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Credit market outlook after the Fed pivot:

Lower costs of capital and pent-up M&A could create a boom in M&A activity

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Apollo Global Management

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Unless otherwise noted, information as of January 2024.

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Three themes for credit investors in 2024

- 1. Up in quality:** Even if the Fed cuts rates a few times in 2024, higher debt costs will continue to weigh on earnings and interest coverage ratios over the coming quarters, and both IG and HY companies will experience higher refinancing costs.
- 2. Large cap:** A default cycle has started with bankruptcy filings rising, and default rates will continue to rise over the coming quarters, impacting in particular middle market companies with weak earnings.
- 3. Lend to firms with low leverage and high interest coverage ratios:** Lagged effects of monetary policy are slowing consumer credit growth with auto and credit card delinquencies rising and bank lending conditions tightening, leading to a slowing of loan growth impacting consumers and firms with weak balance sheets.

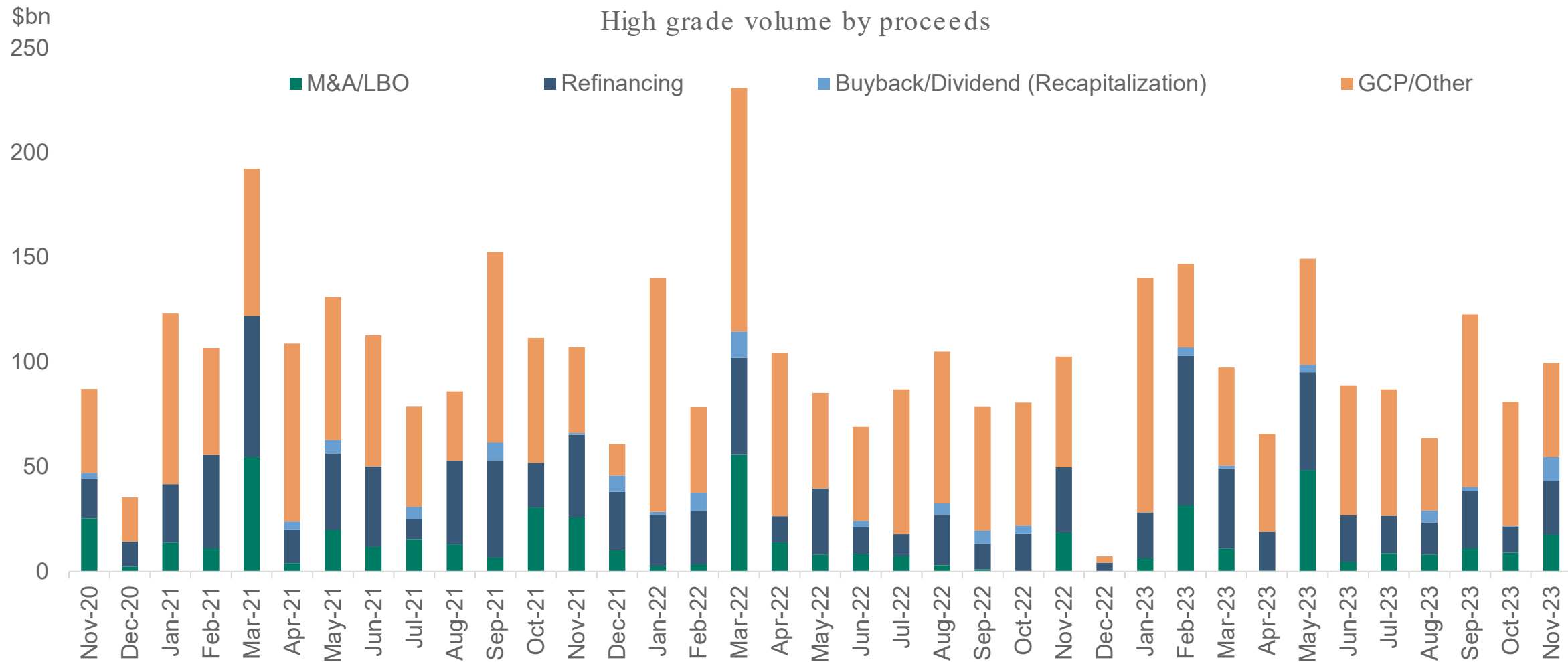
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Overview

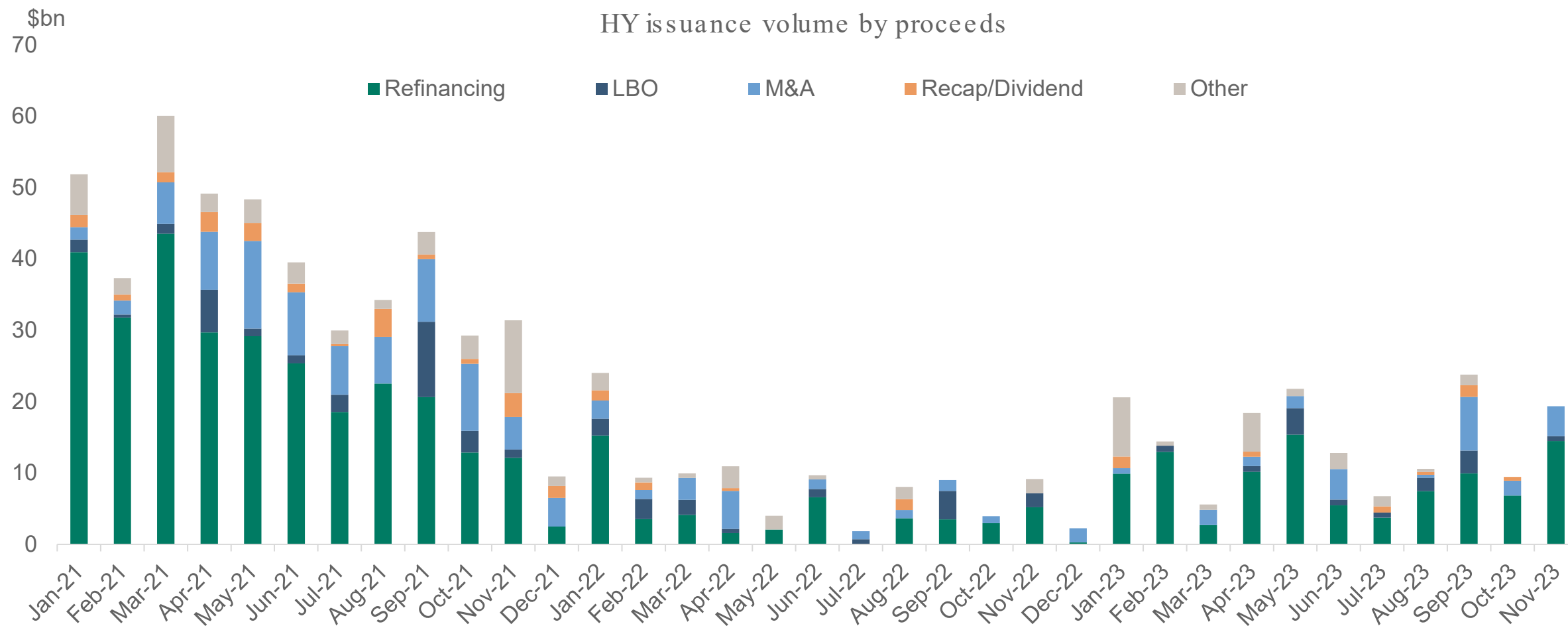


High grade volume by proceeds



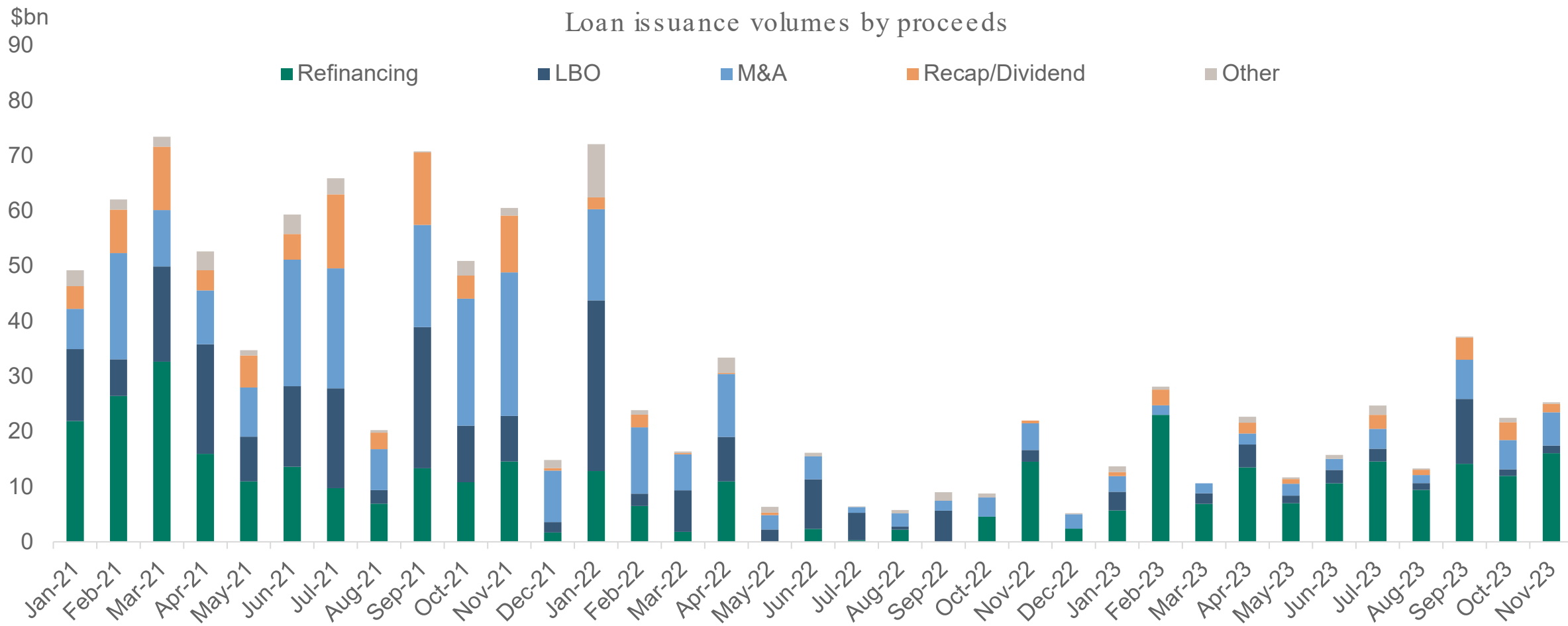
Source: Pitchbook LCD, Apollo Chief Economist. Note: GCP means General Corporate Purpose, which means making or financing any payment for working capital, capital expenditures, or any other general corporate purpose.

High yield volumes by proceeds



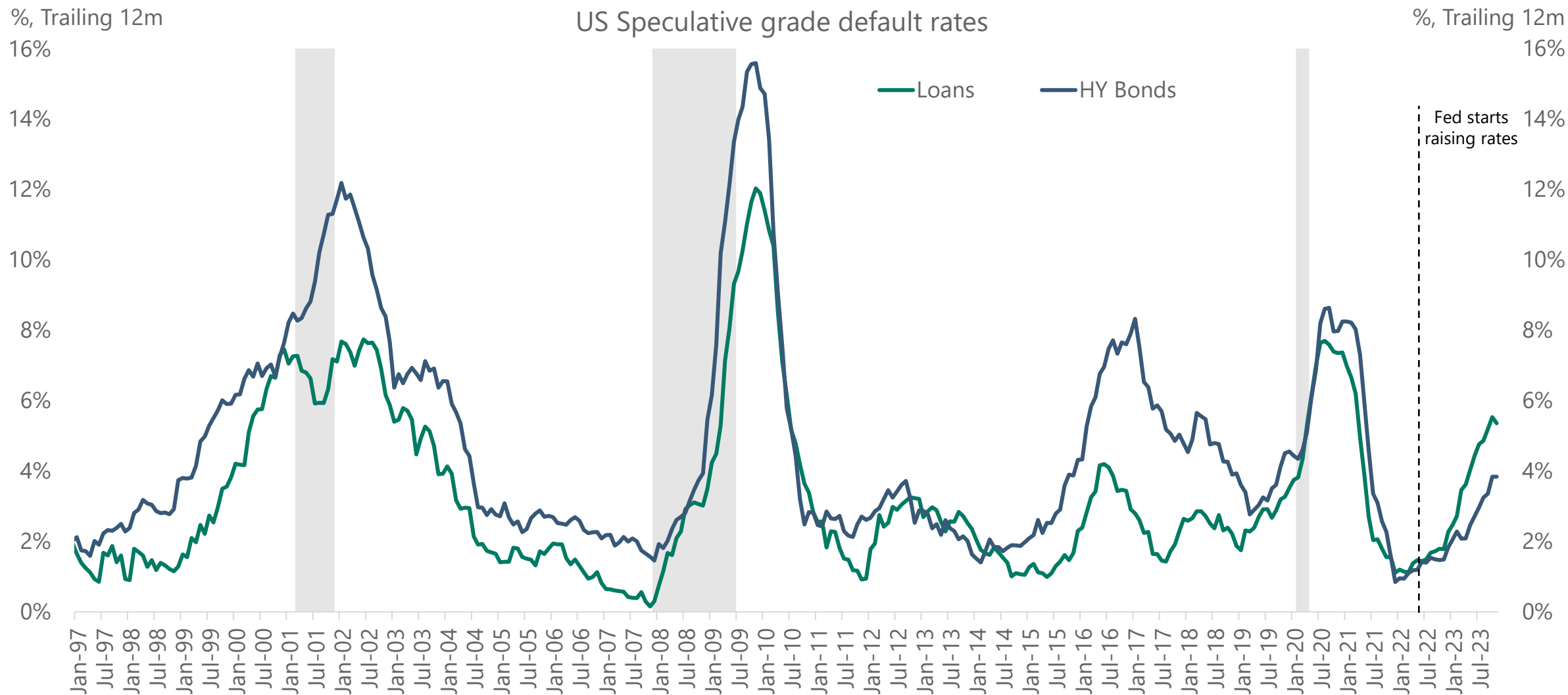
Source: Pitchbook LCD, Apollo Chief Economist

Loan volumes by proceeds



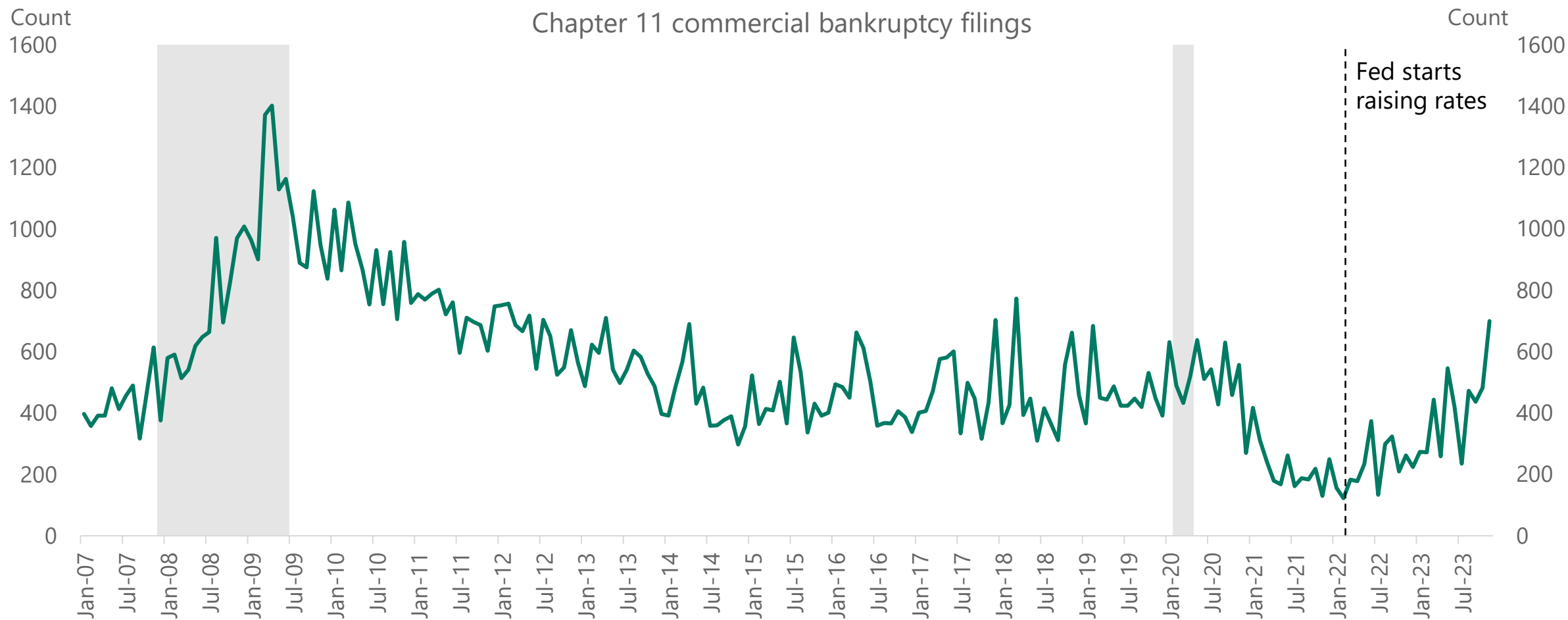
Source: Pitchbook LCD, Apollo Chief Economist

A default cycle has started: Can the Fed pivot reverse the uptrend in defaults?

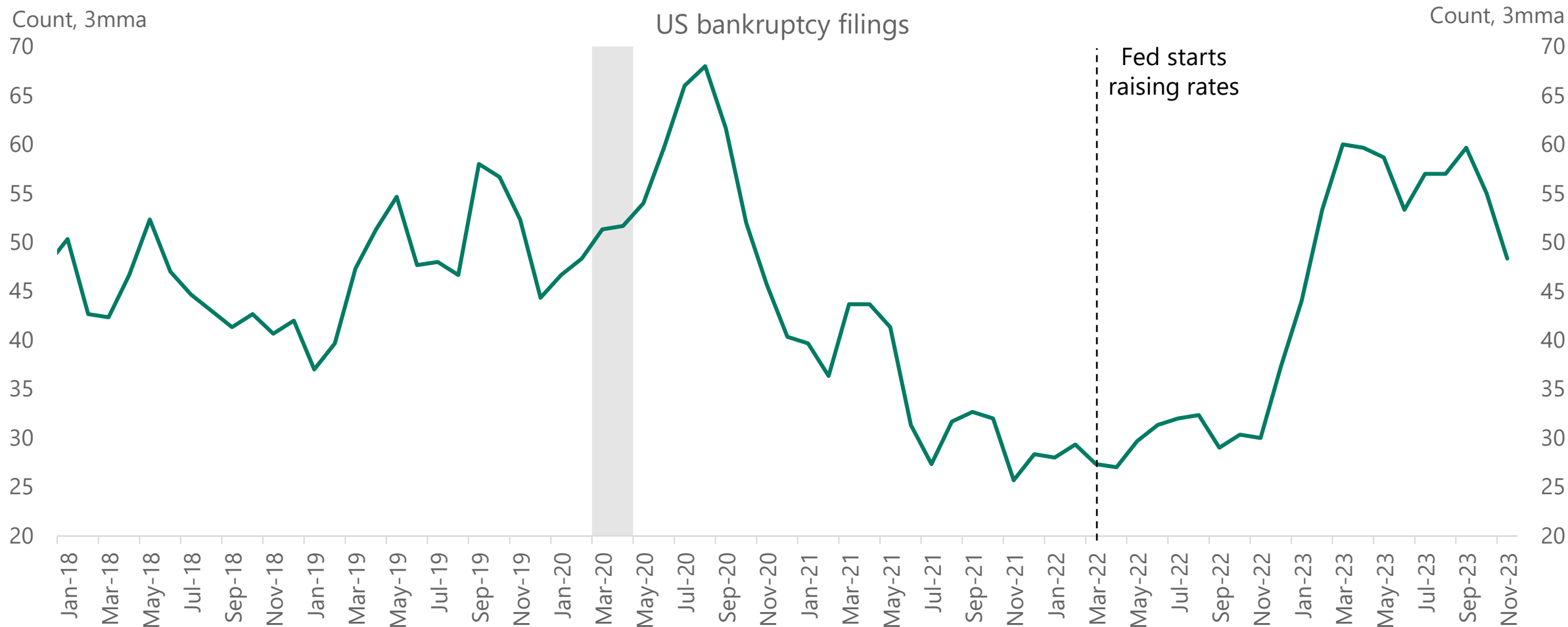


Source: Moody's Analytics, Apollo Chief Economist

Chapter 11 bankruptcy filings in the US rising rapidly in November

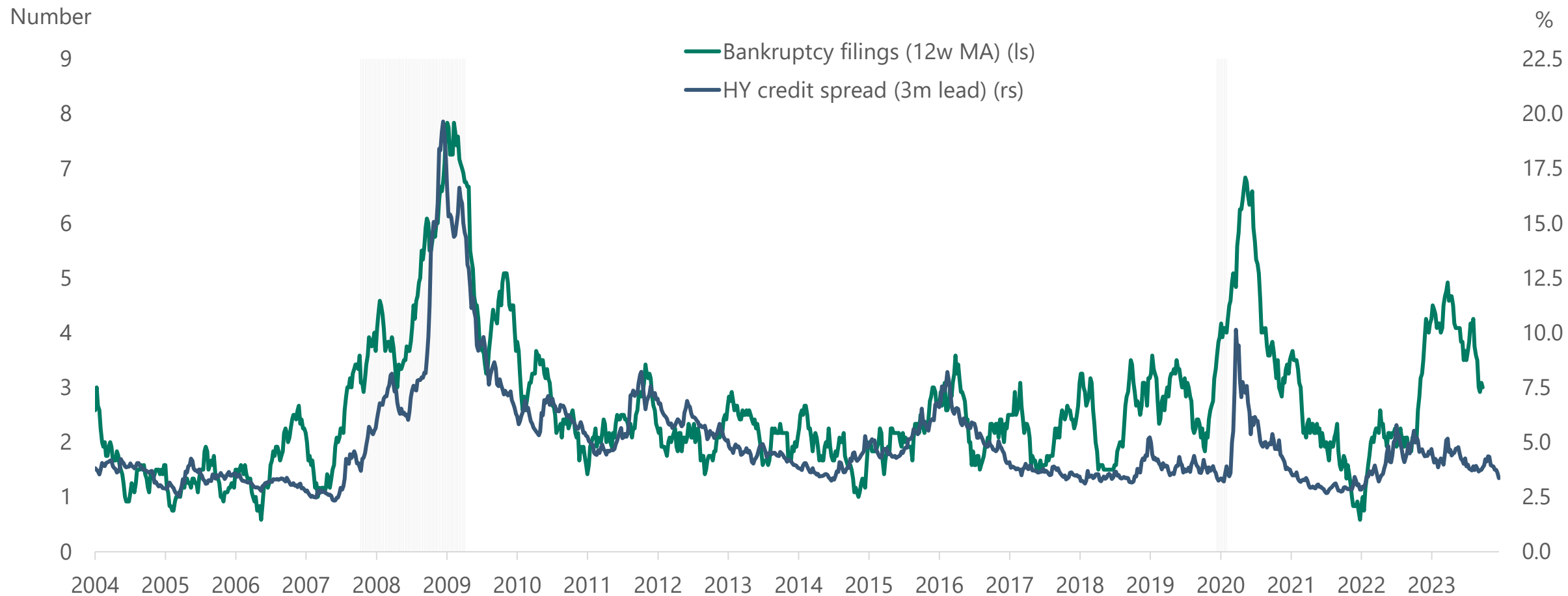


Fed hikes pushing bankruptcy filings higher

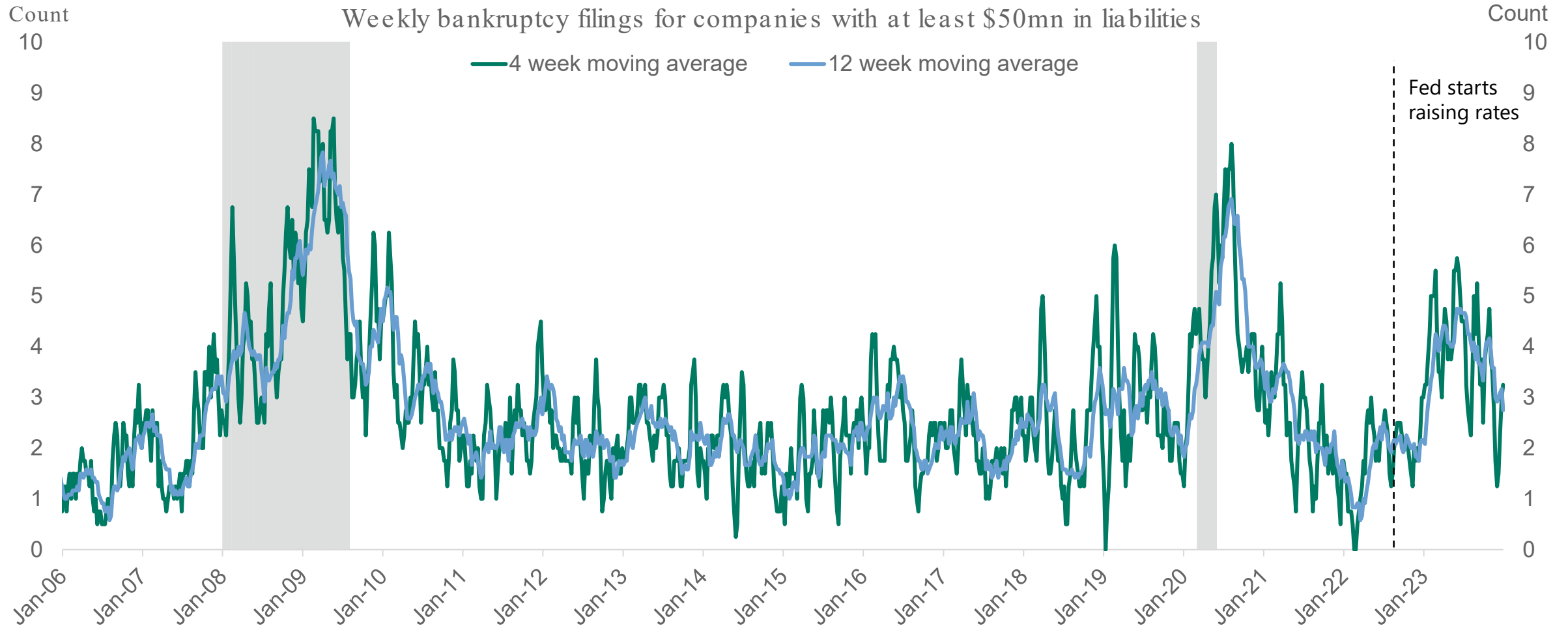


Source: S&P Capital IQ, Bloomberg, Apollo Chief Economist. Note: Bankruptcy figures include public companies or private companies with public debt with a minimum of \$2 million in assets or liabilities at the time of filing, in addition to private companies with at least \$10 million in assets or liabilities.

Disconnect between bankruptcy filings and credit spreads

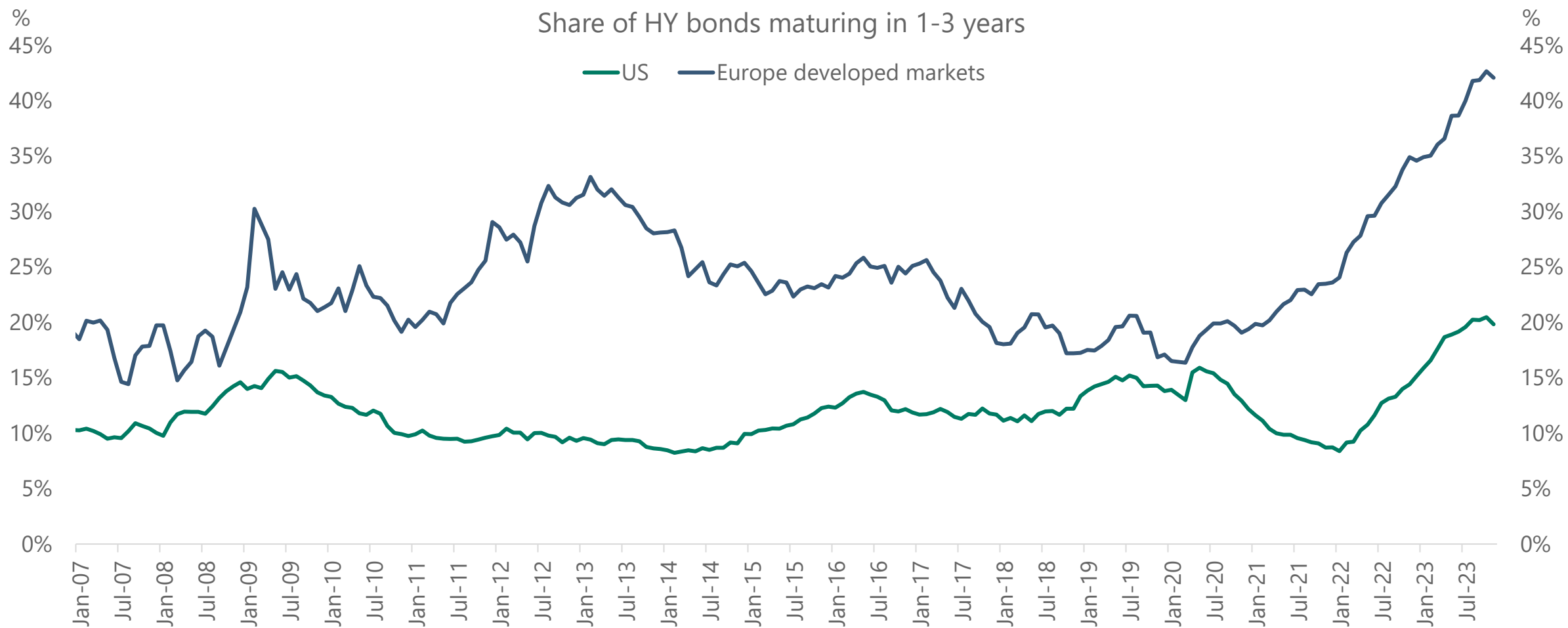


Bankruptcy filings for companies with more than \$50mn in liabilities have declined in recent weeks

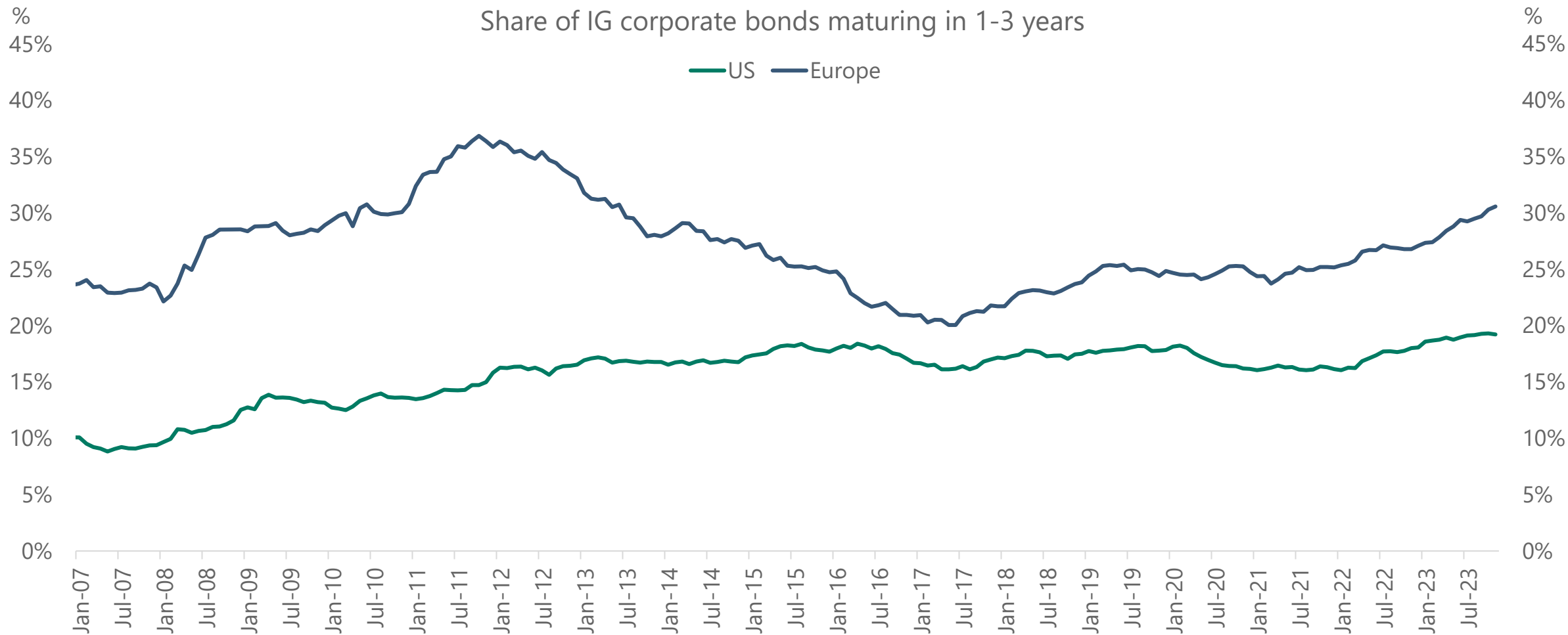


Source: Bloomberg, Apollo Chief Economist. Note: Filings are for companies with more than \$50mn in liabilities. For week ending on December 15, 2023.

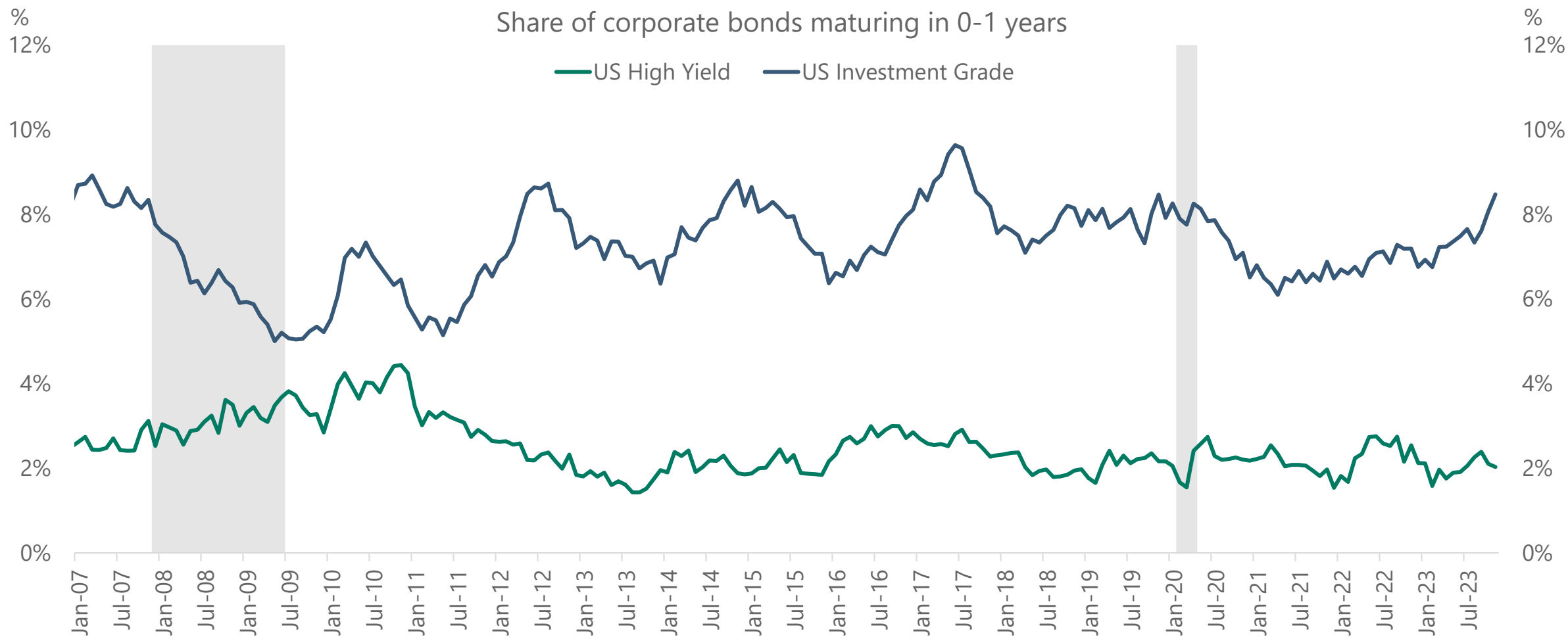
HY: Europe hitting the maturity wall before the US



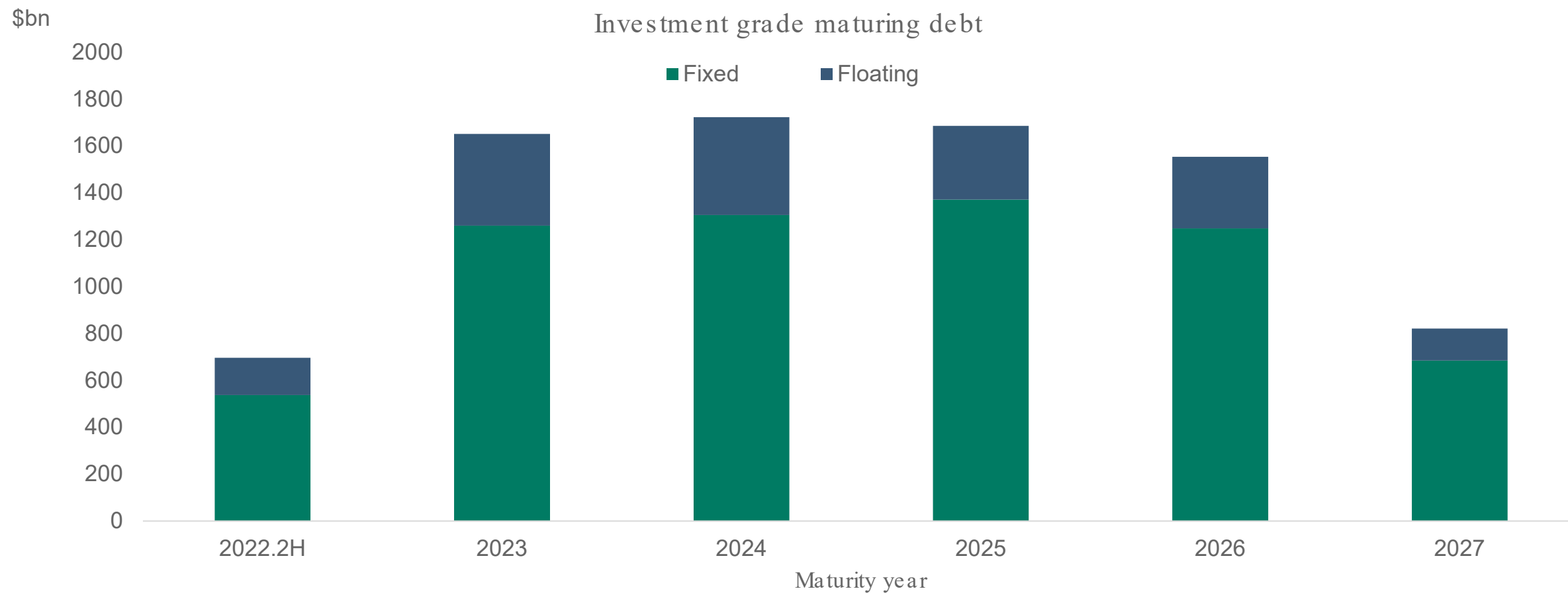
IG: Europe hitting the maturity wall before the US



The share of IG and HY bonds maturing within a year

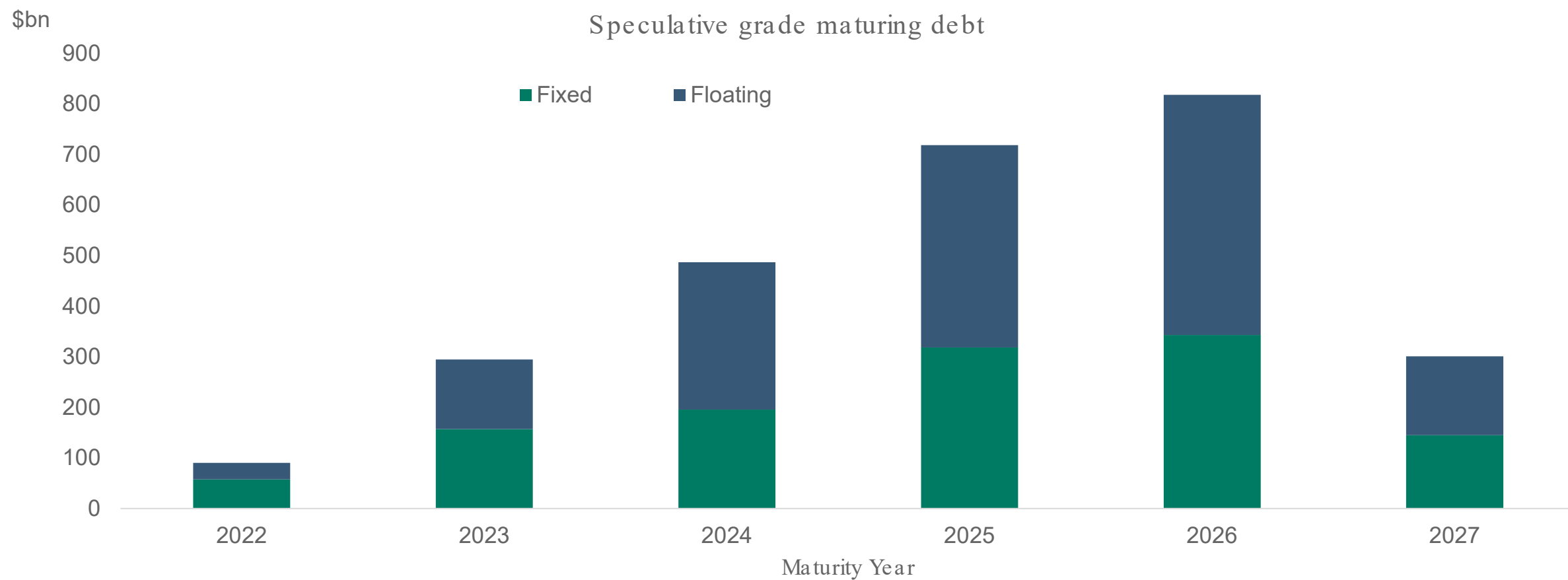


Investment grade maturity wall



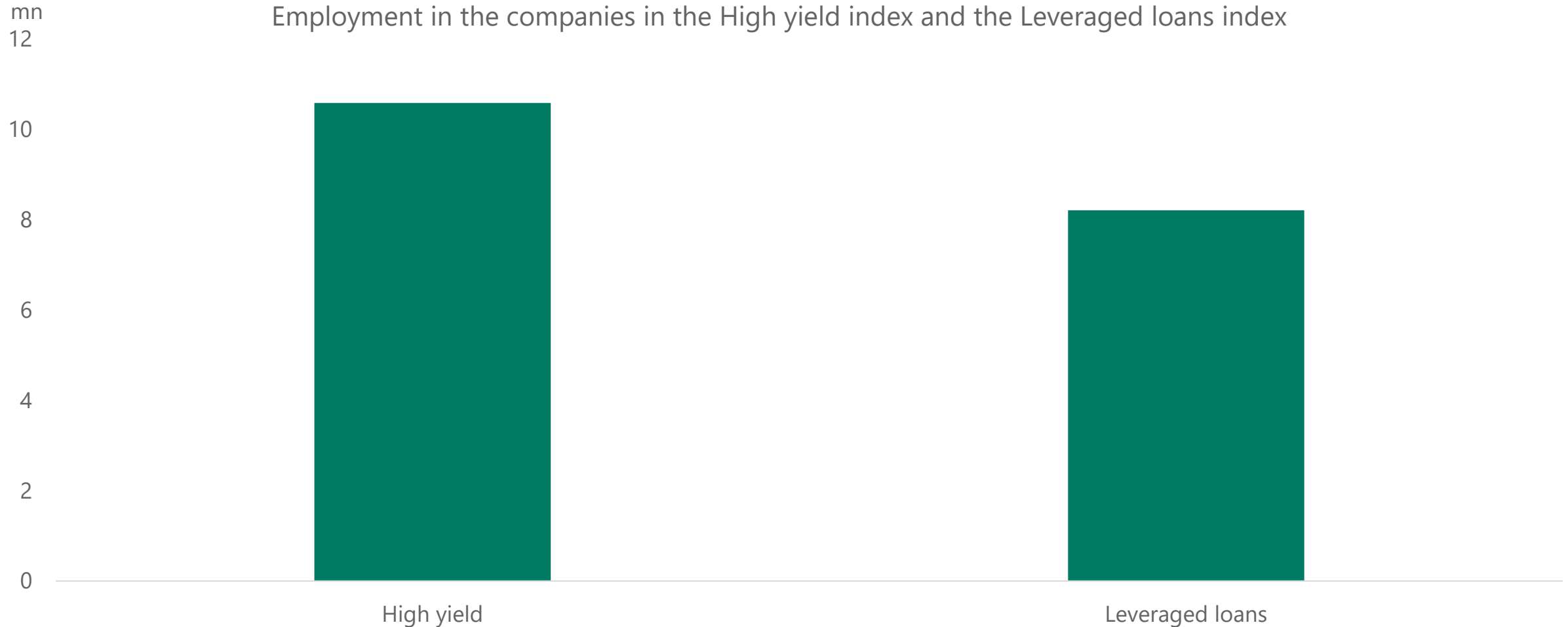
Source: S&P Global ratings Research, Apollo Chief Economist. Note: Data as of July 1, 2022. Includes issuers' investment-grade bonds, loans, and revolving credit facilities that are rated by S&P Global Ratings.

High yield maturity wall



Total employment in firms in the US high yield index: 11 million

Total employment in firms in the leveraged loans index: 8 million

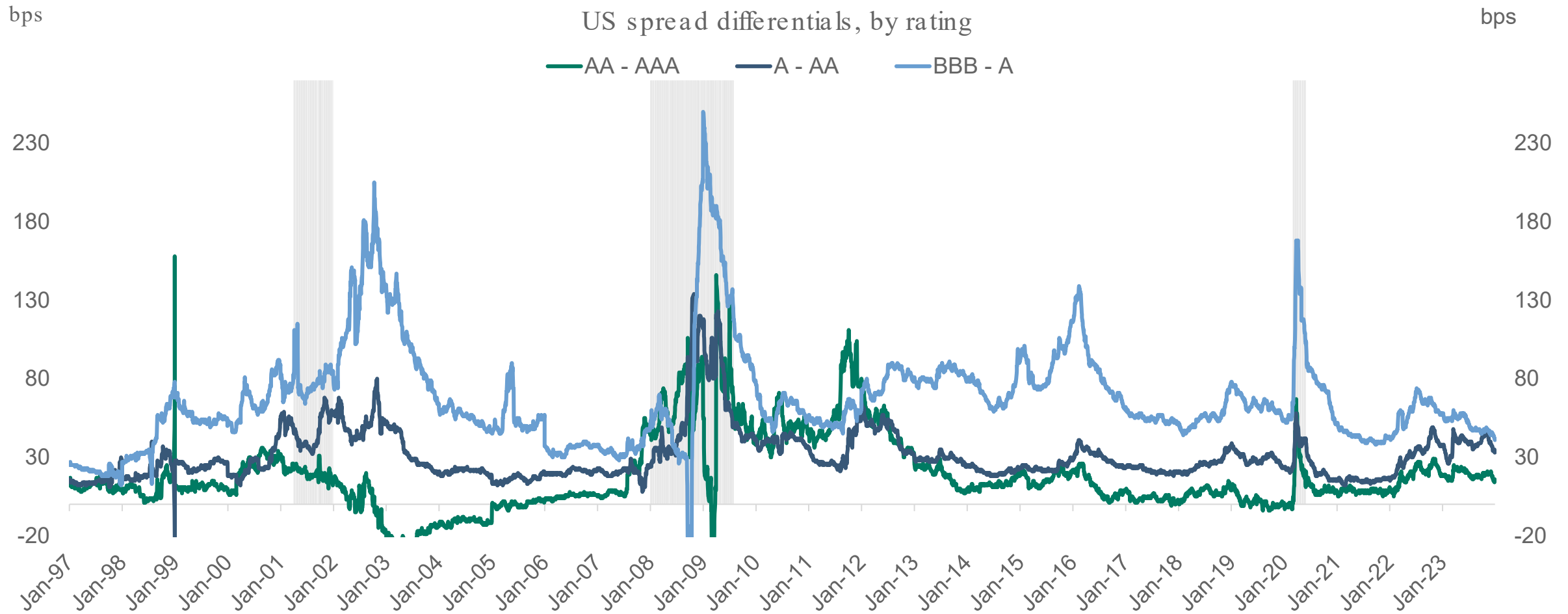


Source: Bloomberg, ICE BofA H0A0 Index, Morningstar LSTA Index, Apollo Chief Economist. Note: Data includes 842 companies in the HY index with employment data available for 584 companies and median employment assumed for the rest. Similarly, there are 1073 companies in the leveraged loans index with employment data available for 450 companies and median employment assumed for the rest.

Bonds more attractive than equities



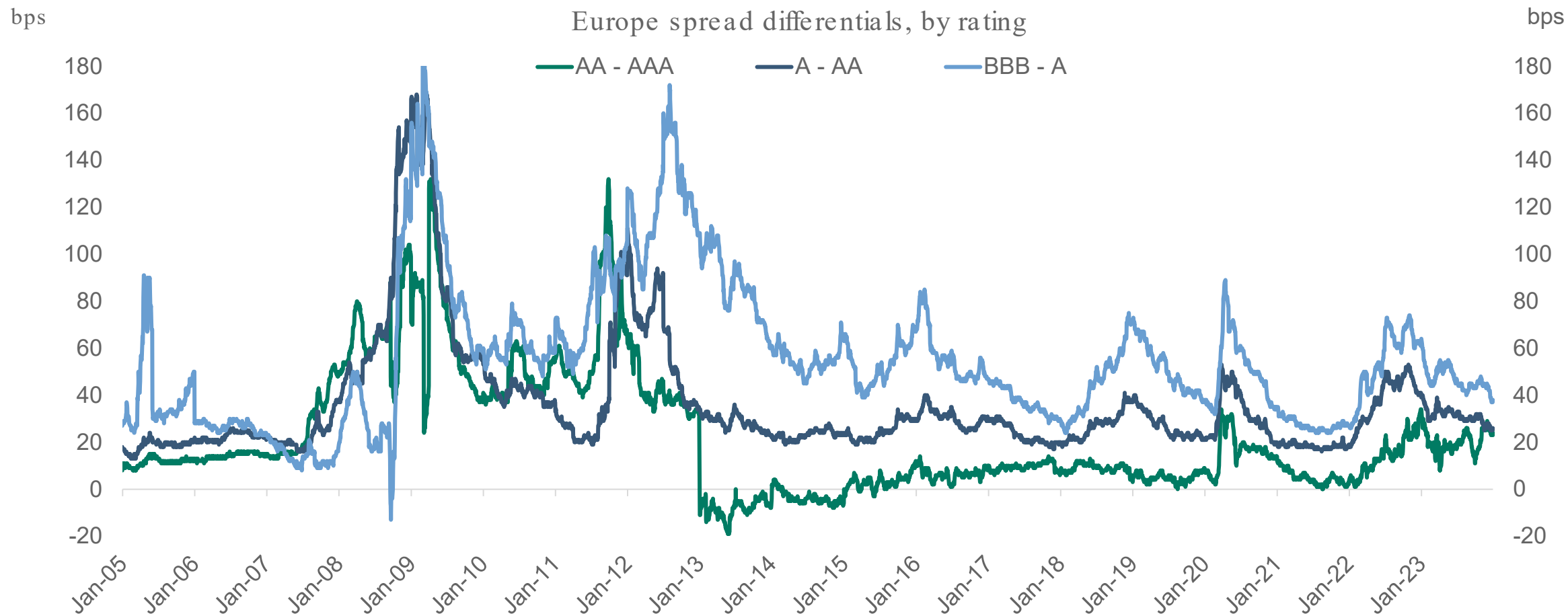
IG quality spreads, some differentiation between BBB and single-A



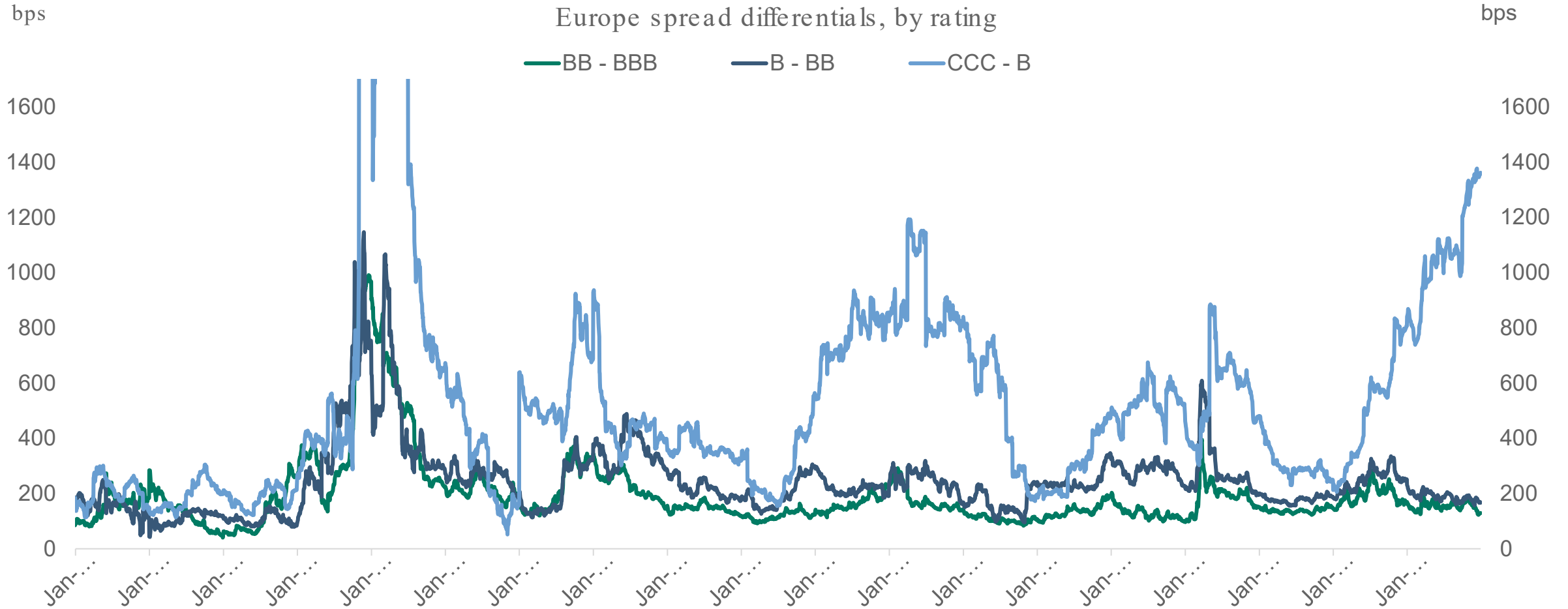
HY quality spreads, more differentiation between CCC and single-B



Europe IG quality spreads



Europe HY quality spreads, significant differentiation between CCC and single-B



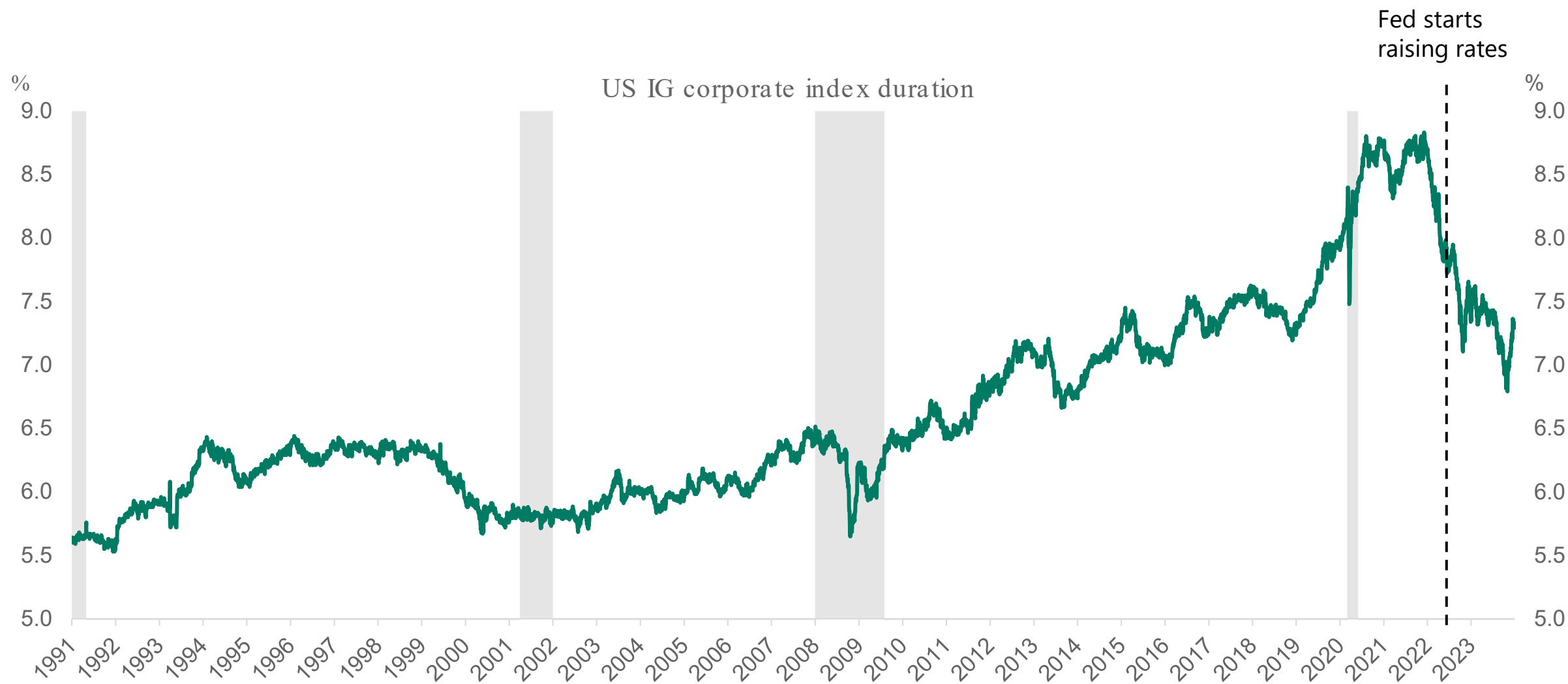
IG quality spread has tightened



HY quality spread has tightened less

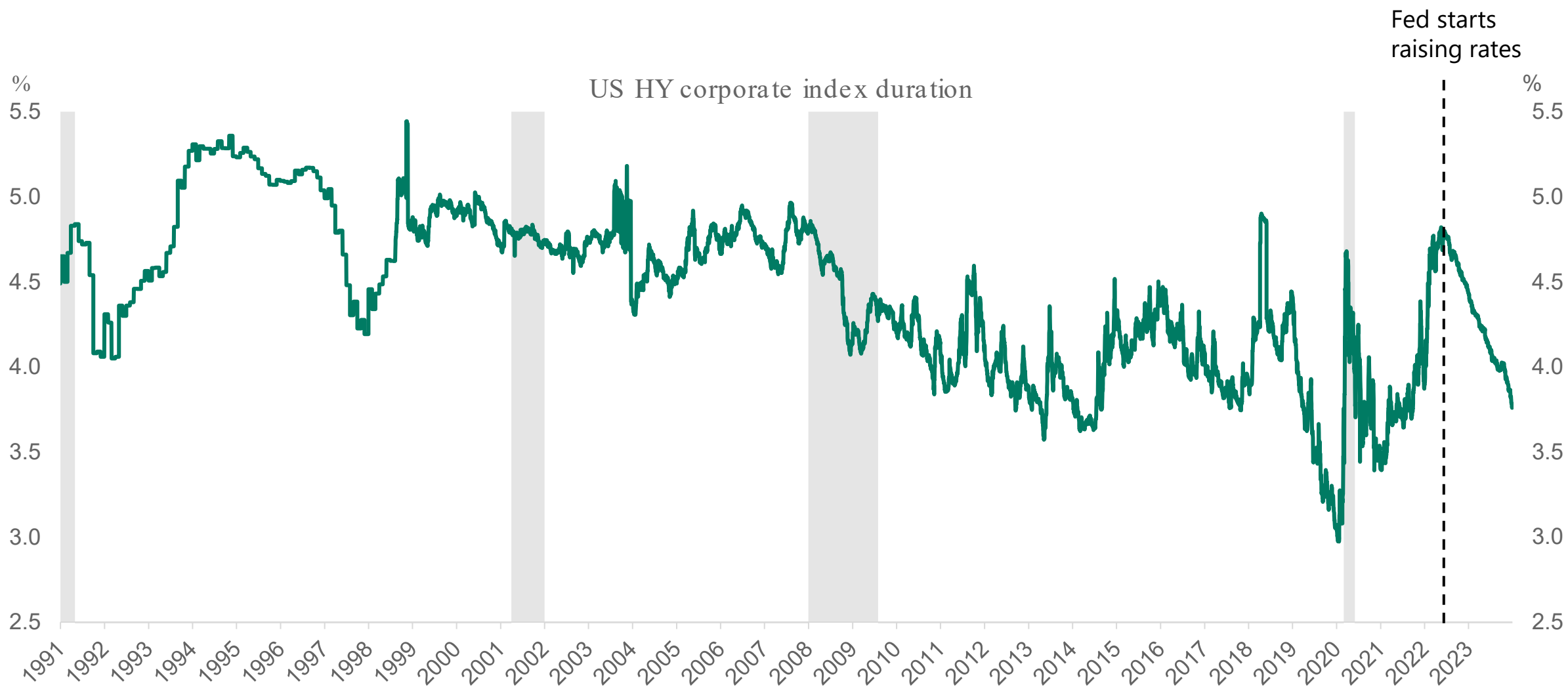


IG index duration rebounding in recent weeks



Source: Bloomberg, Apollo Chief Economist. Note: The measure used is modified duration, which measures the expected change in a bond's price to a 1% change in interest rates.

HY index duration continues to decline

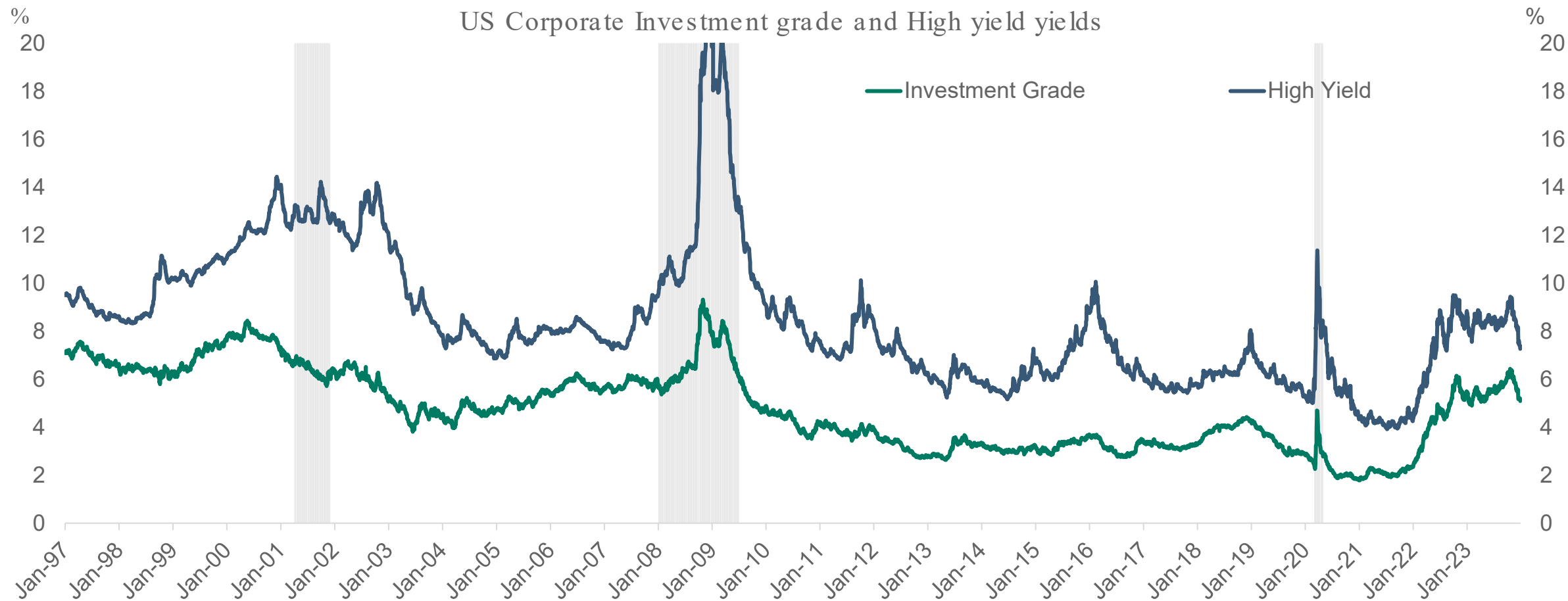


Source: Bloomberg, Apollo Chief Economist. Note: The measure used is modified duration, which measures the expected change in a bond's price to a 1% change in interest rates.

