Collateral Thinking

Drivers of corporate liquidity

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Leveraged Loan Strategy
United States

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Top of the stack

Loans continue to shine in the face of market volatility. YTD they have returned 8% vs HY at 6.7% and IG at 3%. We are on track towards our 11% return target for 2023. This year will be a goldilocks year for loans: ~10% carry will continue to underpin high returns, without becoming an insurmountable burden on corporate balance sheets yet.

However, next year might be different. LevFin corporates are facing an unprecedented rate increase cycle, and effective LTM interest rates for corporates have jumped, reversing a decade long one-way trajectory. Floating rate parts of capital structures have already seen their interest cost doubled; fixed rate bonds are next in line given approaching maturities.

The HY bond market today is where the loan market was a year ago- at the precipice of interest rate resets, and potential refi/downgrade/default risk that comes associated with it. To understand how this could play out, we can look at what loans have done over the last year. Coupons have increased from 4.5% to 9%, coverage ratios have decreased a turn to 3.5x, and 20% of the index has been downgraded. At the same time revenue growth has stagnated and cash on balance sheet has deteriorated.

The silver lining is that the pace of HY coupon increases will be more measured given that only 10-15% of the market needs to be refinanced annually, but nevertheless the potential doubling of costs in a higher for longer rates environment is a risk. Another upshot is capital availability, and sponsors have demonstrated willingness to put higher equity capital in their deals. In this report we assess the status of the most important drivers of corporate liquidity in LevFin space: interest rates, revenues, cash on balance sheet, maturity walls and sponsor equity.

Market Technicals

In the three weeks ending Aug 4th, demand for loans totaled $14.3bn, an increase from $10.8bn demand seen in the prior three weeks. Coupon payments increased by $2.5bn, retail flows and CLO creation increased by $179mn and $755mn respectively.

Rating Actions

In the past month, we have seen rating actions across 22 distinct issuers. A total of 12 issuers were downgraded by 16 notches and 10 issuers upgraded by 13 notches. Overall, we see a net upgrade of $1.1bn.

Return Performance

Loans in the LCD index returned 0.29% in three weeks ending Aug 4th, down from the -1.57% cumulative return seen in the prior three weeks. Across asset classes, YTD loan returns are at 8.0%, YTD HY returns are at 6.7% and YTD IG returns are at 3.0%.

Primary Activity

YTD global and US issuance totals $149bn and $133bn, with a total of 274 and 212 loans launched respectively in the primary market thus far. In total, they trail YTD 2022 issuance by 27% and 25% respectively.

Exhibit 1: Loan performance
YTD Loan return is at 8.0%

Index	Level	1wk Δ	2wk Δ	YTD Rtn
All Loan	94.9 pts	+0.1	+0.1	8.0%
BBs	98.5 pts	-0.0	-0.2	6.0%
Bs	96.2 pts	-0.0	-0.1	8.9%
CCCs	81.2 pts	+0.4	+0.6	11.7%

Source: S&P LCD

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Exhibit 2: HY performance
YTD HY return is at 6.7%

Index	Level	1wk Δ	2wk Δ	YTD Rtn
US HY	394 bps	-2	+03	6.7%
BBs	261 bps	+3	+07	5.0%
Bs	410 bps	-4	-01	7.1%
CCCs	914 bps	-13	-03	12.6%

Source: BofA Global Research

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Exhibit 3: Fund flows ($mn)
YTD loan flows are at -13,614mn

Asset	1wk	2wk	YTD	LTM
Loans	+312	-23	-13,614	-39,389
US HY	-369	-385	-1,503	-6,133
US IG	+1,744	+2,877	+137,898	+61,915

Source: EPFR Global

CLO: Collateralized Loan Obligation

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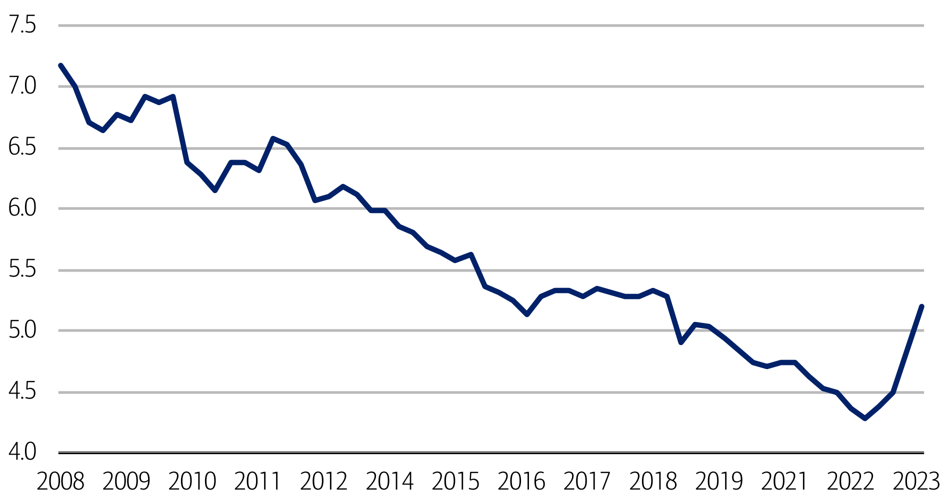
Top of the stack

Loans continue to shine in the face of market volatility. YTD they have returned 8% vs HY at 6.7% and IG at 3%. We are comfortably on track towards our 11% total return target for 2023- a goldilocks year for loans. This year, the 10% carry loans offer will continue to underpin high returns, without yet becoming an insurmountable burden on corporate balance sheets. As such, despite the expected tick up in defaults and distress, credit losses have remained broadly contained. Only the weakest links across LevFin have defaulted to date. LTM issuer and par default rates have increased from 0.7% at the end of 2022 to 2% and 1.8% respectively today, close to historical medians. We expect to finish the year ~3% levels suggesting a bit more upside from here.

However, this is where most of the good news ends. LevFin corporates are facing an unprecedented rate increase cycle. Exhibit 4 shows how steep the ascent in effective LTM interest rates has been for loan issuers, reversing a decade long one-way trajectory. The jump up in interest costs thus far has been driven by the floating rate part of LevFin capital structures which is why gross interest rates remain under the 9% coupons currently available in the loan market. If rates remain in the 5% context for another year, fixed rate HY coupons that need to be refinanced will also mark to market, lifting gross interest rates to match the 9% levels in the loan market. All told, overall interest costs in the LevFin universe could gradually double from levels prevailing a year ago.

