Collateral Thinking

Who's financing the loan market?

23 October 2023

Leveraged Loan Strategy
United States

BofA Data Analytics

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Top of the stack

We see the current selloff as an overdue correction rather than a canary in the coal mine, bringing both US and EU loans in line with our fair-value targets. The decline represents a temporary setback, from which most loans should be able to recover near term. Our optimism around limited near-term downside is a function of the solid technicals in LevFin space – the very reason why spreads have held up YTD.

US loan demand net of supply is at the highest levels in a decade on the back of low new money issuance, high repayment rates, and increased coupons returned to investors. LTM net supply of HY bonds has been negative for a year. As a result, despite a pickup in gross issuance, the market outstanding has been shrinking. Stock of leveraged loans outstanding has declined -2% YoY – its first annual decline since the GFC. HY has shrunk even further at -2.8% YoY. Investors and corporates are in survival mode- the former reluctant to finance new leveraged deals, and the latter unwilling to float expensive debt. This theme is unlikely to change near term, providing support to existing outstanding debt, especially higher quality, in the context of decent investor cash buffers.

This is particularly applicable to loans once we understand the dynamics around who is financing the market. Of all loans refinanced YTD, 32% have been done outside the loan market. 23% of refinanced par has been absorbed by bond takeouts, while Private-Debt has taken out the remaining 9%. This trend is likely to keep loans outstanding in check, and diminish the surge of loan-only structures seen across LevFin over the past decade. However, risks to this favorable technical imbalance exist in the form of approaching maturity walls, slowing demand, and a turn in issuer fundamentals or US consumer.

Market Technicals

In the three weeks ending Oct 13th, demand for loans totaled $15.1bn, increasing from $12.8bn seen in the prior three weeks. CLO issuance and coupon payments increased by $4.1bn and $576mn respectively, while Retail flows decreased by $2.4bn.

Rating Actions

In the past month, we have seen rating actions across 33 distinct issuers. A total of 19 issuers were downgraded by 22 notches and 14 issuers upgraded by 21 notches. In terms of sectors, Retail and Chemicals each contributed 23% and 18% of total downgrades in the past month whereas Media and healthcare contributed 24% and 17% to upgrades respectively. Overall, we see a net upgrade of $5.4bn.

Return Performance

Loans in the LCD index returned 0.03% in three weeks ending Oct 13th, down from the -0.97% cumulative return seen in the prior three weeks. Across asset classes, YTD loan returns are at 10.4%, YTD HY returns are at 4.7% and YTD IG returns are at -1%.

Primary Activity

YTD global and US issuance totals $212bn and $190bn, with a total of 375 and 293 loans launched respectively in the primary market thus far. In total, they trail YTD 2022 issuance by 5% and 1% respectively.

Exhibit 1: Loan performance

YTD Loan return is at 10.4%

Index	Level	1wk Δ	2wk Δ	YTD Rtn
All Loan	95.3 pts	+0.1	-0.0	10.4%
BBs	99.0 pts	+0.1	+0.1	7.6%
Bs	96.7 pts	+0.1	+0.0	11.6%
CCCs	79.6 pts	-0.1	-0.1	14.7%

Source: S&P LCD

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Exhibit 2: HY performance

YTD HY return is at 4.7%

Index	Level	1wk Δ	2wk Δ	YTD Rtn
US HY	425 bps	-1	-01	4.7%
BBs	288 bps	-3	-04	2.8%
Bs	444 bps	+1	+02	5.4%
CCCs	969 bps	+3	+05	11.2%

Source: BofA Global Research

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Exhibit 3: Fund flows ($mn)

YTD loan flows are at -11,848mn

Asset	1wk	2wk	YTD	LTM
Loans	+41	-687	-11,848	-22,987
US HY	-1,505	-2,803	-8,315	+247
US IG	+2,059	-170	+154,497	+114,579

Source: EPFR Global

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See glossary of abbreviations and other terms on page 15.

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Timestamp: 23 October 2023 06:00AM EDT

Top of the stack

Correction or canary?

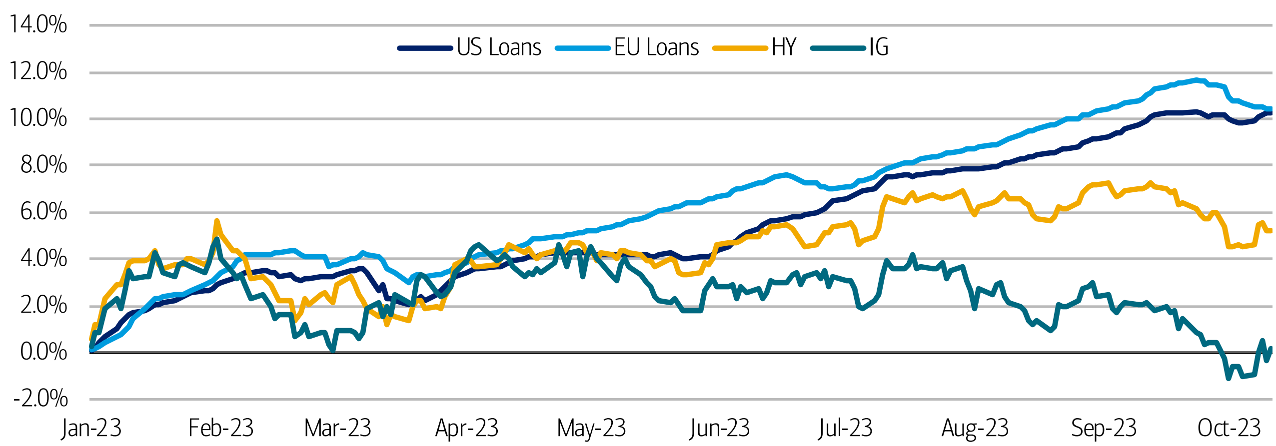
Economic data this month have been a timely reminder of the strength of the US economy (payrolls, ISM, retail sales), and the challenge involved in predicting rates trajectory with conviction (CPI, PPI). Risk assets have sold off over the last month as market jitters around rates and geopolitical volatility have spread. US loans lost 0.75pts, partially erasing their 3pt summer grind. CCCs led the losses with a 1.1pts drop, followed by Bs decreasing 0.7pts. During the same period, EU loans which had run up even more-4pts YTD, saw a more significant pullback, losing 2pts.

Is this selloff simply an overdue correction, or canary in the coal mine, portending further weakness? To us, it's the former – a colling off period in a market that had run past its fair value. Market exuberance reached its peak in mid-Sep, when US loans clocked in at $96.2 while EU loan reached $97.2. Both these levels were higher than our soft landing targets laid out in How will loans and CLOs fare in a soft-landing and EU loan forecasts. With the recent softening, both US and EU loan prices have corrected to ~95.5pts, reaching close to our fair-value targets.

Despite the pullback, loans remain the best performers across credit YTD (Exhibit 4) returning 10.3%. In comparison, HY has wiped out 2% with the recent rates move, now at 5.3% YTD, while IG returns are marginally above 0%. The performance gap between US and EU loans has also now closed, with the latter retracing further.

