**Note**: The following is a redacted version of the original report published November 13, 2023 [32 pgs].



# 2024 Global Credit Outlook: Back in the saddle

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**Long duration, neutral credit risk.** The end of monetary tightening, declining inflation and still-robust growth will likely allow spreads to remain within the tight end of their recent range. This implies lower carry-driven excess returns vs. 2023, given current valuations, but higher total returns, considering the stronger yield support vs. 2023. Absent funding relief next year, we expect the transition to a higher cost of capital environment will likely involve a further uptick in financial distress and defaults among issuers with over-leveraged and rates-sensitive balance sheets. We think this uptick is, to a large extent, priced into the HY bond market but less so in the leveraged loan market. Thematically, our relative value views are centered on owning left tail risks that we think are oversold as well as markets that have been dislocated for technical reasons. These include banks in the USD IG market, the real estate sector in the EUR IG market, agency MBS, new issue BBB-rated CMBS, and middle-market AAA-rated CLOs. Across currencies, we are agnostic as far as spreads are concerned but see more value in the USD IG market for FX-hedged investors. Lastly, we expect the supply/demand backdrop will likely remain friendly on both sides of the Atlantic, given the attractive value proposition of the asset class from an all-in-yield standpoint and corporate borrowers' incentives to manage capital conservatively.

**Risks: An earlier dovish pivot vs. weaker growth**. The main source of upside risk to our baseline forecasts is earlier-than-expected funding relief delivered by central banks relative to our economists' baseline view. Should policy rates move lower and earlier than we expect, market participants are likely to extend the expected life of the current expansion, allowing spreads to move back to their 2021 tights. The main source of downside risk is a delayed recovery in earnings growth, which would fuel additional fragility in corporate balance sheets, particularly given the significant erosion of their liquidity positions. A reemergence of debt-sustainability questions in Italy and the risk of a supply shock in commodities markets given the current geopolitical situation also pose some downside risk. We continue to advocate adding a dose of hedges whenever the market provides an attractive entry point to do so.

Investors should consider this report as only a single factor in making their investment decision. For Reg AC certification and other important disclosures, see the Disclosure Appendix, or go to www.gs.com/research/hedge.html.

# Back in the saddle again

## 1. A mirror image of 2023: Long duration, neutral credit risk

Our modal view for 2024 centers on three ingredients: 1. Modestly tighter spreads and modestly lower yields translating into lower excess returns but higher total returns vs. 2023; 2. A balanced supply/demand technical backdrop; and 3. Rising financial distress in the low end of the quality spectrum that is to some degree priced in (Exhibit 1). For most of 2023, we have been recommending staying short duration and long credit risk, a view that has sought to take the other side of market participants' excessive skepticism vis-à-vis the odds of a soft landing for the US economy. In some ways, we expect 2024 will be a mirror image of 2023, given the tighter starting level of spreads, higher starting level for yields, and the end of the hiking cycles in the US and Euro area.

**Exhibit 1: Range-bound spreads and yields, a friendly supply backdrop, and rising financial distress**

The 2024 return forecasts are based on our year-end 2023 and 2024 spread and yield targets; the US Treasury and Bund yield forecasts are from our rates strategy team

| USD | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Spread, rates and return forecasts | | Current | 2024 | | | | Supply, rating migration and defaults forecasts | | 2024YE |
| | | | Q1 | Q2 | Q3 | Q4 | | | |
| Spreads (bp) | USD IG | 122 | 119 | 117 | 115 | 115 | Rating migration ($bn) | Rising stars | $15bn |
| | USD Financials | 142 | 137 | 134 | 131 | 130 | | Fallen angels | $75bn |
| | USD Non-financials | 110 | 109 | 108 | 107 | 106 | | | |
| | USD HY | 392 | 380 | 375 | 370 | 369 | Defaults (%) | HY defaults (12-month trailing) | 3.5% |
| Rates (%) | US 10-year | 4.6 | 4.8 | 4.7 | 4.6 | 4.6 | | Leveraged loan defaults (12-month trailing) | 5.2% |
| | US 5-year | 4.7 | 4.7 | 4.6 | 4.6 | 4.5 | | | |
| Excess returns (%) | | 2023 Year-to-date | | | | 2024 Forecast | Gross issuance ($bn) | IG | $1,250bn |
| | USD IG | 2.7% | | | | 1.6% | | | |
| | USD HY | 5.6% | | | | 3.6% | | HY | $205bn |
| Total returns (%) | USD IG | 0.5% | | | | 6.2% | Net issuance ($bn) | IG | $290bn |
| | USD HY | 6.7% | | | | 8.6% | | HY | $80bn |

| EUR | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Spread, rates and return forecasts | | Current | 2024 | | | | Supply, rating migration and defaults forecasts | | 2024YE |
| | | | Q1 | Q2 | Q3 | Q4 | | | |
| Spreads (bp) | EUR IG | 165 | 163 | 161 | 160 | 158 | Rating migration (€bn) | Rising stars | €15bn |
| | EUR Financials | 201 | 194 | 190 | 187 | 184 | | Fallen angels | €30bn |
| | EUR Non-financials | 144 | 143 | 142 | 141 | 139 | | | |
| | EUR HY | 454 | 455 | 452 | 451 | 449 | Defaults (%) | HY defaults (12-month trailing) | 3.2% |
| Rates (%) | Bund 10-year | 2.7 | 2.6 | 2.5 | 2.4 | 2.3 | | Leveraged loan defaults (12-month trailing) | 5.0% |
| | Bund 5-year | 2.6 | 2.4 | 2.3 | 2.2 | 2.1 | | | |
| Excess returns (%) | | 2023 Year-to-date | | | | 2024 Forecast | Gross issuance (€bn) | IG | €600bn |
| | EUR IG | 2.6% | | | | 2.0% | | | |
| | EUR HY | 6.2% | | | | 4.3% | | HY | €65bn |
| Total returns (%) | EUR IG | 3.5% | | | | 6.9% | Net issuance (€bn) | IG | €145bn |
| | EUR HY | 6.9% | | | | 9.3% | | HY | €6bn |

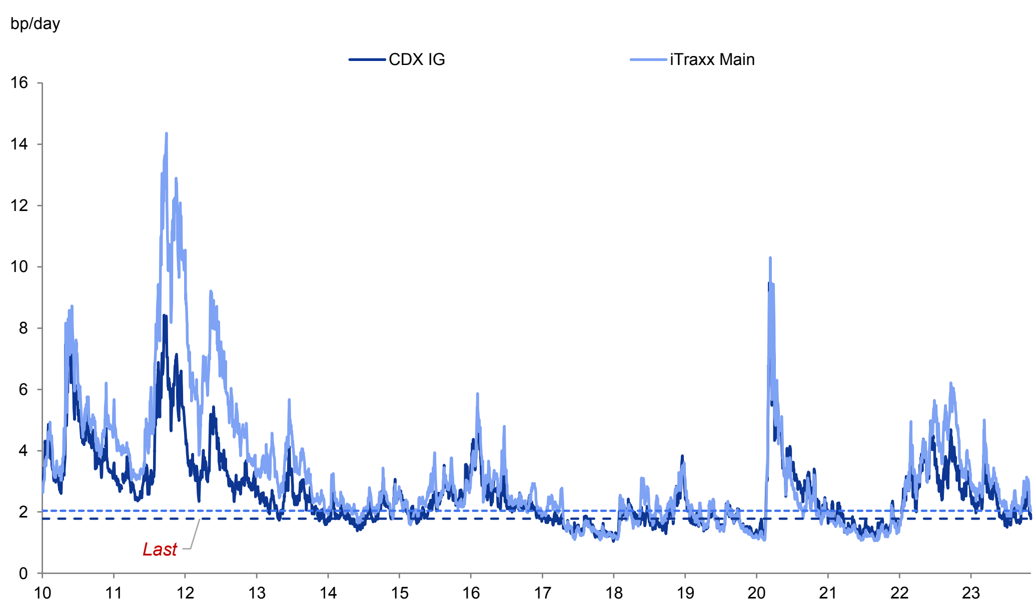
Source: Bloomberg, Dealogic, iBoxx, ICE-BAML, Goldman Sachs Global Investment Research

What will keep spreads within their recent range? Now that there is broader acceptance that the Fed has successfully engineered a soft landing of the economy, further spread compression beyond this year's tights hinges on a potential dovish policy surprise. We think such an outcome is unlikely in the near to medium term and take comfort in our economists' baseline view that the ECB and the Fed will not cut policy rates until the third and fourth quarter of next year, respectively. At the same time, the risk of significant widening is also limited, considering the low odds of recession in 2024 and our expectation of a supportive supply/demand technical backdrop.

For duration, the prospects of further steady disinflation in 2024 coupled with a one-tailed distribution of the forward path of monetary policy not only puts a ceiling on a potential back-up in yields but will also (finally) allow volatility in rates markets to start declining. This should boost absolute and risk-adjusted total returns and strengthen the appetite of multi-asset investors to allocate towards fixed income markets, especially volatility-sensitive products such as agency MBS.

To be clear, as we learned over the last few quarters, unforeseen events fueled by unintended consequences of policy actions such as the UK LDI episode or the stress that crippled US regional banks in March, can cause a repricing of risk. Considering the much lower odds of another large monetary shock, these risks have subsided. Still, we continue to advocate harvesting carry with a dose of hedges whenever the opportunity is given by the market. The recent decline in implied volatility on macro indices provides a good entry point, in our view (Exhibit 2).