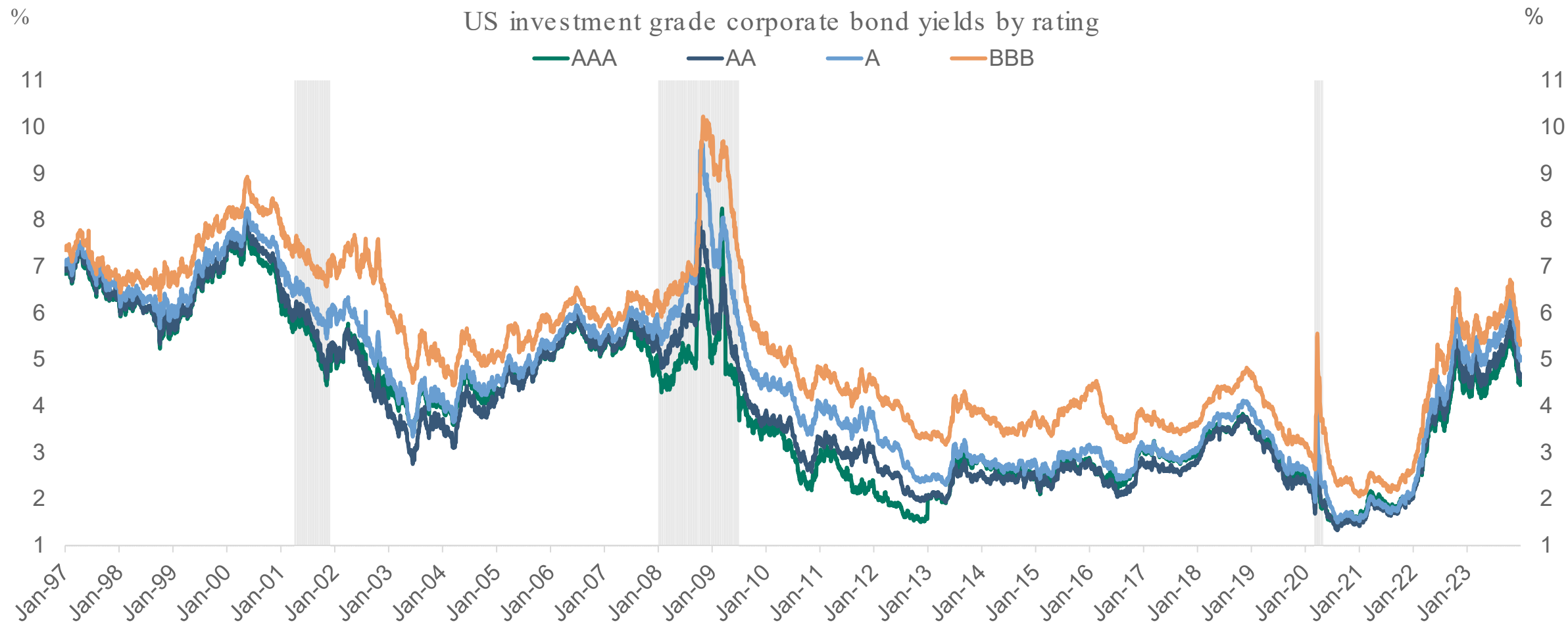
Yield levels



US IG yield around 5.1% and HY yield around 7.3%



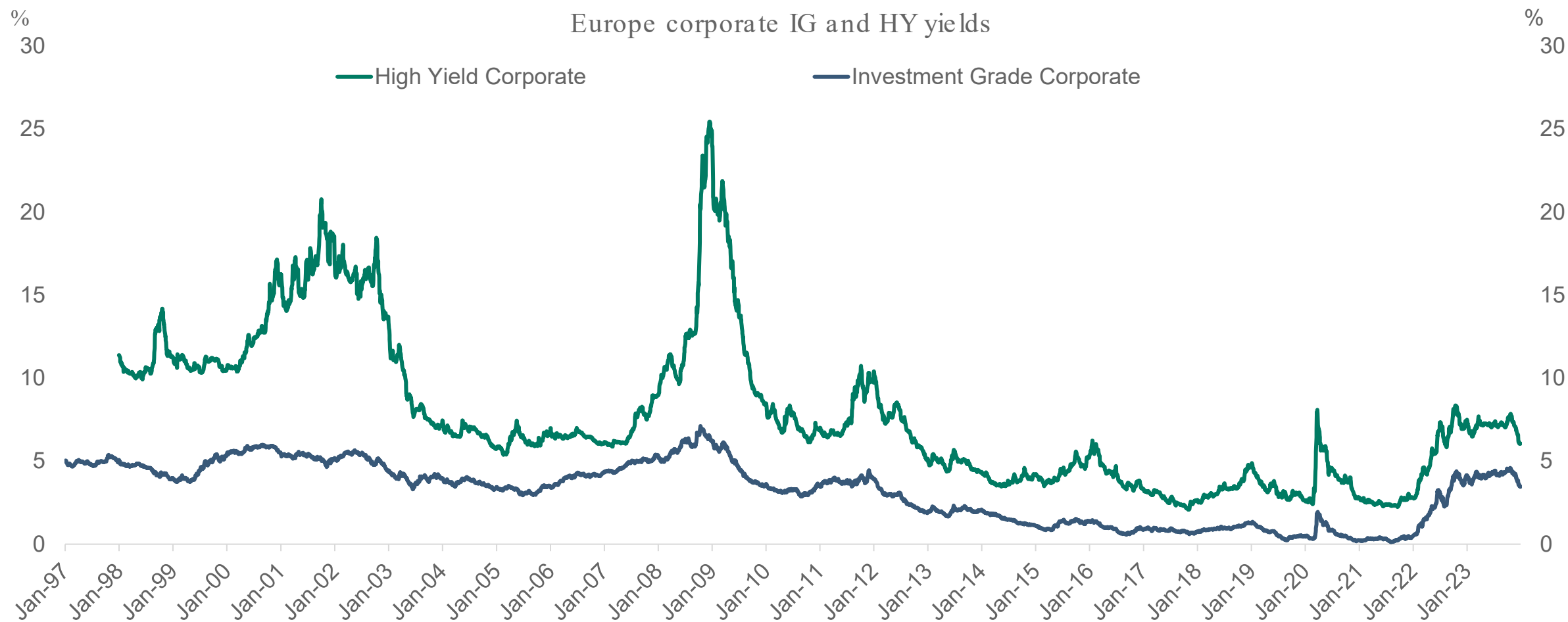
US IG yield levels, by rating



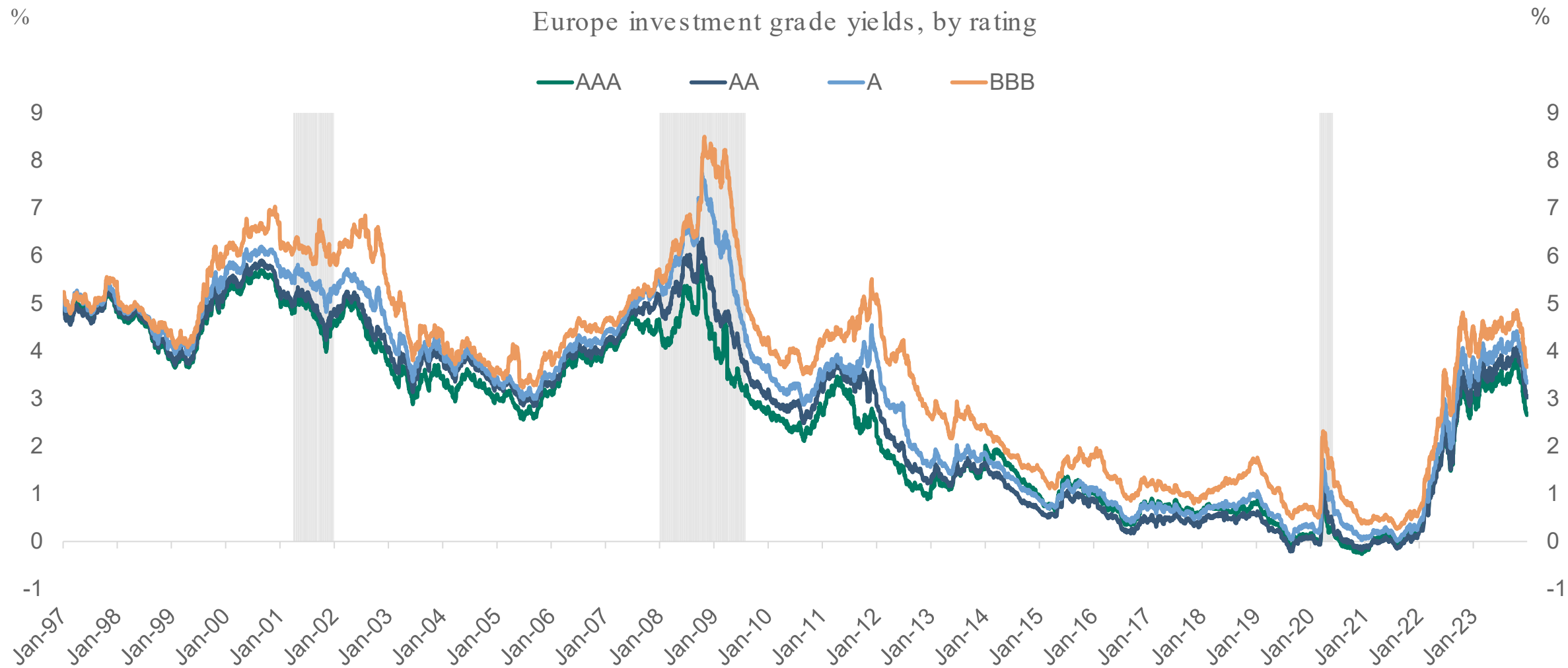
US HY yield levels, by rating



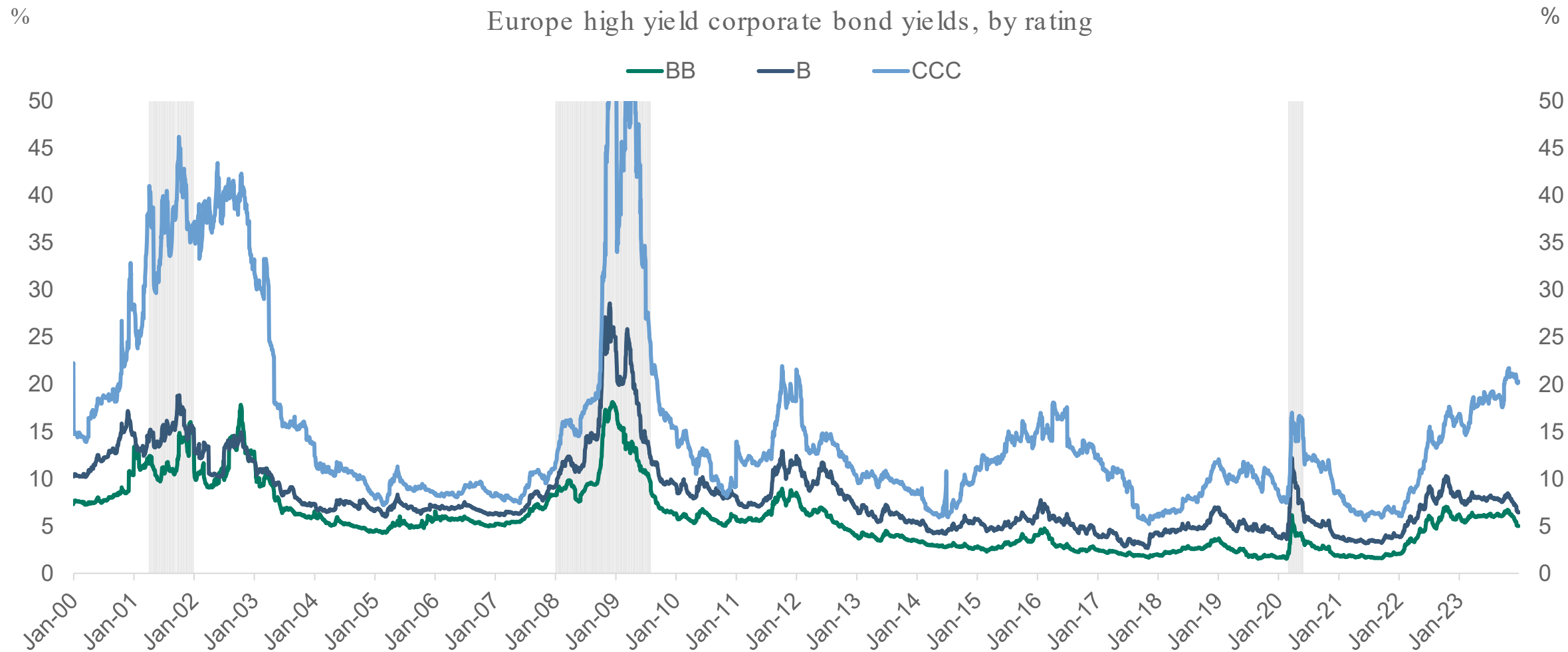
European corporate IG and HY yields



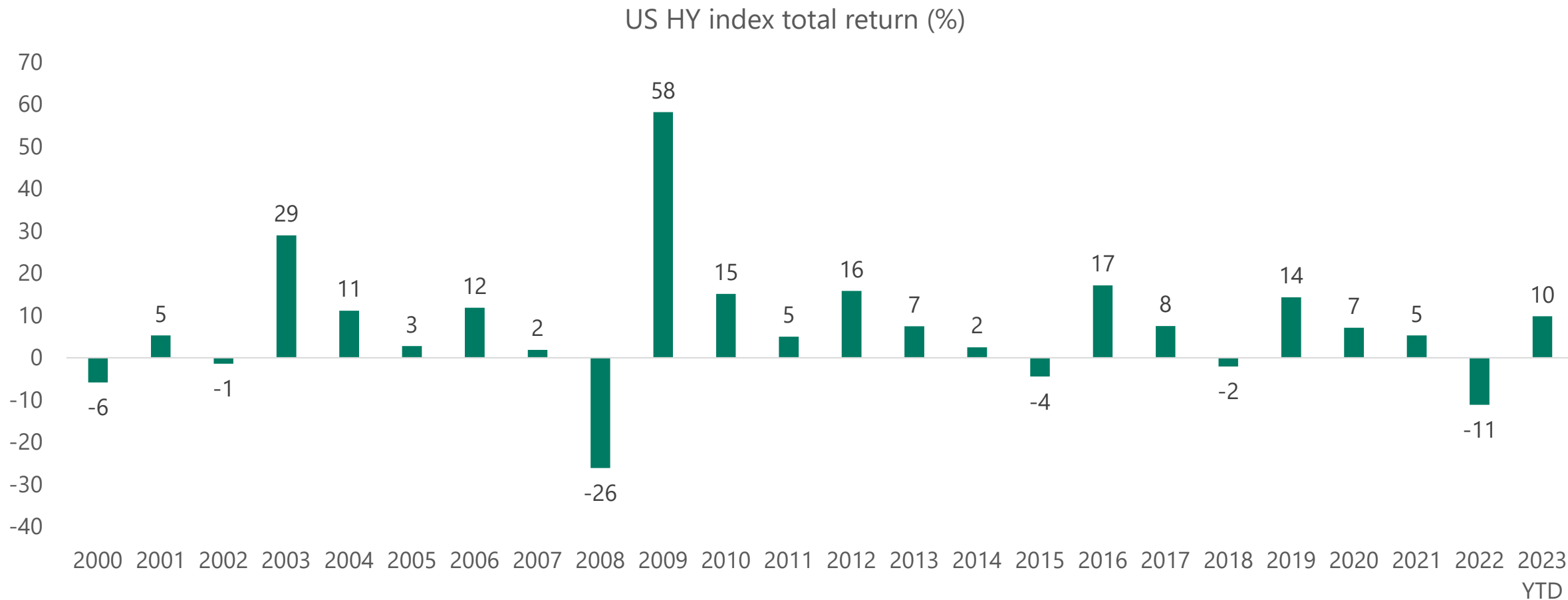
European IG yield levels, by rating



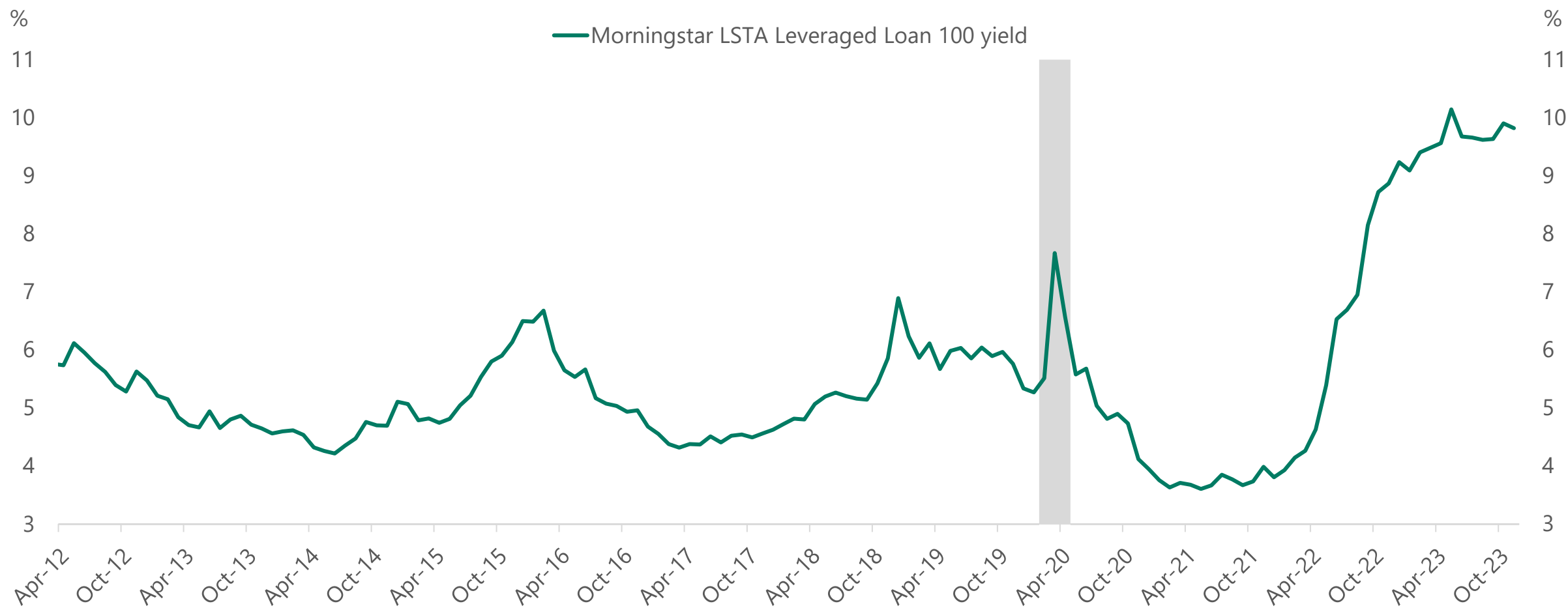
European HY yield levels, by rating



Annual returns for HY



Yield for the leveraged loan index: 9.9%



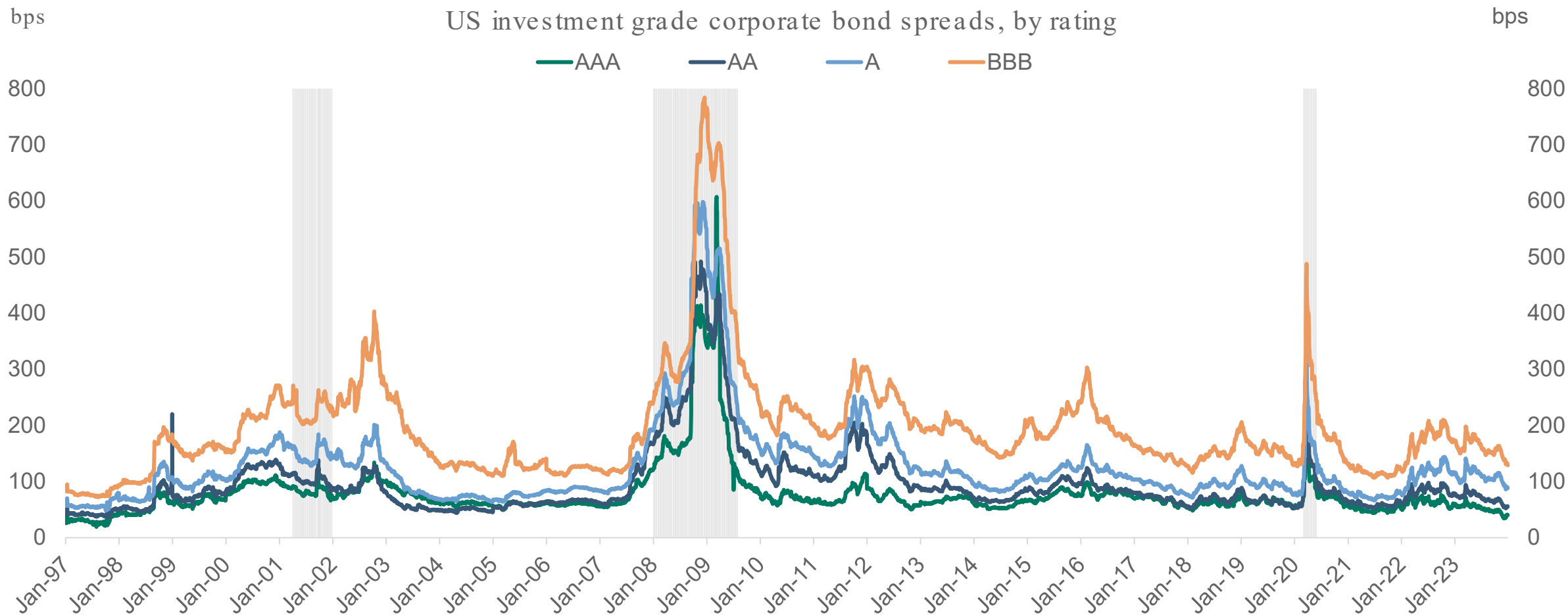
Spread levels



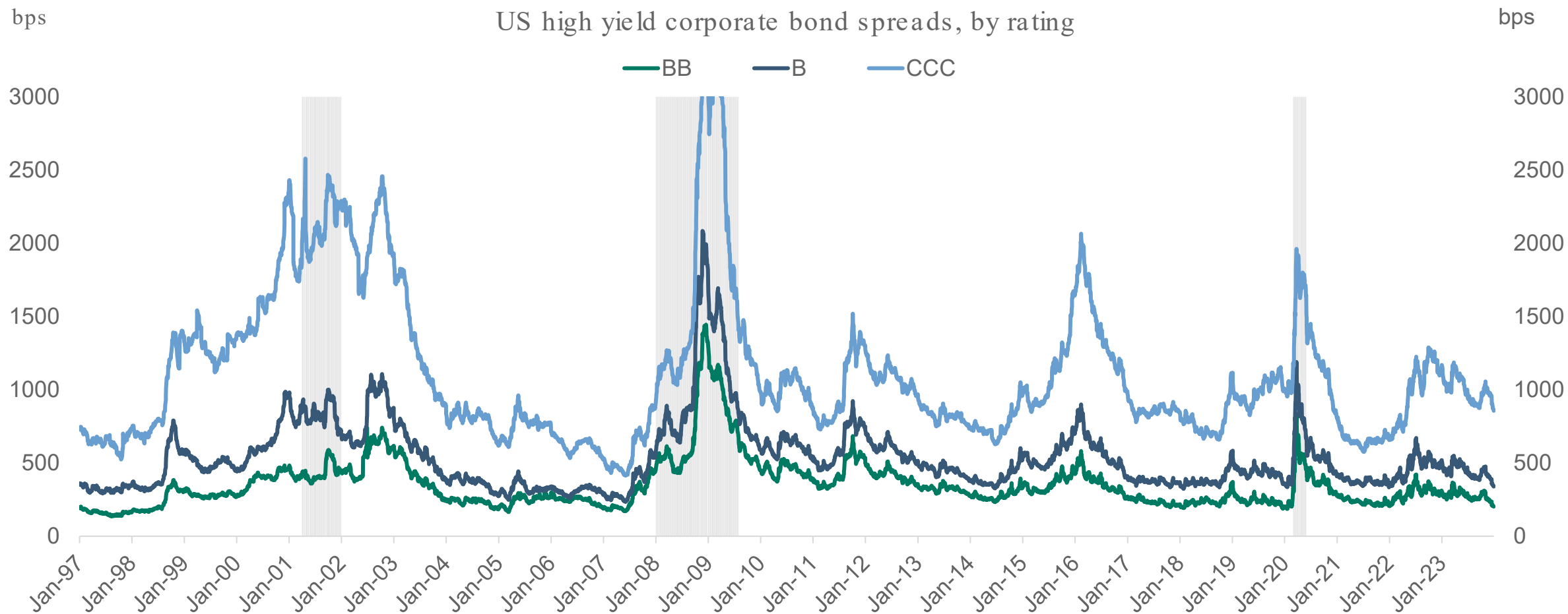
Credit spreads not pricing in a recession



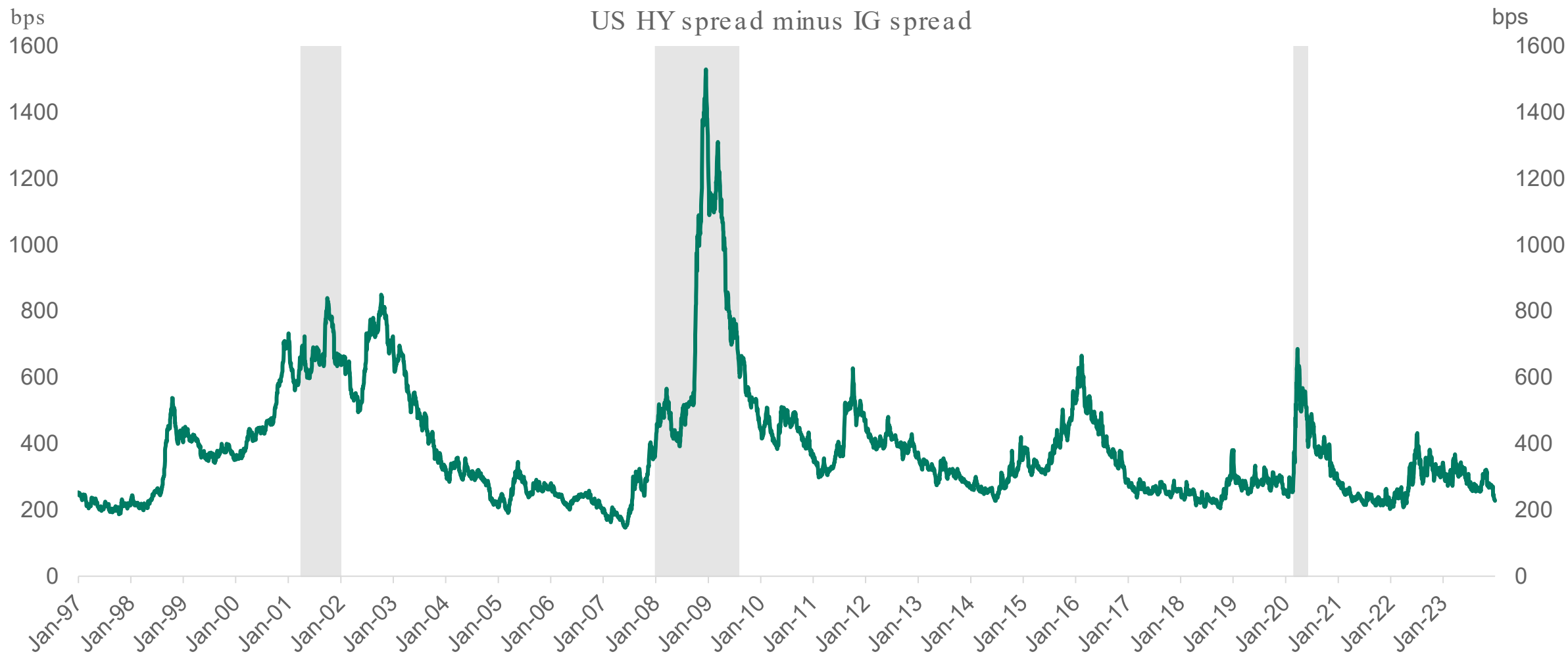
IG spreads by rating



HY spreads by rating

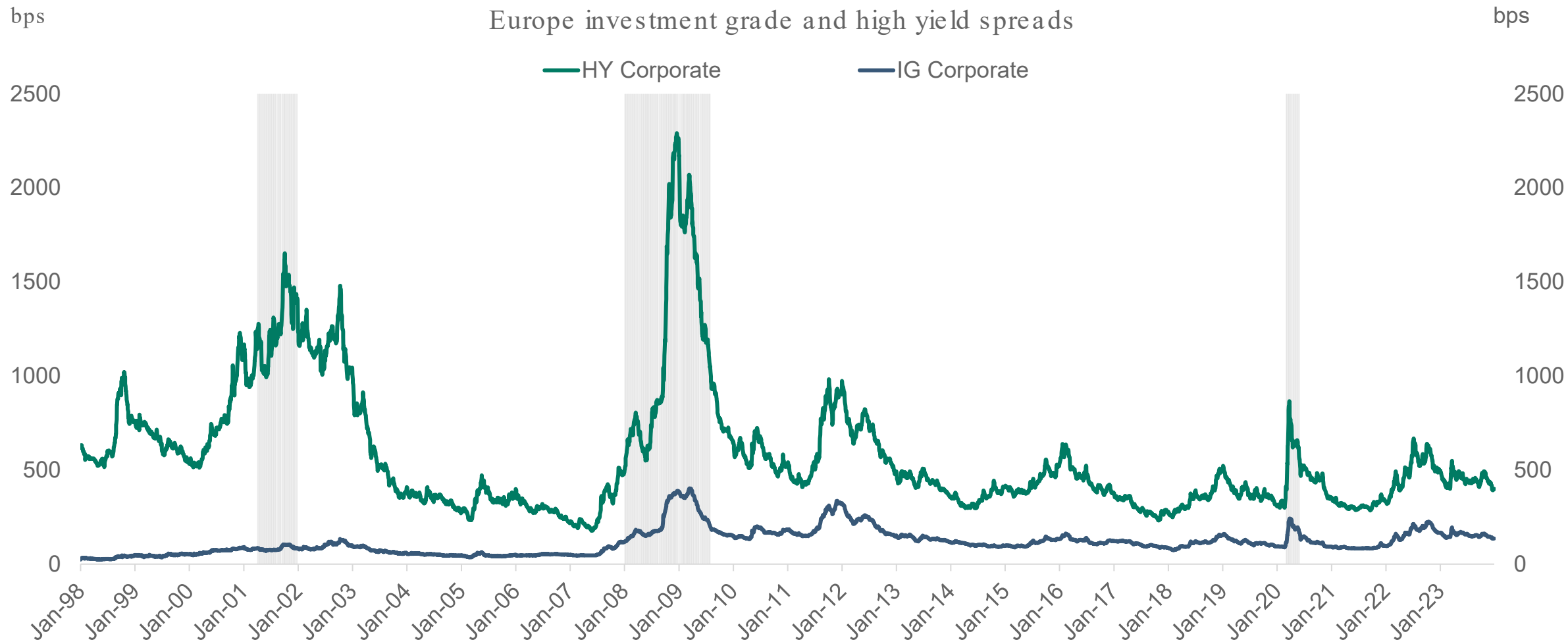


US HY spread minus IG spread



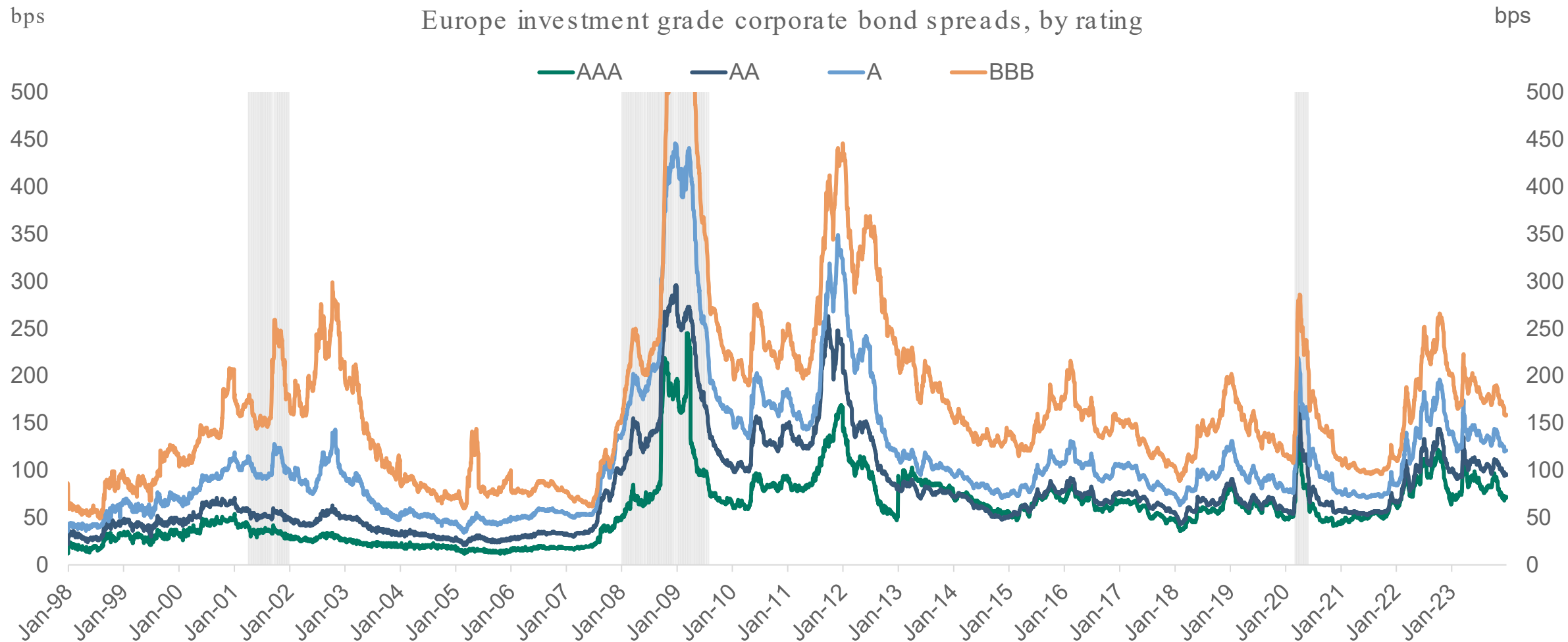
Source: ICE BofA, Bloomberg, Apollo Chief Economist. Note: Bloomberg Index used COA0 Index and H0A0 Index

European IG and HY spreads

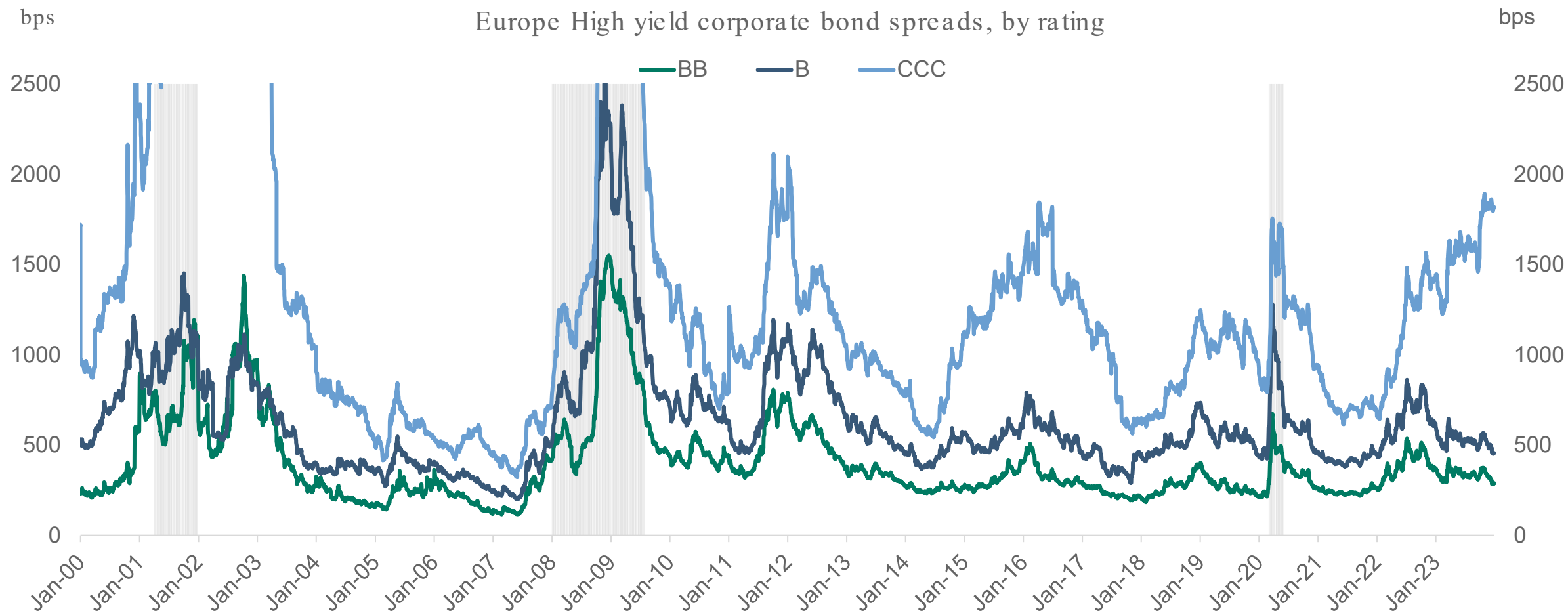


Source: ICE BofA, Bloomberg, Apollo Chief Economist. Note: Ticker used HE00 Index and ER00 Index.

European IG spreads by rating

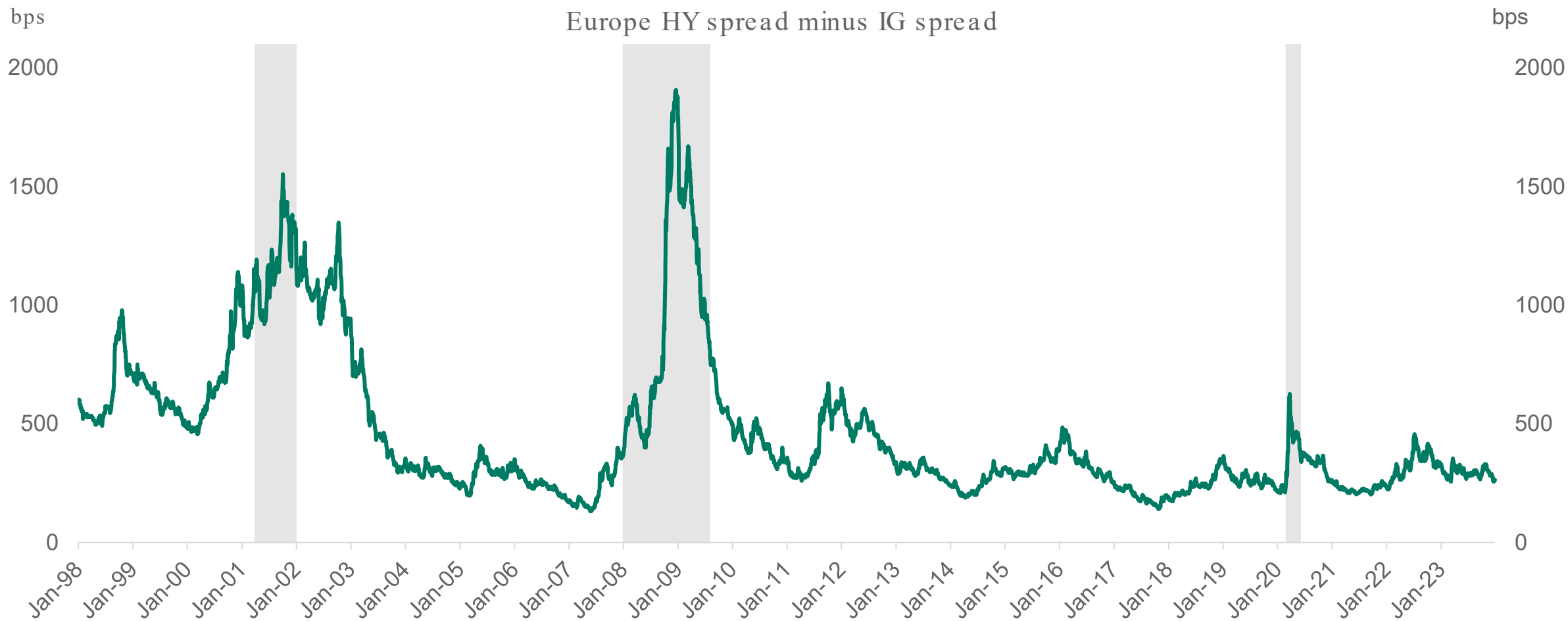


European HY spreads by rating



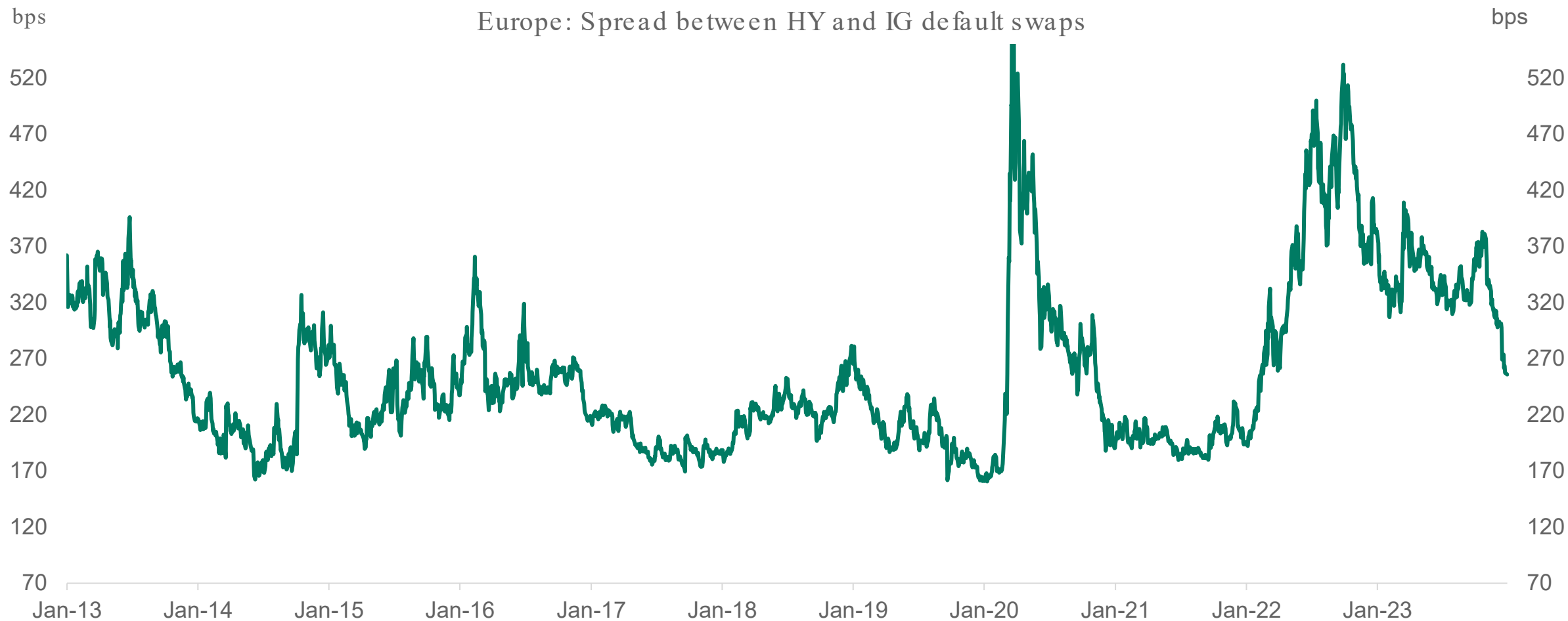
Source: ICE BofA, Bloomberg, Apollo Chief Economist.

European HY spread minus IG spread



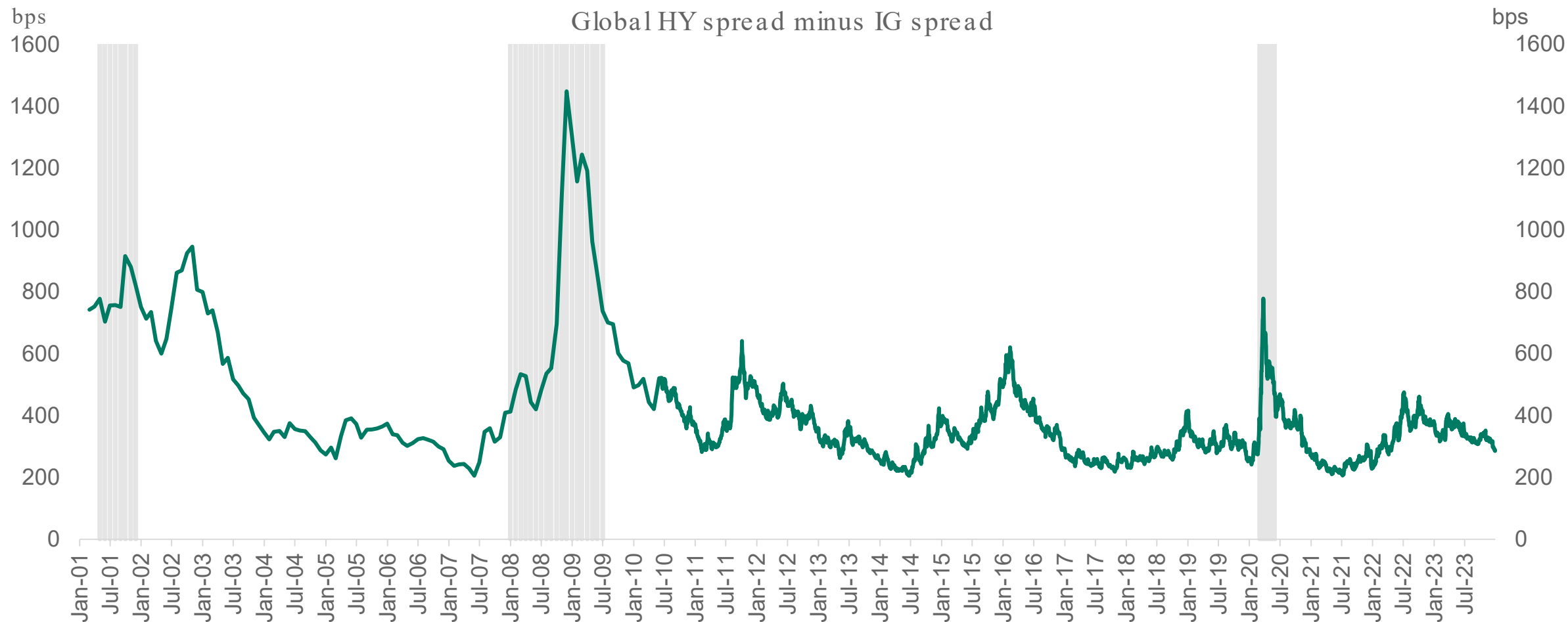
Source: ICE BofA, Bloomberg, Apollo Chief Economist. Note: Ticker used HE00 Index and ER00 Index.

Spread between Europe HY and IG default swaps



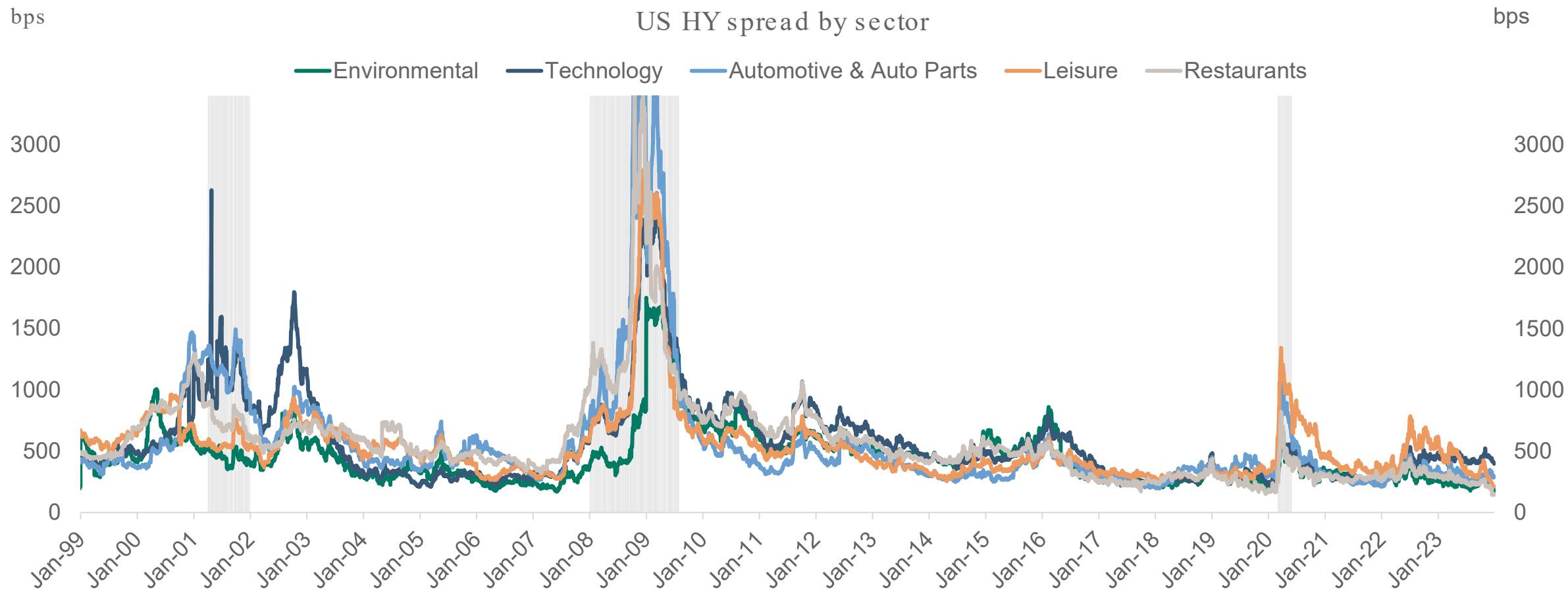
Source: Bloomberg, Apollo Chief Economist. Note: Tickers used ITRXEXE CBBT Curncy and ITRXEBE CBBT Curncy

Global HY spread minus global IG spread

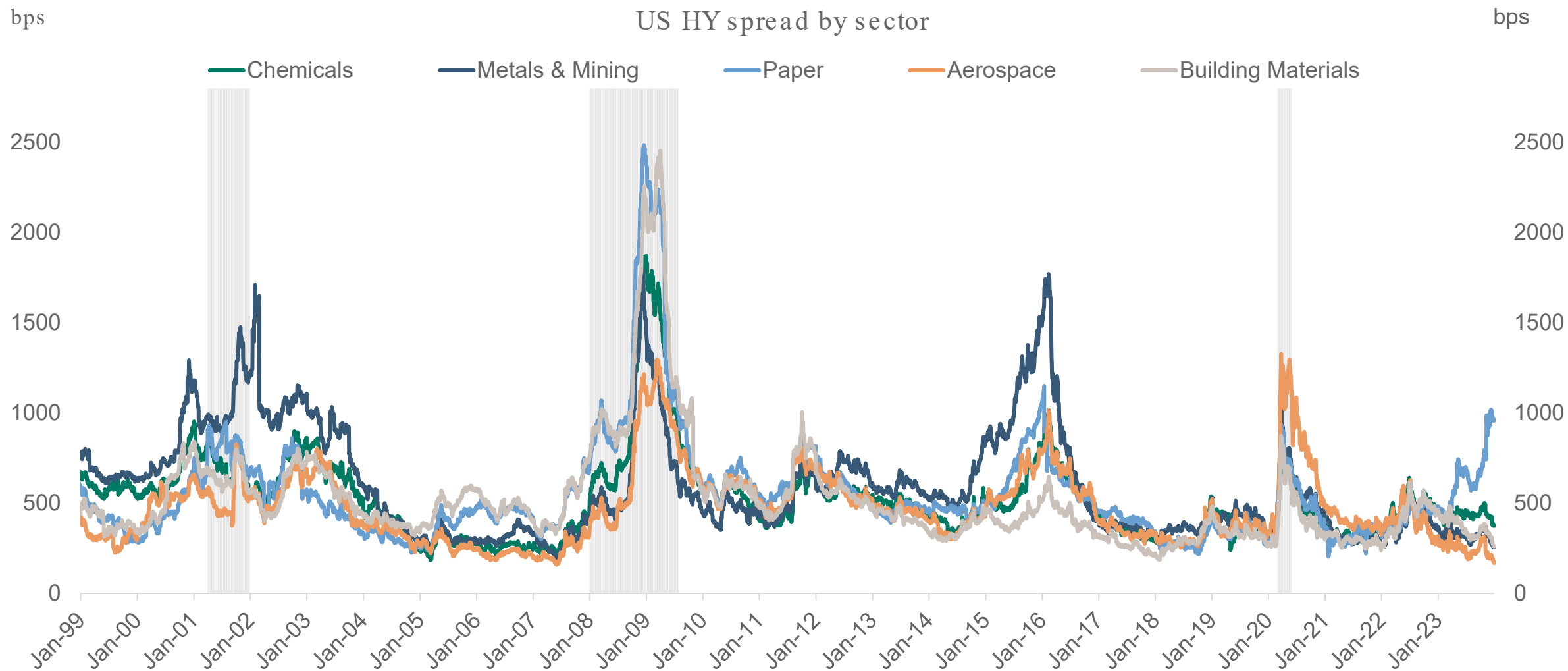


Source: Bloomberg, Apollo Chief Economist. Note: Bloomberg Index used BGLCTRUU index and LG50TRUU Index

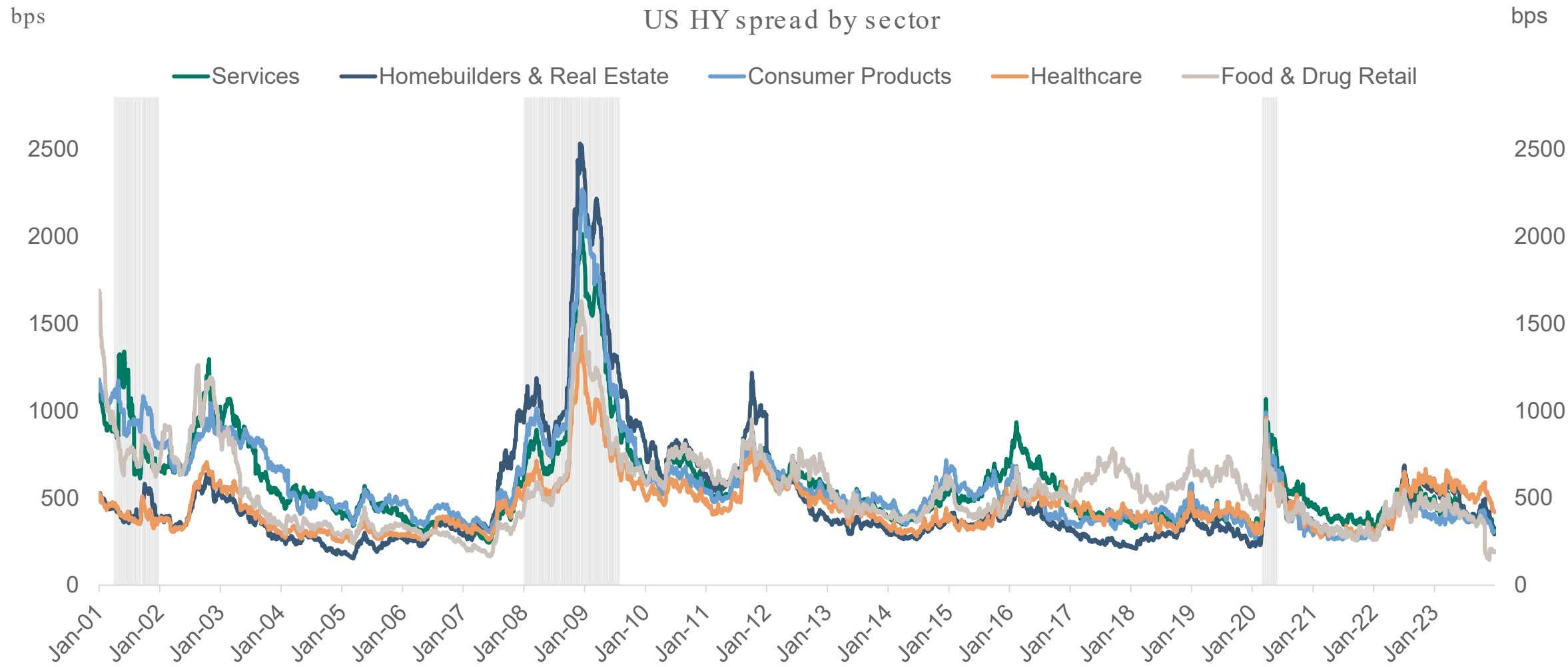
HY spreads by sector: Spread for tech remains wider



HY spreads by sector: Spread for paper has widened

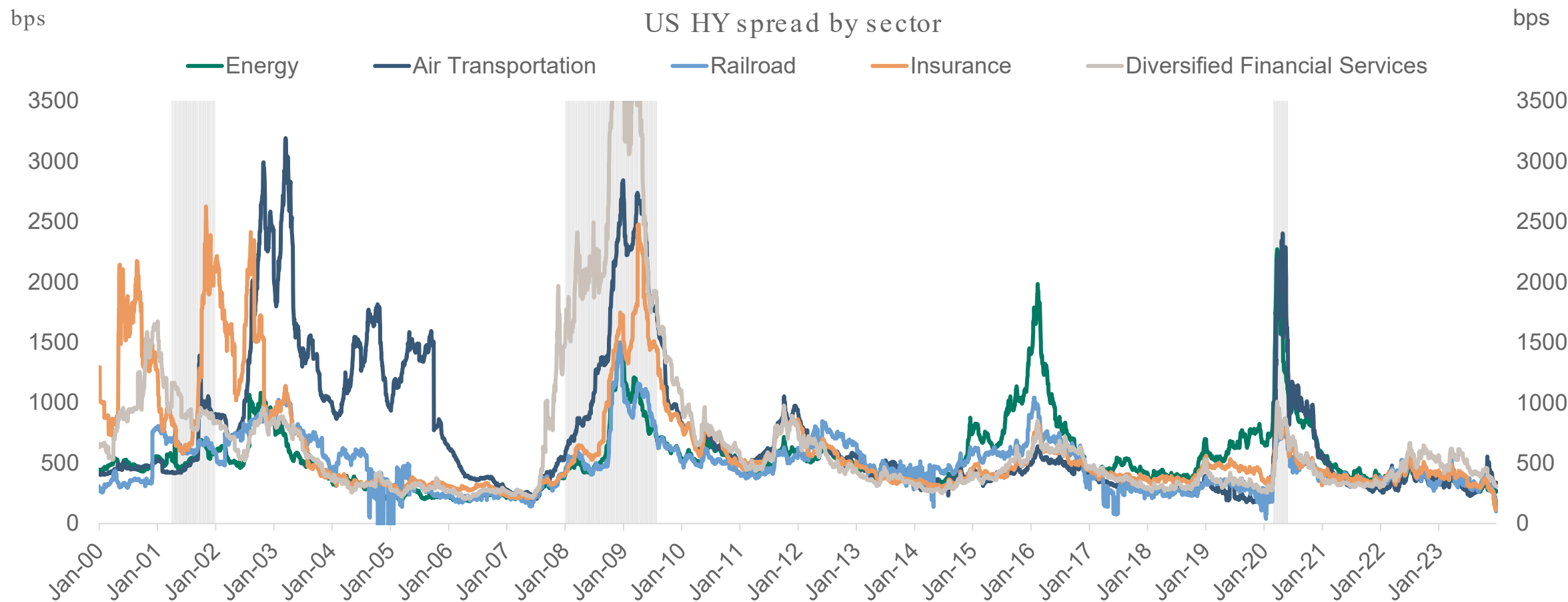


HY spreads by sector



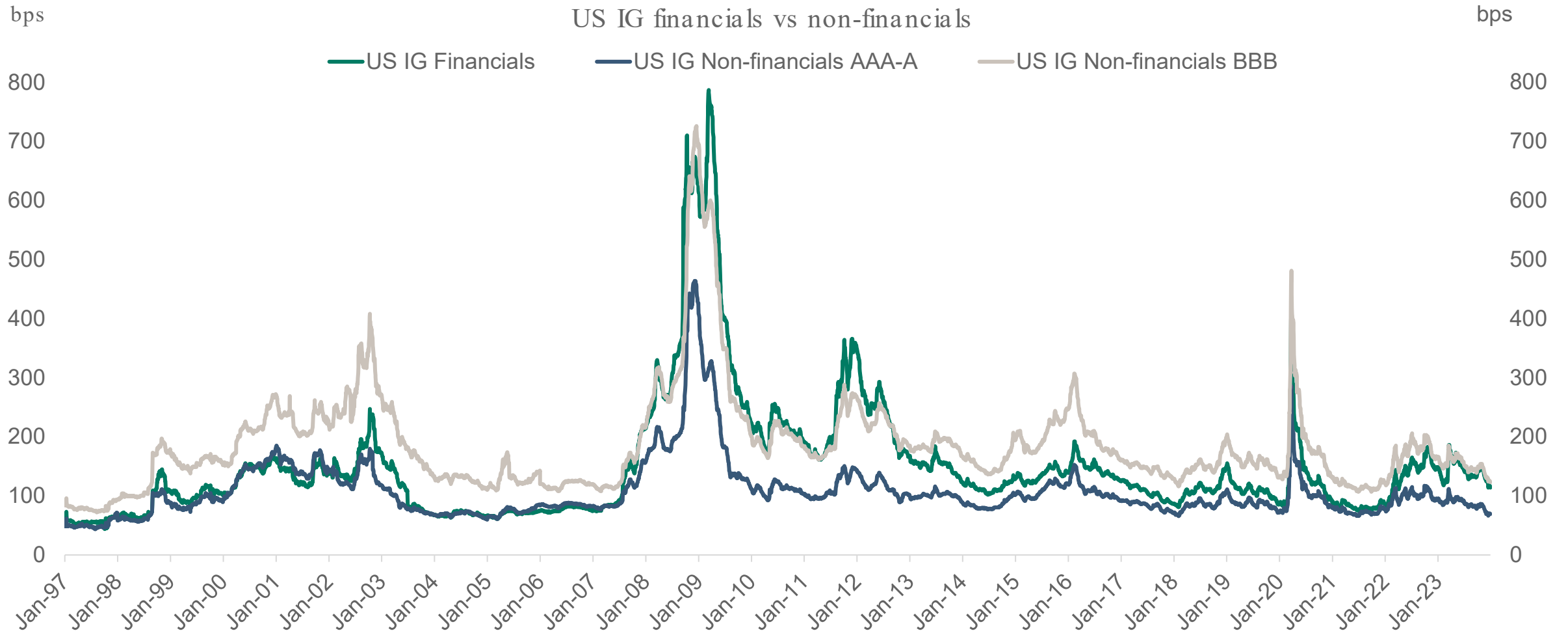
Source: ICE BofA, Bloomberg, Apollo Chief Economist

