

Schroders



Schroders Credit Lens

Perspective of USD investor

Strategic Research Unit

February 2023

Marketing material for professional investors or advisers only.

Important information

- **These do not represent the investment views of Schroders' credit teams**
- Marketing material for professional investors and advisors only
- Past performance is not a guide to future performance and may not be repeated
- Yields and returns are shown hedged to USD unless stated otherwise
- All credit spreads are option-adjusted spreads (OAS) unless stated otherwise
- Spreads are quoted in basis points (bps) where 100 basis points = 1%
- Full list on indices on page 68

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Summary

- **Global credit markets have had a stellar start of the year. The combination of attractive yields and declining volatility has been a draw for credit investors**
- After recent spread narrowing, valuations have become less attractive, especially in the US. History suggests that spreads could fall further, but this would likely require a benign economic outlook
- Default rates in high yield (HY) have slowly started to rise. More elevated distress ratios indicate that defaults could start to increase in 2023
- 2022 issuance was slightly lower in investment grade (IG) compared to 2021 but fell drastically in HY. Very limited maturities in the near term reduce the need for issuance
- Q4 earnings so far have been more on the weaker side, but analysts expect 2023 earnings to still hold up relatively well
- Corporate fundamentals data shows that leverage has remained stable, aided by very low debt growth. Interest coverage, on the other hand, has started to move lower on rising interest costs
- Looking ahead, unless earnings fall meaningfully, leverage is unlikely to increase sharply. Still, rising interest costs and pressure on margins from higher costs are likely to continue to erode fundamentals

Credit spreads have fallen sharply in early 2023

US HY spreads are below 400bps for the first time since April 2022

IG spreads



HY spreads

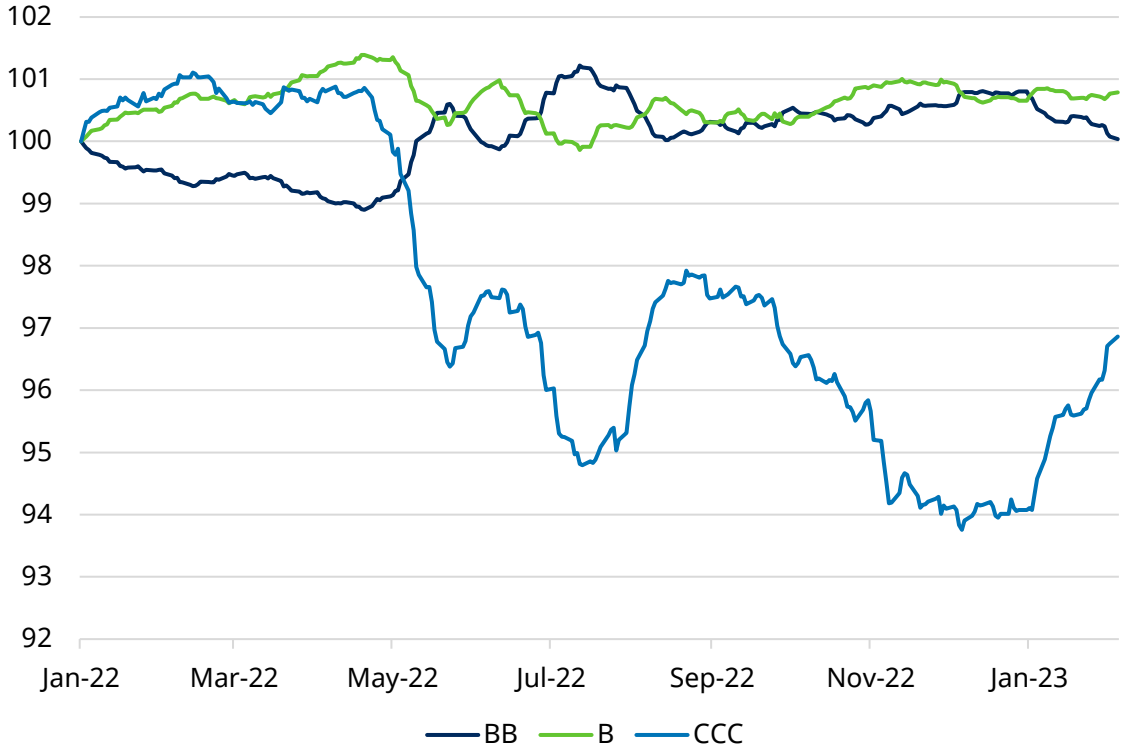


Source: Refinitiv Datastream. Data as at 5 February 2023.

Lowest-rated bonds have outperformed in early 2023 as investors' risk appetite increases

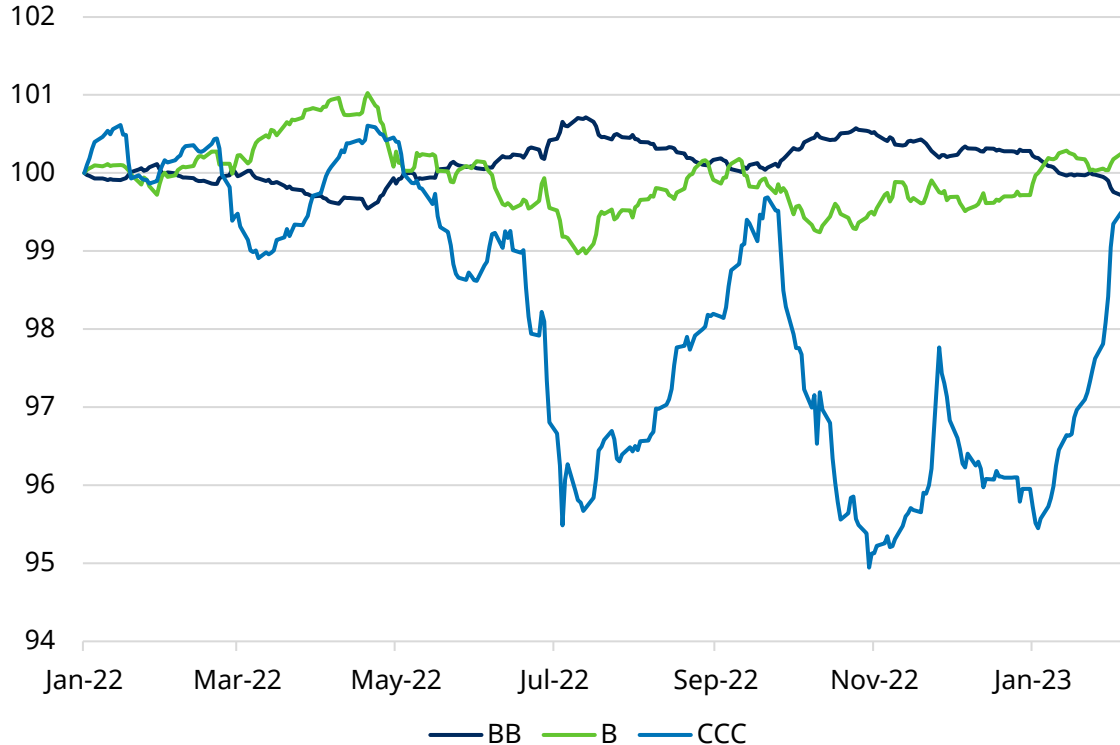
Total return of rating buckets vs US HY index

Rebased to 100



Total return of rating buckets vs Euro HY index

Rebased to 100

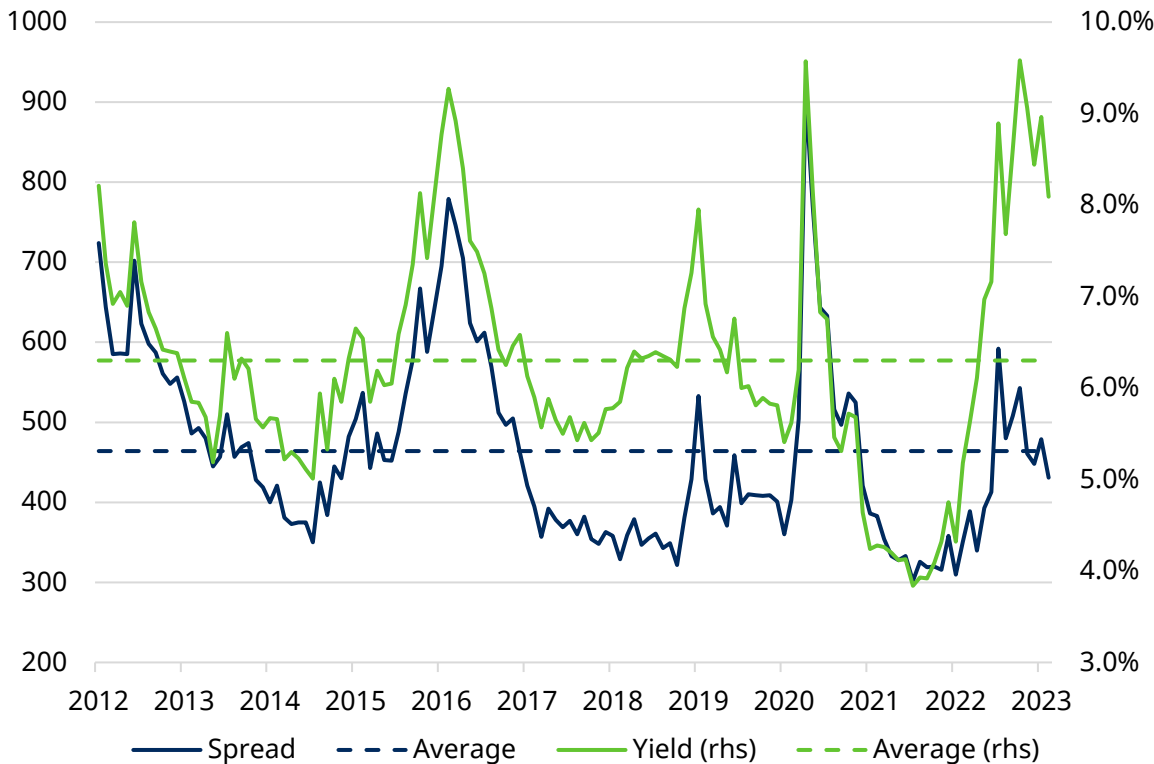


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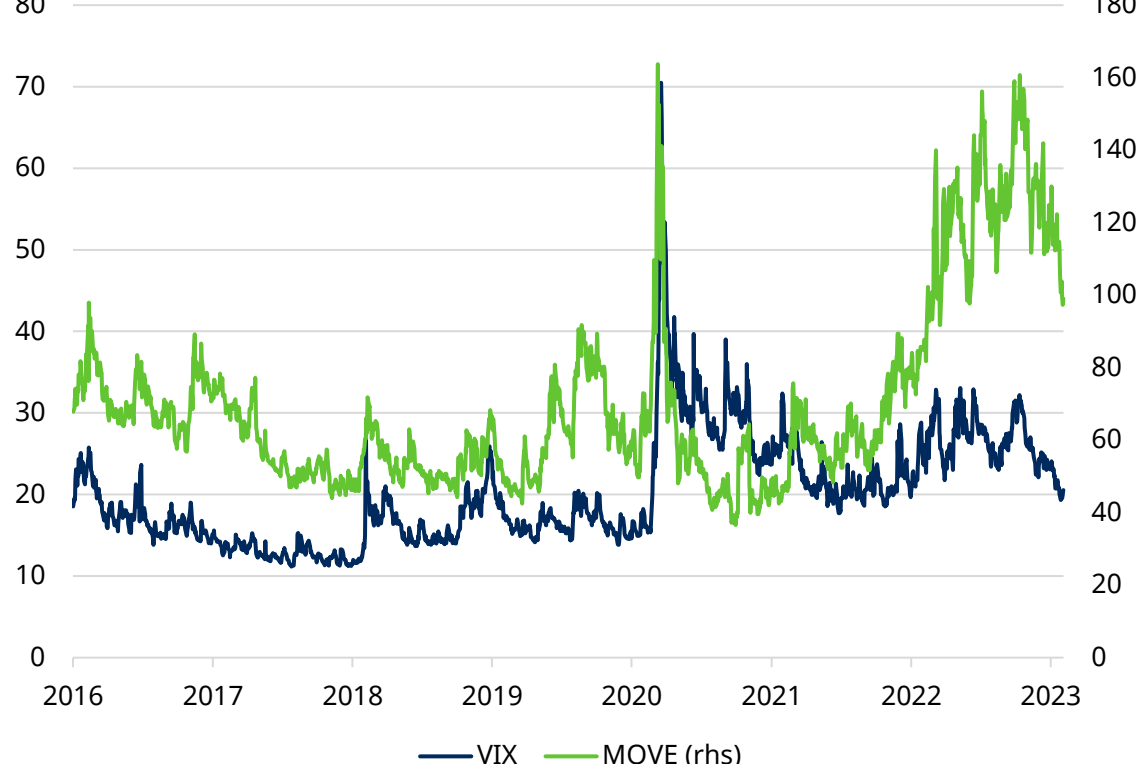
Source: Refinitiv Datastream. Data as at 5 February 2023.

Elevated yields and lower volatility has been attractive combination for HY investors

US HY Index spread and yield



Equity (VIX) and bond (MOVE) implied volatility

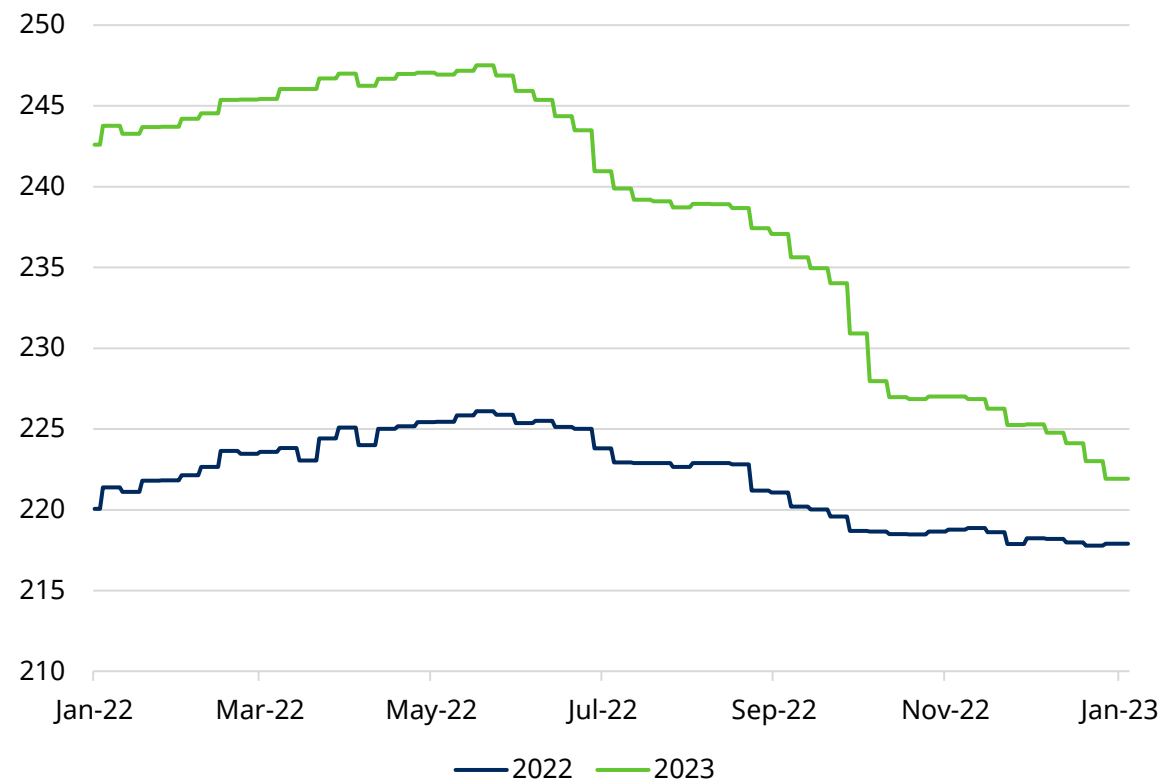


US HY index spread has fallen below its past 10-year average, while US HY index yield is still well above the average

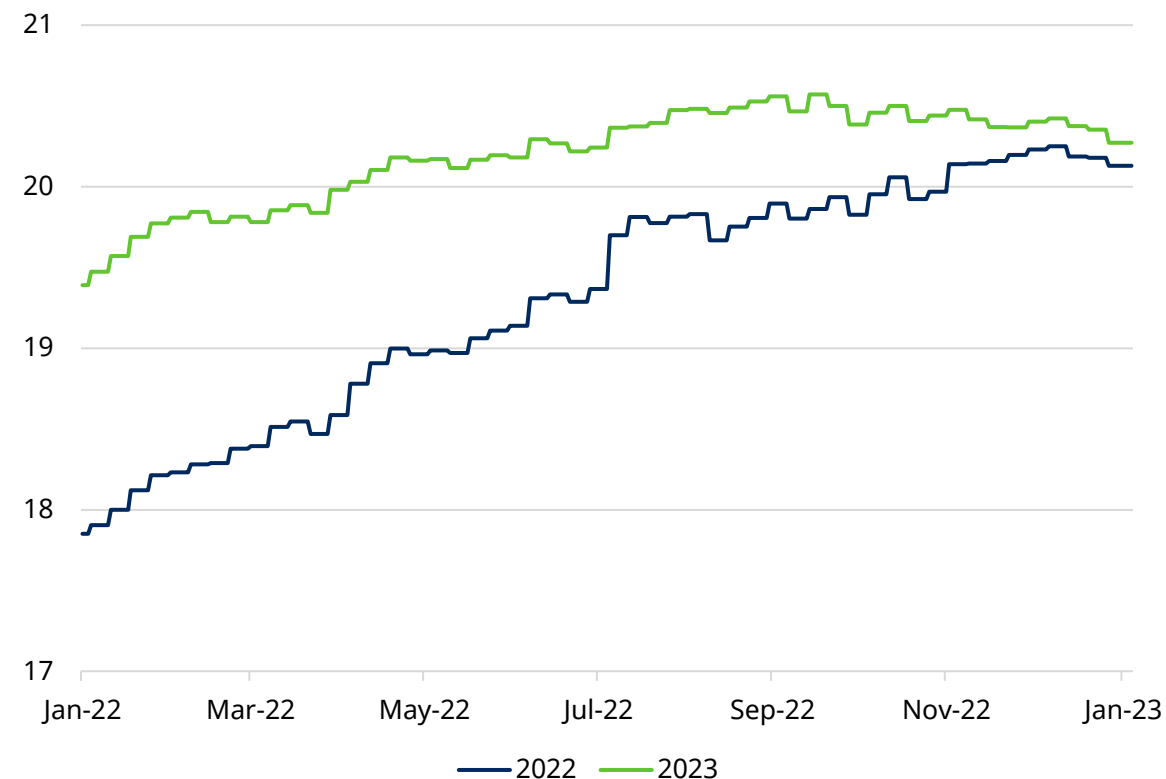
Source: Refinitiv Datastream. Data as at 31 January 2023.