Exhibit 4: YTD 2023 cumulative Total Return across asset classes

Loans remain the best performers across credit YTD; the selloff has helped US loans close the gap with EU loans



Source: BofA Global Research, LCD, ICE

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For now, recent events represent a temporary setback, from which most loans should be able to recover in the near term. We continue to like BBs and think they will outperform over the next 12 months. Our optimism around limited near-term downside is a function of the solid technicals in LevFin space – the very reason why spreads have held up YTD.

In this report we deep dive into the current market dynamics around demand and supply, highlighting the sources of strength and how we expect these to evolve going forward. In that context we also detail where loan market financing has come from this year, given the unusual circumstances around CLOs not being able to freely participate in refis. We discuss how these themes have impacted overall LevFin capital structures over time. Finally, we outline what could upset the apple cart next year.

We expect the supply picture to remain constrained for the remainder of this year, providing a floor to prices. Unless fundamentals become challenging enough to outweigh the technicals, we think prices will remain range-bound in the $94-$96 context.

Technical imbalance

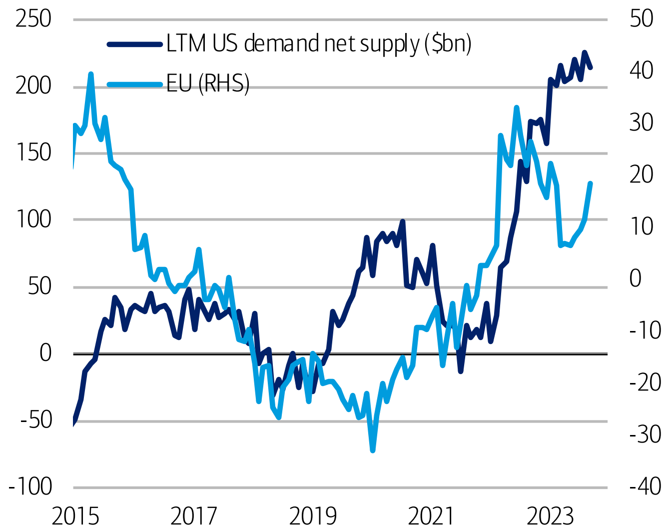
To calibrate technical strength we look at all measurable sources of demand and supply. We calculate net supply as new money issuance minus repayments. Aggregate demand is calculated as the sum of new CLO issuance, retail flows, and coupons received on the index. Netting out supply from demand then lays out technical imbalances should any exist. Exhibit 5 and Exhibit 6 show a timeseries of this "net demand" for US and EU loan markets, as seen on an LTM and L3M basis.

Net demand in the US loan market spiked in 2022 as supply collapsed ($250bn in YE'21 vs $40 in YE'22), and has remained elevated since. Measured cumulatively over an LTM period, net demand reached a record of $225bn in August, and is hovering at similar levels today. On an L3M basis, net demand has softened from its late Aug peak, though it still remains at post-COVID highs.

In contrast, the EU trajectory has been different. Net demand in EU has visibly softened since middle of last year due to pullback in CLO issuance and decrease in repayments, and has generally underwhelmed compared to US, until recently. Since March of this year, net demand has bounced back significantly, driving the L3M levels to their post COVID peaks, now matching US levels.

Exhibit 5: US vs EU LTM demand net supply

LTM EU net demand has underwhelmed compared to US until recently



Source: BofA Global Research, LCD

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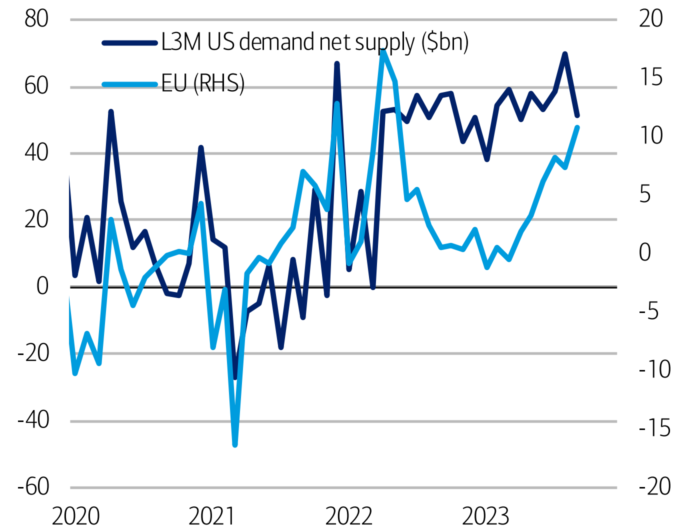
Exhibit 6: US vs EU L3M demand net supply

L3M EU net demand bounced back since March, now matching US levels



Source: BofA Global Research, LCD

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In the US, the supply picture has contributed disproportionately to technical strength. Exhibit 7 shows that YoY net supply (issuance ex repayments) has decreased 94%, essentially meaning net supply is currently running close to zero. This has been a function of a) decreasing new money supply as leveraged corporates shift from expansion mode financed by expensive debt, to survival mode focusing on rolling over maturities and making ends meet just enough to outlast the high rates, b) increasing repayments for the same goal of keeping debt costs low, and c) syndicated issuers getting taken out by private lenders, and exiting public indices altogether.

Meanwhile sources of demand have remained reasonably resilient. New CLO creation though lower vs last year's record $105bn, has picked up pace recently, reaching $84bn YTD. Retail demand, which has been subject to continuous outflows for nearly a year, saw a brief respite over the summer. Most importantly, coupons – which are often overlooked – have proven to be the primary source of demand this year. Interest payments have generated $94bn in fresh investable capital on the back of 9% coupons, thus overshadowing all other forms of demand. For perspective that is $10bn more than CLO issuance YTD and a 77% YoY increase compared to 2022.

Exhibit 7: YoY change of demand and supply in the US loan market
Supply is running close to zero while demand have remained resilient

US Loans	Demand				Supply		
	Retail Flow	CLO	Coupon	Total Demand	New Issuance	Repayment	Net Supply
YTD 2023	-11.3	83.9	94.0	166.6	179.7	176.5	3.2
YTD 2022	4.1	105.4	53.1	162.5	189.4	133.1	56.2
YoY %change	-377%	-20%	77%	2%	-5%	33%	-94%

Source: BofA Global Research, LCD

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Comparatively in EU, net supply has shrunk lesser by -57% (Exhibit 8) on the back of a softening in repayments. Mitigating that has been a higher drop in new loan issuance -30% vs 2022. Demand has also softened marginally by -5%- despite new CLO creation has decreased by only -7% YoY, the concurrent increase in coupons has not been to the same extent as in US given where base rates are in each region.

Exhibit 8: YoY change of demand and supply in the EU loan market
Net supply has shrunk by -57% while demand also softened by -5%

EU Loans	Demand			Supply		
	CLO	Coupon	Total Demand	New Issuance	Repayment	Net Supply
YTD 2023	20.0	1.9	22.0	22.4	19.1	3.4
YTD 2022	21.5	1.5	23.1	32.0	24.2	7.8
YoY %change	-7%	25%	-5%	-30%	-21%	-57%

Source: BofA Global Research, LCD

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In comparison, the HY bond market faced this negative net supply issue most of last year, before turning positive this year. The pressure on LTM net supply in HY bonds has existed since YE 2020, reaching historical lows YE 2022 due to the slowdown in gross issuance. Though issuance bounced back in 2023 on the back of increasing new issuance for six consecutive months, the LTM measure still stands in the negative territory.

