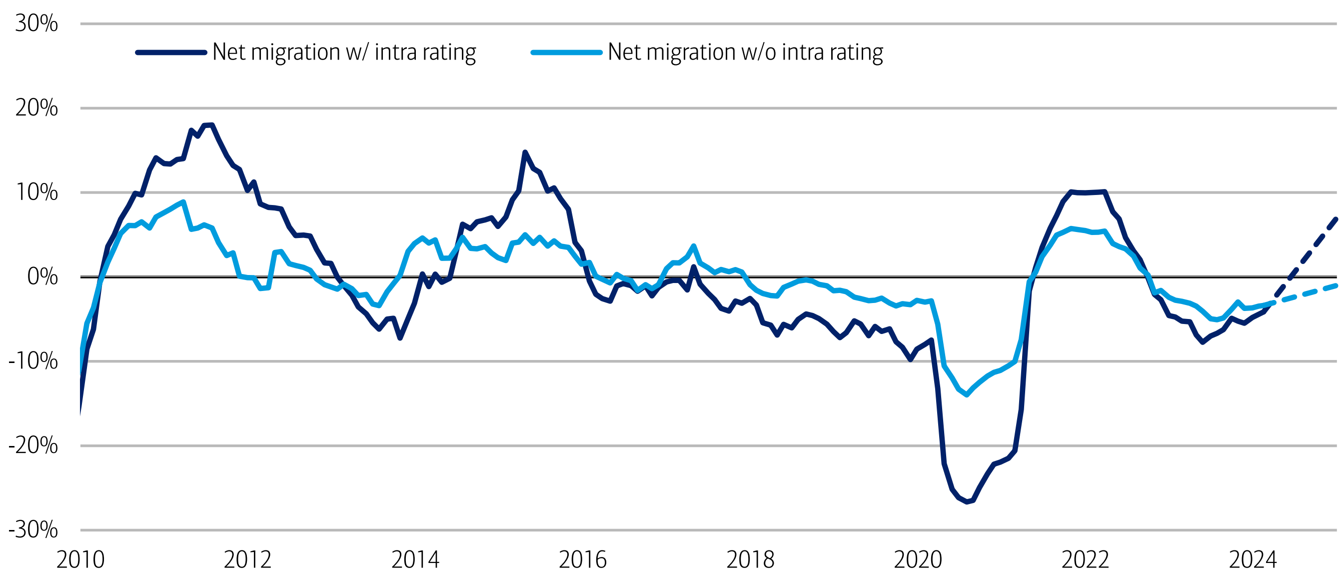
In total we expect 15% of loans to get downgraded, a lower clip than before, but the bigger change has been in upgrade expectations where we now think 22% can get upgraded should the earnings turnaround pan out. This will lead to the first positive net upgrade print since late 2021. Most levered to this outcome are CCCs where upgrades could exceed downgrades by 23%, as compared to the -16% level we have seen in the past 12M (Exhibit 11). Net migration for Bs is projected to increase from today's -8% to +7%, which will be commensurate with levels in YE'21 before the Fed started rate hikes. However, net migration for BBs is expected to contract to 1% from the current 8% level as other rating categories play catch up in the upgrade cycle.

That said, most of the upgrade momentum is expected to come via "intra-rating" migration, ie from within the bucket itself. Of the $160bn of possible upgrade candidates in single-Bs, only $50bn can potentially migrate to BBs, the rest staying within single-Bs. Offsetting that are CCCs where upgrade momentum is inter-rating-here about $30bn of $40bn could migrate to single-Bs. On balance, looking at only true inter-rating migration, dilutes the optimism a bit with net upgrades still negative at -1%, though an improvement compared to prevailing -3.4% levels.