HY spreads by sector



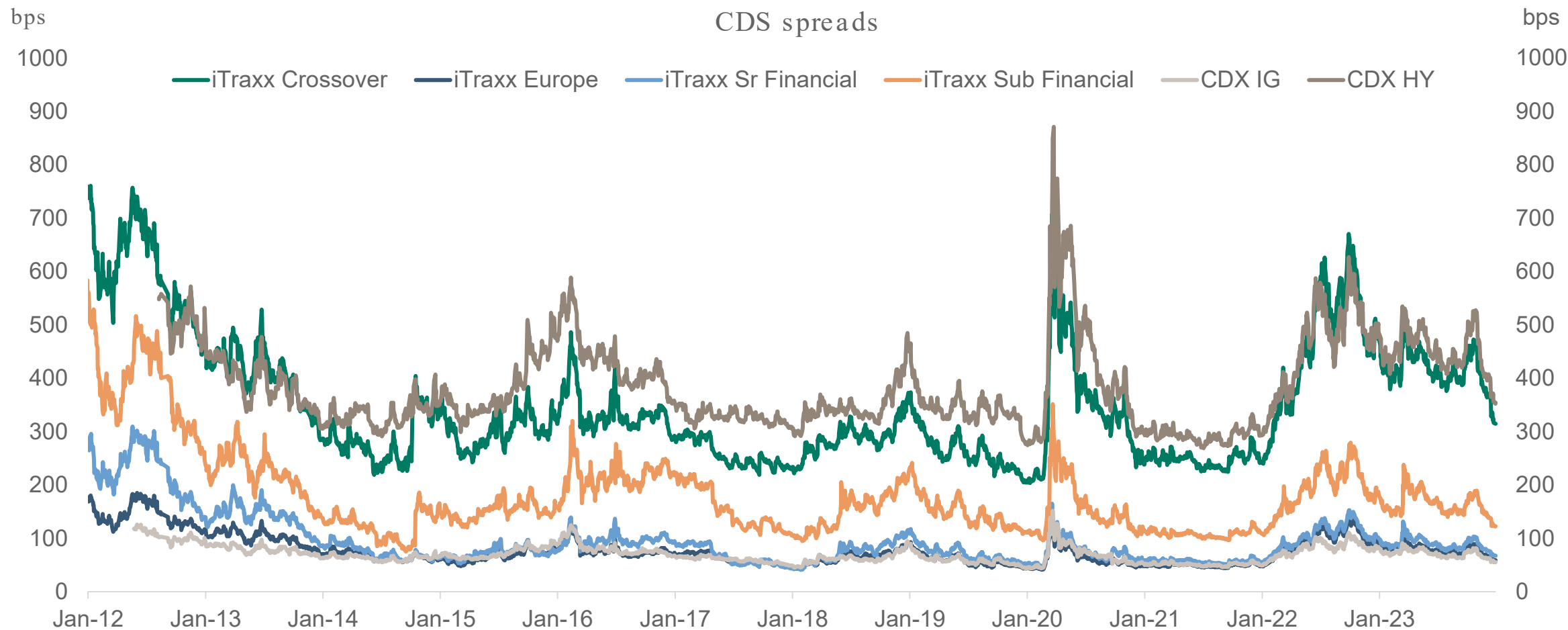
Source: ICE BofA, Bloomberg, Apollo Chief Economist

IG spreads for financials and non-financials

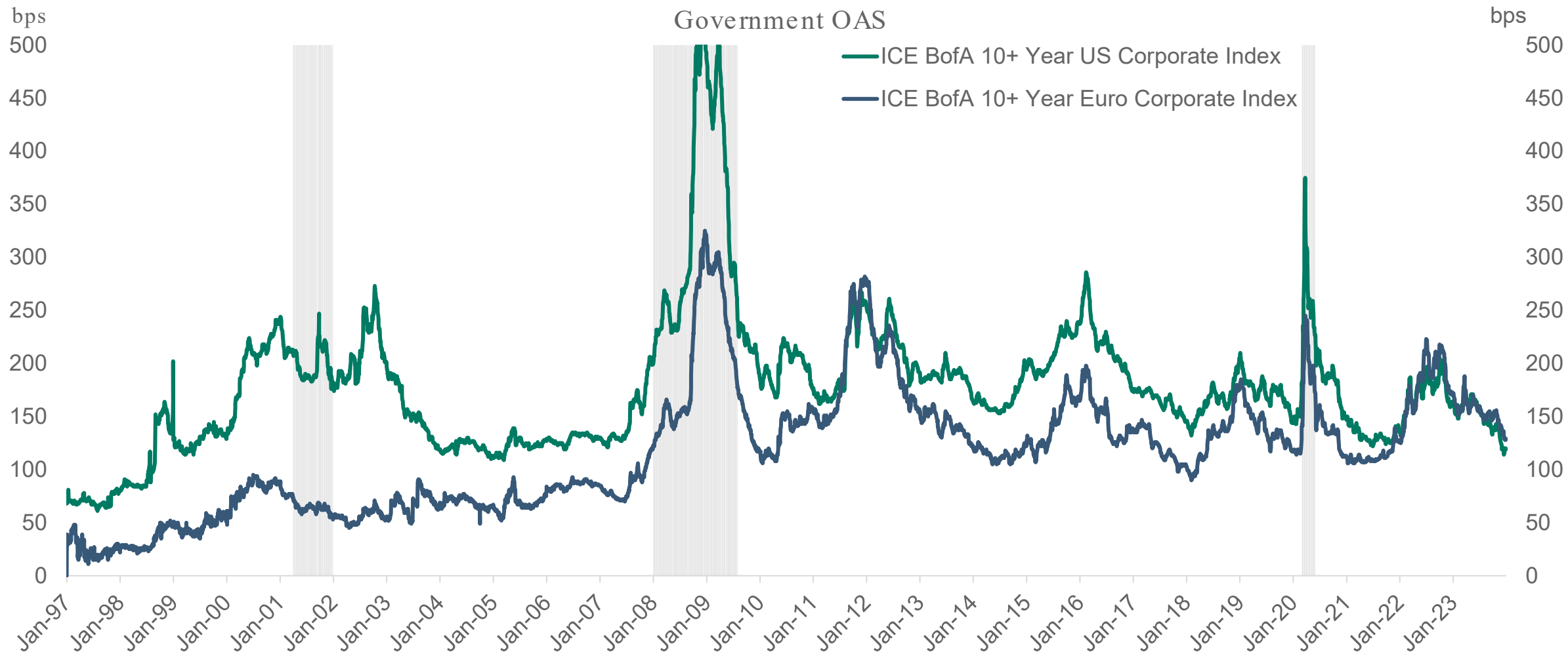


Source: ICE BofA, Bloomberg, Apollo Chief Economist

CDS spreads



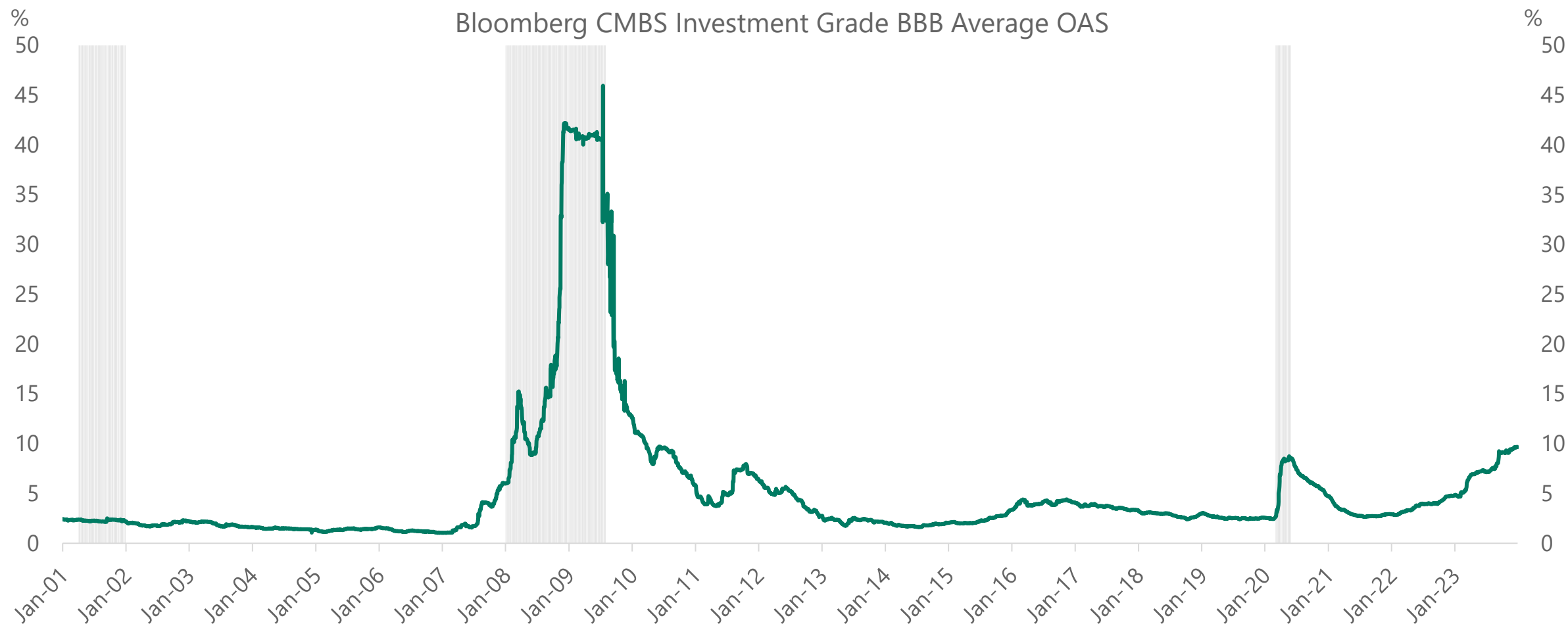
Long-duration IG spreads in US and Europe



Divergence between and US and Europe lower rated junk bond spreads



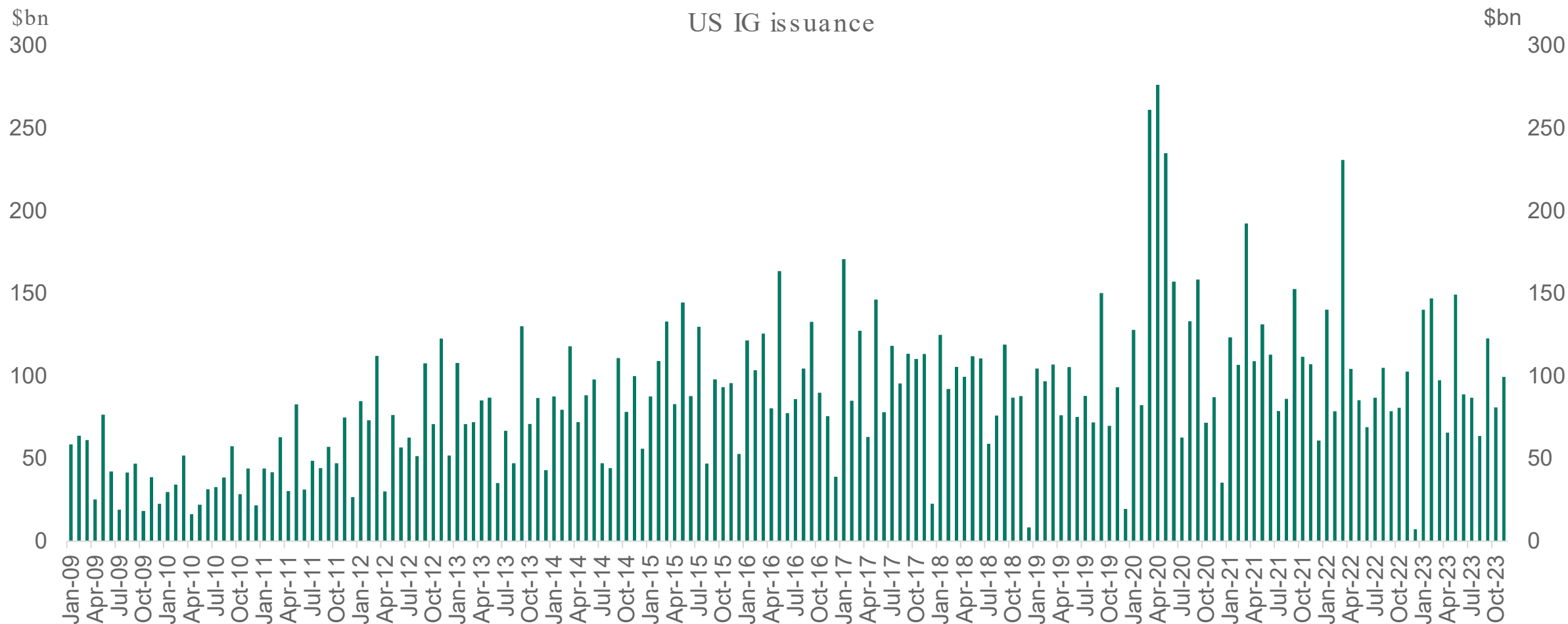
CMBS BBB spreads



New issuance

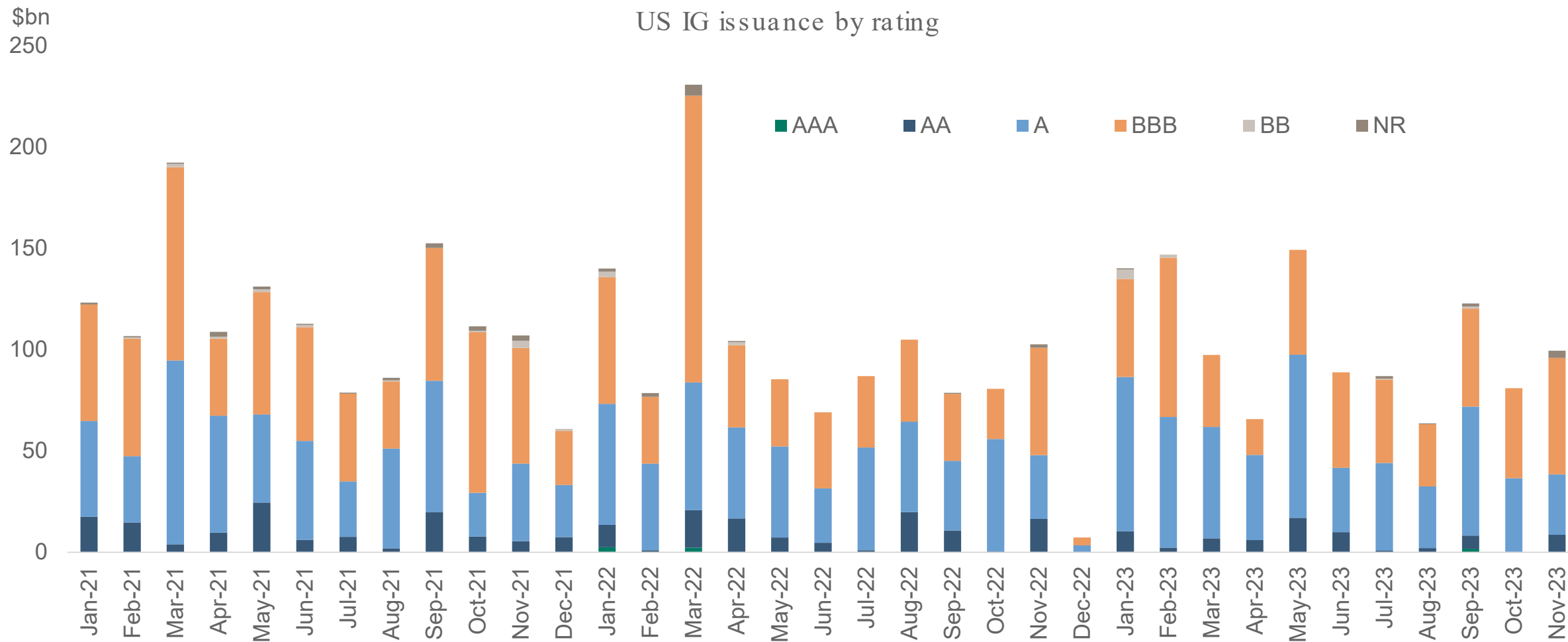


US IG issuance



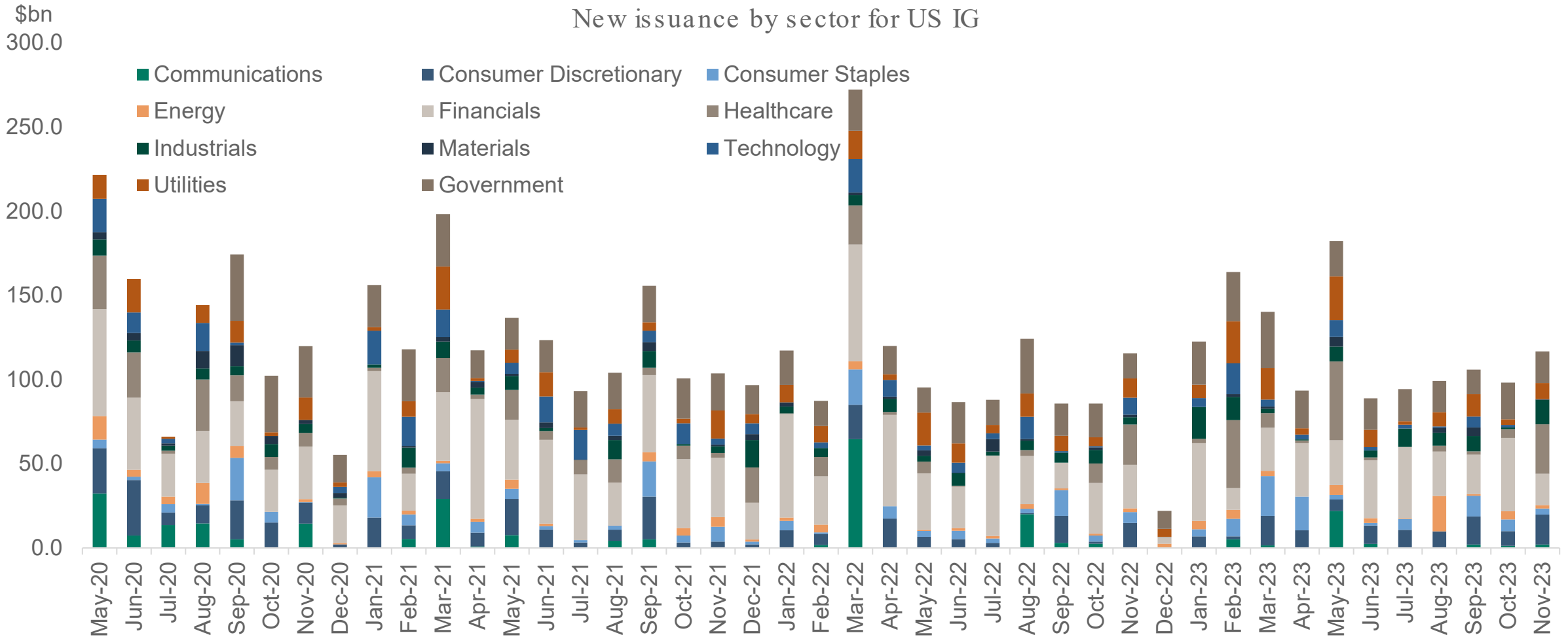
Source: Pitchbook LCD, Apollo Chief Economist

IG issuance by rating



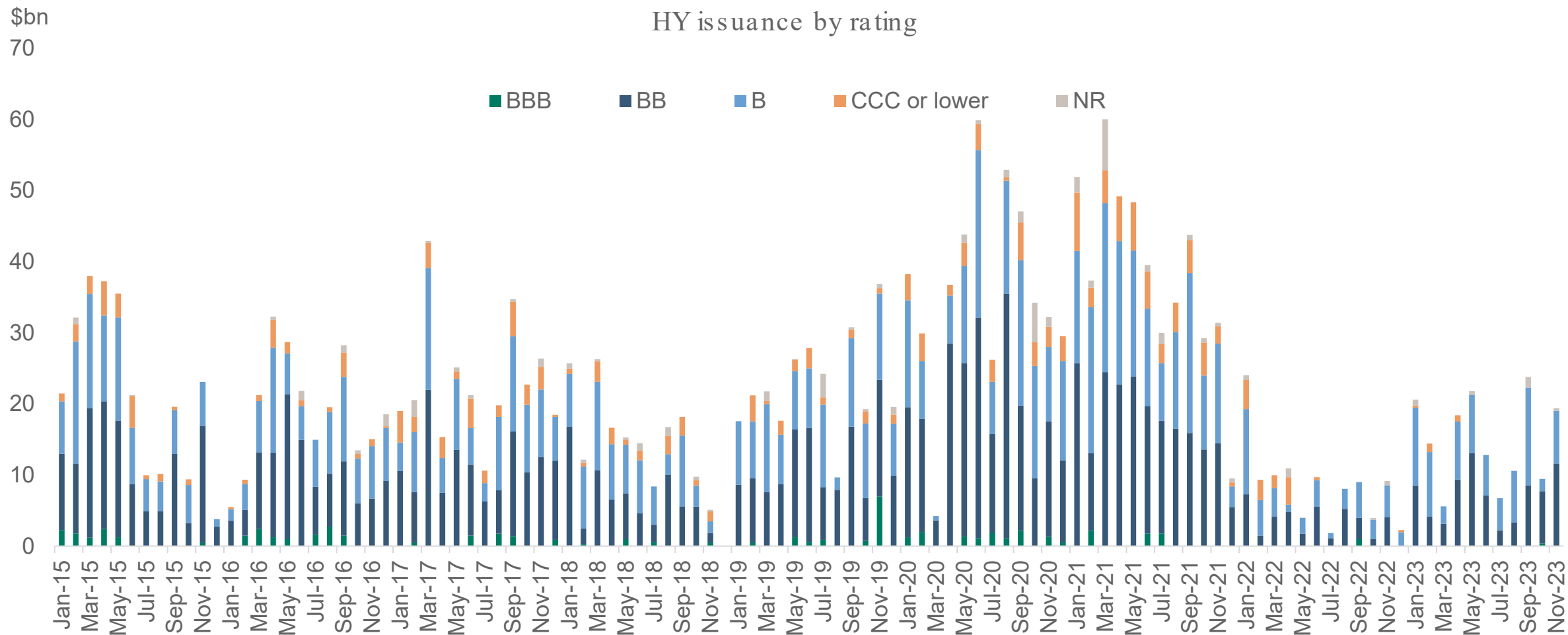
Source: Pitchbook LCD, Apollo Chief Economist.

Sector distribution of new IG issuance



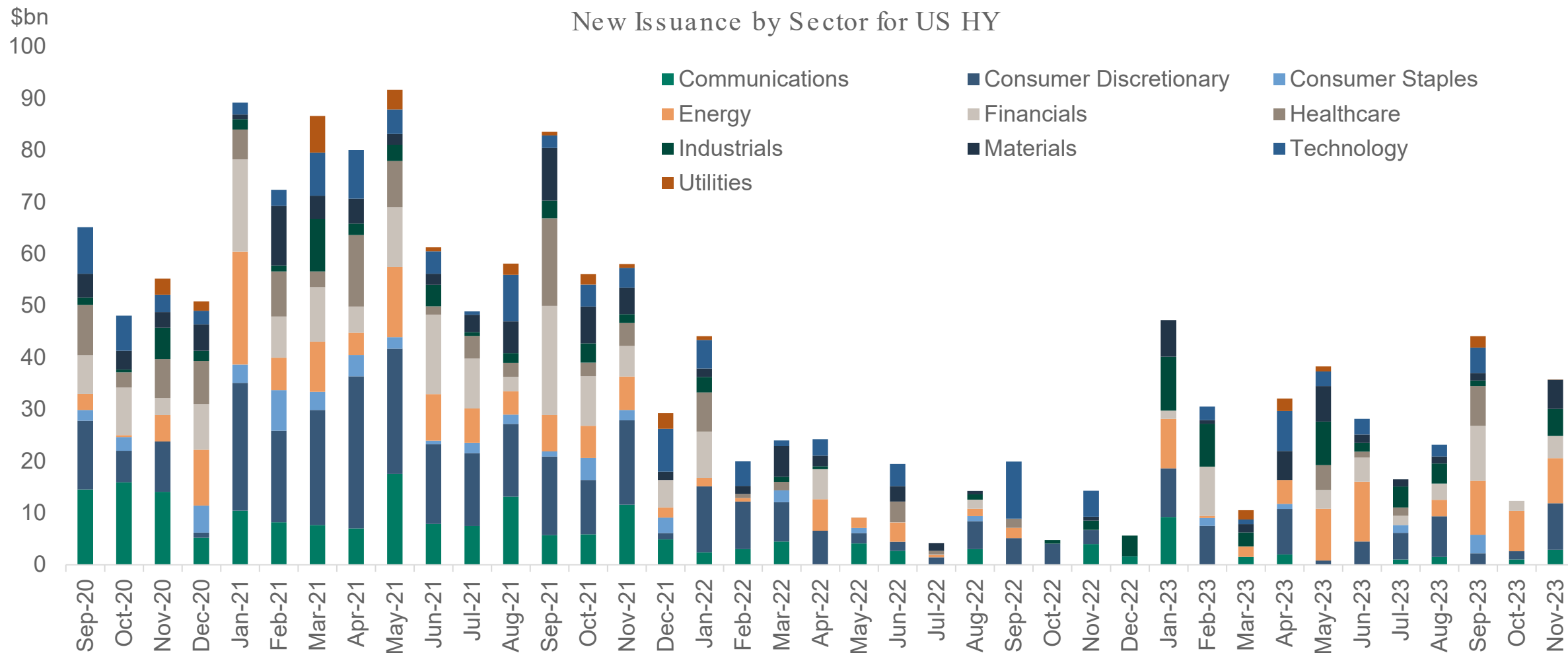
Source: Bloomberg, Apollo Chief Economist. Note: Issuance includes bonds, loans, leveraged loans, and preferred.

HY issuance by rating



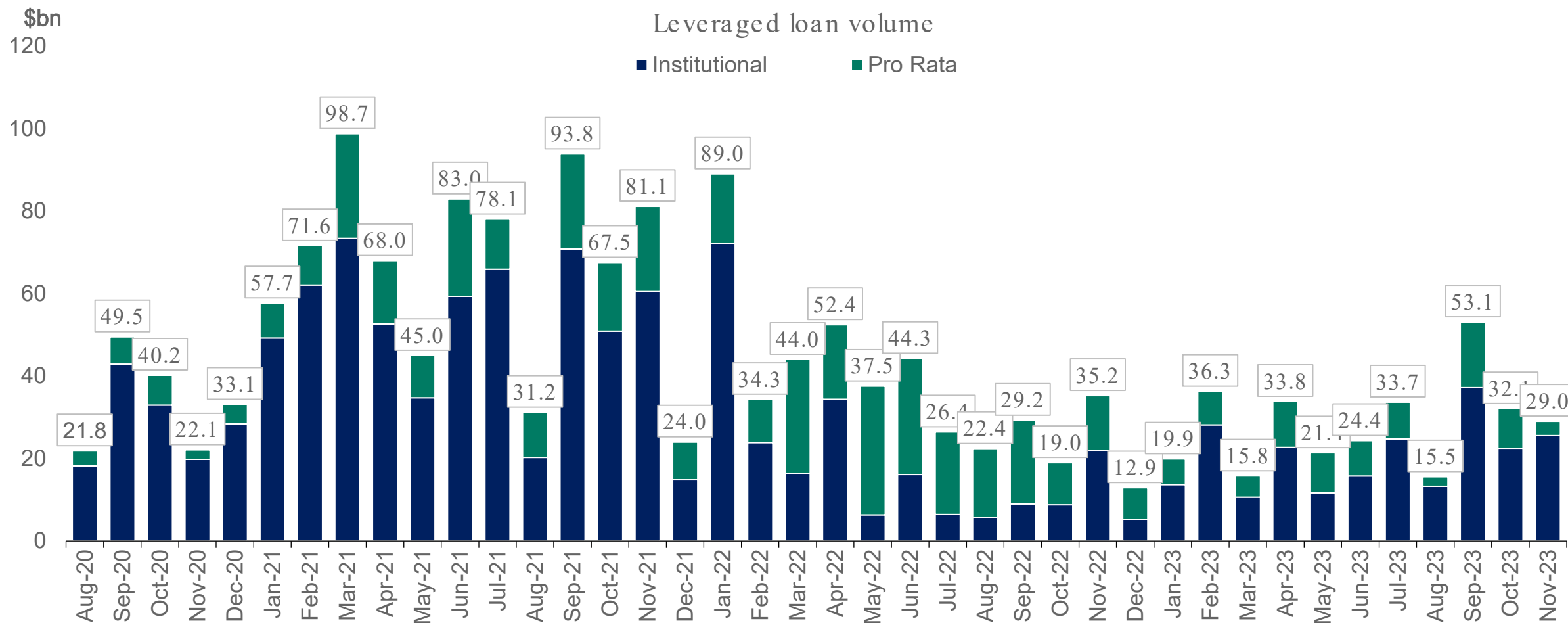
Source: Pitchbook LCD, Apollo Chief Economist.

Sector distribution of new HY issuance



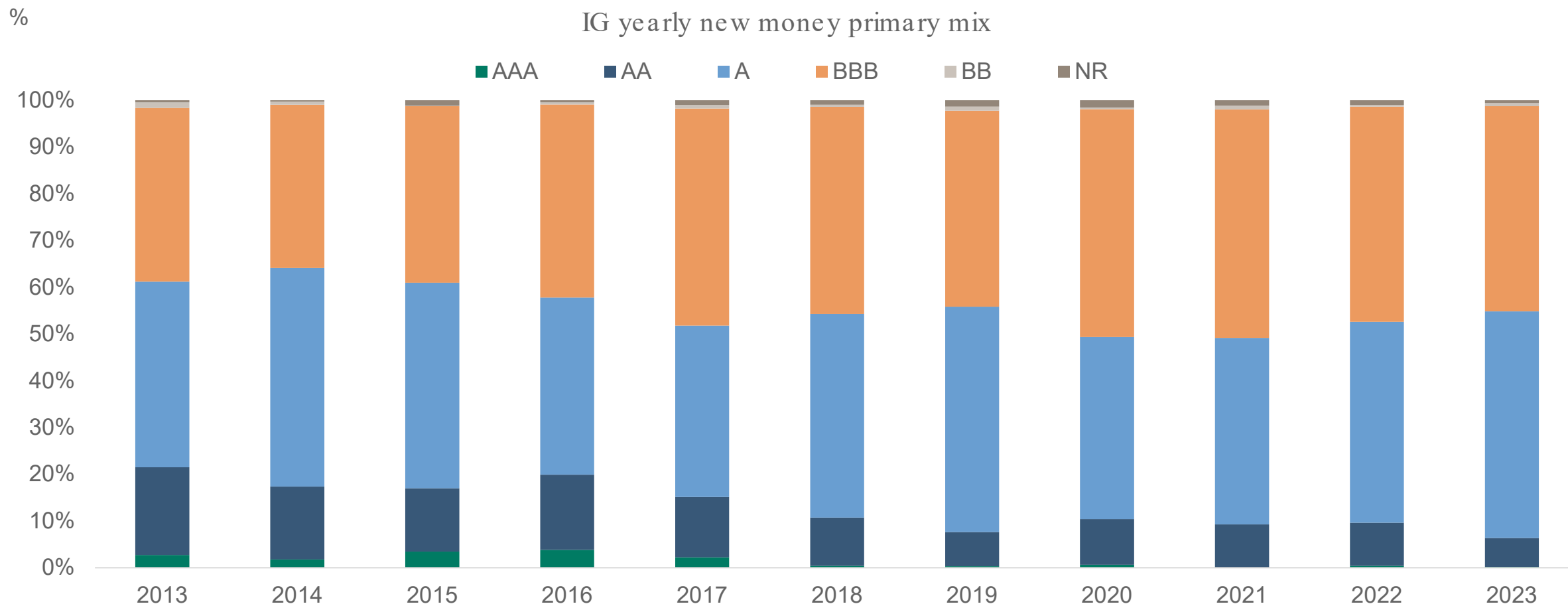
Source: Bloomberg, Apollo Chief Economist. Note: Issuance includes bonds, loans, leveraged loans and preferred.

Leveraged loan volume



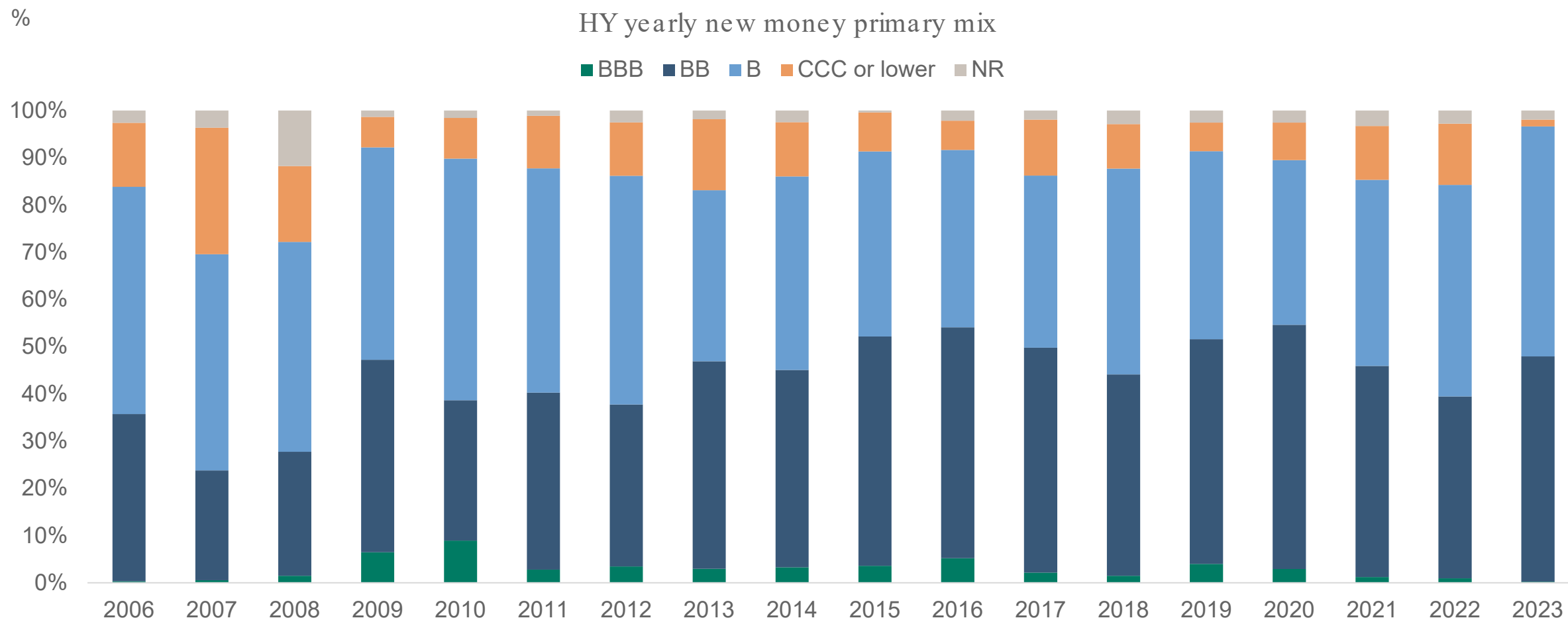
Source: Pitchbook LCD, Apollo Chief Economist.

IG new money primary mix



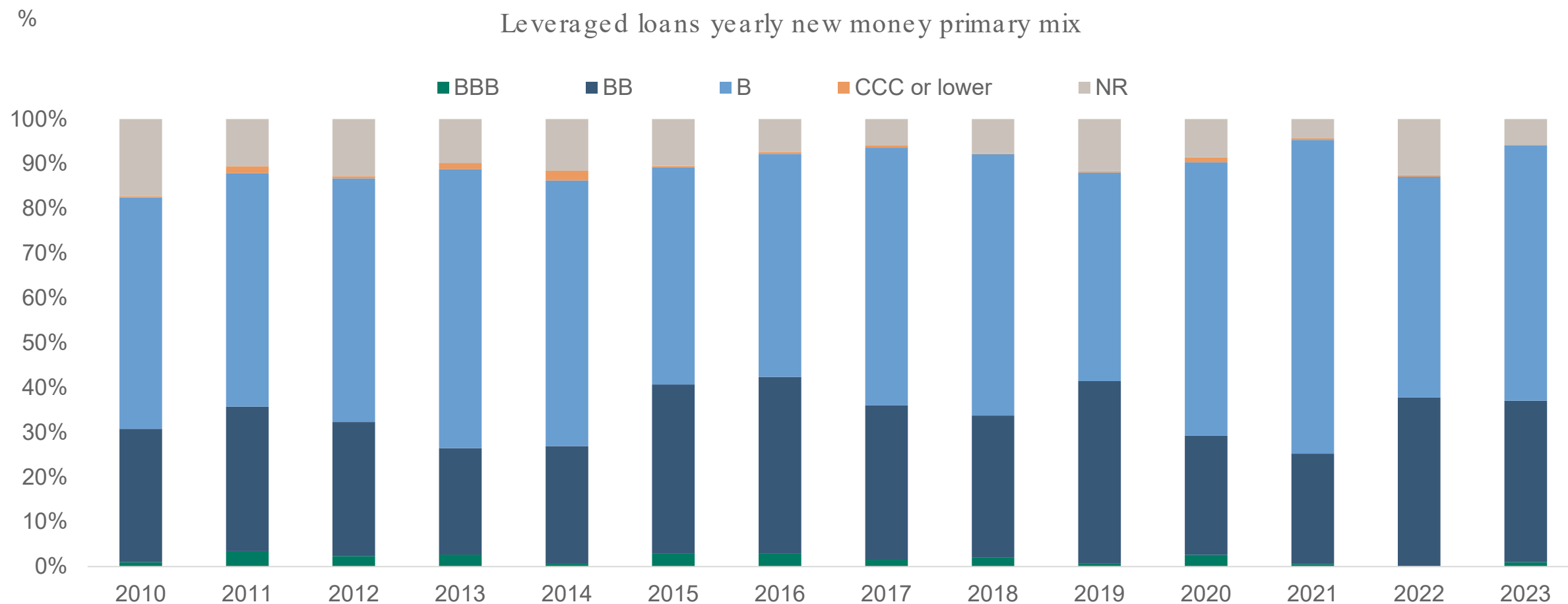
Source: Pitchbook LCD, Apollo Chief Economist. Note: Data as of 30th November 2023.

HY new money primary mix



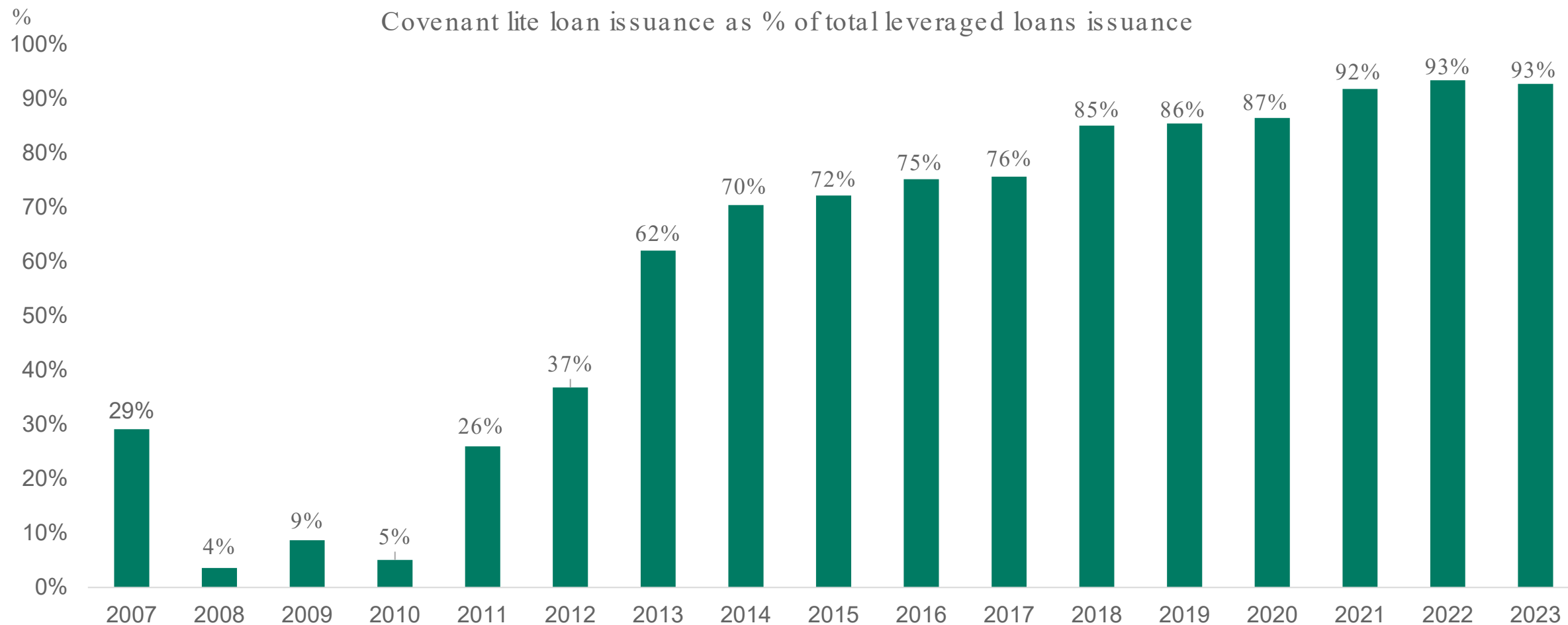
Source: Pitchbook LCD, Apollo Chief Economist. Note: Data as of 30th November 2023

Loans new money primary mix



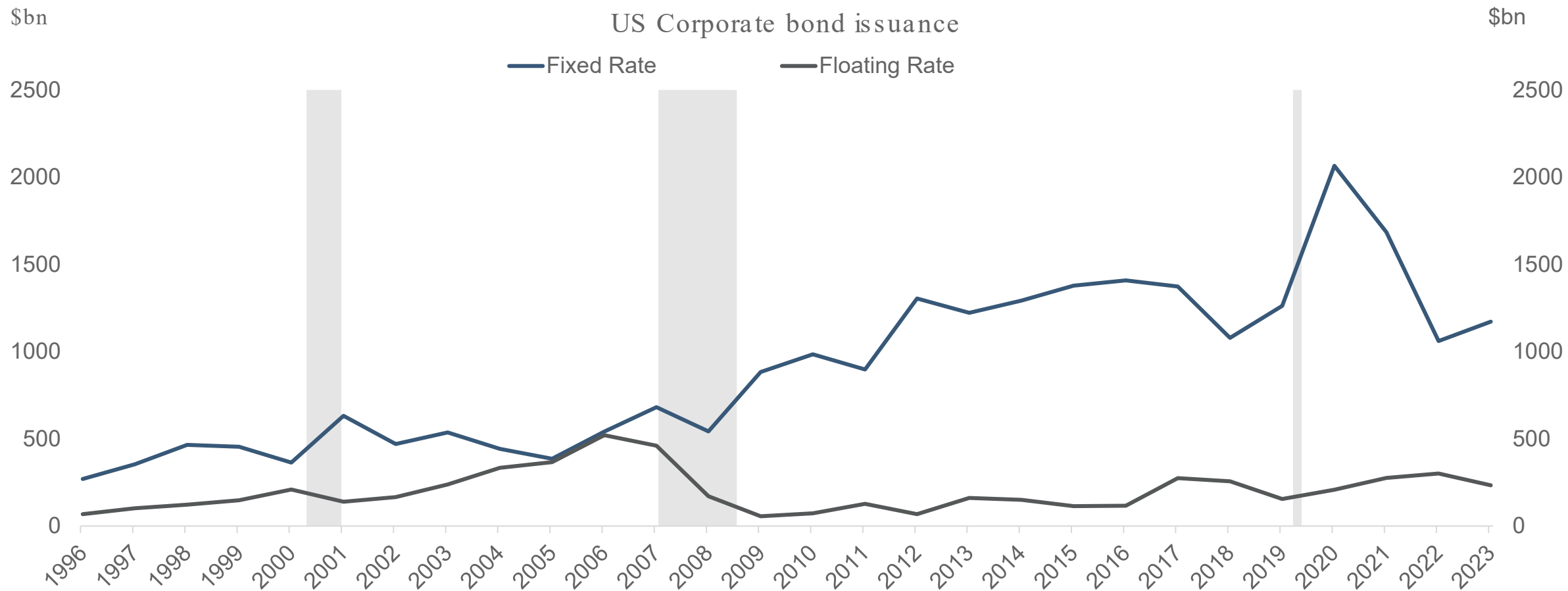
Source: Pitchbook LCD, Apollo Chief Economist. Note: 2022 YTD till of 30th November 2023

Covenant lite loan issuance

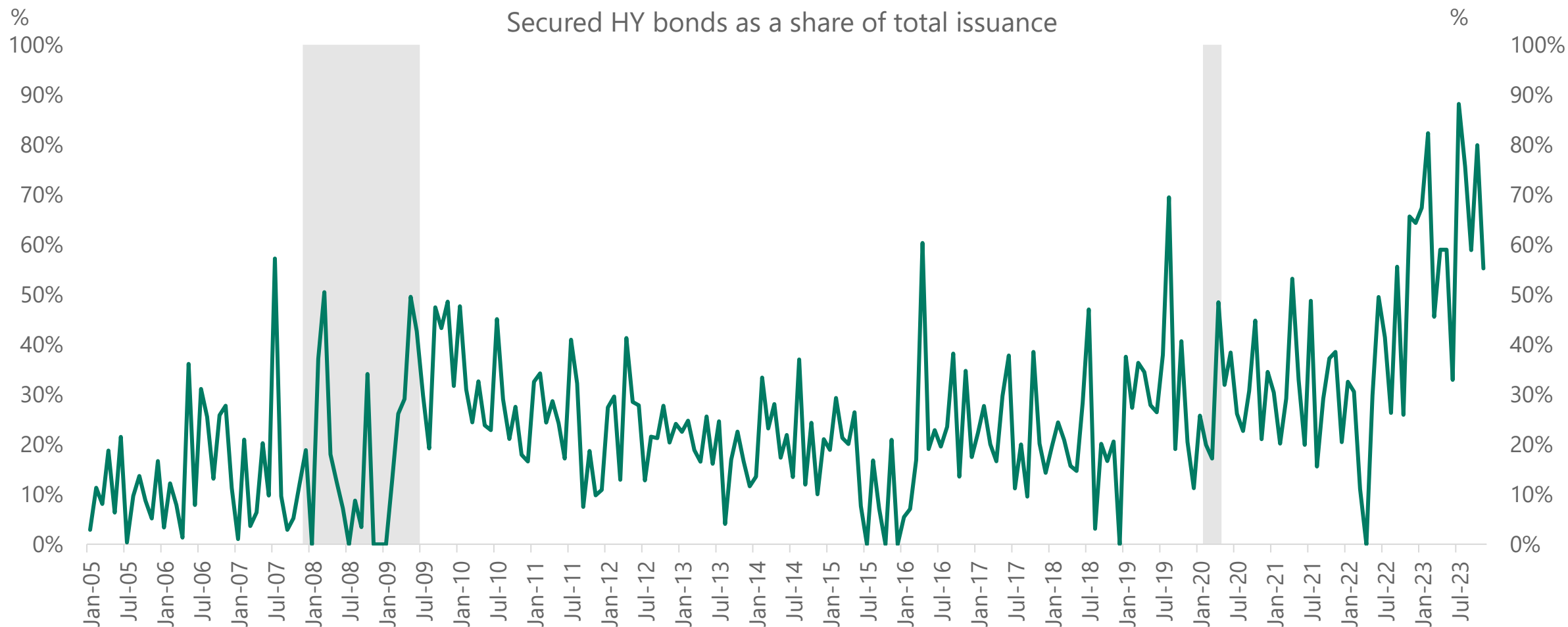


Source: Pitchbook LCD, Apollo Chief Economist.. Note: A covenant-lite loan is a type of financing with fewer restrictions on the borrower and fewer protections for the lender, often used in leveraged buyouts. Data as of 31st October 2023.

Corporate bond issuance



Secured HY bond issuance volume

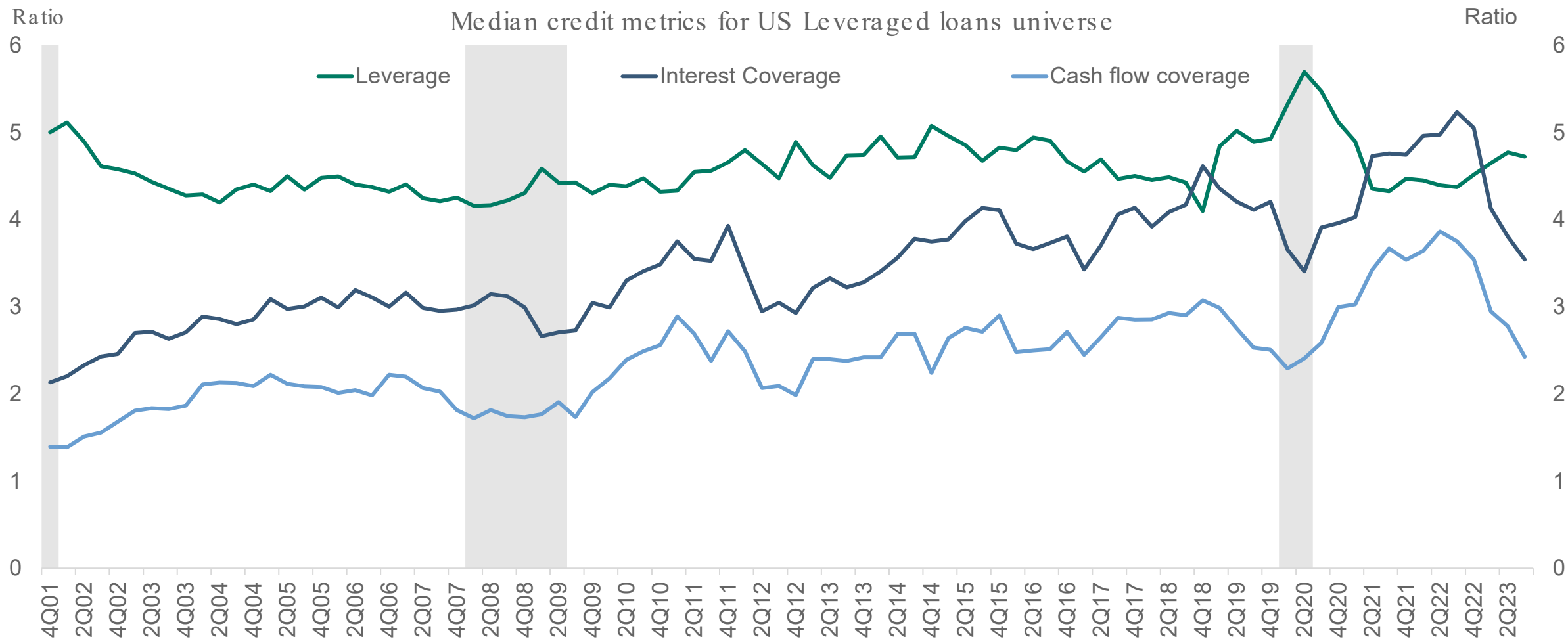


Source: Pitchbook LCD, Apollo Chief Economist. Note: A secured bond is the bond issued with the collateral as a security for the bond

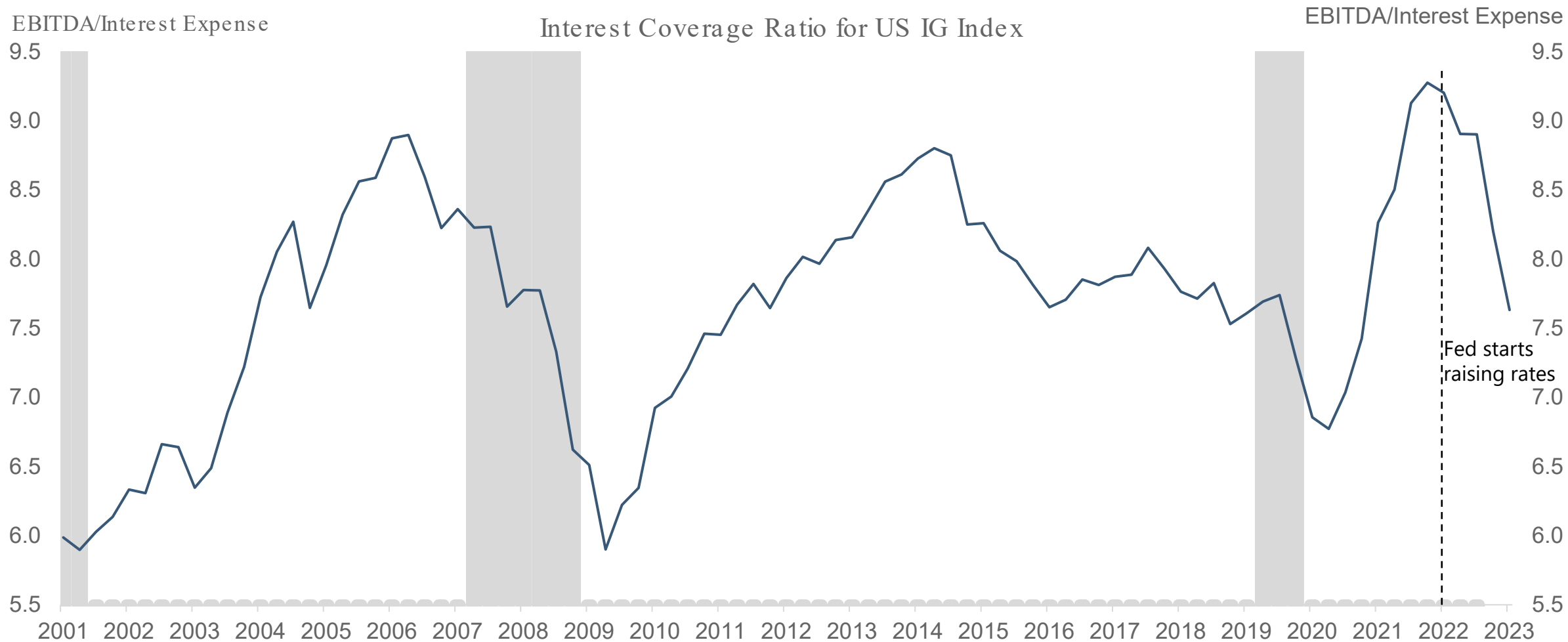
Credit fundamentals



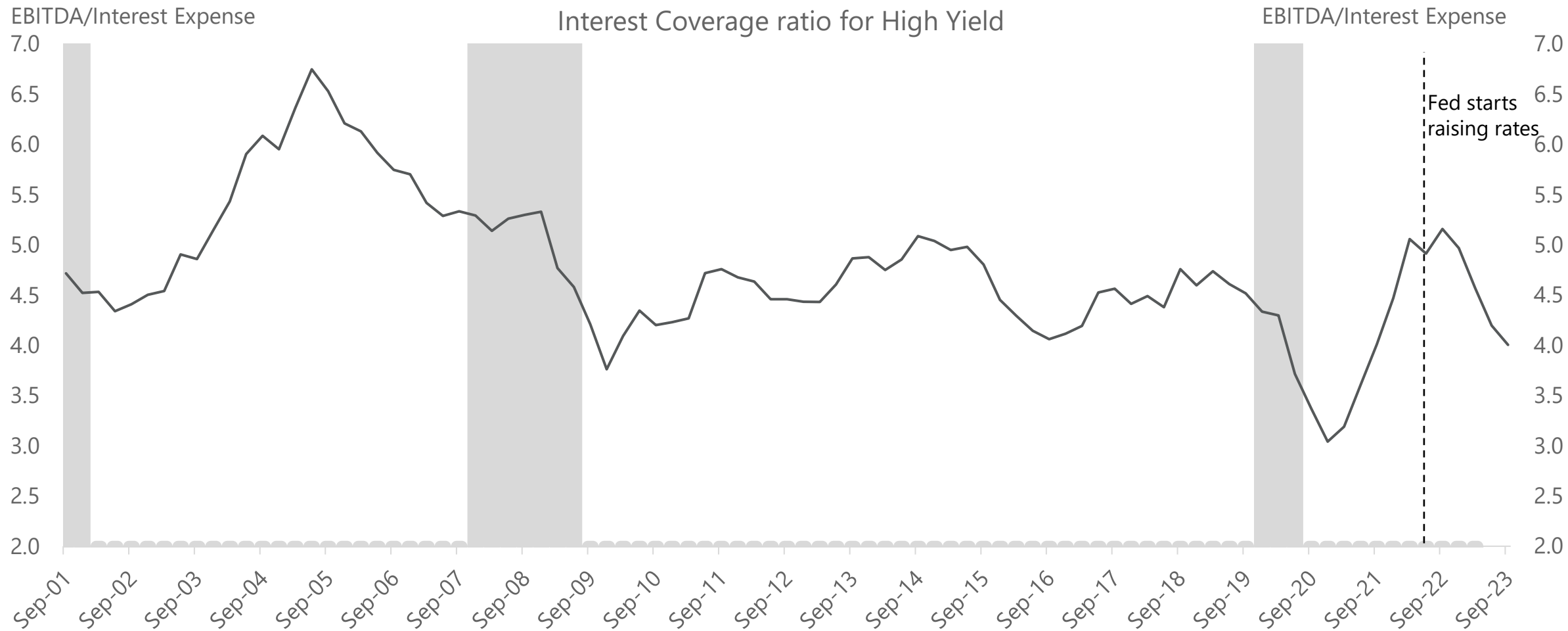
Credit metrics for leveraged loan deals: ICR and cash flow down. Leverage up.



