Private Markets

December 2023

Global Credit Outlook: 1Q2024

A widening divide

BlackRock

Authors

Amanda Lynam, CPA
Head of Macro Credit Research

Dominique Bly
Macro Credit Research Strategist

James Keenan, CFA
Chief Investment Officer & Global Head of Private Debt

Jeff Cucunato
Head of Multi-Strategy Debt Solutions

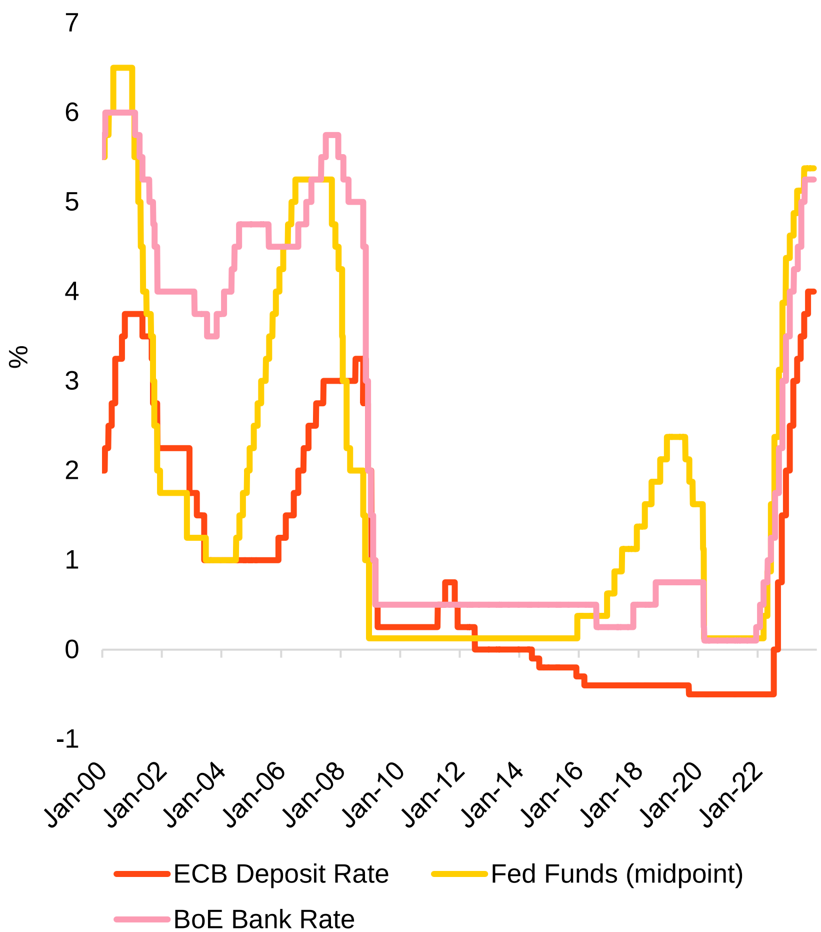
Key takeaways

- Looking ahead to 2024, a widening divide can be seen in various areas of the investing landscape. While consistent with our long-standing expectation for heightened dispersion amidst a higher cost of capital environment, it nevertheless underscores the importance of selectivity in the current backdrop.
- In private debt, notable fundamental variations are present across deal vintages – a function of the swift regime change in rates, over a few short years. In commercial real estate, performance across categories remains incredibly nuanced, with some stress now expanding outside of the well-telegraphed Office sector. And while the consumer – the engine of the U.S. economy – has been resilient overall, cracks are emerging at the low-end of the income spectrum, evident in delinquency data and patterns of discretionary spending.
- The transition to a higher cost of capital is not yet complete, in our view. As a result, we expect a continued (albeit moderate) march higher in default rates and credit losses (in both public and private debt) through mid-2024 – even absent a recession. Similar to the historical pattern, we expect loss rates in the private debt market to compare favorably with their public market peers, owing to the long-term relationships and flexibility inherent in private lending.
- In the public leveraged finance markets, the “price discovery” process for refinancing needs at the lowest rung of the rating spectrum (i.e., CCCs) will be especially important to watch, as it was not tested to a large degree in 2023.

Macro: Data-dependent monetary policy

Exhibit 1: Monetary policy has shifted to observation mode

Monetary policy rates for the European Central Bank, Federal Reserve, and Bank of England



Source: BlackRock, European Central Bank, Federal Reserve, Bank of England, Bloomberg. As of November 24, 2023.

4Q2023 was characterized by the Federal Reserve (Fed), European Central Bank (ECB) and Bank of England (BoE), shifting into wait-and-see mode, in order to assess the transmission of the aggressive series of rate hikes since early 2022 (Exhibit 1), as well as the tightening of financial conditions and bank lending standards.

While progress on inflation has been made (Exhibit 2), the central banks have been reluctant to declare victory. They instead have been emphasizing a data dependent and cautious approach, so as to not be misled by a few good months of inflation data (or inflation "head fakes", as Fed Chair Powell referenced), leaving the door open for additional monetary policy tightening.

As we outlined in our 4Q2023 outlook, the length of time that rates remain in restrictive territory is a more important consideration for risk assets' cost of capital, vs. the potential for one or two more "fine tuning" rate hikes.

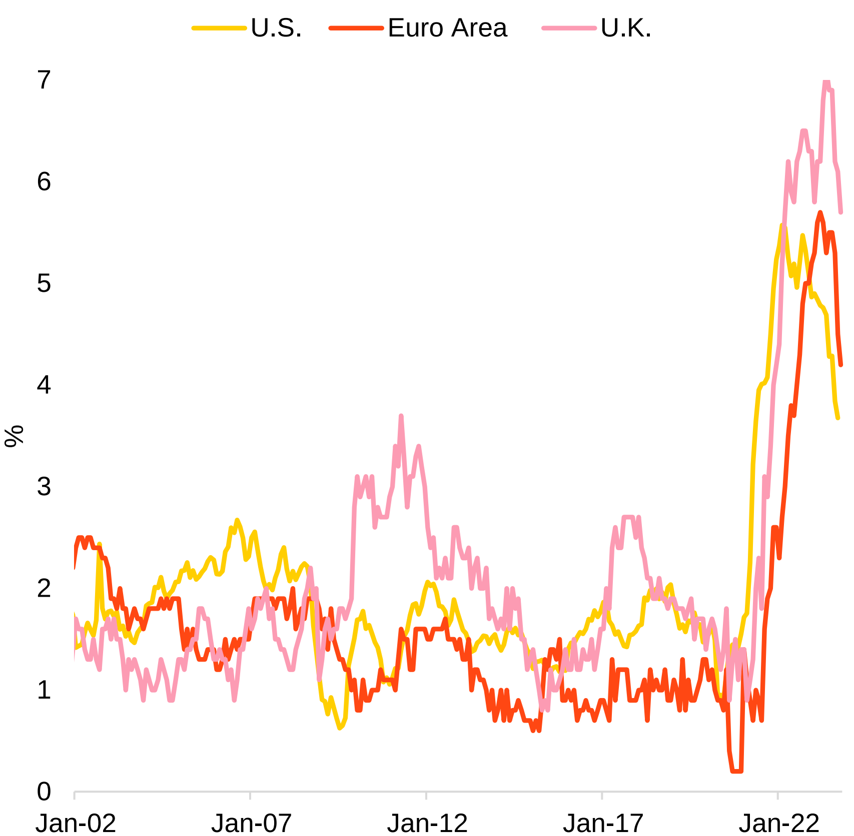
A reacceleration in inflation – or a stalling of the progress over the past few months – is a key risk for 1Q2024, in our view. Ongoing declines in wage inflation (Exhibit 3), in particular, will be key to the Fed's and ECB's efforts to return inflation to the 2% target, given the importance of the metric to non-housing services inflation measures.

We continue to view the bar for rate cuts in 1H2024 as quite high – which stands in contrast to market pricing. This is especially true for the U.S., where we view the growth-inflation mix as more favorable, vs. the Euro Area and U.K.

Inflation: Ongoing declines in wages are key

Exhibit 2: Progress on inflation

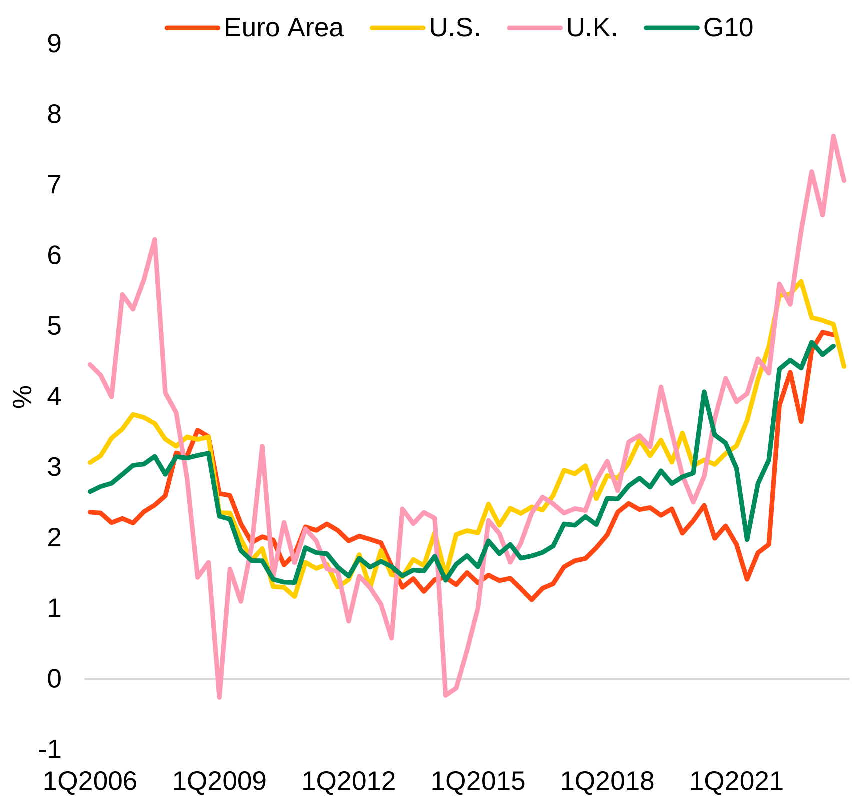
Year-over-year change in core inflation (%): U.S. Core Personal Consumption Expenditures (PCE), Euro Area Core Monetary Union Index of Consumer Prices (MUICP) and U.K. CPI ex-Food, Energy, Alcohol and Tobacco



Source: BlackRock, Bureau of Economic Analysis, Eurostat, U.K. Office for National Statistics, Bloomberg.

Exhibit 3: More moderation in wages is likely required, however

Underlying, year-over-year pace of wage growth in the Euro Area, U.K., U.S., and G10, per the Goldman Sachs Wage Trackers



Source: BlackRock, Goldman Sachs Global Investment Research. Uses most recent quarter available (2Q2023 or 3Q2023) as of November 2023. The Goldman Sachs Wage Trackers capture of blend of official, reported wage data from the U.S. and Euro Area, including the Employment Cost Index, Average Hourly Earnings, Compensation Per Hour, the Atlanta Fed Wage Tracker, and Negotiated Wages.

Macro: structurally higher rates

Beyond elevated front-end policy rates, we also see a case for structurally higher interest rates at the long-end of the curve, driven by deficit funding and rising interest rates, globally.

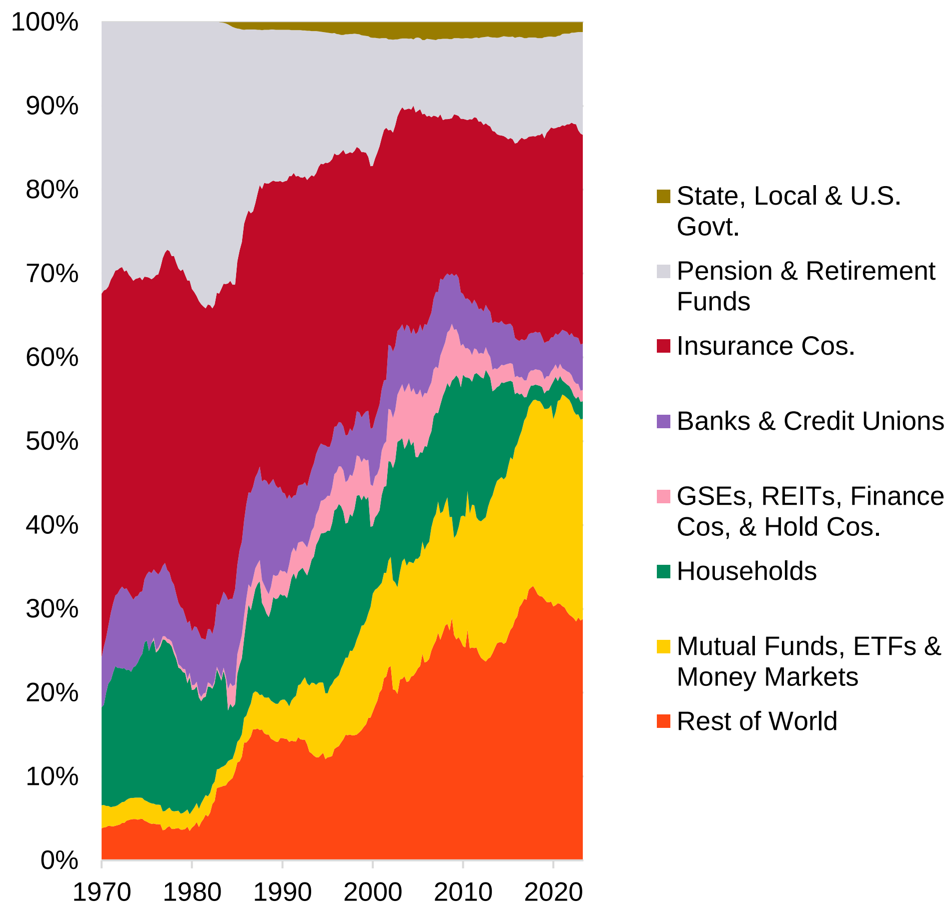
According to the U.S. Treasury, the U.S. budget deficit grew to $1.69 trillion in FY2023 (6.3% of GDP), up from $1.37 trillion (5.4% of GDP) in FY2022. Both years are well above the 50-year average (1974-2023) of 3.7%, per the Congressional Budget Office (CBO). Total Federal borrowing increased by $2.0 trillion during 2023, to $26.2 trillion (98% of GDP), largely due to deficit financing needs. Absent significant policy changes related to taxes and spending, the deficit is likely to continue to expand over the long-term, per the CBO's most recent projections.

On the demand side, the ongoing reduction of the Fed's balance sheet (quantitative tightening) and capital and liquidity constraints on bank balance sheets, have reduced the appetite from historically active buyers of U.S. Treasuries, also keeping rates elevated.

Fiscal budget concerns have not been limited to the U.S., and have also extended to Italy, Germany and the U.K. This, combined with the ongoing normalization of monetary policy in Japan, has led to upward pressure on rates, globally. That said, despite the increased yields offered by global sovereign bond markets, we expect foreign participation (Exhibit 4) in the USD corporate credit markets to remain significant – largely due to a lack of sizable, high-quality, spread duration in other regions.

Exhibit 4: Foreign investors owned more than 25% of the USD corporate bond market as of June 2023

Ownership structure of the USD corporate bond market (investment grade and high yield, combined)



Source: BlackRock, Haver Analytics, Federal Reserve Board. Captures data as of 2Q2023 (most recent available).

Private debt: room for continued growth

At $1.6 trillion in assets under management (AUM) globally (as of March 2023), private debt has cemented its status as a sizable and scalable asset class for a wide range of long-term investors. That said, it still represents a modest 12% of the broader, $13 trillion alternative asset universe (Exhibit 6). As we recently outlined in our private debt primer, we see scope for the global private debt market to reach $3.5 trillion in AUM by year-end 2028 (Exhibit 5). The drivers of this long-term AUM forecast are multi-faceted and include:

(1) **borrower preferences for customized funding solutions**, certainty of execution, and the flexibility inherent in a long-term borrower/lender relationship

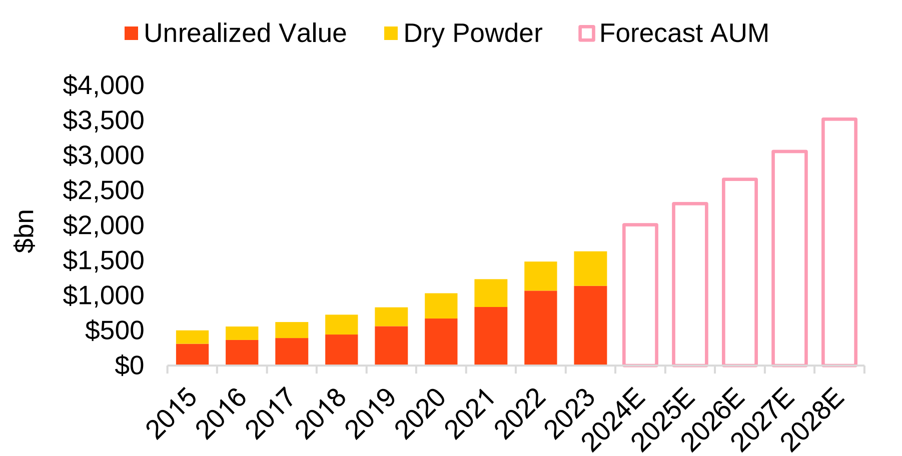
(2) **investor desires for diversification** in the context of a whole portfolio allocation, with opportunities to introduce structural protections (depending on the strategy)

(3) **structural shifts in the public debt markets**, which are now serving larger borrowers, leaving public/syndicated high yield bond and leveraged loan deal sizes prohibitively large for most middle market companies, and

(4) **a continued tightening in bank lending standards and credit availability**, which we expect should allow for a further expansion of private debt's "addressable market" of borrowers (Exhibits 7 and 8).

