nuveen
A TIAA Company

Navigating the New Fixed Income Markets

Institutional Separate Accounts
Global Fixed Income

Marketing communication | 31 Dec 2023

Important information on risk

Investing in securities involves risk of loss that clients should be prepared to bear. There is no assurance that an investment will provide positive performance over any period of time. Debt or fixed income securities are subject to market risk, credit risk, interest rate risk, call risk, derivatives risk, and income risk. As interest rates rise, bond prices fall. Below investment grade or high yield debt securities are subject to liquidity risk and heightened credit risk. Foreign investments involve additional risks, including currency fluctuation, political and economic instability, lack of liquidity and differing legal and accounting standards. Asset-backed and mortgage-backed securities are subject to additional risks such as prepayment risk, liquidity risk, default risk and adverse economic developments.

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1. Macro outlook

The evolving fixed income market environment

Softer U.S. growth outlook	• U.S. real growth moderating further to around 1% in 2024 • Heightened recession risk, but expect magnitude of downturn historically mild • Job growth has begun to decelerate and consumer spending facing headwinds • Inflation has moderated substantially, though stickiness remains in some areas
Global macro trends follow the U.S.	• Forecast tepid GDP growth around 1% for the U.K. and Europe • Japanese GDP also around 1%, representing a better outcome given its lower growth potential • Expect further softness in China, with full-year growth of 4.2%, lower than consensus • Emerging market face headwinds but some bright spots on the horizon
Major central banks done tightening	• Believe the Fed is done and anticipate 150 bps of rate cuts this year beginning before mid-year • Balance sheet runoff expected to taper this year • Treasury yields to continue moderating and curve to steepen • ECB also finished their tightening cycle and expect a similar pivot toward cuts before mid-year • Chinese policymakers likely to continue fiscal support but substantial monetary easing unlikely
Fiscal policy support diminishing	• Fiscal policy has become an economic drag, but latent impact of prior measures remains • U.S. fiscal policy remains on unsustainable path in long term
Diversification and fundamental research critical	• Much higher yields make fixed income more attractive • Favor spread sectors and credit risk, with an up-in-quality bias within asset classes • Credit spreads are poised to widen in the coming months, likely presenting more attractive entry points for risk-taking • Currently see some attractive opportunities in preferreds and BB rated high yield and senior loans • Advocate deep research, favoring idiosyncratic stories with positive long-term growth prospects

Fixed Income Dashboard

− Negative   = Neutral   + Positive

	Macro	Policy	Rates	Sectors
Current	=	−	+	+
Outlook	−	=	+	=
Comment	• Recent developed market growth data has been generally weaker • Inflation has moderated substantially, though stickiness remains in some areas • Forward indicators point to a sharper global growth slowdown ahead	• Major central banks are generally finished tightening policy • We expect the pivot toward rate cuts to happen in 1H24 • Japan is likely to normalize policy with rate hikes this year • China continues to provide targeted policy support	• Global rates rallied in Q4 after selling off earlier in the year • We expect yields to continue moderating from current levels and forecast the 10-year U.S. Treasury yield to end 2024 at 3.50%	• Spreads broadly tightened in Q4 • We believe the risks skew toward wider-than-current-level spreads, likely providing better entry points for risk taking • We favor higher-quality segments within asset classes

Bottom Line

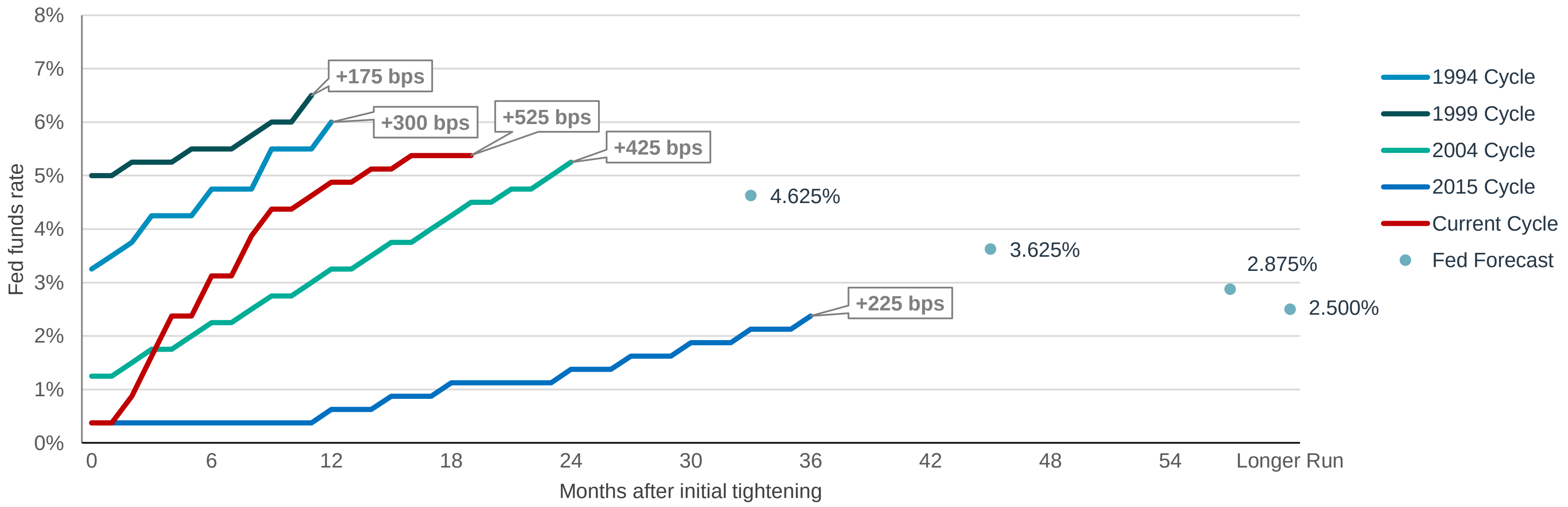
- We expect economic growth to weaken this year, which could pressure spreads wider
- Fixed income total returns are likely to be strong in this environment
- We recommend adding incrementally to duration and preparing to add spread risk in the months ahead

Attention has turned to the pace of Fed rate cuts

We expect 150 bps in rate cuts to begin before mid-year.

- **Rate policy:**
  — Expect a similar magnitude of cuts as the market is currently pricing, with six total cuts over the course of the year
- **Balance sheet reduction:**
  — Reached its maximum monthly rate, with caps of $60 billion Treasuries and $35 billion MBS
  — Tapering expected this year

Fed funds rate path across tightening cycles



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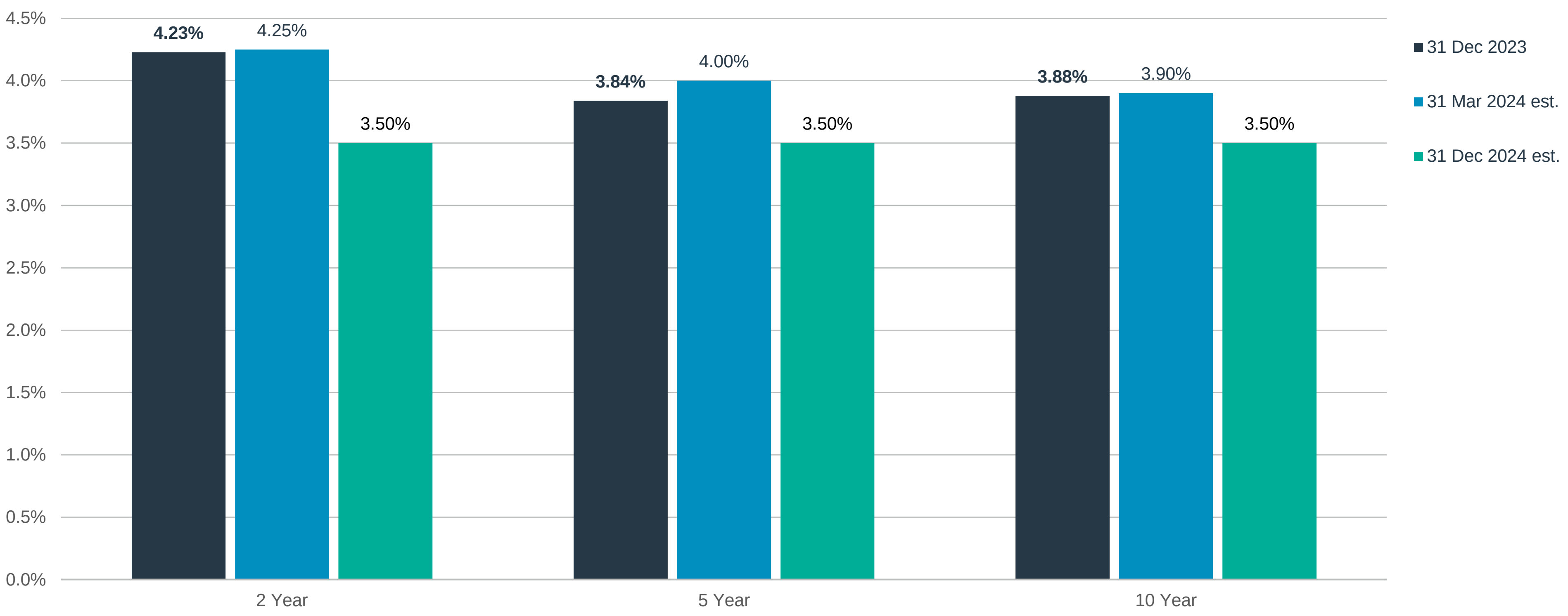
Sources: Bloomberg; Federal Reserve Projection Materials. Fed funds rate and Fed forecasts as of 13 Dec 2023. Fed forecast represents the median forecast of each Federal Open Market Committee participant for the midpoint of the fed funds rate at year ends 2024, 2025, 2006 and longer run. Month 0 shows first rate increase. A basis point is a common unit of measure for interest rates and other percentages in finance. One basis point is equal to 1/100th of 1%, or 0.01% (0.0001).

Interest rates likely to further moderate as Fed eases policy

Expect yields to decline and curve to steepen.

Treasury yields



Estimates as of 31 Dec 2023.
Sources: www.treasury.gov; Nuveen.