Exhibit 22: Rolling 12M net migration and NTM projections
Inter-rating net upgrades are projected to be still negative at -1%, while projected overall net upgrades highest since 2021



Source: BofA Global Research, LCD

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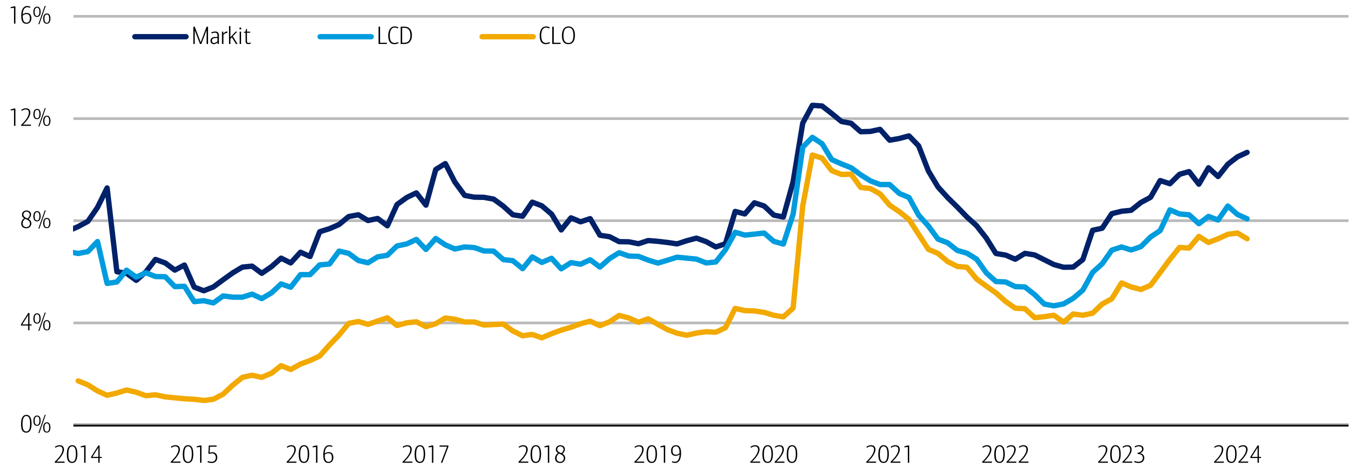
CLO CCC buckets to remain under 9%

We now expect index CCCs to incrementally increase by only 15% compared to 50% previously. Though the net migration out of CCCs is positive (ie current CCCs have an upward migration bias), pressure of downgrades still exists from other rating categories into CCCs which will drive additional increase in CCC proportion of index. However the delta is now much smaller increasing only by 1% to 12% (LCD index equivalent is CCCs increasing by 2% to 10%).

Importantly, for CLOs this will be a welcome relief as their CCC buckets are now unlikely to post meaningful increases from here and will have top out at 8.5%. This is because concentration of CCCs in BSL CLOs is usually ~3.5% lower than the Markit index (Exhibit 23). Since we expect CCCs to finish at 12% on the index level, we expect CLO CCC buckets to remain under 9% going forward.

Exhibit 23: Percentage of CCCs in Markit vs LCD vs CLOs
We expect CLO CCC buckets to finish under 9% this year



Source: BofA Global Research, Markit, LCD

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To summarize, Exhibit 24shows expected impact from migrations in terms of rating wise concentrations before and after, in a scenario where inflation continues to fall and earnings improve. Most of the impact is in Bs where there is sizable upgrade and downgrade activity decreasing the size of the rating bucket as a percentage of the index.

Exhibit 24: Net migration in a soft-landing scenario
We expect % of B loans in index to decrease from 59% to 54% after migration

Rating	Net Migration Soft Landing
BB	2
B	-68
CCC	18
BB index proportion - before migration	21%
BB index proportion - after migration	21%
B index proportion - before migration	59%
B index proportion - after migration	54%
CCC index proportion - before migration	11%
CCC index proportion - after migration	12%

Source: BofA Global Research, Markit, Moody's

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Market Technicals

In the three weeks ending March 8th, demand for loans totaled $16.3bn, decreasing from the $27.2bn of demand seen in the prior three weeks ending Feb 9th. The decrease in demand was mainly driven by $8.3bn decrease in CLO issuance followed by $3.1bn decrease in coupon payments. Retail flows increased by $537mn respectively between the two three-week periods. YTD net demand has trailed supply by $17.6 versus the

$45.8bn of net demand seen this time last year. Note that this table doesn't account for demand channels such as SMAs and alternate asset vehicles.