Exhibit 5: We forecast continued growth

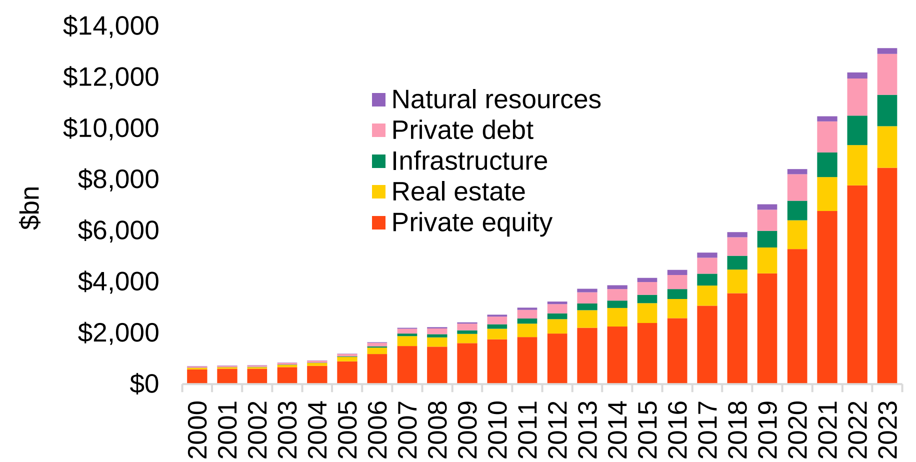
Private debt global AUM ($bn)



Source: BlackRock, Preqin. Historical (actual) data from Preqin, as of each calendar year-end, through March 31, 2023. 2024E to 2028E are BlackRock estimates.

Exhibit 6: Private debt is still modest, overall

Global alternative AUM, by category ($bn)



Source: BlackRock, Preqin. As of March 31, 2023 (most recent available). Assets under management include unrealized value and dry powder. Infrastructure and Real Estate include debt and equity.

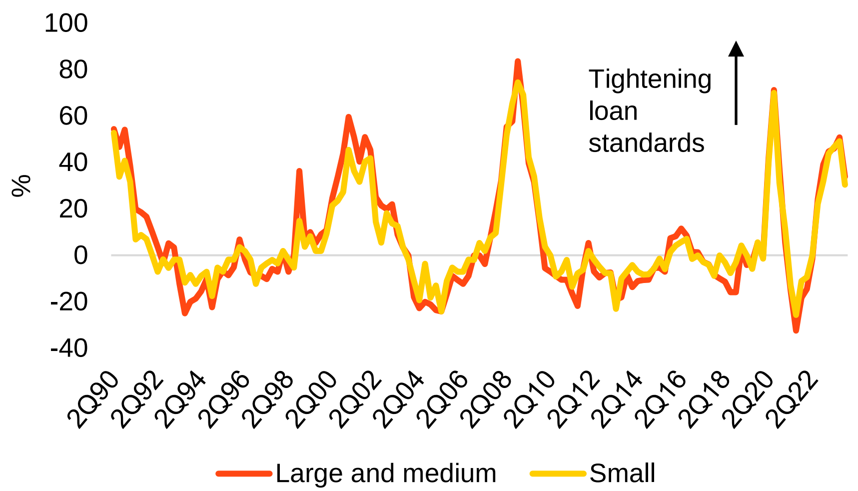
Private debt: framing our AUM forecast

While $3.5 trillion of forecasted global AUM by year-end 2028 may appear large at first glance, it is relatively modest in the context of the global financial ecosystem. For example, taking the sizes of the U.S. and European banking channels in isolation: there were $12.2 trillion of loans outstanding from U.S. banks (per November 2023 Federal Reserve H.8 data), and another €19.9 trillion outstanding from European banks (per June 2023 European Banking Authority data).

Our year-end 2028 AUM forecast also looks modest relative to the *current* size of the public/syndicated debt markets. For context, the Bloomberg Global Corporate Index (which includes investment grade, fixed-rate bonds) stood at $12.6 trillion as of November 2023. The Bloomberg Global High Yield Index (which includes fixed rate, speculative grade bonds) totaled $2.7 trillion in notional value. And the Morningstar Global Leveraged Loan Index (which includes floating rate loans in the broadly syndicated market) had a notional value of $1.7 trillion. To illustrate the point further using two widely-tracked equity indices in the U.S.: the market capitalizations (also as of November 2023) of the S&P 500 and Russell 2000 were $38.2 trillion and $2.6 trillion, respectively.

Exhibit 7: U.S. bank lending remains tight

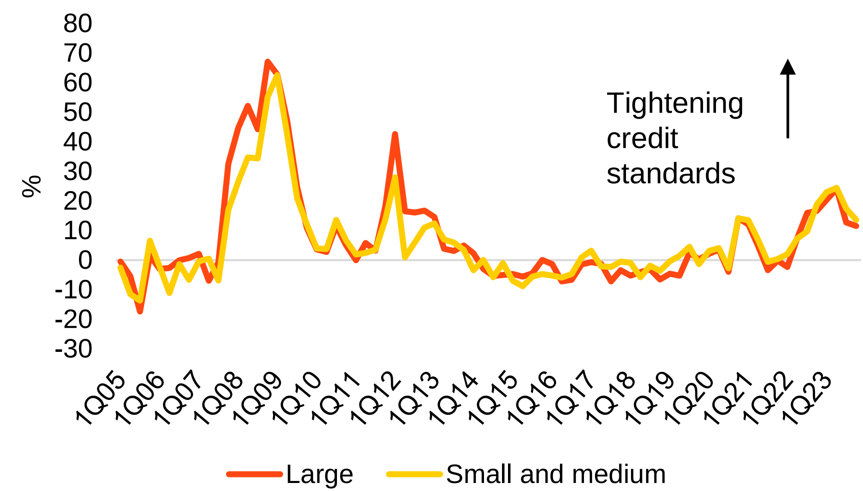
Net percentage of domestic respondents to the Fed's Senior Loan Officer Opinion Survey (SLOOS) tightening standards for loans to large/medium and small firms



Source: BlackRock, Board of Governors of the Federal Reserve System. October 2023 update was released November 6, 2023. Loans referenced are commercial & industrial (C&I) loans.

Exhibit 8: A similar trend is visible in Europe

Net percentage of respondents to the ECB Bank Lending Survey increasing credit standards for business loans to large and small/medium firms



Source: BlackRock, European Central Bank, Haver Analytics. As of October 2023.

Private debt: expect growing participation

Looking ahead to 2024, we expect investors will continue to increase their allocations to private debt – a view supported by a June 2023 investor survey conducted by third-party data provider, Preqin.

Of the Preqin survey respondents (which included retail and institutional investors), an estimated 28% had an allocation to private debt. This leaves room for growth, in our view, considering survey respondents' larger participation in private equity (63%) and real estate (51%). Moreover, Preqin estimates the average target private debt allocation is 6.4% of total assets. This compares to an average target allocation of 14.8% in private equity and 11.8% in real estate.

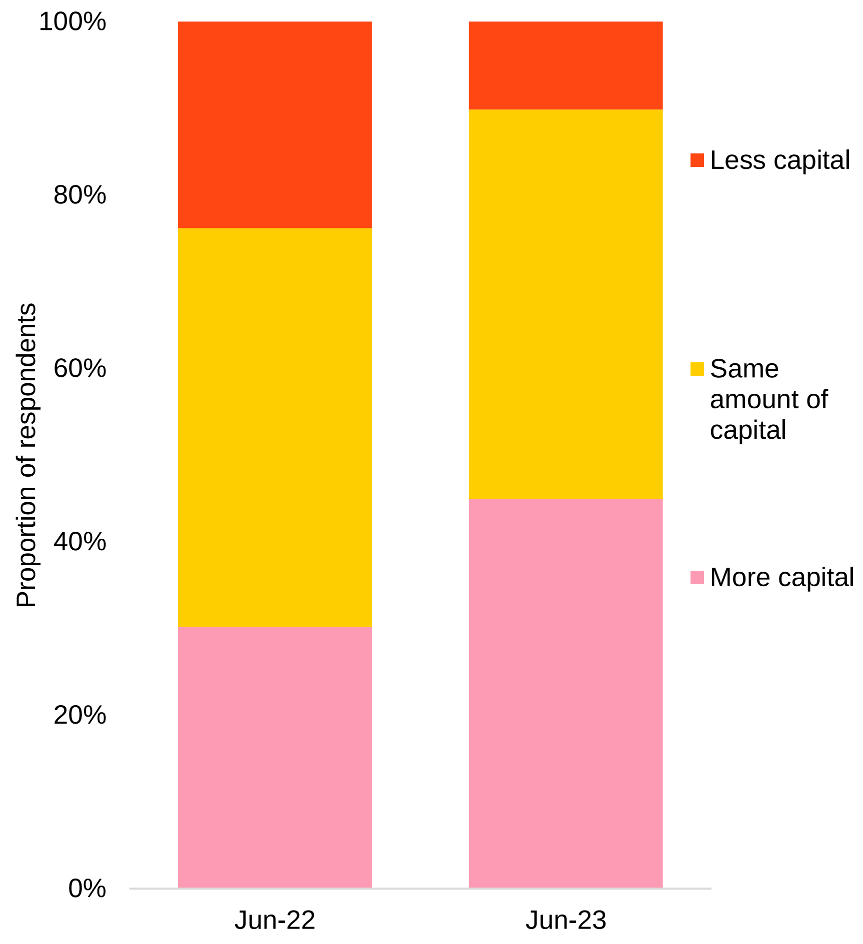
Most relevant for the 2024 outlook, in our view, is the fact that 45% of survey respondents planned to commit more capital to private debt in the next twelve months, and 45% expected to invest the same amount. Only 10% expected to commit less capital to private debt over the next year (Exhibit 9). Similarly, 51% of respondents planned to increase their allocation to private debt over the long-term, while 43% planned to maintain it.

A range of reasons for allocating to private debt were noted by these investors, including a desire for a reliable income stream (cited by 61% of respondents), diversification (49%), high risk-adjusted returns (44%), reduced portfolio volatility (33%), and low correlation to other asset classes (27%).

The Preqin survey signaled investor interest across a range of strategies – most notably direct lending and distressed. The "mix-shift" of the long-term AUM growth (among strategies) will depend heavily, in our view, on the global macroeconomic backdrop. A sharp growth downturn, for example, would likely increase the investing opportunity for strategies such as distressed lending.

Exhibit 9: Room for growth in allocations

Preqin June 2023 investor survey responses to: "How much capital will you commit to private debt in the next 12 months?"



Source: BlackRock, Preqin June 2023 Investor Survey (and June 2022 Survey, for comparison).

Private debt: focus areas for 2024

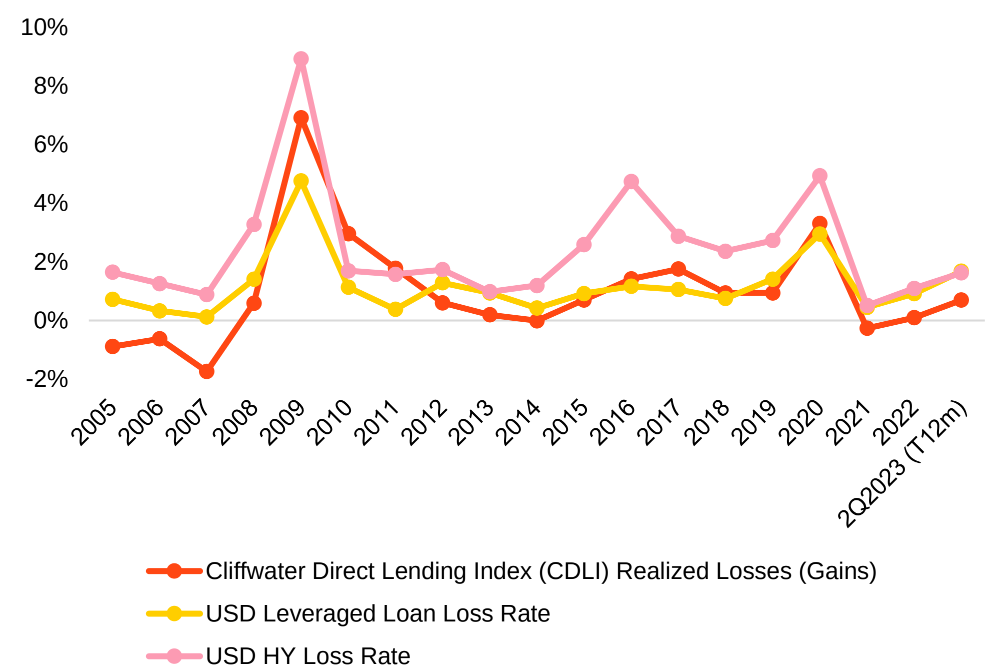
As we look ahead to 2024, we are focused on two key themes related to the private debt market:

1) **Normalizing, but contained, loss rates.** We expect additional, moderate (50-100bp) increases in loss rates (in both the public and private debt markets) over the next few quarters – extending the trend in place for 1H2023 (Exhibit 10). The primary driver of this will be the higher cost of capital environment, which we expect to persist. A sharp growth downturn would further increase realized loss rates. We expect loss rates in certain strategies of the private debt asset class – such as senior secured direct lending – to continue to compare favorably to their public market peers, consistent with the historical pattern (again, Exhibit 10).

2) **Greater financing depth and ongoing evolution.** Alongside its growth, we expect a continued evolution of the private debt asset class, including an expansion of the addressable market and increasing depth of its financing ability. In practice, this means an increasing overlap with the syndicated debt markets. In addition to sponsor-related transactions, we also expect that private debt capital will continue to be deployed in non-sponsored transactions, public-to-private refinancings, and larger lending deals. We also see scope for more partnerships. For example, several global banks have announced formal relationships with non-bank lenders, to service their customers across a wide range of funding needs. Finally, we expect growth in areas such as private debt ("middle market") collateralized loan obligations (CLOs) and private debt secondaries.

Exhibit 10: Public and private debt loss rates should increase moderately in 2024, due to a higher cost of capital

Historical loss rates (%) for the Cliffwater Direct Lending Index and the universe of USD high yield bonds and leveraged loans tracked by Moody's



Source: BlackRock, Moody's, Cliffwater. For the CDLI, we show annual and trailing 12-month realized loss rate data for 2Q2023 (most recent available for the CDLI). Realized gains can be driven by equity stubs, warrants, and gains on exited investments. These were more common in 2005-2007, when second lien and mezzanine loans were a greater portion of the CDLI. We assume a 40% recovery rate for HY and a 60% recovery rate for leveraged loans, to arrive at estimated loss rates given the Moody's issuer-weighted, trailing 12-month default data. The HY and leveraged loan loss rates reflect the universe of HY bonds and leveraged loans tracked by Moody's. **The figures shown relate to past performance. Past performance is not a reliable indicator of current or future result.** Index performance returns do not reflect any management fees, transaction costs or expenses. Indices are unmanaged and one cannot invest directly in an index.

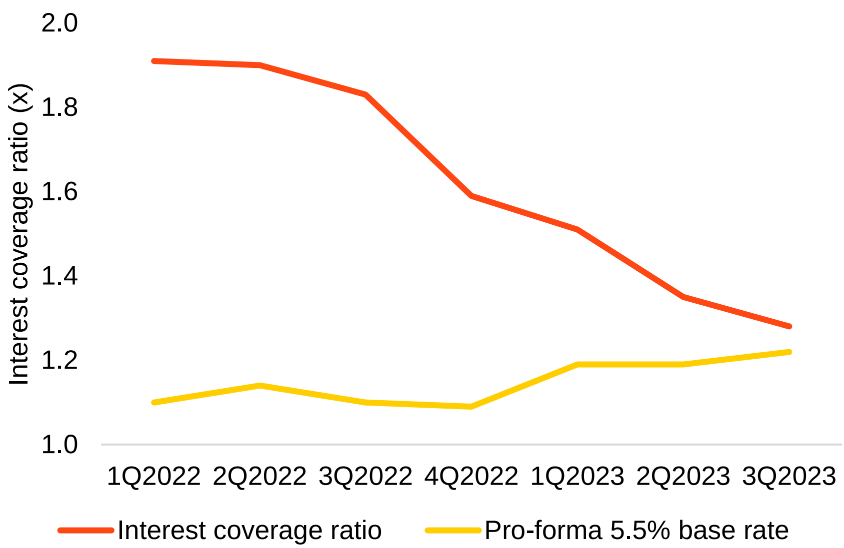
Private debt: interest cost headwinds

Similar to the pattern for floating rate borrowers in the public debt markets (as discussed later), the swift rise in interest rates since early 2022 – and the corresponding higher debt servicing cost – has been a headwind for borrowers in the private debt universe. Exhibits 11 and 12 illustrate this by showing the aggregated trend of interest coverage and fixed charge coverage ratios for the more than 4,500 private, U.S. portfolio companies (across 150 alternative asset managers) tracked by the Lincoln International Senior Debt Index (LSDI). With the bulk (if not the entirety) of the rate hiking cycles in the U.S., Euro Area and U.K. now in the rear-view mirror, the pressure on floating rate interest costs is unlikely to materially worsen from here. That said, we do not expect relief in the form of rate cuts in 1H2024, which underscores the importance of credit selection (emphasizing companies that can navigate and partially offset a higher cost of debt), manager expertise, structural protections, and ongoing monitoring.

.

Exhibit 11: Interest coverage

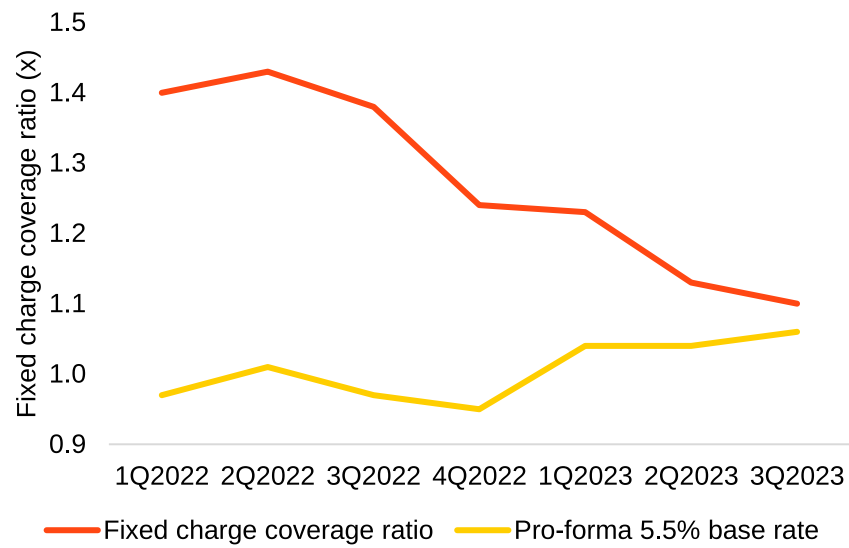
Size-weighted interest coverage ratios for the 4,500+ portfolio companies tracked by the LSDI: actual and pro-forma for 5.5% base rate



Source: BlackRock, Lincoln Valuations & Opinions Group Proprietary Private Market Database. As of 3Q2023. Interest Coverage Ratio = (Last twelve months (LTM) EBITDA – Capex) / Actual LTM Interest. Capital Expenditures ("Capex") utilizes LTM Capex by default. If LTM Capex is not available, NFY Capex is utilized, and LFY Capex if both LTM Capex and NFY Capex are unavailable.