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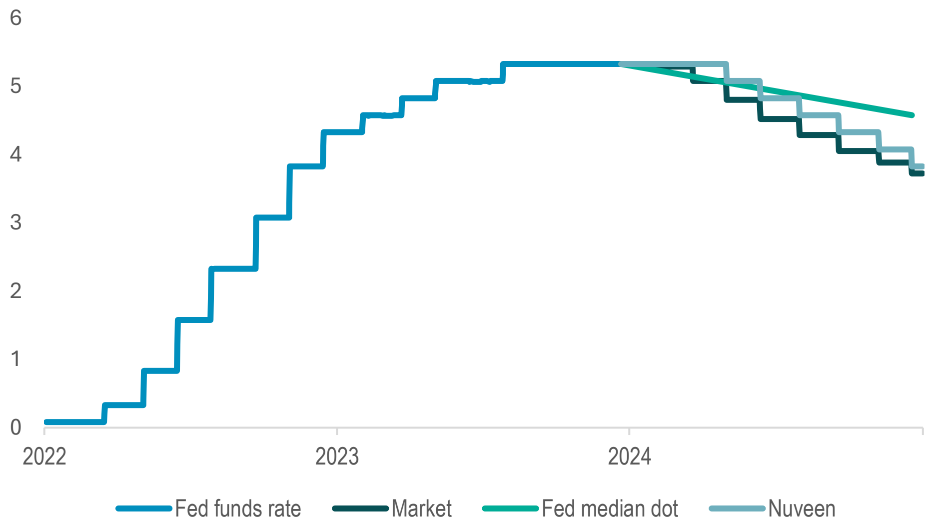
Spotlight: Fed outlook

We expect rate cuts to begin in the first half of 2024, driven largely by two dynamics:

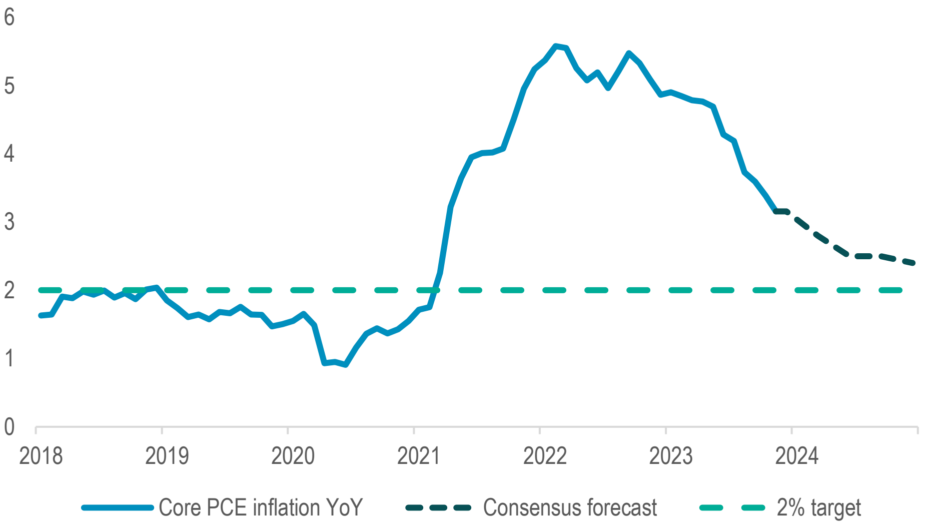
- **Moderating inflation** is the bigger driver.
  - Core PCE inflation has already decelerated from a peak of +5.6% year-on-year in early 2022 to +3.2% today. Consensus expectations and the FOMC's own projections both forecast a +2.4% inflation rate this year.
  - As inflation falls, conventional monetary policy rules call for an equal reduction in the policy rate. With inflation expected to decelerate -80 bps this year, the Fed would need to cut rates by at least that amount just to keep the stance of policy steady.
- **The softer growth outlook** also impacts rates.
  - We expect real GDP growth to decline from around +3% annualized rate in 2023 to +1% this year. With slower growth and heightened downside risks, the Fed is likely to ease policy by even more than the decline in inflation.
  - Already, FOMC participants have indicated in their Summary of Economic Projections that they are equally worried about upside risks to unemployment as they are about upside risks to inflation.

We anticipate 150 bps of rate cuts, close to current market pricing, but substantially more than the FOMC's median forecast



Source: Bloomberg, Federal Reserve.

Inflation has already moderated substantially, and is set to continue that trend in 2024



Source: Bloomberg, BLS, BEA, Federal Reserve

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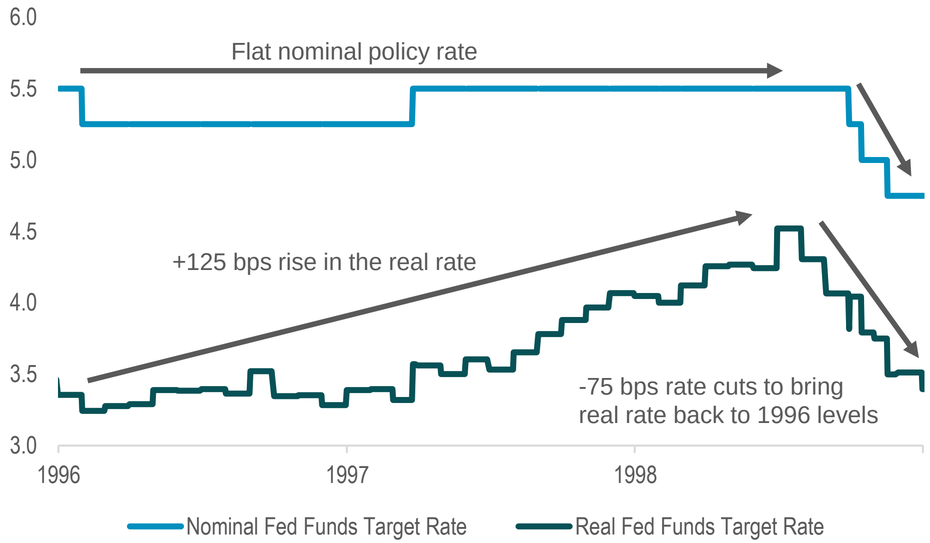
Spotlight: Fed outlook

We expect 150 bps in rate cuts, bringing the real policy rate to around 1.6% at year-end

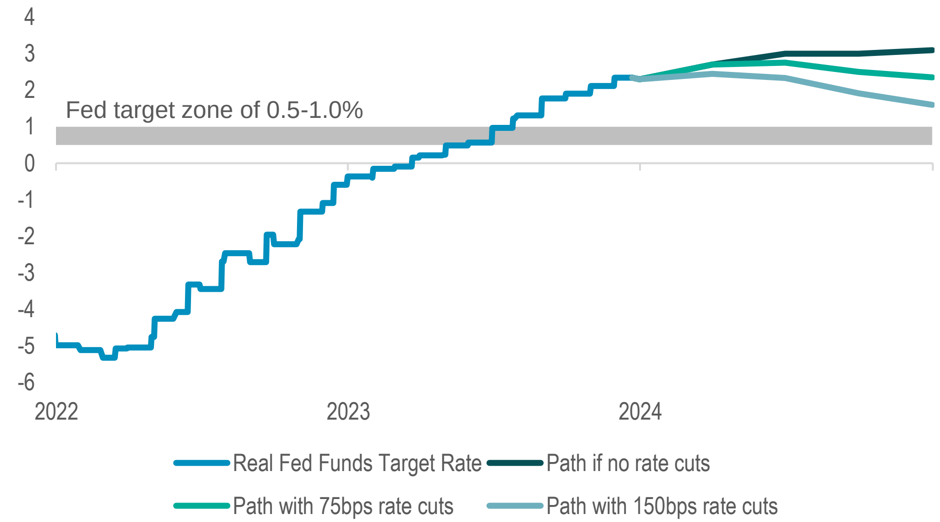
- We still view this level as “restrictive,” but it better aligns policy with the progress on inflation and the downside risks to growth.
- The closest analogue to the current situation was the mid-1990s, when the Fed cut rates without a recession, in response to softer inflation.
  - From 1996 to 1998, the Fed kept nominal policy rates essentially steady, at 5.50%. However, core inflation decelerated in 1997-98, from 2.0% in the middle of 1997 to +1.0% in the middle of 1998.
  - Even though nominal interest rates were unchanged over the period, the real interest rate increased substantially as inflation fell.
- We expect a similar dynamic to play out this year.
  - If the Fed does not cut rates, then policy will become increasingly tight, with the real rate rising from 2.3% today to 3.1% by year-end.
  - Just to keep real rates steady, the Fed would need to cut by 75 bps.
  - To bring the real rate somewhat lower from its current elevated levels, they would need to cut by more than 75 bps.

Though the ‘96-’98 nominal policy rate remained steady, real rates rose as inflation fell, prompting rate cuts



Source: Bloomberg, BEA, Federal Reserve.

Under consensus inflation expectations, no cuts would tighten policy, while 75 bps in cuts keeps policy steady and 150 bps in cuts eases policy



Source: Bloomberg, BEA, Federal Reserve.

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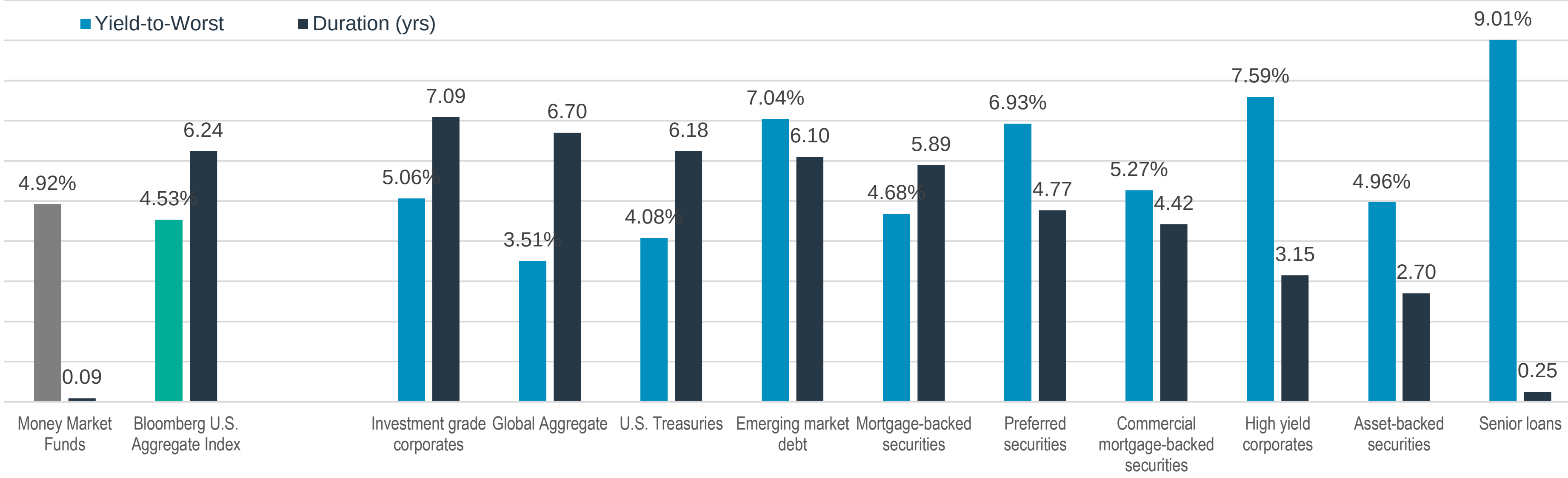
Traditional fixed income sectors have higher yields and longer durations

Adding sectors with longer duration positions portfolios for the next move in rates.