2023 earnings expectations continue to be revised down but still point at small growth over 2022

S&P500: expected annual EPS (\$)



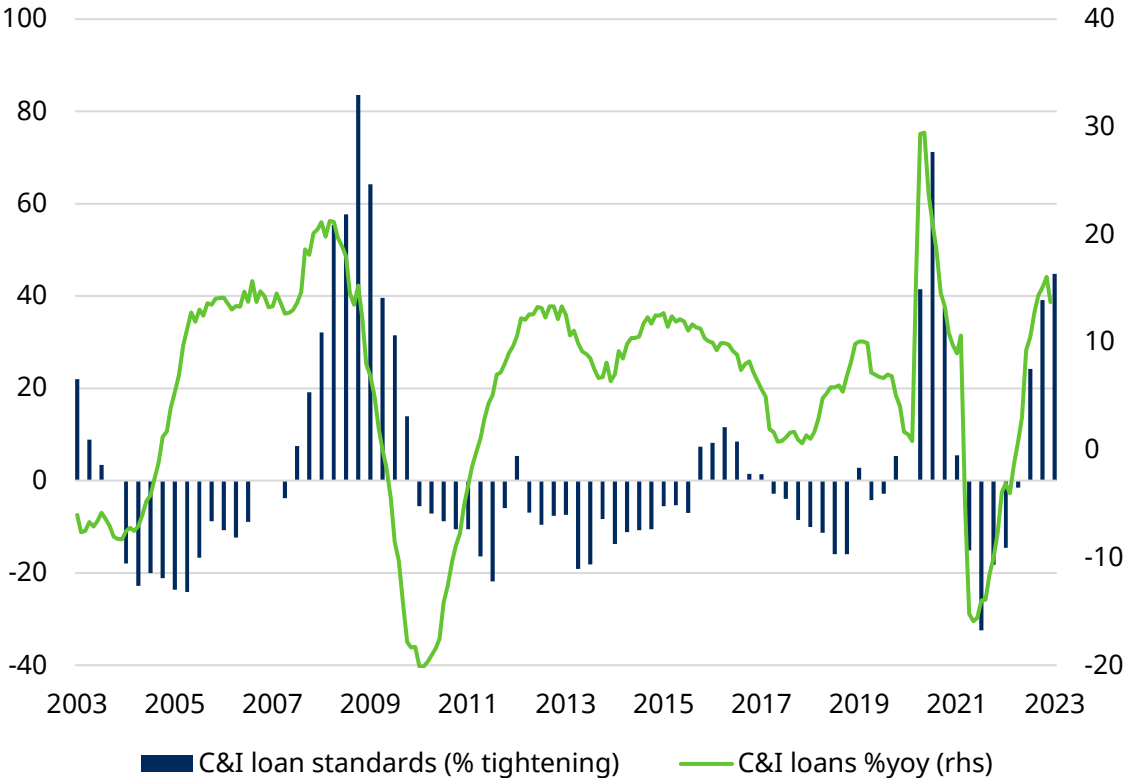
MSCI EMU: expected annual EPS (€)



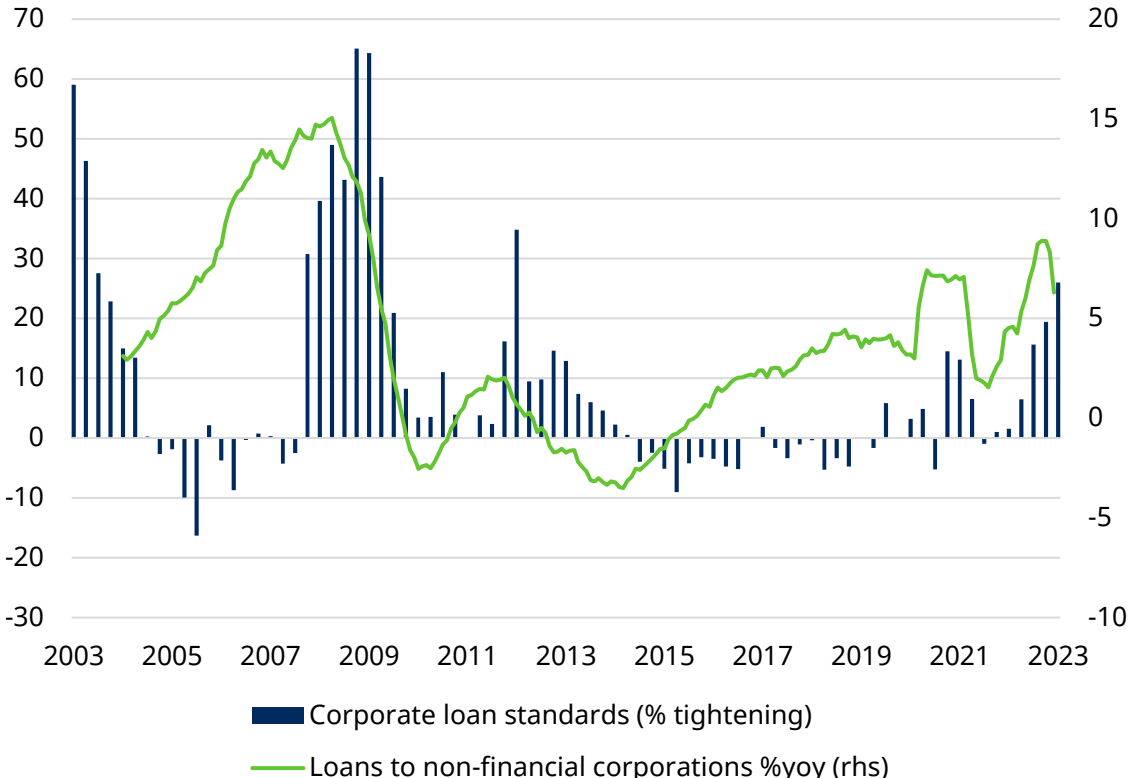
Source: Schroders, Refinitiv Datastream, IBES, MSCI. Data as at 31 January 2023.

Bank lending standards are tightening in the US and Europe

US bank lending standards vs corporate loan growth



Euro bank lending standards vs corporate loan growth



Banks are becoming more cautious after strong corporate loan growth in 2021-22

Source: Refinitiv Datastream. Data as at December 2022.

Summary table

Cross-credit overview

Date: 31 January 2023

	IG GBP non-gilts	IG GBP corporates	IG Euro	IG USD	HY GBP	HY Euro	HY USD	Hard EMD	Local EMD	Corp. EMD
Yield to worst	4.9%	5.1%	3.9%	5.1%	9.6%	7.0%	8.2%	8.1%	6.6%	6.7%
Yield to worst (hedged to USD) ¹	5.6%	5.9%	6.1%	5.1%	10.4%	9.2%	8.2%	8.1%	-	6.7%
Spread (bps)	142	167	151	125	618	441	430	444	297	294
Spread (percentile) ²	64%	62%	71%	40%	77%	50%	44%	67%	15%	35%
Risk premium (bps) ³	109	129	112	87	439	264	210	311	242	183
Duration	6.3	6.9	4.8	7.2	3.5	3.4	4.5	6.9	5.0	4.4
MV (billion \$)	768	578	2,918	7,766	53	419	1,246	623	1,336	525
Rating	A2	A3	A3	A3	BB3	BB3	B1	BB1	BBB3	BBB3
Nr. of issues/countries	1,291	1,089	4,086	9,787	100	753	1,930	67	21	2,002

Since Jan 1997 or inception

Annualised return ⁴	4.9%	5.1%	4.6%	5.1%	8.2%	5.8%	6.2%	6.9%	5.1%	6.0%
Annualised volatility	5.7%	6.5%	3.9%	5.8%	10.5%	11.4%	9.0%	10.7%	11.8%	7.6%
Return/volatility	0.8	0.8	1.2	0.9	0.8	0.5	0.7	0.6	0.4	0.8
Max drawdown	-24.0%	-26.2%	-14.9%	-20.1%	-28.5%	-39.8%	-33.2%	-29.5%	-12.5%	-24.3%
Correlation with S&P500	0.2	0.3	0.3	0.3	0.5	0.6	0.6	0.6	0.6	0.5
Correlation with MSCI World	0.2	0.3	0.3	0.3	0.6	0.7	0.7	0.6	0.7	0.6
Correlation with US Treasuries	0.5	0.4	0.3	0.6	-0.2	-0.3	-0.2	0.1	0.1	0.2

Past performance is not a guide to future performance and may not be repeated.

Source: Schroders, Refinitiv Datastream, ICE Data Indices, J.P. Morgan. Data as at 31 January 2023.

¹Local currency yield minus annualized 3-month hedging cost/return.

²Percentile shows where the current spread is relatively to the historical range of spreads, within a range of 0 to 100. The greater the percentile the higher the spread compared to history.

³Spread minus average historical default and downgrade losses (see slide 25).

⁴All returns USD hedged returns, except EMD Local which is unhedged USD return.

Summary table (alternatives)

Cross-credit overview

Date: 31 January 2023

	US Agency MBS	US ABS	US CMBS	US leveraged loans	Cat Bonds
Yield ¹	4.3%	5.5%	5.6%	8.9%	-
Yield (hedged to USD) ²	4.3%	5.5%	5.6%	8.9%	-
Spread (bps) ³	61	125	197	410	-
Risk premium (bps)	-	-	-	-	-
Duration	6.1	2.2	4.1	0.0	-
Market size (billion \$)	7,389	383	456	1,360	-
Rating	AAA	AAA	AAA	-	-
Since Jan 1997 or inception					
Annualised return ⁴	4.1%	3.5%	4.8%	4.4%	6.5%
Annualised volatility	3.2%	2.2%	6.1%	6.9%	3.7%
Return/volatility	1.3	1.6	0.8	0.6	1.8
Max drawdown	-16.0%	-9.0%	-25.8%	-29.2%	-8.7%
Correlation with S&P500	-9.9%	0.6%	24.7%	60.6%	12.9%
Correlation with MSCI World	-0.1	0.0	0.3	0.6	0.1
Correlation with US Treasuries	0.8	0.5	0.3	-0.4	0.1

Past performance is not a guide to future performance and may not be repeated.

Source: Schroders, Refinitiv Datastream, Bloomberg. Data as at 31 January 2023

¹USD yield

²USD yield minus annualized 3-month hedging cost/return

³US leveraged loans spread is over 3-month LIBOR

⁴All returns USD returns

Performance table

Cross-credit overview

Date: 31 January 2023

	IG GBP non-gilts	IG GBP corporates	IG Euro	IG USD	HY GBP	HY Euro	HY USD	Hard EMD	Local EMD	Corp. EMD
Return (local)¹										
1 month return	3.6%	4.1%	2.0%	3.9%	3.6%	3.2%	3.9%	3.2%	4.3%	3.0%
YTD return	3.6%	4.1%	2.0%	3.9%	3.6%	3.2%	3.9%	3.2%	4.3%	3.0%
1 year return	-12.3%	-13.4%	-11.0%	-9.3%	-6.6%	-7.2%	-5.1%	-12.7%	-7.9%	-8.1%
Return (USD hedged)										
1 month return	3.7%	4.2%	2.3%	3.9%	3.7%	3.5%	3.9%	3.2%	4.3%	3.0%
YTD return	3.7%	4.2%	2.3%	3.9%	3.7%	3.5%	3.9%	3.2%	4.3%	3.0%
1 year return	-10.7%	-11.7%	-8.8%	-9.3%	-5.2%	-4.7%	-5.1%	-12.7%	-7.9%	-8.1%
Spread										
1 month OAS change	-19	-27	-15	-13	-45	-53	-49	-8	8	-28
YTD OAS change	-19	-27	-15	-13	-45	-53	-49	-8	8	-28
1 year OAS change	39	44	44	15	216	74	67	59	-137	9
Latest OAS	142	167	151	125	618	441	430	444	297	294

Past performance is not a guide to future performance and may not be repeated.

Source: Schroders, Refinitiv Datastream, ICE Data Indices, J.P. Morgan. Data as at 31 January 2023.

¹Local EMD is USD return.

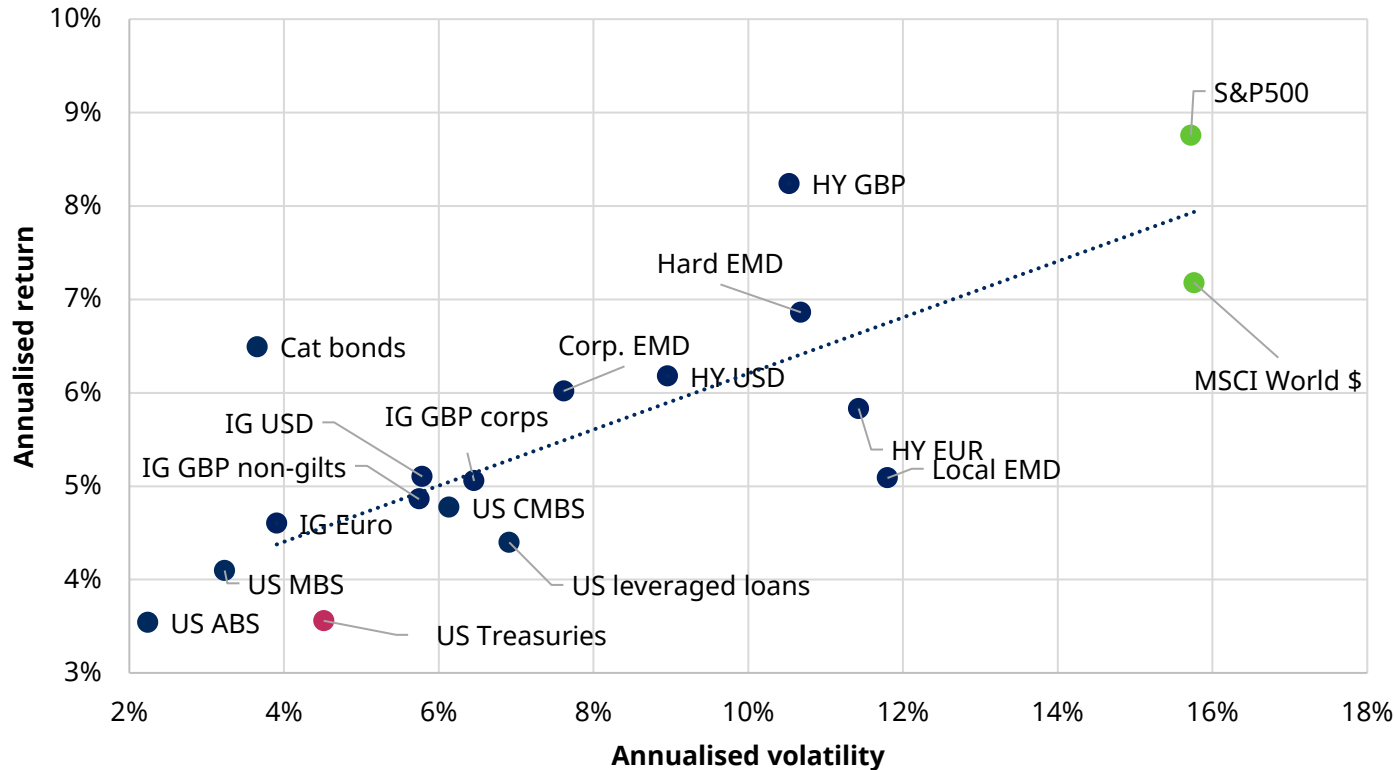
Schroders



Cross-credit analysis

Cross-credit risk-return profile

Since Jan 1997 or inception



- Little difference in risk/return characteristics of four IG indices
- The superior risk adjusted return of GBP HY index could be due to liquidity premium
- \$ EMD has delivered higher risk-adjusted returns than DM credit
- Agency MBS return has been roughly equal to Treasuries but has been achieved with lower volatility

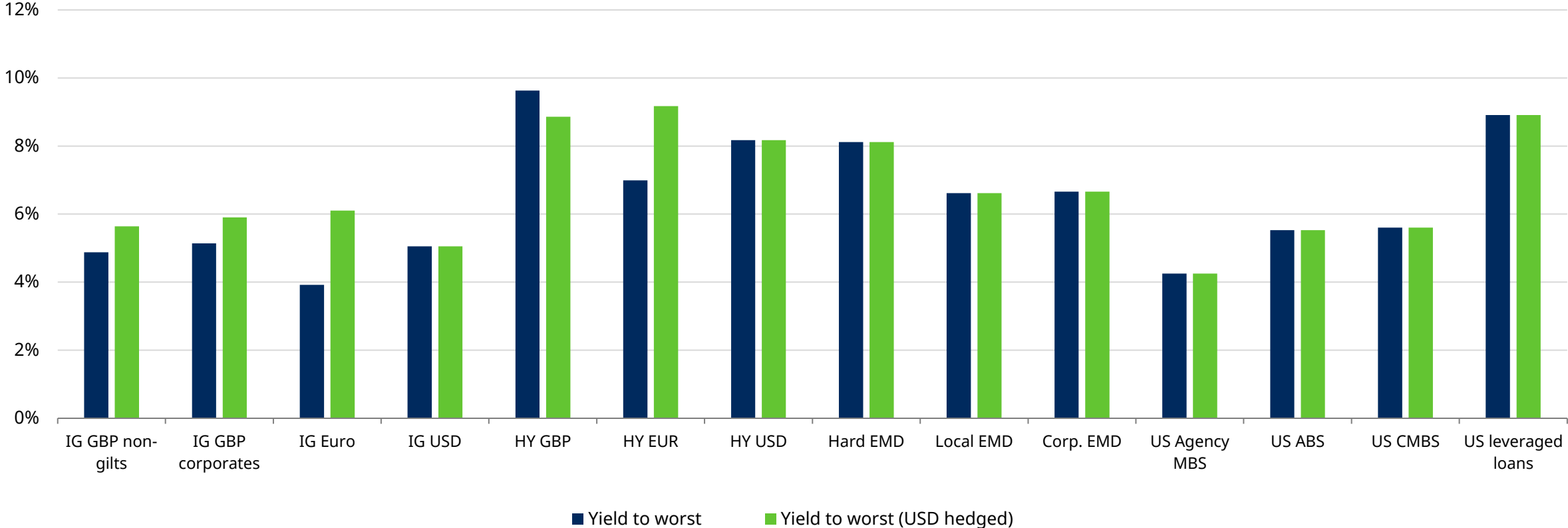
Past performance is not a guide to future performance and may not be repeated.