Exhibit 25: Weekly Technicals ($mns)
Demand net of supply is at 17.6bn

	YTD as of 3/8/2024	3/8/24	3/1/24	2/23/24	2/16/24
Retail flows (a)	2,569	382	677	21	224
CLO creation (b)	30,253	2,581	1,401	4,303	4,397
Coupons (c)	25,762	1,784	3,185	2,011	2,954
Demand (a+b+c)	58,584	4,747	5,262	6,335	7,576
Issuance Ex-repricings (d)	117,595	14,159	5,650	2,930	14,085
Repayments (e)	76,618	7,694	14,132	15,913	5,906
Supply (d-e)	40,977	6,465	-8,482	-12,983	8,179
Demand net of Supply	17,607	-1,718	13,744	19,318	-603

Source: BofA Global Research, LCD

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Rating Actions

In the past 30 days, we have seen rating actions across 40 distinct issuers. A total of 23 issuers were downgraded by 41 notches ($34.7bn total notional) and 17 issuers upgraded by 23 notches ($20.5bn total notional). Of the downgrades, Virgin Media Finance had three loans downgraded by one notch each, totaling $5.85bn the most by notional. Of the upgrades, Quikrete Holdings Inc had two loans upgraded by one notch each, totaling $4.07bn the most by notional.

In terms of sectors, Of the downgrades, by notional amount, 33% was in Cable followed by 17% in Media respectively. Of the upgrades, by notional amount, 20% was in Real estate followed by 14% in Media respectively. Thirteen distinct sectors experienced upgrades and thirteen distinct sectors experienced downgrades. Downgrades outweighed upgrades by $14.2bn.

Exhibit 26: Recent downgrades and upgrades
There was net downgrade activity of $14.2bn

Issuer	Ticker	Margin	Notional	Maturity	Sector	Rating Action	Current Rating	Previous Rating	Notches
Cumulus Media Inc	CUMINT	375	335	3/31/2026	Media	Downgrade	CC	B	-5
iheartMedia	IHRT	300	1,864	5/1/2026	Media	Downgrade	B-	B+	-2
iheartMedia	IHRT	325	401	5/1/2026	Media	Downgrade	B-	B+	-2
Rackspace Hosting Inc	RAX	275	2,181	2/15/2028	Technology	Downgrade	CCC-	CCC+	-2
Terrier Media Buyer Inc	CMGMCO	350	2,089	12/17/2026	Media	Downgrade	B-	B+	-2
Xplornet Communications Inc	BARXPL	400	973	10/2/2028	Telecoms	Downgrade	CCC-	CCC+	-2
Ascend Performance Materials LLC	ASCMAT	475	1,054	8/27/2026	Chemicals	Downgrade	B	B+	-1
Blackstone Mortgage Trust	BXMT	225	911	4/23/2026	Real Estate	Downgrade	B+	BB-	-1
Blackstone Mortgage Trust	BXMT	350	813	5/9/2029	Real Estate	Downgrade	B+	BB-	-1
Blackstone Mortgage Trust	BXMT	275	411	4/23/2026	Real Estate	Downgrade	B+	BB-	-1
Cablevision Lightpath	CVLGHT	325	581	11/30/2027	Cable	Downgrade	B-	B	-1
Cablevision Systems	CSCHLD	250	2,880	4/15/2027	Cable	Downgrade	B-	B	-1
Cablevision Systems	CSCHLD	450	1,982	1/18/2028	Cable	Downgrade	B-	B	-1
Carestream Dental LLC	CARDEN	325	259	9/1/2024	Healthcare	Downgrade	CCC-	CCC	-1
Carestream Dental LLC	CARDEN	450	230	9/1/2024	Healthcare	Downgrade	CCC-	CCC	-1
Chemours Company	CC	350	1,067	8/18/2028	Chemicals	Downgrade	BB+	BBB-	-1
Claros Mortgage Trust, Inc.	CMTGTL	450	725	8/9/2026	Real Estate	Downgrade	B-	B	-1
Container Store	TCS	475	164	1/31/2026	Retail	Downgrade	B-	B	-1
Domtar	UFS	550	344	11/30/2028	Packaging/Paper	Downgrade	B+	BB-	-1
EW Scripps	SSP	256	729	5/1/2026	Media	Downgrade	BB-	BB	-1
EW Scripps	SSP	300	551	1/7/2028	Media	Downgrade	BB-	BB	-1
M6 Midstream LLC	METXHO	450	741	9/19/2029	Energy	Downgrade	B	B+	-1
New Fortress Energy Inc	NFE	500	856	10/27/2028	Energy	Downgrade	BB-	BB	-1
Plz Aeroscience Corp	PLAZEI	350	618	8/3/2026	Packaging/Paper	Downgrade	B-	B	-1
Plz Aeroscience Corp	PLAZEI	375	388	8/3/2026	Packaging/Paper	Downgrade	B-	B	-1
Quick Base	QUICKB	375	263	4/2/2026	Technology	Downgrade	B-	B	-1