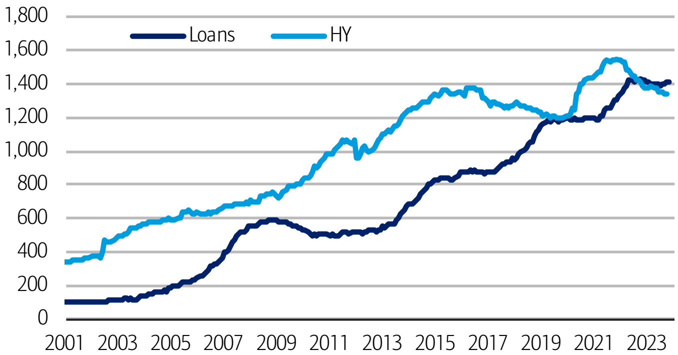
All told, the negative LTM net issuance dynamic has been pervasive across the entire US LevFin market for the last one year, supporting spreads in pullbacks. YTD however, the extent of the imbalance has been more in EU vs US, prompting the sharp rally across the pond earlier this year.

Shrinking LevFin market

Given negative net supply across LevFin, the outstanding market has been shrinking. This is an expected outcome of increase rates cycle. Exhibit 9 shows the historical market size of the loans and HY index. The recent decline in loans outstanding (-2% YoY change) is the first annual decline since the GFC. We discuss this in the next section.

HY has seen an even larger decline, posting a -2.8% YoY change year to date (Exhibit 10) on account of a variety of factors. Of the HY bonds outstanding at YE '22, 36% exited because they no longer met index inclusion criteria, (20% had remaining life <12M and 16% had face <$250mn). In addition, 33% were rising stars upgraded to IG. 22% of the bonds were tendered, and 9% defaulted.

Exhibit 9: Market size of the loans and HY index
Both loans and HY markets have been shrinking



Source: BofA Global Research, LCD, ICE

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Exhibit 10: YoY change in market size for loans and HY
HY has seen larger decline YoY compared to loans

	YTD 2023	YTD 2022	% change
Loans	1,408	1,436	-2.0%
HY	1,345	1,383	-2.8%

Source: BofA Global Research, LCD, ICE

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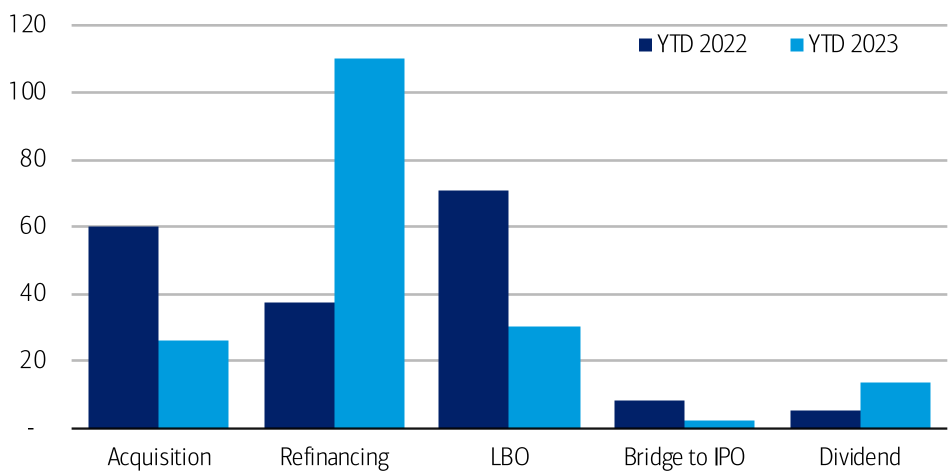
Index outstanding is not building up despite a gross supply figure that's running close to last year's pace (-5% YoY as per Exhibit 7) because issuance this year has come largely as a result of refies as opposed to new money deals. Exhibit 11 shows annual YTD issuance by type of deal. Refinancings have jumped as per our expectations given looming maturities, increasing 192% YoY. In comparison, LBOs and acquisitions, both significant contributors to new money issuance, are down ~55% each.

Exhibit 11: YoY change in UoPs of loan issuance
The decline in issuance large comes from LBO deals, while refinancings have jumped as expected



Source: BofA Global Research, LCD

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This goes to show that investors, just as corporates, are also in survival mode today, preferring to simply put existing money to work rather than finance new leveraged deals. The number of regular way B3 LBO deals in the syndicated market has come to a grinding halt, while the most compelling ones are getting done in private debt markets. Private financing has played a major role in pushing out both bond and loan maturities this year. In particular for loans, we find that issuers who have been unable or unwilling to refi within broadly syndicated loan market (BSL), have either sourced capital through HY bonds, Private Debt or simply delevered. Below we detail how loan market has financed itself through the year and where capital is coming from.

Who's financing the loan market

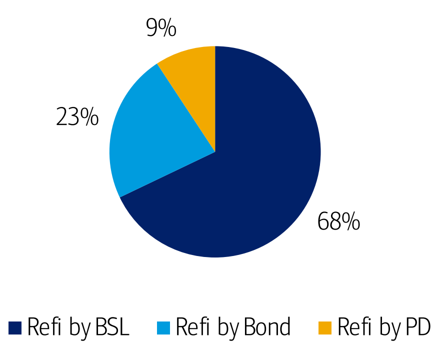
To understand why the loan market is shrinking, we need to understand how loan issuers are financing their existing loans.

Starting with all non-defaulted loans outstanding as of YE 2022, we track the evolution of ones that we can clearly identify as refinanced by a debt instrument in 2023. We focus on loans with short-term maturities, maturing in 2026 or earlier, as the refinancing for these loans will better reflect issuers' ability to access funds in the face of approaching maturities.

We categorize loan refies into 3 groups: BSL takeout, bond takeout, and private-debt takeout. In doing so we use information from all the major data sources, including Bloomberg, LCD, Markit, LevFin Insights and DLD. We also remove repricing deals and only capture true refies in this analysis. When a loan is refinanced by multiple debt instruments, we apply an equal weight approach to calculate the percentage of par repaid by each of the funding sources. For example, if BSL, bond and private debt are all used to refinance a loan, we assume they each repay 33% par value of the original loan.

Our sample represents 170 loans refinanced in 2023, totaling $162bn. Exhibit 12 shows the result – a distribution of sources of capital used to refi these loans. As one would expect, most of loans are still refinanced within the BSL market, accounting for 68% of the financing pool. However, a significant portion -32% is being financed outside the loan market. Bond takeouts have provided an aggregate contribution of 23% – one of the highest levels in recent history, while Private-Debt takeouts account for the remaining 9%.

Exhibit 12: Distribution of sources of capital used to refi loans YTD
BSL accounts for most of the loan refis YTD



Source: BofA Global Research, LCD, Markit, Bloomberg, LevFin Insights, DLD
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Exhibit 13: Trends across funding sources
Loans refied by PD on average have lower issuer ratings and shorter life

	Median Size	Avg Issuer Rating	Avg Life Rem
Refi by BSL	645	B2	1.6
Refi by Bond	969	B1	1.6
Refi by Private Debt	740	B3	1.2

Source: BofA Global Research, LCD, Markit, Bloomberg, LevFin Insights, DLD
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There exist trends based on the type of capital being sourced. Looking across the three funding sources (Exhibit 13), we see the median size of loans refinanced by BSL is at $645mn, whereas loans refinanced by bonds tend to be bigger, with a median size of $969mn. This makes sense as only the biggest loan issuers are likely to have access to the public bond markets to swap out their loans.