Source: Schroders, Refinitiv Datastream, ICE Data Indices, J.P. Morgan. Data as at 31 January 2023.

All return and volatility figures shown as USD hedged, except EMD Local and MSCI World which are unhedged returns in USD.

Cross-credit yield

Yield to worst



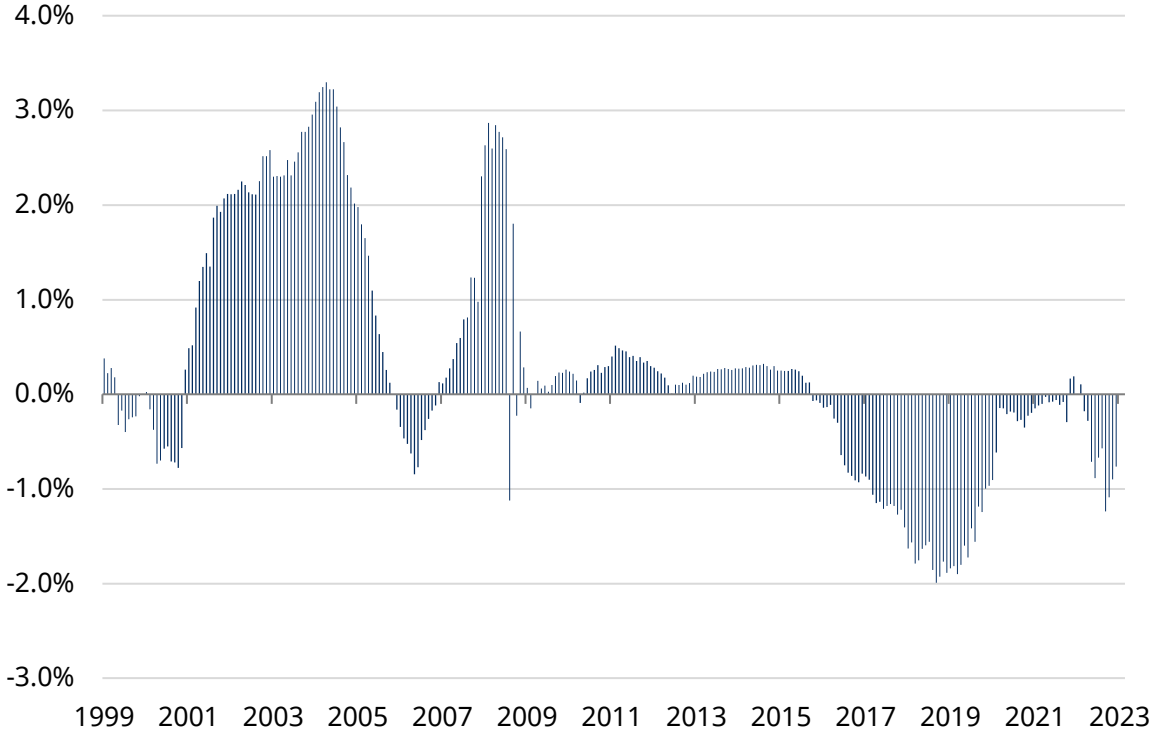
Currency-hedged EUR corporates are attractive for USD investors

Source: Schroders, Refinitiv Datastream, ICE Data Indices, J.P. Morgan, Bloomberg. Data as at 31 January 2023. Hedged yield is local currency yield minus annualised 3-month FX hedging cost/return (see next slide).

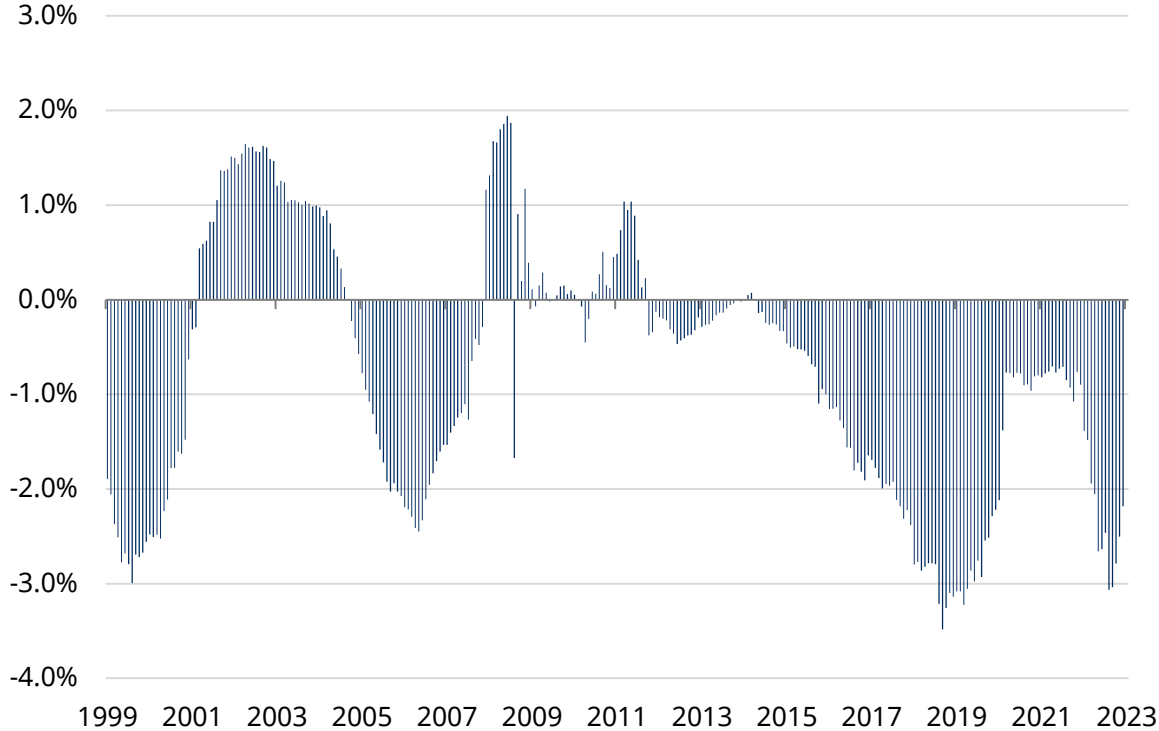
FX hedging cost or return

Using 3-month FX forwards

Annualised GBP to USD hedging cost (pos) or return (neg)



Annualised EUR to USD hedging cost (pos) or return (neg)

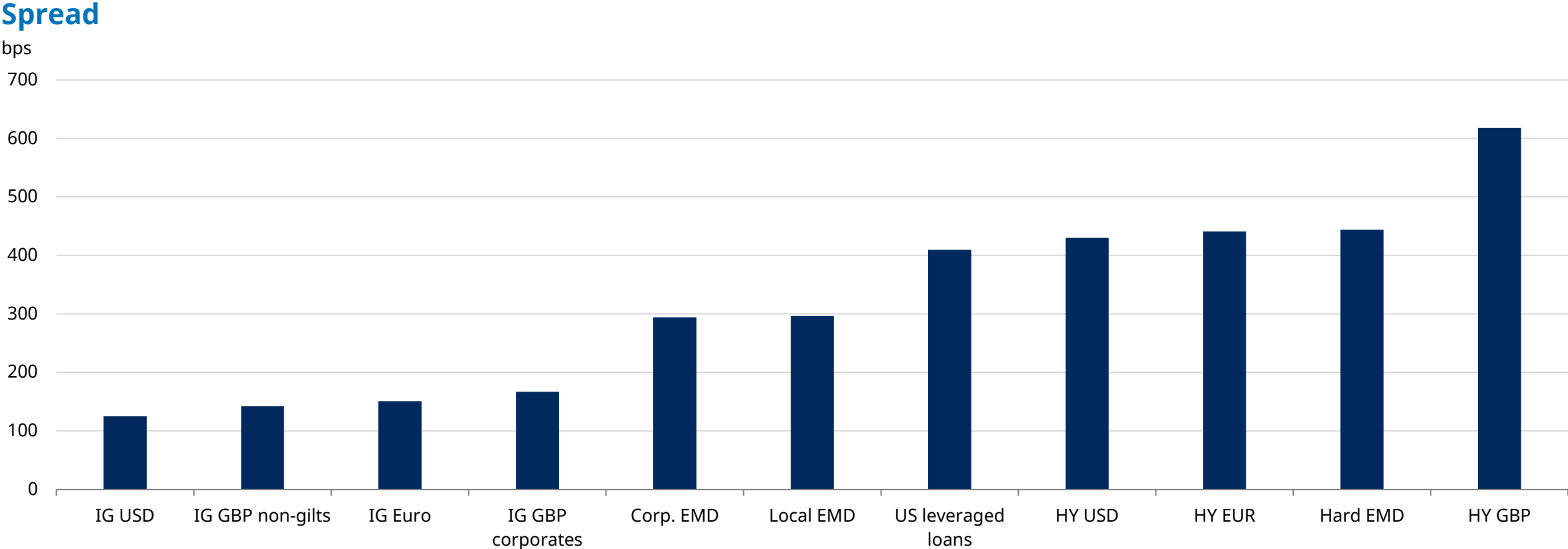


GBP yields will be 0.8% higher in USD once hedging taken account

EUR yields will be 2.2% higher in USD once hedging taken account

Source: Refinitiv Datastream. Data as at 31 January 2023.

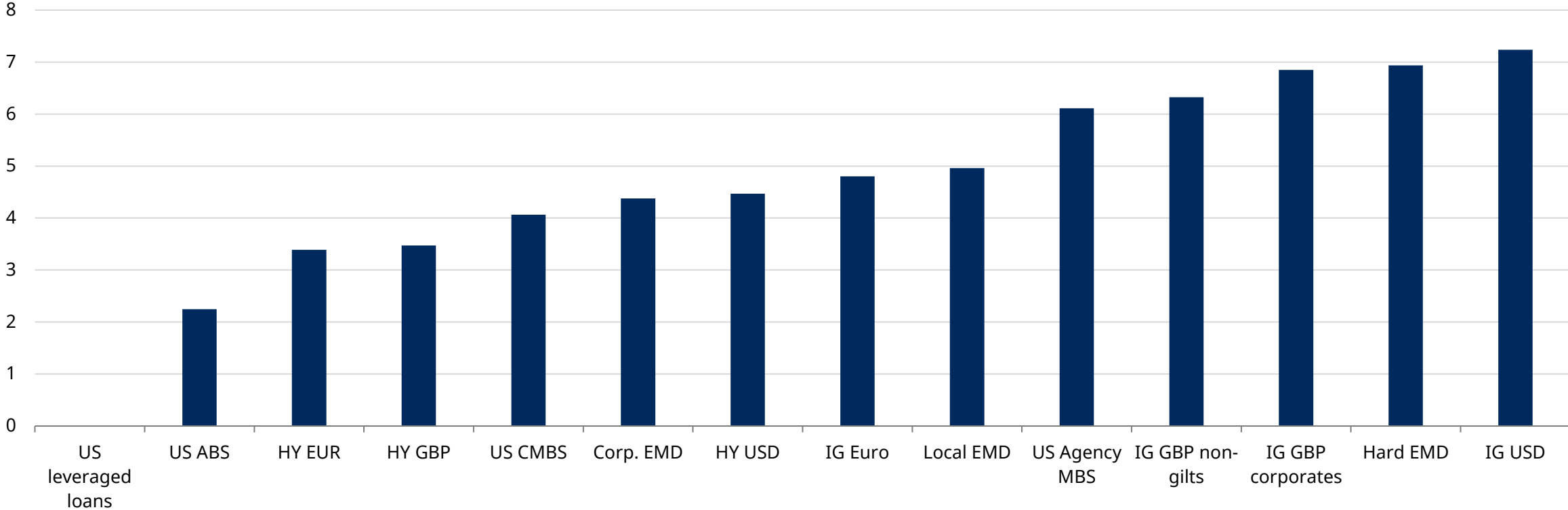
Cross-credit spread



Source: Refinitiv Datastream, ICE Data Indices, J.P. Morgan, Bloomberg. Data as at 31 January 2023. Local EMD has been estimated as a spread over Treasuries of similar maturity.

Cross-credit duration

Modified duration

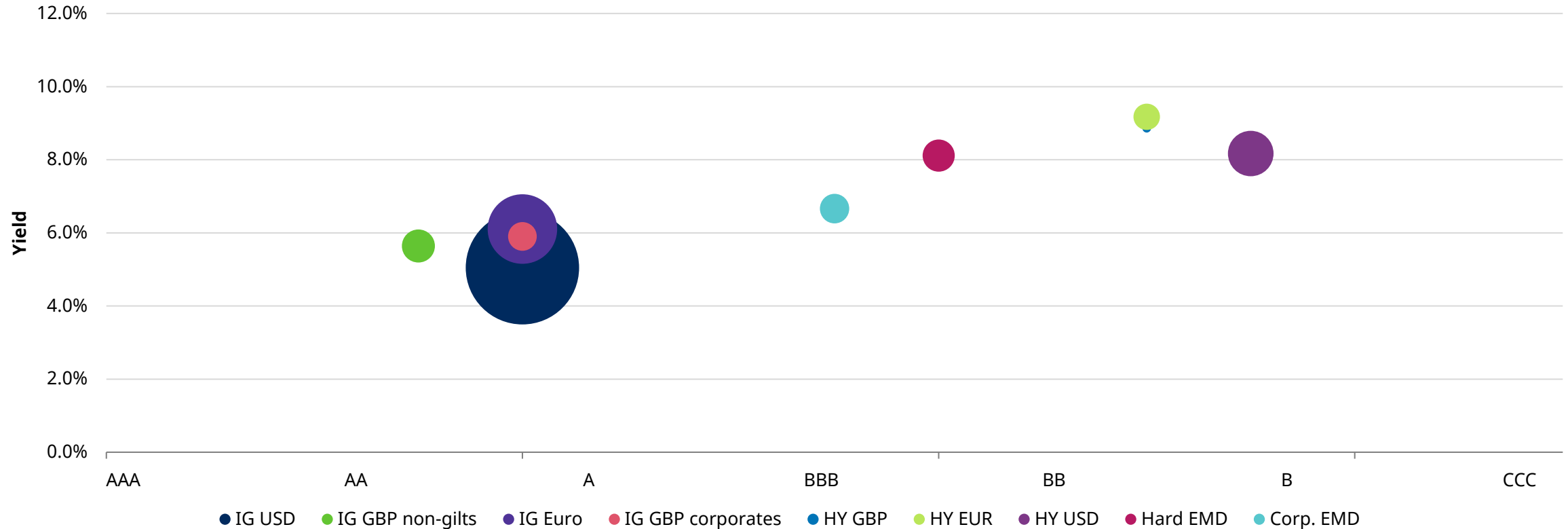


Source: Refinitiv Datastream, ICE Data Indices, J.P. Morgan, Bloomberg. Data as at 31 January 2023.

Yield vs. credit rating vs. market size

The size of bubble is proportionate to the size of the market

Yield (USD hedged) vs credit rating vs market size

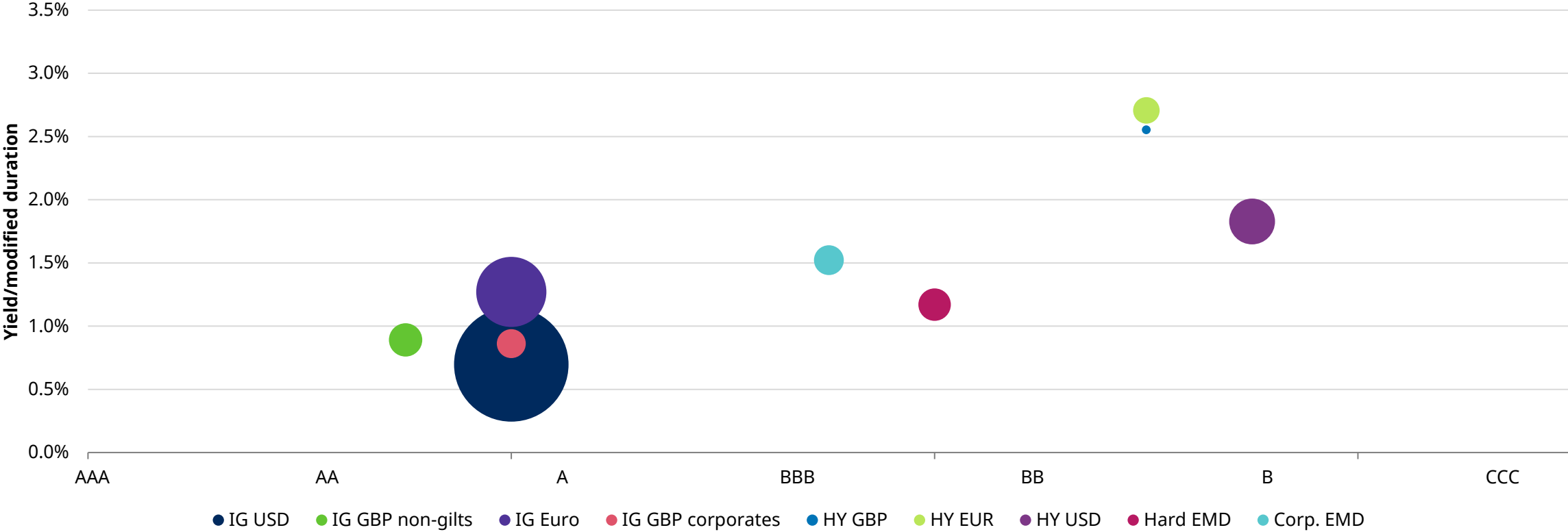


Source: Schroders, Refinitiv Datastream, ICE Data Indices, J.P. Morgan. Data as at 31 January 2023.