**Exhibit 2: Implied volatility on CDX IG and iTraxx Main swaptions have moved back to the low end of their post-global financial crisis range**




Source: Goldman Sachs Global Investment Research

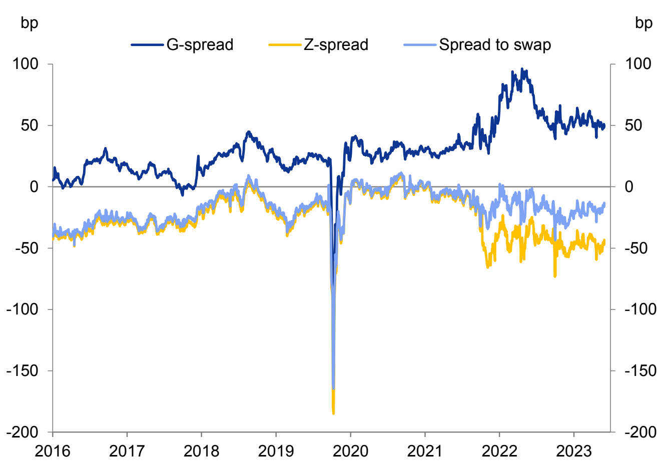
## 2. The cross-currency view: Neutral

Despite the improved trajectory of macro fundamentals in the US, the relative performance of the USD and EUR IG markets has not shown any notable differentiation this year. The outperformance of the EUR market in late 2022 and the first quarter of this year likely reflected better valuations as well as the more US-centric nature of the March episode of instability in the banking system. However, since then, the spread differential has been quasi-flat despite the more severe deterioration in the Euro area cyclical outlook (Exhibit 3).

For FX-unhedged investors, we reiterate our neutral view between the USD and EUR IG markets. From a top-down standpoint, our economists expect a large US/Euro area growth differential vs. consensus alongside continued decline in inflation on both sides of the Atlantic. The flipside of the US growth outperformance, however, is that the ECB will likely deliver its first cut earlier than the Fed. On net, the read-through from this growth, inflation, and policy mix for risk sentiment is likely to be similar across both regions. And while the ECB, unlike the Fed, is a direct participant in the EUR IG market, we think the unwind of the CSPP portfolio is now likely priced-in to a very large extent.

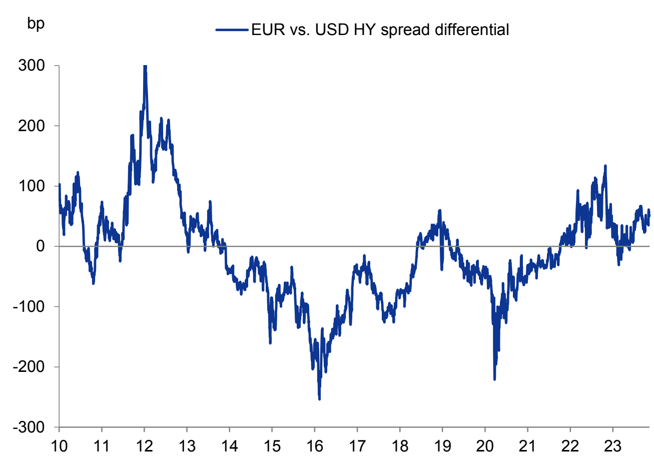
In HY, the outperformance of the USD market has been more noticeable, particularly since the summer (Exhibit 4). At current levels, the OAS differential between the EUR and USD HY markets stands at its 81st percentile when benchmarked to its post-global financial crisis history. We are upgrading the EUR HY market to a neutral allocation, from underweight previously.

**Exhibit 3: The EUR and USD IG spread differential has been moving sideways in recent months**
EUR/USD 5-year IG spread differential




Source: iBoxx, Goldman Sachs Global Investment Research

**Exhibit 4: In HY, the outperformance of the USD market has been more noticeable**

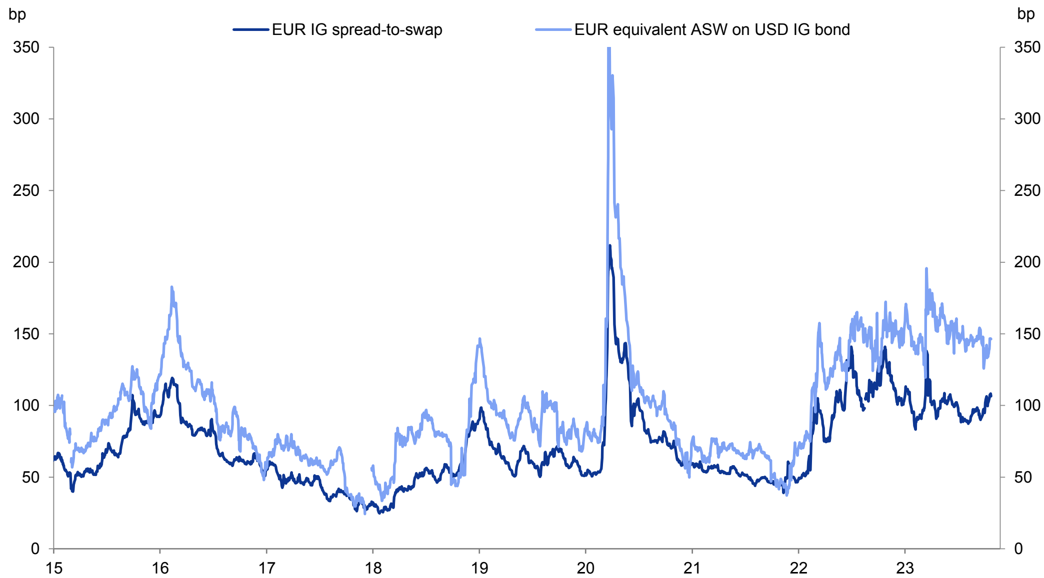



Source: iBoxx, Goldman Sachs Global Investment Research

For cross currency investors, the USD IG market continues to score better than its EUR counterpart. Looking at the issuer- and duration-matched overlap between the USD and EUR IG markets, EUR spread investors that roll FX hedges using 3-month FX forwards are better off owning the same credit risk in the USD market. As Exhibit 5 shows, the spread pick-up provided by USD bonds after hedging FX risk is in the vicinity of 40bp.

**Exhibit 5: For issuer- and duration-matched pairs of bonds, the USD market offers an FX-hedged spread pickup versus its EUR counterpart**

Average spread to swap on EUR IG bonds vs. average FX-adjusted ASW on USD IG bonds using a universe of issuer- and duration-matched bonds across USD and EUR IG




Source: iBoxx, Goldman Sachs Global Investment Research

### 3. Some parts of the left tail of the spread distribution are oversold

The mediocre index excess returns that we envision for next year naturally shift the opportunity set to potential pockets of value in the left tail of the spread distribution. In the USD IG market, left tail risk is oversold in the banking sector. As we have discussed on many occasions recently, heavy supply in 2022, an unexpected rise in stress among US regional banks earlier in the year and increased regulatory scrutiny have pushed the sector's spread ratio to the index above the 89$^{th}$ percentile when benchmarked to the post-global financial crisis period (Exhibit 6). We continue to think this repricing is overdone given the sector's ability to actively mitigate the ongoing pressure on capital and liquidity positions via reduced shareholder-friendliness (share buybacks) and balance sheet optimization. We reiterate our overweight recommendation.

**Exhibit 6: Valuations for the banking sector remain dislocated in the USD market**
USD IG Banks vs. non-financials spread ratio


Source: iBoxx, Goldman Sachs Global Investment Research

In the USD HY market, we see value in Wirelines, Cable & Satellite, and Media & Entertainment, which have been lagging the broader market for almost two years. For Wirelines and Cable & Satellite, a confluence of factors has weighed on performance, including worries over heavy capex spending as well as idiosyncratic concerns. For the Media & Entertainment sectors, secular challenges such as cord cutting and streaming competition have weighed on sentiment. While many of these challenges are unlikely to dissipate next year, we think the excess premium provided by these sectors (the index spread ratios are elevated vs. history) offers adequate compensation, given near- to medium-term default risk (more below).

In the EUR IG market, the Real Estate sector continues to dominate the left tail. We have been recommending adding risk selectively since January on the view that valuations, the more predictable path of monetary policy, and an attractive "fallen angel" premium would help improve sentiment. The sector has shown tangible signs of recovery this year but the valuation gap vs. the broader index remains significant (Exhibit 7). While idiosyncratic risk will likely remain in focus, we think room remains for further recovery next year.