Exhibit 12: Fixed charge coverage

Size-weighted fixed charge coverage ratios for the 4,500+ portfolio companies tracked by the LSDI: actual and pro-forma for 5.5% base rate



Source: BlackRock, Lincoln Valuations & Opinions Group Proprietary Private Market Database. As of 3Q2023. Fixed Charge Coverage Ratio = (LTM EBITDA - Taxes – Capex) / LTM Interest Expense + (1% * Total Debt). Capital Expenditures ("Capex") utilizes LTM Capex by default. If LTM Capex is not available, NFY Capex is utilized, and LFY Capex if both LTM Capex and NFY Capex are unavailable.

Private debt: vintage dispersion will persist

While the aggregate interest and fixed charge coverage metrics highlight the directional trend, there remains significant dispersion of fundamentals across deal vintages. This is a trend we expect to be further amplified throughout 2024.

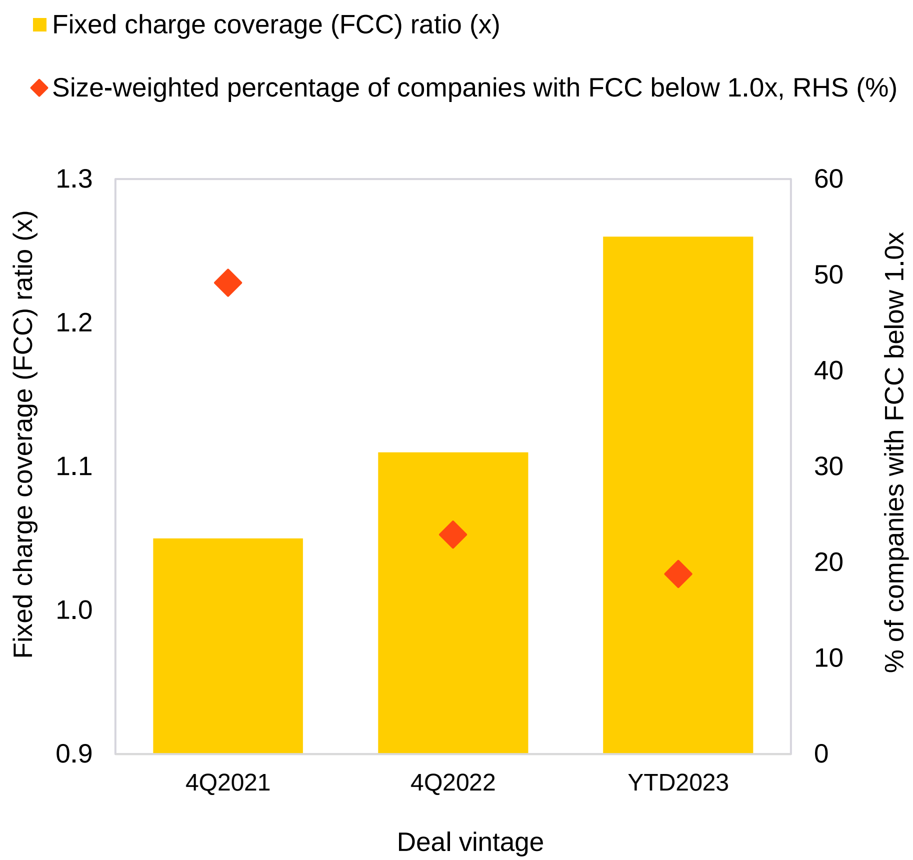
Exhibit 13 highlights this dispersion across vintages, again using the universe of portfolio companies tracked by the LSDI. For example, the average fixed charge coverage ratio for deals done in 4Q2021 – prior to the start of the Fed's rate hiking cycle – is 1.05x. And 49.2% of these deals have a fixed charge coverage ratio below 1.0x. By contrast, the average fixed charge coverage ratio for deals done in the first nine months of 2023 is 1.26x. By contrast, 18.8% of these deals have a fixed charge coverage ratio below 1.0x.

Businesses and sponsors have been adjusting to these higher debt service costs. For example, aggregate capex spending for the LSDI has declined 6% since the start of 2023. And EBITDA has increased 1.4% over that same timeframe. The fair value of private loans in the LSDI increased to 97.8% in 3Q2023, from 96.9% in 2Q2023, owing to fundamental performance and slightly tightened credit market spreads.

We expect headwinds related to debt service costs to remain a key issue in 2024, especially for the older vintages of deals that were underwritten in a more benign rate regime vs. the current backdrop. For the private debt universe, this will underscore the importance of a company's ability to generate *capital efficient* growth – as opposed to growth at any cost, which was more prevalent in a period of ultra-low interest rates.

Exhibit 13: Vintage dispersion across interest rate regimes

Fixed charge coverage ratios, by deal vintage, for the LSDI



Source: BlackRock, Lincoln Valuations & Opinions Group Proprietary Database. Calculations: Fixed Charge Coverage Ratio = LTM EBITDA - Taxes – Capex / LTM Interest Expense + (1% * Total Debt).

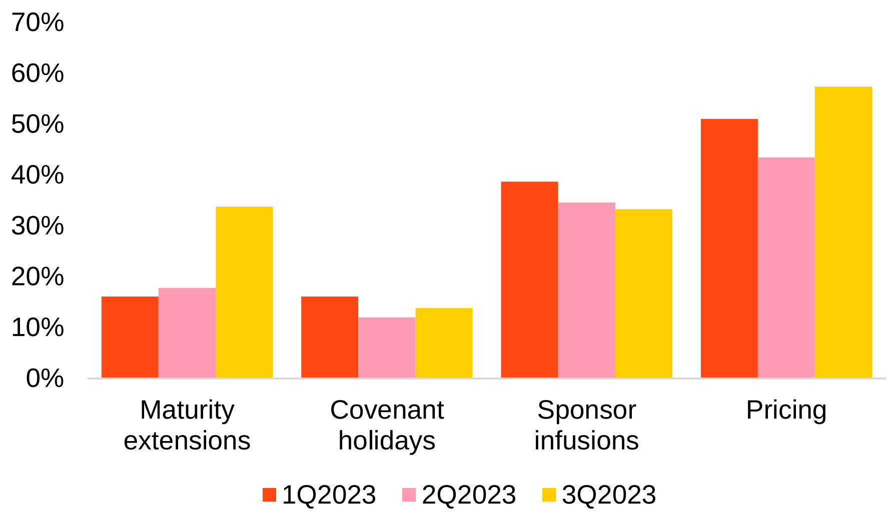
Private debt: the borrower-lender dynamic

Despite the higher cost of capital environment and the pressures on debt servicing, the covenant default rate for the LSDI, has *decreased* over the past two quarters (Exhibit 15). This counterintuitive result is reflective, in our view, of the long-term relationship between a borrower and lender (or small group of lenders) in the private debt market. This dynamic can allow for financial stress to be addressed in a more proactive and efficient way relative to what may take place in the public universe (where many more lenders are typically involved).

According to Lincoln International's 3Q2023 report, more than 550 amendments (Exhibit 14) were completed in the first nine months of 2023 across companies tracked by the LSDI. "A significant amount" of these included coupon increases coupled with sponsor equity infusions, as lenders and borrowers "proactively work through impending covenant defaults due to liquidity constraints and declining fixed charge coverage ratios." The patterns related to the amendments again underscore the importance of credit selection and vintage diversification. According to Lincoln, most of the amendments in 3Q2023 were executed for deals that originated in or before 2021 (when rates were much lower). Additionally, 60 companies required multiple amendments in 2023. These were driven by companies in the business services and consumer sectors, and 2021 vintage credits.

Exhibit 14: Covenant amendments are occurring

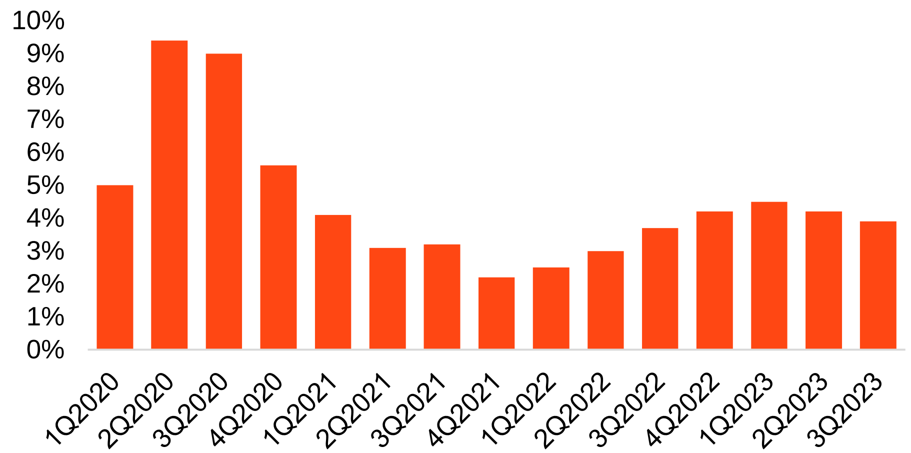
Allocation of the 550+ amendments done in the first nine months of 2023 (involving 15% of the companies tracked by LSDI)



Source: BlackRock, Lincoln International Valuations & Opinions Group Proprietary Private Market Database. As of Lincoln's 3Q2023 report.

Exhibit 15: Private debt default rates have declined

Covenant default rate (size-weighted) for the 4,500+ portfolio companies tracked by the LSDI



Source: BlackRock, Lincoln International Valuations & Opinions Group Proprietary Private Market Database. As of 3Q2023. Note: A default is defined as a covenant default and not a monetary default. The analysis was performed based on a size-weighted approach, which considered the total net debt balance for each of the portfolio companies that had a defaulting security in the respective quarter.

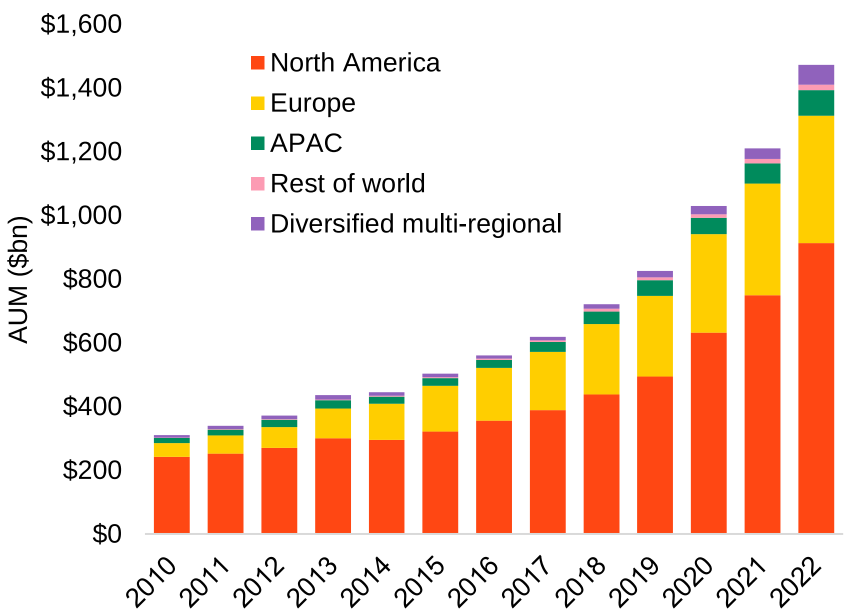
Private debt: ample scope for ex-U.S. growth

At the regional level, roughly two-thirds of global private debt AUM is currently allocated to North America (Exhibit 16). In 2024 and beyond, we see scope for private debt to continue to expand in regions such as Europe and especially the Asia Pacific (APAC), which are currently much more reliant on bank funding, relative to the U.S. and Canada (Exhibit 17). In APAC, for example, we see a particular opportunity for private debt (which is still relatively nascent) to serve as a supplemental capital (and less-dilutive financing) to private equity activity, especially for sectors outside of traditional asset-intensive sectors like real estate.

The prospect for regional diversification in other developed markets may be particularly appealing for investors with sizable, existing exposures to North America. That said, the various economic, foreign exchange, legal system and geopolitical nuances will need to be managed across regions, given the long-term nature of private debt investments. Because of this, local expertise and significant manager experience are increasingly important.

Exhibit 16: Private debt AUM is currently concentrated in North America and Europe

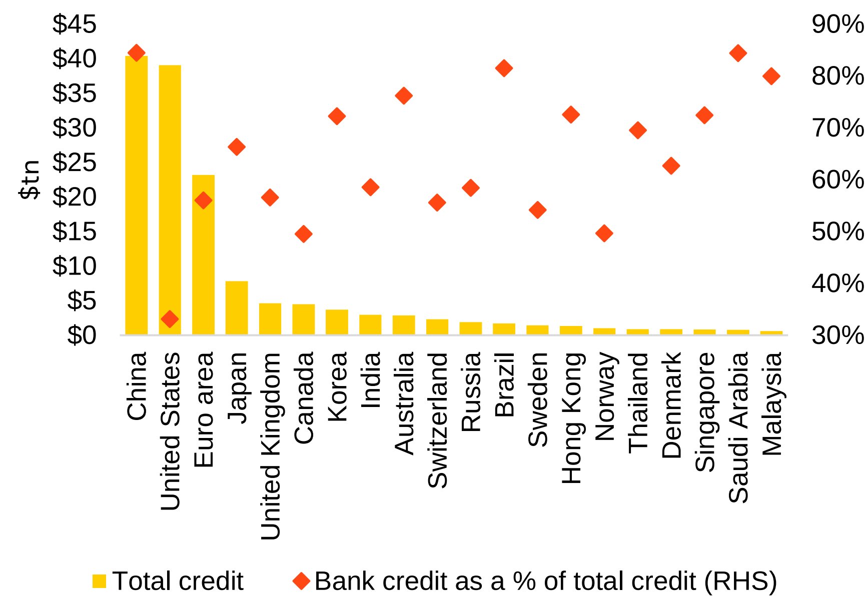
Private debt global assets under management ($bn) by region



Source: BlackRock, Preqin. As of each calendar year-end.

Exhibit 17: Banks' share of lending varies

Total credit provided to the private non-financial sector (core debt), and the bank share of that credit (RHS)



Source: BlackRock, Bank for International Settlements. As of 1Q2023. Excludes countries/regions with less than $630 billion of credit outstanding as of 1Q2023.

Private debt: areas for ongoing evolution

As the private debt asset class evolves, we expect continued growth in two emerging pockets of the market: private debt secondaries, and private debt (also sometimes referred to as "middle market") CLOs.

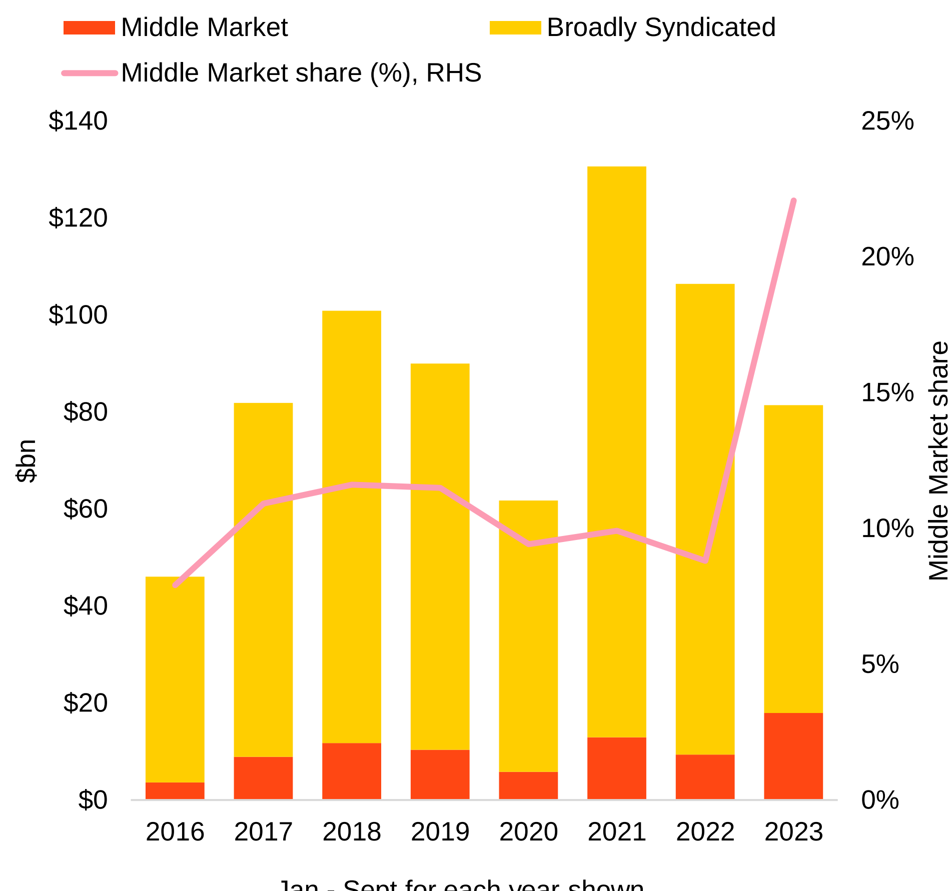
Starting with secondary activity, per investor Coller Capital and data from Pitchbook LCD, total trade volume in the private debt secondaries market reached $17 billion in 2022, more than 30 times total trade volume in 2012. Coller expects private debt secondaries to reach $50 billion by 2026, driven primarily by the rapid growth of private debt.