We also see dispersion in the credit quality of issuers across the three funding sources. The average issuer rating in the bond takeout category is B1, the highest of all three, which is in alignment with the larger issuer size in that universe. Issuers in BSL takeout category have an average rating of B2- which again makes intuitive sense since it's the average credit quality of the loan index. Most interestingly, issuers falling in the PD takeout category have the lowest rating on average – B3.

HY today is a better-quality asset class than loans, so issuers that have access to bond funding tend to be on the higher quality side. In contrast, lower quality issuers today have limited access to funding in both public bond and loan primary markets. As a result, Private Debt funds have stepped in to provide a timely lifeline to these issuers albeit at higher costs (Private Debt: Opportunities and challenges in a new rates regime).

Loans refinanced by Private Debt on average also have the shortest remaining time to maturity compared to those refinanced by BSL and bonds, reinforcing our view of the role of private debt today within credit: as a provider of opportunistic/rescue financing at higher rates.

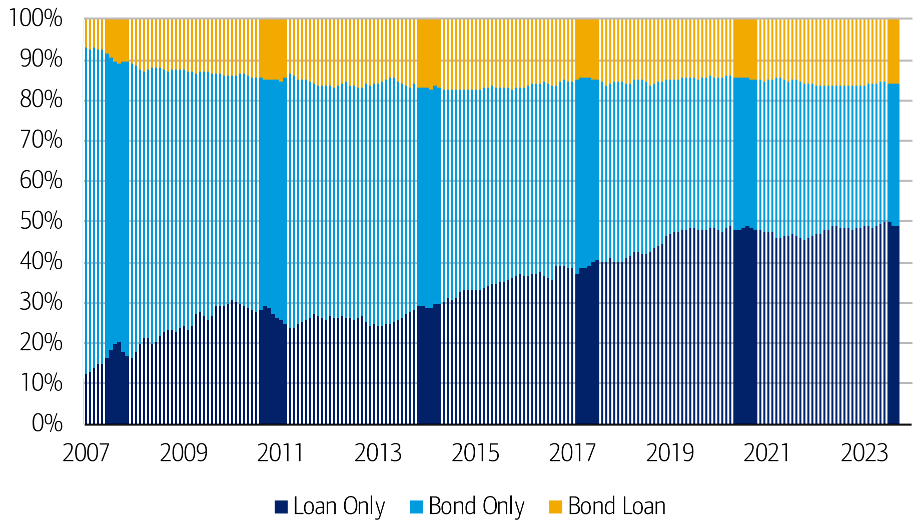
Impact of rates on LevFin capital structures

Issuers' financing of choice has evolved in response to these market dynamics, prompting LevFin capital structures to change over time.

First, due to the increasing divergence between quality of issuers tapping HY bond and loan markets, the proportion of bond-loan capital structures has failed to gain ground despite larger deal sizes.

Second, loan-only issuers have proliferated at the cost of bond only structures over the last decade. Exhibit 14 shows the outstanding LevFin capital structures broken down by type: loan-only, bond-only and bond-loan issuers. Capital structures generally have either HY bonds or TLBs as their financing of choice, and the percentage of structures financed by both has remained stable at ~15%. However, loan-only issuers have displaced bond-only issuers to become the dominant type of capital structures across LevFin (50% today vs 12% pre GFC). Most of this displacement happened between 2013 and 2018 as a new rates cycle facilitated floating rate issuance and popularity of CLOs grew.

Exhibit 14: Percentage of LevFin market by issuer count
Percentage of loan-only structures has increased over time, reaching 50% today



Source: BofA Global Research, Markit, ICE

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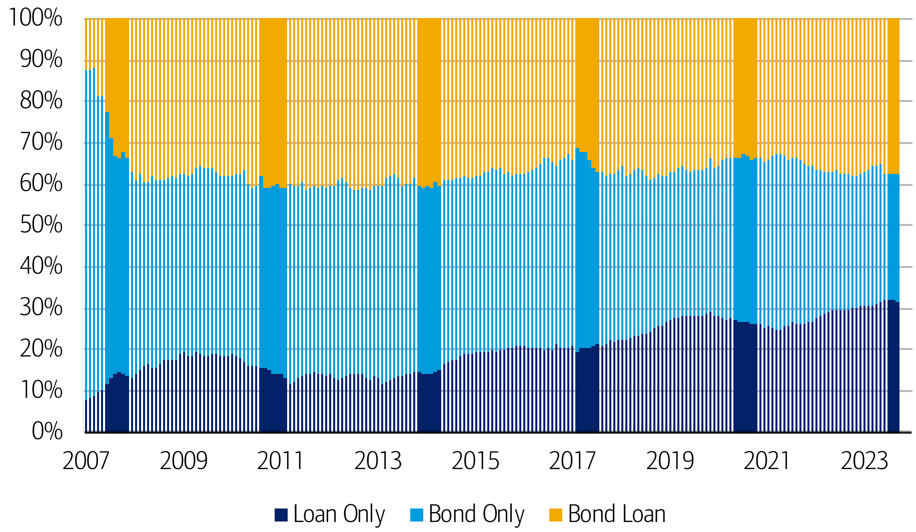
Third, when looking at the same capital structure breakdown by par, loan-only structures account for a much smaller percentage (Exhibit 15). Only 30% of the total par outstanding today is in loan-only structures, while 40% of par outstanding is tied up in large bond-loan capital structures. In other words, smaller capital structures within LevFin tend to be loan-only.

However, we expect some of these trends to buckle in the near future. As we discussed above, loans have now become a more expensive funding source, leading issuers to look for alternative and cheaper solutions in the bond market, or exiting the public market entirely. Year to date, institutional bond-for-loan takeout has reached $21bn, which is 7x more than YTD 2022. As such, the proliferation of bond-only or bond-loan structures is likely to increase going forward, interrupting the increasing dominance of loan-only structures post GFC.

Exhibit 15: Percentage of LevFin market by par
Loan-only structures are the smaller LevFin issuers



Source: BofA Global Research, Markit, ICE

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What could upset the apple cart?

LevFin supply increase

LevFin spreads have been firmly supported due to the lack of new issue supply. Even though the pace of issuance has increased in the 2nd half of the year, YTD supply remains dominated by refinancings leaving net supply in the negative territory.

The key driver of lower supply as expected has been the mammoth increase in cost of debt. This is particularly true for HY companies which have until now successfully shielded themselves by avoiding tapping the primary, hoping to ride it out a temporary jump in rates. This has kept the HY yields lower than loans until now. However, with increasing evidence that we are in a higher for longer rate environment, a "timing the market" strategy is not particularly rational, and this recognition is spreading among c-suites, prompting more serious financing conversations. In that sense, a higher for longer rates environment will serve to be the great equalizer b/w bonds and loans (see Are loans riskier than bonds).

Additionally, the improving financial conditions on the back of the summer rally has sparked interest around previously uneconomical event-driven transactions. As such we have seen a notable increase in corporate activity in Q3, and sponsors could follow suit. Event-driven dealmaking generally tends to bring in new money into the market, increasing net issuance.