**Exhibit 7: The EUR IG Real Estate sector has shown tangible signs of recovery this year but the valuation gap vs. the broader index remains significant**
Real Estate vs. the broader EUR IG index spread ratio

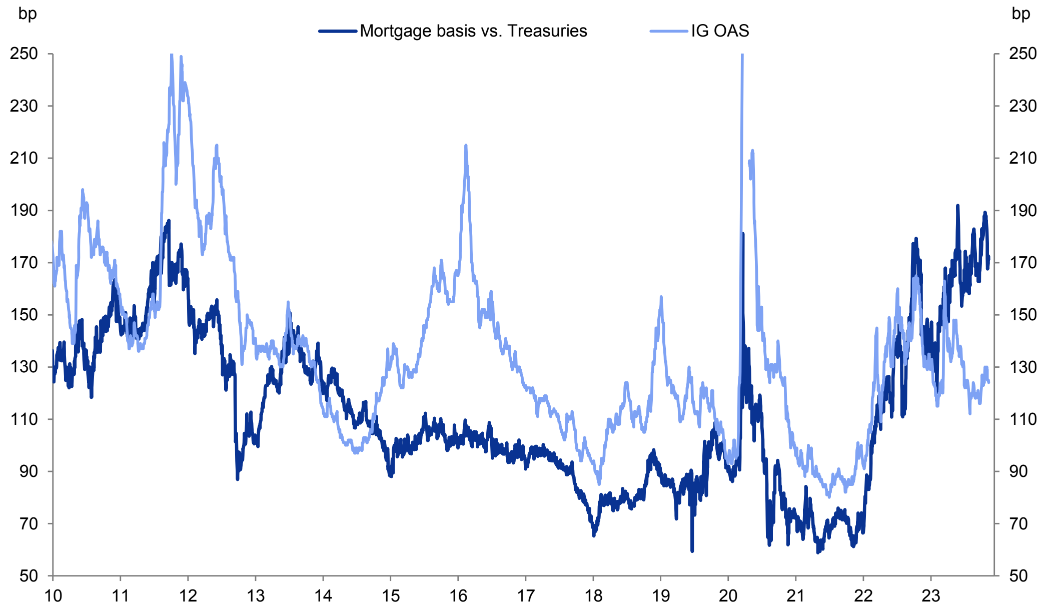

Source: iBoxx, Goldman Sachs Global Investment Research

## 4. Securitized products: Showtime for agency MBS, alpha in BBB-rated CMBS and middle-market CLOs

For unconstrained investors and those benchmarked to the Agg index, we have strong conviction in three sources of alpha: new issue BBB CMBS and middle-market CLOs for the former category and agency MBS for the latter category.

Starting with agency MBS, the soft landing of the US economy has done little to reverse last year’s significant underperformance, both in absolute terms and relative to IG-rated corporate bonds (Exhibit 8). We had been recommending an overweight allocation on the asset class vs. IG corporate bonds going into 2023 on the view that a more predictable path of monetary policy would dampen volatility and push the MBS basis tighter. With the benefit of hindsight, this view was premature. The soft landing of the economy fueled decent tightening in IG spreads but, rather than dampening rates volatility, it ended up pushing it higher. The net result was further widening of the agency MBS basis and another year of underperformance of the asset class.

**Exhibit 8: 2023 has been a tough year for the agency MBS market**



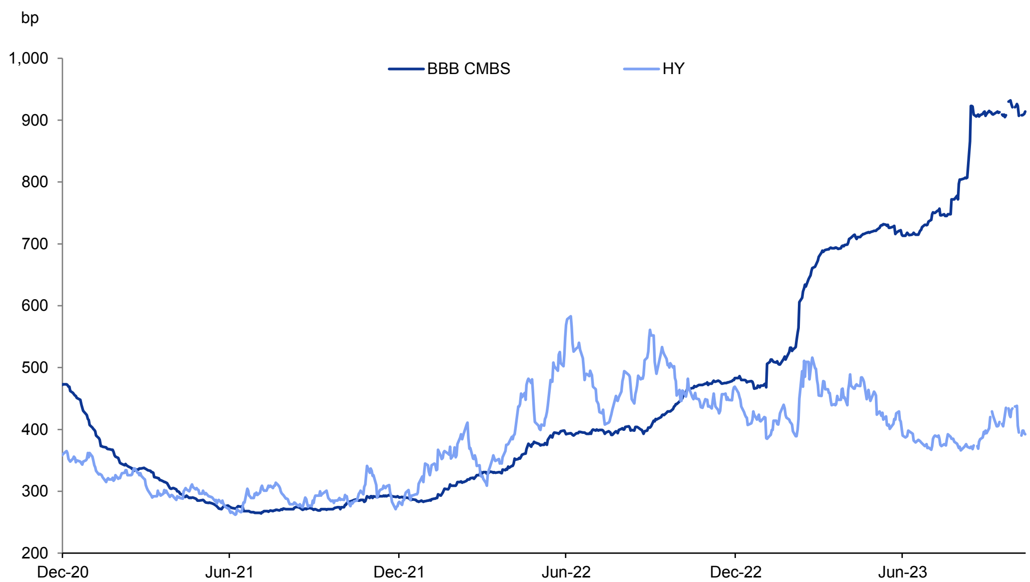

Source: Bloomberg, Goldman Sachs Global Investment Research

We remain cognizant that the combination of Fed QT and the continued pressure on banks' balance sheets (exacerbated by the prospect of more severe Basel 3 revisions to US bank capital requirements) greatly limit the scope for a return to the post-COVID tights for the mortgage basis. That said, we see an even more compelling case for an overweight allocation on agency MBS vs. both US Treasuries and IG-rated bonds in 2024. Three ingredients support this view:

- First, valuation has now approached dislocation territory, with the current coupon MBS basis trading around 174bp ($86^{th}$ historical percentile rank), a remarkably wide level for an asset class that carries virtually no credit risk.
- Second, the case for a sustained decline in rates volatility has materially strengthened now that the Fed is most likely done with its hiking cycle. And while the run-off of the Fed MBS portfolio is set to continue, the pace is unlikely to get remotely close to the $35 billion monthly cap. For context, the current run-off pace has been oscillating around $19 billion per month. Given that the weighted average mortgage rate on the Fed portfolio is in the low 3% area, prepayment speeds are likely to remain muted next year.
- Lastly, challenging affordability in the housing market will likely continue to weigh on origination, providing a technical tailwind to the secondary market performance of agency MBS.

For unconstrainted total return investors, we continue to see value in BBB CMBS tranches, particularly in the new issue market. While plenty of room remains for further downward pressure on CRE prices, the sharp widening in BBB CMBS spreads now provides investors with an attractive compensation against future losses (Exhibit 9). Recent months of CMBS issuance have also shown a sharp drop in loan to value ratios (LTVs), a notable shift in the property mix away from offices, and significant back-up in funding costs. We would emphasize that older vintages could remain vulnerable to a further downward adjustment in property prices, especially in the office sector, given the possibility of lagged price discovery on properties securing loans.

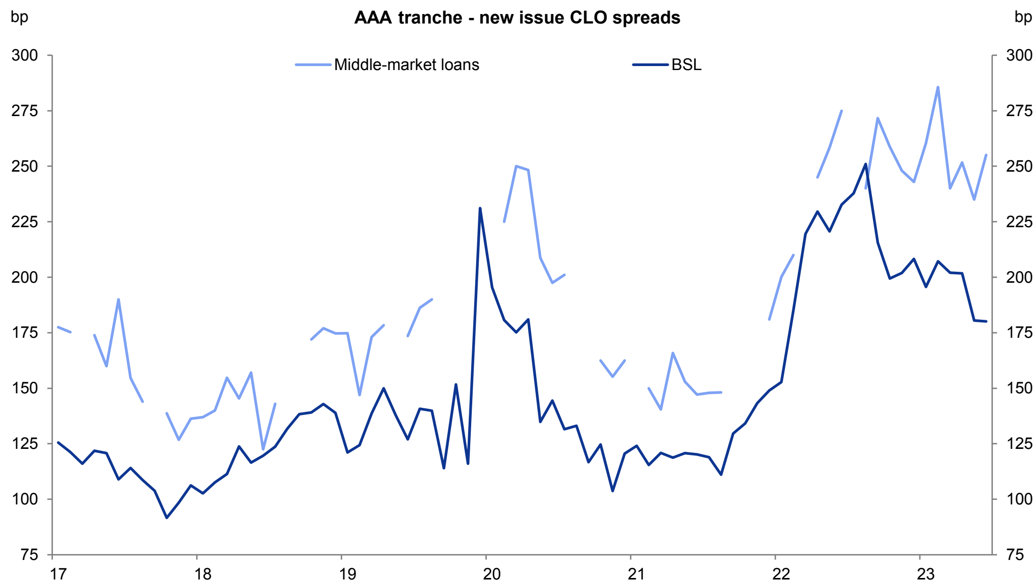
**Exhibit 9: The premium provided by BBB CMBS tranches has moved far enough to compensate investors even under draconian loss scenarios**
BBB CMBS vs. HY bond spreads




Source: Bloomberg, Goldman Sachs Global Investment Research

Another pocket of alpha in structured credit, though arguably less liquid and less scalable, is middle-market CLOs. As shown in Exhibit 10, AAA-rated spreads in the new issue market have remained at the high end of their recent range and have underperformed broadly syndicated loan CLOs. AAA tranches have higher loss subordination levels vs. other structured products, typically around 43% vs. 35% for broadly syndicated loan CLOs and 30% for conduit CMBS. And while the share of CCC loans in middle-market CLOs is also higher compared to the broadly syndicated loan CLOs (and reinvestment periods are often also shorter), it is, nevertheless, further away from the standard concentration limit. Middle-market CLO managers also have more flexibility in substituting distressed loans with performing loans, given they often manage other accounts.