Exhibit 4: Effective interest costs for loan issuers across entire debt stack
Recent rise in interest costs has reversed a decade long one-way trajectory



Source: BofA Global Research, LCD, Bloomberg

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The HY bond market today is where the loan market was a year ago- at the precipice of interest rate increases, and potential refi/downgrade/default risk that comes associated with it. To understand how this could play out in the LevFin space, we just have to look at what loans have done in the past one year. Coupons have increased from 4.5% to 9%, coverage ratios have decreased a turn to 3.5x, and 20% of the outstanding loan index has been hit with at downgrades. At the same time revenues have stagnated and cash on balance sheet has deteriorated.

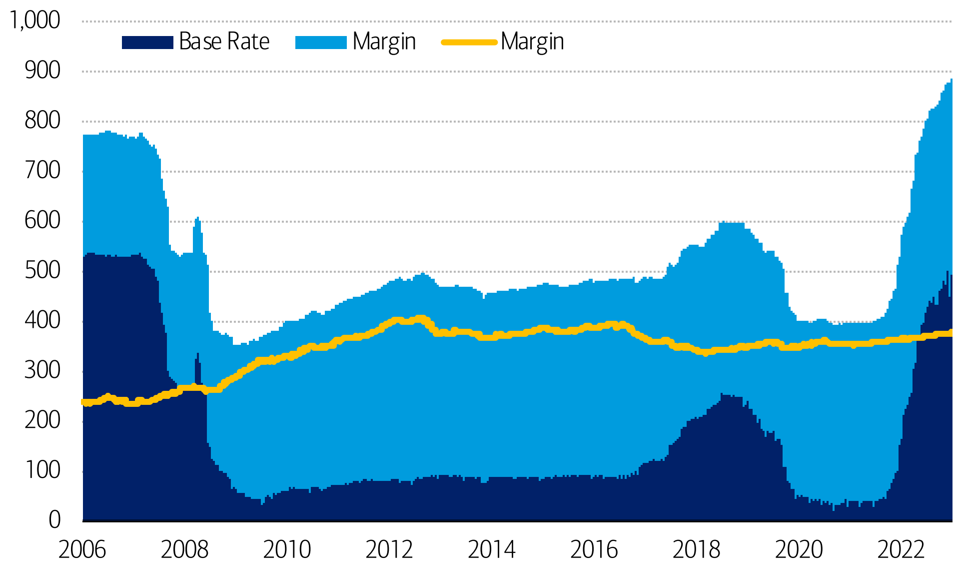
The silver lining is that the pace of HY coupon increases and thus downgrade/default risk will be more measured given that only limited portions will be refinanced annually, but nevertheless the eventuality remains of potentially doubling of costs in a higher for longer rates environment. Additionally, capital availability for the "right" corporates is plentiful, and sponsors have demonstrated willingness to put higher equity capital in their deals. ***In this report we deep dive into the drivers of LevFin corporate liquidity: interest rates, revenues, cash on balance sheet, maturity walls and sponsor equity.***

Interest rate increase being driven by base rates

Exhibit 5 shows prevailing loan coupons split by base rate and margins. We note how the increase in interest costs has largely been driven by the base rates, meaning that thus far credit contagion remains in check. In fact for CCCs, margins today are lower than where they were pre COVID. Exhibit 7 shows the split of prevailing loan coupons for CCC loans, while Exhibit 6 shows the same for BBs.

Exhibit 5: Loan coupon contribution from base rate and margin

Coupon increases are being driven by base rates not margins



Source: BofA Global Research, IHS Markit

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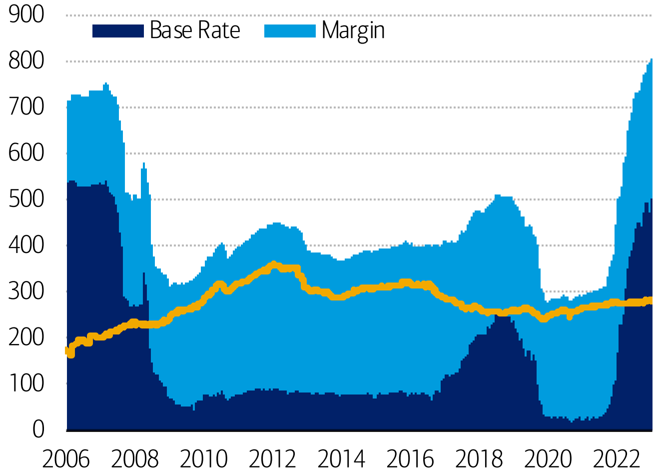
Comparing the two opposite sides of the rating spectrum forms an interesting exercise in understanding credit risk priced in. Typically, base rates form a large part of outstanding BB coupons- out of the 800bps being paid out by these issuers today, ~500bps is the contribution from base rates while the credit sensitive margin is only 300bps. It's the opposite in CCCs as suspected. Margins and base rates have nearly an equal contribution to outstanding coupons. Given the relatively thicker margin for CCC issuers allows them to compress as rates rise, because typically rates rise in tandem with economic growth portending decreasing credit risk for the lower quality issuers.

Given the quickly fading recession probability, recent BB/CCC behavior has been similar to past experiences of rate increases with CCC margins compressing. However, the difference today is that the driver of high rates today is not growth but inflation. In the absence of real earnings growth within levfin issuers, it will be hard to justify continued margin compression for the foreseeable future. This could potentially open doors towards margin increase in tandem with high base rates- a double whammy for levfin issuers on a temporary basis where yields will continue to rise.

However, should inflation get tamed without the Fed having to raise rates further, and we get rate cuts in 2024, this would alleviate interest cost pressures and potentially set up the levfin market towards stable margins, if not outright compression, in the context of declining base rates and yields.