Yield per unit of duration vs. credit rating vs. market size

Vertical axis is yield divided by modified duration

Yield (USD hedged) per unit of duration vs credit rating vs market size

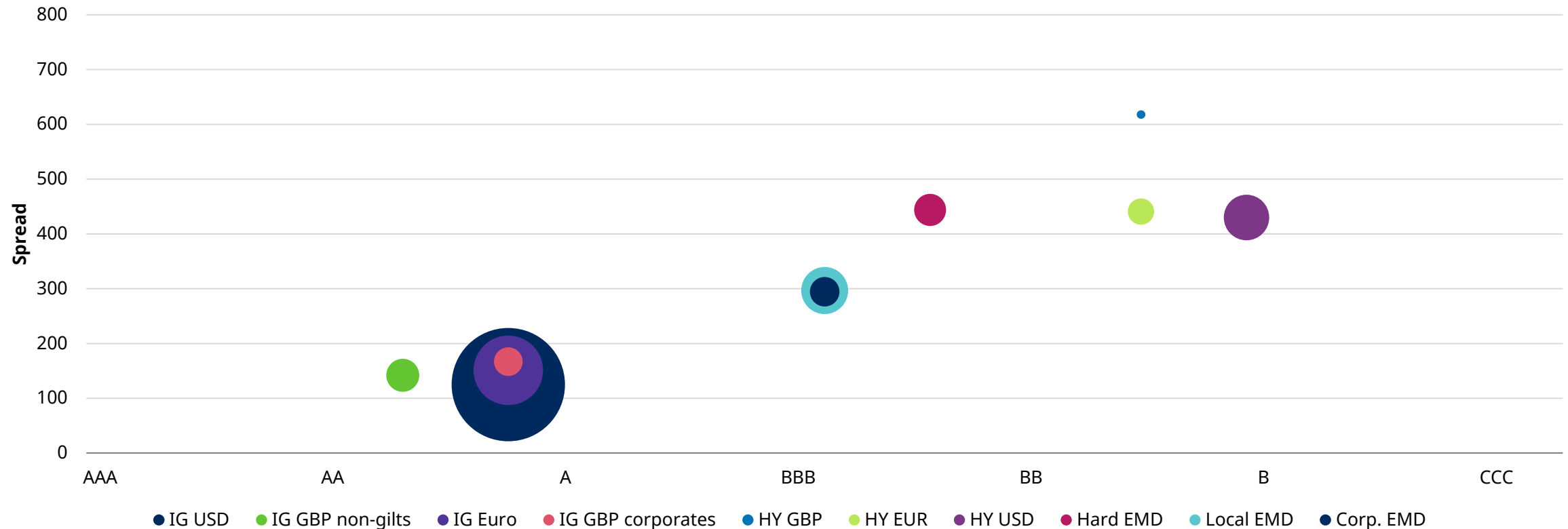


Source: Schroders, Refinitiv Datastream, ICE Data Indices, J.P. Morgan. Data as at 31 January 2023.

Spread vs. credit rating vs. market size

The size of bubble is proportionate to the size of the market

Spread vs credit rating vs market size

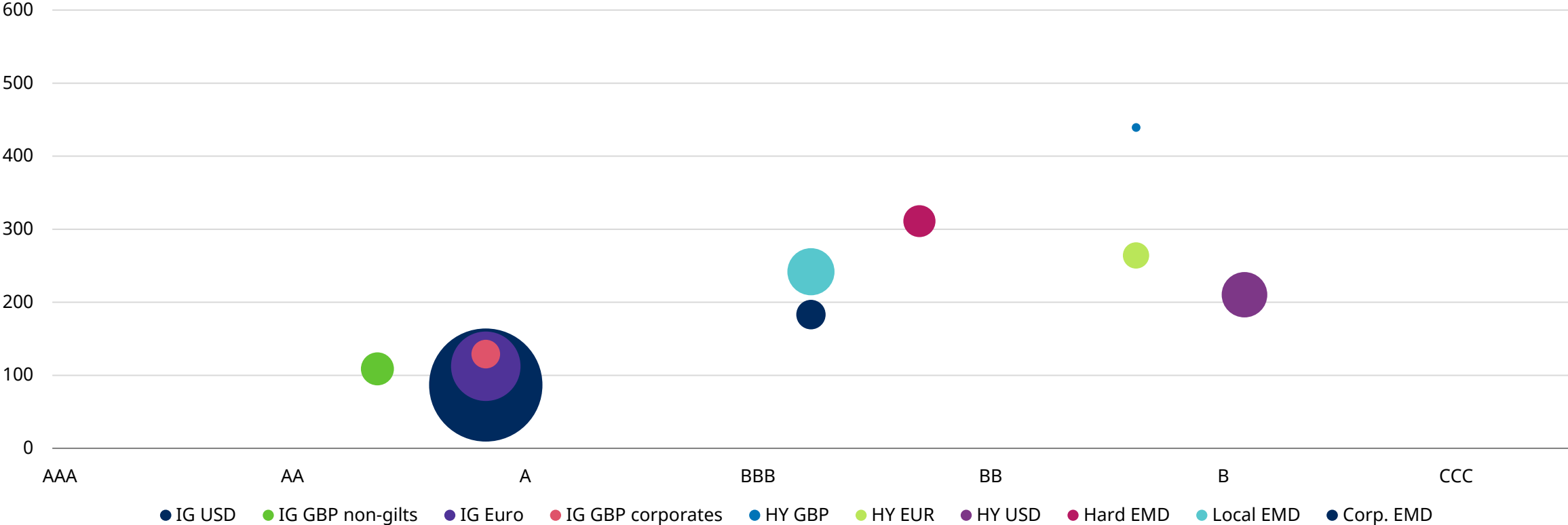


Source: Schroders, Refinitiv Datastream, ICE Data Indices, J.P. Morgan. Data as at 31 January 2023.

Risk premium vs. credit rating vs. market size

Risk premium = credit spread – long term default and downgrade losses

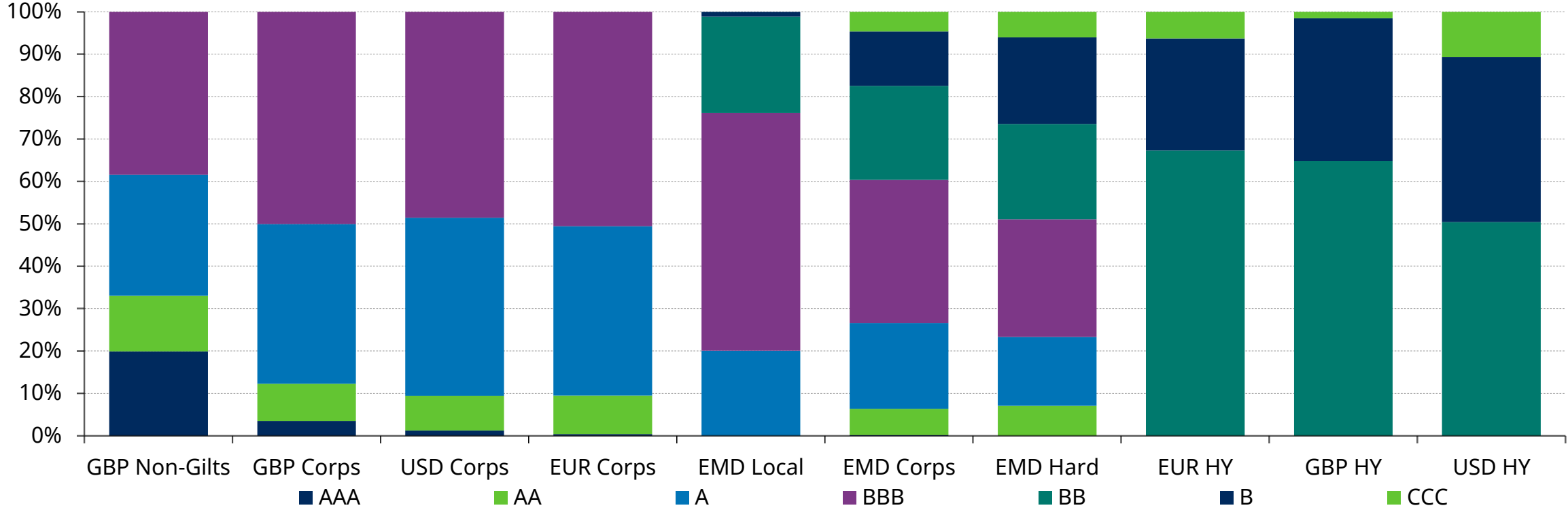
Risk premium vs credit rating vs market size



Local EMD returns are driven by rates and currency movements rather than defaults

Source: Schroders, Refinitiv Datastream, ICE Data Indices, J.P. Morgan. Data as at 31 January 2023.

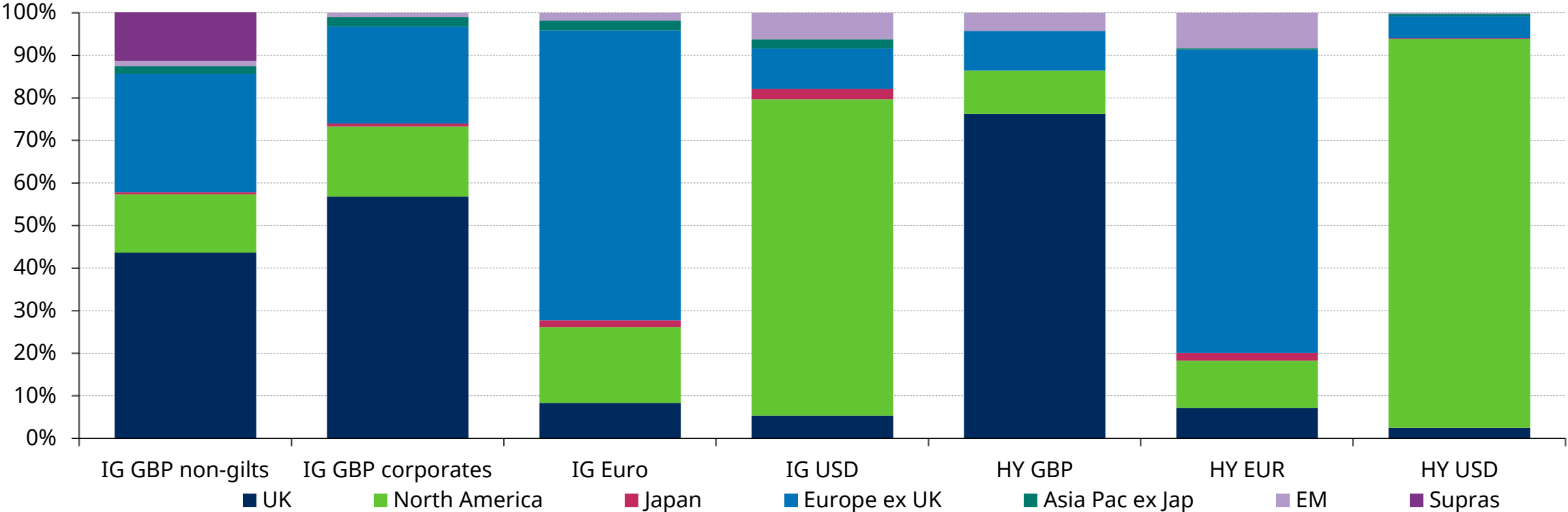
Cross-credit ratings split



US HY lower quality than UK/EUR HY; IG larger share of EMD Corporates than EMD Hard

Source: Refinitiv Datastream, ICE Data Indices, J.P. Morgan. Data as at 31 January 2023.

Currency of issue vs country of issuer

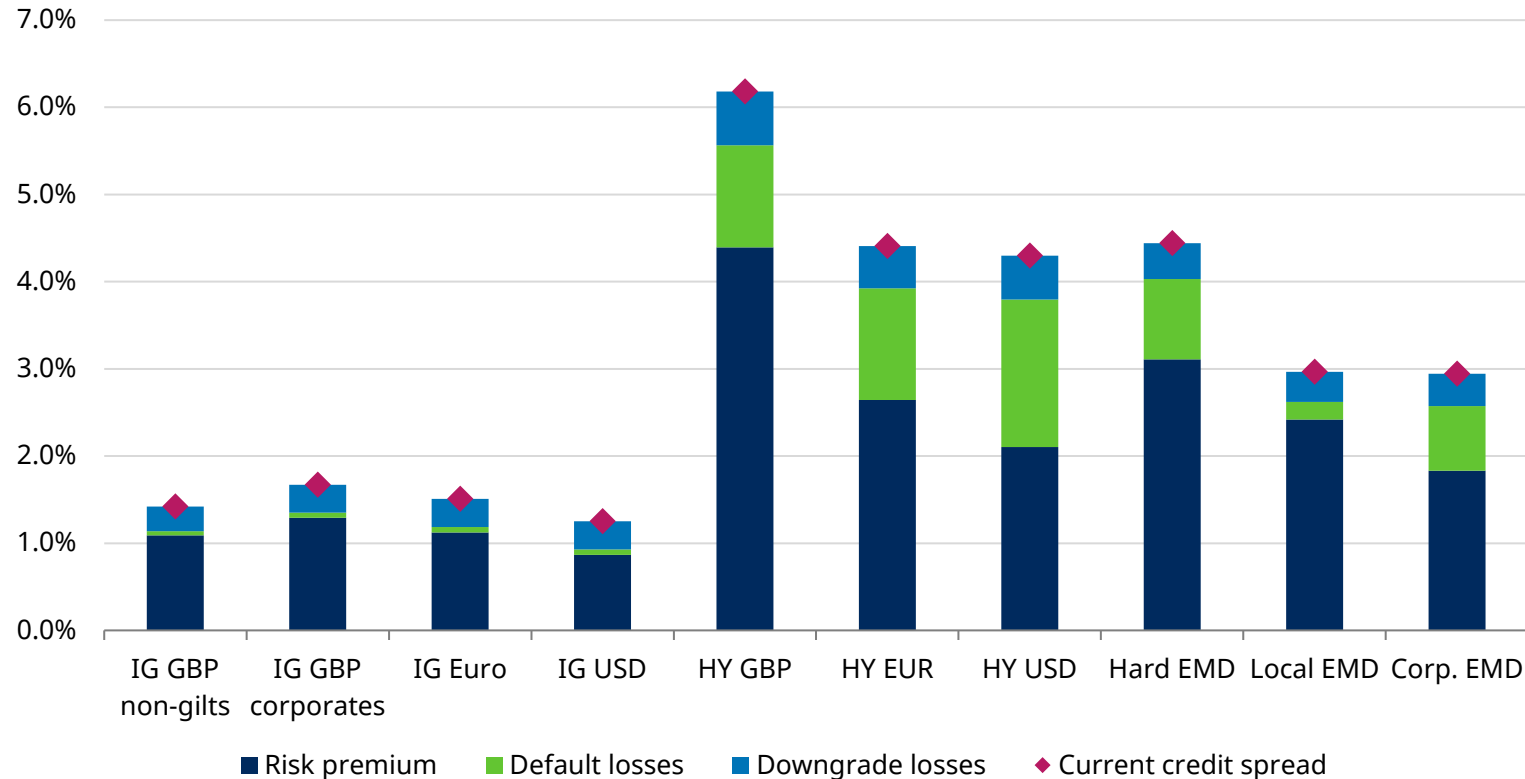


Almost half of GBP IG issuers are not based in the UK

Source: Refinitiv Datastream, ICE Data Indices, J.P. Morgan. Data as at 31 January 2023.

Risk premium/net spread in credit

Decomposition of credit spread into expected losses and expected risk premium



- IG is more exposed to **downgrade losses** (value of a bond falling after a downgrade), while **default losses** have been negligible
- Major losses in HY come from defaults that mostly happen in recessions
- Historically, investors have received a **risk premium** for having exposure to credit, as the average default and downgrade losses have been less than the average spread

Source: Schroders, Moody's default and recovery study 2019, ICE Data Indices, J.P.Morgan. Data as at 31 January 2023.

Risk premium

Decomposition of credit spread into exp. losses and exp. risk premium

	Expected default rate ¹	Default losses ²	Downgrade losses	Current credit spread	Risk premium ³
IG GBP non-gilts	0.1%	0.0%	0.3%	1.4%	1.1%
IG GBP corporates	0.1%	0.1%	0.3%	1.7%	1.3%
IG Euro	0.1%	0.1%	0.3%	1.5%	1.1%
IG USD	0.1%	0.1%	0.3%	1.3%	0.9%
HY GBP	1.8%	1.2%	0.6%	6.2%	4.4%
HY EUR	2.0%	1.3%	0.5%	4.4%	2.6%
HY USD	2.6%	1.7%	0.5%	4.3%	2.1%
Hard EMD	1.4%	0.9%	0.4%	4.4%	3.1%
Local EMD	0.3%	0.2%	0.3%	3.0%	2.4%
Corp. EMD	1.1%	0.7%	0.4%	2.9%	1.8%

Risk premium is expected annual return on top of risk-free rate over a full credit cycle, implied by current spreads

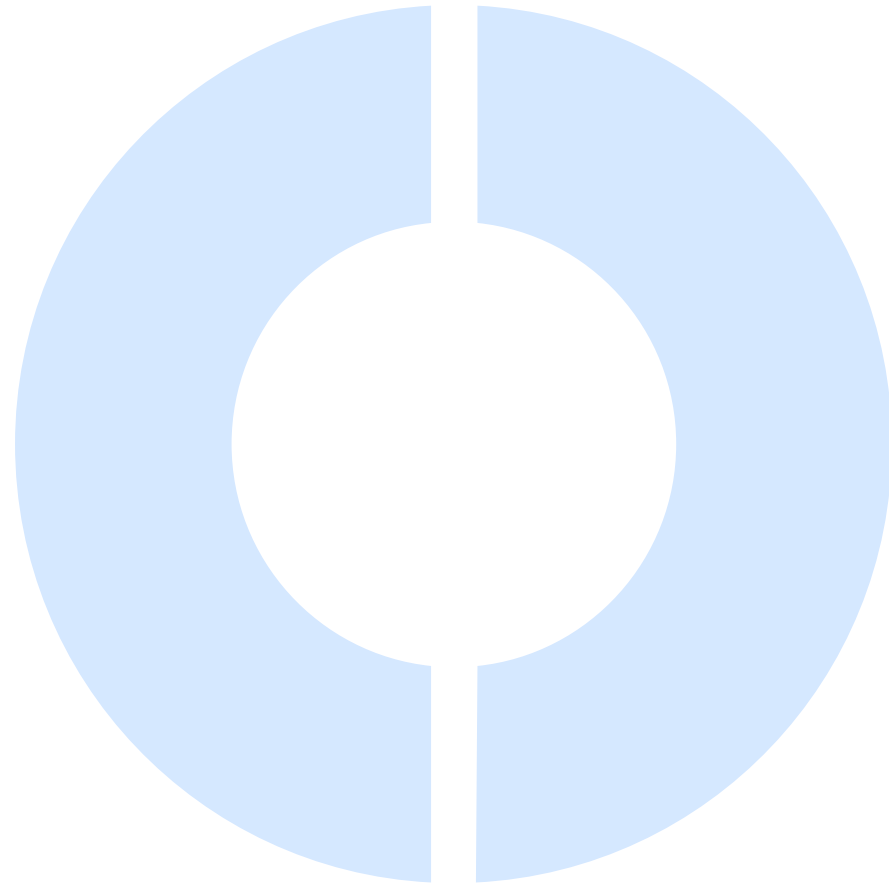
Source: Schroders, Moody's default and recovery study 2022, ICE Data Indices, J.P.Morgan. Data as at 31 January 2023.