**Exhibit 10: AAA middle-market CLO spreads have remained at the high end of their recent range**
New issue AAA CLO spreads




Source: Morningstar LCD, Goldman Sachs Global Investment Research

## 5. Aggregate fundamentals: Weaker but not weak

In aggregate, corporate balance sheet credit quality among bond issuers went into the Fed and ECB hiking cycles in a position of strength. But a year and a half later, the aggressiveness of the monetary tightening has left distinct marks (Exhibits 11). While the risk of another large monetary shock has largely subsided, our economists expect central banks will likely leave policy rates above currently projected long-run sustainable levels. The ability of corporate borrowers to adjust to a higher-for-longer cost of capital environment without a significant uptick in financial distress will therefore remain a key concern for market participants.

The good news is that, except for European HY-rated bond issuers, debt servicing capacity has remained healthy by historical standards, with interest coverage still at the high end of the pre-COVID range. The bad news is that liquidity positions on balance sheets have seen significant erosion and are now below historical averages. This means that the ability of non-financial corporations to withstand an unexpected negative shock has been diminished. Additionally, as new, more expensive debt replaces older, cheaper debt, the average cost of funding will also start increasing. The speed and the magnitude of this increase will depend on many factors, including refinancing needs, capital management priorities, and earnings growth.

**Exhibit 11: The aggressiveness of the Fed hiking cycle has left some marks on North American corporate balance sheets**

Fundamental data across North American IG- and HY-rated firms

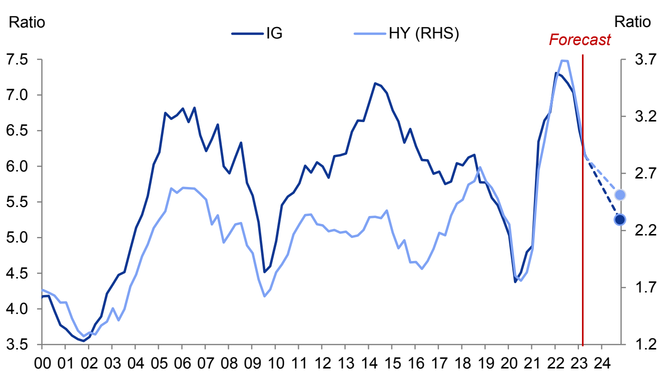
| Metric | | Percentile ranks for IG-rated North American corporations (1998, 1999, 2000, 2005, 2010, 2015, 2020) | Current percentile rank |
|---|---|---|---|
| Leverage | Net debt to EBITDA | | 92 |
| | Total debt to EBITDA | | 88 |
| | Net debt to assets | | 85 |
| | Total debt to assets | | 100 |
| Debt servicing capacity | Interest coverage ratios | | 69 |
| | Interest expenses to total debt | | 15 |
| Profitability | EBITDA margins | | 69 |
| | EBITDA growth | | 15 |
| Liquidity positions | Cash to total assets | | 23 |

| Metric | | Percentile ranks for HY-rated North American corporations (1998, 1999, 2000, 2005, 2010, 2015, 2020) | Current percentile rank |
|---|---|---|---|
| Leverage | Net debt to EBITDA | | 38 |
| | Total debt to EBITDA | | 62 |
| | Net debt to assets | | 77 |
| | Total debt to assets | | 85 |
| Debt servicing capacity | Interest coverage ratios | | 92 |
| | Interest expenses to total debt | | 19 |
| Profitability | EBITDA margins | | 73 |
| | EBITDA growth | | 15 |
| Liquidity positions | Cash to total assets | | 31 |

Source: FactSet, Goldman Sachs Global Investment Research

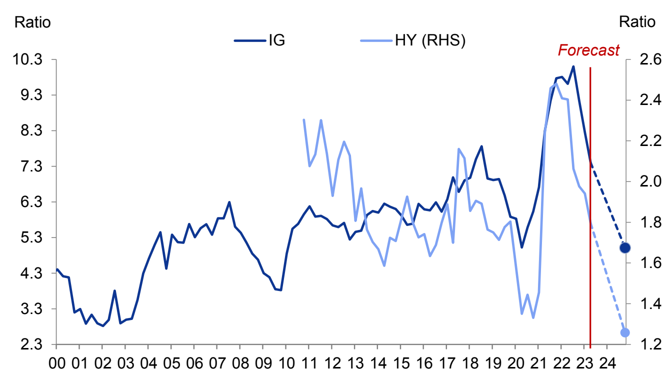
As we showed in recent research, under a set of conservative assumptions, including no relief in funding costs, no earnings growth, and primary market activity that is entirely centered on refinancing all bonds maturing prior to 2026, higher marginal funding costs will likely be well absorbed, at least *in aggregate*. On our estimates, interest coverage ratios for the median IG- and HY-rated companies domiciled in North America would fall from current near-record-high levels but remain healthy (Exhibit 12). In Europe, the downward pressure on interest coverage ratios would also likely remain manageable for IG-rated issuers. But in HY, the deterioration would likely be more noticeable, which reflects the weaker starting level relative to both their own history and North American firms (Exhibit 13).

**Exhibit 12: Under a set of conservative assumptions, interest coverage ratios for the median non-financial corporation domiciled in North America will likely remain healthy in 2024**




Source: FactSet, Goldman Sachs Global Investment Research

**Exhibit 13: In Europe, the downward pressure on interest coverage ratios will also likely remain manageable for IG-rated issuers but less so for their HY-rated peers**



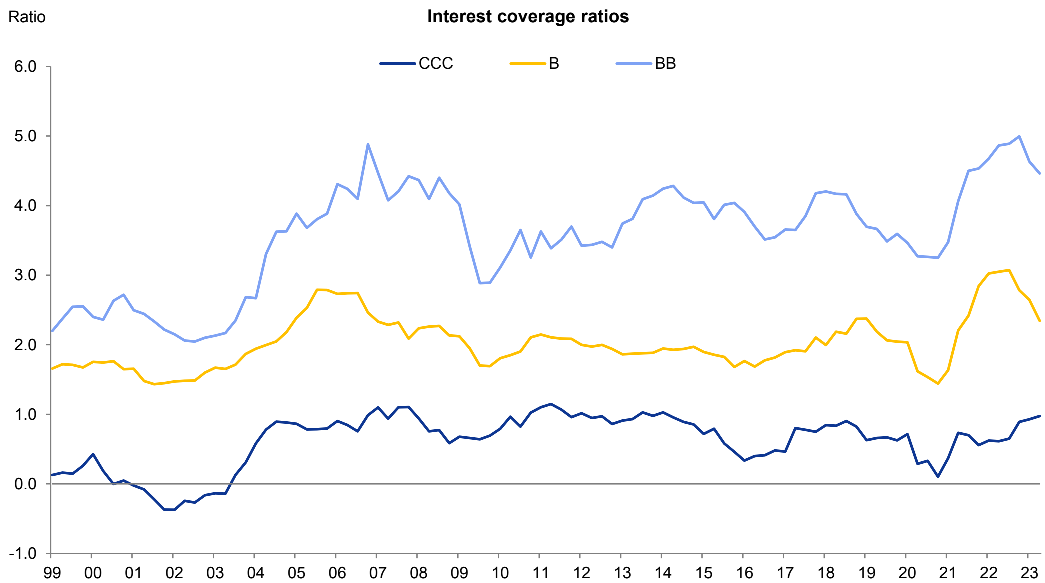

Source: FactSet, Goldman Sachs Global Investment Research

## 6. More conservative capital management and higher aversion towards low-quality balance sheets

A higher-for-longer rates environment, coupled with sluggish earnings growth, will continue to challenge the economics of leveraged transactions such as debt-funded M&A and buybacks, ultimately disincentivizing corporate managements from aggressively pursuing active forms of balance sheet re-leveraging. Put another way, capital will likely be managed more conservatively, at least by the standards of the post-global financial crisis period. This will leave activity in the primary market centered around refinancing activity, a positive for secondary market supply technicals as well as fundamentals, especially in IG.

For over-leveraged and rates-sensitive balance sheets, the transition to a higher funding cost environment will, however, be tougher. CCC-rated firms with sub-one interest coverage ratios now have a much narrower path to avoid rising financial distress, given the considerable additional pressure vis-à-vis much higher funding costs (Exhibit 14). For context, current secondary market yields are almost double the level of current coupons while refinancing needs are also higher relative to the high end of the rating spectrum.