Exhibit 26: Recent downgrades and upgrades
There was net downgrade activity of $14.2bn

ThyssenKrupp Elevator Technology	TYTELE	550	2,641	7/30/2027	Capital Goods	Downgrade	B	B+	-1
Twin River Management Group Inc	BALY	325	1,906	10/2/2028	Gaming	Downgrade	B+	BB-	-1
Vaco Holdings	VACHOL	500	711	1/21/2029	Services	Downgrade	B-	B	-1
Virgin Media Finance	VMED	250	3,300	1/31/2028	Cable	Downgrade	B+	BB-	-1
Virgin Media Finance	VMED	325	1,300	1/31/2029	Cable	Downgrade	B+	BB-	-1
Virgin Media Finance	VMED	325	1,250	3/31/2031	Cable	Downgrade	B+	BB-	-1
Alkermes Inc	ALKS	250	292	3/12/2026	Healthcare	Upgrade	BB+	BB	1
APi Group	APG	250	1,405	1/3/2029	Services	Upgrade	BB	BB-	1
APi Group	APG	225	330	10/1/2026	Services	Upgrade	BB	BB-	1

Source: BofA Global Research, LCD

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Return Performance

Loans in the LCD index returned 0.81% in the three weeks ending March 8th, up from the 0.50% cumulative return seen in the prior three weeks ending Feb 16th. CCC loans were the best performer during the three-week window returning 168bps and Second Lien loans (86bps) outperformed both BB's (63bps) and B's (83bps) respectively. Across asset classes, YTD loan returns are at 2.2%, HY returns are at 1.2% and IG returns are at -0.4%.

Exhibit 27: Total Returns (price plus coupon return) bps
Loans returned 0.32% in the week ending March 8th

	3/8/2024	3/1/2024	2/23/2024	2/16/2024
All Loans	32	23	26	22
BB	22	19	22	19
B	35	22	26	25
CCC	61	50	57	23
2nd Lien	-22	65	43	30
LL100	32	30	34	27

Source: BofA Global Research, LCD

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Primary Activity

YTD global and US issuance totals $132.6bn and $113.3bn, with a total of 199 and 154 loans launched respectively in the primary market thus far. In comparison, YTD '23 brought in $53.8bn global issuance across 96 loans and $48bn US issuance across 72 loans. In total, YTD 2024 has outperformed YTD 2023 in both global and US issuance. In terms of the composition of the types of deals financed in the past 30 days, 48% by notional amount was for Refinancing and 20% was for LBO.

Exhibit 28: Recent new loan issues
The largest recent new issue came from Cotiviti Corp's $5bn deal