¹Based on average historical default rate

²Default rate * (1-recovery rate)

³Credit spread – default losses – downgrade losses

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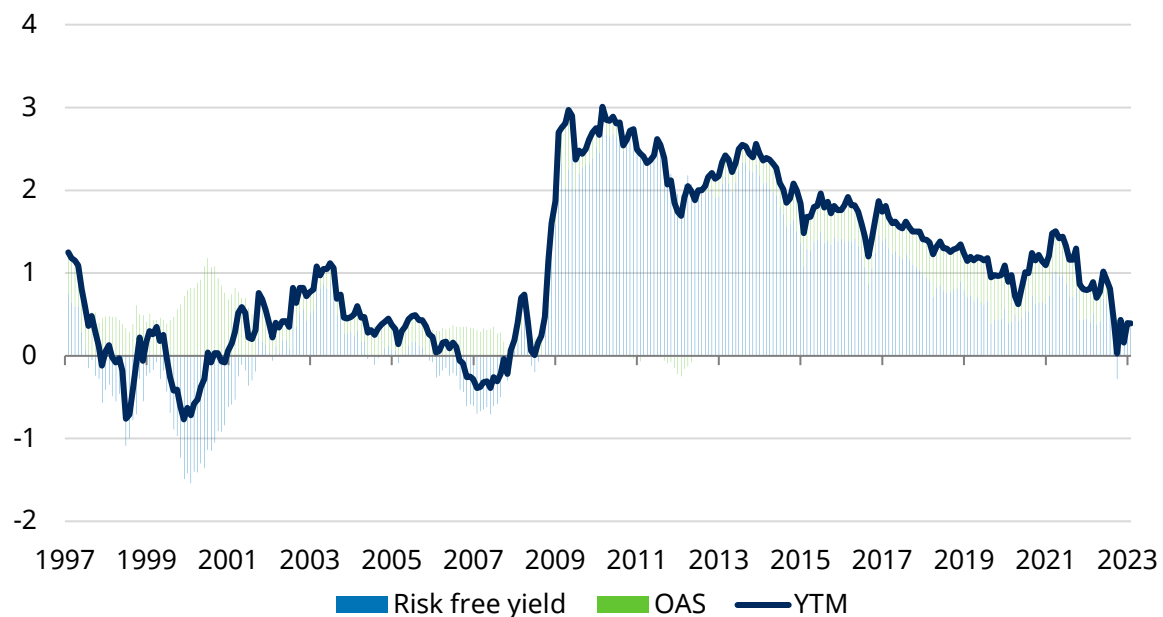


IG long vs short

Shape of the curve

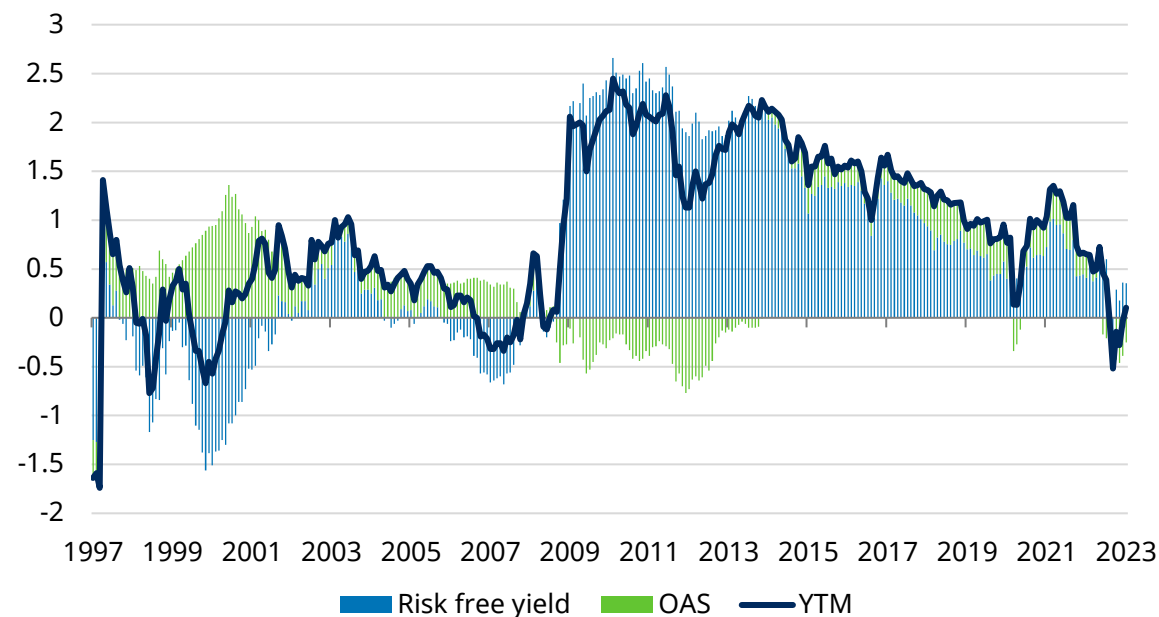
Shape of GBP IG curves

IG GBP non-gilts 10+ minus 1-5 year index yield (%)



	YTW	OAS	Duration
IG GBP non-gilts 1-5 year	4.7%	133	2.9
IG GBP non-gilts Index	4.9%	142	6.3
IG GBP non-gilts 10+	5.1%	139	12.0

IG GBP corporate 10+ minus 1-5 year index yield (%)

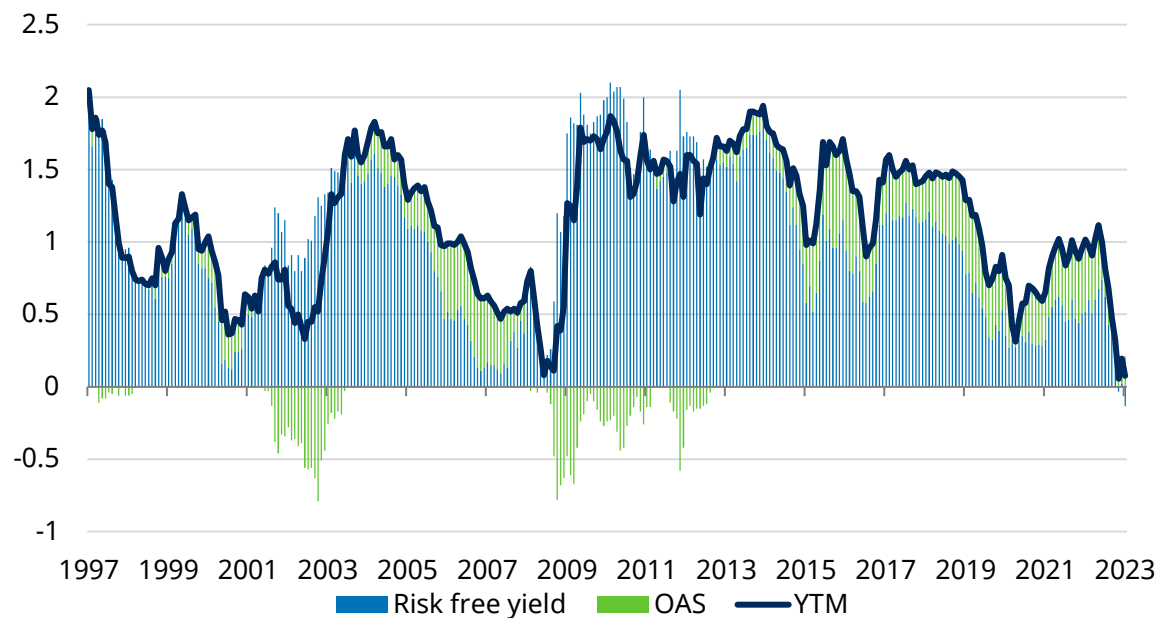


	YTW	OAS	Duration
IG GBP corporates 1-5 year	5.1%	172	3.0
IG GBP corporates Index	5.1%	167	6.9
IG GBP corporates 10+	5.2%	147	11.8

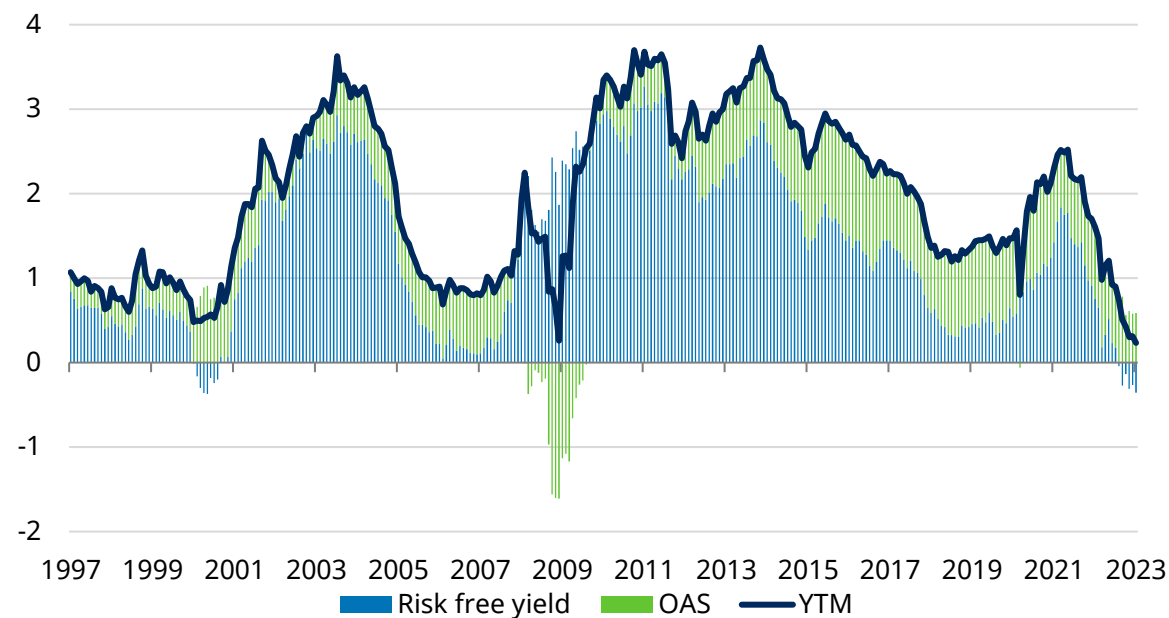
Source: Refinitiv Datastream. Data as at 31 January 2023.

Shape of EUR and USD IG curves

IG EUR 10+ minus 1-5 year index yield (%)



IG USD 15+ minus 1-5 year index yield (%)



	YTW	OAS	Duration
IG Euro 1-5 year	3.9%	139	2.9
IG Euro Index	3.9%	151	4.8
IG Euro 10+	4.0%	160	11.8

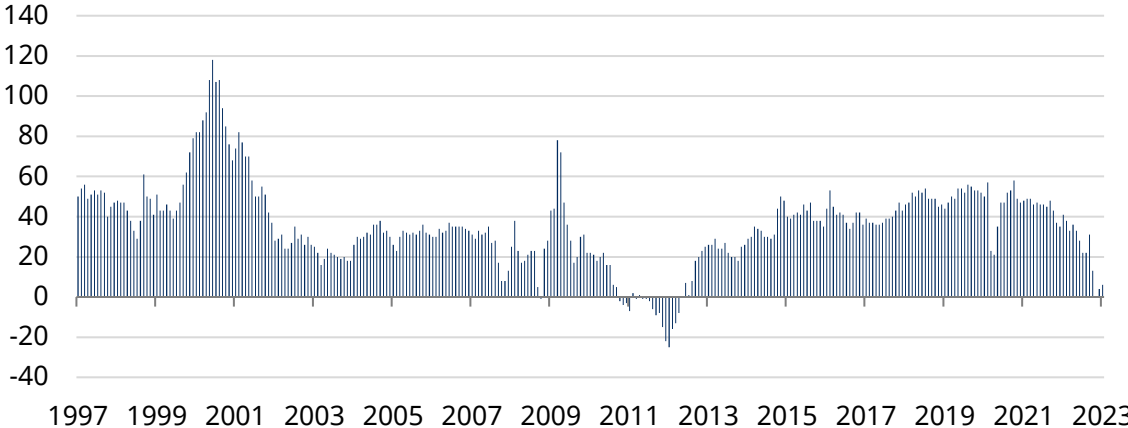
	YTW	OAS	Duration
IG USD 1-5 year	5.0%	90	2.8
IG USD Index	5.1%	125	7.2
IG USD 10+	5.2%	149	14.3

Source: Refinitiv Datastream. Data as at 31 January 2023.

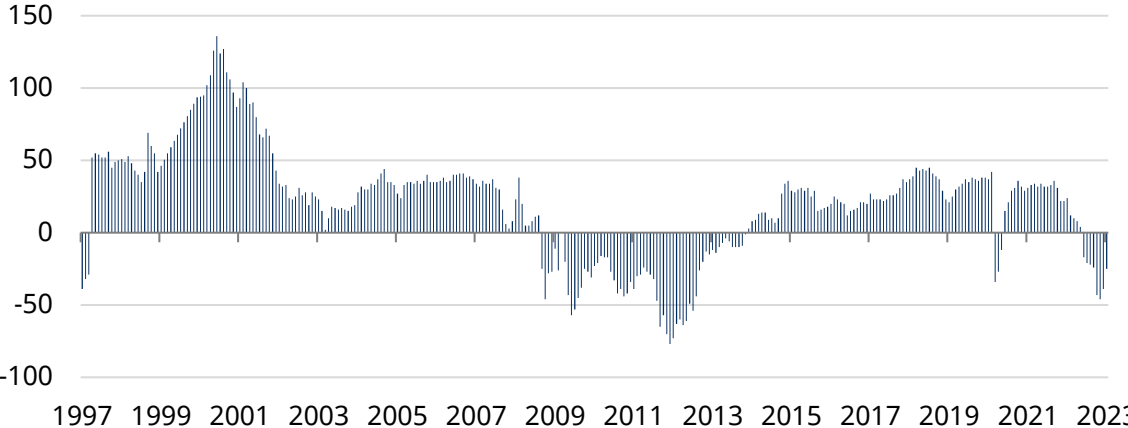
IG long vs short OAS

Shape of spread curves

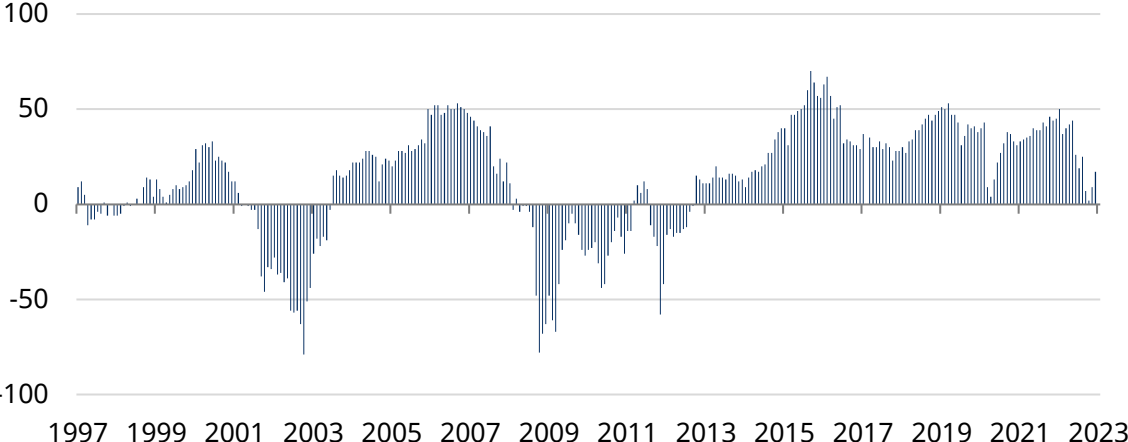
IG GBP non-gilts (bps)



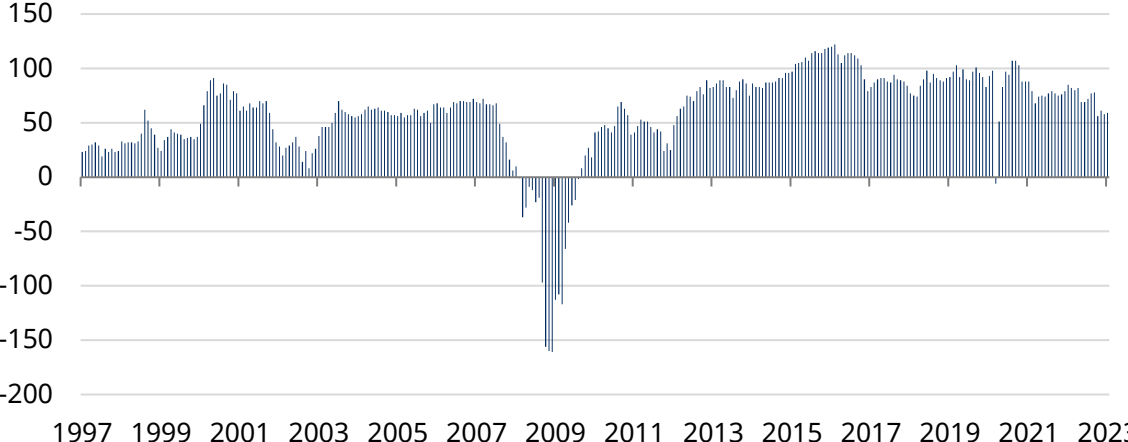
IG GBP corporates (bps)



IG EUR (bps)

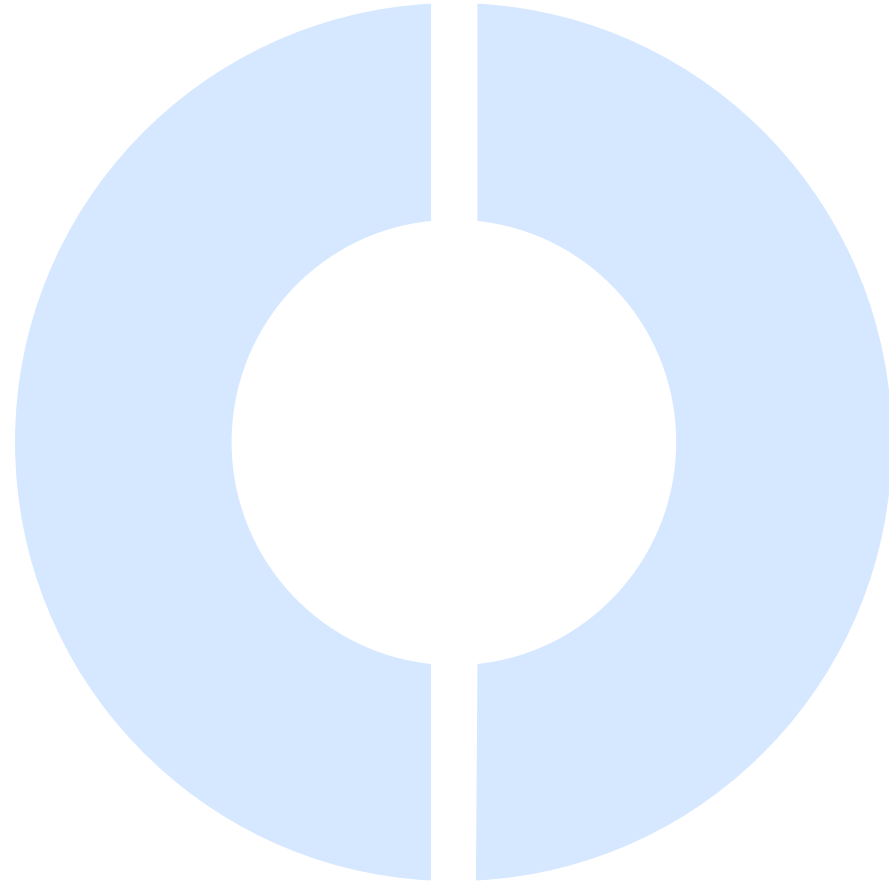


IG USD (bps)



Source: Schroders, ICE Data Indices. Figures showing 10+ minus 1-5 year index spread. Data as at 31 January 2023.

