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Credit market outlook:
High rates and slowing earnings growth creating opportunities for credit investors

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Apollo Global Management

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Table of contents

Source: Apollo Chief Economist

Thematic credit investing

1. **Up in quality:** With the Fed staying higher for longer, higher debt costs will continue to weigh on margins and interest coverage ratios over the coming quarters, and both IG and HY companies will experience higher refinancing costs.

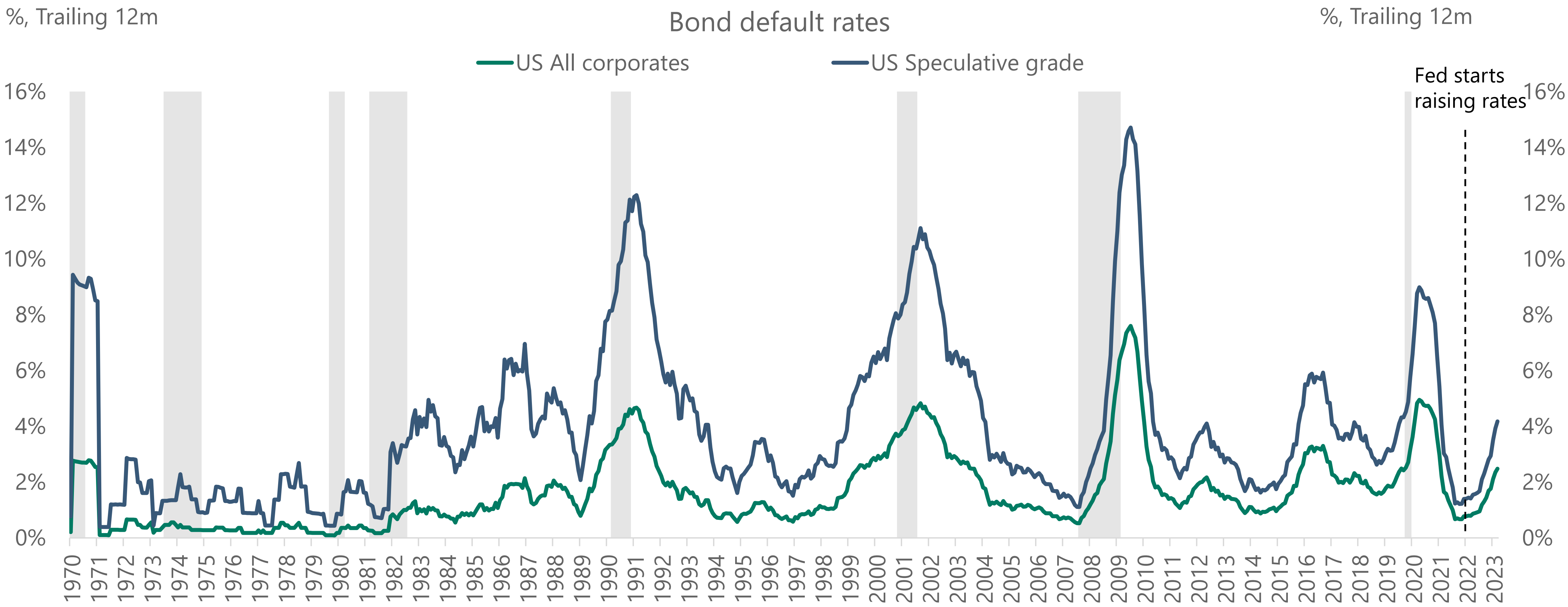
2. **Large cap:** A default cycle has started with bankruptcy filings rising, and default rates will continue to rise over the coming quarters, impacting in particular middle market companies.

3. **Low leverage, 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 significant slowing of loan growth impacting vulnerable consumers and firms.

Source: Apollo Chief Economist

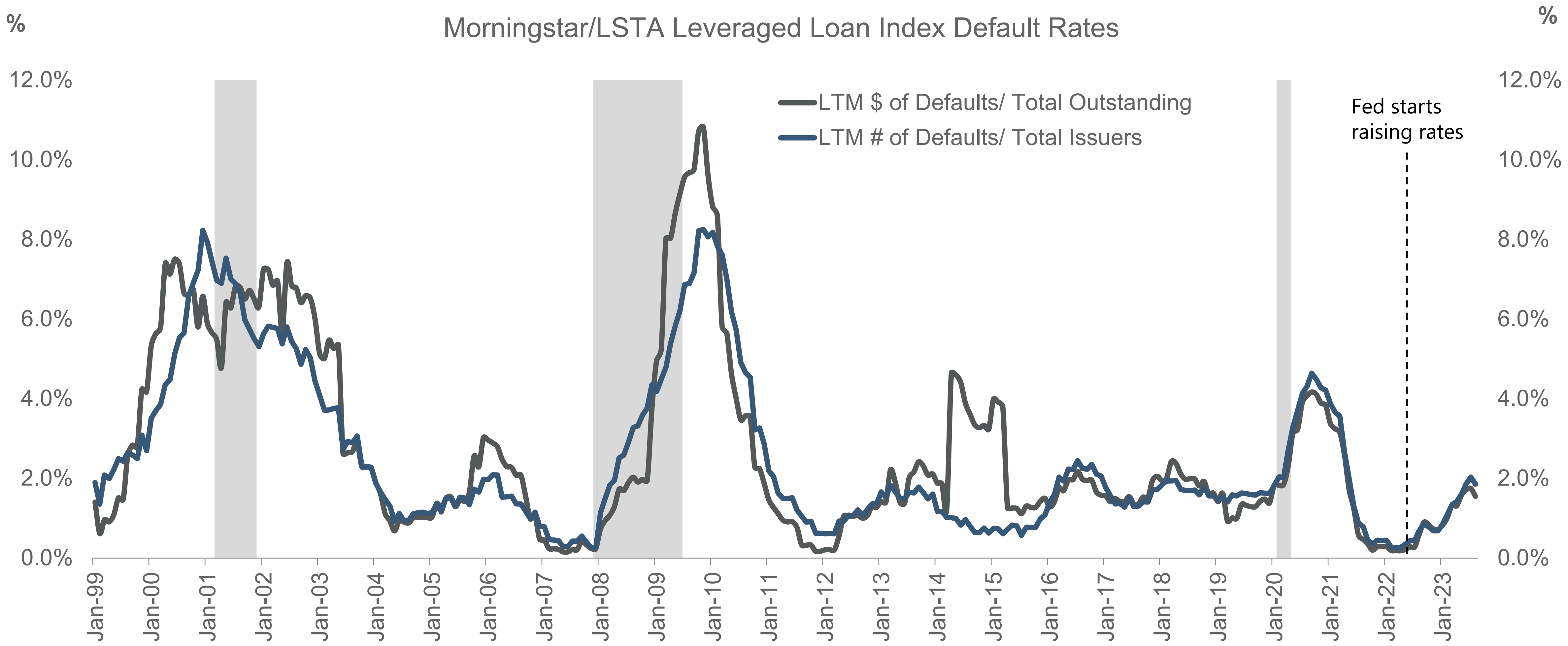
A default cycle has started

A default cycle has started



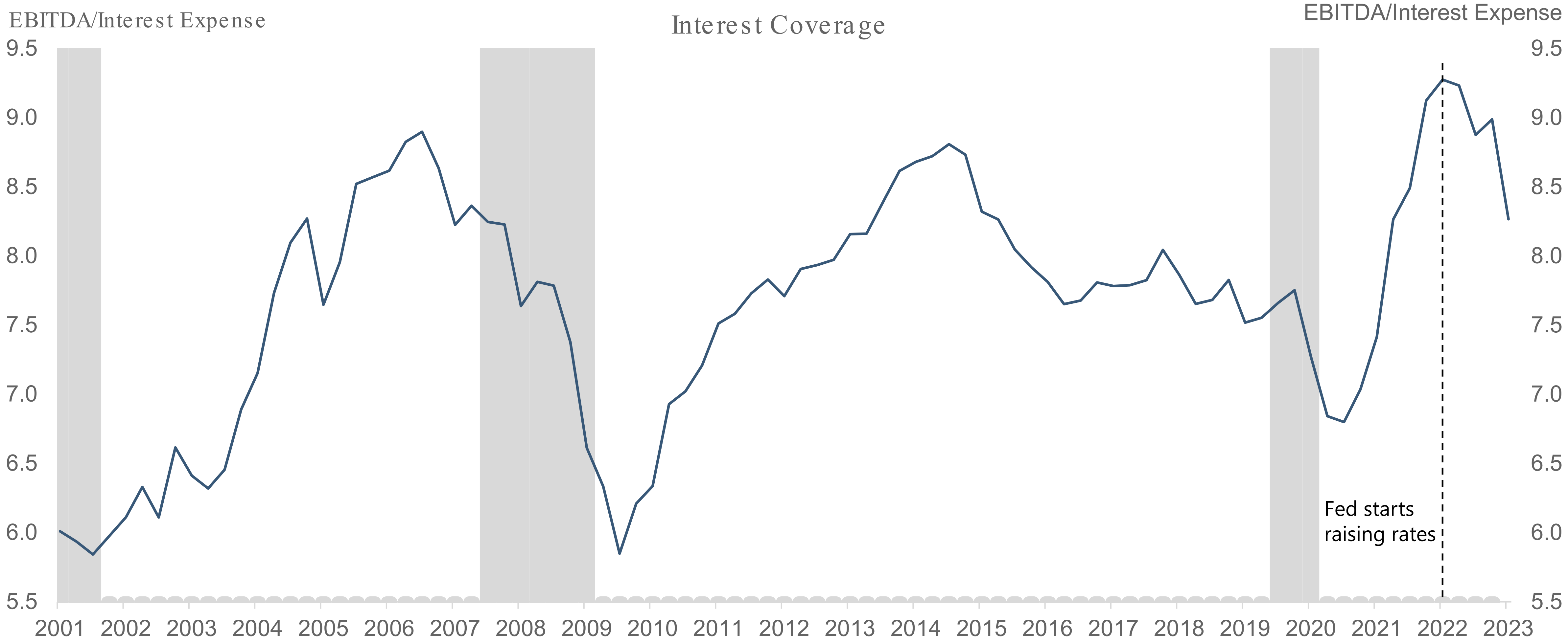
Source: Moody's Analytics, Apollo Chief Economist

Leveraged loan index default rates starting to rise



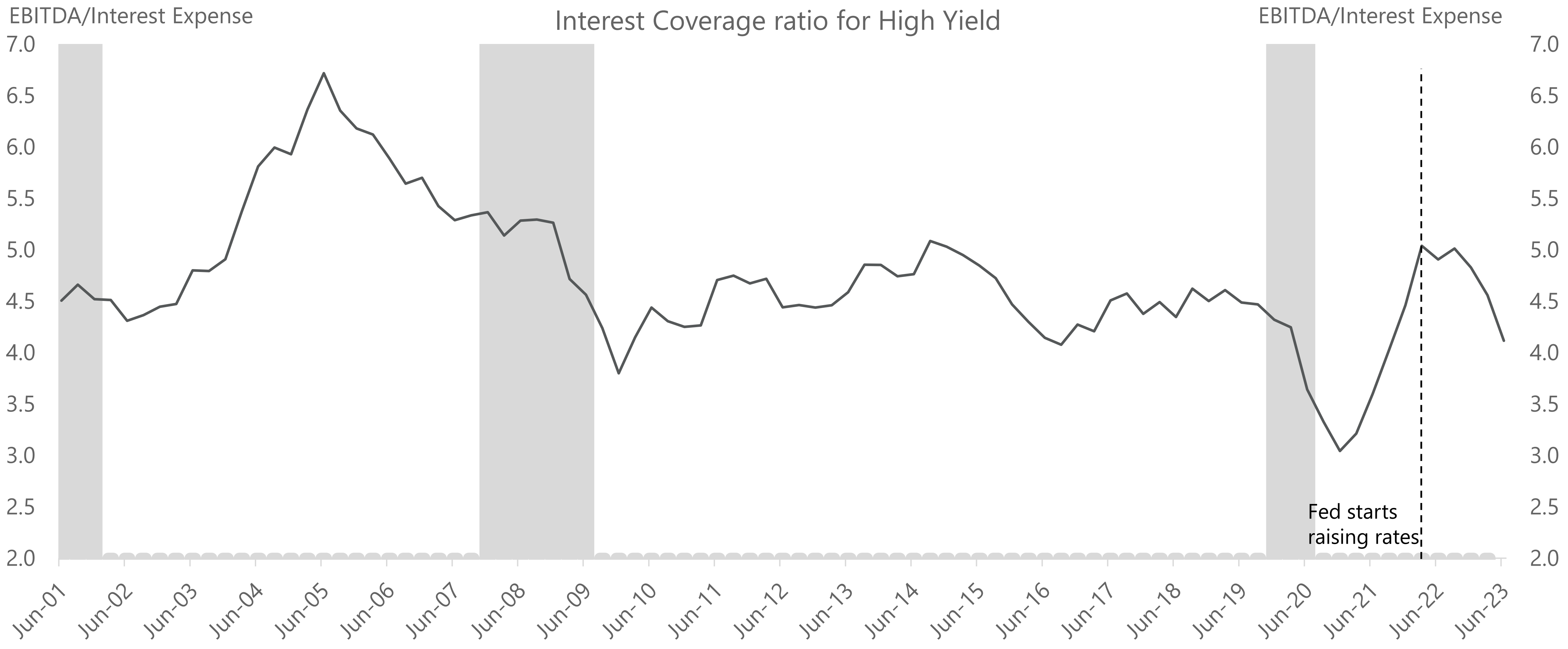
Source: Pitchbook LCD, Apollo Chief Economist

IG ICR coming down



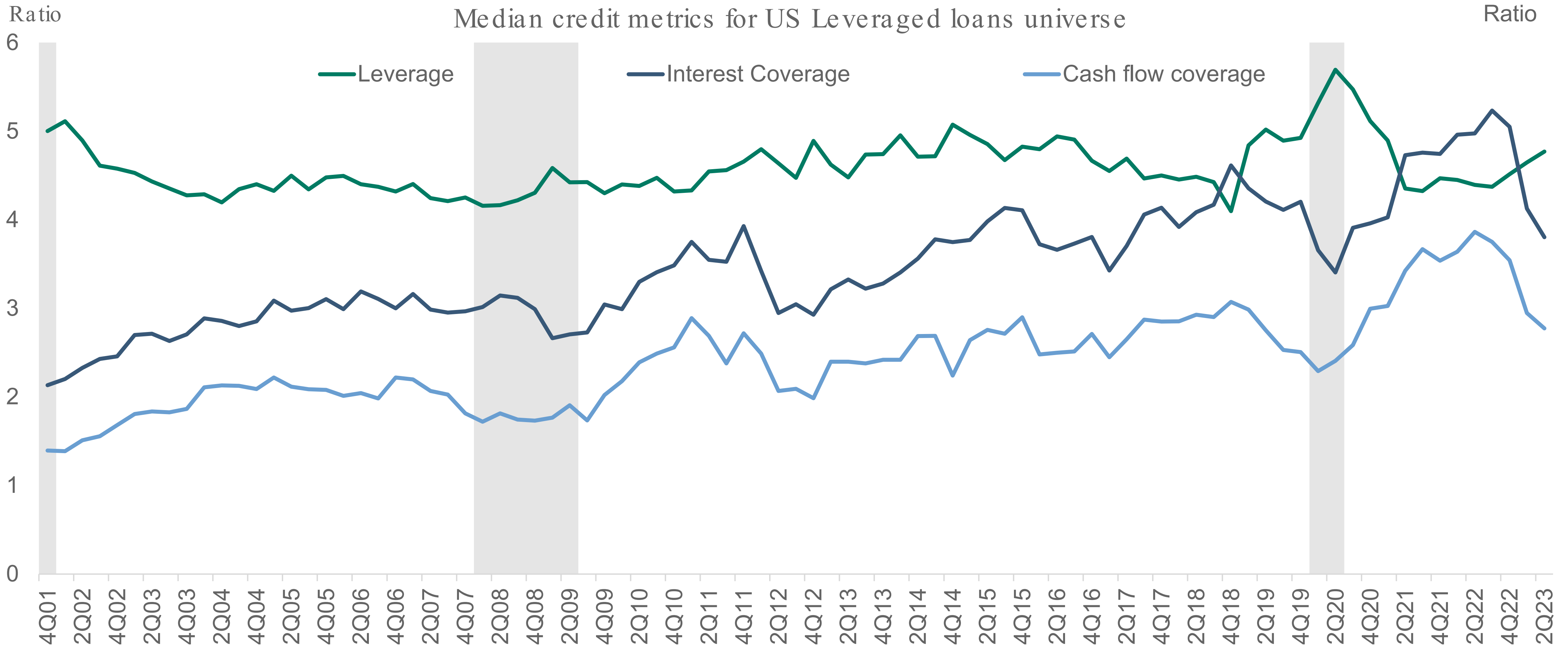
Source: Bloomberg, Apollo Chief Economist

HY ICR coming down



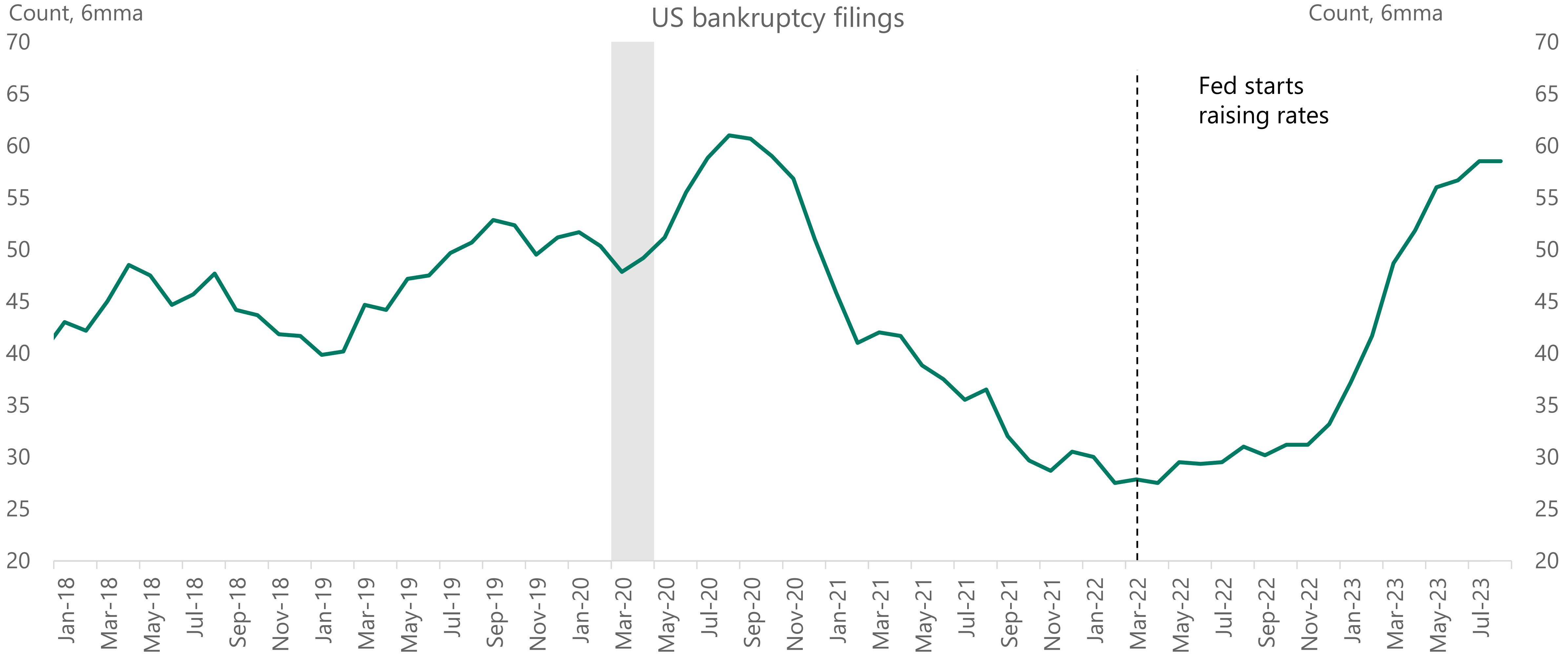
Source: Bloomberg, Apollo Chief Economist

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



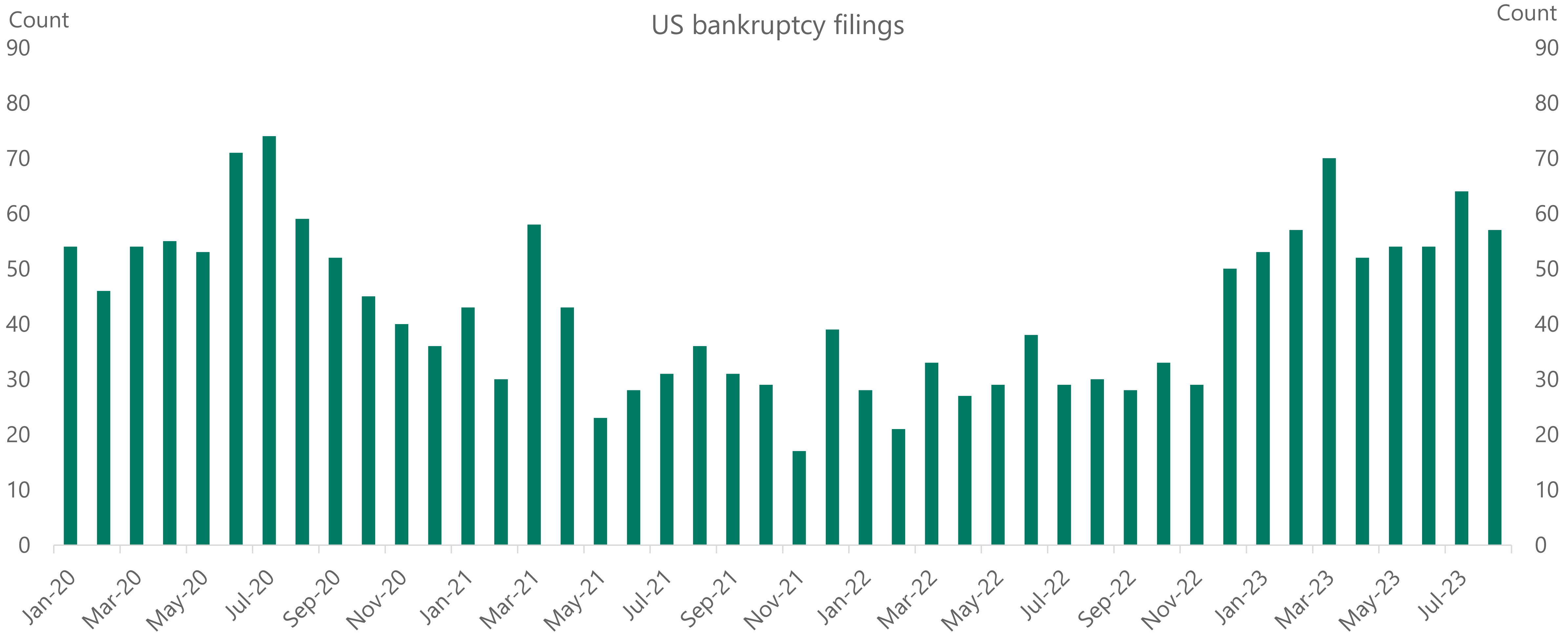
Source: Pitchbook LCD, Apollo Chief Economist

Bankruptcy filings for companies with at least $10mn in liabilities



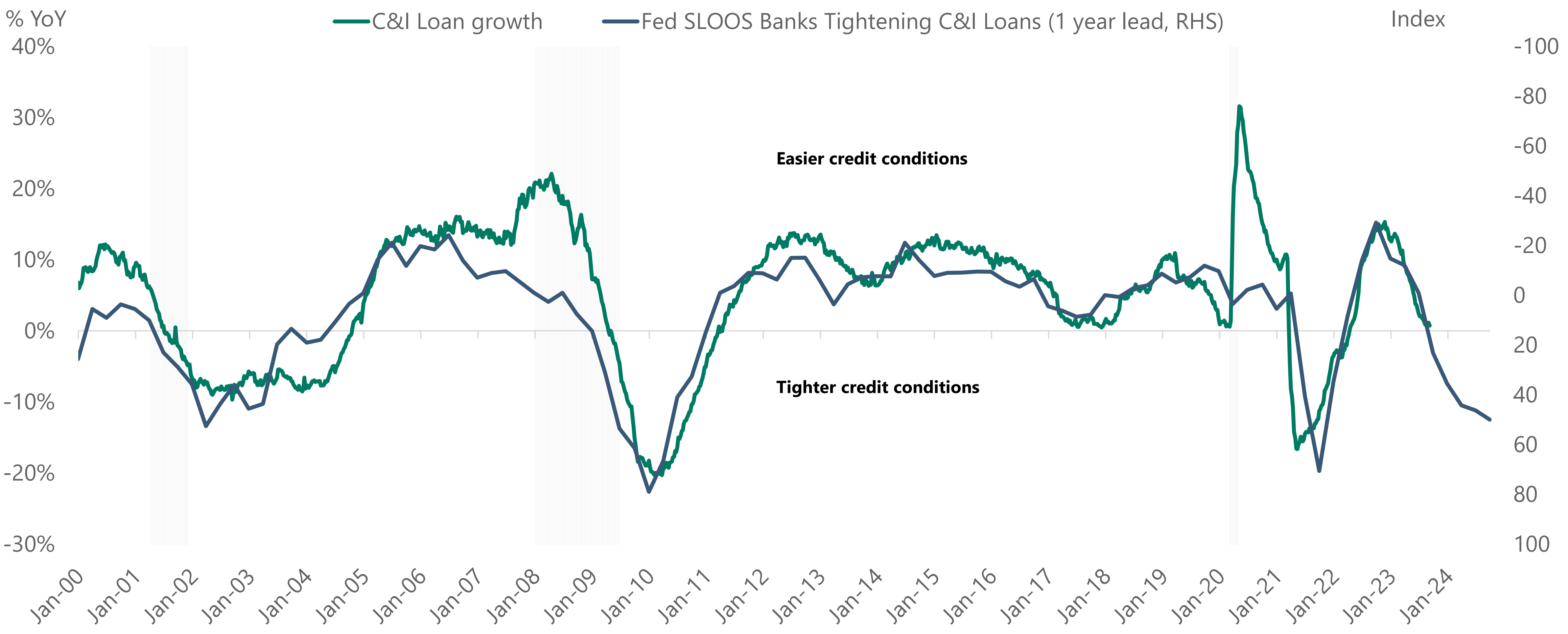
Source: S&P Capital IQ, Bloomberg, Apollo Chief Economist. Note: Bankruptcy figures include public companies or private companies with public debt with a minimum of $2 million in assets or liabilities at the time of filing, in addition to private companies with at least $10 million in assets or liabilities.

Bankruptcy filings rising for companies with at least $2mn in liabilities



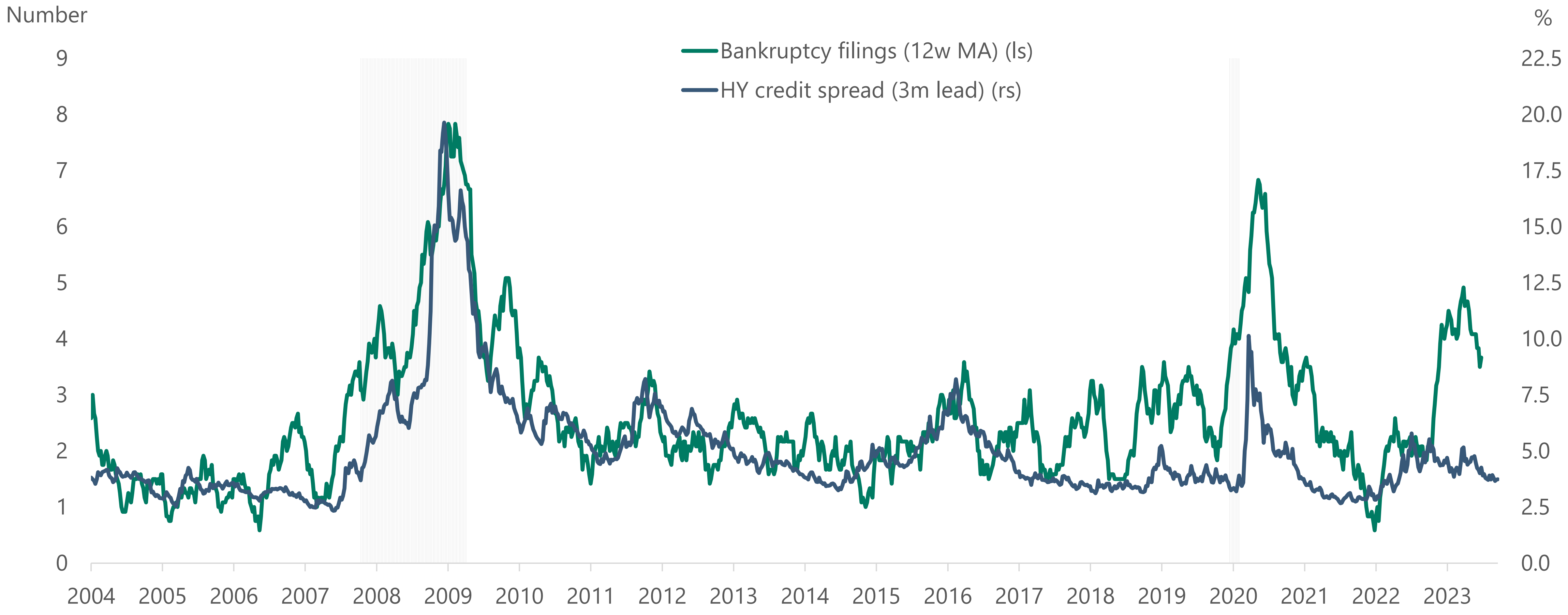
Source: S&P Capital IQ, Bloomberg, Apollo Chief Economist. Note: Bankruptcy figures include public companies or private companies with public debt with a minimum of $2 million in assets or liabilities at the time of filing, in addition to private companies with at least $10 million in assets or liabilities.

Bank lending will shrink significantly over the coming quarters



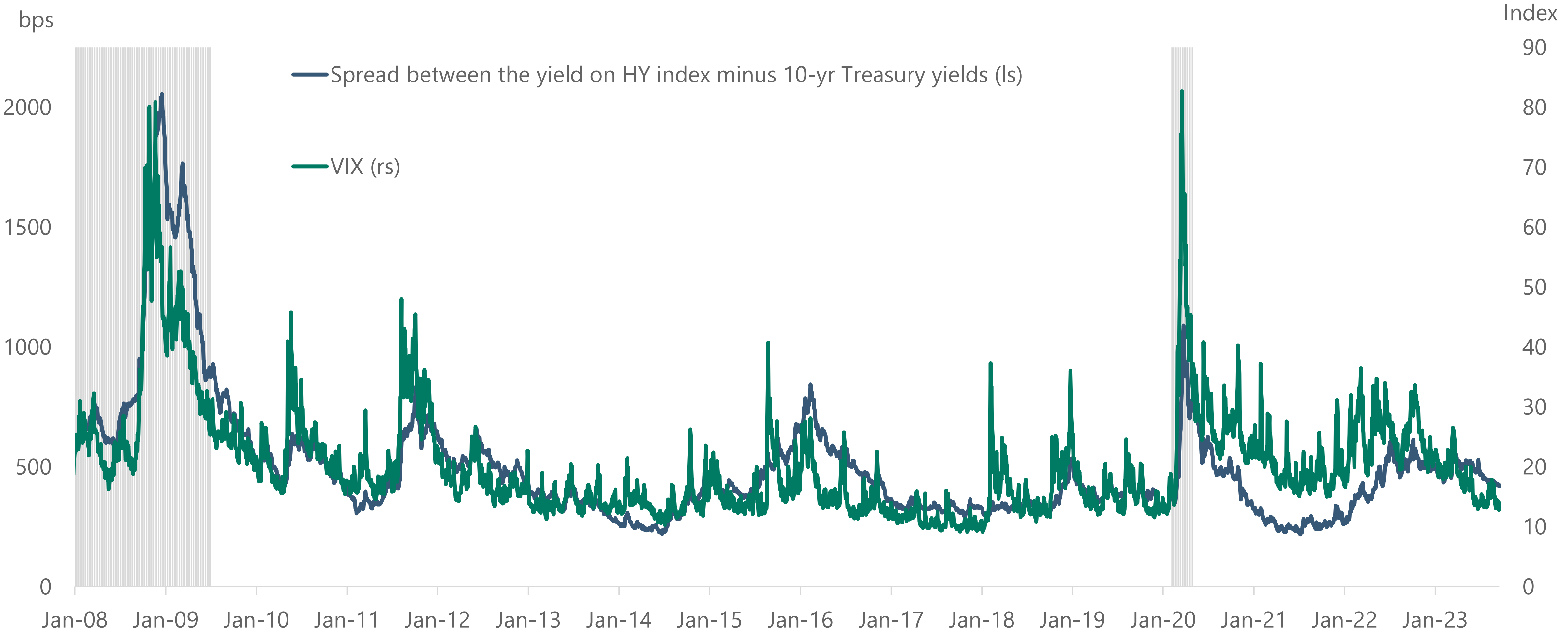
Source: FRB, Haver Analytics, Apollo Chief Economist

Disconnect between bankruptcy filings and credit spreads



Source: Bloomberg, Apollo Chief Economist

HY credit spreads and VIX tend to move closely together



Source: Bloomberg, Apollo Chief Economist

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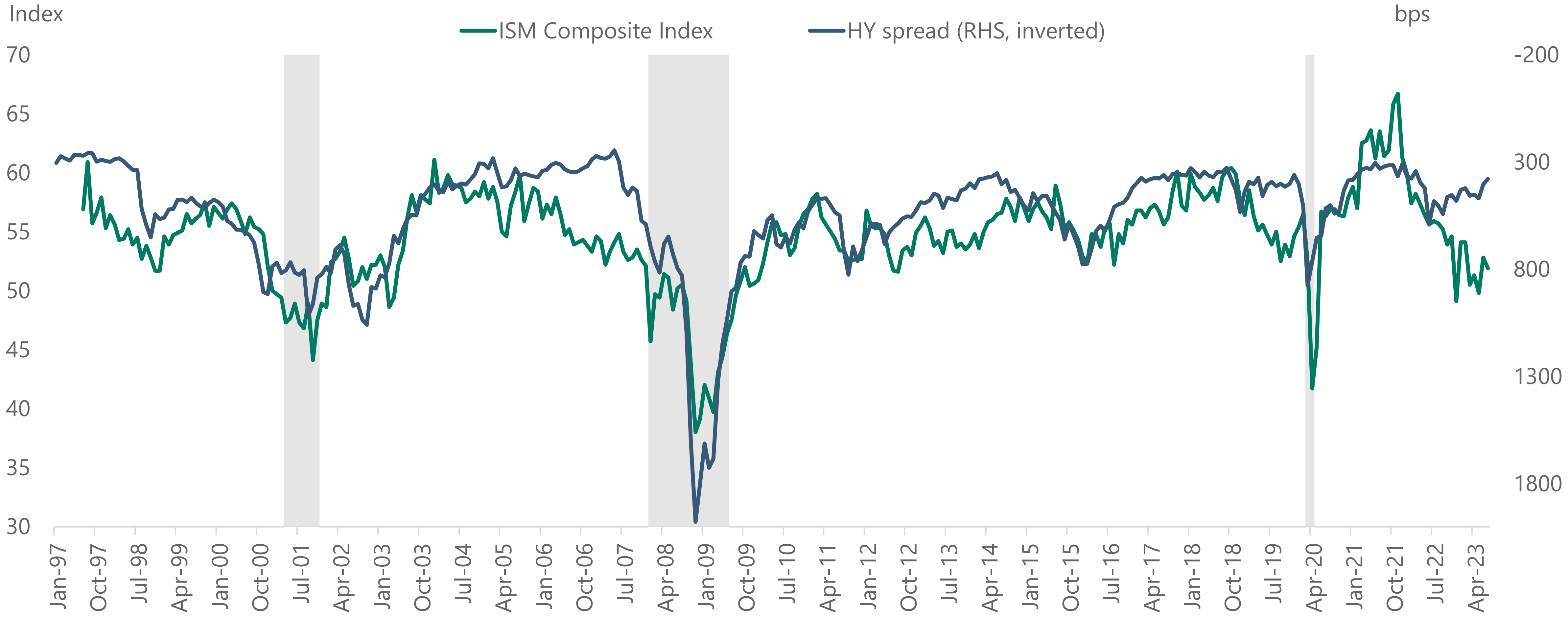
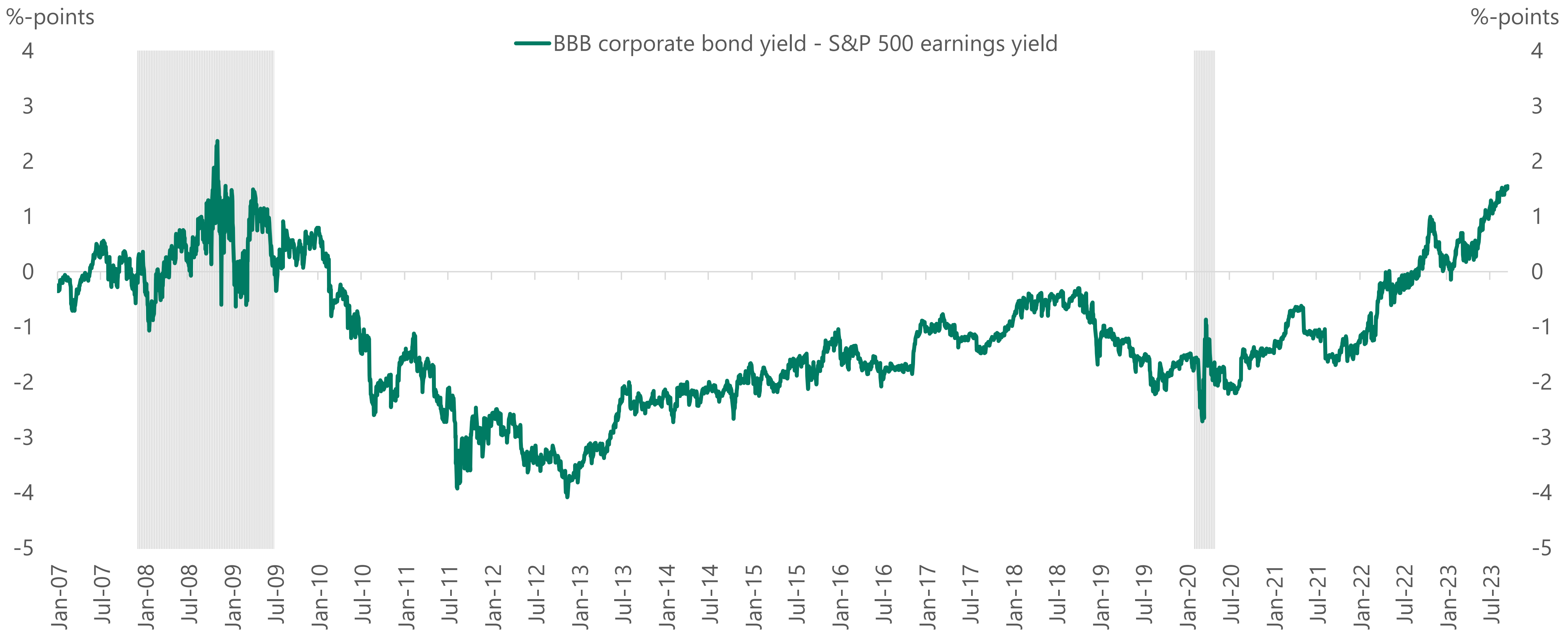
Disconnect between spreads and economic activity



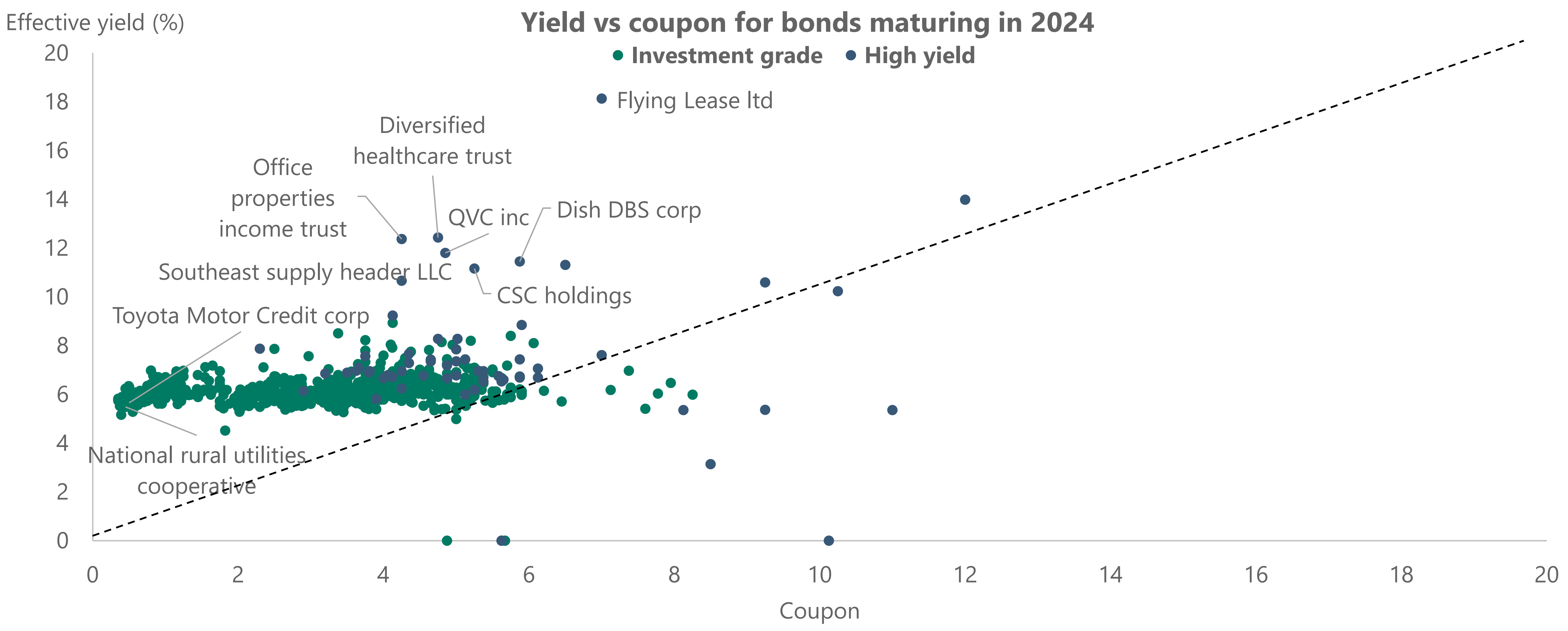
Source: ISM, ICE BofA, Haver Analytics, Apollo Chief Economist

Bonds more attractive than equities



Source: Bloomberg, Apollo Chief Economist

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



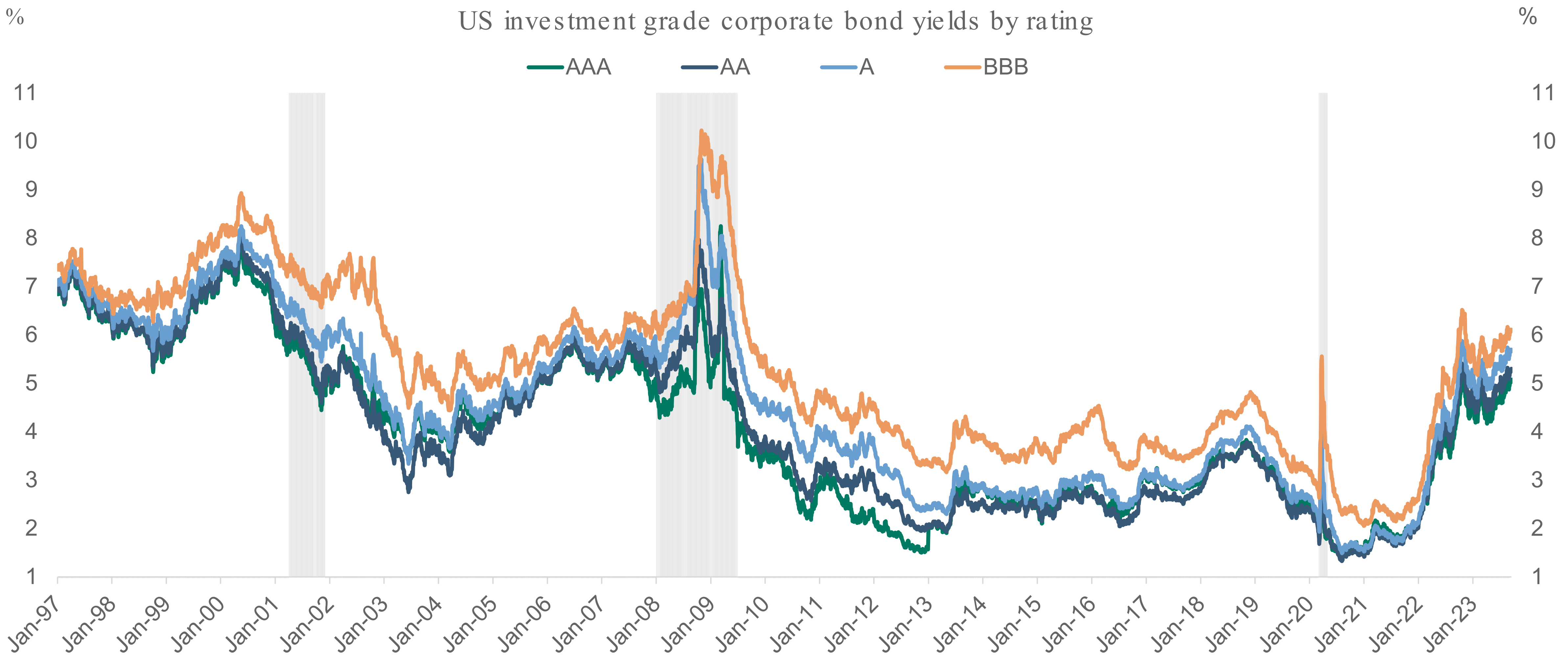
Source: Bloomberg, Apollo Chief Economist

Yield levels

US IG yield around 5.8% and HY yield around 8.4%

Source: ICE BofA, Haver Analytics, Apollo Chief Economist.

US IG yield levels, by rating

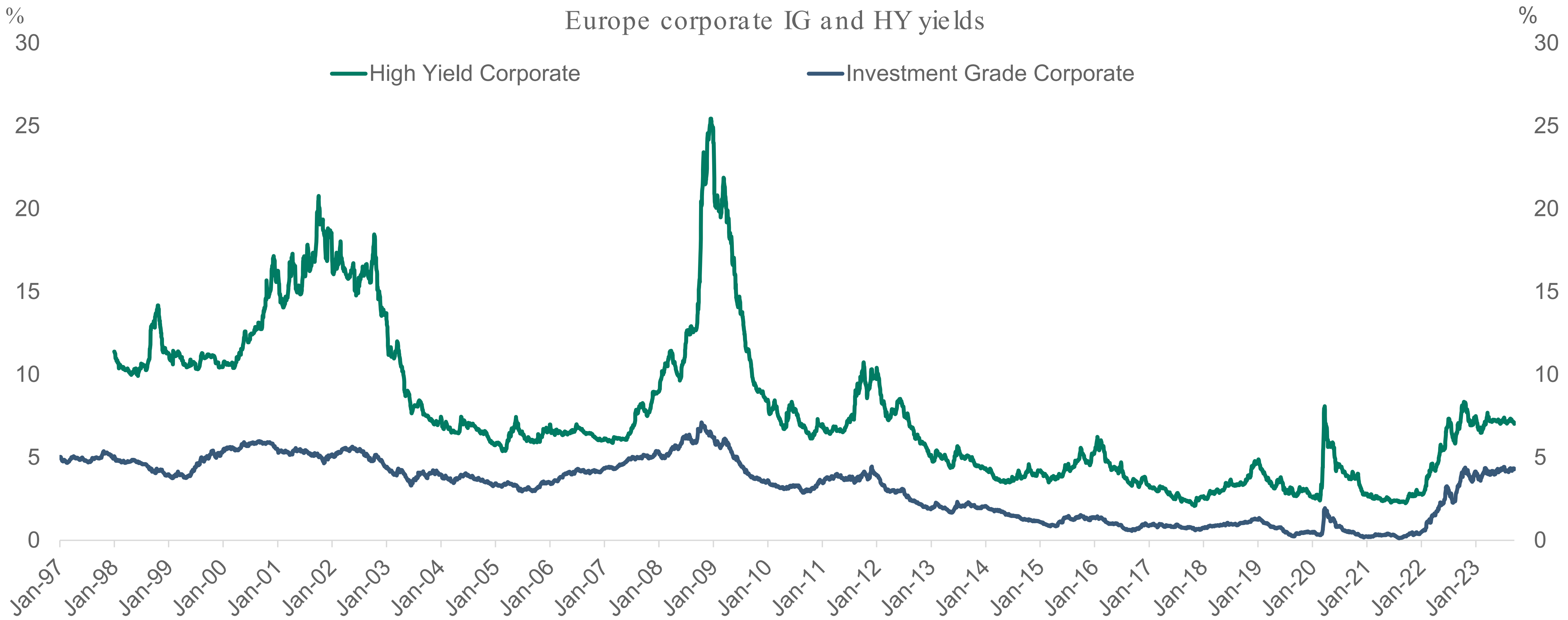


Source: ICE BofA, Haver Analytics, Apollo Chief Economist

US HY yield levels, by rating

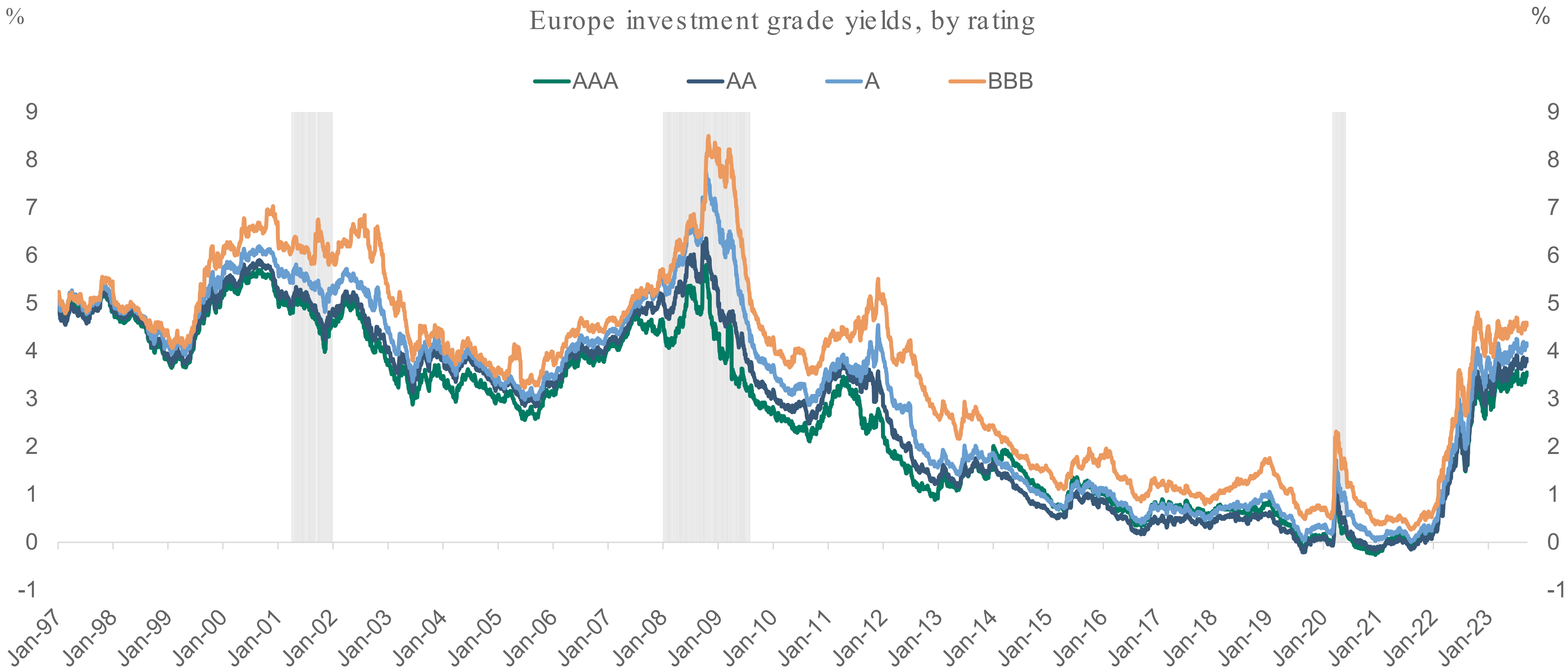
Source: ICE BofA, Haver Analytics, Apollo Chief Economist

European corporate IG and HY yields



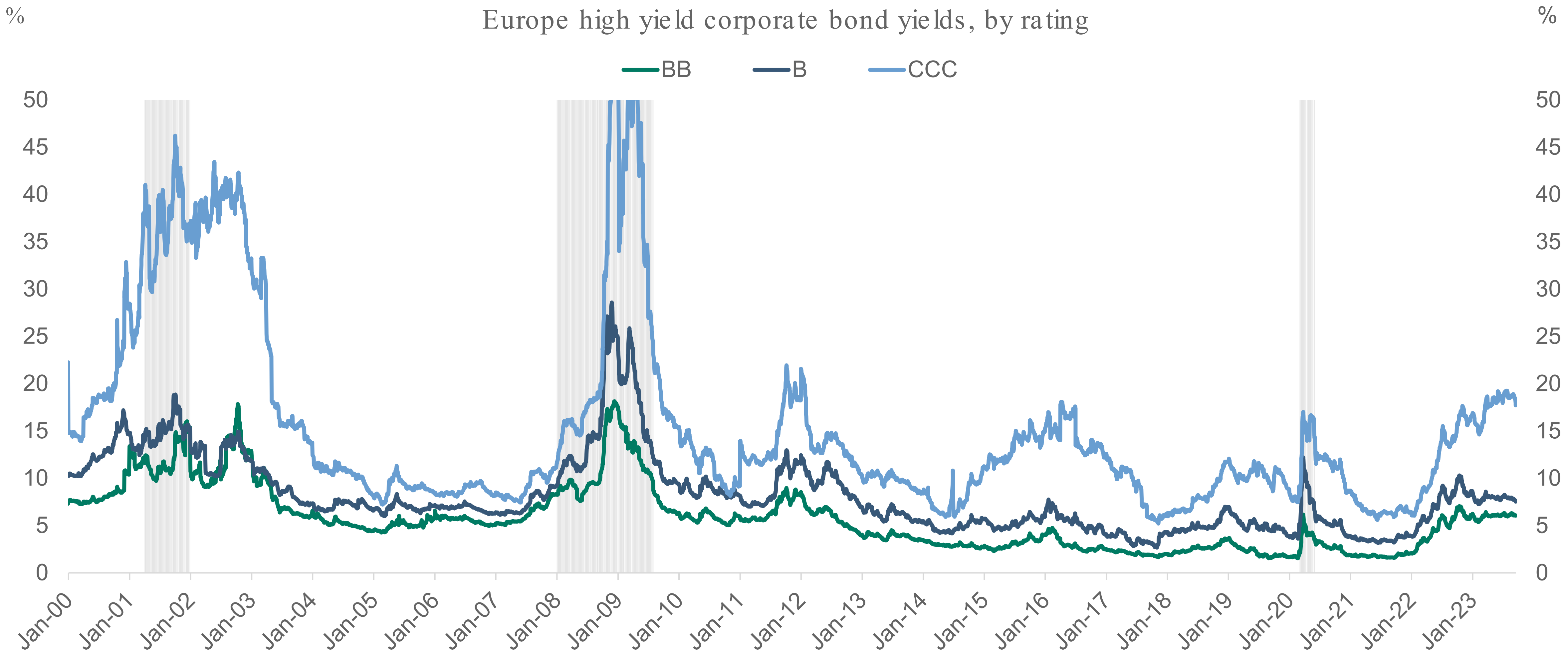
Source: ICE BofA, Bloomberg, Apollo Chief Economist

European IG yield levels, by rating



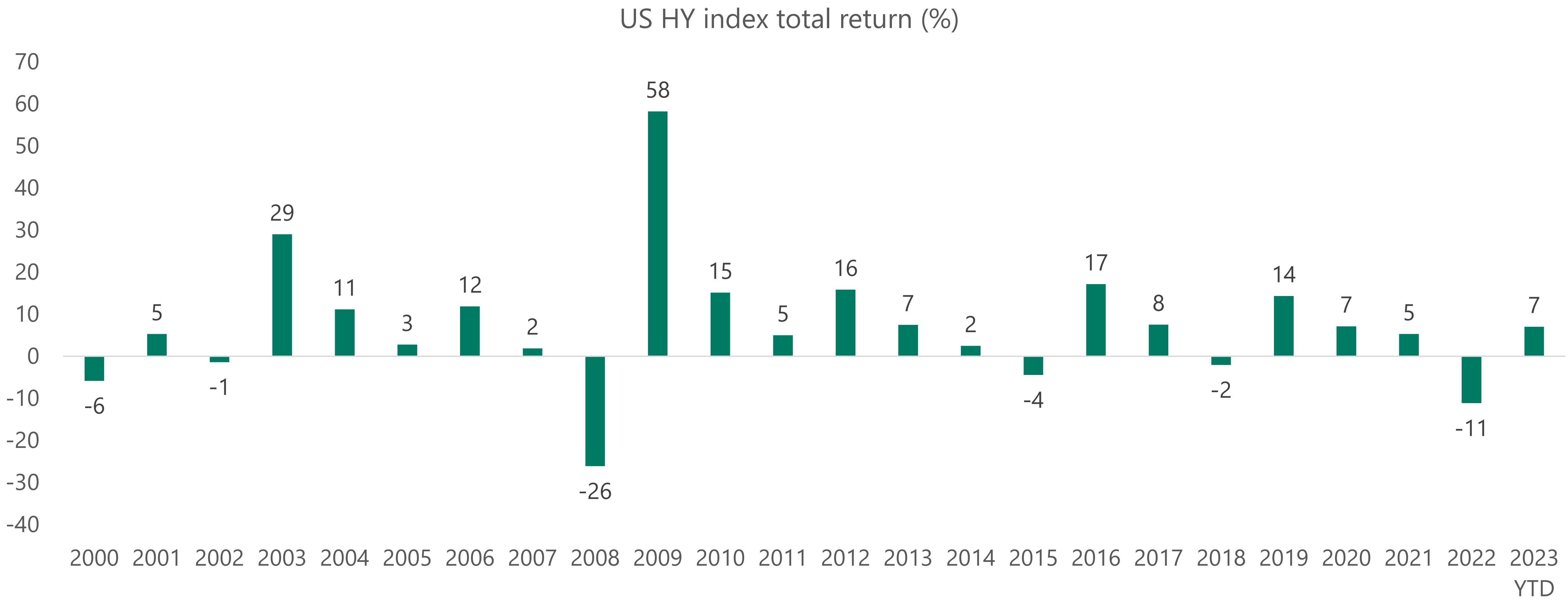
Source: ICE BofA, Bloomberg, Apollo Chief Economist

European HY yield levels, by rating



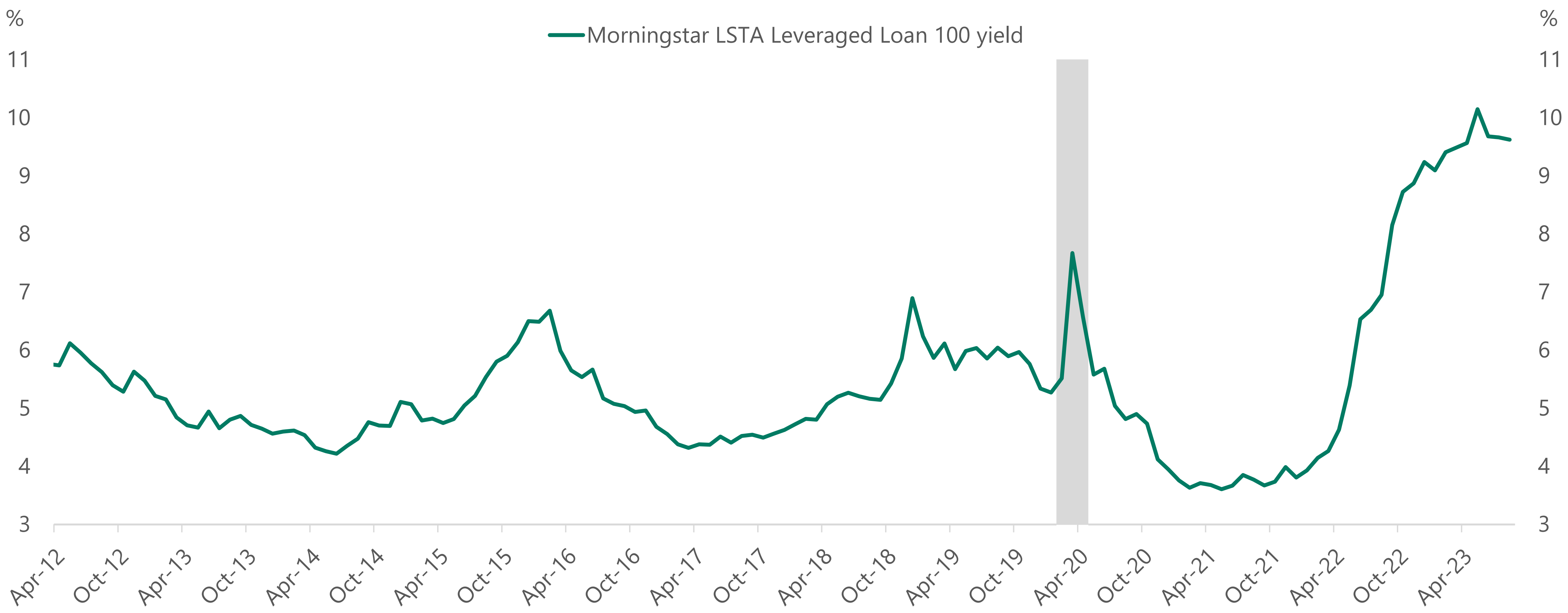
Source: ICE BofA, Bloomberg, Apollo Chief Economist