Investors leverage secondary markets for a variety of reasons, including rebalancing or shifting portfolio allocations. Secondary pricing for private debt funds is highly dependent on the type of loans (i.e., senior, mezzanine, distressed), vintage, stage in the fund term, and manager. We believe additional options for raising liquidity (and adjusting long-term exposures, if needed) will be supportive for increased investor participation in the private debt asset class.

The second area for growth is in middle market CLOs, which can include loans directly originated from private debt lenders. As Exhibit 18 shows, middle market CLOs are now becoming a larger share of total CLO issuance. Indeed, a July 2023 Bloomberg article highlighted that middle market CLOs are being used by some direct lenders to finance portions of their own lending businesses.

Exhibit 18: Middle market CLOs are capturing a larger share of broader CLO issuance

U.S. CLO issuance volume, in January through September for each year shown



Source: BlackRock, Pitchbook LCD. 2023 is as of September 26, 2023.

CRE: dispersion will persist

In the U.S., the performance across the various categories of the commercial real estate (CRE) market remains highly dispersed (Exhibit 19). We expect this trend to persist in 2024 and see room for additional downward pressure on valuations – especially in categories such as Office, and, to a lesser extent, portions of Apartment (multi-family). While the subsets and regions of the CRE market remain incredibly nuanced, we expect many of the themes in place during 2023 to extend into 2024, including:

1) **A higher cost of capital.** Capitalization ("cap") rates (defined as a property's annual net operating income / asset value) have not kept pace with the increase in interest rates (Exhibit 22). As cap rates move higher (across CRE categories), valuations should decline. A higher cost of debt, coupled with lower asset values, may make refinancing uneconomic, in some instances.

2) **Upcoming maturities.** A sizable maturity wall, with nearly $500 billion of CRE debt maturing in each of 2024 and 2025, according to data from Real Capital Analytics (RCA). Roughly 20% of these maturities are tied to the Office category, per RCA.

3) **Tighter CRE lending standards.** The Federal Reserve's October 2023 Senior Loan Officer Opinion Survey (SLOOS) noted that banks reported tighter standards and weaker demand for all commercial real estate (CRE) loan categories (Exhibit 20)

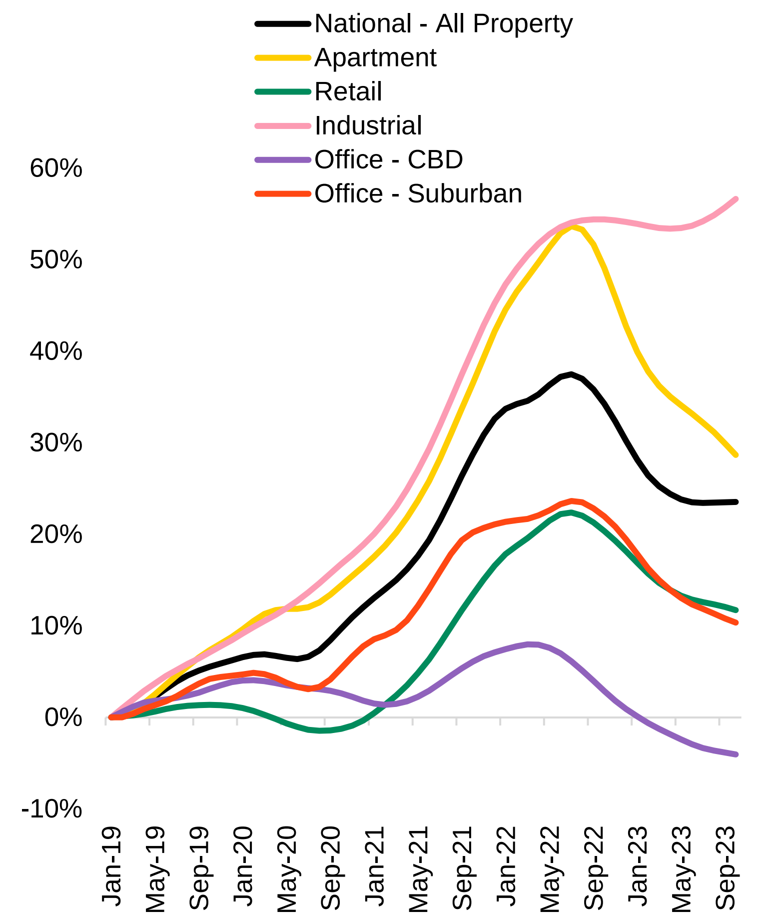
4) **Depressed office utilization.** Post-pandemic shifts to hybrid working models have left office utilization rates in major U.S. metros well below the pre-pandemic trend (Exhibit 21).

5) **Elevated Apartment supply.** A wave of new apartment construction in 2022 may result in temporary oversupply in certain U.S. metros.

6) **Industrial tailwinds.** The continued adoption of online shopping, and efforts to improve supply chain resilience, should be longer-term tailwinds for the Industrial sector.

Exhibit 19: CRE remains very nuanced

Cumulative percent change in the level of the Real Capital Analytics Commercial Property Price Indices, since January 2019

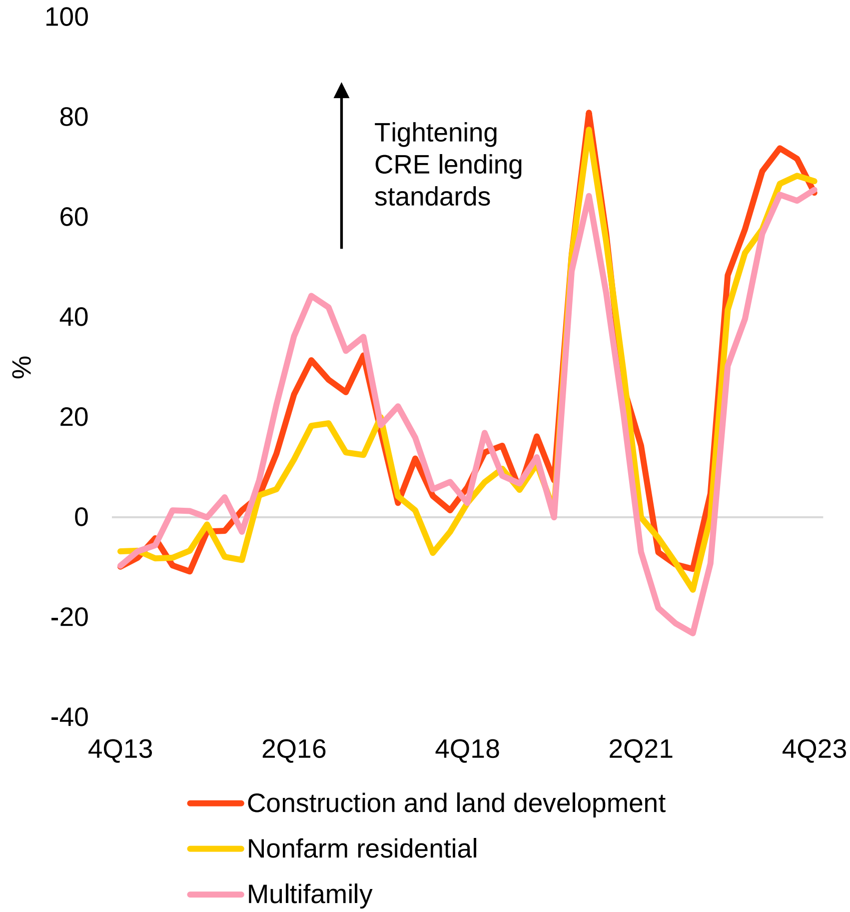


Source: BlackRock, Real Capital Analytics. Captures data through October 31, 2023.

CRE: tighter lending, shifts in office use

Exhibit 20: CRE lending remains tight

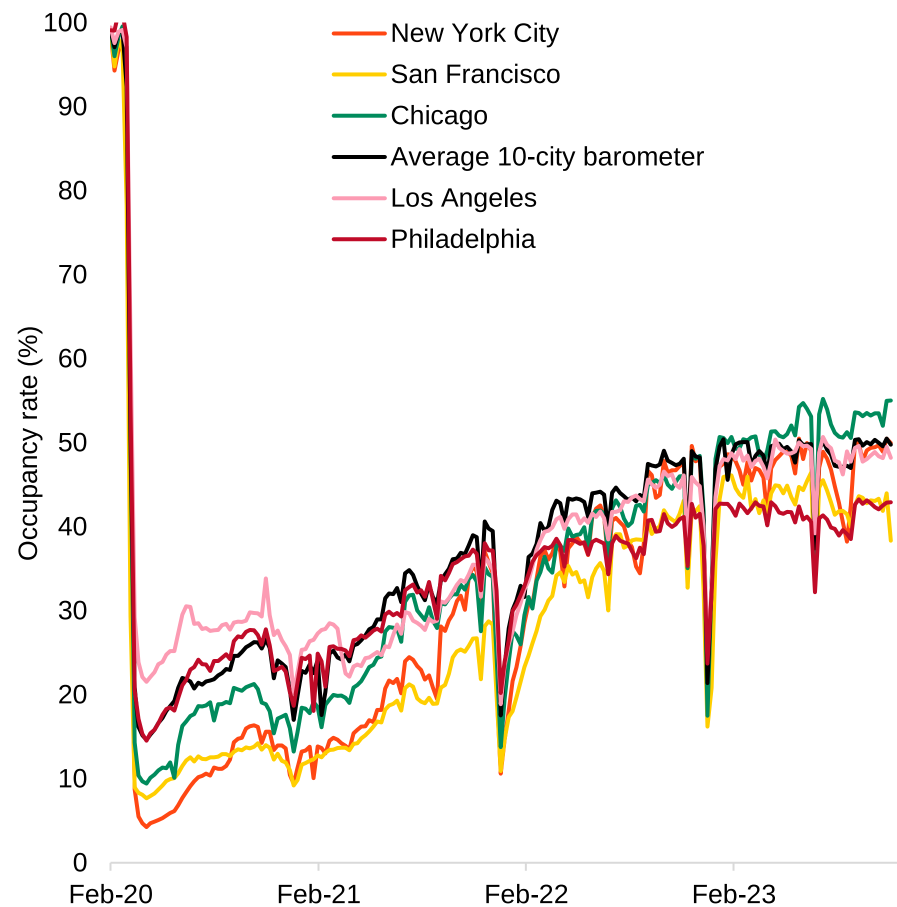
Net percentage of domestic respondents to the Fed's Senior Loan Officer Opinion Survey (SLOOS) tightening standards for CRE loans



Source: BlackRock, Board of Governors of the Federal Reserve System. As of the October 2023 Senior Loan Officer Opinion Survey (most recent available). Respondent banks received the survey on September 25, 2023, and responses were due by October 5, 2023.

Exhibit 21: Office use remains low

Weekly office occupancy rates for major U.S. metro areas



Source: BlackRock, Kastle, Bloomberg. The Kastle 10-city barometer includes the following metros: Washington D.C., New York City, Chicago, Houston, Philadelphia, San Francisco, Los Angeles, Dallas, San Jose, and Austin. As of November 15, 2023.

CRE: still early in the distressed cycle

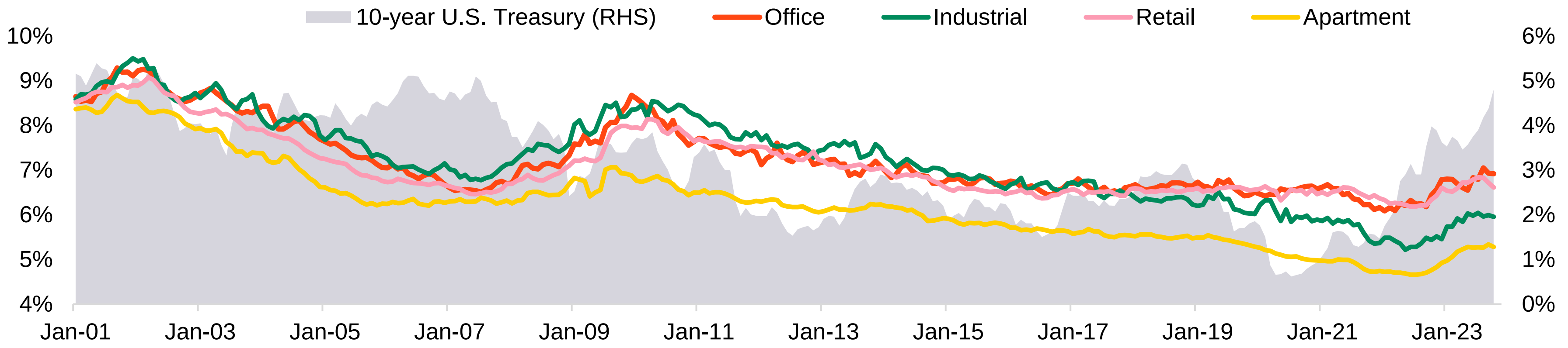
Looking ahead, we expect the Office category will remain among the most vulnerable CRE categories, given the intersection of higher refinancing rates, tighter bank lending standards for CRE (broadly), and structurally lower usage of office space. Highlighting the headwind from refinancing, during the most recent round of bank earnings in October 2023, one large U.S. regional bank noted the following related to the reclassification of a portion of its multi-tenant Office CRE, from "criticized" to "non-performing": "*...we don't think they're refinanceable in the current market. The move to non-performing from already being criticized...comes about as you...watch cap rates creeping higher...and adjust...the underlying value of the properties accordingly*."

Given the long-term nature of office space leases and the illiquidity of the CRE asset class, the price discovery and default/loss cycles are likely to be more protracted vs. what is typically observed in the corporate credit market. For example, in the period following the global financial crisis, it took 34 months (after September 2007) for the RCA Commercial Property Price Index to reach a bottom. With the important caveat that we view today's CRE market as distinctly different from the GFC era landscape, we nonetheless believe additional downward pricing pressure in CRE is likely to be a multi-year event, likely extending into 2025.

A rebound in sale transaction volumes (Exhibit 23) will be key for the price discovery process, as a transaction is typically the catalyst for a renewed property appraisal.

Exhibit 22: Higher CRE cap rates should place downward pressure on valuations

Average CRE category capitalization rates (%, three month rolling), and the U.S. Treasury 10-year yield (%, RHS)

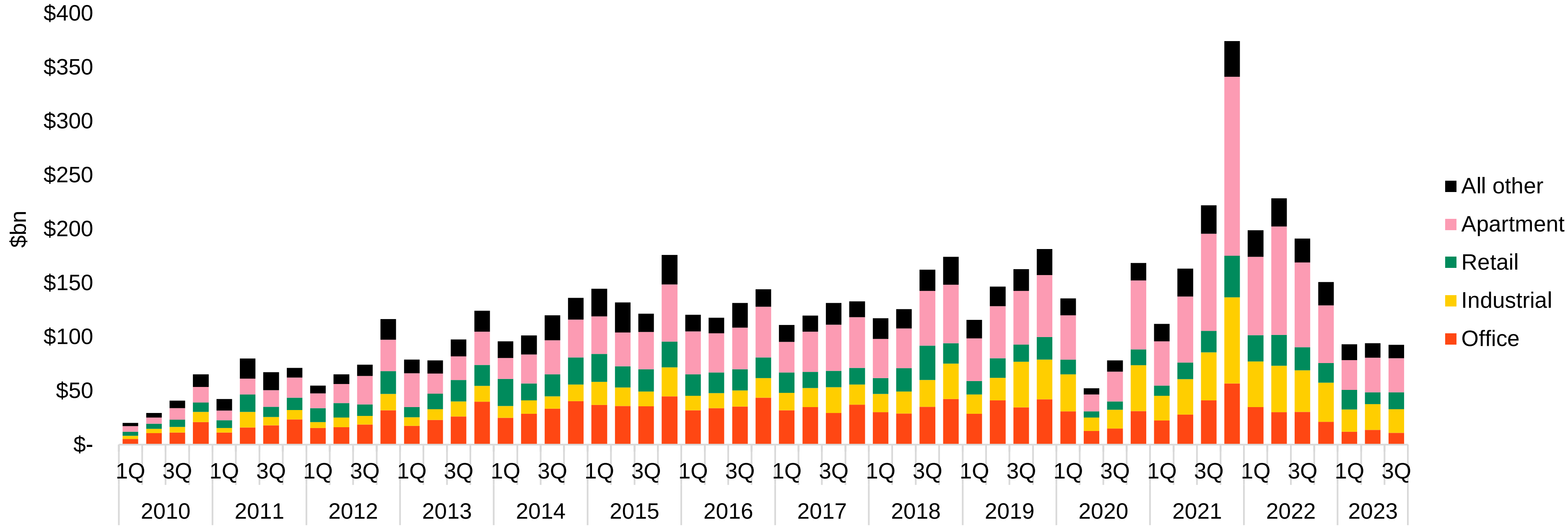


Source: BlackRock, Real Capital Analytics. Captures data through October 31, 2023.

CRE: transactions are key for valuation reset

Exhibit 23: CRE transaction volumes remain muted

U.S. CRE quarterly transaction volumes, by property type



Source: BlackRock, Real Capital Analytics. "All other" includes: Hotels, Development Sites, and Seniors Housing & Care. Captures data through 3Q2023.

Given this backdrop, it is unsurprising that the amount of distressed CRE has continued to increase. According to data compiled by RCA, the value of outstanding distressed CRE grew for the fifth consecutive quarter in 3Q2023, to $79.7 billion (vs. $71.8 billion as of 2Q2023). This represents the highest aggregate value of distressed CRE since 2013, although still well below the global financial crisis peak of just under $200 billion, per RCA data. Office CRE represents 41% of the $79.7 billion of outstanding distressed CRE (Exhibit 24).