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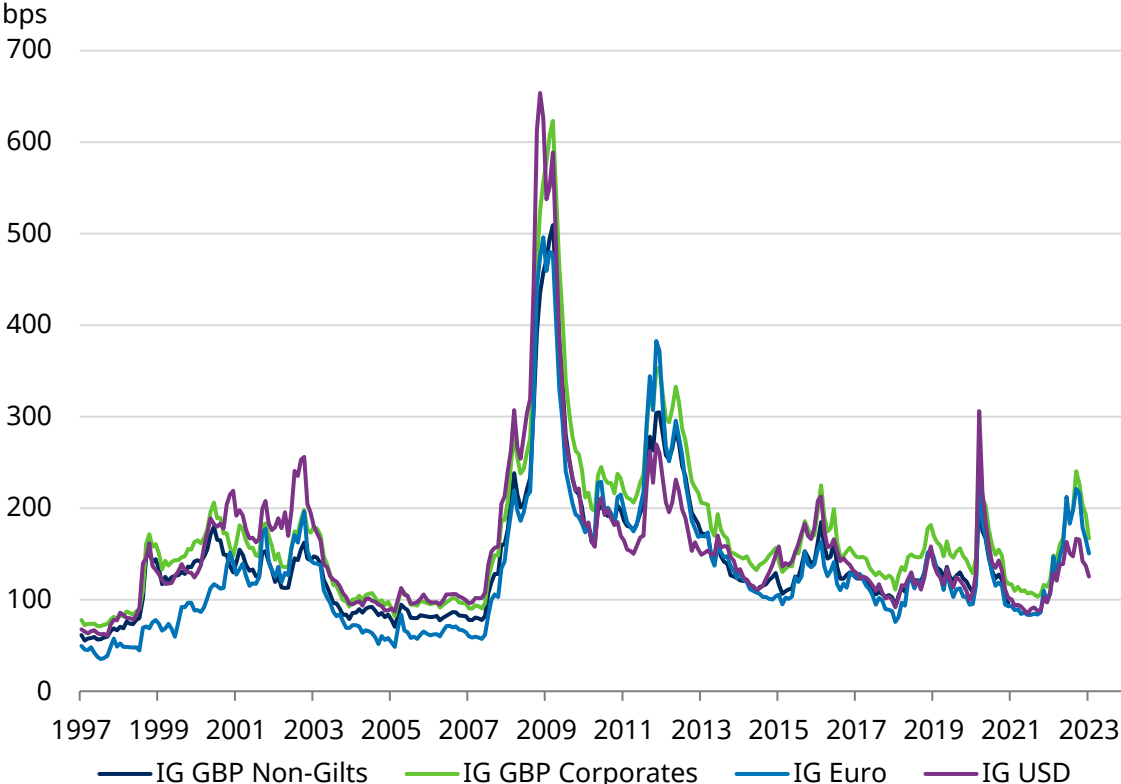


Corporate credit
Valuation

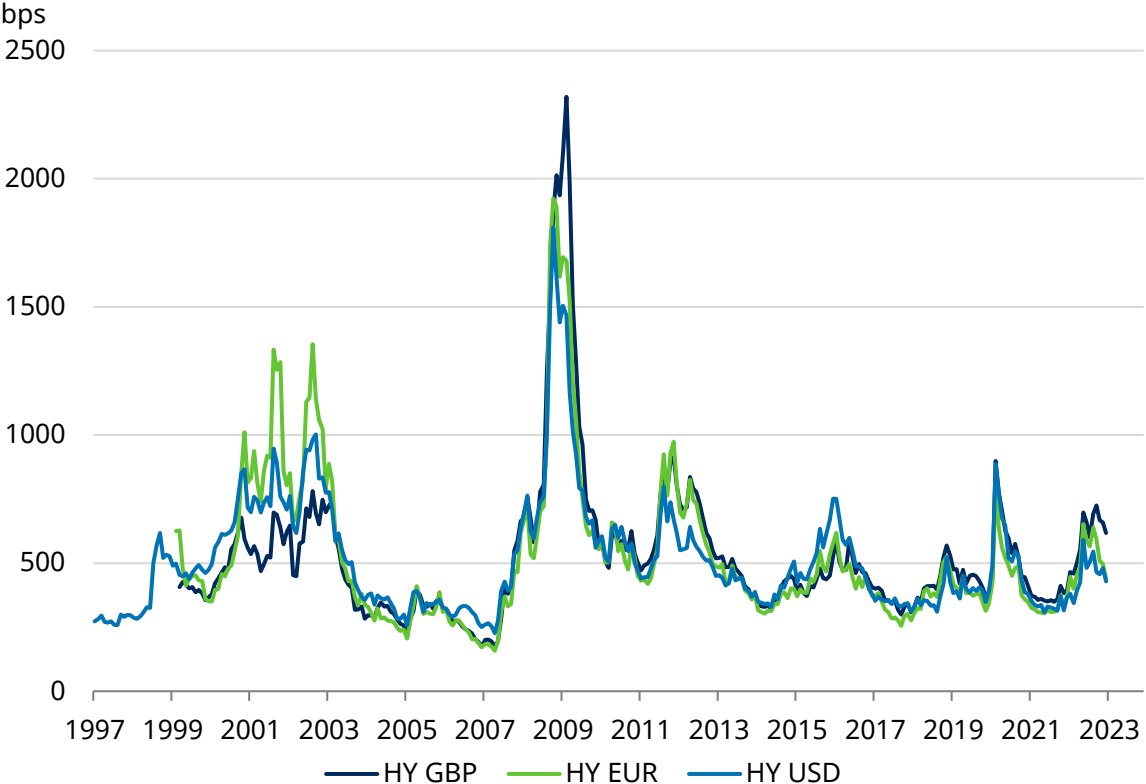
IG and HY valuation

Historical ratings-adjusted credit spreads

IG adjusted spreads



HY adjusted spreads

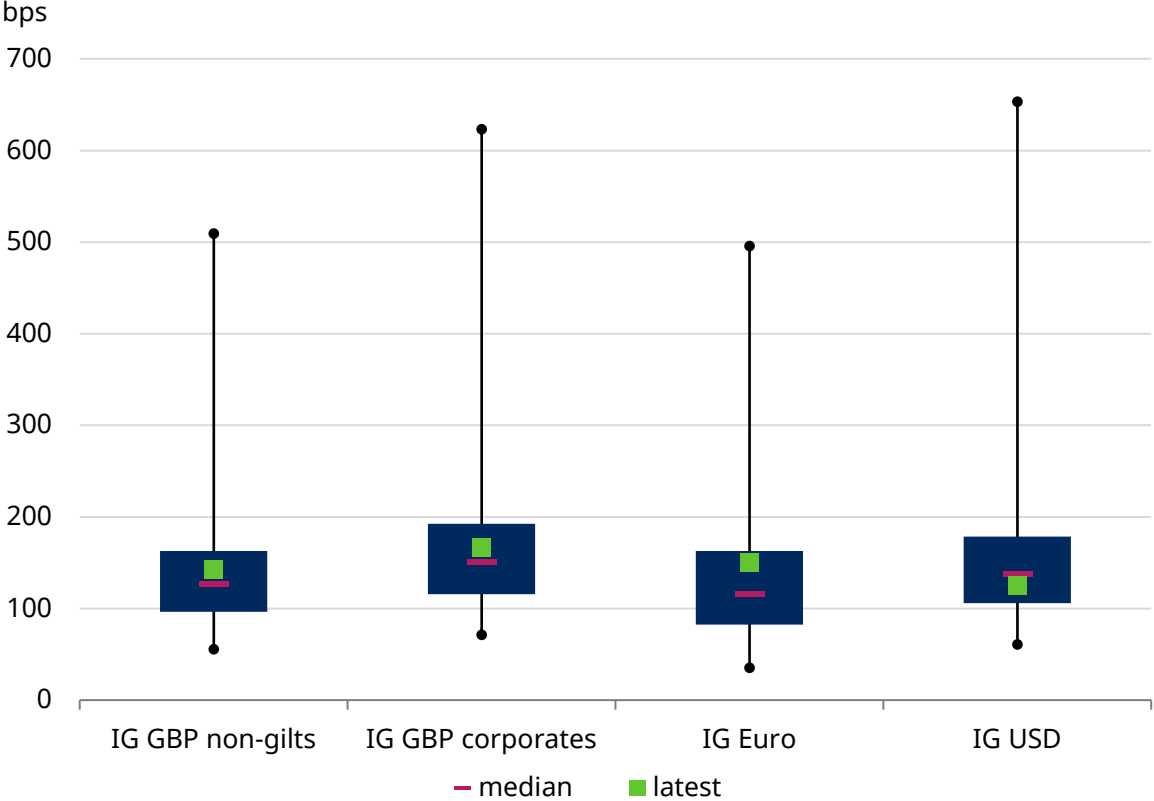


Source: Schroders, Refinitiv Datastream, ICE Data Indices, J.P. Morgan. Data as at 31 January 2023. Spreads are adjusted for changes in the distribution of credit ratings within each index over time.

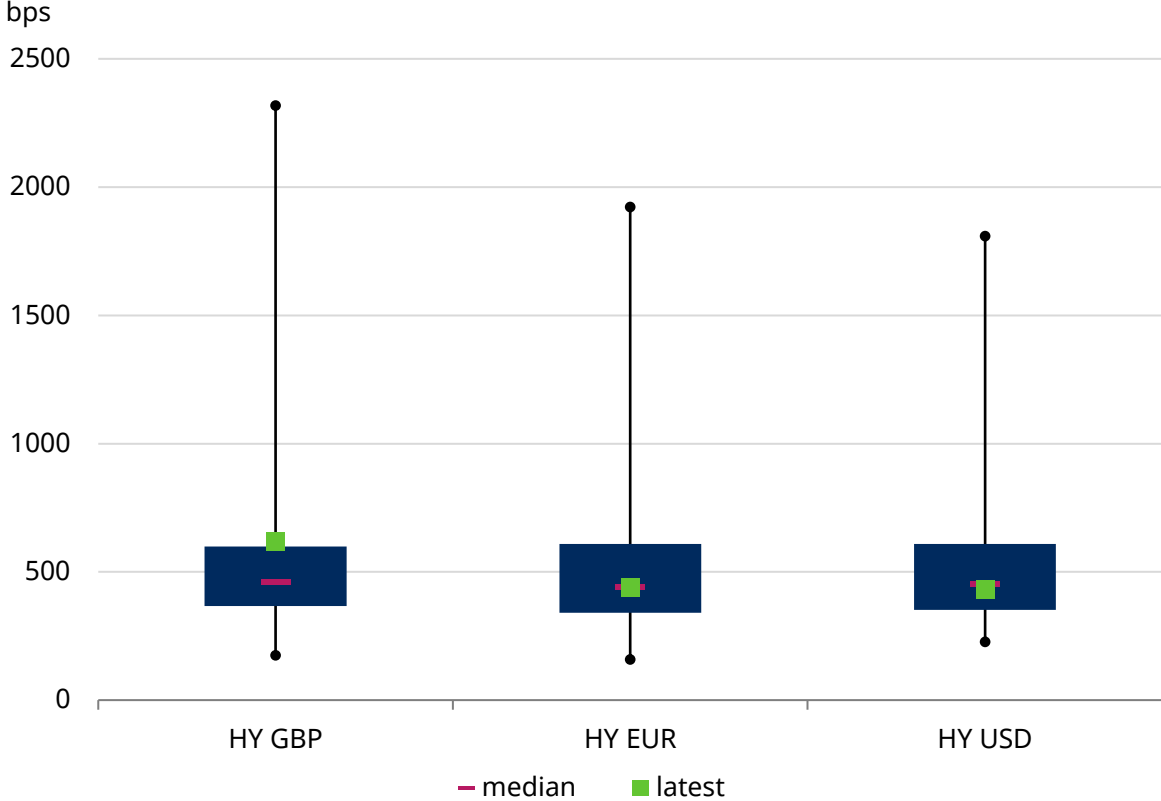
IG and HY valuation

Spread percentiles¹

IG adjusted spreads

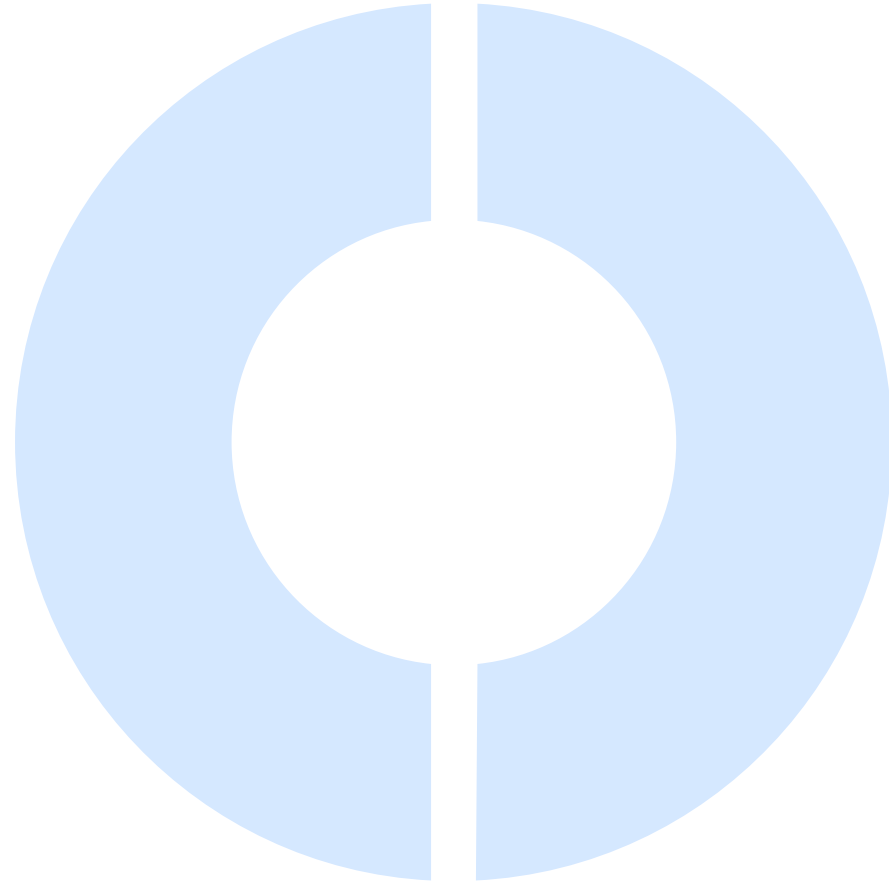


HY adjusted spreads



Source: Schroders, Refinitiv Datastream, ICE Data Indices, J.P. Morgan. Data as at 31 January 2023. Spreads are adjusted for changes in the distribution of credit ratings within each index over time.
¹Percentiles shows where the current spread is relatively to the historical range of spreads, within a range of 0 to 100. The greater the percentile the higher the spread compared to history.