Finally, middle market maturity walls – which have built up to be the most aggressive across LevFin – need to be addressed. Which means supply spigots could open up there, pushing yields higher. The impact to broader credit markets will be indirect- though the channels of middle market premium over syndicated loan space. This premium tends to oscillate between 0-200bps and is currently near its cyclical highs. Should middle market spreads increase, they are unlikely to do so in isolation, dragging syndicated loan/bond spreads with them.

Decrease in demand

As we discussed in our previous report, Private Debt is likely to revert back to its natural habitat of investing– middle market loans given the relatively more attractive valuations there compared to the syndicated market, and the upcoming maturity walls. Implying that syndicated bonds and loans are unlikely to remain the primary beneficiaries of Private Debt's spending binge circa 2022. YoY, nonbanks have already slowed down dealmaking and deployment, and we think once volumes pick up, they will be biased towards smaller middle market companies as opposed to large syndicated issuers.

Retail demand is going sideways at best. The reprieve from outflows observed over the last 2months, is likely to remain an anomaly. We might not witness the same level of outflows as seen in 2H'22, but suffice to say, we are not expecting meaningful show of demand from the retail community in a higher for longer rate environment.

That leaves CLOs and SMAs as the remaining major sources of capital for loans. The above discussed concerns have been partially mitigated by higher demand from these capital pools. SMAs are seeing inflows given more attractive yields for higher quality paper and we don't expect that to change. CLO issuance has also been ramping up lately, but is likely to be temporary and highly dependent on wings of the structure. We see little impetus for either CLO AAAs or CLO equity to fall back into investor favor in the foreseeable future. All things equal, this should keep new CLO issuance range bound next year.

A turn in fundamentals

While we acknowledged some fundamental green shoots amongst LevFin issuers in Q2 earnings reports, numbers are still a far cry from 2022 peaks. Real revenue growth is borderline negative, while ebitda growth is already expected to fall into negative territory squeezed by increasing operating and interest costs, combined with falling pricing power. On top, loan issuers have now faced a first full year servicing debt at prevailing high market rates, making balance sheet cash also a concern going forward.

Admittedly, this is a problem limited to the lowest quality LevFin issuers – BB issuers are on the opposite side of this issue and represent one of the best investment prospects across credit next year. Nevertheless, should the economy decline faster than expected, this could tip the scales away from all but the highest quality LevFin issuers, prompting a new downgrade cycle, and ending with higher spreads. Regardless of how strong technicals might be then, fundamentals eventually triumph in the long run.

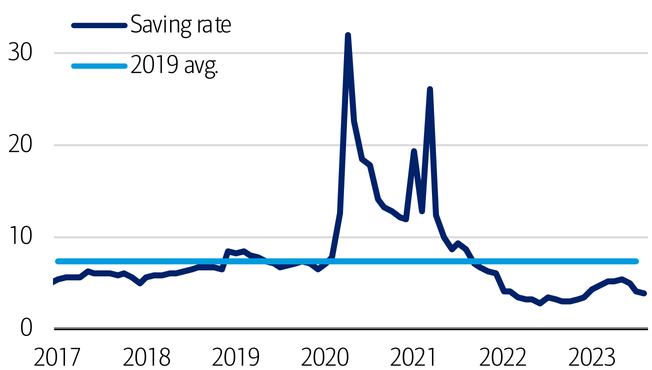
Consumer runway

US consumer has been the engine of economic growth post COVID, absorbing price increases and spending built up savings. However, any which way you look at it, the consumer has been softening.

Disposable income has slowed down, averaging 0.1% m/m from June-Aug, a significant slowdown from Mar-May (0.5%). Savings rate of consumers continues to drop. Exhibit 16 shows the US personal saving rate, which measures personal saving as a percentage of disposable personal income. This metric has dropped significantly from its COVID highs and has reached 3.9% in August, the lowest level this year and well below the pre-covid level of 7.4% in 2019. As spending growth outpaces disposable income growth, households have been dipping into their excess savings, which now stands at $1.0tn (Exhibit 17) and would run out in six quarters at the current rate of run-down according to our econ team's view in their September US Watch.

We don't expect consumer spending to drop dramatically – after all, wages are increasing and the job market remains strong. However, while spending on basics and non-cyclicals will continue, consumers will have to eventually start culling on leisure and non-essentials. We have already seen that transpire within goods- with spending on discretionary products down meaningfully YTD. At some point services are also likely to witness the same bifurcation in terms of defensives and cyclicals.

Exhibit 16: Personal saving rate (% of disposable income)
The saving rate fell to 3.9% in August



Source: Bureau of Economic Analysis (BEA), Haver Analytics, BofA Global Research

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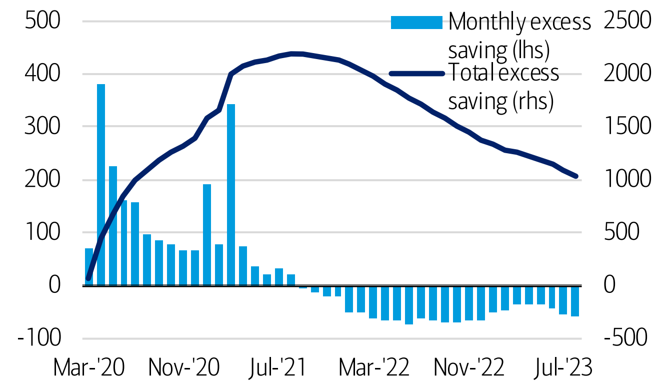
Exhibit 17: Excess saving ($bn)
We estimate that excess savings were around $1.0tn in August



Source: BEA, Haver Analytics, BofA Global Research.

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Real revenues within the Levfin issuer universe are already teetering on the verge of contraction. Any further slowdown in the consumer is likely to push revenue growth into negative territory, impacting earnings, leverage and coverage ratios. This could become a trigger for spread widening.

Market Technicals

In the three weeks ending Oct 13th, demand for loans totaled $15.1bn, increasing from the $12.8bn of demand seen in the prior three weeks ending Sep 15th. The increase in demand was mainly driven by $4.1bn of CLO issuance and $576mn of coupon payments respectively. Retail flows decreased by $2.4bn between the two three-week periods. YTD net demand has outweighed supply by $166bn versus the $108bn 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 18: Weekly Technicals ($mns)
Demand net of supply is at 166bn

	YTD as of 10/13/2023	10/13/23	10/6/23	9/29/23	9/22/23
Retail flows (a)	-11,701	276	-680	-474	643
CLO creation (b)	81,962	2,087	2,843	4,259	2,057
Coupons (c)	94,271	1,457	3,805	1,599	2,144
Demand (a+b+c)	**164,532**	**3,820**	**5,968**	**5,384**	**4,844**
Issuance Ex-repricings (d)	189,875	3,586	6,595	5,365	7,021
Repayments (e)	191,344	6,771	6,820	11,243	5,726
Supply (d-e)	**-1,469**	**-3,185**	**-225**	**-5,878**	**1,295**
Demand net of Supply	**166,000**	**7,005**	**6,193**	**11,262**	**3,549**

Source: BofA Global Research, LCD

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Rating Actions

In the past month, we have seen rating actions across 33 distinct issuers. A total of 19 issuers were downgraded by 22 notches ($17.8bn total notional) and 14 issuers upgraded by 21 notches ($23.3bn total notional). Of the downgrades, Restoration Hardware Inc had two loans with each loan downgraded by one notch, totaling $2.4bn. Of the upgrades, ICON Plc had two loans upgraded by one notch, totaling $3.5bn which is the most by notional.