Exhibit 6: Loan coupon contribution from base rate & margin- BBs
Base rates form a large part of outstanding BB coupons



Source: BofA Global Research, IHS Markit

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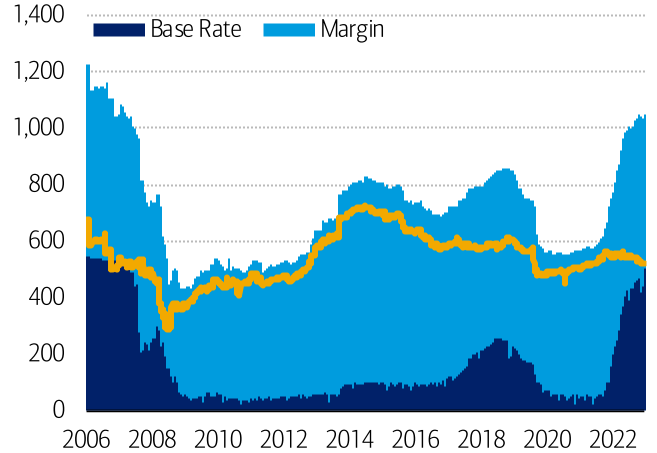
Exhibit 7: Loan coupon contribution from base rate & margin- CCCs
Margins and base rates contribute equally to CCC coupons



Source: BofA Global Research, IHS Markit

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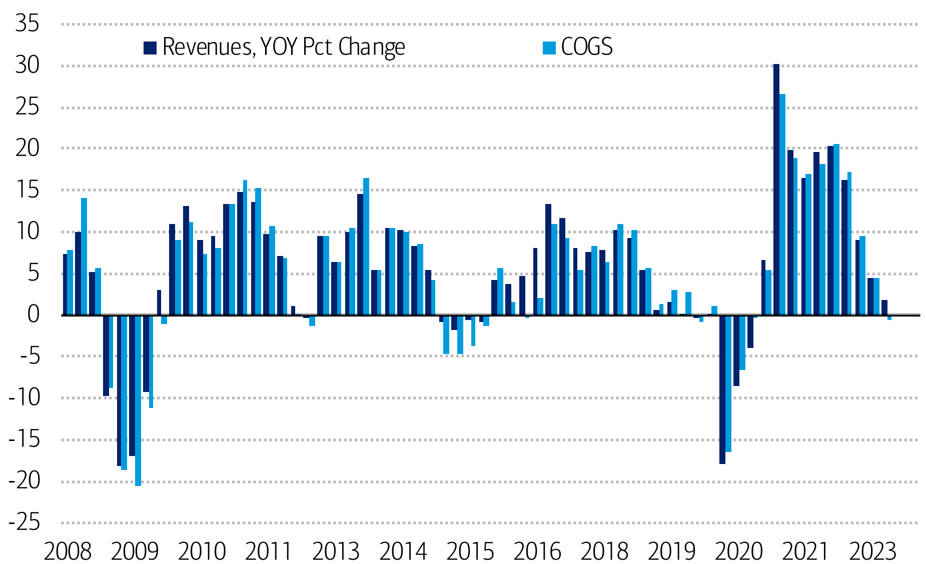
Real revenue growth is negative

A usual interest rate cycle comes with economic growth and increasing corporate revenues and profitability generally mitigate increases in coupons. However, as mentioned, this is an atypical cycle and topline growth if any is unlikely to be commensurate with the rapid increase in debt service costs. Nominal revenue growth YoY is already near 0%, indicating that real revenue growth net of inflation is actually negative. Most feedback from individual companies reporting earnings also suggests that volumes are suffering, and revenues are holding up because of price push throughs for now. As the consumer balance sheet starts wearing out, this will have further impact on topline growth, cutting off an essential source of cash generation for companies as soon as next year. On the flip side, costs have also reigned in, and could help generate margin expansions and profitability.

Exhibit 8: YoY revenue and cost growth
Nominal revenue growth is near zero



Source: BofA Global Research, LCD, Bloomberg

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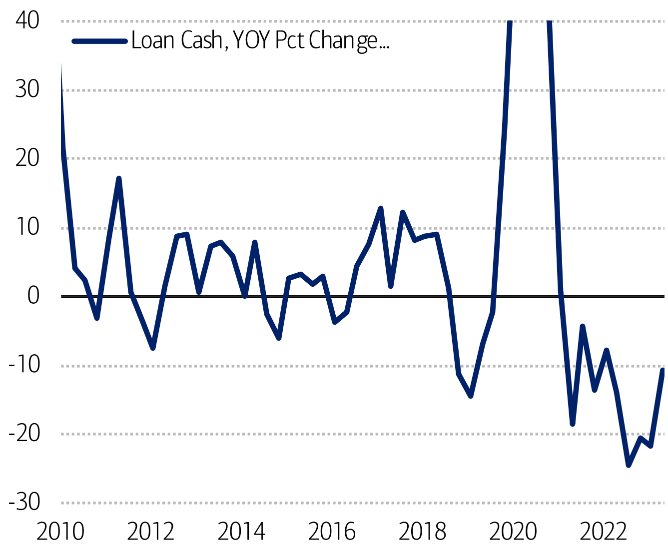
Cash on balance sheet is decreasing

This brings us to the one pillar of strength that corporates had coming into this slowdown: cash on balance sheet. American companies (and consumers) had built an arsenal of cash equivalents through COVID due to multiple rounds of fiscal and monetary stimulus. A lot of that has now been spent. Exhibit 9 shows that the growth in balance sheet cash for loan issuers has remained in negative territory most of post COVID.

Simultaneously short-term debt has built up by way of both upcoming loan and bond maturities. Cash as a proportion of short term debt is almost near its cycle lows reached during COVID depths. These are sobering numbers that need to be taken into account in the context of the cash runway issuers have left in a higher for longer rates environment.