Launch Dt	Issuer	New Inst. Money	Moody's	S&P	ABL	Cov Lite	Proceeds	Sector	Country
3/7/2024	Access Information Management	125	B3	B	No	YES	Refinancing	Computers & Electronics	United States
3/7/2024	LegalShield	125	B3	B-	No	YES	Refinancing	Services & Leasing	United States
3/7/2024	AMCP Clean	350	NR	NR	No	YES	Refinancing	Services & Leasing	United States
3/7/2024	Vistra Energy Corporation	700	Ba2	BBB-	No	YES	GCP	Utilities	United States
3/6/2024	Zekelman Industries	55	Ba3	BBB-	No	YES	Refinancing	Metals & Mining	United States
3/6/2024	SunSource Inc	1,685	B3	B	No	YES	Dividend	Building Materials	United States
3/6/2024	Prosol Gestion SA	200	B3	B-		YES	Refinancing	Food & Beverage	France
3/6/2024	Creative Artists Agency	125	B2	B+	No	YES	GCP	Entertainment & Leisure	United States
3/5/2024	Closure Systems	500	B2	B	No	YES	Refinancing	Chemicals	United States
3/5/2024	AppLovin Corporation	600	Ba3	BB+	No	YES	Refinancing	Computers & Electronics	United States
3/5/2024	Bakelite Synthetics	110	B1	BB-	No	YES	Dividend	Chemicals	United States
3/5/2024	Bettcher Industries Inc	85	B2	B-	No	YES	Acquisition	Manufacturing & Machinery	United States
3/5/2024	Delivery Hero SE	550	NR	B-	No	YES	Refinancing	Retail	Germany
3/5/2024	Flutter Entertainment plc	514	Ba1	BBB-	No	YES	Refinancing	Gaming & Hotel	Ireland
3/5/2024	Ivirma	550	B2	B		YES	Refinancing	Healthcare	Spain
3/5/2024	Ivirma	500	B2	B	No	NO	Refinancing	Healthcare	Spain

Exhibit 28: Recent new loan issues
The largest recent new issue came from Cotiviti Corp's $5bn deal

Launch Dt	Issuer	New Inst. Money	Moody's	S&P	ABL	Cov Lite	Proceeds	Sector	Country
3/5/2024	Station Casinos Inc	1,320	Ba3	BB+	No	YES	Refinancing	Gaming & Hotel	United States
3/5/2024	Quick Base	152	B3	B-	No	YES	Refinancing	Computers & Electronics	United States
3/4/2024	Qualtrics	175	B1	B	No	YES	Refinancing	Computers & Electronics	United States
3/4/2024	ThyssenKrupp Elevator Technology	500	B2	B		YES	Refinancing	Manufacturing & Machinery	Germany
3/4/2024	ThyssenKrupp Elevator Technology	100	B2	B	No	YES	Refinancing	Manufacturing & Machinery	Germany
3/4/2024	First Brands	225	B1	B+		YES	Acquisition	Automotive	United States
3/4/2024	First Brands	525	B1	B+	No	YES	Acquisition	Automotive	United States
3/4/2024	Cengage Learning	1,613	B2	B	No	YES	Refinancing	Printing & Publishing	United States
3/1/2024	Truist Insurance Holdings	1,900	NR	NR	No	YES	LBO	Insurance	United States
2/29/2024	Pacific Dental Services	1,000	B1	B	No	YES	Dividend	Services & Leasing	United States
2/29/2024	Ineos Quattro	500	Ba3	BB		YES	Refinancing	Chemicals	Germany
2/29/2024	Ineos Quattro	475	Ba3	BB	No	YES	Refinancing	Chemicals	Germany
2/28/2024	Fertitta Entertainment	300	B2	B	No	YES	Refinancing	Gaming & Hotel	United States
2/28/2024	APi Group DE Inc	300	Ba1	BB-	No	YES	Repurchase equity	Building Materials	United States
2/26/2024	April Insurance	1,200	B1	B		YES	Acquisition	Insurance	France
2/26/2024	Groundworks LLC	965	B3	B	No	YES	Refinancing	Building Materials	United States
2/26/2024	Teneo Holdings	710	B2	B	No	YES	Refinancing	Services & Leasing	United States
2/23/2024	Emeria SASU	100	B2	B-		YES	Refinancing	Real Estate	France
2/22/2024	K-MAC Enterprises Inc	115	B3	B-	No	YES	Refinancing	Restaurants	United States
2/22/2024	B&B Hotels SAS	1,250	B3	B		YES	Refinancing	Gaming & Hotel	France
2/22/2024	Clean Harbors Inc	500	Ba1	BBB-	No	YES	Acquisition	Environmental	United States
2/21/2024	BlueTriton Brands Inc	400	B2	B	No	YES	Dividend	Food & Beverage	United States
2/21/2024	Barentz	525	B2	B	No	YES	Refinancing	Food & Beverage	Netherlands
2/21/2024	Motor Fuel Ltd	1,401	B2	B		YES	Acquisition	Retail	United Kingdom
2/21/2024	Renta	350	B2	B		YES	Refinancing	Services & Leasing	Finland
2/20/2024	Solina Group	420	B2	B	No	YES	Acquisition	Food & Beverage	France
2/20/2024	One Toronto Gaming	450	B3	B	No	YES	Dividend	Gaming & Hotel	Canada
2/20/2024	Polygon	60	B2	B		YES	Refinancing	Real Estate	Sweden
2/20/2024	Ellucian Inc	520	B2	B-	No	YES	Refinancing	Computers & Electronics	United States