- Despite the recent rally, yields remain very attractive
- Multi-sector strategies offer the opportunity to balance stability with income

Non-cash sectors offer both yield and duration



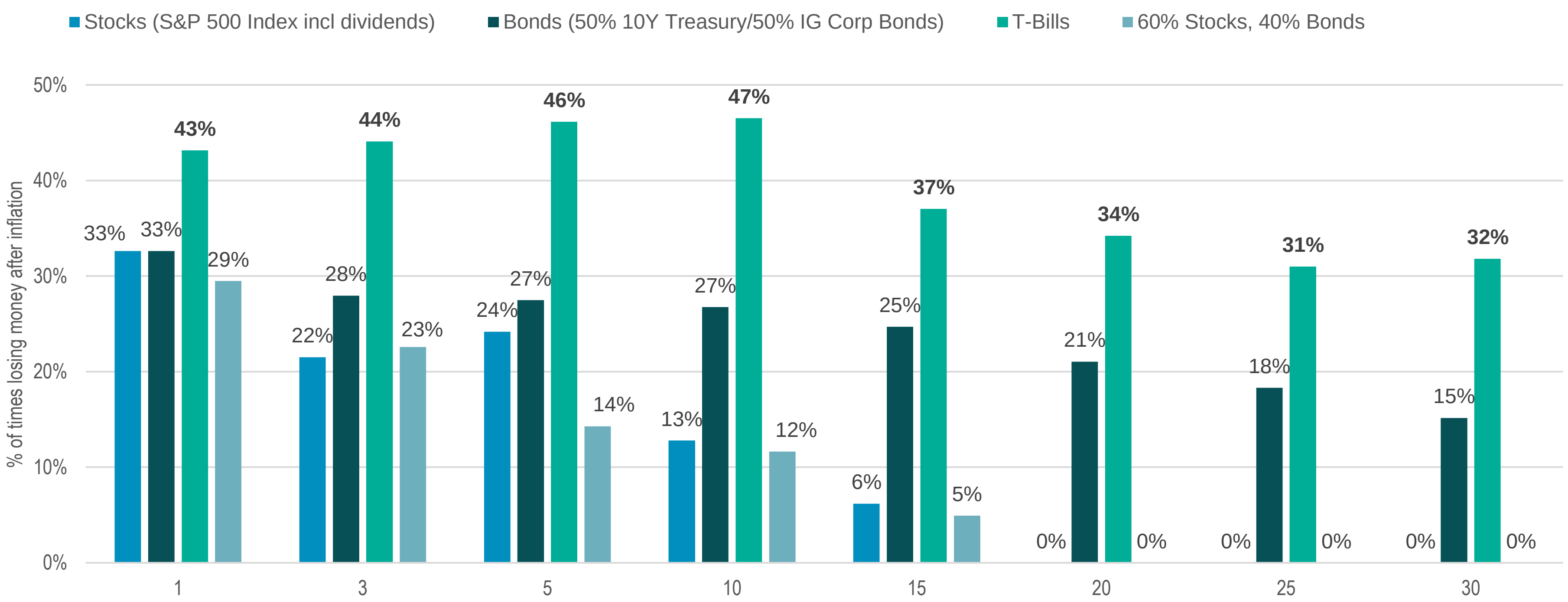
As of 31 Dec 2023. Source: Bloomberg LP; Credit Suisse; Morningstar Direct.

Representative indices**: Money Market Funds:** Yield is the average of all funds in the Morningstar Prime Money Fund category; duration is the 1-month U.S. Treasury Bill; **U.S. Treasuries:** Bloomberg U.S. Treasury Index; **MBS:** Bloomberg U.S. Mortgage-Backed Securities Index; **CMBS:** Bloomberg Commercial Mortgage-Backed Securities Index; **ABS:** Bloomberg Asset-Backed Securities Index; **Investment grade corporates:** Bloomberg U.S. Corporate Investment Grade Index; **Emerging market debt:** Bloomberg Emerging Market USD Aggregate Index; **Preferred securities:** ICE BofA U.S. All Capital Securities Index; **Senior loans:** Credit Suisse Leveraged Loan Index; **High yield corporates:** Bloomberg U.S. Corporate High Yield 2% Issuer Capped Index. **Past performance is no guarantee of future results**. It is not possible to invest directly in an index.

“Every rose has its thorn”

Cash risks losing after inflation the longer you hold it.

T-Bills have the highest loss frequency after accounting for inflation



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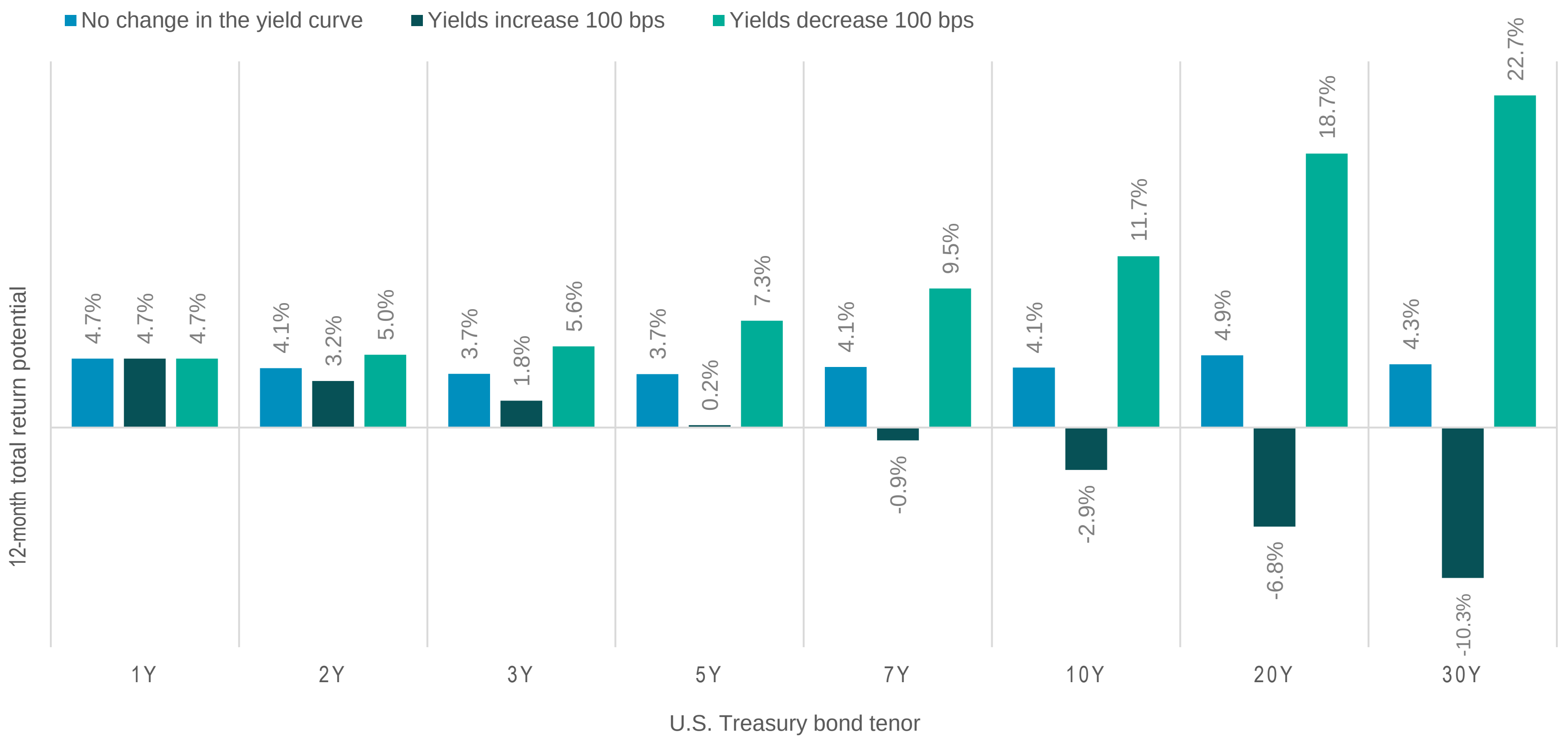
Based on annual total return periods from 1928 to 2022. Source: Bloomberg.
Representative indices: **Stocks:** S&P 500 Index; **Bonds:** Bloomberg 10-Year Treasury Index and Bloomberg BBB Corporate Index; **T-Bills:** 3-Month U.S. Government T-Bill.

With Treasury yields likely to decline, bond math favors owning duration

Longer duration assets can outperform as rates fall.