Exhibit 9: YoY growth in balance sheet cash amongst loan issuers
Balance sheet cash has been eroding after COVID-era boom



Source: BofA Global Research, LCD, Bloomberg

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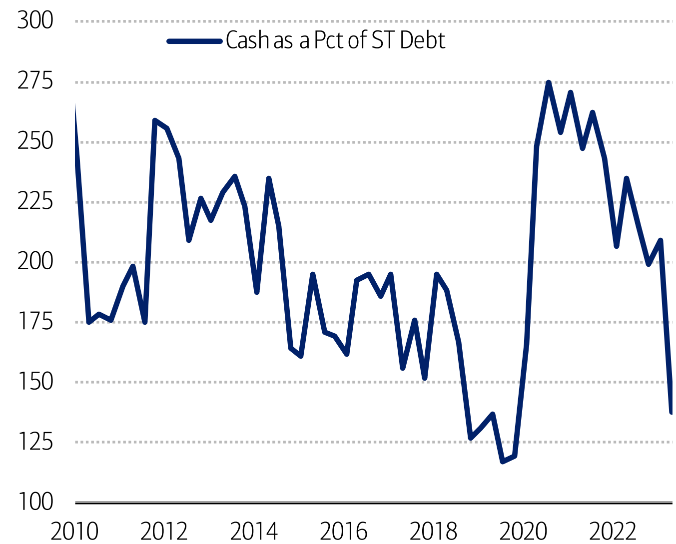
Exhibit 10: Cash as % of short-term debt amongst loan issuers
Cash as % of short-term debt is near cyclical troughs



Source: BofA Global Research, LCD, Bloomberg

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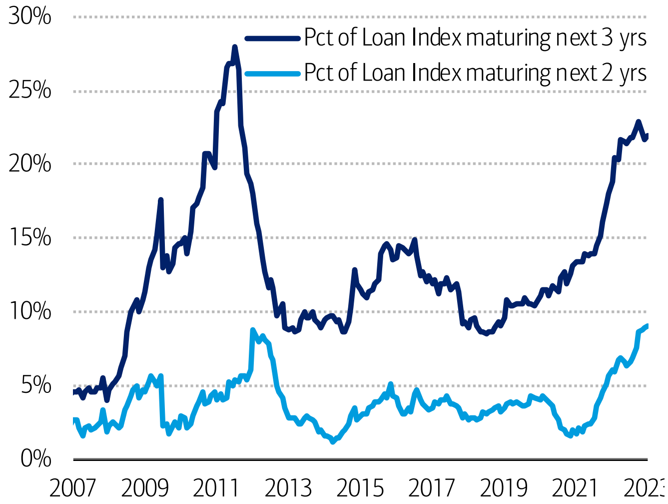
Maturity walls

All the above fundamental data should be assessed in the context of another potential strain on corporate liquidity: maturity walls. This will dictate the amount of time LevFin corporates have before their coupons double. For Loans the clock already started ticking last year given their floating nature, and most have been able to refinance (at higher rates) since then, thus keeping outstanding maturities from building up aggressively.

On the other hand, HY issuers have naturally avoided coming to market. Maturities have now built up to loan-market levels, suggesting the clock has now started ticking for the HY market segment as well. Exhibit 11 shows how "aggressive" near-term maturities are in the loan market vs historically. Today, both 2 and 3yr maturities are elevated but lower vs historical peaks reached in 2011. As well, recent levels have come off a touch from the highs signaling a possible respite. Exhibit 12 shows near-term maturities for the HY bond index- the HY near-term maturity wall is the most aggressive it has ever been in the post-GFC period.

Exhibit 11: Near-term loan maturities
Loan maturities remain elevated but less aggressive vs historically



Source: : BofA Global Research, LCD

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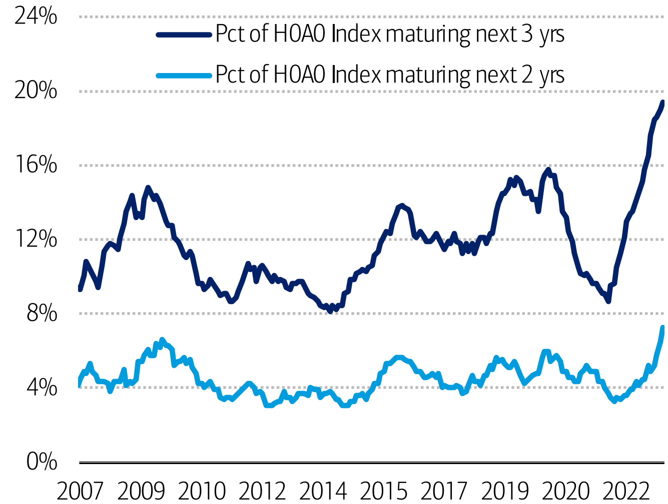
Exhibit 12: Near-term bond maturities
Bond maturities are at the most aggressive level since GFC



Source: BofA Global Research, ICE Indices

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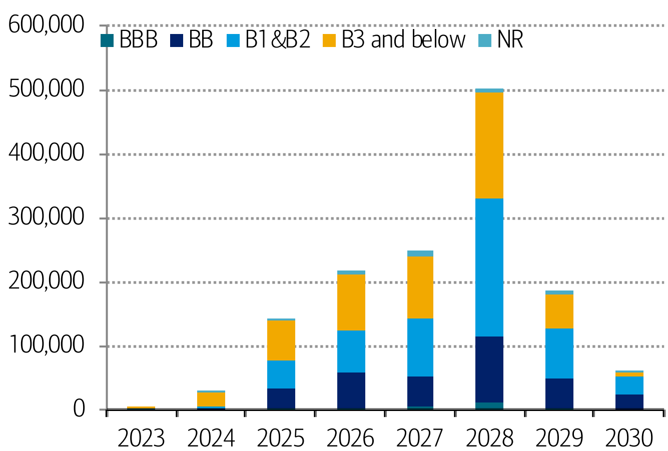
This brings us to the Refi/Downgrade/default risk within LevFin. To assess the risk that some of the upcoming maturities may not be able to find refinancing, we look to the rating distribution of annual maturities since most of the refi risk will come from the lower quality segment of the market. On an absolute level, this risk is noticeably higher in loans with ~$30bn of loans from B3/below issuers coming due over the next two years in HY vs $86bn in Loans.

This is largely a function of the large absolute levels of low-quality paper within Loans. Seen as a pct of lower quality paper outstanding, annual %s due across low quality paper is nearly identical within HY and Loans.

