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# Credit market outlook: Recession fears fading? Spread between HY and IG narrowing

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Unless otherwise noted, information as of August 2022

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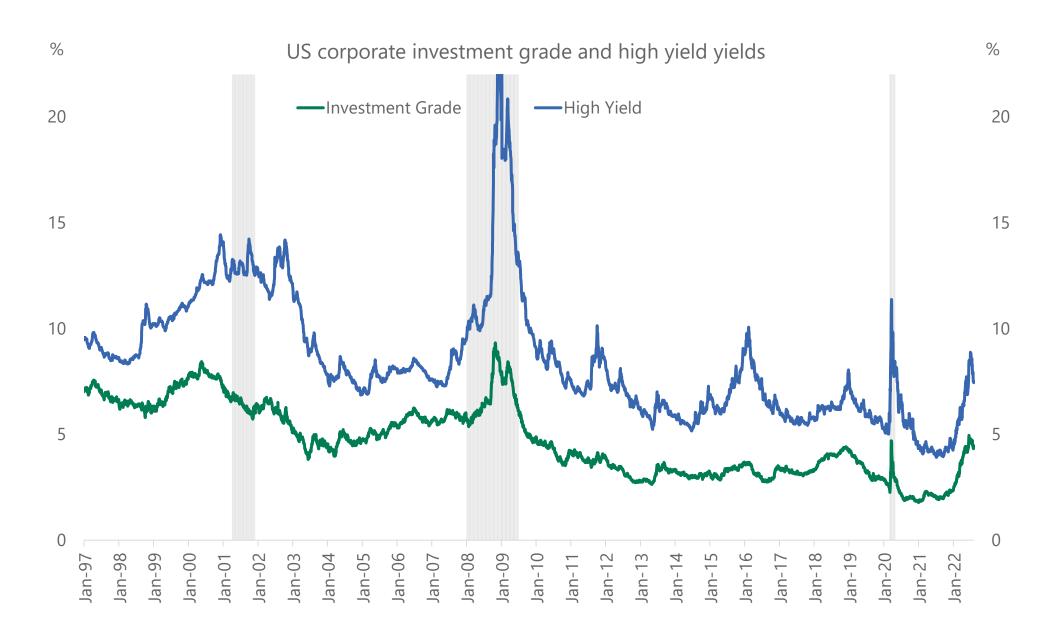
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#### Five features of credit markets at the moment

- 1. HY issuance is very low. IG issuance at normal levels.
- 2. IG spreads and HY spreads close to historical averages
- 3. Passive credit index investors are hit very hard by duration moves
- 4. Lower quality credits rallying and the spread between IG and HY is narrowing. Are recession fears fading?
- 5. IG index duration has declined, HY index duration has increased

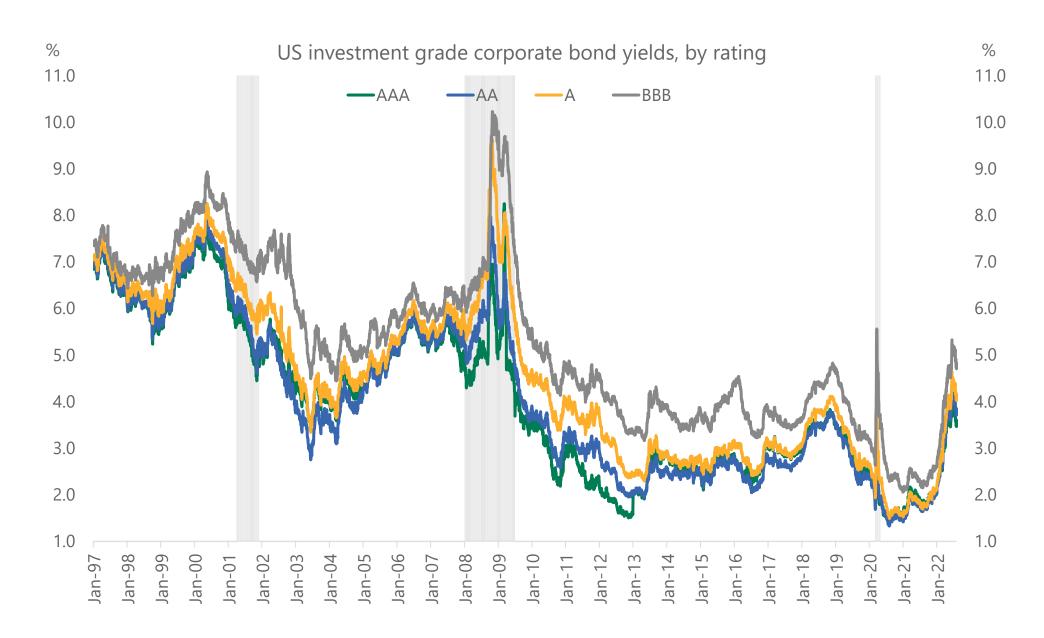
### Yields

#### US IG and HY yield levels



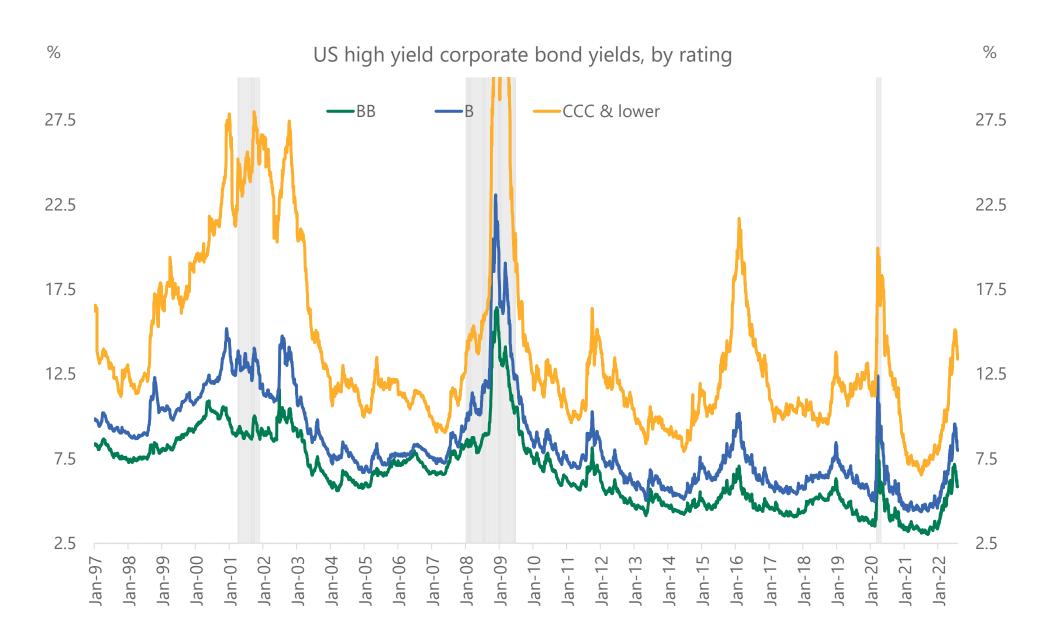
Source: ICE BofA, Haver Analytics, Apollo Chief Economist.

#### IG yield levels, by rating



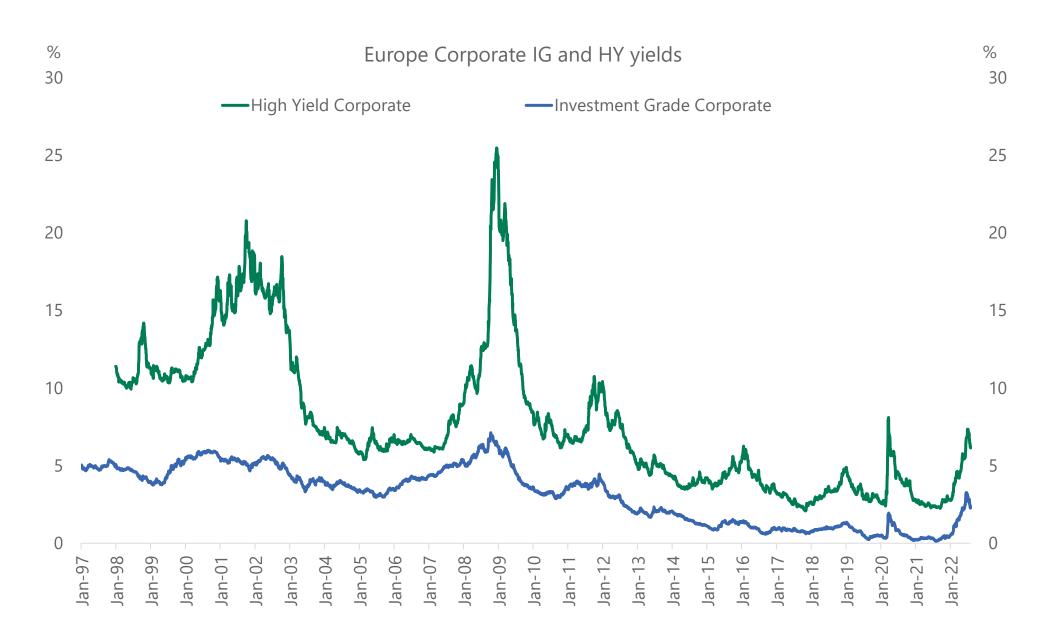
Source: ICE BofA, Haver Analytics, Apollo Chief Economist