Source: BofA Global Research, LCD

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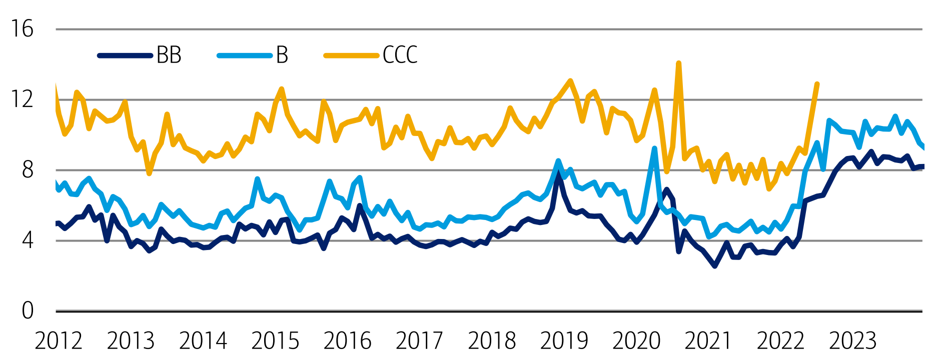
Exhibit 29: Average new issue yields by month
BB and B currently yield 8.47% and 9.72% respectively while there is not enough sample size for CCC



Source: BofA Global Research, LCD

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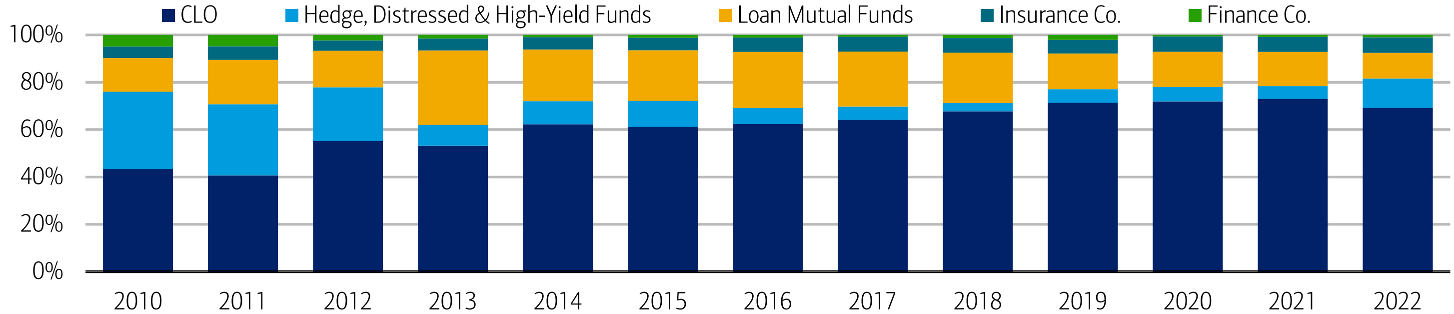
CLO Update

CLOs are the largest buyers of loans and today represent close to 70% of the primary demand within this asset class. Loan retail funds are the second largest buyers – their participation has shrunk since the peaks of 2013 but has been increasing recently, coinciding with the rate move. At the same time, hedge, distressed & high yield funds have played a lesser role in the primary market.