Exhibit 13: Loan maturity wall by issuer ratings
Loans have more absolute dollars of lower quality paper to refi



Source: BofA Global Research, LCD

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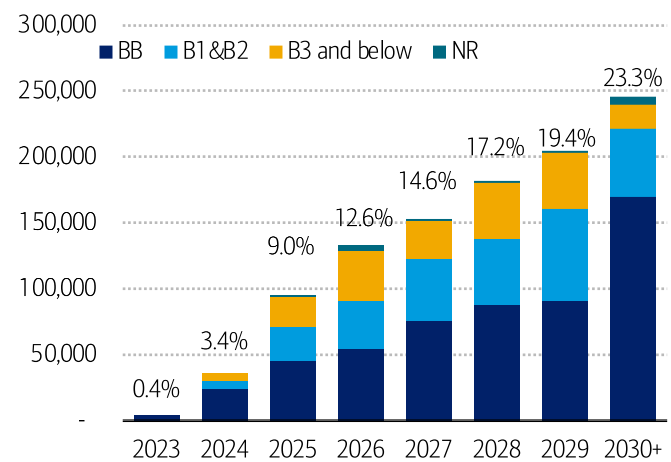
Exhibit 14: Bond maturity wall by issuer ratings
Bonds have a smaller amount of lower quality paper to refi



Source: BofA Global Research, ICE Indices

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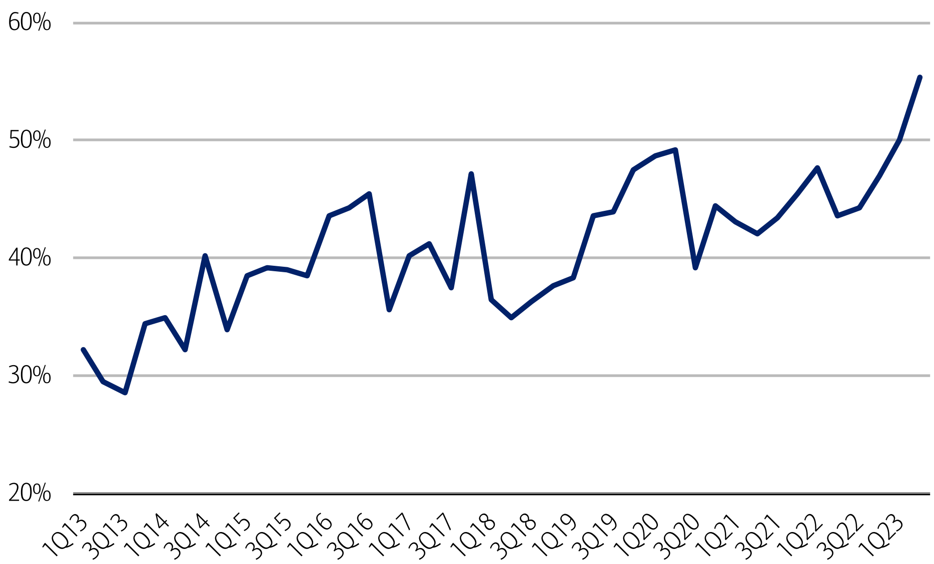
Given that roughly 10%-15% of the market is coming due annually, this suggests the aggregate increase in coupons for HY issuers will take place at a slower, more measured pace vs the loan market which floats with base rates instantaneously.

Sponsor Equity contributions have increased

This brings us to the last and the very important aspect of liquidity: equity checks. Exhibit 15 demonstrates that the willingness and ability of sponsors to put in a higher pct of the deal value in equity capital, is the highest in a decade. The average deal value in sponsor equity in new issue deals today is near 55%. This is a function of the treasure trove of dry powder within the Private Equity asset class. As well as being driven by necessity: given the high cost of debt, many creditors today will only put capital in at deal leverage levels lower than before. This is also true in refinancings where sponsors in problematic capital structures are being asked to delever in order to tide refinancings over.

Exhibit 15: Percentage of deal value coming from sponsor equity within large corporate LBOs
Sponsors have demonstrated ability and willingness to write bigger equity checks



Source: Refinitiv LPC

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Market Technicals

In the three weeks ending Aug 4th, demand for loans totaled $14.3bn, increasing from the $10.8bn of demand seen in the prior three weeks ending July 14th. The increase in demand was mainly driven by a $2.5bn coupon payments between the two three-week periods. Additional CLO issuance and retail inflow increased by 755mn and 179mn respectively. YTD net demand has outweighed supply by $117bn versus the $68bn 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 16: Weekly Technicals ($mns)
Demand net of supply is at 117bn

	YTD as of 8/4/2023	8/4/23	7/28/23	7/21/23	7/14/23
Retail flows (a)	-13,911	312	70	125	323
CLO creation (b)	59,208	2,295	1,105	1,376	2,553
Coupons (c)	71,709	4,898	1,933	2,218	1,312
Demand (a+b+c)	117,006	7,505	3,108	3,719	4,188
Issuance Ex-repricings (d)	129,960	8,453	5,147	6,890	4,520
Repayments (e)	130,261	3,745	2,430	1,696	4,780
Supply (d-e)	-301	4,708	2,717	5,194	-260
Demand net of Supply	117,308	2,797	391	-1,475	4,448

Source: BofA Global Research, LCD

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Rating Actions

In the past month, we have seen rating actions across 22 distinct issuers. A total of 12 issuers were downgraded by 16 notches ($7.4bn total notional) and 10 issuers upgraded by 13 notches ($8.5bn total notional). Of the downgrades, American Beacon Advisors had one loan downgraded by four notches, totaling $538mn, the most among issuers. Of the upgrades, American Airlines had two loans upgraded by three notches, totaling $2.17bn, the most by notional.

In terms of sectors, Technology and Packaging/Paper each contributed 26% and 17% of total downgrades in the past month by notional respectively. Of the upgrades, by notional amount, 40% was in Travel followed by 27% in Services. Seven distinct sectors experienced upgrades while eight distinct sectors experienced downgrades. Overall, we see net upgrade activity of $1.1bn.