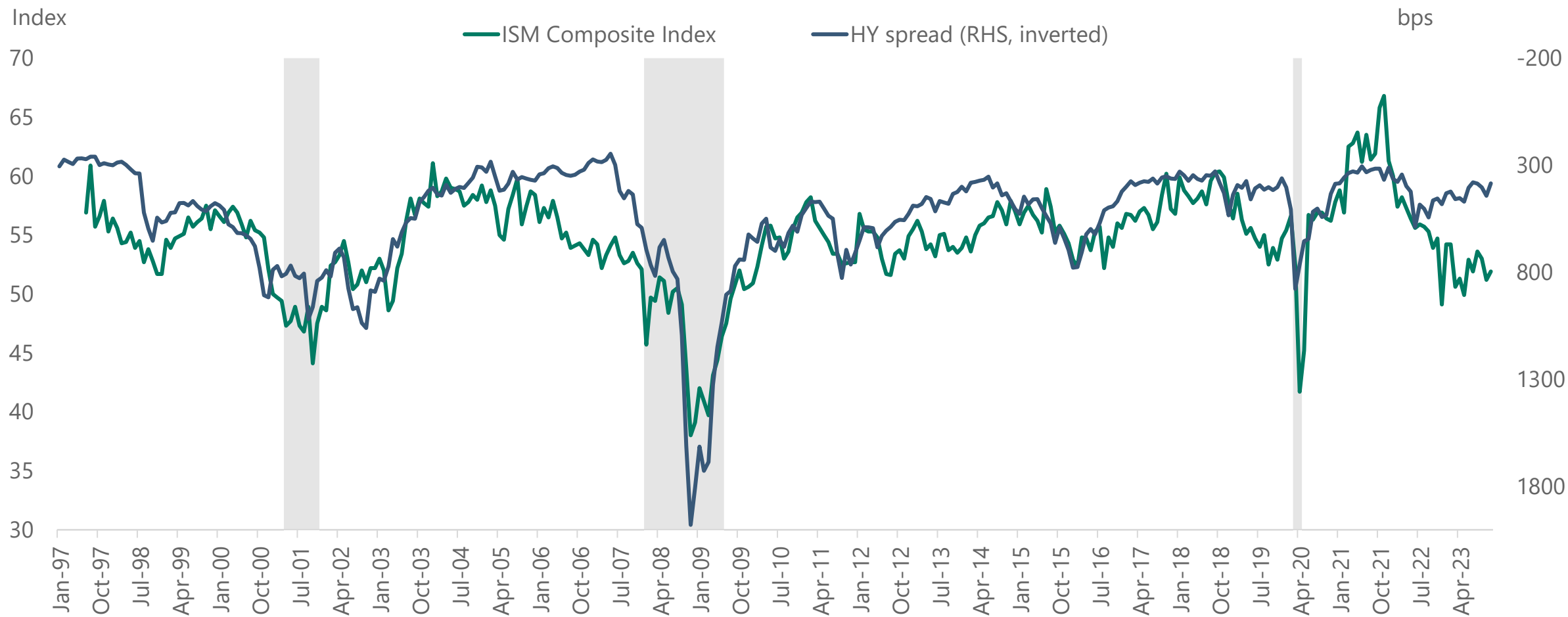
IG ICR coming down



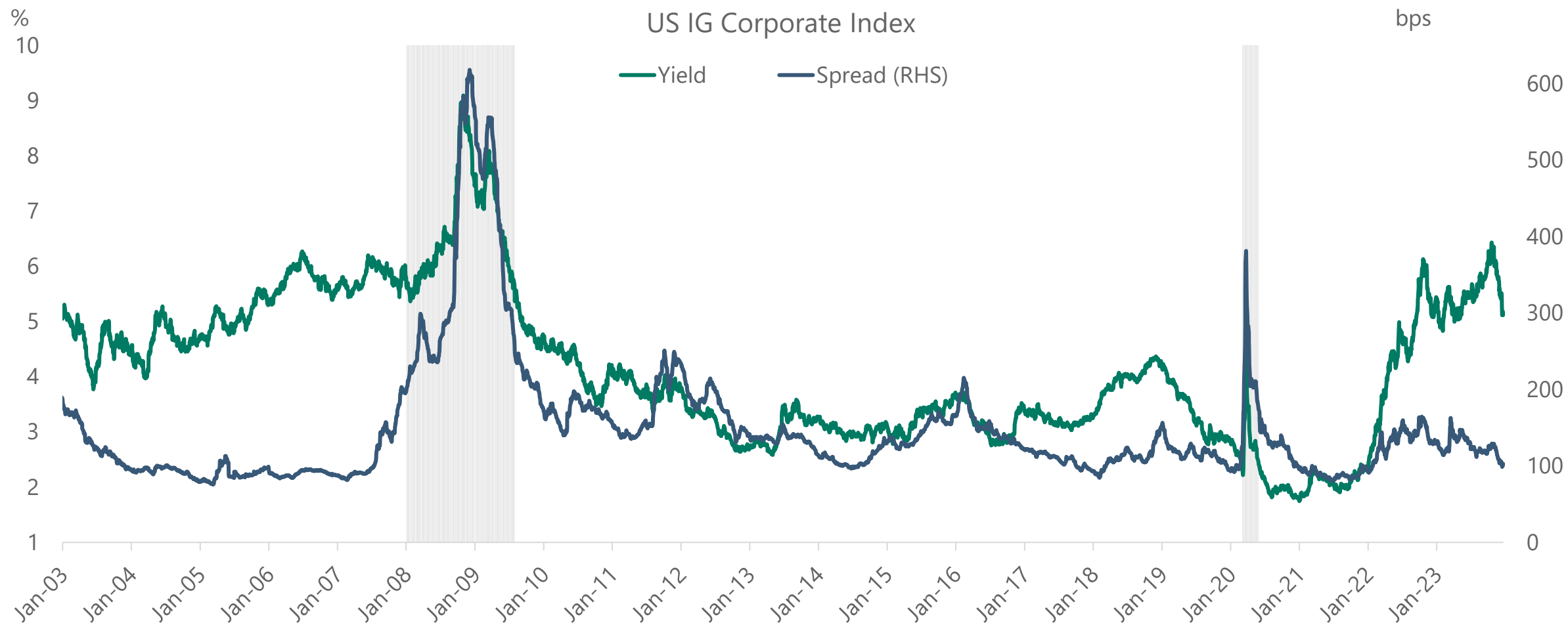
HY ICR coming down



Disconnect between spreads and economic activity

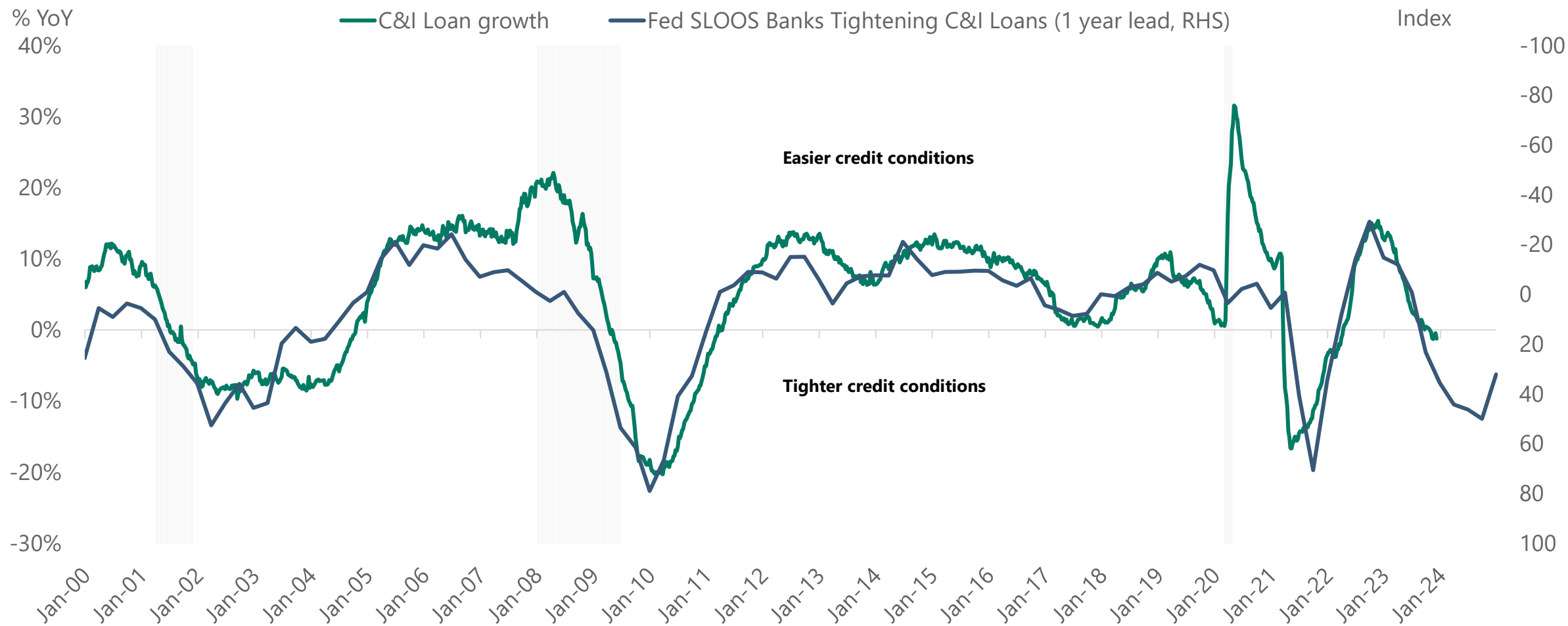


Disconnect between yield and spreads

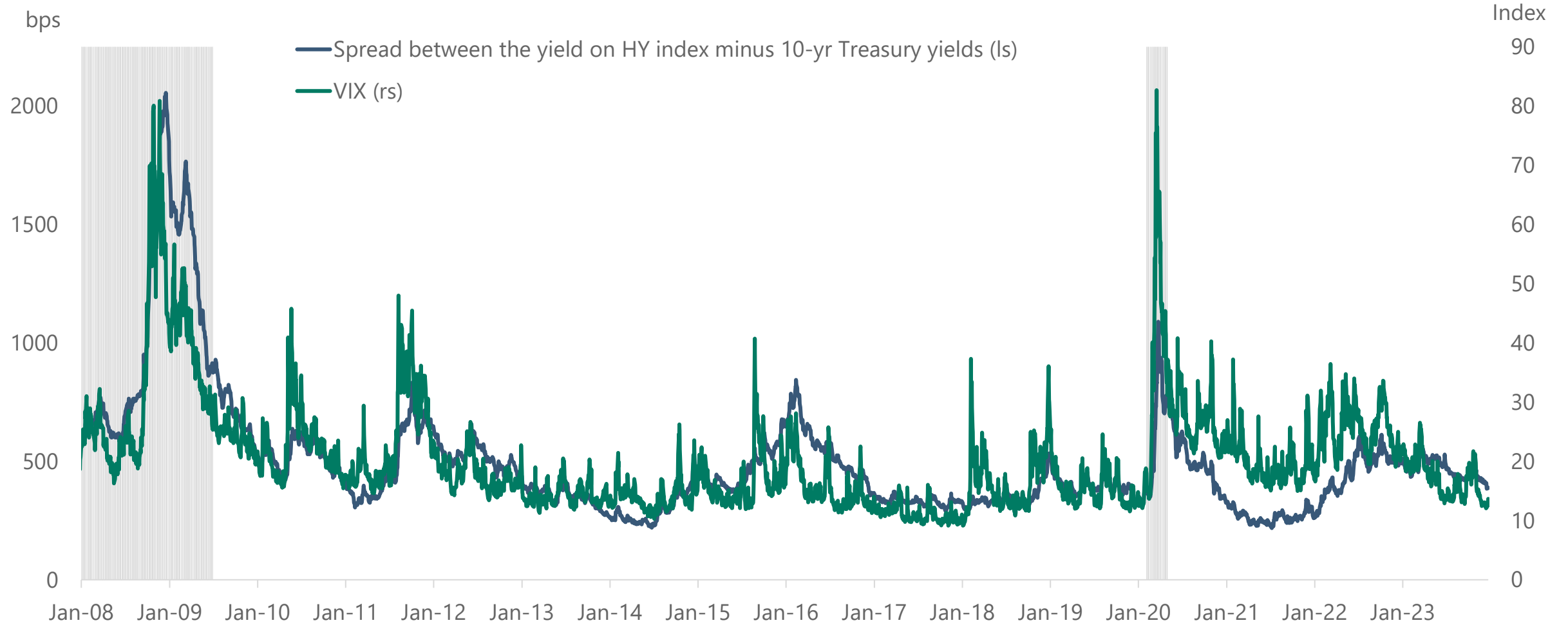


Source: Bloomberg, Apollo Chief Economist. Note: Index used LUACTRUU Index

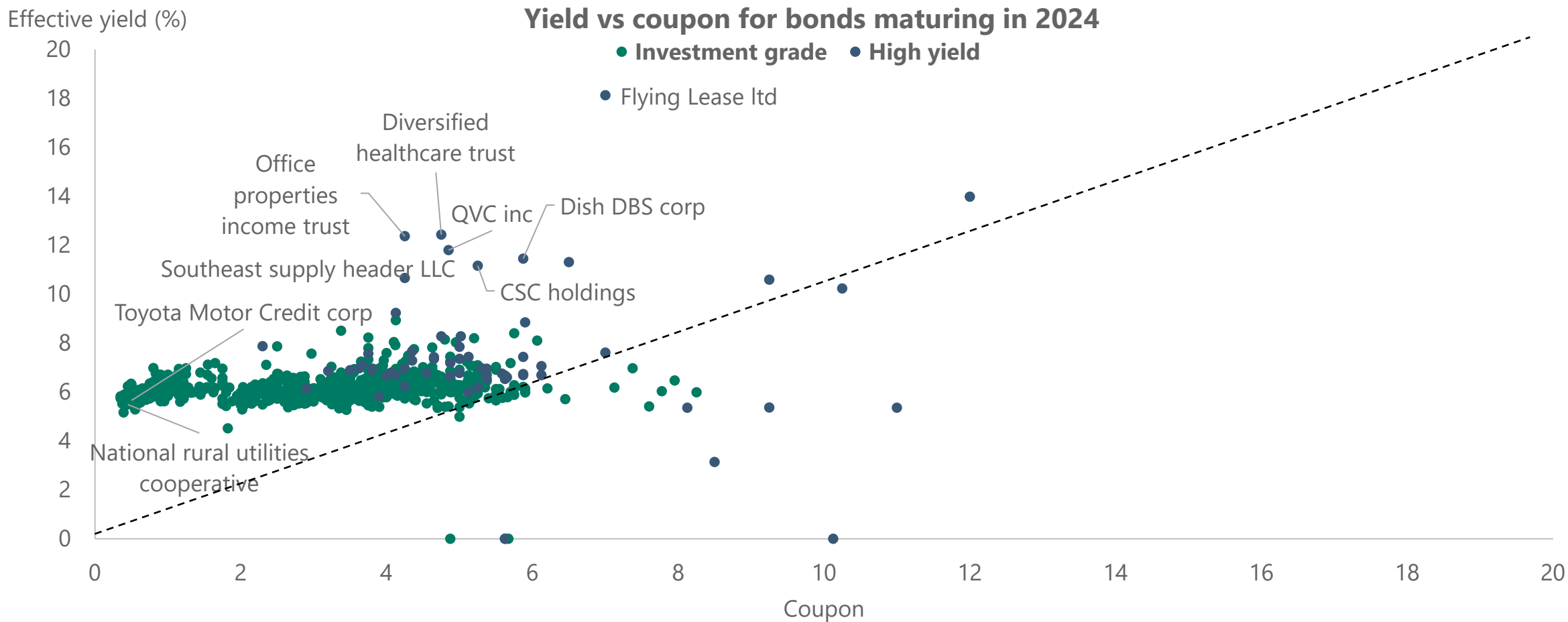
Bank lending likely to shrink over the coming quarters



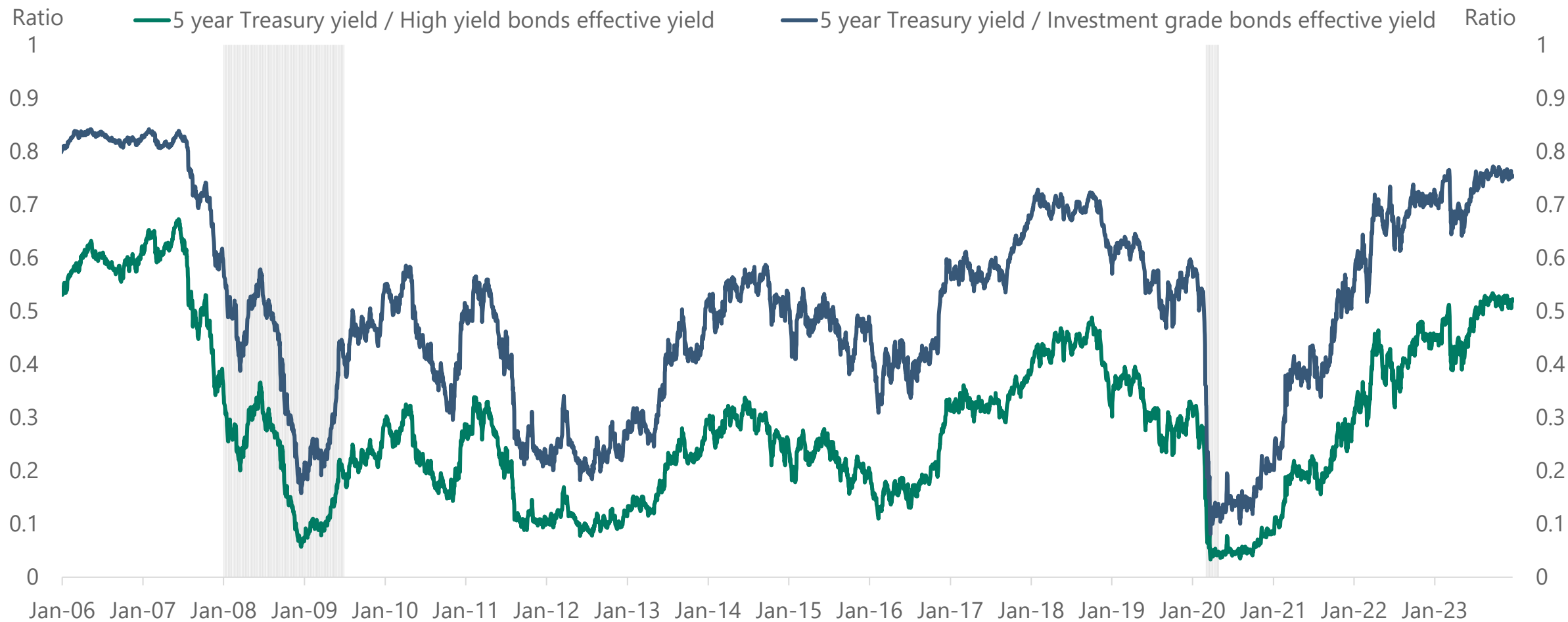
HY credit spreads and VIX tend to move closely together



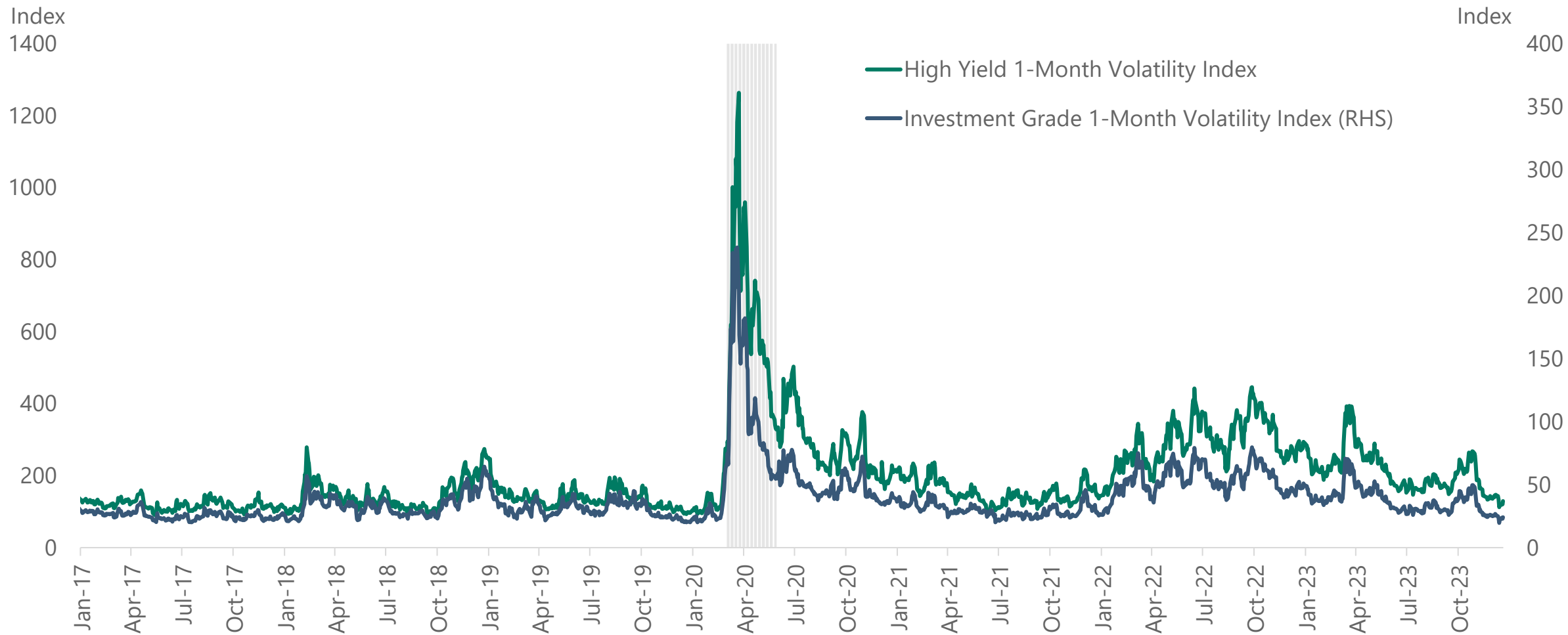
Comparing coupons and effective yields for IG and HY bonds maturing in 2024



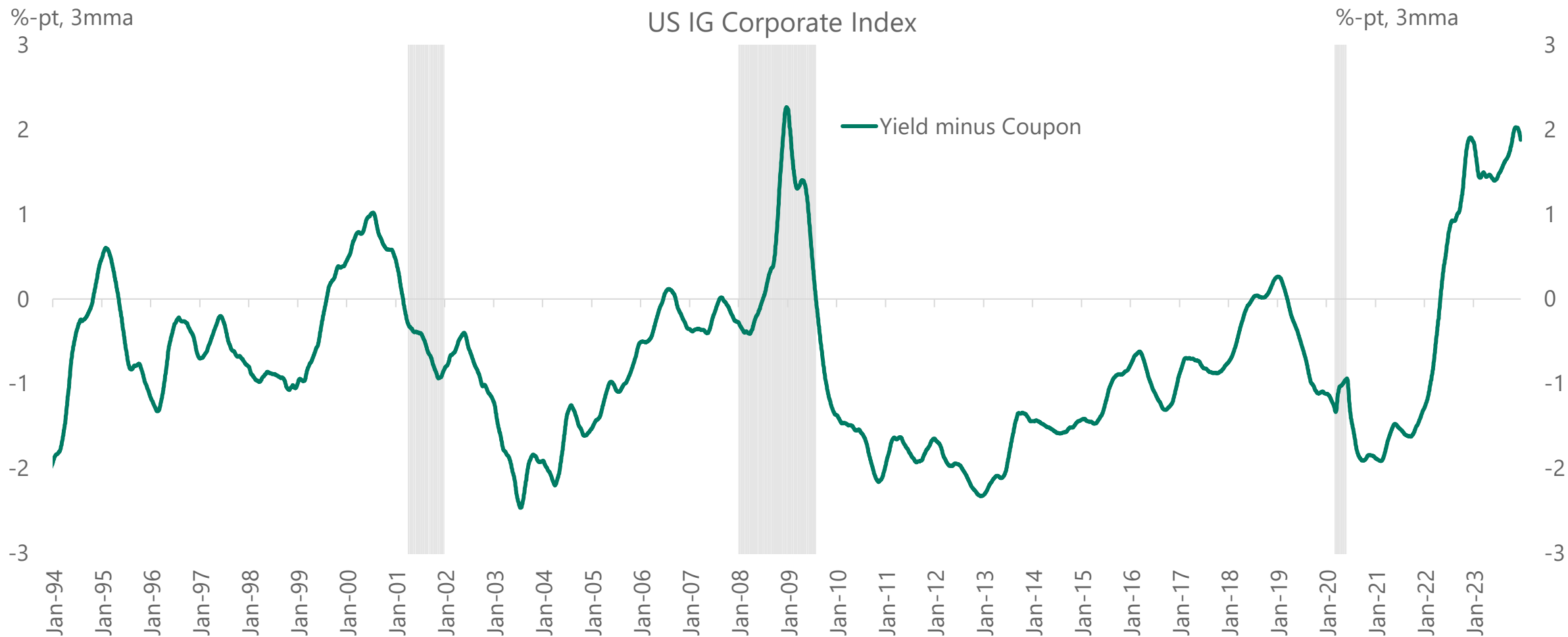
Rise in yields due to rising risk free rates



HY and IG implied volatility

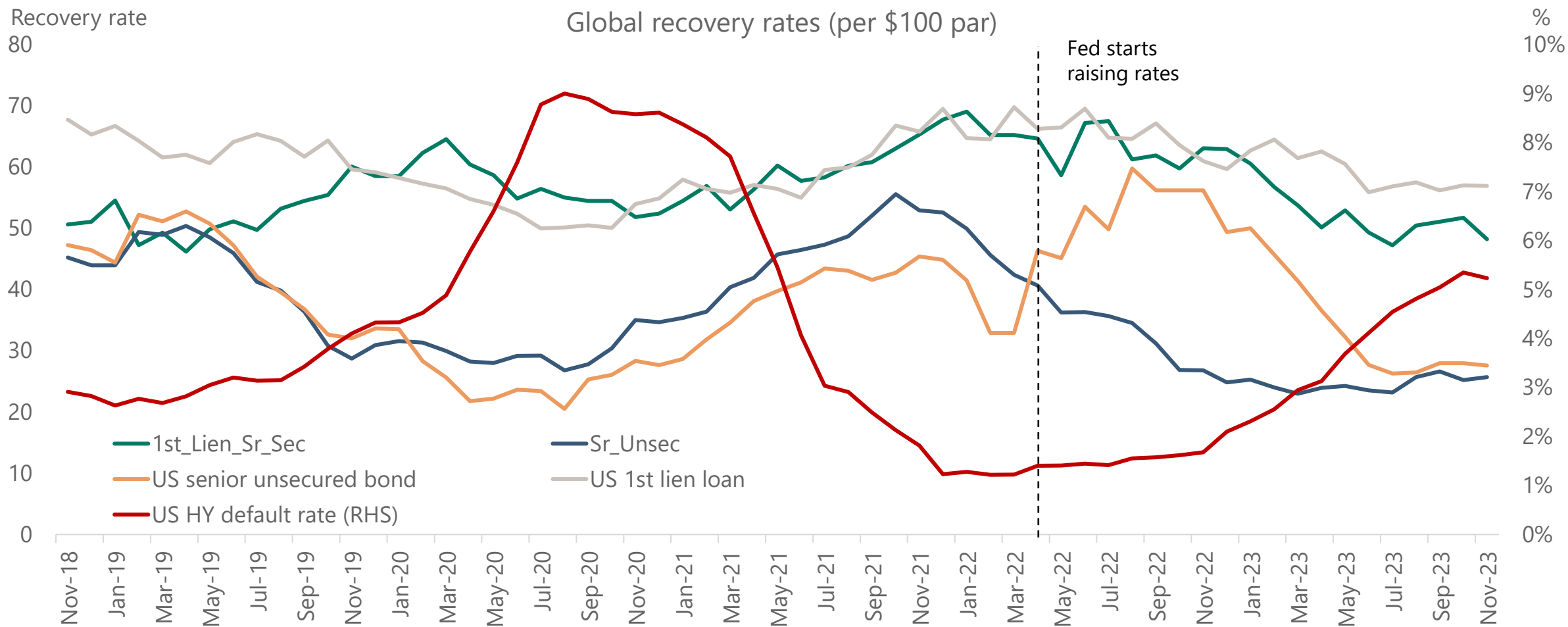


The yield on the IG corporate bond index is 2%-point higher than coupon rate

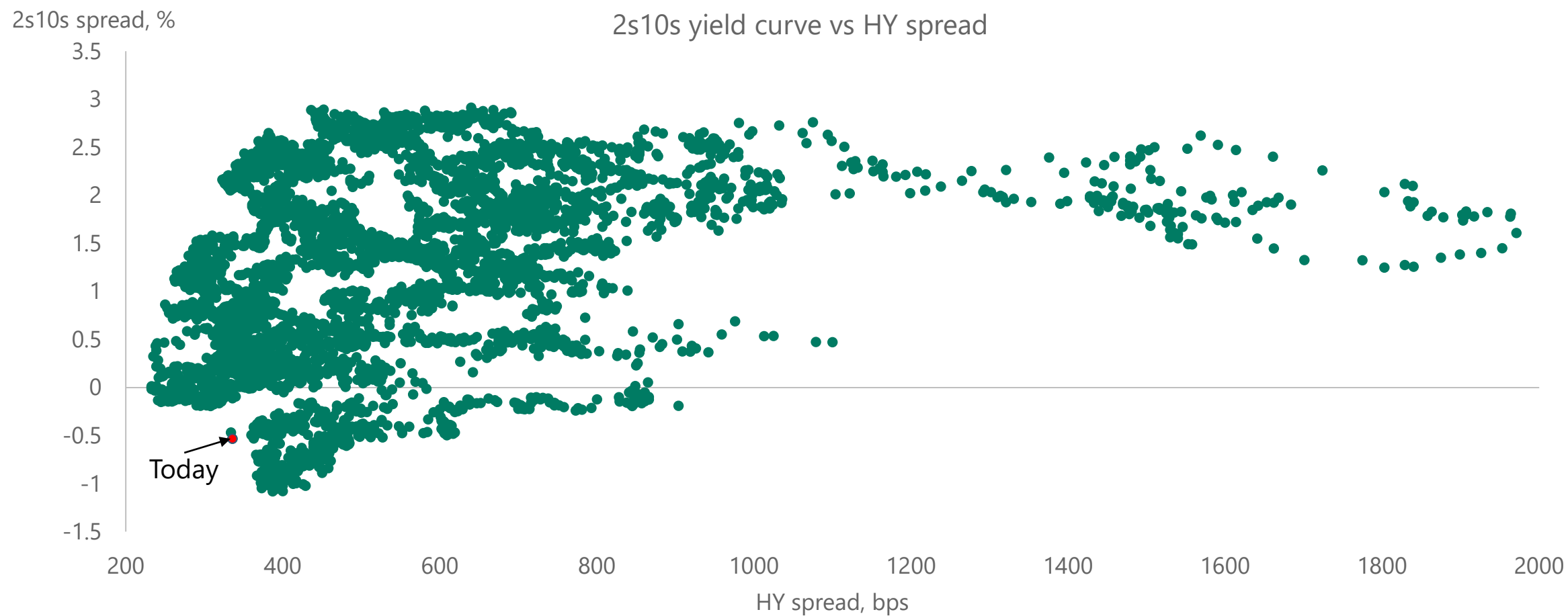


Source: Bloomberg, Apollo Chief Economist. Note: Index used LUACTRUU Index

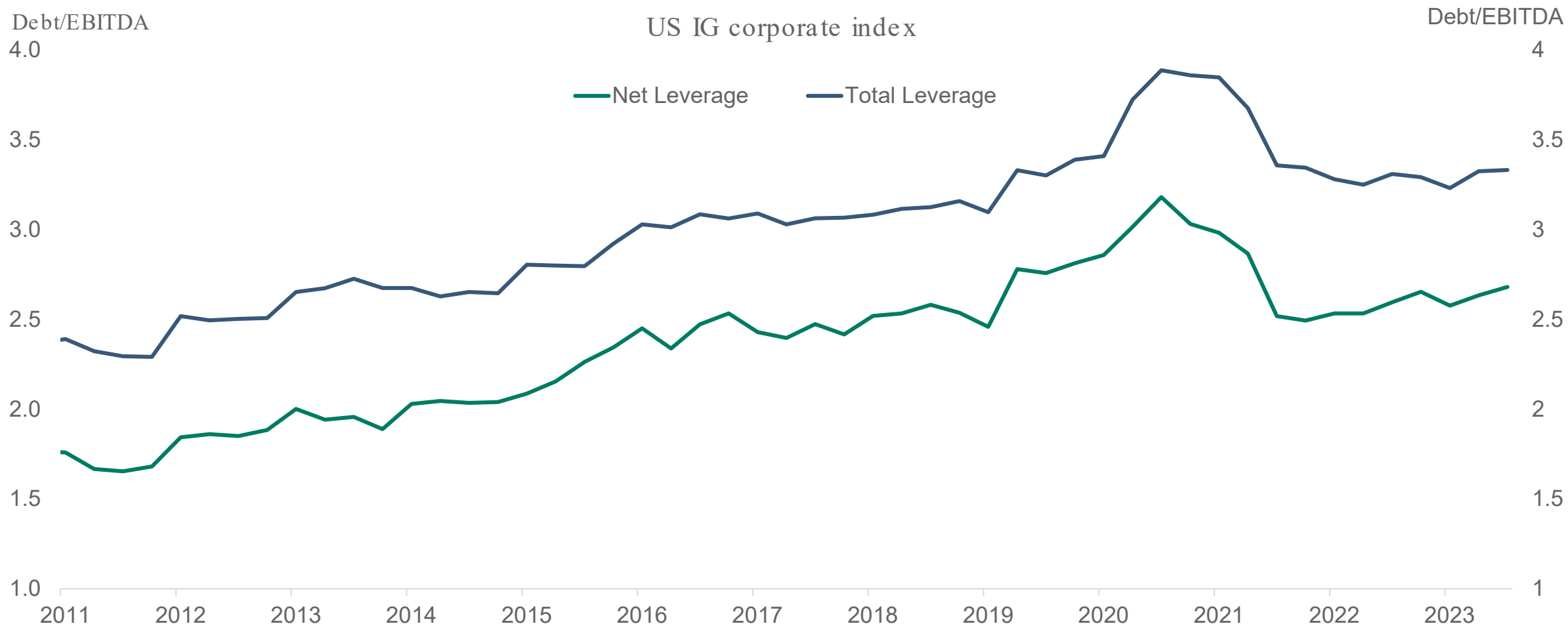
Recovery rates



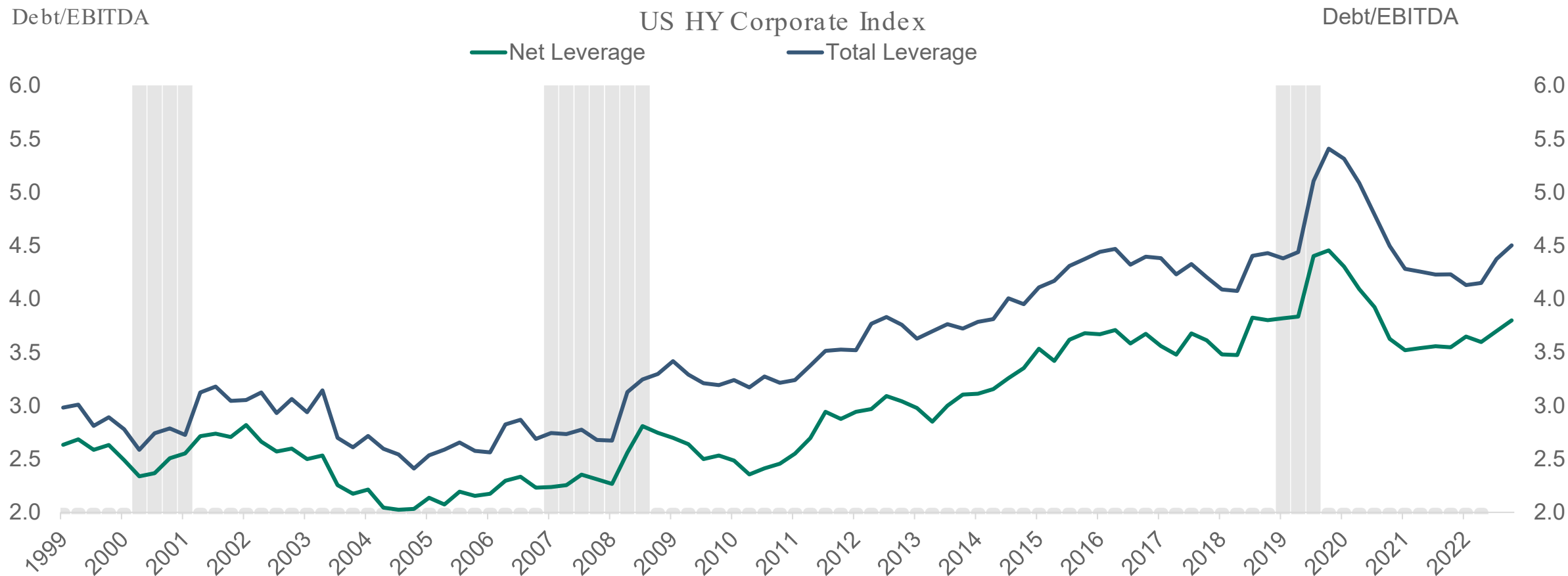
Yield curve is worried about recession, but the HY market is not



IG leverage has come down after the pandemic

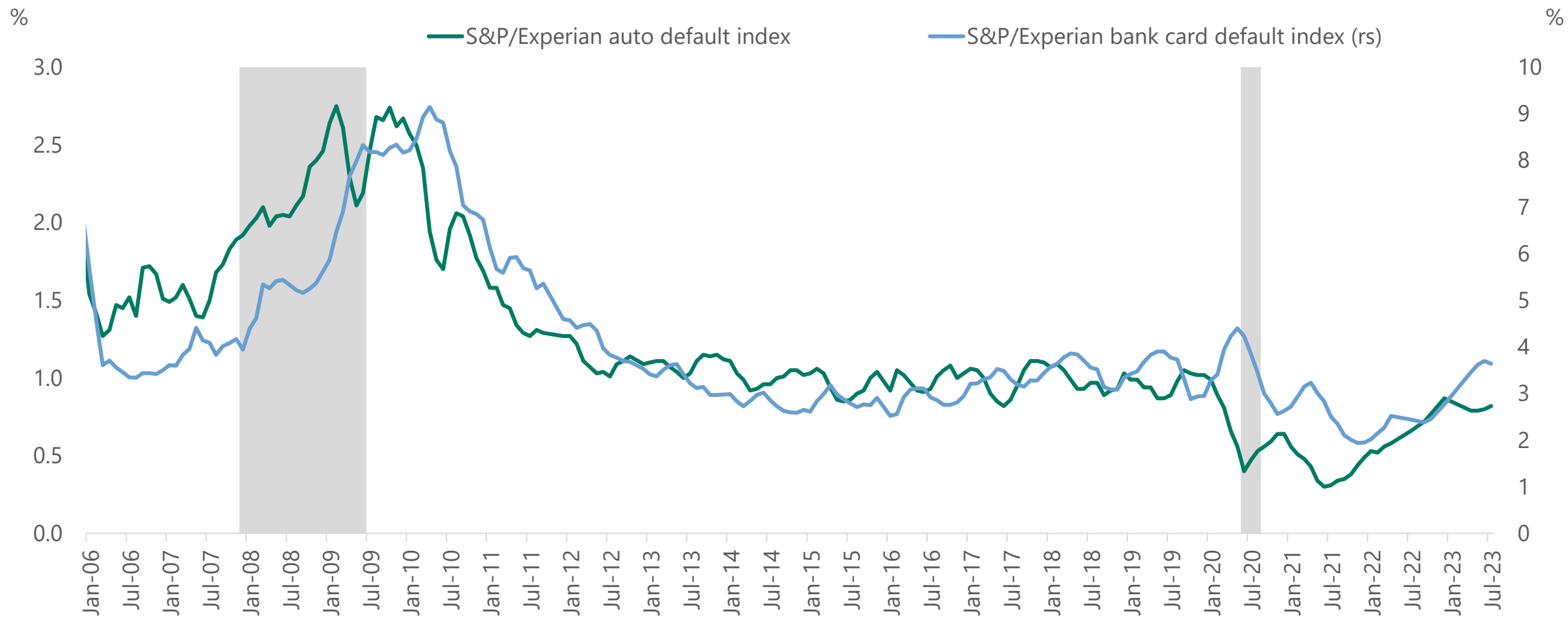


High yield leverage rising recently

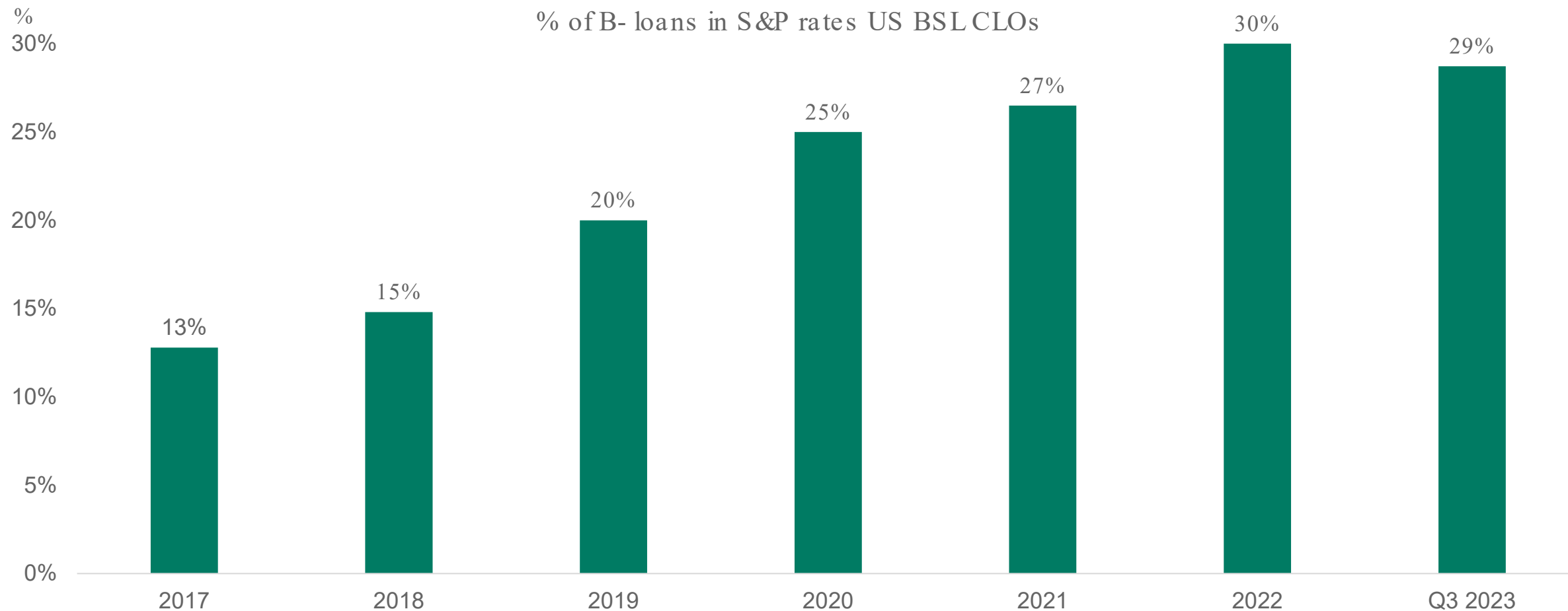


Source: Bloomberg, Apollo Chief Economist. Note: Median leverage for the bonds in H0A0 index

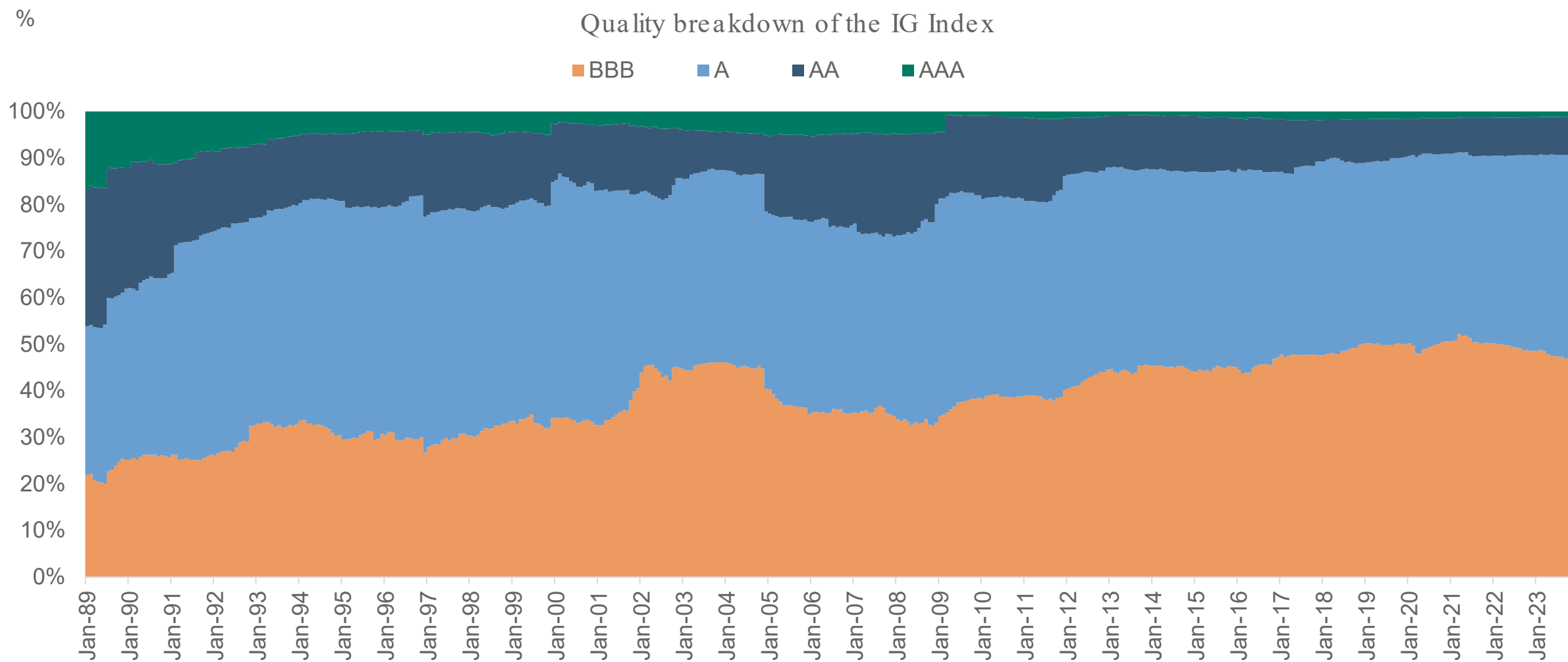
Default rates for auto loans and credit cards moving higher



29% of the loans in the Morningstar LSTA Leveraged Loan Index are rated B-

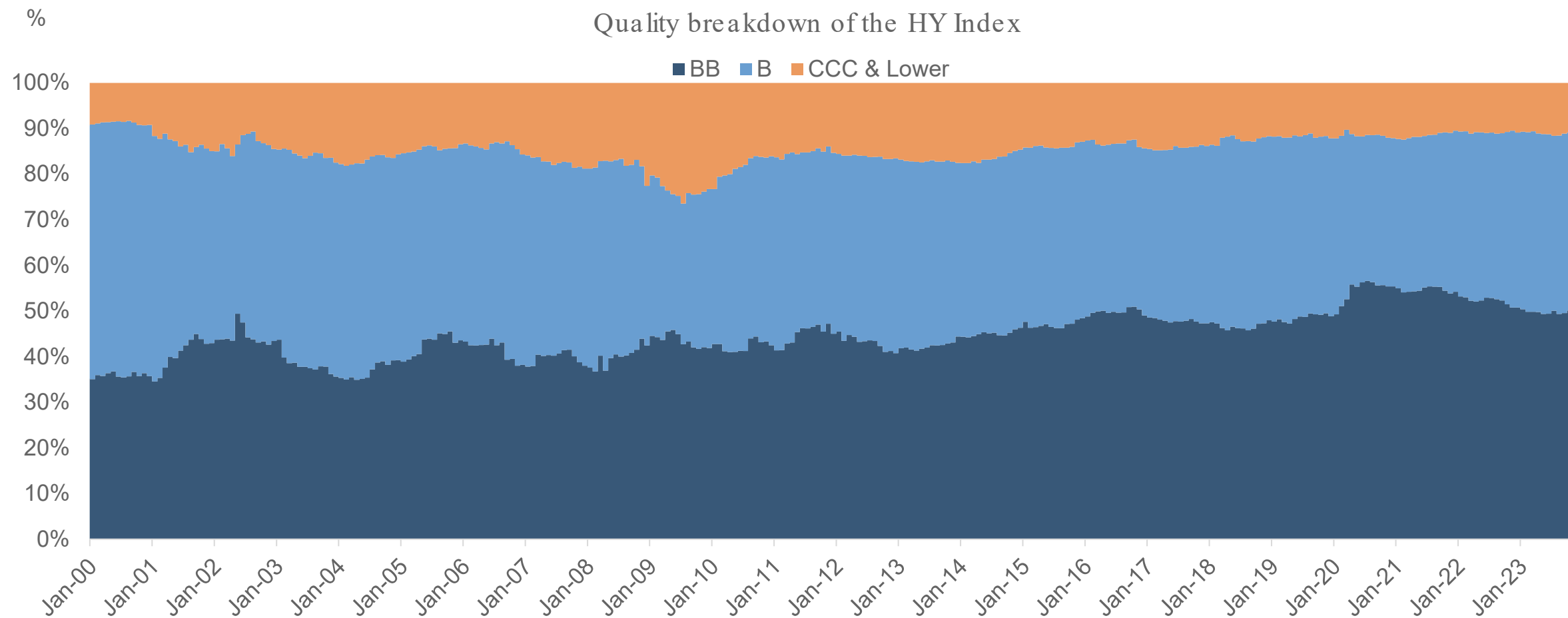


Quality composition of the IG Index



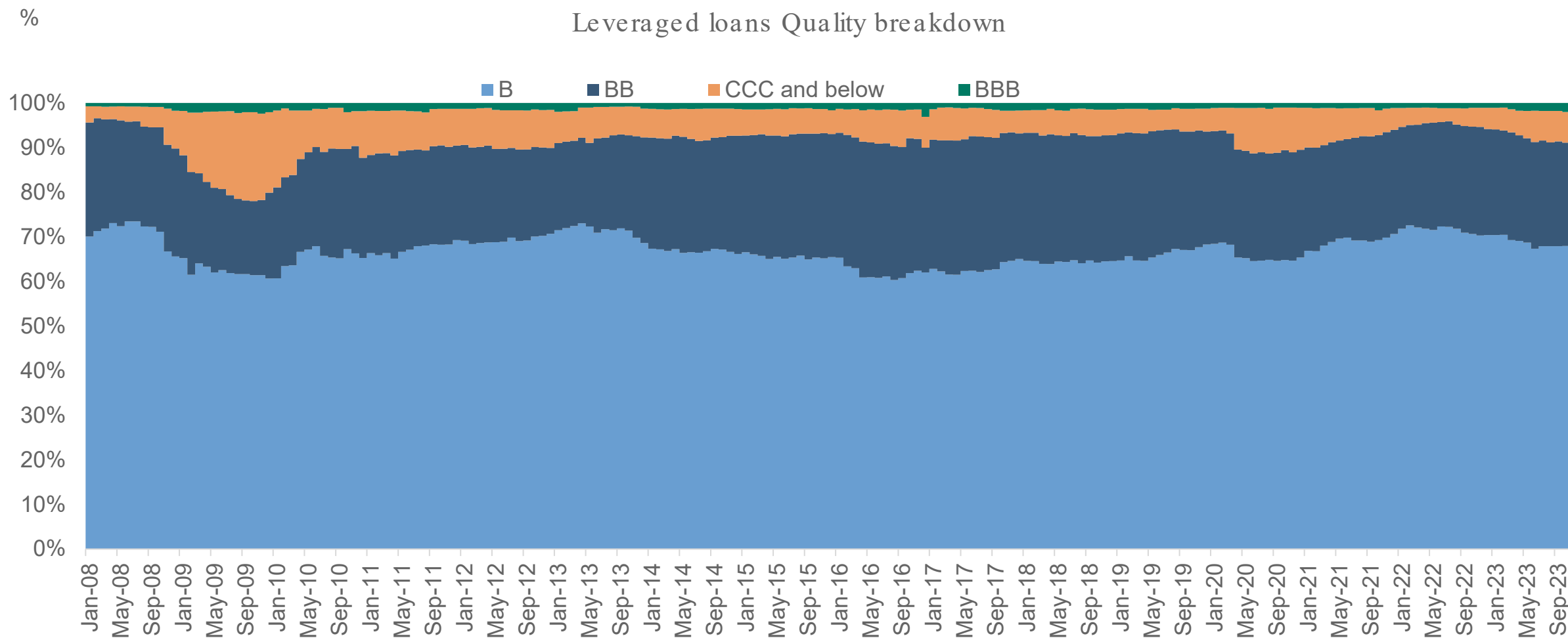
Source: ICE BofA, Bloomberg, Apollo Chief Economist. Note: Breakdown by market value. Data as of 31st October 2023

Quality composition of the HY Index

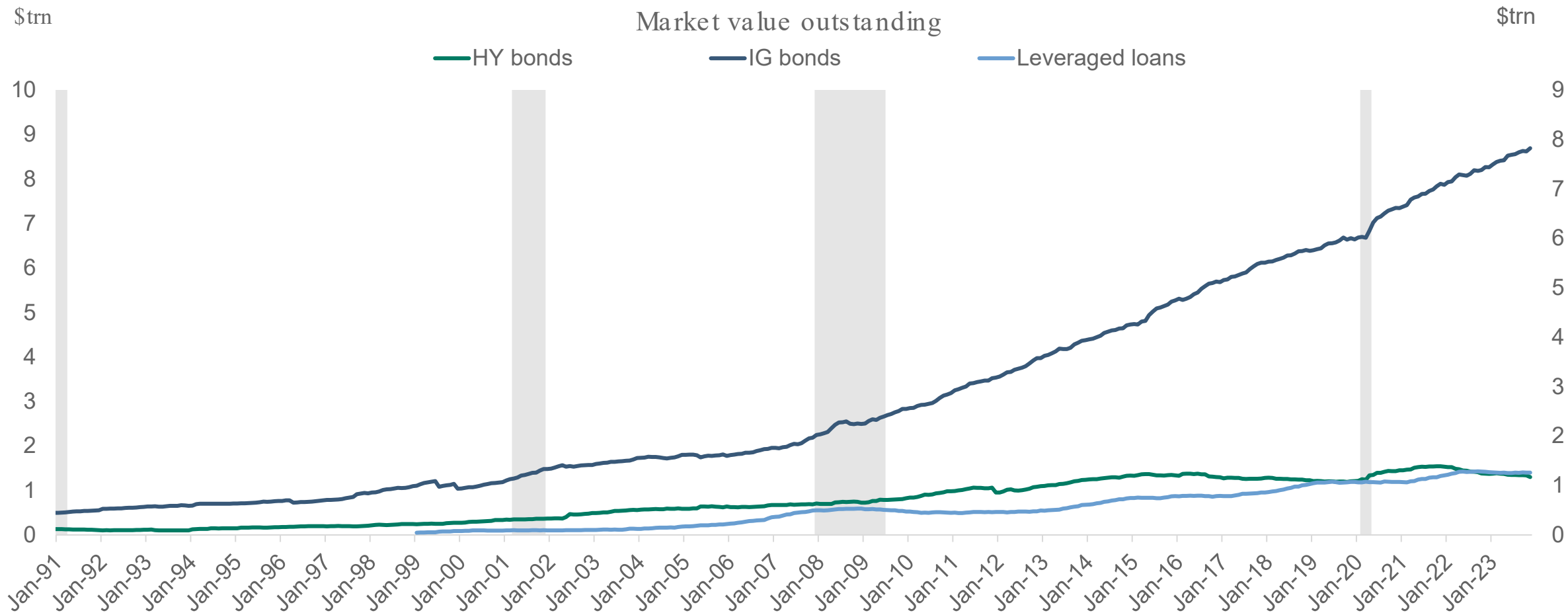


Source: ICE BofA, Bloomberg, Apollo Chief Economist. Note: Breakdown by market value. Data as of 31st October 2023

Quality composition of the leveraged loans index

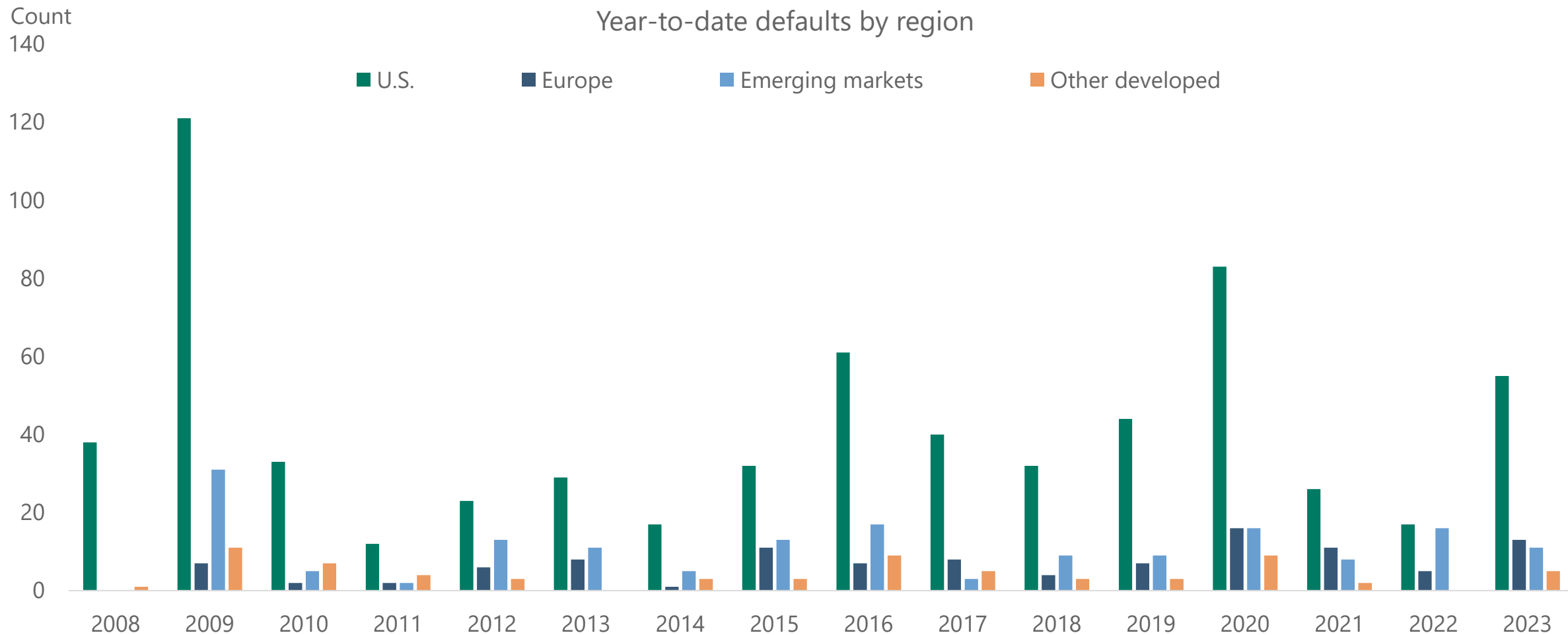


IG market is eight times bigger than HY and eight times bigger than the loan market



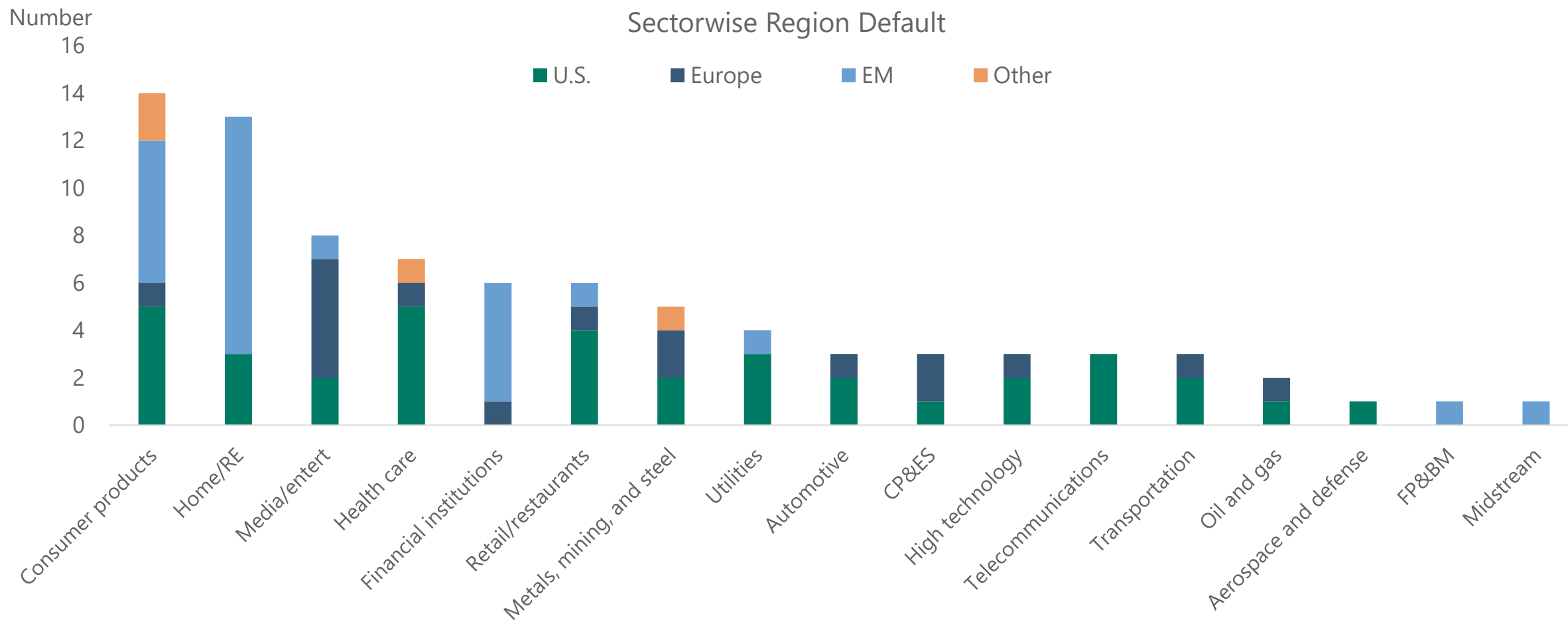
Source: ICE BofA, Bloomberg, Pitchbook LCD, Apollo Chief Economist. Note: Ticker used for HY is H0A0 Index and for IG it is C0A0 Index and for Loans it is SPBDALB Index.