In terms of sectors, Retail and Chemicals each contributed 23% and 18% of total downgrades in the past month by notional respectively. Of the upgrades, by notional amount, 24% was in Media followed by 17% in Healthcare. Nine distinct sectors experienced upgrades while eleven distinct sectors experienced downgrades. Upgrades outweighed downgrades by $5.4bn.

Exhibit 19: Recent downgrades and upgrades
There was net upgrade activity of $5.4bn

Issuer	Ticker	Margin	Notional	Maturity	Sector	Rating Action	Current Rating	Previous Rating	Notches
Mannington Mills	MANNIN	375	254	8/6/2026	Real Estate	Downgrade	B	BB-	-2
Apex Tool	APEXTO	525	844	2/8/2029	Capital Goods	Downgrade	CCC+	B-	-1
ClientLogic	SITEL	375	1,372	8/28/2028	Technology	Downgrade	BB-	BB	-1
CPV Shore Holdings	CPVSHO	375	362	12/27/2025	Utilities	Downgrade	B	B+	-1
Edgewater Generation	EDGGEN	375	976	12/13/2025	Utilities	Downgrade	B+	BB-	-1
IMTT	INTMAT	275	637	7/10/2028	Energy	Downgrade	BB-	BB	-1
Kraton Polymers	KRA	325	591	3/15/2029	Chemicals	Downgrade	B+	BB-	-1
Maravai Life Sciences Inc	CYGNUS	300	534	10/19/2027	Healthcare	Downgrade	B	B+	-1
Michaels Stores Inc	MIK	425	1,906	4/15/2028	Retail	Downgrade	CCC+	B-	-1
MRC Global	MRC	300	294	9/20/2024	Energy	Downgrade	B-	B	-1
NAPA Management Services Corporation	NAPAMA	525	601	2/23/2029	Healthcare	Downgrade	B-	B	-1
Restoration Hardware Inc	RH	250	1,960	10/20/2028	Real Estate	Downgrade	B+	BB-	-1
Restoration Hardware Inc	RH	325	495	10/20/2028	Real Estate	Downgrade	B+	BB-	-1
Rinchem Company Inc	RINCHM	425	296	3/2/2029	Transportation	Downgrade	CCC+	B-	-1
Russell Investment Management Company	RUSINV	350	1,215	5/30/2025	Financials	Downgrade	B+	BB-	-1
SI Group	SIGRP	475	1,325	10/15/2025	Chemicals	Downgrade	CCC	CCC+	-1
Staples Inc	SPLS	500	1,915	4/16/2026	Retail	Downgrade	B-	B	-1
Staples Inc	SPLS	450	287	9/12/2024	Retail	Downgrade	B-	B	-1
Trilliant Food and Nutrition	TRFONU	350	278	9/30/2024	Food Producers	Downgrade	CCC	CCC+	-1
Western Dental Services Inc	WESDEN	450	490	8/18/2028	Healthcare	Downgrade	CCC+	B-	-1
WR Grace & Co	GRA	375	1,228	9/22/2028	Chemicals	Downgrade	B-	B	-1
Atlantic Power Corp	ATPCN	375	103	5/14/2027	Utilities	Upgrade	BB	BB-	1
Caliber Collision	CHHOLD	275	1,868	2/5/2026	Autos	Upgrade	B	B-	1
Garrett Motion	GTX	325	701	4/30/2028	Autos	Upgrade	BB-	B+	1
Garrett Motion	GTX	450	500	4/30/2028	Autos	Upgrade	BB-	B+	1
Genesys Telecom Holdings	GCTI	400	2,633	12/1/2027	Technology	Upgrade	B	B-	1
ICON Plc	ICLR	225	2,803	7/3/2028	Healthcare	Upgrade	BBB-	BB+	1
ICON Plc	ICLR	225	698	7/3/2028	Healthcare	Upgrade	BBB-	BB+	1
IMG Worldwide Inc	WMMORR	275	2,251	5/18/2025	Media	Upgrade	BB-	B+	1
JMC Steel Group	ZEKIND	200	857	1/24/2027	Metals	Upgrade	BBB-	BB+	1
Latam Airlines	LTMCI	950	1,095	10/12/2027	Travel	Upgrade	BB-	B+	1
MedPlast Inc	MEDPLA	375	475	7/2/2025	Healthcare	Upgrade	B-	CCC+	1
Uber Technologies	UBER	275	2,492	3/3/2030	Transportation	Upgrade	BB	BB-	1
UST Global Inc	USTGLO	350	393	11/20/2028	Technology	Upgrade	BB	BB-	1
Authentic Brands	AUTBRA	400	1,696	12/21/2028	Media	Upgrade	BB-	B	2

Source: BofA Global Research, LCD

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Return Performance

Loans in the LCD index returned 0.03% in the three weeks ending Oct 13th, down from the 0.97% cumulative return seen in the prior three weeks ending Sep 22nd. Second Lien loans were the best performer during the three-week window, returning 28bps. Across asset classes, YTD loan returns are at 10.4%, HY YTD returns are at 4.7% and IG YTD returns are at -1%.

Exhibit 20: Total Returns (price plus coupon return) bps
Loans returned 39bps in the week ending Oct 13th

	10/13/2023	10/6/2023	9/29/2023	9/22/2023
All Loans	39	-27	-9	10
BB	35	-14	-5	6
B	44	-30	-14	9
CCC	35	-65	-9	24
2nd Lien	41	-21	9	49
LL100	52	-36	-23	7

Source: BofA Global Research, LCD

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Primary Activity

YTD global and US issuance totals $212bn and $190bn, with a total of 375 and 293 loans launched respectively in the primary market thus far. In comparison, YTD '22 brought in $222bn global issuance across 323 loans, and $192bn US issuance across 258 loans. In total, YTD 2023 Global and US issuance trail YTD 2022 issuance by 5% and 1% respectively. In terms of the composition of the types of deals financed in the past 30 days, 46% by notional amount was for refinancing, followed by 18% for LBO and 18% for Acquisition.