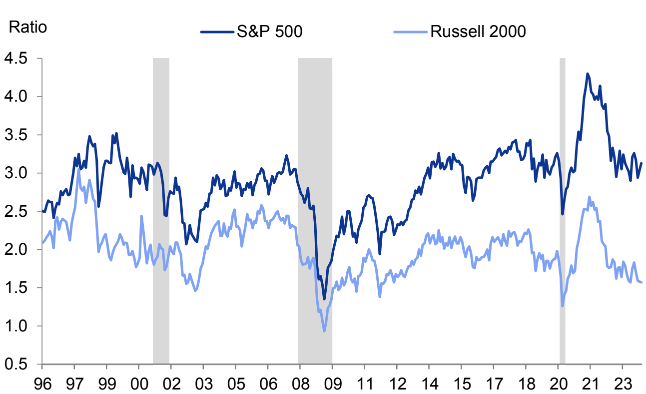
**Exhibit 14: CCC-rated issuers will have a narrower path to avoid financial distress, given sub-one interest coverage ratios**
Median interest coverage ratios by rating bucket for non-financial corporations domiciled in North America




Source: FactSet, Goldman Sachs Global Investment Research

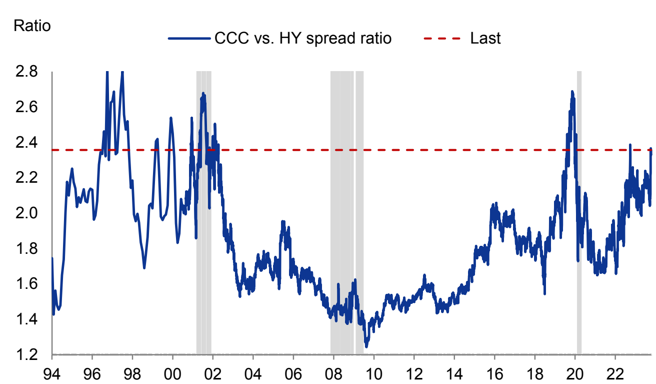
Of course, markets rarely wait, and the price action of the past few months show a decent rebuild of risk premium in the low end of the quality spectrum, among both credit and equity investors. As shown in Exhibit 15, small-cap firms that lack financial flexibility and operational agility have been penalized by equity investors, now trading at recession levels vs. their book values. Similarly, as shown in Exhibit 16, the spread ratio of CCC-rated bonds relative to the broader index also backed up to recession levels. Despite this year's collapse in issuance and the ensuing technical tailwind for the secondary market (the share of CCC-rated bonds in the new issue market has declined to its lowest level since 2010), CCC-rated bonds have come under pressure in September and October as the notion of higher-for-longer funding costs has gained broader acceptance.

**Exhibit 15: Small-cap firms have been penalized by equity investors**
Median price to book ratios for the Russell 2000 and the S&P 500




Source: Bloomberg, Goldman Sachs Global Investment Research

**Exhibit 16: Excluding recessions, CCC-rated bond spreads are trading at the largest discount vs. the broader HY index**

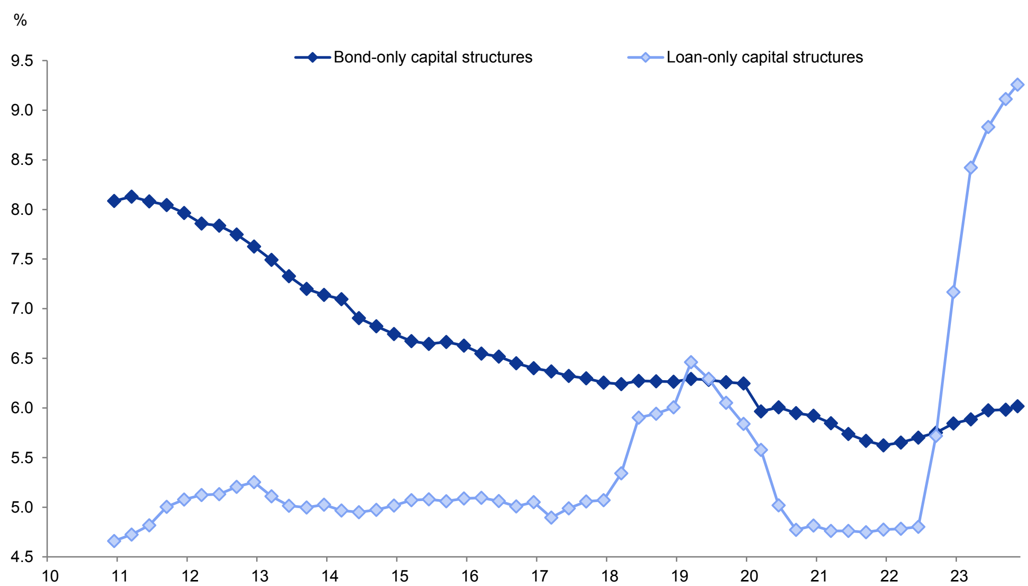



Source: ICE-BAML, Goldman Sachs Global Investment Research

Considering the decent repricing of the past month, we are upgrading CCC-rated bonds to a neutral allocation (from underweight), downgrading BB-rated bonds to an underweight allocation (from neutral), and maintaining an overweight allocation on B-rated bonds. In our view, the low odds of a full-blown recession should limit the risk of further repricing of the CCC premium (at least in relative terms). That being said, absent any relief in funding costs, this year's dramatic increase in investor aversion to low-quality and over-leveraged balance sheets is also unlikely to abate.

Unlike the CCC-rated bond issuers, the market performance of leveraged loan issuers, whose liabilities are largely skewed towards floating rate structures, has yet to reflect the much tough transition to higher funding costs, especially among issuers with loan-only capital structures (Exhibit 17). The absence of any funding relief will likely continue to pressure fundamentals and fuel a faster pace of downgrades and defaults relative to the HY bond market. As we detail further below, we continue to prefer owning credit risk in the HY bond vs. the leveraged loan market, at the index level.

**Exhibit 17: For issuers with loan-only capital structures, the transition to higher funding costs has been more extreme**




Source: Bloomberg, Morningstar LCD, Goldman Sachs Global Investment Research

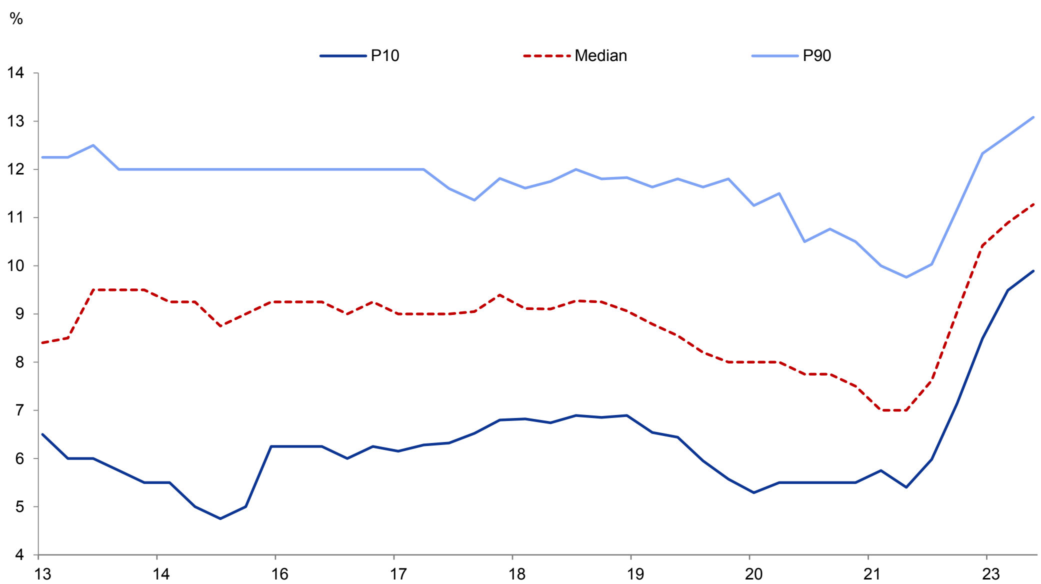
## 7. Private credit: Nearing the pivotal moment

The story for private credit markets has been one of strong investor demand and attractive returns. Despite a much stronger level of yield support in public fixed income markets, investors' appetite for private debt has not waned. From year-end 2021 to year-end 2022, assets under management across private debt strategies (excluding private and listed BDCs) increased to $1.5 trillion from $1.2 trillion and even further to $1.6 trillion in 1Q23, rivaling the size of the high yield and leveraged loan markets even after accounting for the ~$493 billion of dry powder. We continue to think the primary value proposition for private credit markets is their ability to deliver superior volatility-adjusted returns to "buy and hold" investors . The strength of demand has also fueled a notable increase in the depth of financing, as direct lenders have shown both willingness and ability to underwrite refinancing needs of “large-cap” borrowers that typically seek financing in the broadly syndicated loan market.

As the cycle continues to age and corporate borrowers adjust to higher funding costs, a key question for investors revolves around the ability of the asset class to manage rising financial distress. As shown in Exhibit 18, the average coupon payment among borrowers in private markets has also increased dramatically over the last year. Here again, the absence of any material relief in funding costs in 2024 will certainly test the resilience of the asset class. For context, the Cliffwater Direct Lending Index shows a 12-month trailing loss rate of 0.7%, which is lower than the corresponding rate of 1.8% in the broadly syndicated loan market.

**Exhibit 18: Higher-for-longer funding costs will test the ability of the private credit asset class to withstand rising financial distress**

Median, 10th and 90th percentile coupon payment in BDC portfolios




Source: Pitchbook LCD, Bloomberg, Goldman Sachs Global Investment Research

Like public leveraged finance markets, the transition to higher funding costs will almost surely involve an uptick in financial distress. The magnitude of this uptick remains, however, a subject of intense debate among market participants. The young age of the direct lending asset class clearly makes historical comparison less informative relative to the more mature broadly syndicated loan and HY bond markets. But relative to the broadly syndicated loan market, we continue to see a few reasons to expect lower credit losses in private markets:

- The first is the nature of the borrower/lender relationship, which reduces coordination costs (and more generally execution) among creditors. The lower number of creditors allows for faster resolution of financial distress without the direct supervision of a bankruptcy court. The same process is, of course, also common in the public market, as evidenced by this year’s significant uptick in distressed exchanges. But the frictions are often more present on the public side, resulting in a lengthier and costlier resolution of financial distress. For context, using data on portfolio holdings from public and private BDCs as a proxy for direct lending funds, we estimate that, on a fair-value weighted basis, two thirds of the universe of borrowers have two or fewer lender counterparties.