Potential investment returns for Treasury tenors over the next year



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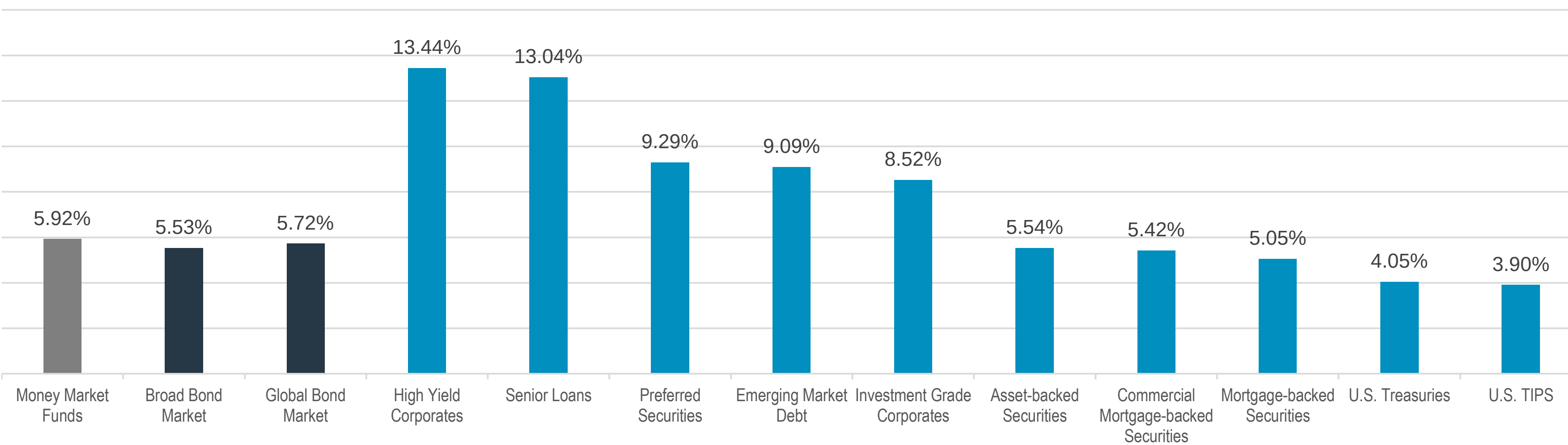
Total return includes roll, price change and coupon return. As of 18 Dec 2023. Sources: Nuveen, Bloomberg, LP.

Income drove positive bond returns

As markets rallied strongly in the fourth quarter, fixed income returns benefited.

- Most sectors outperformed cash
- High yield corporates and senior loans benefited from generous yields and narrowing credit spreads
- Preferred securities recovered nicely from the early 2023 mini-bank crisis
- TIPS lagged as inflation fell throughout the year

2023 total returns by fixed income sector



Source: Morningstar Direct. As of 31 Dec 2023.

Representative Indices: **Money Market Funds:** Yield is the average of all funds in the Morningstar Prime Money Fund category; **Broad Bond Market:** Bloomberg U.S. Aggregate Index; **Global Bond Market:** Bloomberg Global Aggregate Index; **U.S. Treasuries:** Bloomberg U.S. Treasury Index; **MBS:** Bloomberg U.S. Mortgage-Backed Securities Index; **CMBS:** Bloomberg Commercial Mortgage-Backed Securities Index; **ABS:** Bloomberg Asset-Backed Securities Index; **Investment grade corporates:** Bloomberg U.S. Corporate Investment Grade Index; **Preferred securities:** ICE BofA U.S. All Capital Securities Index; **Senior loans:** Credit Suisse Leveraged Loan Index; **High yield corporates:** Bloomberg U.S. Corporate High Yield 2% Issuer Capped Index: **Emerging market debt:** Bloomberg Emerging Market USD Aggregate Index; **U.S. TIPS:** Bloomberg U.S. TIPS Index. **Performance data shown represents past performance and does not predict or guarantee future results.** It is not possible to invest directly in an index.

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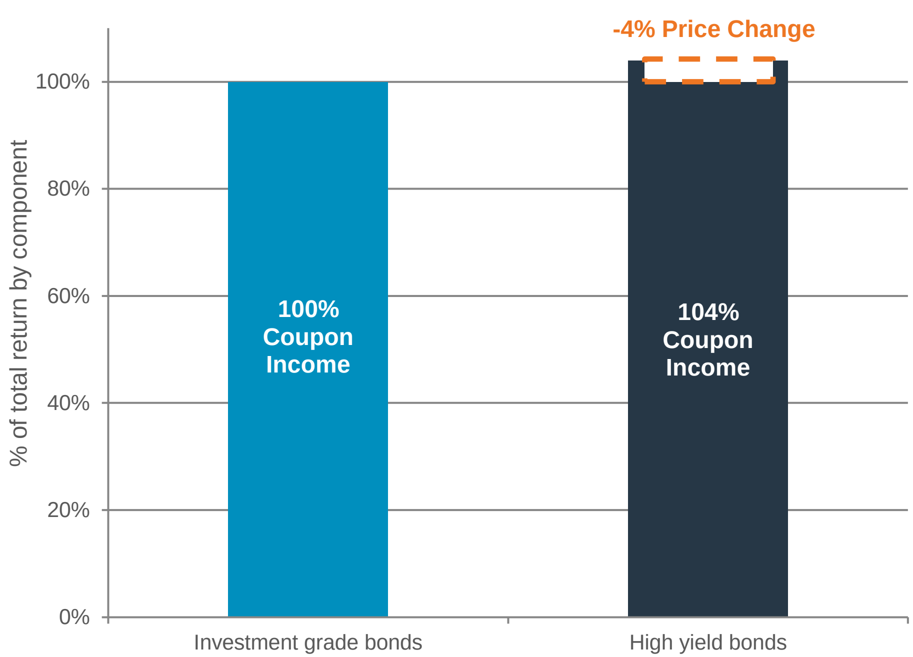
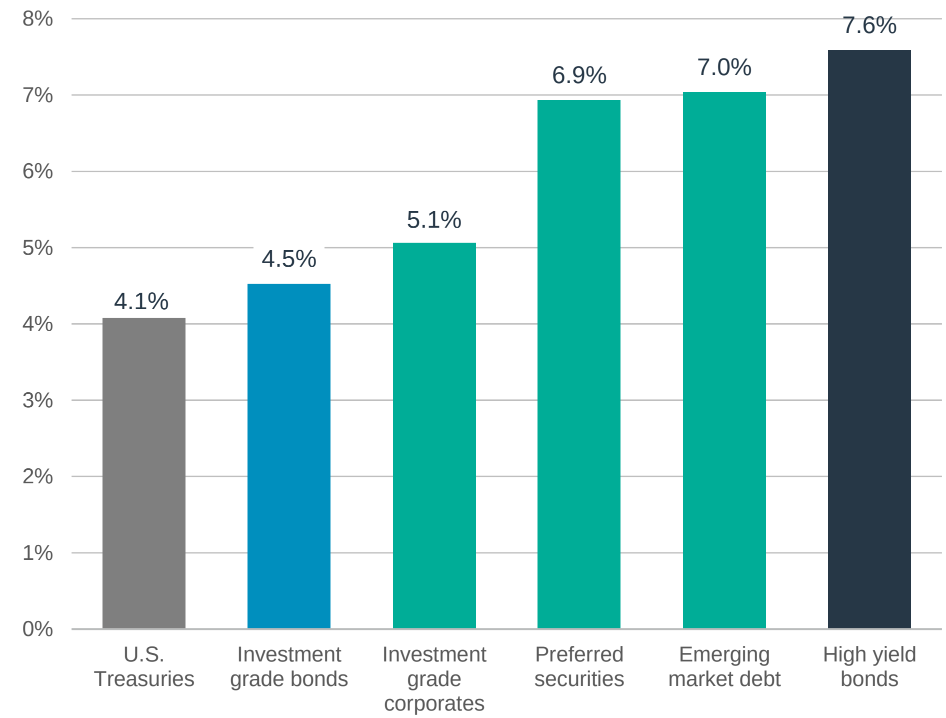
Income remains the primary contributor to total return

Income has dominated total return over time and can help offset any price declines.

Income comprises almost all return over time



Yields



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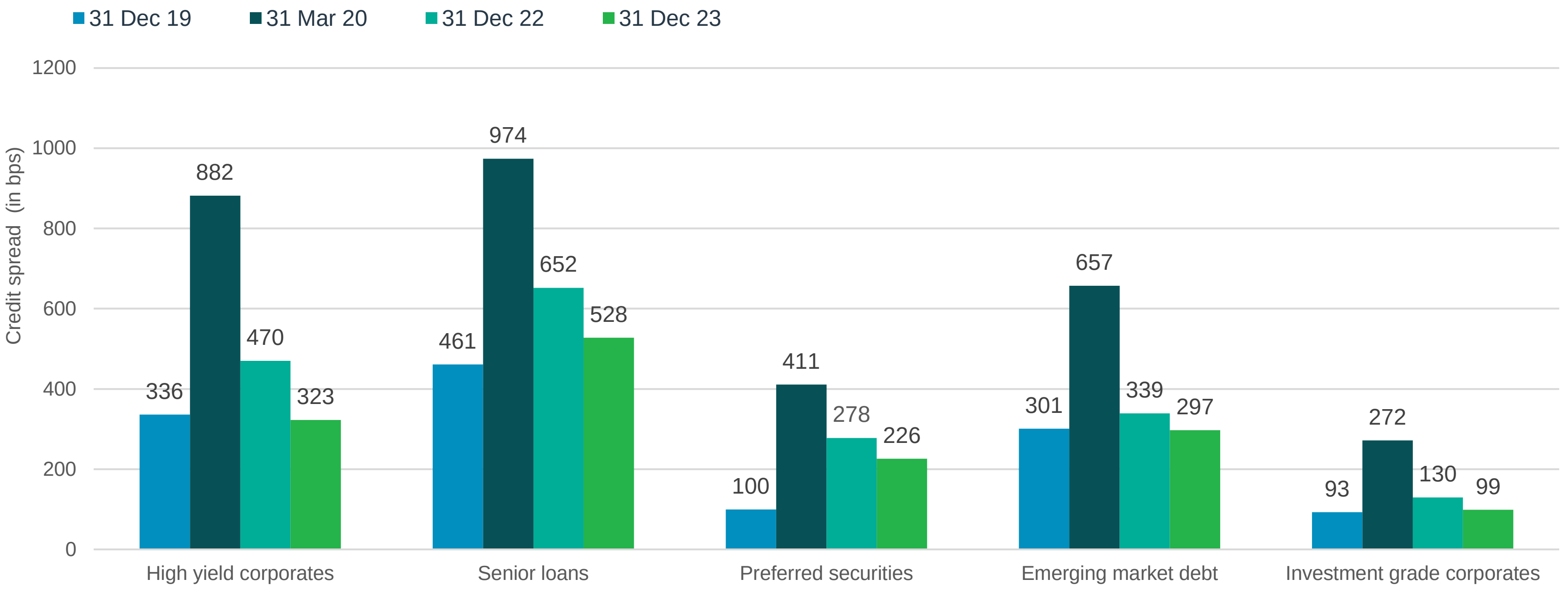
Source: Bloomberg LP. As of 31 Dec 2023.
Chart shows the percent of annualized total return derived from coupon return (as opposed to price appreciation) since index inception. Investment grade bonds are represented by the Bloomberg Aggregate Bond Index, which has an inception date of 01 Jan 1976; returns from 31 Jan 1976 – 31 Dec 2023. High yield bonds are represented by the Bloomberg U.S. High Yield 2% Issuer Capped Index, which has an inception date of 31 Jan 1993; returns from 31 Jan 1993 – 31 Dec 2023. U.S. Treasuries are represented by the Bloomberg U.S. Treasury Index. The index return presented is for illustration purposes only and does not represent or predict performance of any Nuveen product. It is not possible to invest directly in an index.
Performance data shown represents past performance and does not predict or guarantee future results.