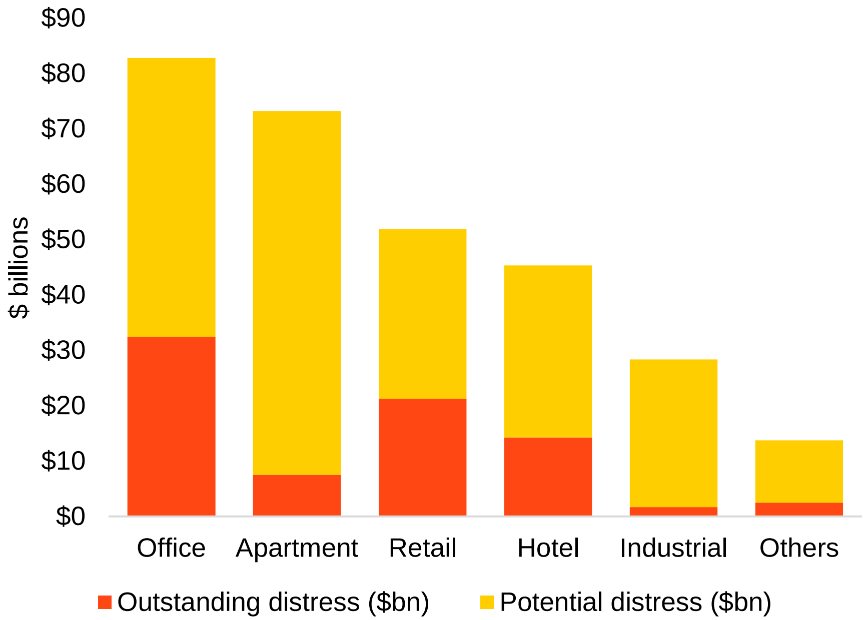
That said, as the pipeline of distressed and potentially distressed CRE grew in the first nine months of 2023, it expanded *beyond* the Office category. As Exhibit 25 illustrates, the Apartment category was a large contributor to potentially distressed CRE (likely attributable, in part, to the swift pace of new Apartment construction in certain parts of the U.S.).

CRE: watching the mix-shift of distressed

Despite the potential for a temporary oversupply of Apartment units in some U.S. metros, the longer-term trend – specifically, a shortage of affordable housing in the U.S. – suggests this will likely be well absorbed, over time. Key to watch, in our view, is whether the distress in the CRE market becomes broad-based across categories, owing to persistent refinancing pressures (which may mitigate, or even overshadow, fundamental tailwinds for some geographies and categories).

Exhibit 24: Office represents the largest share of outstanding distressed…

Balance of distressed CRE by property type, as of September 30, 2023



Source: BlackRock, Real Capital Analytics. "Others" includes categories such as self storage and manufactured housing. As of September 30, 2023. "Outstanding distress" indicates direct knowledge of property-level distress (via announcements of bankruptcy, default, foreclosure, and other publicly reported issues). "Potential distress" indicates possible future property-level financial trouble due to events such as delinquent loan payments, forbearance and slow lease up/sell out, among others. This also includes CMBS loans placed on master servicer watchlists.

Exhibit 25: …but the mix-shift of potentially distressed CRE will be important to watch

Pipeline of potentially distressed CRE, as of each quarter end, by category

Source: BlackRock, Real Capital Analytics. "Others" includes categories such as self storage and manufactured housing. As of September 30, 2023. "Outstanding distress" indicates direct knowledge of property-level distress (via announcements of bankruptcy, default, foreclosure, and other publicly reported issues). "Potential distress" indicates possible future property-level financial trouble due to events such as delinquent loan payments, forbearance and slow lease up/sell out, among others. This also includes CMBS loans placed on master servicer watchlists.

CRE: making note of the downside risks

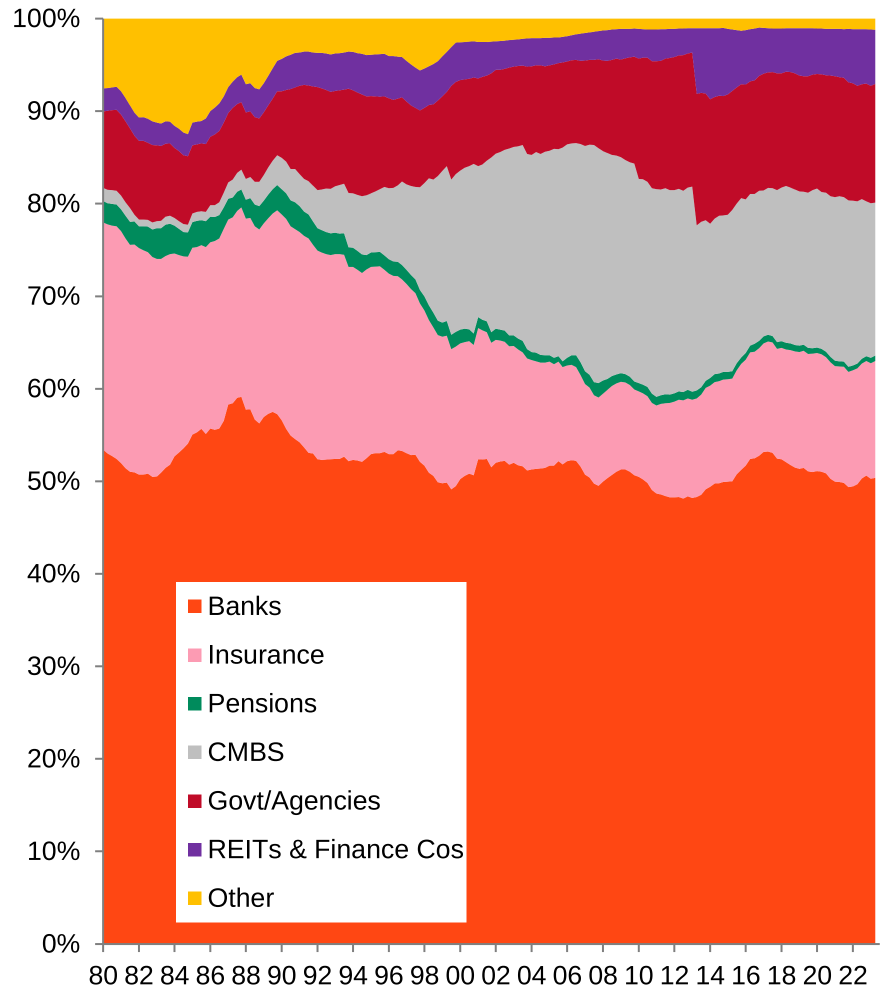
Based on public disclosures, for most large banks, CRE Office loans represent a small (low-single digit) percentage of their overall loans (including non-CRE). Small banks, by contrast, are more exposed – a view that was reiterated in Chair Powell's public commentary at the Economic Club of New York, in October 2023. Indeed, an August 2023 report from Moody's specifically highlighted the more vulnerable position of small and mid-sized banks, some of which have "material" exposure (as a percentage of tangible common equity) to CRE maturities in the next 18 months.

The Federal Reserve's October 2023 Financial Stability Report offered the below caution related to the CRE Office market, if the U.S. encounters a recession. Exhibit 26 frames the CRE loan exposures, by ownership type.

"If the economy were to slow unexpectedly, profits of nonfinancial businesses would decrease, and, given the generally high level of leverage in that sector, such decreases would likely lead to financial stress and defaults at some firms…valuations in the office building sector appear particularly vulnerable given the ongoing uncertainty surrounding post-pandemic norms regarding return to work. A correction in office property valuations accompanied by even a mild recession could result in significant losses for a range of financial institutions with sizable exposures, including some regional and community banks and insurance companies. Lenders that experience large losses may reduce their willingness to supply credit to the broader economy, which would further weigh on economic activity. While stress tests suggest the largest banks are well positioned to withstand a severe recession and contraction in CRE markets, other financial institutions with concentrated exposures could be forced to retrench."

Exhibit 26: Banks have large CRE exposure

Ownership structure of the CRE loan market



Source: BlackRock, Federal Reserve Board. As of June 30, 2023.

Consumer: resilient at the high-end

The health of the U.S. consumer – which represents approximately 68% of U.S. GDP – remains a closely watched indicator heading into 2024. For much of 2023, the U.S. consumer demonstrated notable resilience, even as market estimates of household "excess savings" – which were boosted by fiscal transfers and a lack of opportunities to spend – declined from their 2021 peak.

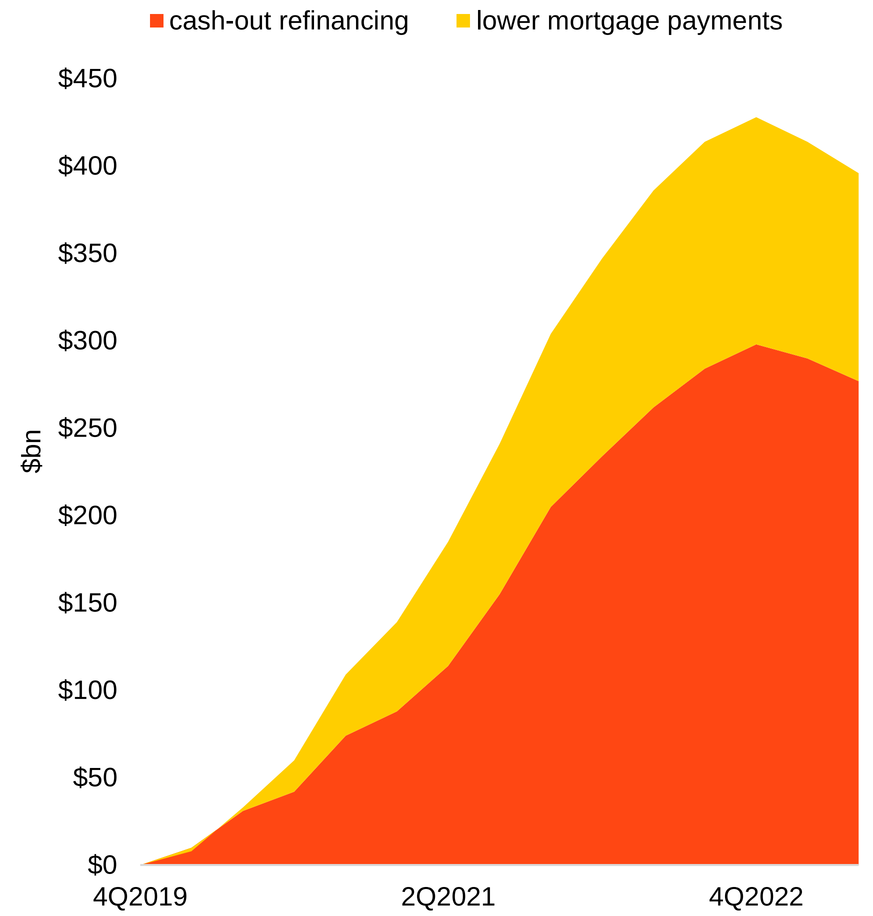
While excess savings is one measure of household wealth (albeit subject to important and variable assumptions of the pre-pandemic savings rate), it does not capture the value of illiquid assets on household balance sheets, such as homes. For example, from year-end 2019 through August 2023, the S&P Core Logic / Case-Shiller U.S. National Home Price Index (which tracks the value of single-family homes) has increased 45%. We believe this explains a large portion of the consumer resilience seen in 2023, especially at the high-end of the income spectrum.

Furthermore, according to an October 2023 analysis by the New York Federal Reserve (NY Fed), an estimated 14 million U.S. households refinanced their mortgages – at historically low interest rates – during the pandemic period (2Q2020-4Q2021). As shown in Exhibit 27, the cumulative savings from these lower mortgage payments reached roughly $120 billion, as of 2Q2023.

In addition to the savings from mortgage refinancing, the NY Fed also estimates that homeowners withdrew home equity via cash-out refinancings during the pandemic period. By their estimates, the amount of cash-out refinancing available for consumption stood at $280 billion as of 2Q2023 (again, Exhibit 27).

Exhibit 27: Home ownership was used as a lever to improve households' cashflow

Cumulative contribution to U.S. households' liquid funds, since 4Q2019 ($bn)



Source: BlackRock, New York Federal Reserve Consumer Credit Panel, Equifax. As of 2Q2023.

Consumer: cracks are emerging

Taken together, the approximate $400 billion in cumulative savings has been an important tailwind behind aggregate consumer spending (and consumer confidence), in our view.

This homeownership-related support for the consumer stands in addition to other factors, such as gains in real wages from a still-strong (although cooling) labor market, as well as earnings from investments (interest income, equities, etc.).

That said, these observations are accompanied by an important caveat: the gains from home ownership and investments typically accrue (disproportionately) to the high-end of the wealth and income spectrum.

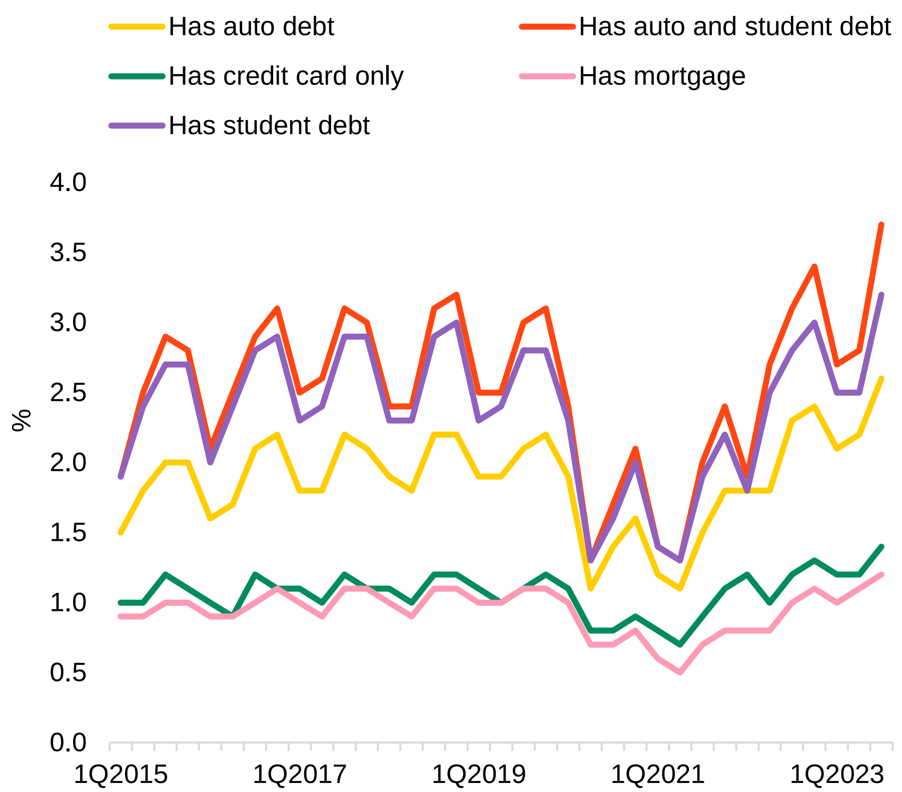
Indeed, we view the low-income consumer cohort as the key vulnerability to the U.S. economy in 2024, given the pockets of weakness which are already materializing.

A November 2023 NY Fed study showed that delinquency rates on most credit product types have been rising from the historic lows of mid-2021. While the transition rate into delinquency remains below the pre-pandemic level for mortgages (the largest share of household debt), auto loan and credit card delinquencies have surpassed their pre-pandemic levels and continue to rise.

Somewhat unsurprisingly, the increase in credit card delinquencies has been most pronounced for consumers in the lower-income quartiles, as well as those with auto *and* student loans (Exhibits 28 and 29).

Exhibit 28: Credit card delinquencies are rising quickly for borrowers with auto and student loans

Share of credit card borrowers who are newly delinquent (in percent)

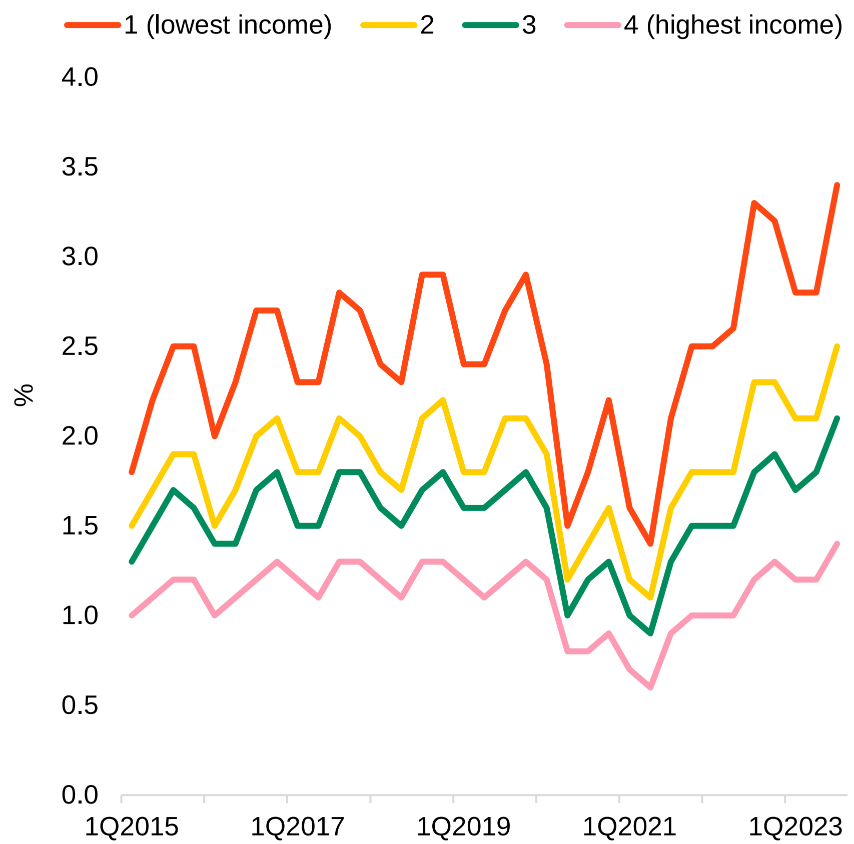


Source: BlackRock, New York Fed Consumer Credit Panel/Equifax. As of 3Q2023. Notes: Credit card users are categorized into groups based on whether they had a nonzero balance for other debt types. Borrowers can contribute to multiple groups depending on which loans they hold.

Consumer: bifurcation will likely persist

Exhibit 29: Each income quartile has credit card delinquency rates at/above 2019 levels

Share of U.S. credit card borrowers who are newly delinquent (in percent), by income quartile



Source: BlackRock, New York Fed Consumer Credit Panel/Equifax; American Community Survey. As of 3Q2023. Notes: Credit card users are categorized into zip income quartiles by ranking zip code median income from lowest to highest and splitting zip codes into four equally sized groups by population.