Exhibit 21: Recent new loan issues

The largest recent new issue came from Qlik Technologies $2.4bn deal

Launch Dt	Issuer	New Inst. Money	Moody's	S&P	ABL	Cov Lite	Proceeds	Sector	Country
10/12/2023	Action Nederland B.V.	1,000	Ba2	BB	No	YES	Dividend	Retail	Netherlands
10/12/2023	Ciena Corporation	670	Baa3	BB+	No	YES	Refinancing	Telecom Equipment	United States
10/11/2023	BGIS	916	B3	B	No	YES	Acquisition	Real Estate	Canada
10/11/2023	Aggreko PLC	300	B1	BB-		YES	Acquisition	Services & Leasing	United Kingdom
10/11/2023	Cook & Boardman	500	B3	B	No	YES	LBO	Building Materials	United States
10/10/2023	Delachaux SA	92	B2	B		YES	Refinancing	Manufacturing & Machinery	France
10/10/2023	Etraveli	465	NR	NR		YES	Dividend	Entertainment & Leisure	Sweden
10/10/2023	Gentiva Health Services Inc	500	B2	B	No	YES	Acquisition	Healthcare	United States
10/5/2023	Qlik Technologies	2,400	B2	B-	No	YES	Refinancing	Computers & Electronics	United States
10/4/2023	Exact Holding NV	400	B3	B-		YES	Dividend	Computers & Electronics	Netherlands
10/3/2023	Homeserve PLC	1,050	B1	BB-	No	YES	Dividend	Insurance	United Kingdom
10/3/2023	Prime Security Services/ADT Corp	1,375	Ba2	BB	No	YES	Refinancing	Services & Leasing	United States
10/3/2023	Citco Group	760	NR	NR	No	NO	GCP	Services & Leasing	Netherlands
10/2/2023	Delrin	700	B2	B+	No	YES	LBO	Chemicals	United States
10/2/2023	Ineos Group Ltd	350	Ba3	BB		YES	Refinancing	Chemicals	United Kingdom
10/2/2023	Ineos Group Ltd	310	Ba3	BB	No	YES	Refinancing	Chemicals	United Kingdom
9/28/2023	FR Refuel LLC	120	B3	B	No	YES	Acquisition	Retail	United States
9/28/2023	iSolved Inc	575	B2	B	No	YES	Refinancing	Computers & Electronics	United States
9/28/2023	EVERTEC Inc	600	Ba3	BB-	No	YES	Acquisition	Computers & Electronics	United States
9/28/2023	Altice Group	800	B3	B		YES	Refinancing	Cable	Netherlands
9/27/2023	Aramsco Inc	505	B3	B-	No	YES	LBO	Chemicals	United States
9/27/2023	BJ's Wholesale Club Inc	400	Ba2	BBB-	No	YES	Refinancing	Retail	United States
9/27/2023	Circet	175	B1	BB-		YES	Refinancing	Telecom Equipment	France
9/27/2023	Better Health Group	150	B2	B+	No	YES	GCP	Services & Leasing	United States
9/27/2023	DXP Enterprises Inc	550	B2	B	No	YES	Acquisition	Manufacturing & Machinery	United States
9/27/2023	The Knot Worldwide	70	B2	B	No	YES	Dividend	Computers & Electronics	United States
9/26/2023	Theramex	240	B2	B		YES	Acquisition	Healthcare	United Kingdom
9/26/2023	AssuredPartners Inc	400	B2	B	No	YES	Acquisition	Insurance	United States
9/26/2023	J.D. Power and Associates	525	B2	B-	No	YES	Acquisition	Services & Leasing	United States
9/26/2023	Palex Medical Sa	370	B2	B		YES	LBO	Healthcare	Spain
9/26/2023	Patriot Rail & Ports	100	B2	B	No	YES	Dividend	Transportation	United States
9/26/2023	IMTT	750	Ba2	BB-	No	NO	Refinancing	Transportation	Canada
9/26/2023	Heritage-Crystal Clean Inc	620	B2	B	No	YES	LBO	Environmental	United States
9/25/2023	Combell Group	175	B2	B		YES	Refinancing	Computers & Electronics	Belgium
9/25/2023	Virgin Media Finance	700	Ba3	BB-		YES	Refinancing	Cable	United Kingdom
9/22/2023	TenCate Grass Holding BV	70	B2	B		YES	Acquisition	Chemicals	Netherlands
9/21/2023	Upfield BV	185	B1	B		YES	Refinancing	Food & Beverage	United Kingdom
9/21/2023	Watlow Electric Manufacturing	170	B2	B	No	YES	Refinancing	Manufacturing & Machinery	United States
9/21/2023	MedImpact Healthcare Systems Inc	1,200	NR	NR	No	YES	Refinancing	Insurance	United States
9/20/2023	Interstate Waste Services Inc	575	B2	B	No	YES	Dividend	Environmental	United States
9/20/2023	RealTruck Group Inc	180	B2	B-	No	YES	Acquisition	Automotive	United States
9/19/2023	Simon & Schuster Inc	1,100	B2	B	No	YES	LBO	Printing & Publishing	United States
9/19/2023	Spring Education	850	B2	B-	No	YES	Refinancing	Computers & Electronics	United Kingdom
9/19/2023	Konecta	70	B2	B+		YES	Refinancing	Computers & Electronics	Spain
9/19/2023	FleetPride Inc	326	B3	B-	No	YES	Refinancing	Automotive	United States

Source: BofA Global Research, LCD

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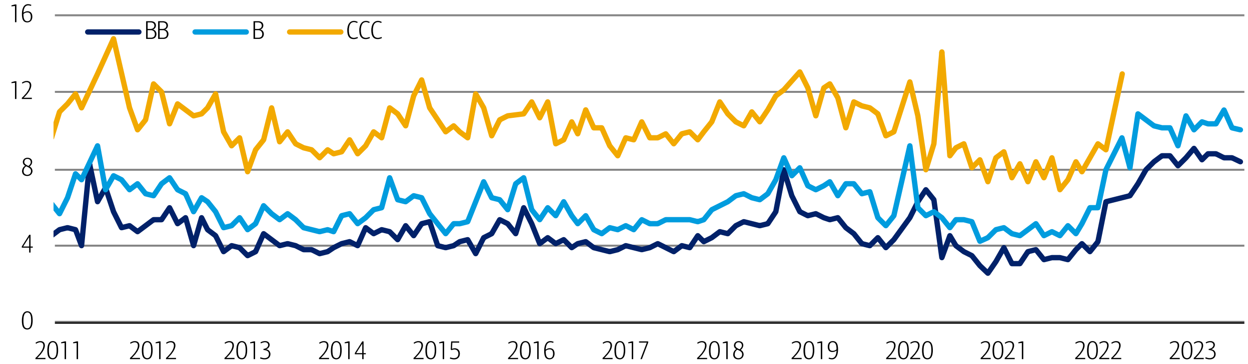
Exhibit 22: Average new issue yields by month
BB and B currently yield 8.34% and 10.02% respectively while there is not enough sample size for CCC



Source: BofA Global Research, LCD

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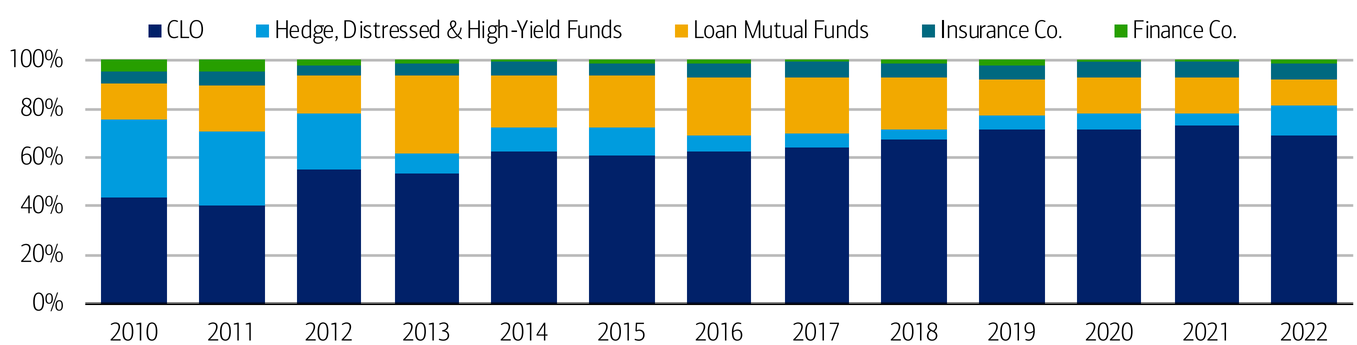
CLO Update