#### HY yield levels, by rating

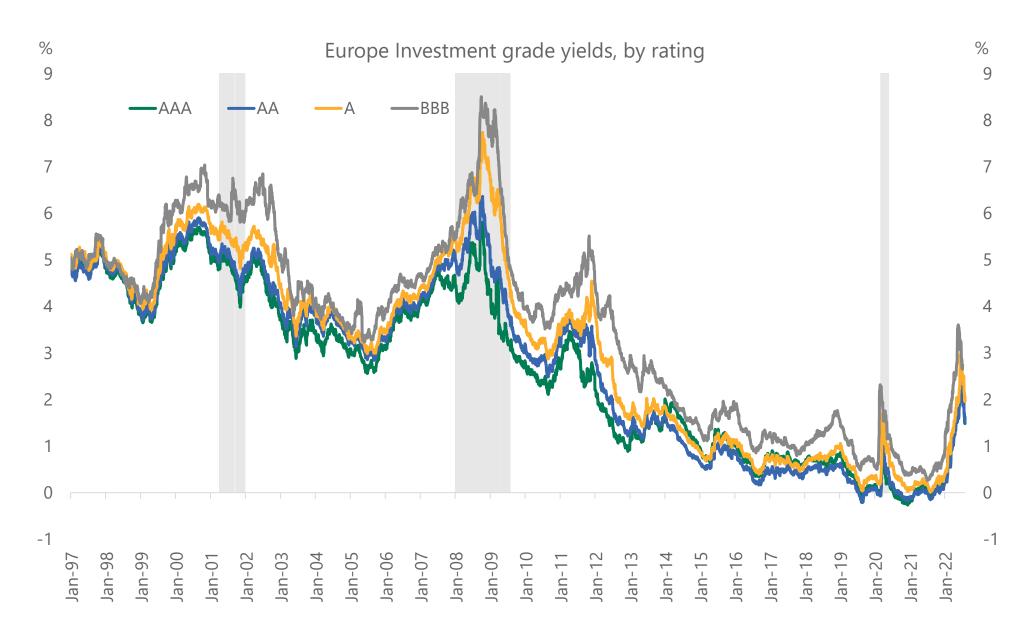


Source: ICE BofA, Haver Analytics, Apollo Chief Economist

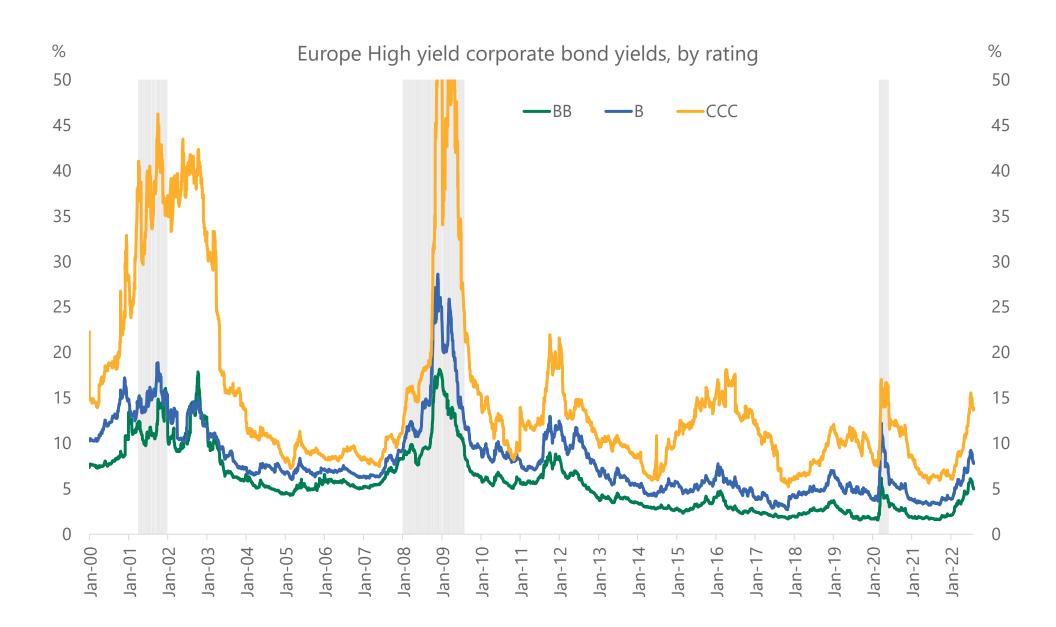
#### Europe Corporate IG and HY yields



#### Europe IG yield levels, by rating

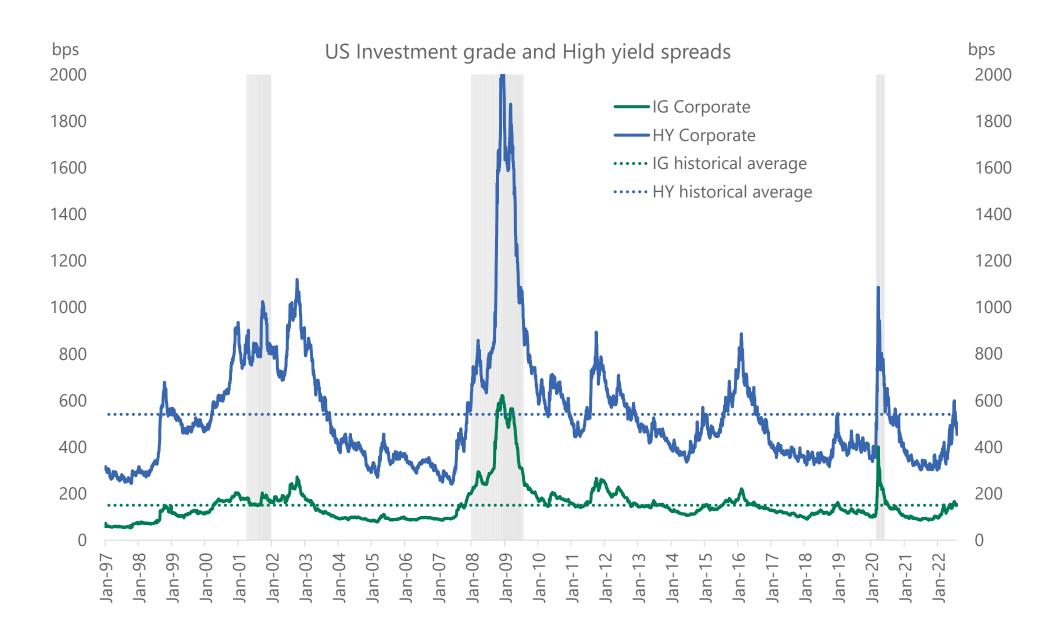


#### Europe HY yield levels, by rating



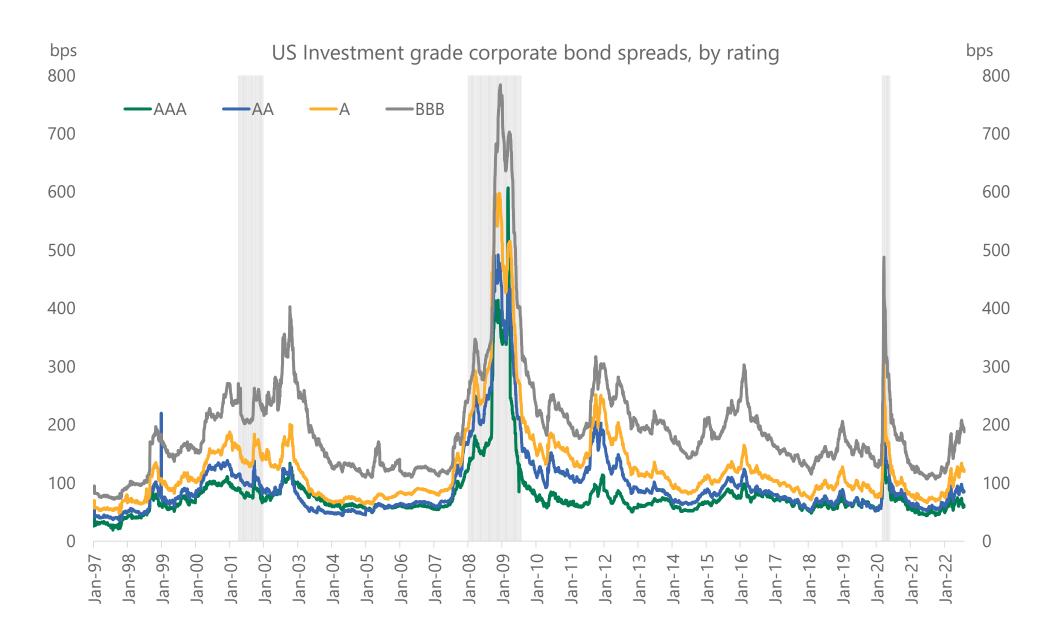
## Spreads

#### Credit spreads near historical averages

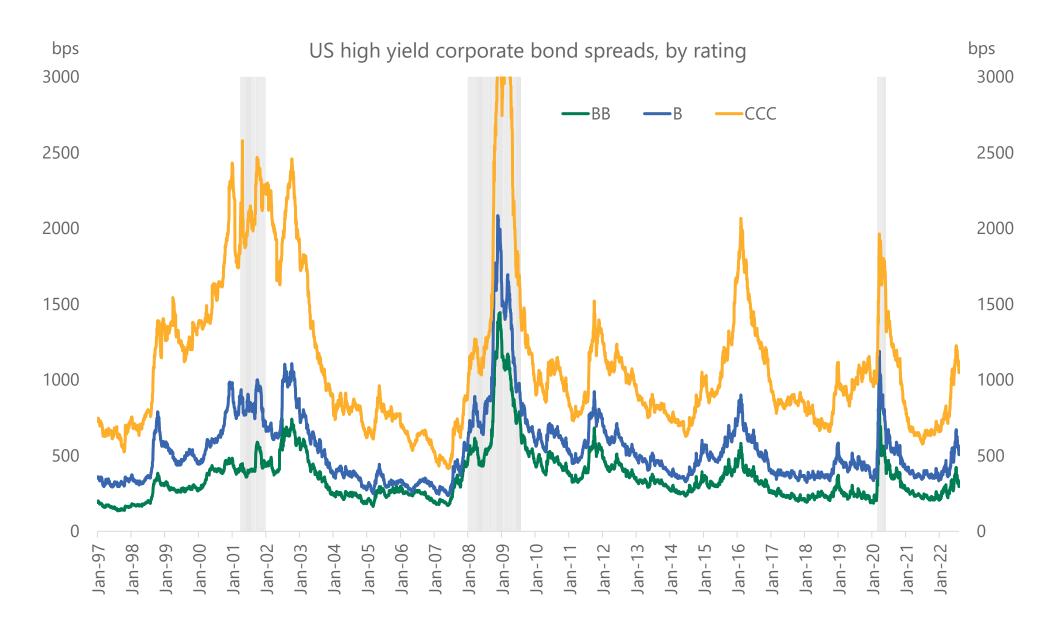




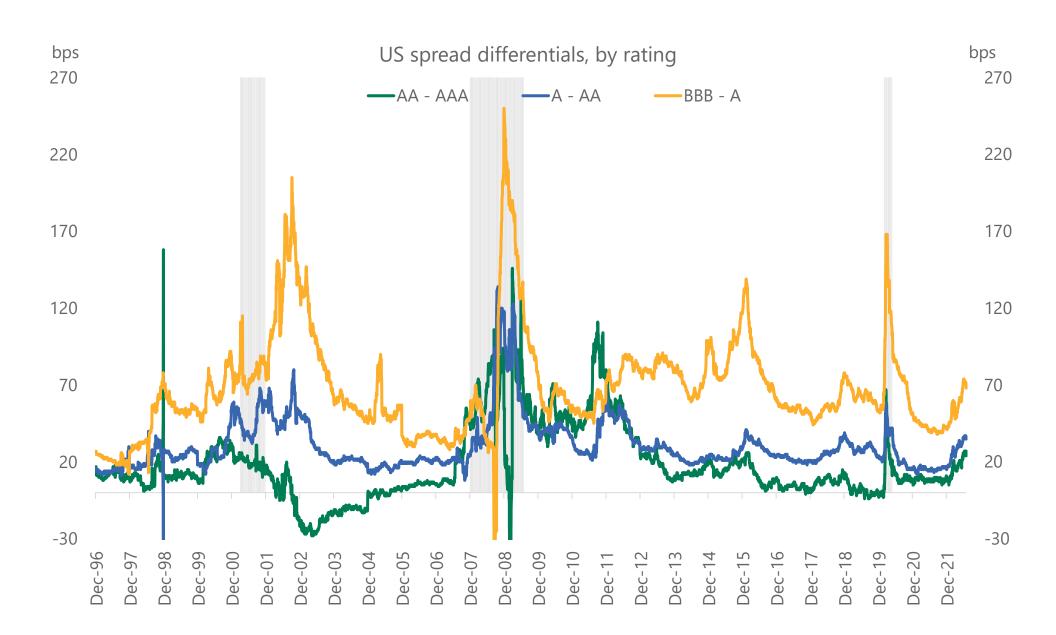
#### IG spreads by rating



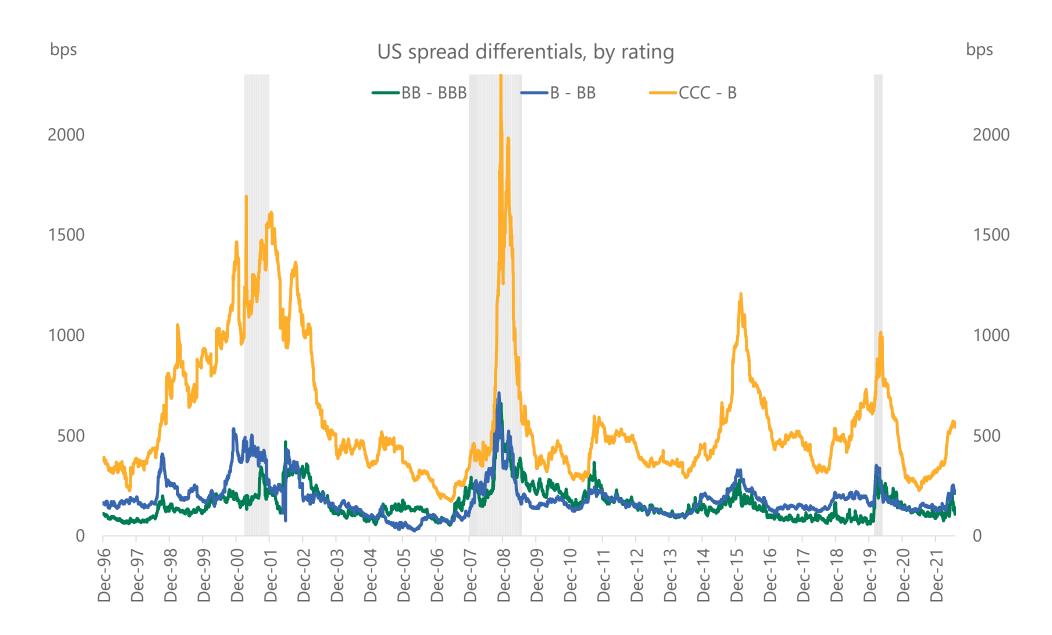
#### HY spreads by rating



#### IG quality spreads, more differentiation between BBB and single-A



#### HY quality spreads, more differentiation between CCC and B



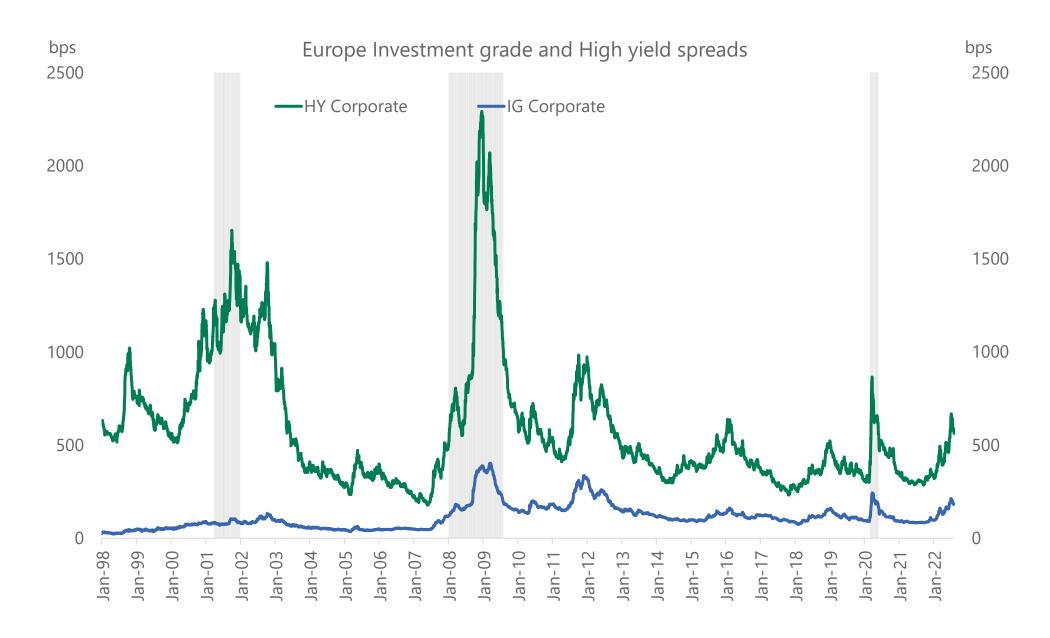
#### US HY spread minus IG spread



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

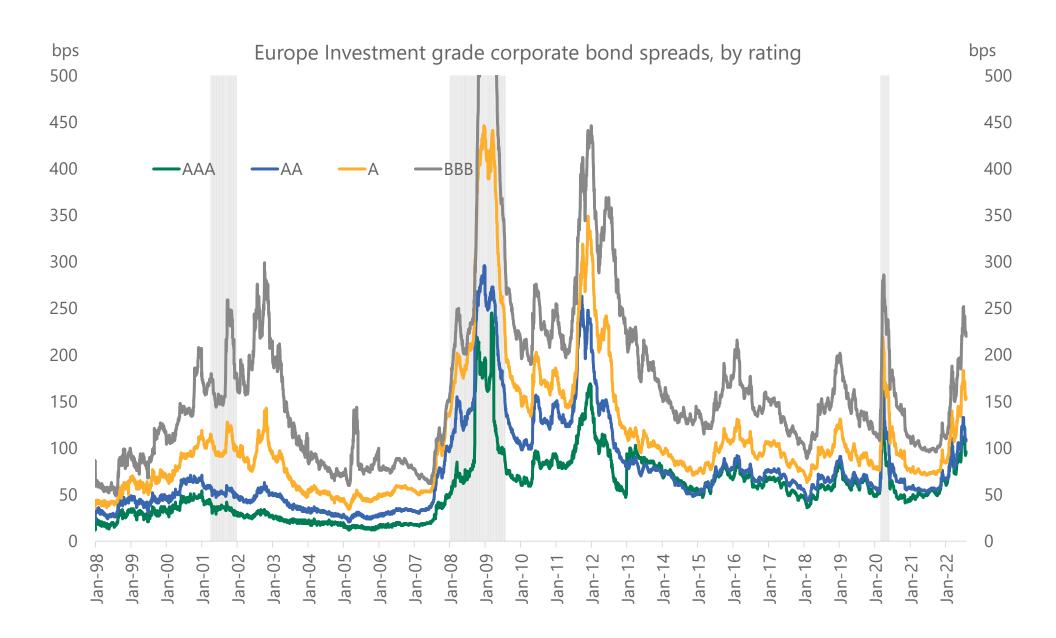


#### Europe spreads

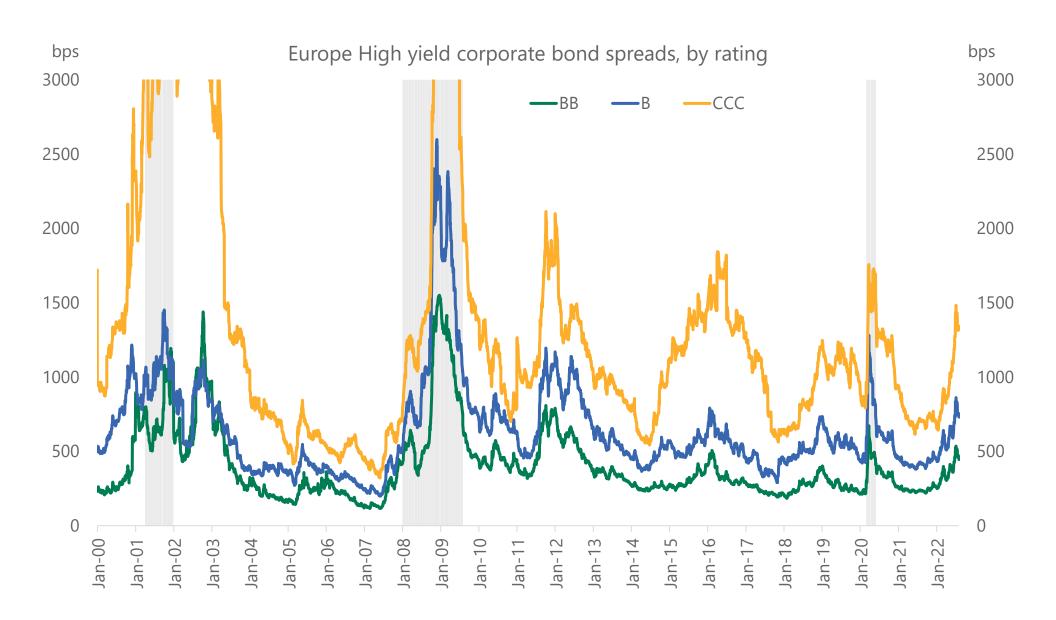


Source: ICE BofA, Bloomberg, Apollo Chief Economist. Note: Ticker used HE00 Index and ER00 Index.

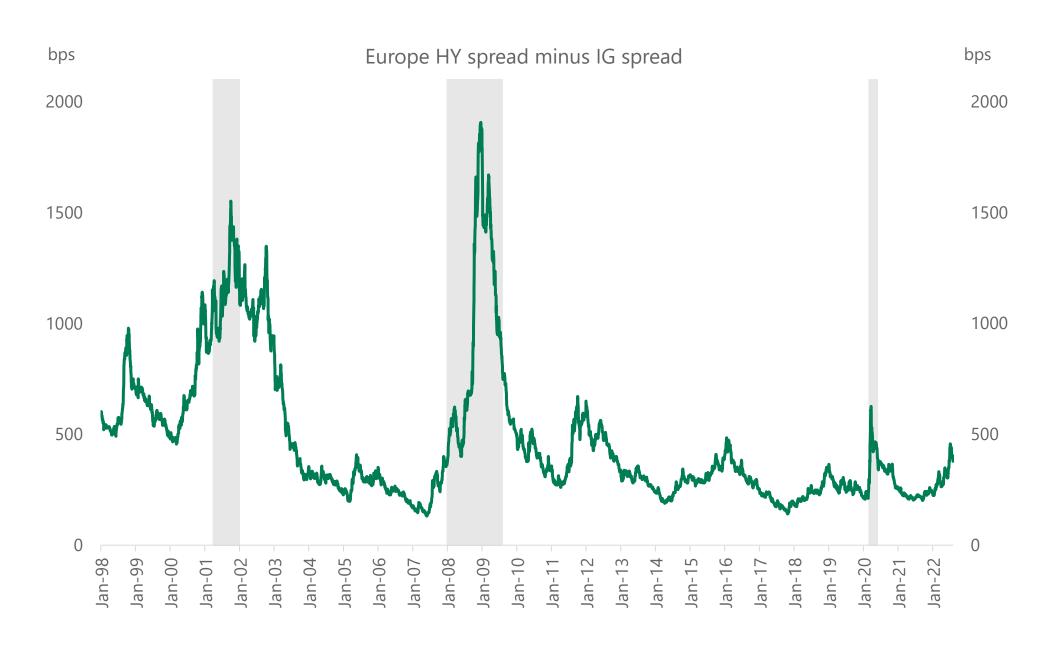
#### Europe IG spreads by rating



#### Europe HY spreads by rating



#### Europe HY spread minus IG spread



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

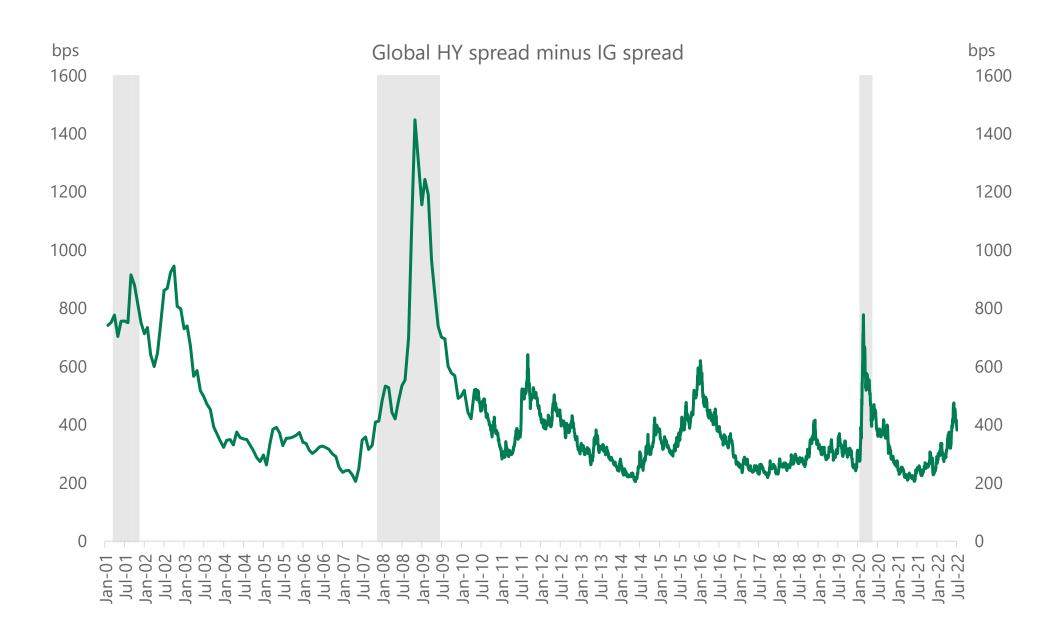


#### Spread between Europe HY and IG default swaps



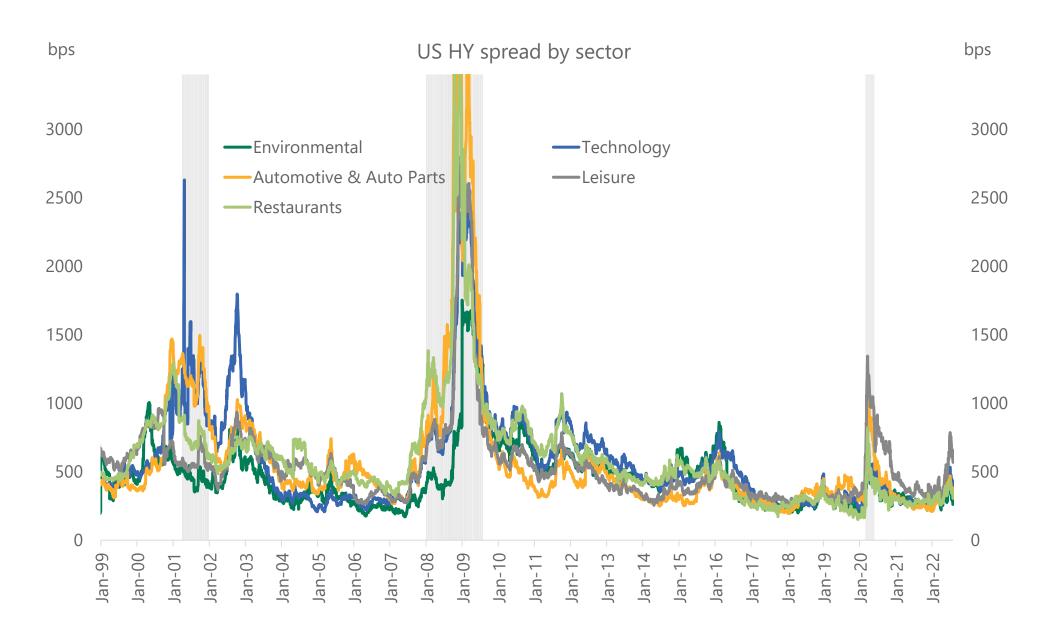
Source: Bloomberg, Apollo Chief Economist. Note: Tickers used ITRXEXE CBBT Curncy and ITRXEBE CBBT Curncy

#### Global HY spread minus IG spread

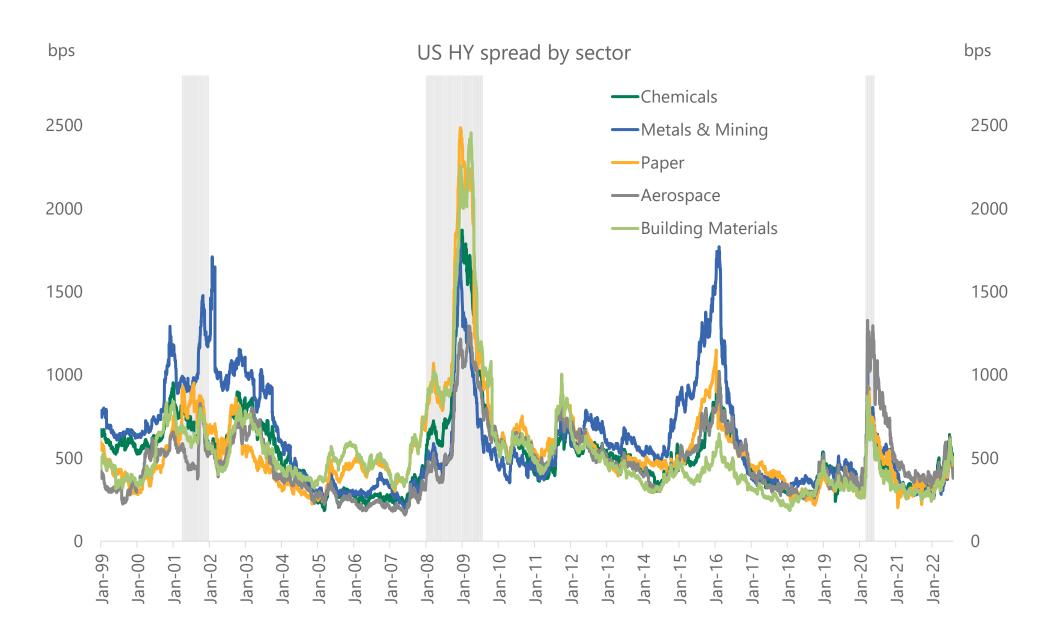


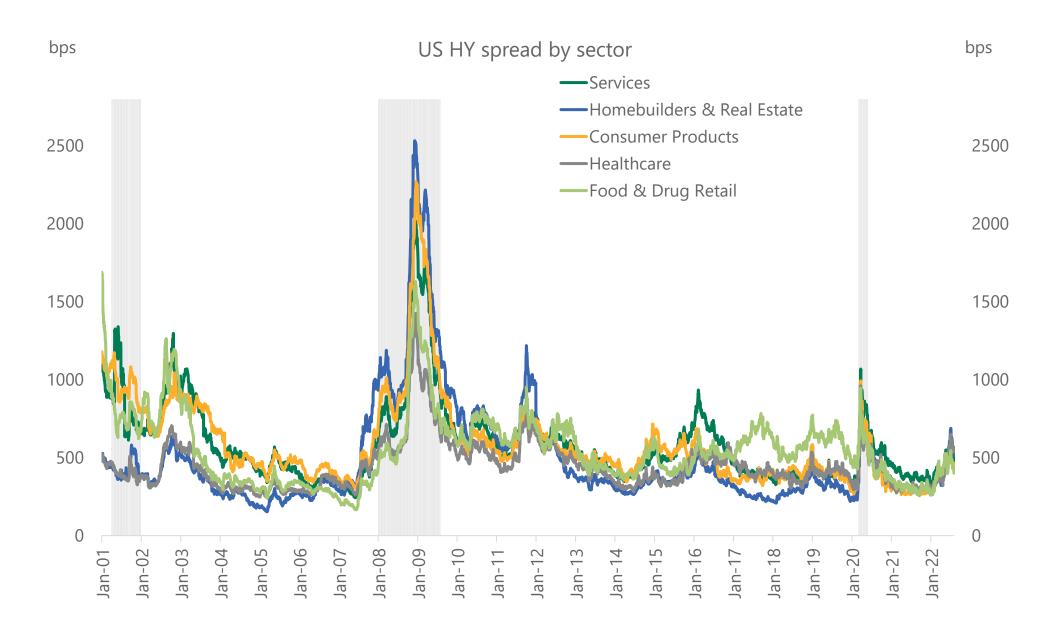
Source: Bloomberg, Apollo Chief Economist. Note: Bloomberg Index used BGLCTRUU index and LG50TRUU Index