Global default rates rising in US and Europe

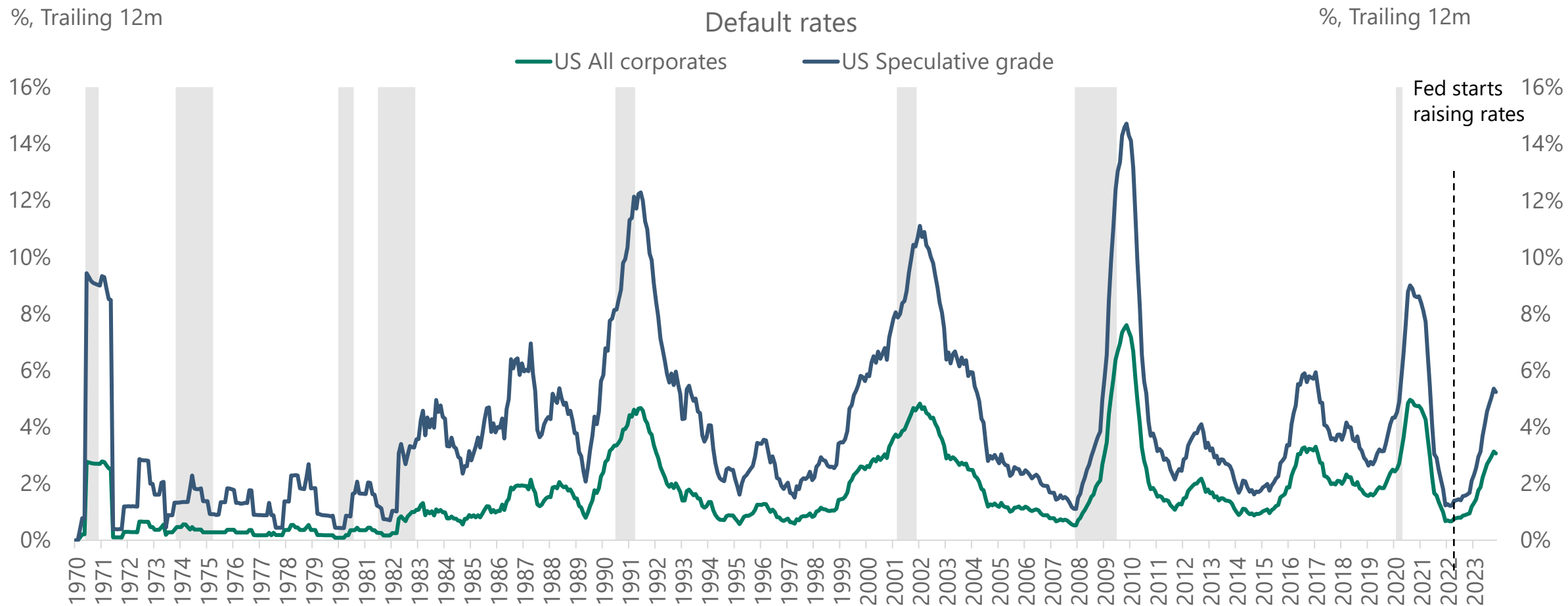


Sources: S&P Global Ratings Research and S&P Global Market Intelligence's CreditPro®, Apollo Chief Economist. Note: Data as of 30th June 2023

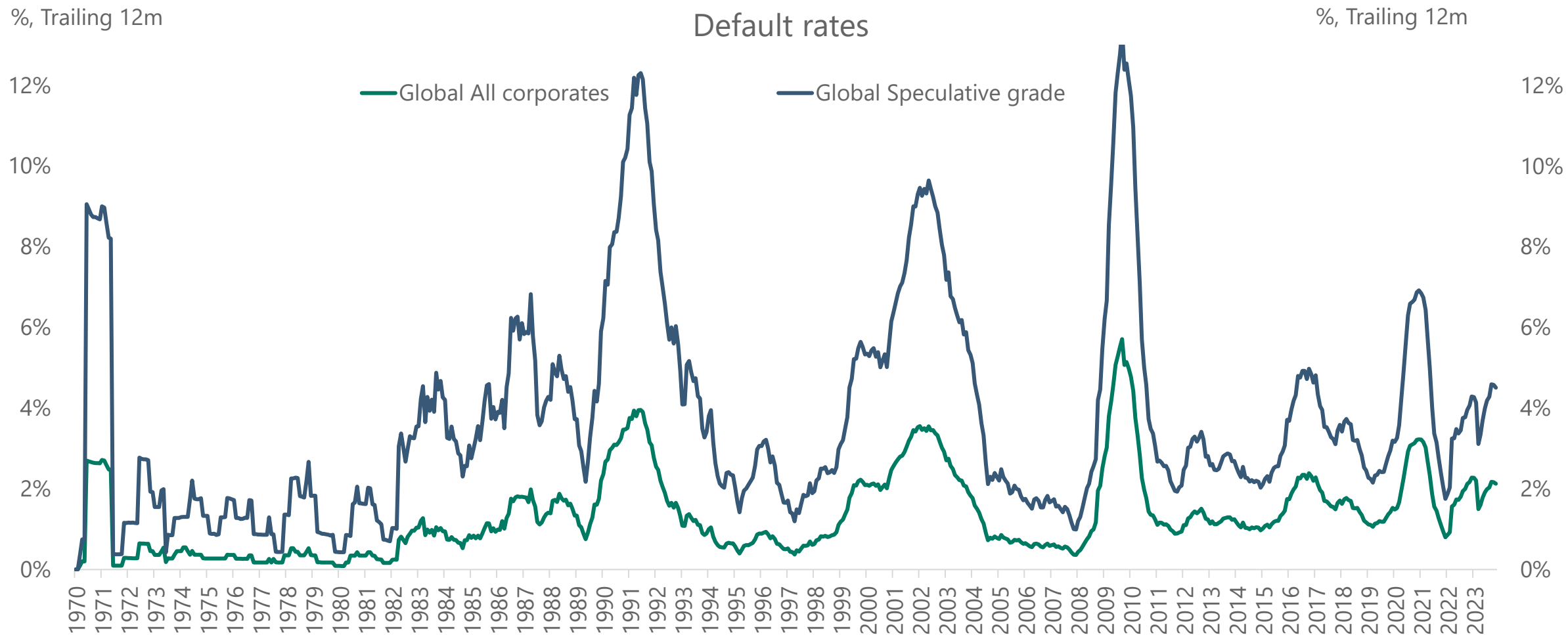
Default rates differ across sectors



A default cycle has started

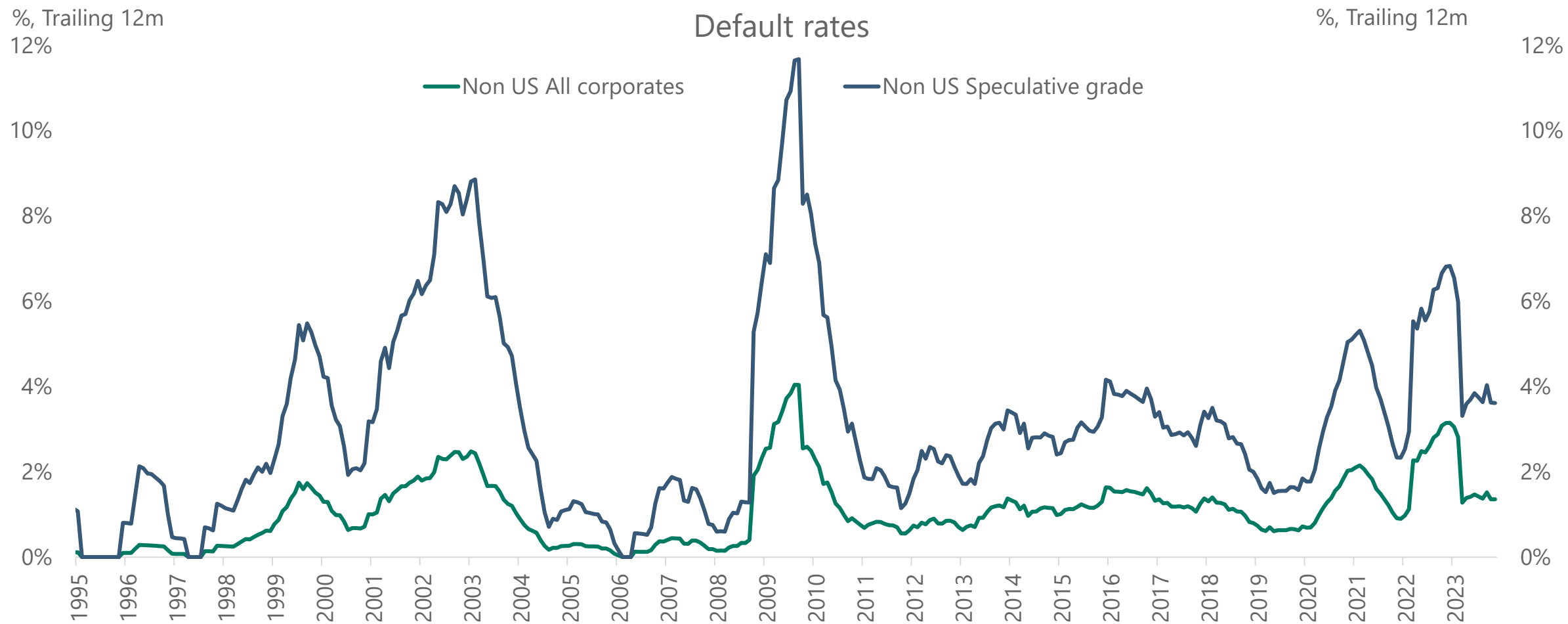


Global corporate default rates



Source: Moody's Analytics, Apollo Chief Economist

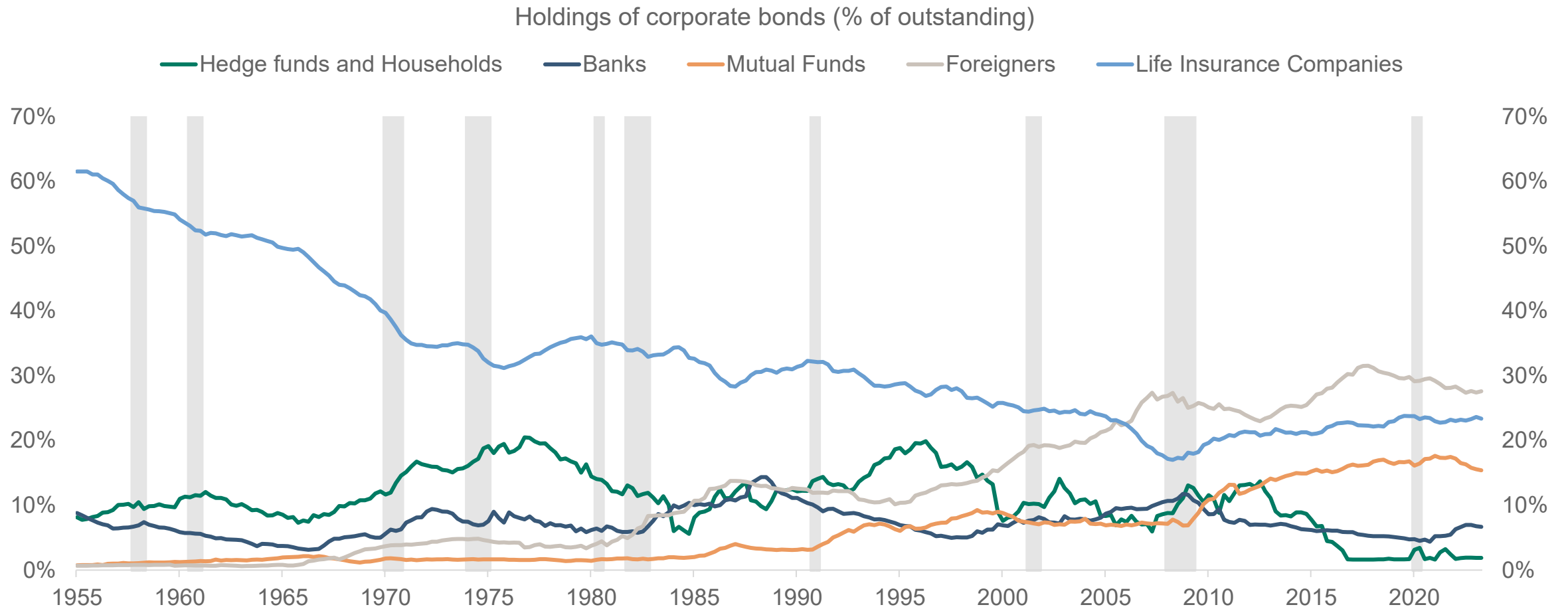
Non-US corporate default rates



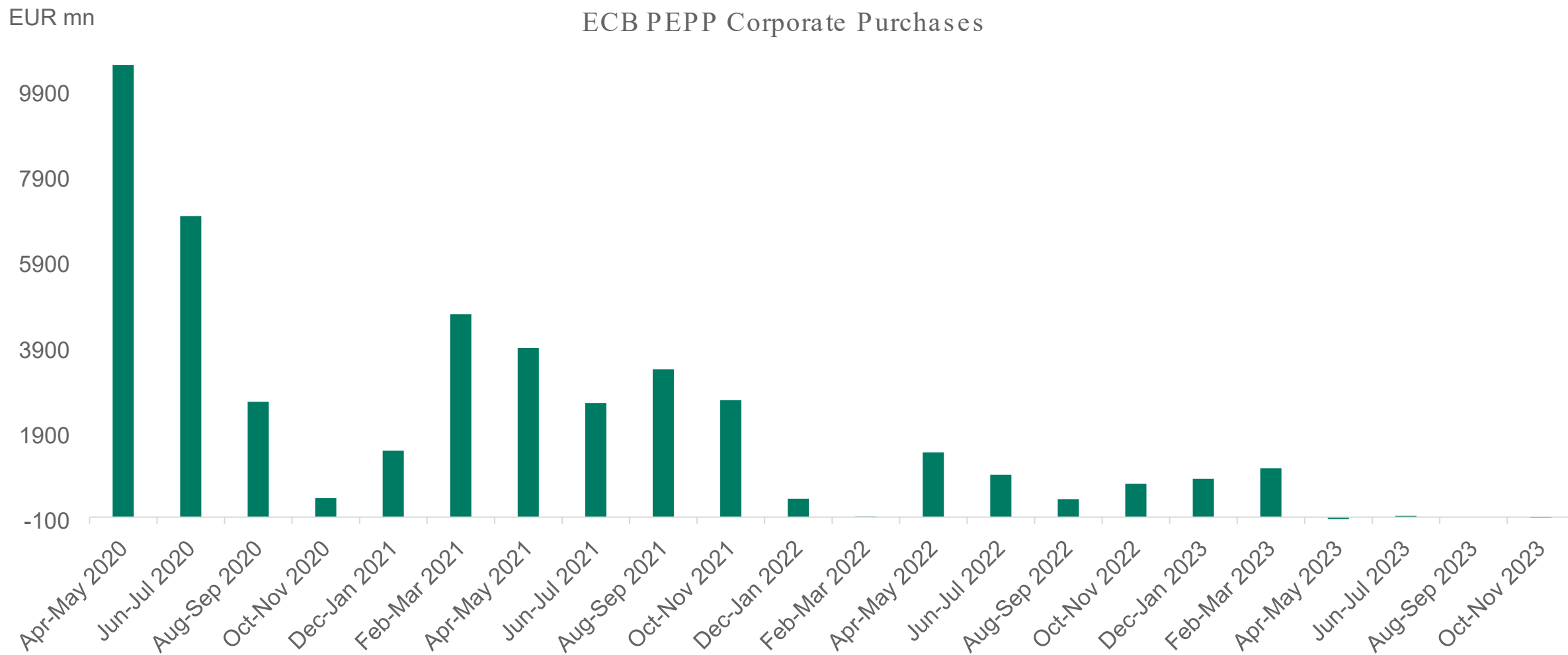
Corporate bond holdings



The biggest holder of US corporate bonds is foreigners

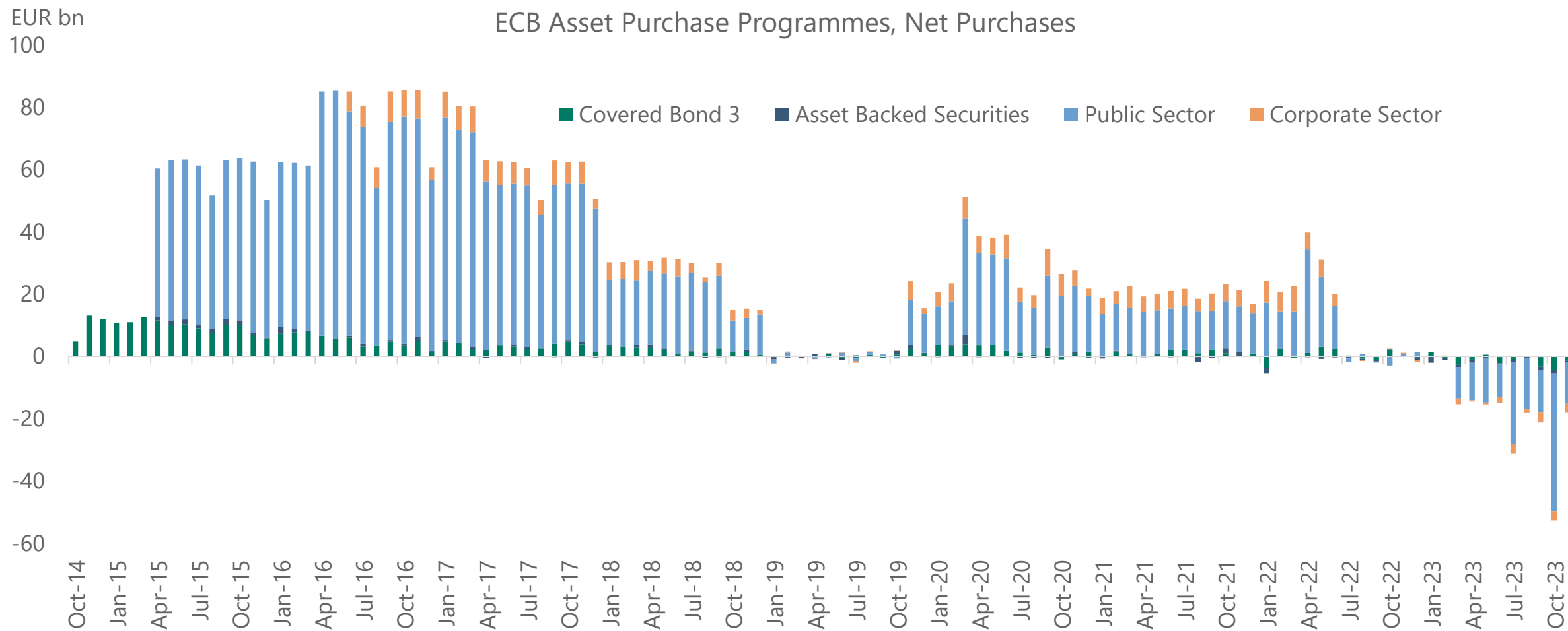


ECB purchases of corporate bonds



Source: ECB, Bloomberg, Apollo Chief Economist

ECB doing QT



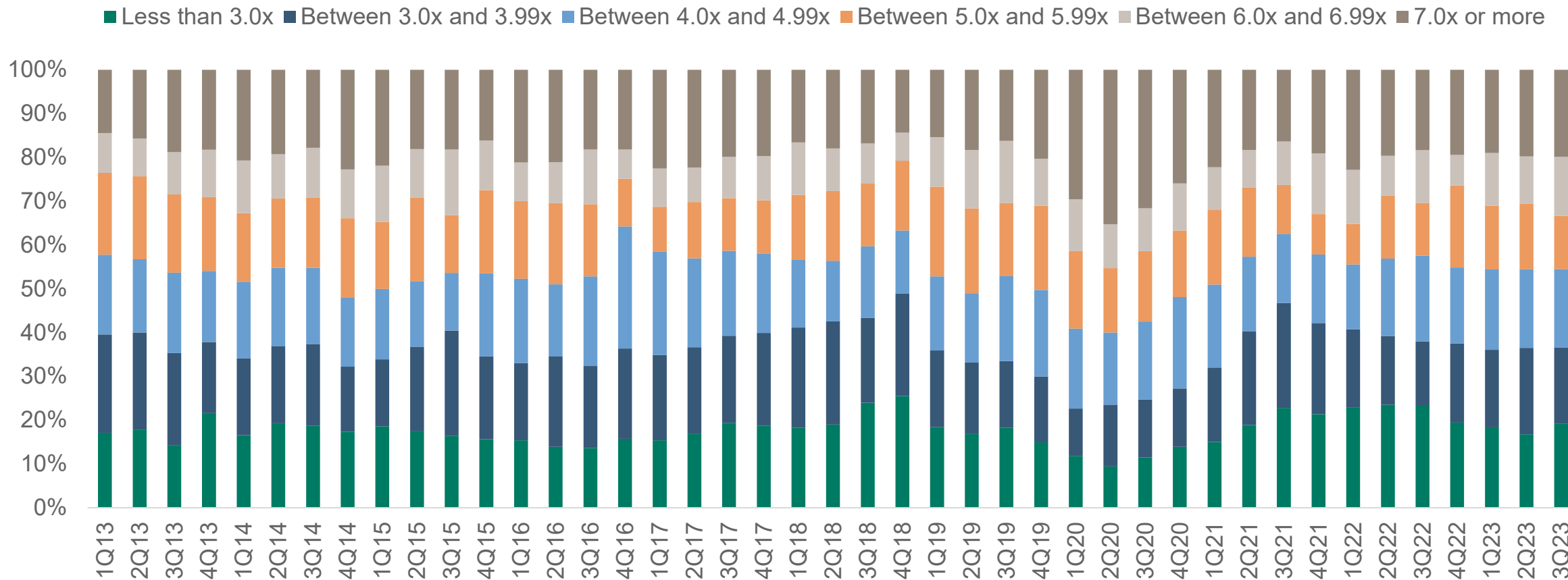
Source: ECB, Bloomberg, Apollo Chief Economist

Loans/CLOs



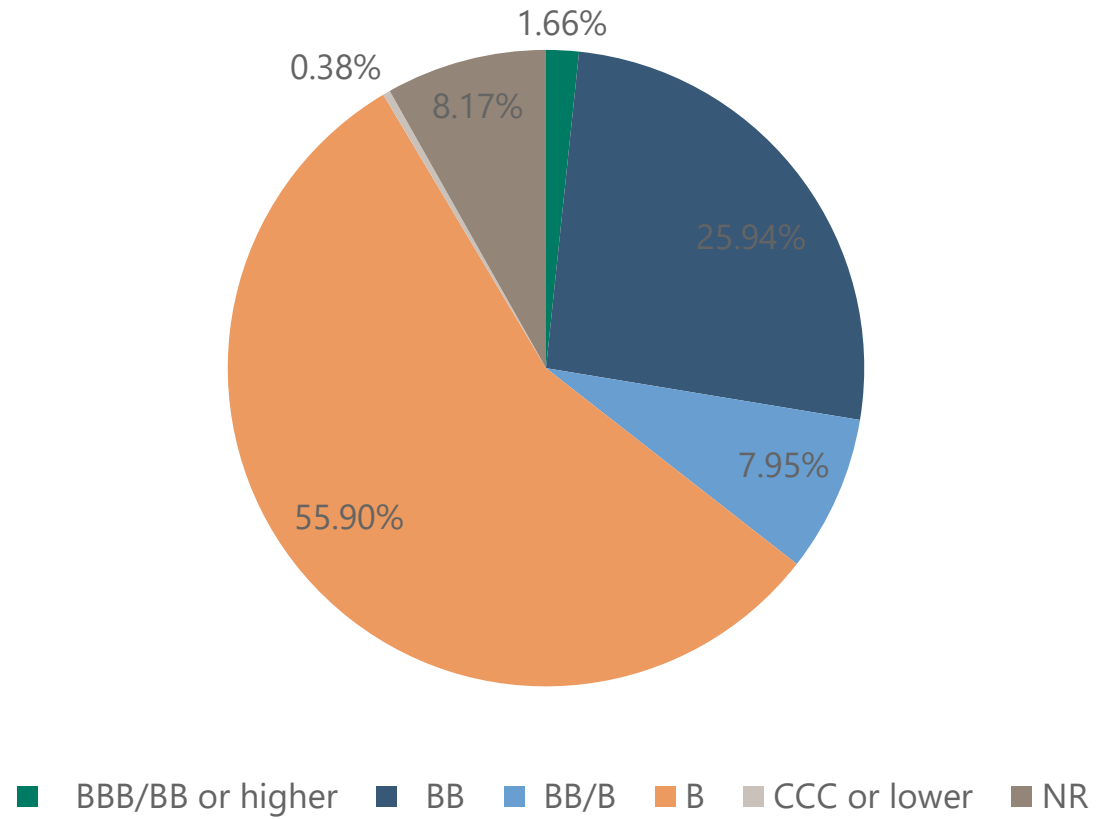
Leveraged loan deals, by multiple

Share of leveraged deals



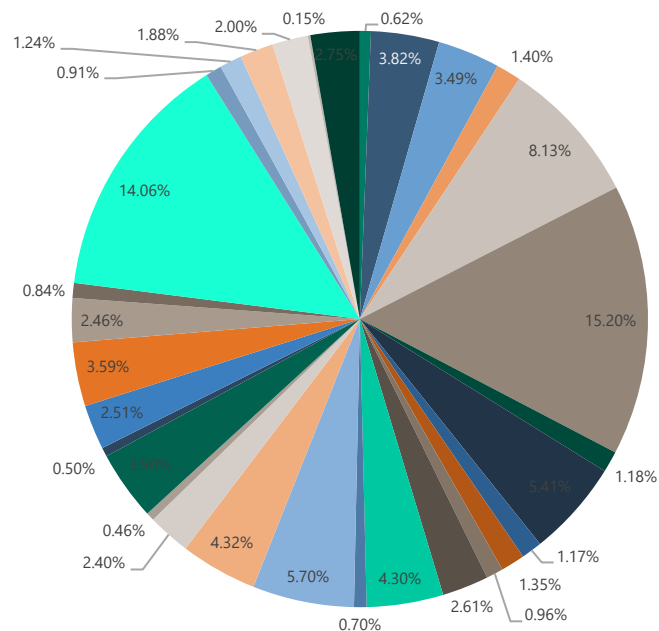
Leveraged loans rating distribution, 2023Q3

US leveraged loan rating distribution



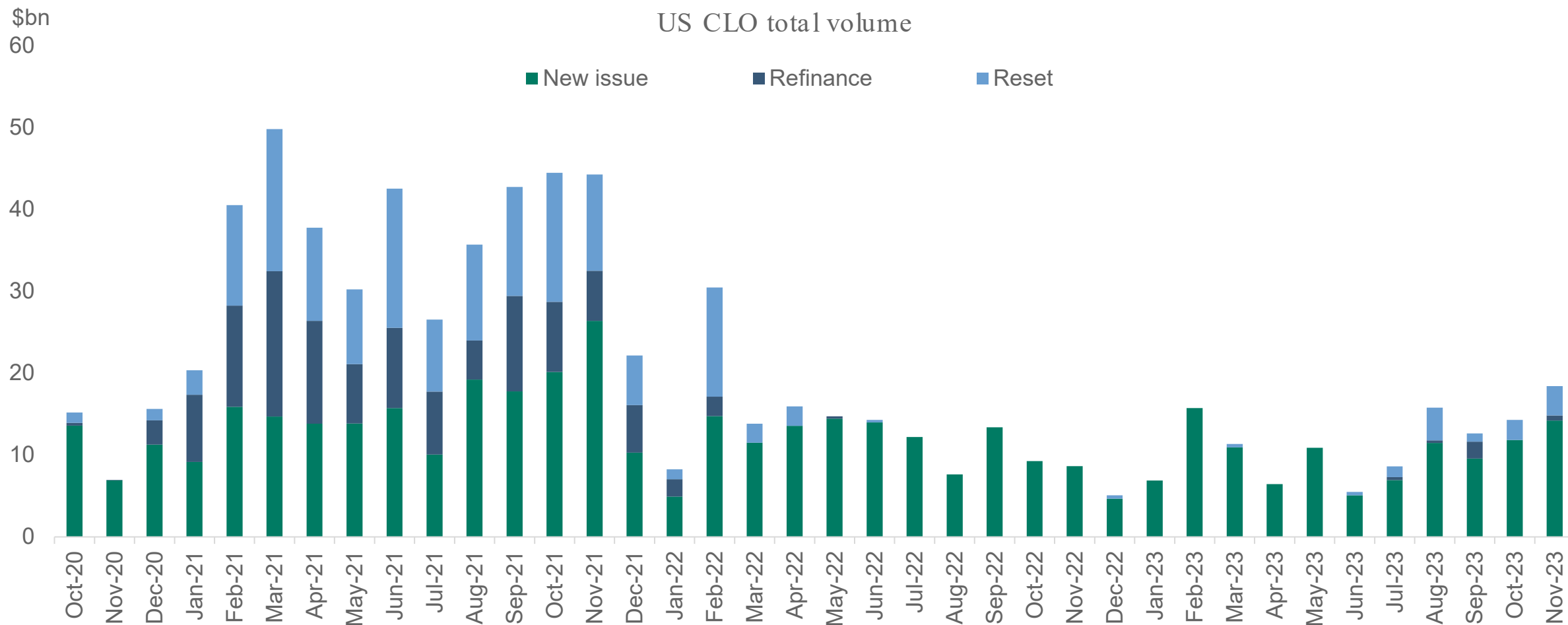
Leveraged loans distribution, by industry, 2023Q3

US leveraged loan industry distribution



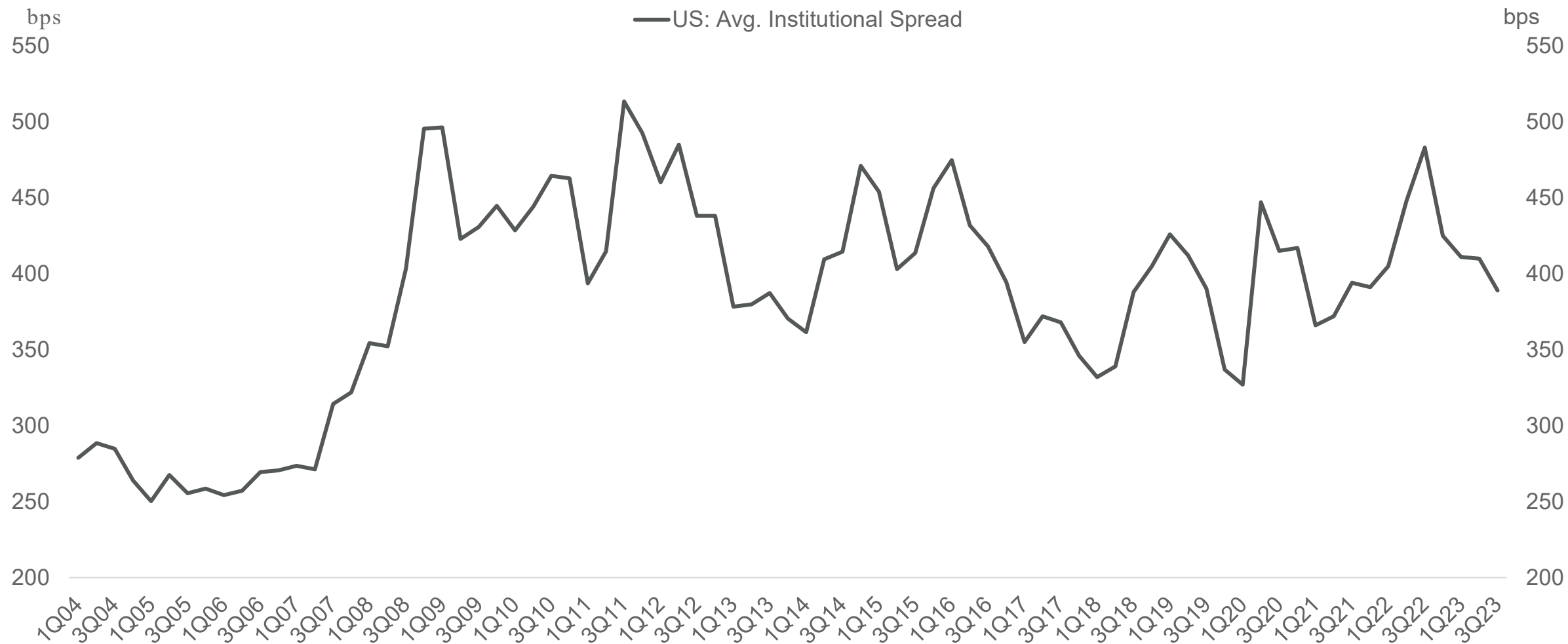
- Aerospace & Defense
- Automotive
- Building Materials
- Cable
- Chemicals
- Computers & Electronics
- Consumer Nondurables
- Entertainment & Leisure
- Environmental
- Food & Beverage
- Forest Product
- Gaming & Hotel
- Healthcare
- Home Furnishings
- Insurance
- Manufacturing & Machinery
- Metals & Mining
- Not for Profit
- Oil & Gas
- Printing & Publishing
- Real Estate
- Restaurants
- Retail
- Retail Food & Drug
- Services & Leasing
- Telecom
- Telecom Equipment
- Textile & Apparel
- Transportation
- TV
- Utilities

US CLO total volume

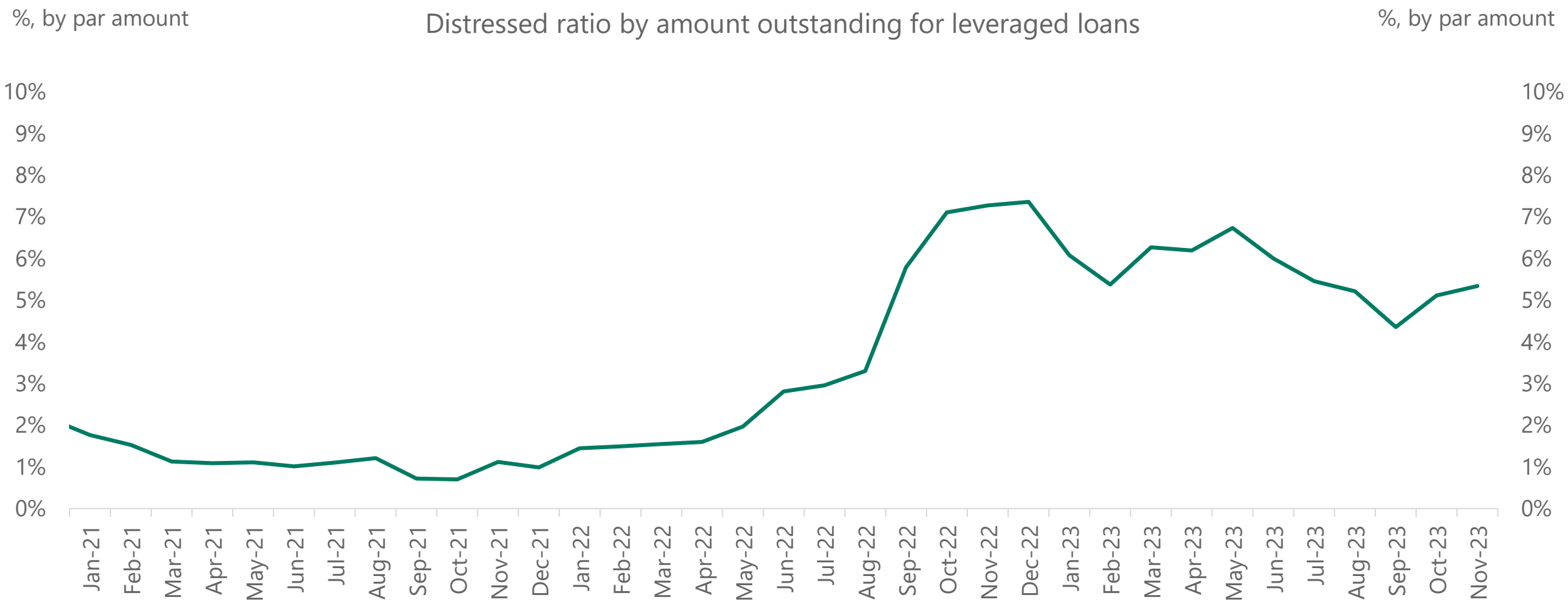


Source: Pitchbook LCD, Apollo Chief Economist.

Loans: Institutional spread relative to bespoke loans

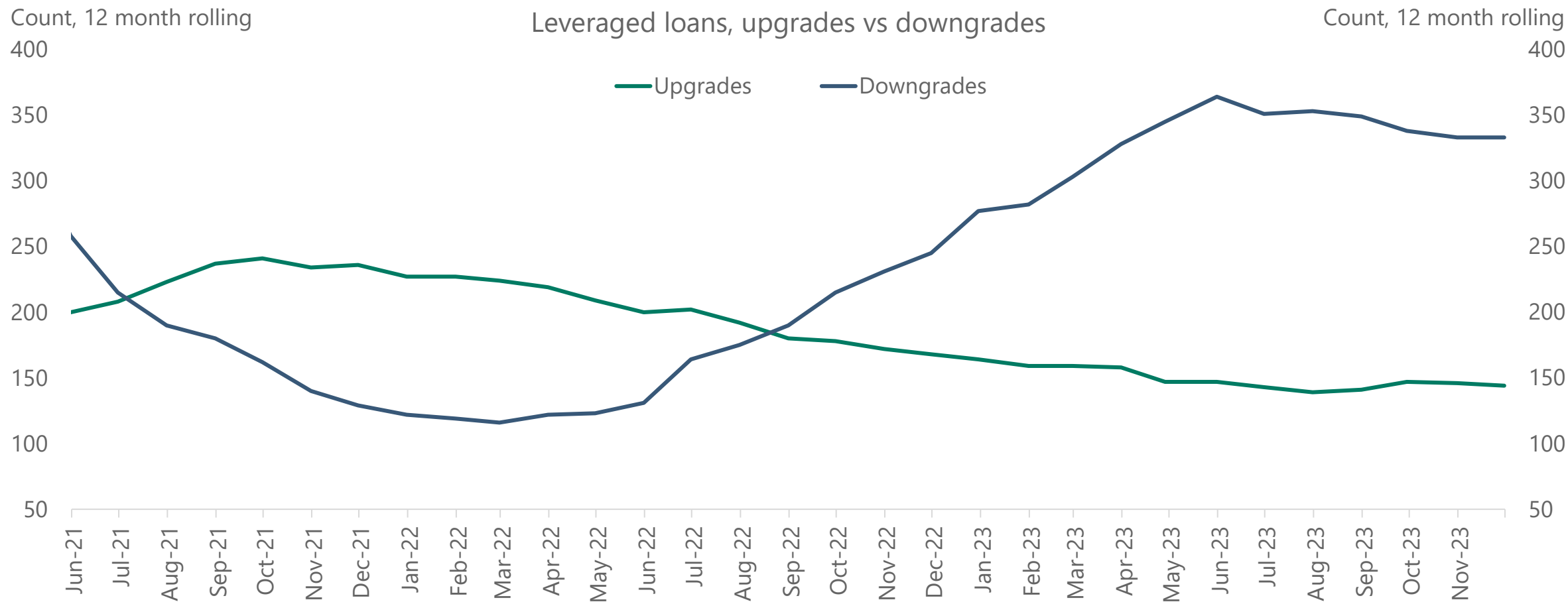


Distressed ratio for leveraged loans has risen



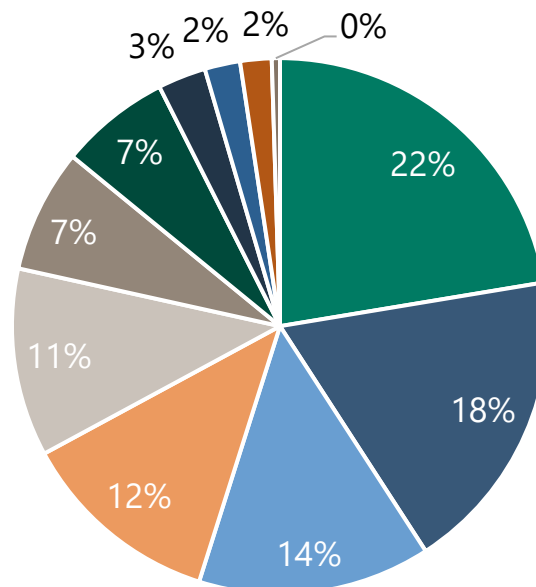
Source: Pitchbook LCD, Apollo Chief Economist. Note: For percent loans priced below 80

More downgrades than upgrades



Leveraged loans index weights

Morningstar leveraged loans index weights

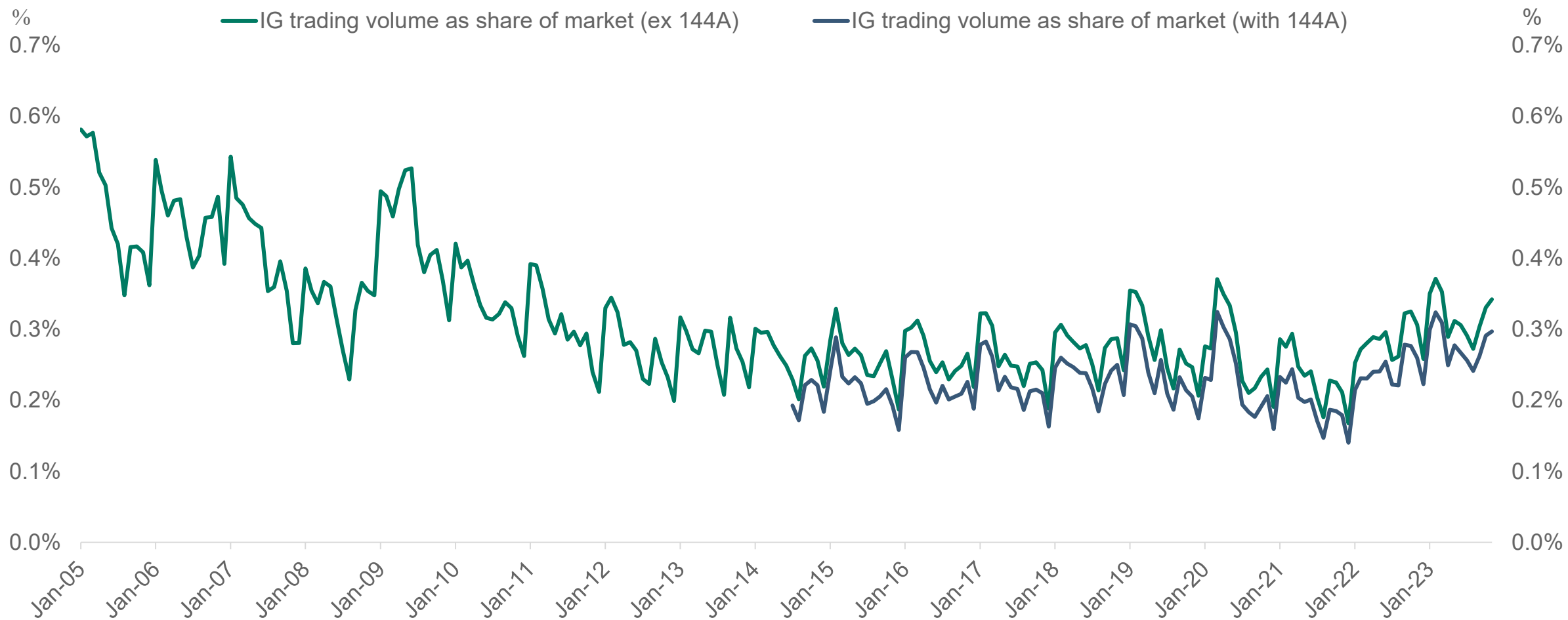


- Industrials
 - Communication Services
 - Utilities
- Information Technology
 - Materials
 - Energy
- Consumer Discretionary
 - Financials
 - Real Estate
- Health Care
 - Consumer Staples

Liquidity in US credit markets



IG trading liquidity

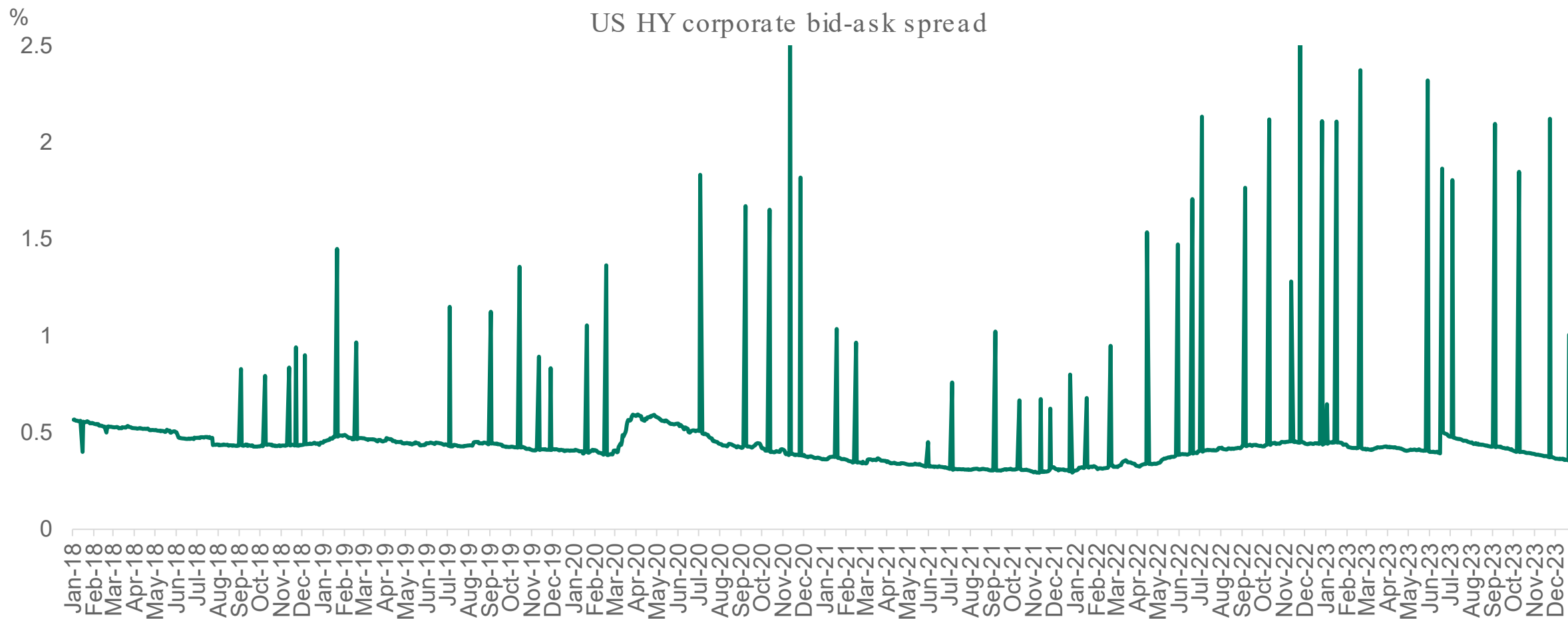


Bid-ask spread for US IG



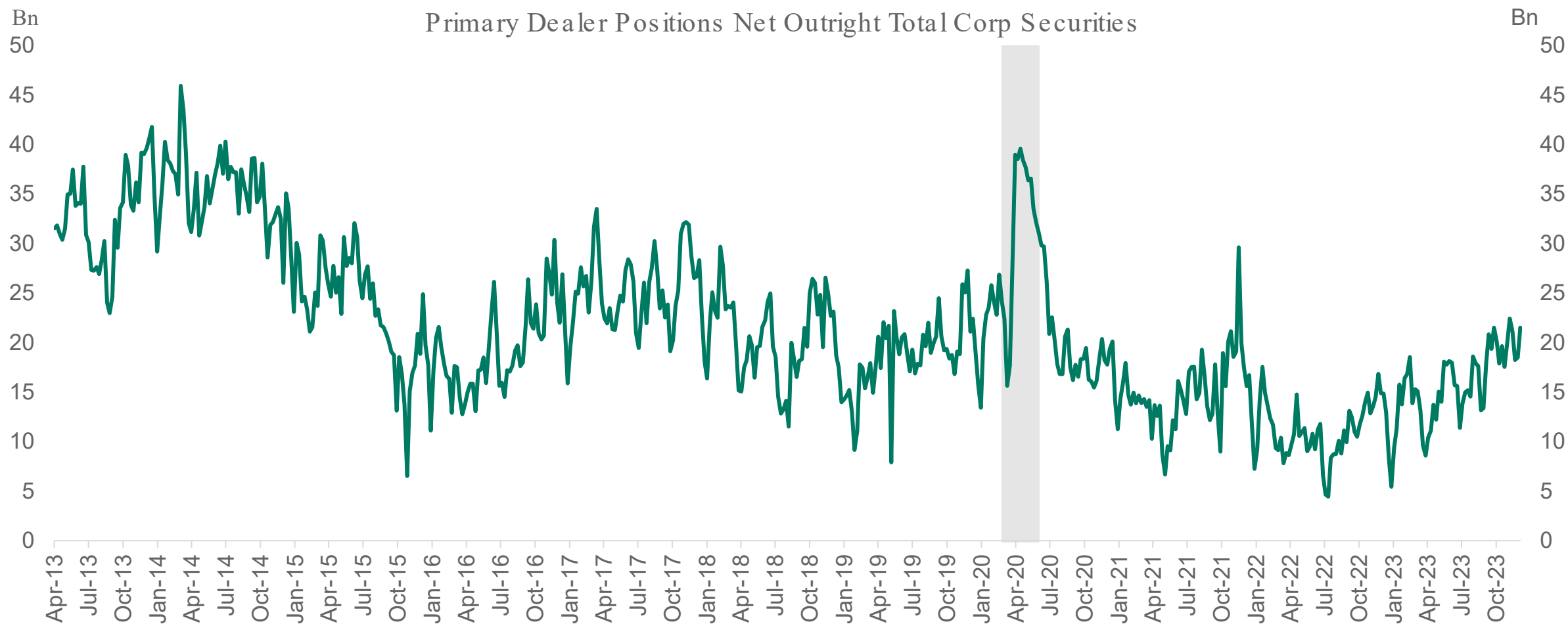
Source: Bloomberg, Apollo Chief Economist. Note: The bid-ask spread is the weighted average of Bloomberg Barclays US IG Index

Bid-ask spread for US HY

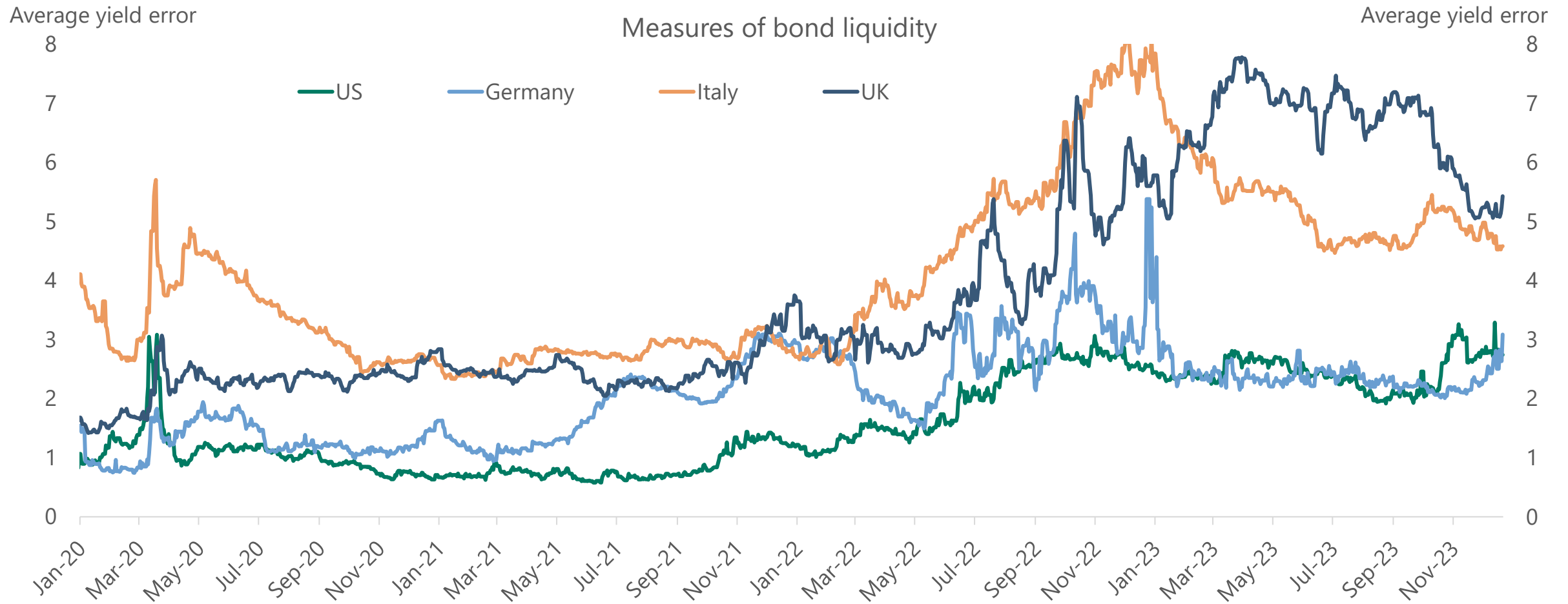


Source: Bloomberg, Apollo Chief Economist. Note: The bid-ask spread is the weighted average of Bloomberg Barclays US HY Index

Dealer inventory of corporate bonds (IG+HY)

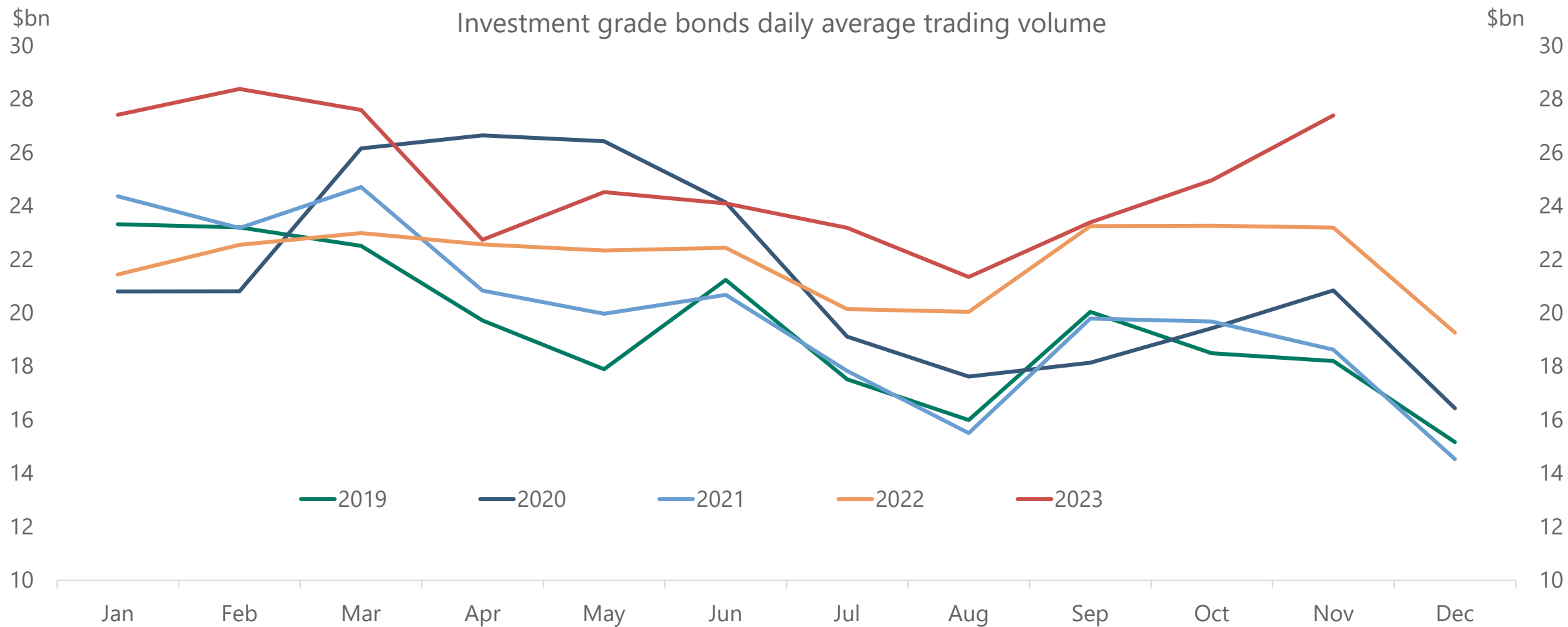


Worse liquidity in the UK bond market

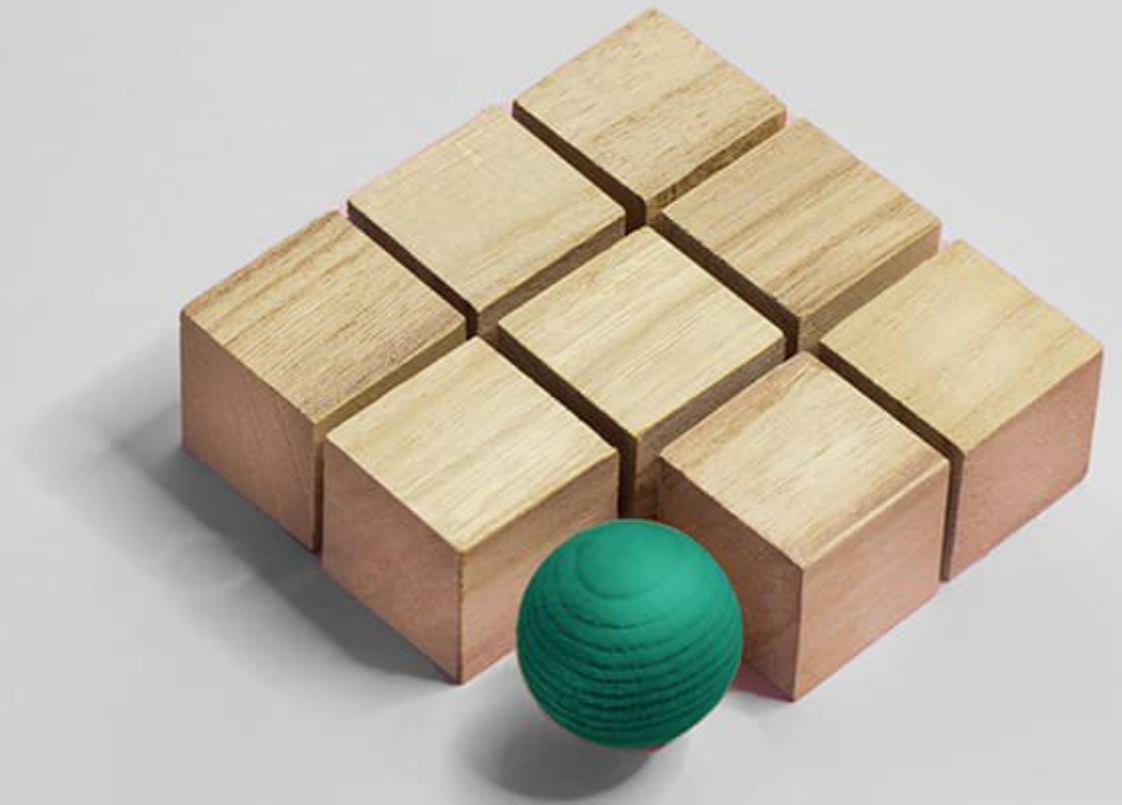


Source: Bloomberg, Apollo Chief Economist. Note: The index displays the average yield error across the universe of government notes and bonds with remaining maturity 1-year or greater, based off the intra-day Bloomberg relative value curve fitter. When liquidity conditions are favorable the average yield errors are small as any dislocations from fair values are normalized within a short time frame. Average yield error is defined as an aggregate measure for dislocations in Treasury securities across the curve.

IG trading volume in November higher than previous years



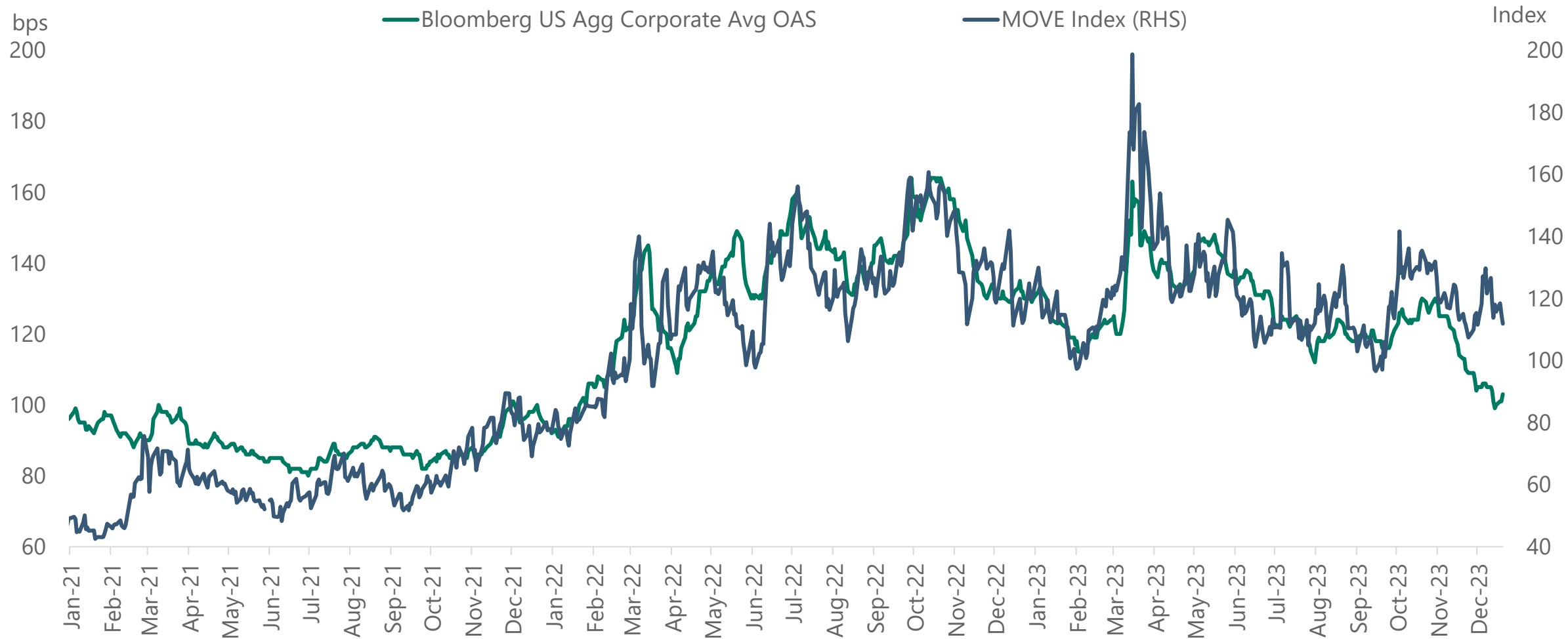
Market technicals



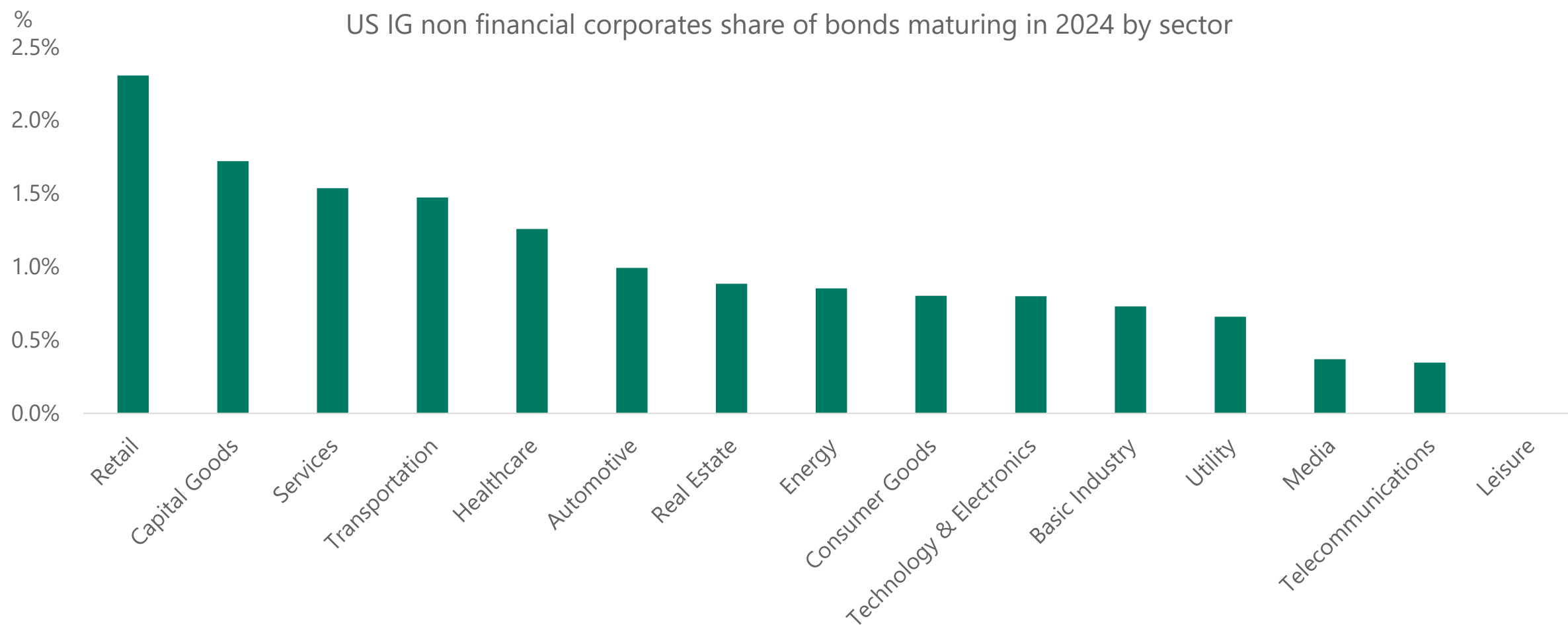
2023: Not a broad-based rally in the S&P500



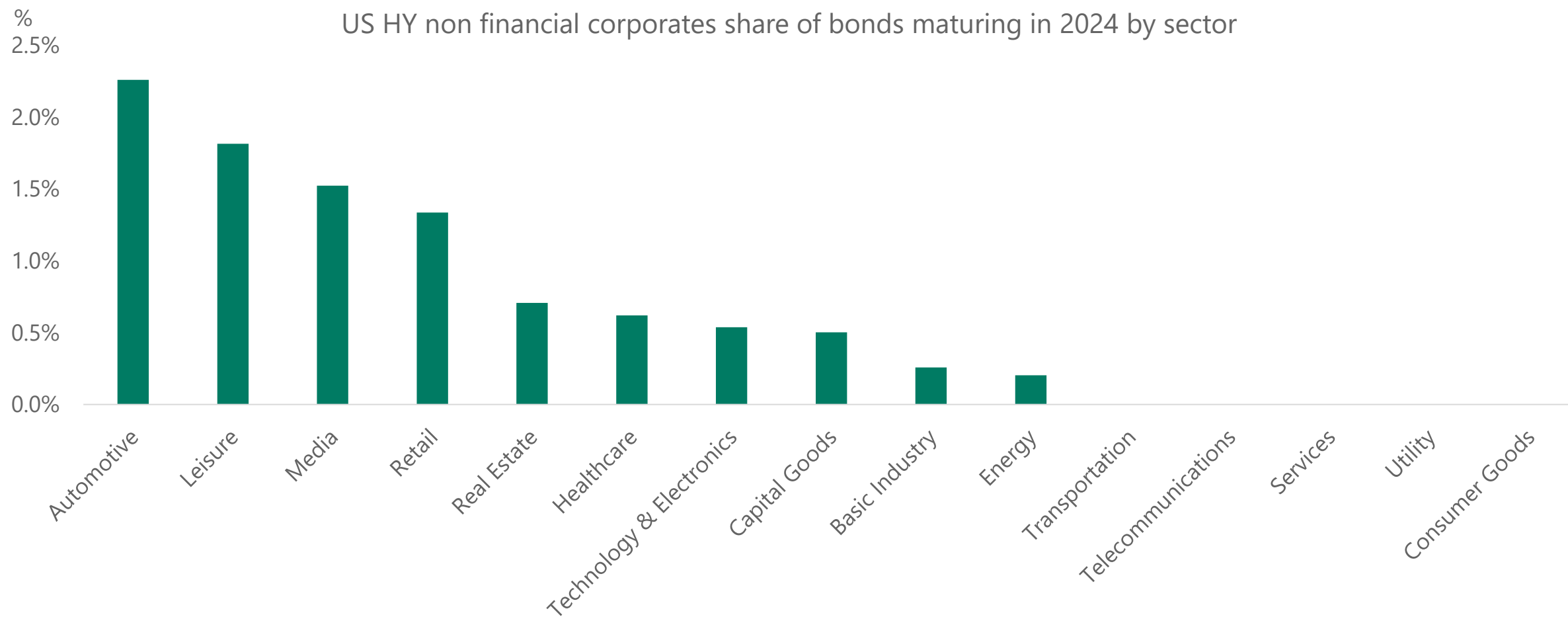
US IG spread highly correlated with implied rates vol



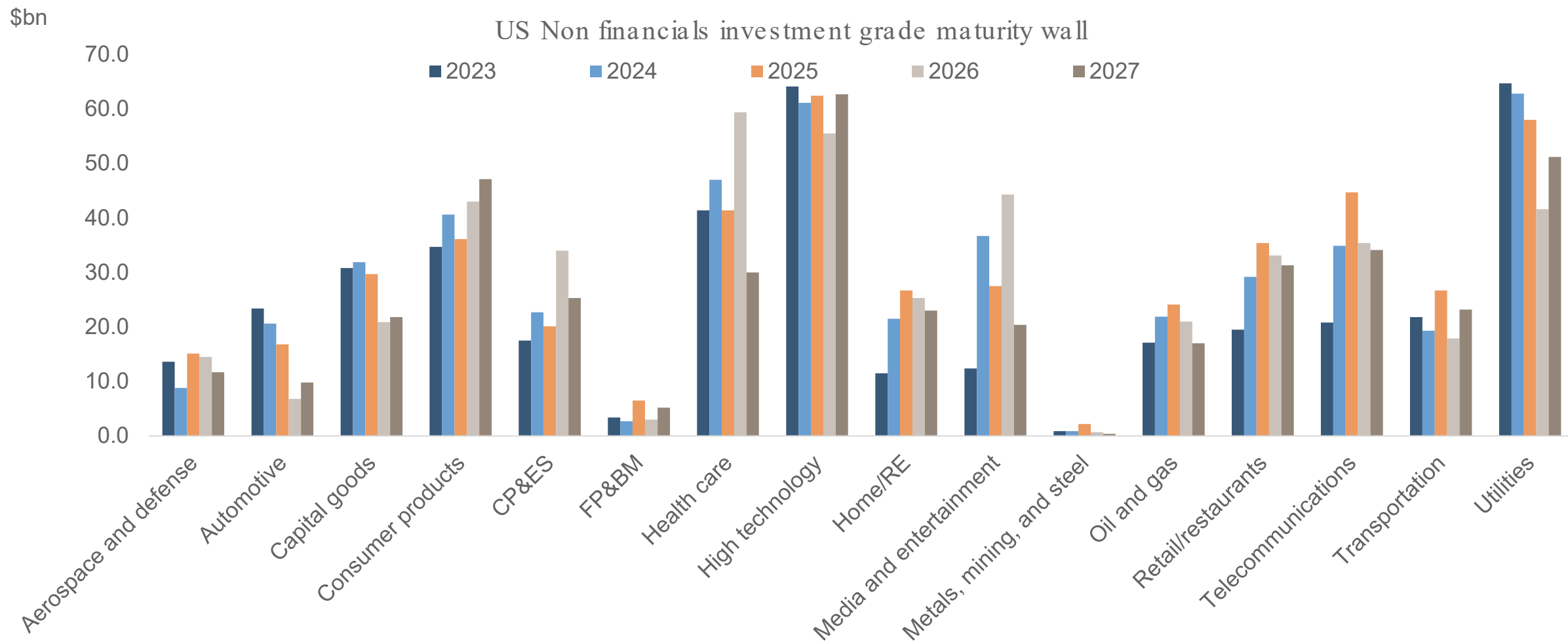
Investment grade maturity by sector in 2024



High yield maturity by sector in 2024

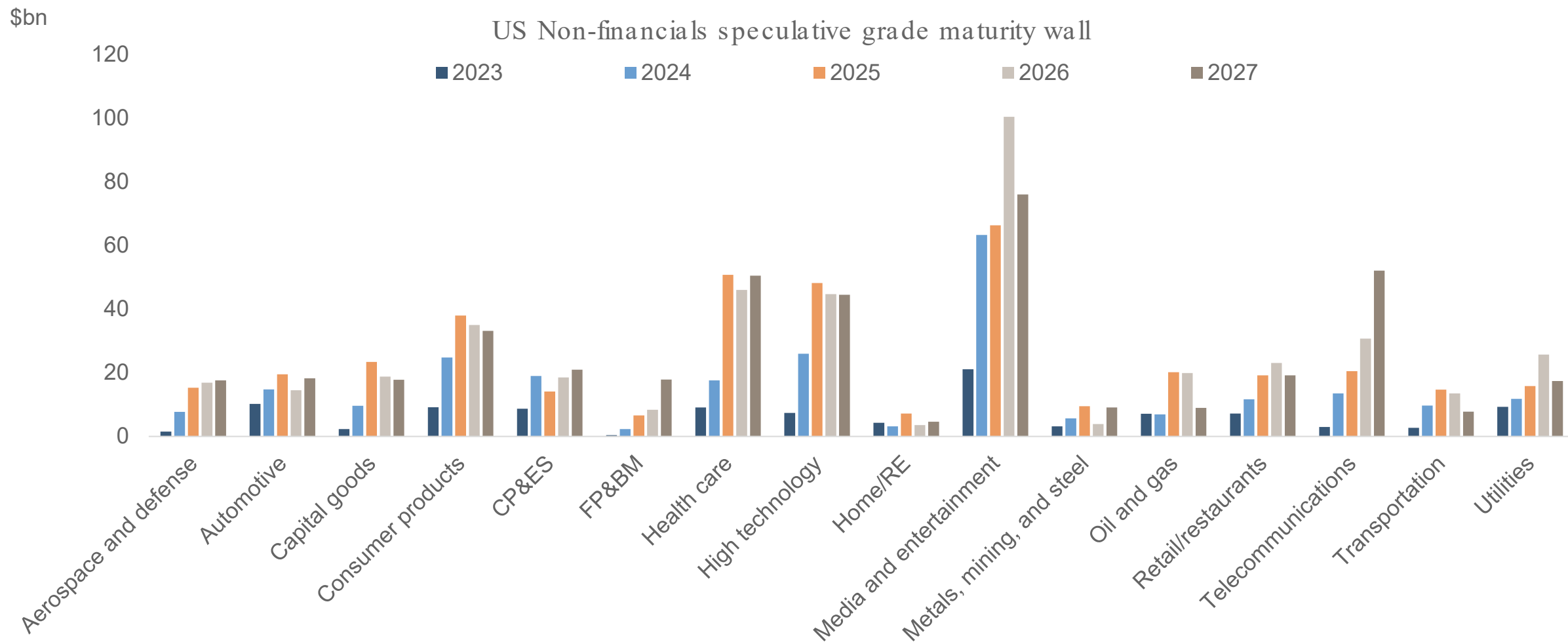


IG: US Non financials maturity wall



Source: S&P, Apollo Chief Economist. Note: CP&ES--Chemicals, packaging, and environmental services. FP&BM--Forest products and building materials. Media and entertainment includes the leisure sector. Includes bonds, loans, and revolving credit facilities that are rated by S&P Global Ratings. Data as of Jan 1, 2023.