Schroders



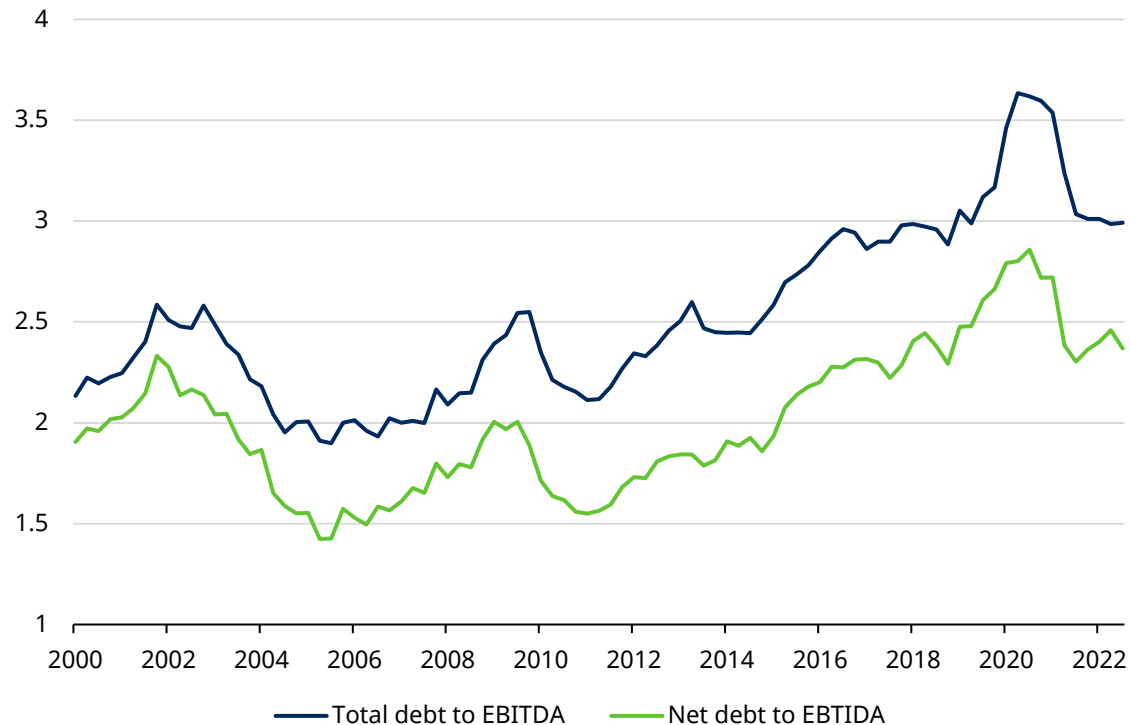
Corporate credit
Fundamentals

US IG leverage

Leverage has been broadly stable in recent quarters

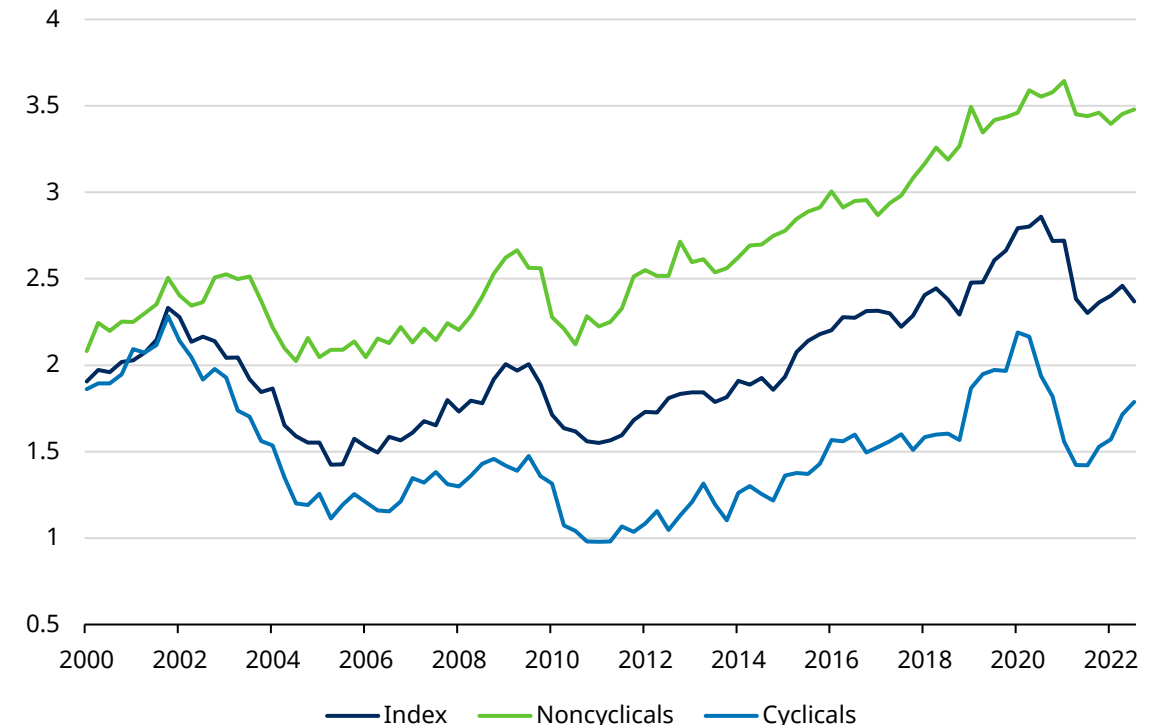
US IG leverage

Debt to last 12 months EBITDA



US IG net leverage

Net debt to last 12 months EBITDA



Unless earnings fall meaningfully, leverage is unlikely to increase sharply

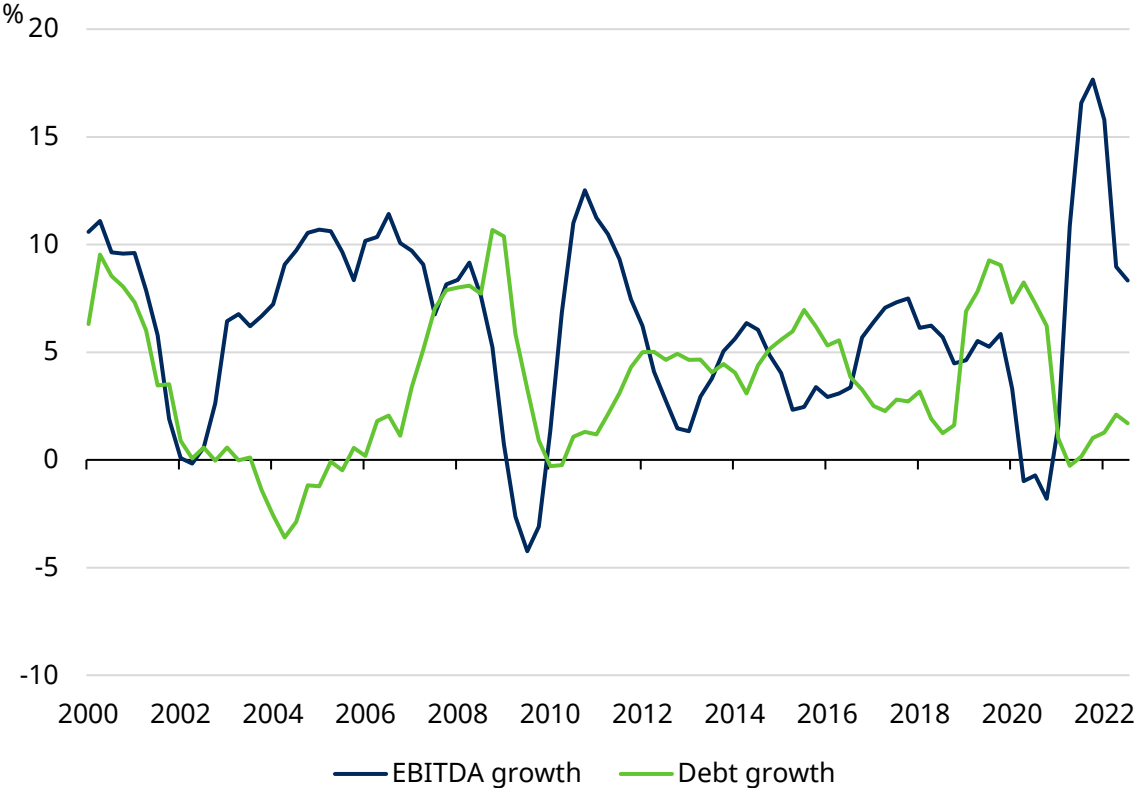
Source: Schroders, Bloomberg. Median issuer ex-Financials. Data as of Q3 2022.

Cyclical sectors: Basic Materials, Consumer Discretionary, Industrials, Technology. **Noncyclical sectors:** Communications, Consumer Staples, Utility, Health Care.

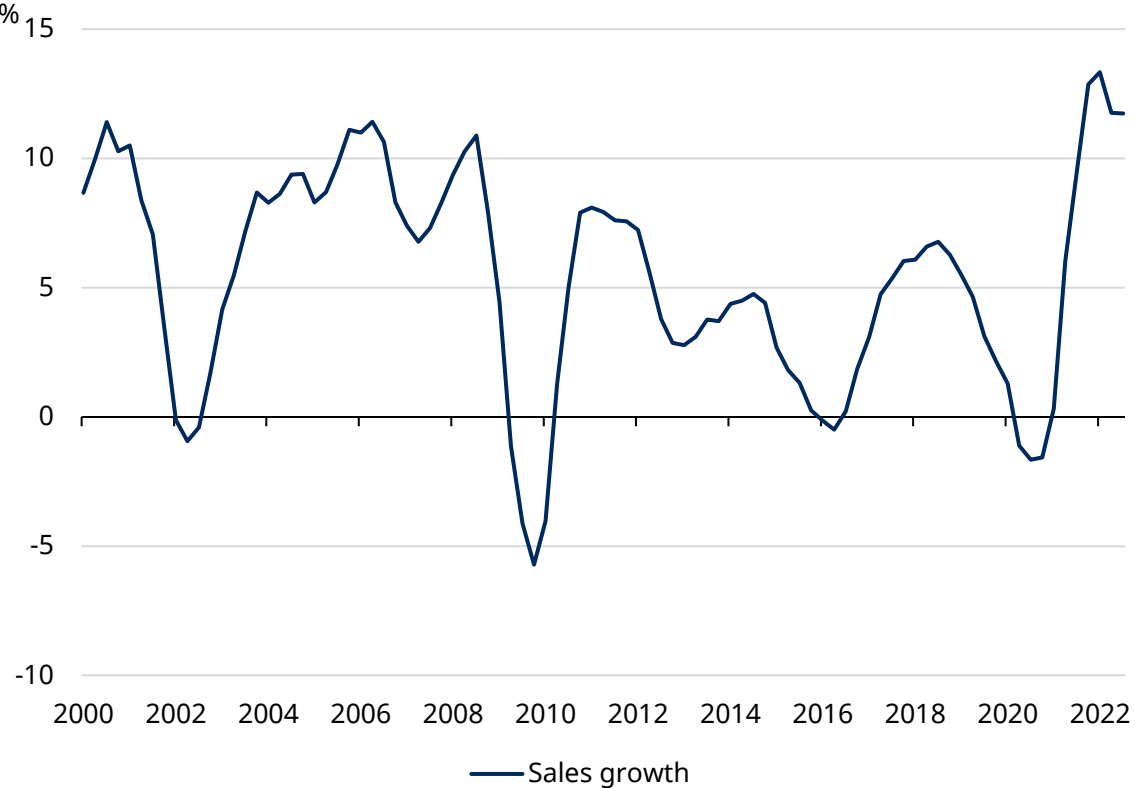
US IG earnings, sales and debt growth

Sales and earnings growth is cooling; debt growth remains modest

US IG EBITDA and debt growth



US IG sales growth



Source: Schroders, Bloomberg. Median issuer ex-Financials. Data as of Q3 2022.

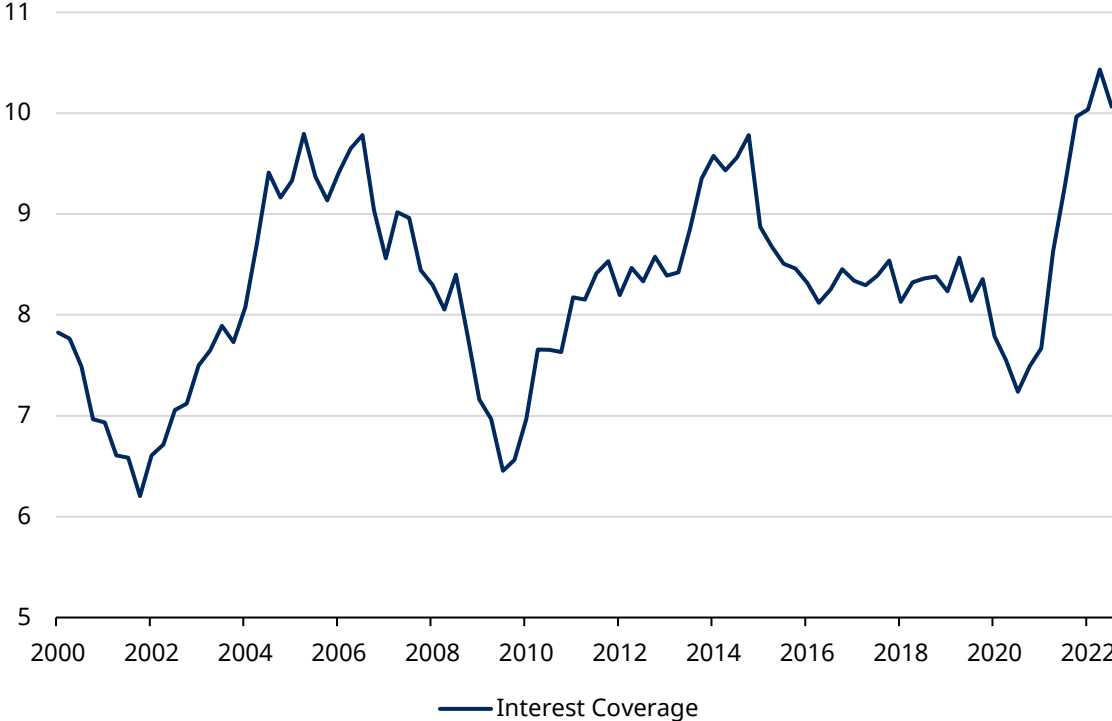
Cyclical sectors: Basic Materials, Consumer Discretionary, Industrials, Technology. **Noncyclical sectors:** Communications, Consumer Staples, Utility, Health Care

US IG interest coverage

Interest coverage has peaked with interest expense growth turning positive again

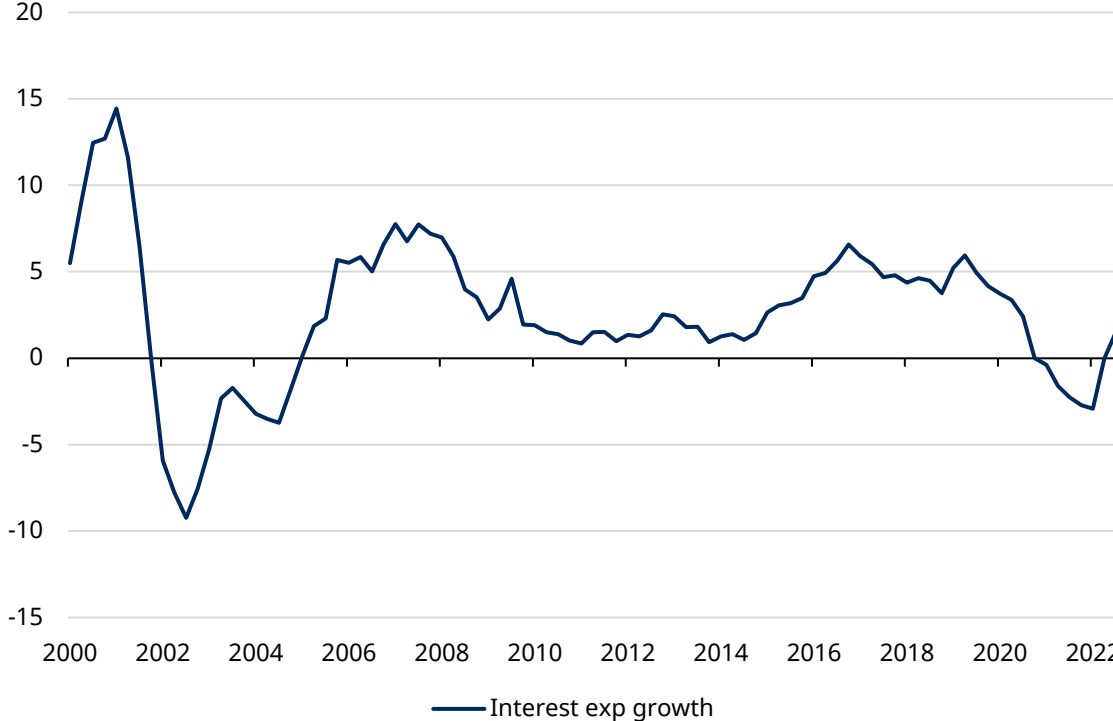
US IG interest coverage ratio

Last 12 months EBITDA to interest expense



US IG annual interest expense growth

%



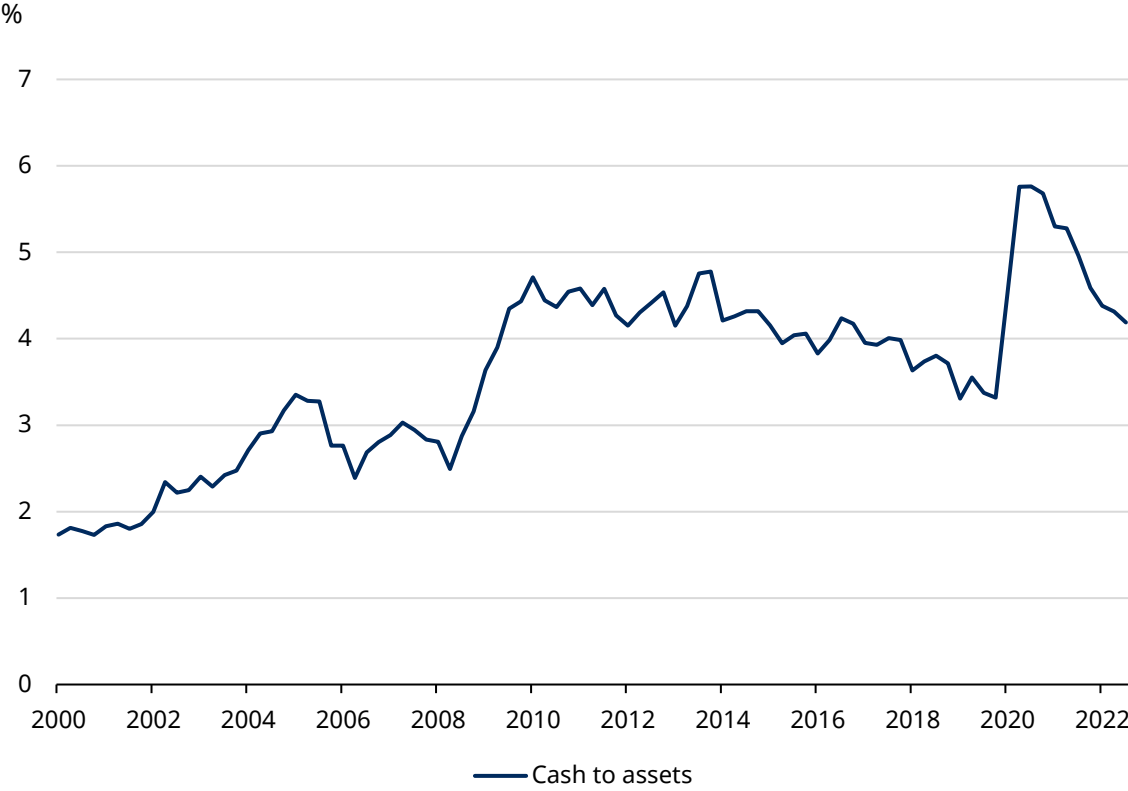
Source: Schroders, Bloomberg, Median issuer ex-Financials. Data as of Q3 2022.