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 23:Primary institutional investor market by type
CLOs make up 69% of the primary institutional market



Source: BofA Global Research, LCD

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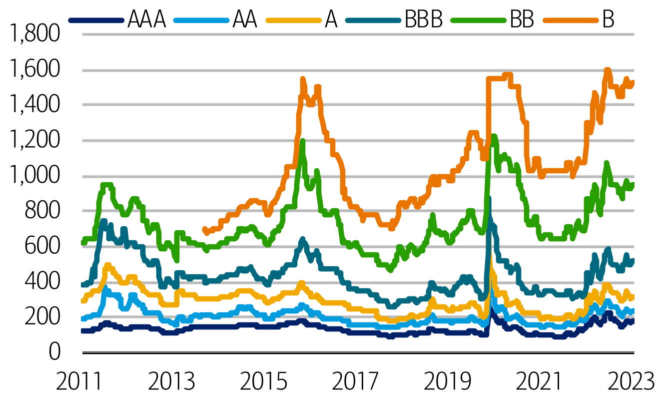
Exhibit 24 shows CLO spread levels by tranches. CLO arbitrage is a widely followed statistic in the loan market and represents the theoretical spread that managers can capture by issuing CLOs. Exhibit 25 compares CLO asset (loan) spreads to the weighted average spreads of CLO liabilities. The difference 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 24: US CLO 2.0/3.0 indicative spread level (bps)
Secondary CLO spreads have increased materially



Source: BofA Global Research

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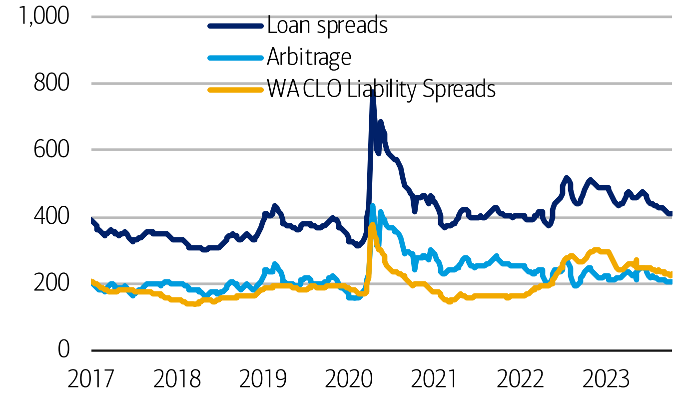
Exhibit 25: CLO Arbitrage (bps)
CLO arbitrage has been declining



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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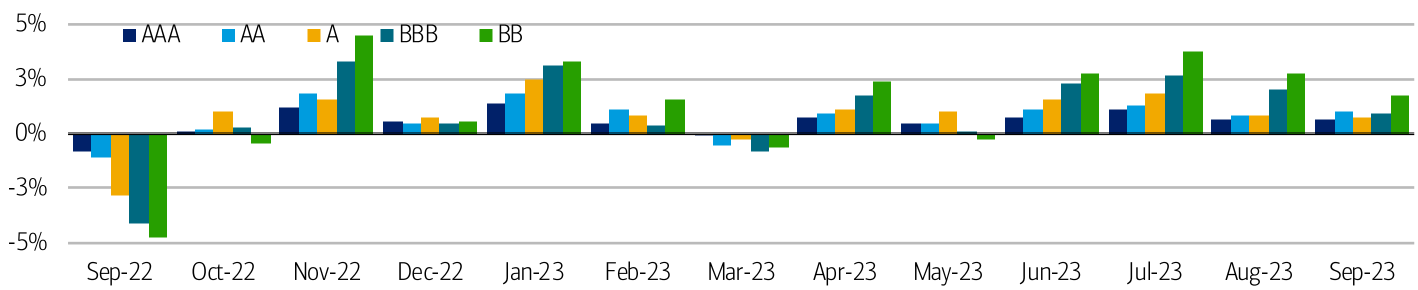
Exhibit 26 shows monthly CLO returns as defined by the Palmer Square CLO index (price plus coupon returns).

Exhibit 26: Monthly CLO 2.0 returns by rating
CLOs returned 0.8% in Sep



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

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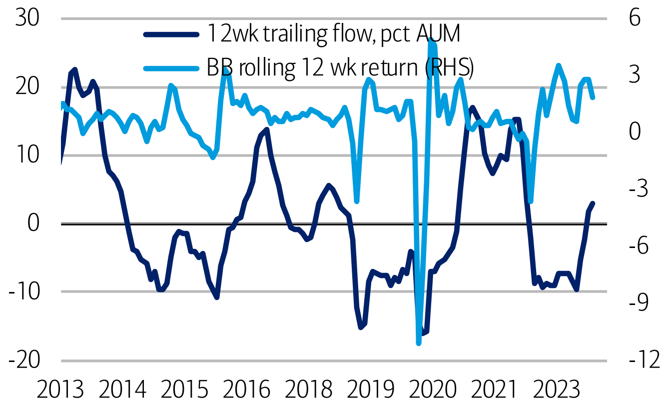
The following charts show demand trends within the loan market, correlated with returns within rating buckets. Exhibit 27 shows a measure of retail flows (12 week trailing retail flows as a percentage of outstanding AUM) vs. monthly BB Loan total returns, while Exhibit 28 depicts monthly CLO issuance vs. monthly B Loan total returns.

Exhibit 27: BB performance vs Loan retail flows
Currently BB rolling 12-week return is at 1.86% and 12 week trailing flow is 2.92% of outstanding AUM.



Source: LCD, EPFR Global

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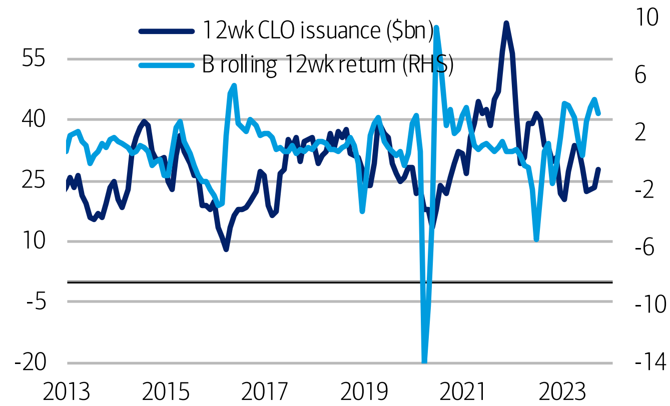
Exhibit 28: B performance vs CLO creation
For Bs, rolling 12 week return is at 3.32% while 12 week CLO issuance is $27.96bn



Source: LCD, EPFR Global

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Glossary

AUM: Assets Under Management

BSL: Broadly Syndicated Loan Market

CLO: Collateralized Loan Obligation

CPI: Consumer Price Index

GFC: Global Financial Crisis

ISM: Institute for Supply Management

LBO: Leveraged Buyout

LCD: Leveraged Commentary & Data

LevFin: Leveraged Finance

PPI: Producer Price Index

SMA: Separately Managed Accounts

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