The October 2023 Federal Reserve Financial Stability report cited a sharp rise in auto delinquency rates for subprime borrowers in 2Q2023, to a level above the pre-pandemic rate. Additionally, it noted that real (i.e., adjusted for inflation) credit card balances continued to increase in 1H2023 (across the distribution of credit scores) and that delinquency rates increased.

Banks are also drawing a distinction across the quality spectrum, when lending to consumers. The October 2023 Senior Loan Officer Opinion Survey showed that lending standards tightened for credit card, auto, and other consumer loans. But under the surface, there was a preference for consumers with higher credit scores.

For example, banks reported that they were less likely to approve credit card and auto loan applications for borrowers with FICO scores of 620 and 680 in comparison with the beginning of 2023. Meanwhile, they were more likely to approve credit card loan applications, and about as likely to approve auto loan applications, for borrowers with FICO scores of 720, over the same timeframe.

Additionally, multiple earnings reports from U.S. retailers in November 2023 cited weakness in large-ticket, discretionary categories, as “value conscious” shoppers and consumers “under pressure” delayed and/or prioritized their purchases.

For corporate credit investors, this underscores the importance of credit selection across and *within* sectors. Products which are reliant upon consumer financing (autos, appliances, large electronics) are likely to be especially pressured in 2024.

Refinancing into a higher cost of capital

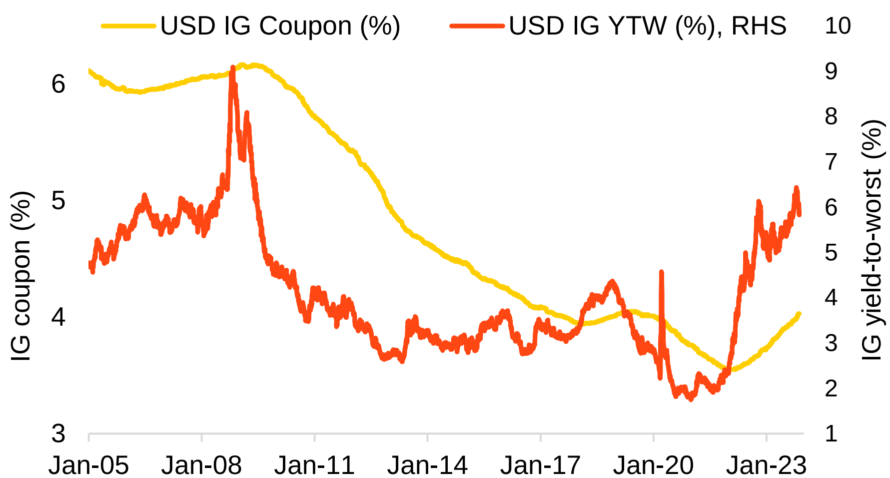
In the liquid/syndicated credit markets, we expect refinancing costs (and in some instances, refinancing *risk*) to be a key focus in 2024. As Exhibits 30 through 33 highlight, par-weighted coupons for the investment grade (IG) and high yield (HY) corporate credit indices in the USD and EUR markets continue to increase vs. the exceptionally low levels of 2021 and 2022, as new, fixed-rate debt is refinanced into the higher cost of capital environment.

For the USD IG index (Exhibit 30), the average par-weighted coupon has increased nearly 50bp vs. early 2022 (to 4.03%, as of November 2023). Meanwhile, the index yield-to-worst (which we view as a rough proxy for the current cost of debt in the new issue market) increased 338bp (to 5.83%). A similar dynamic can be seen for the EUR IG index, as shown in Exhibit 31. The par-weighted coupon increased 62bp vs. the start of 2022 (to 2.04%), while the index yield-to-worst increased 367bp (to 4.21%).

As we have outlined previously, we expect this cost of capital headwind to be very manageable for IG firms, given their significant financial flexibility, liquidity resources, and ability to divert cash flows if needed (for example, paring back on share repurchase activity).

Exhibit 30: USD IG

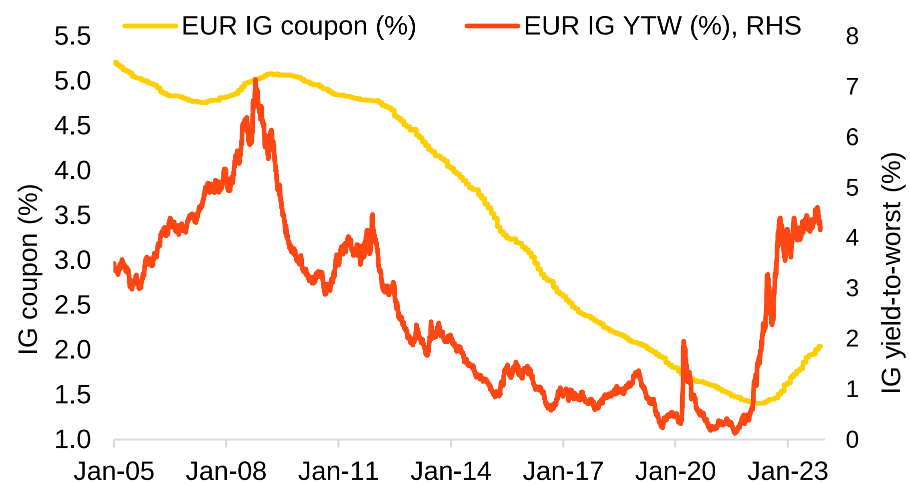
Bloomberg USD IG Corporate Index yield-to-worst and par-weighted coupon



Source: BlackRock, Bloomberg. As of November 20, 2023. **The figures shown relate to past performance. Past performance is not a reliable indicator of current or future results.** Index performance returns do not reflect any management fees, transaction costs or expenses. Indices are unmanaged and one cannot invest directly in an index.

Exhibit 31: EUR IG

ICE-BAML EUR IG Corporate Index yield-to-worst and par-weighted coupon



Source: BlackRock, ICE-BAML, Bloomberg. As of November 20, 2023. **The figures shown relate to past performance. Past performance is not a reliable indicator of current or future results.** Index performance returns do not reflect any management fees, transaction costs or expenses. Indices are unmanaged and one cannot invest directly in an index.

Refinancing: largely manageable…

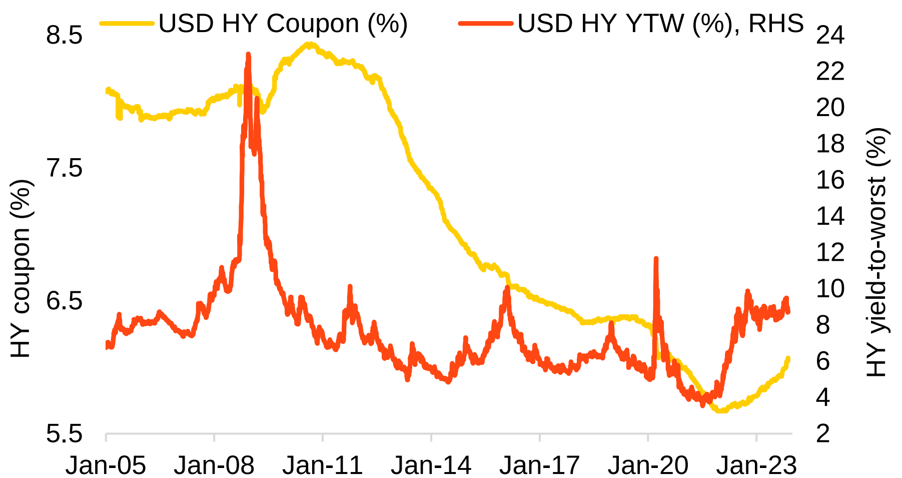
In the HY market, where financial cushions are typically thinner vs. their IG peer group, we expect a more pronounced – but still largely manageable, except for the lowest-quality issuers – headwind from higher debt servicing costs.

Using the same timeframes as in the IG examples, the average par-weighted coupon increase for the USD HY index has been 40bp (to 6.07%), while the index yield-to-worst increased 447bp (to 8.73%; Exhibit 32). For the EUR HY index (Exhibit 33), the par-weighted coupon has increased 55bp (to 4.06%), while the index yield-to-worst increased 435bp (to 7.23%).

As we noted in our 4Q2023 outlook, we expect the higher cost of capital backdrop will generally be a catalyst for performance dispersion in the corporate credit market, as opposed to widespread disruption. For example, companies with strong brand loyalty may use pricing power to offset some of these interest costs. Additionally, management teams with access to various sources of funding may consider tapping those resources to lower their cost of capital (such as issuing in the convertible bond market or utilizing secured debt capacity to lower coupon rates) when refinancing.

Exhibit 32: USD HY

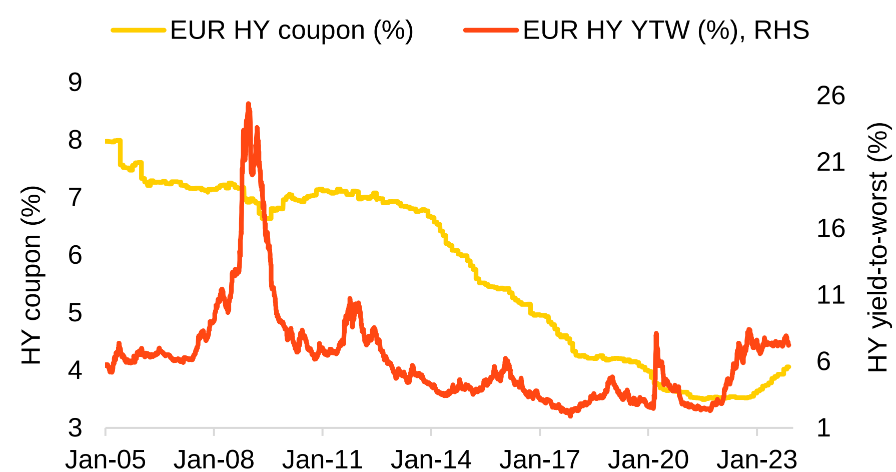
Bloomberg USD HY Corporate Index yield-to-worst and par-weighted coupon



Source: BlackRock, Bloomberg. As of November 20, 2023. **The figures shown relate to past performance. Past performance is not a reliable indicator of current or future results.** Index performance returns do not reflect any management fees, transaction costs or expenses. Indices are unmanaged and one cannot invest directly in an index.

Exhibit 33: EUR HY

ICE-BAML EUR HY Corporate Index yield-to-worst and par-weighted coupon



Source: BlackRock, ICE-BAML, Bloomberg. As of November 20, 2023. **The figures shown relate to past performance. Past performance is not a reliable indicator of current or future results.** Index performance returns do not reflect any management fees, transaction costs or expenses. Indices are unmanaged and one cannot invest directly in an index.

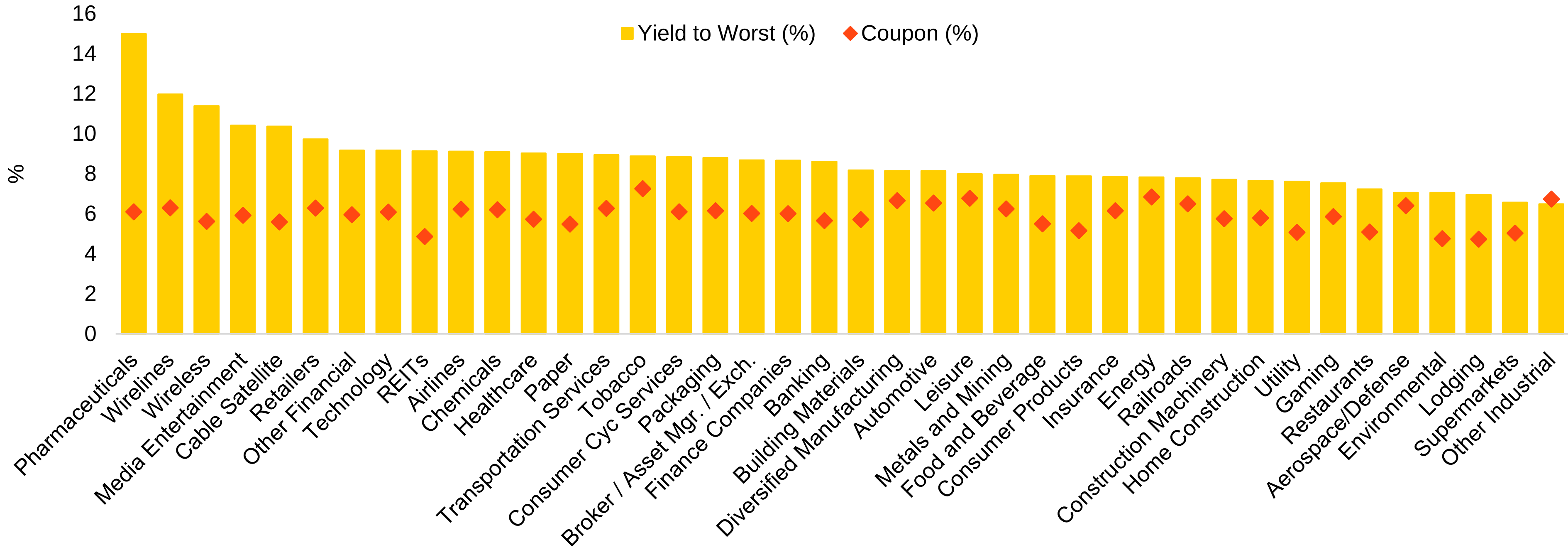
...but still a catalyst for dispersion

This pattern of dispersion – as it relates to the cost of capital environment – can also be clearly seen at the sector level. Exhibit 34 illustrates this using the Bloomberg USD HY Corporate Index. Isolating the sector-level, par-weighted coupons and yield-to-worst measures, the Pharmaceutical, Telco/Media/Cable, REIT, and Retail sectors screen as having among the largest refinancing differentials. A similar trend of dispersion is evident among sectors in the EUR HY market.

That said, not all of the sector-wide debt will need to be refinanced in the next one to two years. Additionally, while we view a sector-level analysis as informative in terms of the hypothetical directional trend, the *actual* outcomes for refinancing will be determined at the issuer (idiosyncratic) level.

Exhibit 34: There is significant dispersion of refinancing risk at the sector level

Bloomberg USD HY Corporate Index sector yield-to-worst and par-weighted coupons



Source: BlackRock, Bloomberg. As of November 20, 2023. **The figures shown relate to past performance. Past performance is not a reliable indicator of current or future results.** Index performance returns do not reflect any management fees, transaction costs or expenses. Indices are unmanaged and one cannot invest directly in an index.

Refinancing “price discovery” among CCCs

Another key development in 2024, related to the cost of capital environment, will be the “price discovery” process for the lowest-rated issuers in the USD HY market (i.e., CCC rated firms).

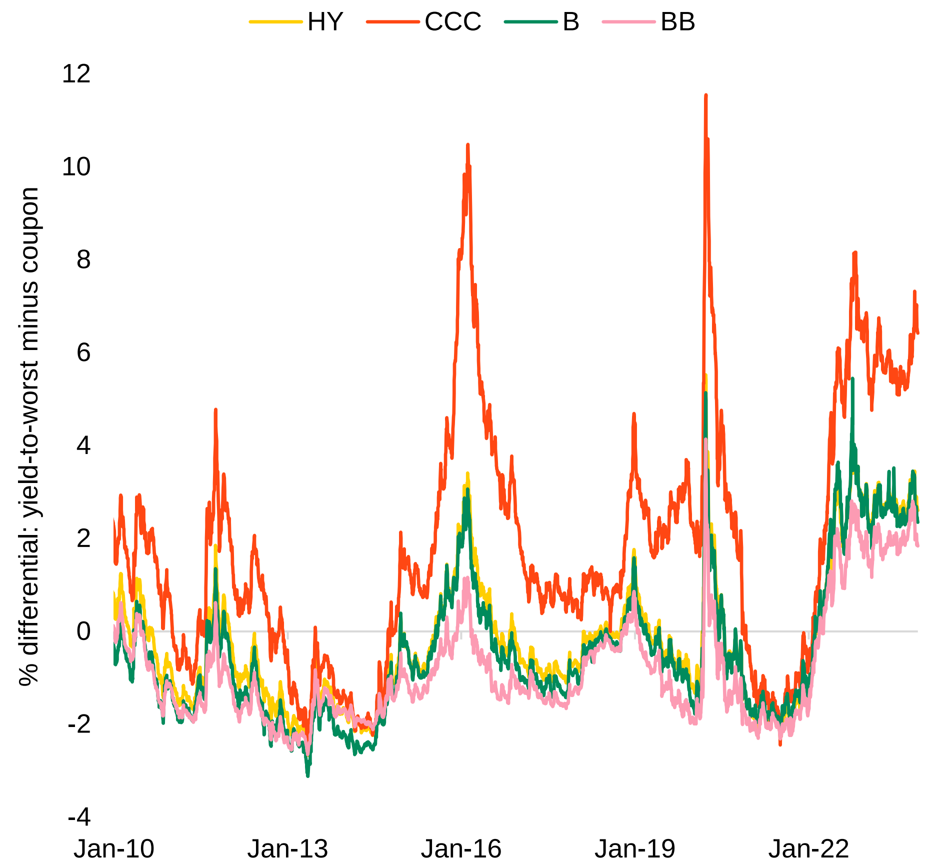
Using the same methodology of yield-to-worst minus coupon, the implied additional refinancing cost for CCC rated issuers has increased substantially, to 640bp (Exhibit 35). With the caveat that CCCs are a highly idiosyncratic group, the margin for increased interest costs is thin. Using data compiled by Bloomberg, the trimmed mean EBITDA/interest coverage for CCC issuers in the Bloomberg USD HY Index was just 1.1x as of 2Q2023 (vs. 2.6x for Bs, 4x for BBs, and 6.1x for BBBs).

For most of 2023, market receptivity for CCC refinancing has been largely untested, as year-to-date USD HY issuance has skewed towards higher-rated groups (Exhibit 38). Per data from Dealogic, CCC rated issuance represents just 4% of total year-to-date supply (vs. 12% in 2022, 9% in 2021 and 6% in 2020). The share of B- rated deals has also been light, at just 6% (vs. 4% in 2022, 8% in 2021, and 9% in 2020). For context, B- rated bonds represent 9.3% of the market value of the Bloomberg USD HY Index, while CCCs (across all notches) represent 10.8%. A similar skew towards highly-rated issuance in 2023 can be seen in the EUR HY market, as shown in Exhibit 39. That said, CCC rated bonds are a much smaller portion of the EUR HY market, at just 4% of market value.