Annual returns for HY



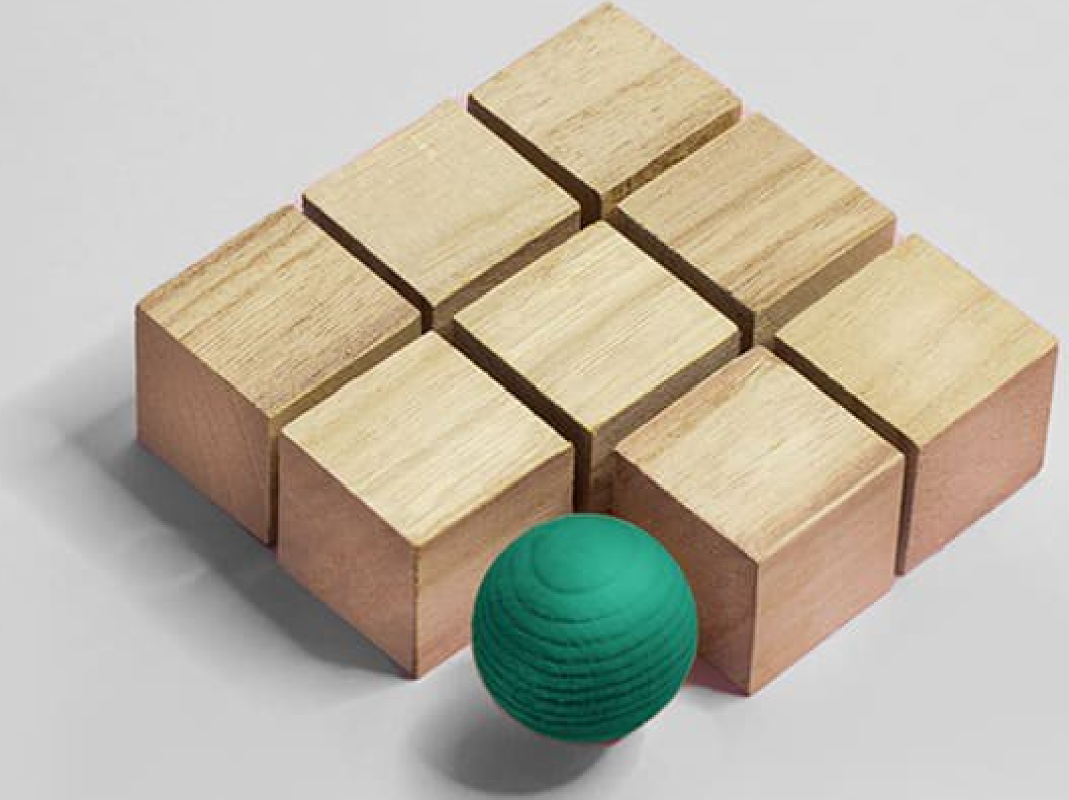
Source: Bloomberg, Apollo Chief Economist

Yield for the leveraged loan index: 9.6%

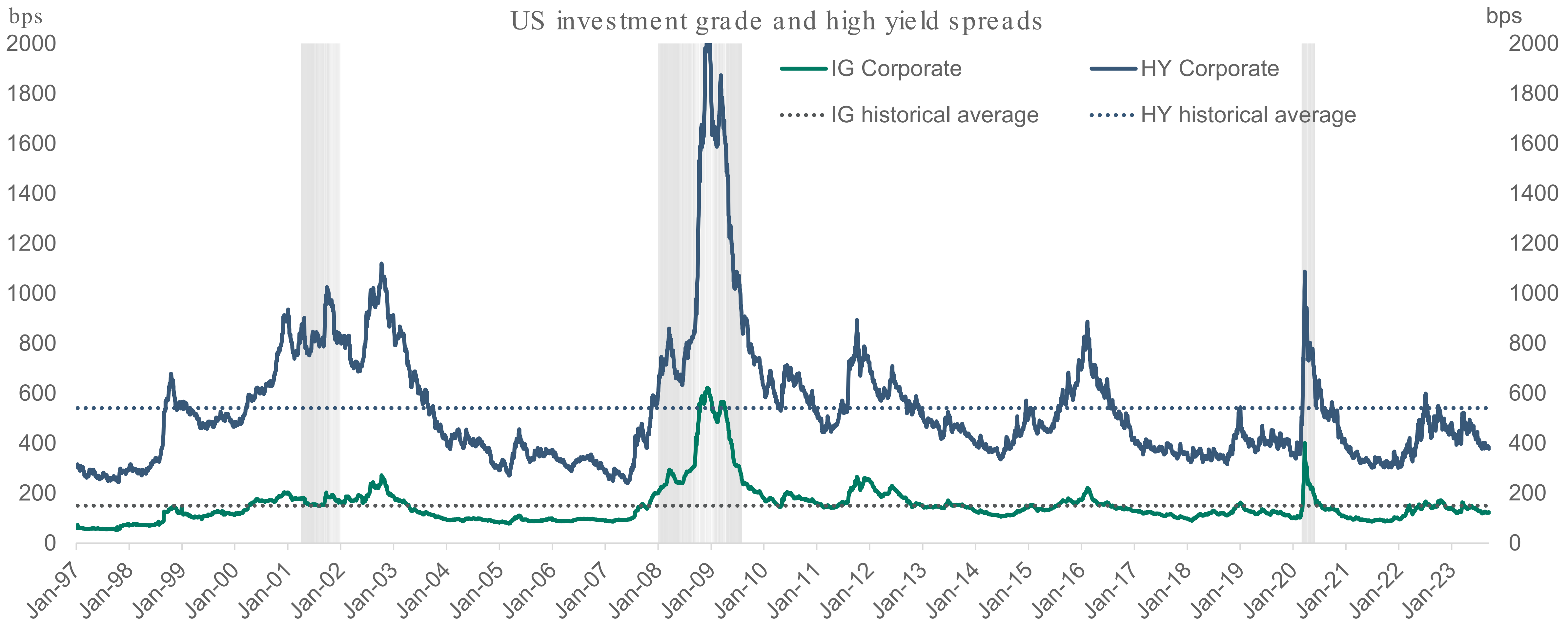


Source: Pitchbook LCD, Apollo Chief Economist

Spread levels



Credit spreads not pricing in a recession



Source: ICE BofA, Bloomberg, Apollo Chief Economist

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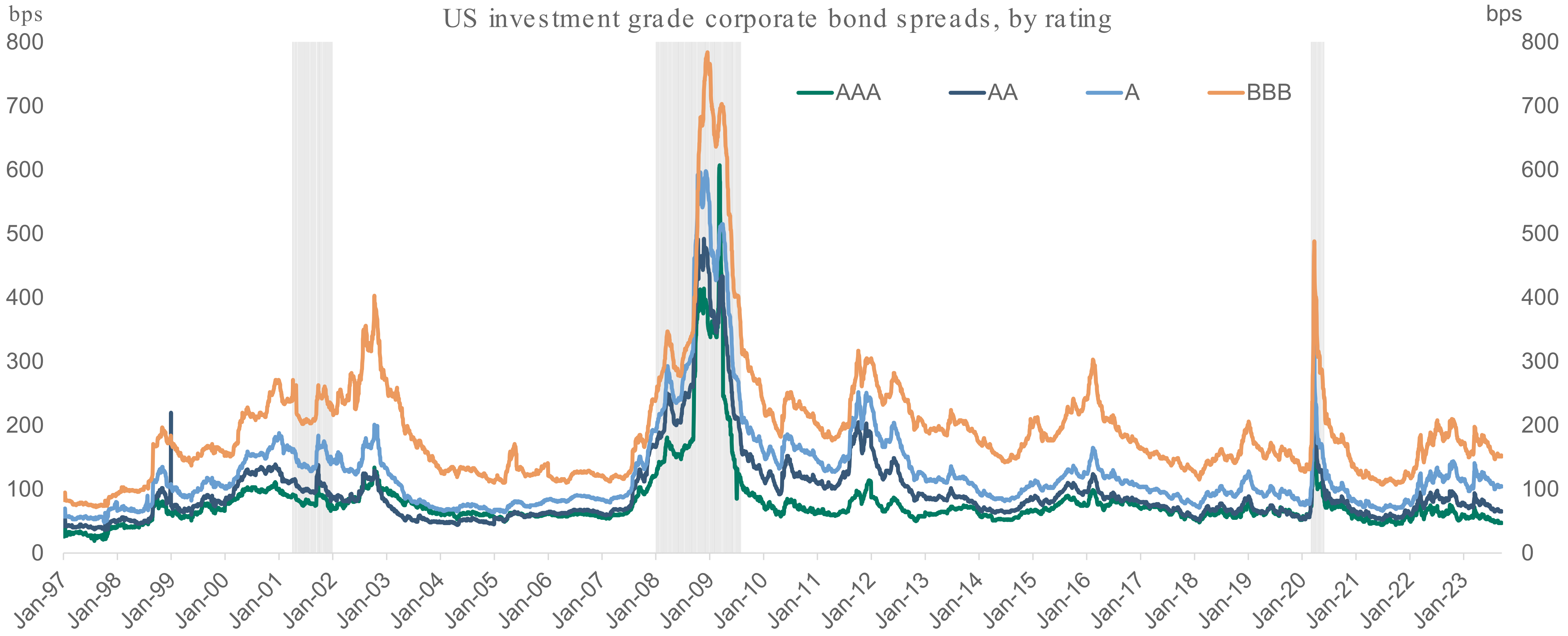
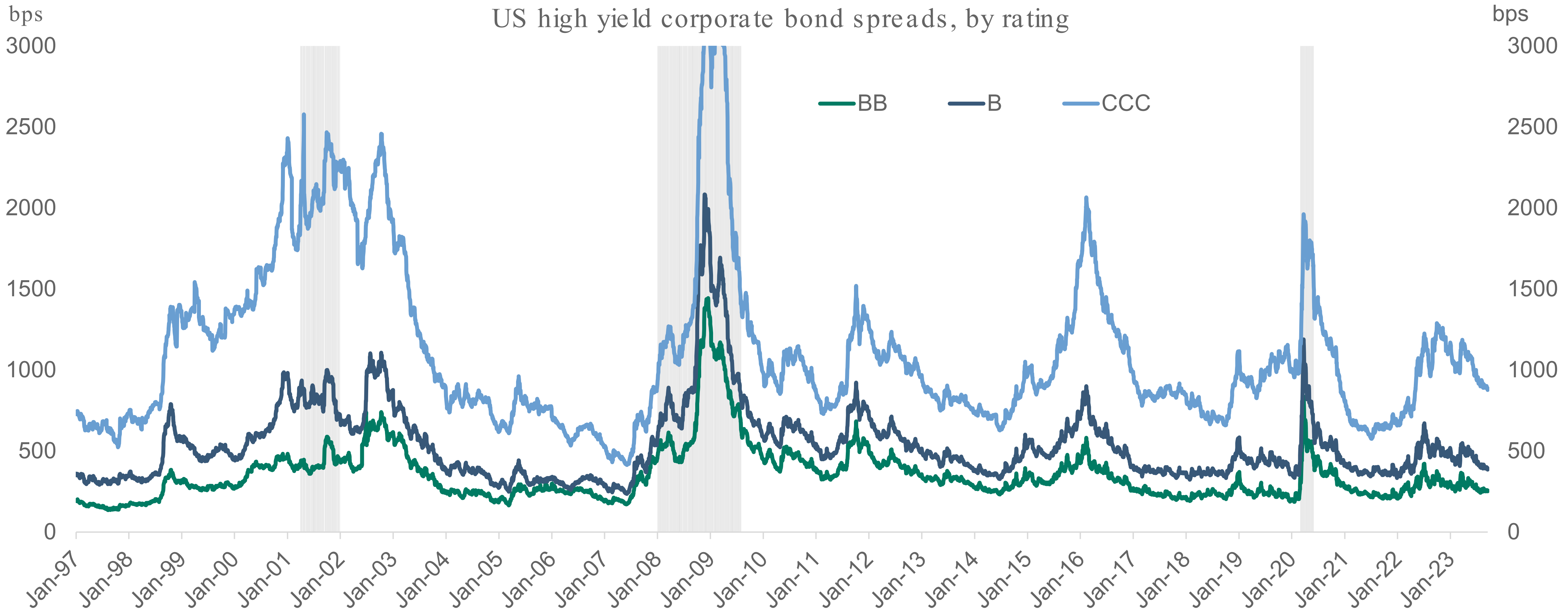
IG spreads by rating



Source: ICE BofA, Bloomberg, Apollo Chief Economist

HY spreads by rating

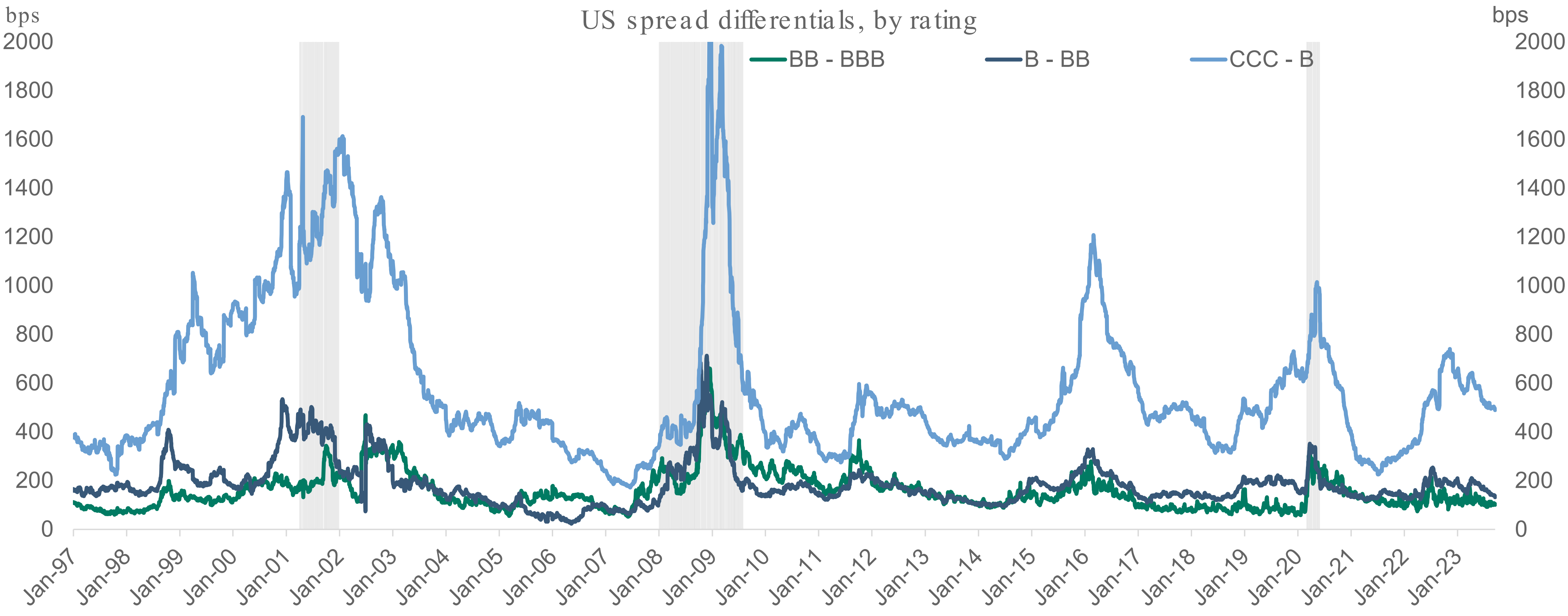


Source: ICE BofA, Bloomberg, Apollo Chief Economist

IG quality spreads, some differentiation between single-A and double-AA

Source: ICE BofA, Bloomberg, Apollo Chief Economist

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

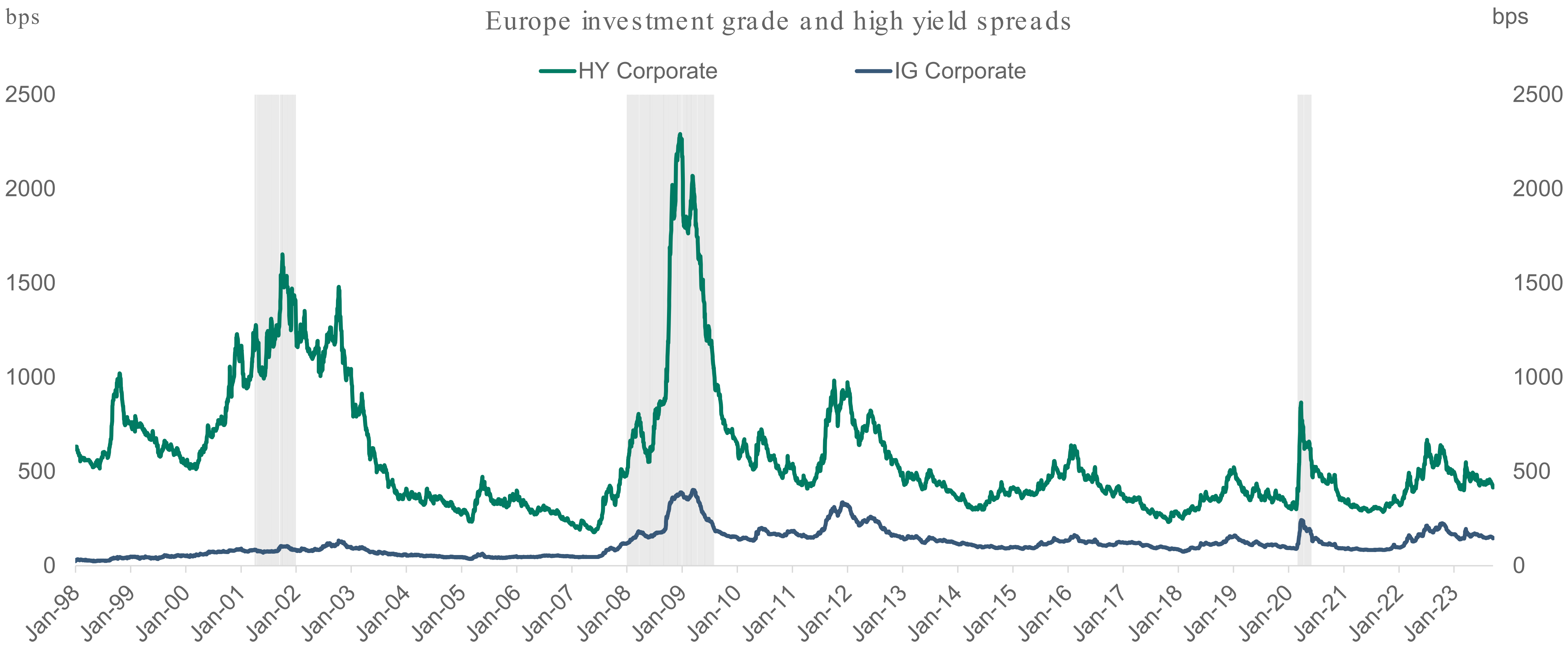


Source: ICE BofA, Bloomberg, Apollo Chief Economist

US HY spread minus IG spread

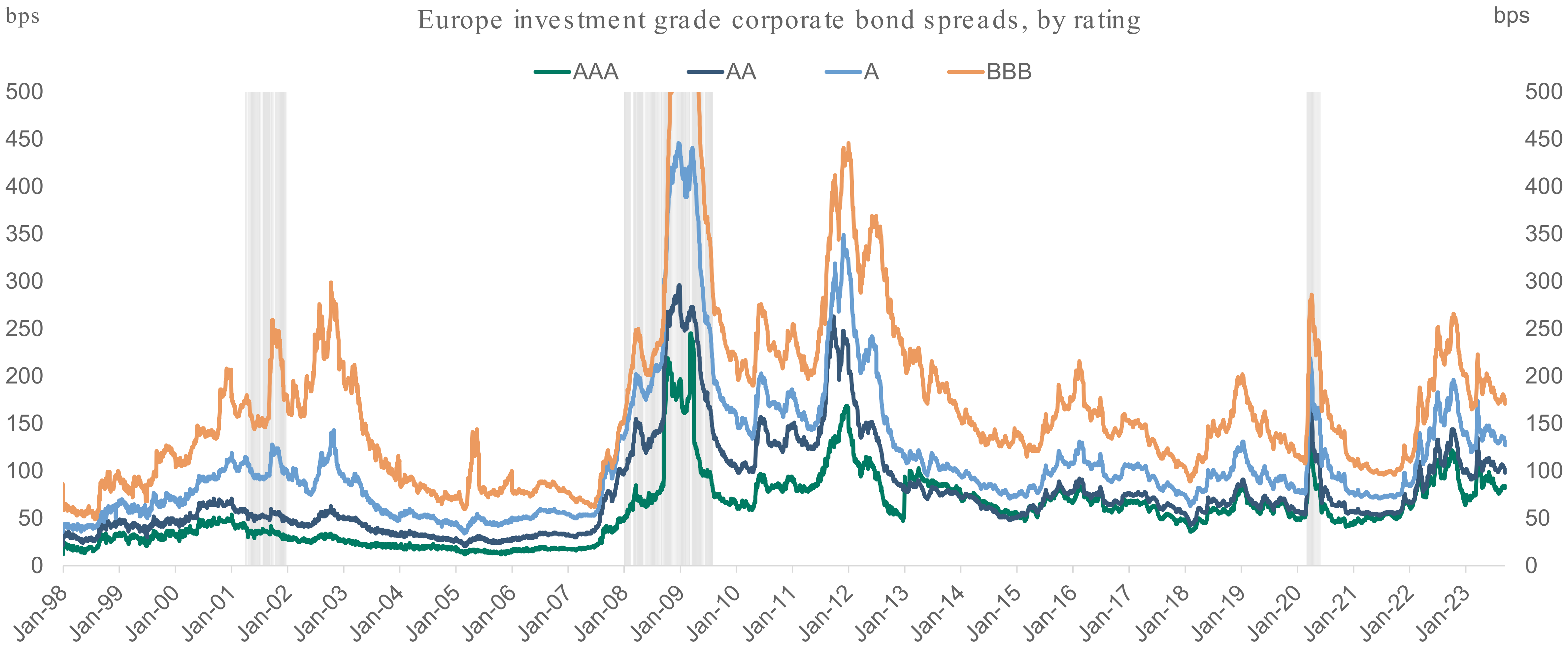
Source: ICE BofA, Bloomberg, Apollo Chief Economist. Note: Bloomberg Index used C0A0 Index and H0A0 Index

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

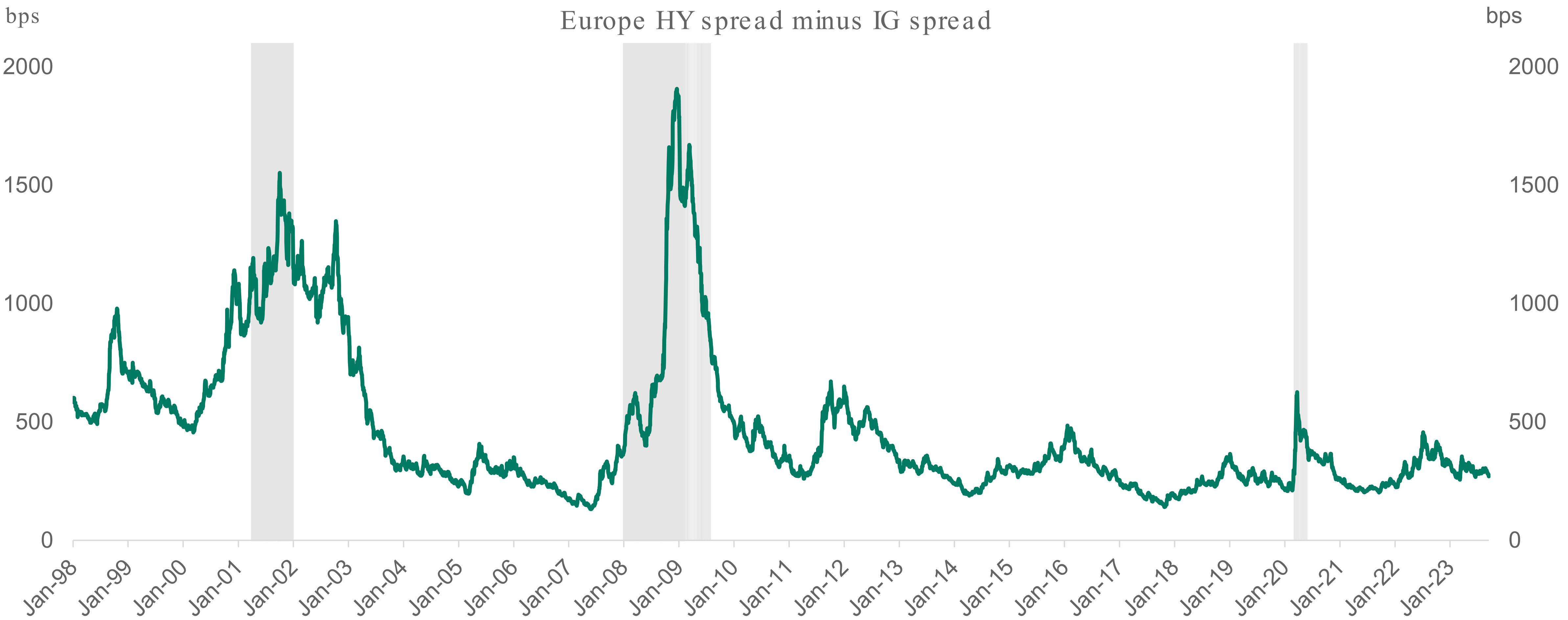


Source: ICE BofA, Bloomberg, Apollo Chief Economist.

European HY spreads by rating

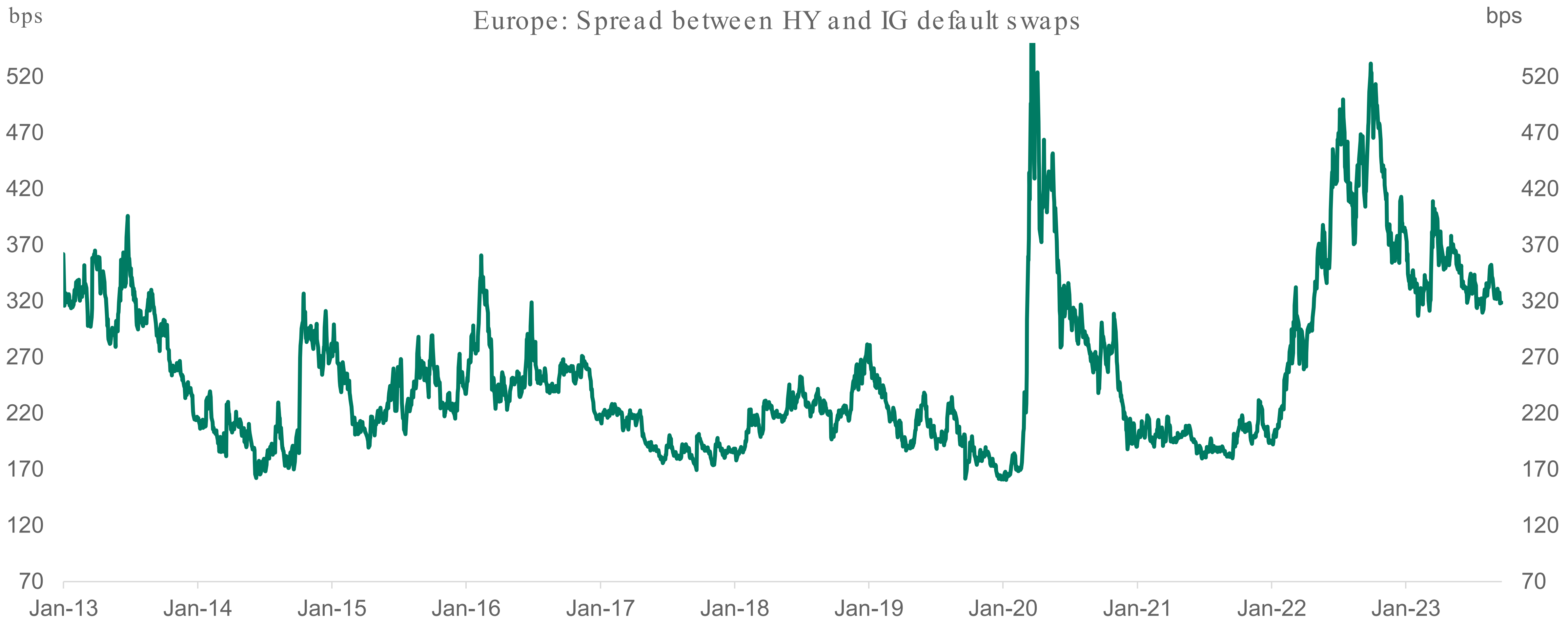
Source: ICE BofA, Bloomberg, Apollo Chief Economist.

European HY spread minus IG spread



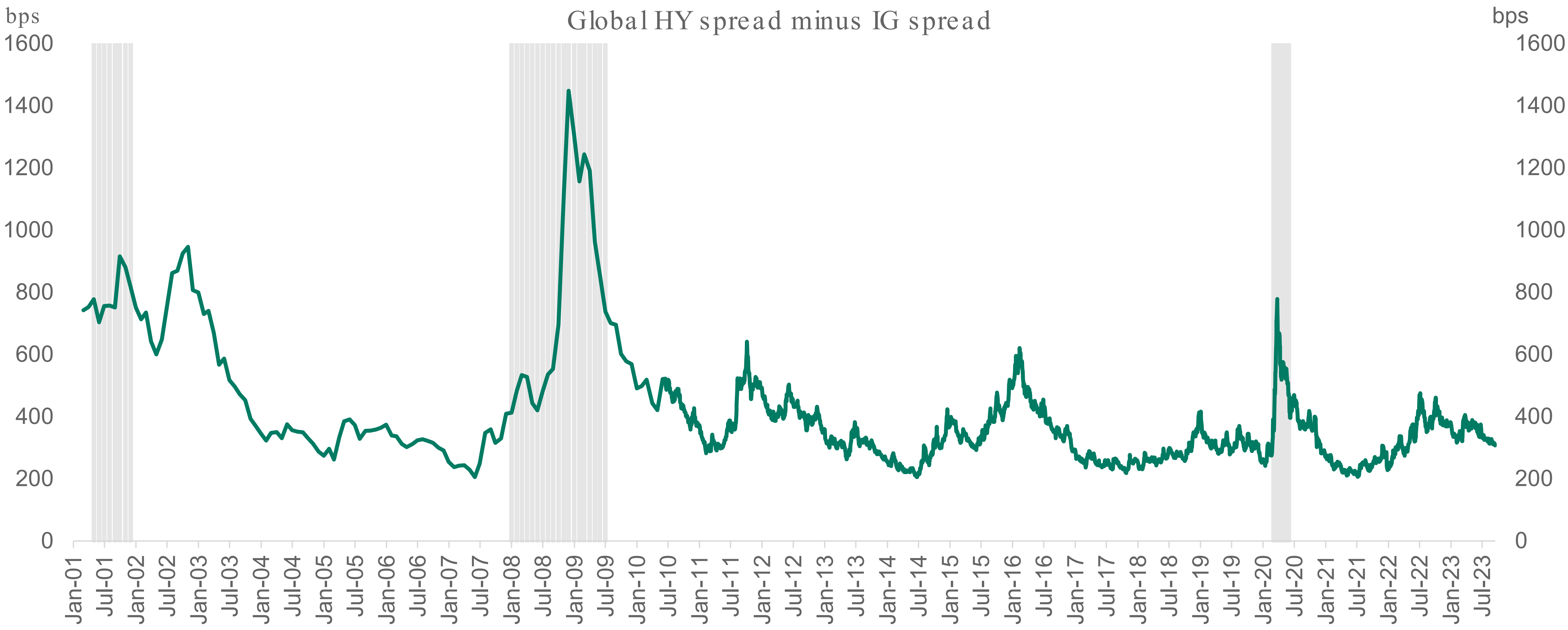
Source: ICE BofA, Bloomberg, Apollo Chief Economist. Note: Ticker used HE00 Index and ER00 Index.

Spread between Europe HY and IG default swaps



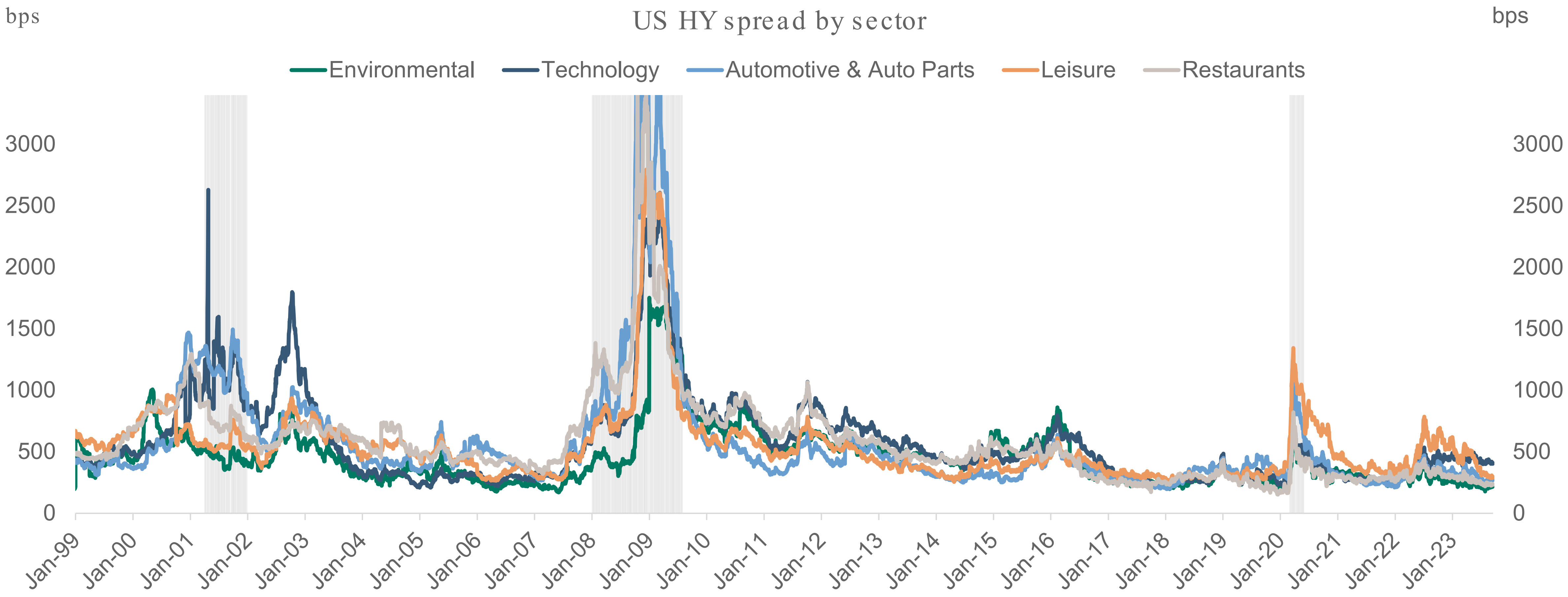
Source: Bloomberg, Apollo Chief Economist. Note: Tickers used ITRXEXE CBBT Curncy and ITRXEBE CBBT Curncy

Global HY spread minus global IG spread



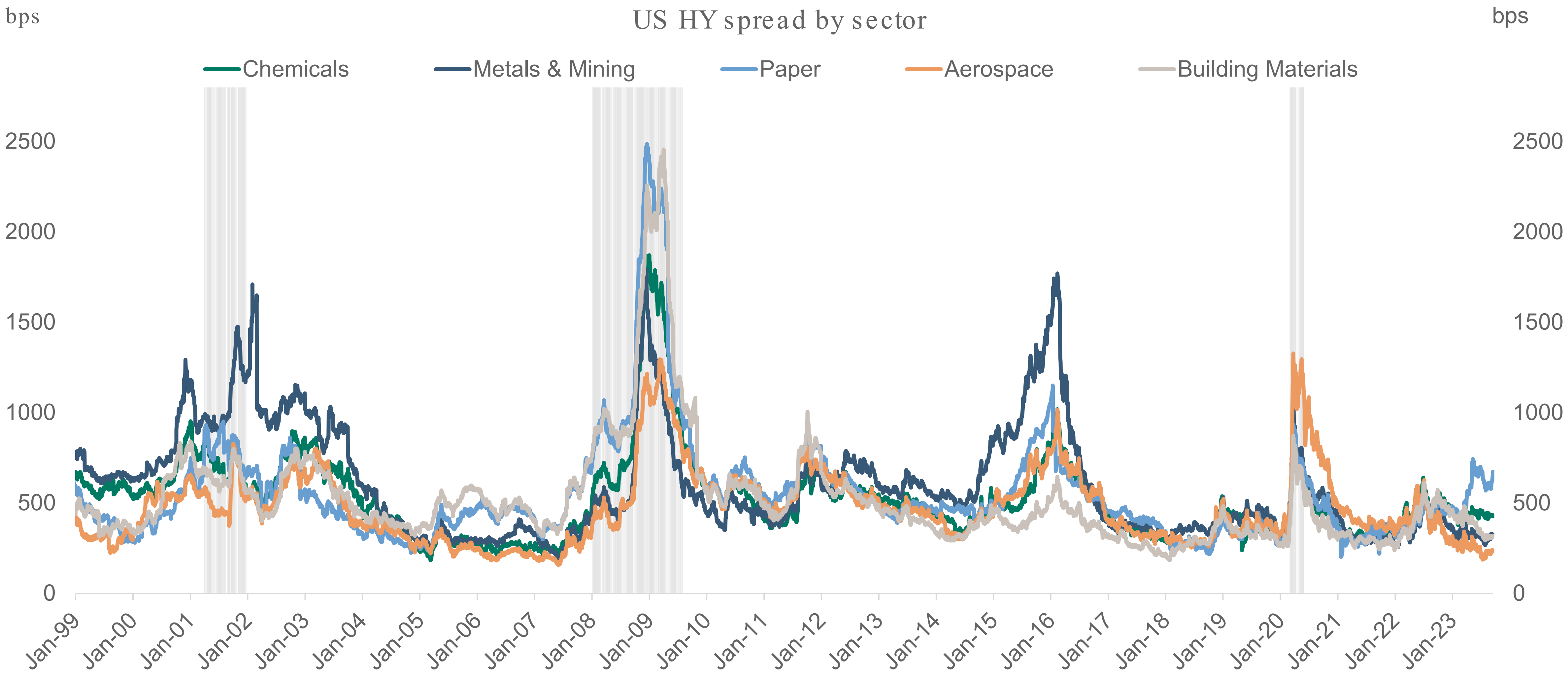
Source: Bloomberg, Apollo Chief Economist. Note: Bloomberg Index used BGLCTRUU index and LG50TRUU Index

HY spreads by sector: Spread for technology remains wide



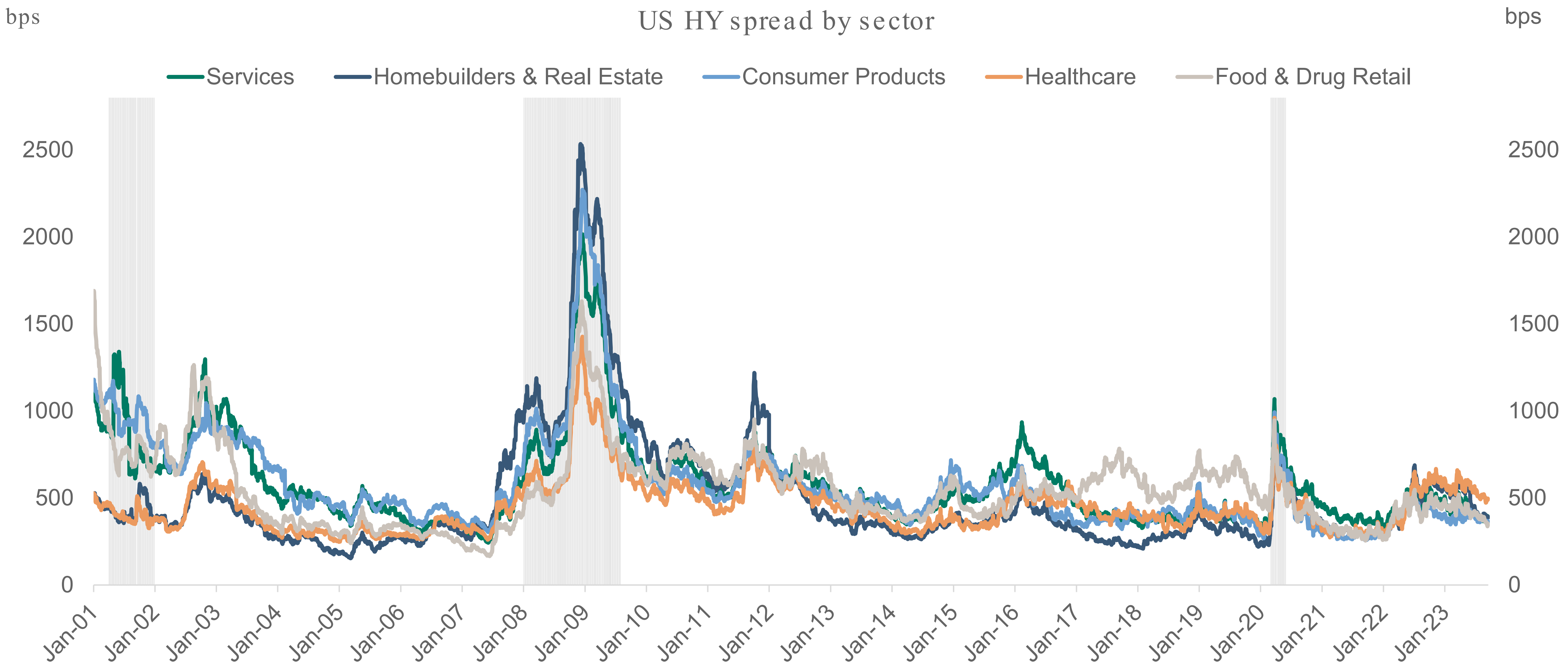
Source: ICE BofA, Bloomberg, Apollo Chief Economist

HY spreads by sector: Spread for paper has widened



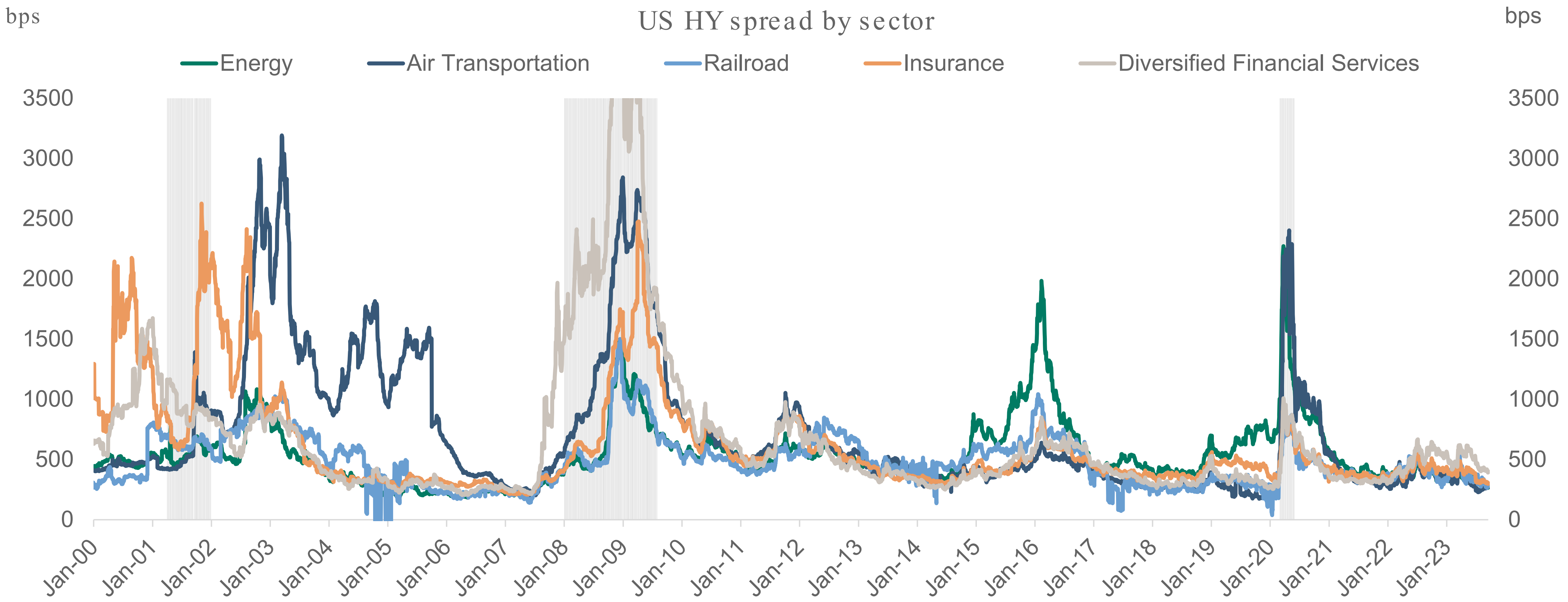
Source: ICE BofA, Bloomberg, Apollo Chief Economist

HY spreads by sector



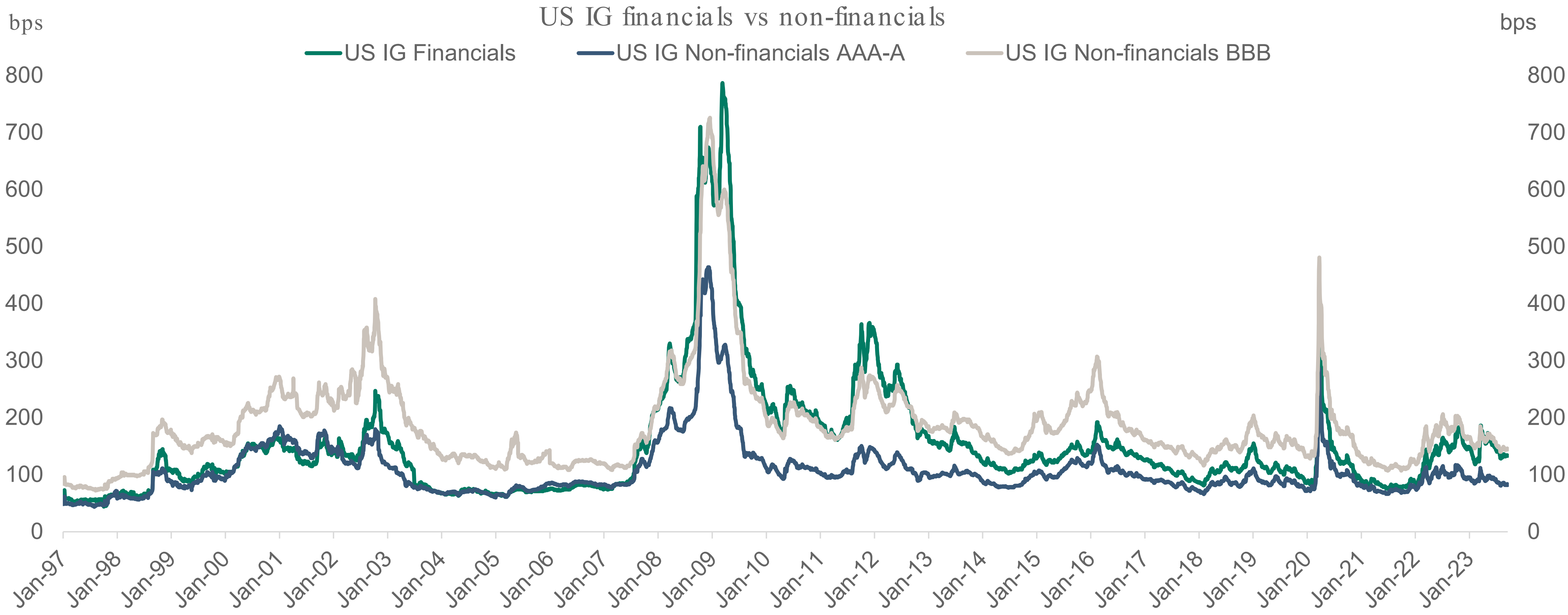
Source: ICE BofA, Bloomberg, Apollo Chief Economist

HY spreads by sector



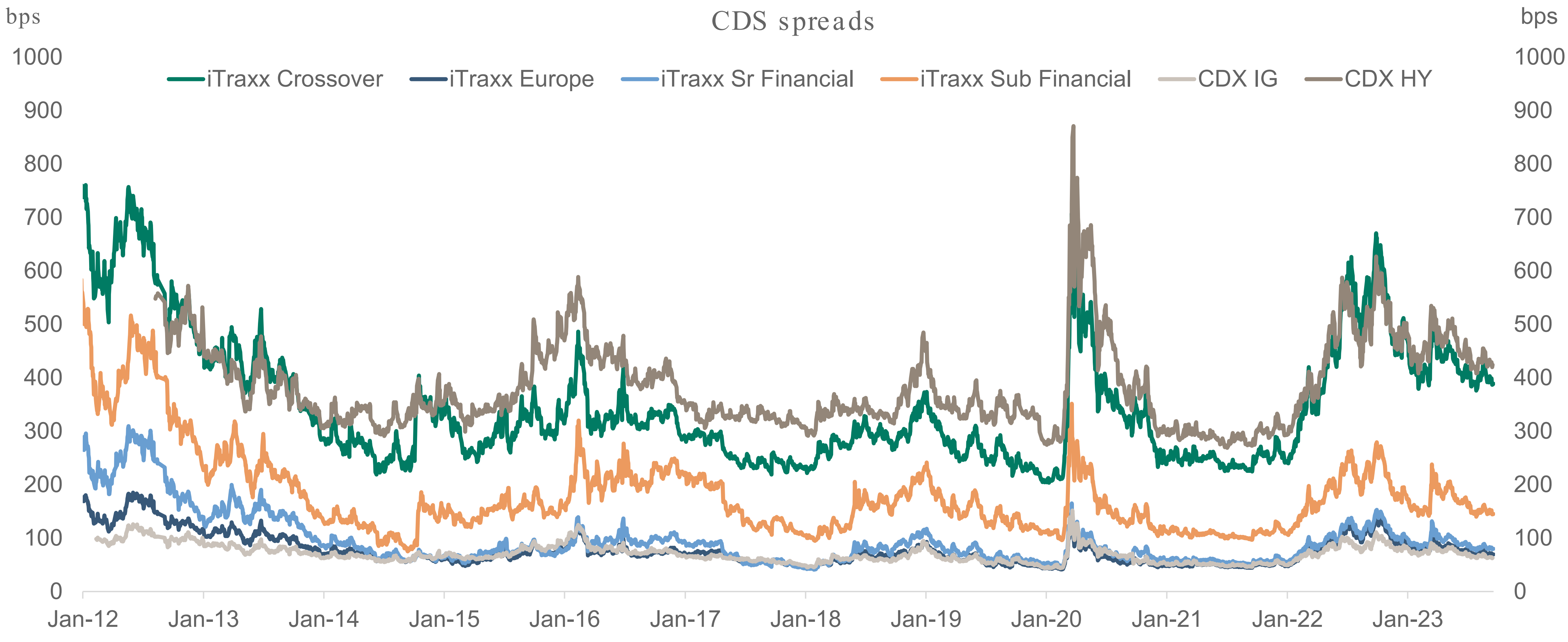
Source: ICE BofA, Bloomberg, Apollo Chief Economist

IG spreads for financials and non-financials



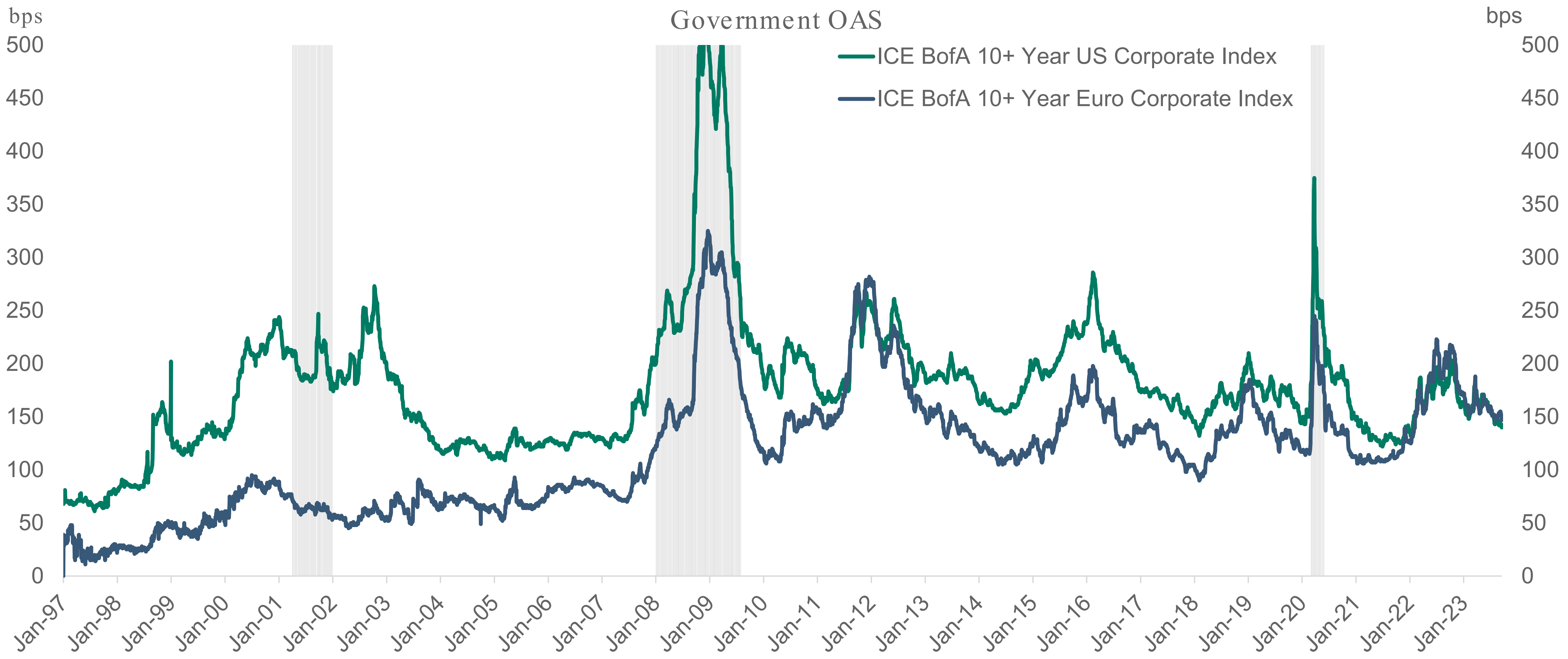
Source: ICE BofA, Bloomberg, Apollo Chief Economist

CDS spreads



Source: Markit, Bloomberg, Apollo Chief Economist

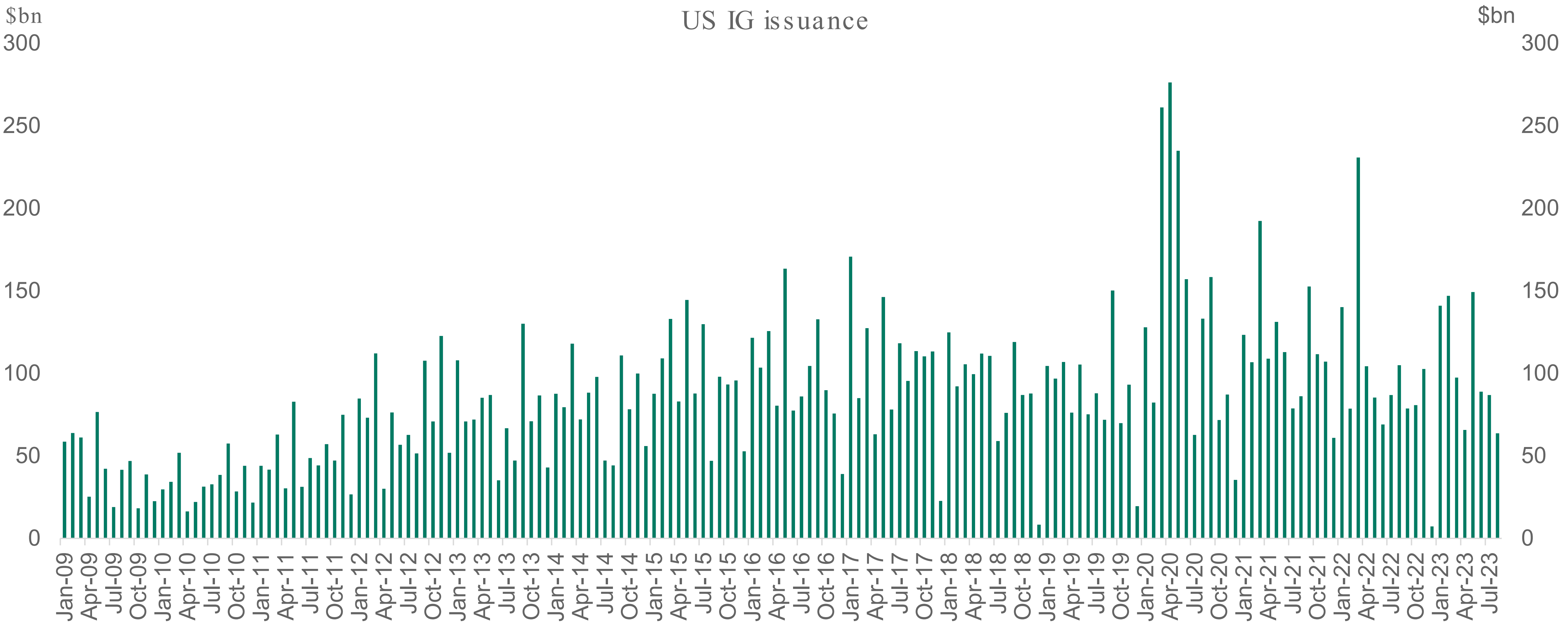
Long-duration IG spreads in US and Europe



Source: ICE BofA, Bloomberg, Apollo Chief Economist

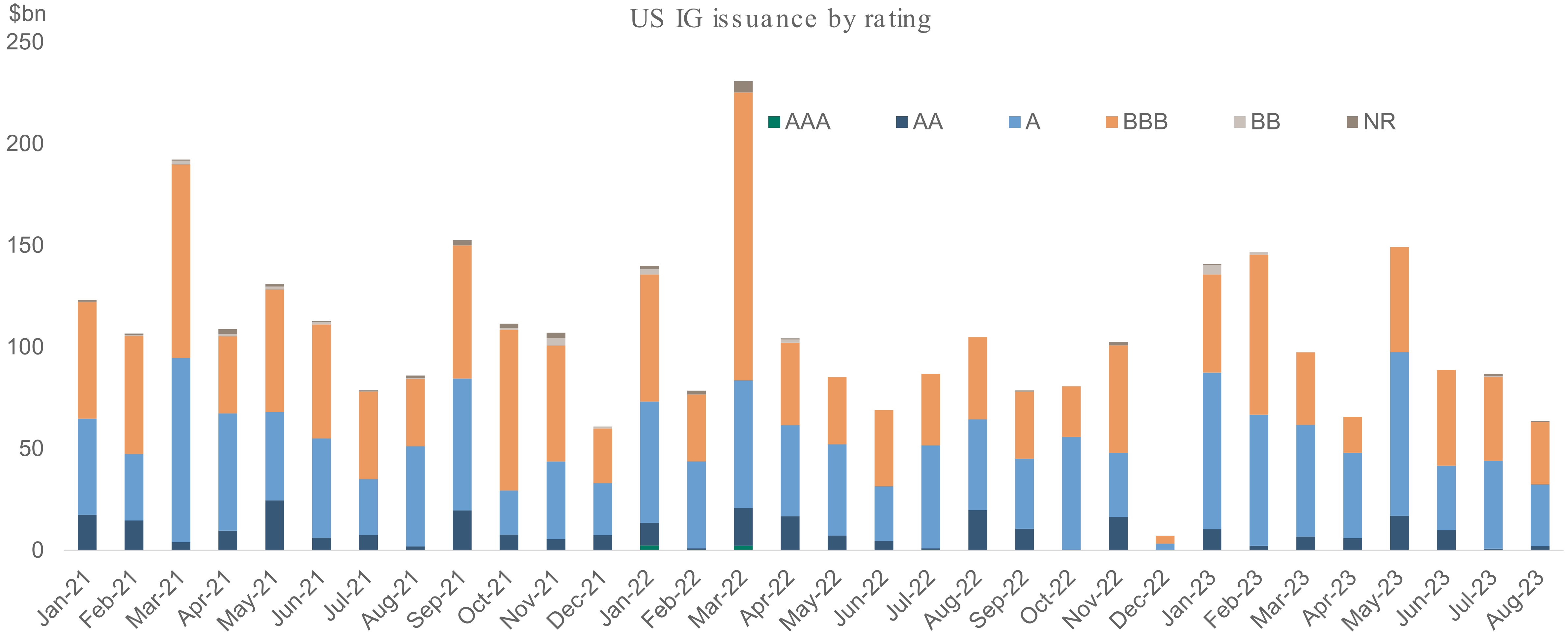
New issuance

US IG issuance



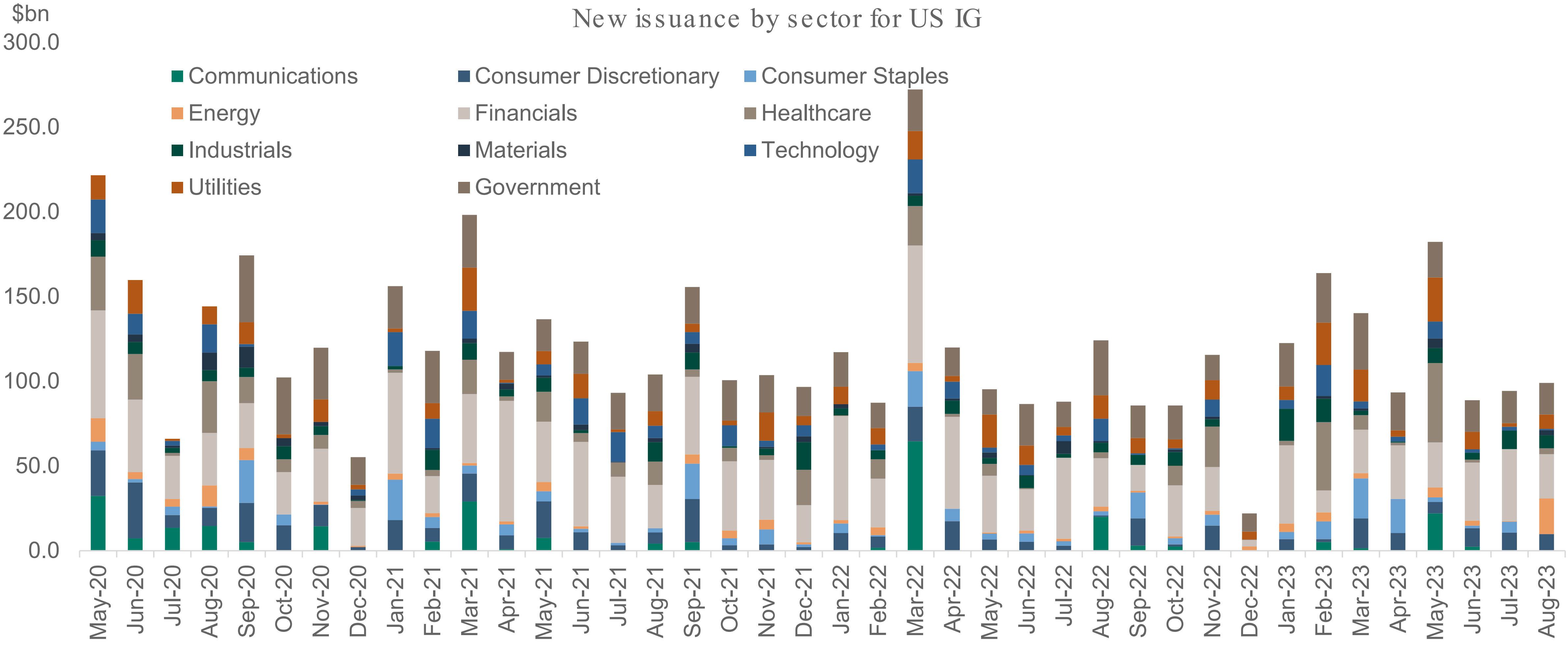
Source: Pitchbook LCD, Apollo Chief Economist

IG issuance by rating



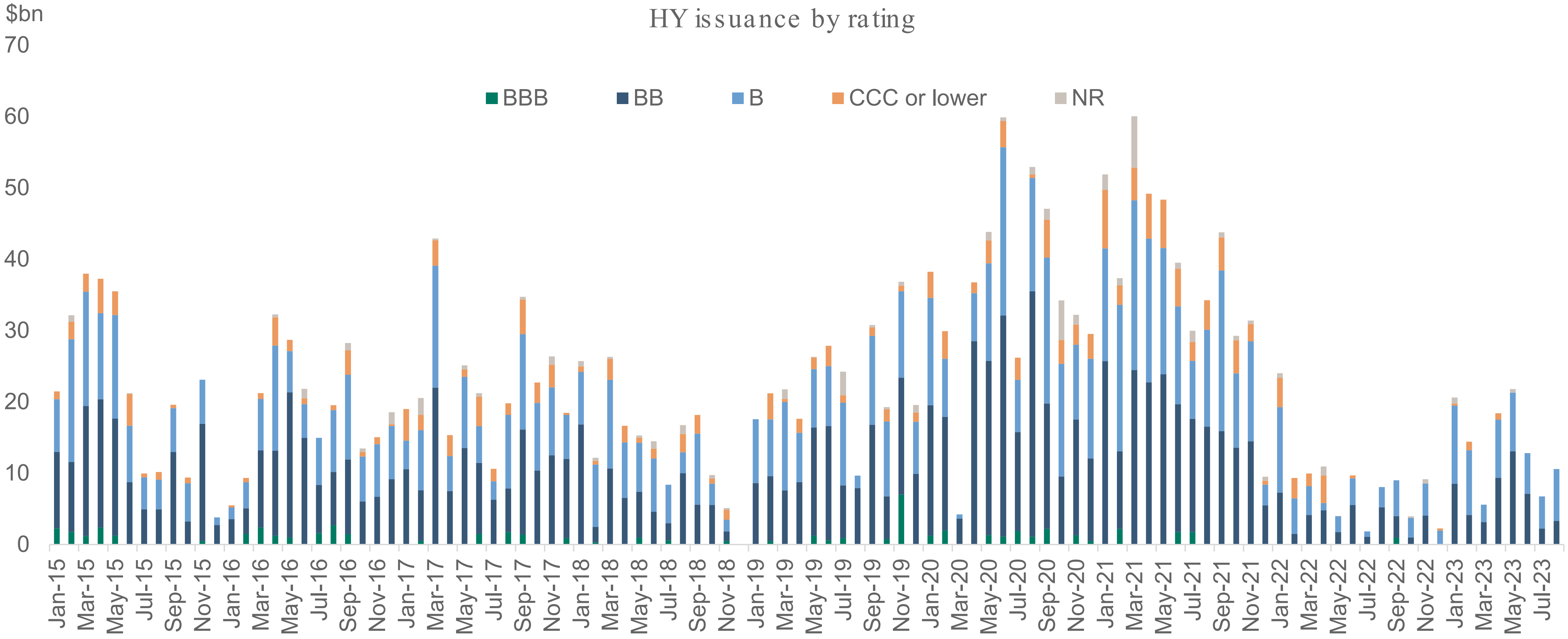
Source: Pitchbook LCD, Apollo Chief Economist.