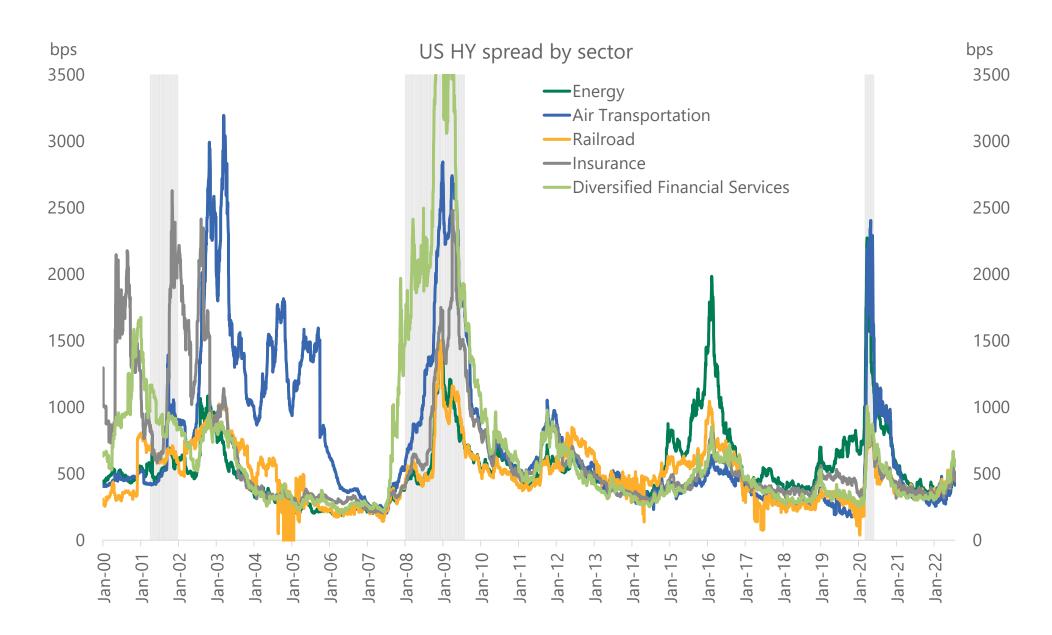




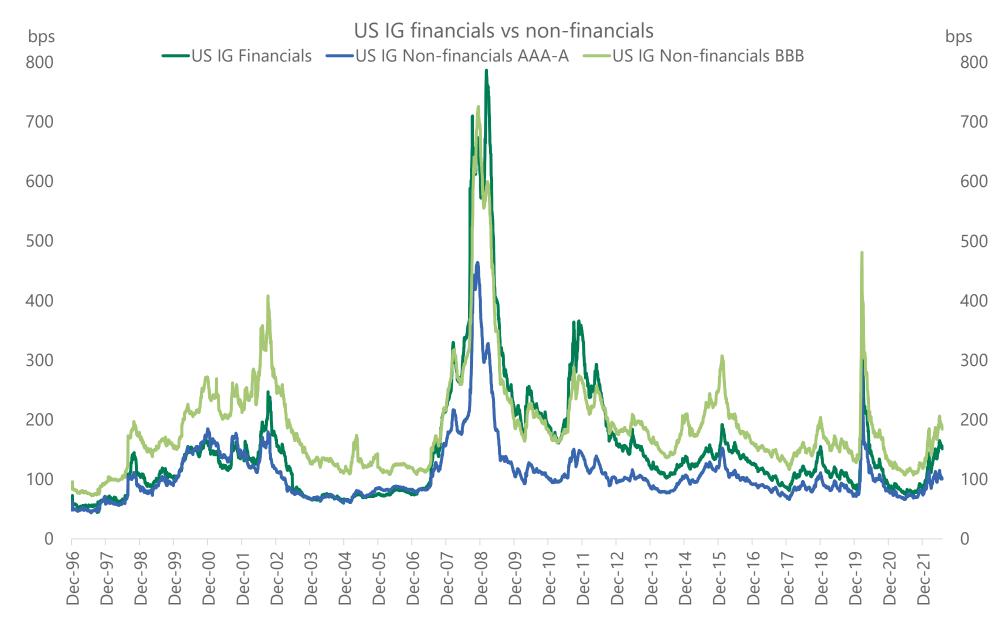




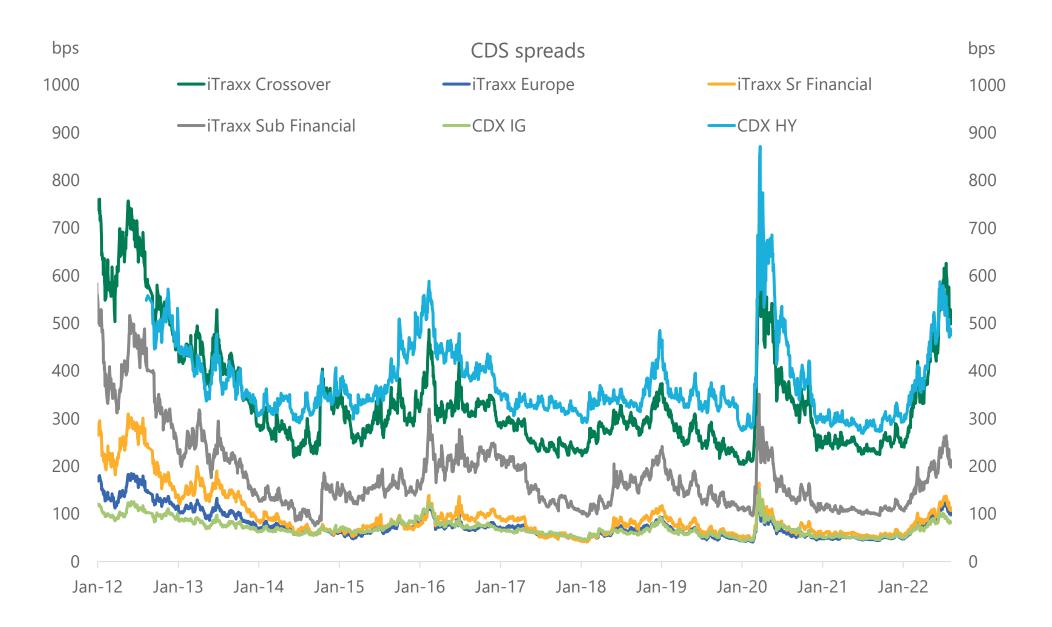




#### IG spreads for financials and non-financials



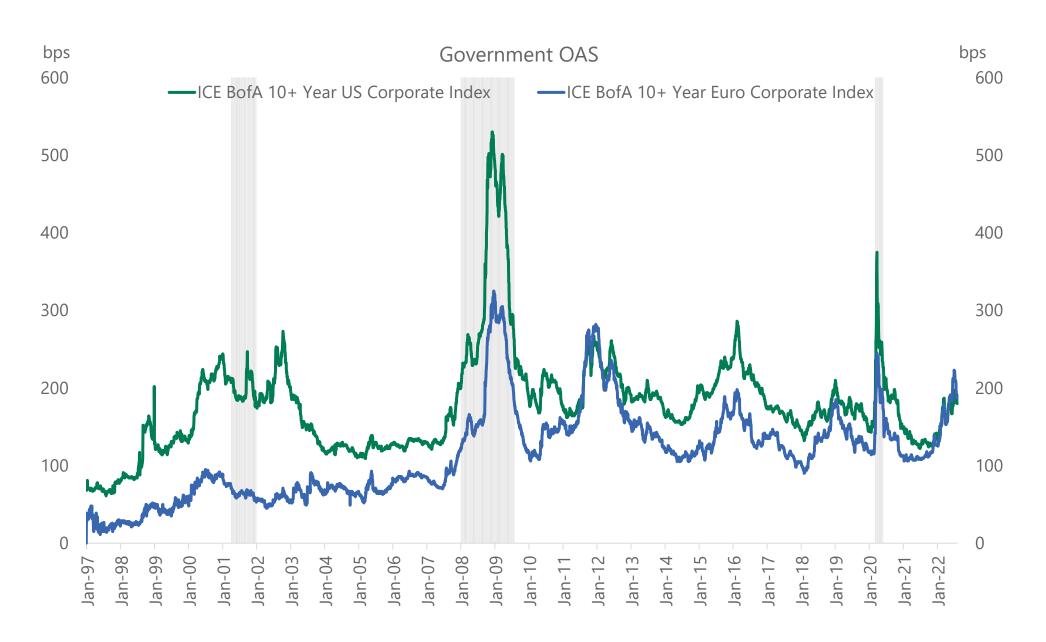
#### **CDS** spreads



Source: Markit, Bloomberg, Apollo Chief Economist

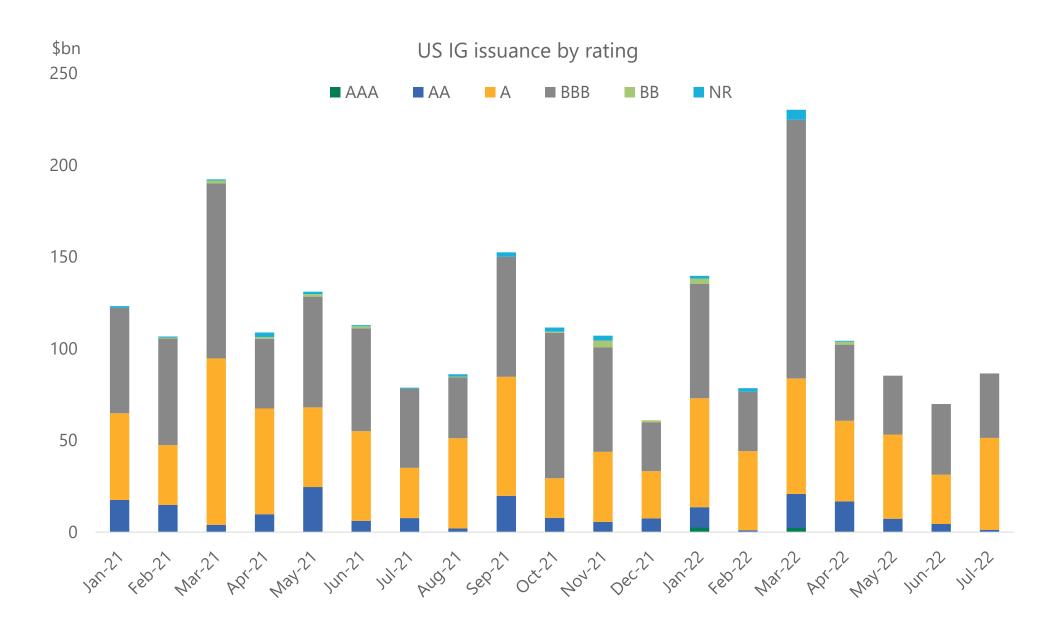


#### Long-duration IG spreads in US and Europe



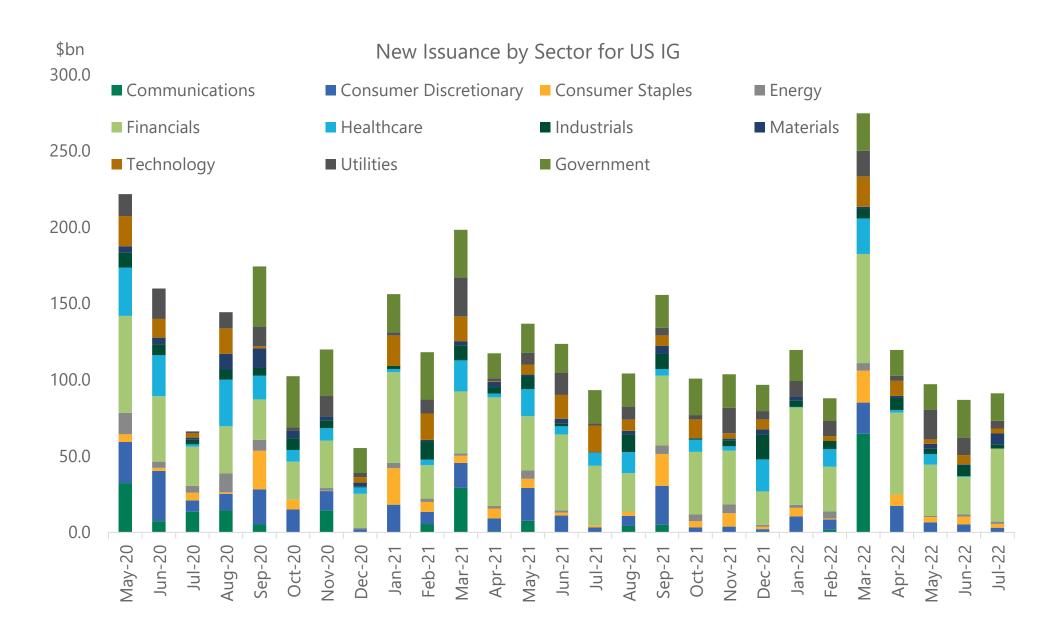
New issuance

#### IG issuance by rating



Source: S&P LCD, Apollo Chief Economist. Note: Data as of 30th Aptil 2022

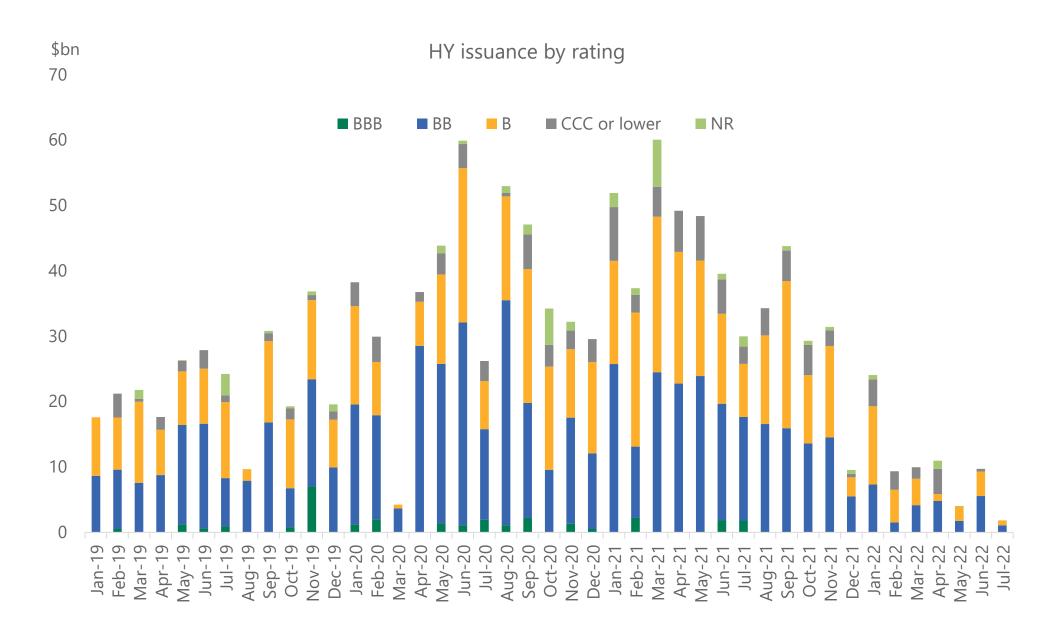
#### Sector distribution of new IG issuance



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

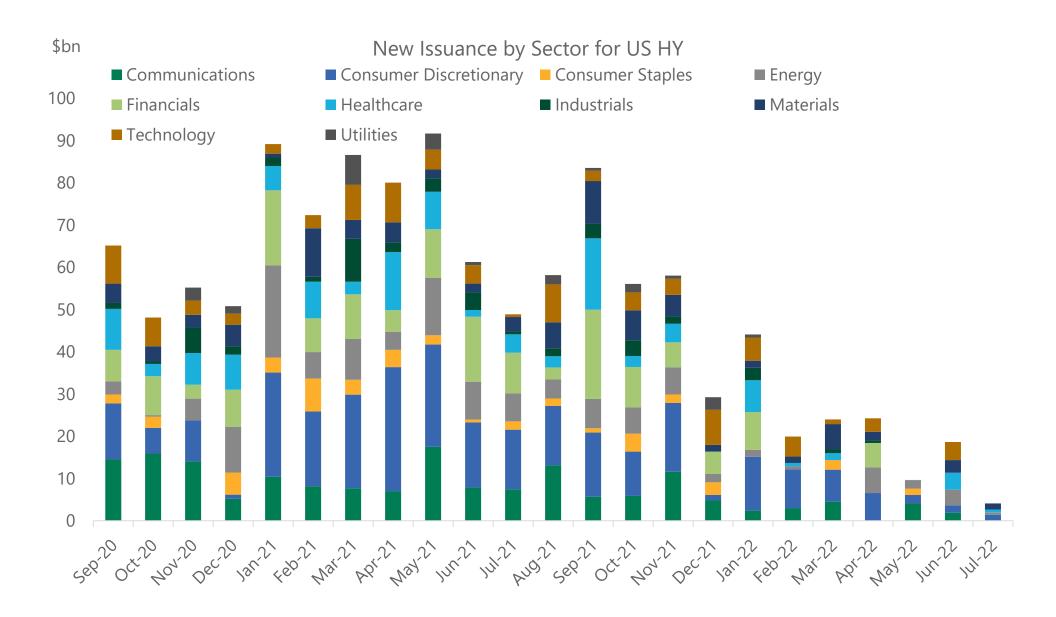


#### HY issuance by rating



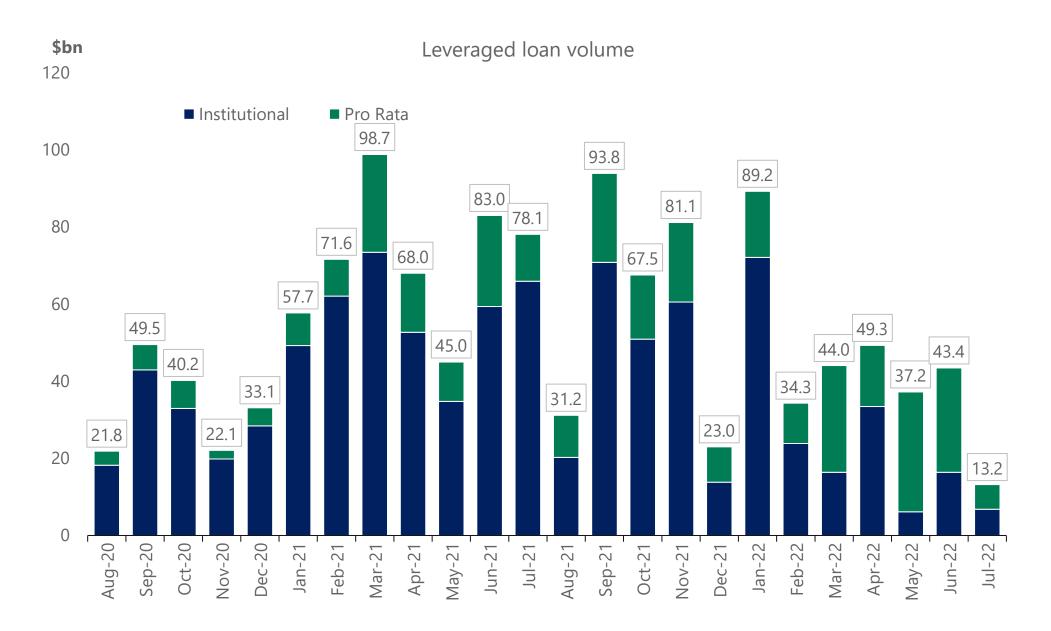
Source: S&P LCD, Apollo Chief Economist. Note: Data as of 30th Aptil 2022

#### Sector distribution of new HY issuance



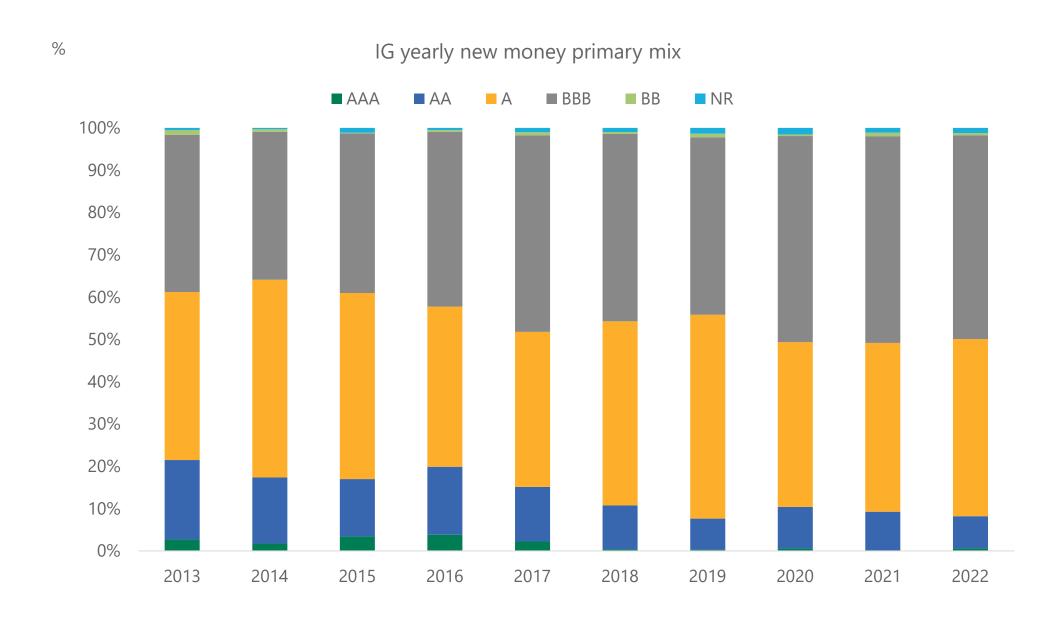
Source: Bloomberg, apollo Chief Economist. Note:. Issuance includes bonds, loans, leveraged loans and preferred.

#### Leveraged loan volume



Source: S&P LCD, Apollo Chief Economist.

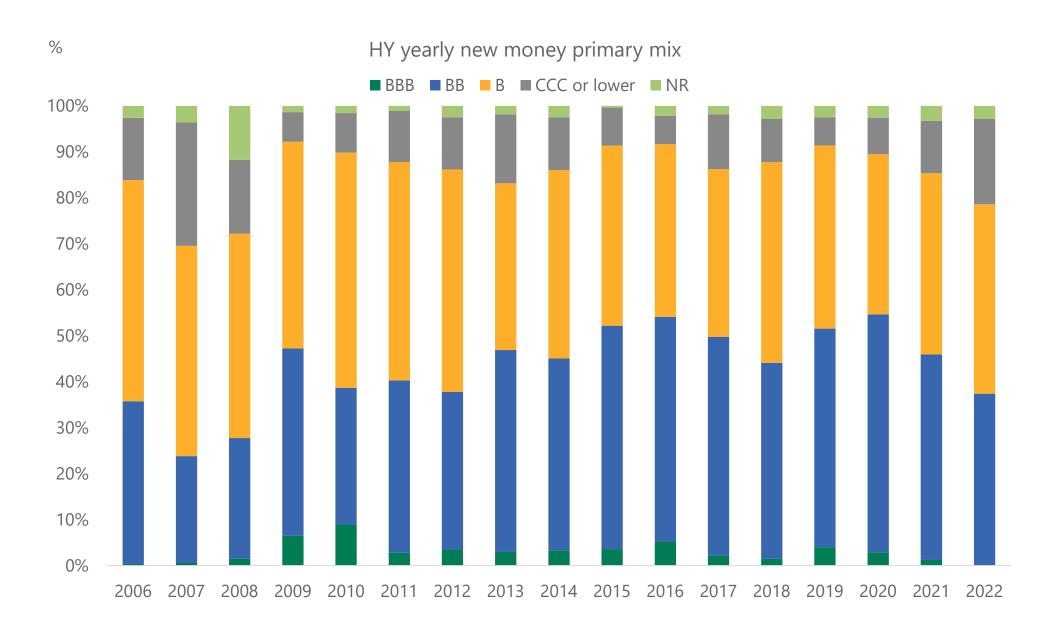
## IG new money primary mix



Source: S&P LCD, Apollo Chief Economist. Note: Data as of 31st July 2022

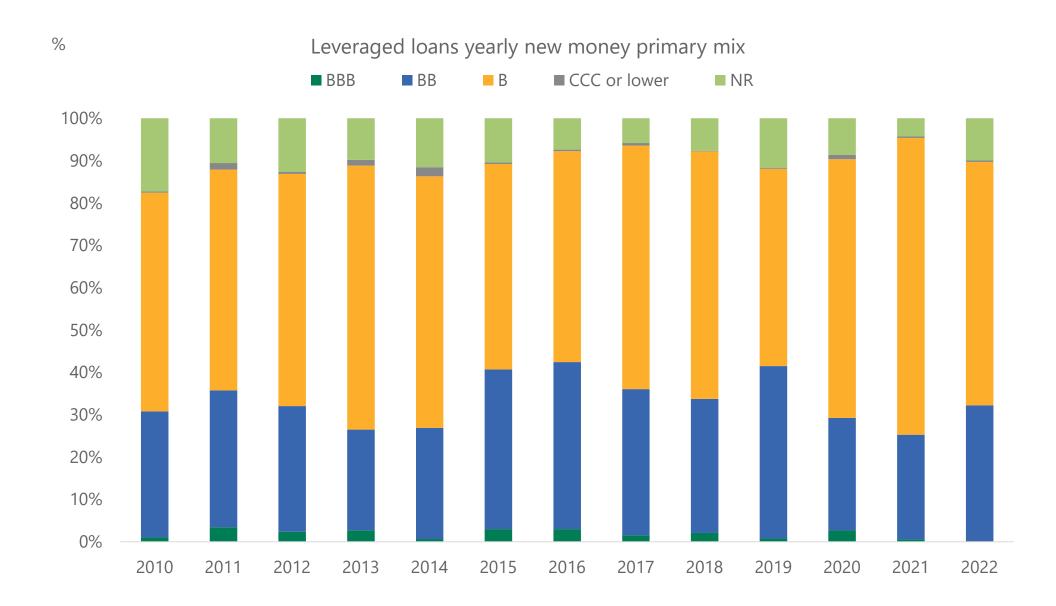


### HY new money primary mix



Source: S&P LCD, Apollo Chief Economist. Note: Data as of 31st July 2022

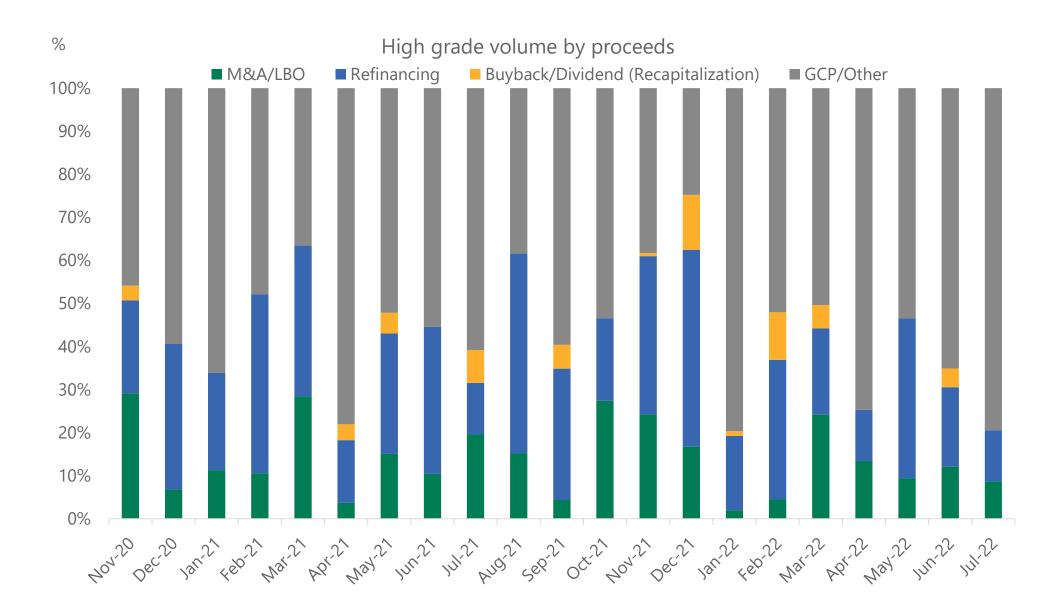
#### Loans new money primary mix



Source: S&P LCD, Apollo Chief Economist. Note: 2022 YTD till 31st July 2022



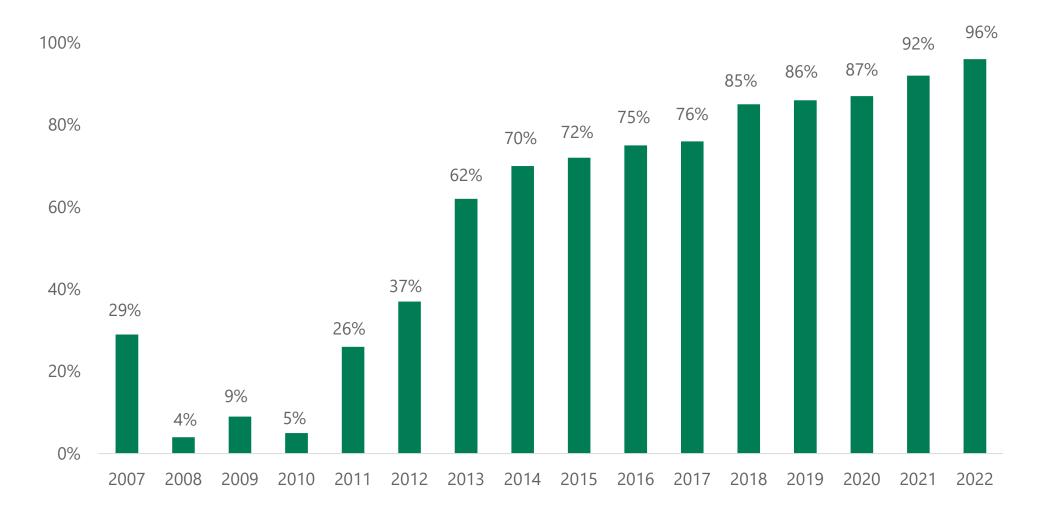
#### High grade volume by proceeds



Source: S&P LCD, Apollo Chief Economist

#### Covenant lite loan issuance

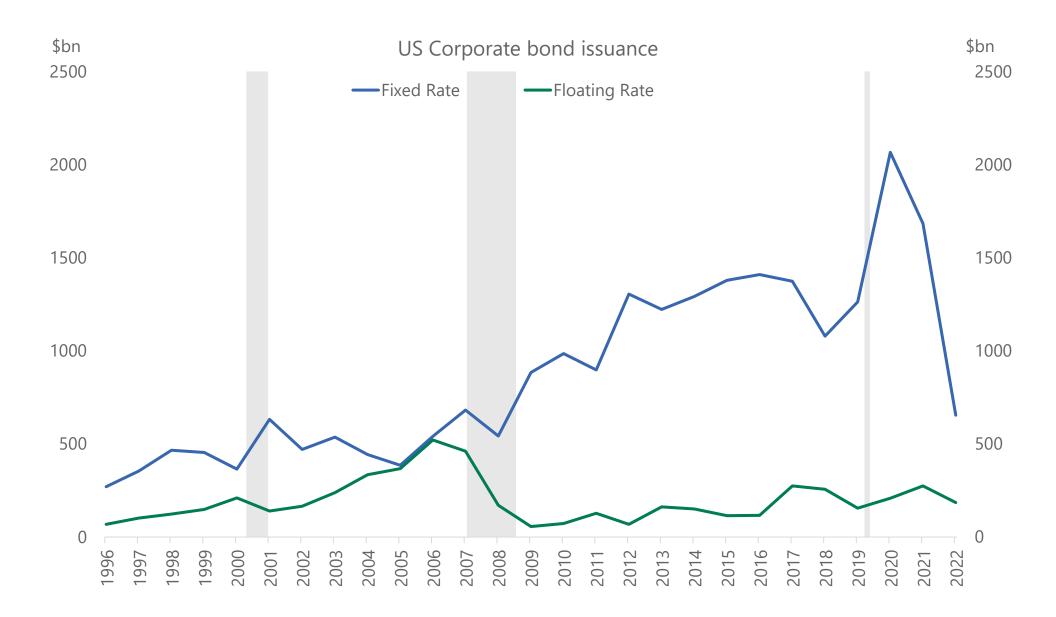
% Covenant lite loan issuance as % of total leveraged loans issuance 120%



Source: S&P 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 1st August 2022



#### Corporate bond issuance

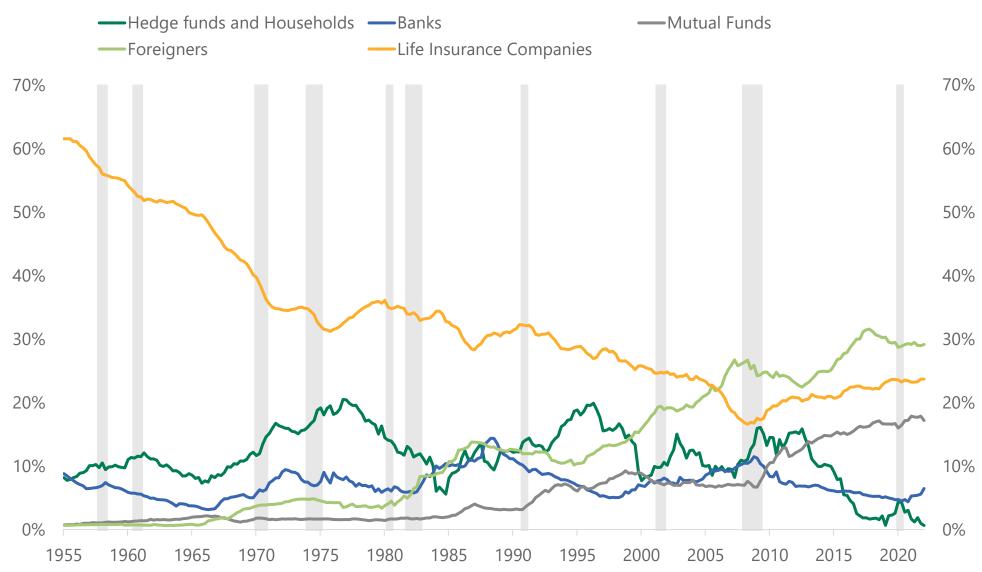


Source: SIFMA, Apollo Chief Economist. Note: 2022 YTD till 30th June 2022

## Corporate bond holdings

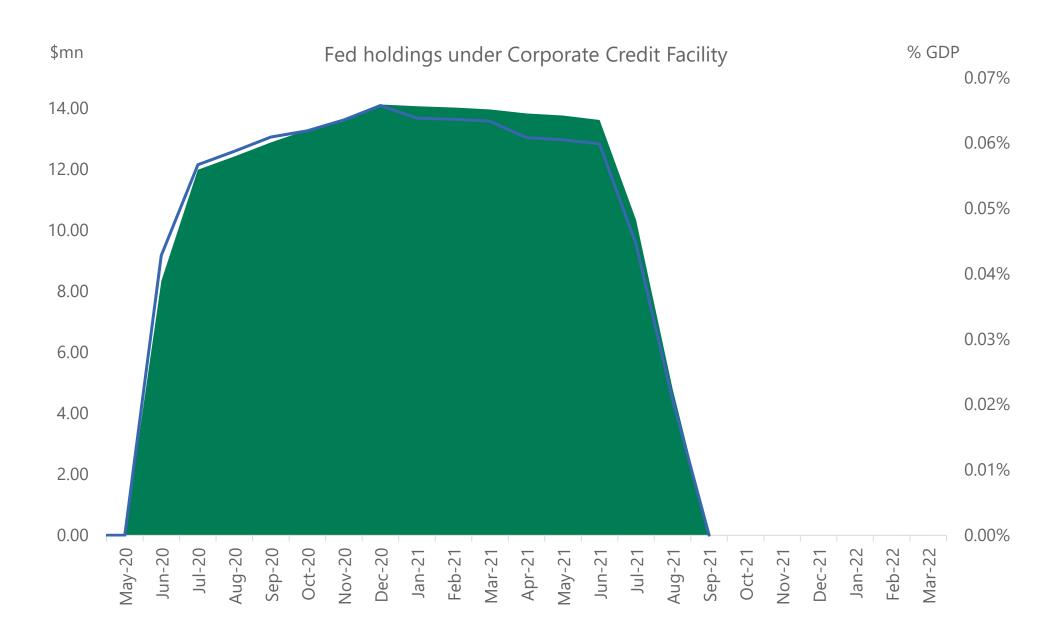
#### The biggest holder of US corporate bonds is foreigners