HY: US Non financials maturity wall

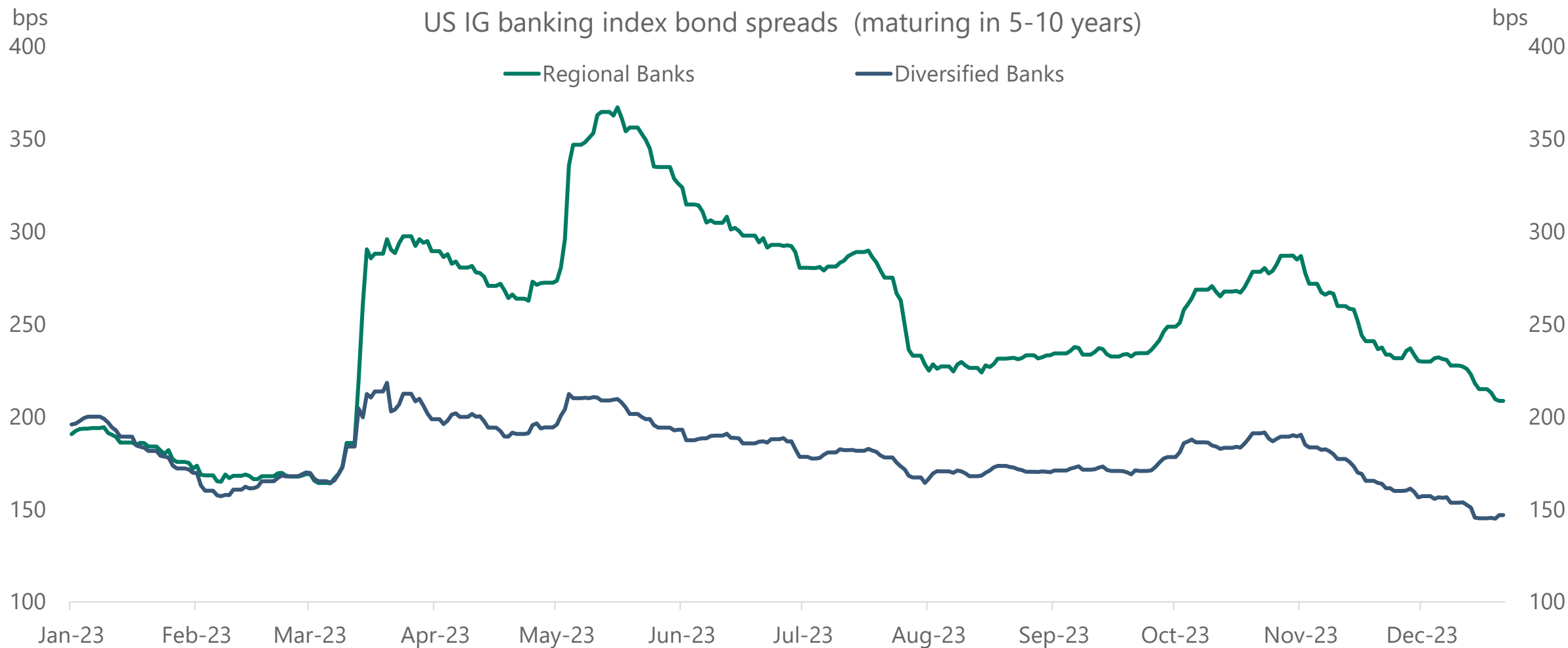


Source: S&P, Apollo Chief Economist. Note: CP&ES--Chemicals, packaging, and environmental services. FP&BM--Forest products and building materials. Media and entertainment includes the leisure sector. Includes bonds, loans, and revolving credit facilities that are rated by S&P Global Ratings. Data as of Jan 1, 2023.

Regional banks

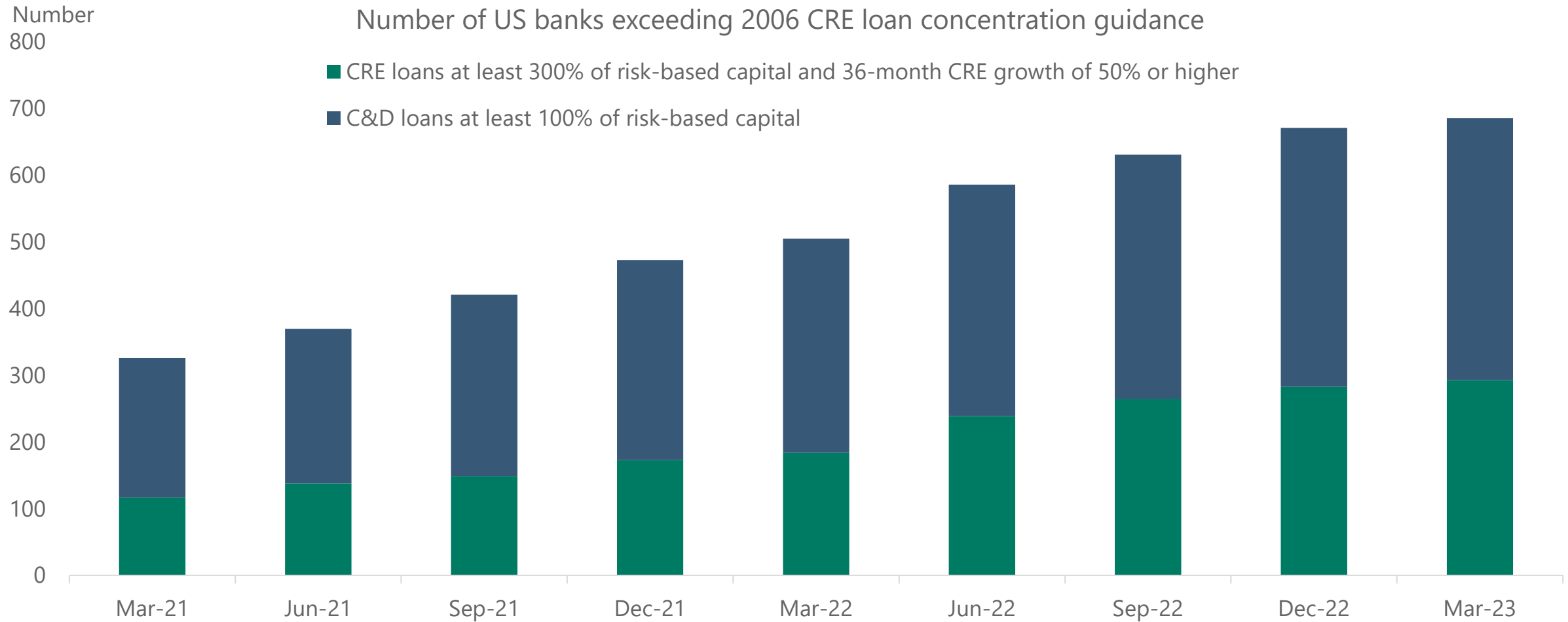


Regional bank spreads have widened recently



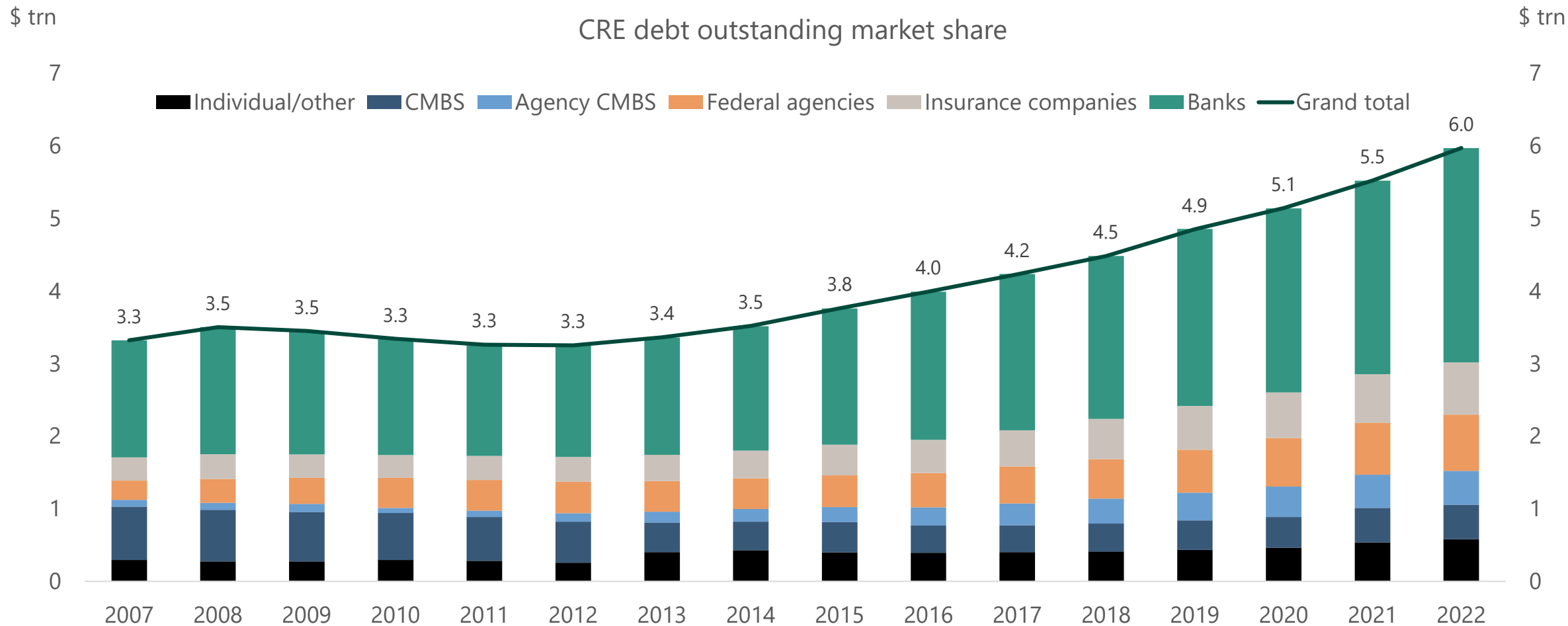
Source: ICE BofA, Bloomberg, Apollo Chief Economist. Note: Unweighted average spreads of bonds from ICE 5-10 Year US Banking Index, C6PX Index for bonds issued before 1st Jan 2023. There are 8 banks in the Regional index and 41 banks in the Diversified index, and Regional banks include BankUnited Inc, Citizens Financial Group, Huntington Bancshares Incorporated, Regions Financial Corporation, Truist Financial Corporation, Webster Financial Corp, Wintrust Financial Corp, Zions, and Diversified banks includes JP Morgan, Citibank, Bank of America, etc

Almost 700 US banks exceed the 2006 CRE loan concentration guidance

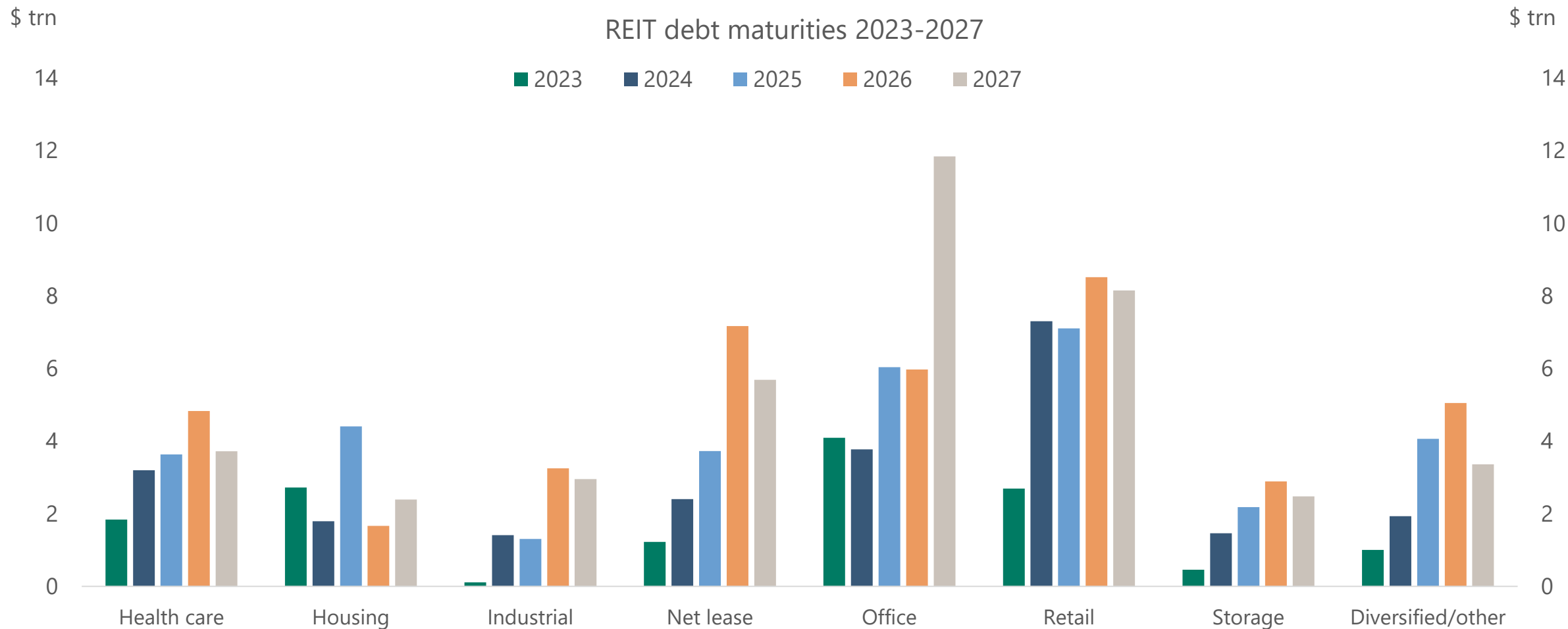


Source: S&P Global Market Intelligence, Apollo Chief Economist. Note: C&D = Construction and Development, data as of May 2023 and based on regulatory filings

US banks account for the bulk of CRE lending

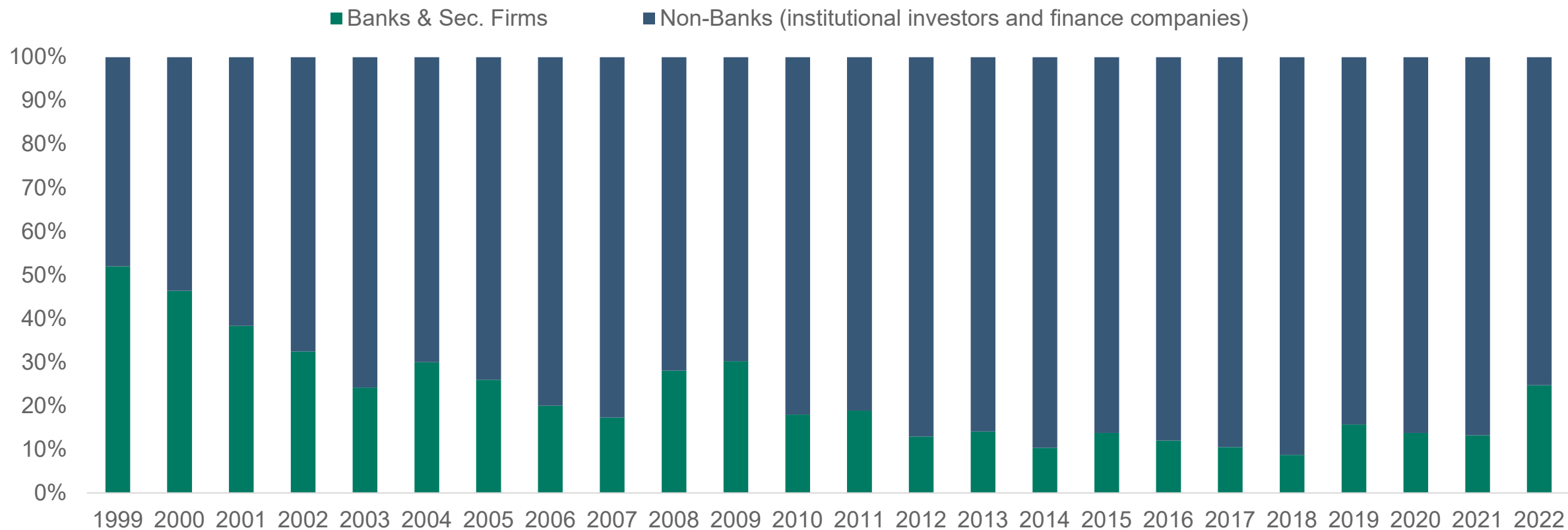


U.S. REITs hold approximately \$14 billion of debt maturing this year



More leveraged loans are held by banks

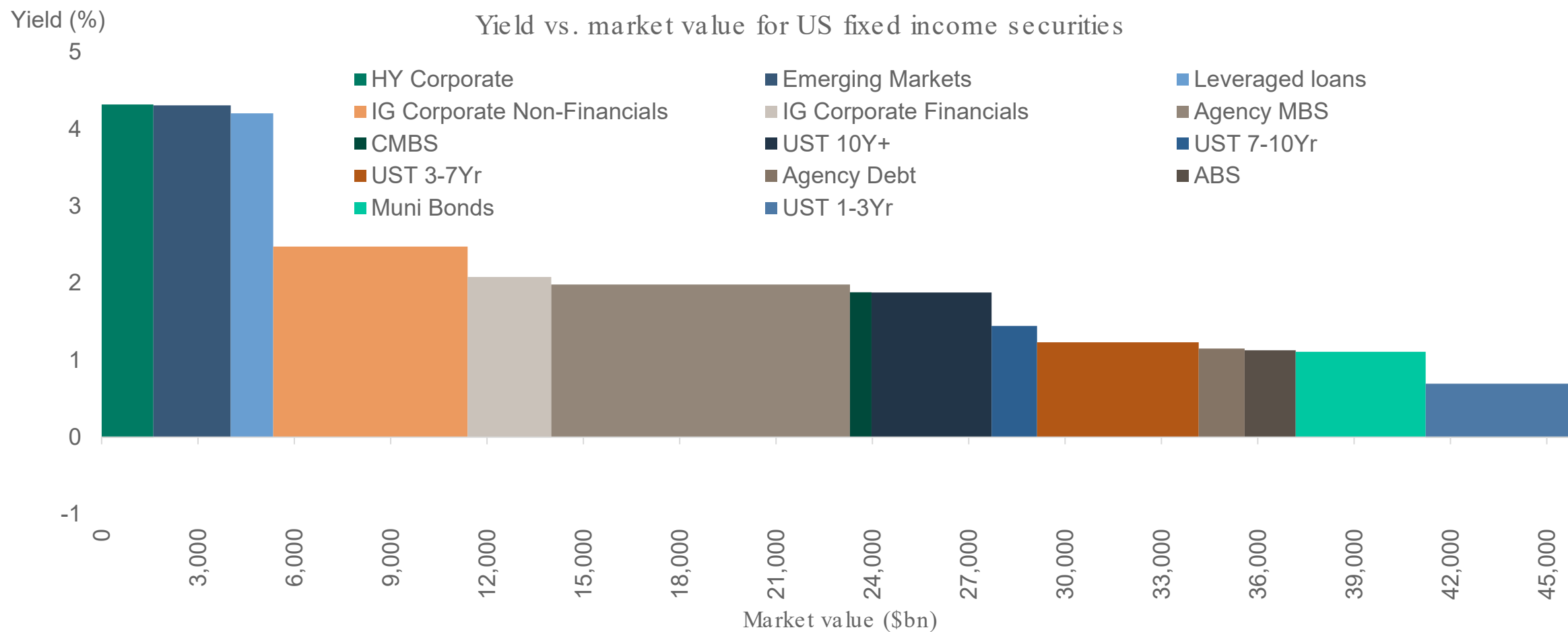
Primary investor market: leveraged loans



Credit markets in a
broader perspective

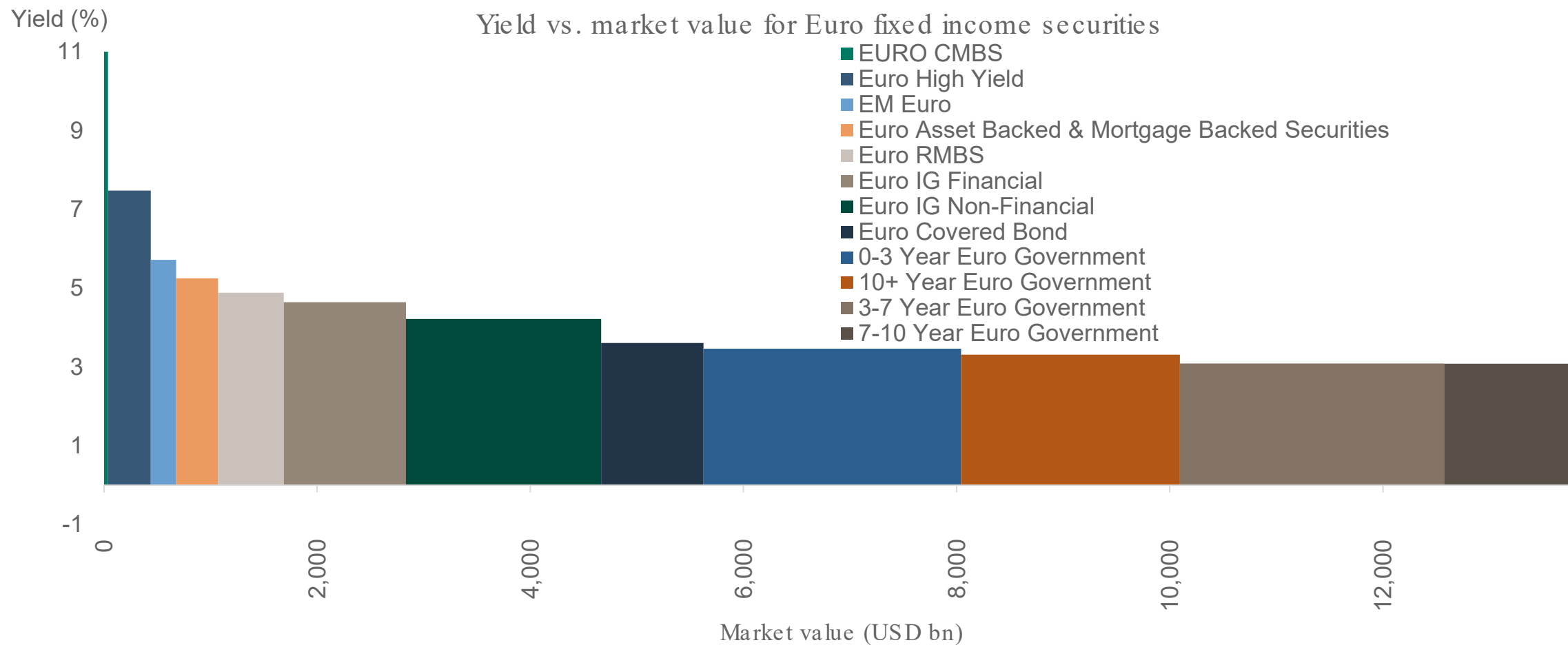


US fixed income markets by yield and size

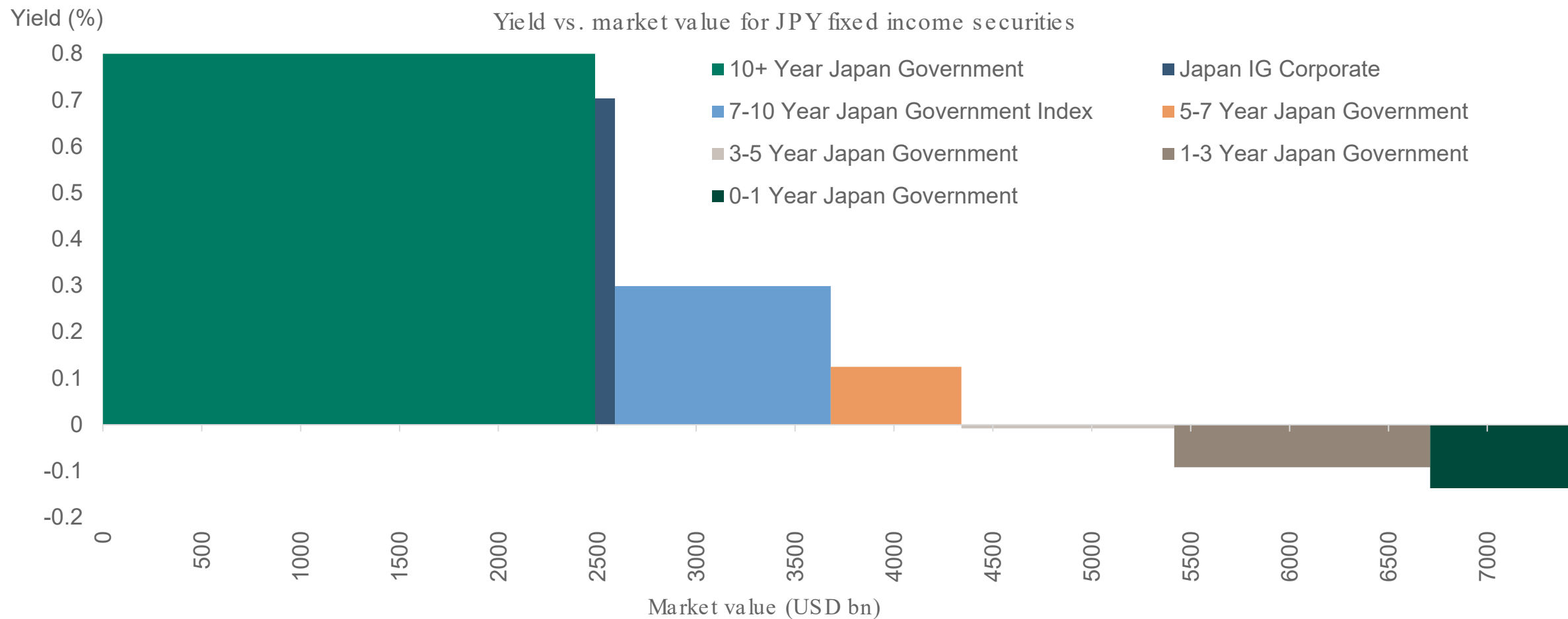


Source: Bloomberg Barclays, SIFMA, ICE BofA, Pitchbook LCD, Bloomberg, Apollo Chief Economist. Note: data as of 4Q21

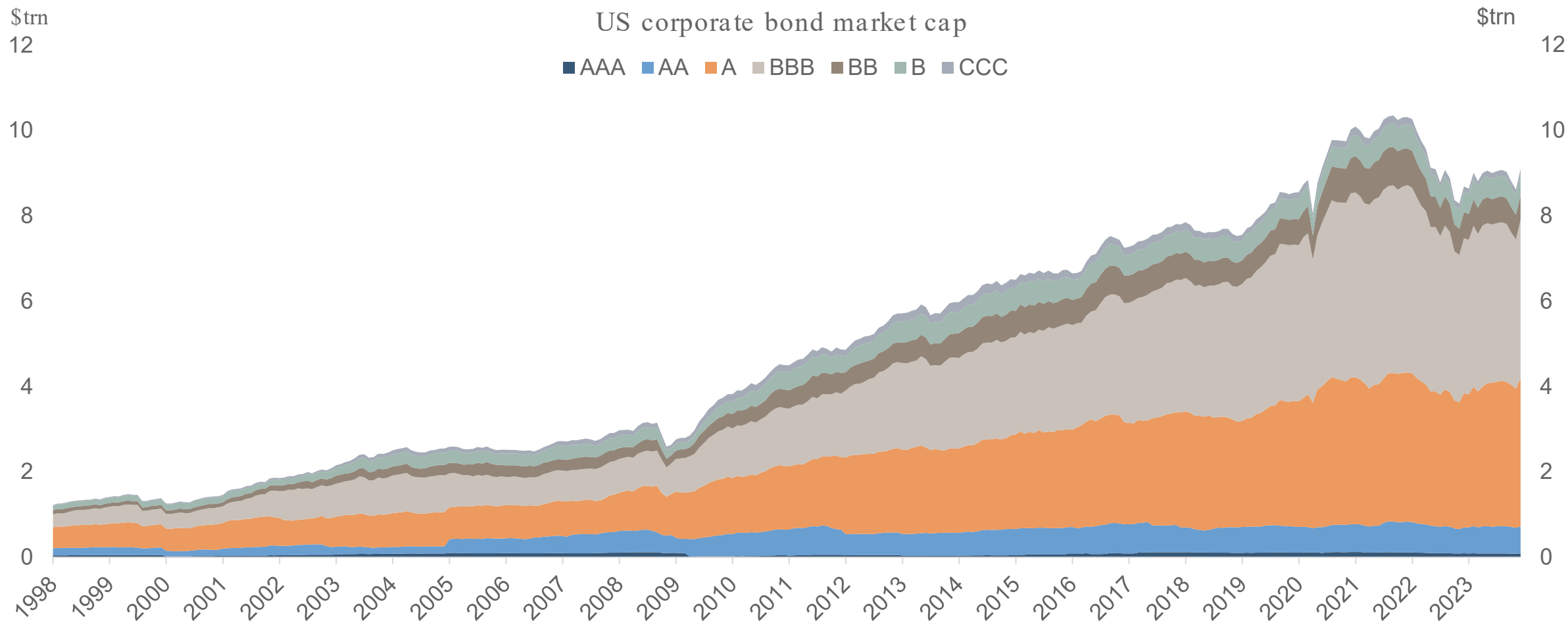
European fixed income markets by yield and size



Japanese fixed income markets by yield and size



Total market cap of US corporate bond markets: \$9trn

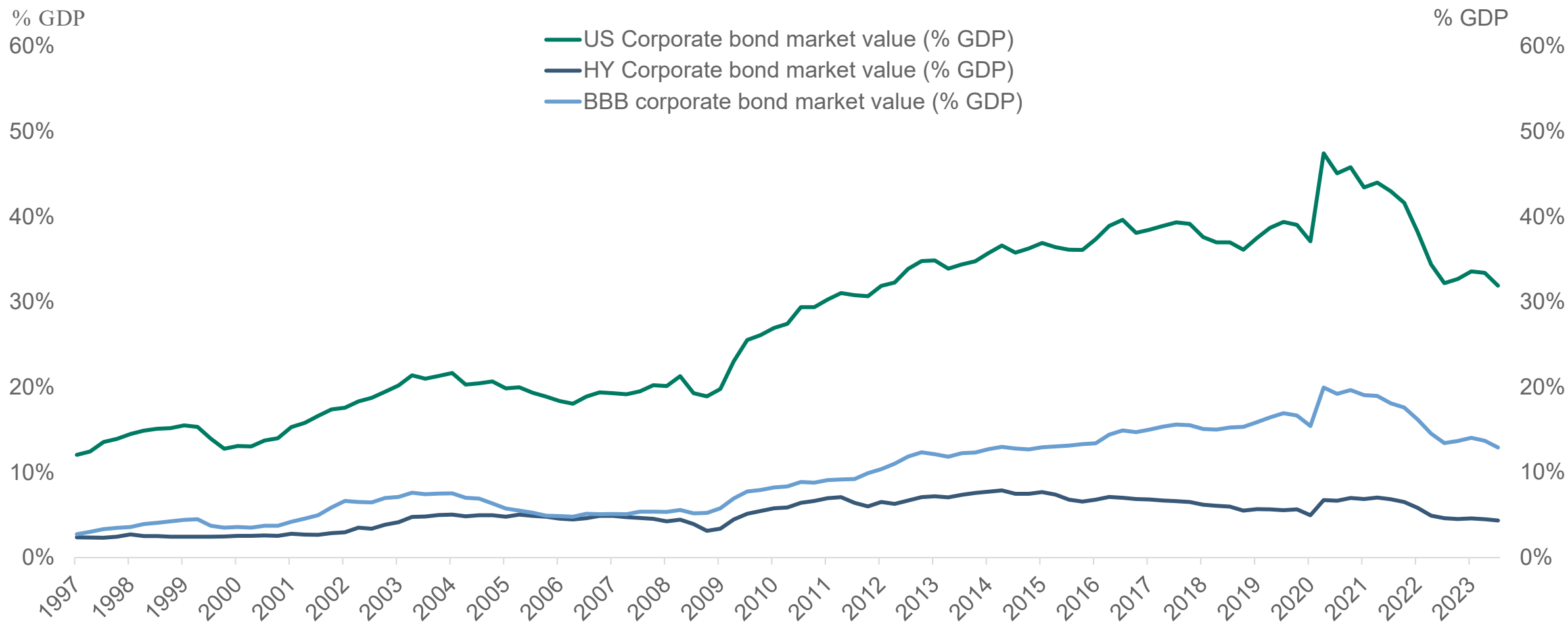


Source: ICE BofA, Bloomberg, Apollo Chief Economist.

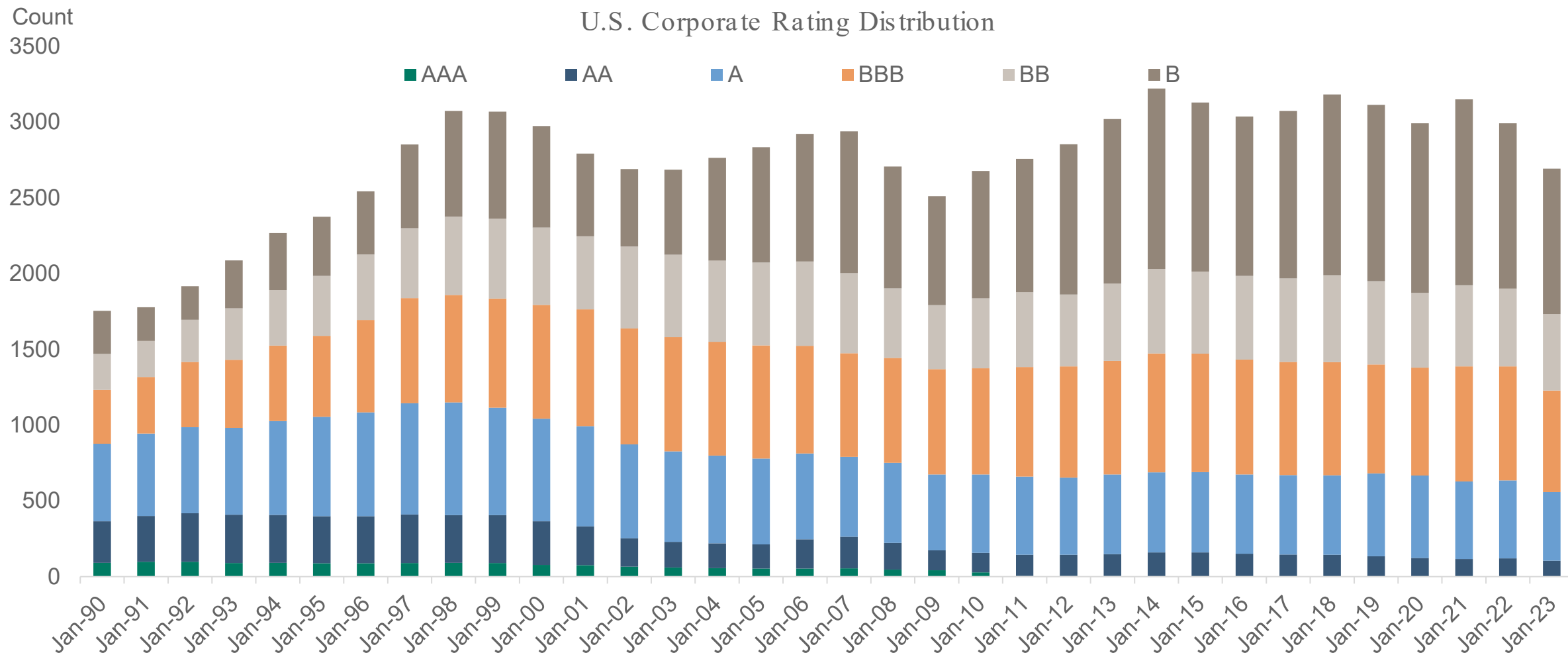
Most corporate bonds outstanding are rated either BBB or single-A



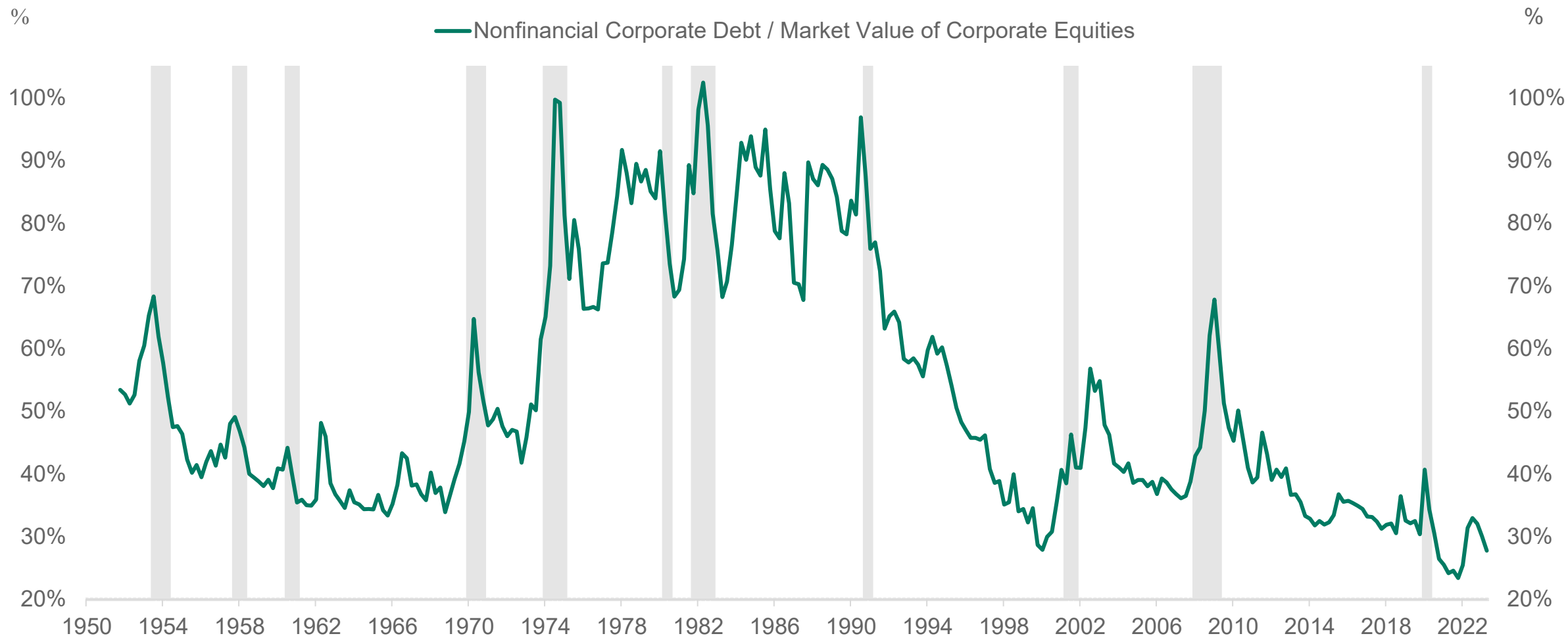
US corporate bond markets as a share of GDP



Distribution of corporate credit ratings

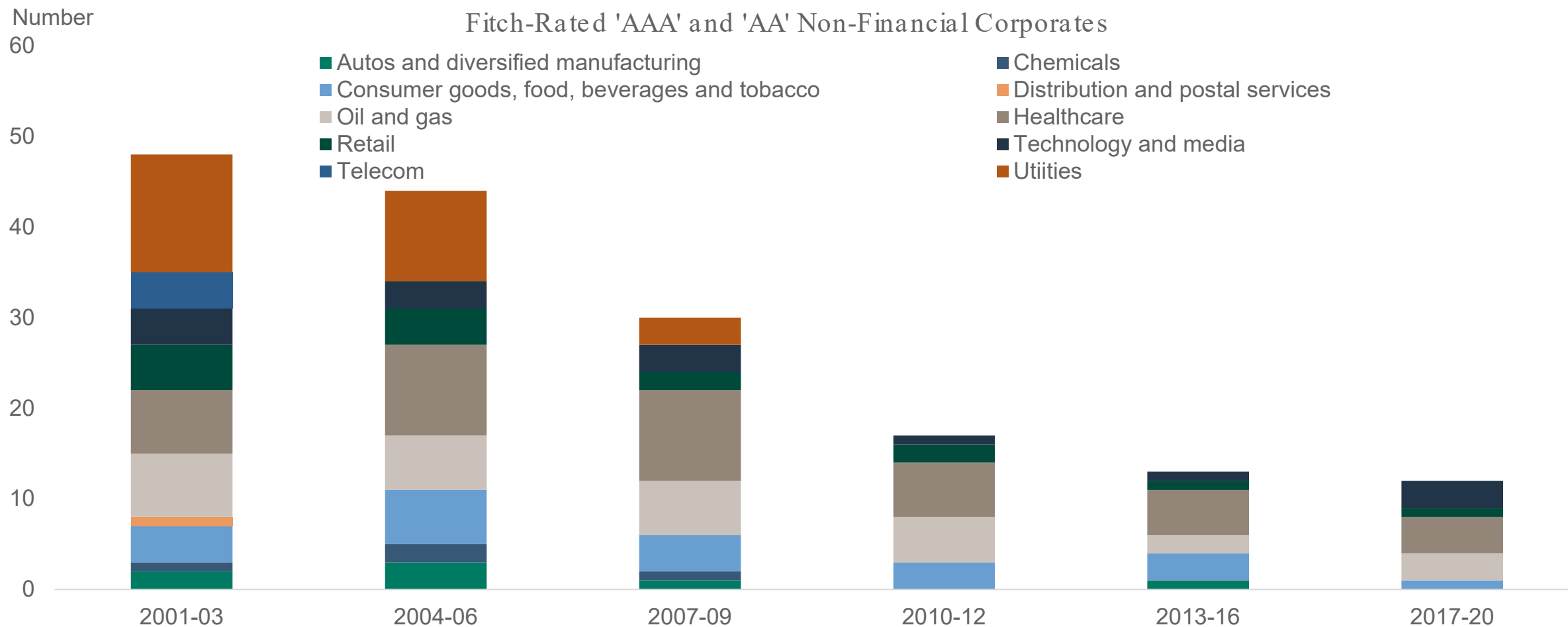


Debt-to-equity ratio is low for corporate America



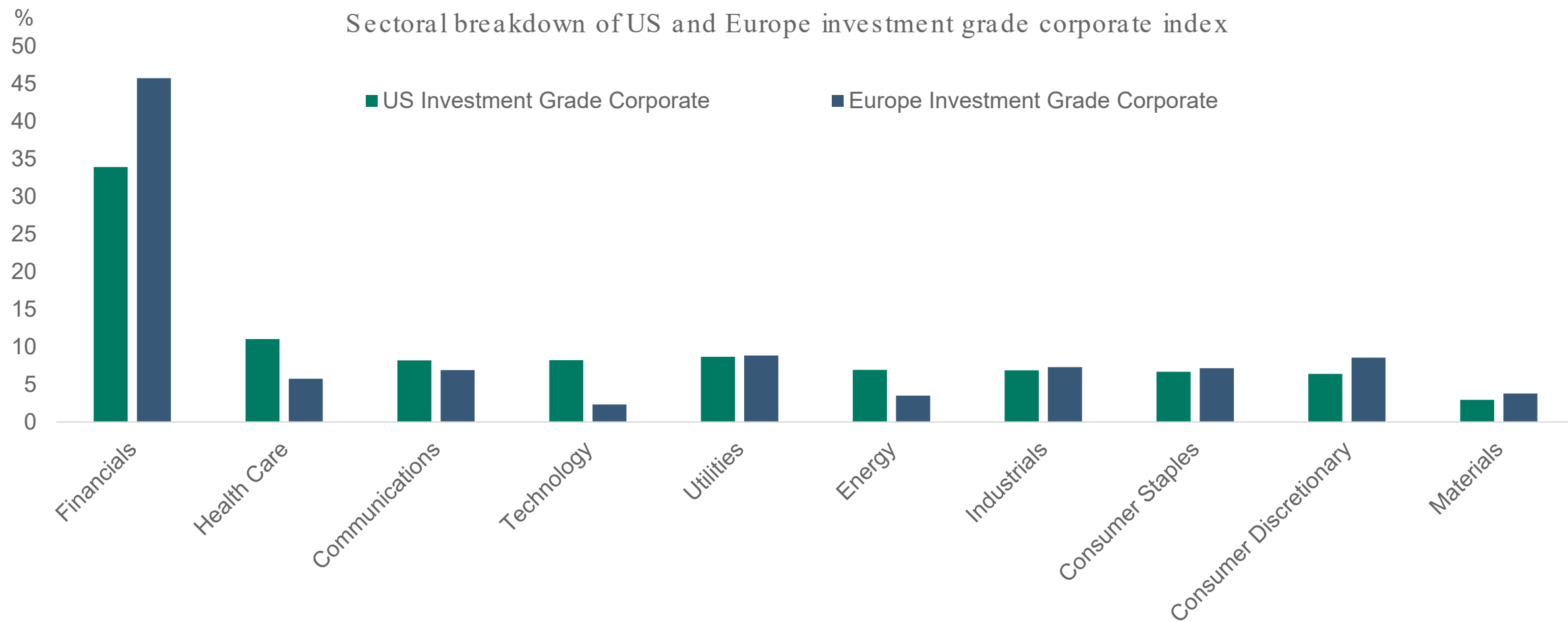
Source: FRB, Haver Analytics, Apollo Chief Economist.

Fewer and fewer corporate bonds are rated AAA and AA

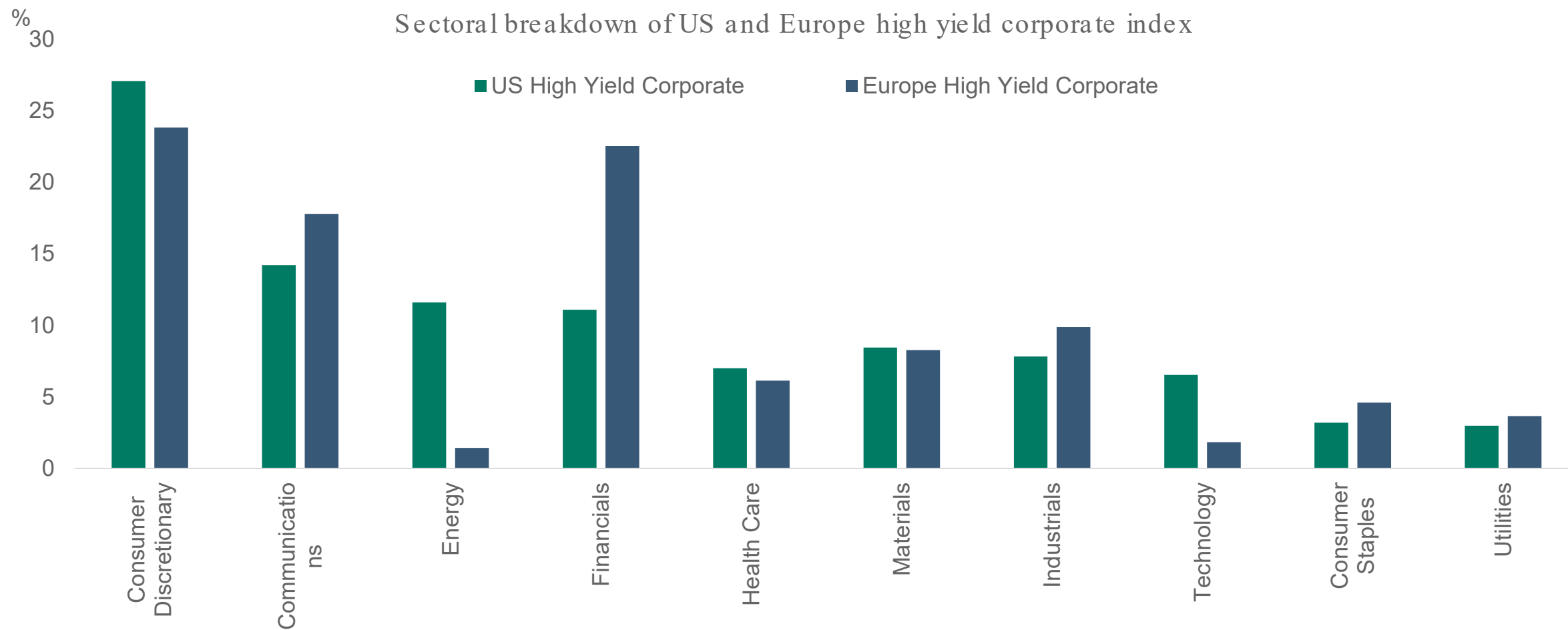


Source: Fitch Ratings, Apollo Chief Economist. Note: Including state-linked issuers with Standalone Credit Profiles in the 'AA' category. Data cover issuers that have been rated for at least six years or at end-2020.

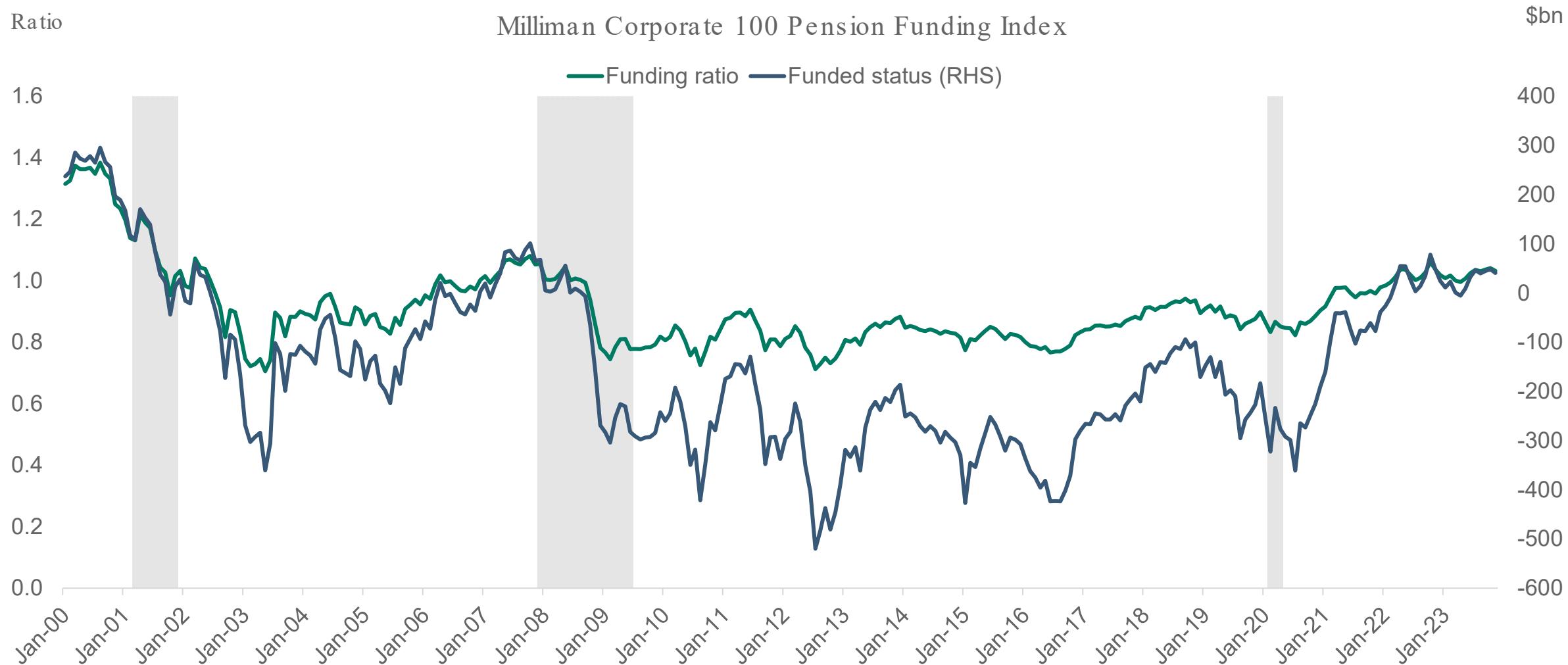
Comparing the US IG index with the EU IG index



Comparing the US HY index with the EU HY index

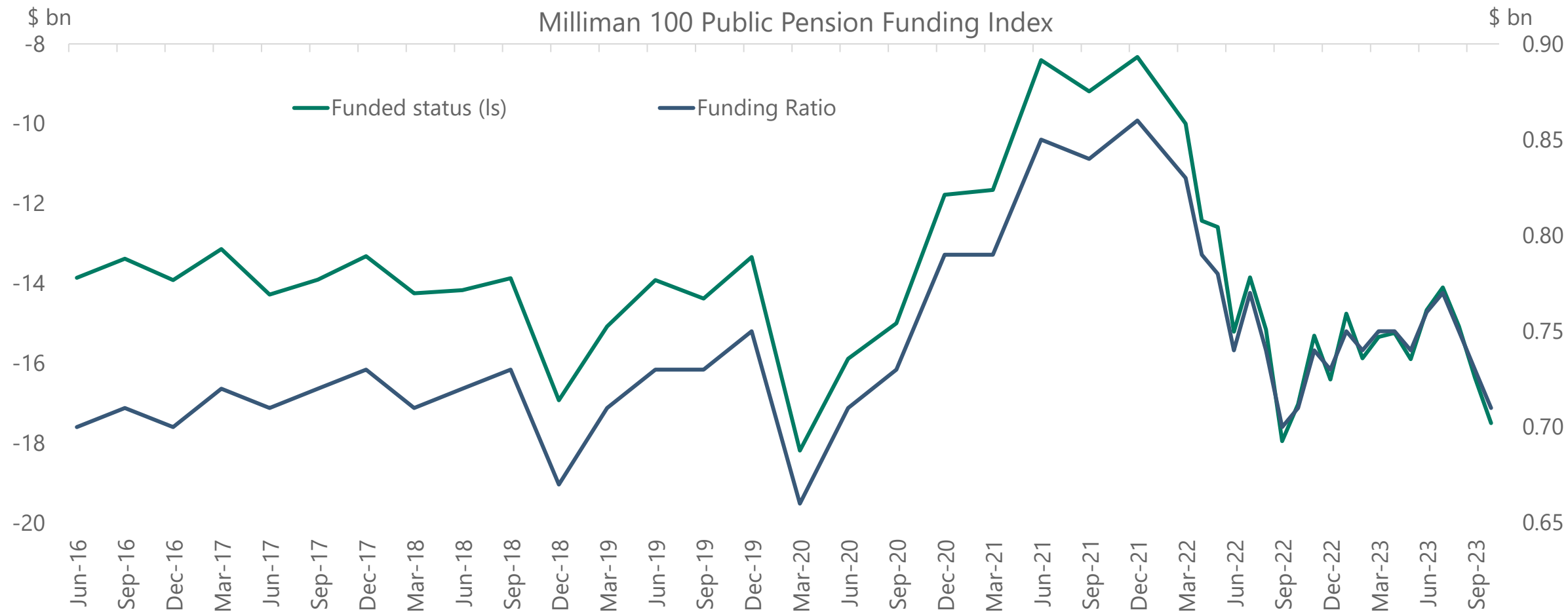


Corporate pension funding status has improved



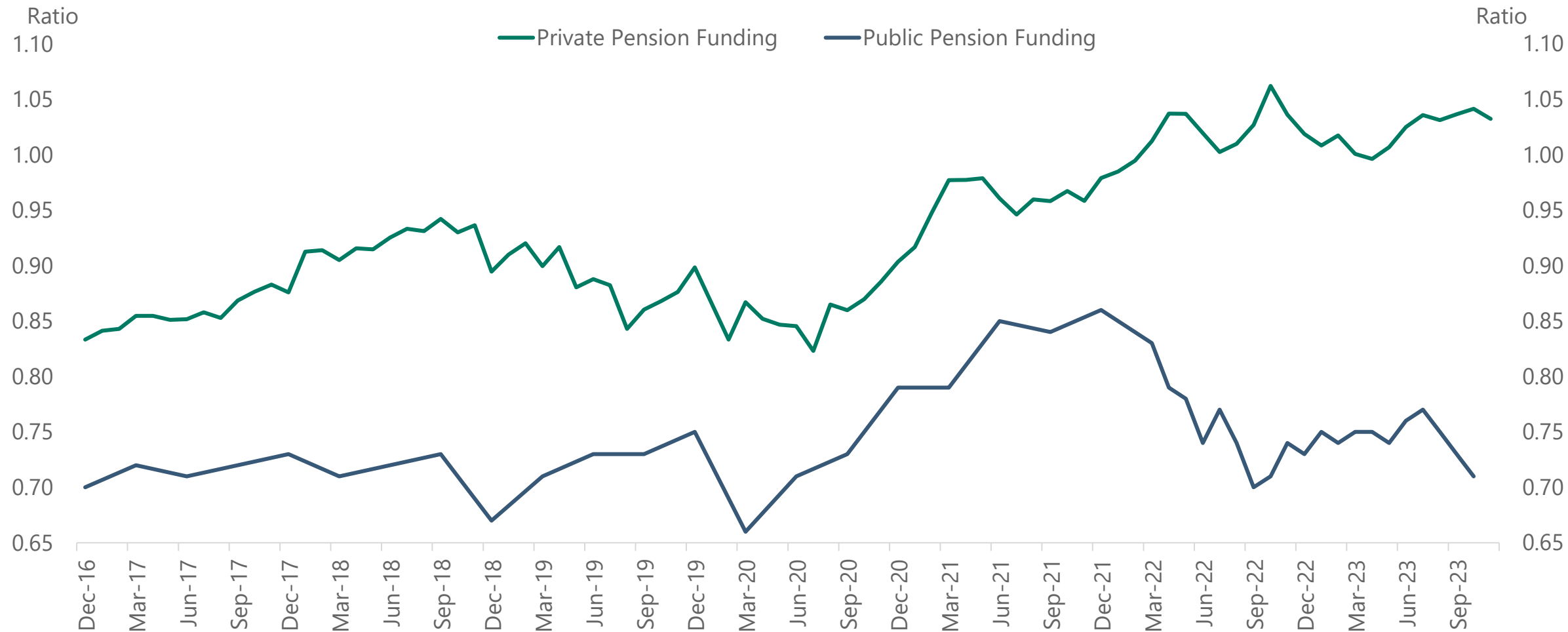
Source: Milliman, Bloomberg, Apollo Chief Economist. Note: Funded status measures planned assets minus projected benefit obligation

Public pension funding status has deteriorated



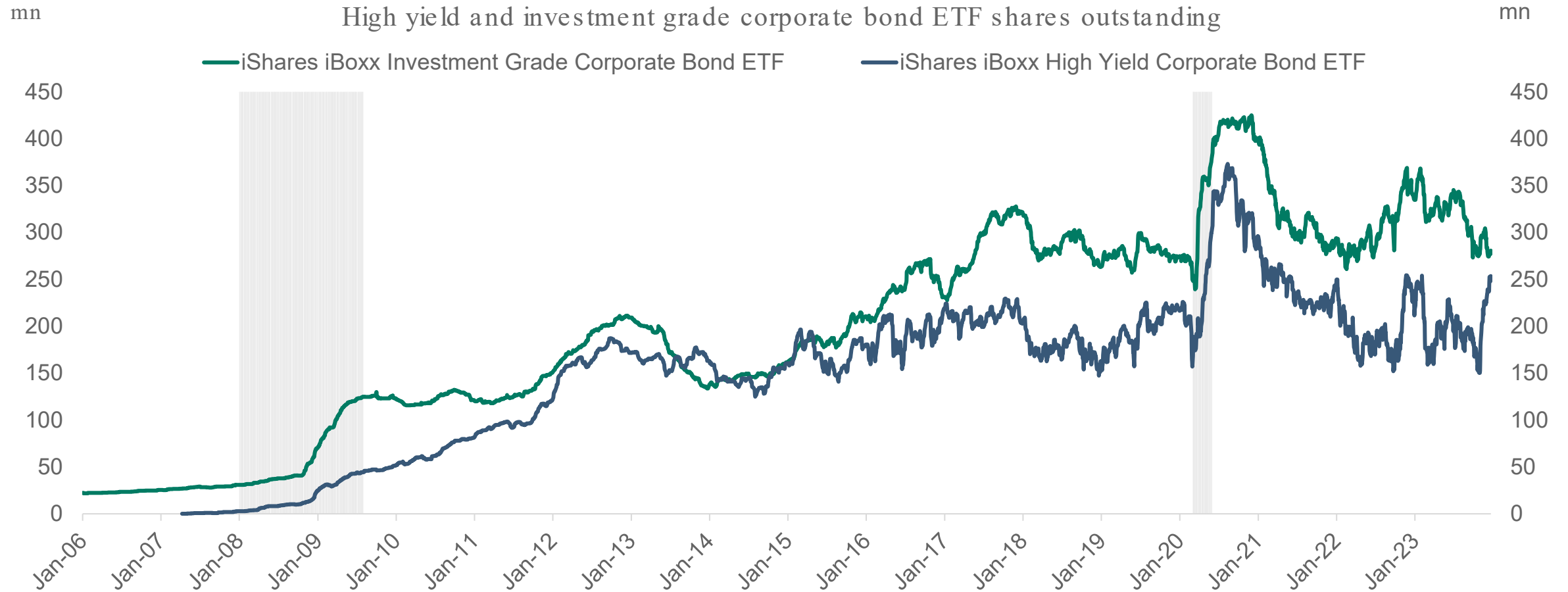
Source: Milliman, Bloomberg, Apollo Chief Economist.