Sector distribution of new IG issuance



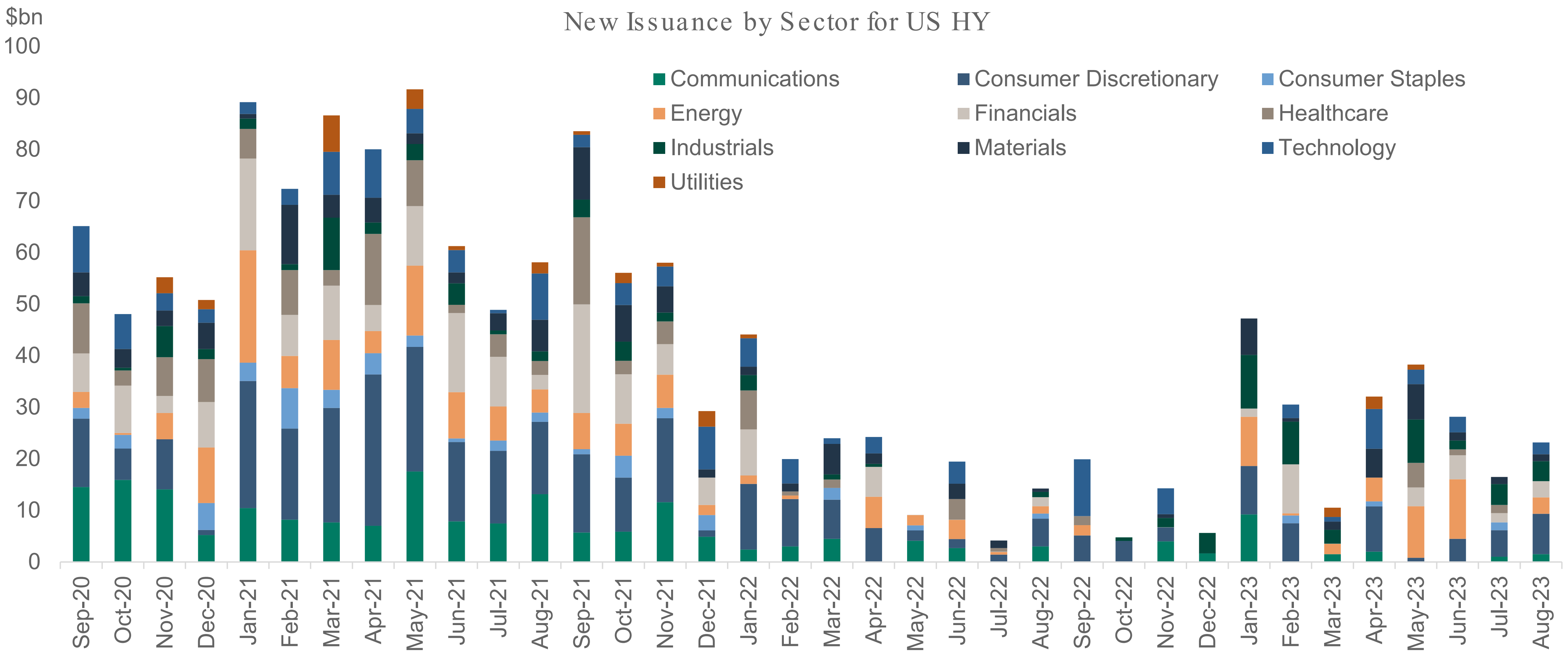
Source: Bloomberg, Apollo Chief Economist. Note: Issuance includes bonds, loans, leveraged loans, and preferred.

HY issuance by rating



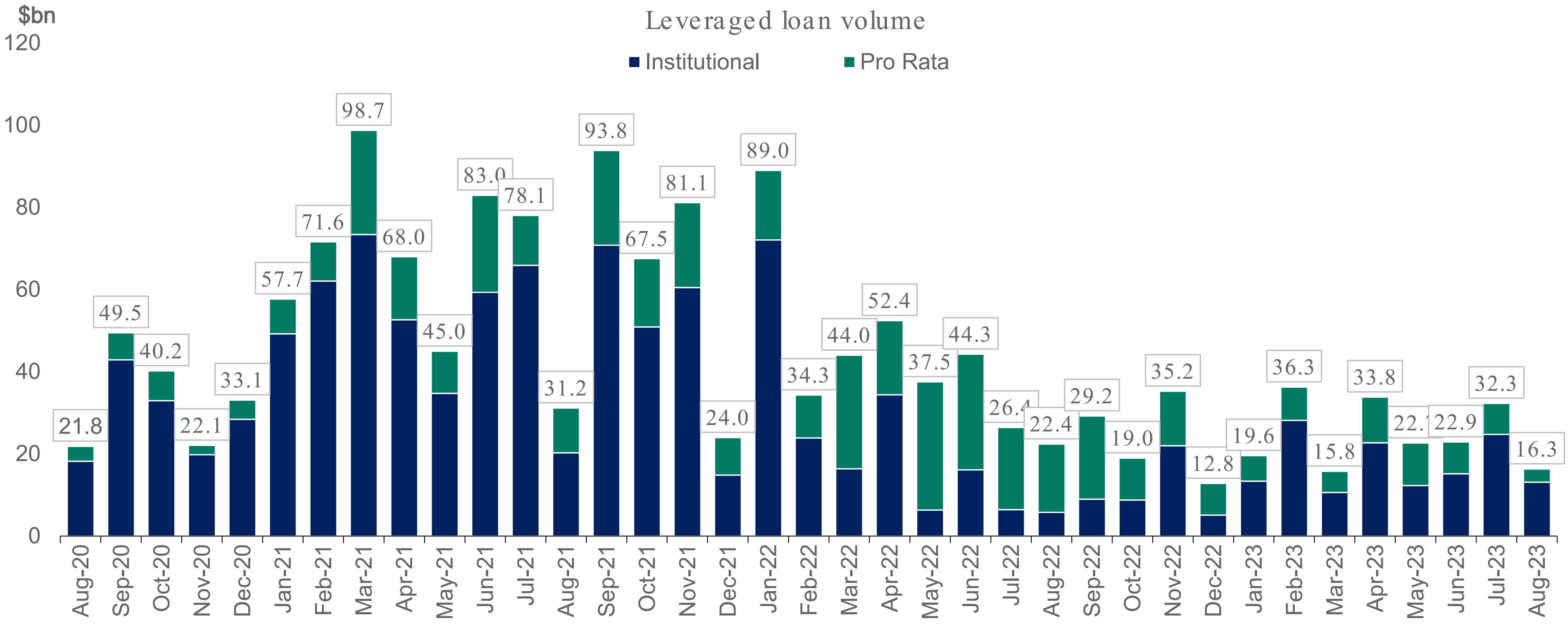
Source: Pitchbook LCD, Apollo Chief Economist.

Sector distribution of new HY issuance



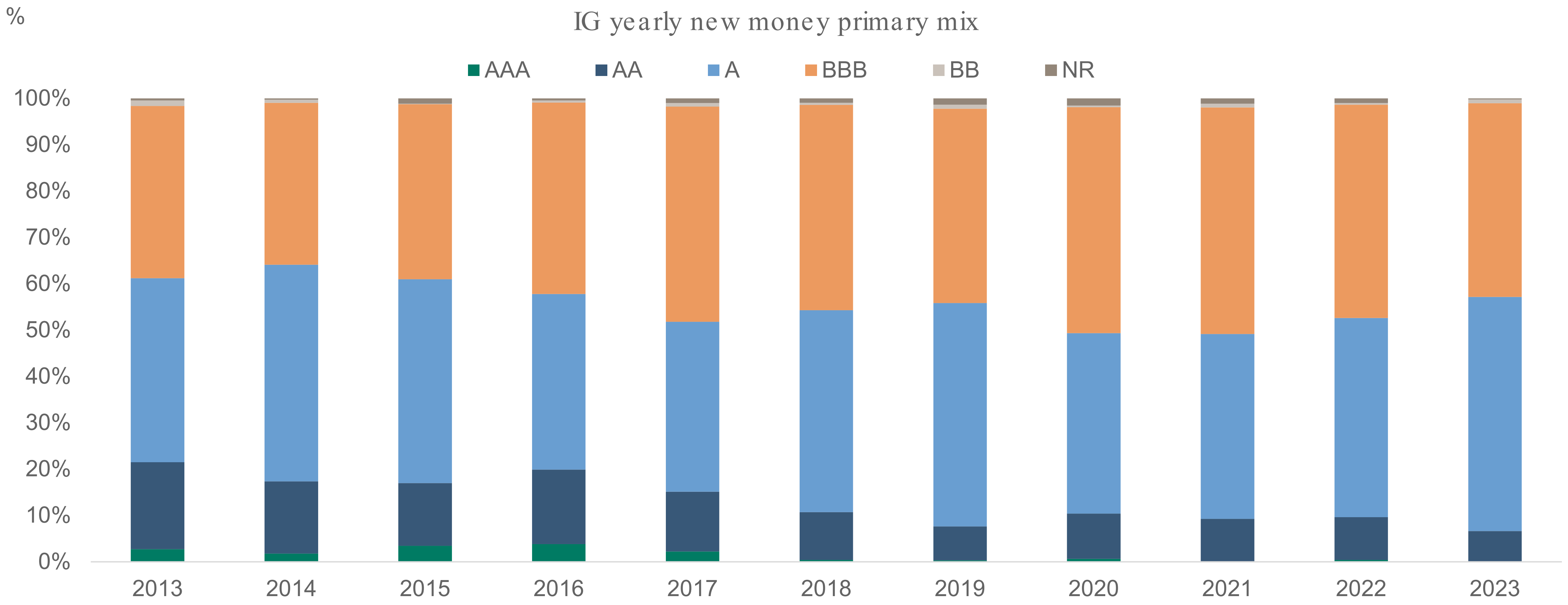
Source: Bloomberg, Apollo Chief Economist. Note:. Issuance includes bonds, loans, leveraged loans and preferred.

Leveraged loan volume



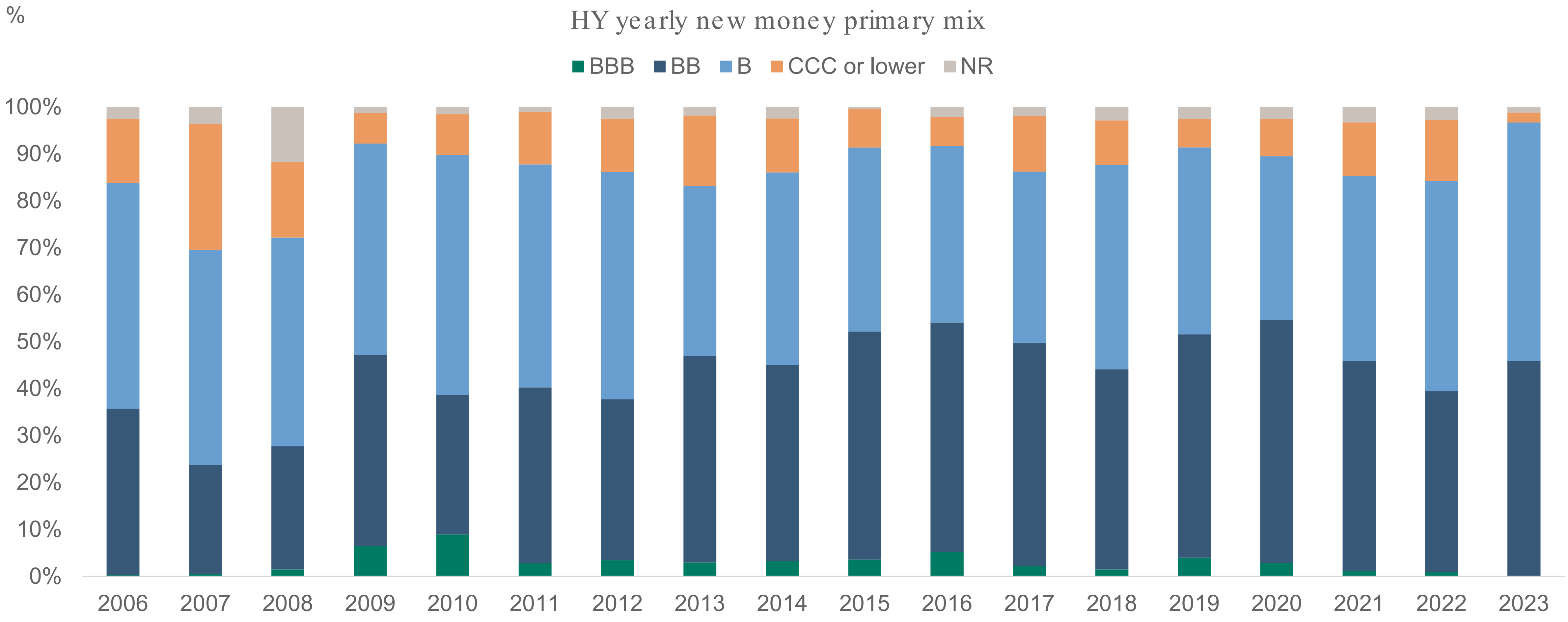
Source: Pitchbook LCD, Apollo Chief Economist.

IG new money primary mix



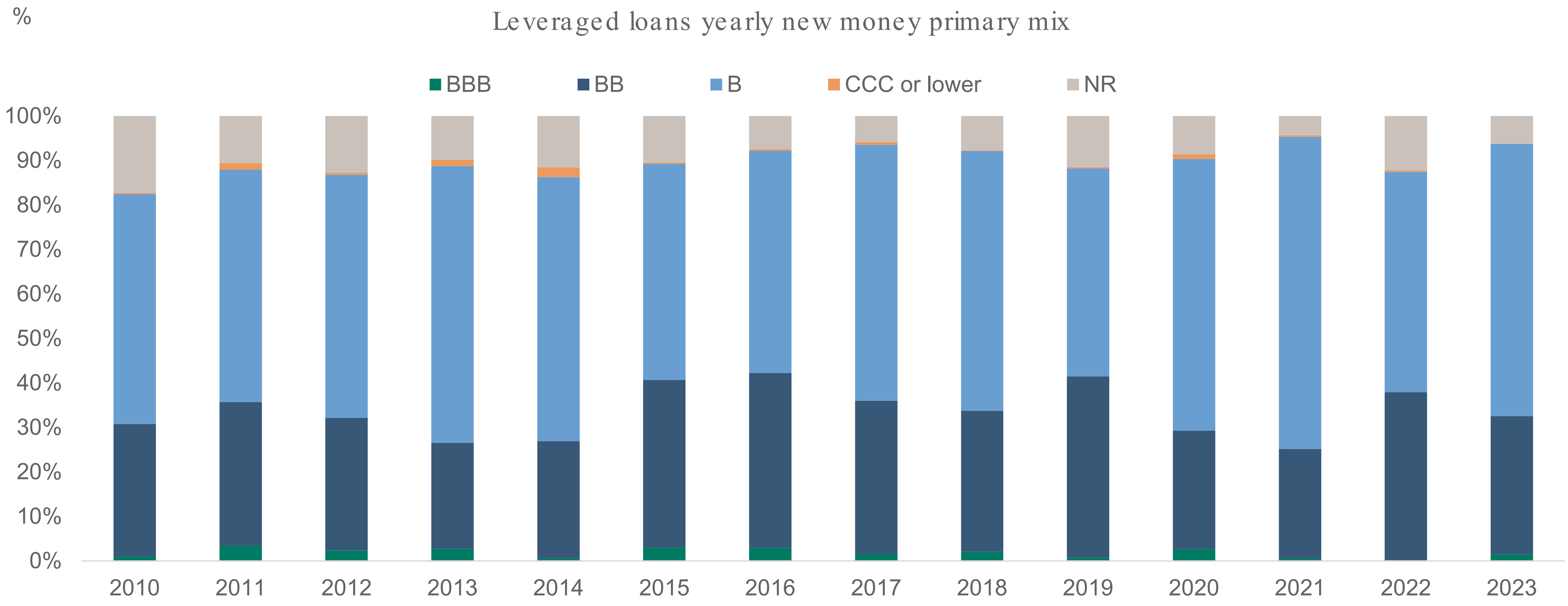
Source: Pitchbook LCD, Apollo Chief Economist. Note: Data as of 31st August 2023.

HY new money primary mix



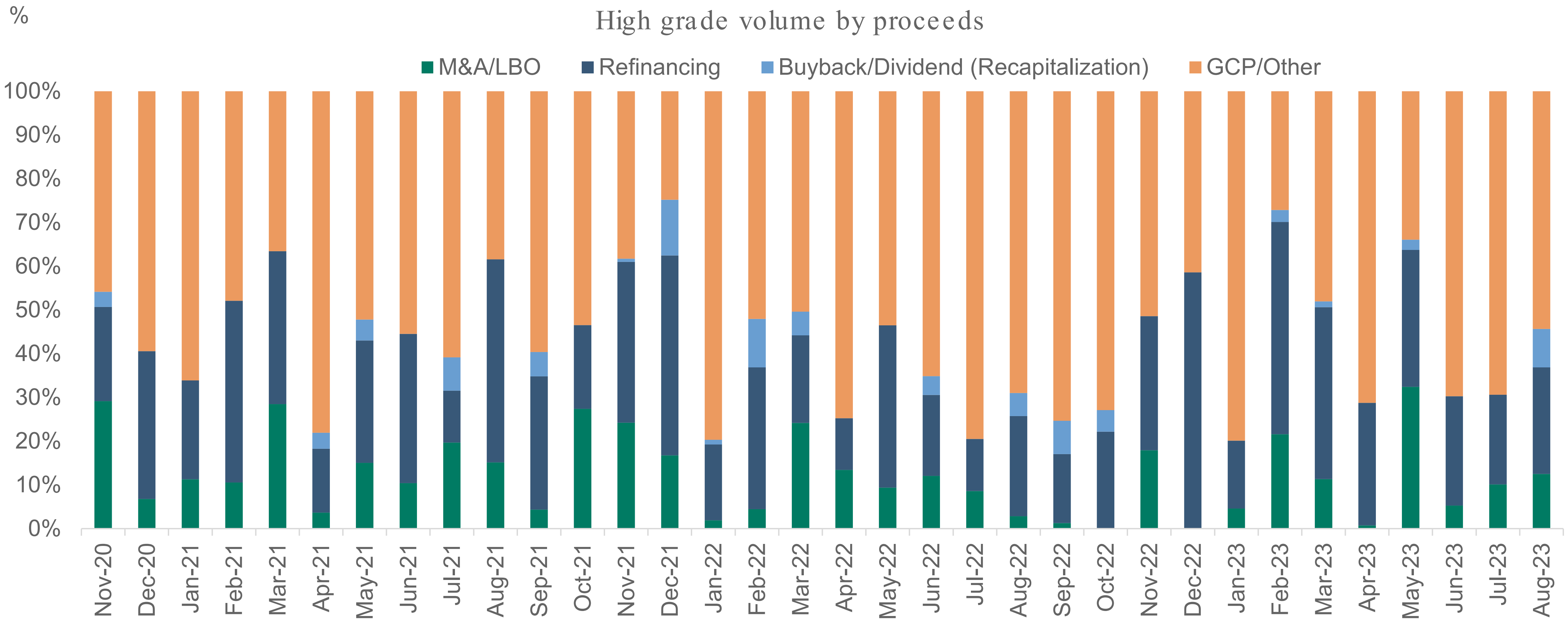
Source: Pitchbook LCD, Apollo Chief Economist. Note: Data as of 31st August 2023

Loans new money primary mix



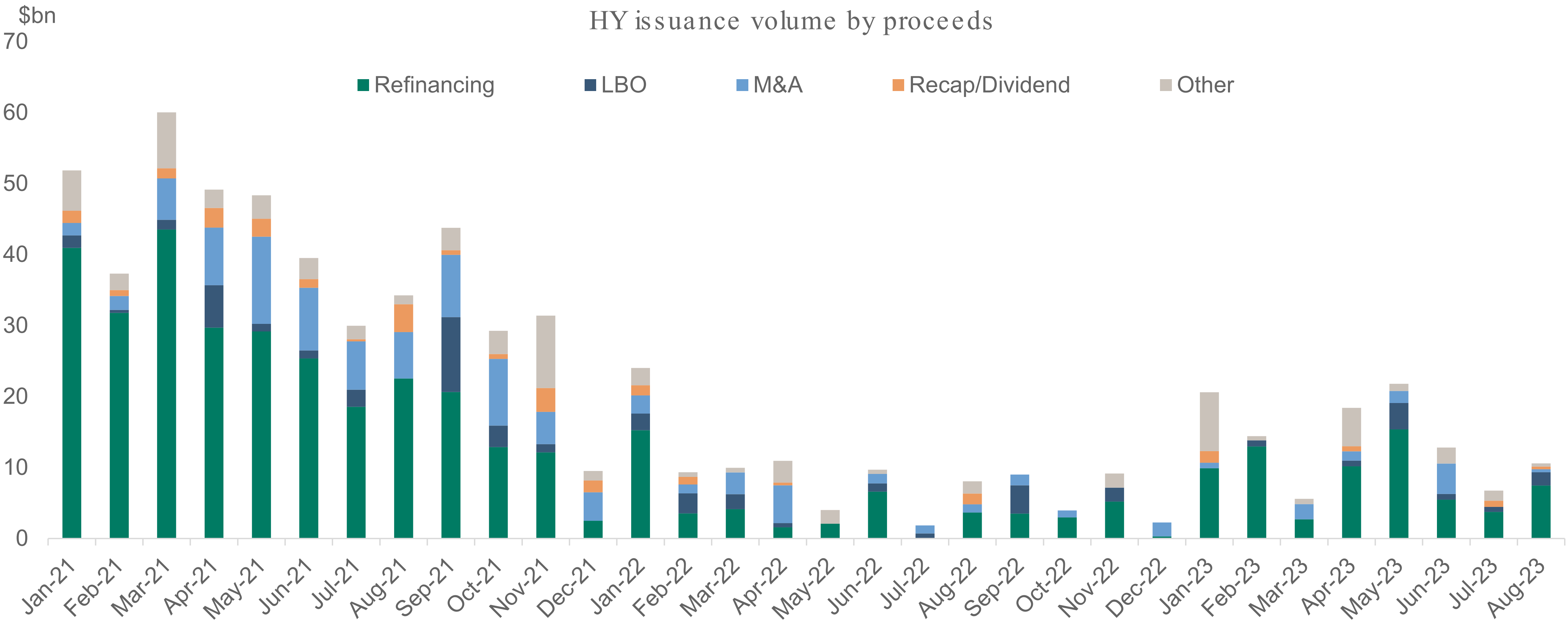
Source: Pitchbook LCD, Apollo Chief Economist. Note: 2022 YTD till of 31st August 2023

High grade volume by proceeds



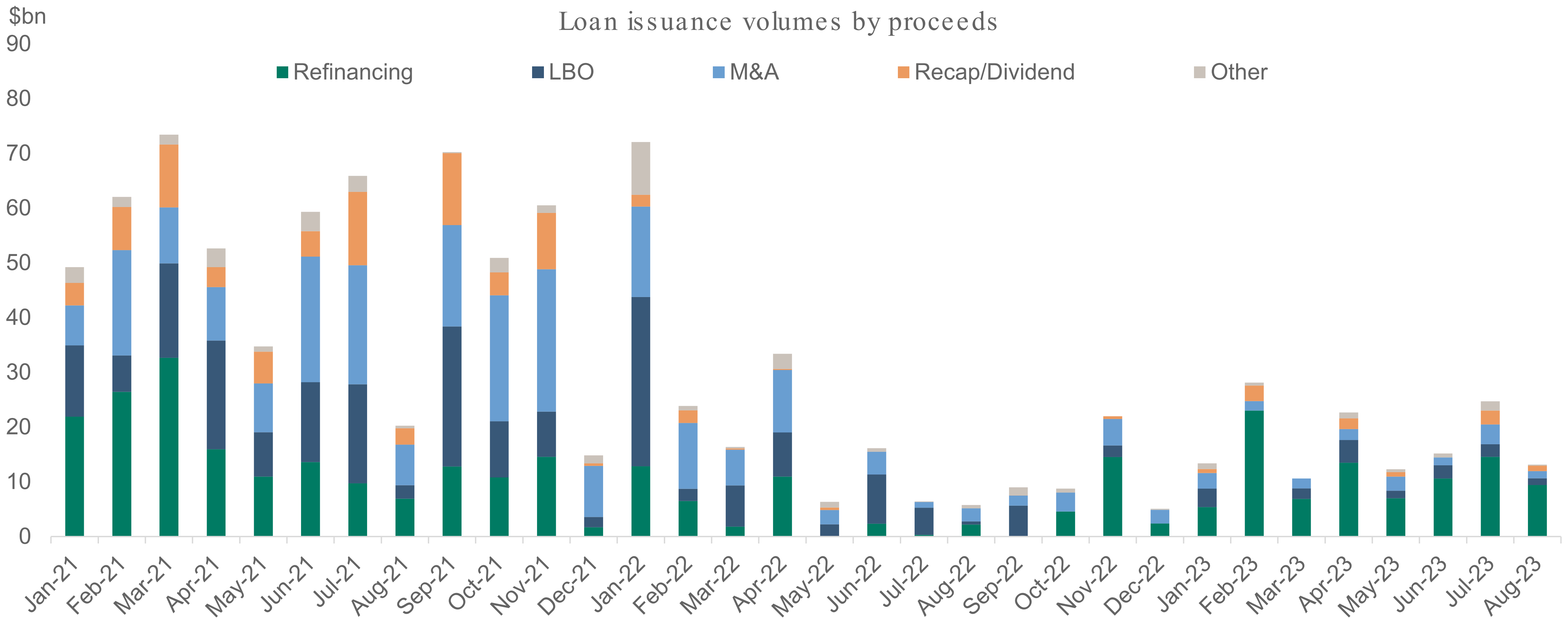
Source: Pitchbook LCD, Apollo Chief Economist

High yield volumes by proceeds



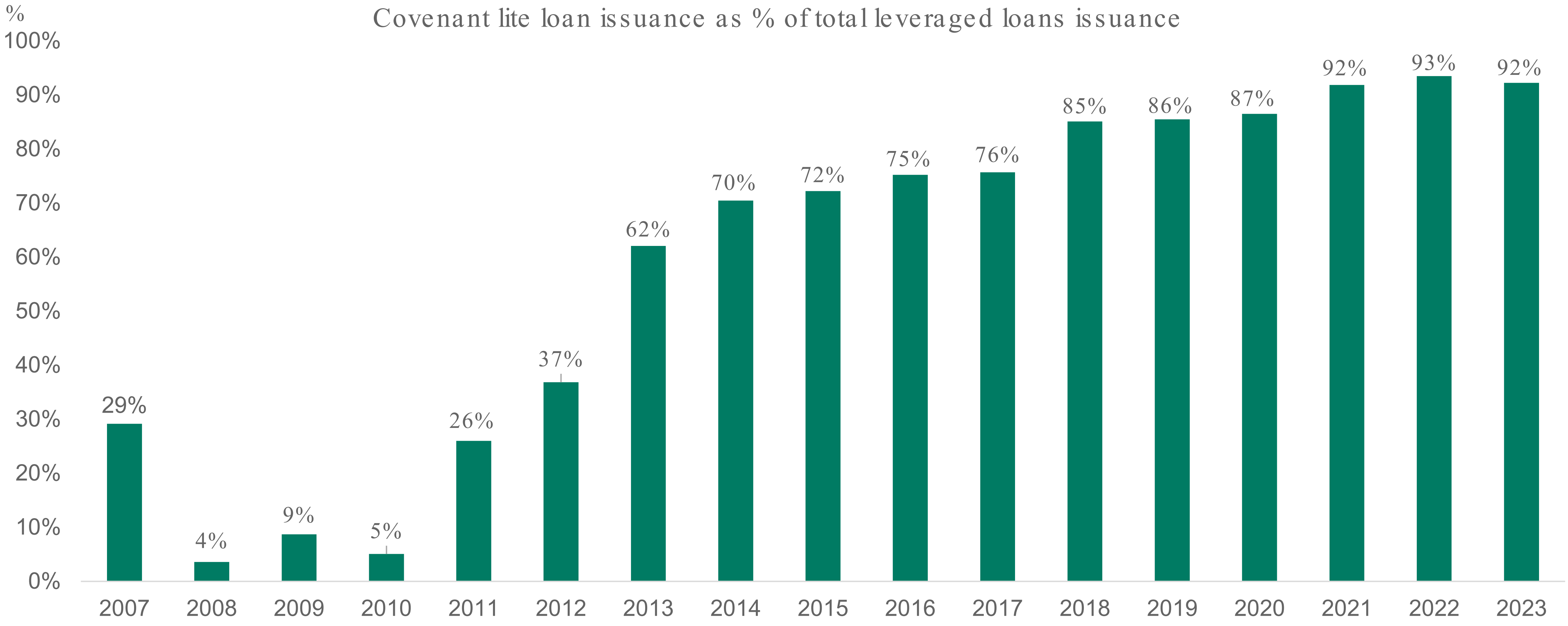
Source: Pitchbook LCD, Apollo Chief Economist

Loan volumes by proceeds



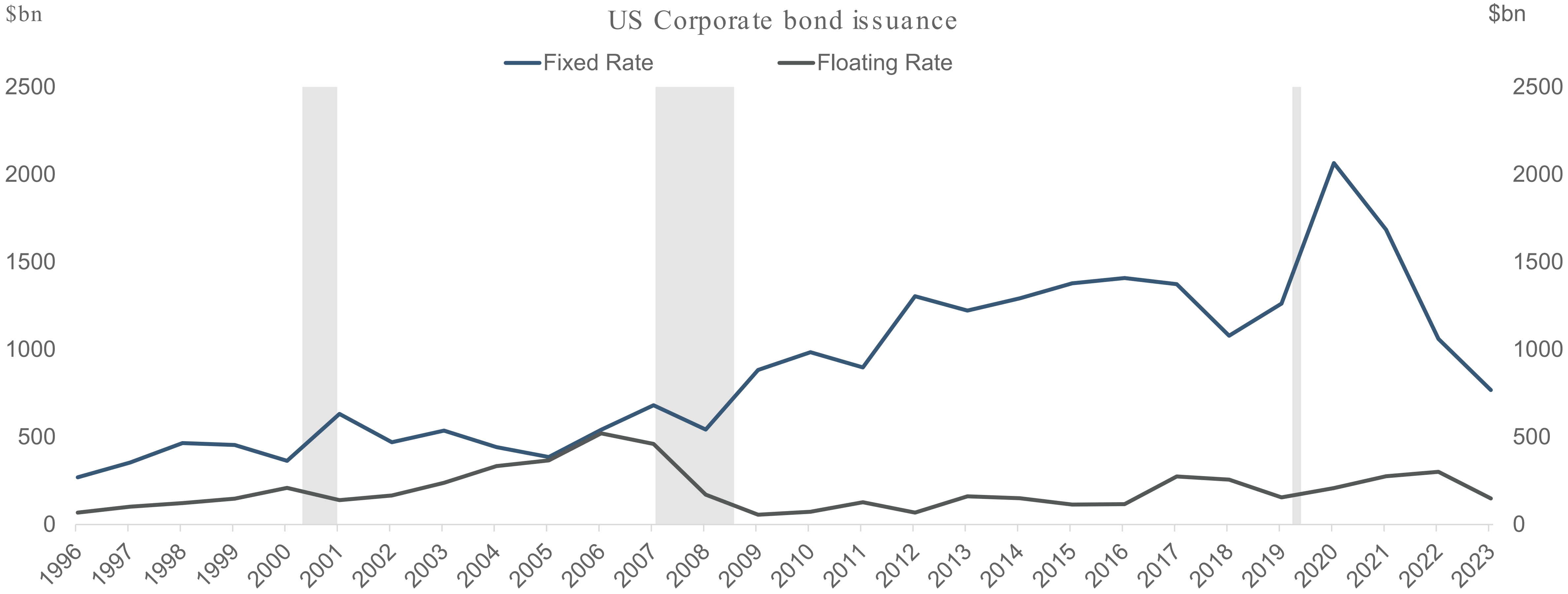
Source: Pitchbook LCD, Apollo Chief Economist

Covenant lite loan issuance



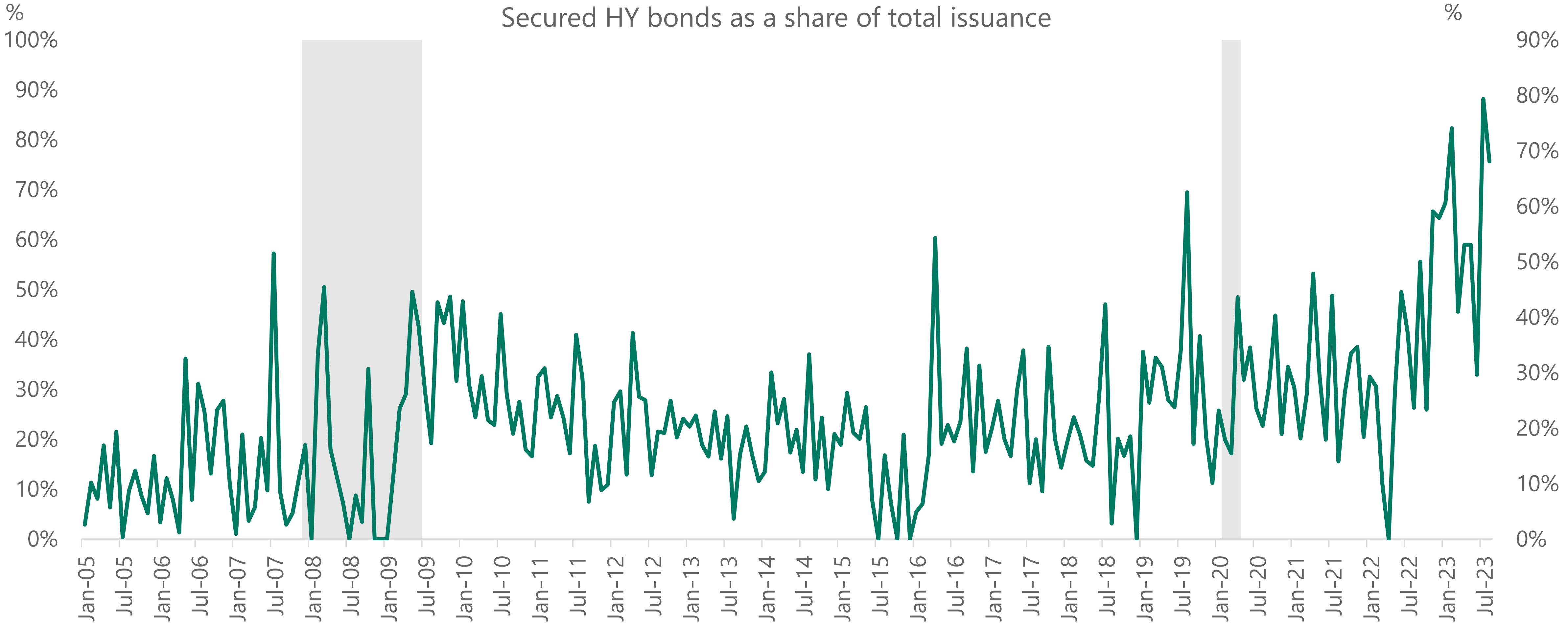
Source: Pitchbook LCD, Apollo Chief Economist.. Note: A covenant-lite loan is a type of financing with fewer restrictions on the borrower and fewer protections for the lender, often used in leveraged buyouts. Data as of 30th June 2023.

Corporate bond issuance



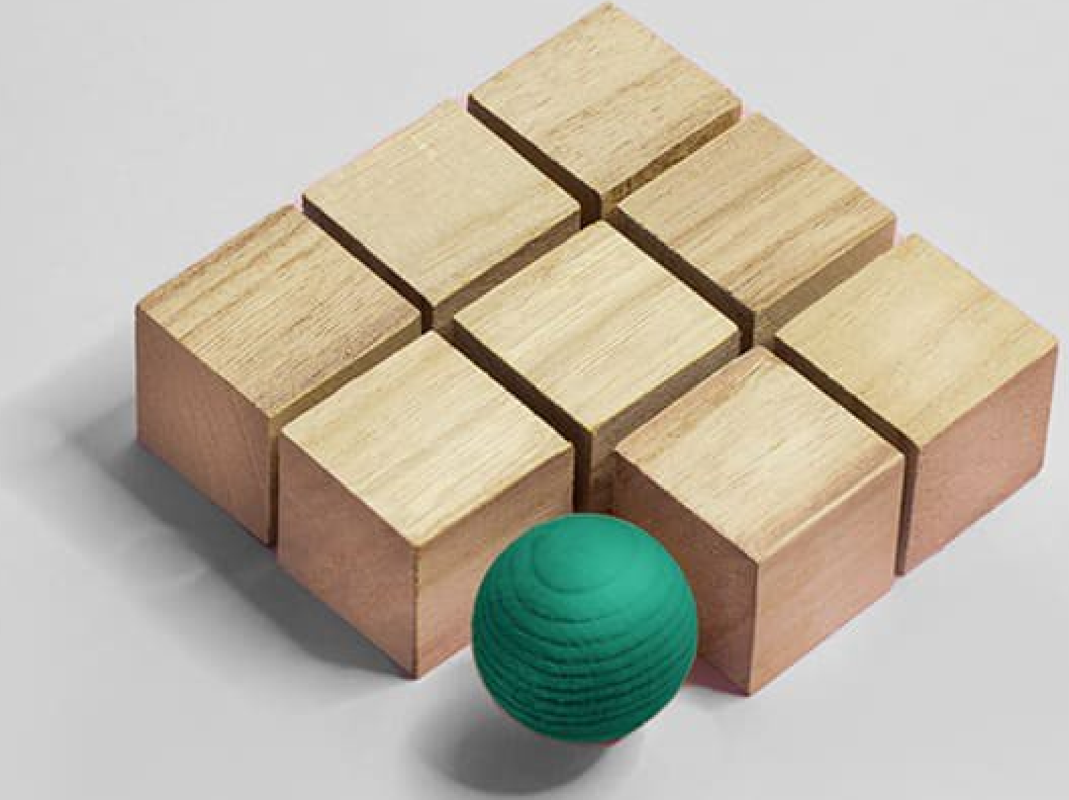
Source: SIFMA, Apollo Chief Economist.

Secured HY bond issuance volume

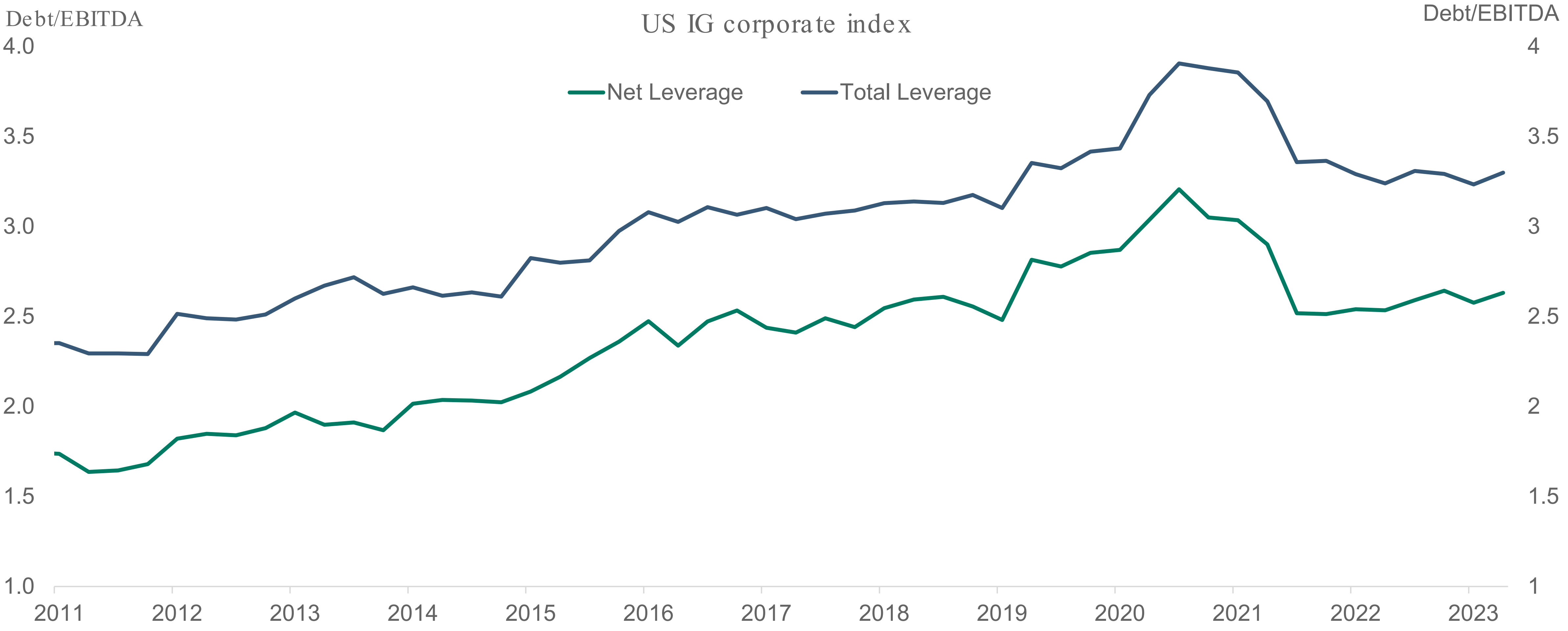


Source: Pitchbook LCD, Apollo Chief Economist. Note:A secured bond is the bond issued with the collateral as a security for the bond

Credit fundamentals

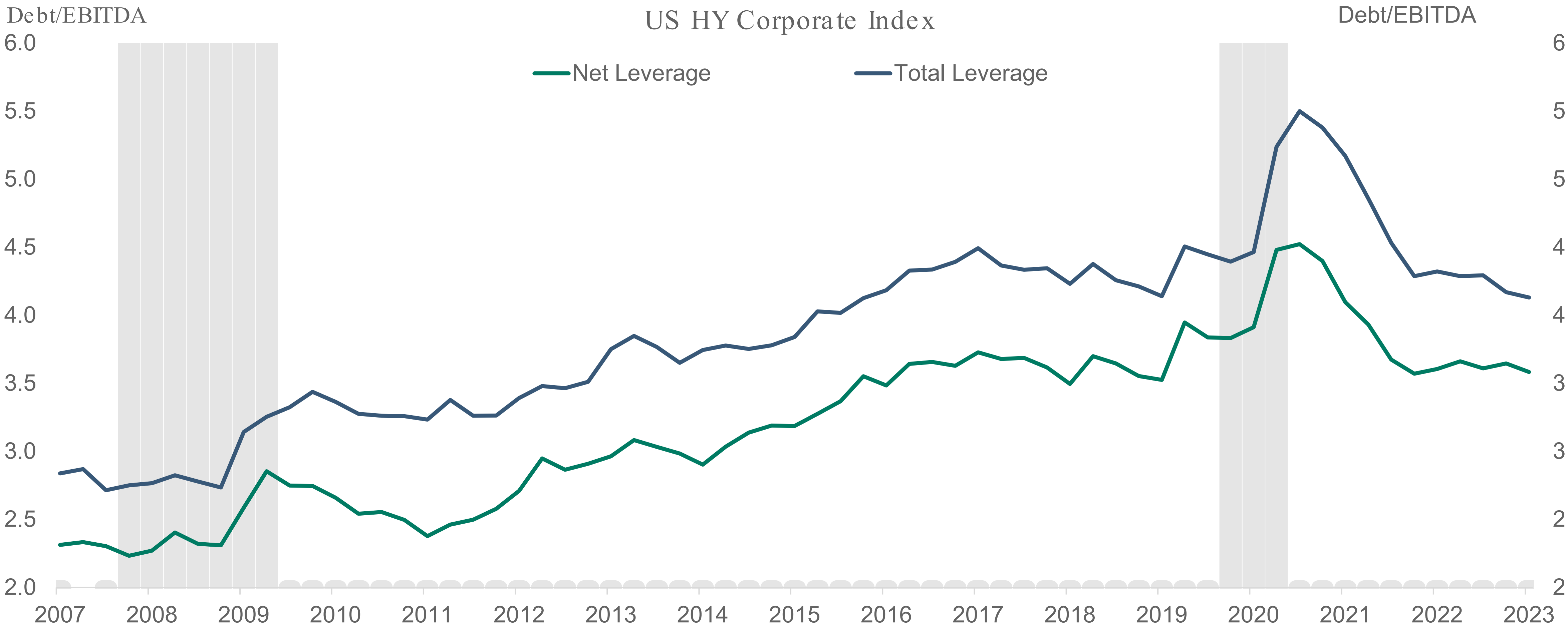


IG leverage has come down after the pandemic



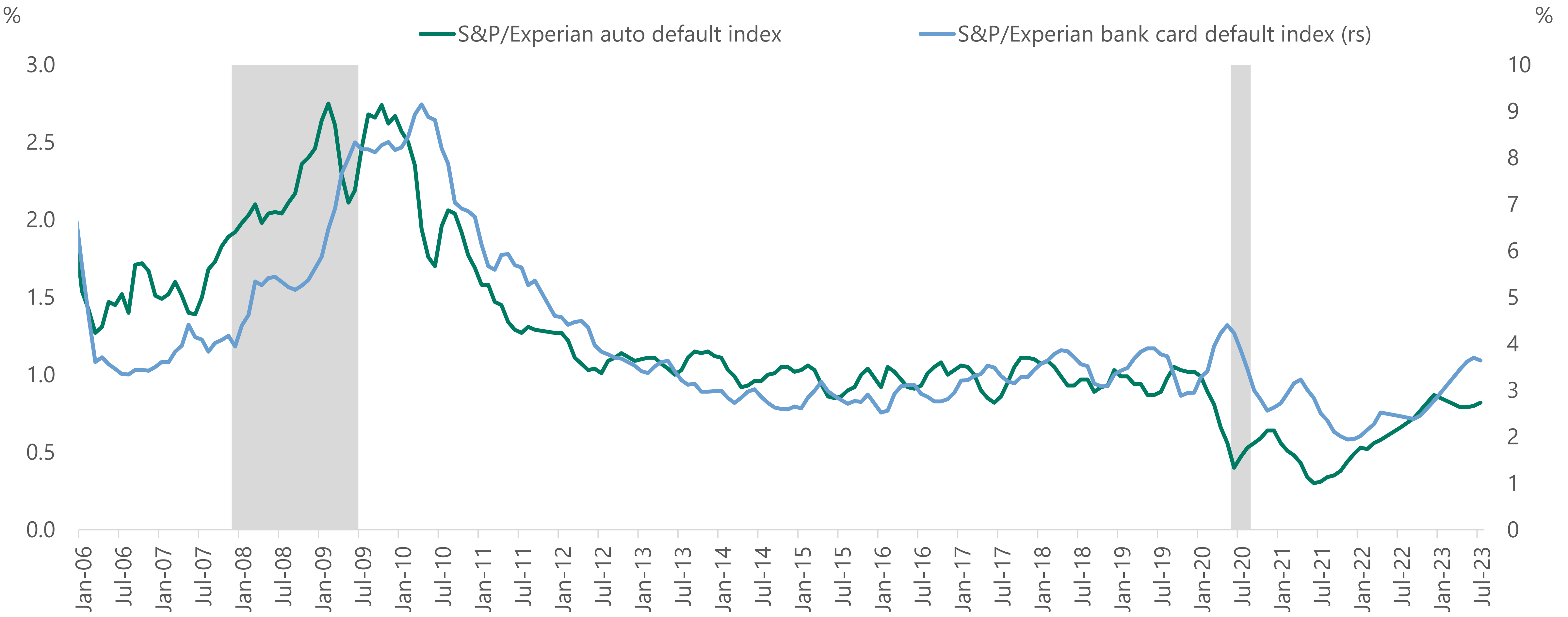
Source: ICE BofA, Bloomberg, Apollo Chief Economist. Note: Index used C0A0 Index

High yield leverage has come down after the pandemic



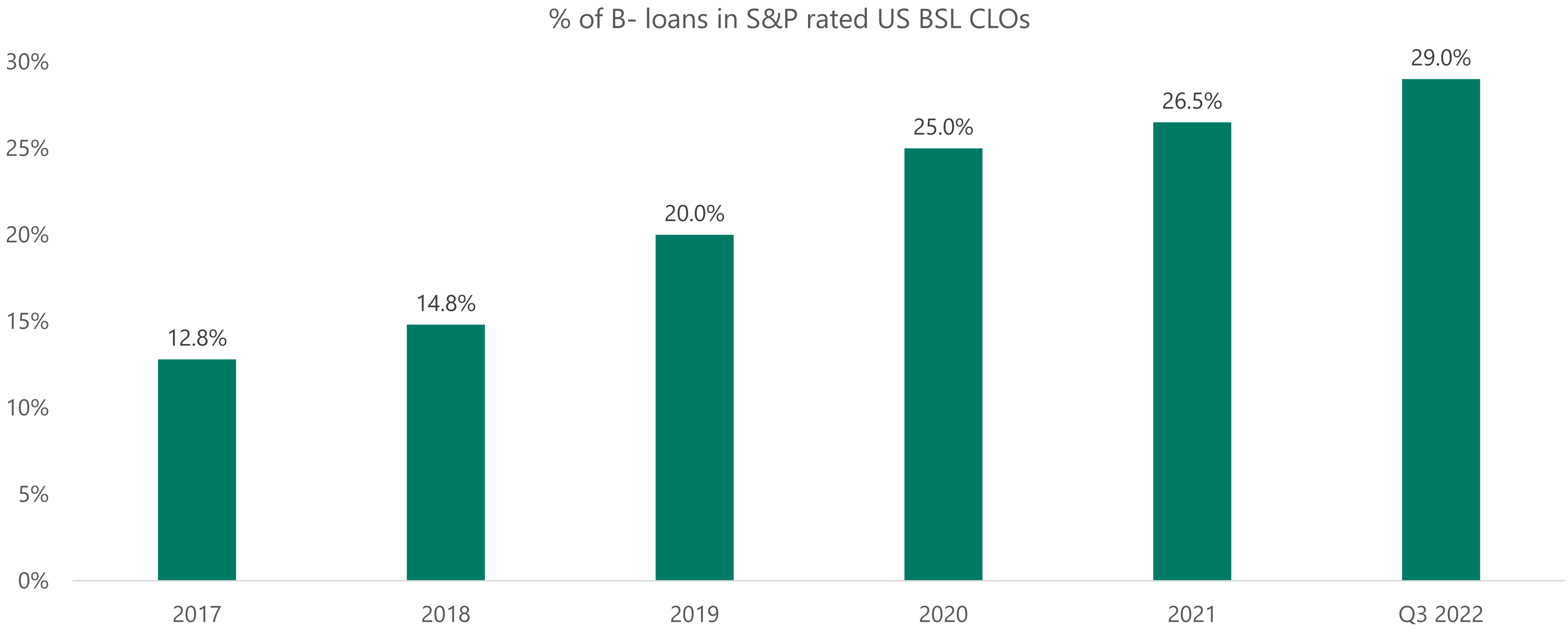
Source: Bloomberg, Apollo Chief Economist. Note: Median leverage for the bonds in H0A0 index

Default rates for auto loans and credit cards moving higher



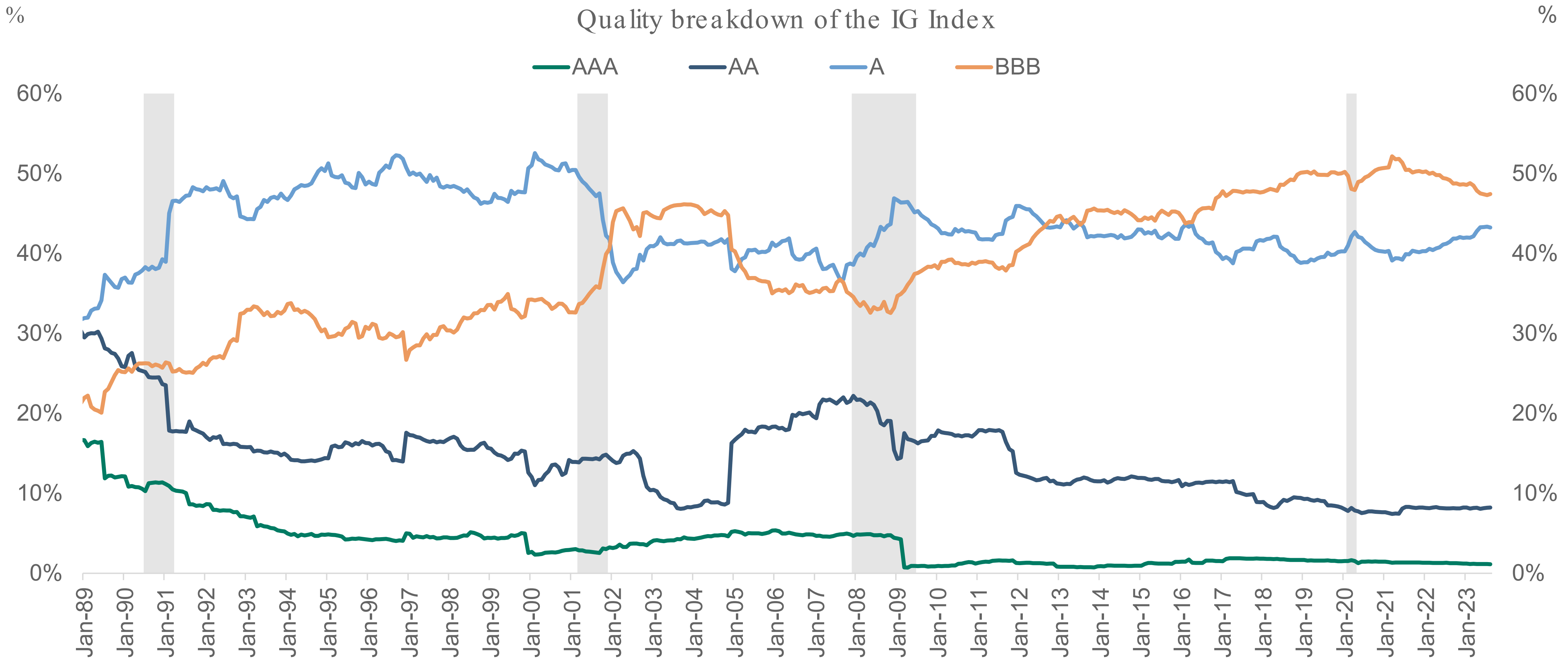
Source: S&P, Bloomberg, Apollo Chief Economist

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



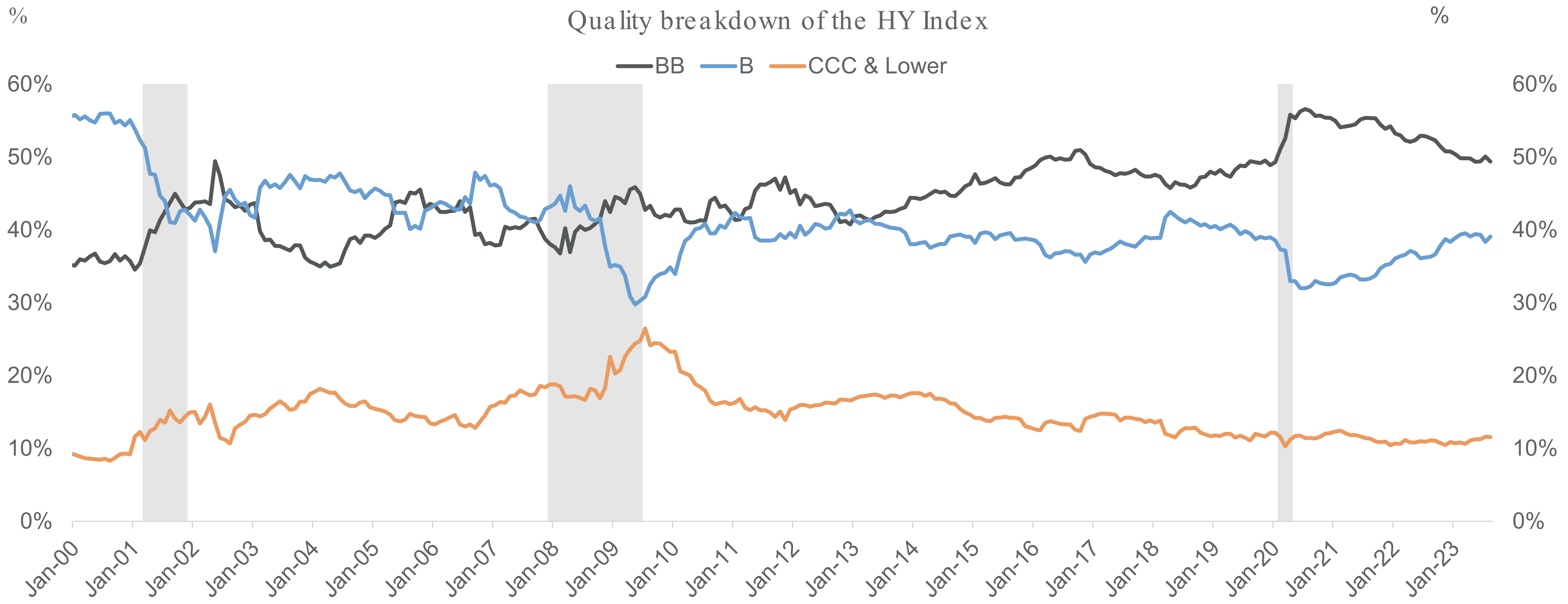
Source: Morningstar, Apollo Chief Economist