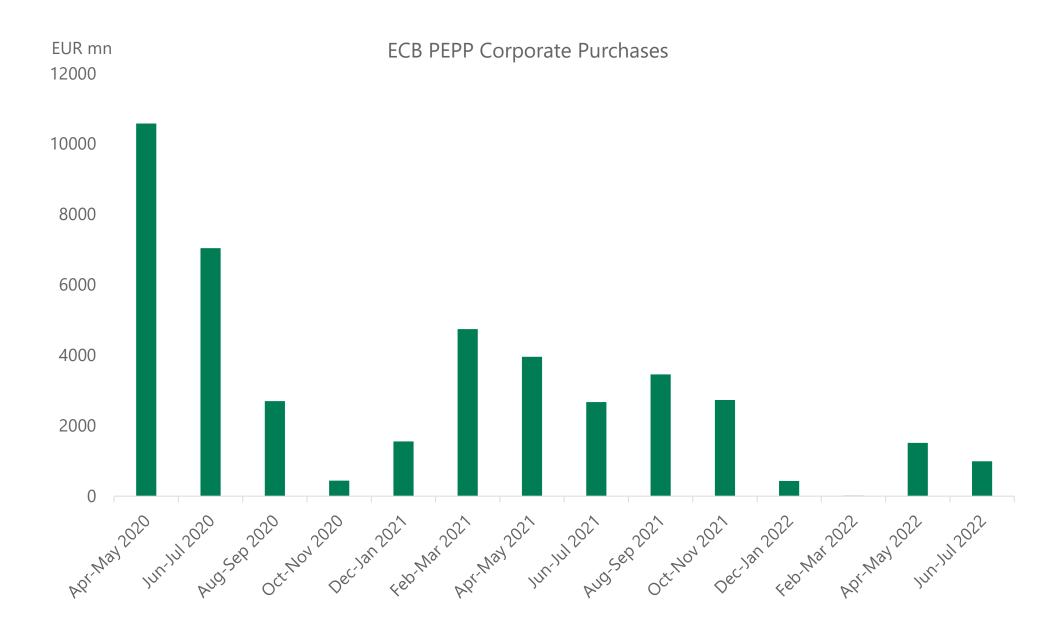
Source: FRB, Haver Analytics, Apollo Chief Economist

#### Fed holdings of corporate bonds



Source: Bloomberg, Apollo Chief Economist

#### ECB purchases of corporate bonds

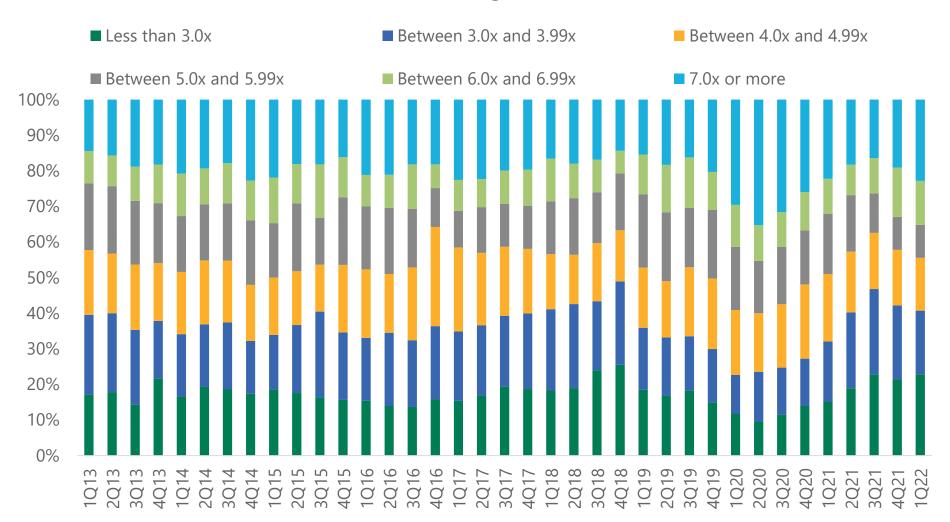


Source: ECB, Bloomberg, Apollo Chief Economist

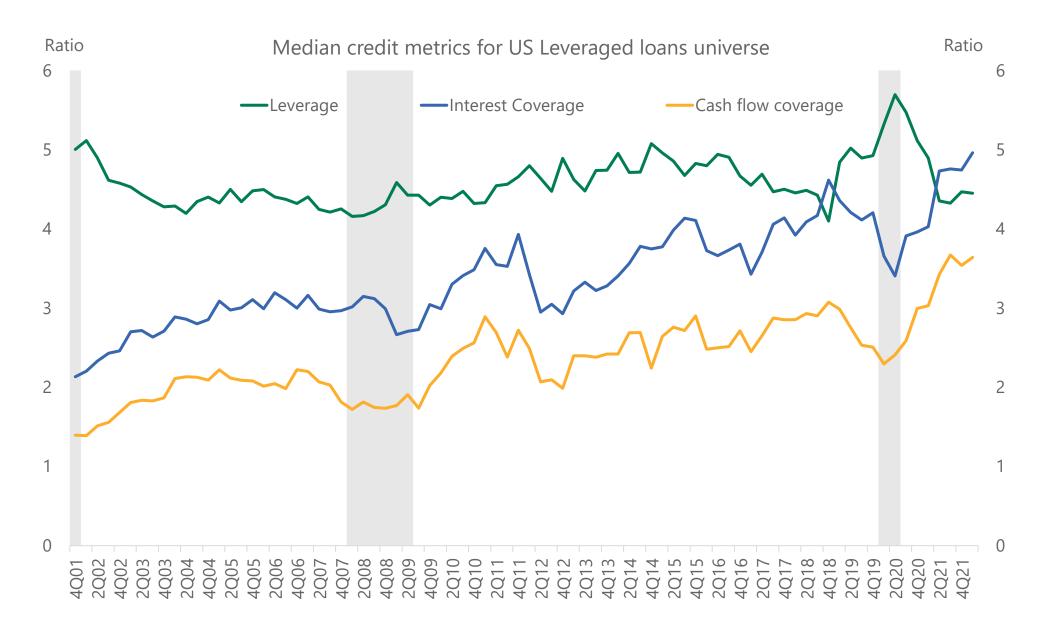
## Loans

#### Leveraged loan deals, by multiple

#### Share of leveraged deals



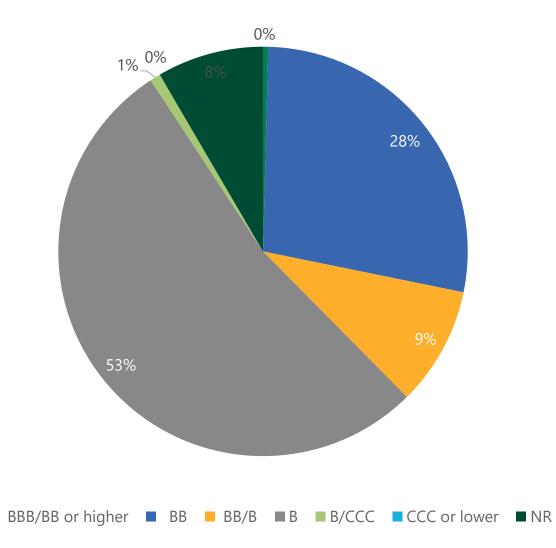
#### Credit metrics for leveraged loan deals



Source: S&P LCD, Apollo Chief Economist

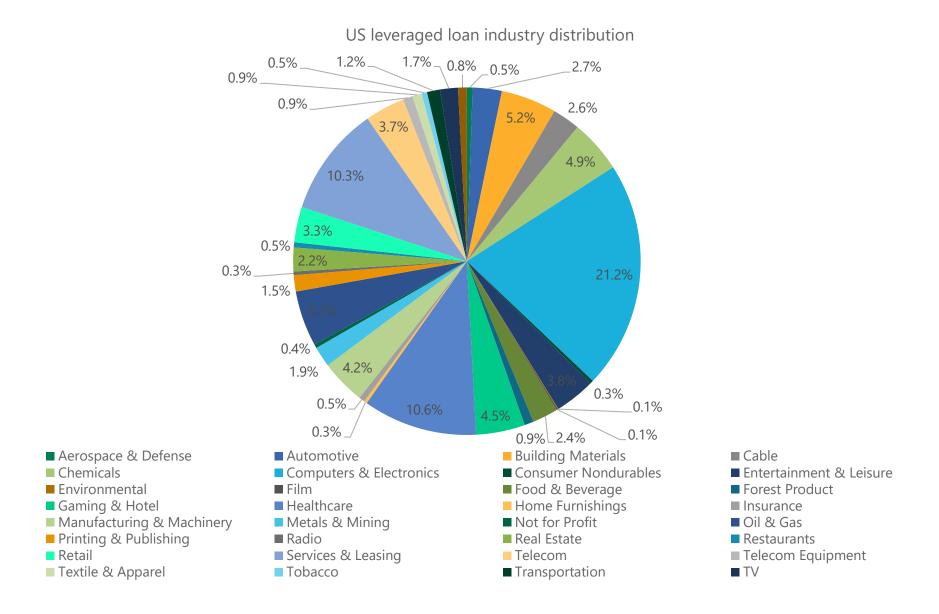
## Leveraged loans rating distribution, 2022Q2







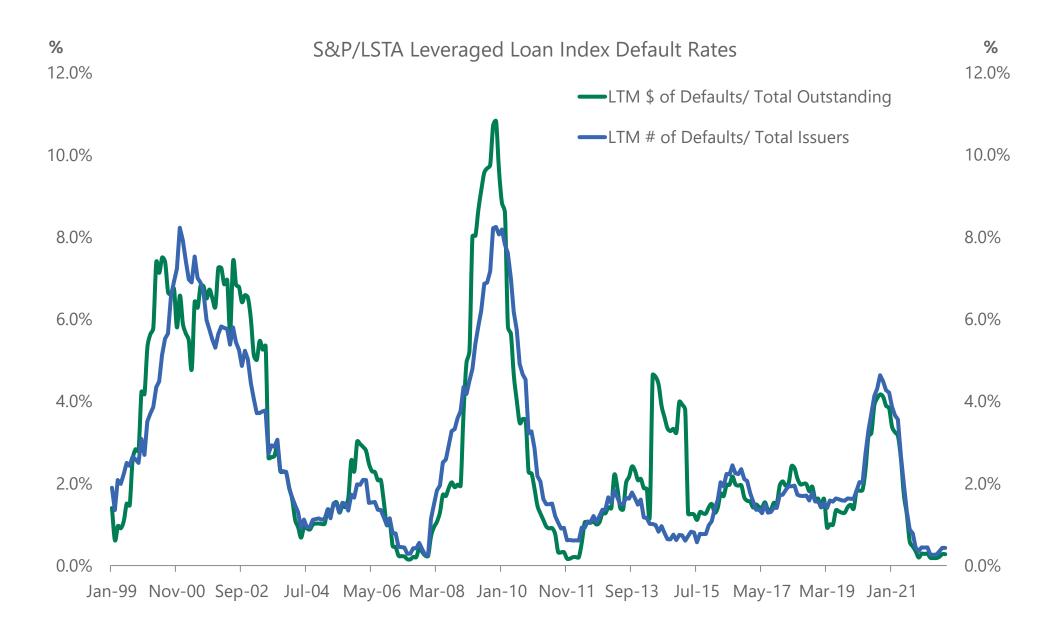
#### Leveraged loans distribution, by industry, 2022Q2





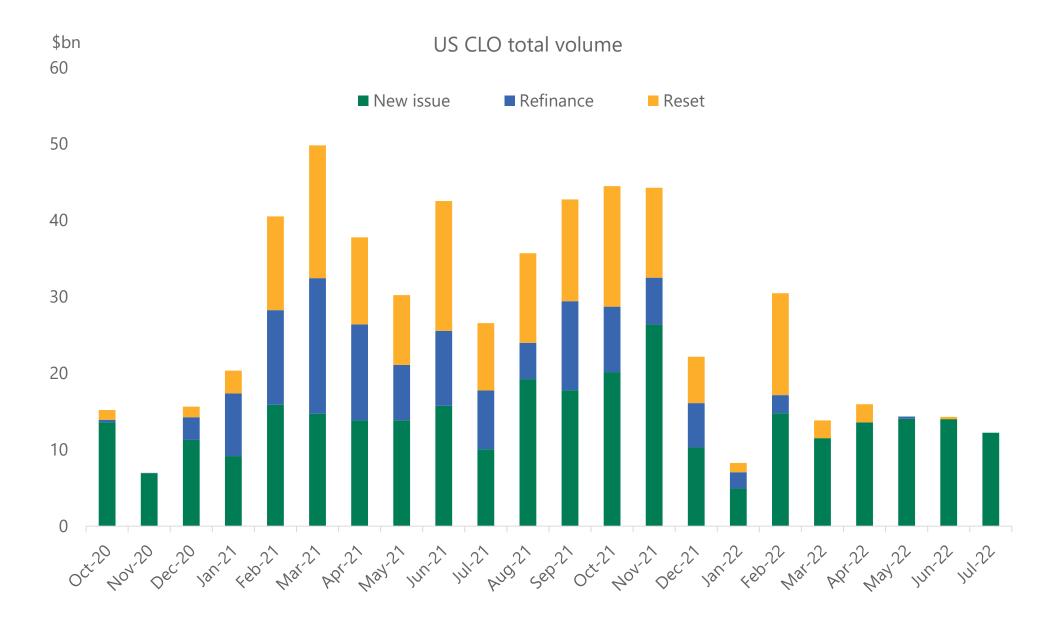


#### Leveraged loan index default rates very low



Source: S&P LCD, Apollo Chief Economist

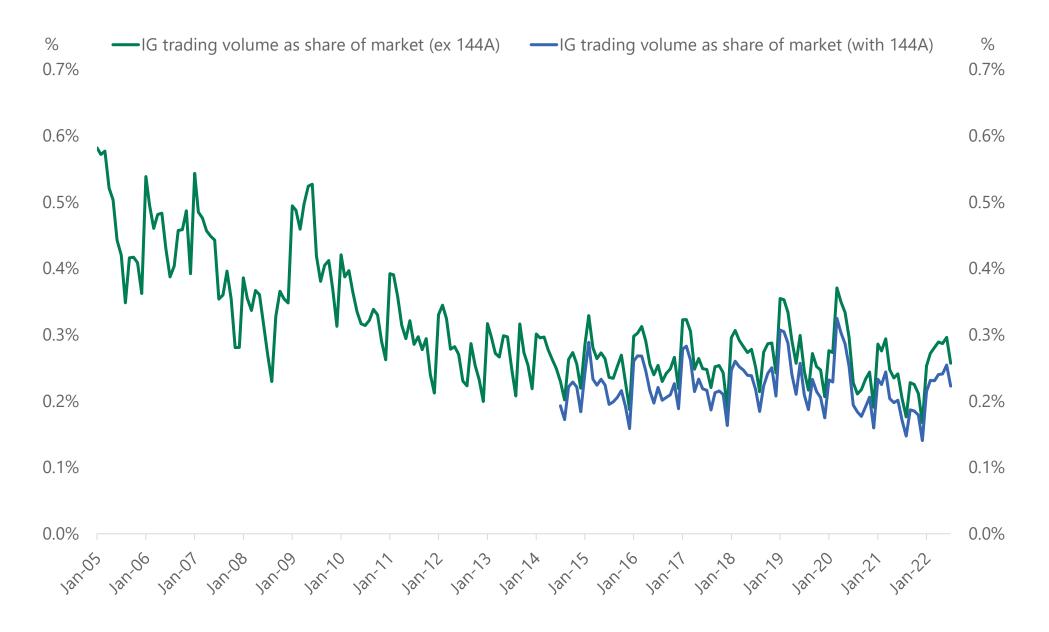
#### US CLO total volume



Source: S&P LCD, Apollo Chief Economist.

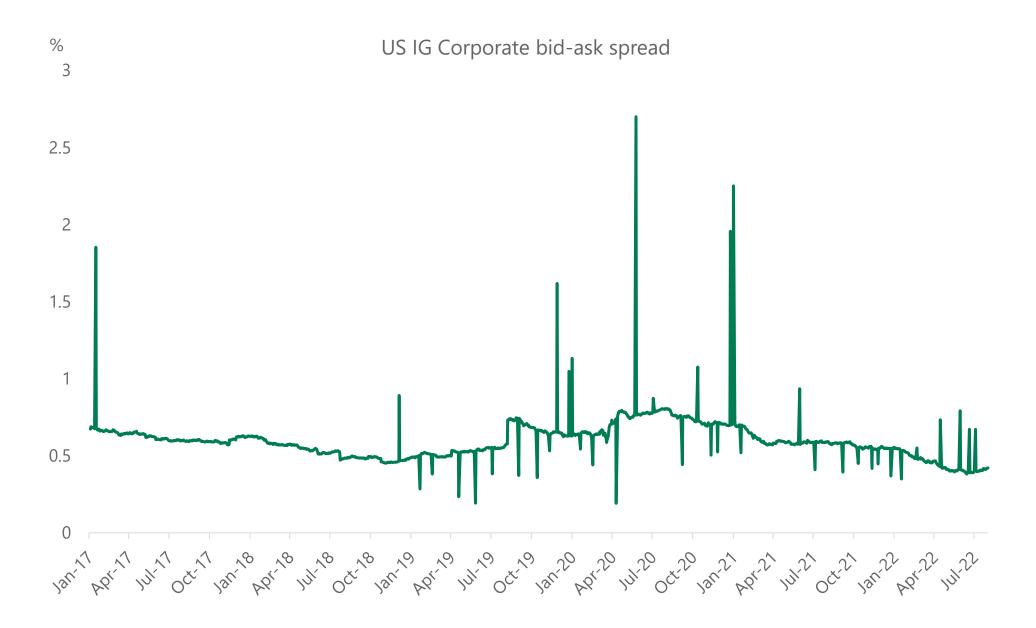
Liquidity in US credit markets

#### IG trading liquidity



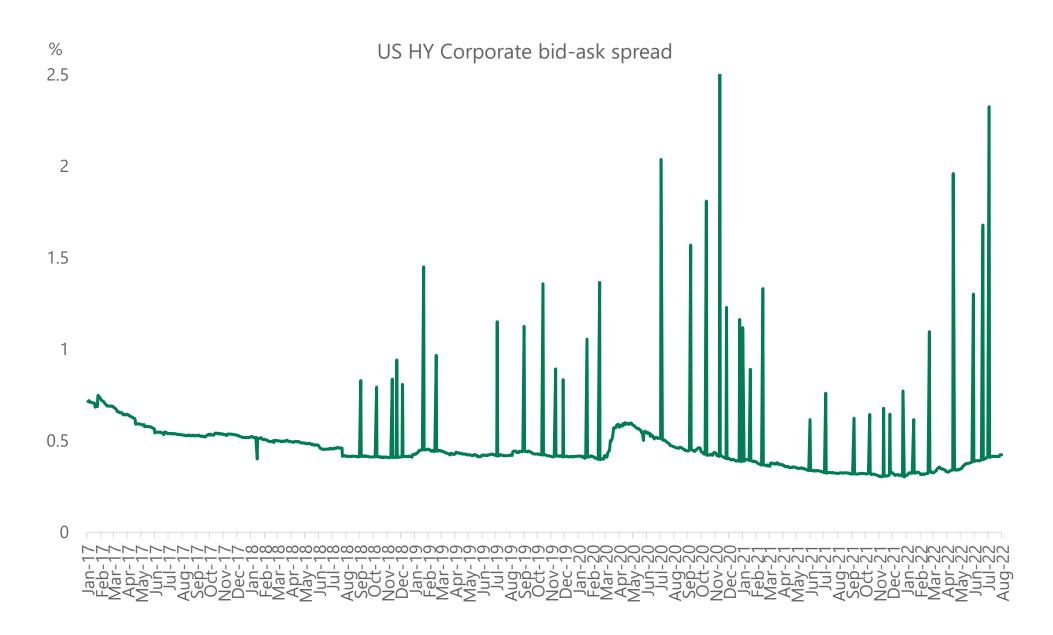
Source: ICE BofA, FINRA TRACE, Haver Analytics, Apollo Chief Economist

#### Bid-ask spread for US IG



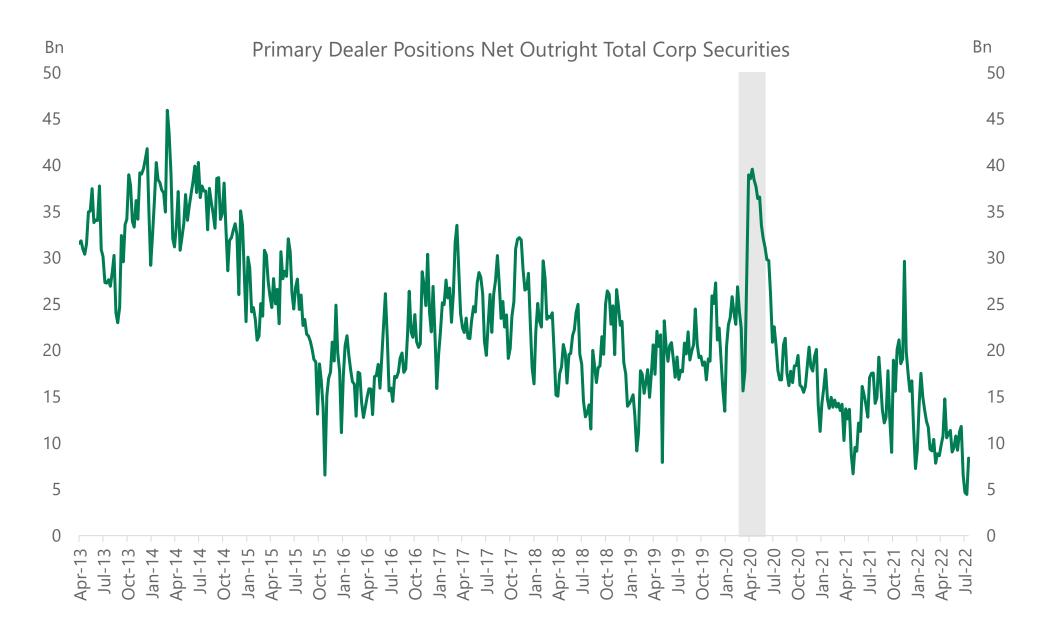
Source: Bloomberg, Apollo Chief Economist. Note: The bid-ask spread is the weighted average of Bloomberg Barclays US IG Index

## 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

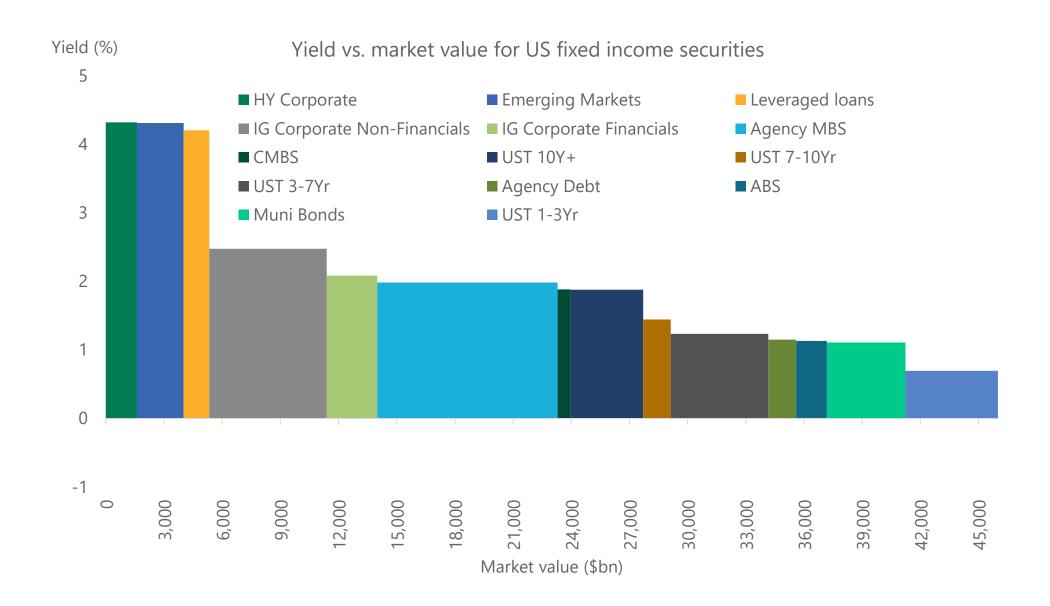
#### Very low dealer inventory of corporate bonds (IG+HY)



Source: Bloomberg, Apollo Chief Economist

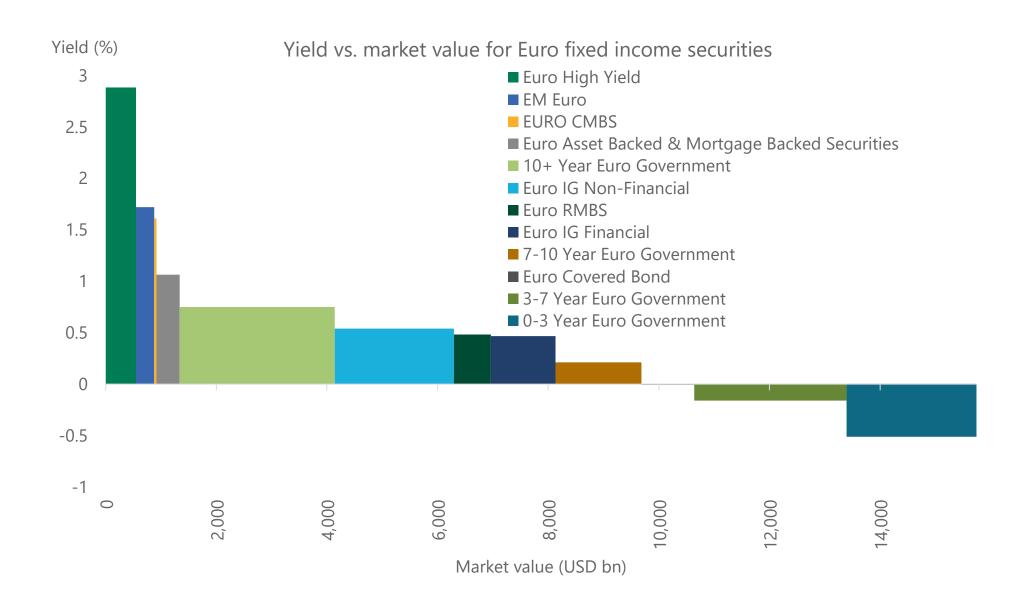
Credit markets in a broader perspective

#### US fixed income markets by yield and size



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

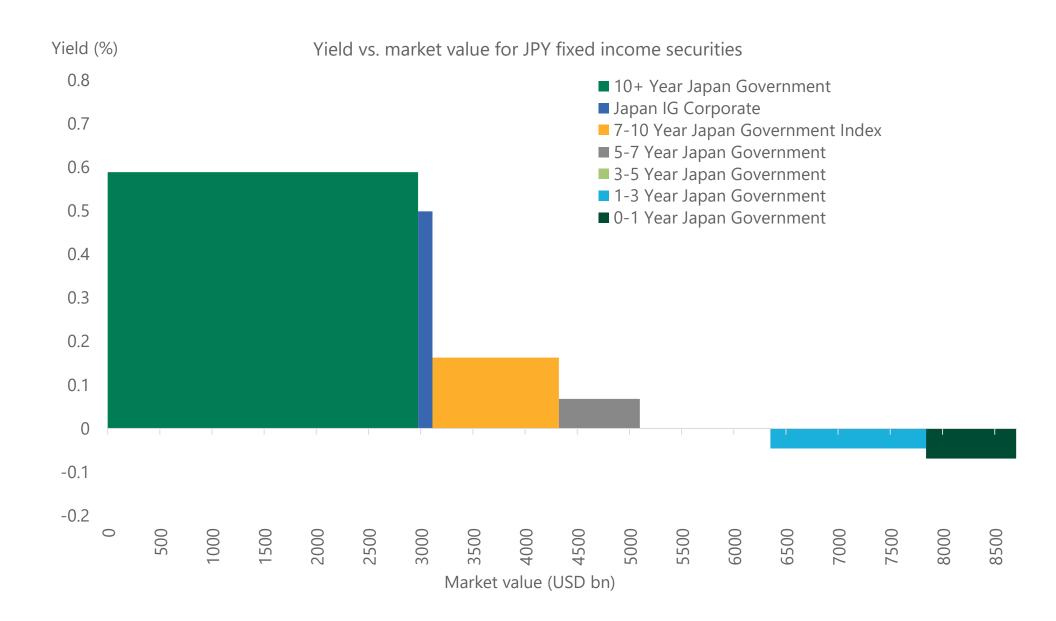
#### European fixed income markets by yield and size