Private vs public pension funding



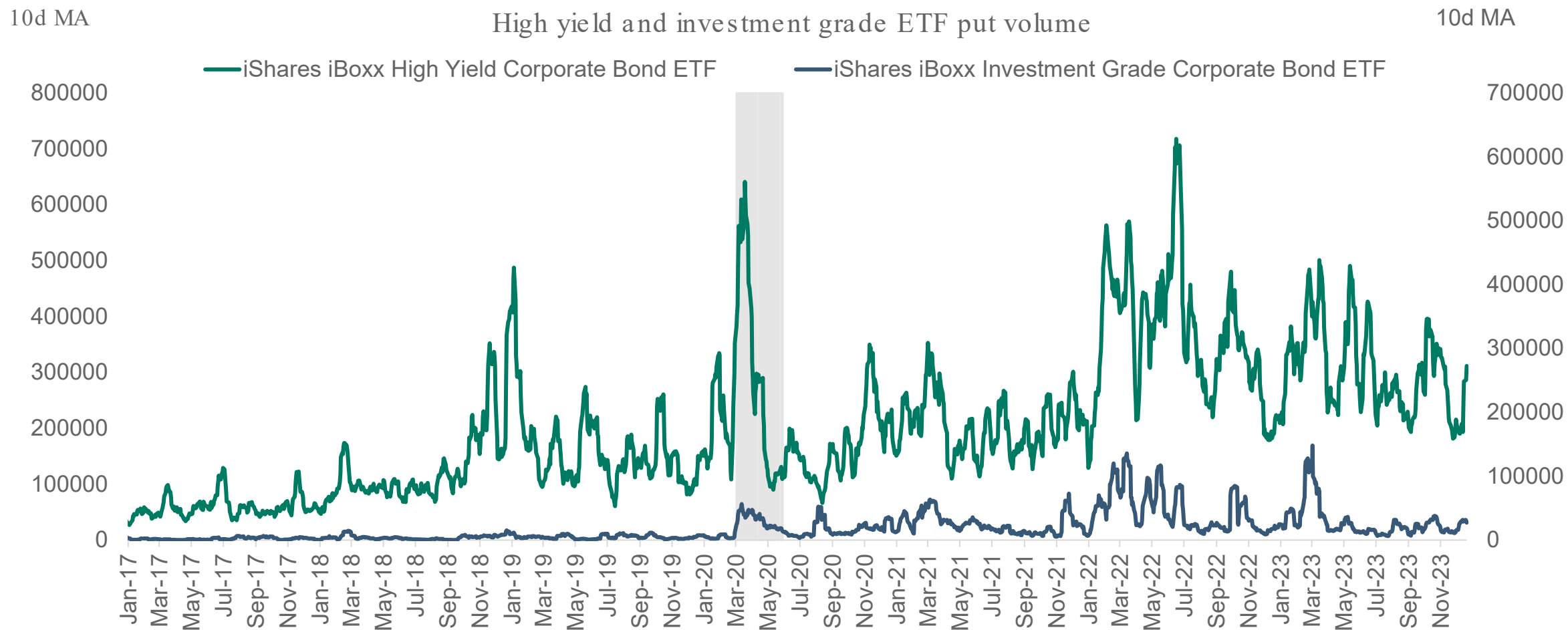
Source: Milliman, Bloomberg, Apollo Chief Economist.

Retail investor activity in IG and HY



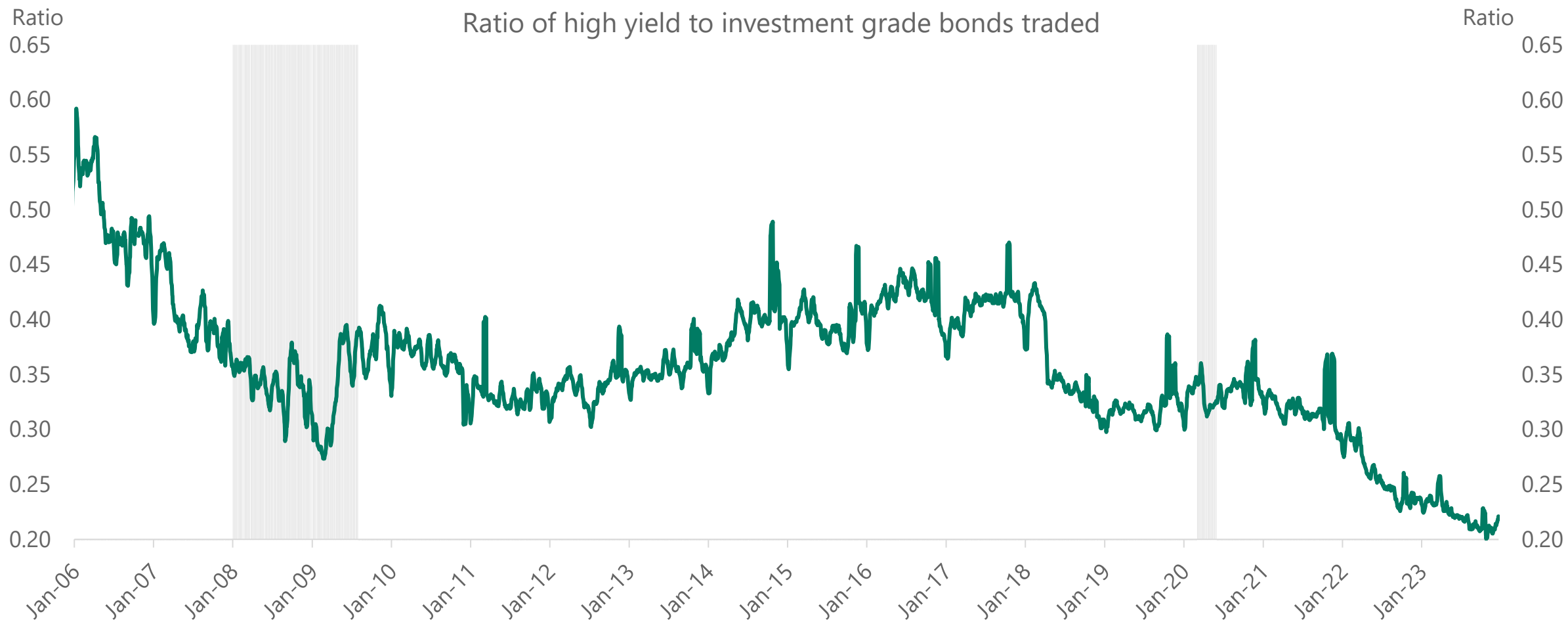
Source: Bloomberg, Apollo Chief Economist. Note: Tickers used HYG US Equity and LQD US Equity

Put volumes for IG and HY ETF

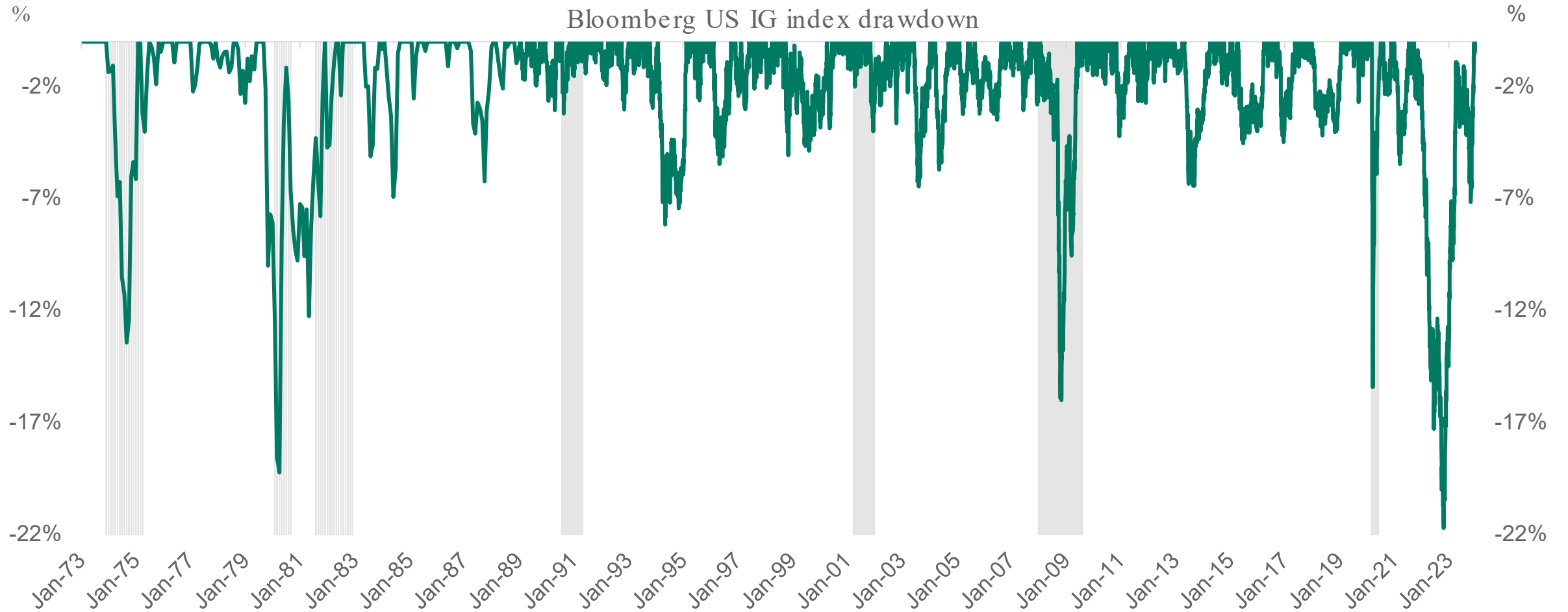


Fewer high yield bonds being traded

Ratio of high yield to investment grade bonds traded



IG index drawdown

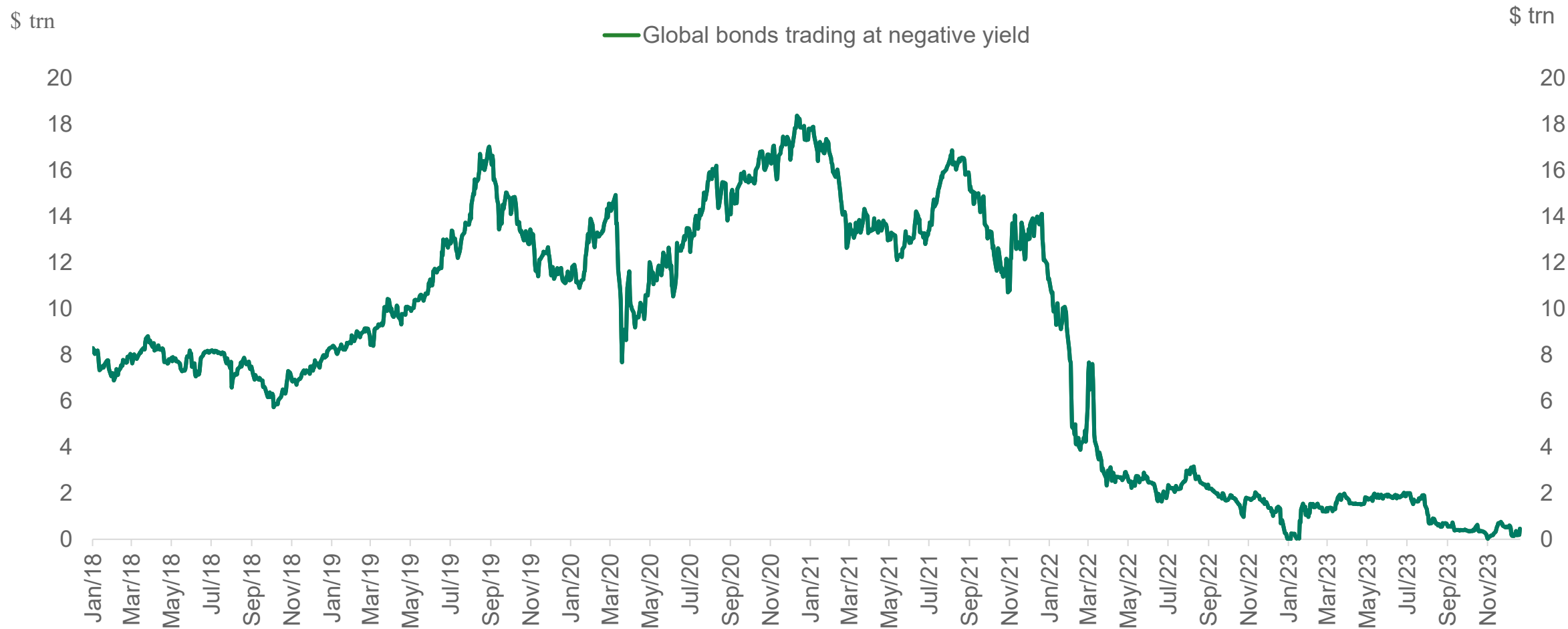


Source: Bloomberg, Apollo Chief Economist. Note: Index used LUACTRUU Index

Bonds outstanding trading at negative interest rates



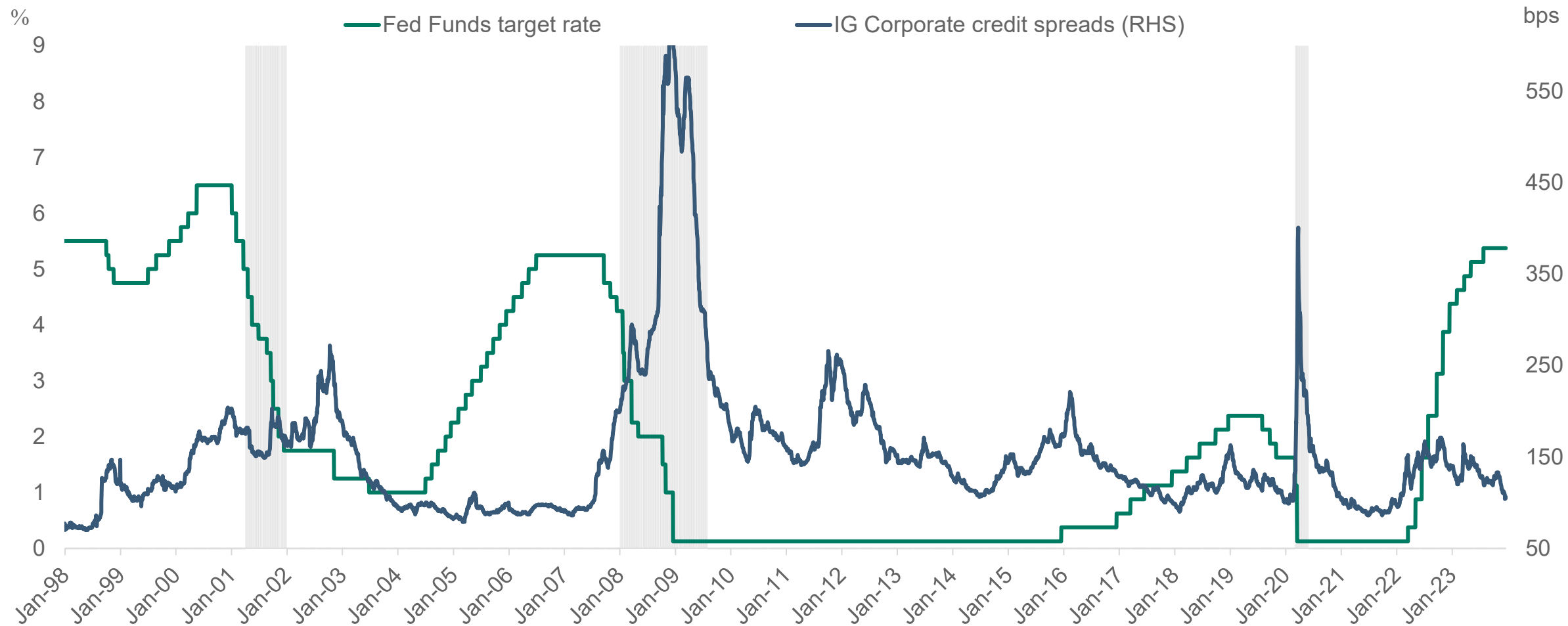
The total value of negative yielding debt in the world



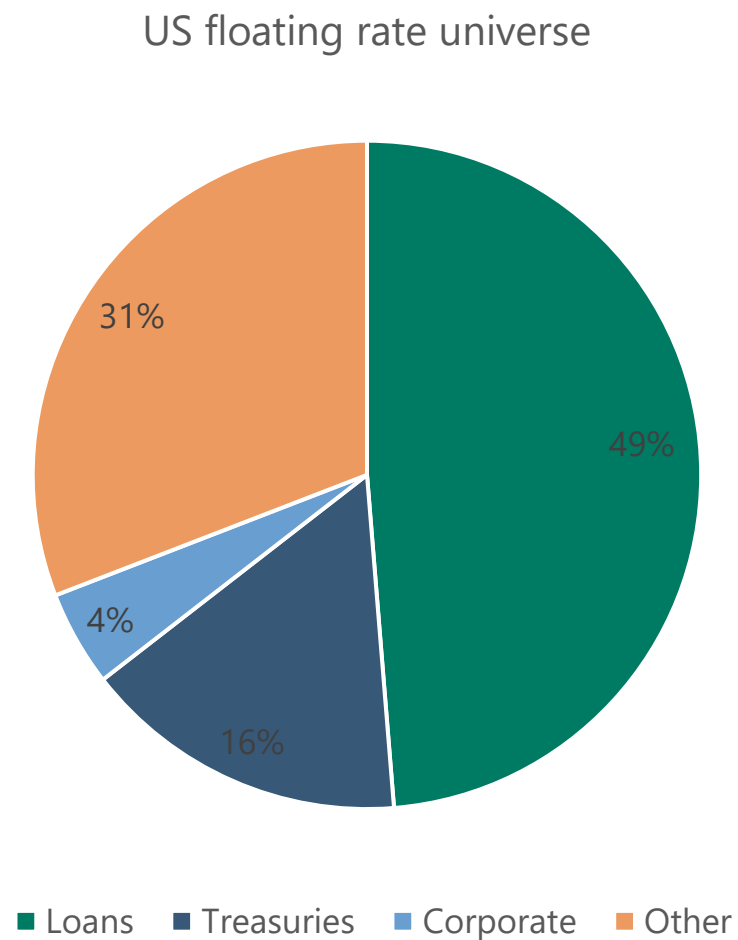
All corporate bonds now have positive yields



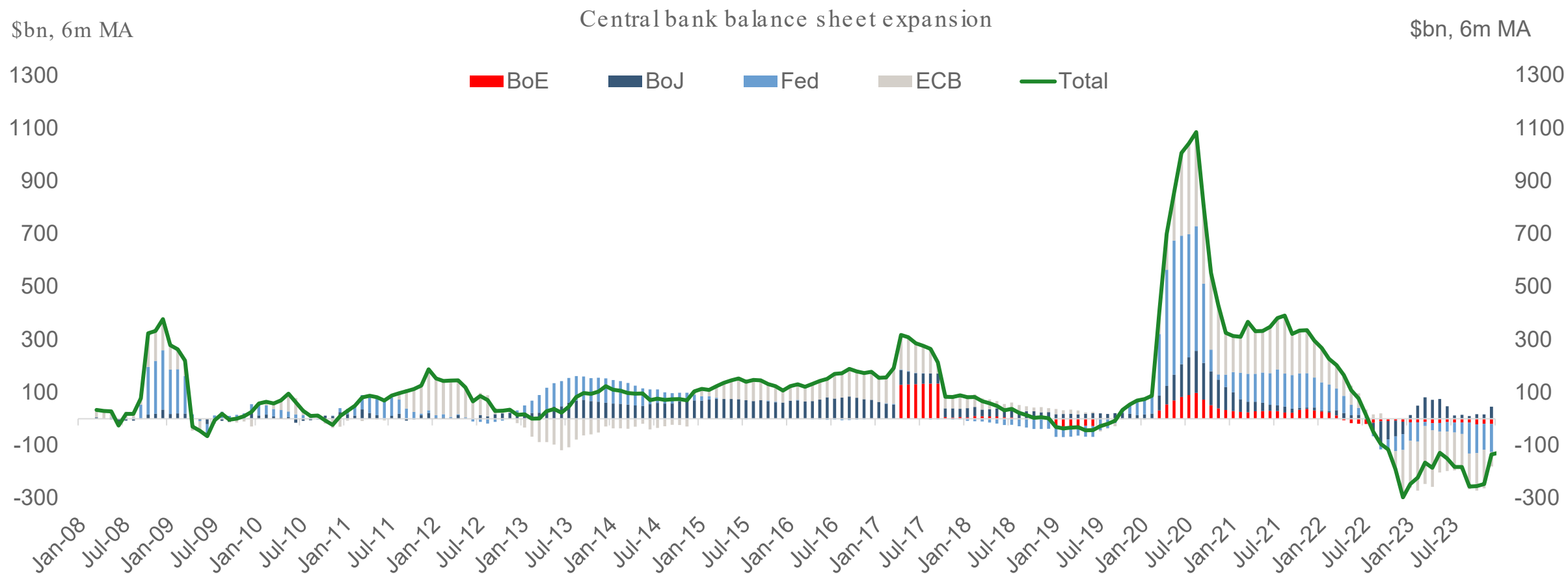
Credit spreads normally widen when the Fed is hiking



US: Floating rate bonds outstanding, December 2023

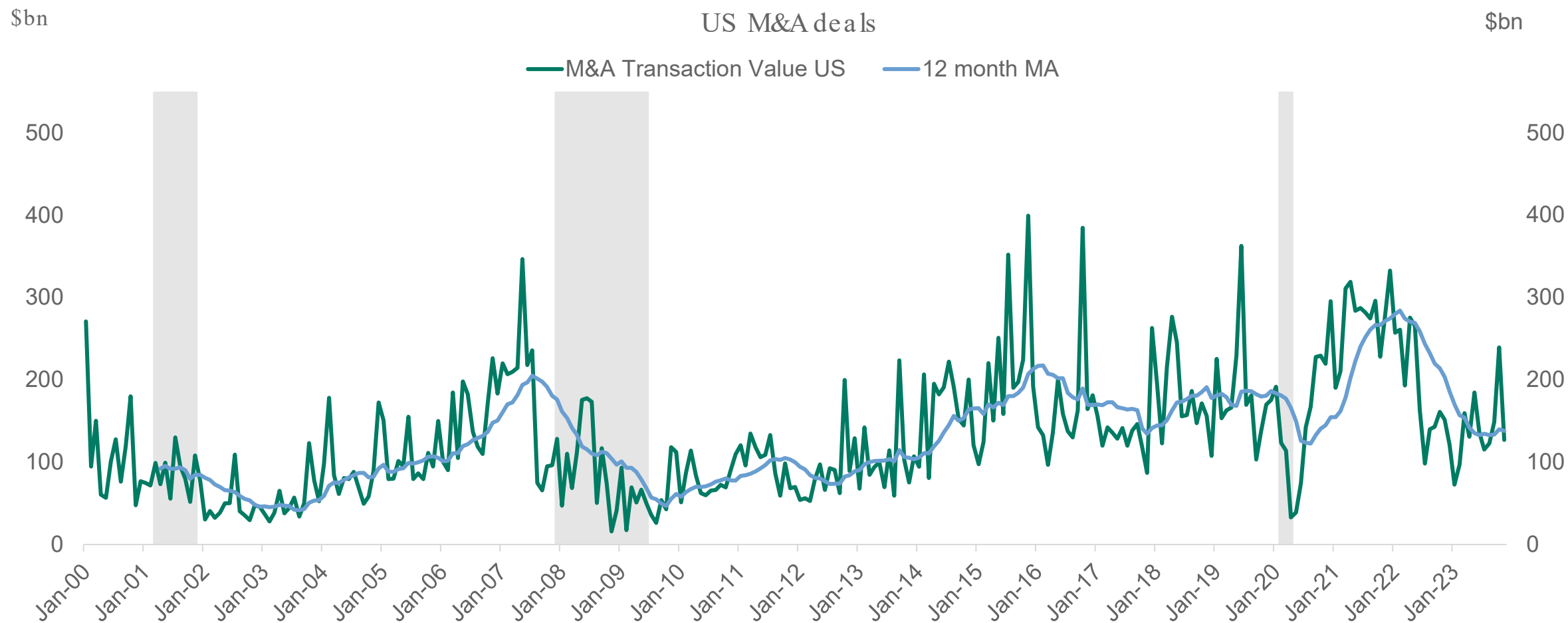


From QE to QT



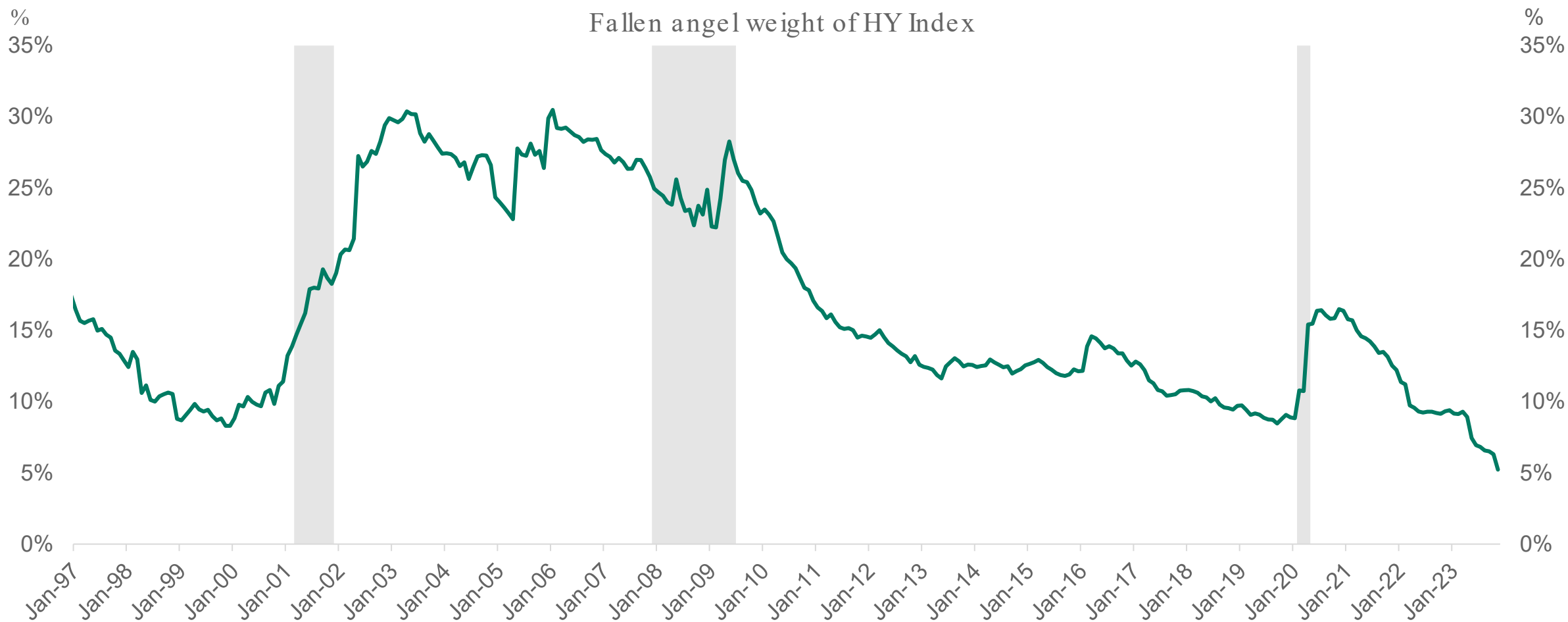
Source: Bloomberg, Apollo Chief Economist. Pace of purchases for 2021: BOE: £3.4bn per week till mid December 2021, FED: USD120bn per month with wind down from December with purchases ending in March 2022, ECB: Euro 90bn per month (20 bn APP + 60 bn PEPP), PEPP till March 2022, Euro 40bn in April, Euro 30bn in May and Euro 20bn in June, and only redemptions reinvested from August. BOJ: USD 60bn per month. For 2022: All programs are expected to wind down linearly from January 2022 to December 2022. Fed QT \$ 95 per month from May 2022. BoE starts to sell GBP80 bn in the next 12 months and ECB starts QT in 2Q23

M&A activity declining



Source: Bloomberg, Apollo Chief Economist. Note: Ticker used is MAATUS Index

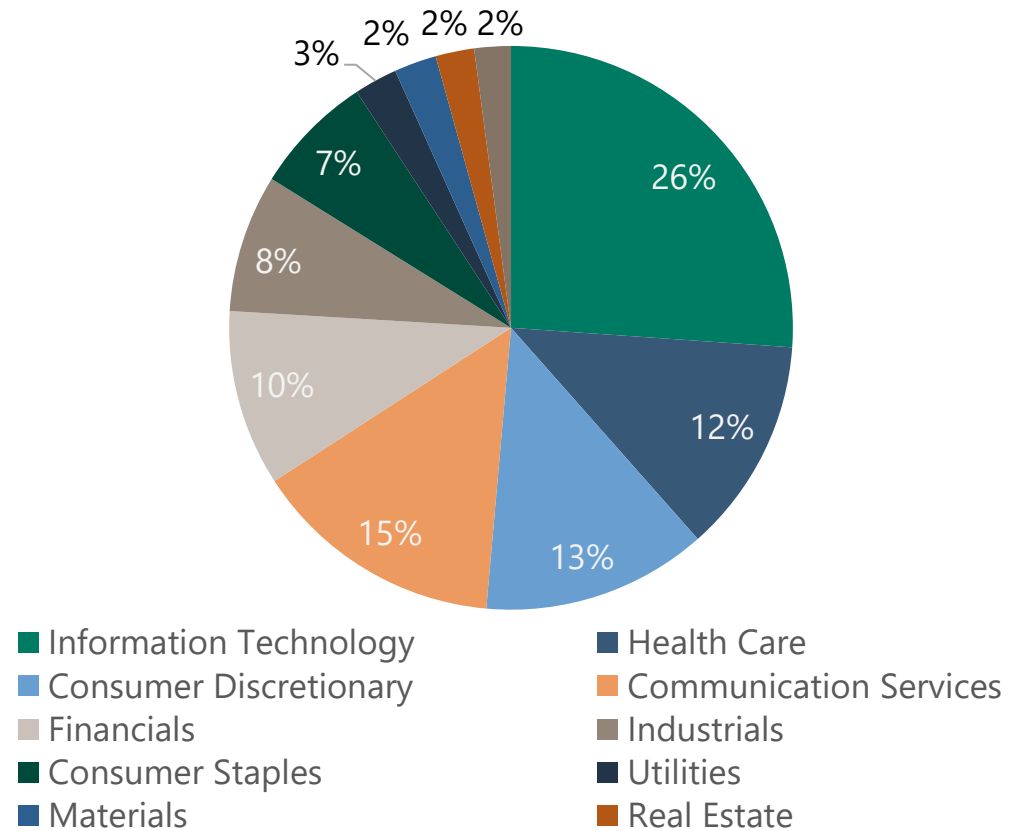
Declining share of fallen angels in the HY index



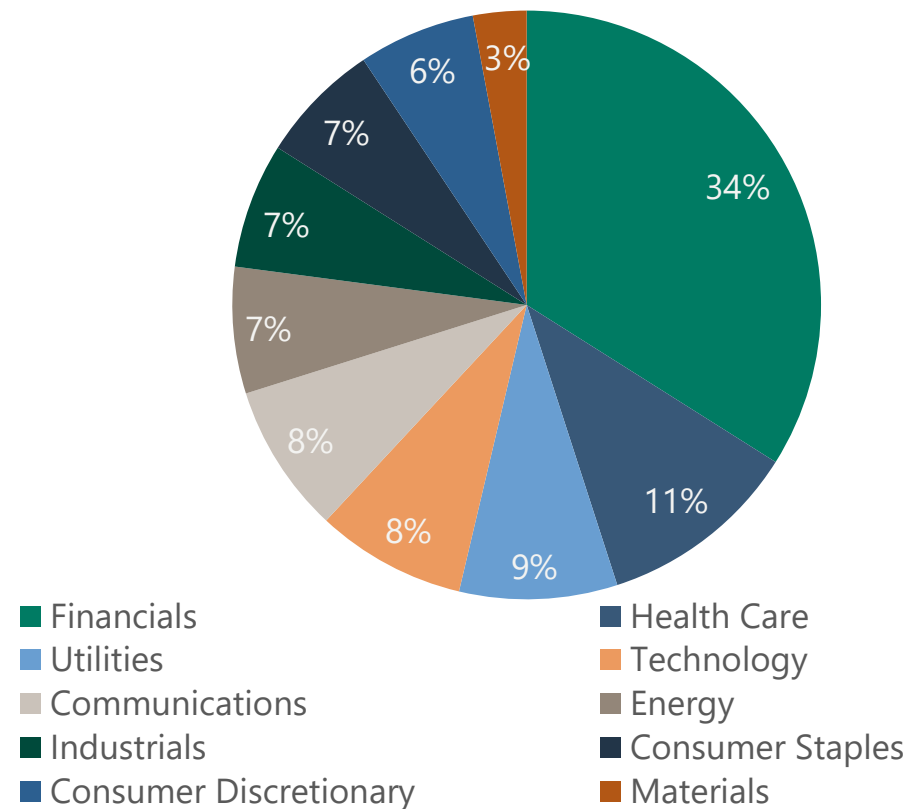
Source: ICE BofA, Bloomberg, Apollo Chief Economist. Note: Tickers used H0A0 Index and H0FA Index

Big differences between weights in the S&P500 and the IG index

S&P 500 Index weight by market cap



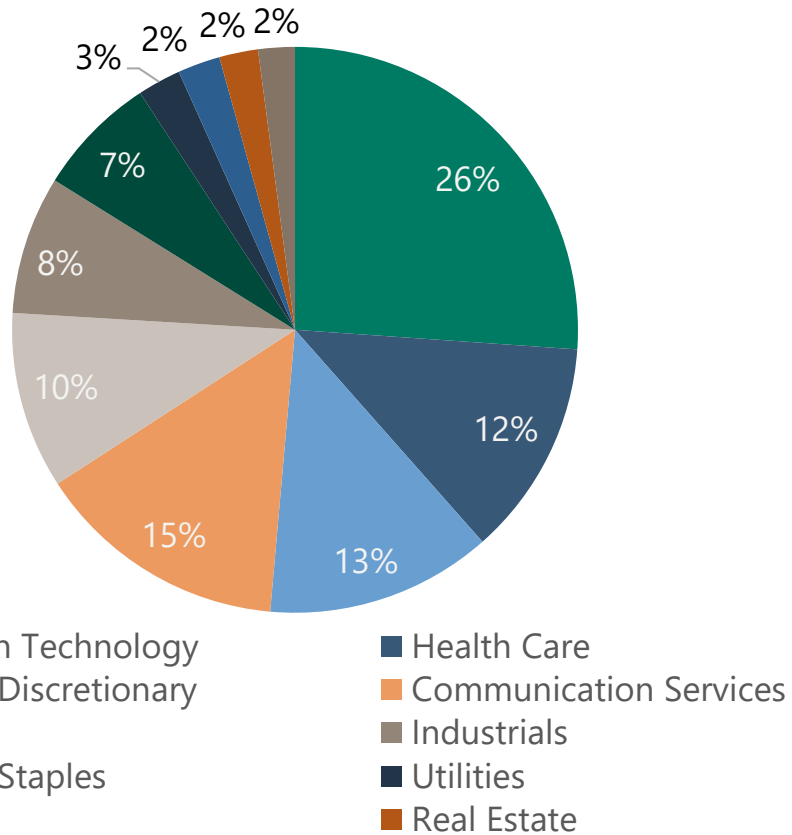
Barclays corporate IG index weights by market cap



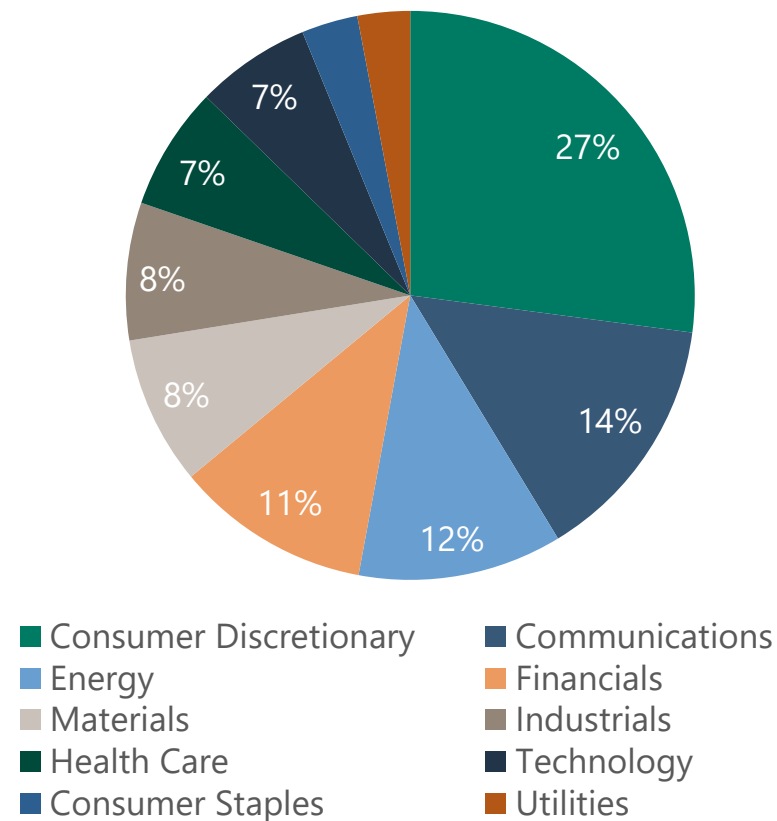
Note: Source: Bloomberg, Apollo Chief Economist

Big differences between weights in the S&P500 and the HY index

S&P 500 index weight by market cap



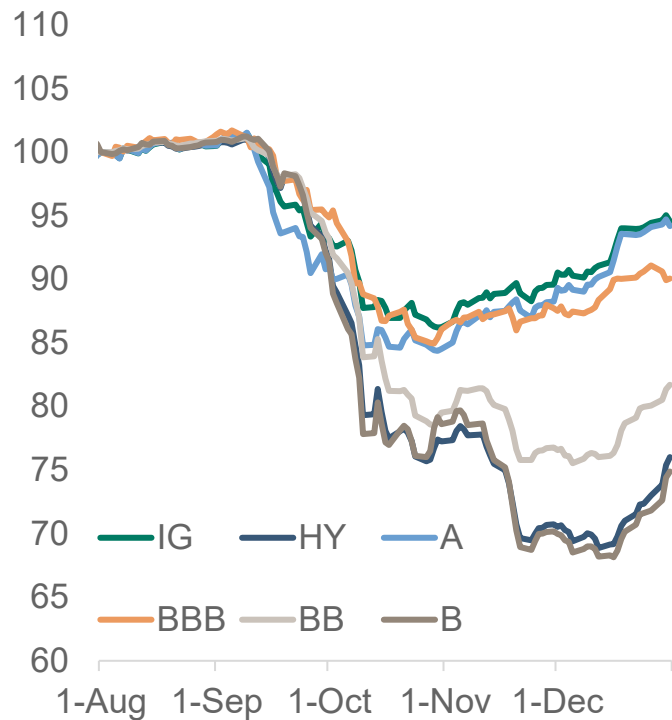
Bloomberg Barclays HY index weights by mkt cap



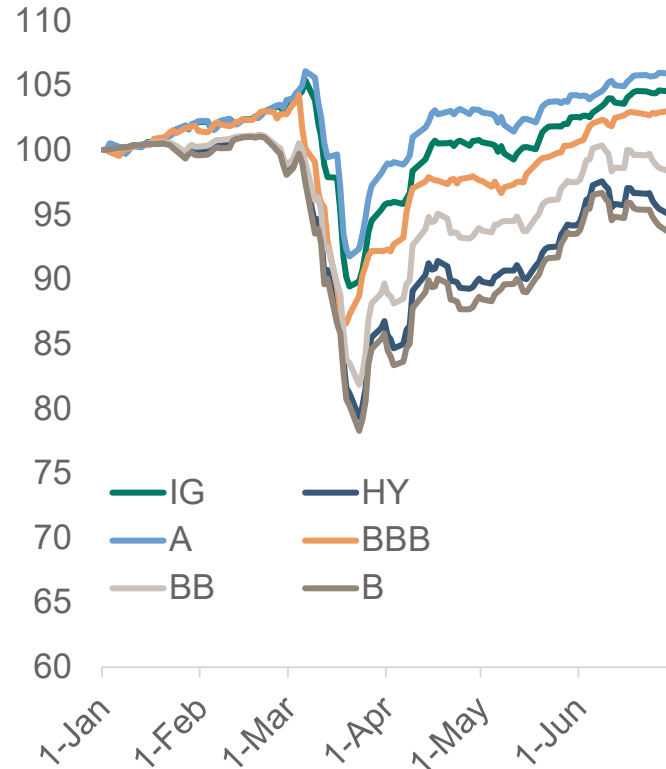
Note: Source: Bloomberg, Apollo Chief Economist

Synchronized movements in credit so far. Little differentiation between credits compared with 2008 and March 2020 episodes.

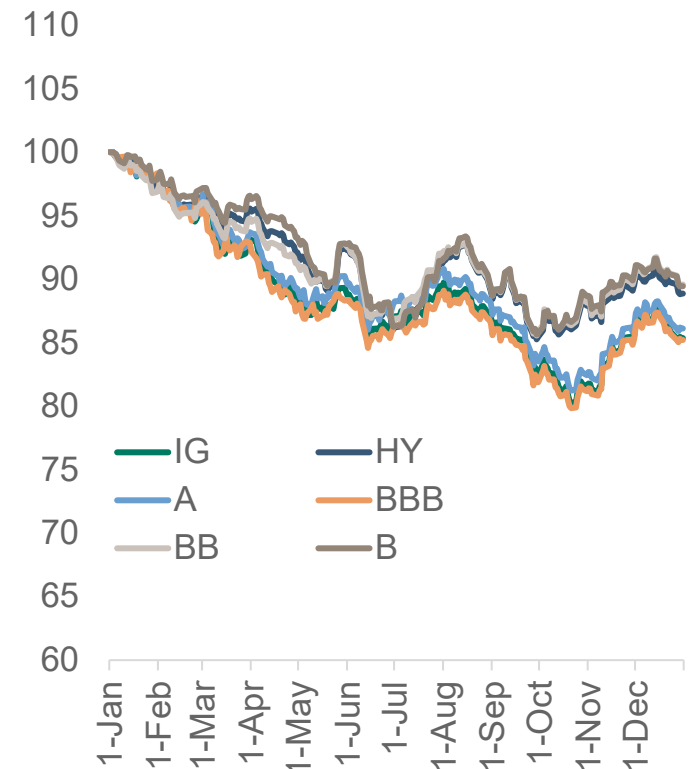
Aug 1st=100 US total returns, 2008



Jan 1st=100 US total returns, 2020

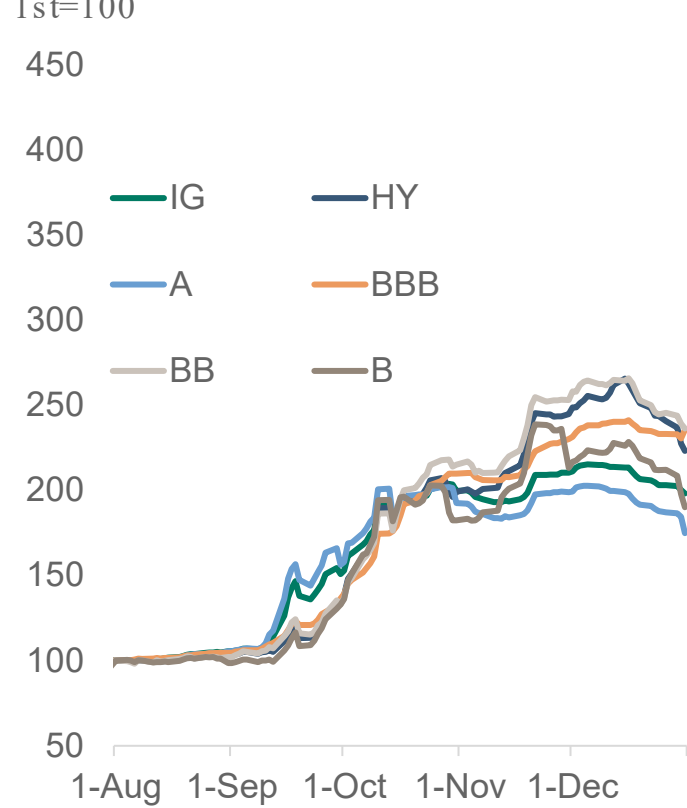


Jan 1st=100 US total returns, 2022

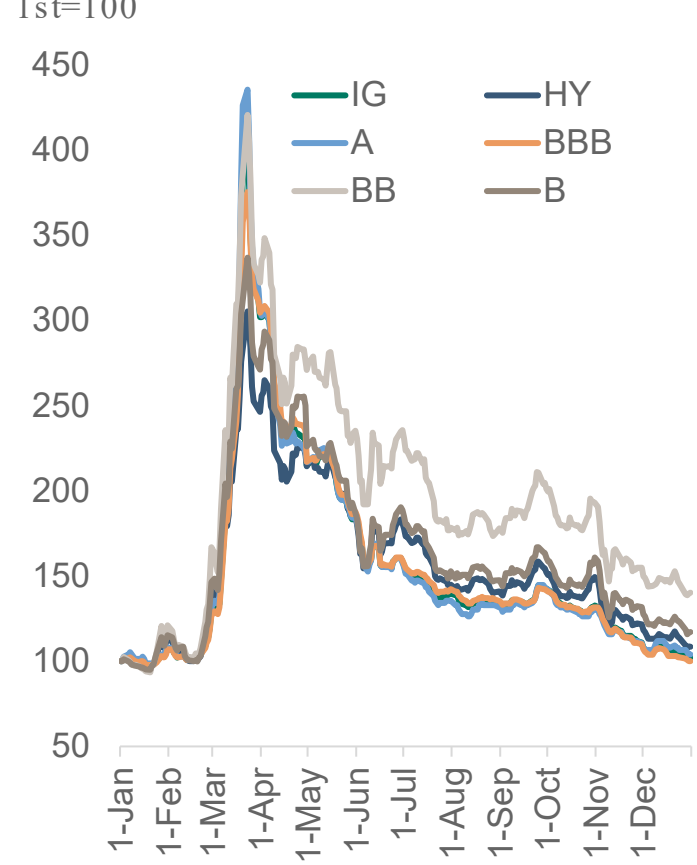


Synchronized movements in credit so far. Little differentiation between credits compared with 2008 and March 2020 episodes.

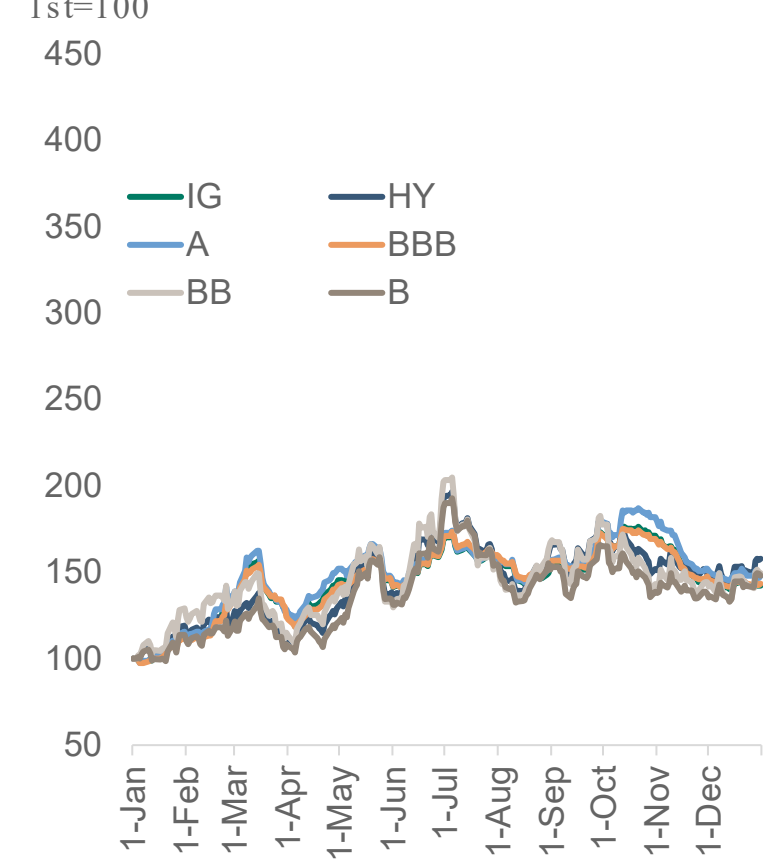
Aug 1st=100 US spreads, 2008



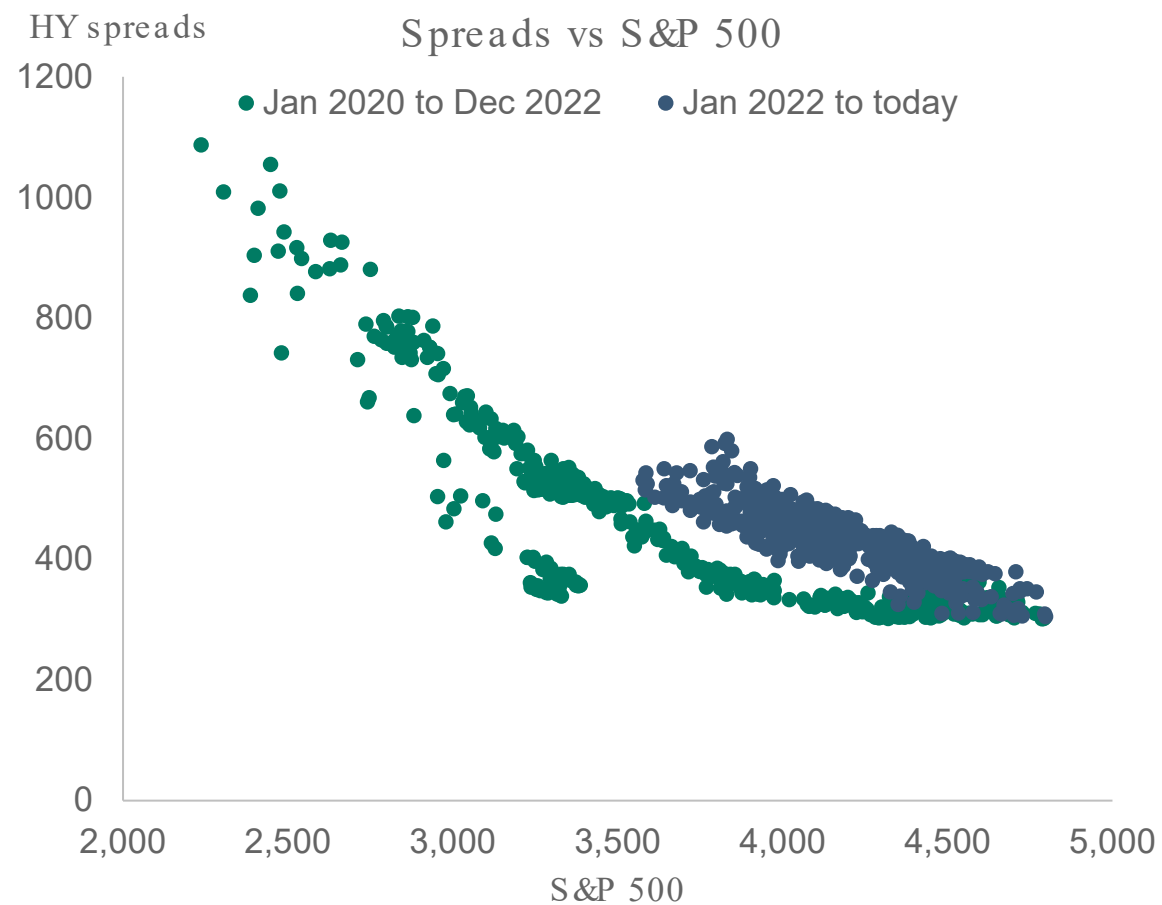
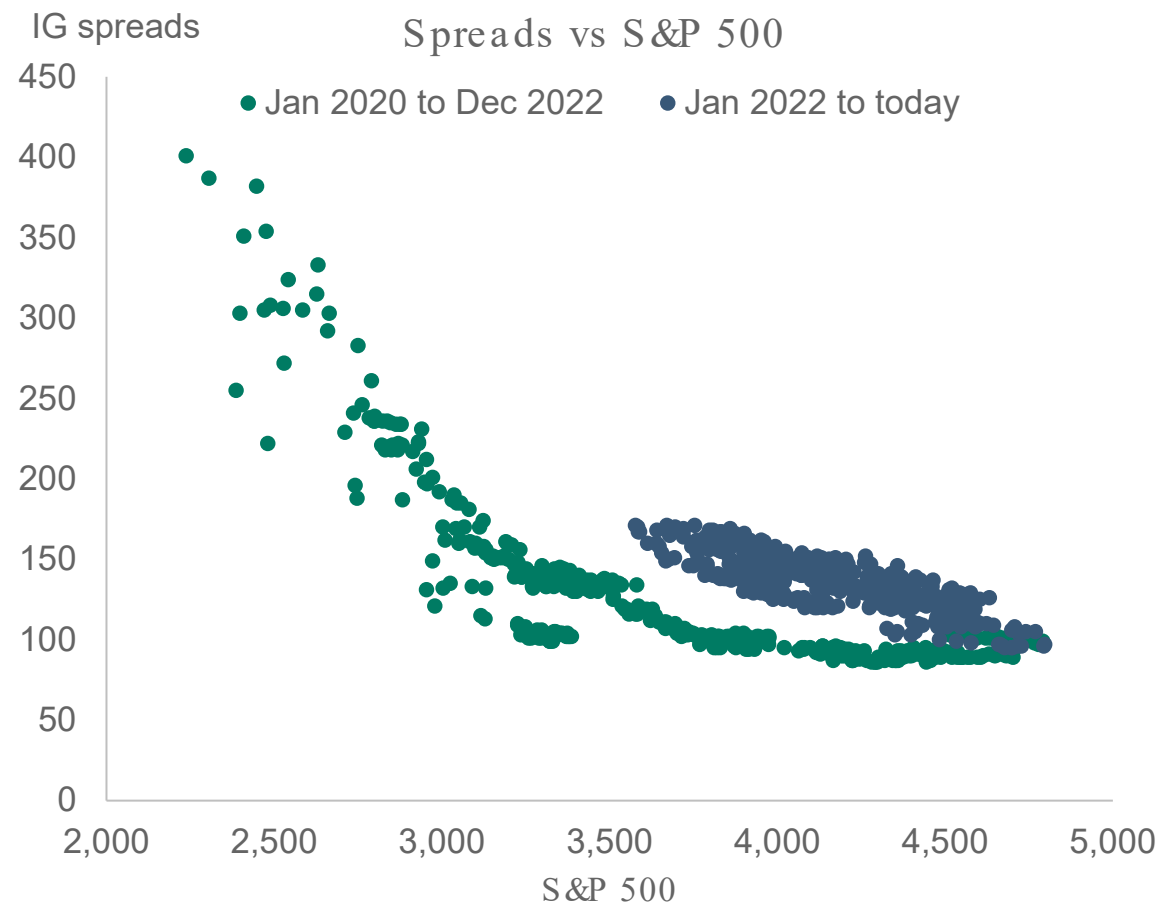
Jan 1st=100 US spreads, 2020



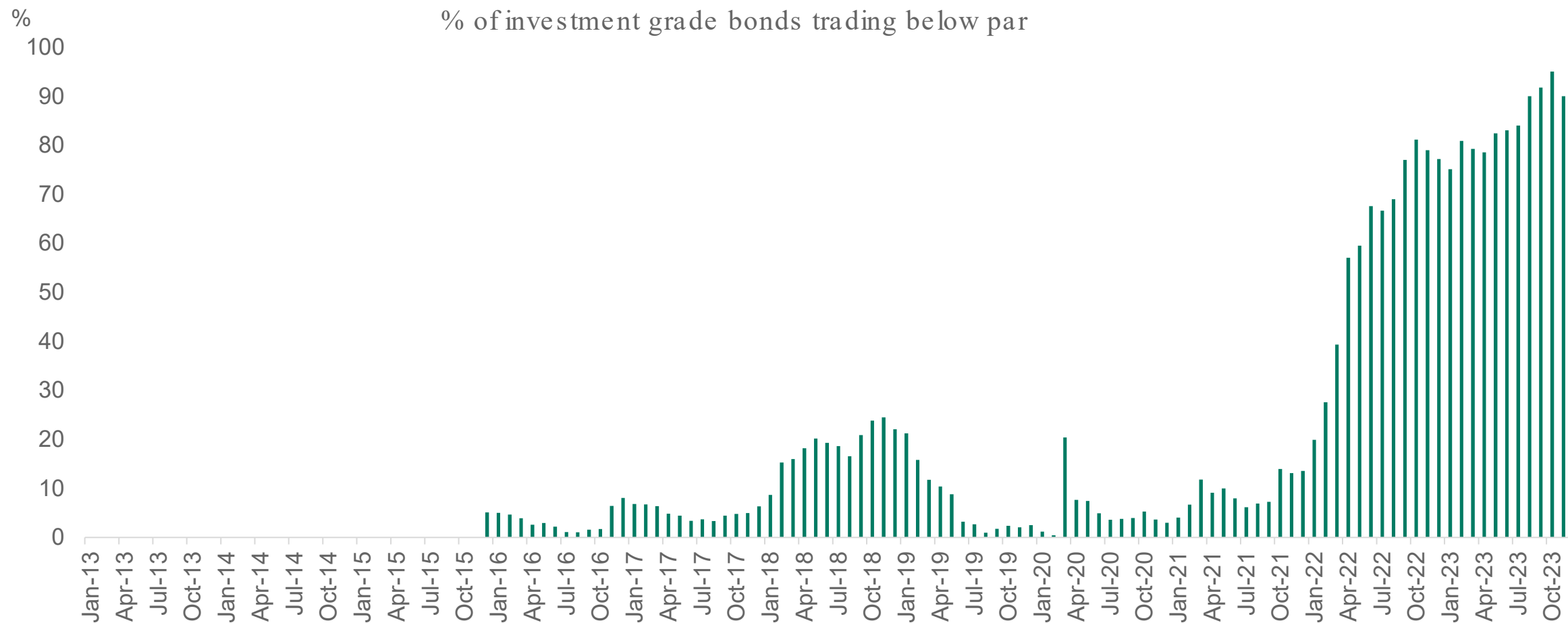
Jan 1st=100 US spreads, 2022



Valuation of credit versus equities

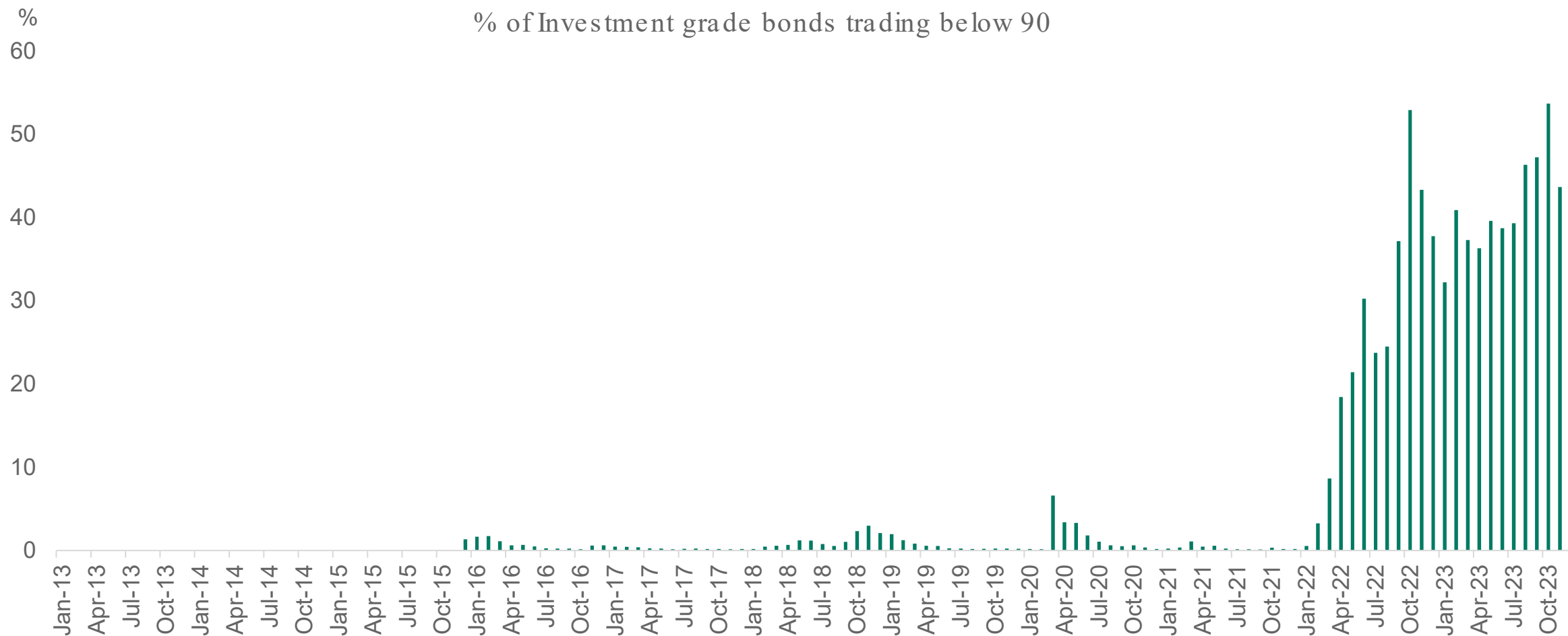


79% of the US IG market trading below par



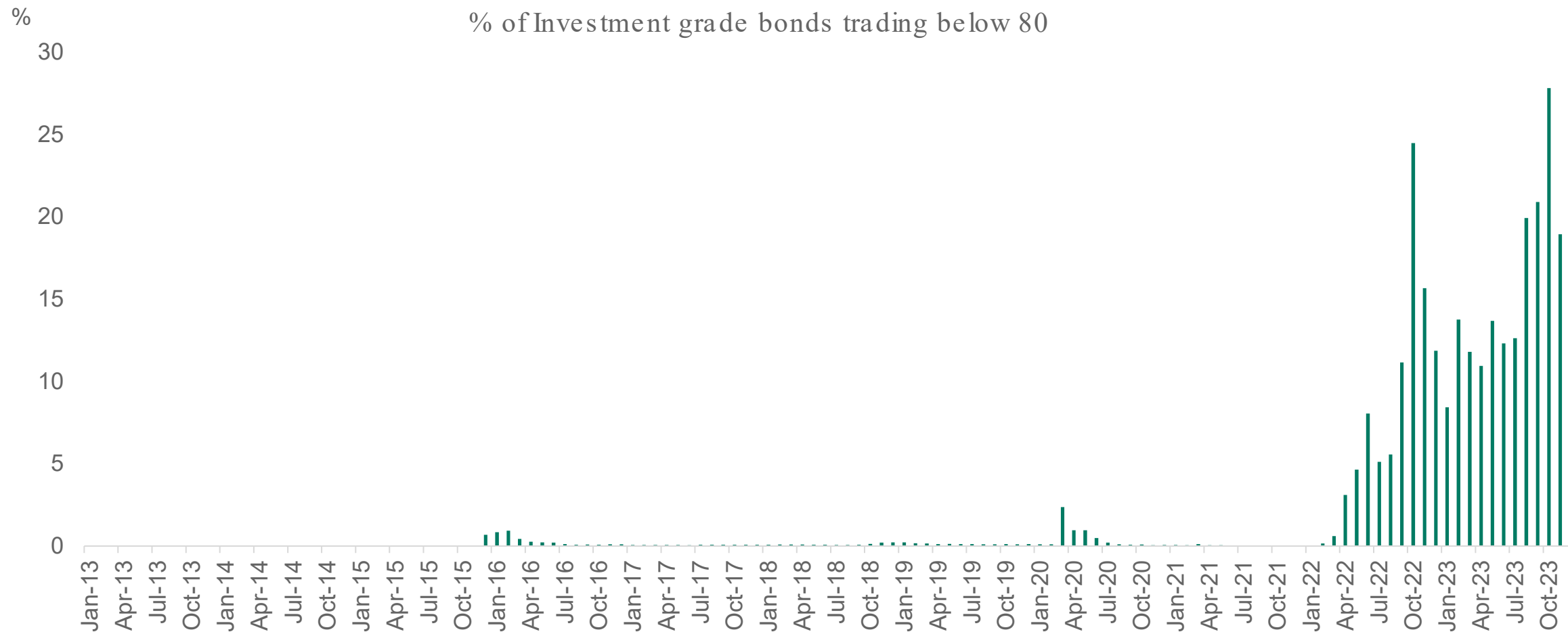
Source: Bloomberg, Apollo Chief Economist. Note: Data used for members in the LBUSTRUU Index.