Quality composition of the IG Index



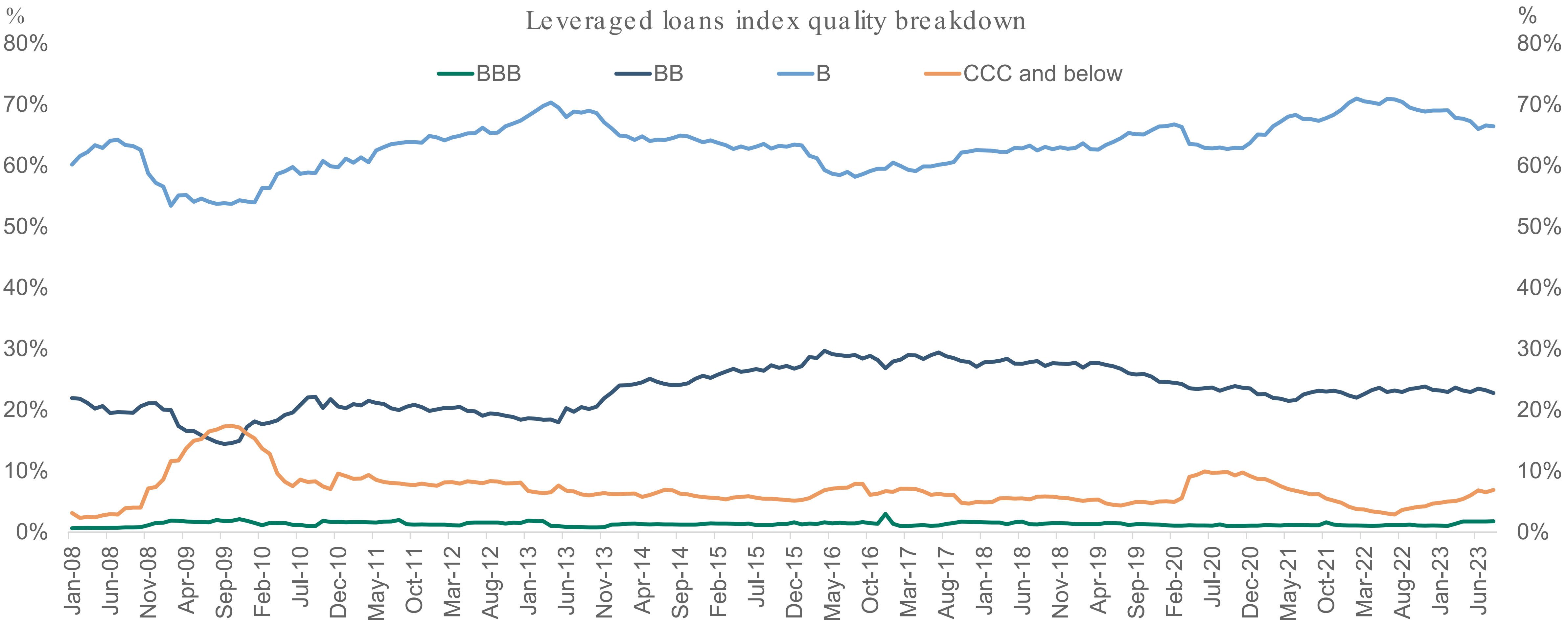
Source: ICE BofA, Bloomberg, Apollo Chief Economist. Note: Breakdown by market value. Data as of 31st August 2023

Quality composition of the HY Index



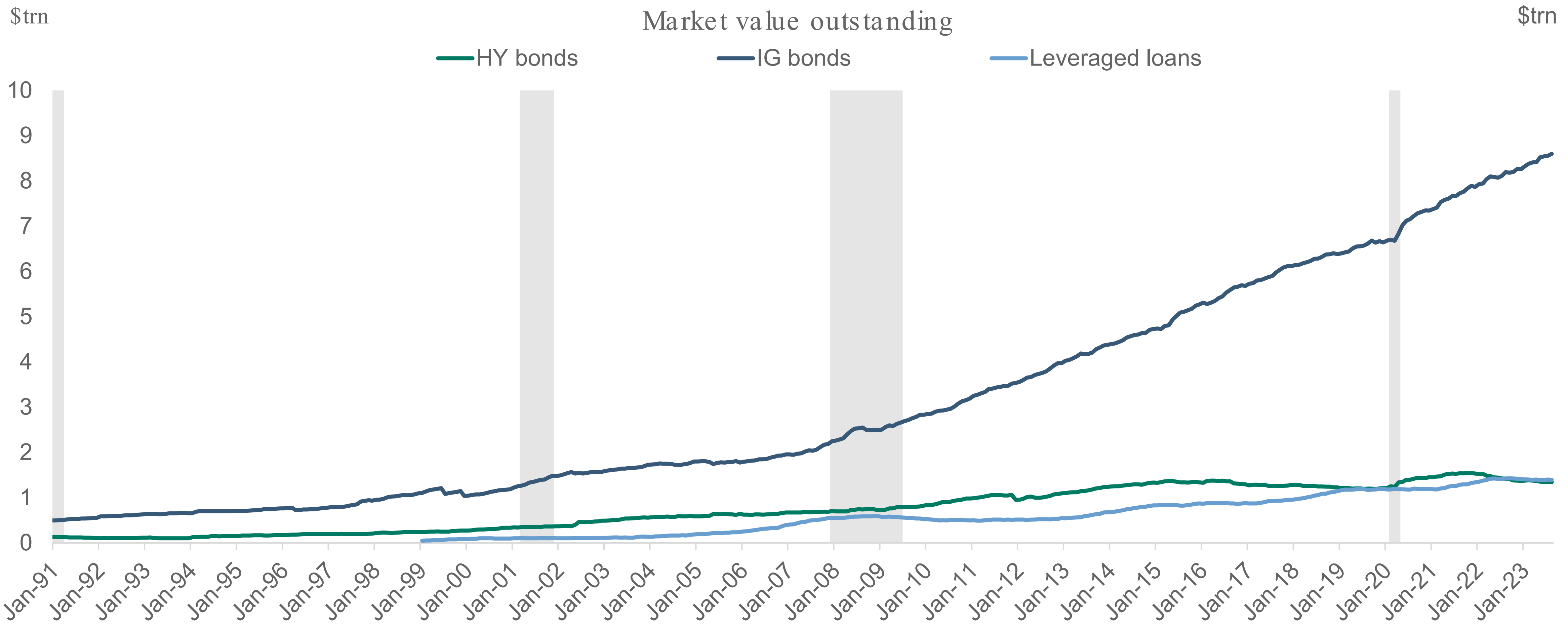
Source: ICE BofA, Bloomberg, Apollo Chief Economist. Note: Breakdown by market value. Data as of 31st August 2023

Quality composition of the leveraged loans index



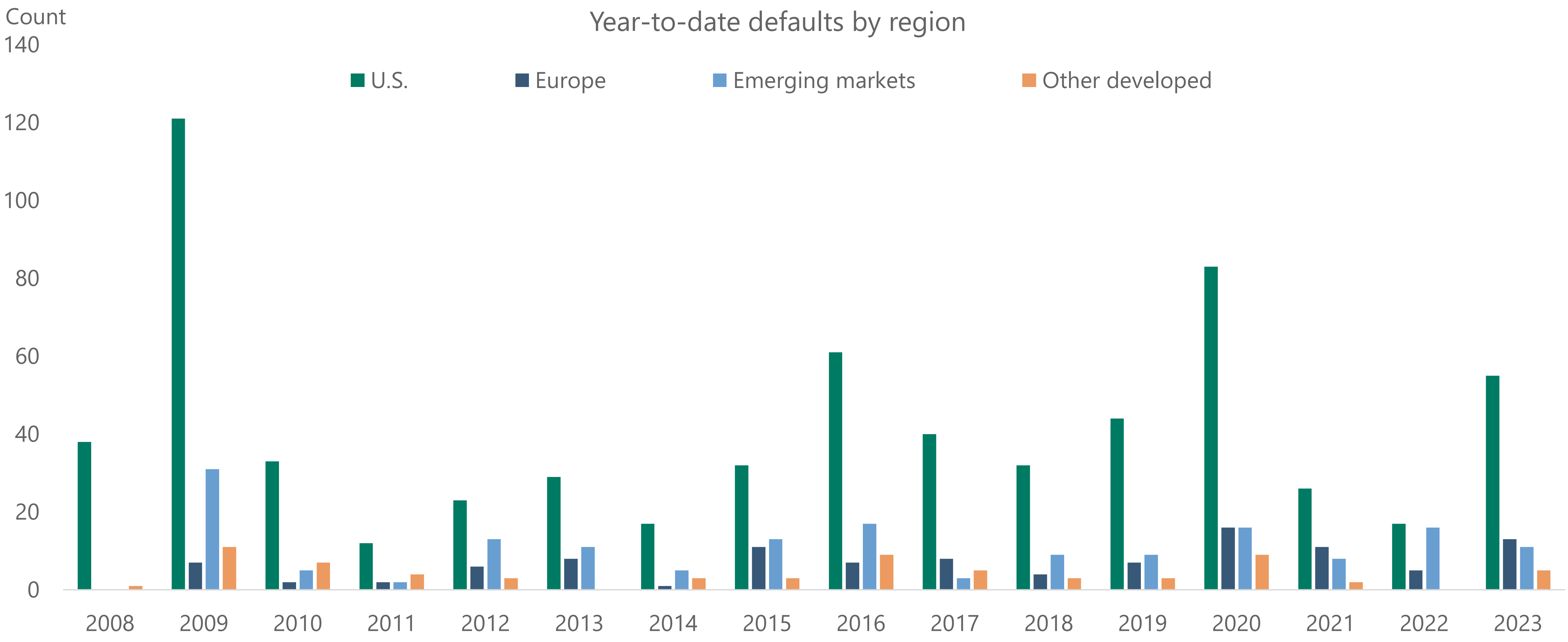
Source: Pitchbook LCD, Apollo Chief Economist

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



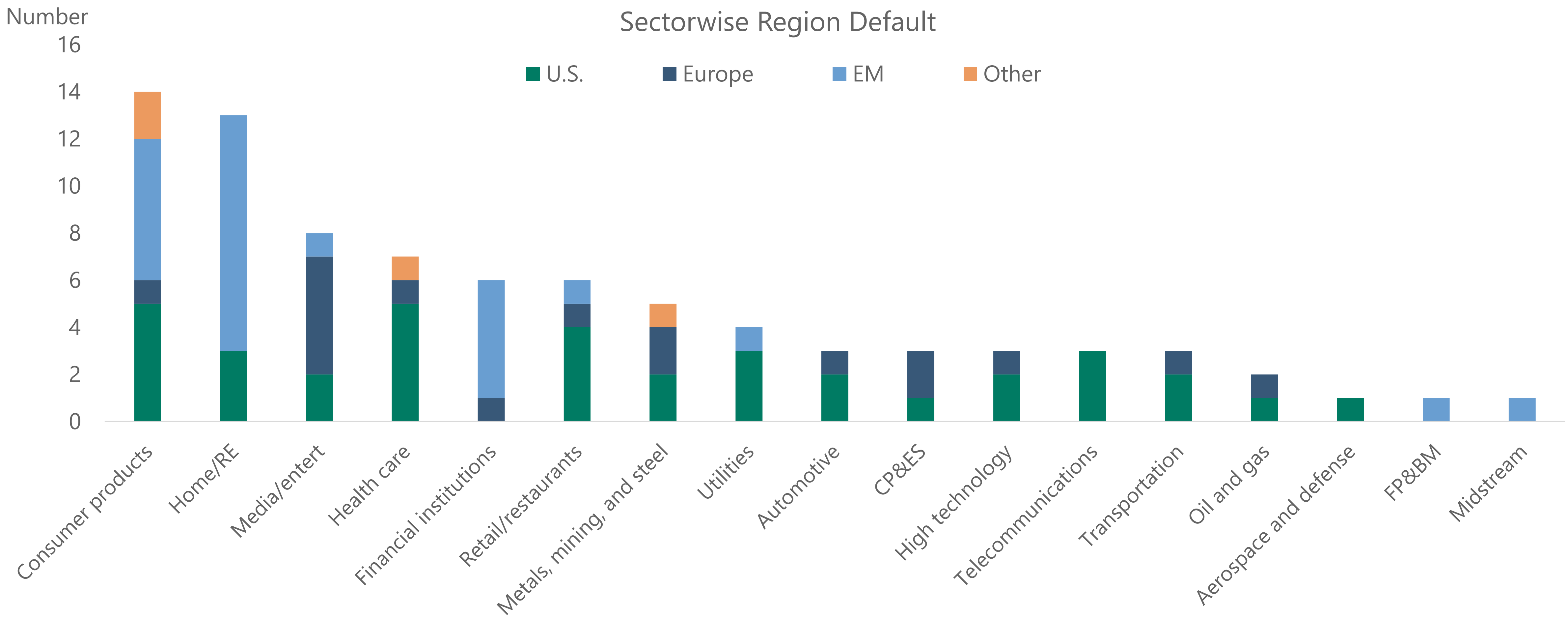
Source: ICE BofA, Bloomberg, Pitchbook LCD, Apollo Chief Economist. Note: Ticker used for HY is H0A0 Index and for IG it is C0A0 Index and for Loans it is SPBDALB Index.

Global default rates rising in US and Europe



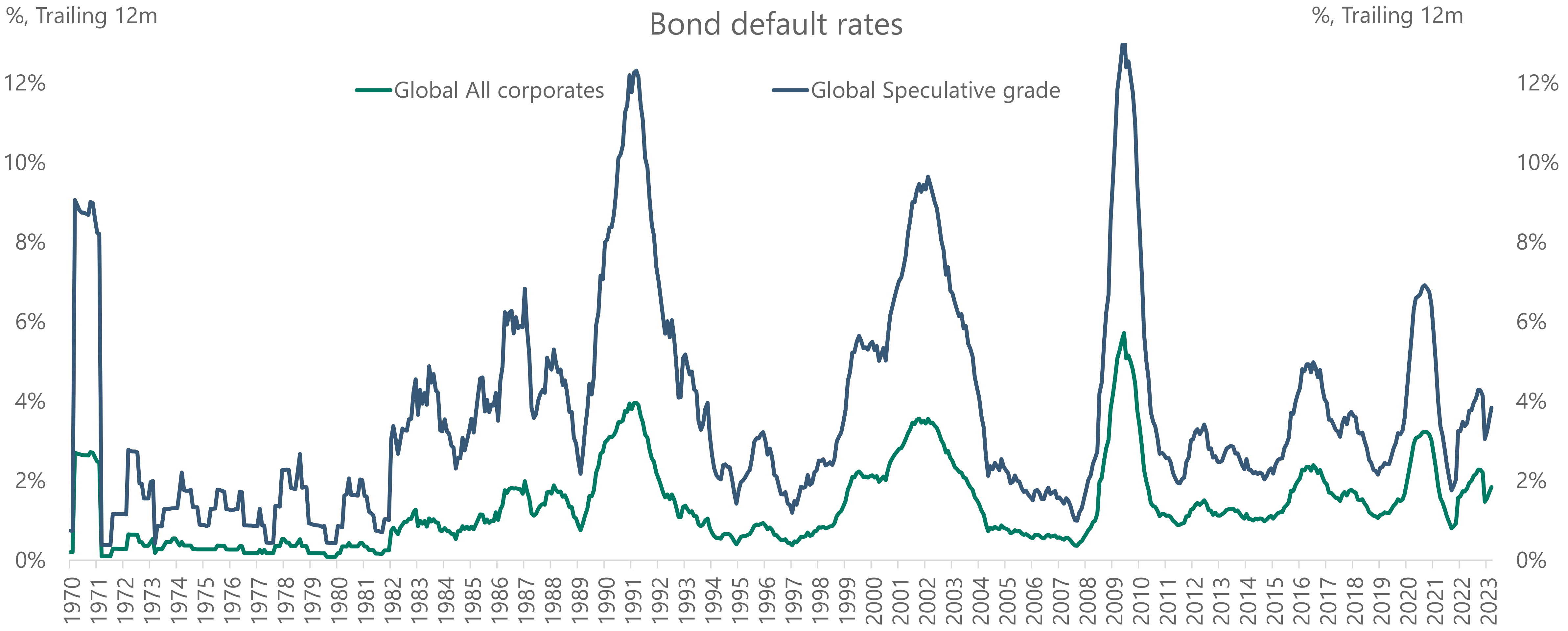
Sources: S&P Global Ratings Research and S&P Global Market Intelligence's CreditPro®, Apollo Chief Economist. Note: Data as of 30th June 2023

Default rates differ across sectors



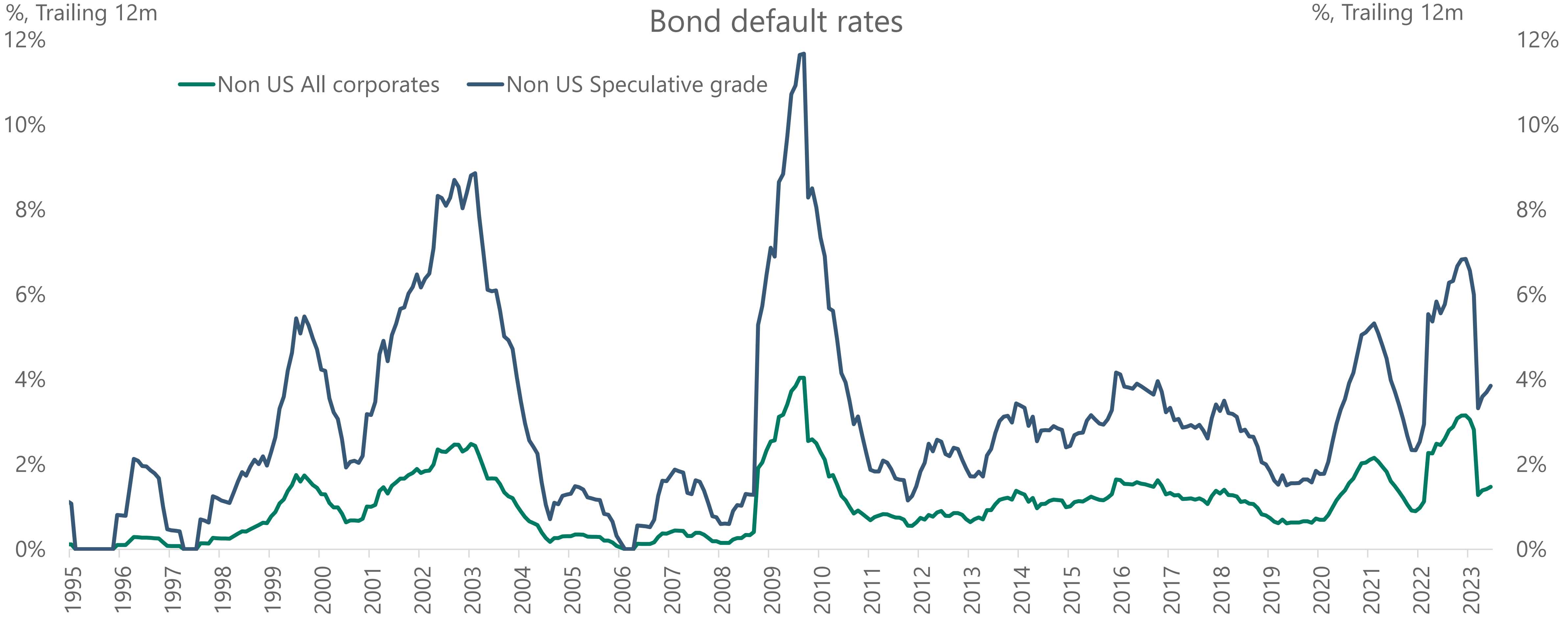
Sources: S&P Global Ratings Research and S&P Global Market Intelligence's CreditPro®, Apollo Chief Economist. Note: Data as 31st December 2022

Global bond default rates



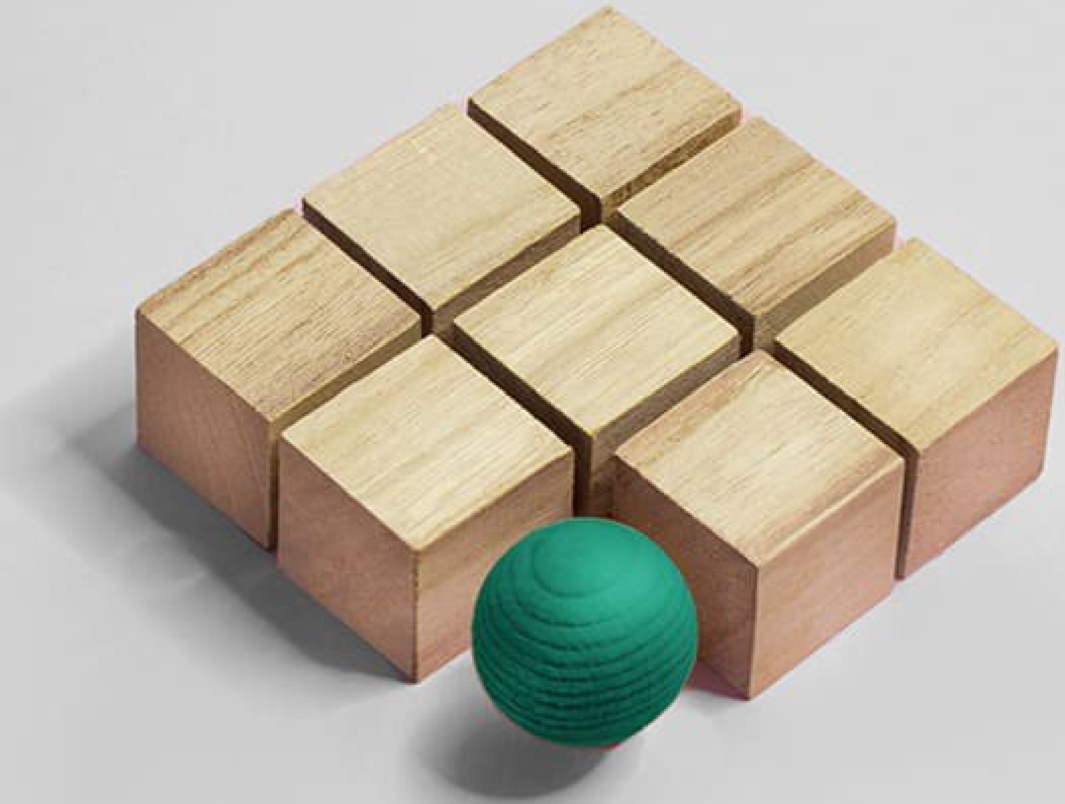
Source: Moody's Analytics, Apollo Chief Economist

Non-US bond default rates

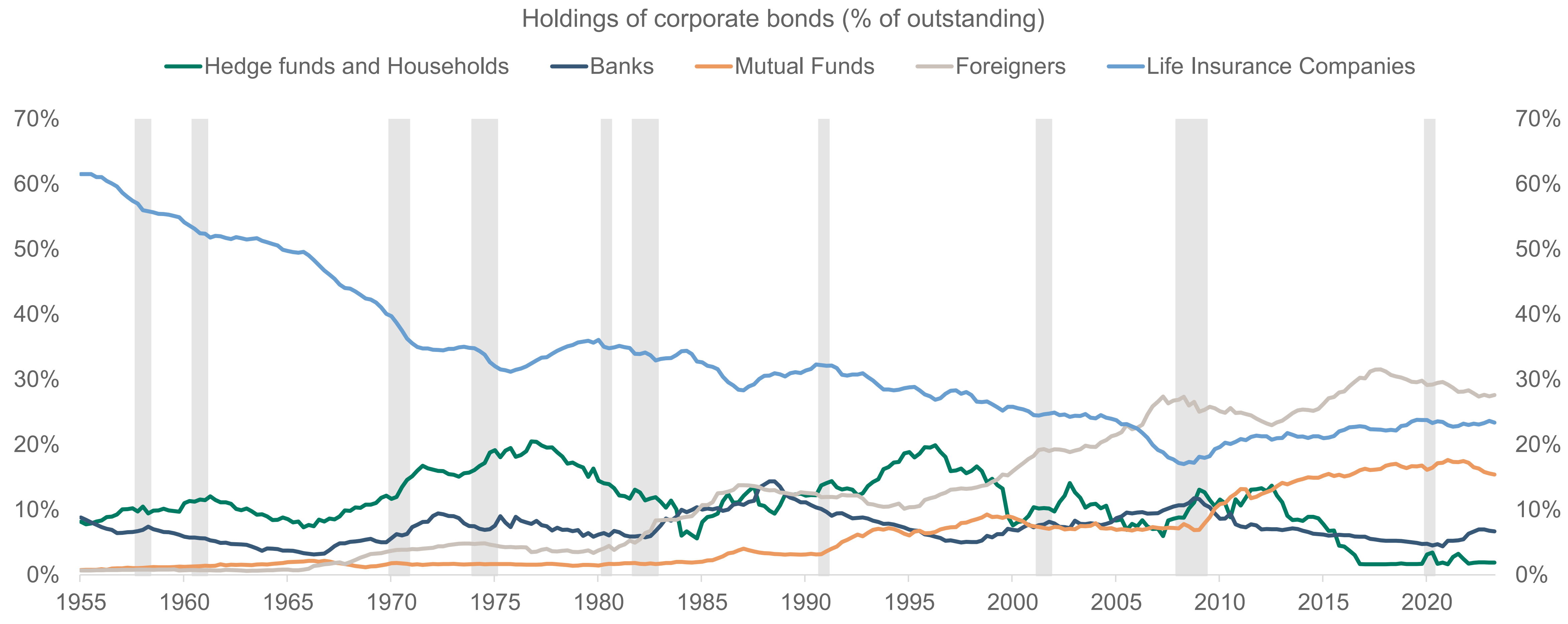


Source: Moody's Analytics, Apollo Chief Economist

Corporate bond holdings

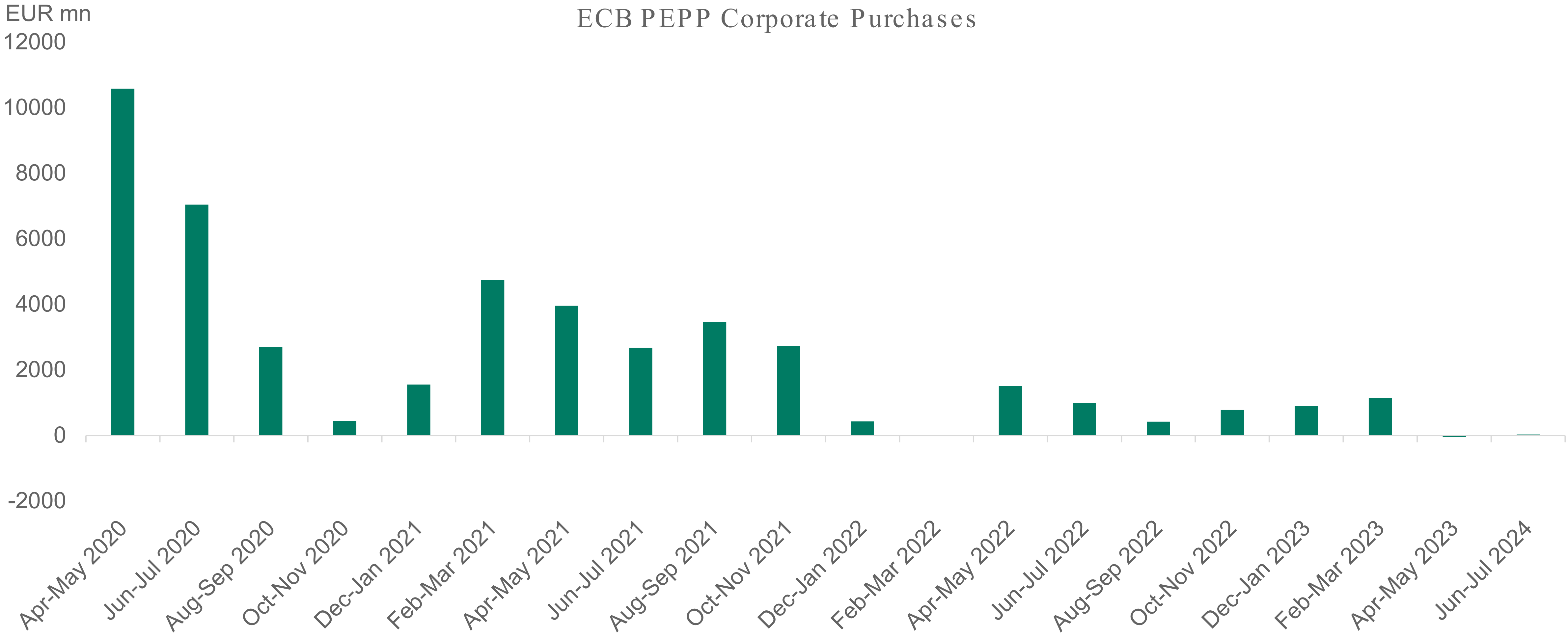


The biggest holder of US corporate bonds is foreigners



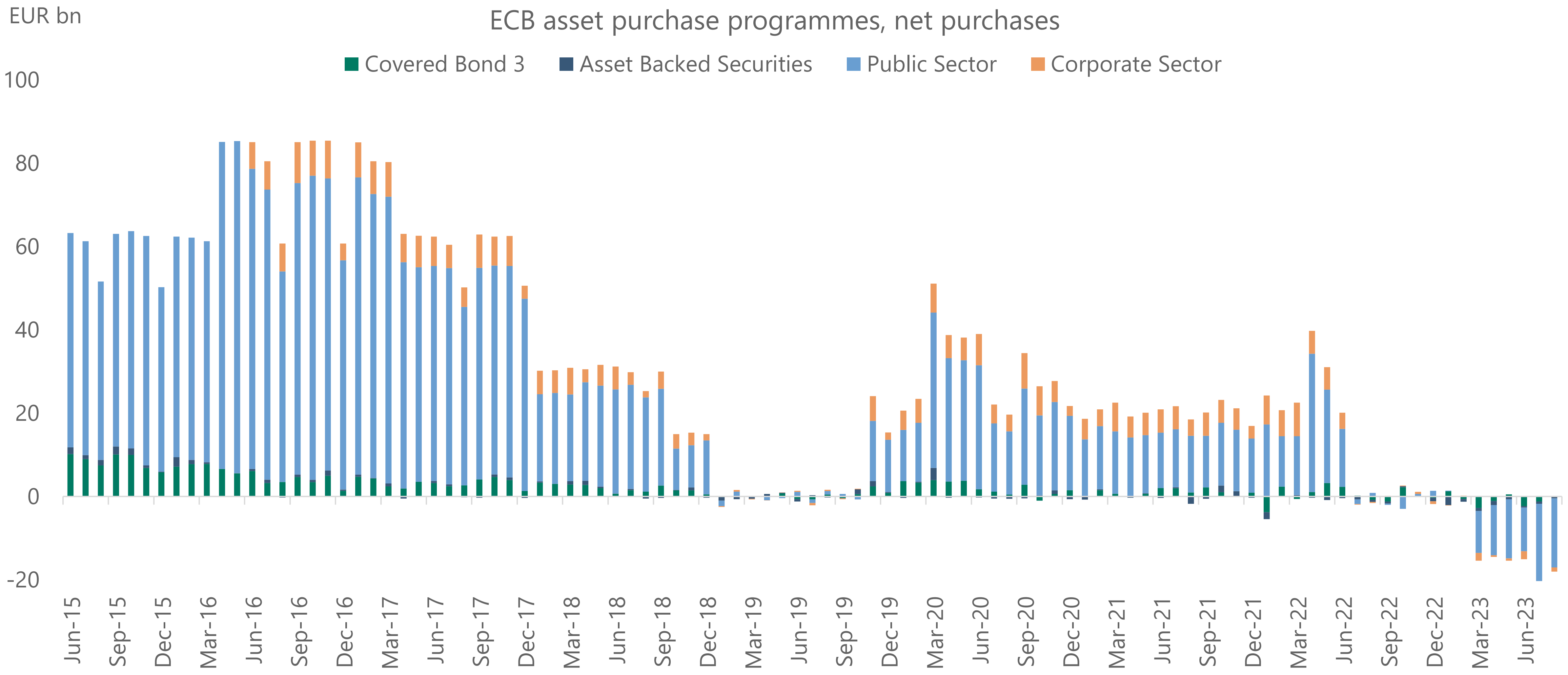
Source: FRB, Haver Analytics, Apollo Chief Economist

ECB purchases of corporate bonds



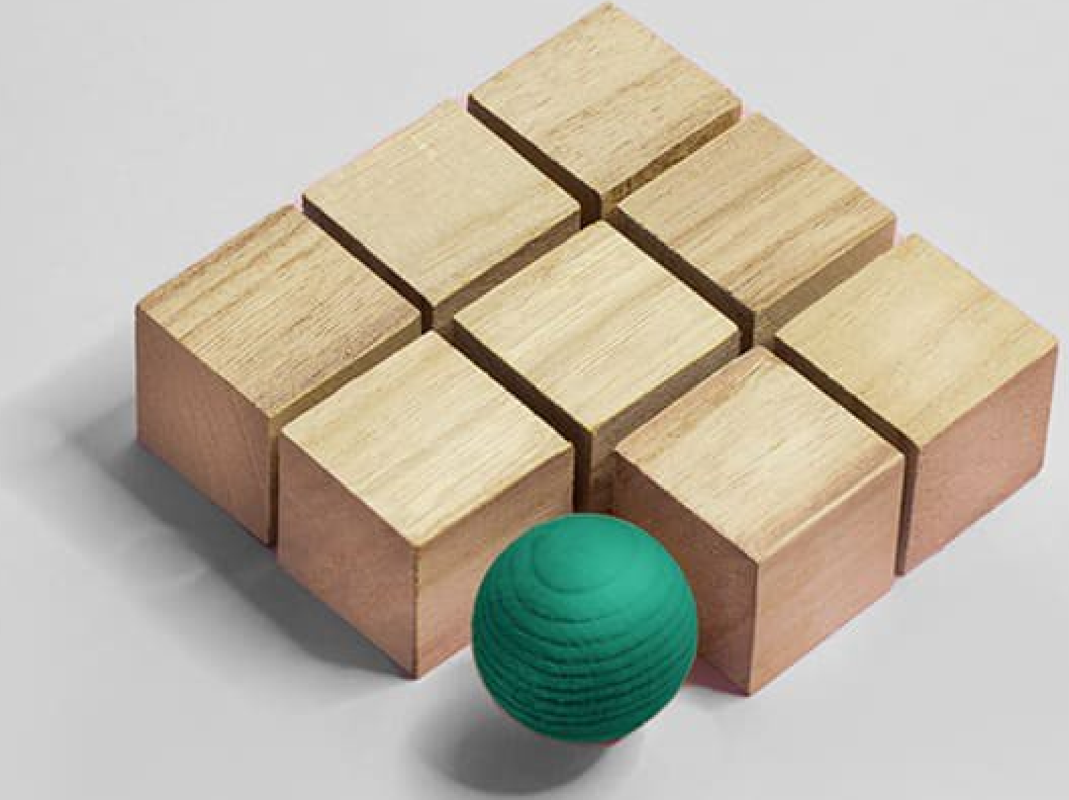
Source: ECB, Bloomberg, Apollo Chief Economist

ECB doing QT

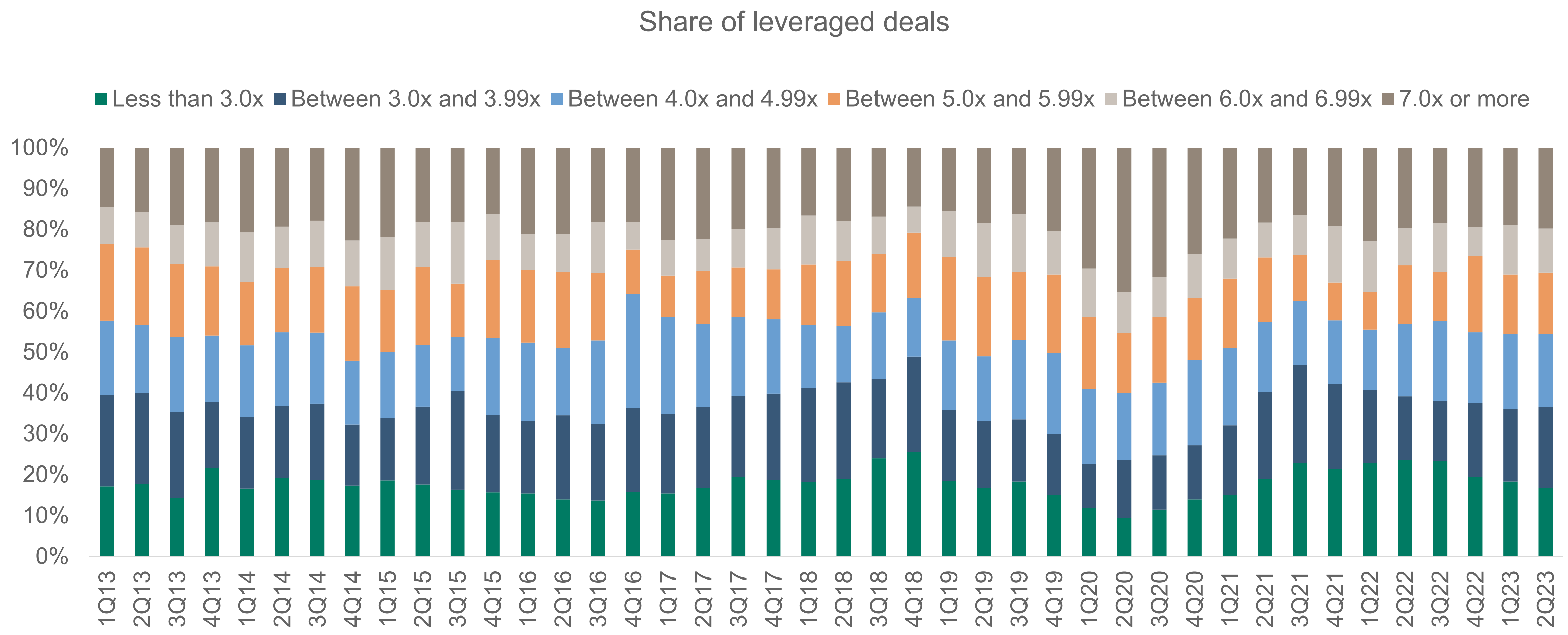


Source: ECB, Bloomberg, Apollo Chief Economist

Loans/CLOs

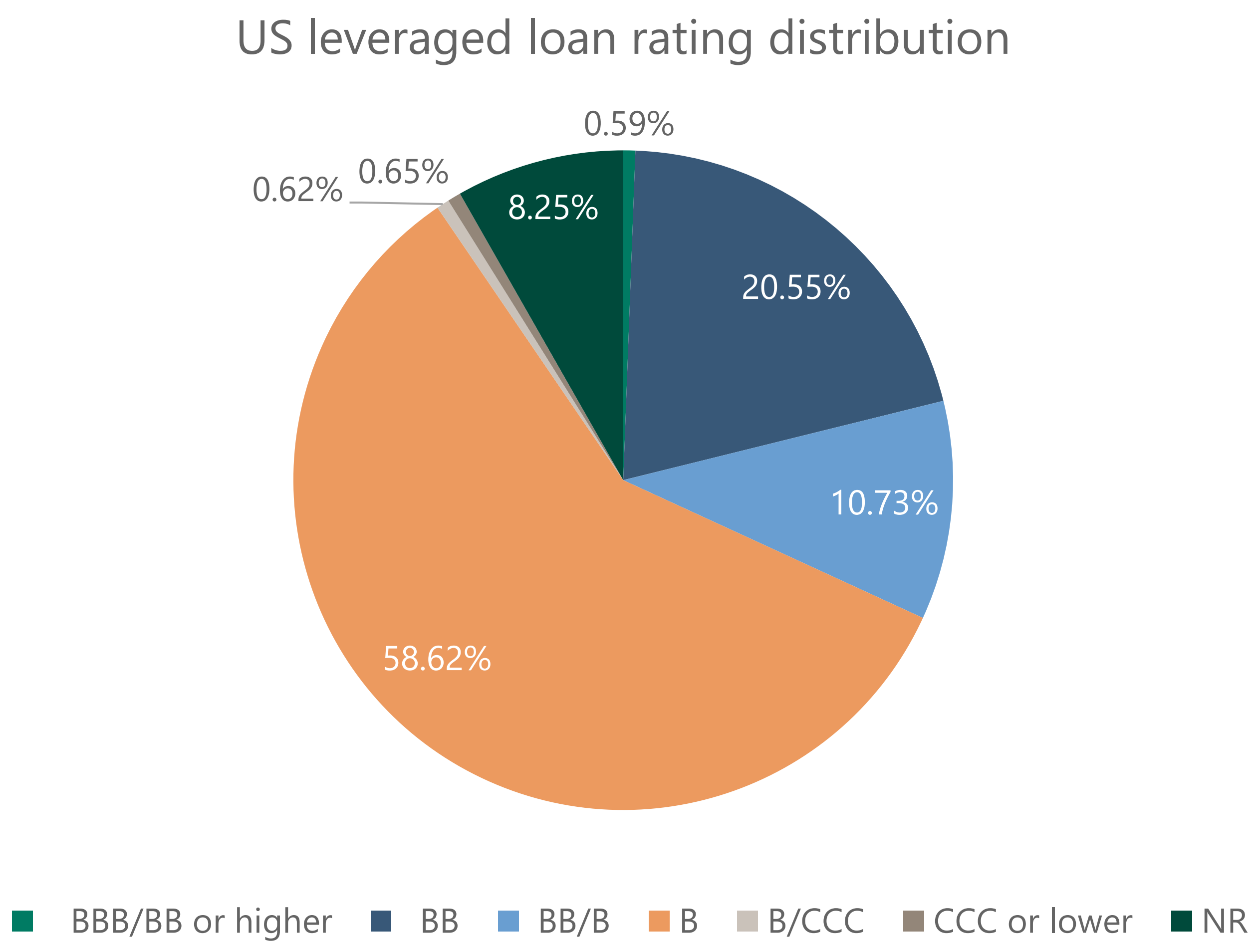


Leveraged loan deals, by multiple



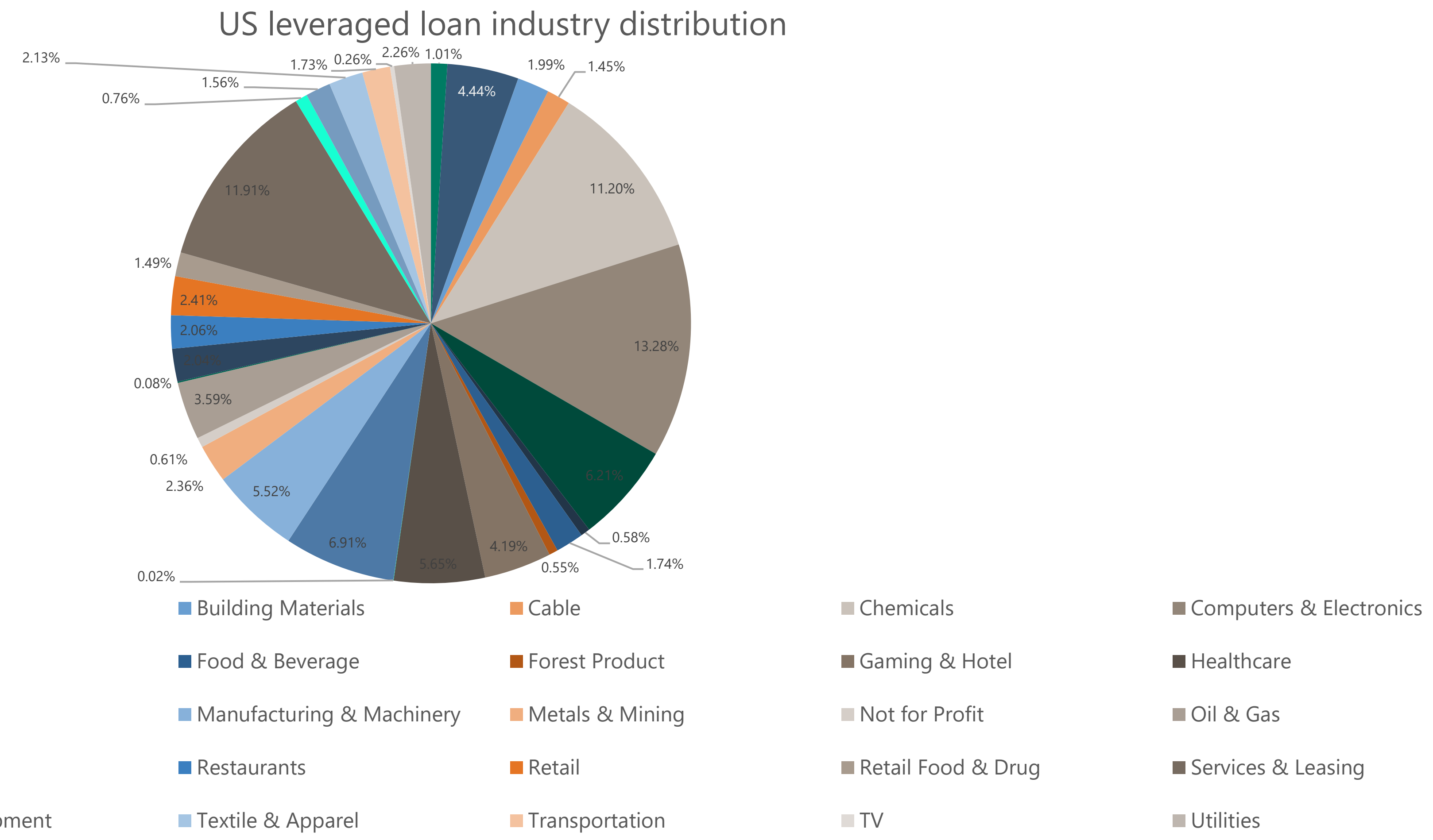
Source: Pitchbook LCD, Apollo Chief Economist

Leveraged loans rating distribution, 2023Q2



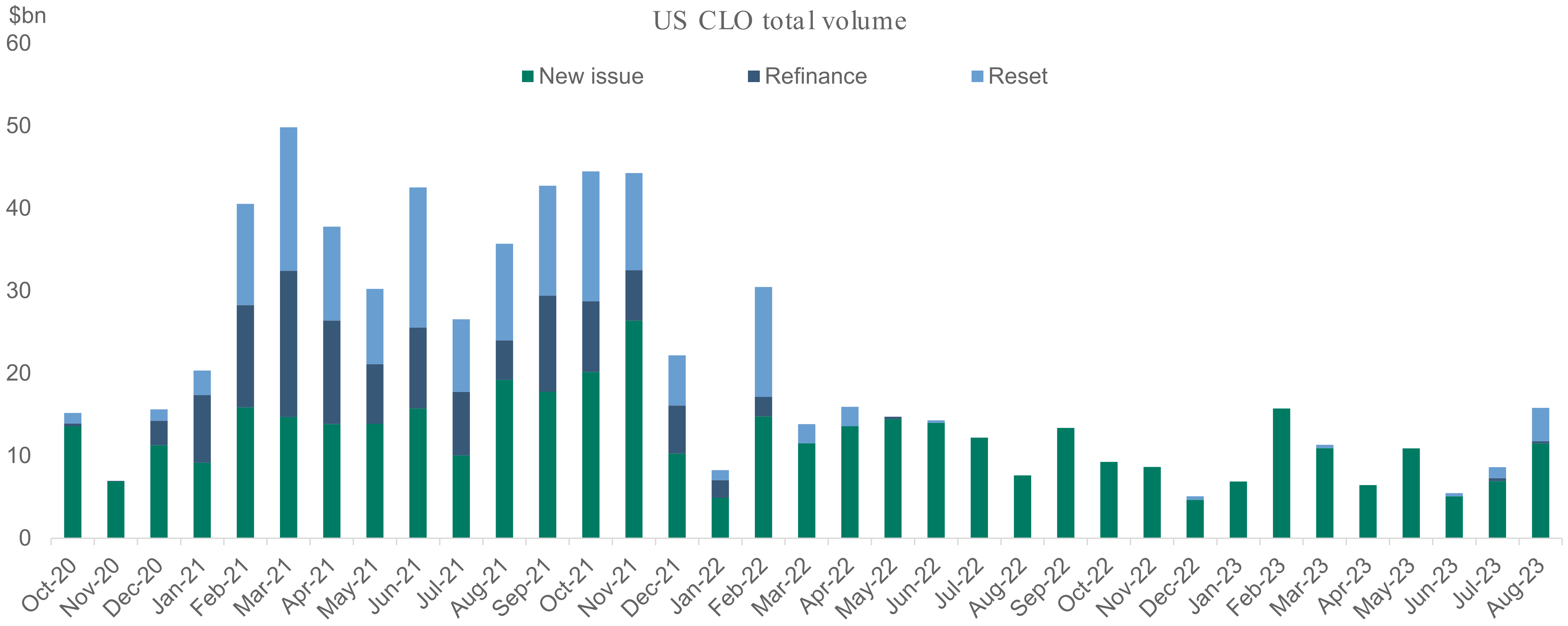
Source: Pitchbook LCD, Apollo Chief Economist

Leveraged loans distribution, by industry, 2023Q2



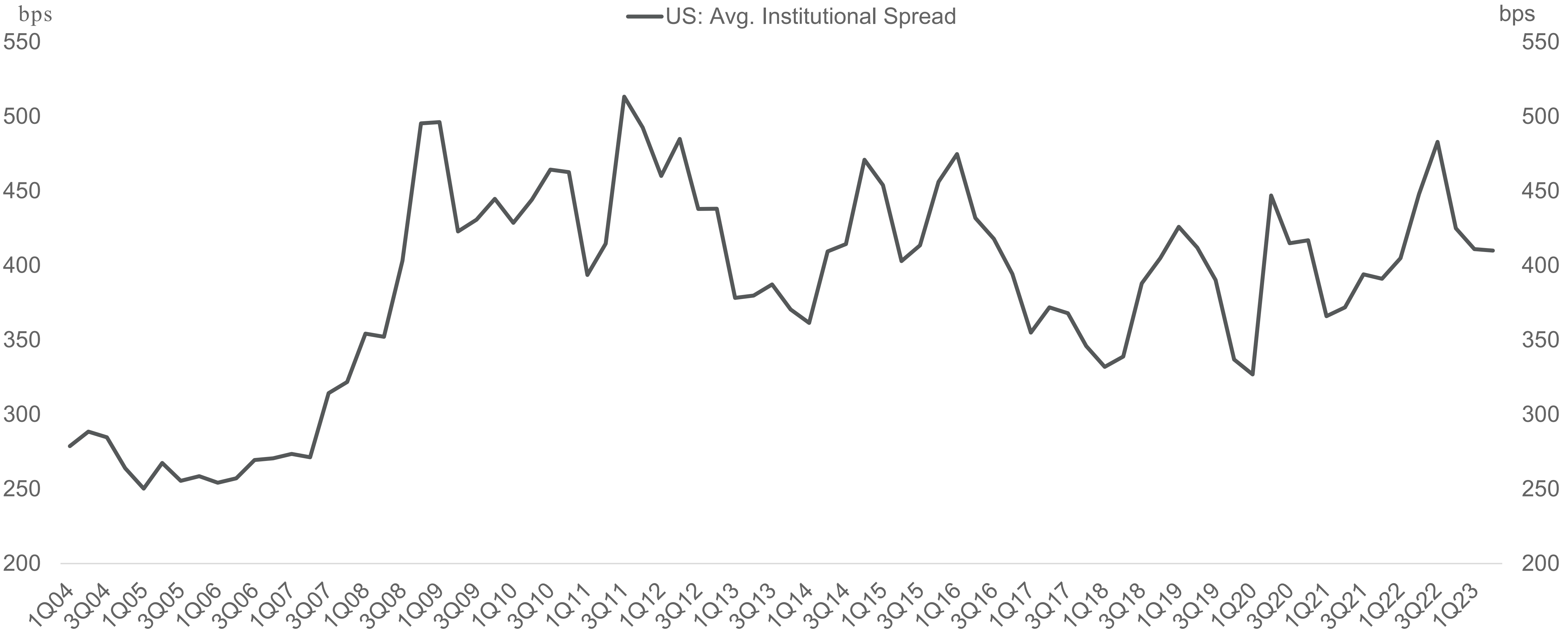
Source: Pitchbook LCD, Apollo Chief Economist

US CLO total volume



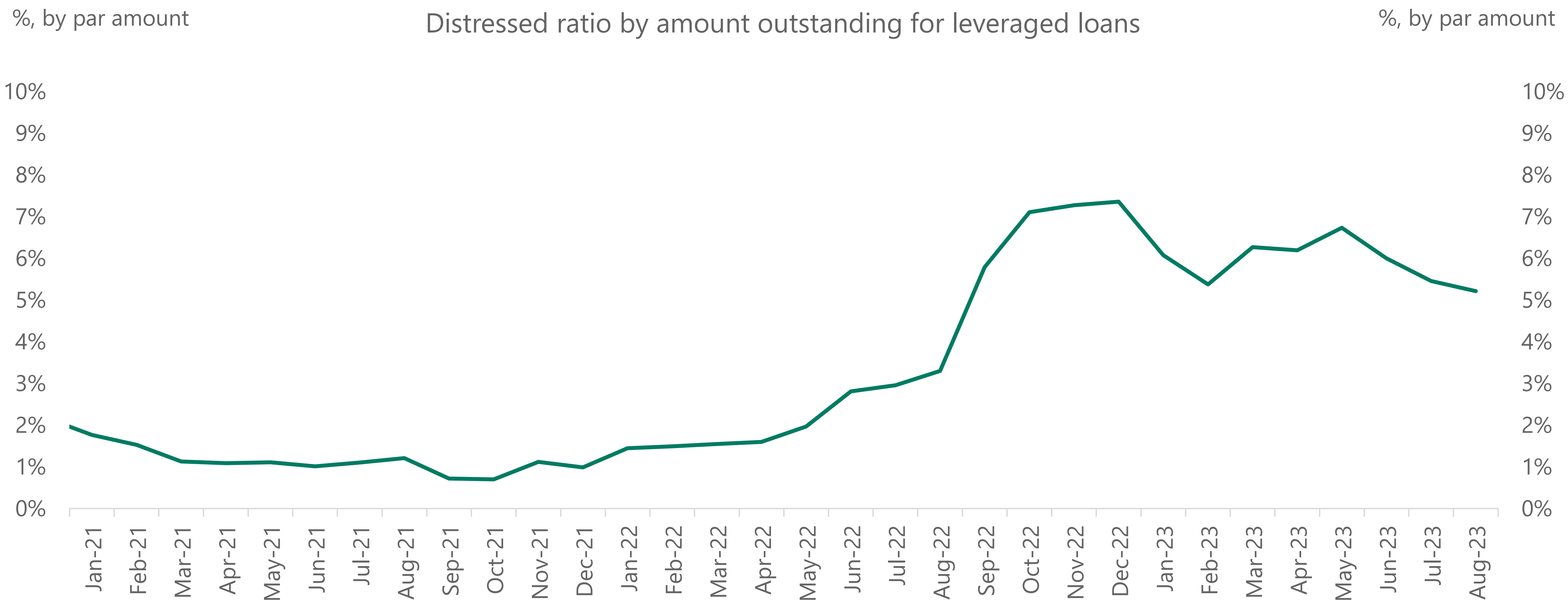
Source: Pitchbook LCD, Apollo Chief Economist.