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



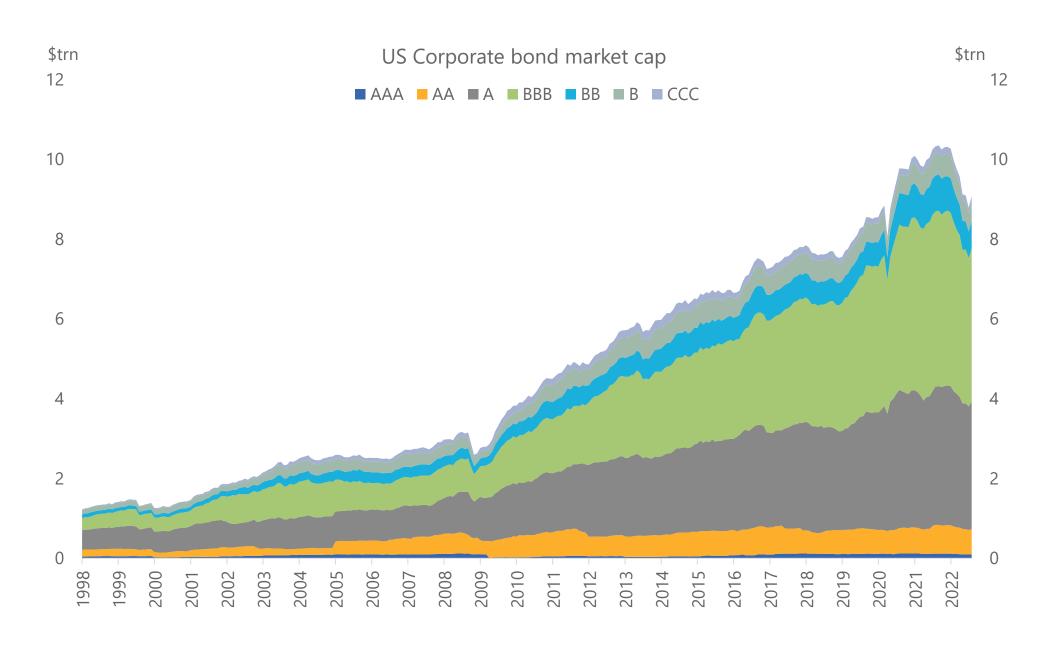
#### Japan fixed income markets by yield and size



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

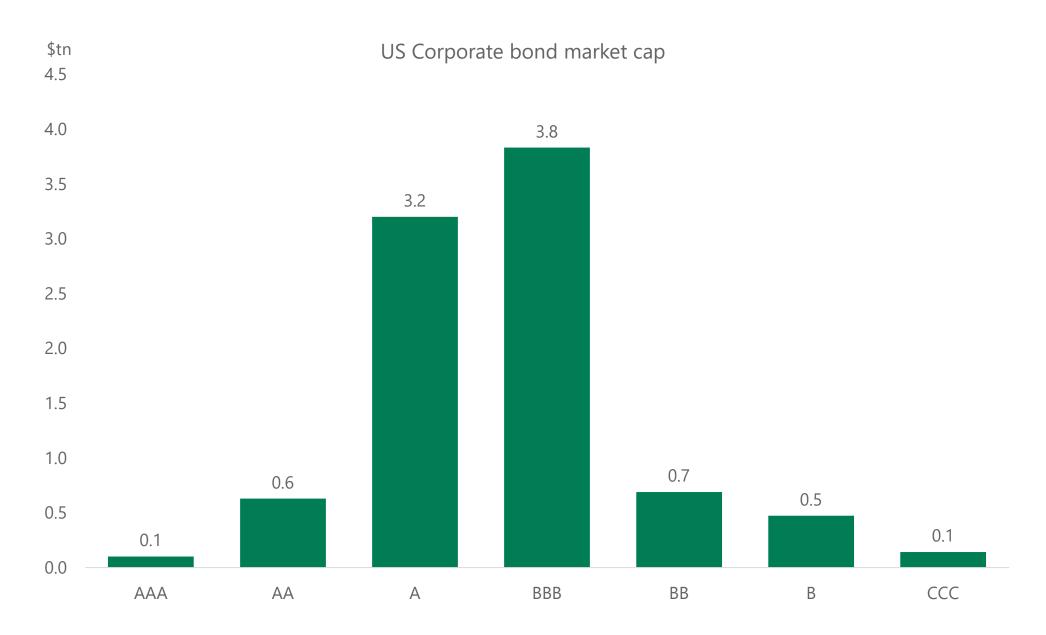


#### Market cap of US credit markets



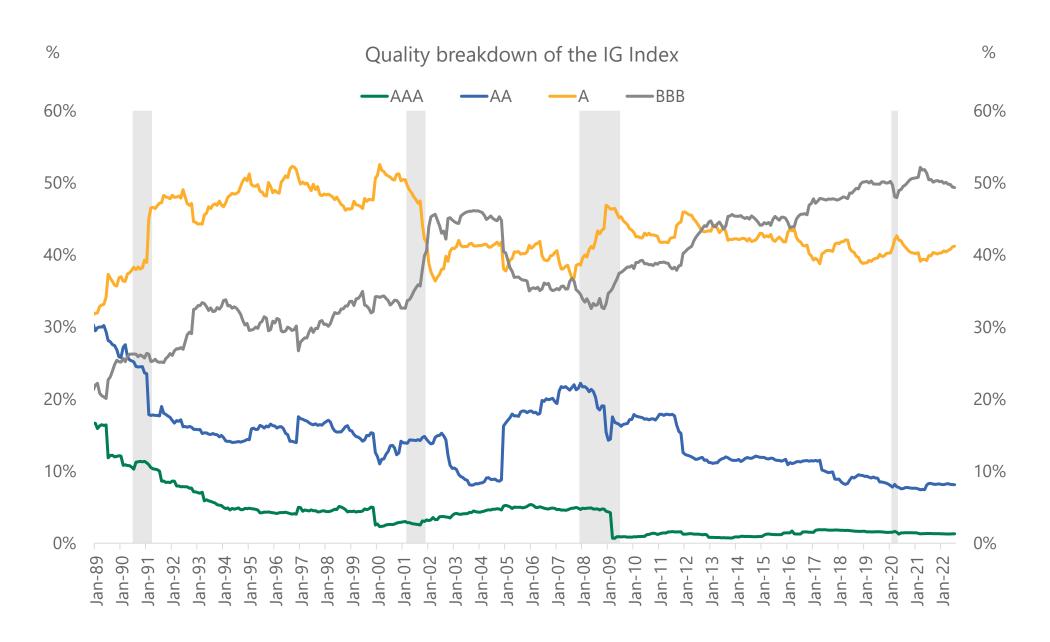
Source: ICE BofA, Bloomberg, Apollo Chief Economist. Data as of 31st July 2022

### Corporate bond market cap, by rating



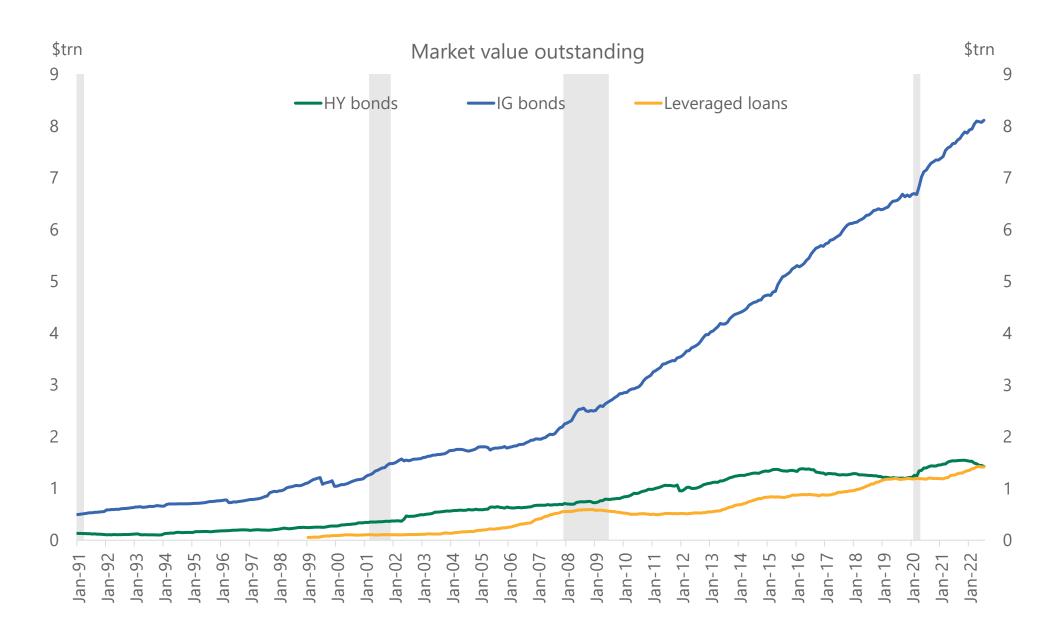
Source: ICE BofA, Bloomberg, Apollo Chief Economist. Data as of 31st July 2022

#### Quality breakdown of the IG Index



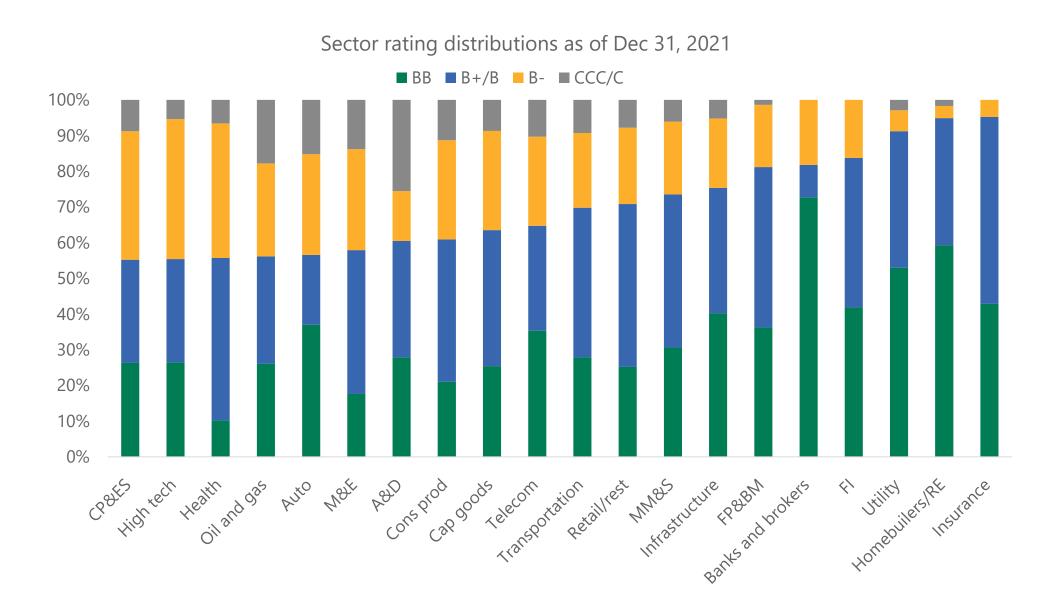
Source: ICE BofA, Bloomberg, Apollo Chief Economist. Note: Breakdown by market value. Data as of 31st July 2022

# IG market is five times bigger than HY and five times bigger than the loan market



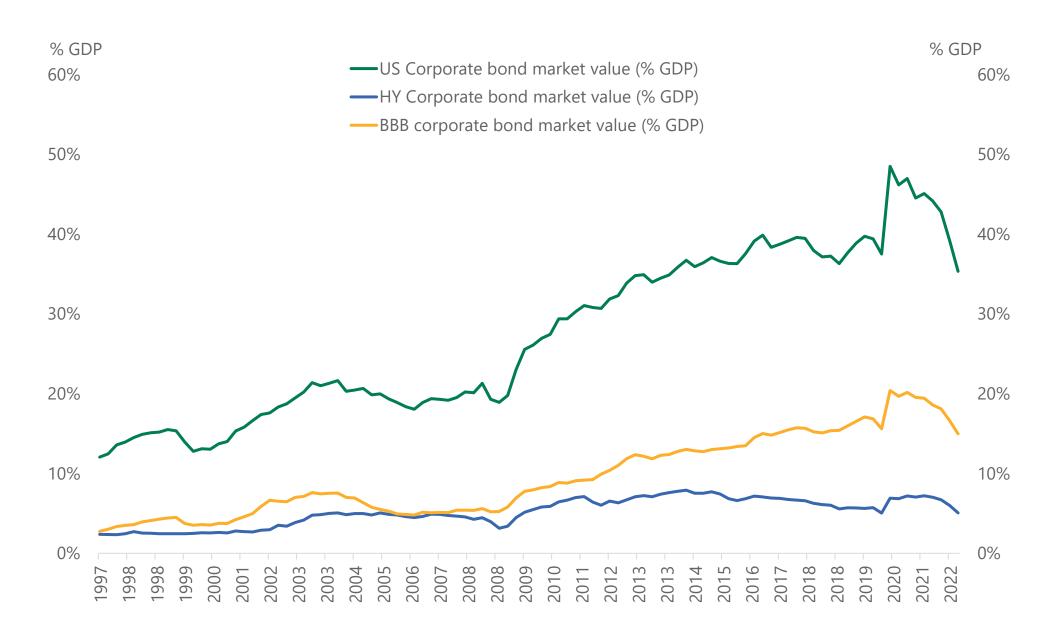
Source: ICE BofA, Bloomberg, S&P LCD, Apollo Chief Economist. Note: Ticker used for HY is H0A0 Index and for IG it is C0A0 Index and for Loans it is SPBDALB Index.

#### HY sector rating distributions



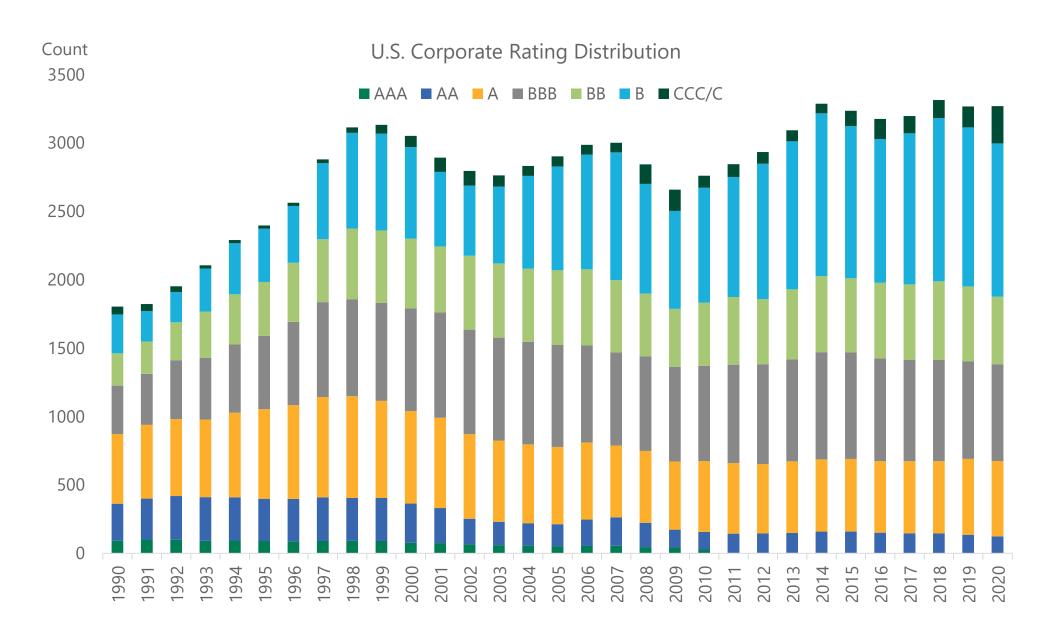
Source: S&P Global Ratings Research and S&P Global Market Intelligence's CreditPro®., Apollo Chief Economist. Note: Numbers in parentheses represent overall sector's proportion of the speculative-grade population. CP&ES-Chemicals, packaging, and environmental services. FP&BM--Forest products and building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

#### US corporate bond markets as a share of GDP



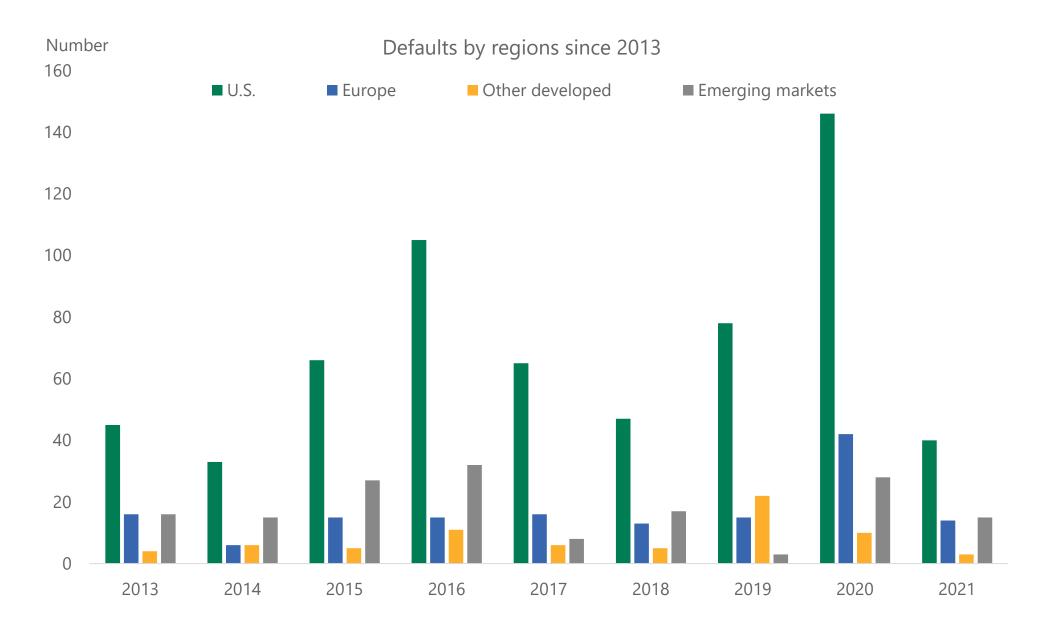
Source: ICE BofA, BEA, Haver Analytics, Bloomberg, Apollo Chief Economist

#### Distribution of corporate credit ratings



Source: S&P, Apollo Chief Economist

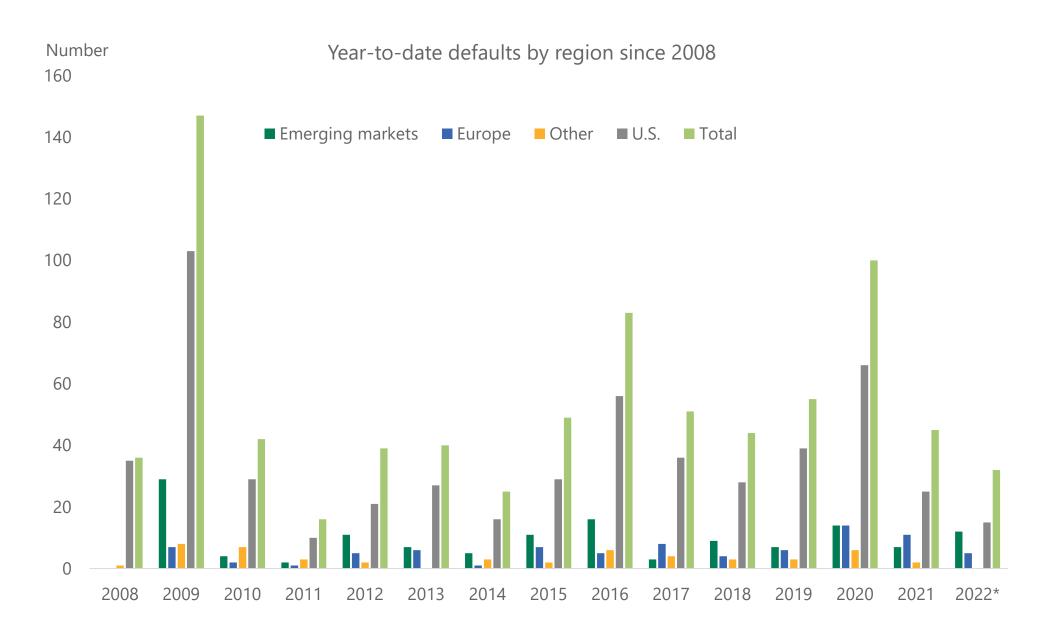
#### Global default rates remain low



Sources: S&P Global Ratings Research and S&P Global Market Intelligence's CreditPro®, Apollo Chief Economist. Note: Data as of 5th January 2022

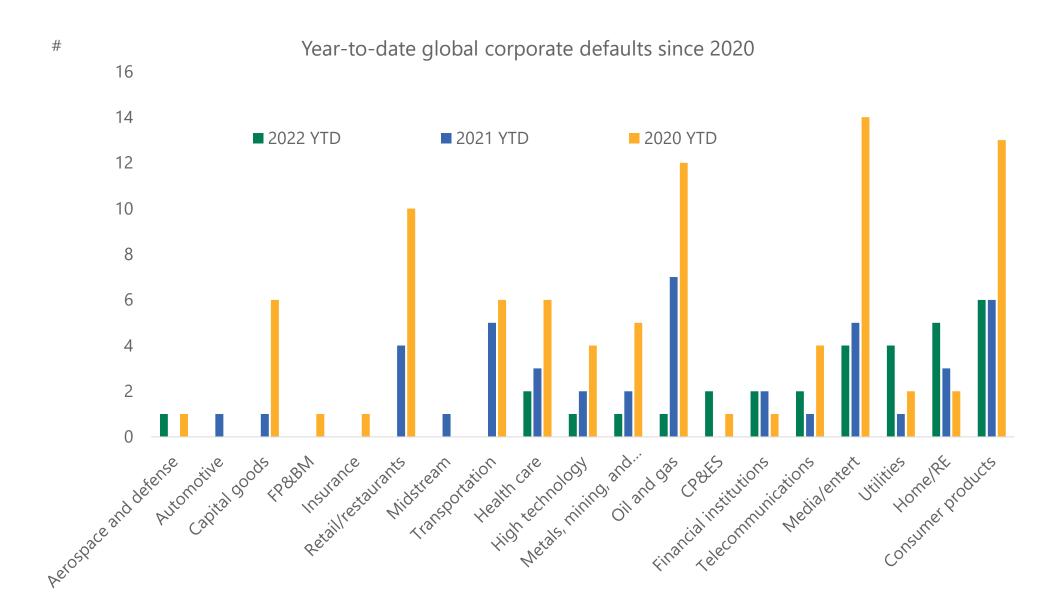


#### Global default rates remain very low



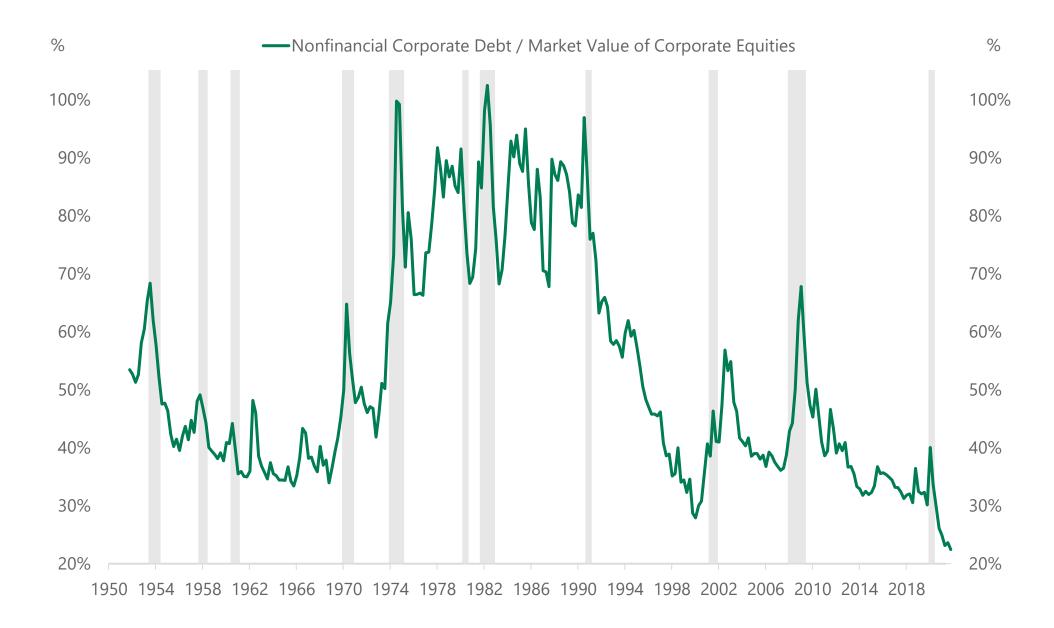
Sources: S&P Global Ratings Research and S&P Global Market Intelligence's CreditPro®, Apollo Chief Economist. Note: Data as of 8th June 2022

#### 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 25th May 2022

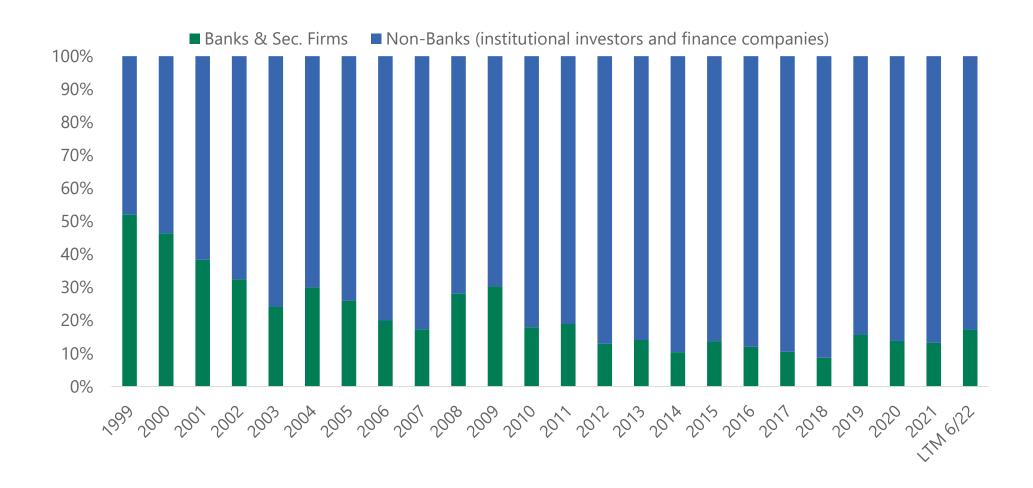
# Record-low debt-to-equity ratio for corporate America



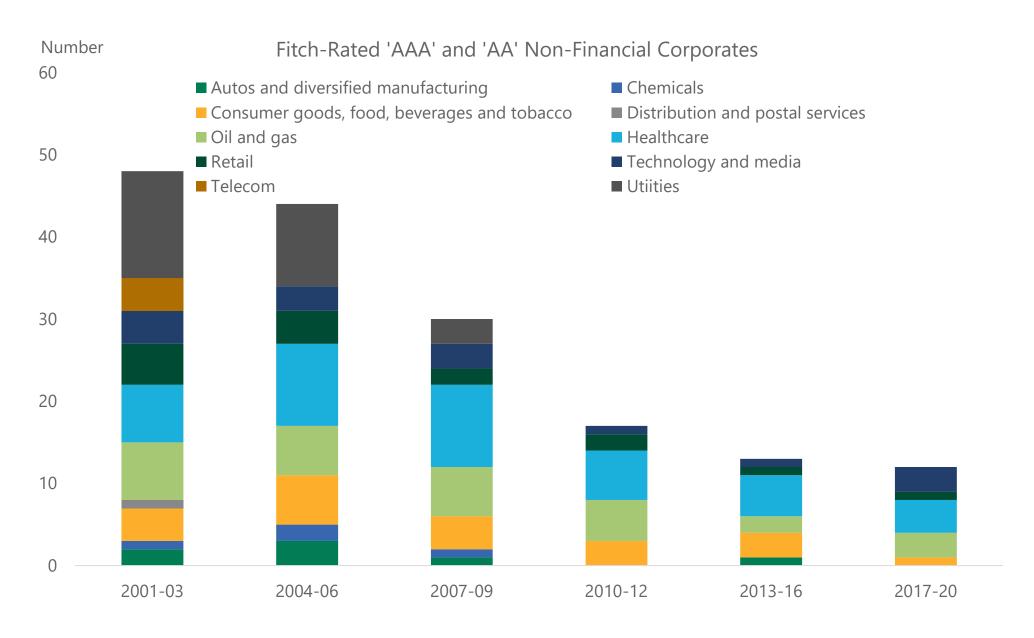
Source: FRB, Haver Analytics, Apollo Chief Economist.