- The second mitigating factor pertains to the ability of lenders in private markets to exert more control over covenants and the amortization payments, given that they hold the loan to maturity. In cases where the borrower is a sponsored entity, incentives to inject fresh equity to avoid a loss of control, especially if the broader macro environment remains resilient, are also strong, which preserves recovery values.

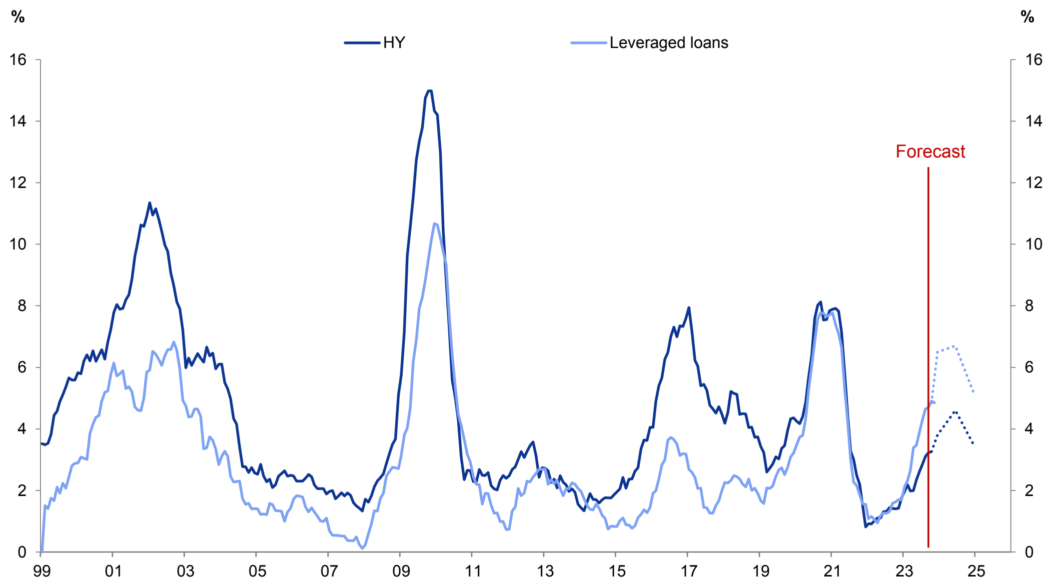
### 8. Defaults and rating migrations: Mean reversion but no spike

2023 has seen a modest increase in defaults from the rock-bottom levels of 2021 and 2022. We expect further acceleration over the first half 2024 as higher funding costs and refinancing needs tighten their grip on the weakest and most overleveraged issuers. We also expect floating-rate structures to be more acutely affected than their fixed-rate peers, given lower aggregate credit quality and the immediacy with which higher policy rates are already affecting interest expenses. In the US, we forecast a peak in the trailing 12-month issuer-weighted default rate of 6.7% through 1H2024 for leveraged loan issuers, before declining to 5.2% by 4Q2024. For HY bond issuers, we expect the same rate will peak at 4.6% through 1H2024, slightly above the long-run average of 4%, before settling to 3.5% for the full year ending in 4Q2024 (Exhibit 19).

Across sectors, Wirelines, Healthcare, Retail, and Pharmaceuticals have some of the highest expected default rates, on a par value-weighted basis (Exhibit 20). That said, a look under the surface shows a high degree of idiosyncrasy within these sectors, with many distressed situations already priced-in to a large degree. This leaves us comfortable with our constructive view on Wirelines and Media & Entertainment.

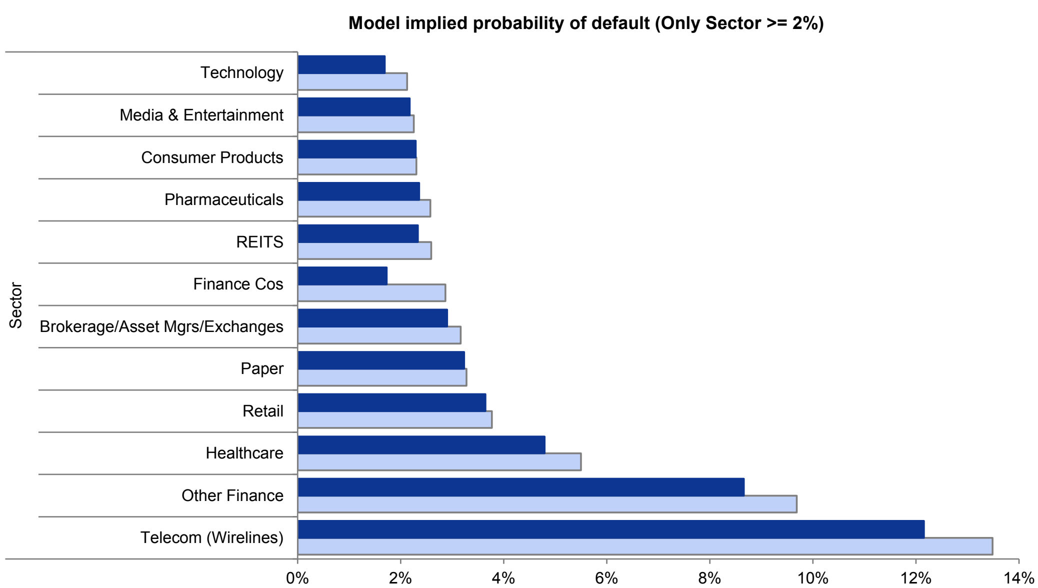
In Europe, we see a similar pattern to the US, forecasting peak default rates of 3.6% and 5.3%, for the HY bond and leveraged loan markets, respectively, by end of the first half of the year, followed by some decline through year-end to 3.2% and 5.0%, respectively (Exhibit 21).

**Exhibit 19: We expect US default rates to peak in 1H2024**
12-month trailing issuer-weighted default rate in the US HY and leveraged loan markets



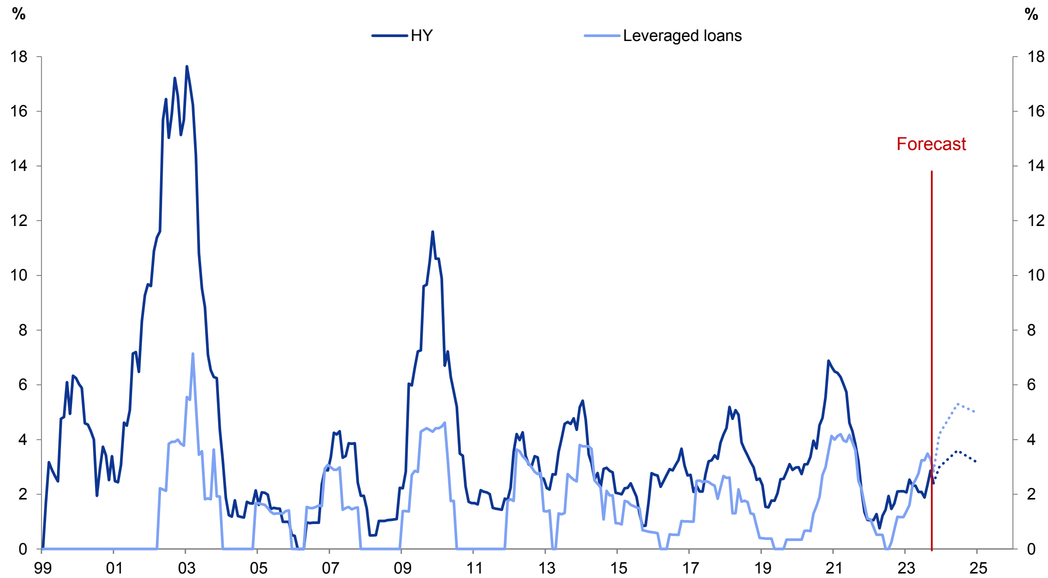

Source: Moody's, Goldman Sachs Global Investment Research

**Exhibit 20: Sector level par-value weighted default rates are largely driven by idiosyncratic stories**
Model-implied 1-year ahead par and market value weighted default rates, by sector, for our matched universe; only sectors with a greater than 2.0% expected par value default rate are included




Source: Bloomberg, FactSet, Goldman Sachs Global Investment Research

**Exhibit 21: The default backdrop should be more benign in Europe**
12-month trailing issuer-weighted default rate in the European HY and leveraged loan markets



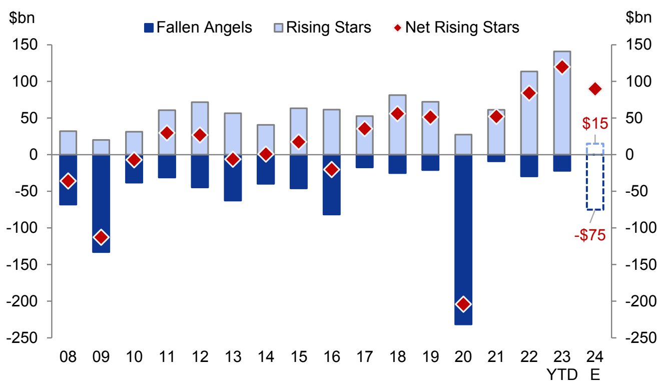

Source: Moody's, Goldman Sachs Global Investment Research

While our default forecasts envision mean reversion but no spike, we do expect the downward pressure on recovery rates will remain in place. For secured and unsecured debt, we think it is important to distinguish between the intra- and inter-company capital structure view. As we demonstrated in previous research, in aggregate, the recovery rate differential between 1st lien and senior unsecured debt will likely compress, given the significant growth of issuers with loan-only capital structures. We forecast recoveries of 35% for senior unsecured bonds (vs. ~44% historically) and 50% for 1st lien loans (vs. ~70% historically). As it relates to recovery rates at the issuer-level (i.e., intra-company capital structure), we expect divergence between senior secured and unsecured recovery rates, given the generally thinner subordination cushion that is available to senior unsecured investors.