The upcoming maturity walls *do* include refinancing needs from issuers in these lower-rated groupings in both the USD and EUR HY markets (Exhibits 36 and 37). We expect this to remain an overhang for CCC and B- rated subsets of the market.

Exhibit 35: CCCs have elevated implied refinancing risk

% differential: yield-to-worst minus coupon for the Bloomberg USD HY Corporate Index, by rating category

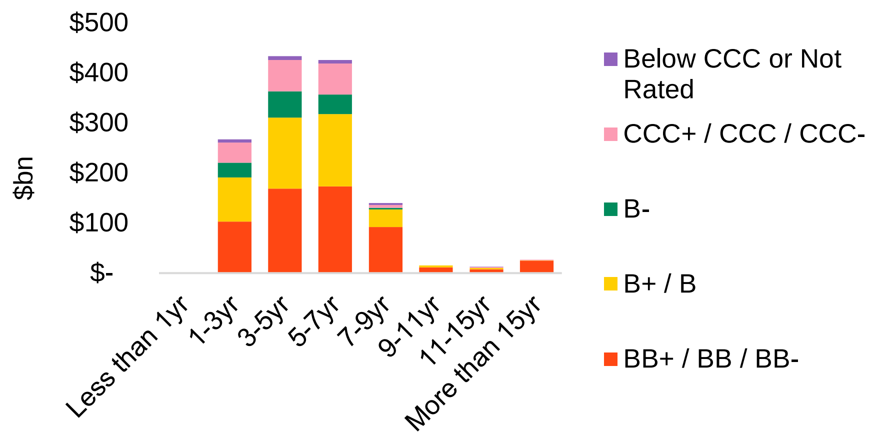


Source: BlackRock, Bloomberg. As of November 21, 2023. **The figures shown relate to past performance. Past performance is not a reliable indicator of current or future results.** Index performance returns do not reflect any management fees, transaction costs or expenses. Indices are unmanaged and one cannot invest directly in an index.

Low-end refinancing is key to watch

Exhibit 36: USD HY maturity walls

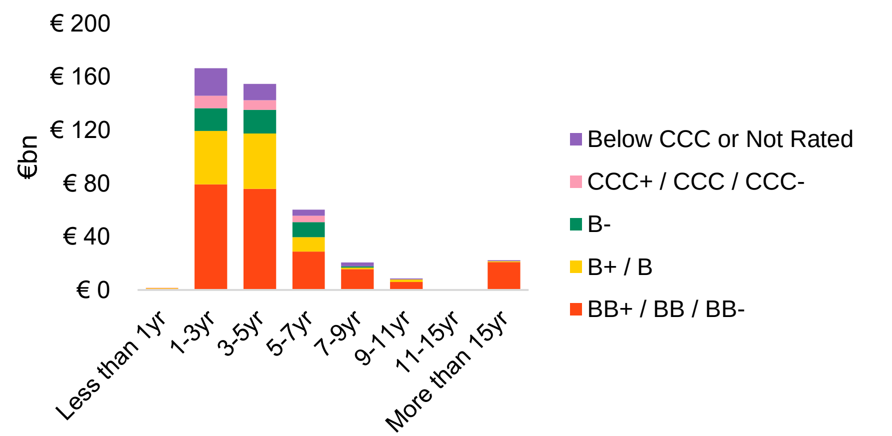
Maturity breakdown (by rating) of bonds in the Bloomberg USD HY Corporate Index



Source: BlackRock, Bloomberg. As of November 9, 2023. Excludes index ineligible bonds.

Exhibit 37: EUR HY maturity walls

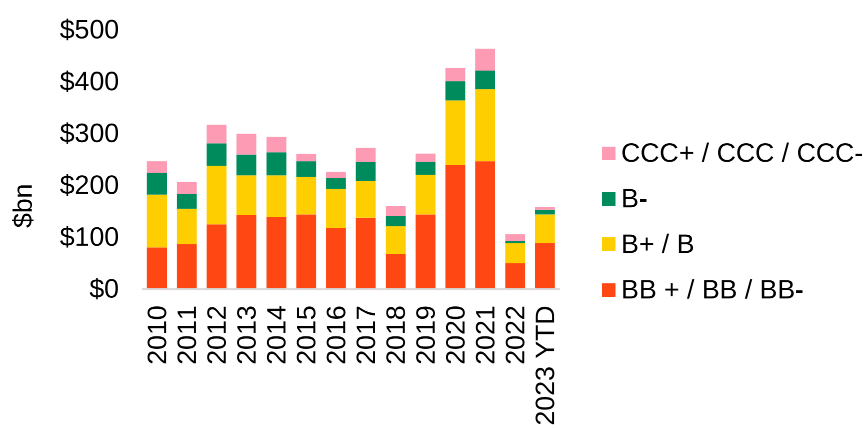
Maturity breakdown (by rating) of bonds in the Bloomberg Pan Euro HY Corporate Index



Source: BlackRock, Bloomberg. As of November 24, 2023. Excludes index ineligible bonds.

Exhibit 38: USD HY supply, by rating

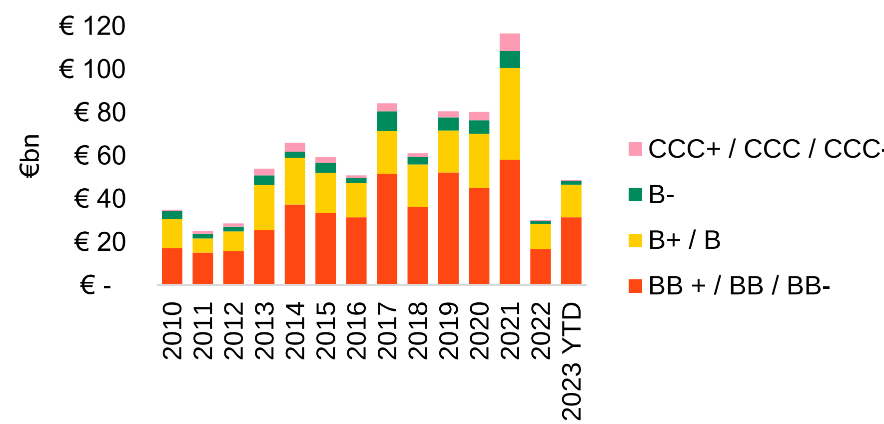
USD HY gross supply by Dealogic Effective Rating at Launch



Source: BlackRock, Dealogic. 2023 year-to-date is as of November 21, 2023. Excludes private placements not reported to Dealogic.

Exhibit 39: EUR HY supply, by rating

EUR HY gross supply by Dealogic Effective Rating at Launch



Source: BlackRock, Dealogic. 2023 year-to-date is as of November 21, 2023. Excludes private placements not reported to Dealogic.

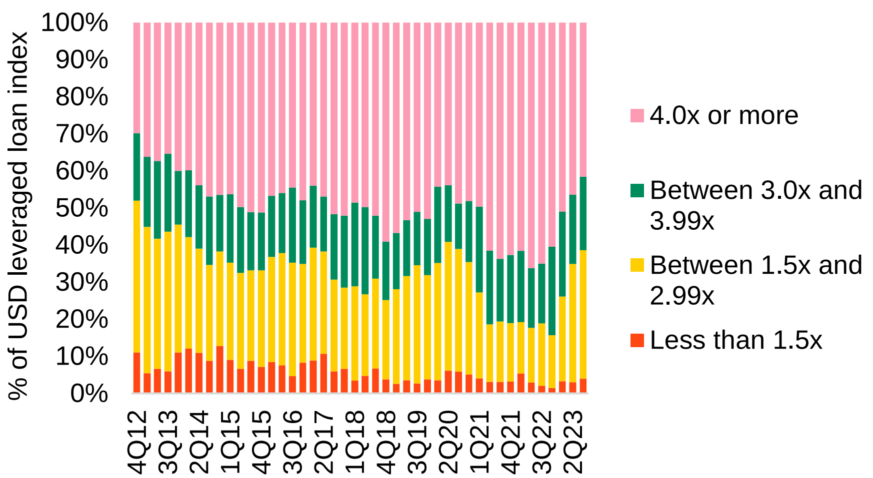
The HY vs. loan allocation decision

In the USD leveraged loan market, the appetite for lower quality issuers will also need to be closely monitored in 2024, given the loan market's lower ratings skew vs. its HY bond peer. For example, as of October 2023, 23.8% of the Morningstar/LSTA USD Leveraged Loan Index was rated B-, and another 6.7% rated CCC (by market value).

Loans' floating rate structure has meant that higher interest costs have been realized in tandem with Fed and ECB rate hikes, even without refinancing (Exhibits 42 and 43). This has weighed on fundamentals, as shown in the interest coverage metric distribution in Exhibit 40. With the loan-HY carry differential at the high end of the historical range (Exhibit 41), investors are capturing additional compensation for leveraged loans' risk. Indeed, USD leveraged loan year-to-date total returns (+11.3%) have outpaced HY bonds (8.3%), through November 26th 2023[1]. That said, we believe the bulk of the leveraged loan outperformance may be in the rear-view mirror, especially if the rate hiking cycle is complete and long-end interest rate volatility subsides. In such an environment, investors are likely to increase their focus on the fundamental divergence between the two asset classes.

Exhibit 40: Loan interest coverage has declined

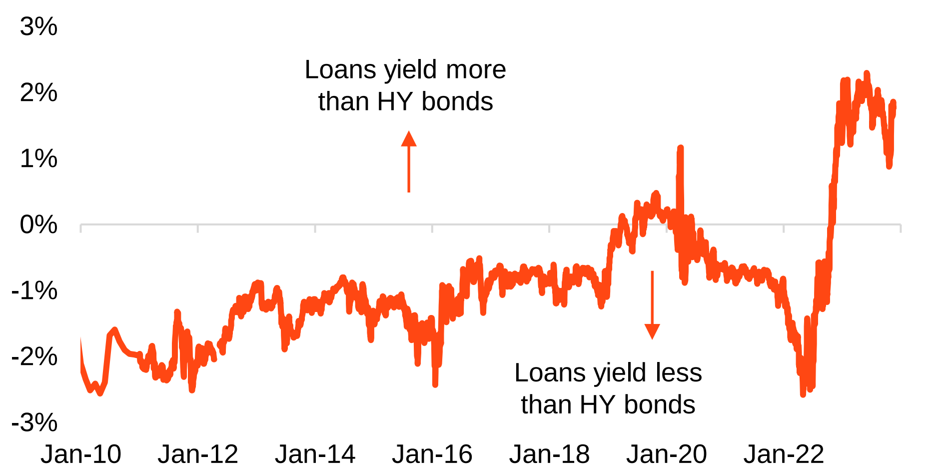
Interest coverage (EBITDA/interest) distribution of loans (public issuers only) in the Morningstar/LSTA USD Leveraged Loan Index, based on issuer count



Source: BlackRock, Morningstar/LSTA, Pitchbook LCD. As of 3Q2023. 1) Uses the Morningstar/LSTA USD Leveraged Loan Index and the Bloomberg USD HY Corporate Index for total return calculations.

Exhibit 41: The loan-HY carry differential is wide

Carry differential (%): B rated leveraged loans minus B rated HY bonds, using the Morningstar/LSTA USD Leveraged Loan Index

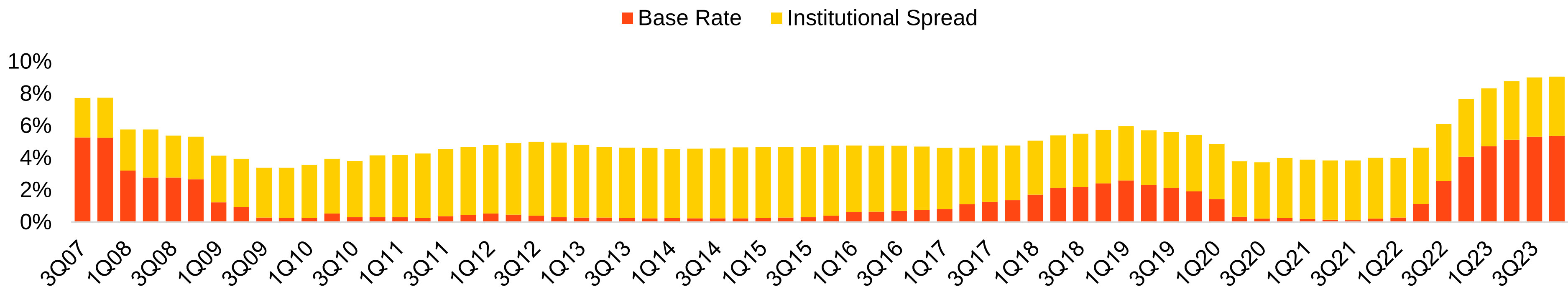


Source: BlackRock, Morningstar/LSTA, Pitchbook LCD. As of November 17, 2023. **The figures shown relate to past performance. Past performance is not a reliable indicator of current or future results.** Index performance returns do not reflect any management fees, transaction costs or expenses. Indices are unmanaged and one cannot invest directly in an index.

Leveraged loans: navigating higher costs

Exhibit 42: For the USD loan index, the all-in borrowing rate has increased 2.3x vs. 1Q2022

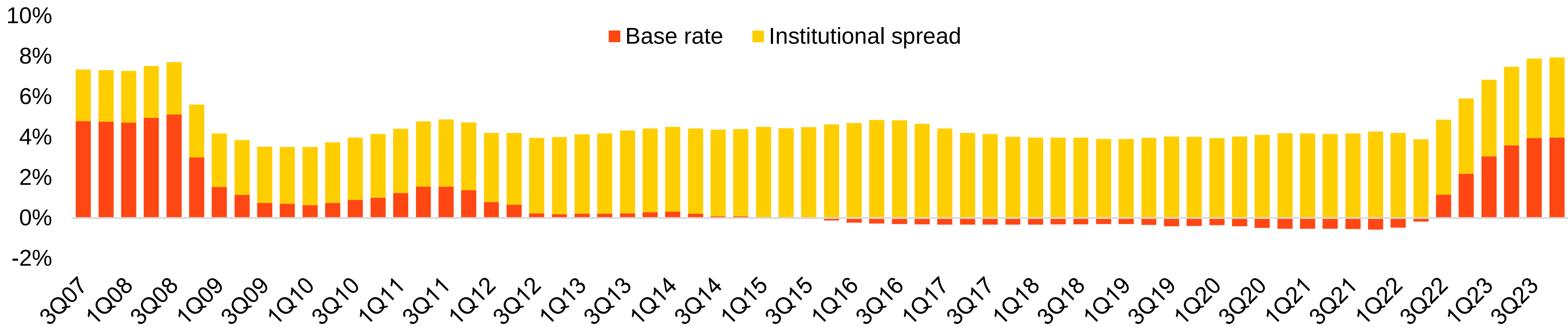
All-in coupon (%) for the Morningstar/LSTA USD Leveraged Loan Index



Source: BlackRock, Pitchbook LCD, Morningstar/LSTA, Markit. The base rate represents an average of all outstanding 1 and 3 Month LIBOR/SOFR contracts tracked by Markit. 4Q2023 is as of November 17, 2023. Index performance returns do not reflect any management fees, transaction costs or expenses. Indices are unmanaged and one cannot invest directly in an index.

Exhibit 43: The all-in borrowing cost for the EUR loan index has increased 2.1x since 1Q2022

All-in coupon (%) for the Morningstar EUR Leveraged Loan Index



Source: BlackRock, Pitchbook LCD, Morningstar. 4Q23 is as of November 17, 2023. Base rate is 3-month EURIBOR. Index performance returns do not reflect any management fees, transaction costs or expenses. Indices are unmanaged and one cannot invest directly in an index.

.

Defaults: a slow march higher

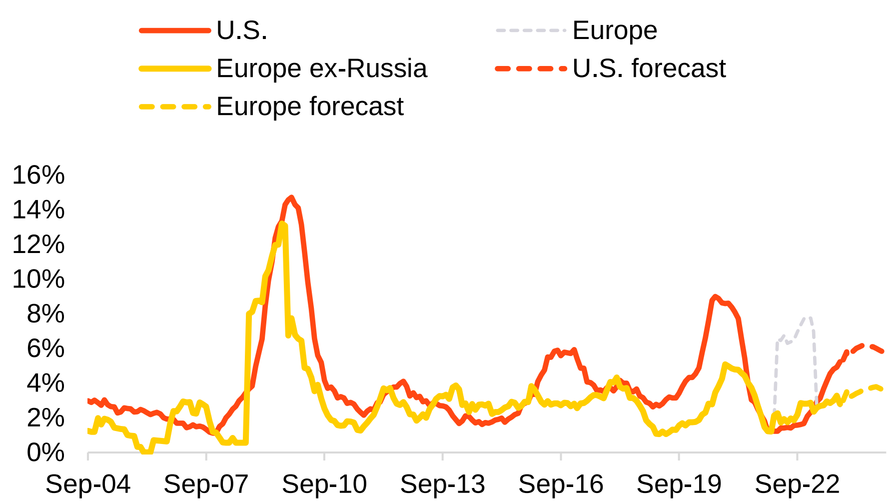
Given our expectation for the elevated cost of capital environment to persist, we forecast moderately higher default rates in 2024. Rather than a sudden spike, however, we expect a gradual increase in defaults over the next several months – extending the trend in place for much of 2023 (Exhibit 44). Also similar to the pattern in 2023, we expect that leveraged loan issuers will continue to generate a higher share of default activity, relative to their HY bond peers (Exhibit 45).

As has been our view, a recession is not a necessary ingredient for an ongoing increase in default activity. That said, a sharp downturn, to the extent it materializes, would exacerbate the trend. With downside risks to growth becoming more prominent in the Euro Area, we expect the recent improvement in the default rate to prove short-lived. Importantly for corporate credit investors, the severity of defaults will remain a key focus, with recovery rates trending lower in 2023.

Defaults are likely to peak in mid-2024 (6.2% in USD, 3.7% in EUR; again Exhibit 44), which would provide ample time for issuers to lap the most severe rate increases and also gain clarity on available refinancing options. This compares to 5.2% and 2.7% as of October 31, 2023, in the USD and EUR markets, respectively. Similar to the trend over the past several months, we expect distressed exchanges to represent a sizable share of default activity in 2024, as some over-leveraged issuers may choose to evaluate the long-term sustainability of their capital structures.