Spread levels fully valued given economic conditions

We believe spreads are likely to widen further in the near term, providing better entry points for risk taking in the coming months.

- Some major credit sectors have reached pre-COVID levels
- We believe credit fundamentals remain healthy with modest leverage, solid cash flows and slowly rising defaults

Credit spread levels by fixed income sector



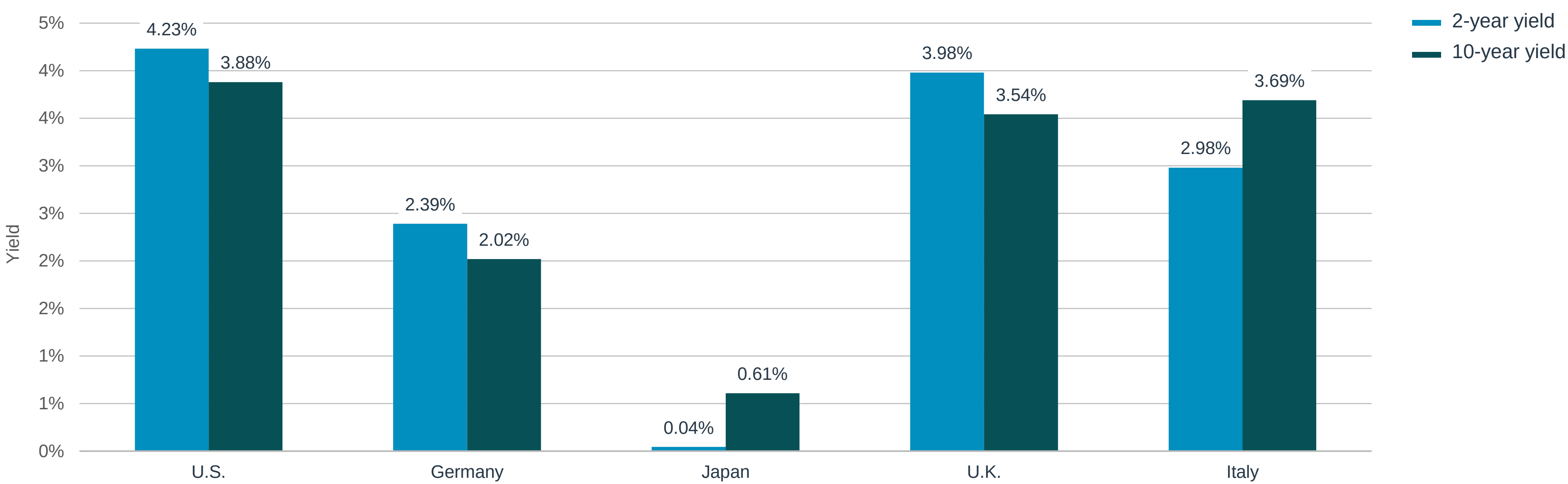
Source: Bloomberg LP., Credit Suisse. As of 31 Dec 2023.
Representative indices: **High yield corporates:** Bloomberg U.S. Corporate High Yield 2% Issuer Capped Index; **Senior loans:** Credit Suisse Leveraged Loan Index; **Emerging market debt:** Bloomberg Emerging Market Aggregate Index; **Preferred securities:** ICE BofA U.S. All Capital Securities Index; **Investment grade corporates:** Bloomberg U.S. Corporate Investment Grade Index.
Performance data shown represents past performance and does not predict or guarantee future results. It is not possible to invest directly in an index.

U.S. rates attract global capital flows

Relatively high U.S. rates offer safety, liquidity and diversification.

- High hedging costs remain a hurdle for Japanese investors but are likely to moderate this year

Government bond yields



Gov't bond market size	$28.0T	$2.4T	$8.3T	$2.9T	$2.6T

Government Bond Yields as of 31 Dec 2023. Represents the yield on the 2-Year and 10-Year on-the-run government bond of each country. Sources: www.federalreserve.gov; Bloomberg.

Government Bond Market Size as of 30 Jun 2023. Source: Bank for International Settlements. In trillions of U.S. Dollars.

Credit cycle entering downturn stage

Four stages characterize the credit cycle.

Falling leverage

Lower growth | **Higher growth**

Repair
- Debt repaid/balance sheets strengthened
- Leverage declines
- Focus on cost cutting and cash generation

Recovery
- Restructuring boosts profit margins
- Leverage falls
- Free cash flow grows

Downturn
- High leverage
- Lower earnings
- Recession or falling asset prices
- Defaults spike

We are here

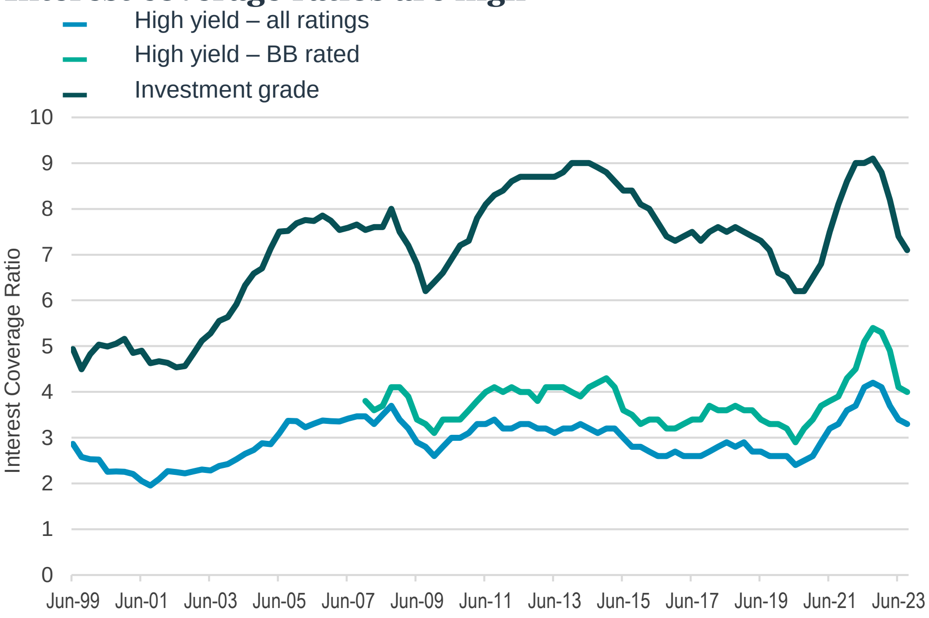
Expansion
- Leverage rises
- Speculative and M&A activity increases
- Volatility increases
- ***Credit cycle peaks***

Rising leverage

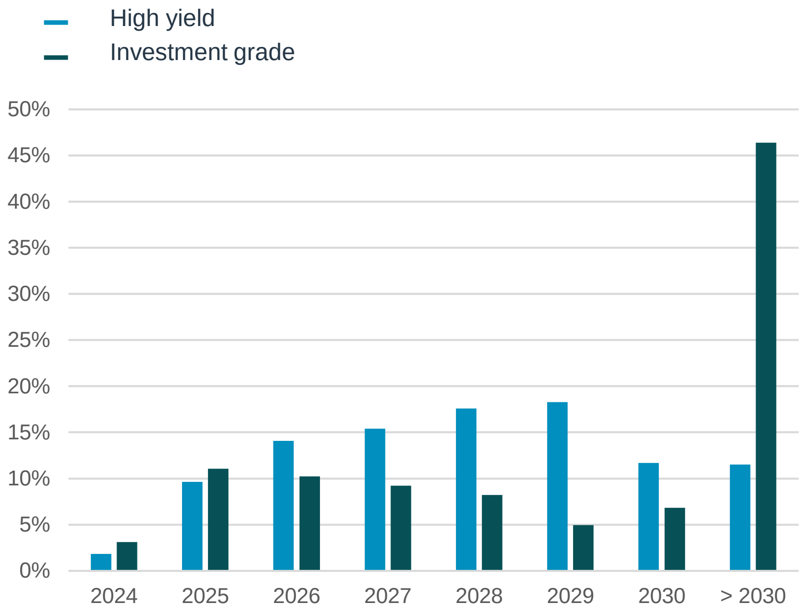
Fundamentals and maturity wall dynamics support corporate credit

Companies used the last two years to improve their capital structures and reduce refinancing needs.

Interest coverage ratios are high



Maturity wall pushed out



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Source: Nuveen Portfolio Strategy & Solutions, Bloomberg.
Interest coverage ratio is from 31 Dec 1998 to 30 Jun 2023. Data depicts the ratio of interest expense covered by the annual operating profits of the Bloomberg Corporate High Yield Index. The maturity wall is as 30 Sep 2023.