For ratings migrations, we also expect some normalization after two years of an exceptionally friendly trend. For context, rising stars have outpaced fallen angels so far in 2023 by a more than 6-to-1 notional ratio. For 2024, we expect net downgrades from IG to HY of $60 billion in notional value split between $75 billion of fallen angels and $15 billion of rising stars (Exhibit 22). These forecasts reflect a much lighter pipeline for ratings migrations vs. a year ago, as well as the limited scope for further improvement in fundamentals. We hold a similar view in the EUR market, expecting €15 of net downgrades from IG into HY, split between €30 of fallen angels and €15 of rising stars (Exhibit 23).

**Exhibit 22: USD rising stars outpaced fallen angels in 2023 for the third consecutive year**

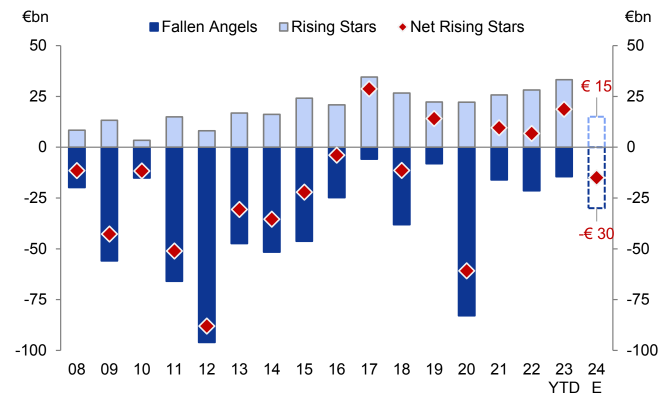
Notional amount downgraded from IG to HY versus upgraded from HY to IG in the USD corporate bond market




Source: Bloomberg, Goldman Sachs Global Investment Research

**Exhibit 23: The same trend has prevailed in the EUR market**

Notional amount downgraded from IG to HY versus upgraded from HY to IG in the EUR corporate bond market



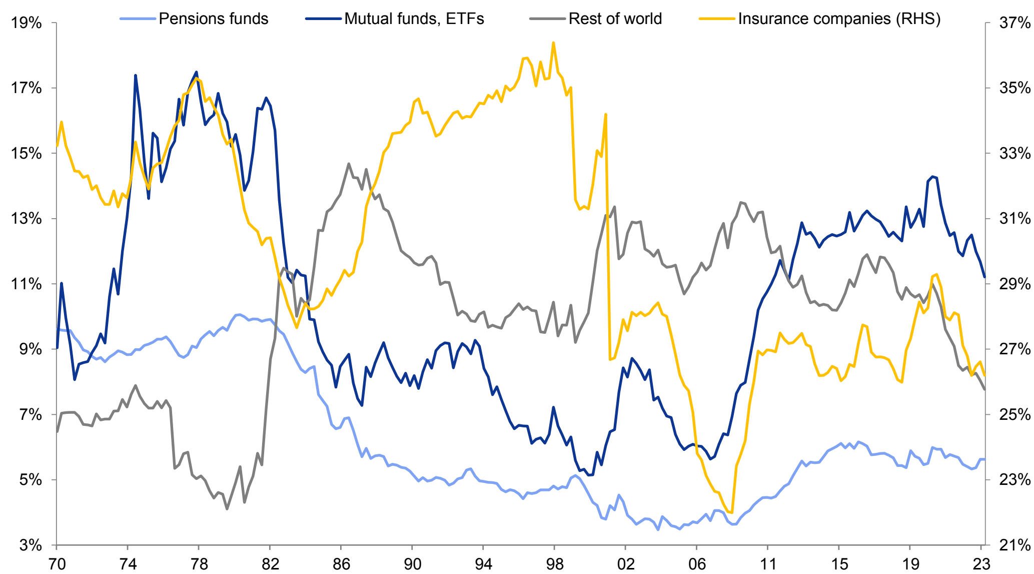

Source: Bloomberg, Goldman Sachs Global Investment Research

## 9. A friendly supply/demand technical backdrop

While the significant strengthening in the level of yield support across the entire fixed income complex has generally been viewed as a positive demand driver, two concerns have recently emerged. The first is the risk of crowding out from the US Treasury market, given the combined impact of QT and another year with a large US budget deficit and therefore increased supply. For credit markets, we think the bar is high for a crowding out effect, given current allocations to corporate bonds among large institutional investors. Data from the Federal Reserve Financial Accounts shows that, aside from asset managers, the allocation to corporate bonds (excluding structured products) among insurance companies, pension plans, and foreign investors is at or below its historical median (Exhibit 24).

The second concern relates to a potential weakening of foreign participation. The ongoing normalization of monetary policy in Japan and its implications for cross-currency relative value and cross-border flows in fixed income markets have been a key focus. As we discussed in recent research, irrespective of the pace of normalization of monetary policy in Japan, the depth and the breadth of US credit markets coupled with the lack of competing domestic alternatives will likely continue to put a floor on foreign net purchases. For Japanese demand, the impact of the ongoing normalization of monetary policy on the direction of flows involves many moving parts that could shift investor incentives in various ways. The recent re-steepening of the JGB yield curve and the changes announced by the BoJ are too modest to have any major impact on flows, in our view. Only an unlikely a combination of significant JPY strengthening, a sharp steepening of the JGB yield curve, and significant compression of the yield differential vs. the US would fuel persistent selling pressure. But here again, the bar is high, given current market pricing.

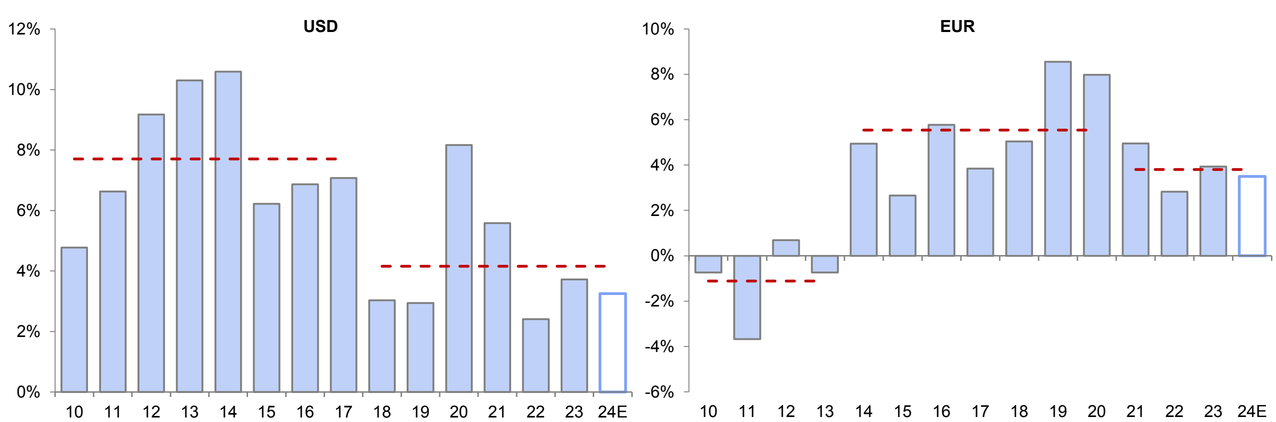
**Exhibit 24: Aside from asset managers, the allocation to corporate bonds among insurance companies, pension plans, and foreign investors is at or below the historical medians**
Share of corporate bonds (excluding structured products) as a percentage of financial assets




Source: Federal Reserve Board, Goldman Sachs Global Investment Research

We also expect the supply backdrop will further mitigate the risk of a crowding out from the US Treasury market. In both the USD and EUR markets, we forecast net supply will grow at 3.2% and 3.5%, respectively, in the USD and EUR markets (IG and HY combined), a slower than the post-global financial crisis period. This decline in net issuance reflects the weaker incentives for active forms of re-leveraging, which will likely keep primary market activity skewed towards refinancing (Exhibit 25).