Exhibit 17: Recent downgrades and upgrades
There was net upgrade activity of $1.1bn

Issuer	Ticker	Margin	Notional	Maturity	Sector	Rating Action	Current Rating	Previous Rating	Notches
American Beacon Advisors	AMEBEA	425	538	4/30/2024	Financials	Downgrade	CC	B-	-4
Research Now Group Inc	EREWDS	550	926	12/20/2024	Media	Downgrade	CCC	B-	-2
Constellation Brands Canada	CNDINC	350	444	11/24/2027	Food Producers	Downgrade	B-	B	-1
Domtar	UFS	550	637	11/30/2028	Packaging/Paper	Downgrade	BB-	BB	-1
DuPage Medical Group	MIDPHY	325	714	3/12/2028	Healthcare	Downgrade	B-	B	-1
Exactech Inc	EXAC	375	256	2/14/2025	Healthcare	Downgrade	CCC	CCC+	-1
Jo-Ann Stores	JAS	475	663	7/7/2028	Retail	Downgrade	CCC	CCC+	-1
Mavenir Systems	MAVSYS	475	578	8/18/2028	Technology	Downgrade	CCC	CCC+	-1
Qlik Technologies	QLIK	400	1,383	4/26/2024	Technology	Downgrade	B-	B	-1
Therm-O-Disc Inc	THEODI	600	356	5/31/2029	Capital Goods	Downgrade	CCC	CCC+	-1
Tortoise Investments	TORINV	350	301	1/31/2025	Financials	Downgrade	CCC-	CCC	-1
Tosca Services	TOSCSE	350	612	8/18/2027	Packaging/Paper	Downgrade	CCC+	B-	-1
American Airlines	AAL	275	990	2/15/2028	Travel	Upgrade	B+	B	1
Birkenstock GmbH & Co. KG	BIRKEN	325	783	4/28/2028	Retail	Upgrade	B+	B	1
Clarion Events	CLAEVE	500	401	9/30/2024	Services	Upgrade	B-	CCC+	1
Hilton Grand Vacations Inc	HGV	300	1,277	8/2/2028	Travel	Upgrade	BBB-	BB+	1
Learning Care Group	LCGI	325	521	3/13/2025	Services	Upgrade	B	B-	1
Oxea Group	OXEAGR	350	436	10/14/2024	Chemicals	Upgrade	B+	B	1
Physician Partners Inc	PHYPNR	400	593	12/23/2028	Healthcare	Upgrade	B+	B	1
Tricor Group LLC	THEVEL	400	752	6/18/2029	Services	Upgrade	B+	B	1
Tricor Group LLC	THEVEL	475	600	6/18/2029	Services	Upgrade	B+	B	1
Voyage Digital (NZ) Limited	VYGVF	425	505	5/11/2029	Media	Upgrade	BB-	B+	1
WebPros	PARINV	525	492	2/18/2027	Technology	Upgrade	B+	B	1
American Airlines	AAL	175	1,183	1/29/2027	Travel	Upgrade	BB-	B	2

Source: BofA Global Research, LCD

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Return Performance

Loans in the LCD index returned 0.29% in the three weeks ending Aug 4th, down from the 1.57% cumulative return seen in the prior three weeks ending June 30th. Second Lien loans were the best performer during the three-week window, returning 140bps, and CCC loans (117bps) outperformed both BBs (11bps) and Bs (27bps). Across asset classes, YTD loan returns are at 8.0%, HY YTD returns are at 6.7% and IG YTD returns are at 3.0%.

Exhibit 18: Total Returns (price plus coupon return) bps
Loans returned 0.29% in the week ending Aug 4th

	8/4/2023	7/28/2023	7/21/2023	7/14/2023
All Loans	6	18	5	59
BB	4	5	2	39
B	6	19	2	66
CCC	16	73	28	109
2nd Lien	26	81	33	114
LL100	4	9	-7	55

Source: BofA Global Research, LCD

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Primary Activity

YTD global and US issuance totals $149bn and $133bn, with a total of 274 and 212 loans launched respectively in the primary market thus far. In comparison, YTD '22 brought in $204bn global issuance across 293 loans, and $178bn US issuance across 239 loans. In total, YTD 2023 Global and US issuance trail YTD 2022 issuance by 27% and 25% respectively. In terms of the composition of the types of deals financed in the past 30 days, 61% by notional amount was for refinancing, followed by 16% for LBO and 11% for Acquisition.

Exhibit 19: Recent new loan issues
The largest recent new issue came from Arconic $1.4bn deal

Launch Dt	Issuer	New Inst. Money	Moody's	S&P	ABL	Cov Lite	Proceeds	Sector	Country
8/8/2023	Cushman & Wakefield	700	Ba3	BB	No	YES	Refinancing	Real Estate	United States
8/8/2023	ECL Entertainment	380	B2	B+	No	YES	Refinancing	Gaming & Hotel	United States
8/8/2023	Epicor Software Corporation	350	B2	B-	No	YES	Refinancing	Computers & Electronics	United States
8/7/2023	Tacala Restaurants LLC	85	B2	B-	No	YES	Dividend	Restaurants	United States
8/7/2023	Tenneco Inc	1,397	B1	B	No	YES	LBO	Automotive	United States
8/7/2023	Tronox Worldwide LLC	300	Ba2	BB	No	YES	Refinancing	Chemicals	United States
8/4/2023	Hyperion Materials & Technologies	60	B2	B	No	YES	GCP	Manufacturing & Machinery	United States
8/3/2023	ASGN	500	Ba1	BBB-	No	YES	Refinancing	Services & Leasing	United States
8/3/2023	SonicWall International LLC	88	Caa2	CCC+	No	YES	Refinancing	Computers & Electronics	United States
8/3/2023	NorthRiver Midstream	850	Ba3	BB	No	YES	Refinancing	Oil & Gas	Canada
8/2/2023	Osaic Holdings Inc	200	B1	B	No	YES	Acquisition	Services & Leasing	United States
8/2/2023	Consilio	200	B2	B-	No	YES	Acquisition	Computers & Electronics	United States
8/2/2023	First Brands	350	B1	B+	No	YES	Acquisition	Automotive	United States
8/2/2023	Duravant LLC	125	B1	B-	No	YES	Refinancing	Manufacturing & Machinery	United States
8/1/2023	Greystar Real Estate Partners	450	Ba3	BB-	No	YES	Refinancing	Real Estate	United States
8/1/2023	Carnival Corp	1,300	Ba2	BB-	No	YES	Refinancing	Entertainment & Leisure	United States
8/1/2023	Charter Next Generation	210	B3	B	No	YES	Refinancing	Chemicals	United States
8/1/2023	Chemours Company	515	Ba1	BBB-		YES	Refinancing	Chemicals	United States
8/1/2023	Chemours Company	960	Ba1	BBB-	No	YES	Refinancing	Chemicals	United States
8/1/2023	Access Information Management	1,125	B2	B	No	YES	Refinancing	Computers & Electronics	United States
8/1/2023	Sharp	245	B2	B-	No	YES	Acquisition	Chemicals	United States
8/1/2023	Learning Care Group	900	B2	B	No	YES	Refinancing	Services & Leasing	United States
7/31/2023	Talen Energy Corp	290	Ba3	BB	No	YES	Refinancing	Utilities	United States
7/31/2023	Barnes Group Inc	600	Ba3	BB	No	YES	Acquisition	Aerospace & Defense	United States
7/28/2023	Avient Corporation	732	Ba1	BB+	No	YES	Refinancing	Chemicals	United States
7/26/2023	J&J Ventures Gaming LLC	350	B2	B	No	YES	Acquisition	Gaming & Hotel	United States
7/25/2023	Generation Bridge Northeast LLC	865	Ba2	BB	No	NO	Dividend	Utilities	United States
7/25/2023	Enlyte	150	B2	B-	No	YES	Refinancing	Computers & Electronics	United States
7/25/2023	Asurion LLC	600	Ba3	B+	No	YES	Refinancing	Computers & Electronics	United States
7/25/2023	Curium	25	B3	B-		YES	Refinancing	Healthcare	France
7/25/2023	Veritext Corp	940	B2	B	No	YES	Refinancing	Services & Leasing	United States
7/25/2023	kdc/one Development Corporation Inc	460	B3	B-		YES	Refinancing	Consumer Nondurables	Canada
7/25/2023	kdc/one Development Corporation Inc	1,005	B3	B-	No	YES	Refinancing	Consumer Nondurables	Canada
7/24/2023	Legence Holdings	155	B2	B-	No	YES	Acquisition	Building Materials	United States
7/24/2023	Invenergy LLC	350	Ba2	BB-	No	NO	Refinancing	Utilities	United States
7/21/2023	Jones DesLauriers Group	375	B2	B-	No	YES	Refinancing	Insurance	Canada
7/20/2023	Fortress Investment Group	150	Ba1	BB	No	YES	Acquisition	Services & Leasing	United States
7/19/2023	GIP II Blue Holdings	100	Ba3	BB-	No	NO	Dividend	Oil & Gas	United States