2. Sector outlooks

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High yield can continue to offer attractive risk-adjusted returns

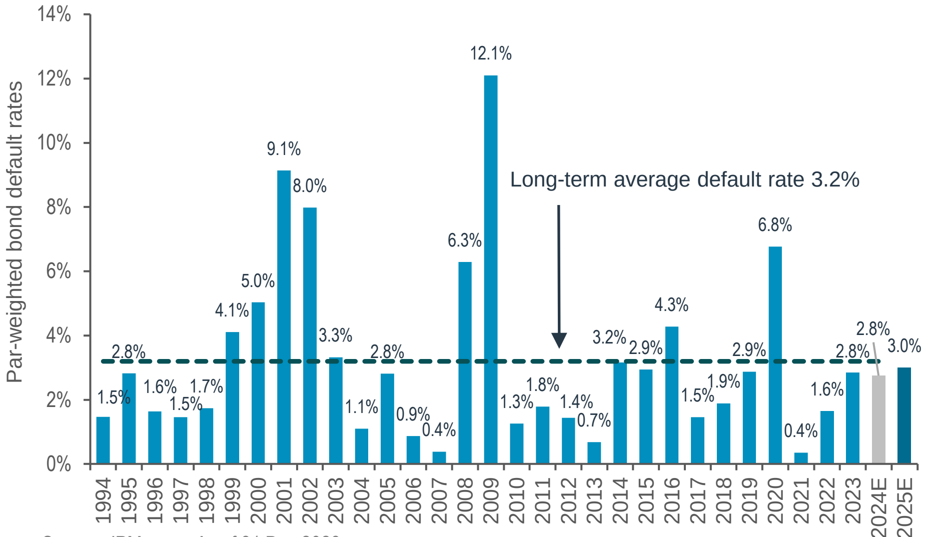
We believe high yield is well-positioned to deliver another year of attractive risk-adjusted performance, with income the primary driver.

- Fundamentals remain sound, with nearly half of outstanding debt rated BB and only about 10% rated CCC. The 2020 downturn and defaults cleansed the market of the weakest companies, while a wave of fallen angels resulted in more higher-quality issuers
- Technical factors are still solid and we expect net supply continuing to fall short of natural demand
- We are positioned defensively against a slowing economy and the lagged effects of higher funding costs on corporations.
- We continue to favor non-cyclical sectors and higher-quality bonds, and remain cautious on lower-rated, private issuers where we expect increased credit deterioration and price volatility

High yield valuations send mixed message

Source: Bloomberg LP. As of 31 Dec 2023.

Default rates expected rise, but only to near long-term average levels



Source: JPMorgan. As of 31 Dec 2023.

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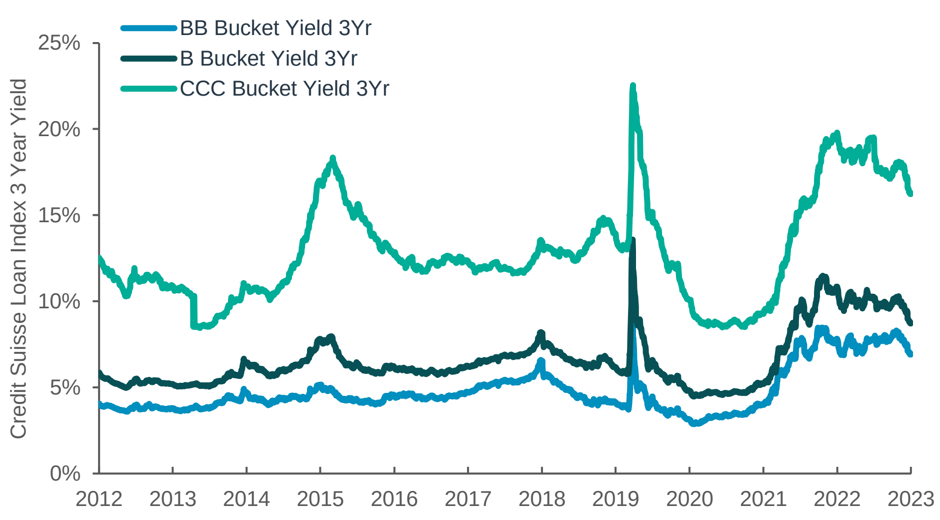
Senior loan yields offer compelling value

We believe senior loans continue to offer attractive income opportunities for investors.

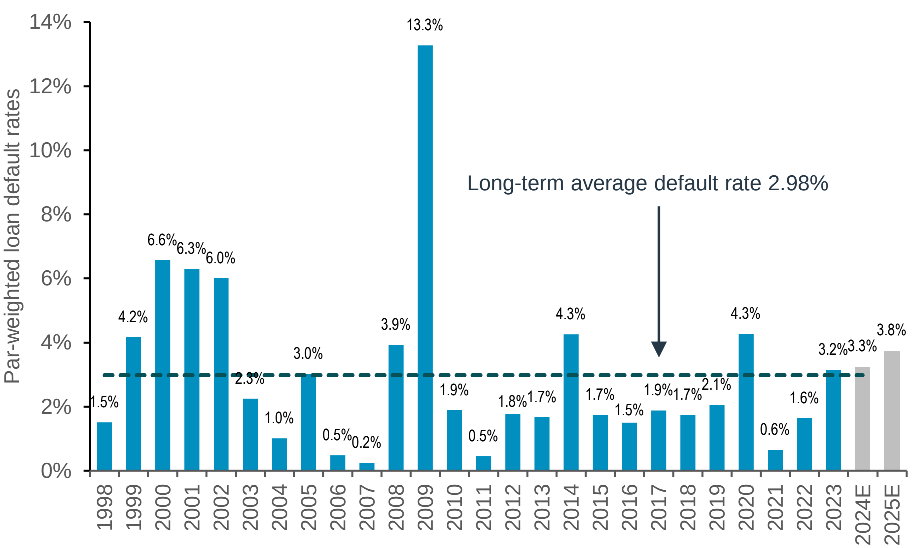
- Investors may benefit from high-single-digit income levels along with the potential to generate total return from mispriced discount loans
- In our view, we are at the beginning of a default cycle – one that will take defaults modestly higher than long term averages, but importantly should remain concentrated among lower-quality issuers
- We expect higher new-issue supply in 2024 and continued demand from both new-issue CLO formation and institutions
- Our focus remains on higher-quality loans, which offer healthy yields (approximately 8%-9%) and minimal default risk compared to lower-rated issuers

Loan yields by rating



Sources: Credit Suisse. As of 31 Dec 2023.

Loan default rates over time



Source: JP Morgan. As of 31 Dec 2023.

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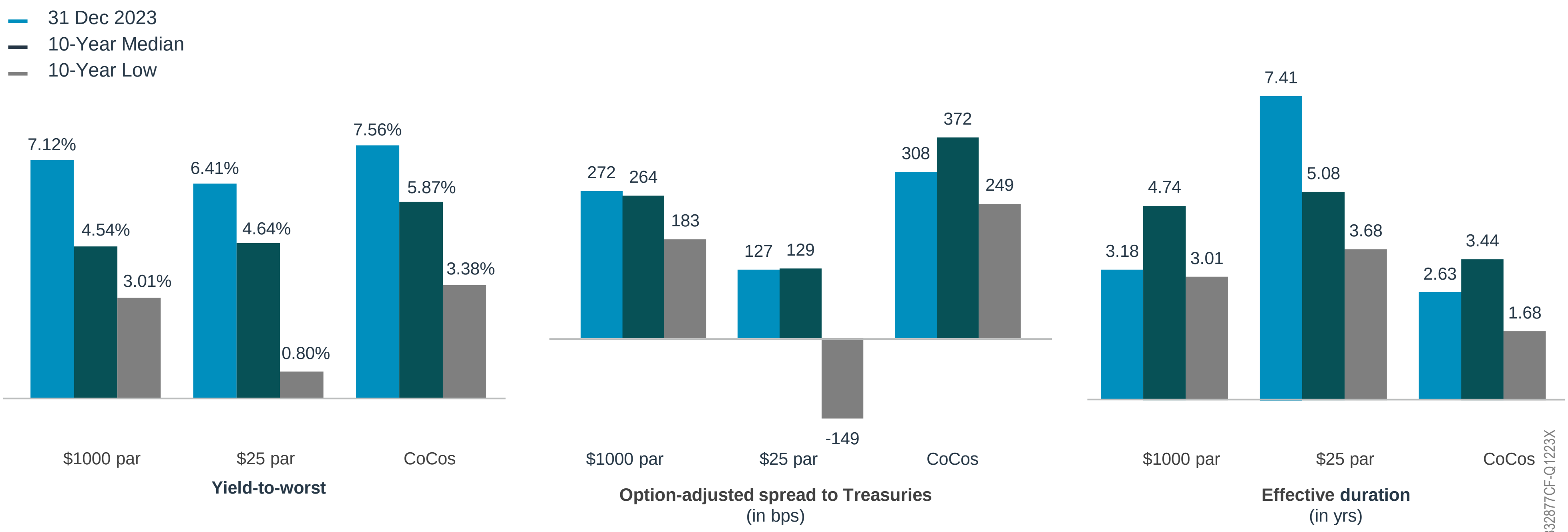
Not all preferreds are created equal

Valuations vary across segments but spreads are still well above all-time lows.

- We continue to favor $1000 par preferreds given their higher option-adjusted spreads (OAS) compared to $25 par preferreds
- While U.S. dollar CoCo security OAS is below its longer-term median level, it is still 85 bps above early 2020 historic lows
- Western European banks face lower commercial real estate risk and less competition for deposits than U.S. banks, and thus are still compelling on a risk-adjusted basis



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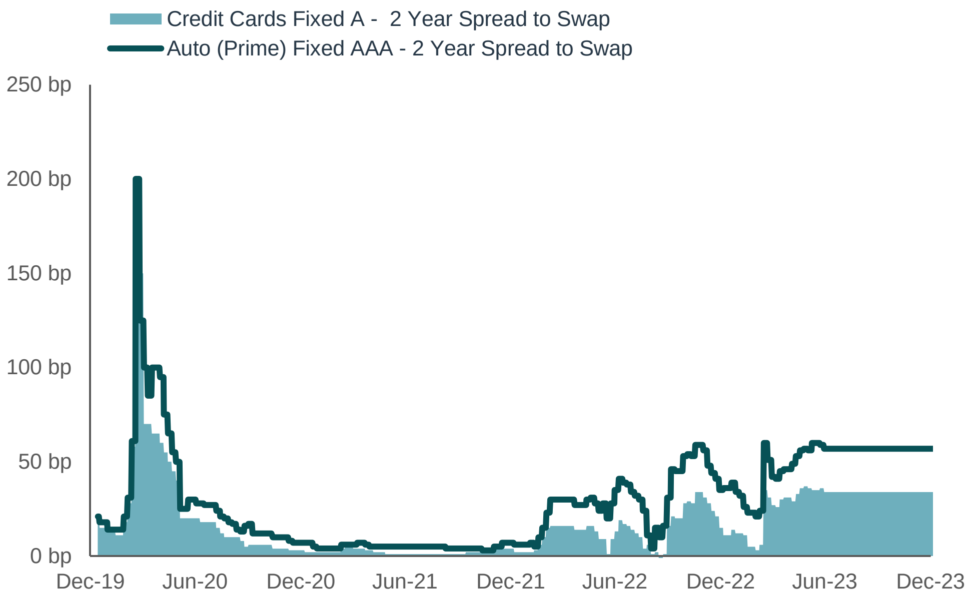
As of 31 Dec 2023.
Representative indexes: **$1,000 par preferred:** ICE BofA U.S. Institutional Capital Securities Index; **$25 par preferred**: ICE BofA Core Plus Fixed Rate Preferred Index; **Contingent Capital (CoCo):** ICE BofA USD Contingent Capital Index.