# More leveraged loans are bought by non-banks

Primary Investor Market: Leveraged Loans



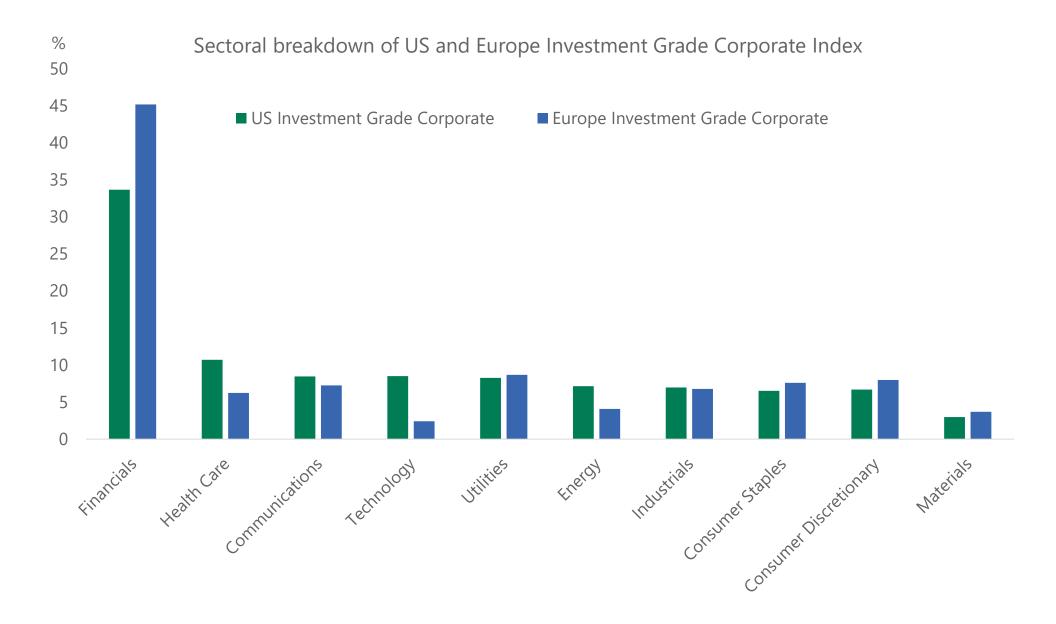
### Fewer and fewer corporate bonds are rated AAA and AA



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.

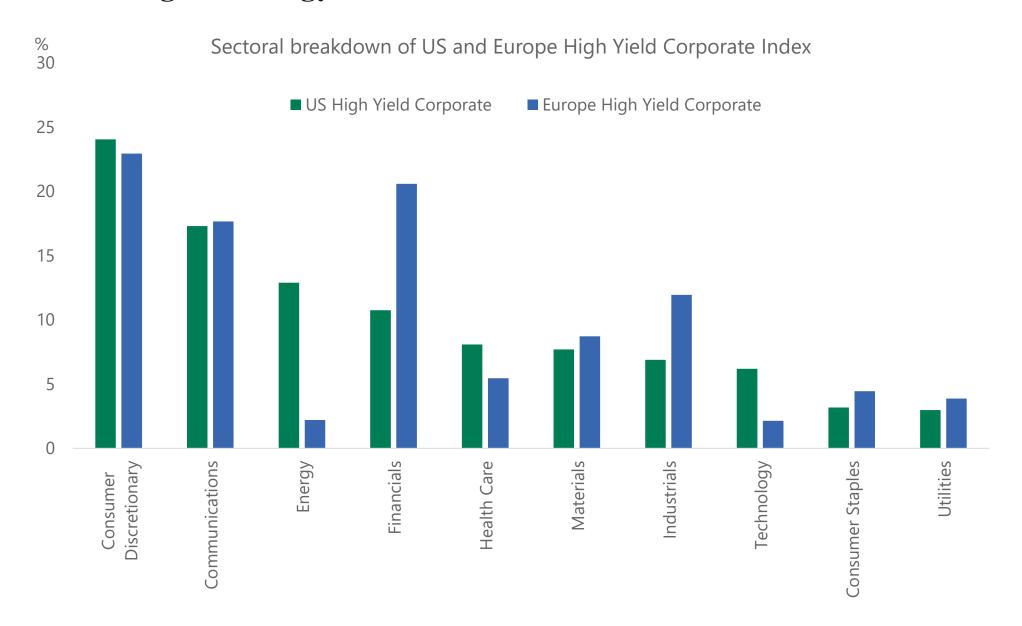


### EU IG index: Bigger weight to financials, lower weight to energy, healthcare and tech



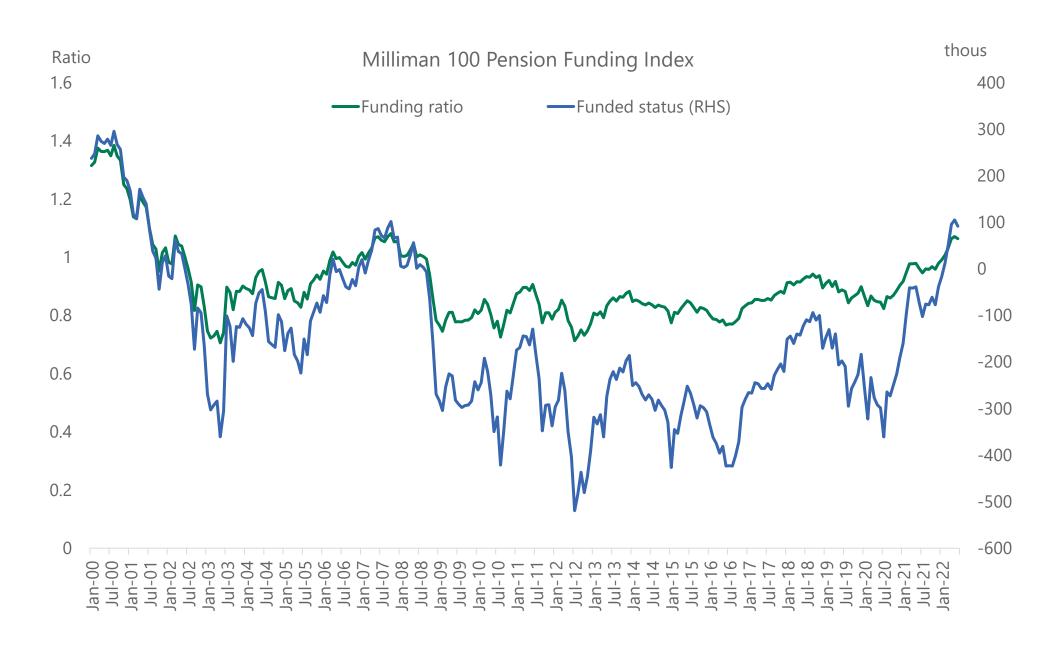
Source: Bloomberg Barclays, Bloomberg, Apollo Chief Economist. Data as of 30th June 2022

# EU HY index: Bigger weight to financials and industrials. Lower weight to energy, healthcare, and tech



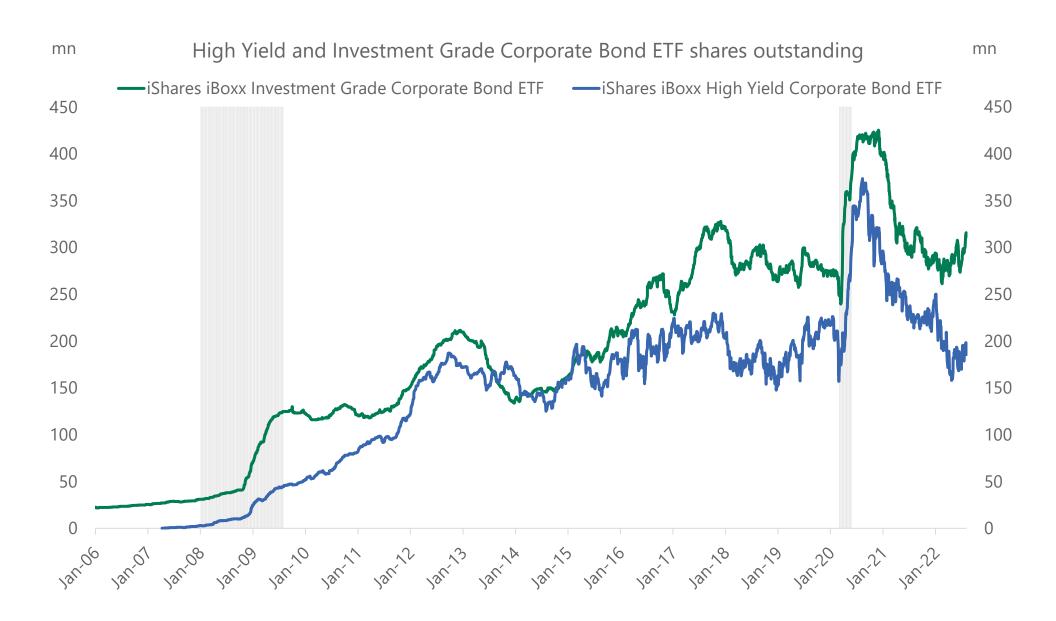
Source: Bloomberg Barclays, Bloomberg, Apollo Chief Economist Data as of 30th June 2022

# Pension funding status has improved



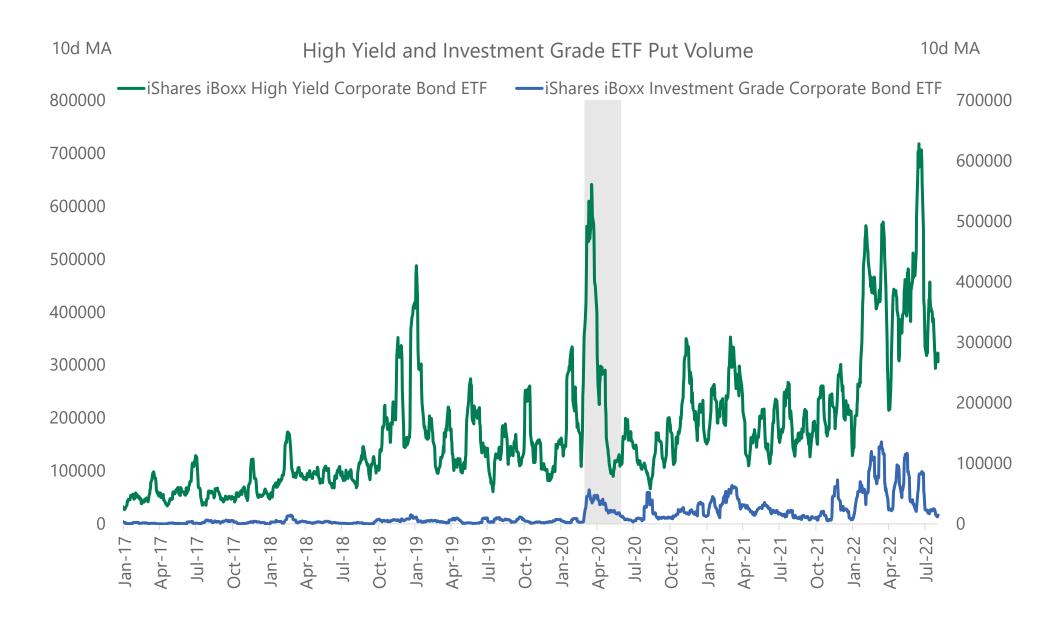
Source: Milliman, Bloomberg, Apollo Chief Economist

### Retail investors buying IG and HY in recent weeks



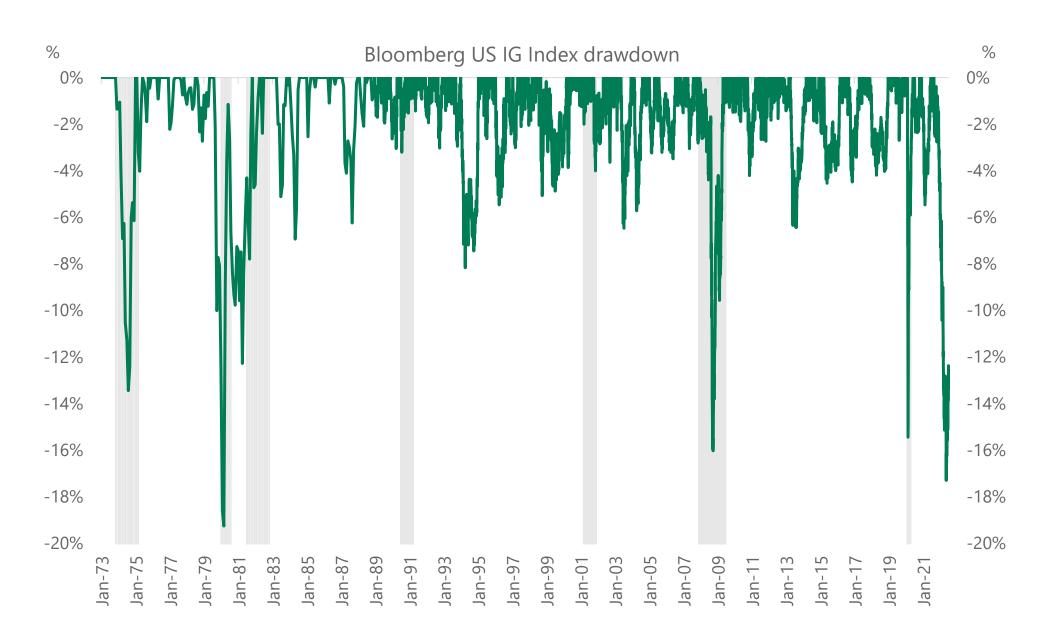
Source: Bloomberg, Apollo Chief Economist. Note: Ticker used HYG US Equity and LQD US Equity

#### Put volumes for IG ETF and HY ETF



Source: Bloomberg, Apollo Chief Economist

# Passive IG investors down 13% from peak



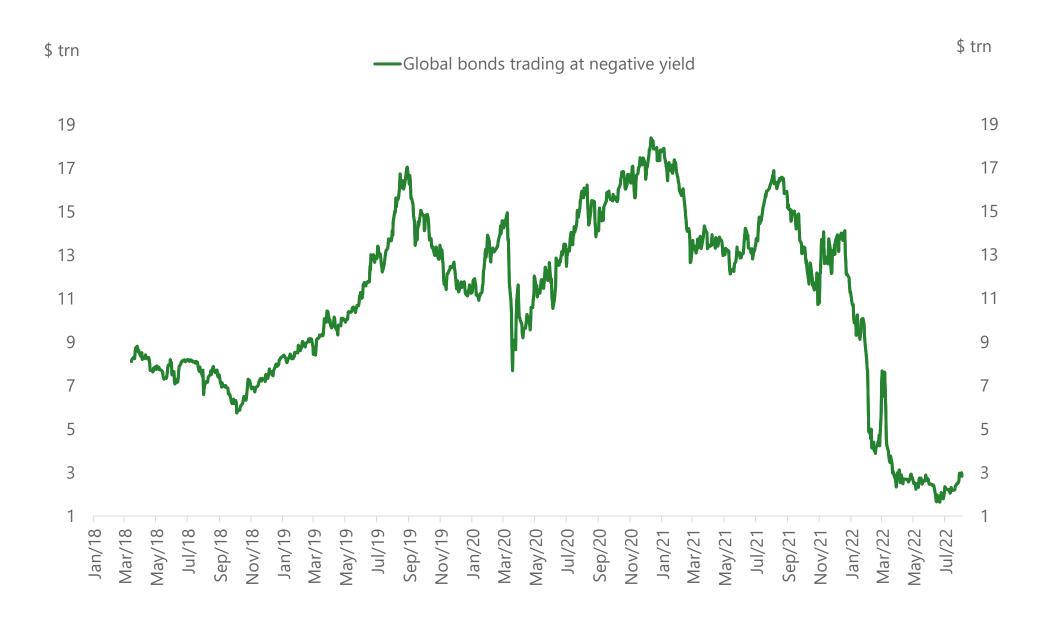
Source: Bloomberg, Apollo Chief Economist. Note: Index used LUACTRUU Index

### Bonds outstanding trading at negative interest rates



Source: Bloomberg, Apollo Chief Economist

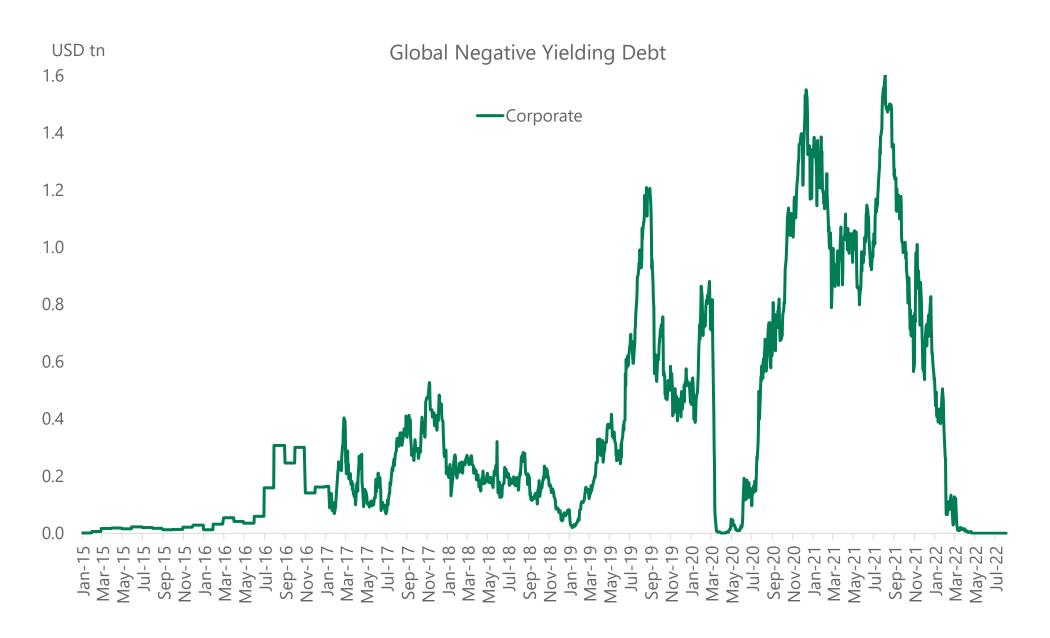
### The total value of negative yielding debt in the world: \$2trn



Source: Bloomberg, Apollo Chief Economist

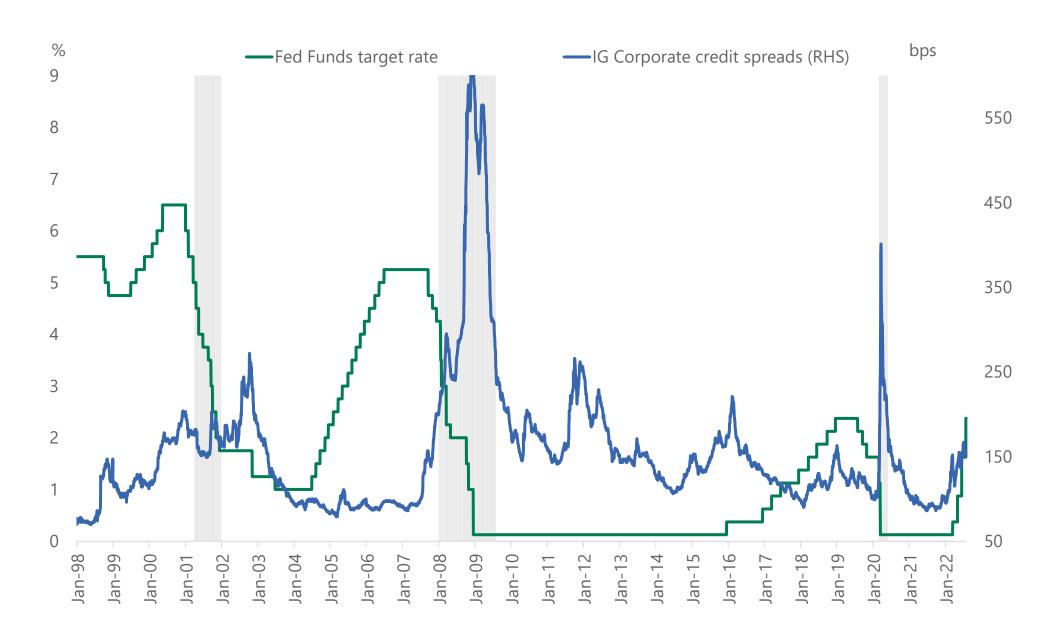


### All corporate bonds now have positive yields





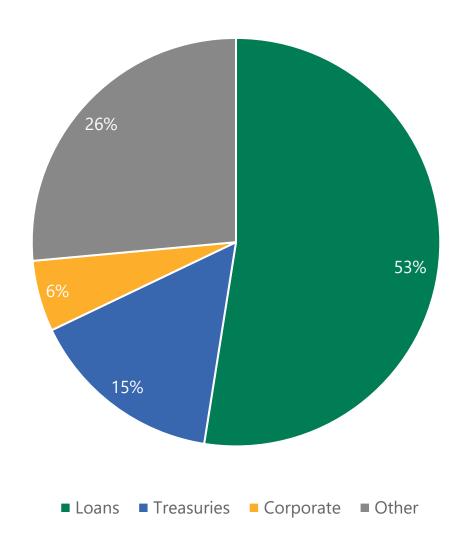
# Fed hiking and spreads widening



Source: Bloomberg, Apollo Chief Economist

# US: Floating rate bonds outstanding, July 2022

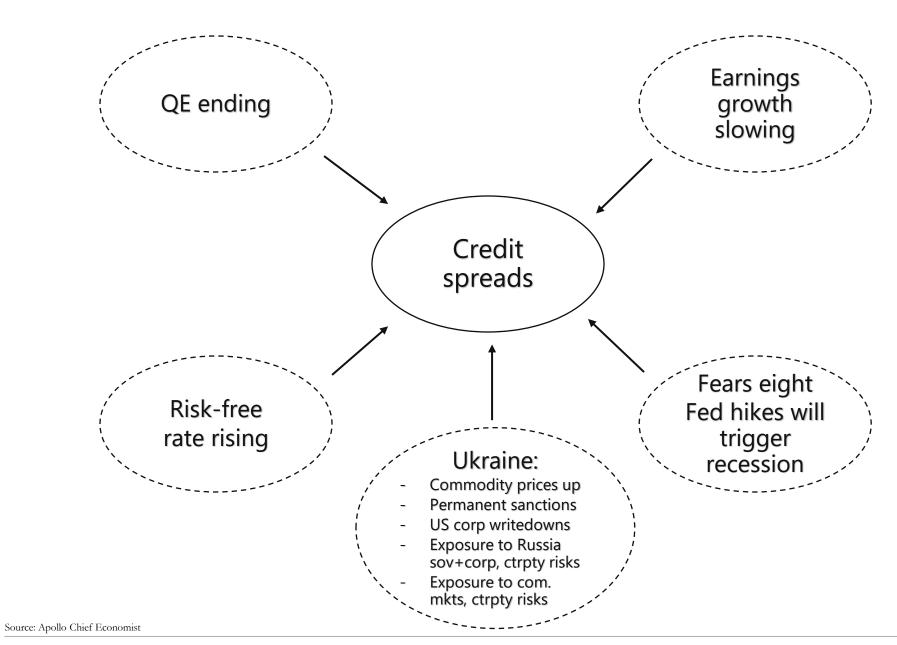




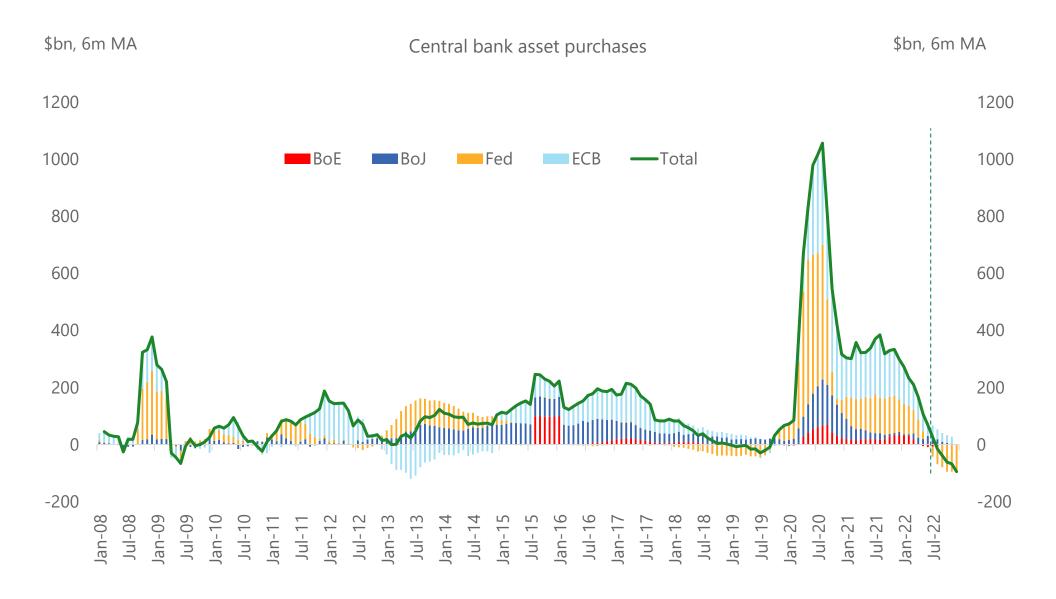
Source: Bloomberg, Apollo Chief Economist. Note: Other includes Munis, Agency and Securitized. The chart filters floating rate securities for all asset class from the fixed income SRCH <GO> screen on Bloomberg.