Exhibit 19: Recent new loan issues
The largest recent new issue came from Arconic $1.4bn deal

Launch Dt	Issuer	New Inst. Money	Moody's	S&P	ABL	Cov Lite	Proceeds	Sector	Country
7/19/2023	CoAdvantage	575	B2	B	No	YES	Dividend	Services & Leasing	United States
7/18/2023	BrandSafway	1,335	B3	B-	No	YES	Bridge to IPO	Building Materials	United States
7/18/2023	Inspired Education	600	B2	B		YES	Acquisition	Not for Profit	United Kingdom
7/18/2023	Arconic	1,425	Ba3	B+	No	YES	LBO	Metals & Mining	United States
7/18/2023	Software AG	640	B2	B		YES	LBO	Computers & Electronics	Germany
7/18/2023	Software AG	405	B2	B	No	YES	LBO	Computers & Electronics	Germany
7/17/2023	Syntegon	115	B2	B		YES	Refinancing	Forest Product	Germany

Source: BofA Global Research, LCD

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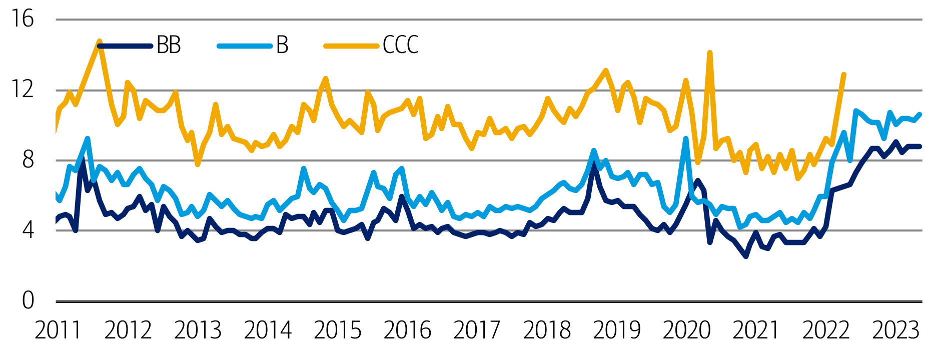
Exhibit 20: Average new issue yields by month
BB and B currently yield 9.05% and 10.65% respectively while there is not enough sample size for CCC



Source: BofA Global Research, LCD

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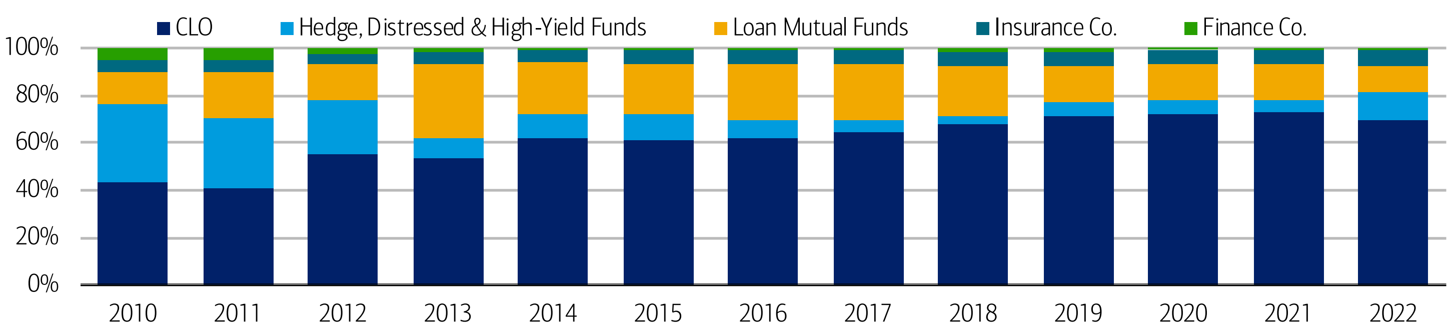
CLO Update

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 21: Distribution of investors across loan market
CLOs make up 69% of the primary institutional market