Loans: Institutional spread relative to bespoke loans



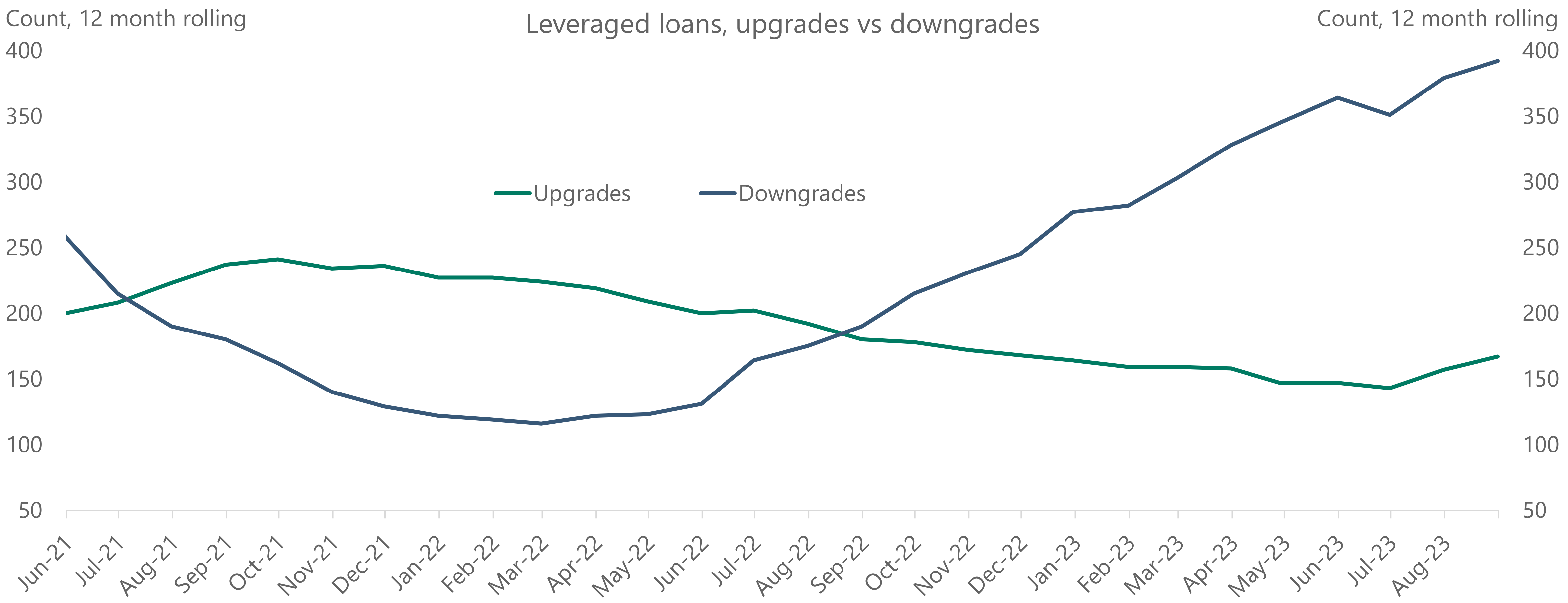
Source: Pitchbook LCD, Apollo Chief Economist

Distressed ratio for leveraged loans has risen



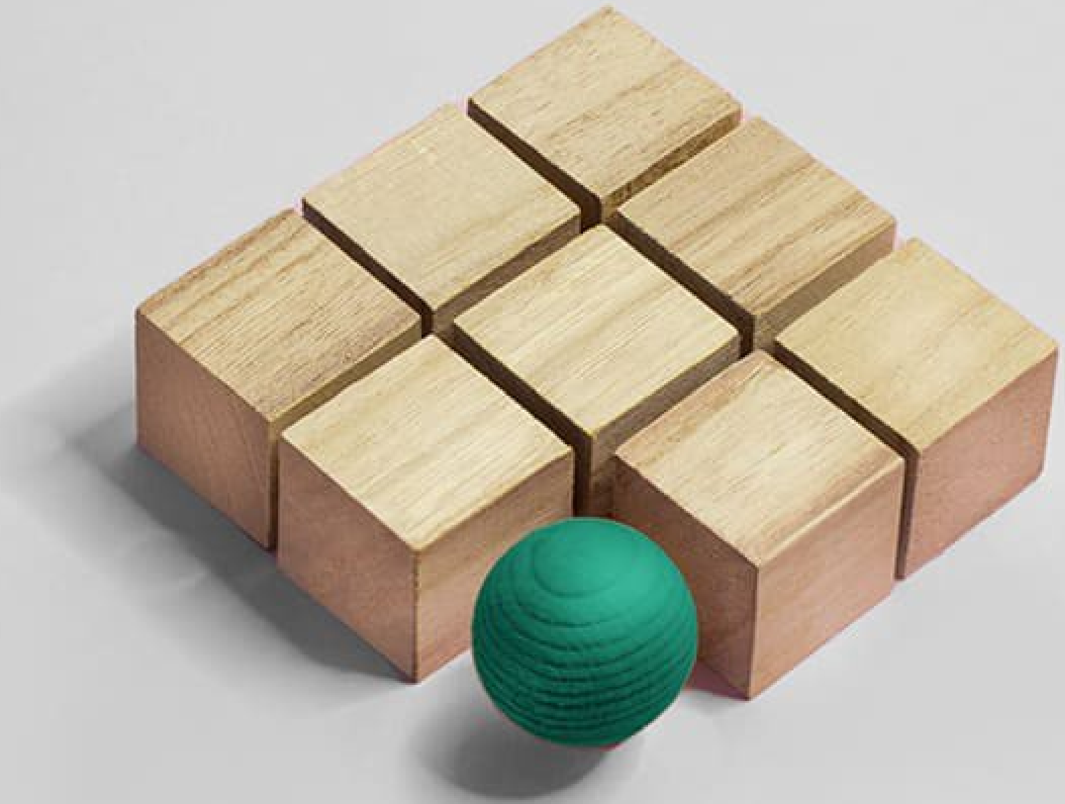
Source: Pitchbook LCD, Apollo Chief Economist. Note: For percent loans priced below 80

Downgrades are rising

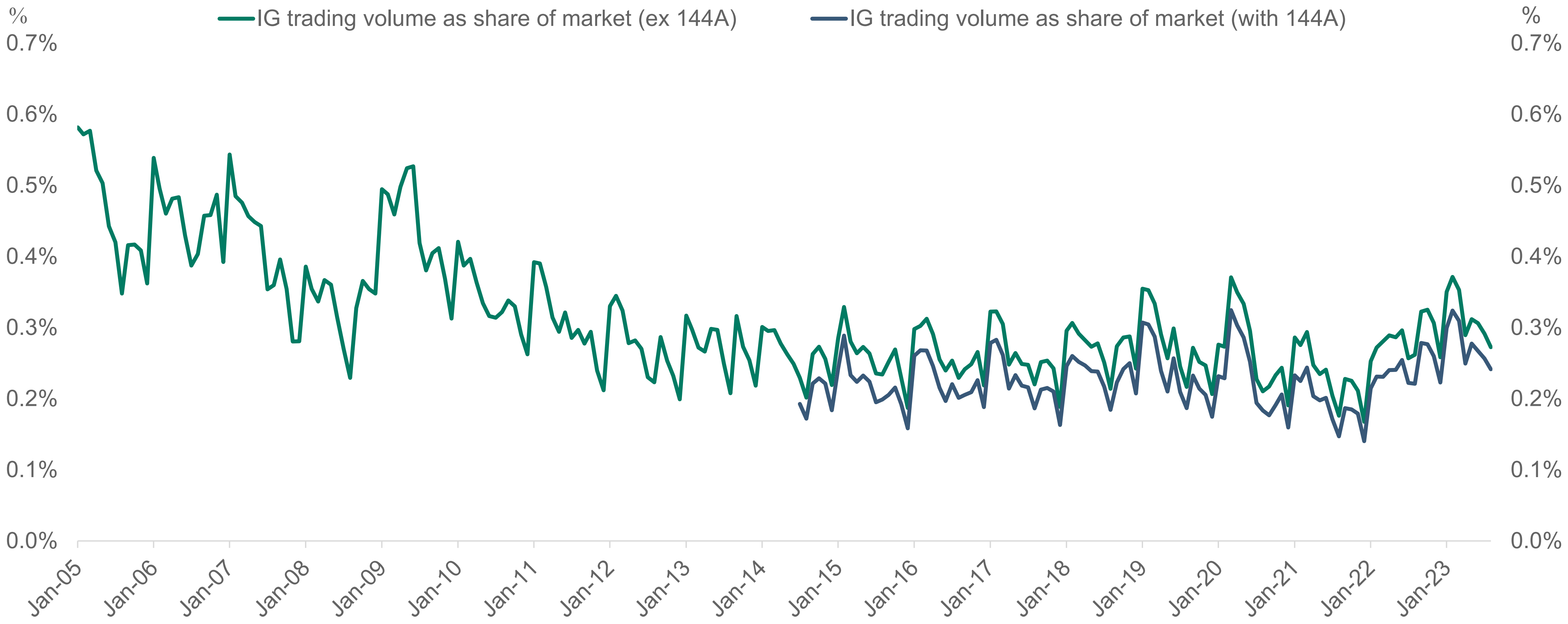


Source: Pitchbook LCD

Liquidity in US credit markets

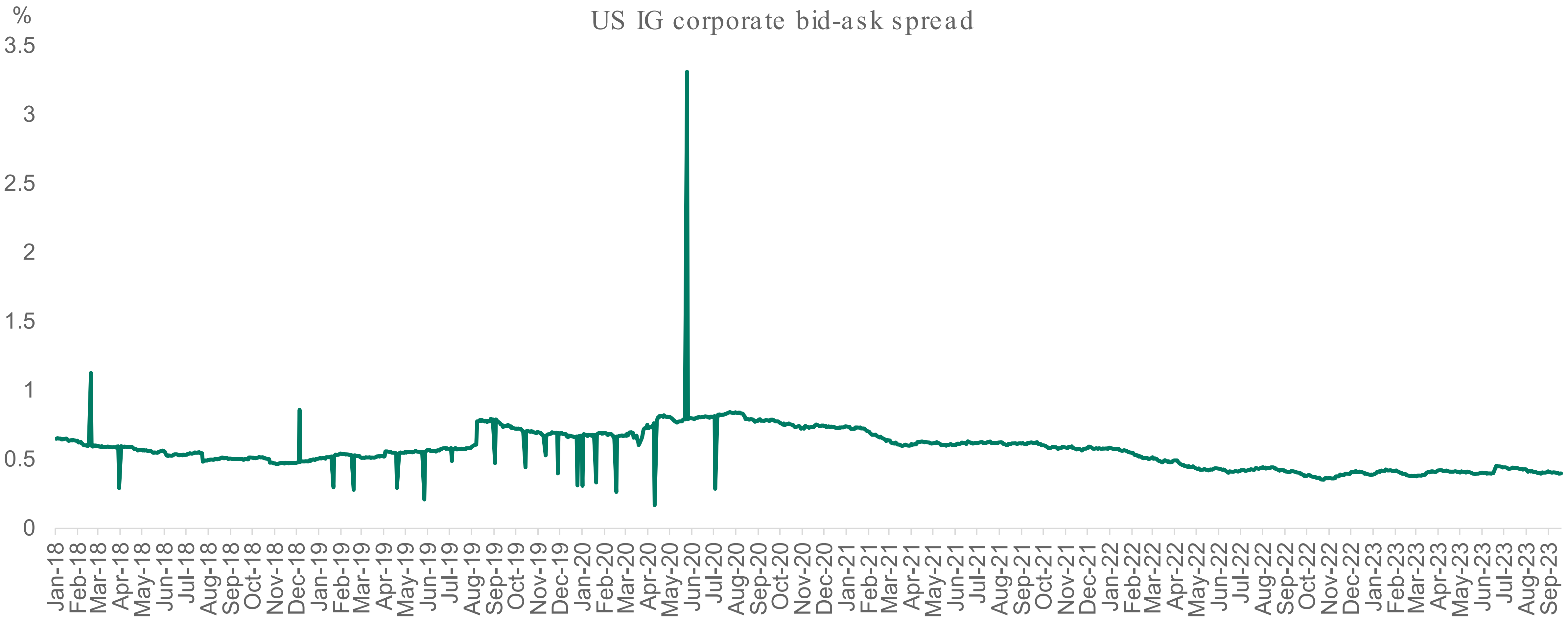


IG trading liquidity



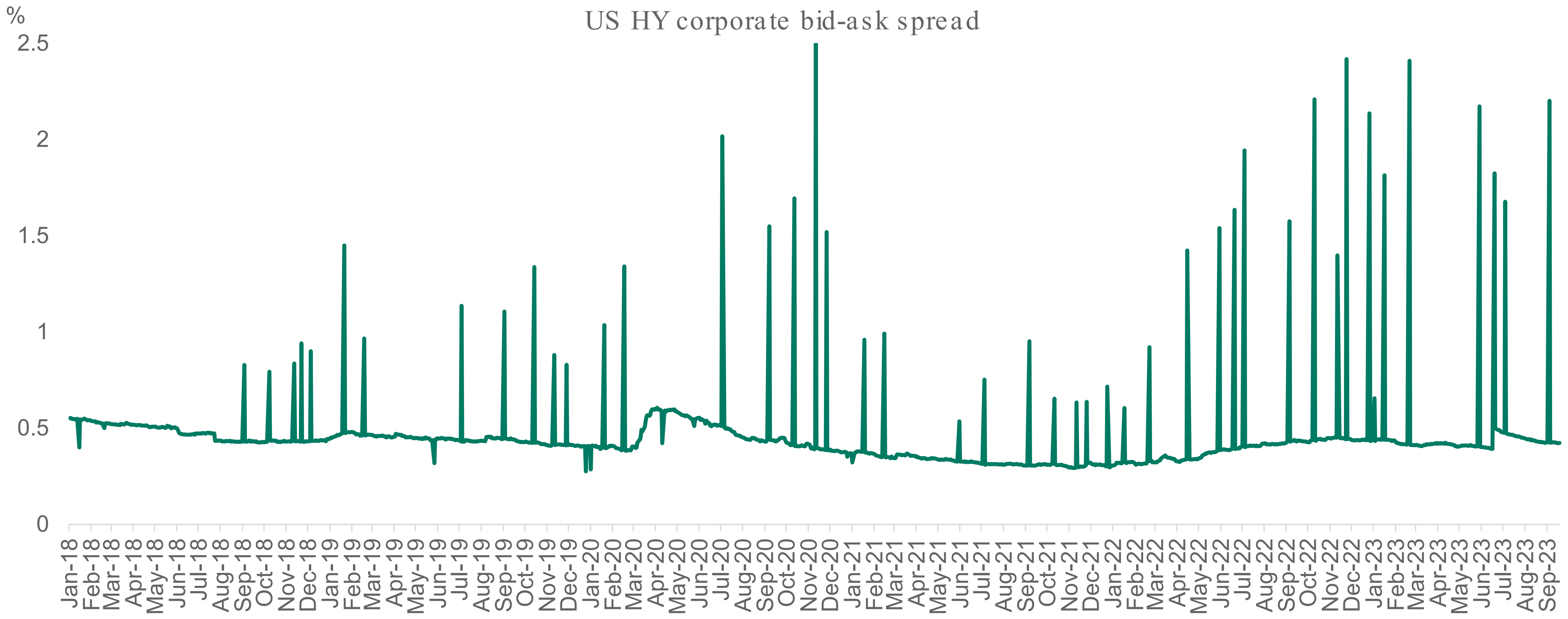
Source: ICE BofA, FINRA TRACE, Haver Analytics, Apollo Chief Economist

Bid-ask spread for US IG



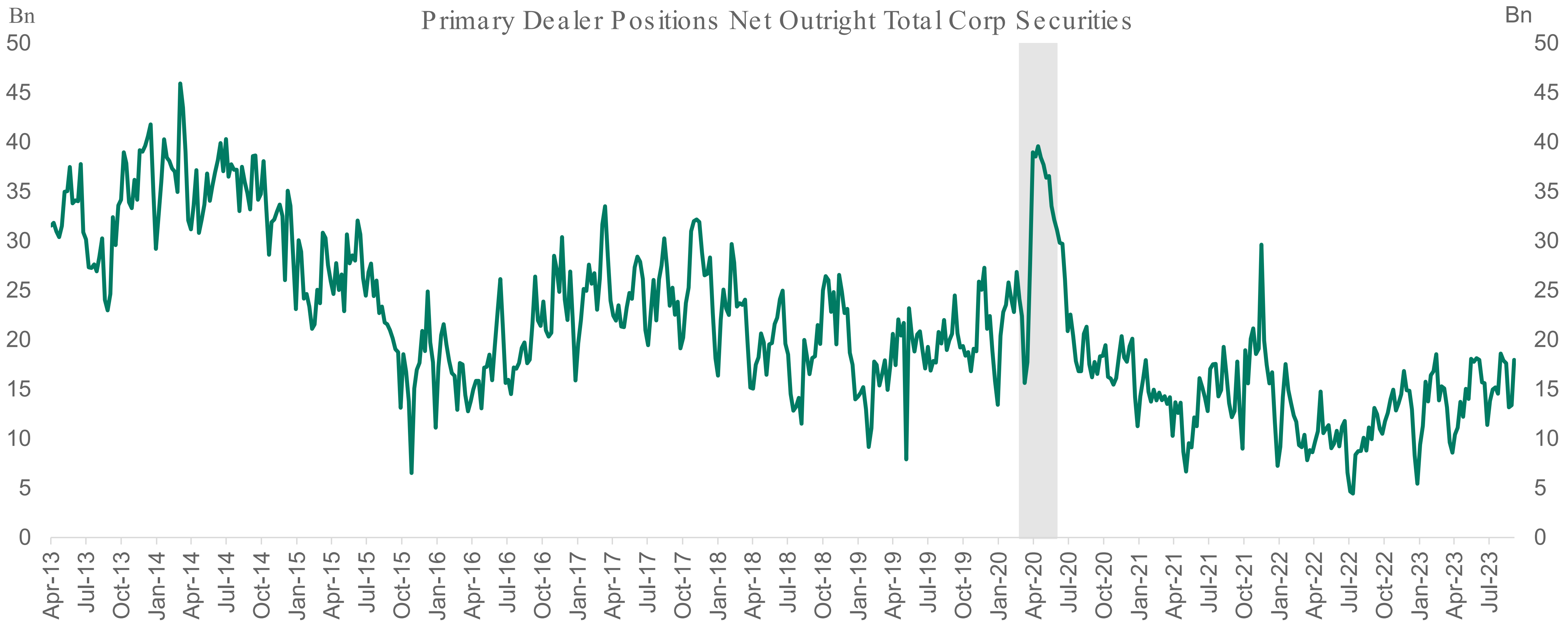
Source: Bloomberg, Apollo Chief Economist. Note: The bid-ask spread is the weighted average of Bloomberg Barclays US IG Index

Bid-ask spread for US HY



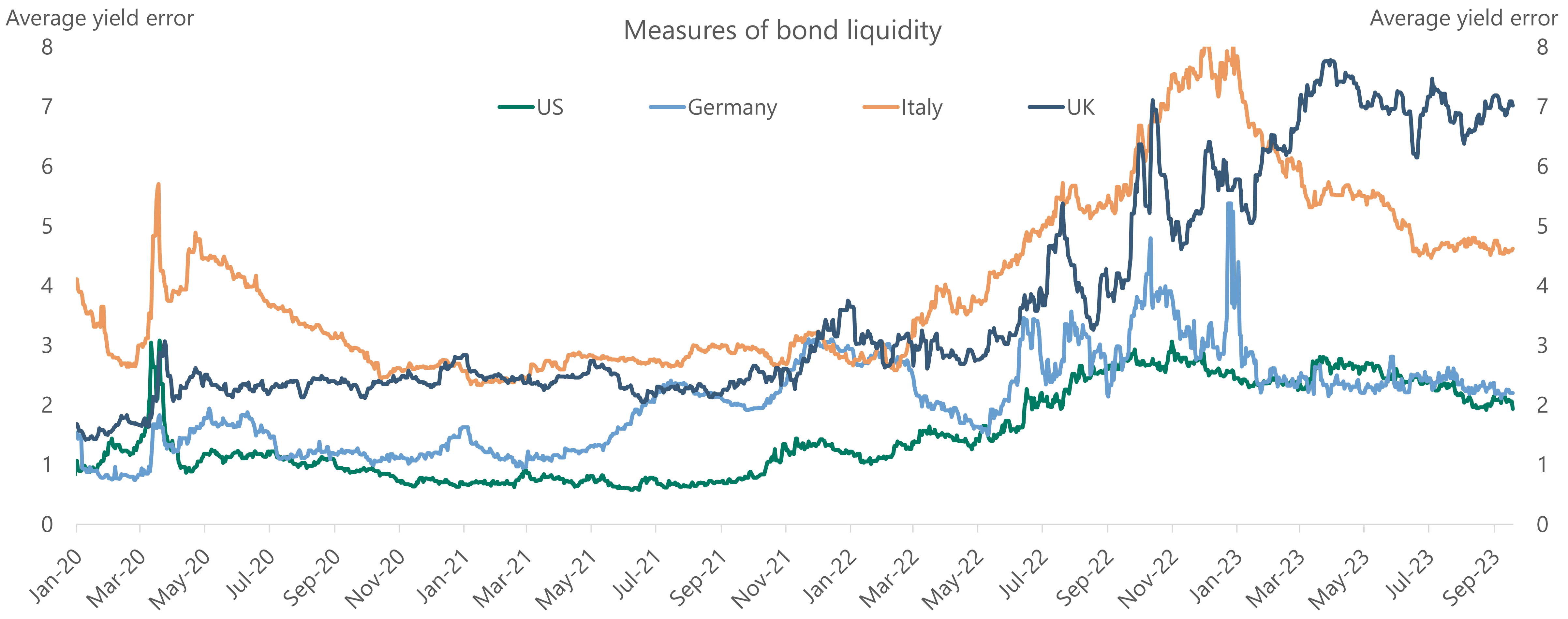
Source: Bloomberg, Apollo Chief Economist. Note: The bid-ask spread is the weighted average of Bloomberg Barclays US HY Index

Dealer inventory of corporate bonds (IG+HY)



Source: Bloomberg, Apollo Chief Economist

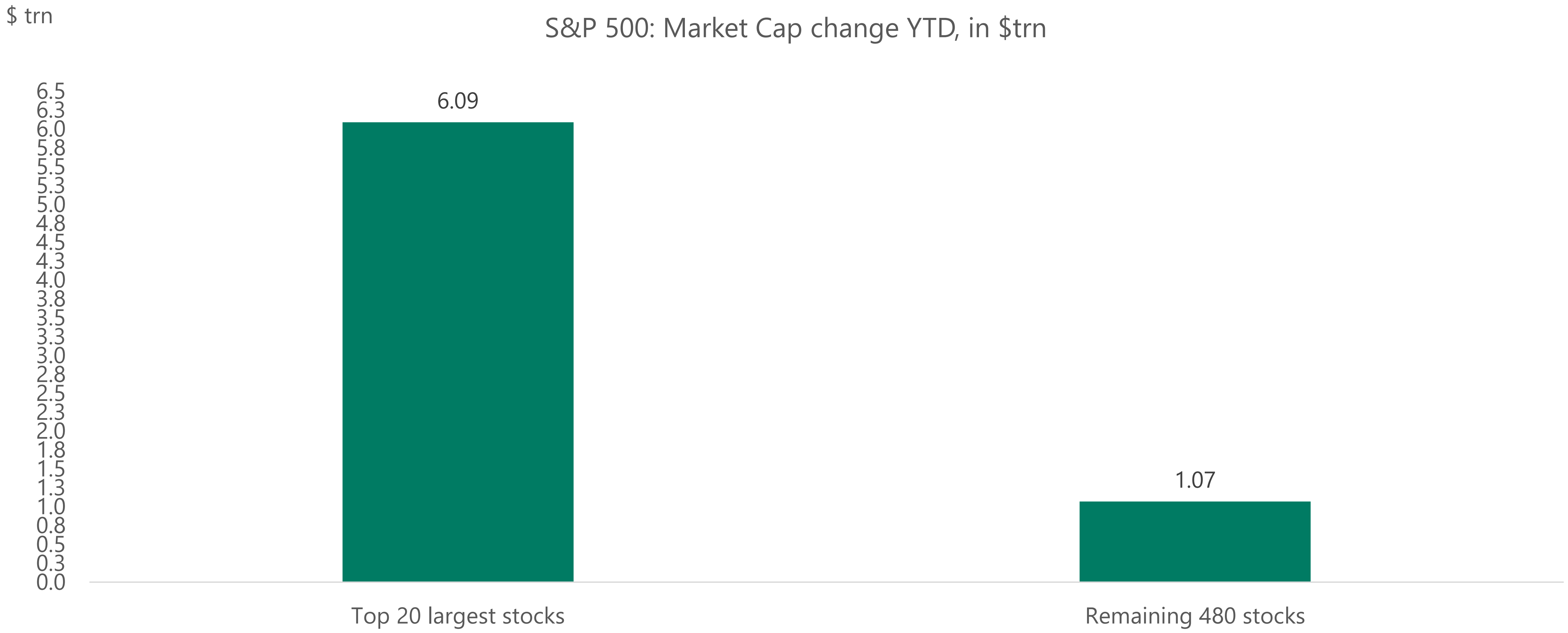
Liquidity deteriorating in UK bond market



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.

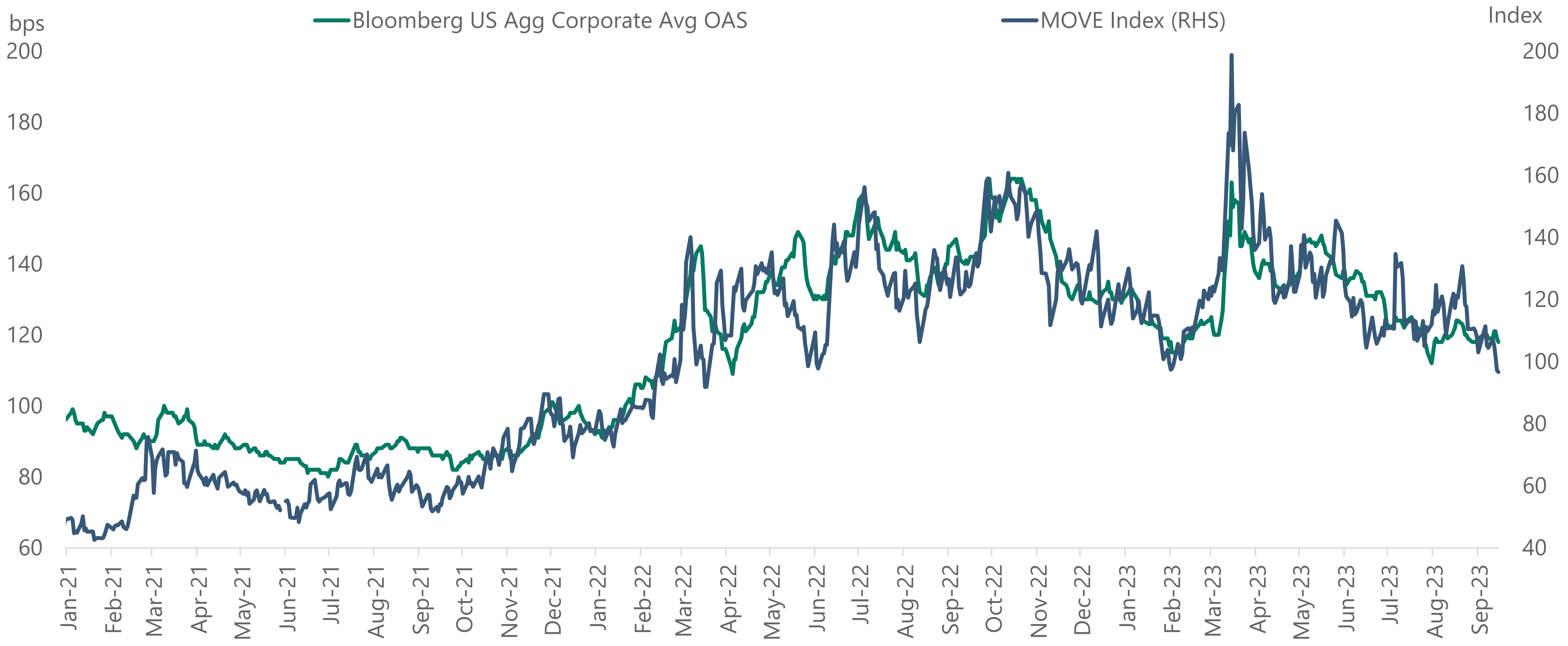
Market technicals

Not a broad-based rally in the S&P500



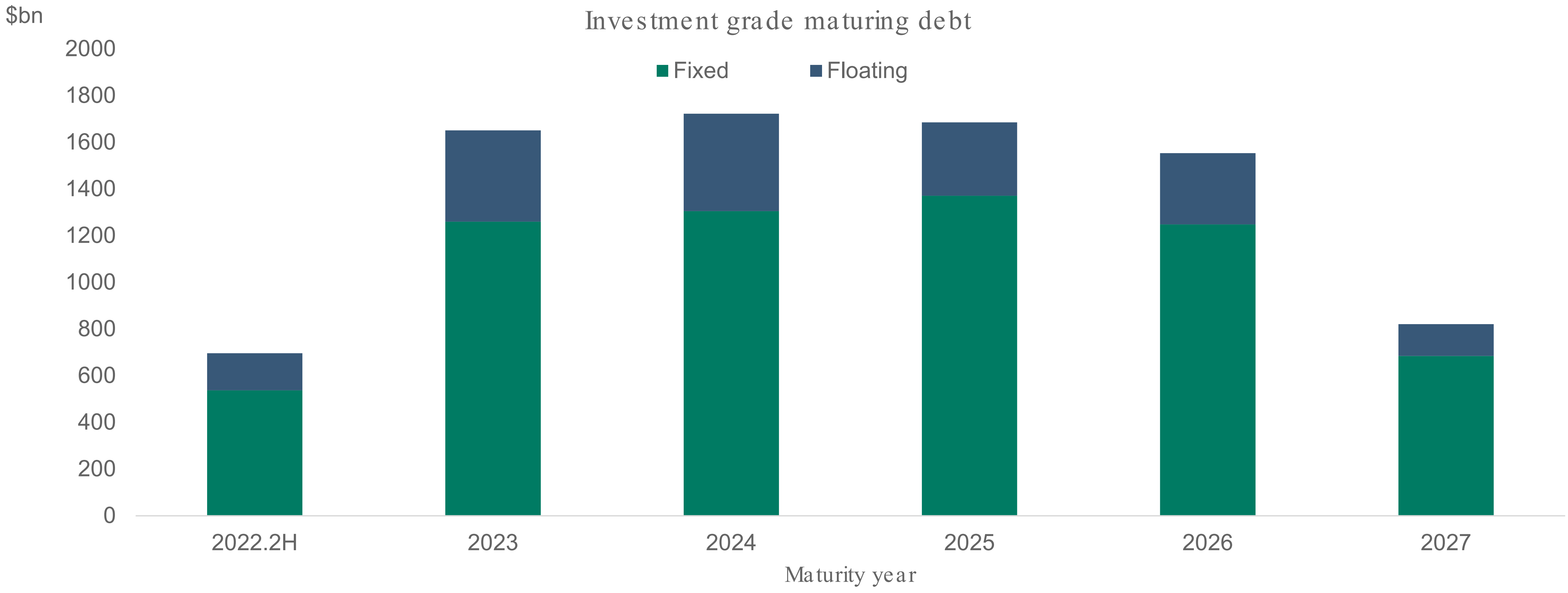
Source: Bloomberg, Apollo Chief Economist.

US IG spread highly correlated with implied rates vol



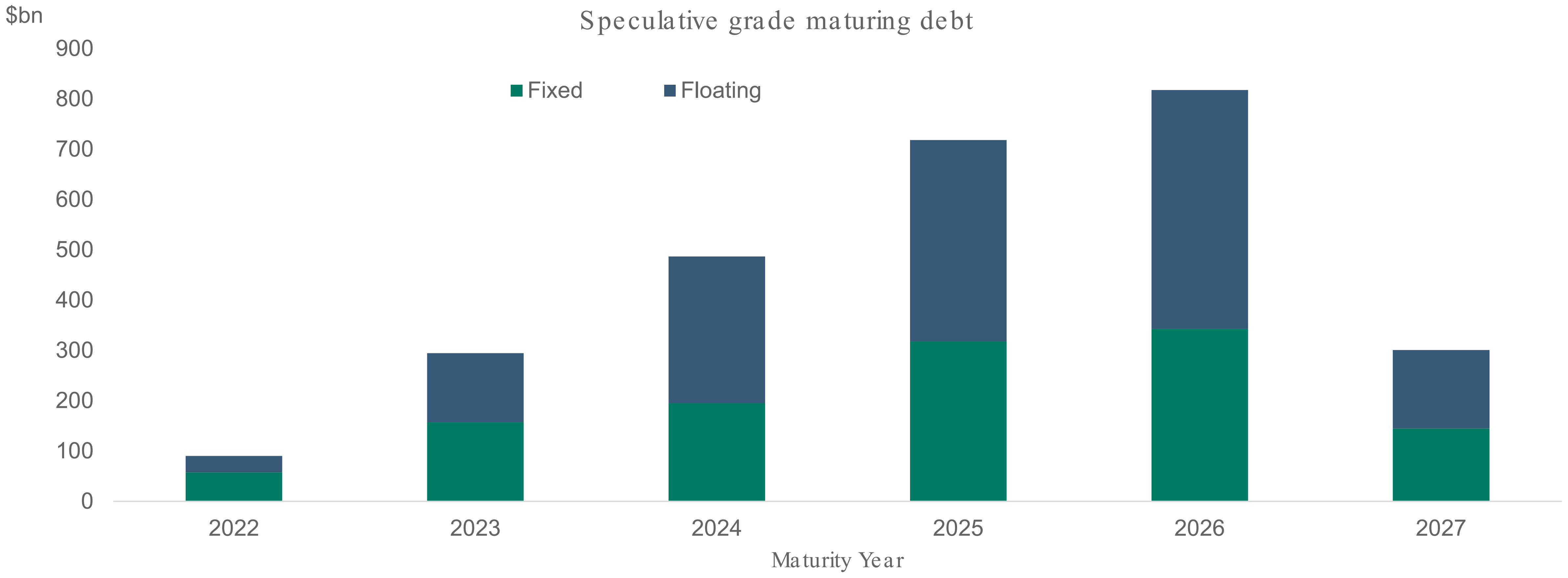
Source: Bloomberg, Apollo Chief Economist

Investment grade maturity wall



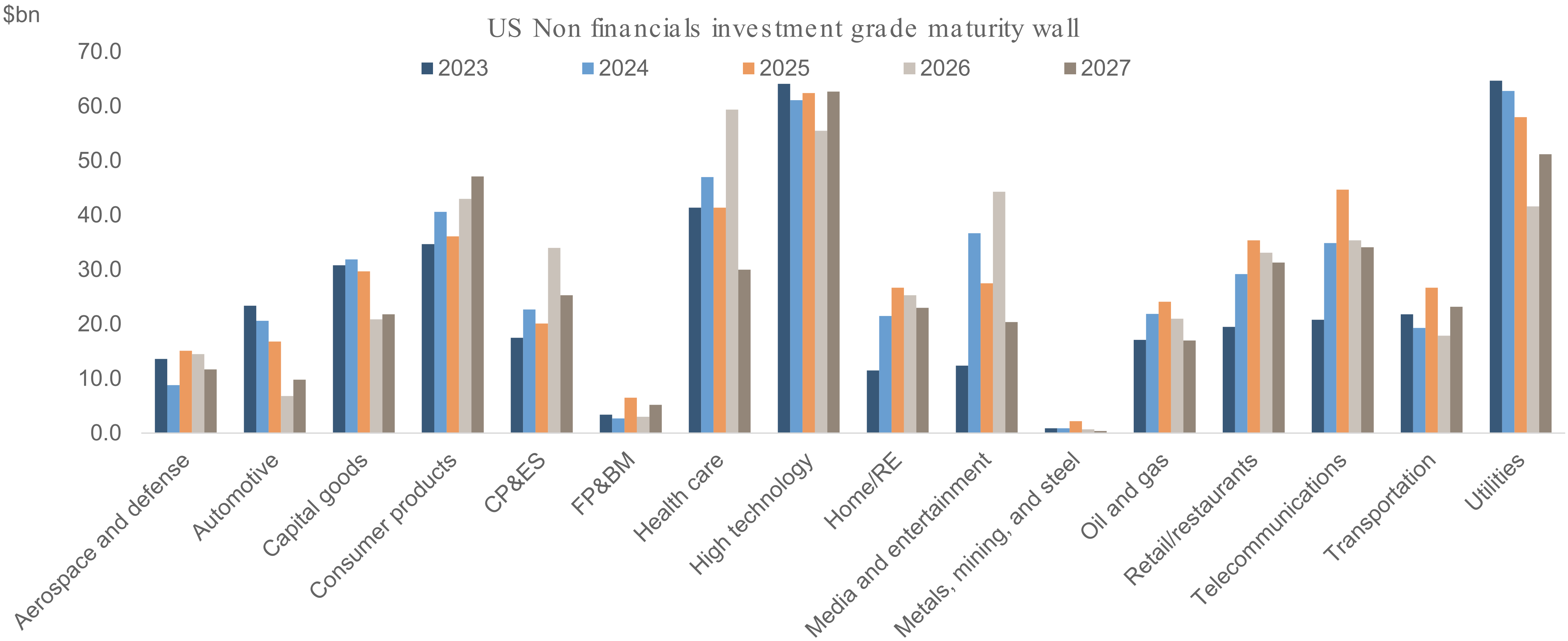
Source: S&P Global ratings Research, Apollo Chief Economist. Note: Data as of July 1, 2022. Includes issuers' investment-grade bonds, loans, and revolving credit facilities that are rated by S&P Global Ratings.

High yield maturity wall



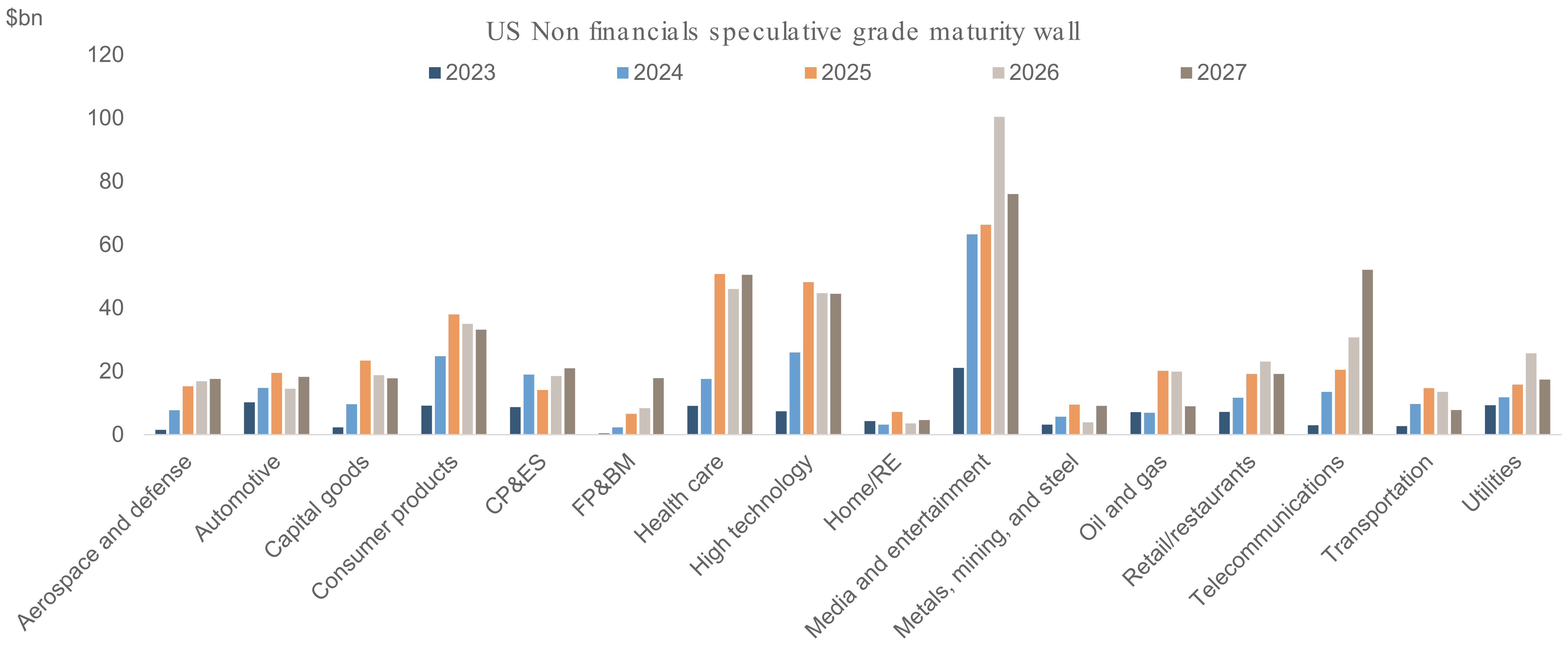
Source: S&P Global ratings Research, Apollo Chief Economist. Note: Data as of July 1, 2022. Includes issuers' speculative-grade bonds, loans, and revolving credit facilities that are rated by S&P Global Ratings.

IG: US Non financials maturity wall



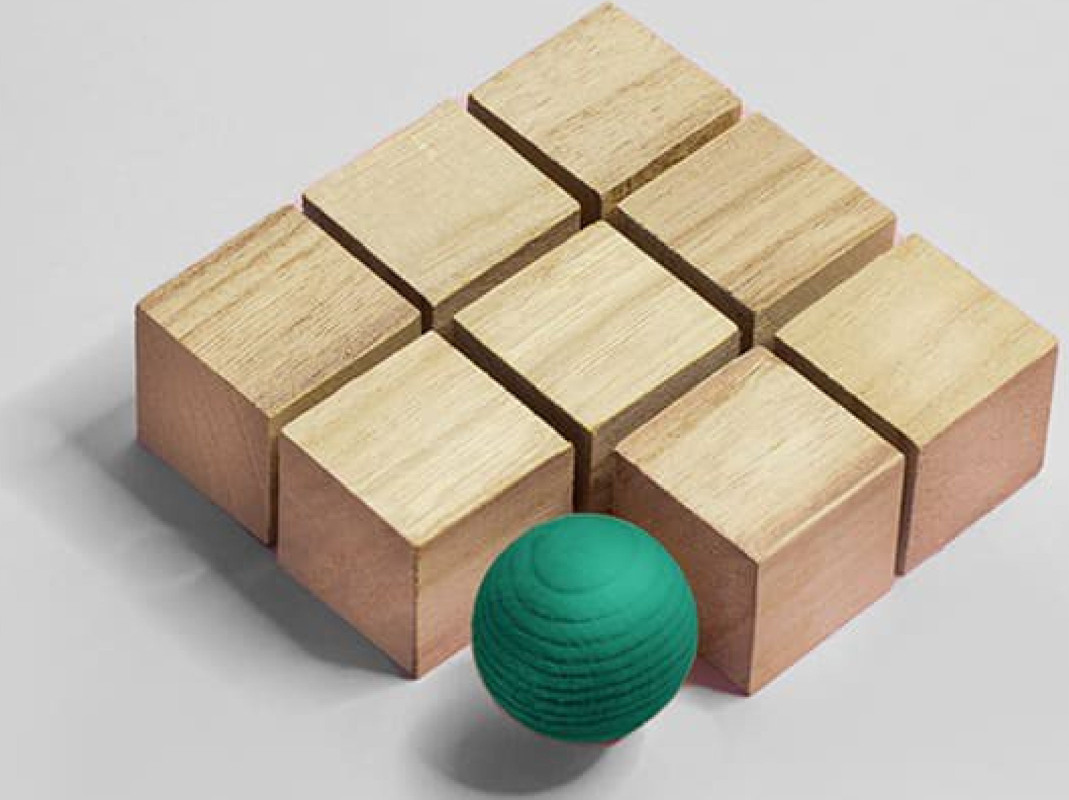
Source: S&P, Apollo Chief Economist. Note: CP&ES--Chemicals, packaging, and environmental services. FP&BM--Forest products and building materials. Media and entertainment includes the leisure sector. Includes bonds, loans, and revolving credit facilities that are rated by S&P Global Ratings. Data as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

HY: US Non financials maturity wall

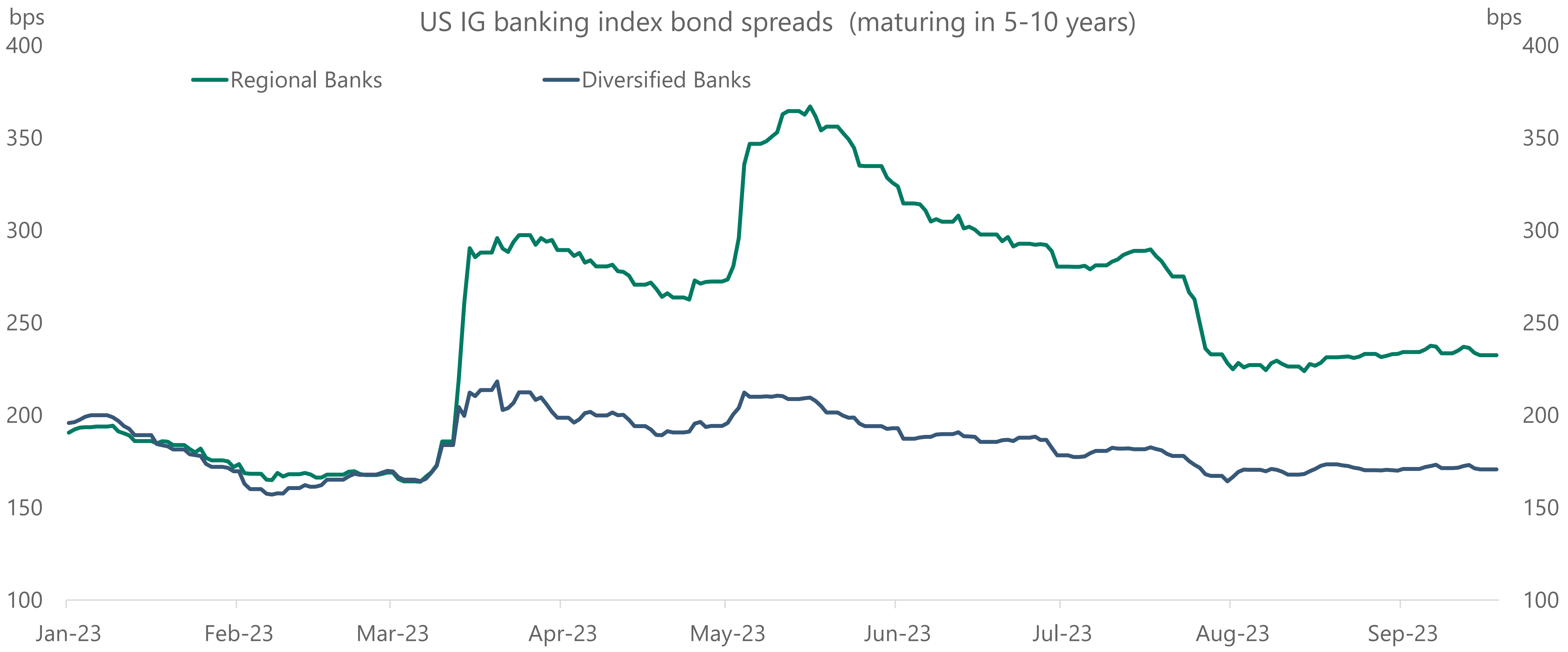


Source: S&P, Apollo Chief Economist. Note: CP&ES--Chemicals, packaging, and environmental services. FP&BM--Forest products and building materials. Media and entertainment includes the leisure sector. Includes bonds, loans, and revolving credit facilities that are rated by S&P Global Ratings. Data as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

Regional banks

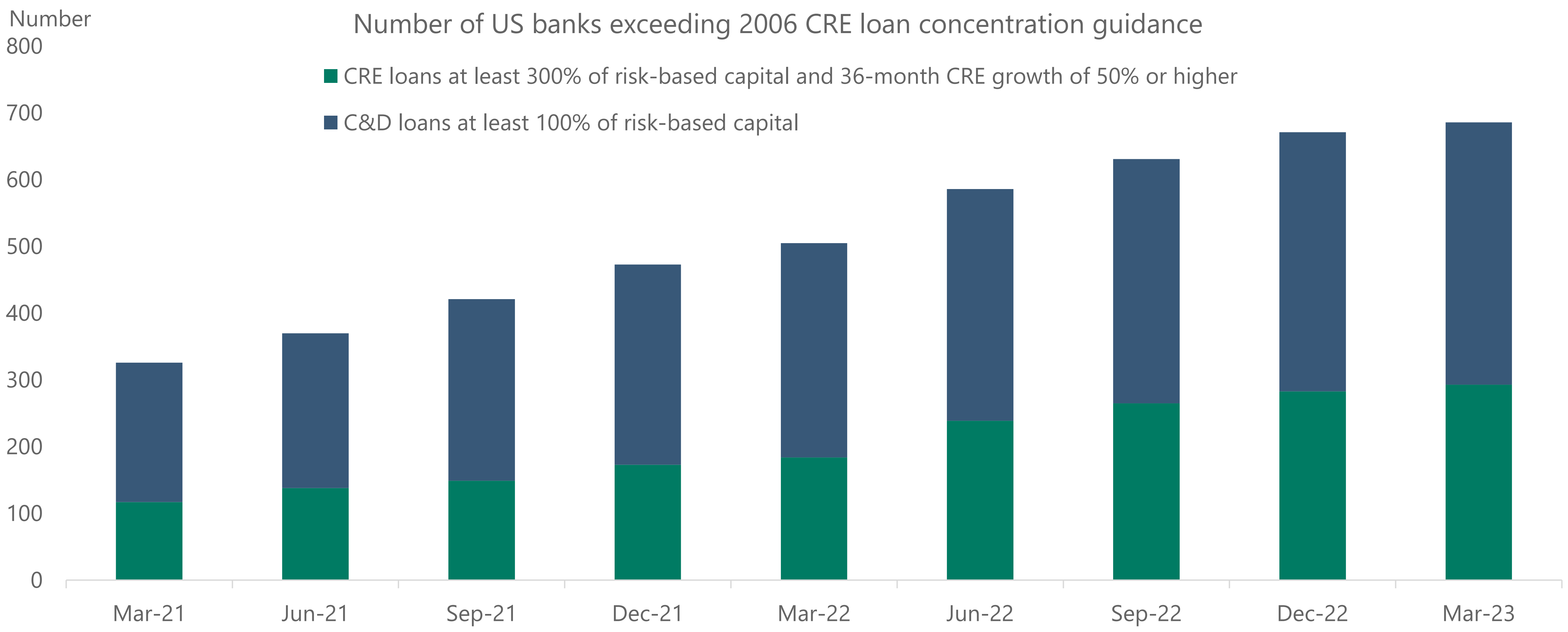


Regional bank spreads still wide



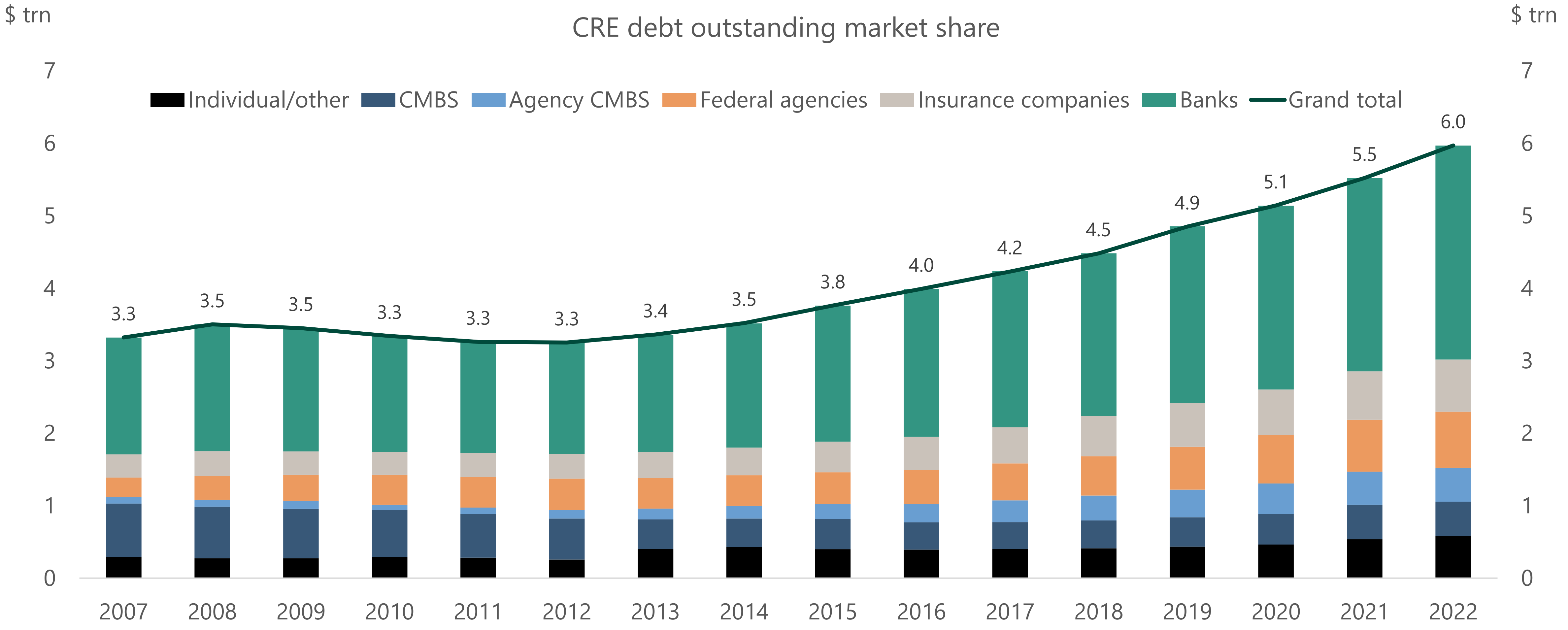
Source: ICE BofA, Bloomberg, Apollo Chief Economist. Note: Unweighted average spreads of bonds from ICE 5-10 Year US Banking Index, C6PX Index for bonds issued before 1st Jan 2023. There are 8 banks in the Regional index and 41 banks in the Diversified index, and Regional banks include BankUnited Inc, 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



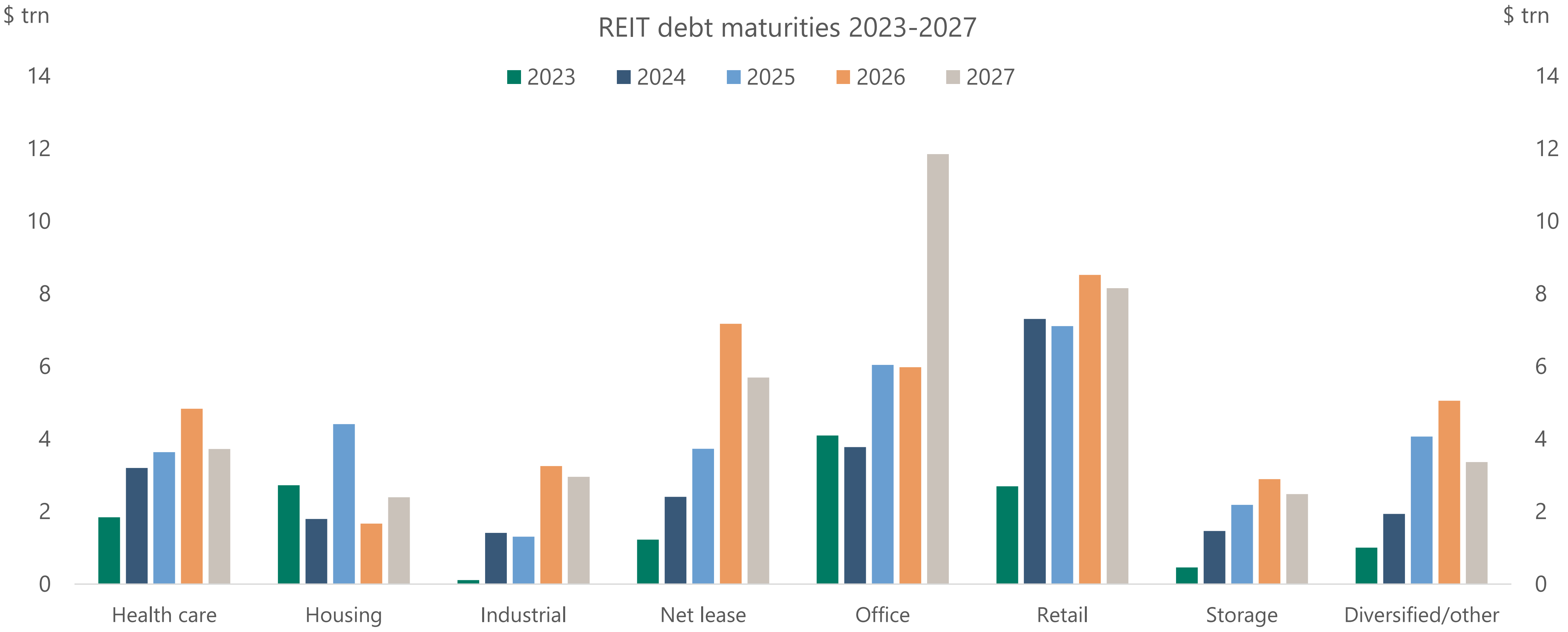
Source: S&P Global Market Intelligence, Apollo Chief Economist. Note: C&D = Construction and Development, data as of May 2023 and based on regulatory filings

US banks account for the bulk of CRE lending



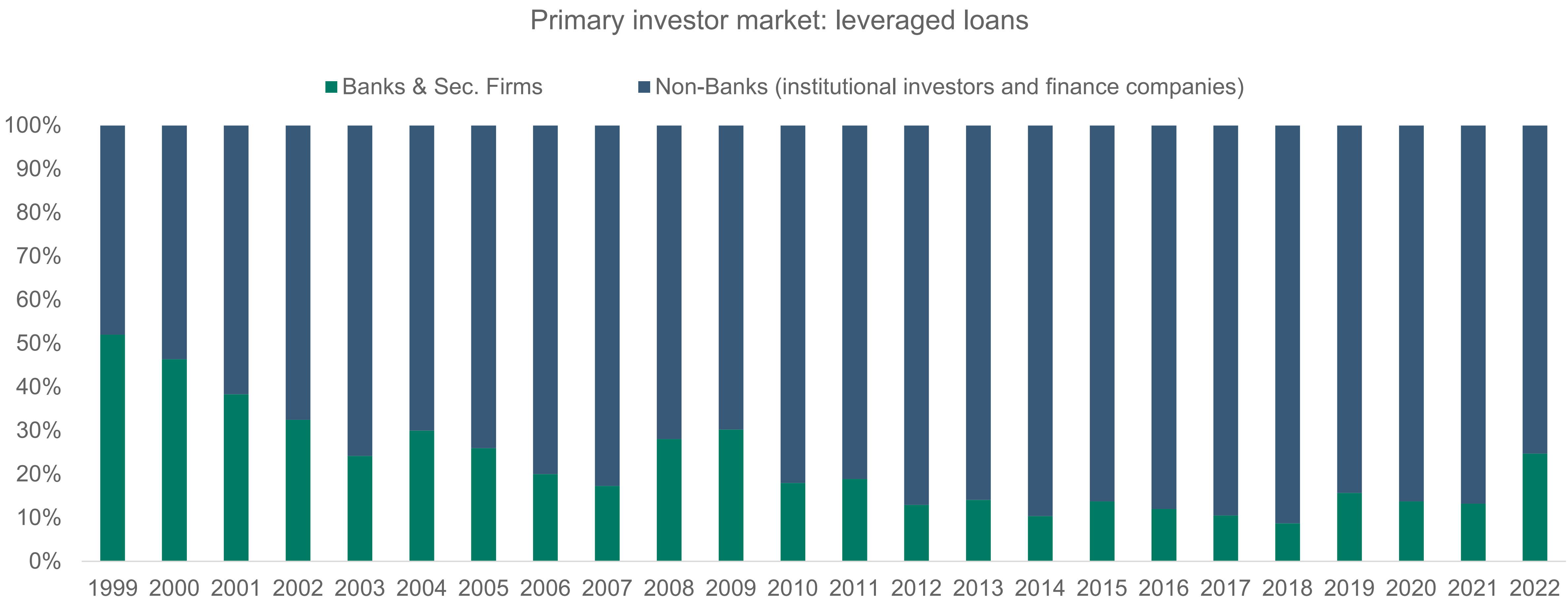
Source: S&P Capital IQ, Apollo Chief Economist

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



Source: S&P Capital IQ, Apollo Chief Economist

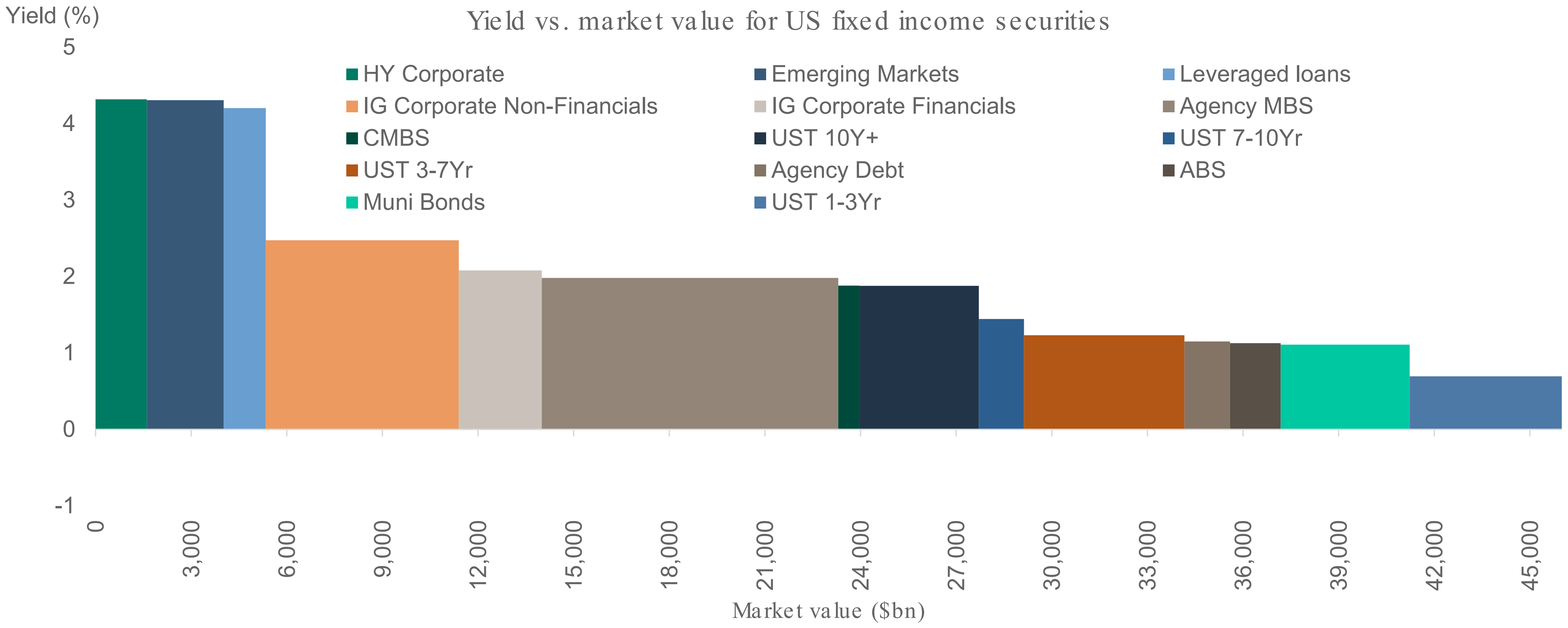
More leveraged loans are held by banks



Source: Pitchbook LCD, Apollo Chief Economist

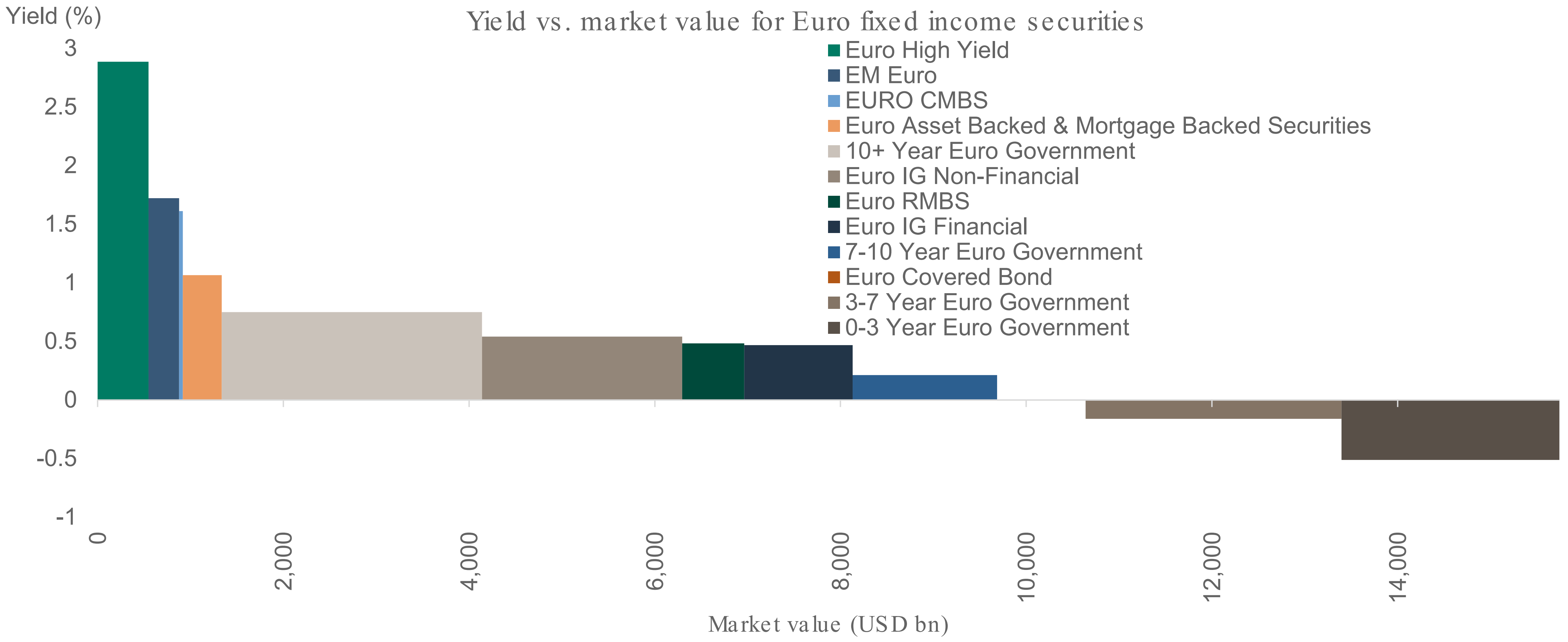
Credit markets in a broader perspective

US fixed income markets by yield and size



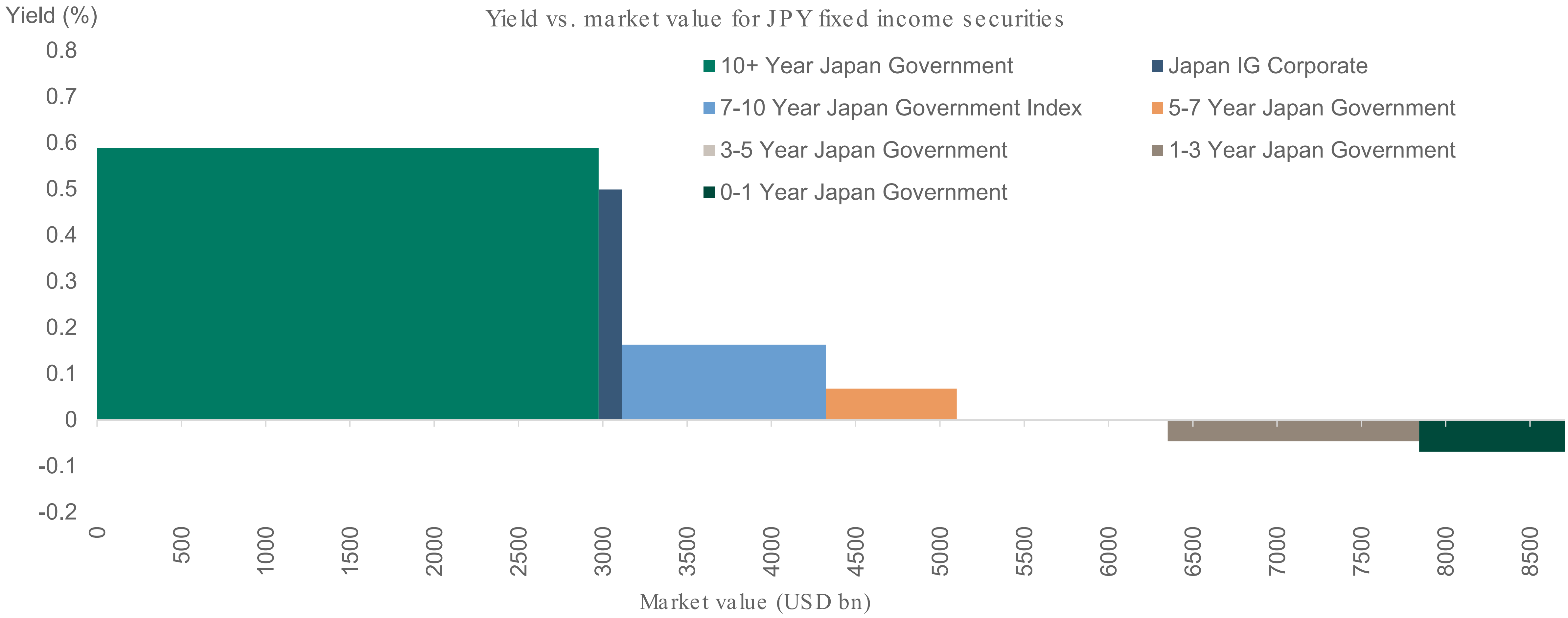
Source: Bloomberg Barclays, SIFMA, ICE BofA, Pitchbook LCD, Bloomberg, Apollo Chief Economist. Note: data as of 4Q21