Exhibit 44: Defaults should peak in mid-2024

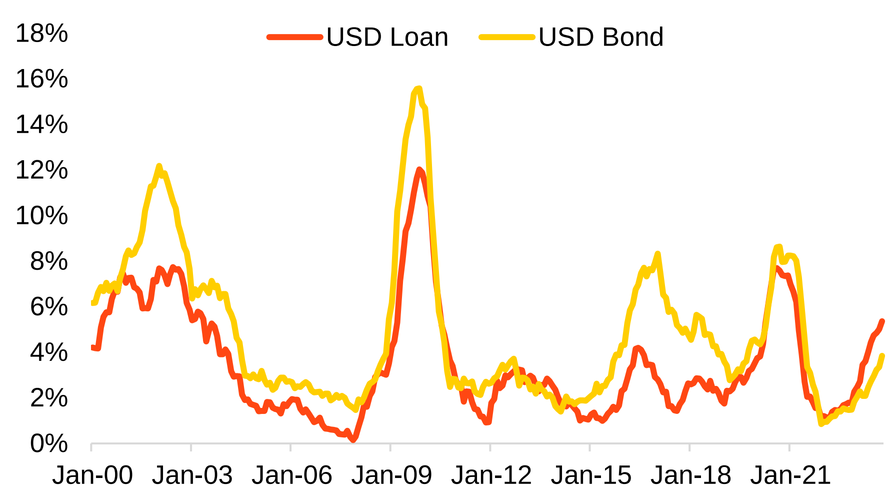
Speculative-grade, issuer-weighted, trailing 12-month default rates for HY and loan issuers (combined) in the U.S. and Europe



Source: BlackRock, Moody's. As of October 31, 2023 (most recent available). The increase in defaults in the EUR market in early 2022 reflects the onset of the Russia-Ukraine war.

Exhibit 45: Loan defaults should outpace HY

Trailing 12-month, issuer-weighted default rates (%) for the universe of USD HY bonds and leveraged loans tracked by Moody's



Source: BlackRock, Moody's. As of October 31, 2023 (most recent available).

Disclaimers

The figures shown relate to past performance. Past performance is not a reliable indicator of current or future results.

FOR QUALIFIED, PROFESSIONAL, INSTITUTIONAL AND WHOLESALE INVESTORS/ PROFESSIONAL CLIENTS ONLY | FOR PERMITTED CLIENTS ONLY IN CANADA

Risk Warnings:

Capital at risk. The value of investments and the income from them can fall as well as rise and are not guaranteed. You may not get back the amount originally invested.

Past performance is not a reliable indicator of current or future results and should not be the sole factor of consideration when selecting a product or strategy.

Changes in the rates of exchange between currencies may cause the value of investments to diminish or increase. Fluctuation may be particularly marked in the case of a higher volatility fund and the value of an investment may fall suddenly and substantially. Levels and basis of taxation may change from time to time.

IMPORTANT INFORMATION

In **Canada**, this material is intended for permitted clients as defined under Canadian securities law, is for educational purposes only, does not constitute investment advice and should not be construed as a solicitation or offering of units of any fund or other security in any jurisdiction.

In **China**, this material may not be distributed to individuals resident in the People's Republic of China ("PRC", for such purposes, not applicable to Hong Kong, Macau and Taiwan) or entities registered in the PRC unless such parties have received all the required PRC government approvals to participate in any investment or receive any investment advisory or investment management services.

In **Singapore**, this document is provided by BlackRock (Singapore) Limited (company registration number:200010143N) for use only with institutional investors as defined in Section 4A of the Securities and Futures Act, Chapter 289 of Singapore. This advertisement or publication has not been reviewed by the Monetary Authority of Singapore.

In **Hong Kong**, this material is issued by BlackRock Asset Management North Asia Limited and has not been reviewed by the Securities and Futures Commission of Hong Kong. This material is for distribution to "Professional Investors" (as defined in the Securities and Futures Ordinance (Cap.571 of the laws of Hong Kong) and any rules made under that ordinance.) and should not be relied upon by any other persons or redistributed to retail clients in Hong Kong.

In **South Korea**, this information is issued by BlackRock Investment (Korea) Limited. This material is for distribution to the Qualified Professional Investors (as defined in the Financial Investment Services and Capital Market Act and its sub-regulations) and for information or educational purposes only and does not constitute investment advice or an offer or solicitation to purchase or sells in any securities or any investment strategies.

In **Australia** & **New Zealand**, issued by BlackRock Investment Management (Australia) Limited ABN 13 006 165 975, AFSL 230 523 (BIMAL) for the exclusive use of the recipient, who warrants by receipt of this material that they are a wholesale client as defined under the Australian Corporations Act 2001 (Cth) and the New Zealand Financial Advisers Act 2008 respectively.

This material provides general information only and does not take into account your individual objectives, financial situation, needs or circumstances. Before making any investment decision, you should therefore assess whether the material is appropriate for you and obtain financial advice tailored to you having regard to your individual objectives, financial situation, needs and circumstances. Refer to BIMAL's Financial Services Guide on its website for more information. This material is not a financial product recommendation or an offer or solicitation with respect to the purchase or sale of any financial product in any jurisdiction. This material is not intended for distribution to, or use by, any person or entity in any jurisdiction or country where such distribution or use would be contrary to local law or regulation. BIMAL is a part of the global BlackRock Group which comprises of financial product issuers and investment managers around the world. BIMAL is the issuer of financial products and acts as an investment manager in Australia. BIMAL does not offer financial products to persons in New Zealand who are retail investors (as that term is defined in the Financial Markets Conduct Act 2013 (FMCA)). This material does not constitute or relate to such an offer. To the extent that this material does constitute or relate to such an offer of financial products, the offer is only made to, and capable of acceptance by, persons in New Zealand who are wholesale investors (as that term is defined in the FMCA).

BIMAL, its officers, employees and agents believe that the information in this material and the sources on which it is based (which may be sourced from third parties) are correct as at the date of publication. While every care has been taken in the preparation of this material, no warranty of accuracy or reliability is given and no responsibility for the information is accepted by BIMAL, its officers, employees or agents. Except where contrary to law, BIMAL excludes all liability for this information.

In **Brunei**, BlackRock does not hold a Capital Markets Services License and is therefore not licensed for conducting business in any regulated activity under the Securities Market Order, 2013. This document has been issued by BlackRock and is intended for the exclusive use of the recipient. The distribution of the information contained herein may be restricted by law and persons who access it are required to comply with any such restrictions. The information provided herein information is directed solely at persons who would be regarded as “Accredited Investors”, “Expert Investors” or “Institutional Investors” in accordance with the Securities Market Order 2013

This material is for distribution to Professional Clients (as defined by the Financial Conduct Authority or MiFID Rules) only and should not be relied upon by any other persons.

In the UK and Non-European Economic Area (EEA) countries: this is Issued by BlackRock Investment Management (UK) Limited, authorised and regulated by the Financial Conduct Authority. Registered office: 12 Throgmorton Avenue, London, EC2N 2DL. Tel: + 44 (0)20 7743 3000. Registered in England and Wales No. 02020394. For your protection telephone calls are usually recorded. Please refer to the Financial Conduct Authority website for a list of authorised activities conducted by BlackRock.

In the European Economic Area (EEA): this is Issued by BlackRock (Netherlands) B.V. is authorised and regulated by the Netherlands Authority for the Financial Markets. Registered office Amstelplein 1, 1096 HA, Amsterdam, Tel: 020 – 549 5200, Tel: 31-20-549-5200. Trade Register No. 17068311 For your protection telephone calls are usually recorded

For Investors in **Switzerland**: This document is marketing material. This document shall be exclusively made available to, and directed at, qualified investors as defined in Article 10 (3) of the CISA of 23 June 2006, as amended, at the exclusion of qualified investors with an opting-out pursuant to Art. 5 (1) of the Swiss Federal Act on Financial Services ("FinSA"). For information on art. 8 / 9 Financial Services Act (FinSA) and on your client segmentation under art. 4 FinSA, please see the following website: www.blackrock.com/finsa.

In **Italy**: For information on investor rights and how to raise complaints please go to https://www.blackrock.com/corporate/compliance/investor-right available in Italian.

For investors in **Israel**: BlackRock Investment Management (UK) Limited is not licenced under Israel's Regulation of Investment Advice, Investment Marketing and Portfolio Management Law, 5755-1995 (the "Advice Law"), nor does it carry insurance thereunder.

The information contained in this document is intended strictly for Professional Clients as defined under the Dubai Financial Services Authority ("DFSA") Conduct of Business (COB) Rules. The information contained in this document, does not constitute and should not be construed as an offer of, invitation or proposal to make an offer for, recommendation to apply for or an opinion or guidance on a financial product, service and/or strategy. Whilst great care has been taken to ensure that the information contained in this document is accurate, no responsibility can be accepted for any errors, mistakes or omissions or for any action taken in reliance thereon. You may only reproduce, circulate and use this document (or any part of it) with the consent of BlackRock. The information contained in this document is for information purposes only. It is not intended for and should not be distributed to, or relied upon by, members of the public. The information contained in this document, may contain statements that are not purely historical in nature but are "forward-looking statements". These include, amongst other things, projections, forecasts or estimates of income. These 44 forward-looking statements are based upon certain assumptions, some of which are described in other relevant documents or materials. If you do not understand the contents of this document, you should consult an authorised financial adviser.

The information contained in this document is intended strictly for non-natural Qualified Investors as defined in the UAE Securities and Commodities Authority's Board Decision No. 3/R.M of 2017 concerning Promoting and Introducing Regulations. The information contained in this document, does not constitute and should not be construed as an offer of, invitation or proposal to make an offer for, recommendation to apply for or an opinion or guidance on a financial product, service and/or strategy. Whilst great care has been taken to ensure that the information contained in this document is accurate, no responsibility can be accepted for any errors, mistakes or omissions or for any action taken in reliance thereon. You may only reproduce, circulate and use this document (or any part of it) with the consent of BlackRock. The information contained in this document is for information purposes only. It is not intended for and should not be distributed to, or relied upon by, members of the public. The information contained in this document, may contain statements that are not purely historical in nature but are "forward-looking statements". These include, amongst other things, projections, forecasts or estimates of income. These forward-looking statements are based upon certain assumptions, some of which are described in other relevant documents or materials. If you do not understand the contents of this document, you should consult an authorised financial adviser.

The information contained in this document, may contain statements that are not purely historical in nature but are “forward-looking statements”. These include, amongst other things, projections, forecasts or estimates of income. These forward-looking statements are based upon certain assumptions, some of which are described in other relevant documents or materials. If you do not understand the contents of this document, you should consult an authorised financial adviser.

The information contained in this document is intended strictly for Professional Clients as defined under the Dubai Financial Services Authority (“DFSA”) Conduct of Business (COB) Rules.

Blackrock Advisors (UK) Limited -Dubai Branch is a DIFC Foreign Recognised Company registered with the DIFC Registrar of Companies (DIFC Registered Number 546), with its office at Unit L15 - 01A, ICD Brookfield Place, Dubai International Financial Centre, PO Box 506661, Dubai, UAE, and is regulated by the DFSA to engage in the regulated activities of ‘Advising on Financial Products’ and ‘Arranging Deals in Investments’ in or from the DIFC, both of which are limited to units in a collective investment fund (DFSA Reference Number F000738).

In **Saudi Arabia**, the information contained in this document is intended strictly for sophisticated institutions. The information contained in this document, does not constitute and should not be construed as an offer of, invitation or proposal to make an offer for, recommendation to apply for or an opinion or guidance on a financial product, service and/or strategy. Whilst great care has been taken to ensure that the information contained in this document is accurate, no responsibility can be accepted for any errors, mistakes or omissions or for any action taken in reliance thereon. You may only reproduce, circulate and use this document (or any part of it) with the consent of BlackRock. The information contained in this document is for information purposes only. It is not intended for and should not be distributed to, or relied upon by, members of the public. The information contained in this document, may contain statements that are not purely historical in nature but are “forward-looking statements”. These include, amongst other things, projections, forecasts or estimates of income. These forward-looking statements are based upon certain assumptions, some of which are described in other relevant documents or materials. If you do not understand the contents of this document, you should consult an authorised financial adviser.

<u>Kuwait</u>

The information contained in this document is intended strictly for sophisticated institutions that are ‘Professional Clients’ as defined under the Kuwait Capital Markets Law and its Executive Bylaws.

The information contained in this document, does not constitute and should not be construed as an offer of, invitation or proposal to make an offer for, recommendation to apply for or an opinion or guidance on a financial product, service and/or strategy. Whilst great care has been taken to ensure that the information contained in this document is accurate, no responsibility can be accepted for any errors, mistakes or omissions or for any action taken in reliance thereon. You may only reproduce, circulate and use this document (or any part of it) with the consent of BlackRock.

The information contained in this document is for information purposes only. It is not intended for and should not be distributed to, or relied upon by, members of the public.

The information contained in this document, may contain statements that are not purely historical in nature but are “forward-looking statements”. These include, amongst other things, projections, forecasts or estimates of income. These forward-looking statements are based upon certain assumptions, some of which are described in other relevant documents or materials.

For investors in **Central America**, these securities have not been registered before the Securities Superintendence of the Republic of Panama, nor did the offer, sale or their trading procedures. The registration exemption has made according to numeral 3 of Article 129 of the Consolidated Text containing of the Decree-Law No. 1 of July 8, 1999 (institutional investors). Consequently, the tax treatment set forth in Articles 334 to 336 of the Unified Text containing Decree-Law No. 1 of July 8, 1999, does not apply to them. These securities are not under the supervision of the Securities Superintendence of the Republic of Panama. The information contained herein does not describe any product that is supervised or regulated by the National Banking and Insurance Commission (CNBS) in Honduras. Therefore any investment described herein is done at the investor's own risk. This is an individual and private offer which is made in Costa Rica upon reliance on an exemption from registration before the General Superintendence of Securities ("SUGEVAL"), pursuant to articles 7 and 8 of the Regulations on the Public Offering of Securities ("Reglamento sobre Oferta Pública de Valores"). This information is confidential, and is not to be reproduced or distributed to third parties as this is NOT a public offering of securities in Costa Rica. The product being offered is not intended for the Costa Rican public or market and neither is registered or will be registered before the SUGEVAL, nor can be traded in the secondary market. If any recipient of this documentation receives this document in El Salvador, such recipient acknowledges that the same has been delivered upon his request and instructions, and on a private placement basis. For Guatemala Investors, This communication and any accompanying information (the "Materials") are intended solely for informational purposes and do not constitute (and should not be interpreted to constitute) the offering, selling, or conducting of business with respect to such securities, products or services in the jurisdiction of the addressee (this "Jurisdiction"), or the conducting of any brokerage, banking, or other similarly regulated activities ("Financial Activities") in the Jurisdiction. Neither BLACKROCK, nor the securities, products and services described herein, are registered (or intended to be registered) in the Jurisdiction. Furthermore, neither BLACKROCK, nor the securities, products, services, or activities described herein, are regulated, or supervised by any governmental or similar authority in the Jurisdiction. The Materials are private, confidential and are sent by BLACKROCK only for the exclusive use of the addressee. The Materials must not be publicly distributed and any use of the Materials by anyone other than the addressee is not authorized. The addressee is required to comply with all applicable laws in the Jurisdiction, including, without limitation, tax laws and exchange control regulations if any.

In **Latin America**, for institutional investors and financial intermediaries only (not for public distribution). This material is for educational purposes only and does not constitute investment advice or an offer or solicitation to sell or a solicitation of an offer to buy any shares of any fund or security and it is your responsibility to inform yourself of, and to observe, all applicable laws and regulations of your relevant jurisdiction. If any funds are mentioned or inferred in this material, such funds may not been registered with the securities regulators of Argentina, Brazil, Chile, Colombia, Mexico, Panama, Peru, Uruguay or any other securities regulator in any Latin American country and thus, may not be publicly offered in any such countries. The securities regulators of any country within Latin America have not confirmed the accuracy of any information contained herein. No information discussed herein can be provided to the general public in Latin America. The contents of this material are strictly confidential and must not be passed to any third party.

In **Colombia**, the sale of each fund discussed herein, if any, is addressed to less than one hundred specifically identified investors, and such fund may not be promoted or marketed in Colombia or to Colombian residents unless such promotion and marketing is made in compliance with Decree 2555 of 2010 and other applicable rules and regulations related to the promotion of foreign financial and/or securities related products or services in Colombia.

In **Peru**, this private offer does not constitute a public offer, and is not registered with the Securities Market Public Registry of the Peruvian Securities Market Commission, for use only with institutional investors as such term is defined by the Superintendencia de Banca, Seguros y AFP.

Any research in this document has been procured and may have been acted on by BlackRock for its own purpose. The results of such research are being made available only incidentally. The views expressed do not constitute investment or any other advice and are subject to change. They do not necessarily reflect the views of any company in the BlackRock Group or any part thereof and no assurances are made as to their accuracy.

Any opinions, forecasts represent an assessment of the market environment at a specific time and is not intended to be a forecast of future events or a guarantee of future results. This information should not be relied upon by the reader as research, investment advice or a recommendation.

This document is for information purposes only and does not constitute an offer or invitation to anyone to invest in any BlackRock funds and has not been prepared in connection with any such offer.

If you are an intermediary or third-party distributor, you must only disseminate this material to other Professional Investors as permitted in the above-specified jurisdictions and in accordance with applicable laws and regulations.

Certain information contained herein has been obtained from published sources and from third parties, including without limitation, market forecasts, internal and external surveys, market research, publicly available information and industry publications. In addition, certain information contained herein may have been obtained from companies in which investments have been made by entities affiliated with BlackRock. Although such information is believed to be reliable for the purposes used herein, neither the Fund nor BlackRock assumes any responsibility for the accuracy or completeness of such information. Reliance upon information in this material is at the sole discretion of the reader. Certain information contained herein represents or is based upon forward-looking statements or information. BlackRock and its affiliates believe that such statements and information are based upon reasonable estimates and assumptions. However, forward-looking statements are inherently uncertain, and factors may cause events or results to differ from those projected. Therefore, undue reliance should not be placed on such forward-looking statements and information.