Source: BofA Global Research, LCD

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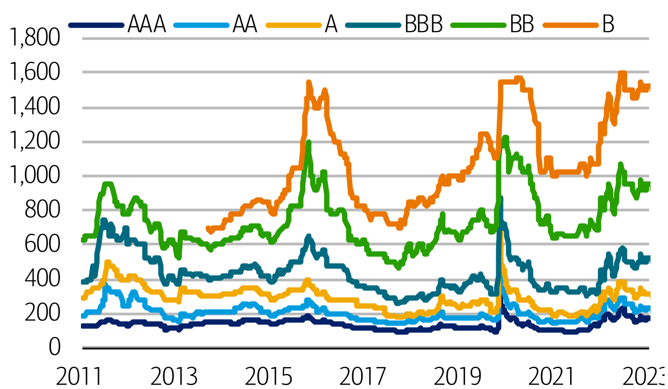
Exhibit 22 shows CLO spread levels by tranches. CLO arbitrage is a widely followed statistic in the loan market and represents the theoretical spread that managers can capture by issuing CLOs. Exhibit 23 compares CLO asset (loan) spreads to the weighted average spreads of CLO liabilities. The difference 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 22: US CLO 2.0/3.0 indicative spread level (bps)
Secondary CLO spreads have increased materially



Source: BofA Global Research

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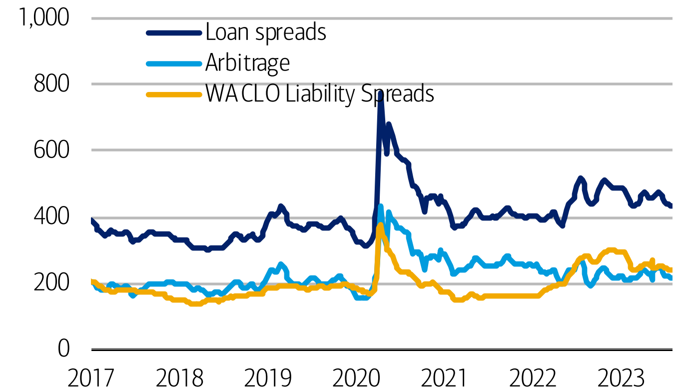
Exhibit 23: CLO Arbitrage (bps)
CLO arbitrage has been declining



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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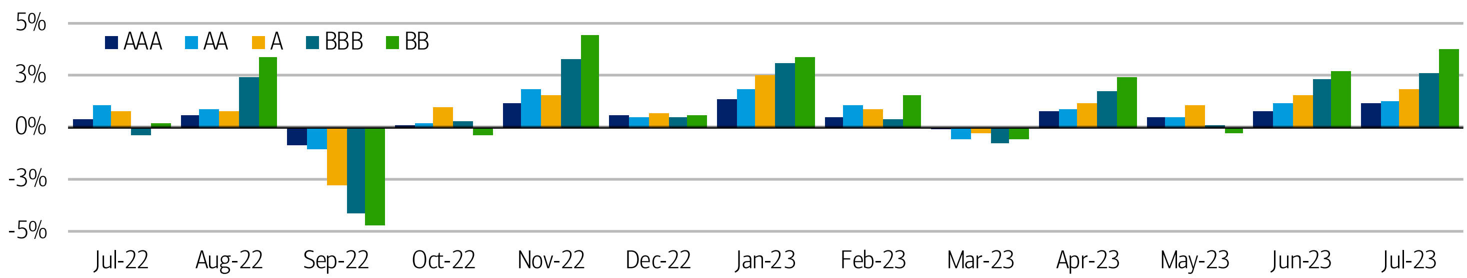
Exhibit 24 shows monthly CLO returns as defined by the Palmer Square CLO index (price plus coupon returns).

Exhibit 24: Monthly CLO 2.0 returns by rating
CLOs returned 1.4% in July



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

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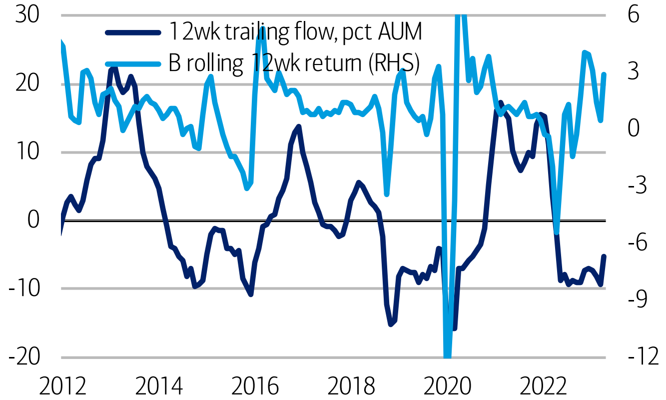
The following charts show demand trends within the loan market, correlated with returns within rating buckets. Exhibit 25 shows a measure of retail flows (12 week trailing retail flows as a percentage of outstanding AUM) vs. monthly BB Loan total returns, while Exhibit 26 depicts monthly CLO issuance vs. monthly B Loan total returns.

Exhibit 25: BB performance vs Loan retail flows
12wk trailing flow % of AUM with BB rolling 12k return



Source: LCD, EPFR Global

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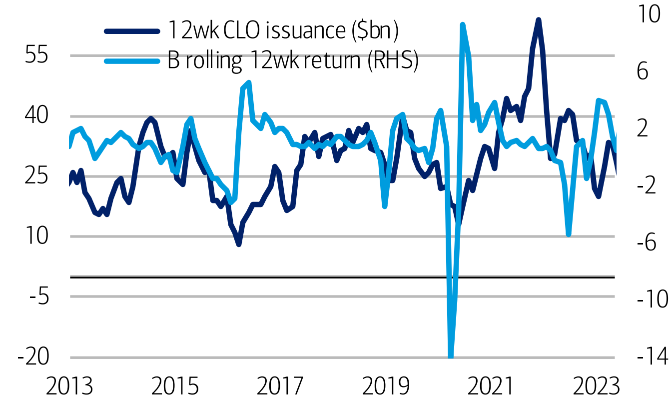
Exhibit 26: B performance vs CLO creation
12wk CLO issuance with B rolling 12wk return



Source: LCD, EPFR Global

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