European fixed income markets by yield and size



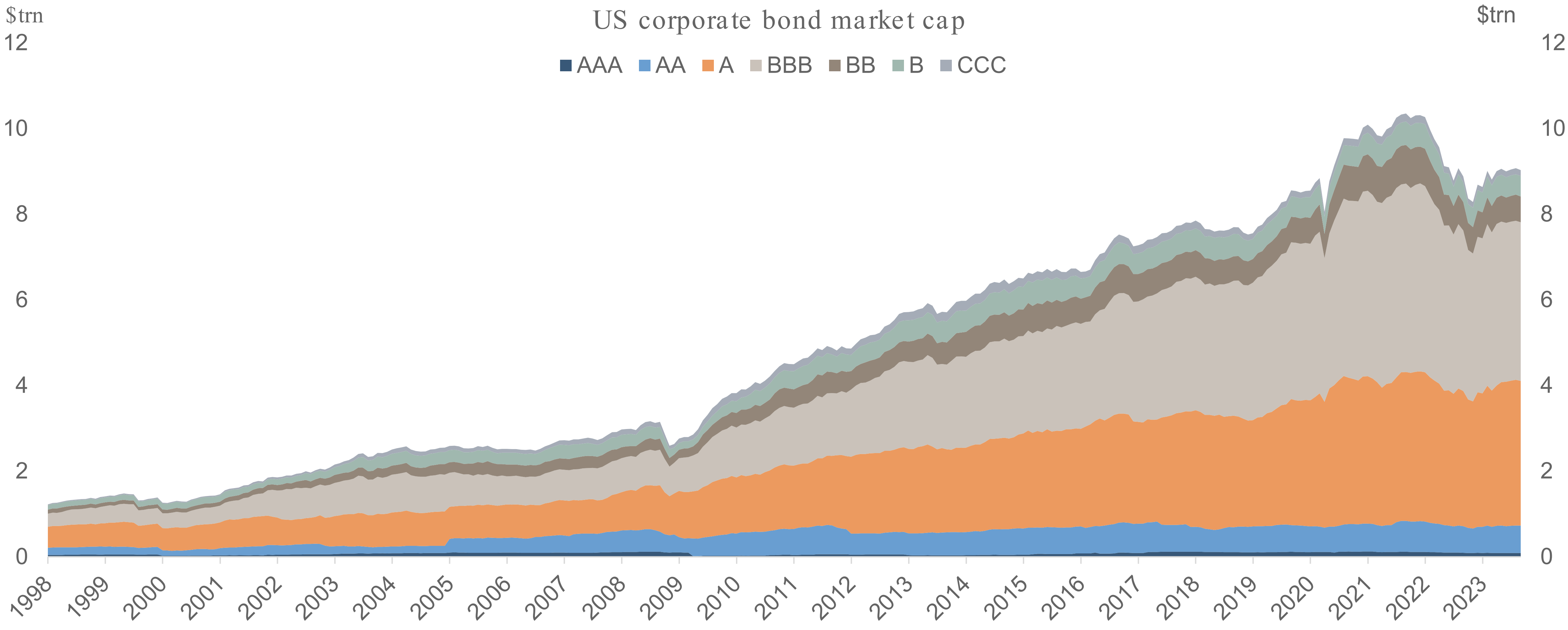
Source: Bloomberg Barclays, AFME, ICE BofA, Pitchbook LCD, Bloomberg, Apollo Chief Economist. Note: data as of 4Q21

Japanese fixed income markets by yield and size



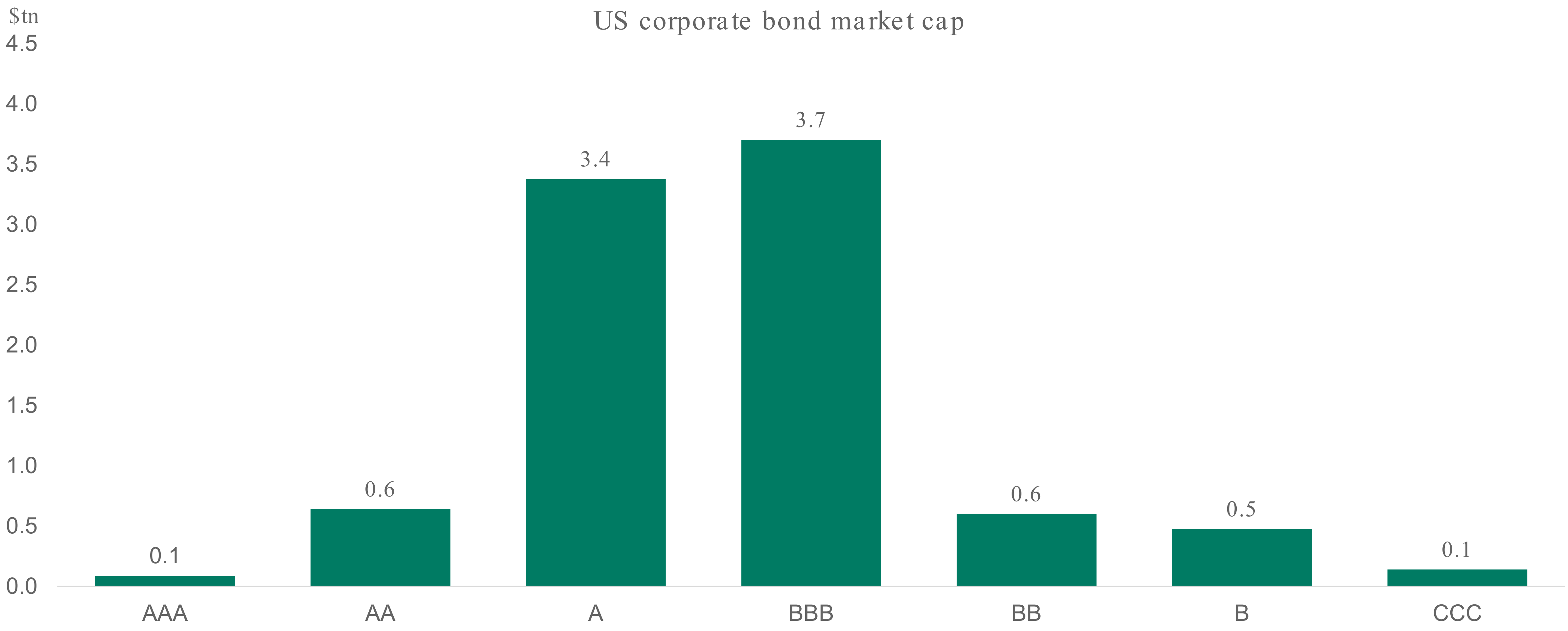
Source: ICE BofA, Bloomberg, Apollo Chief Economist. Data as of 1Q22

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



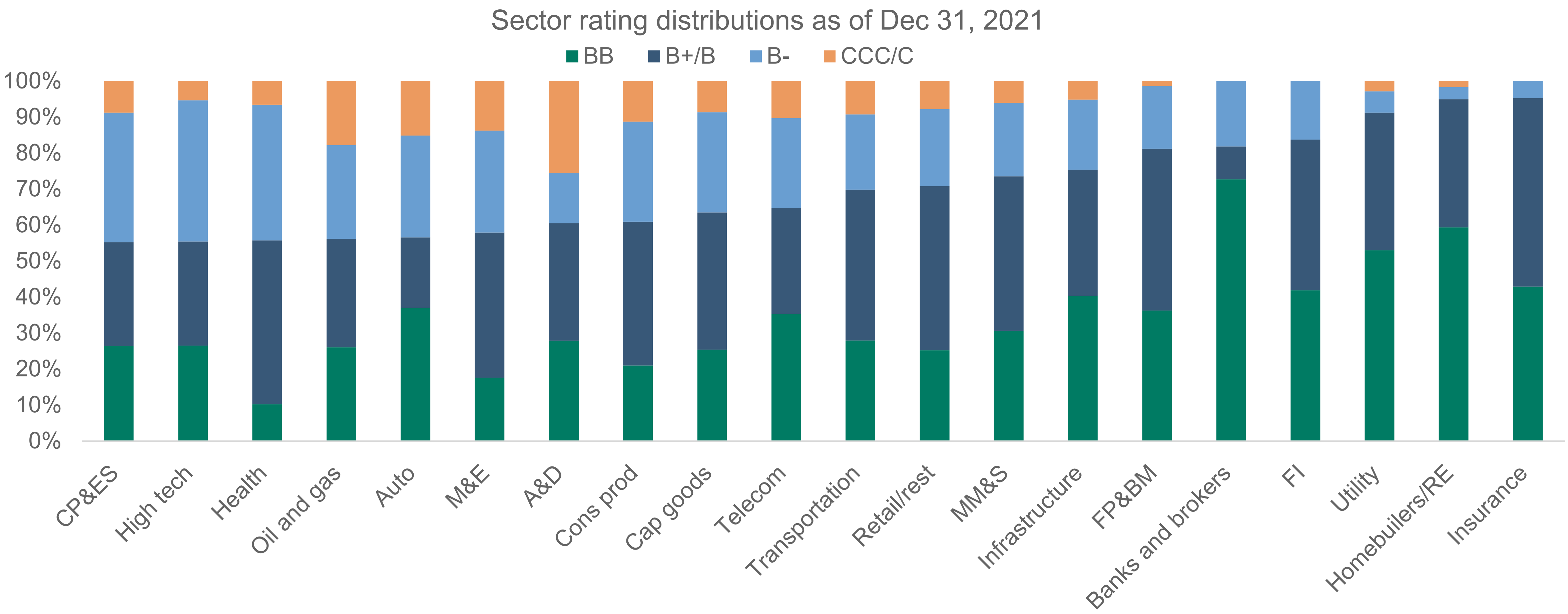
Source: ICE BofA, Bloomberg, Apollo Chief Economist.

Corporate bond market cap, by rating



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

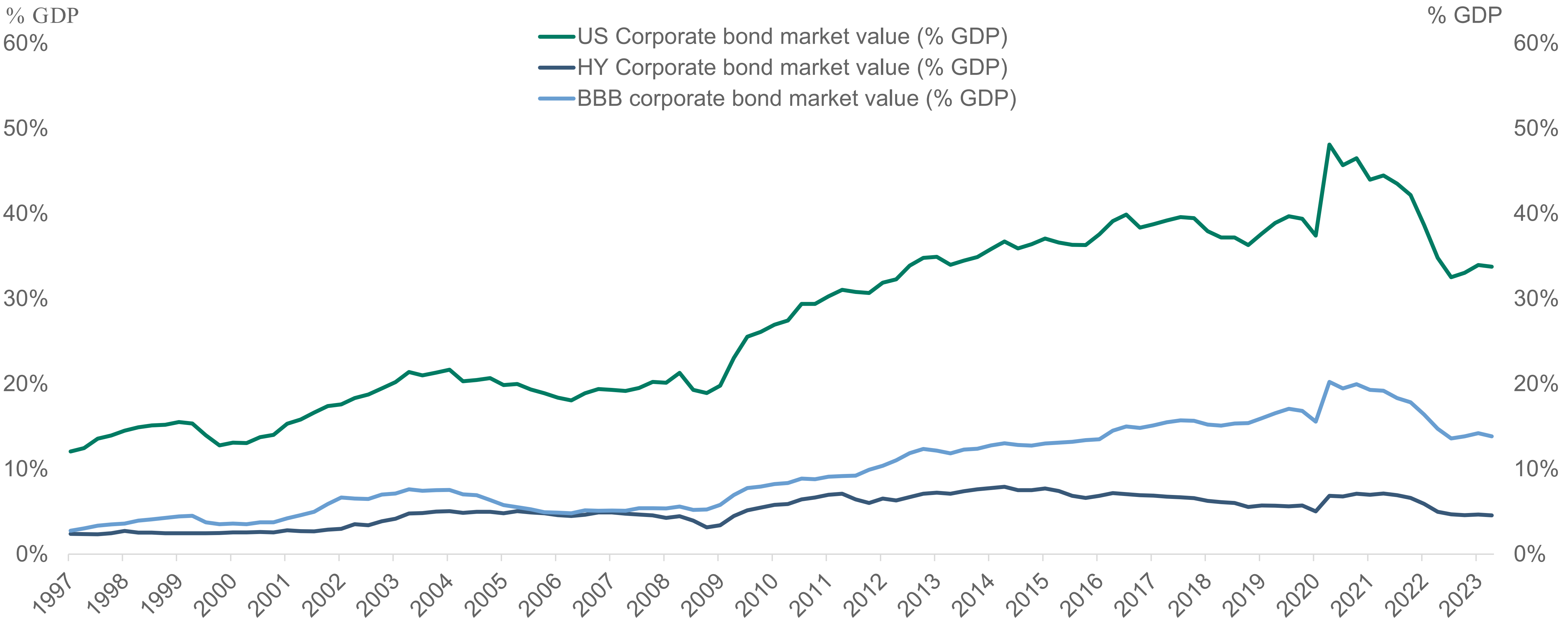
HY sector rating distributions



Source: S&P Global Ratings Research and S&P Global Market Intelligence's CreditPro®., Apollo Chief Economist. Note: Numbers in parentheses represent overall sector's proportion of the speculative-grade population. CP&ES--Chemicals, packaging, and environmental services. FP&BM--Forest products and building materials. Home/RE--Homebuilders and real estate companies.

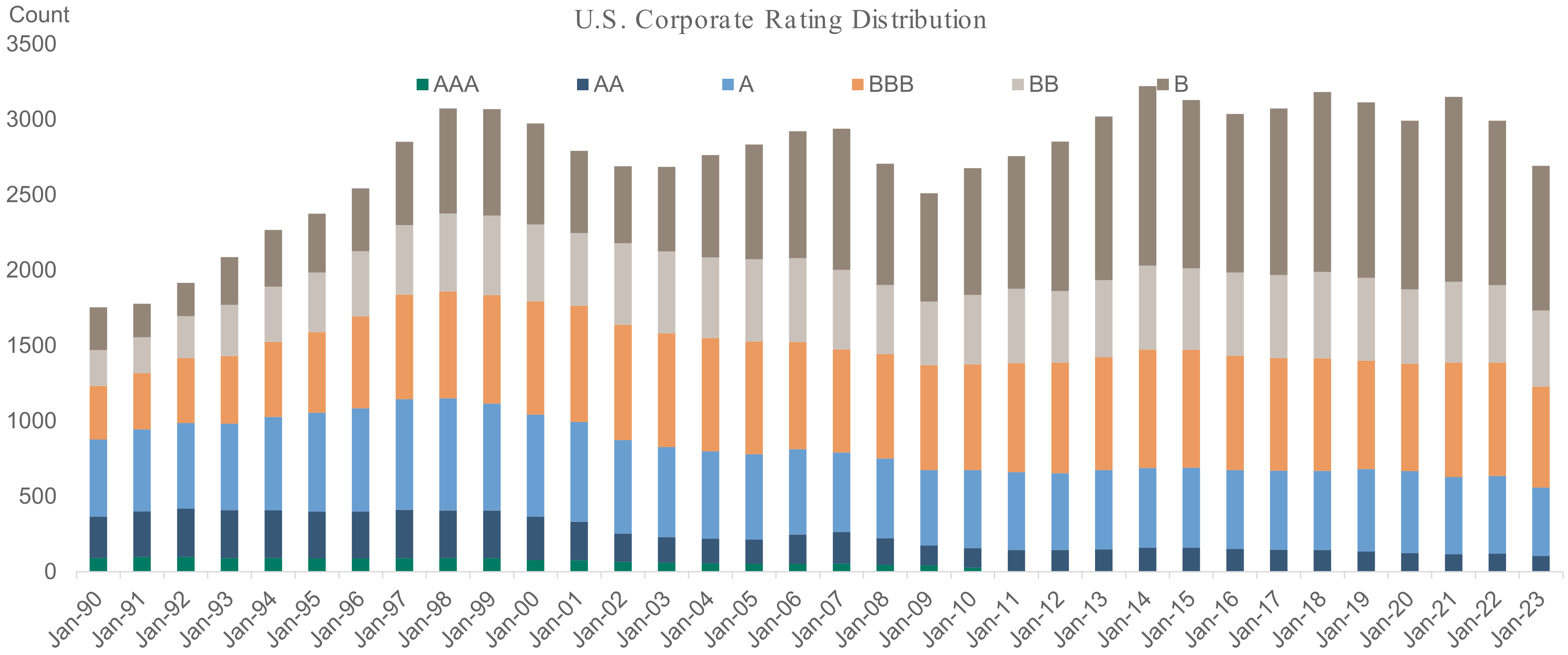
APOLLO

US corporate bond markets as a share of GDP



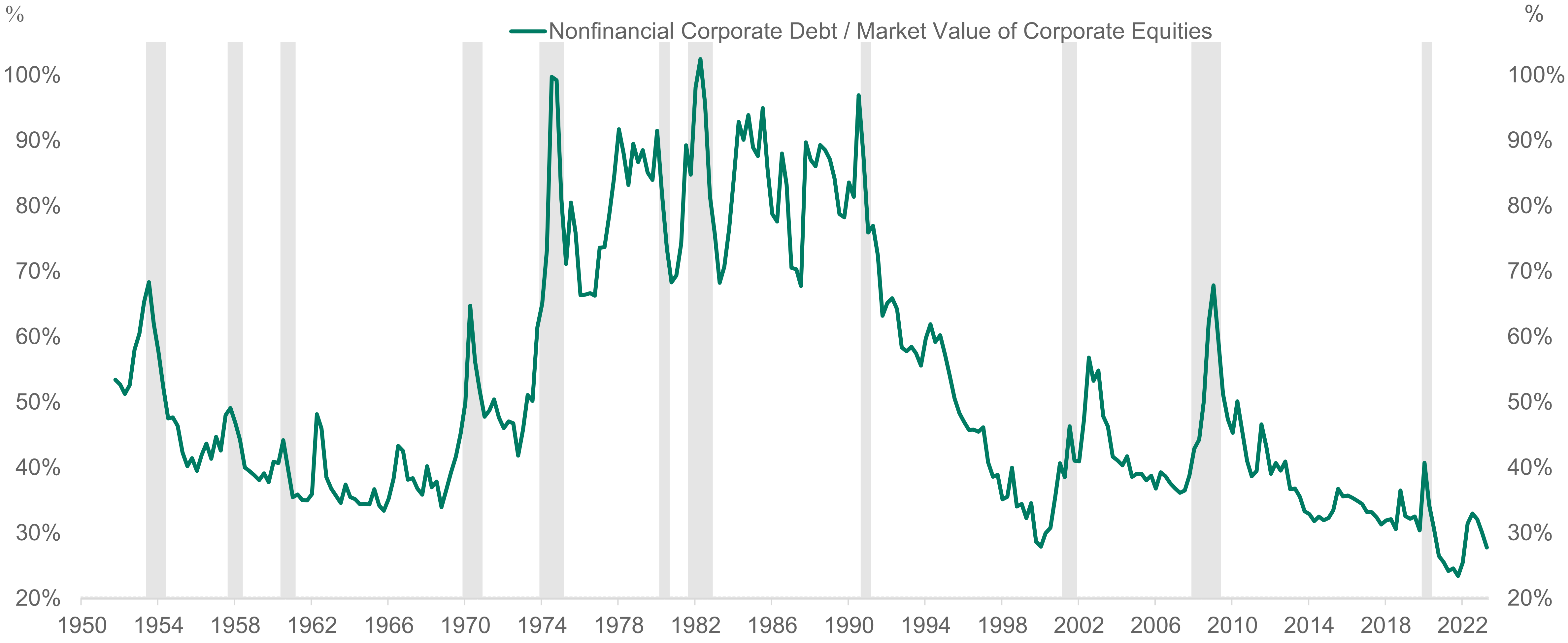
Source: ICE BofA, BEA, Haver Analytics, Bloomberg, Apollo Chief Economist

Distribution of corporate credit ratings



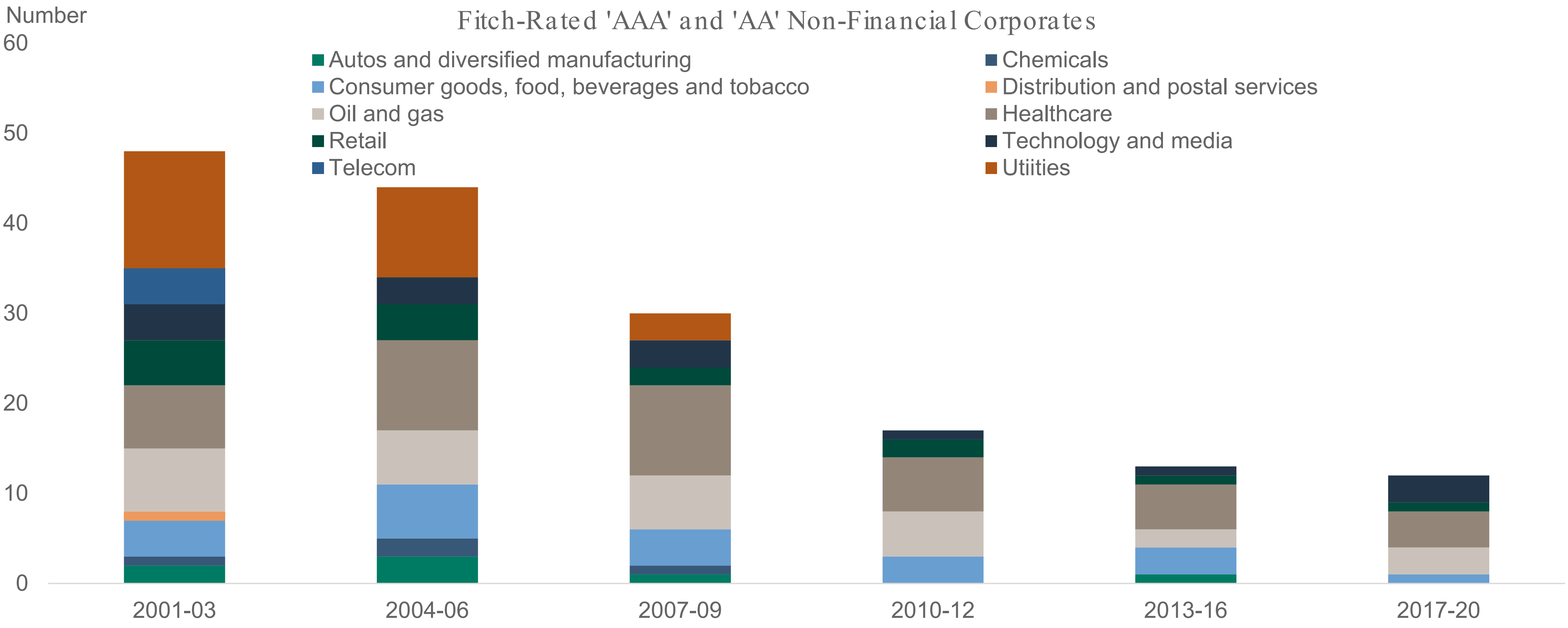
Source: S&P, Apollo Chief Economist

Debt-to-equity ratio is very low for corporate America



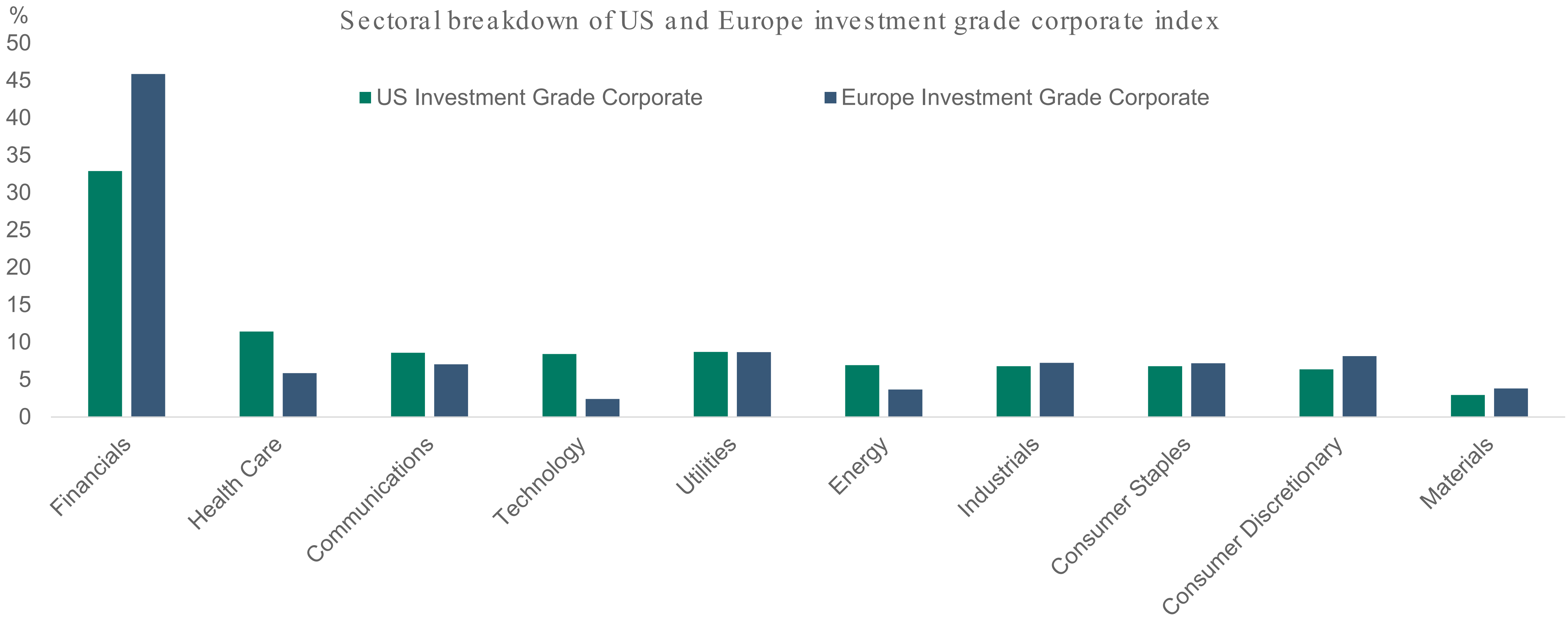
Source: FRB, Haver Analytics, Apollo Chief Economist.

Fewer and fewer corporate bonds are rated AAA and AA



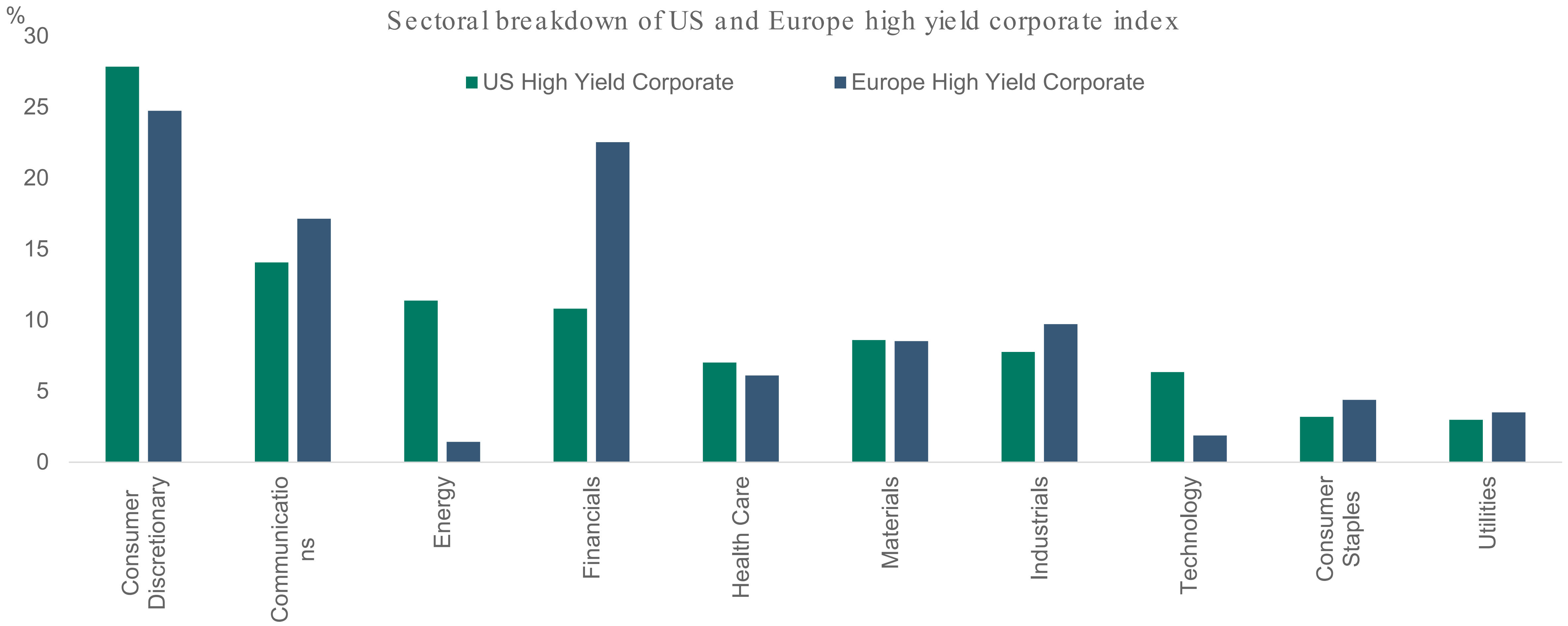
Source: Fitch Ratings, Apollo Chief Economist. Note: Including state-linked issuers with Standalone Credit Profiles in the 'AA' category. Data cover issuers that have been rated for at least six years or at end-2020.

Comparing the US IG index with the EU IG index



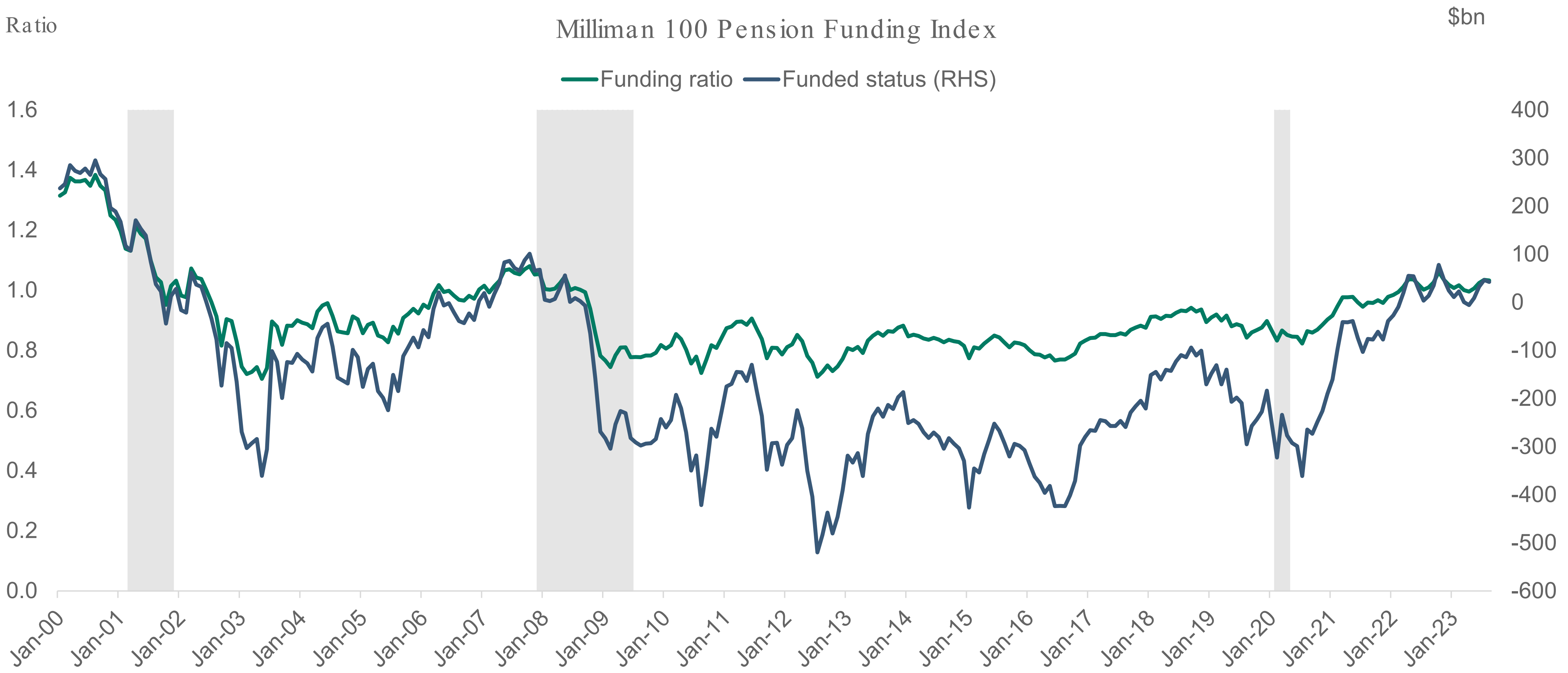
Source: Bloomberg Barclays, Bloomberg, Apollo Chief Economist.

Comparing the US HY index with the EU HY index



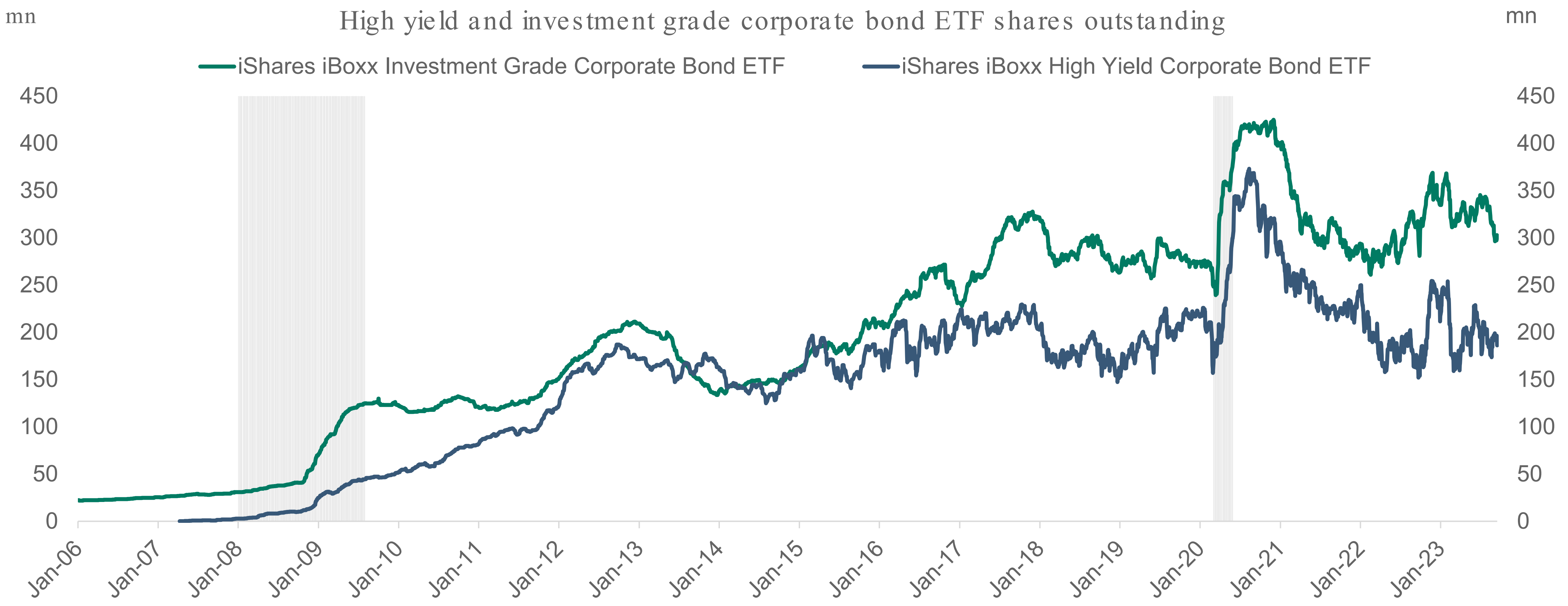
Source: Bloomberg Barclays, Bloomberg, Apollo Chief Economist.

Pension funding status has improved



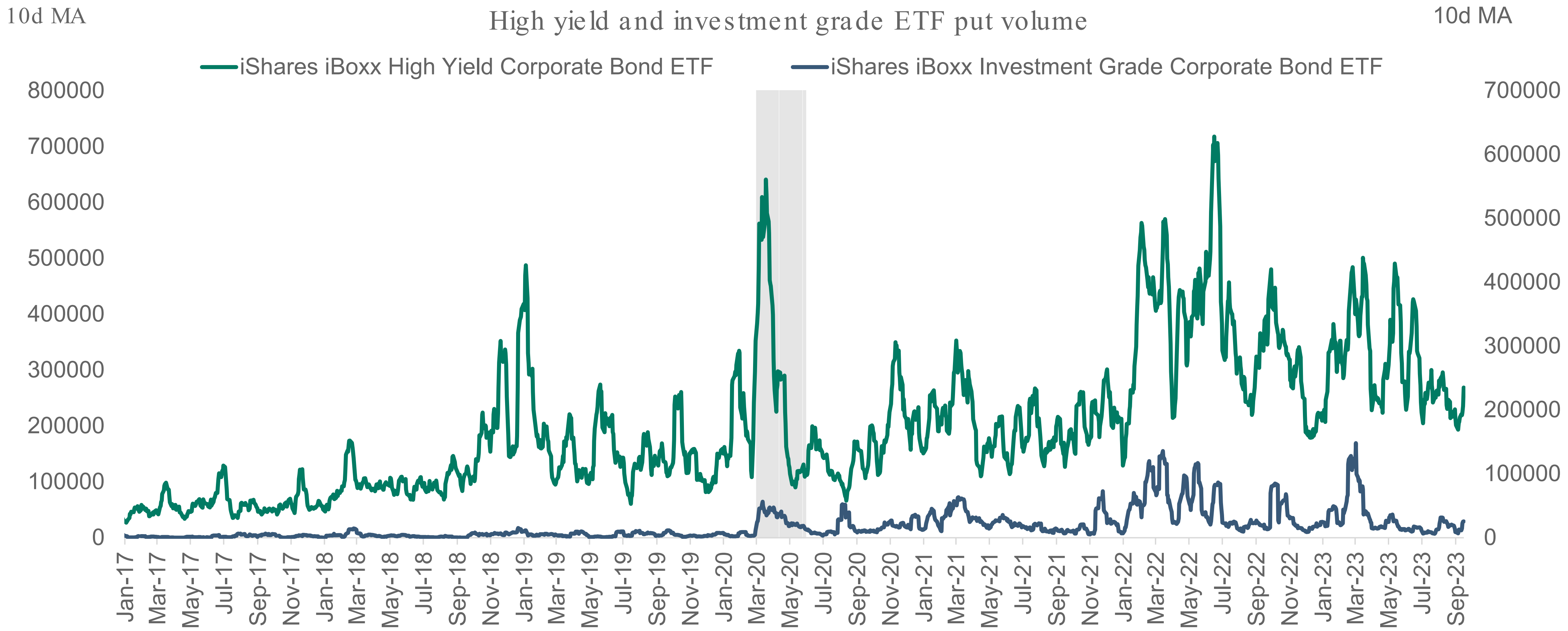
Source: Milliman, Bloomberg, Apollo Chief Economist. Note: Funded status measures planned assets minus projected benefit obligation

Retail investor activity in IG and HY



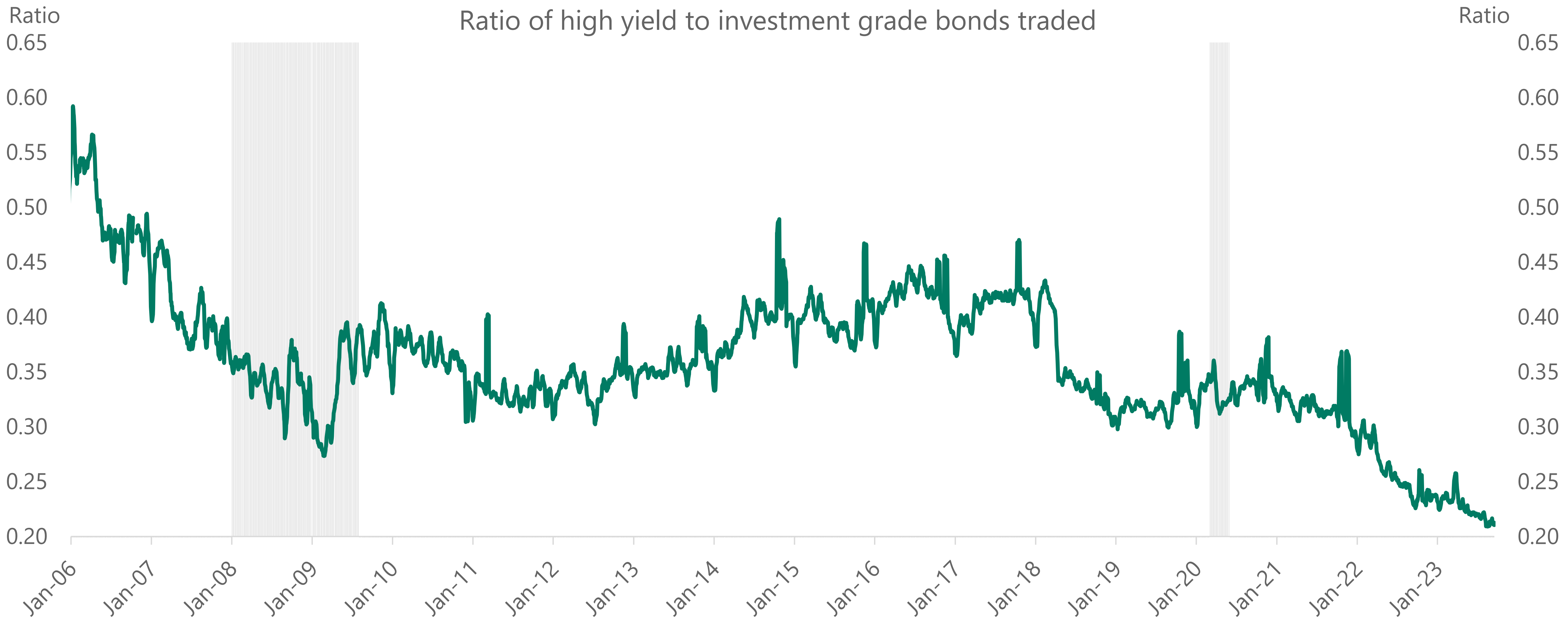
Source: Bloomberg, Apollo Chief Economist. Note: Tickers used HYG US Equity and LQD US Equity

Put volumes for IG and HY ETF



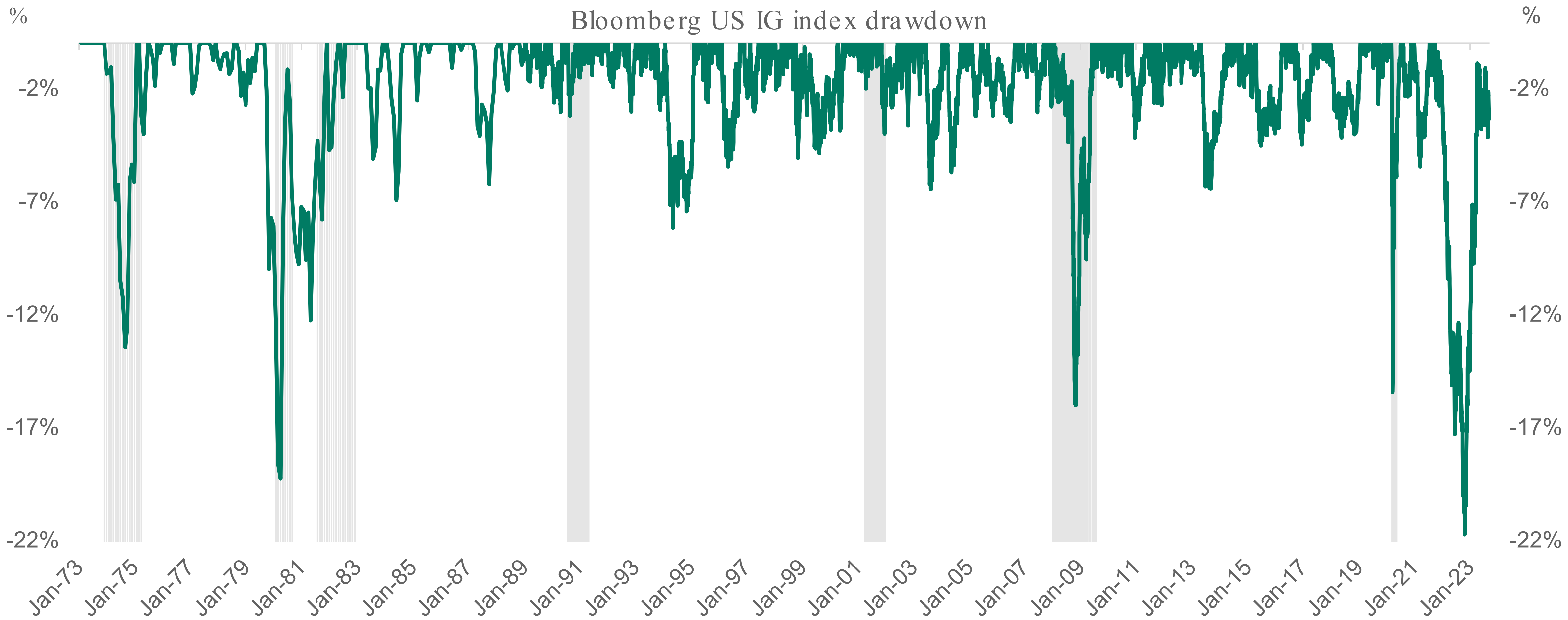
Source: Bloomberg, Apollo Chief Economist

Fewer high yield bonds being traded



Source: FINRA Trace, Bloomberg, Apollo Chief Economist

IG index drawdown



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

Bonds outstanding trading at negative interest rates

Source: Bloomberg, Apollo Chief Economist

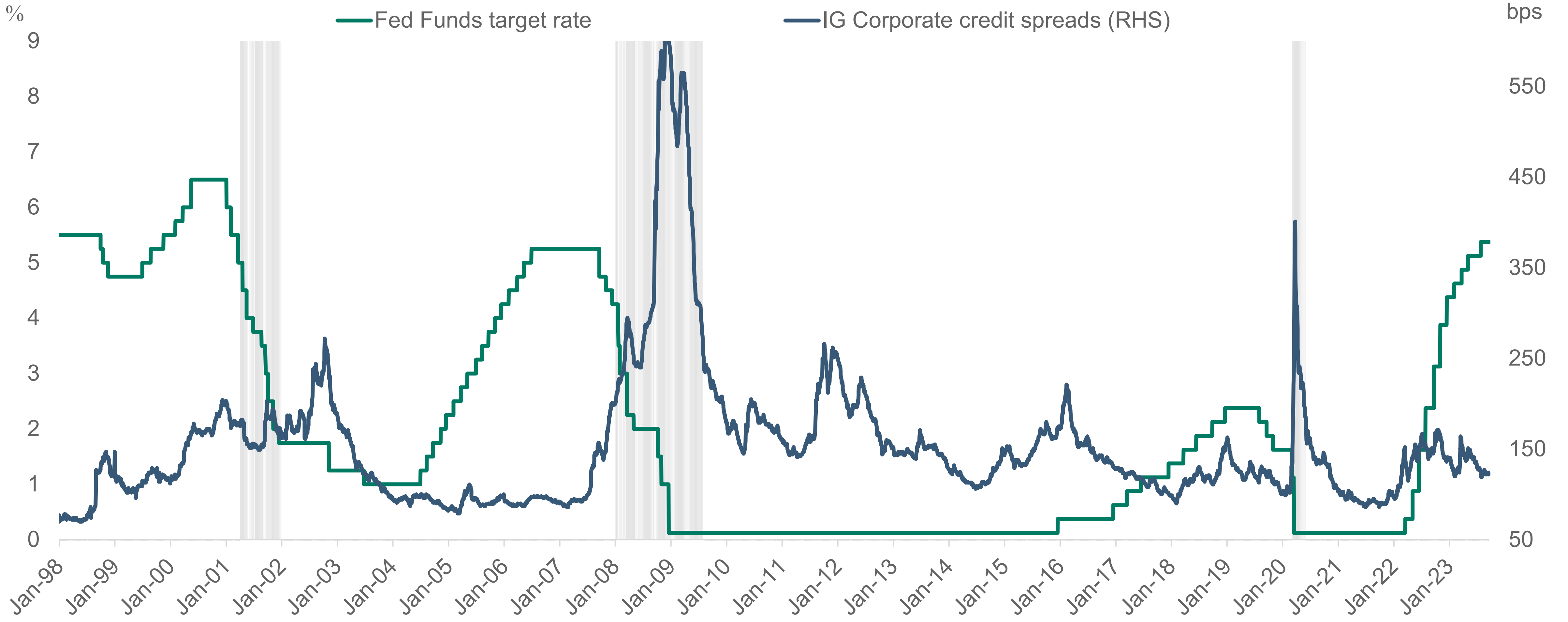
The total value of negative yielding debt in the world

Source: Bloomberg, Apollo Chief Economist

All corporate bonds now have positive yields

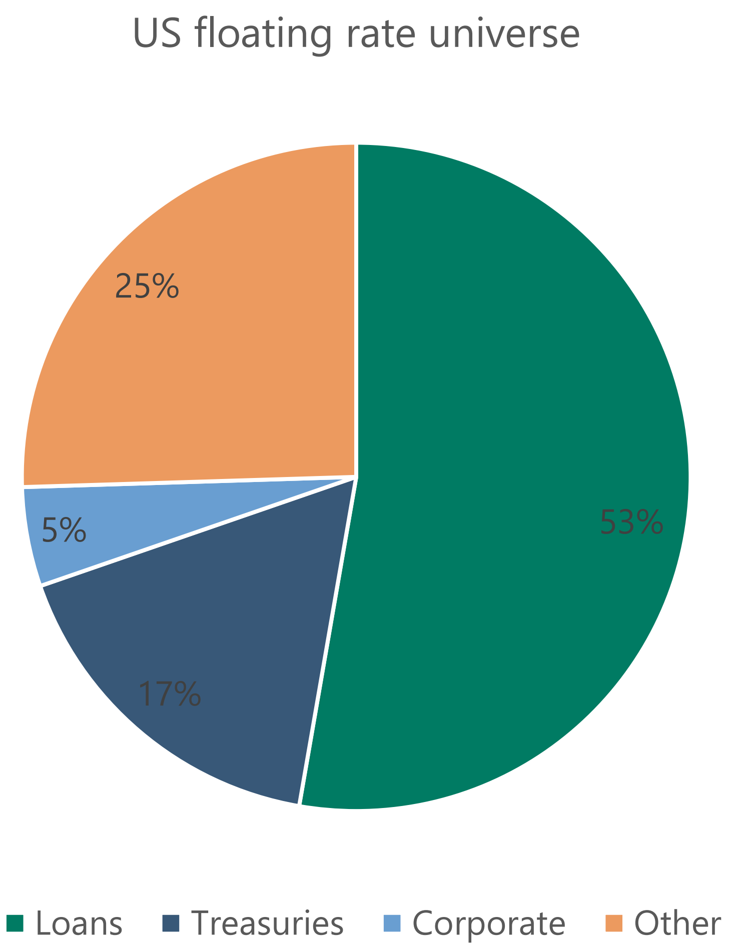
Source: Bloomberg, Apollo Chief Economist

Credit spreads normally widen when the Fed is hiking



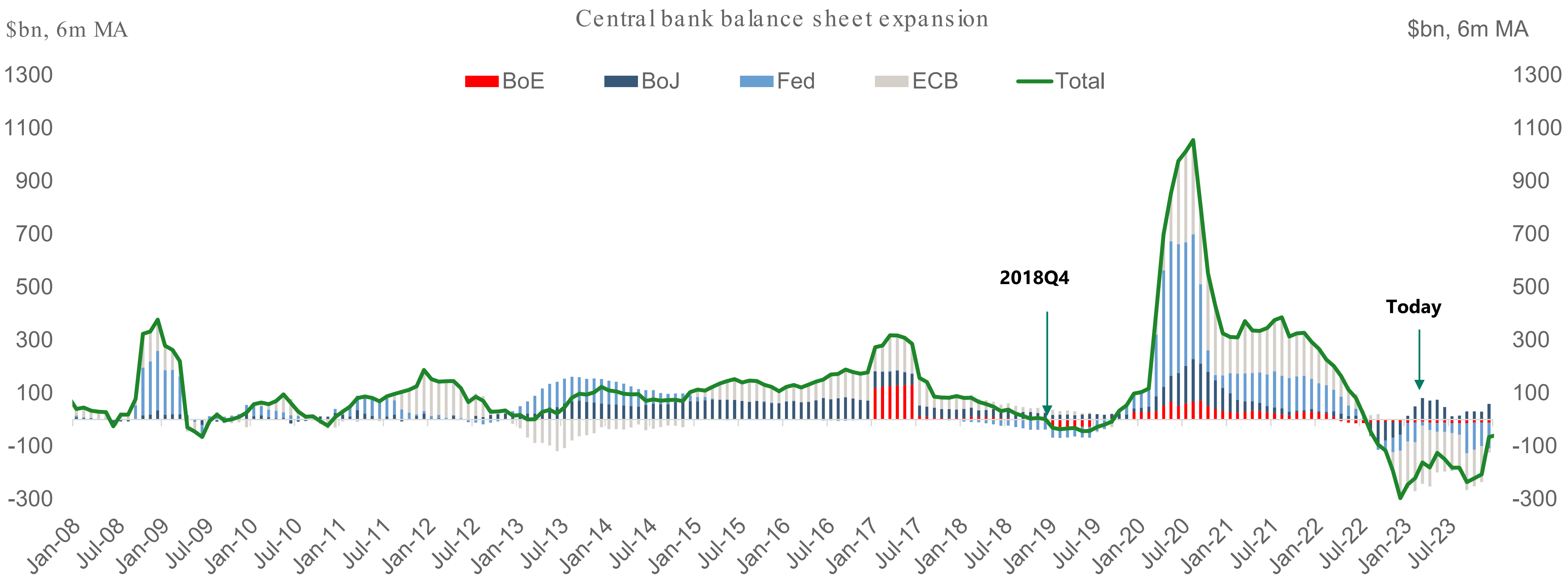
Source: Bloomberg, Apollo Chief Economist

US: Floating rate bonds outstanding, September 2023



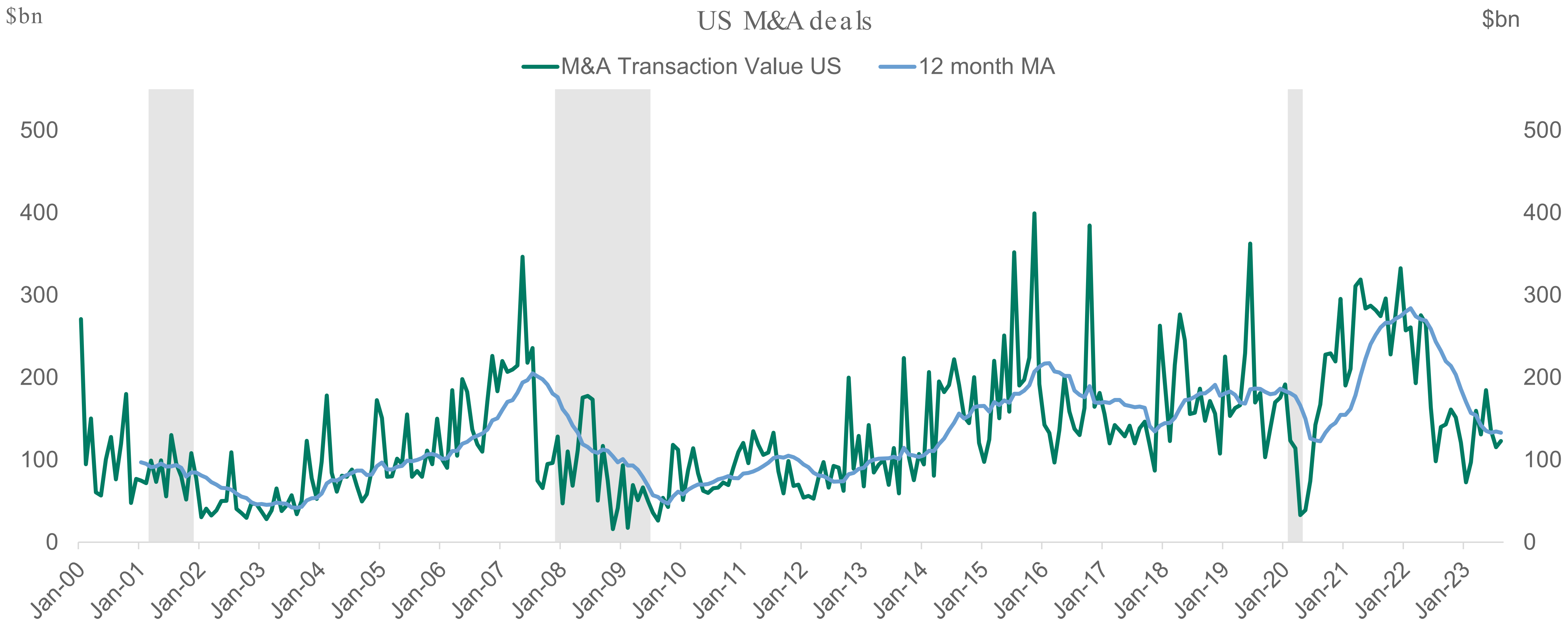
Source: Bloomberg, Apollo Chief Economist. Note: Other includes Munis, Agency and Securitized. The chart filters floating rate securities for all asset class from the fixed income SRCH <GO> screen on Bloomberg.