**Exhibit 25: Corporate borrowers can (and likely will) respond to higher funding costs by reducing net supply**
Annual percentage growth in the notional amount outstanding of USD and EUR corporate bonds (IG and HY combined)




Source: Bloomberg, Goldman Sachs Global Investment Research

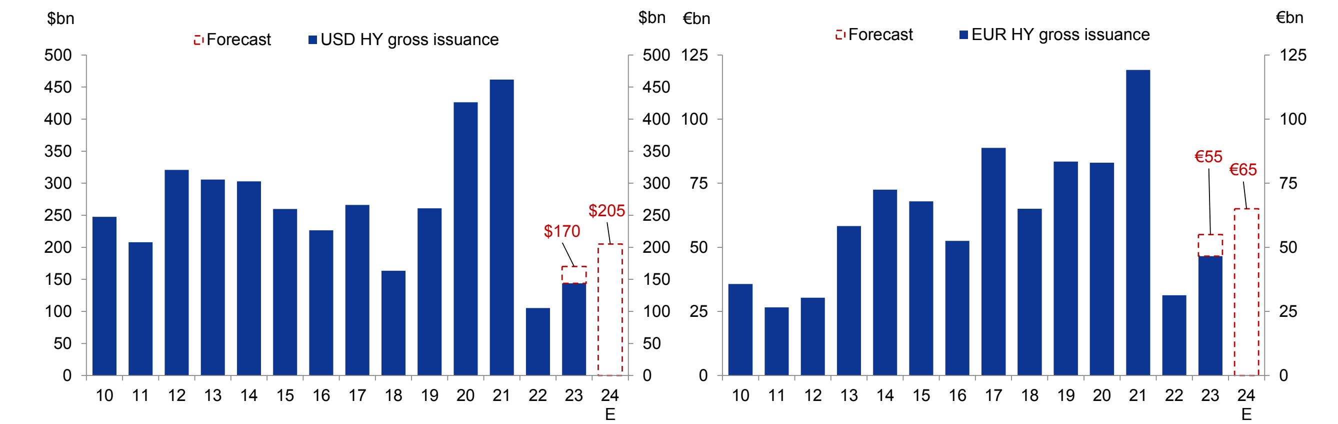
For gross issuance, the steady march of upcoming maturities has fueled a rebound in new issuance volumes this year. Except for the USD IG market, where issuance volumes are roughly flat vs. last year, supply in the USD HY, EUR IG and EUR HY markets are up double digits relative to last year's pace.

We expect a further acceleration in primary market activity in the USD and EUR HY markets with 2024 gross supply amounting to $205 billion and €65 billion, respectively, compared to 2023's likely totals of $170 and €55 billion (Exhibit 26). The primary drivers of this uptick are the elevated share of bonds maturing in the near to medium term (Exhibit 27), coupled with the significant erosion of balance sheet liquidity positions. .

For the USD and EUR IG markets, we expect 2024 gross issuance volumes will come down a bit from this year's likely totals of $1.3 trillion and €634 billion to end 2024 at $1,250 billion and €600 billion (Exhibit 28). Combining these gross supply forecasts with our ratings transition and default forecasts implies total net issuance of $290 billion and $80 billion in the USD IG and HY markets, respectively. In the EUR market, our net issuance forecasts are €145 billion and €6 billion in the IG and HY markets, respectively.

**Exhibit 26: We expect gross issuance to accelerate in the USD and EUR HY markets next year**

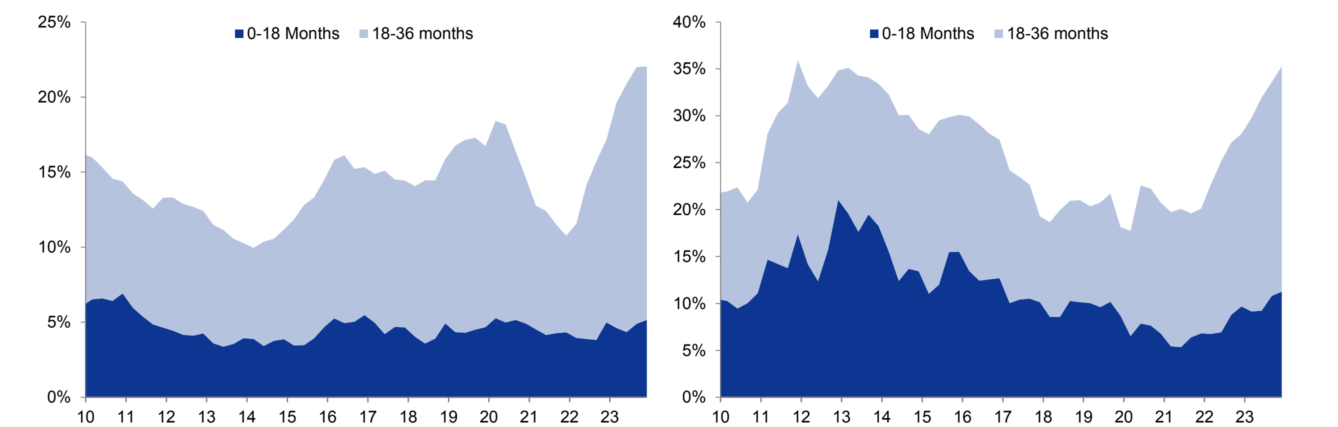
Actuals vs. forecasts for annual gross supply




Source: Dealogic, Goldman Sachs Global Investment Research

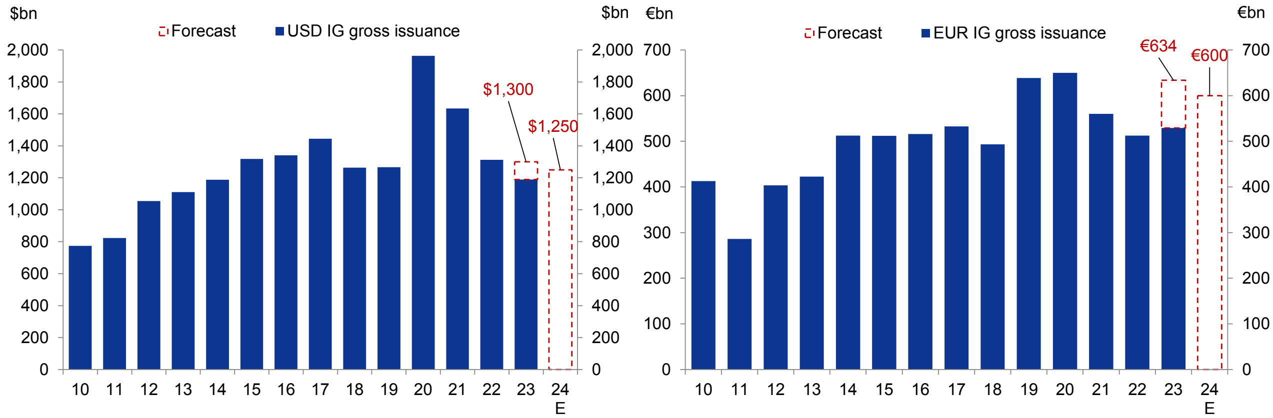
**Exhibit 27: Near-term refinancing needs in the HY market are high but manageable**

The notional share of the USD HY (left panel) and EUR HY (right panel) maturing within 36 months




Source: Bloomberg, Goldman Sachs Global Investment Research

**Exhibit 28: In IG, we expect a decline in gross issuance**
Annual gross issuance volumes in the USD and EUR IG markets




Source: Dealogic, Goldman Sachs Global Investment Research

## 10. Some upside risk but cautionary flags are still flying high

The main source of upside risk to our baseline forecasts is an earlier-than-expected funding relief delivered by the Fed and ECB relative to our economists' forecasts for Q4 and Q3, respectively. For context, market pricing is currently implying 100bp of cuts in the US and over 90bp in the Euro area. Should policy rates move lower than we expect (either because inflation is falling faster than expected or because the growth trajectory warrants insurance cuts), market participants are likely to extend the expected life of the current expansion, a boost for duration and total returns, and a potential catalyst for spreads to move back to their pre-hiking cycle levels. Issuers would also benefit from some relief in funding costs, which would skew the risks to our default forecasts to the lower side.

The other source of upside risk is an even more pronounced decline in net issuance than we currently project, which would reflect a more aggressive deleveraging mindset in the face of higher funding costs. Such an outcome could fuel a supply/demand imbalance and cause spreads to tighten more than our baseline forecasts.

As for potential sources of downside risk, one concern is a delayed recovery in earnings growth that would expose the fragility of corporate balance sheet liquidity positions. As highlighted by our economists, the ongoing negative momentum in global manufacturing business surveys could persist if the current higher cost of capital environment pushes corporations to manage inventories more conservatively or if goods demand softens more than anticipated. Such a scenario would pose clear downside risk to growth and could fuel a repricing of the recession premium.

Another risk to keep an eye on is potential concern over the debt sustainability of Italy in a higher-for-longer yield environment. Although our economists forecast a rebound in Euro area growth next year, the path is arguably narrower in a higher yield environment.

Lastly, the evolution of the current geopolitical situation and the risk of a supply shock in commodities markets will likely remain in focus. Again, the recent decline in implied volatility on macro indices provides a good entry point to add hedges in credit portfolios.

# Disclosure Appendix

## Reg AC

We, Lotfi Karoui, Spencer Rogers, CFA, Michael Puempel, Ph.D., Sienna Mori and Ben Shumway, hereby certify that all of the views expressed in this report accurately reflect our personal views, which have not been influenced by considerations of the firm's business or client relationships.

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