Securitized sectors can offer diversification

Asset-backed security yields at their highest levels since the Global Financial Crisis.

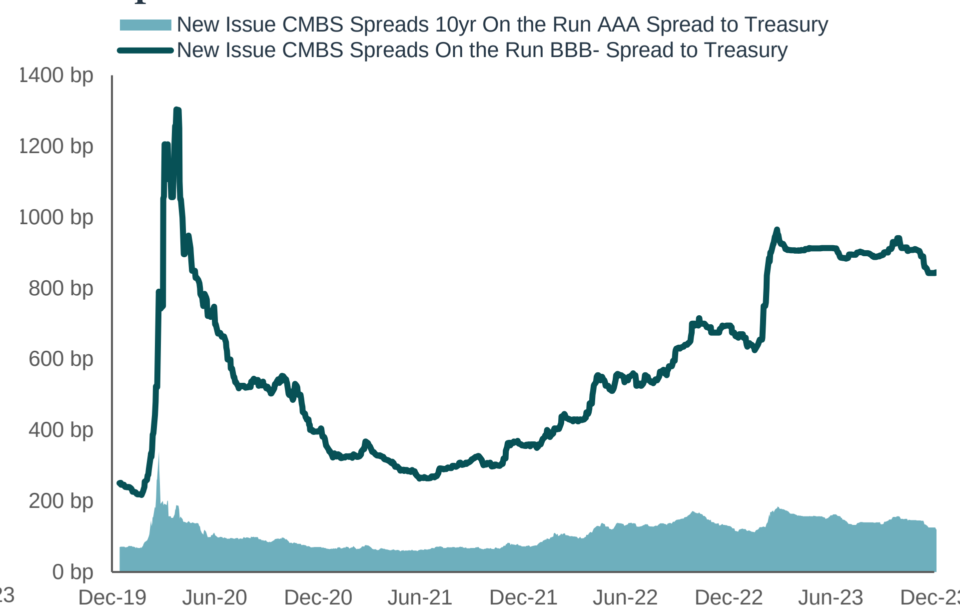
- Within asset-backed securities, sentiment will be driven by inflation and economic growth outlooks. The higher-yield environment is driving greater dispersion and creating opportunities to capture attractive returns
- Securities backed by commercial mortgages offer substantial reward for those willing to accept the challenges facing office and retail properties. These risks can be mitigated by careful risk selection of loan vintage and property type combined with comprehensive credit underwriting

Short, consumer ABS remains a high-quality, defensive asset class



Source: JPMorgan. As of 31 Dec 2023.

CMBS spreads remain stable at wide levels



Source: JPMorgan. As of 31 Dec 2023.

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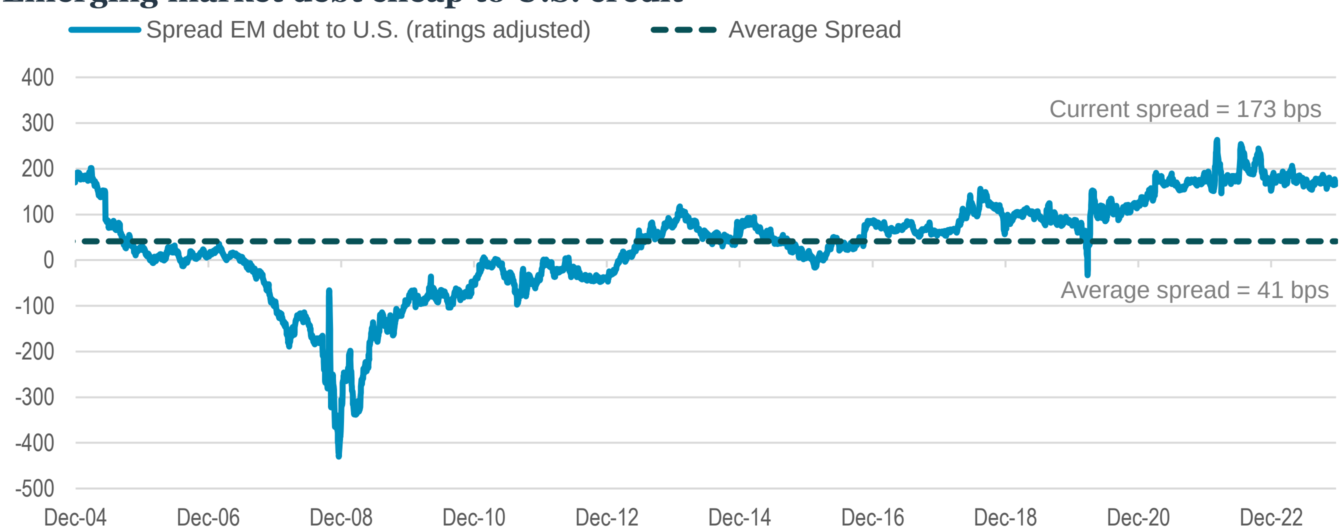
Emerging markets offer compelling characteristics in current economic cycle stage

Yield/duration profile particularly attractive as we pass peak Fed hawkishness.

- Global macro risks today much more balanced – a welcome change from prior year headwinds. We think the 2024 total return opportunity looks favorable with elevated yields providing a buffer against potential spread widening
- While the disinflation process and the scope of Fed easing remain major sources of uncertainty, if the rate cutting cycle is deeper than currently anticipated, EM stands to benefit given its duration profile
- In EM sovereign credit, we are optimistic but with an eye toward refinancing risk and balancing HY with higher-quality issuers
- EM corporate spreads offer a reasonable pick up to sovereigns and select EM HY corporates are quite attractive both relative to US/global credits and on a historic basis
- We favor local markets, particularly those with proactive hiking cycles and remain wary of unorthodox policymaking

Emerging market debt cheap to U.S. credit



Source: Bloomberg, J.P. Morgan, Nuveen. As of 31 Dec 2023.
Spread of emerging market debt to U.S. credit (ratings adjusted) is the credit spread of the JPMorgan Emerging Markets Bond Index - Global Diversified (EMBI-GD) less the blended credit spread of a 50-50 mix of the Bloomberg U.S. High Yield Index and the Bloomberg U.S. Investment Grade Corporate Index.

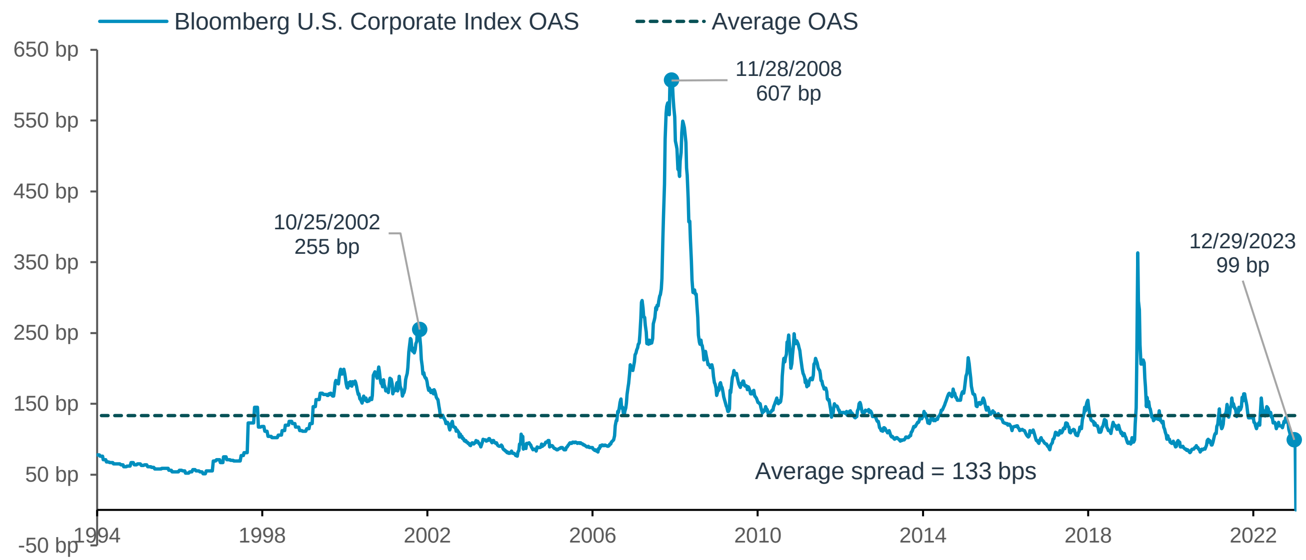
GPP-3332877CF-Q1223X

Positioned defensively in investment grade corporates

While relatively high yields draw interest, we are cautious over the medium term.

- Expect the technical picture to weaken as primary issuance heats up in January
- Believe spreads are tight considering broader macroeconomic conditions and the path of least resistance in the first quarter is likely wider
- Favor issuers with strong financials, low leverage and ample free cash flow in the bank, energy, and telecommunications sectors – the last of which we view as defensive and utility-like in nature

Limited opportunity for narrowing as spreads at 23-month tight level



Sources: Bloomberg LLC. As of 31 Dec 2023.
OAS is option-adjusted spread, a measure of the difference between corporate yields and those of similar duration Treasuries.