### Turbulence in credit markets continues



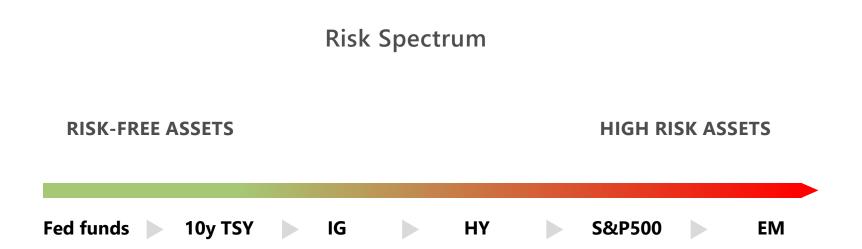
### Global QE is coming to an end



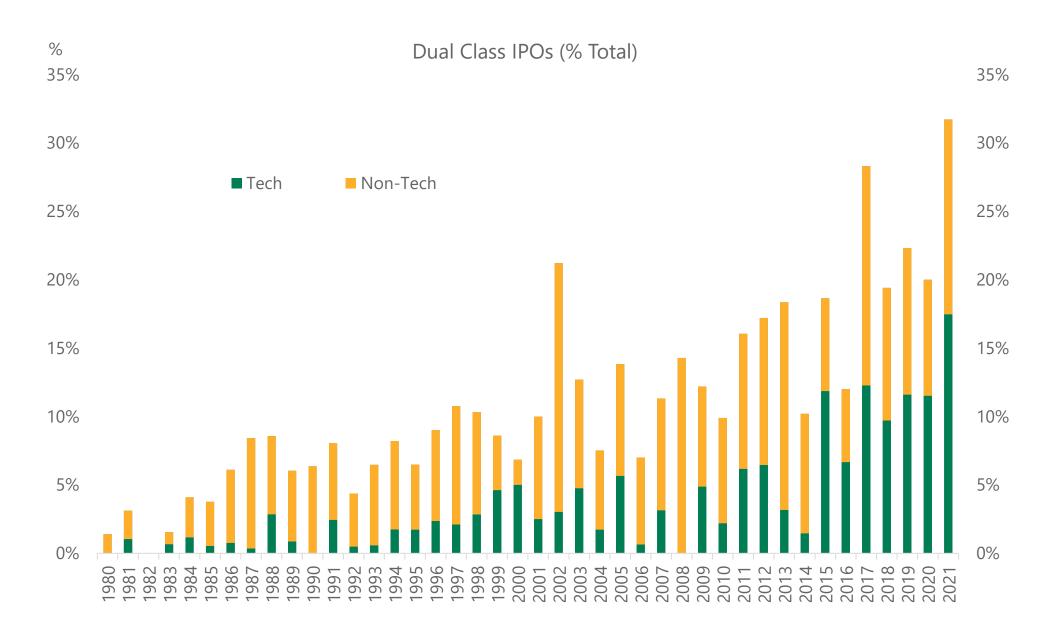
Source: Bloomberg, Apollo Chief Economist. Pace of purchases for 2021: BOE: £3.4bn per week till mid December 2021, FED: USD120bn per month with wind down from December with purchases ending in March 2022, ECB: Euro 90bn per month (20 bn APP + 60 bn PEPP), PEPP till March 2022, Euro 40bn in April, Euro 30bn in May and Euro 20bn in June, and euro 20bn per month onwards. BOJ:: USD 70bn 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.



# What can reverse the hunt for yield? Inflation/higher rates

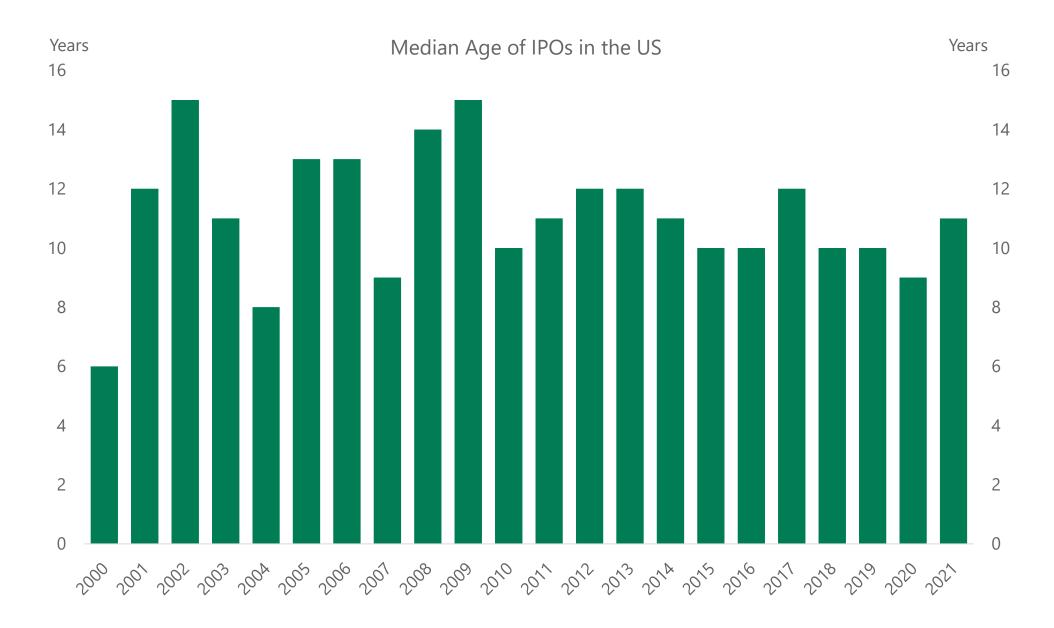


### More dual class IPOs, driven by tech



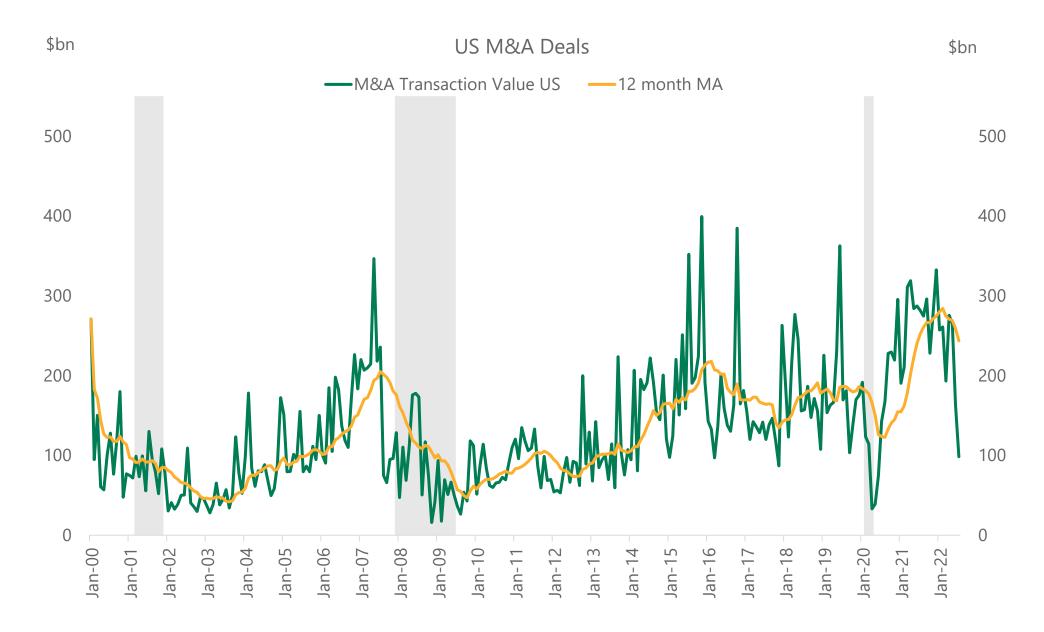
Source: Jay Ritter, Apollo Chief Economist

# Median age of IPOs



Source: Jay Ritter, Apollo Chief Economist

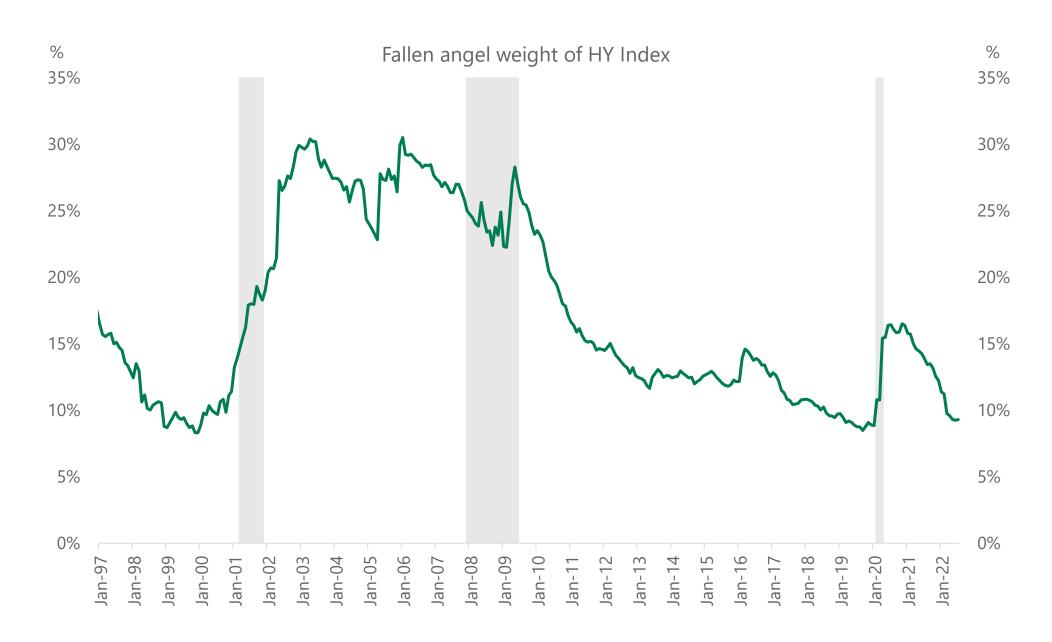
### M&A deals



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

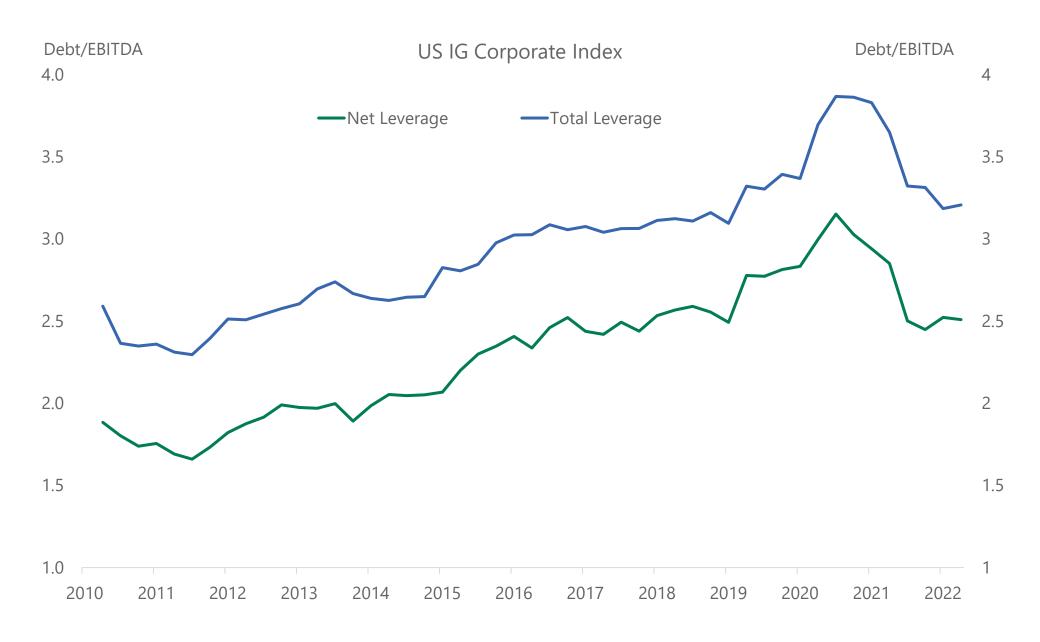


### Declining share of fallen angels in the HY index



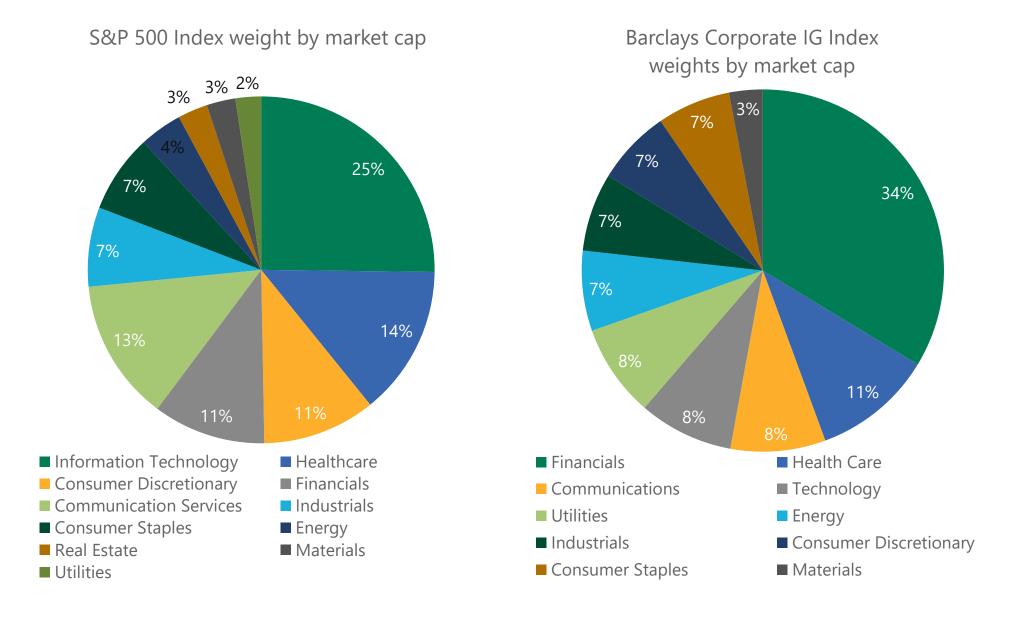
Source: ICE BofA, Bloomberg, Apollo Chief Economist. Note: Tickers used H0A0 Index and H0FA Index

# IG leverage down a bit during the pandemic



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

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

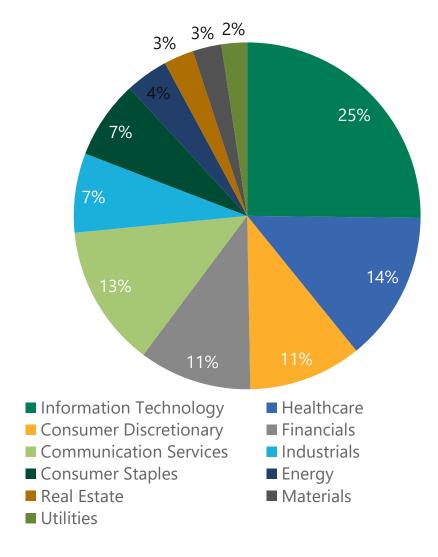


Note: Data as of 30th June 2022. Source: Bloomberg, Apollo Chief Economist

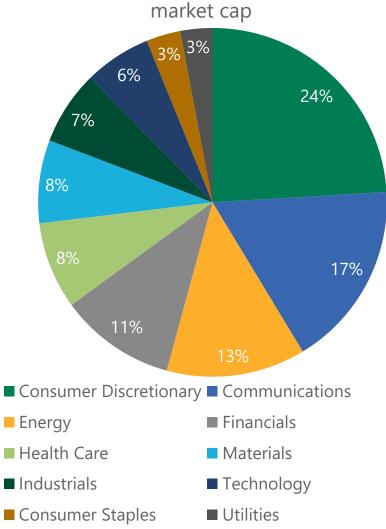


### Big differences between weights in S&P500 and HY index





# Bloomberg Barclays HY index weights by



Note: Data as of 30th June 2022. Source: Bloomberg, Apollo Chief Economist

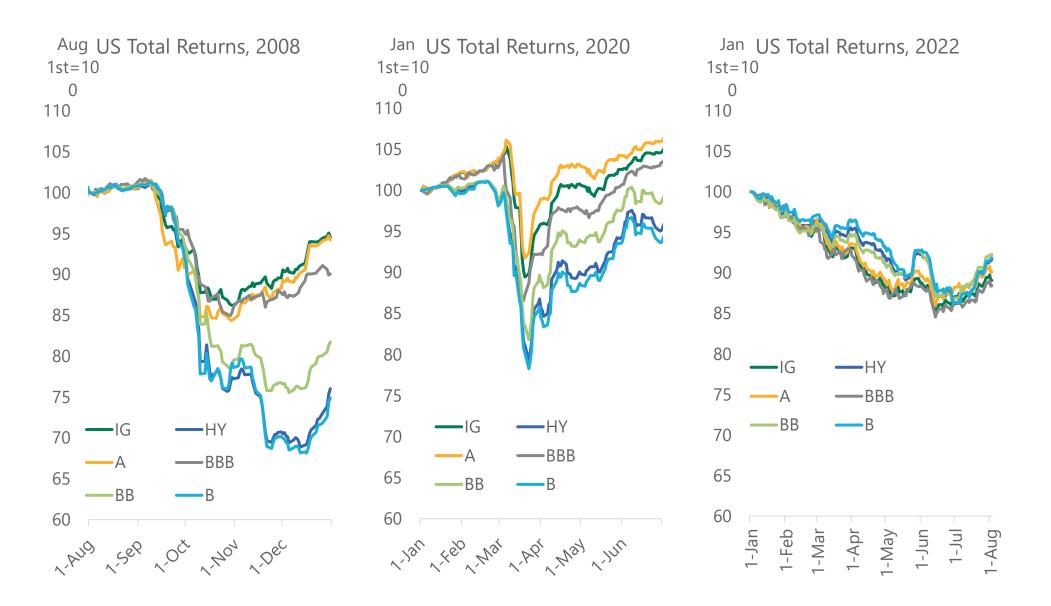


	Top 50 Investment Grade corporate bond issuers	Top 50 High Yield corporate bond issuers
1	Bank of America Corporation	Ford Motor Credit Company LLC
2	JPMorgan Chase & Co.	Occidental Petroleum Corporation
3	Goldman Sachs Group Inc.	CCO Holdings LLC/ CCO Holdings Capital Corp.
4	Citigroup Inc.	Bausch Health Companies Inc
5	Morgan Stanley	Centene Corporation
6	AT&T Inc	Tenet Healthcare Corporation
7	Wells Fargo & Company	CSC Holdings LLC
8	Apple Inc.	HCA Inc.
9	Verizon Communications Inc.	Community Health Systems Incorporated
10	Comcast Corporation	TransDigm Inc.
11	HSBC Holdings PLC	DISH DBS Corporation
12	Oracle Corporation	T-Mobile USA Inc.
13	The Boeing Company	Carnival Corporation
14	AbbVie Inc.	Ford Motor Company
15		T-Mobile US Inc
	Microsoft Corporation	
16	CVS Health Corp	Lumen Technologies Inc
17	Amazon.com Inc.	OneMain Financial Corporation
18	Charter Communications Operating LLC/Charter Communications Operating Capital Corp.	Royal Caribbean Group
19	United Health Group Incorporated	Sirius Xm Radio Inc
20	Walt Disney Company	Altice France S.A
21	The Home Depot Inc.	Bombardier Inc.
22	Mitsubishi UFJ Financial Group Inc.	FirstEnergy Corp.
23	Anheuser-Busch InBev Worldwide Inc.	Deutsche Bank AG New York Branch
24	Sumitomo Mitsui Financial Group Inc	Caesars Entertainment Inc New
25	Bristol-Myers Squibb Company	AAdvantage Loyalty IP Ltd/ American Airlines Inc
26	T-Mobile USA Inc.	Equitrans Midstream Corporation
27	Amgen Inc.	Mozart Debt Merger Subordinated Incorporated
28	Broadcom Inc	Western Midstream Operating LP
29	BNP Paribas	Iron Mountain Incorporated
30	Shell International Finance B.V.	1011778 B.C. Unlimited Liability Company / New Red Finance Inc.
31	Exxon Mobil Corporation	Post Holdings Inc.
32	Barclays PLC	Sprint Capital Corporation
33	Energy Transfer LP	Albertsons Cos Inc / Safeway Inc / New Albertsons LP / Albertsons LLC
34	Intel Corporation	YUM Brands Inc
35	International Business Machines Corporation	Service Properties Trust
36	Pacific Gas and Electric Company	Icahn Enterprises L.P. / Icahn Enterprises Finance Corporation
37	Raytheon Technologies Corporation	Level 3 Financing Inc.
38	Aercap Ireland Capital DAC	Hilton Domestic Operating Co Inc.
39	Walmart Inc	Calpine Corporation
40	Magallanes Inc.	Navient Corporation
41	General Motors Financial Company Inc	United Rentals (North America) Inc.
42	Cigna Corporation	Intesa Sanpaolo S.p.A.
43	Union Pacific Corporation	Bath & Body Works Inc
44	Pfizer Inc.	Vistra Operations Co LLC
45	Merck & Co. Inc	Ball Corporation
46	Lowes Companies Inc.	The Goodyear Tire & Rubber Company
47	Enterprise Products Operating LLC	Newell Brands Inc.
48	Johnson & Johnson	Vici Properties Inc
49	Pepsico Inc	Uniti Group LP
50	Toyota Motor Credit Corporation	Univision Commmunications Inc.
	royota motor Credit Corporation	Onivision Communications inc.