From QE to QT



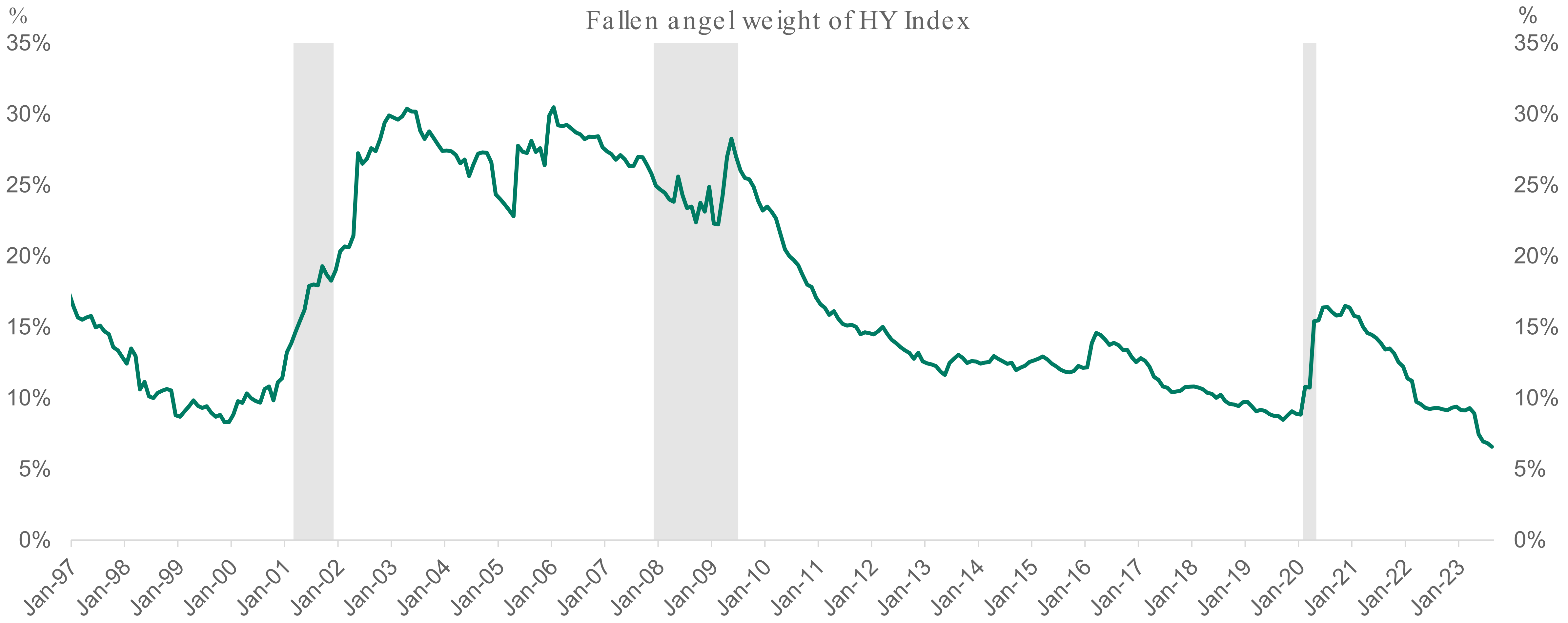
Source: Bloomberg, Apollo Chief Economist. Pace of purchases for 2021: BOE: £3.4bn per week till mid December 2021, FED: USD120bn per month with wind down from December with purchases ending in March 2022, ECB: Euro 90bn per month (20 bn APP + 60 bn PEPP), PEPP till March 2022, Euro 40bn in April, Euro 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



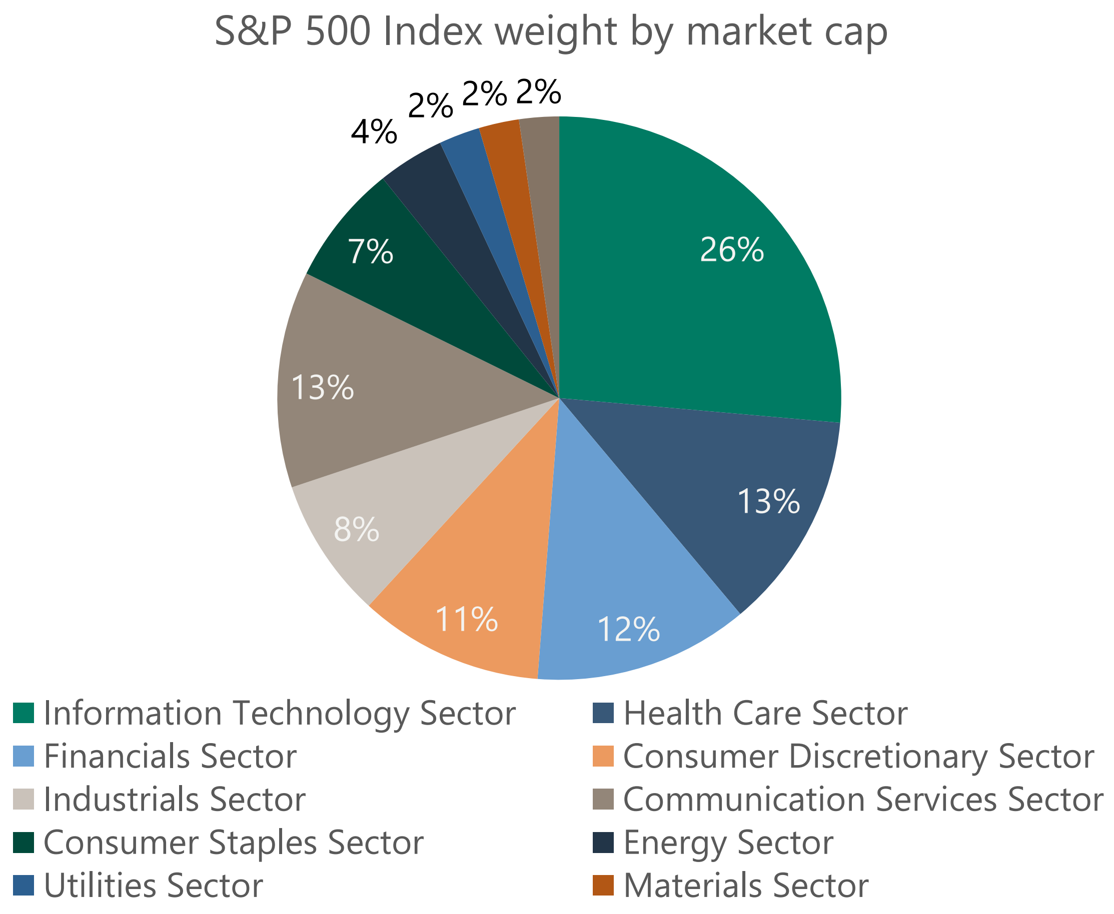
Source: Bloomberg, Apollo Chief Economist. Note: Ticker used is MAATUS Index

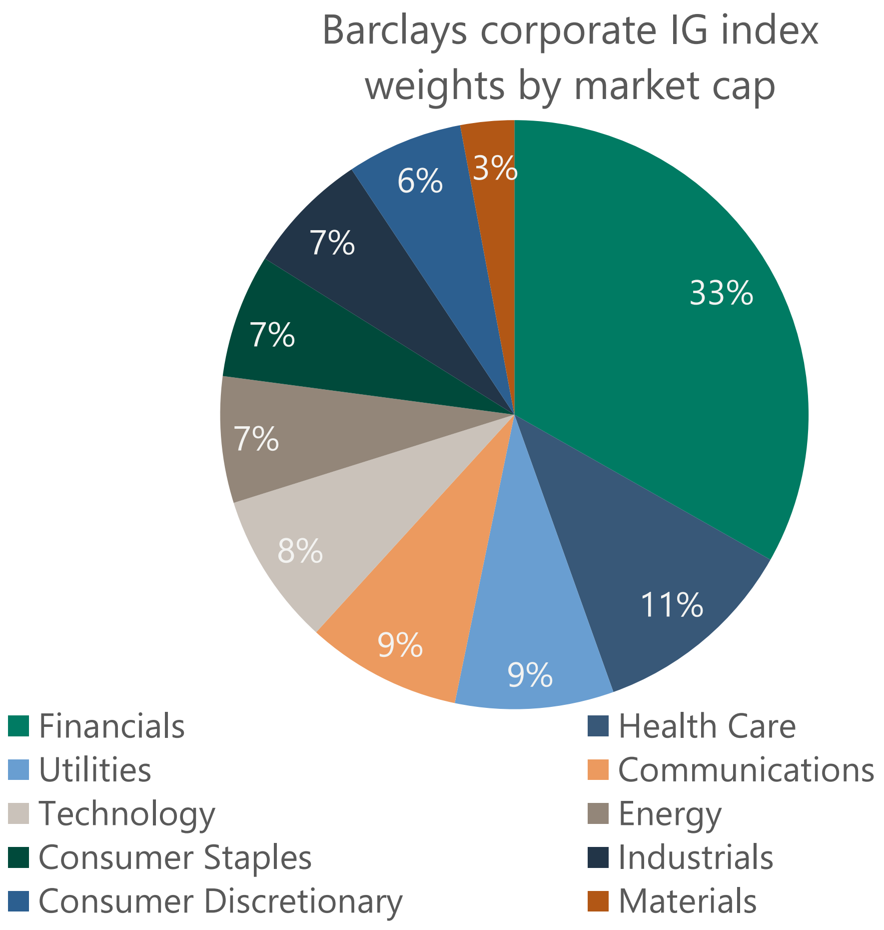
Declining share of fallen angels in the HY index



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

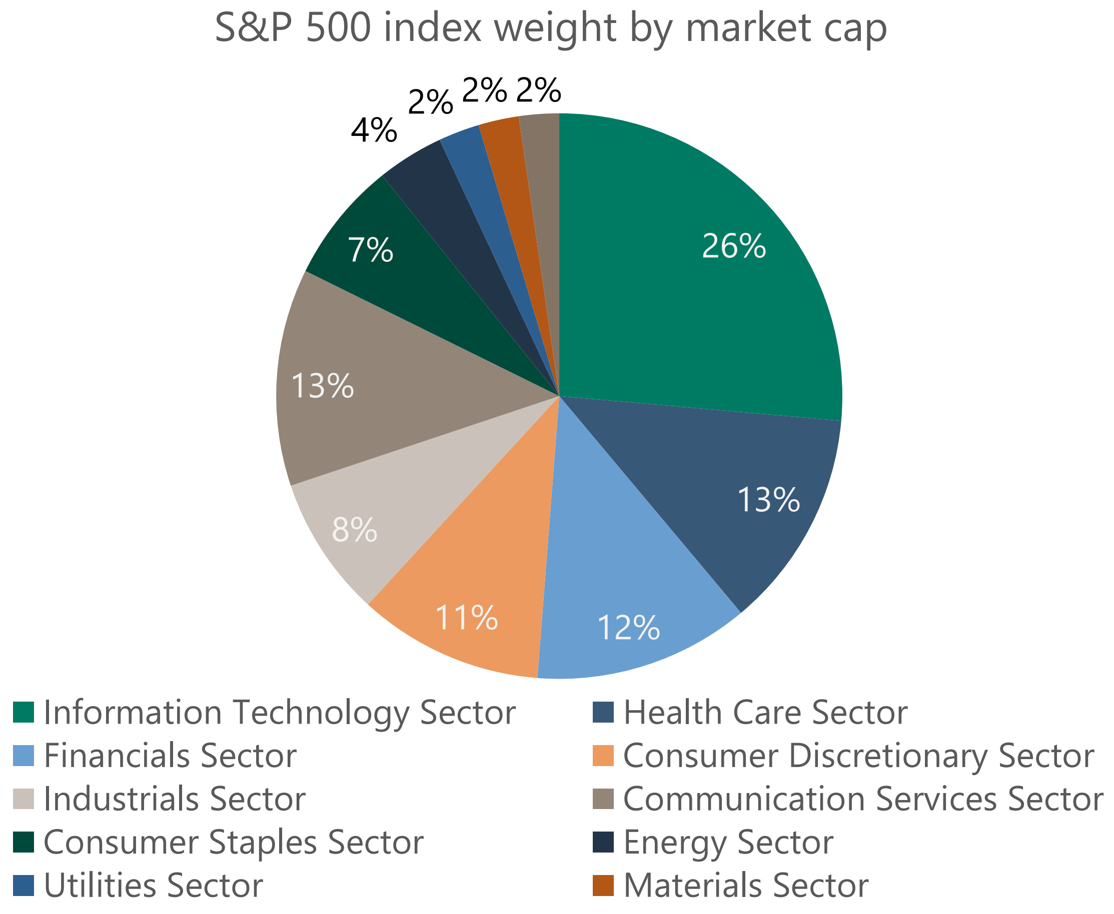
Big differences between weights in the S&P500 and the IG index

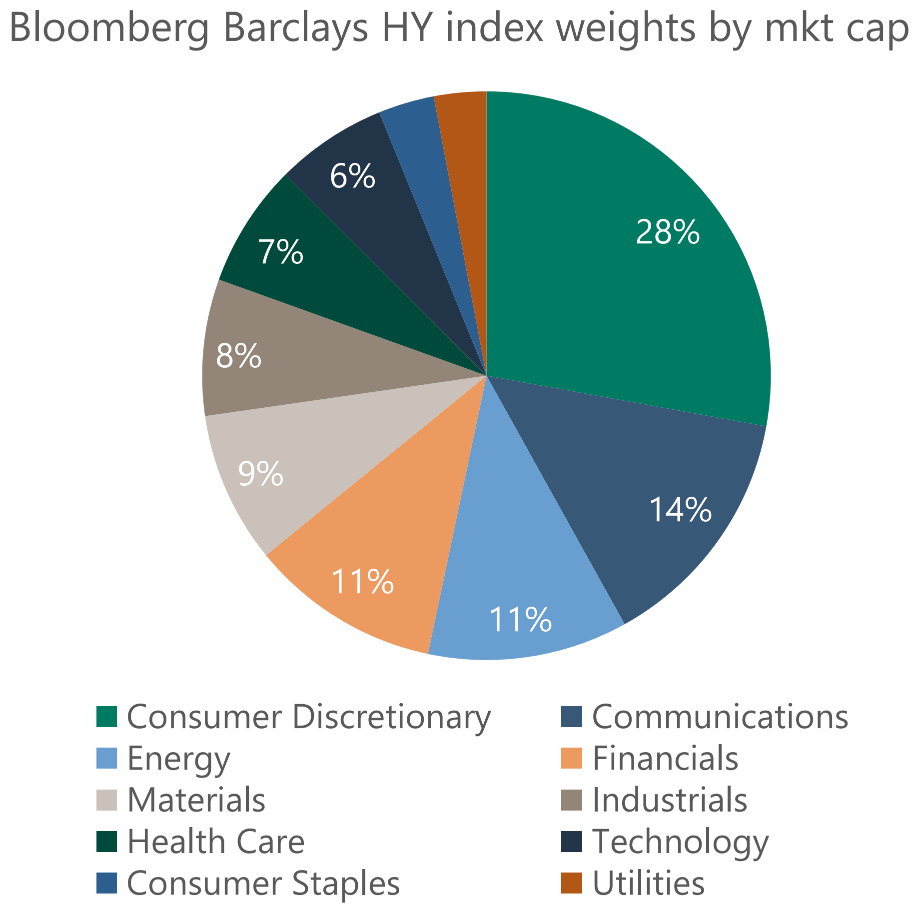




Note: Source: Bloomberg, Apollo Chief Economist

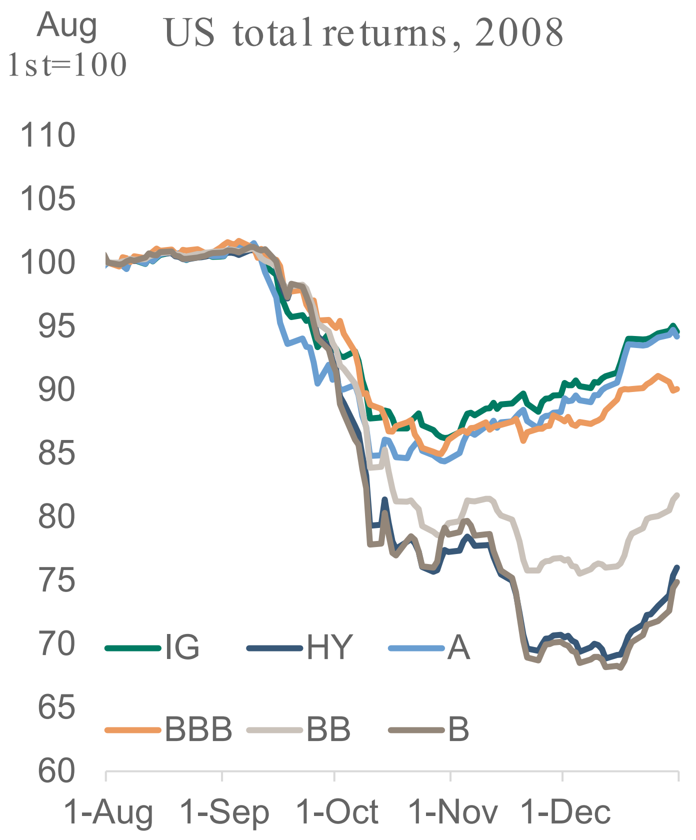
Big differences between weights in the S&P500 and the HY index

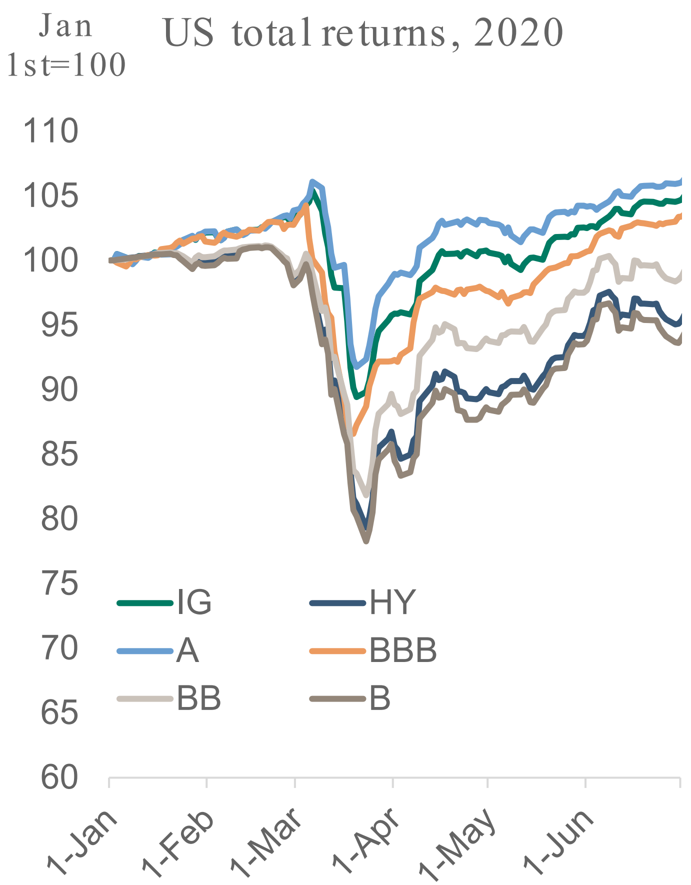


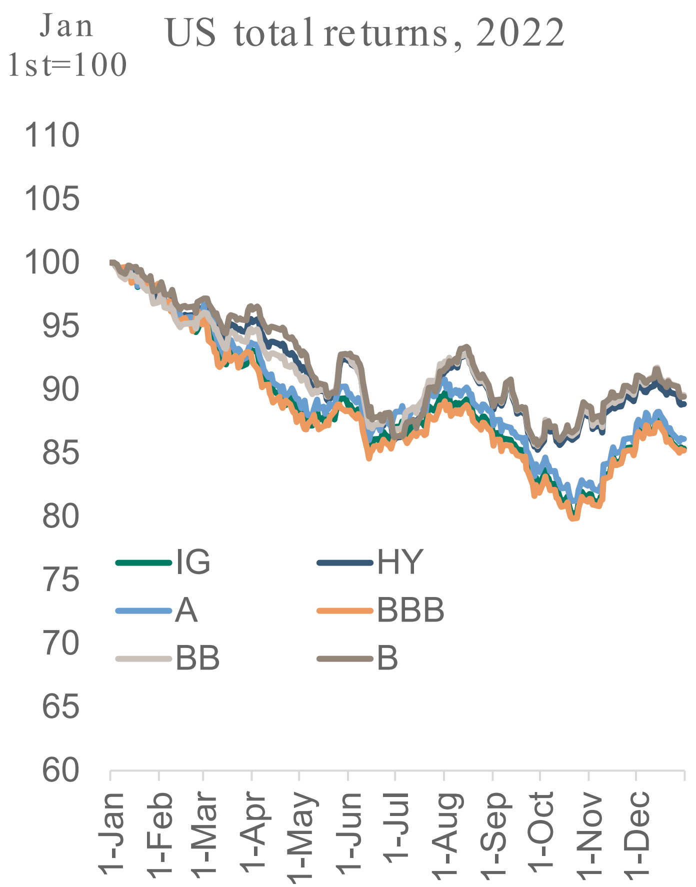


Note: Source: Bloomberg, Apollo Chief Economist

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

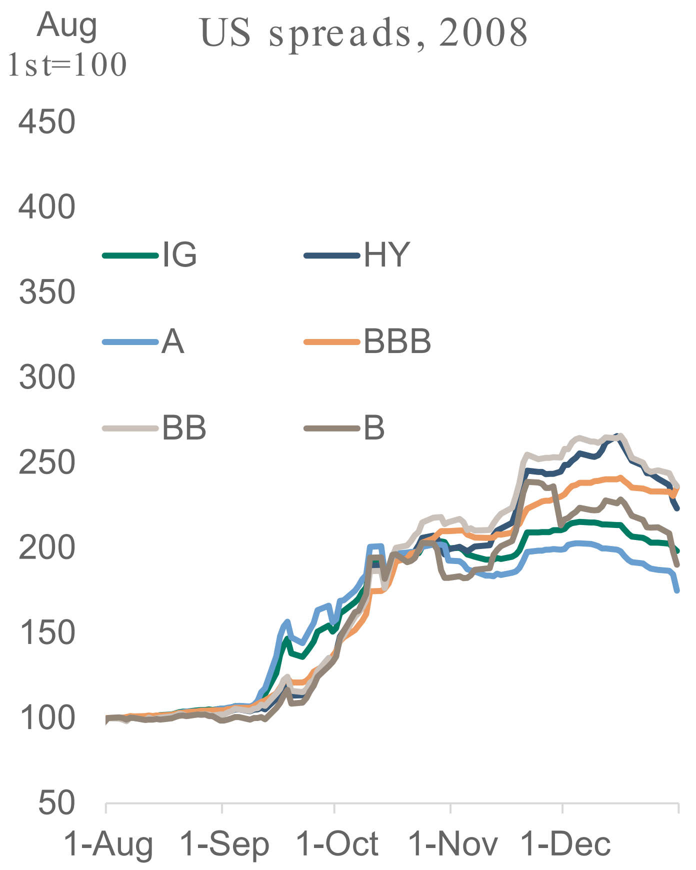


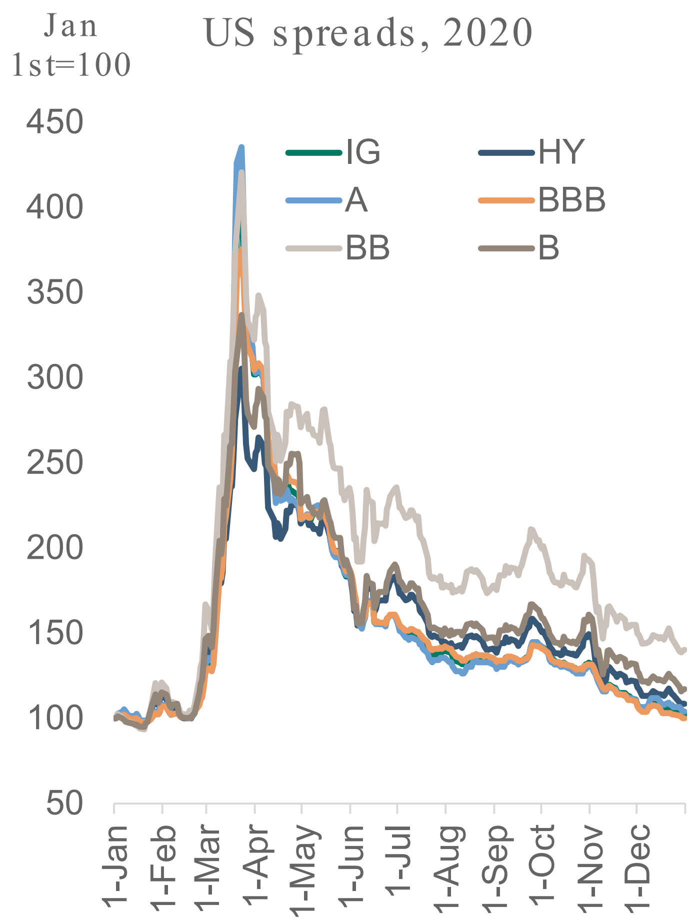


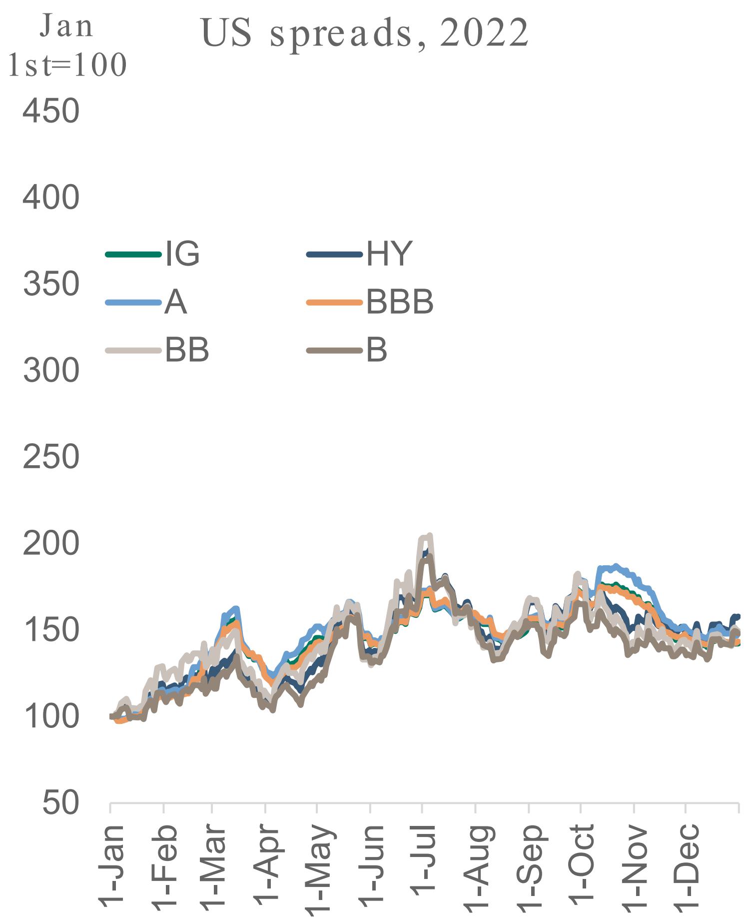


Source: Bloomberg, Apollo Chief Economist

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

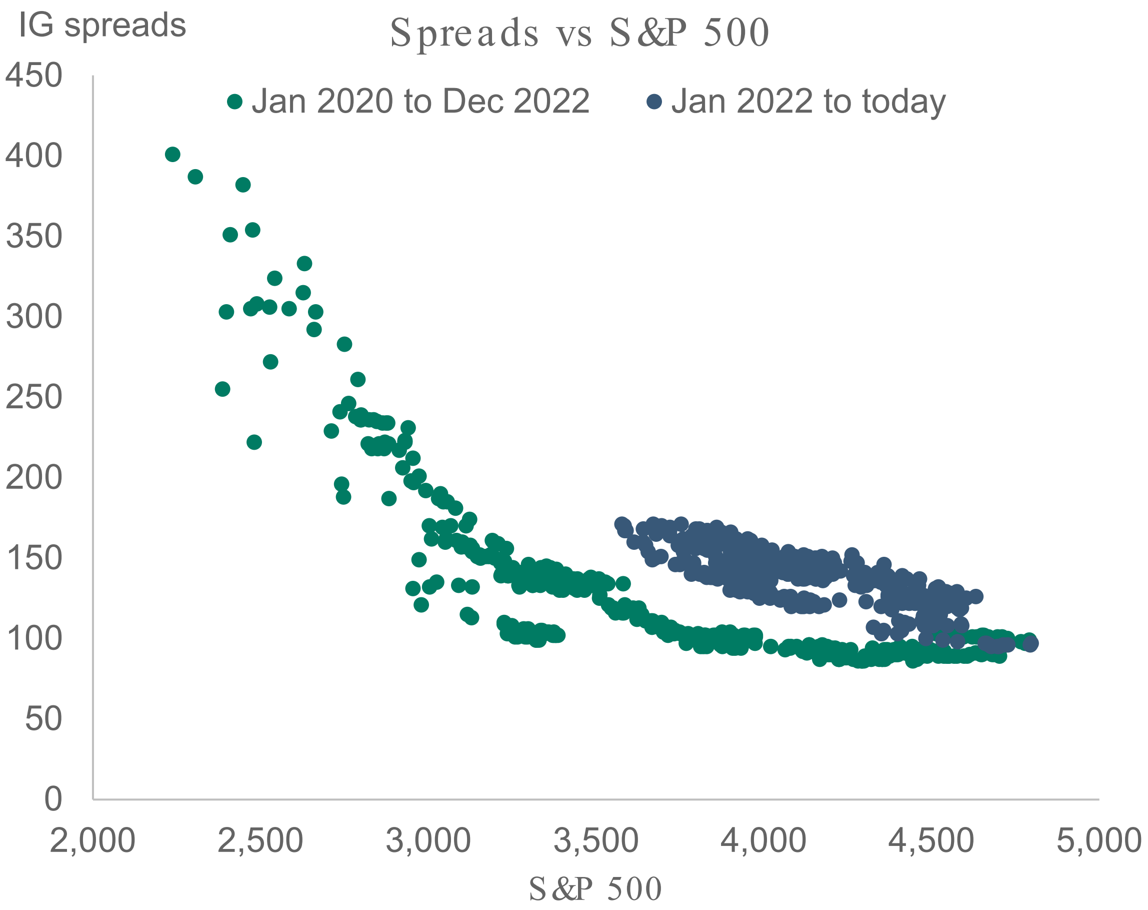


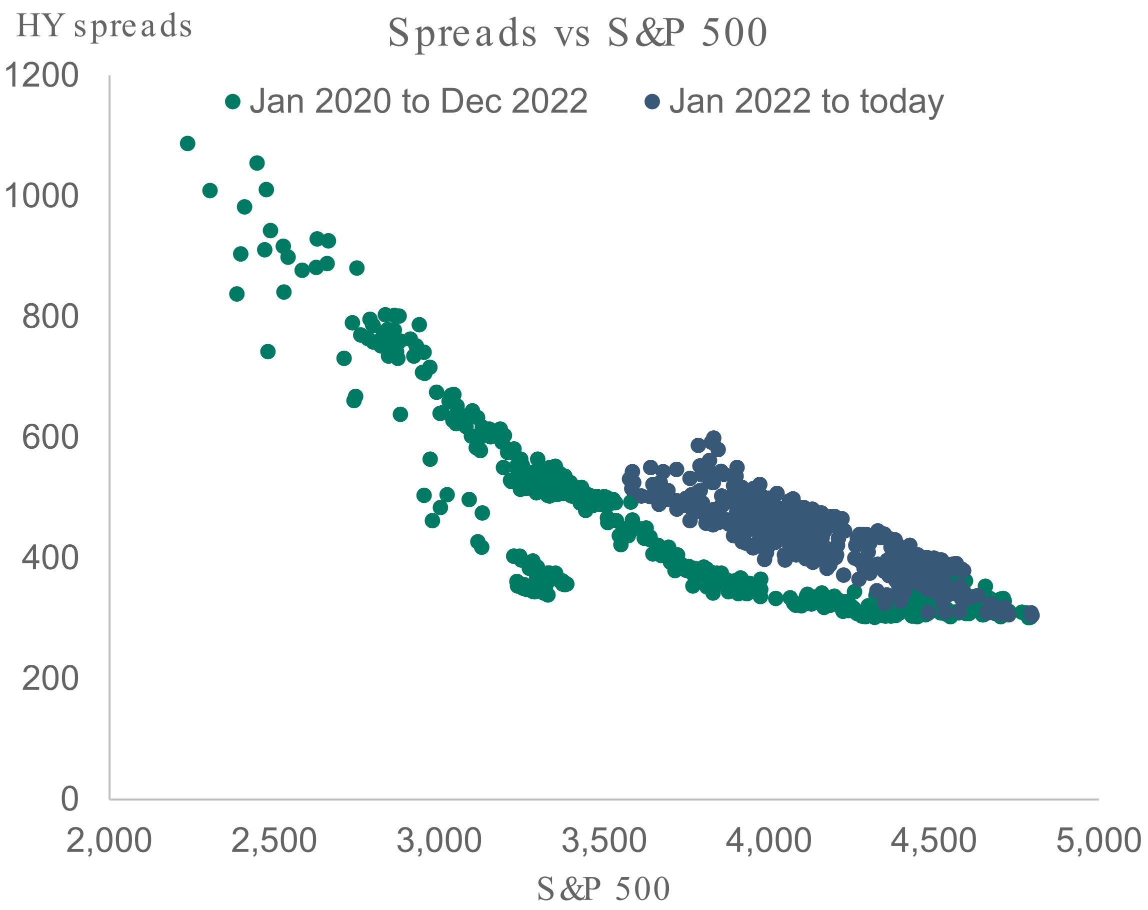




Source: Bloomberg, Apollo Chief Economist

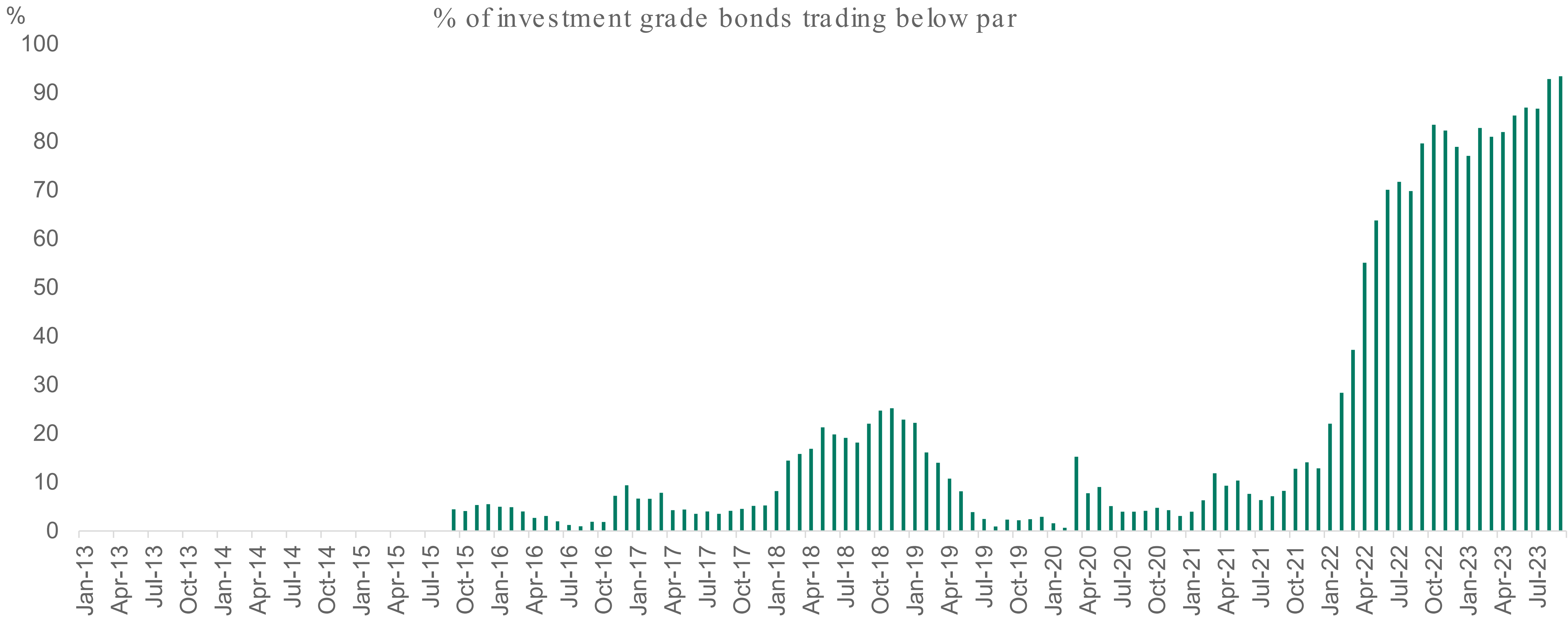
Valuation of credit versus equities





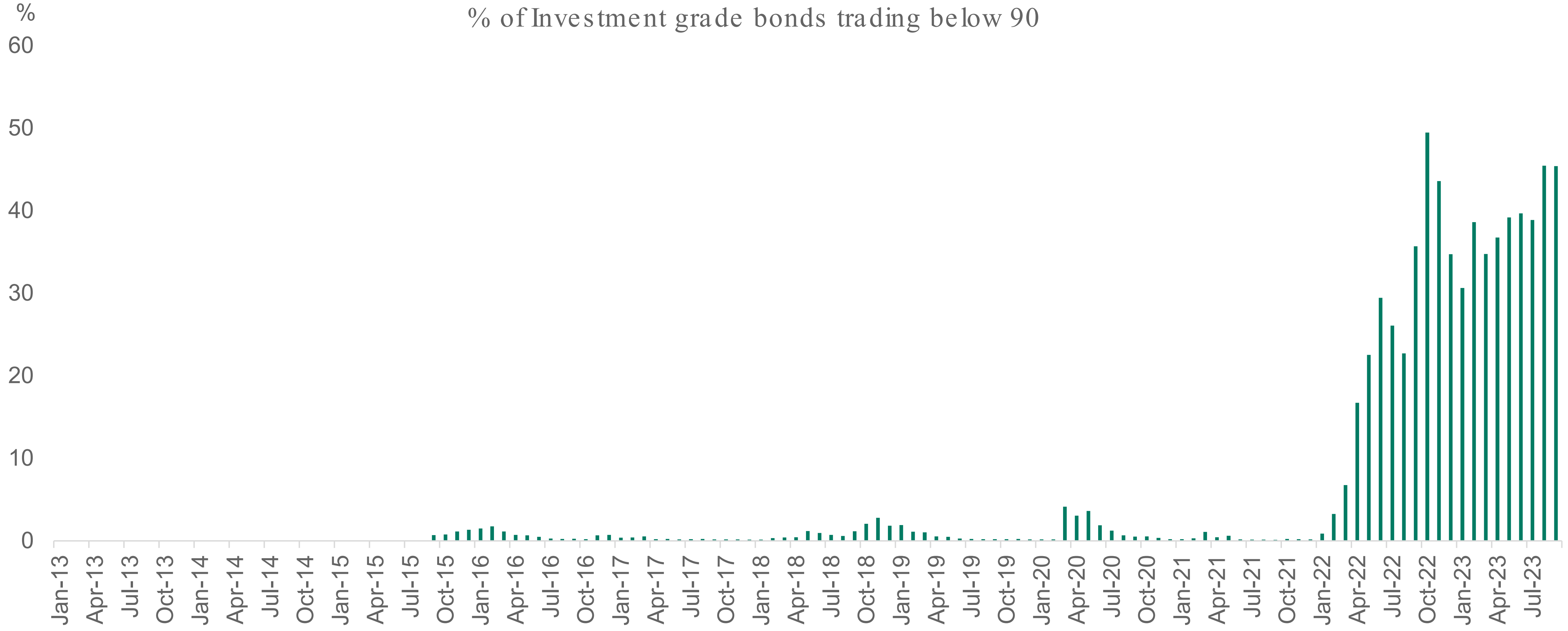
Source: Bloomberg, Apollo Chief Economist

91% of the US IG market trading below par



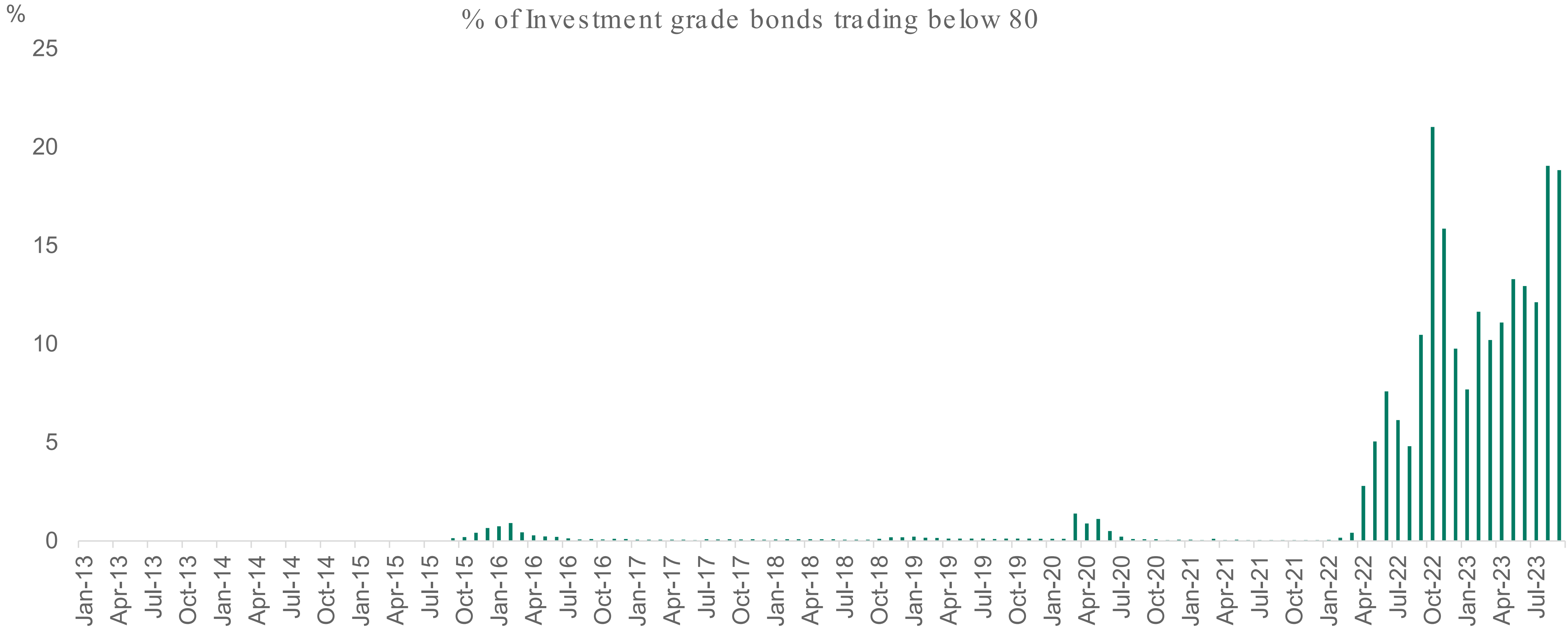
Source: Bloomberg, Apollo Chief Economist. Note: Data used for members in the LBUSTRUU Index.

Less than 50% of the US IG market trading below 90



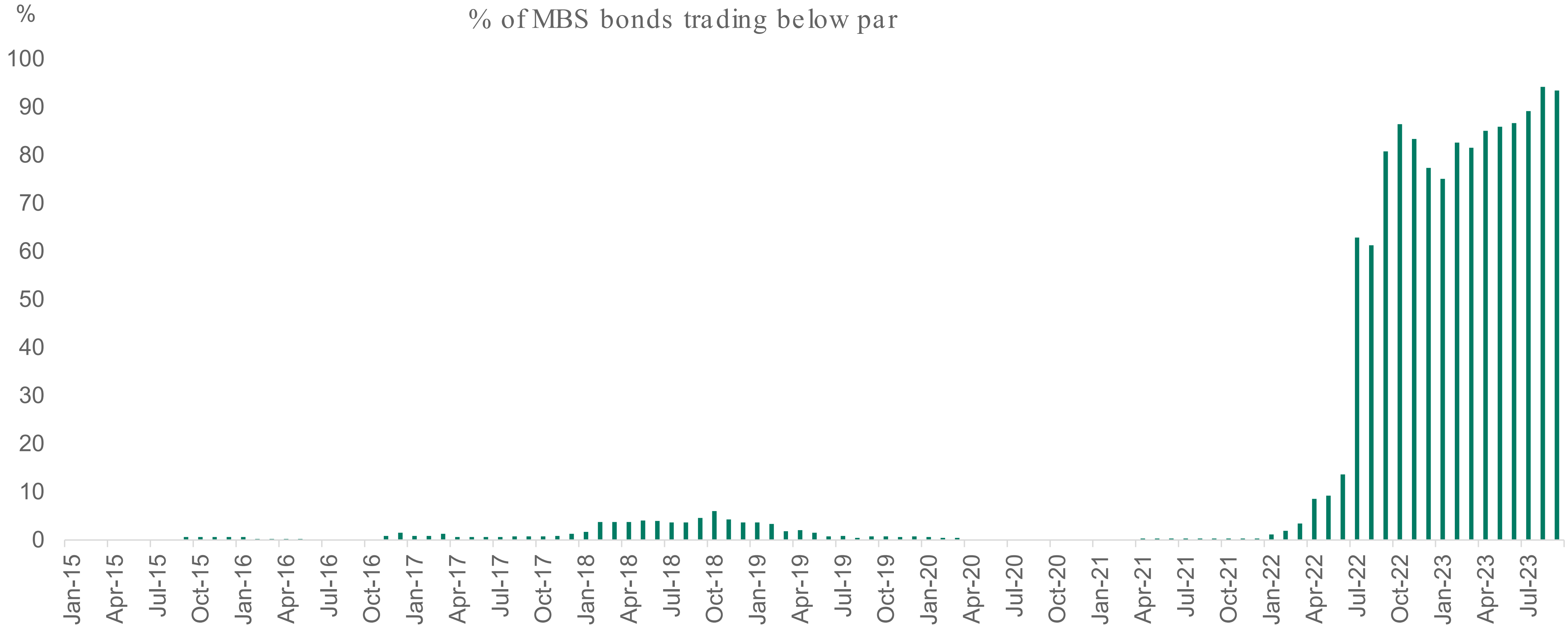
Source: Bloomberg, Apollo Chief Economist. Note: Data used for members in the LBUSTRUU Index.

Only 15% of the US IG market trading below 80



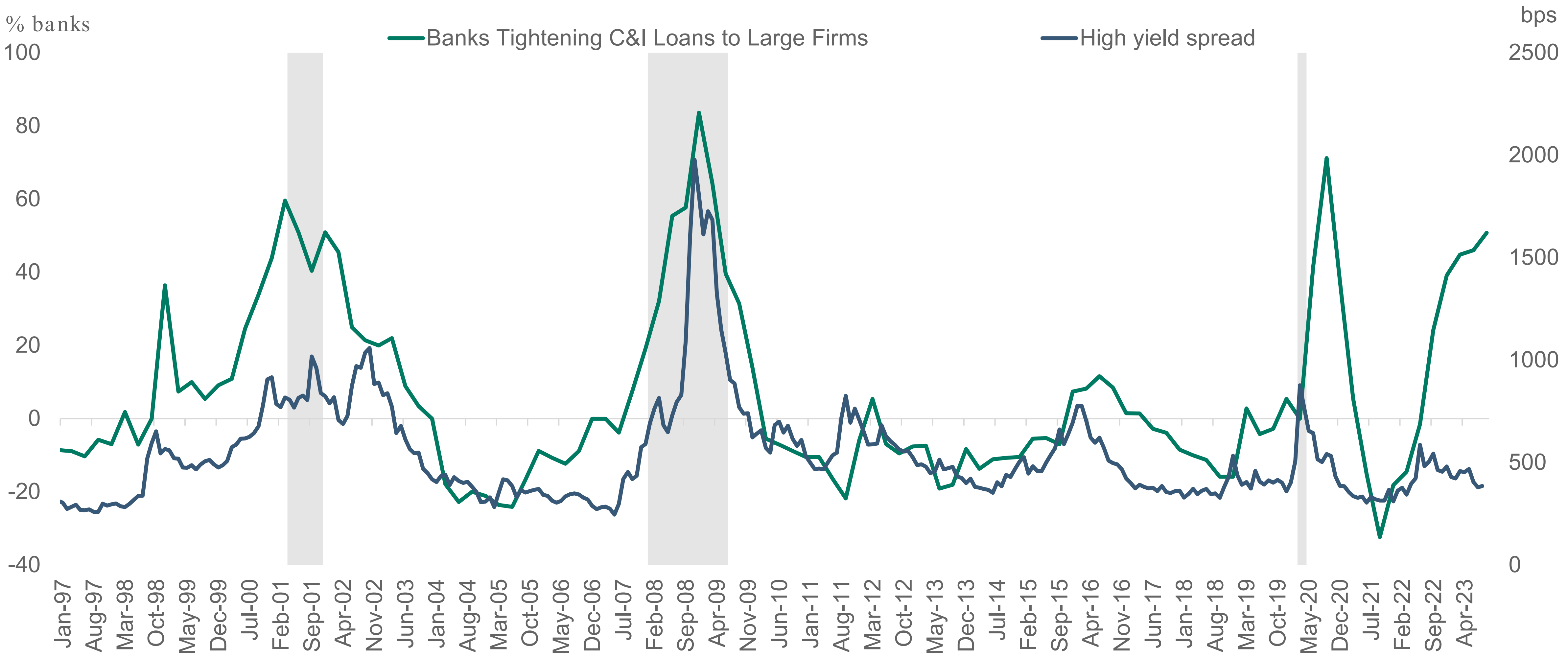
Source: Bloomberg, Apollo Chief Economist. Note: Data used for members in the LBUSTRUU Index.

90% of the US MBS market trading below par



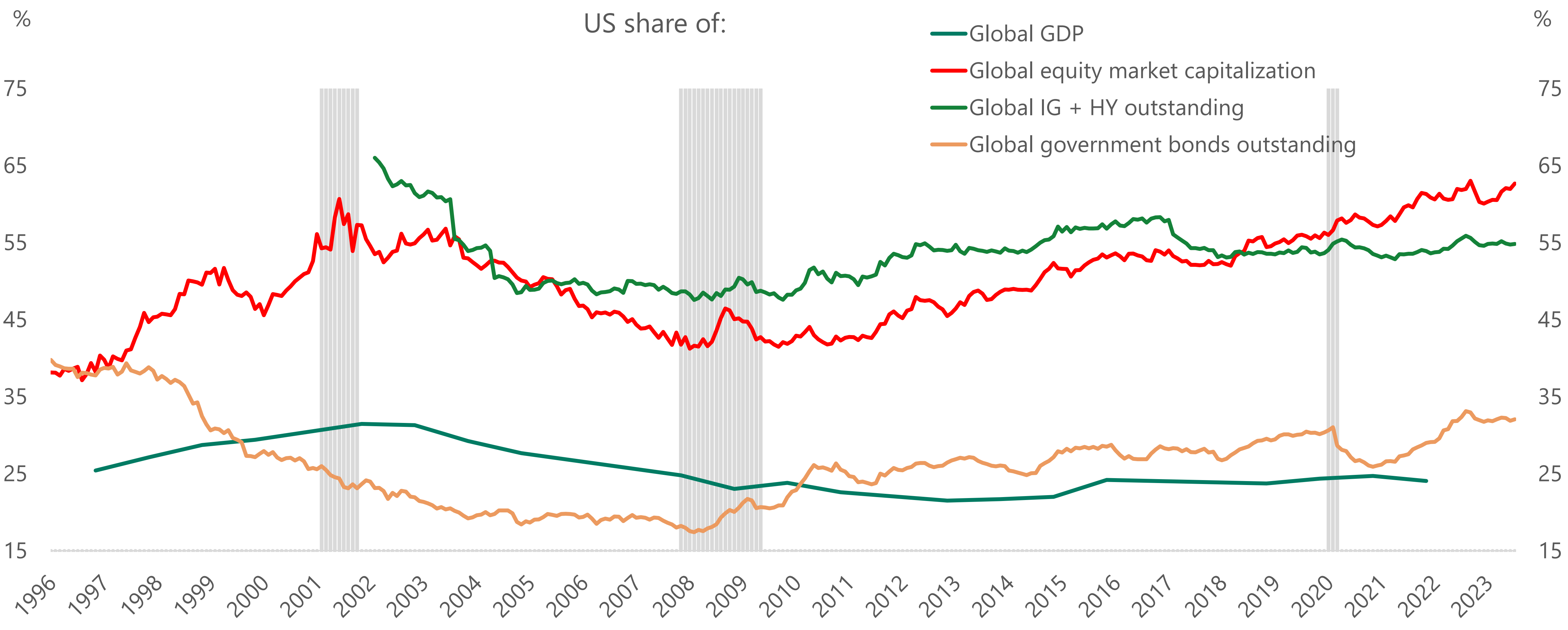
Source: Bloomberg, Apollo Chief Economist. Note: Data used for members in the LD10TRUU Index.

Banks tightening credit conditions, HY spread should be trading wider



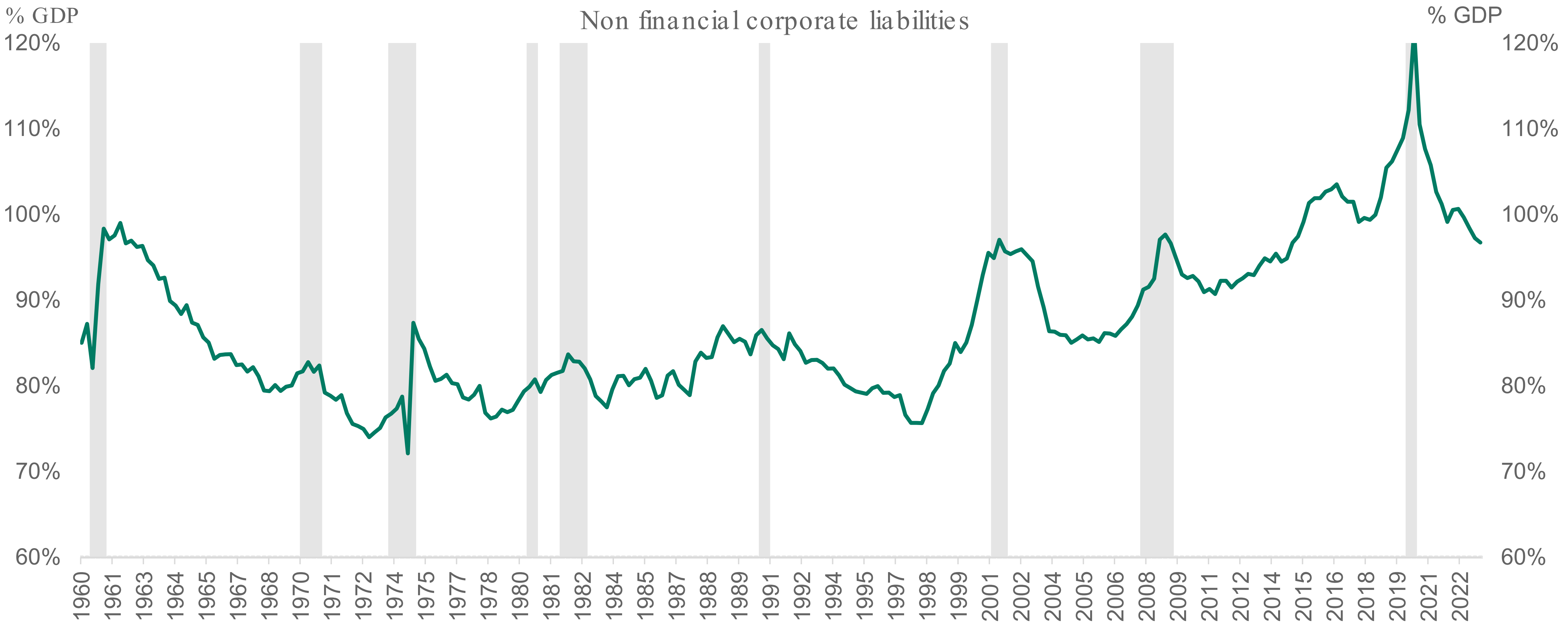
Source: FRB, Haver Analytics, Bloomberg, Apollo Chief Economist

US share of the world economy and global financial markets



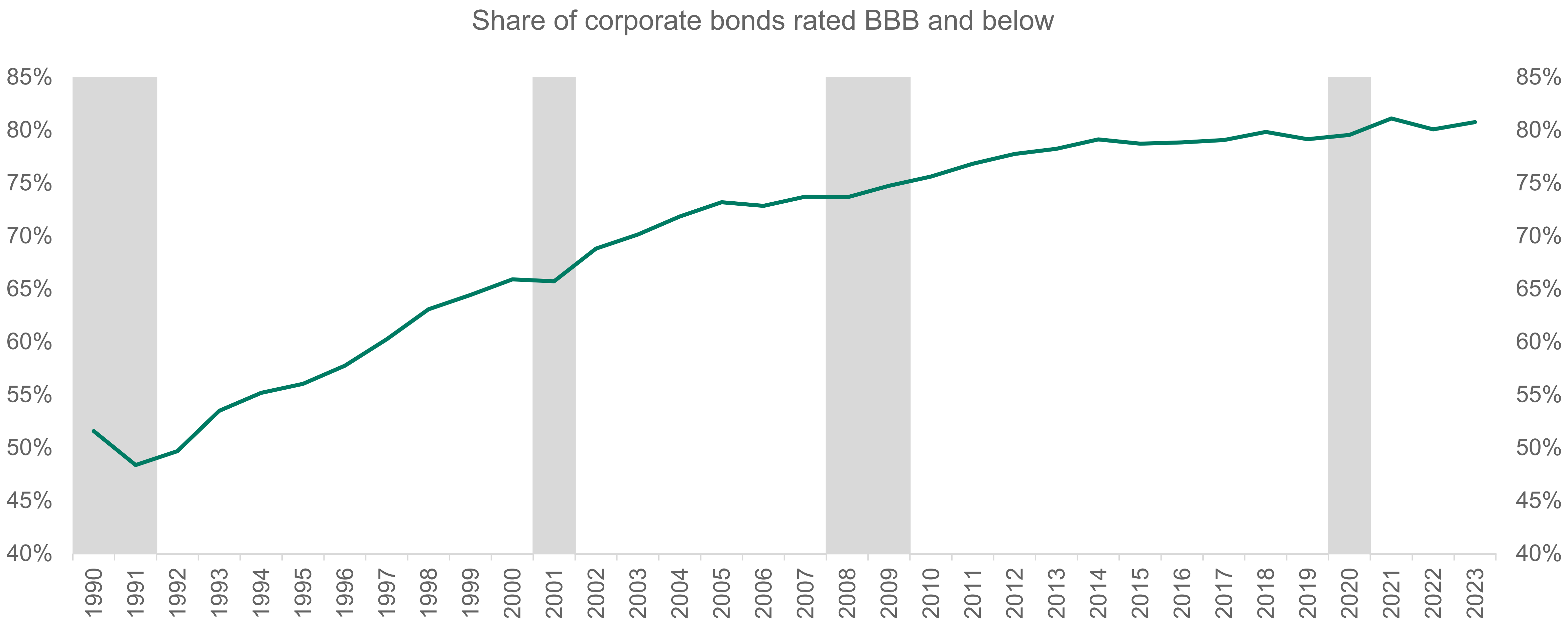
Source: Bloomberg, Haver, Apollo Chief Economist (Note: Bloomberg tickers: MXUS Index, MXWD Index , LUATTRUU Index, BTSYTRUU Index, LF98TRUU Index, LG30TRUU index, LUACTRUU Index, I09805US index)

Corporate debt is coming down as a share of GDP



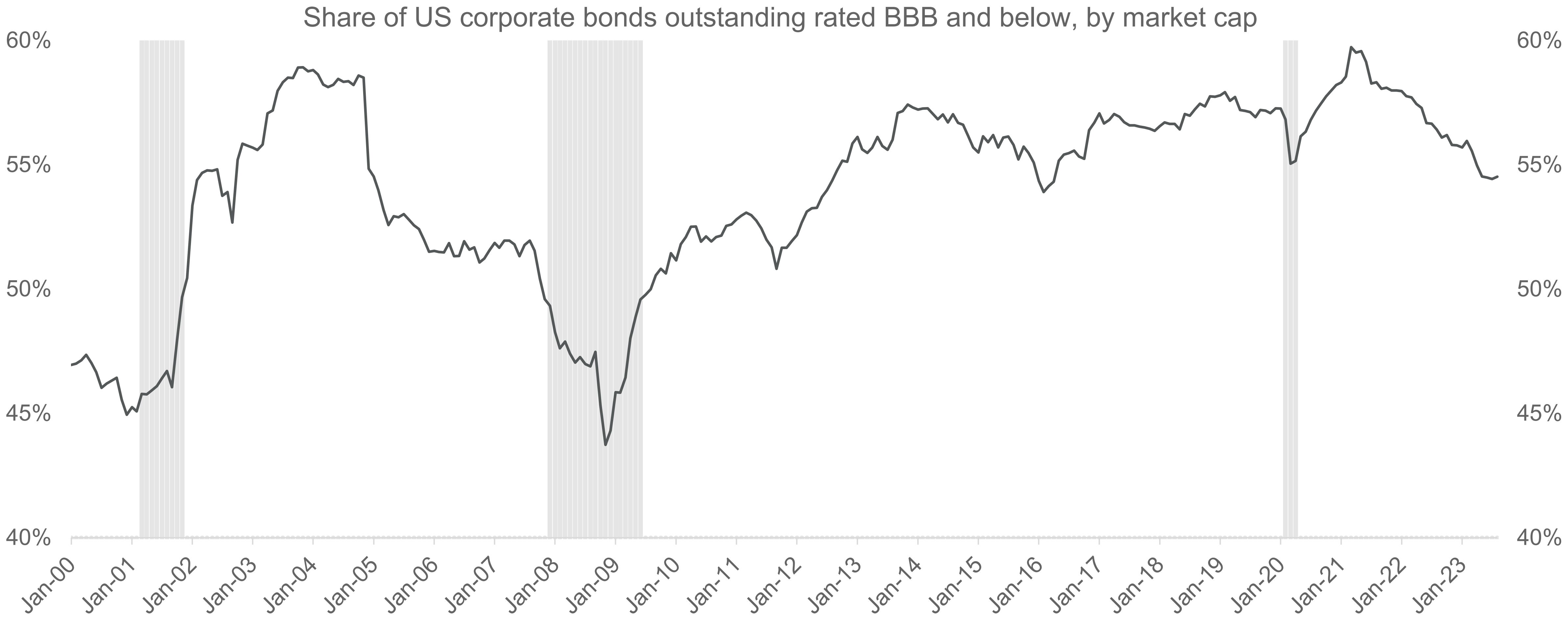
Source: FRB, Haver Analytics, Apollo Chief Economist

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



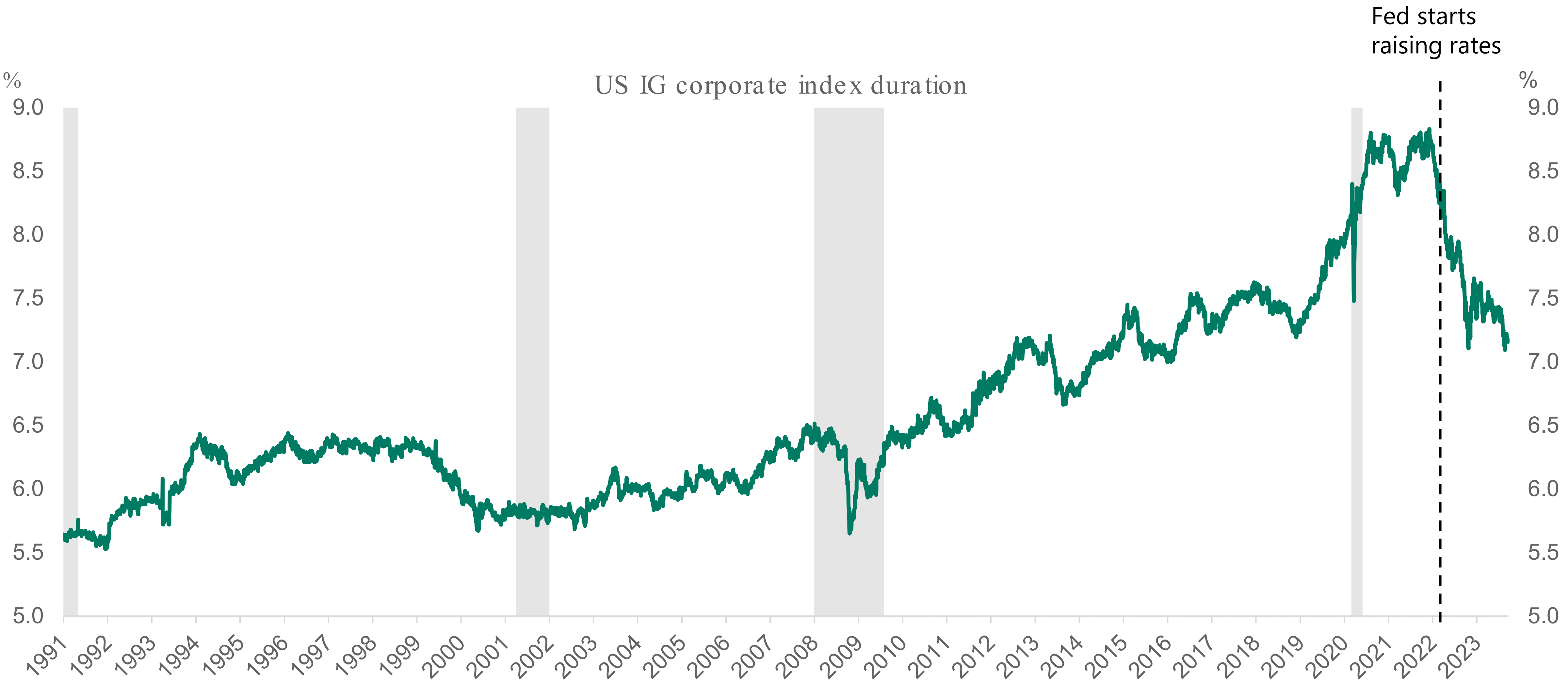
Source: S&P, Apollo Chief Economist

Share of corporate bond market value outstanding rated BBB and below



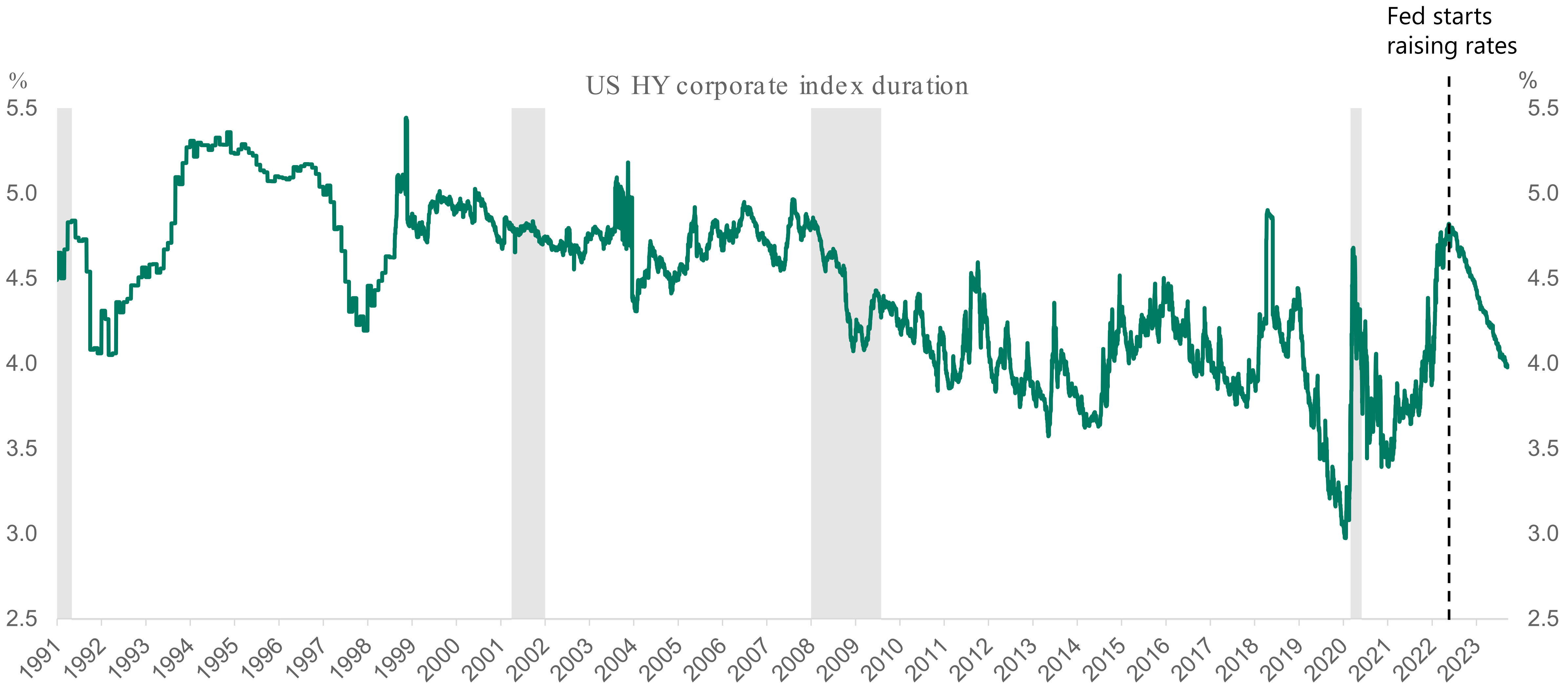
Source: ICE BofA, Bloomberg, Apollo Chief Economist. Data as of 31st August 2023

IG index duration declining



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.