Traditional core sectors behave like bonds

Maintaining an allocation to traditional fixed income sectors helps balance equity risk.

Correlation to bond and stock market of selected sectors

Sources: Morningstar Direct.
Correlations for 10-year period ending 31 Dec 2023. Representative Indices: **Bond market:** Bloomberg U.S. Aggregate Index; **Stock market:** S&P 500 Index; **U.S. Treasuries:** Bloomberg U.S. Treasury Index; **MBS:** Bloomberg U.S. Mortgage-Backed Securities Index; **Investment grade corporates:** Bloomberg U.S. Corporate Investment Grade Index; **CMBS:** Bloomberg Commercial Mortgage-Backed Securities Index; **ABS:** Bloomberg Asset-Backed Securities Index; **Emerging market debt**: Bloomberg EM USD Aggregate Index; **Preferred securities:** ICE BofA U.S. All Capital Securities Index; **High yield corporates:** Bloomberg U.S. Corporate High Yield 2% Issuer Capped Index; **Senior loans:** Credit Suisse Leveraged Loan Index. **Performance data shown represents past performance and does not predict or guarantee future results.** It is not possible to invest directly in an index. Correlation is a statistical measure of how two securities move in relation to each other.

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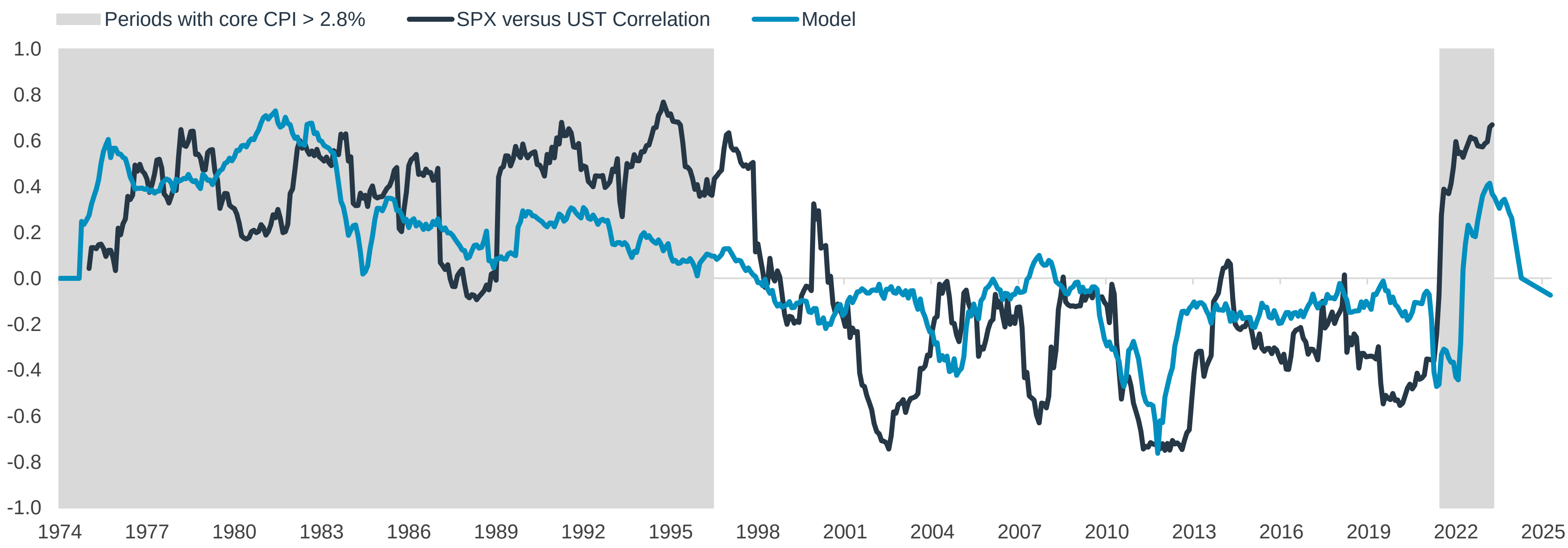
Positive correlation between stocks and bonds last year will likely normalize

Bond and equity markets sold off in tandem in 2022, resulting in a positive correlation.

- For the first significant period since 2000, bond and equity markets were positively correlated last year. This represented a reversion to the 1975-2000 relationship
- When inflation is high, the bond-equity correlation is positive, because high inflation negatively impacts both asset classes
- We expect inflation to moderate and the correlation to flip back to negative over the medium term

With inflation set to moderate moving forward, the bond-equity correlation is likely to return to negative



Source: Bloomberg. As of 31 Dec 2023. SPX is the S&P 500 Index. UST is the Bloomberg U.S. Treasury Index.

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Which environment seems most likely?

	Sticky inflation	Falling inflation	Recessionary environment
What would the Fed do?	Fewer, or zero, fed funds rate cuts	Measured rate cuts over the course of the year to prevent unwelcome rise in real fed funds rate	Earlier and steeper rate cut cycle
What could happen?	Rising rates Could trigger a recession over a protracted period	Modest decline in rates Low defaults and potentially solid risk asset performance	Falling interest rates May lead to Fed balance sheet expansion if conditions persist
What should fixed income investors consider?	Diversify with shorter duration, risk-off strategies: **Taxable income** • Short-term corporates • TIPS • Senior loans **Tax-exempt income** • Short and limited term municipals	Diversify with credit-based and risk-on strategies: **Taxable income** • High yield corporates • Preferred securities • Multisector bond • Senior loans • Emerging markets debt **Tax-exempt income** • High yield municipals	Diversify with high-quality, risk-off and longer duration strategies: **Taxable income** • Core • Core plus • Core with ESG/Impact **Tax-exempt income** • Investment grade municipals

Nuveen Base Case

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Source: Nuveen as of 31 Dec 2023. Certain statements may be deemed forward-looking statements. Please note that any such statements are not guarantees or intended to constitute a prediction of any future performance; actual results or developments may differ materially from those projected.

Relative value across income sectors

A dashboard of the yield and spread of various income sectors, as well as how these spreads compare to their historical averages.

Based on standardized spread levels vs trailing 3, 5 and 10-year averages

As of 29 Dec 2023	U.S. agg bond [1]	IG corp [2]	CLO (AA) [3]	Pfd [4]	EMD ($) [5]	HY corp [6]	Lev loans [7]	CLO (BB) [8]	Taxable muni [9]	AA muni [10]	A muni [10]	BBB muni [10]	HY muni [11]	Real estate [12]
Yield to Worst / Cap Rate	4.53	5.03	5.78	6.93	7.84	7.59	9.01	12.10	4.86	3.25	3.48	3.98	5.57	6.60
Spreads*	0.42	1.05	2.14	2.26	3.83	3.23	5.28	8.35	0.82	0.17	0.40	0.90	2.43	2.72
Net chg 1M	-0.04	-0.03	-0.12	-0.08	-0.22	-0.49	-0.30	-0.39	-0.03	-0.02	-0.02	-0.03	0.13	0.45
Net chg 1Y	-0.10	-0.37	-0.49	-0.54	-0.70	-1.47	-1.24	-1.57	-0.38	-0.17	-0.15	-0.09	-0.09	0.43
3Y Avg Spread	0.45	1.24	2.15	2.19	4.23	3.82	5.30	8.46	0.94	0.26	0.45	0.85	2.12	2.72
5Y Avg Spread	0.48	1.31	2.11	2.10	4.11	4.17	5.38	8.48	1.06	0.24	0.43	0.89	2.30	3.18
10Y Avg Spread	0.47	1.32	2.06	1.95	3.76	4.26	5.13	7.56	1.18	0.23	0.47	0.94	2.76	3.09
3Y Z-Score	-0.30	-0.76	-0.04	0.15	-0.62	-0.75	-0.02	-0.08	-0.66	-1.10	-0.44	0.27	0.98	0.00
5Y Z-Score	-0.53	-0.85	0.05	0.26	-0.37	-0.85	-0.10	-0.07	-0.79	-0.87	-0.34	0.04	0.25	-0.48
10Y Z-Score	-0.53	-0.95	0.19	0.45	0.10	-0.95	0.15	0.44	-1.25	-1.09	-0.72	-0.20	-0.44	-0.50
Duration	6.20	8.41		4.77	6.06	3.10	0.25						7.04	

Z-score = Number of standard deviations between the current spread level and the historic average spread

Spreads tighter than historic average — Spreads wider than historic average

Source Bloomberg, Thompson Reuters MMD as of 30 November 2023. *Spreads for municipals are YTW vs. AAA 20-yr municipal yield; for CLO AA JPM CLO Total AA discount margin; for CLO BB JPM CLO Total BB discount margin; for leveraged loans and middle mkt loans discount margin (3-yr life); and OAS to U.S. Treasury for all other fixed income sectors. **Option adjusted duration is shown, except for Leveraged Loans (effective duration is shown here). Representative indexes: 1 **U.S. Agg Bond:** Bloomberg Barclays U.S. Aggregate Total Return Value Unhedged USD Index; 2 **Investment Grade Corp:** Bloomberg Barclays Liquid Investment Grade Corp Total Return Unhedged USD Index; 3 **CLO AA:** JPM CLO Total AA Yield Index; Index inception 12.30.11; 4 **Preferred securities:** ICE BofA US ALL Capital Securities Index (3/2012-4/2021), CE BofA Fixed Rate Preferred Securities Index (4/2011-2/2012); 5 **Emerging markets debt:** JPM EMBI Global Diversified Index; 6 **High yield corporates:** Bloomberg Barclays U.S. Corporate High Yield 2% Issuer Capped Total Return Value Unhedged Index; 7 **Leveraged loans:** Credit Suisse Leveraged Loan Index; 8 **CLO BB:** JPM CLO Total BB Yield Index; Index inception 12.30.11; 9 **Taxable municipals:** Bloomberg Barclays Municipal Index Taxable Bonds Total Return Index Value; **10 AA, A, and BBB Municipal:** Thompson Reuters MMD Scale; 11 **High yield municipals:** Bloomberg Barclays High Yield Municipal Index; 12 **Real estate:** Green street advisors, Nominal Cap Rate of Major Sectors, Spread = difference between Nominal Cap Rate and the U.S.10Y Treasury Yield. **Past performance is no guarantee of future results**. It is not possible to invest directly in an index.

Disclosures

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