33% of the US IG market trading below 90



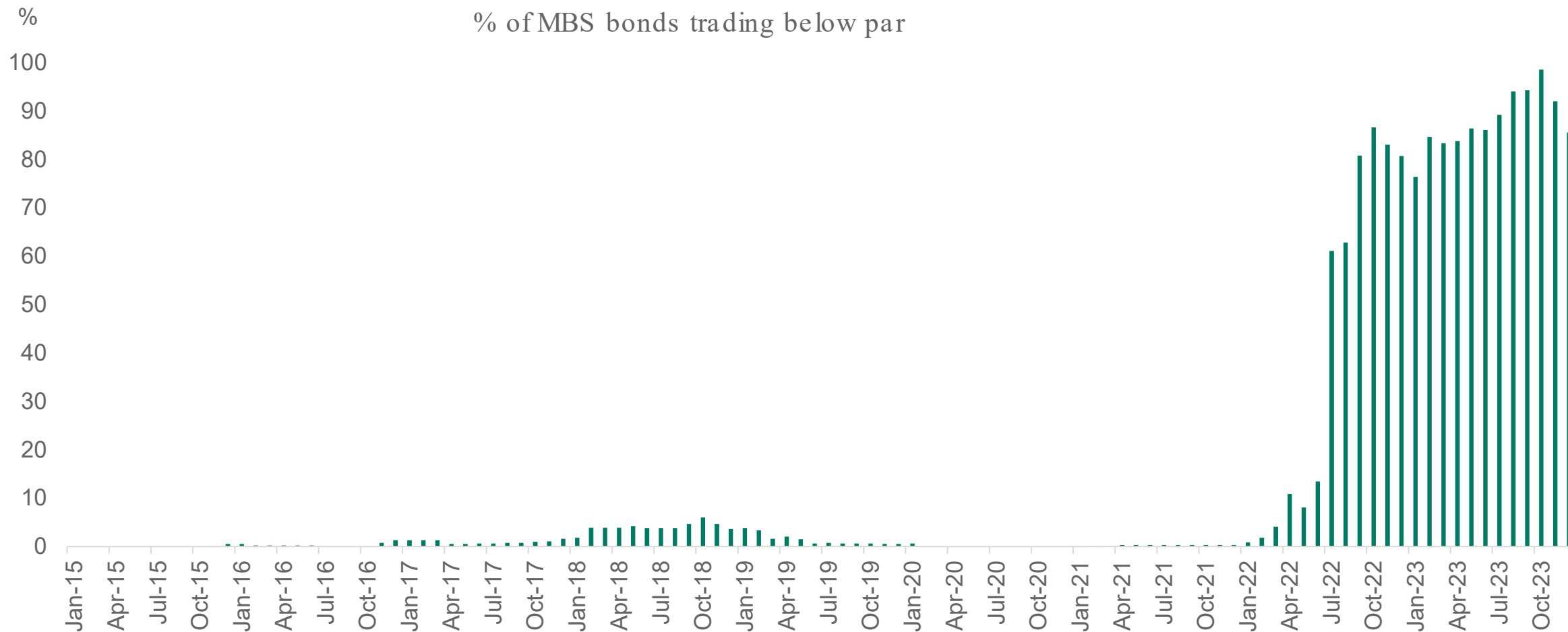
Source: Bloomberg, Apollo Chief Economist. Note: Data used for members in the LBUSTRUU Index.

10% of the US IG market trading below 80



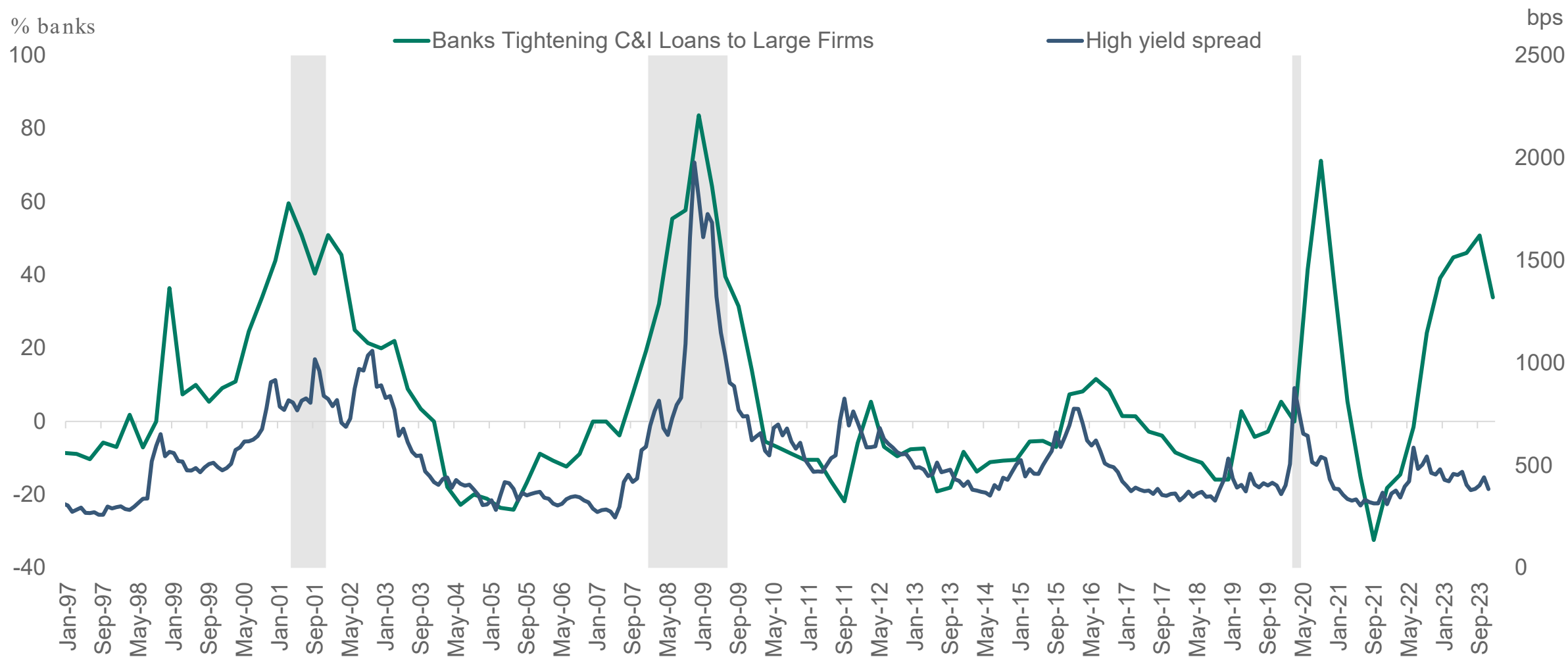
Source: Bloomberg, Apollo Chief Economist. Note: Data used for members in the LBUSTRUU Index.

85% of the US MBS market trading below par



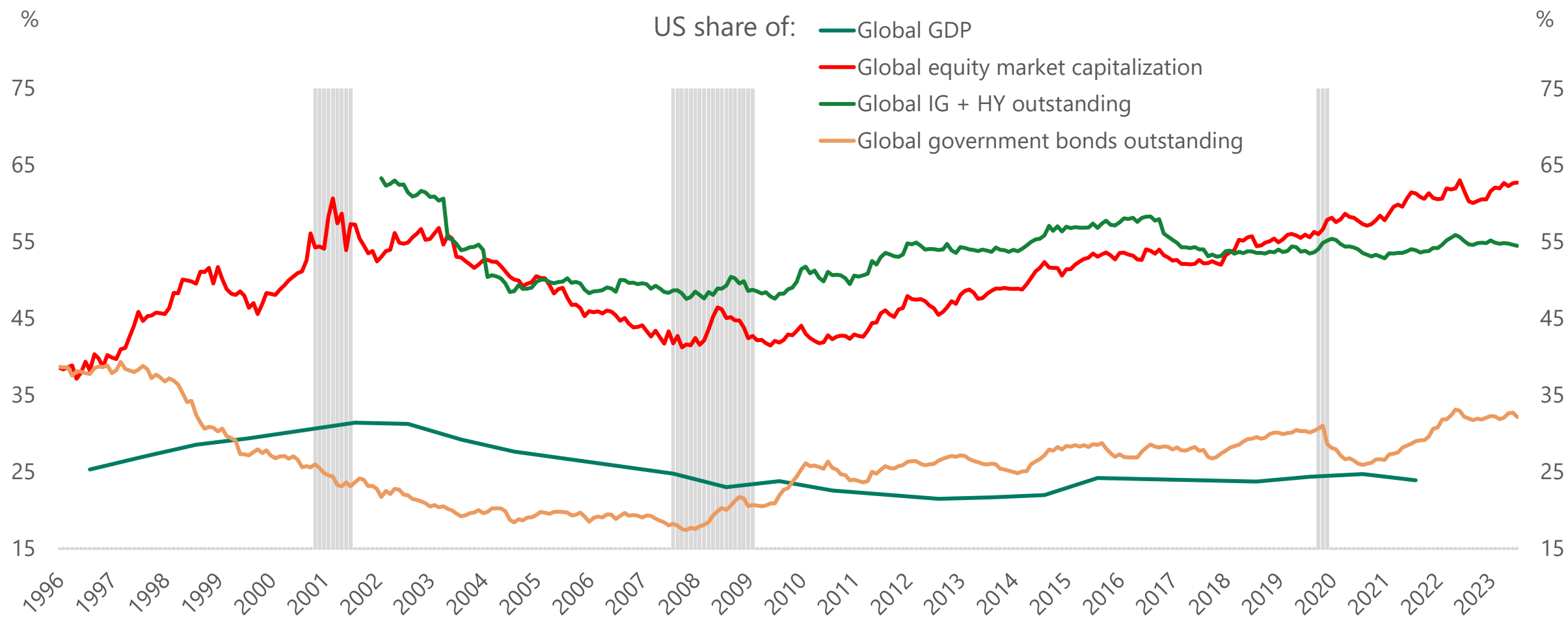
Source: Bloomberg, Apollo Chief Economist. Note: Data used for members in the LD10TRUU Index.

Banks tightening credit conditions, HY spread not responding



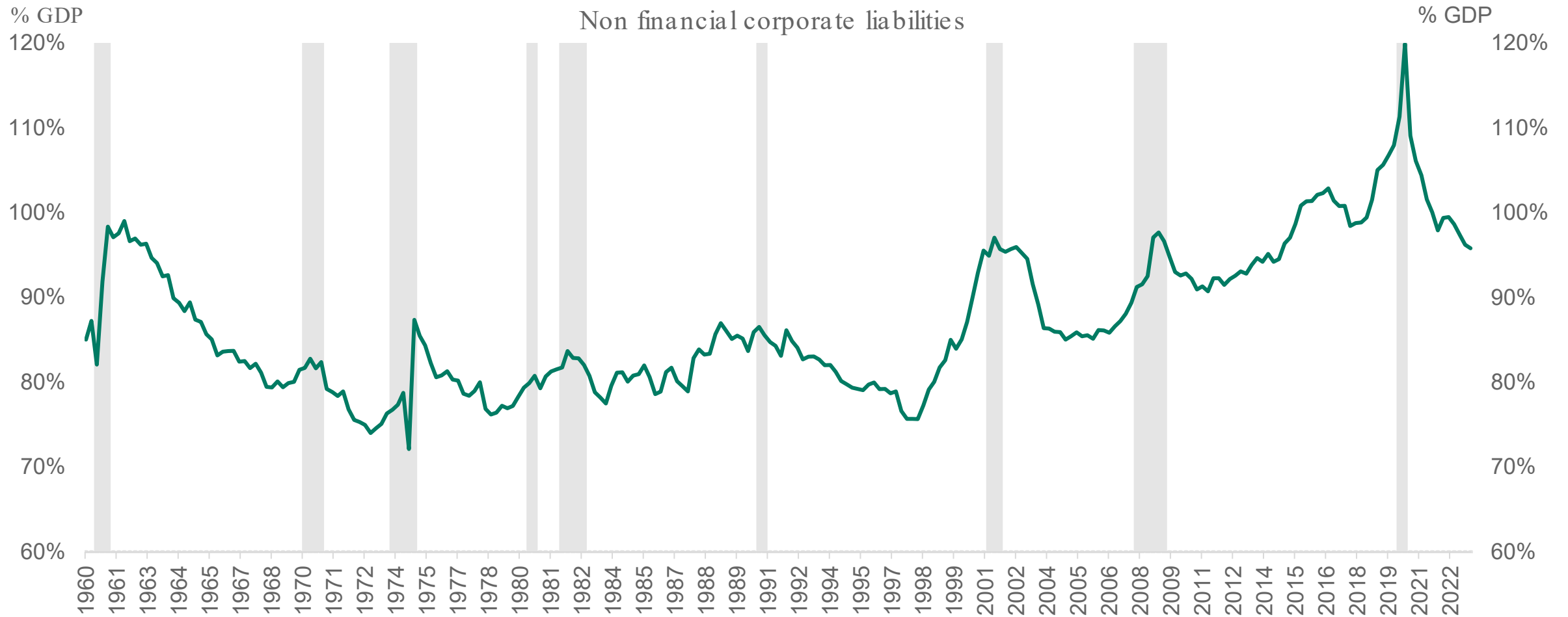
Source: FRB, Haver Analytics, Bloomberg, Apollo Chief Economist

US share of the world economy and global financial markets



Source: Bloomberg, Haver, Apollo Chief Economist (Note: Bloomberg tickers: MXUS Index, MXWD Index, LUATTRUU Index, BTSYTRUU Index, LF98TRUU Index, LG30TRUU index, LUACTRUU Index, I09805US index)

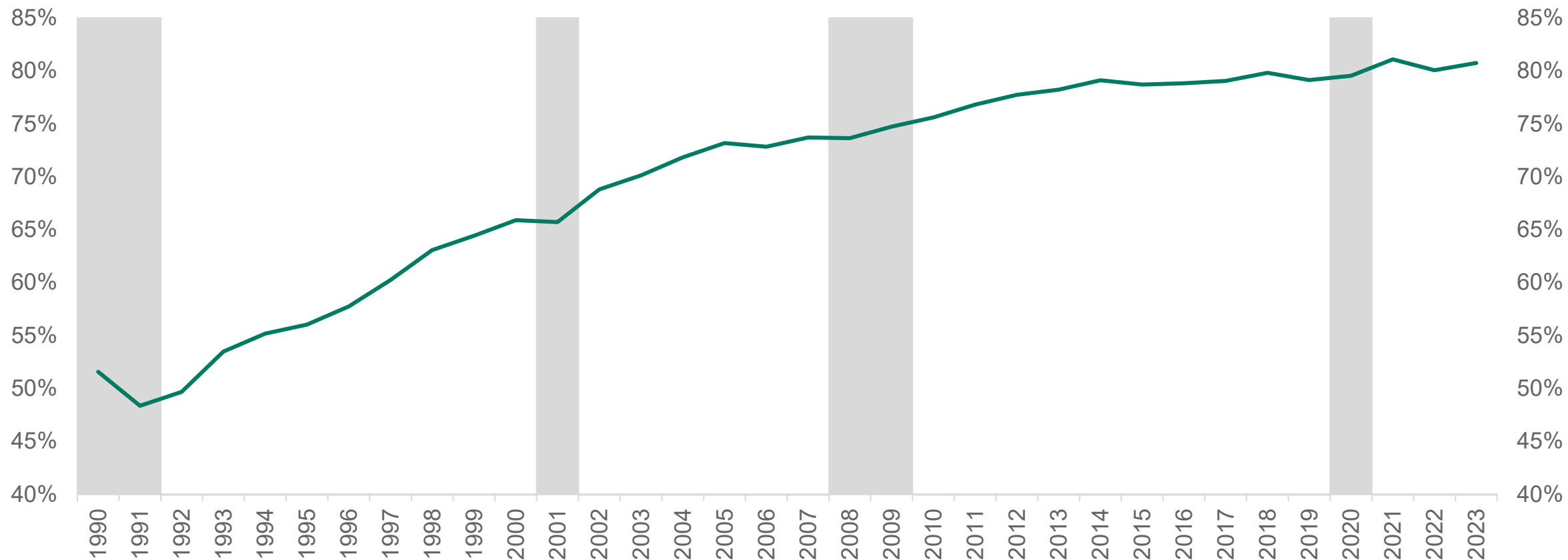
Corporate debt is coming down as a share of GDP



Source: FRB, Haver Analytics, Apollo Chief Economist

Lower-rated firms are by definition more vulnerable to rising interest rates

Share of corporate bonds rated BBB and below



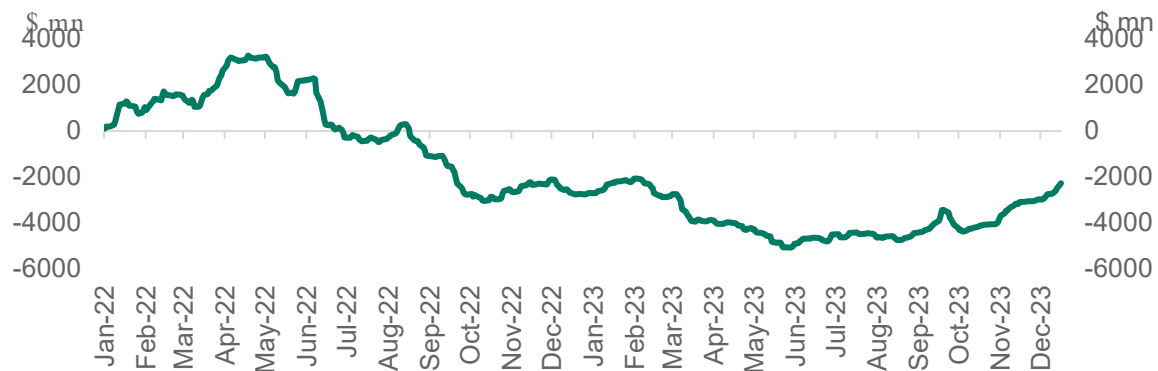
Share of corporate bond market value outstanding rated BBB and below



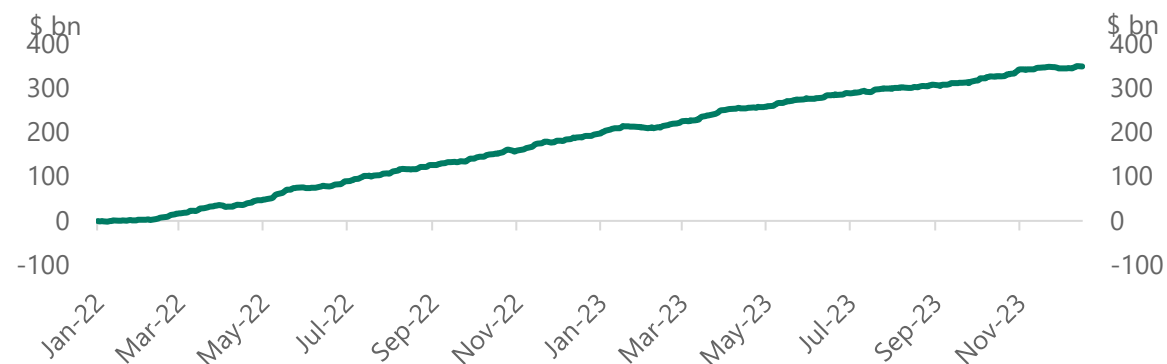
Source: ICE BofA, Bloomberg, Apollo Chief Economist. Data as of 31st October 2023

Flow monitor

US bank loans ETF flows



IG ETF flows



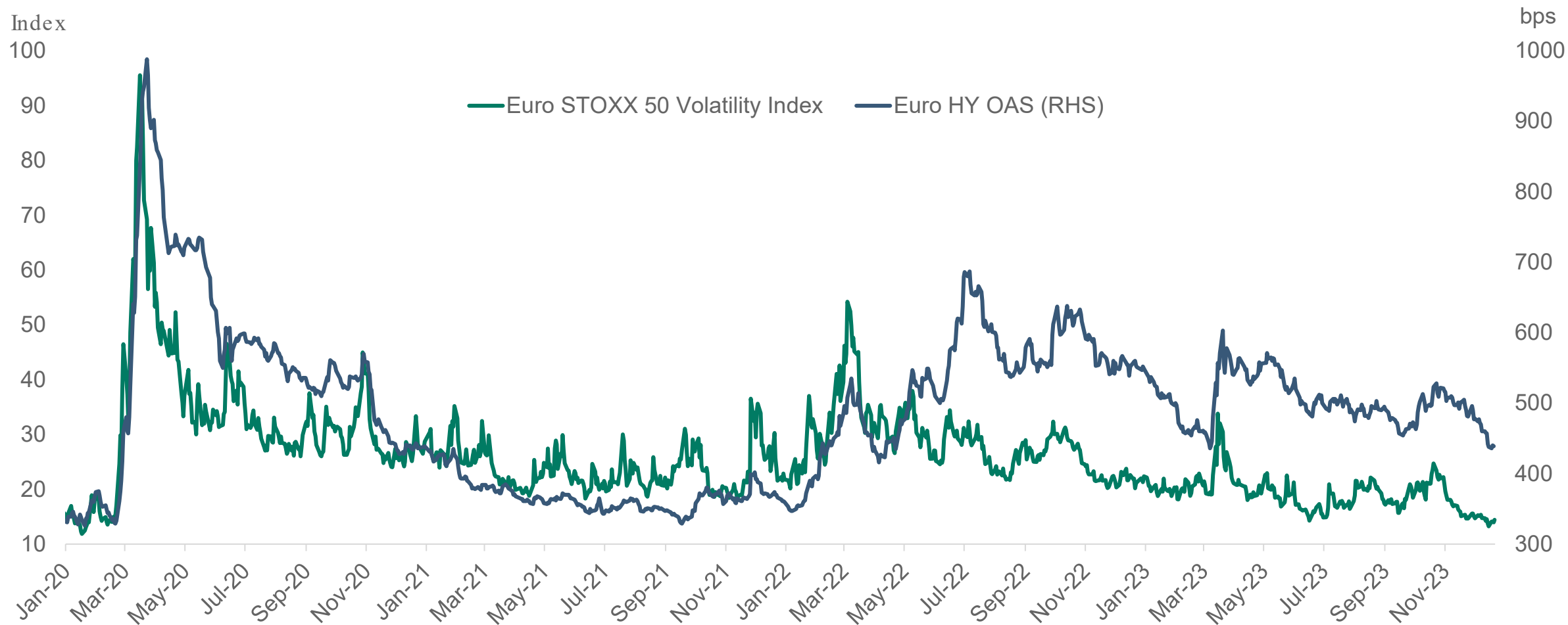
HY ETF Flows



Crypto ETF flows



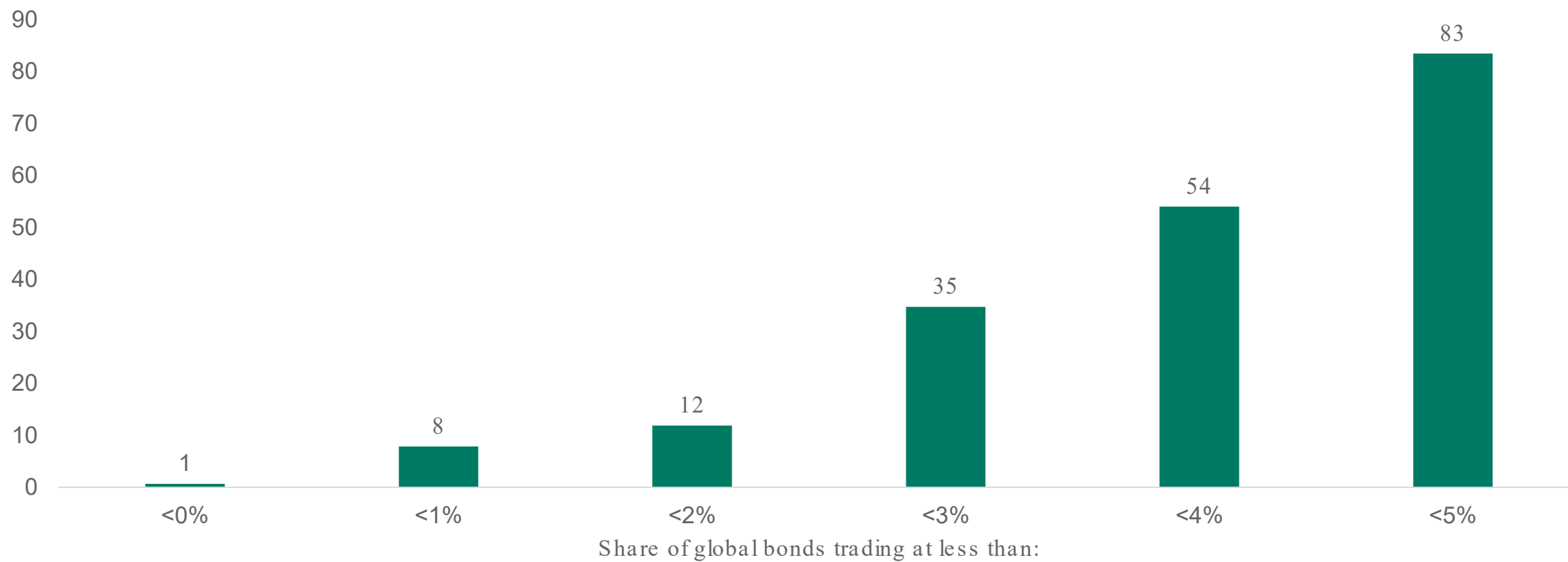
Convergence between EU equity vol and EU HY spreads



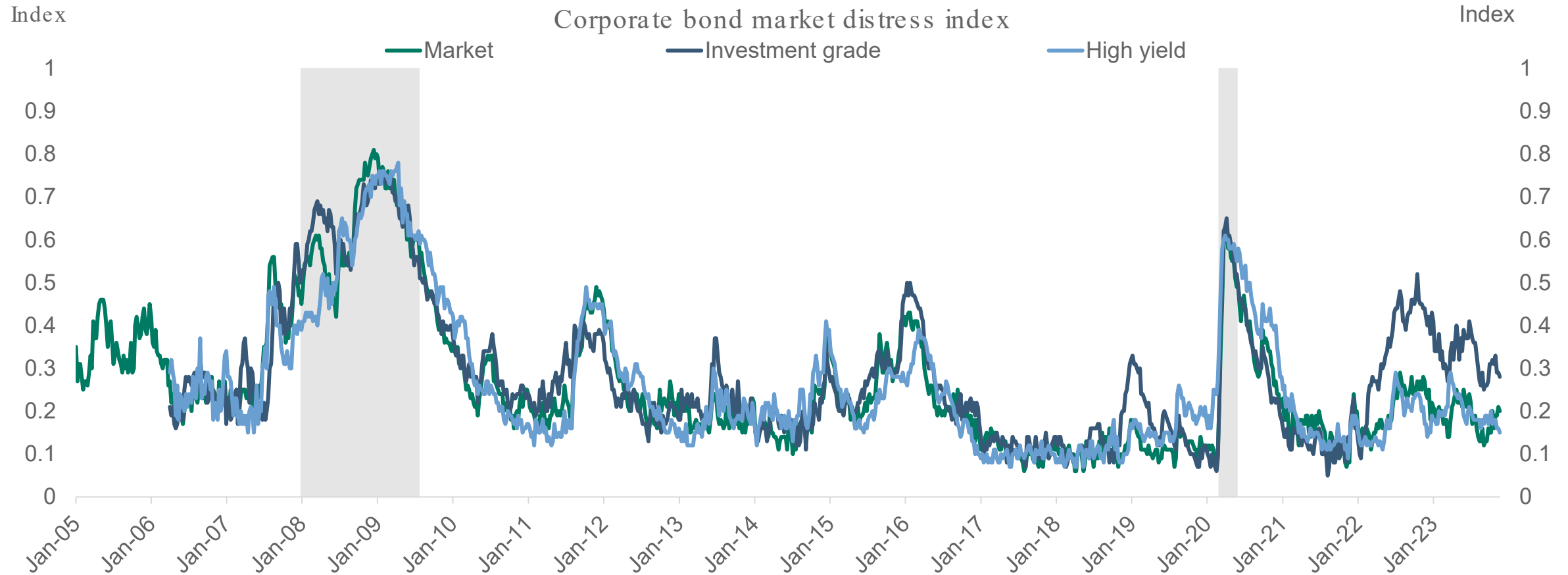
Source: Bloomberg, Apollo Chief Economist. Note: Tickers used are V2X Index and LP01OAS Index

35% of bonds in the world trading at less than 3% yield

% global bonds outstanding

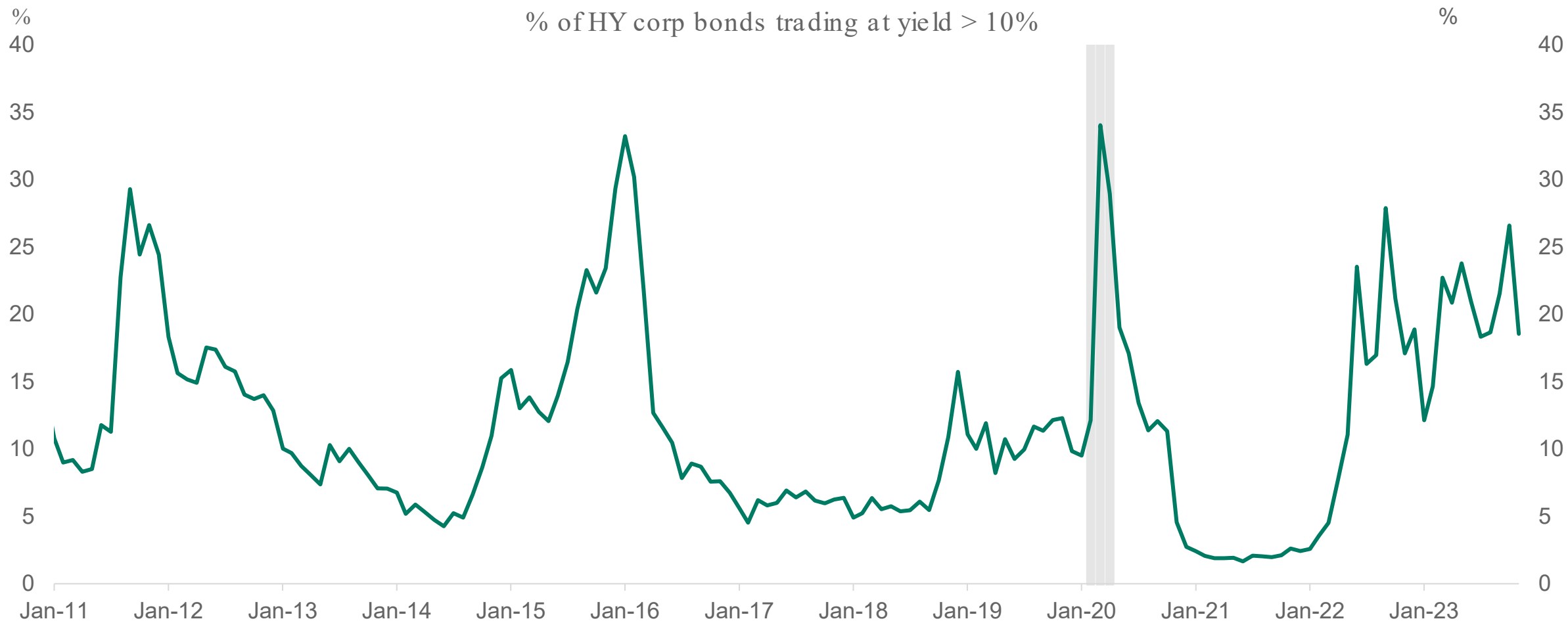


NY Fed measure of corporate bond market functioning



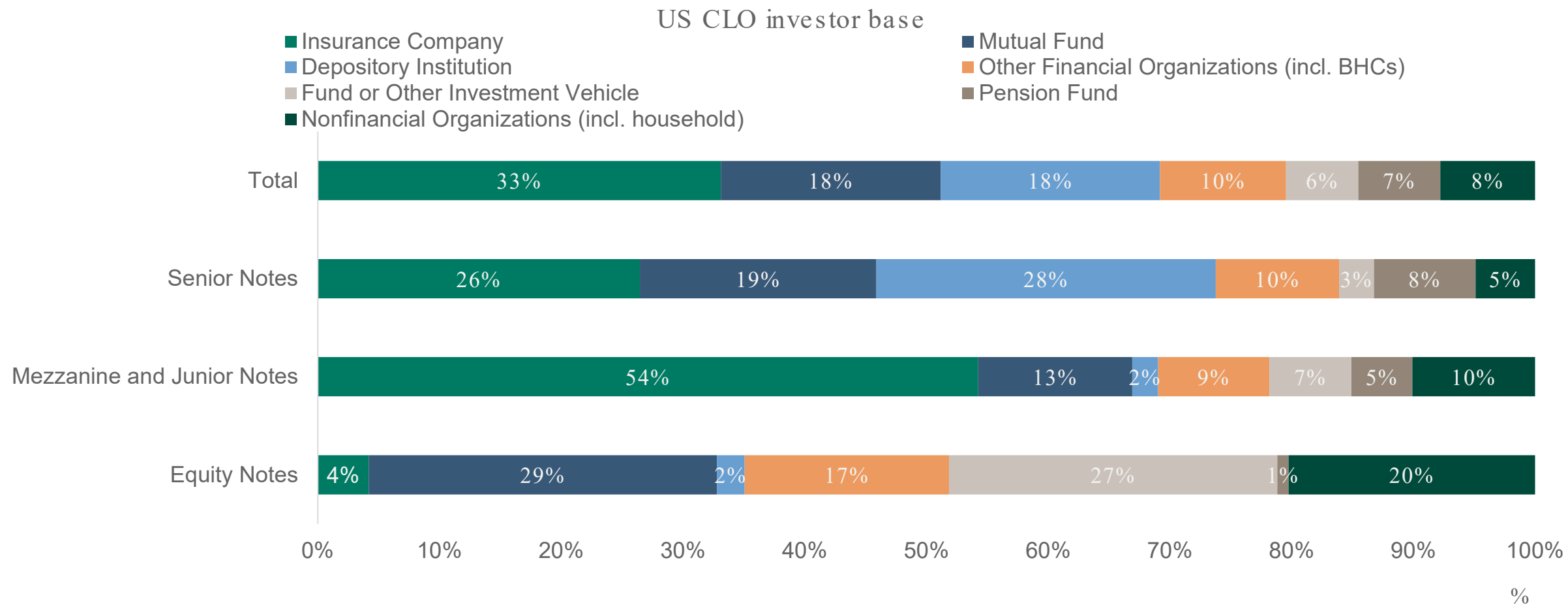
Source: FRB of New York, Apollo Chief Economist (Note: Corporate bonds are a key source of funding for U.S. non-financial corporations and a key investment security for insurance companies, pension funds, and mutual funds. Distress in the corporate bond market can thus both impair access to credit for corporate borrowers and reduce investment opportunities for key financial sub-sectors. CMDI offers a single measure to quantify joint dislocations in the primary and secondary corporate bond markets. Ranging from 0 to 1, a higher level of CMDI corresponds with historically extreme levels of dislocation. CMDI links bond market functioning to future economic activity through a new measure.

27% of bonds in the HY index are trading with a yield higher than 10%

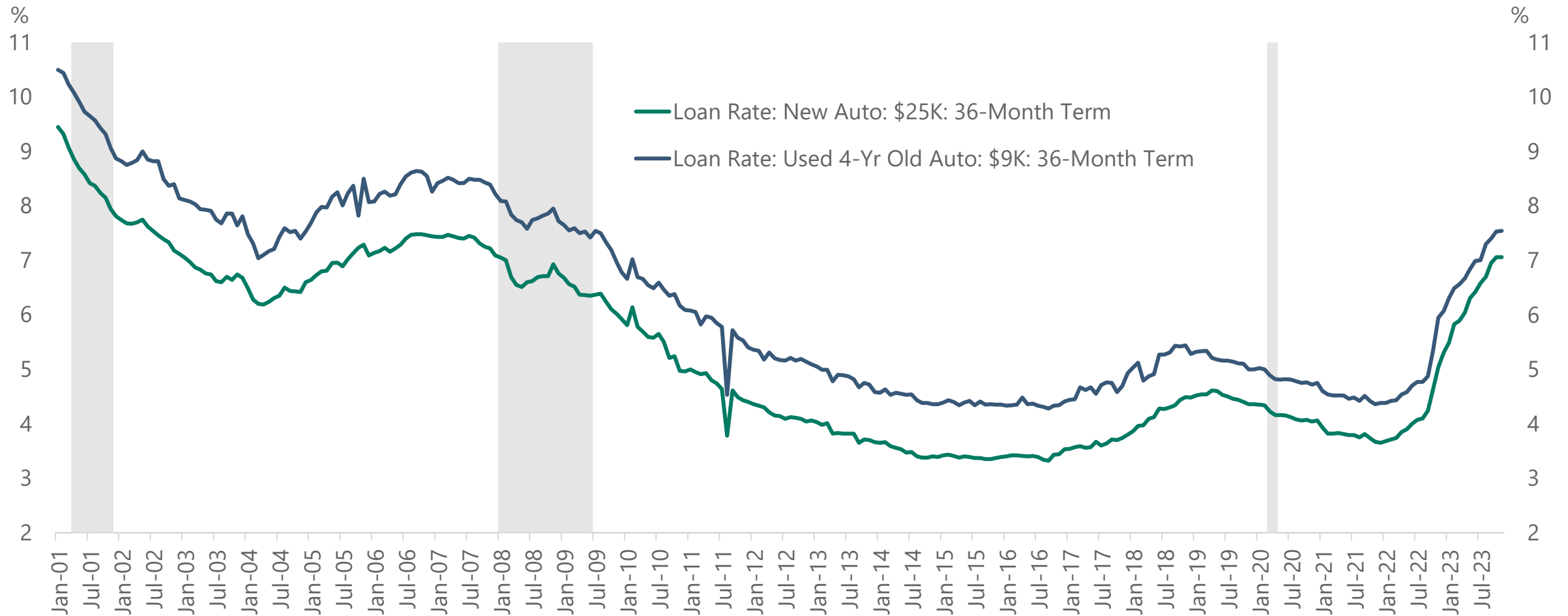


Source: Bloomberg, Apollo Chief Economist. Note: HY bond universe is H0A0 Index

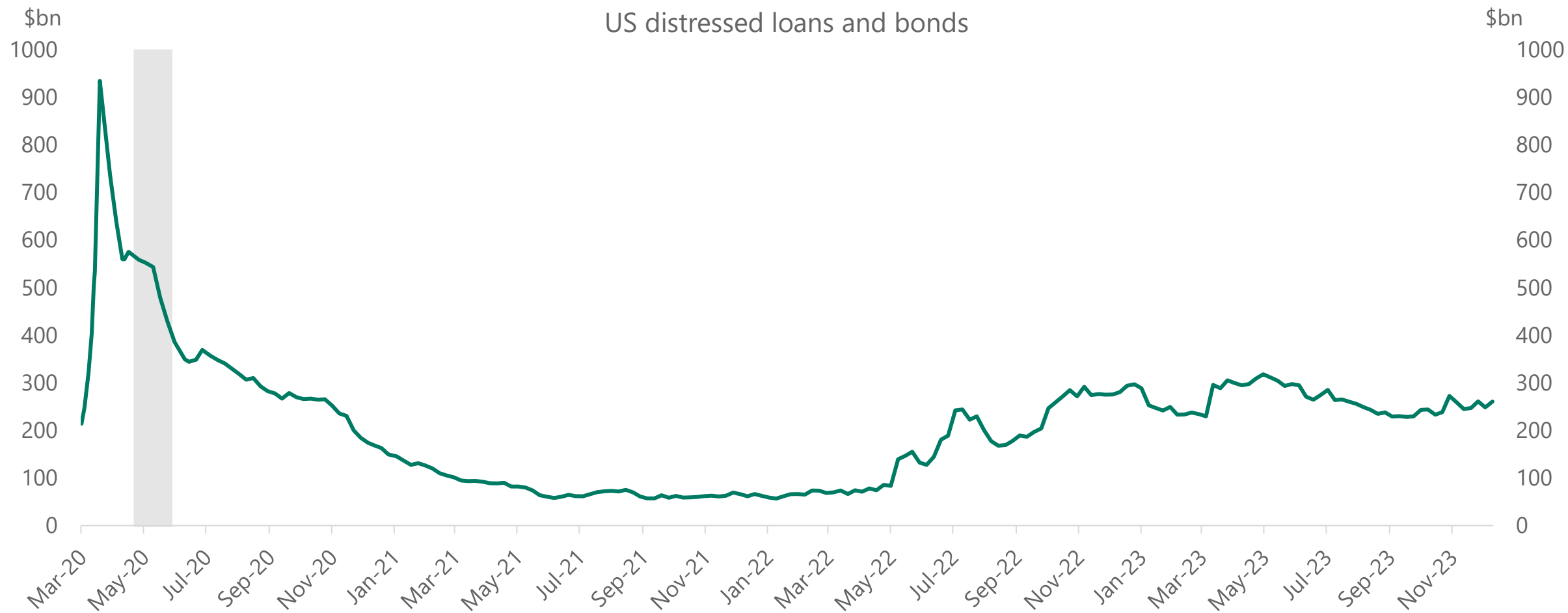
US CLO investor base by tranche



Auto loan rates rising

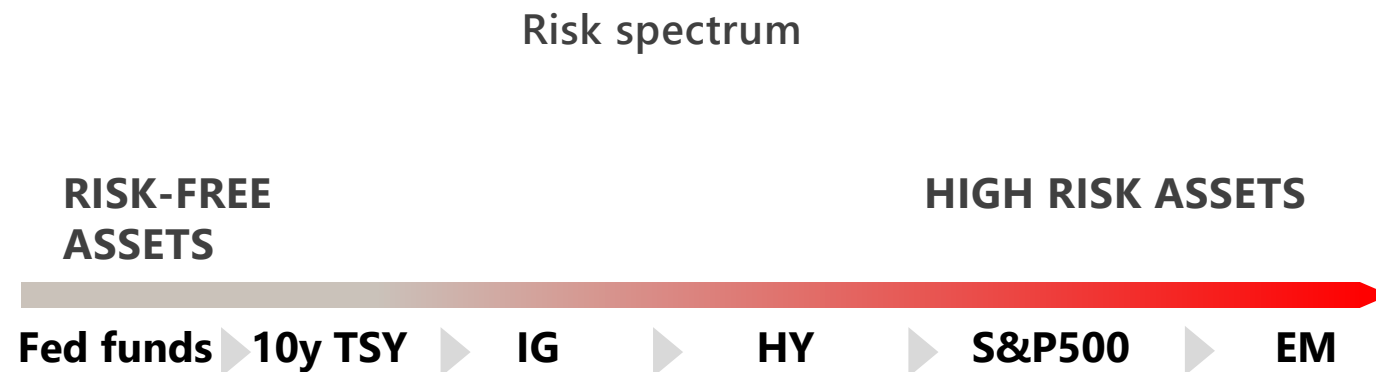


Distressed debt outstanding

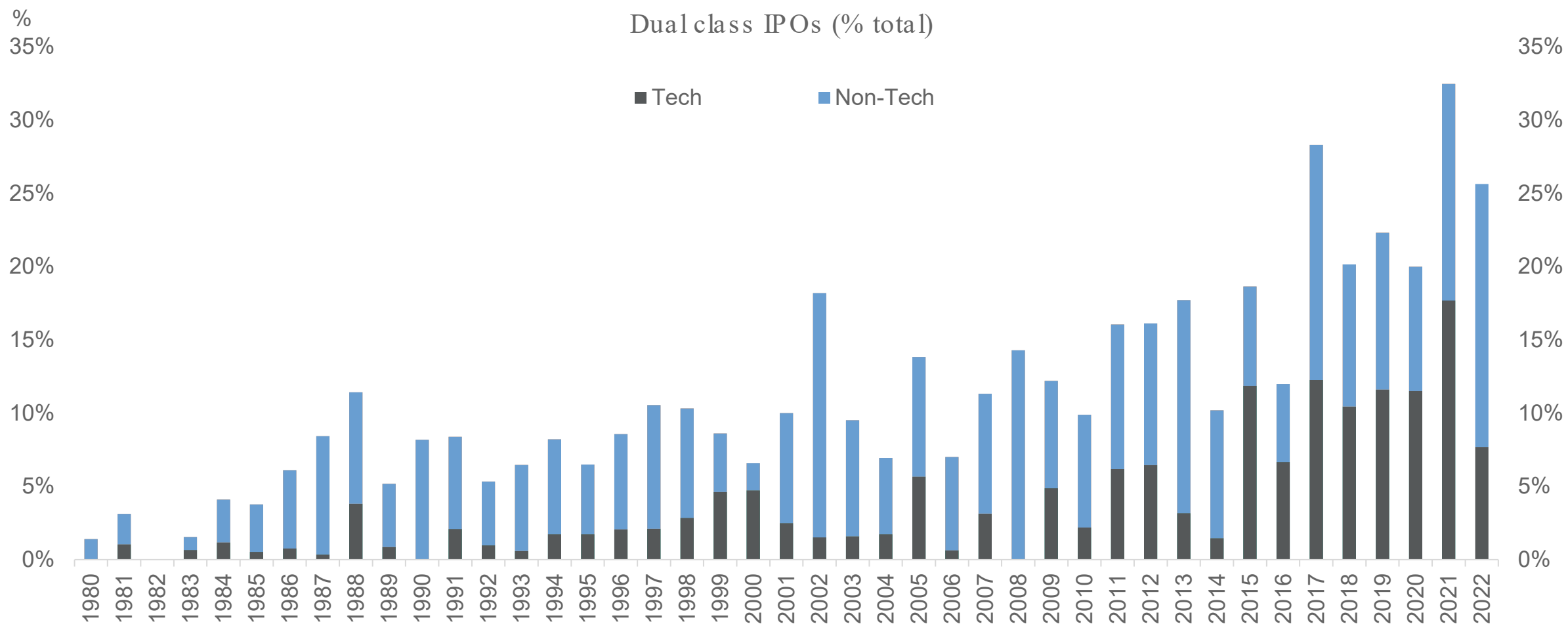


Source: Bloomberg, Apollo Chief Economist. Note: Distressed bonds are Corporate Bonds in Americas with spreads > 1,000 bps and distressed loans defined as USD Loans trading at or below 80 in Americas

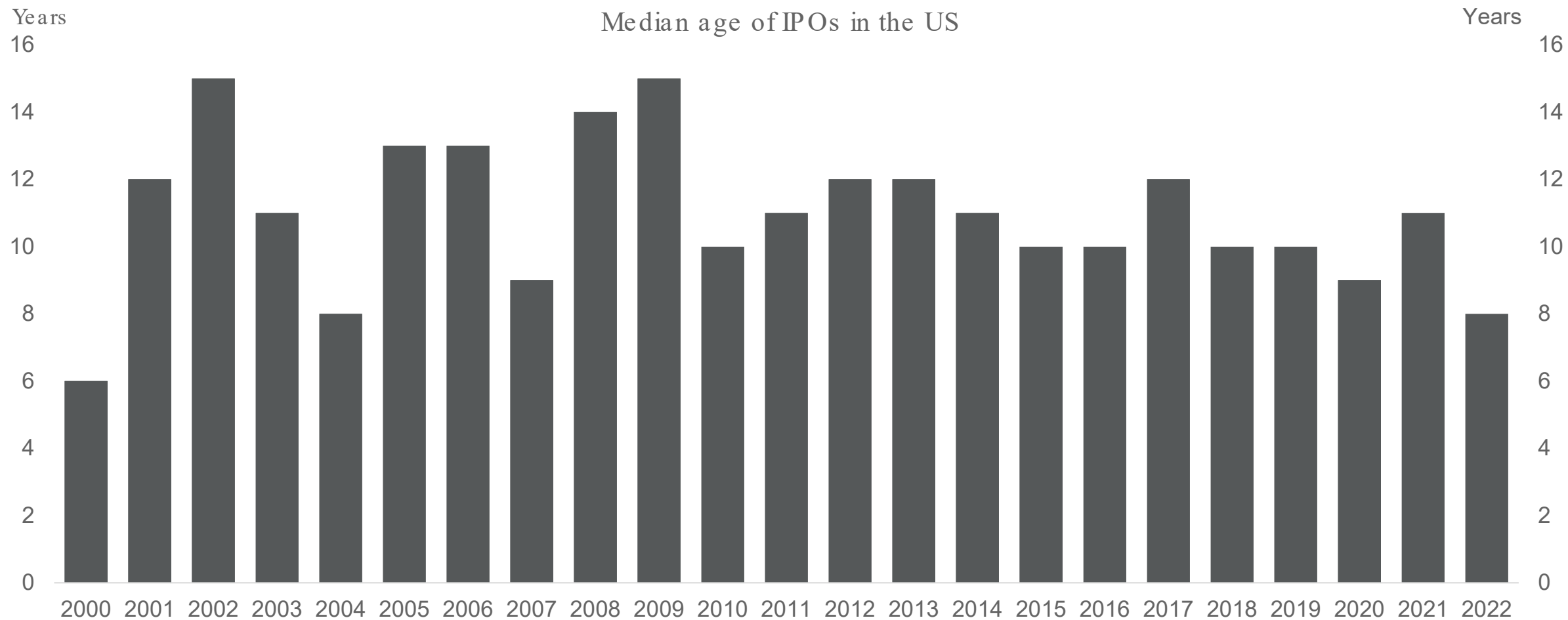
Inflation is reversing the hunt for yield



Dual class IPOs, driven by non-tech



Median age of IPOs



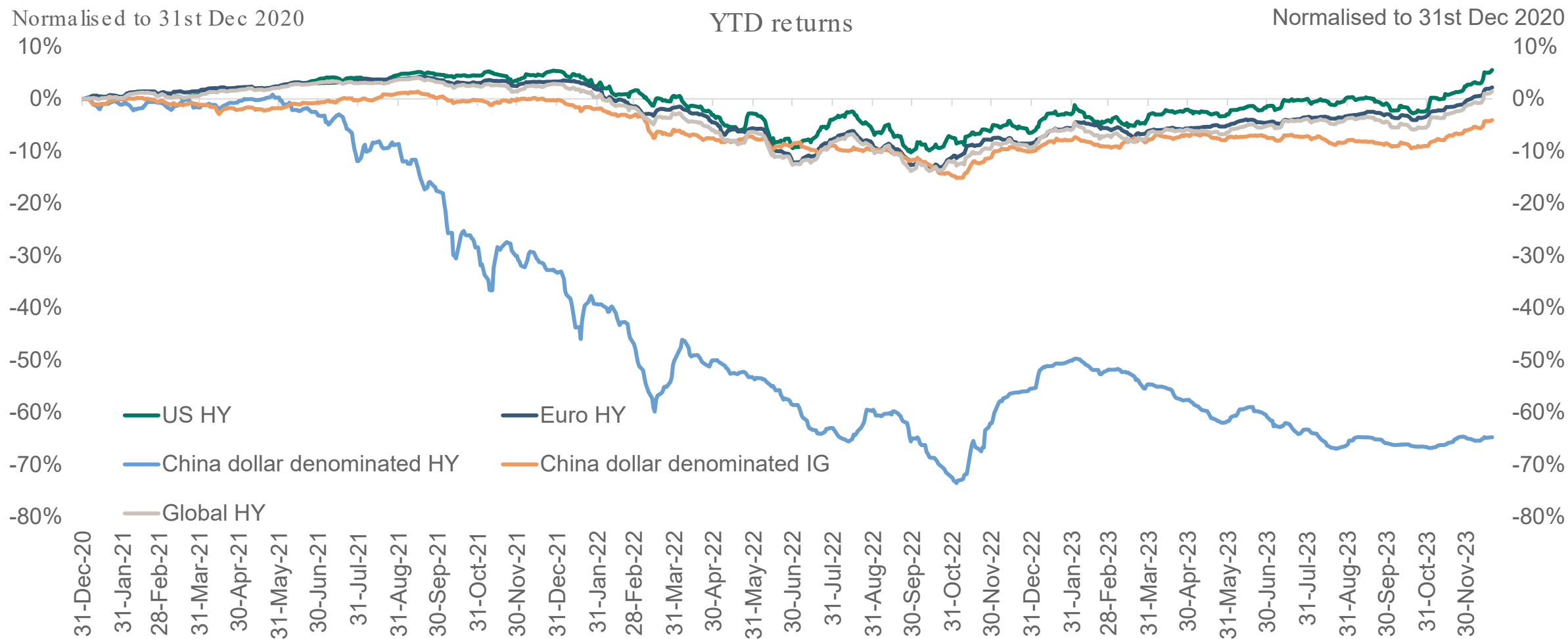
China HY



The yield on China HY is now at 18%



Little contagion from China HY to US and EU credit markets

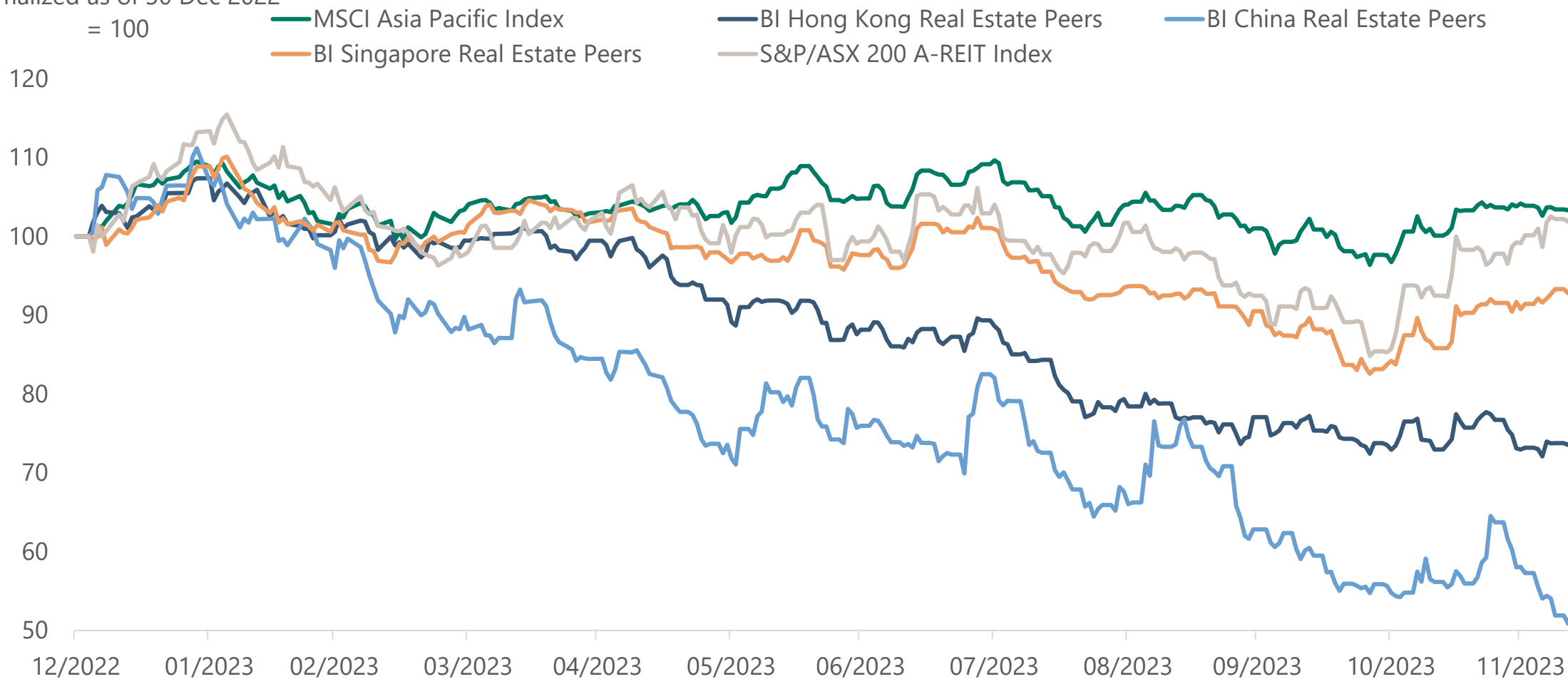


China property crisis intensifying



China real state sector performance compared to its peers

Normalized as of 30 Dec 2022
= 100



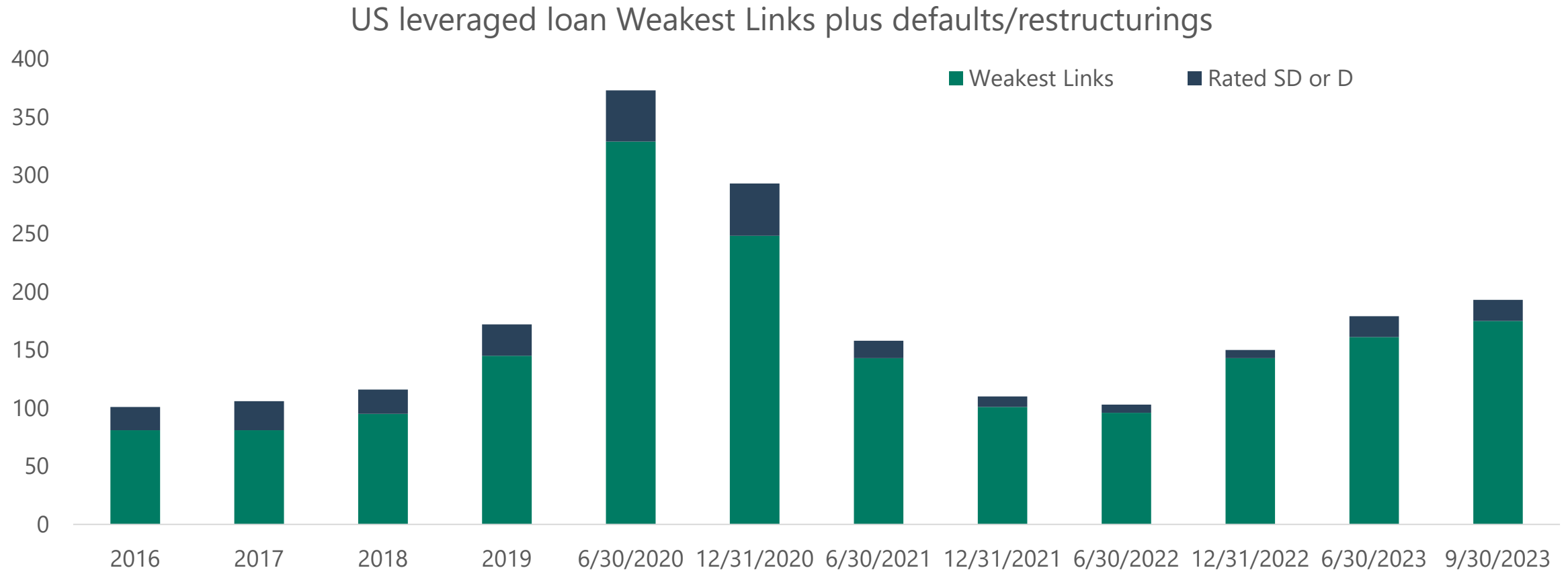
Top issuer names



Top issuer names for IG and HY

| | Top 50 Investment Grade corporate bond issuers | Top 50 High Yield corporate bond issuers |
|----|---|--|
| 1 | Bank of America Corporation | Ford Motor Credit Company LLC |
| 2 | JPMorgan Chase & Co. | CCO Holdings LLC/ CCO Holdings Capital Corp. |
| 3 | Morgan Stanley | Tenet Healthcare Corporation |
| 4 | Citigroup Inc. | TransDigm Inc. |
| 5 | Goldman Sachs Group Inc. | Carnival Corporation |
| 6 | Wells Fargo & Company | Ford Motor Company |
| 7 | Apple Inc. | Royal Caribbean Group |
| 8 | HSBC Holdings PLC | CSC Holdings LLC |
| 9 | AT&T Inc | Community Health Systems Incorporated |
| 10 | Oracle Corporation | DISH DBS Corporation |
| 11 | Verizon Communications Inc. | Bausch Health Companies Inc |
| 12 | Comcast Corporation | Caesars Entertainment Inc New |
| 13 | UnitedHealth Group Inc. | Sirius Xm Radio Inc |
| 14 | Amazon.com Inc. | Iron Mountain Inc. |
| 15 | Amgen Inc. | OneMain Financial Corporation |
| 16 | UBS Group AG | AAAdvantage Loyalty IP Ltd/ American Airlines Inc |
| 17 | CVS Health Corp | Albertsons Cos Inc / Safeway Inc / New Albertsons LP / Albertsons LLC / (Albertsons Safeway LLC) |
| 18 | T-Mobile USA Inc. | Mozart Debt Merger Subordinated Inc. |
| 19 | Mitsubishi UFJ Financial Group Inc. | Equitrans Midstream Corporation |
| 20 | AbbVie Inc. | Altice France S.A |
| 21 | The Boeing Company | 1011778 B.C. Unlimited Liability Company / New Red Finance Inc. |
| 22 | Intel Corporation | Bombardier Inc. |
| 23 | Microsoft Corporation | Ball Corporation |
| 24 | Barclays PLC | United Rentals (North America) Inc. |
| 25 | Sumitomo Mitsui Financial Group Inc. | Hilton Domestic Operating Co Inc. |
| 26 | Walt Disney Company | Calpine Corporation |
| 27 | Charter Communications Operating LLC/Charter Communications Operating Capital Corp. | Icahn Enterprises L.P. / Icahn Enterprises Finance Corporation |
| 28 | Home Depot Inc | Post Holdings Inc. |
| 29 | Walmart Inc | Level 3 Financing Inc. |
| 30 | Lowe's Companies Inc. | Univision Communications Inc. |
| 31 | Anheuser-Busch InBev Worldwide Inc. | Vistra Operations Co LLC |
| 32 | Pfizer Investment Enterprises Pte Ltd. | The Goodyear Tire & Rubber Company |
| 33 | HCA Inc. | Venture Global LNG Inc. |
| 34 | General Motors Financial Company Inc | FirstEnergy Corp. |
| 35 | Pacific Gas and Electric Company | Uniti Group LP/Uniti Fiber Holdings Inc/Uniti Group Finance 2019 Inc/CSL Capital LLC |
| 36 | Energy Transfer LP | HUB International Ltd. |
| 37 | Broadcom Inc | Bath & Body Works Inc |
| 38 | BNP Paribas SA | Service Properties Trust |
| 39 | Royal Bank of Canada | Carvana Co |
| 40 | Bristol-Myers Squibb Company | Transocean Inc. |
| 41 | Raytheon Technologies Corporation | Venture Global Calcasieu Pass LLC |
| 42 | International Business Machines Corporation | YUM Brands Inc |
| 43 | Merck & Co. Inc | Newell Brands Inc. |
| 44 | Toyota Motor Credit Corp. | GFL Environmental Inc. |
| 45 | Shell International Finance B.V. | Uber Technologies Inc |
| 46 | Philip Morris International Inc. | Navient Corporation |
| 47 | U.S. Bancorp. | NCL Corporation Ltd. |
| 48 | The Bank of New York Mellon Corporation | Standard Buildings Solutions Inc. |
| 49 | Exxon Mobil Corporation | Mauser Packaging Solutions Holding Company |
| 50 | Pepsico Inc | Vodafone Group PLC |

US: More downside risk in credit as leveraged loan weakest links increase in Q3



Source: Pitchbook, LCD; Morningstar LSTA US Leveraged Loan Index, Apollo Chief Economist (Data through June 30, 2023) (SD and D - An obligor rated 'SD' (Selective Default) or 'D' has failed to pay one or more of its financial obligations (rated or unrated) when it came due. A 'D' rating is assigned when Standard & Poor's believes that the default will be a general default and that the obligor will fail to pay all or substantially all of its obligations as they come due. An 'SD' rating is assigned when Standard & Poor's believes that the obligor has selectively defaulted on a specific issue or class of obligations, but it will continue to meet its payment obligations on other issues or classes of obligations in a timely manner.)



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Torsten Slok joined Apollo in August 2020 as Chief Economist and he leads Apollo's macroeconomic and market analysis across the platform.

Prior to joining, Mr. Slok worked for 15 years as Chief Economist at Deutsche Bank where his team was top ranked in the annual Institutional Investor survey for a decade. Prior to joining Deutsche Bank Mr. Slok worked at the IMF in Washington, DC and at the OECD in Paris.

Mr. Slok has a Ph.D in Economics and has studied at the University of Copenhagen and Princeton University.