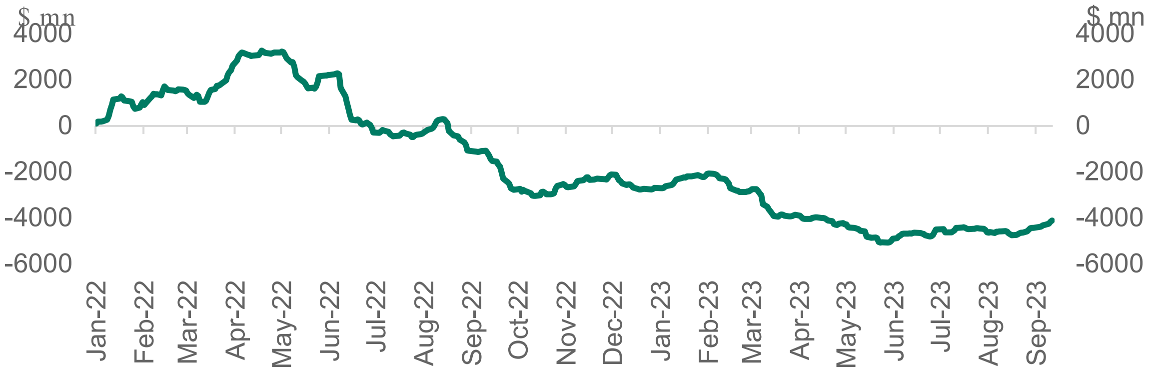
HY index duration declining



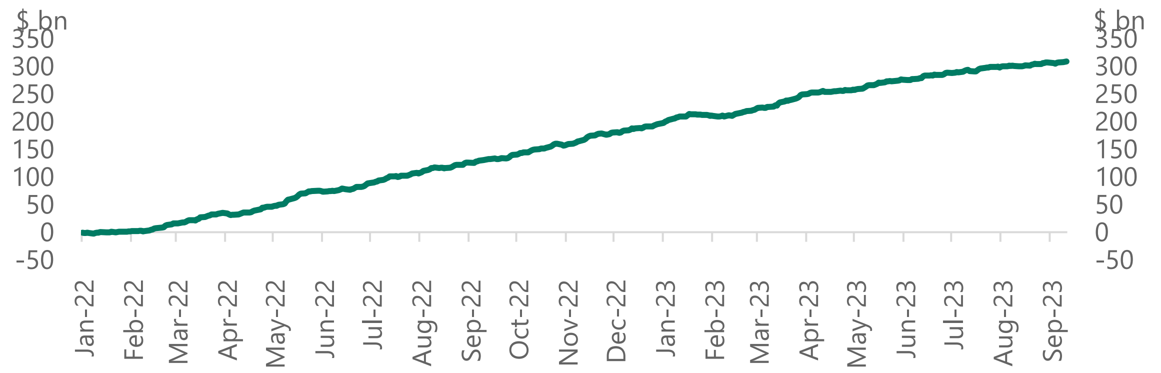
Source: Bloomberg, Apollo Chief Economist. Note: The measure used is modified duration, which measures the expected change in a bond's price to a 1% change in interest rates.

Flow monitor

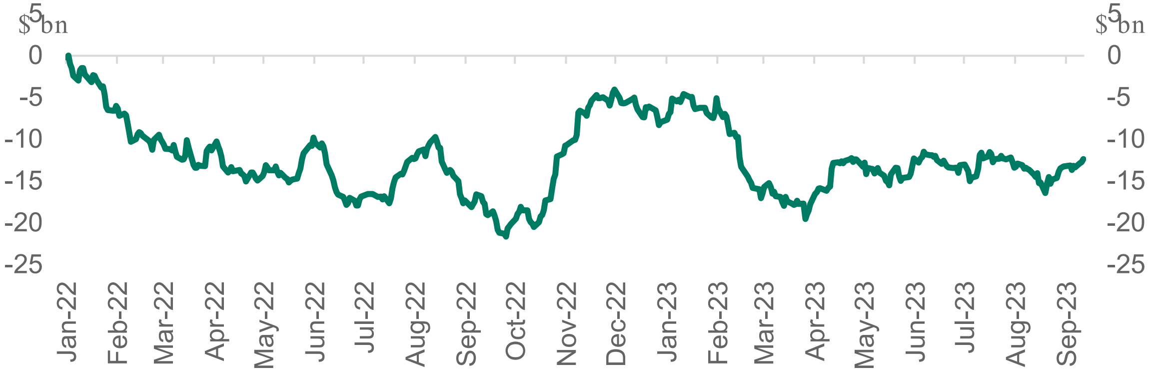
US bank loans ETF flows



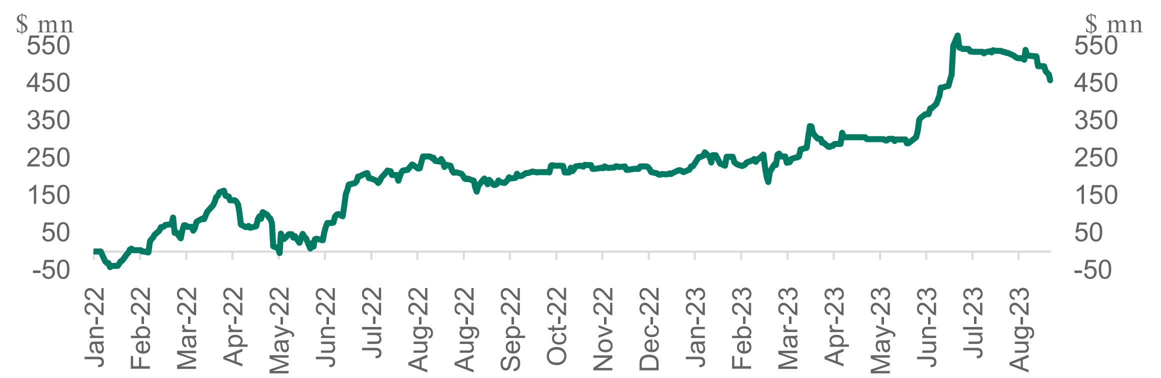
IG ETF flows



HY ETF Flows

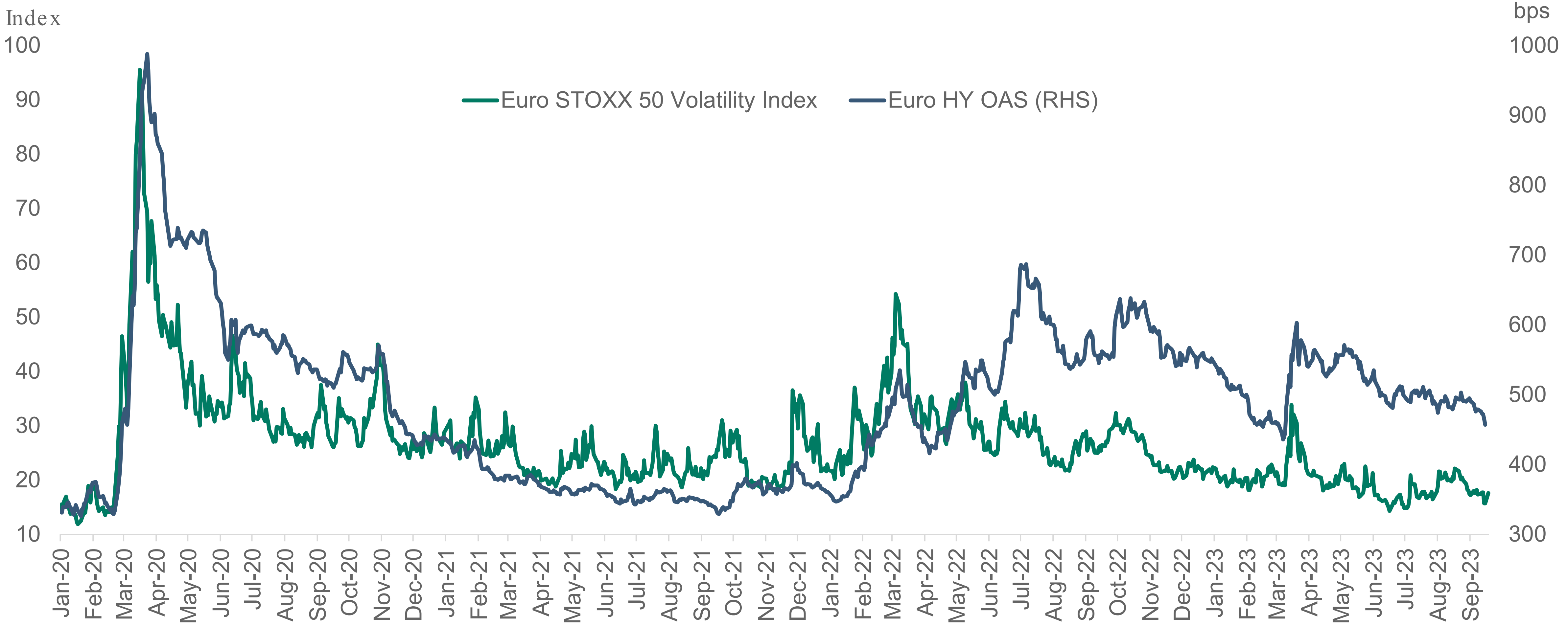


Crypto ETF flows



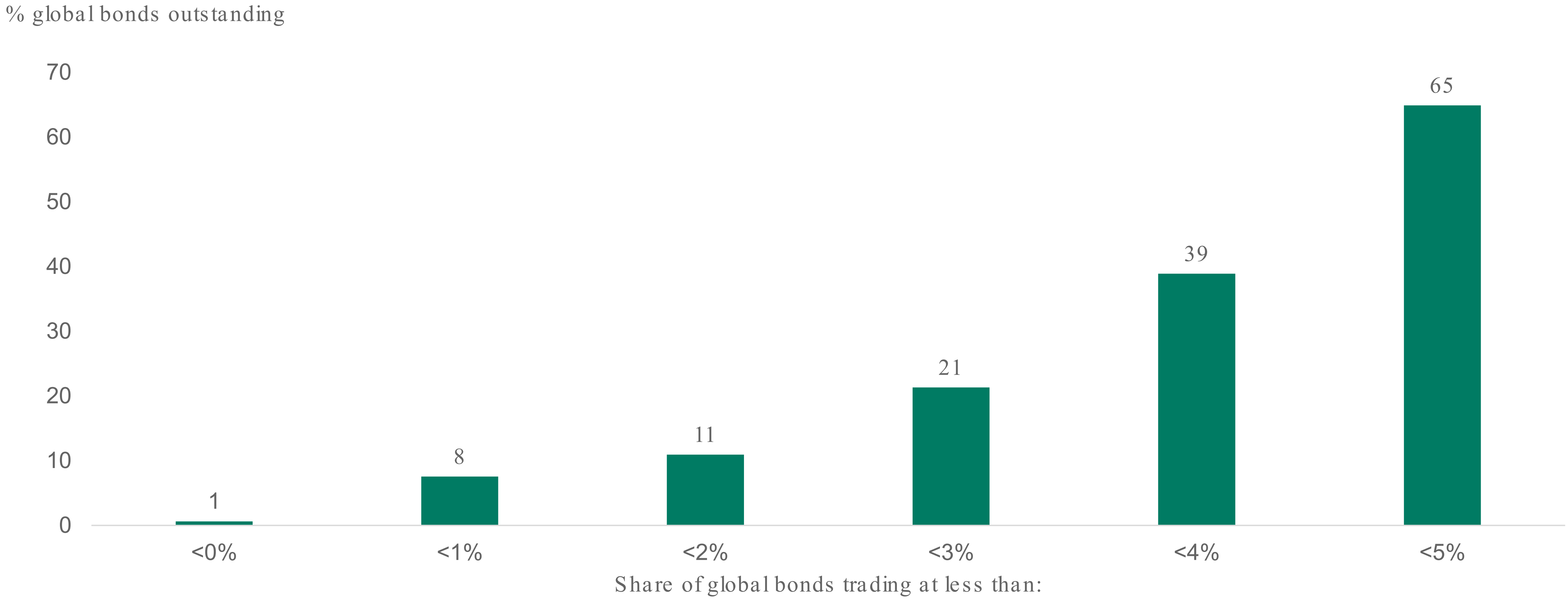
Source: Bloomberg, Apollo Chief Economist (Note: bito US equity: Crypto ETF flows, BFFUEBK Index: US Bank loans ETF flows, BFFUEHY Index: HY ETF flows; BFFUEIG Index: US IG ETF flows)

Convergence between EU equity vol and EU HY spreads



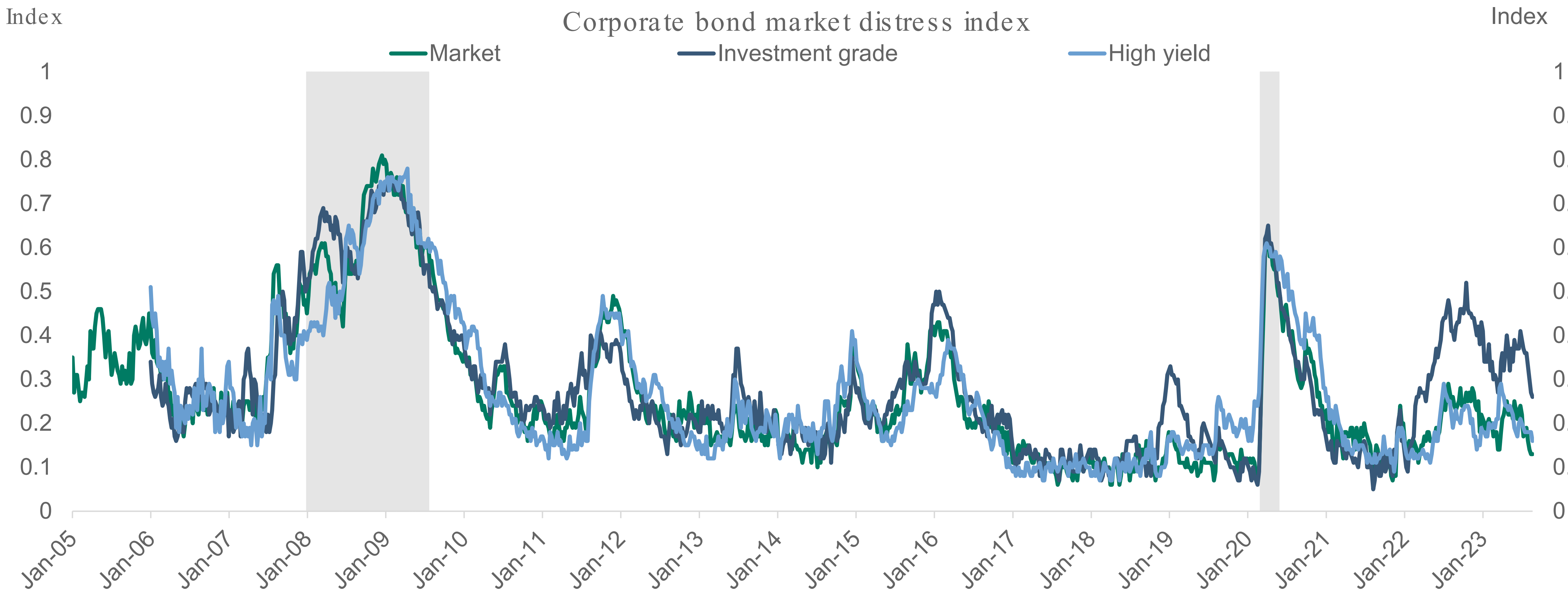
Source: Bloomberg, Apollo Chief Economist. Note: Tickers used are V2X Index and LP01OAS Index

21% of bonds in the world trading at less than 3% yield



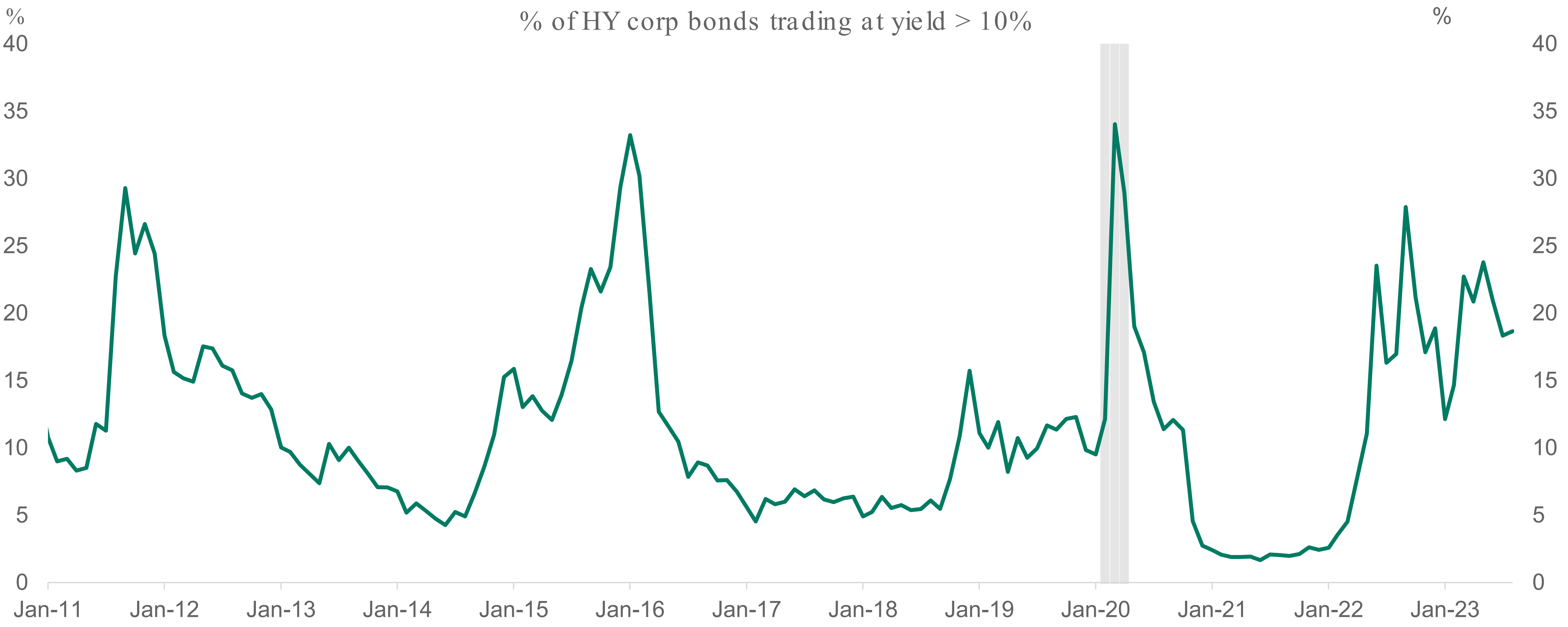
Source: Bloomberg, Apollo Chief Economist

NY Fed measure of corporate bond market functioning elevated level of distress in IG



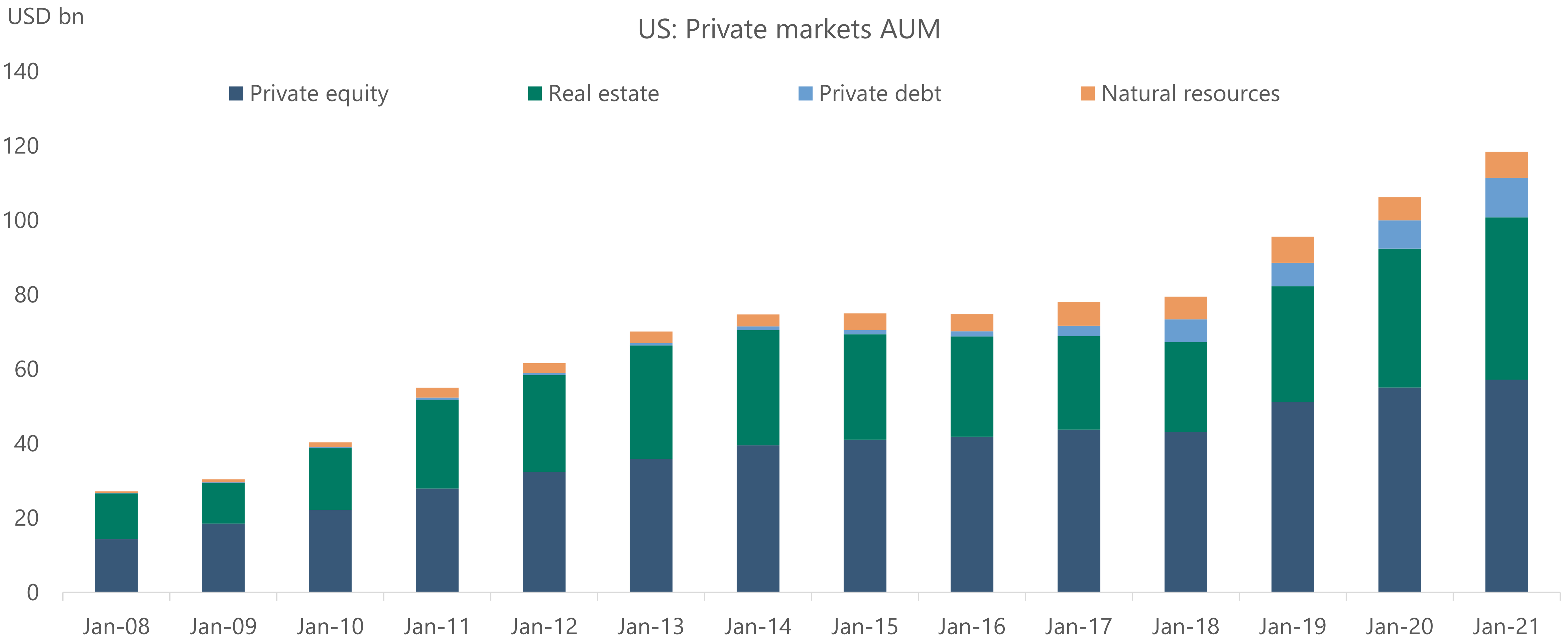
Source: FRB of New York, Apollo Chief Economist (Note: Corporate bonds are a key source of funding for U.S. non-financial corporations and a key investment security for insurance companies, pension funds, and mutual funds. Distress in the corporate bond market can thus both impair access to credit for 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.

18% of HY bonds trading with yield higher than 10%



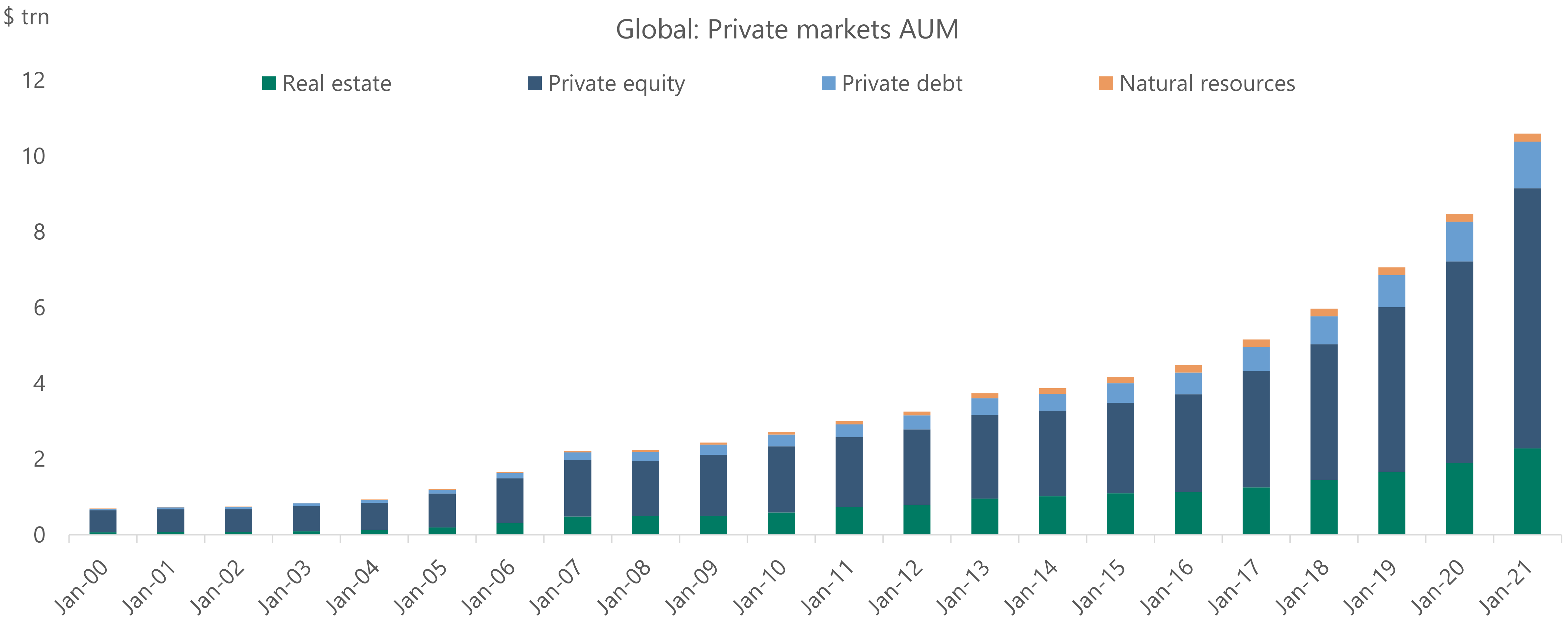
Source: Bloomberg, Apollo Chief Economist. Note: HY bond universe is H0A0 Index

US: Total assets under management in private markets



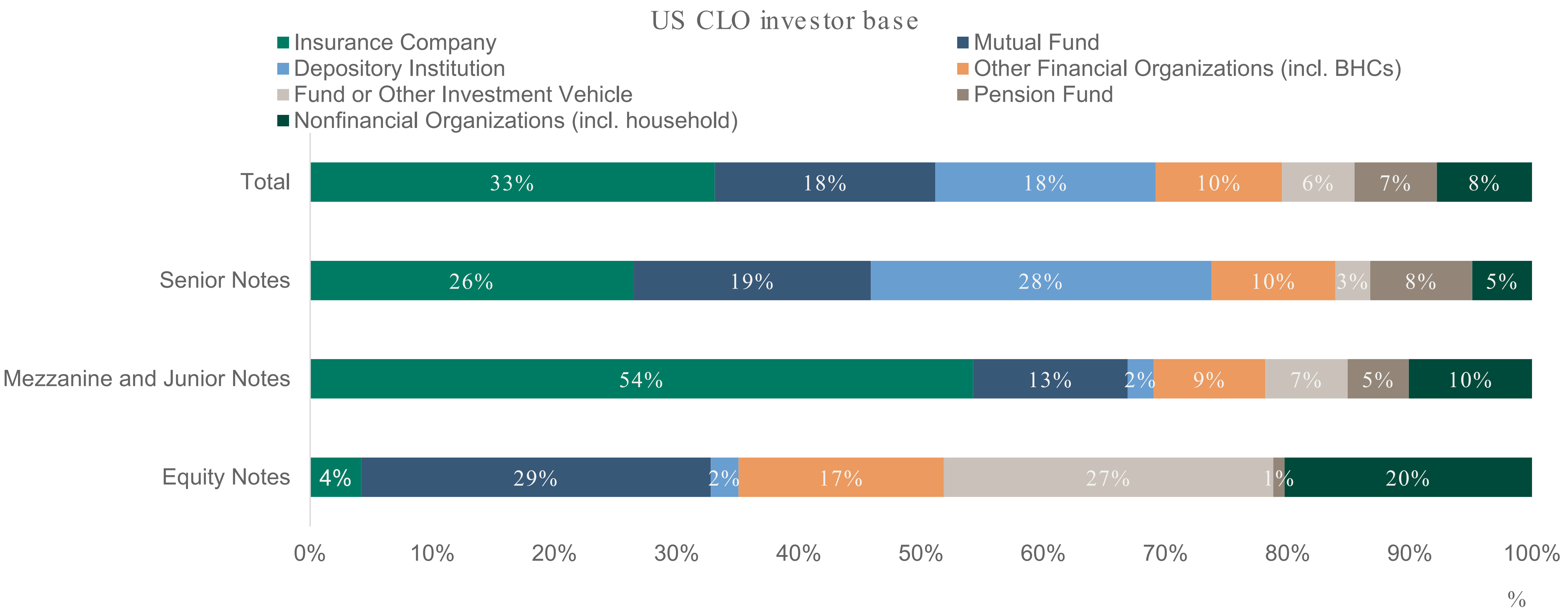
Source: Preqin, Apollo Chief Economist (Note: Real estate includes private real estate and infrastructure funds)

Total assets under management in private markets funds globally



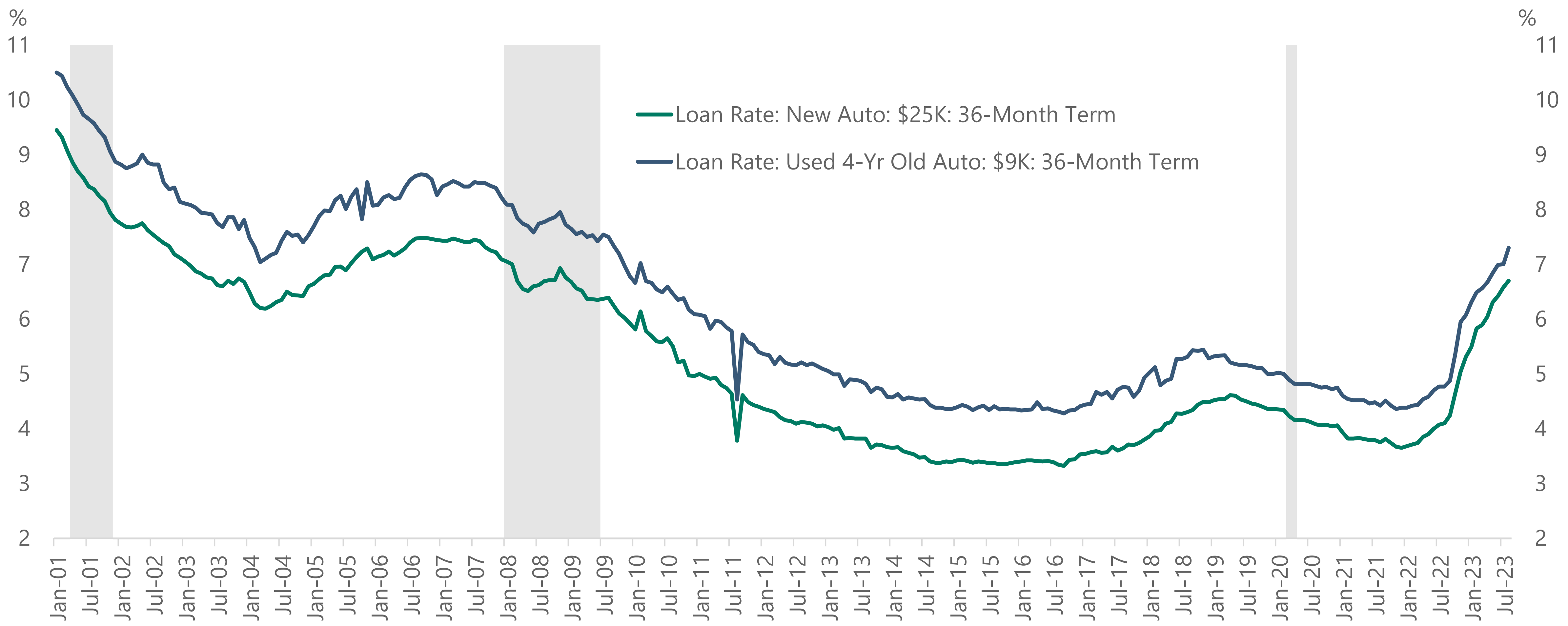
Source: Preqin, Apollo Chief Economist (Note: Real estate includes private real estate and infrastructure funds)

US CLO investor base by tranche



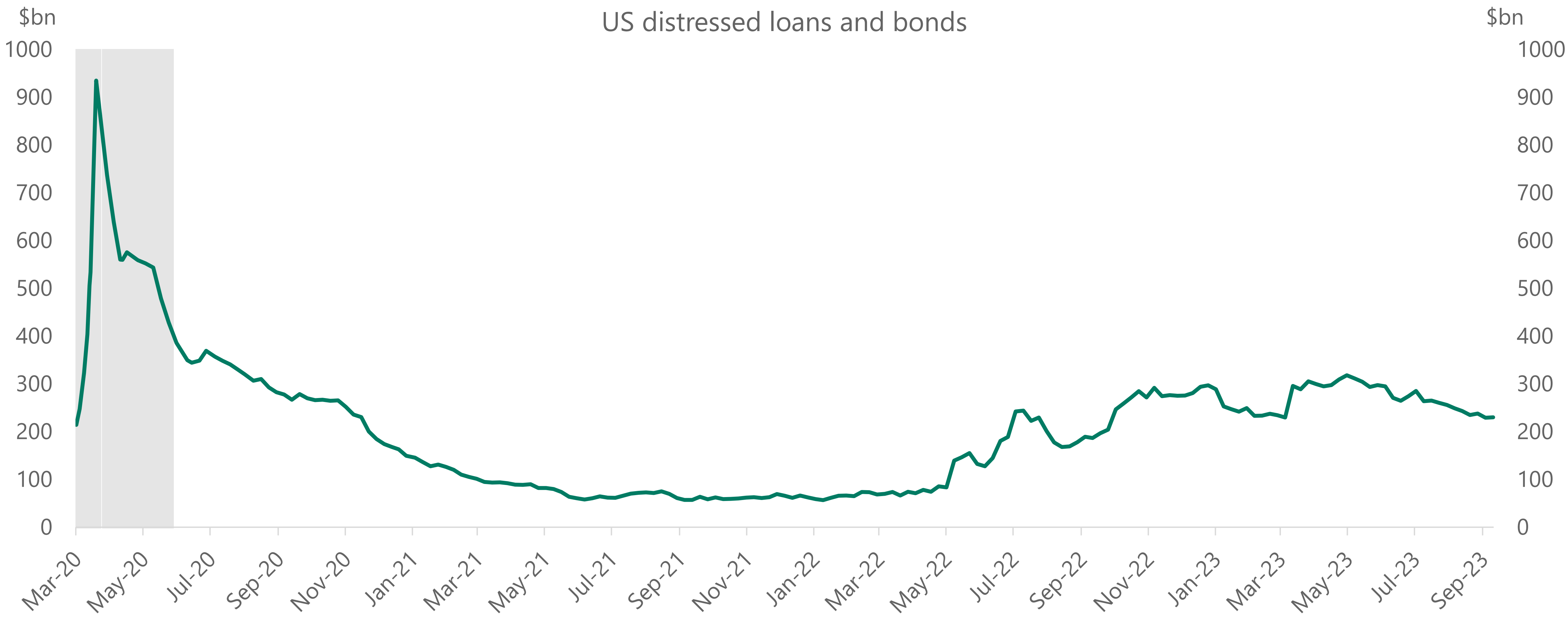
Source: TIC, Moody's data, Fed, Apollo Chief Economist

Auto loan rates rising



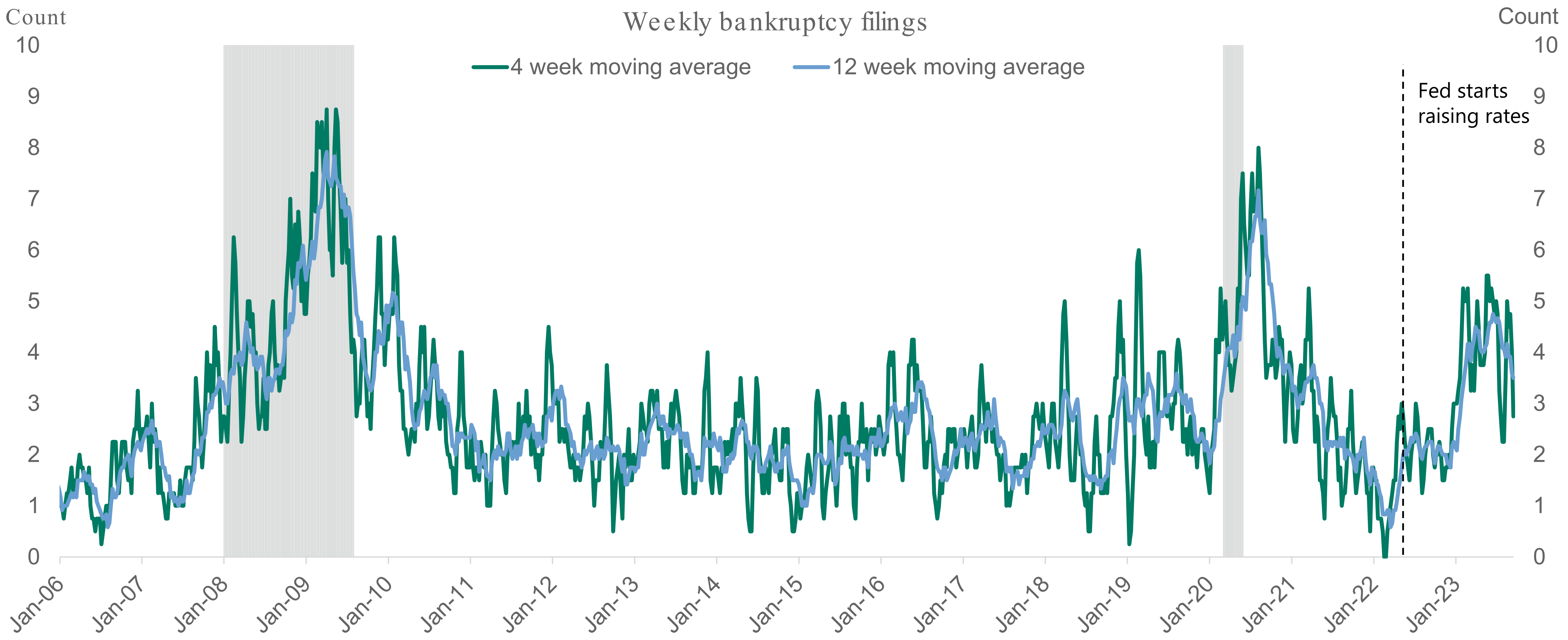
Source: RateWatch, Haver Analytics, Apollo Chief Economist

Distressed debt is growing



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

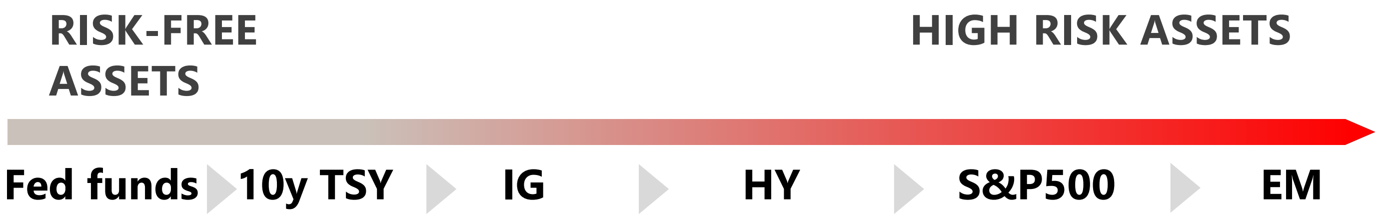
Weekly bankruptcy filings for companies with at least $50mn in liabilities



Source: Bloomberg, Apollo Chief Economist. Note: Filings are for companies with more than $50mn in liabilities. For week ending on June 28, 2023.

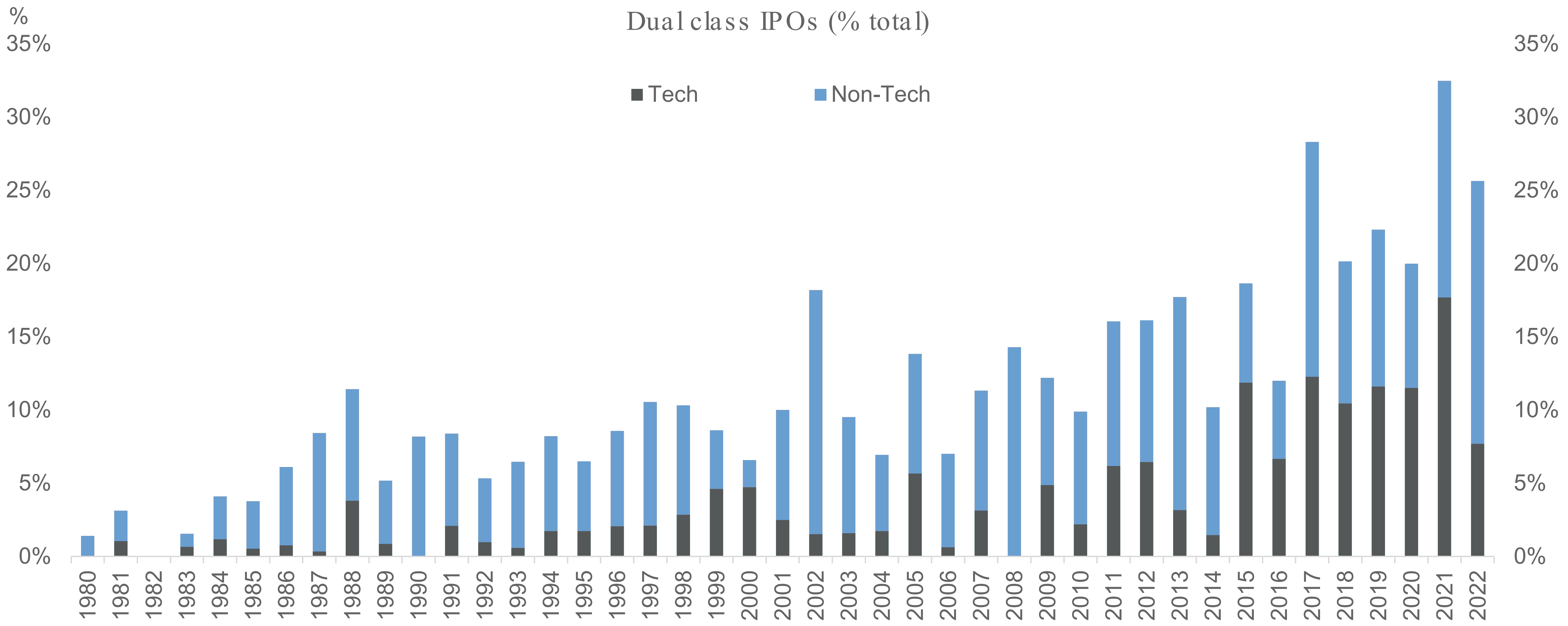
Inflation is reversing the hunt for yield

Risk spectrum



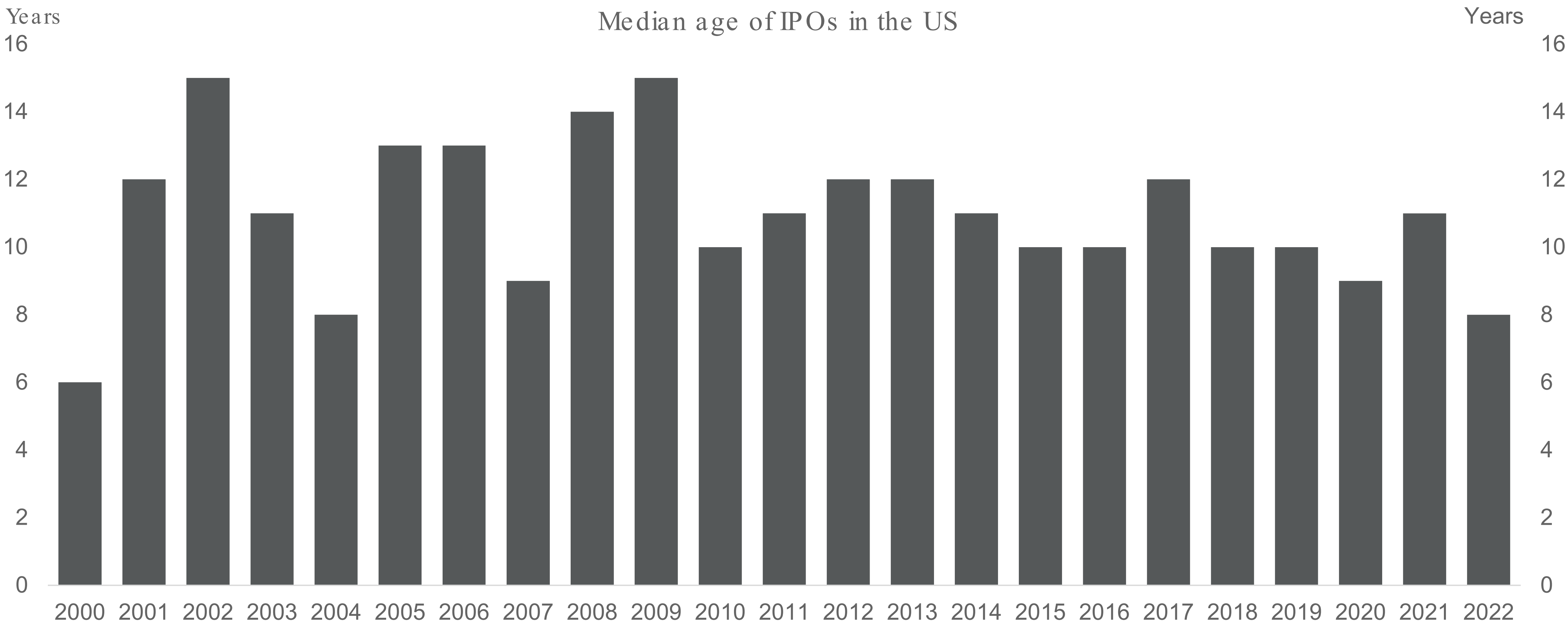
Source: Apollo Chief Economist

Dual class IPOs, driven by tech



Source: Jay Ritter, Apollo Chief Economist

Median age of IPOs



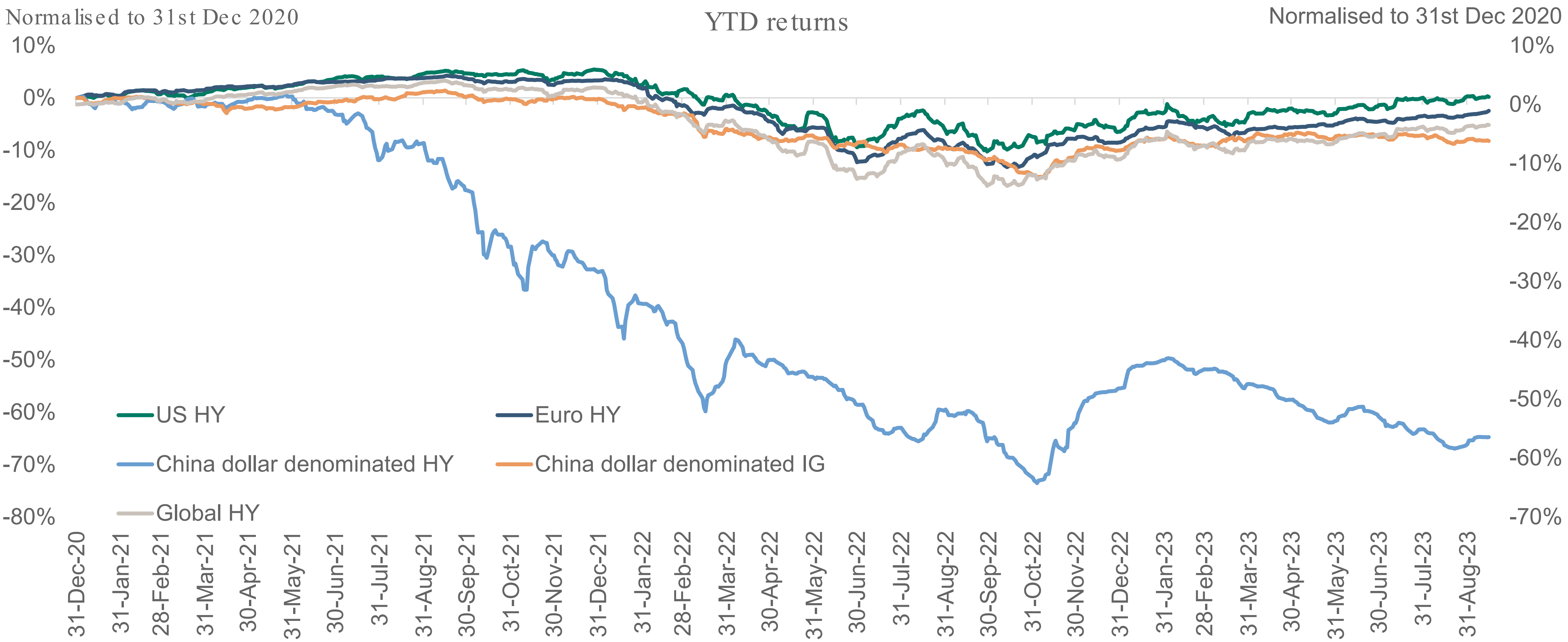
Source: Jay Ritter, Apollo Chief Economist

China HY

The yield on China HY is now at 20%

Source: Bloomberg Barclays, Bloomberg H29381US Index, Apollo Chief Economist

Little contagion from China HY to US and EU credit markets



Source: ICE BofA, Bloomberg, Apollo Chief Economist,

Top issuer names

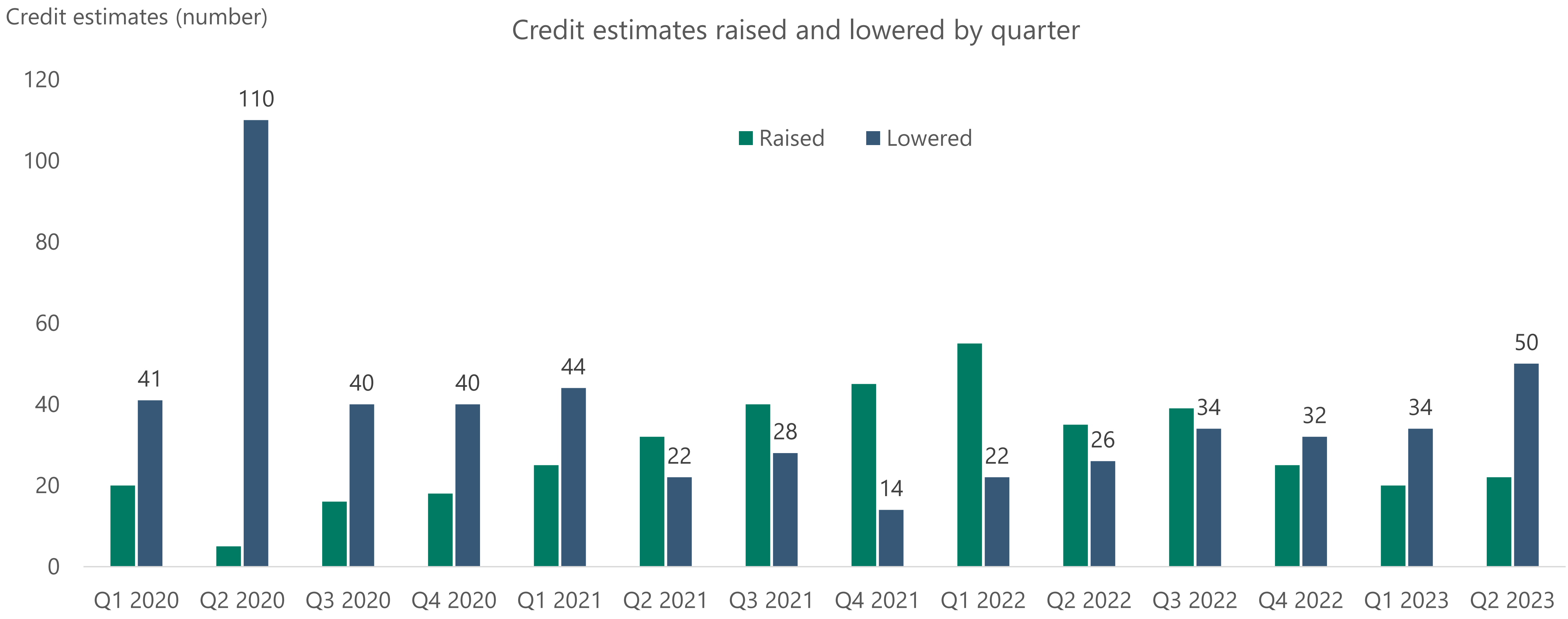
Top issuer names for IG and HY

APOLLO

	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	AAdvantage 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	Lowes Companies Inc.	Univision Commmunications 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

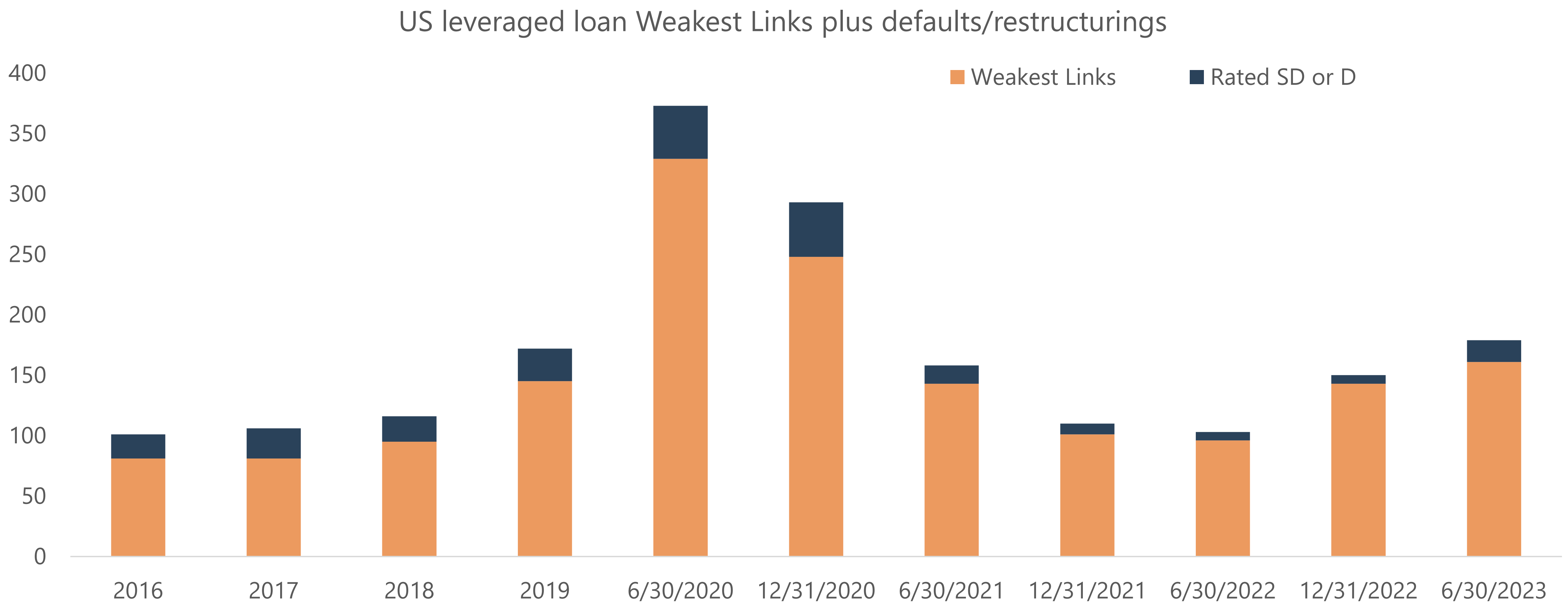
Source: Bloomberg, Apollo Chief Economist. Note: Top 50 issuers for C0A0 and H0A0 Index

Downgrades have outpaced upgrades since Q4 2022



Source: S&P Global ratings, Apollo Chief Economist

US: More downside risk in credit as leveraged loan weakest links increase in Q2



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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Apollo Global Management
tslok@apollo.com

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.