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

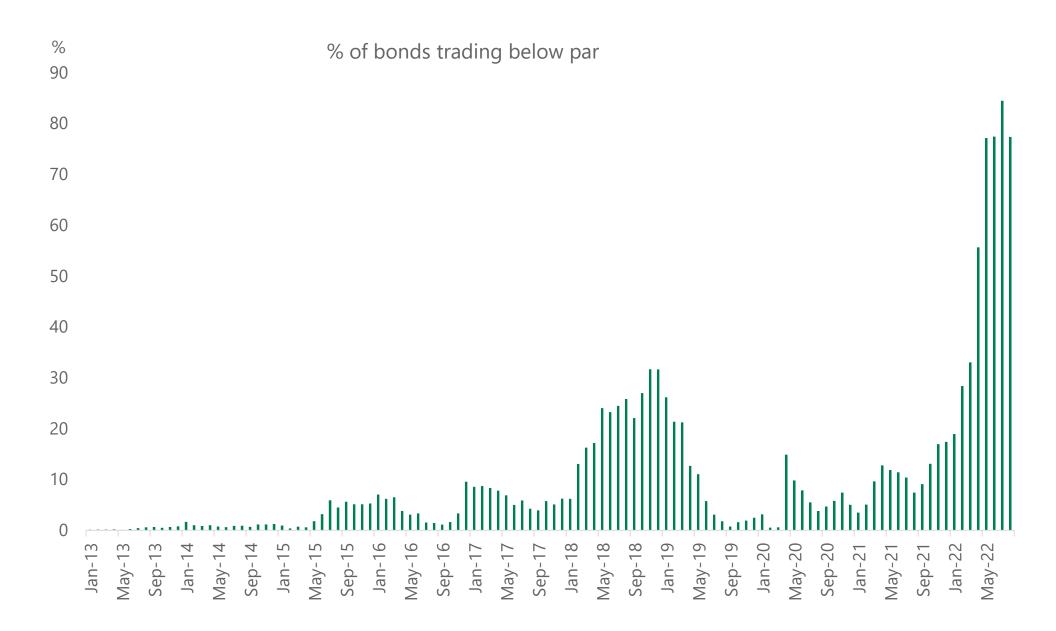


# Synchronized sell-off in credit so far. Little differentiation between credits.



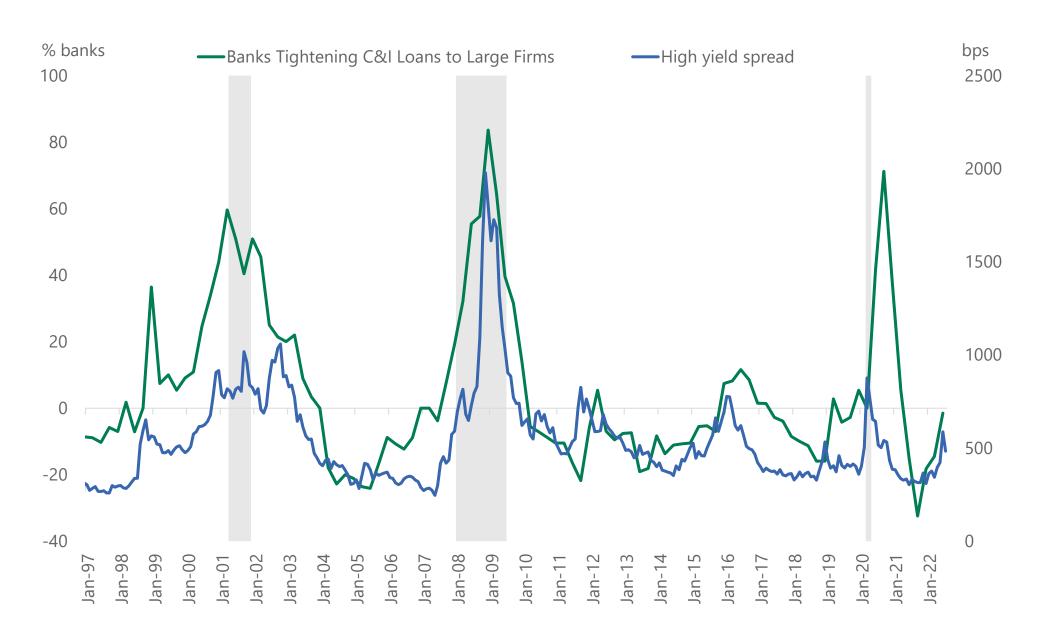
Source: Bloomberg, Apollo Chief Economist

### 80% of the US IG market trading below par



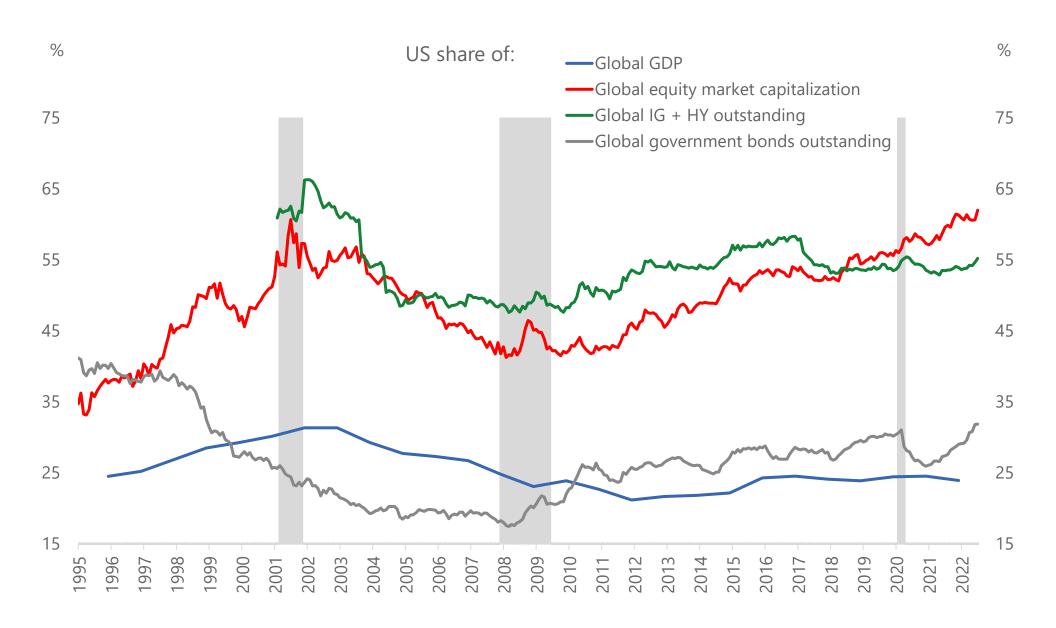
Source: Bloomberg, Apollo Chief Economist. Note: Data used for members in the LBUSTRUU Index as of 1st August 2022

# Banks starting to tighten credit conditions



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

### Percent of world market cap



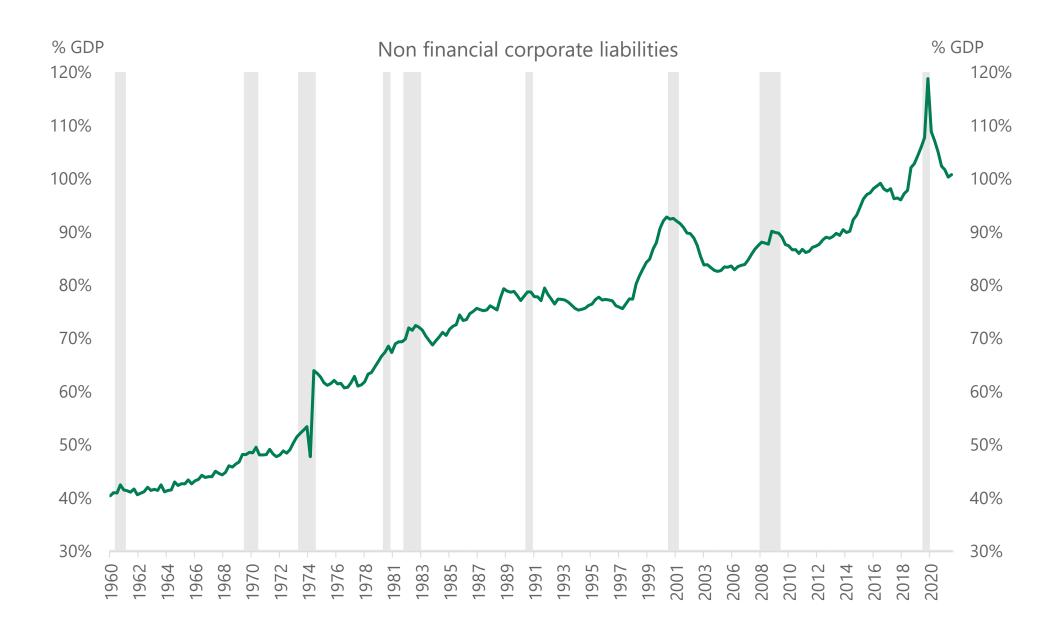
Source: Bloomberg, Haver, Apollo Chief Economist (Note: Bloomberg tickers: MXUS Index, MXWD Index, LUATTRUU Index, LF98TRUU Index, LG30TRUU index, LUACTRUU Index, 109805US index)

Credit markets have never been more vulnerable to rising rates.

Three reasons:

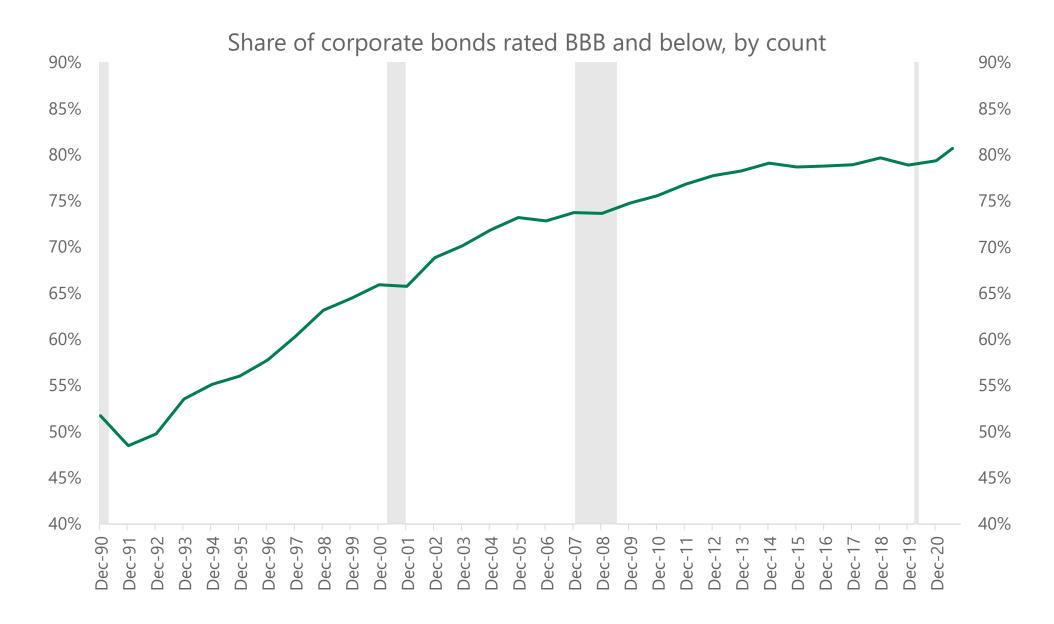
- 1) Very high leverage in the corporate sector
- 2) Lower-rated firms make up big share of all debt outstanding
- 3) Very high duration for the IG index and the HY index

### High debt level in the corporate sector means more vulnerability to rising rates



Source: FRB, Haver Analytics, Apollo Chief Economist

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



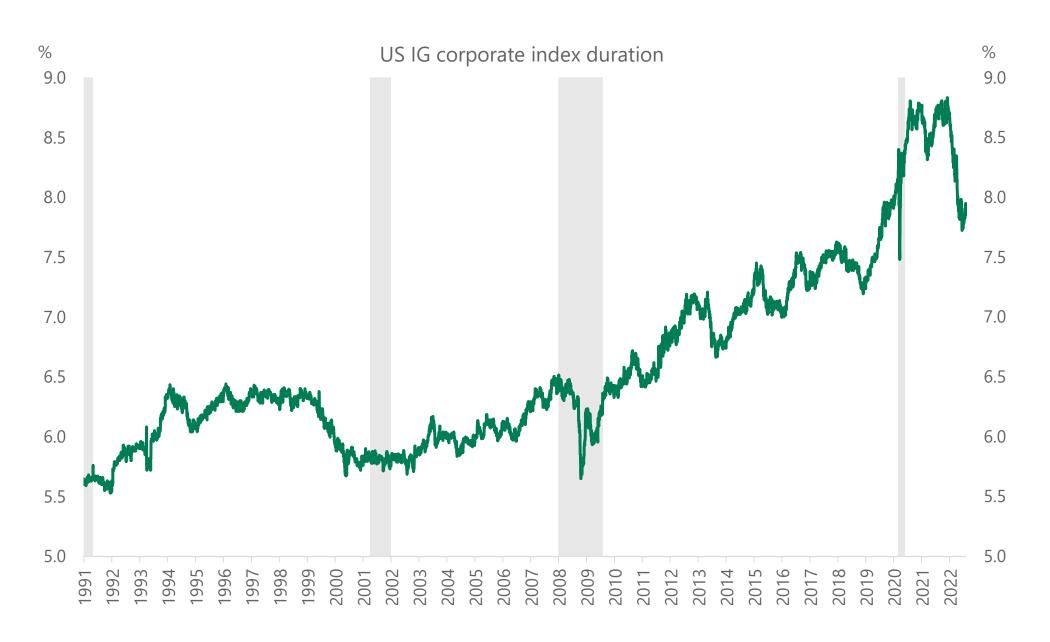
Source: S&P, Apollo Chief Economist

### Share of corporate bond market value outstanding rated BBB and below



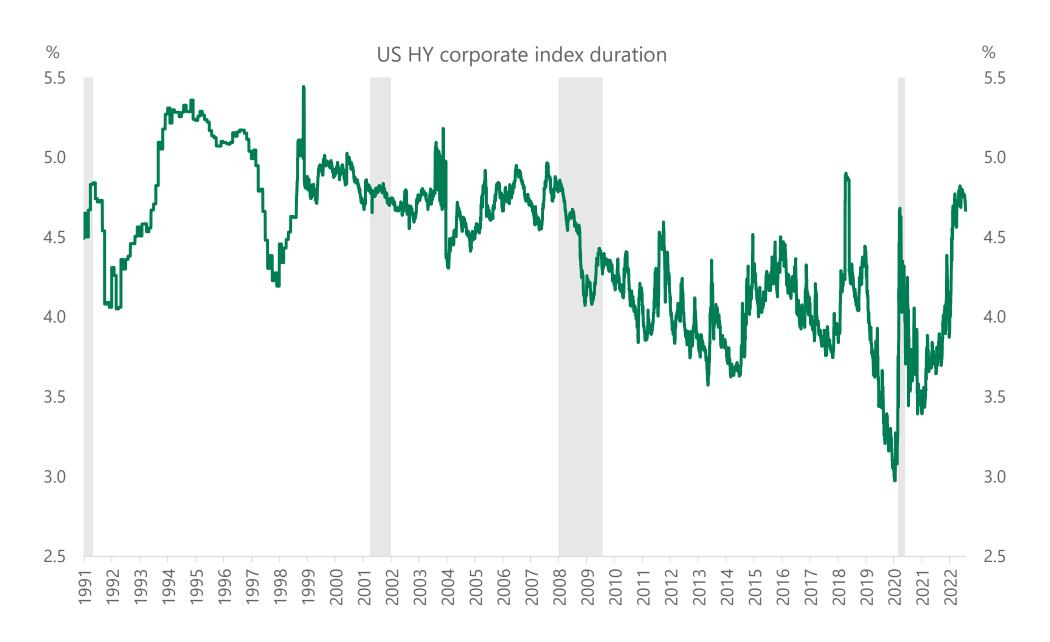
Source: ICE BofA, Bloomberg, Apollo Chief Economist. Data as of 30th June 2022

# IG credit index duration declining



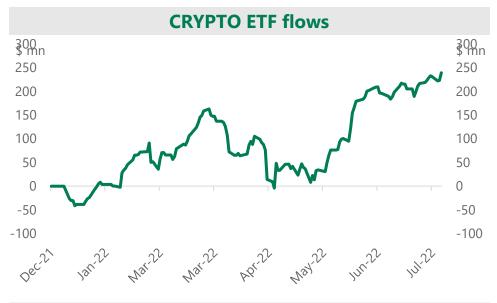
Source: Bloomberg, Apollo Chief Economist. Note: The measure used is modified duration, which measures the expected change in a bond's price to a 1% change in interest rates.

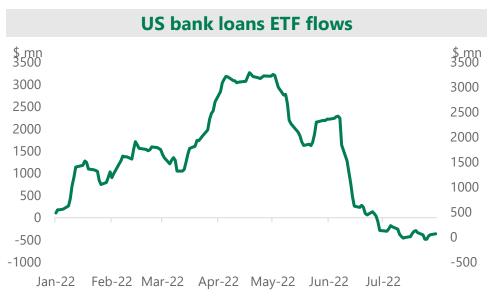
### HY credit index duration increasing

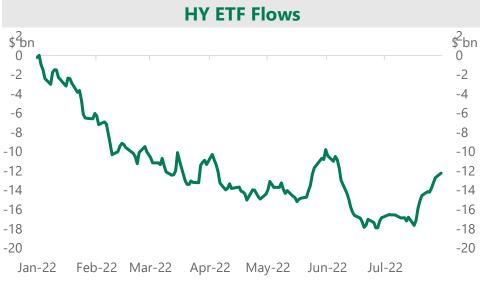


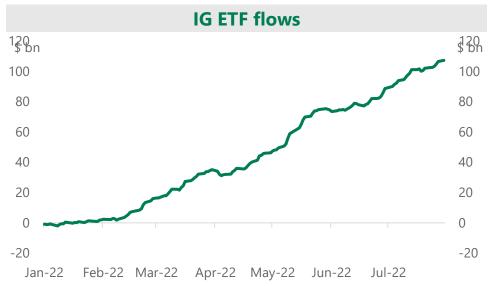
Source: Bloomberg, Apollo Chief Economist. Note: The measure used is modified duration, which measures the expected change in a bond's price to a 1% change in interest rates.

#### Flow monitor



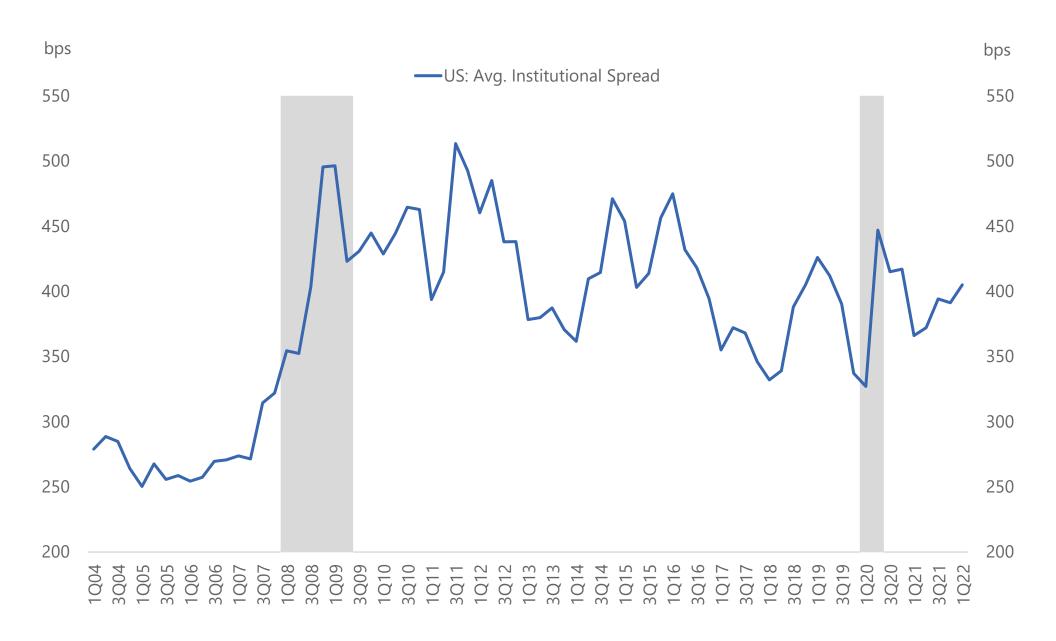






Source: Bloomberg, Apollo Chief Economist (Note: bito US equity: Crypto ETF flows, BFFUEBK Index: US Bank loans ETF flows, BFFUEHY Index: HY ETF flows; BFFUEIG Index: US IG ETF flows)

### Loans: Institutional spread relative to bespoke loans



Source: S&P, Apollo Chief Economist

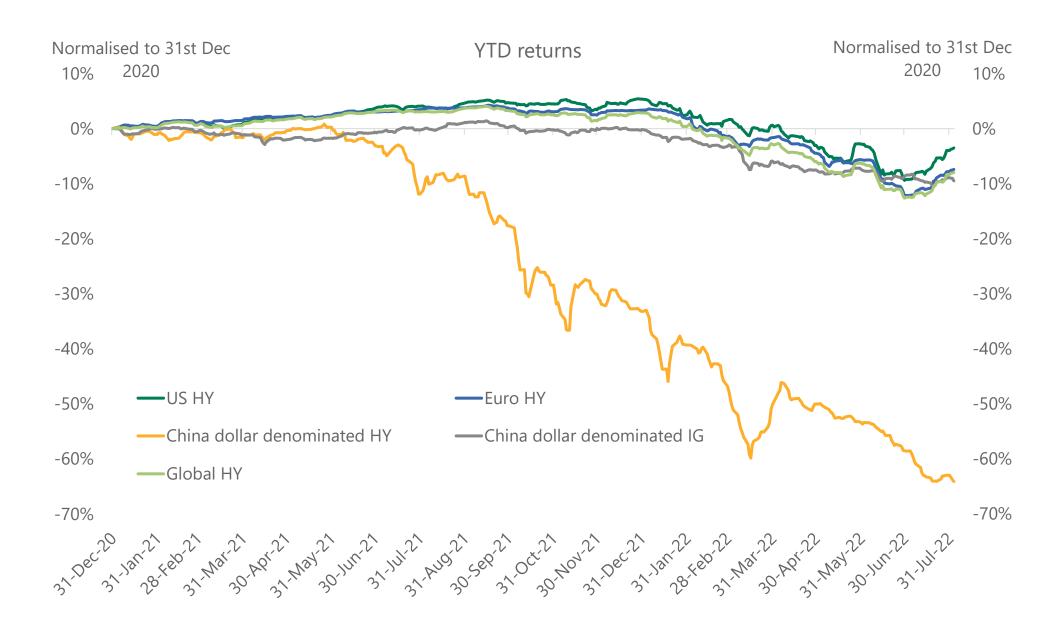
# China HY

# The yield on China HY above 20%



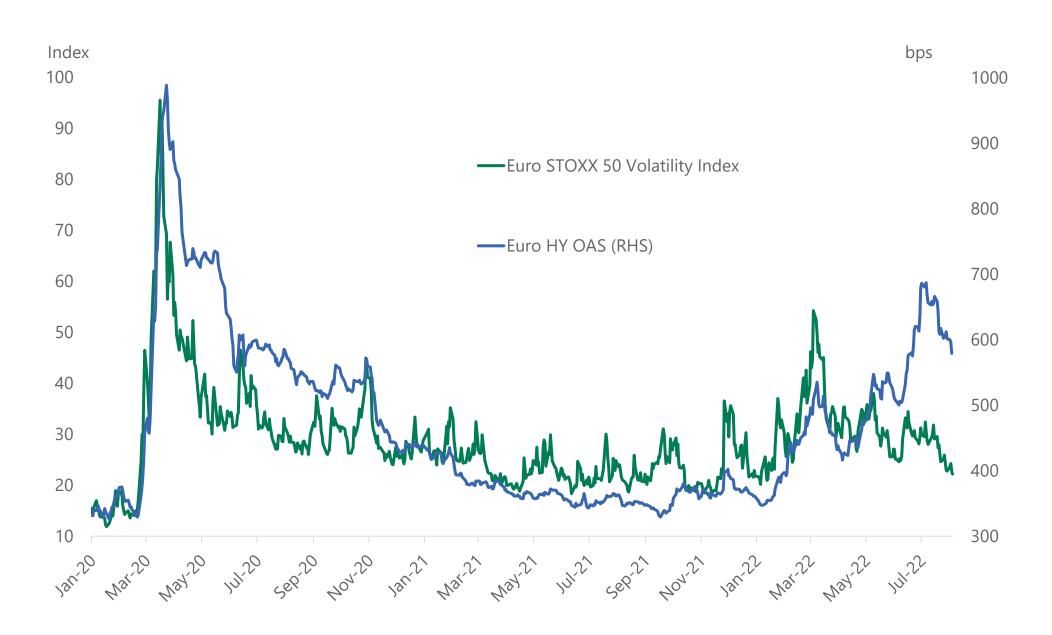
Source: Bloomberg Barclays, Bloomberg H29381US Index, Apollo Chief Economist

### Little contagion from China HY to US and EU credit markets



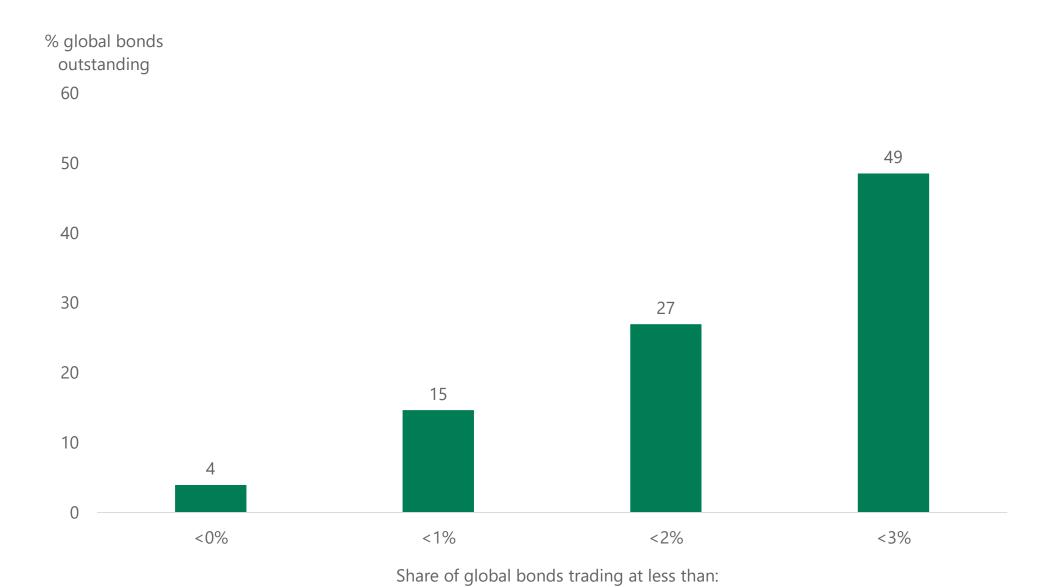
Source: ICE BofA, Bloomberg, Apollo Chief Economist,

### Disconnect between EU equity vol and EU HY spreads



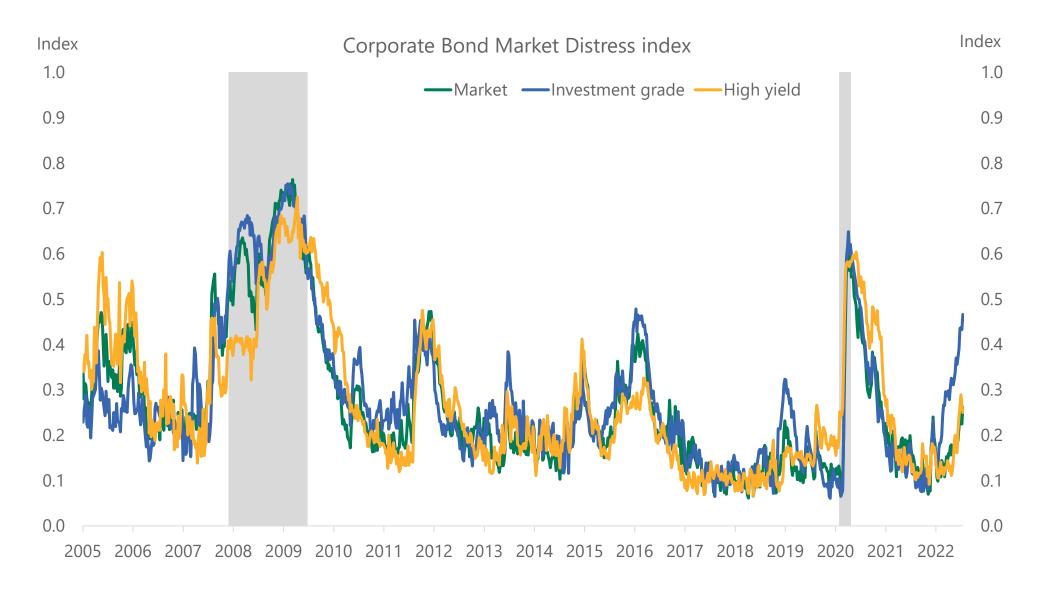
Source: Bloomberg, Apollo Chief Economist. Note: Tickers used are V2X Index and LP01OAS Index

# 27% of bonds in the world trading at less than 2%



Source: Bloomberg, Apollo Chief Economist

# Corporate bond market functioning continues to be somewhat more strained in the IG segment



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.

# Percentage of HY bonds trading with yield higher than 10%



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

# Biography



Torsten Slok, Ph.D.
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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, including #1 in 2019. 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.