Exhibit 30: Distribution of investors across loan market

CLOs make up 69% of the primary institutional market



Source: BofA Global Research, LCD

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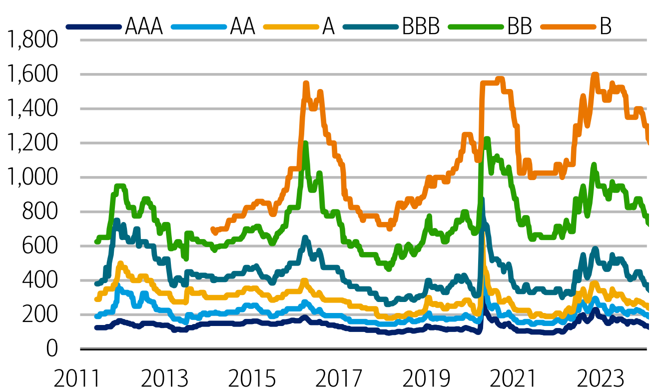
Exhibit 31 shows CLO spread levels by tranches. CLO arbitrage is a widely followed statistic in the loan market, and represents the theoretical spread that managers can capture by issuing CLOs. Exhibit 32 compares CLO asset (loan) spreads to the weighted average spreads of CLO liabilities. The difference between these two values is the theoretical arbitrage and represents the current attractiveness of creating new CLOs. A higher arbitrage number means a greater incentive for managers to bring new CLOs to the market, and thus provide incremental loan demand, and vice versa. Importantly, this arbitrage calculation puts more weight on the primary loan market.

Exhibit 31: US CLO 2.0/3.0 indicative spread level (bps)

Secondary CLO spreads have increased materially



Source: BofA Global Research

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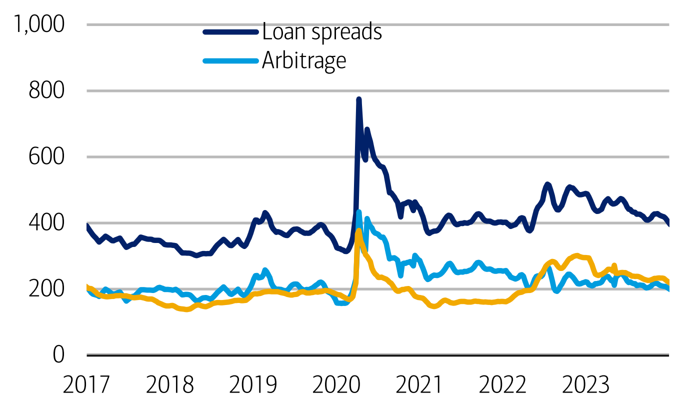
Exhibit 32: CLO Arbitrage (bps)

CLO arbitrage has been declining



Source: BofA Global Research, LCD

Arbitrage: Loan asset spread – WA CLO spread X Liability %

Loan spreads (running avg 4wks): 60% sec BB, 40% sec B

Until 3/4/22 Loan spreads (running avg 4wks): 50%new issue B+/B, 30% pri BB, 10% sec BB, 10% sec B

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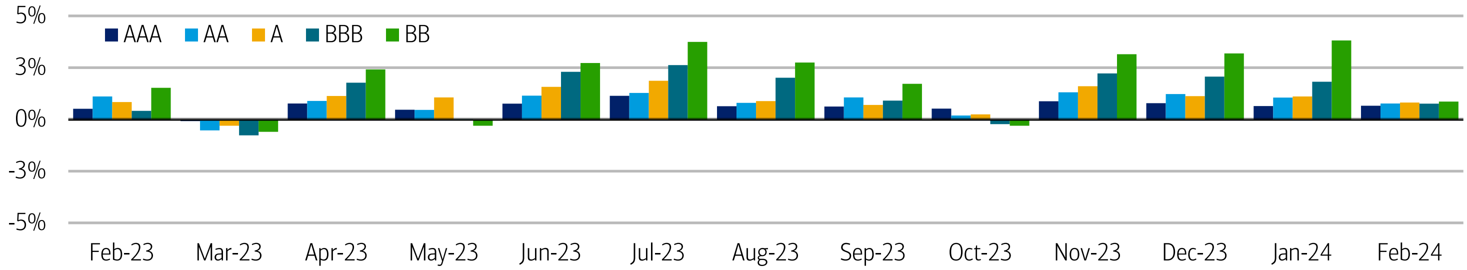
Exhibit 33 shows monthly CLO returns as defined by the Palmer Square CLO index (price plus coupon returns).

Exhibit 33: Monthly CLO 2.0 returns by rating
CLOs returned 0.7% in Feb



Source: BofA Global Research, PriceServe, Palmer Square CLO Indices, Bloomberg

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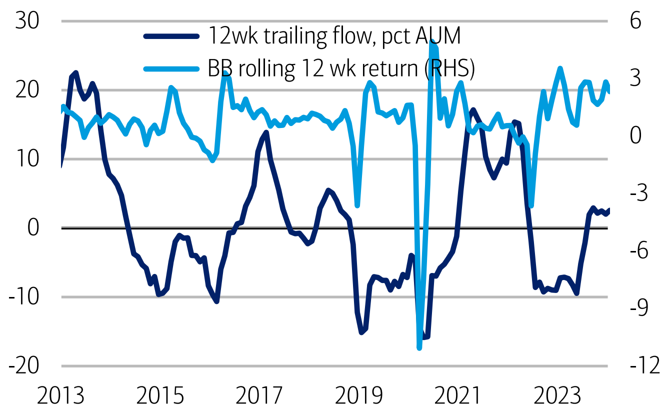
The following charts show demand trends within the loan market, correlated with returns within rating buckets. Exhibit 34 shows a measure of retail flows (12 week trailing retail flows as a percentage of outstanding AUM) vs. monthly BB Loan total returns, while Exhibit 35 depicts monthly CLO issuance vs. monthly B Loan total returns.

Exhibit 34: BB performance vs Loan retail flows
Currently BB rolling 12-week return is at 2.32% and 12-week trailing flow is 2.59% of outstanding AUM



Source: LCD, EPFR Global

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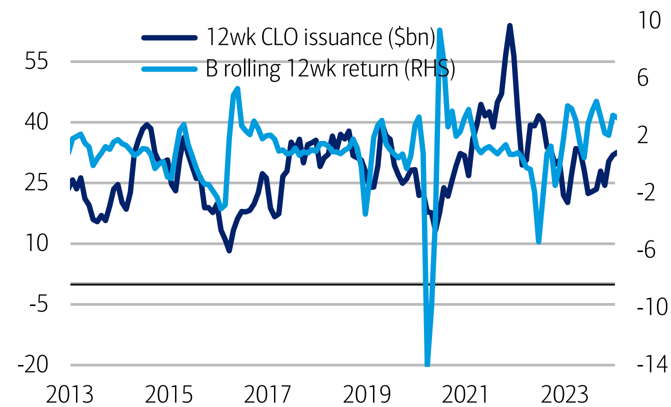
Exhibit 35: B performance vs CLO creation
For Bs, rolling 12 week return is at 3.26% while 12 week CLO issuance is $32.57bn



Source: LCD, EPFR Global

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Glossary

A&E: Amendment and Extension

AUM: Assets Under Management

BSL: Broadly Syndicated Loan Market

CLO: Collateralized Loan Obligation

CPI: Consumer Price Index

DE: Distressed Exchange

DL: Direct Lending

DR: Default Rate

FL/1L: First Lien

GFC: Global Financial Crisis

FOMO: Fear of Missing Out

IG: Investment Grade

HY: High Yield

ISM: Institute for Supply Management

LBO: Leveraged Buyout

LCD: Leveraged Commentary & Data

LevFin: Leveraged Finance

LTM: Last 12 months

MM: Middle Market

OAS: Option-Adjusted Spread

OER: Owners' Equivalent Rent

PD: Private Debt

PDR: Probability Default Rating

PIK: Payment-in-Kind

PPI: Producer Price Index

QoQ: Quarter over Quarter

Refi: Refinancing

RV: Relative Value

SL/2L: Second Lien

SMA: Separately Managed Accounts

TLA/TLB: Term Loan A/B

UoP: Use of Proceed

WK: Week

YoY: Year over Year

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