US IG cash balances continue to fall

US IG cash to short term debt



US IG cash to assets



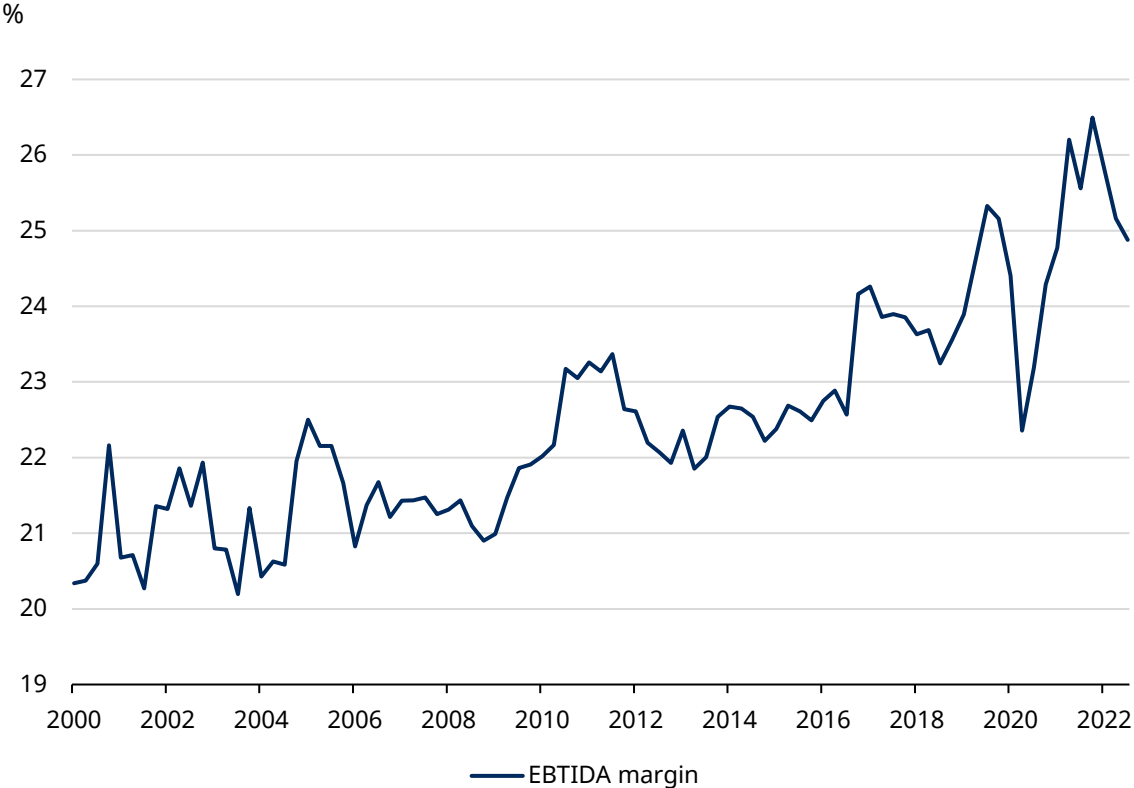
Cash buffers are back to pre-pandemic levels, when measured by the cash to short term debt ratio

Source: Schroders, Bloomberg, Median issuer ex-Financials. Data as of Q3 2022.

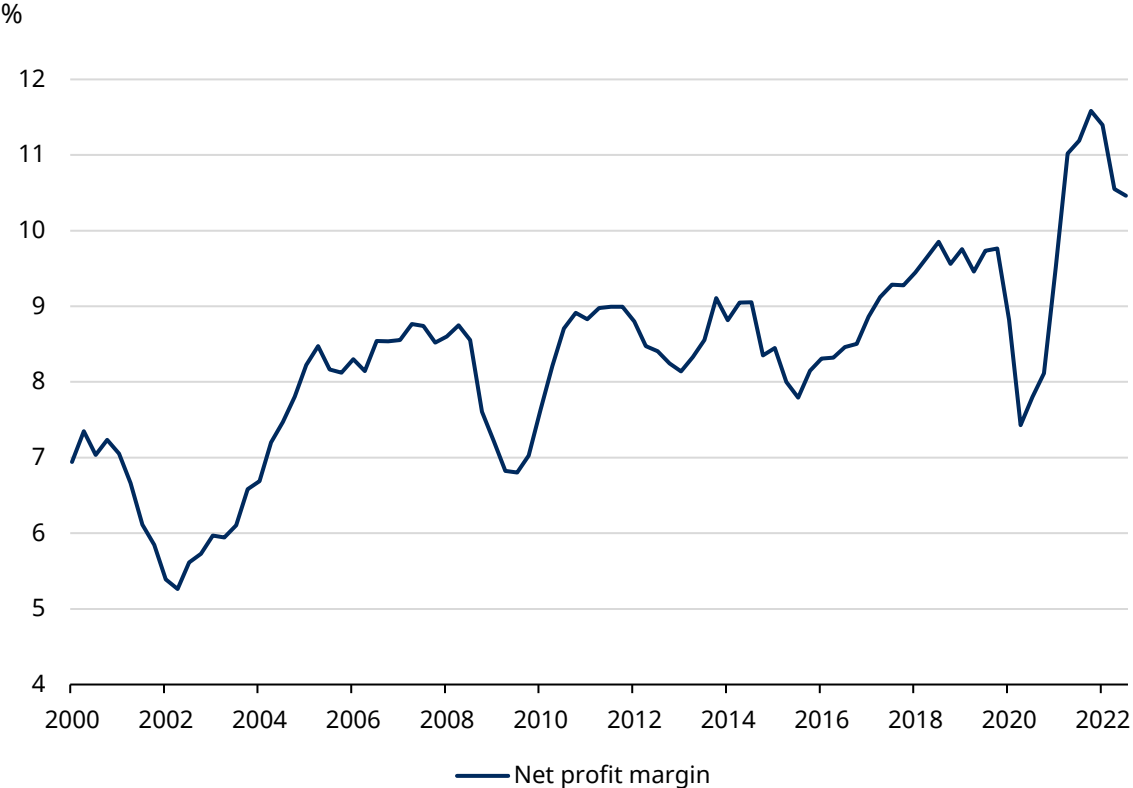
US IG corporate margins

Margins have started to fall from record high levels

US IG EBITDA margin



US IG net profit margin



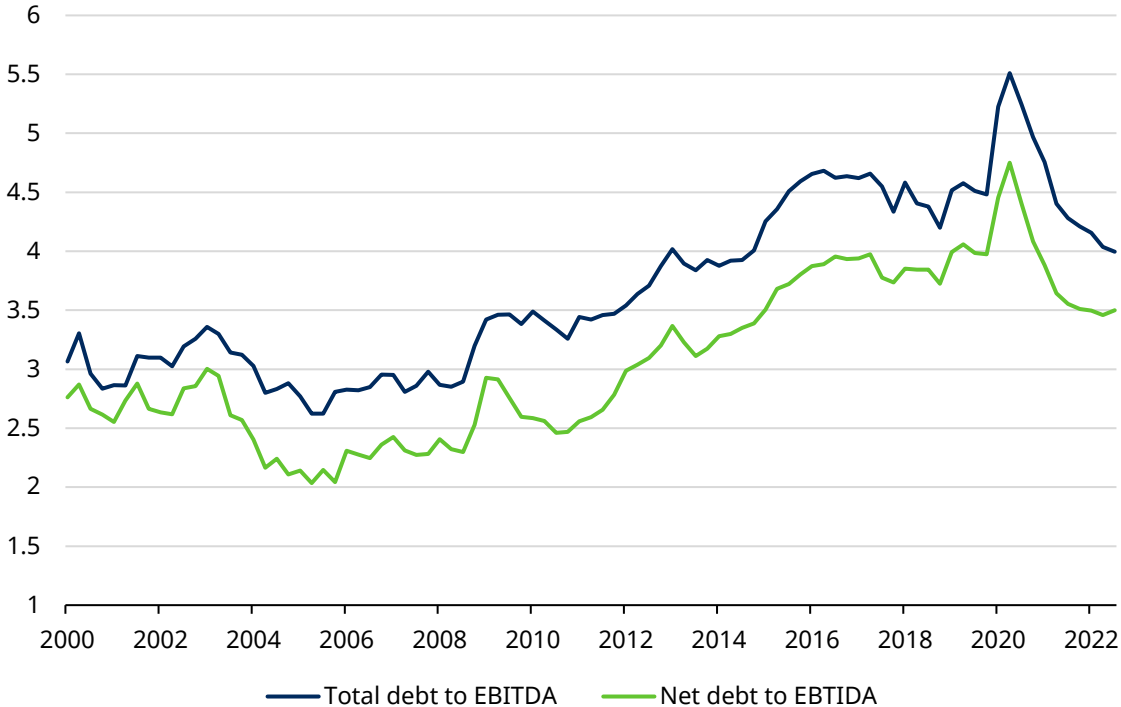
Source: Schroders, Bloomberg. Median issuer ex-Financials. Data as of Q3 2022.

US HY gross leverage is still falling

Lower cash balances are a headwind for net leverage

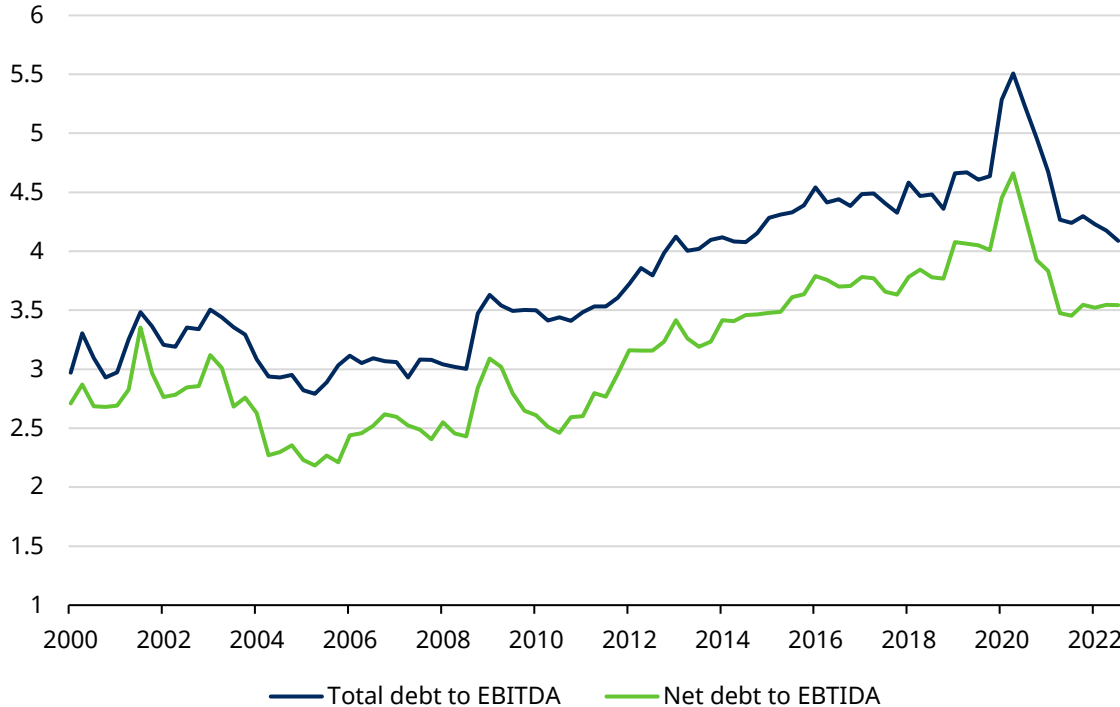
US HY leverage

Debt to last 12 months EBITDA



US HY ex-energy leverage

Debt to last 12 months EBITDA

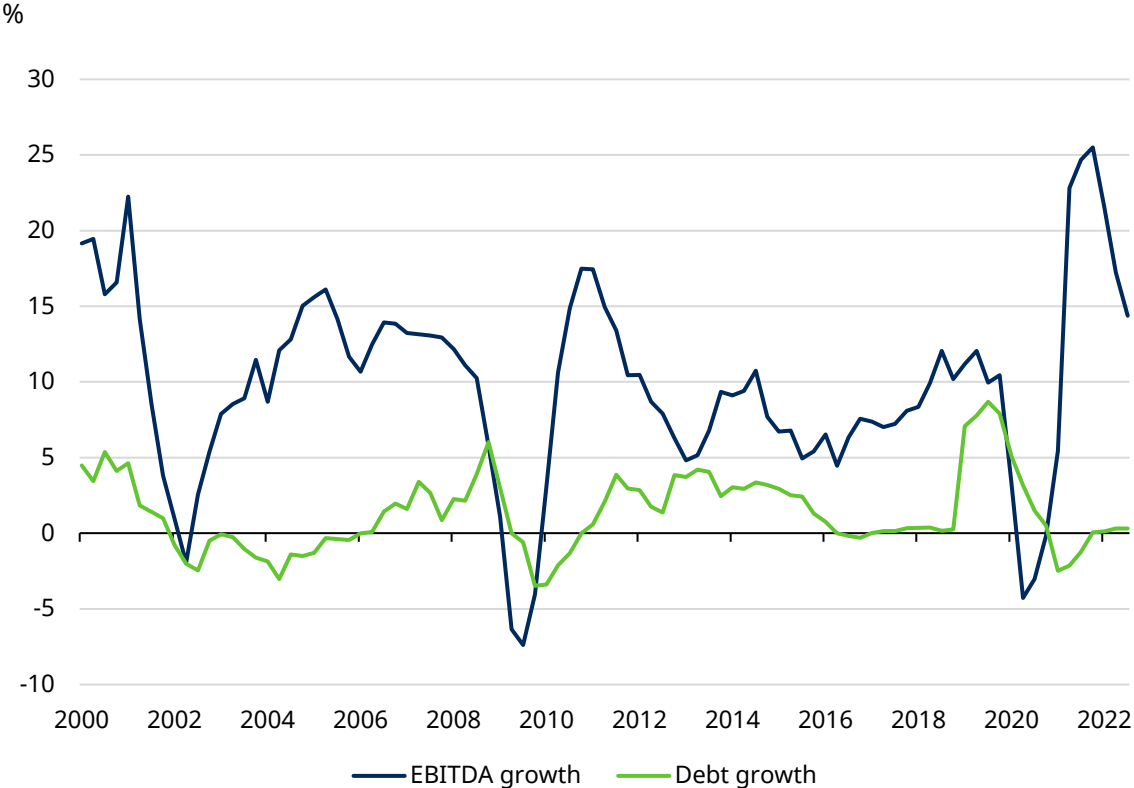


Source: Schroders, Bloomberg. Median issuer ex-Financials. Data as of Q3 2022.

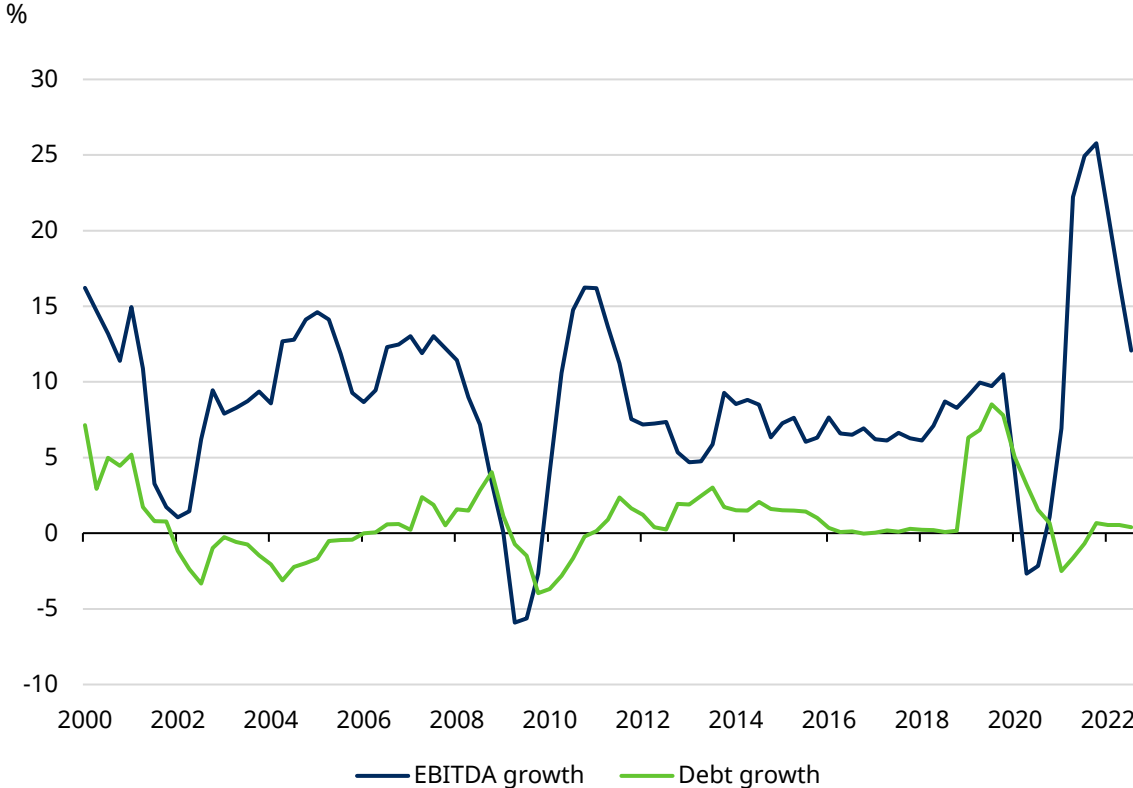
US HY earnings and debt growth

EBITDA growth has peaked but debt growth is close to zero

US HY EBITDA and debt growth (last 12 months)



US HY ex-energy EBITDA and debt growth (last 12m)



Source: Schrodgers, Bloomberg. Median issuer ex-Financials. Data as of Q3 2022.

US HY interest coverage has likely peaked, even if it is the highest in the post-GFC era

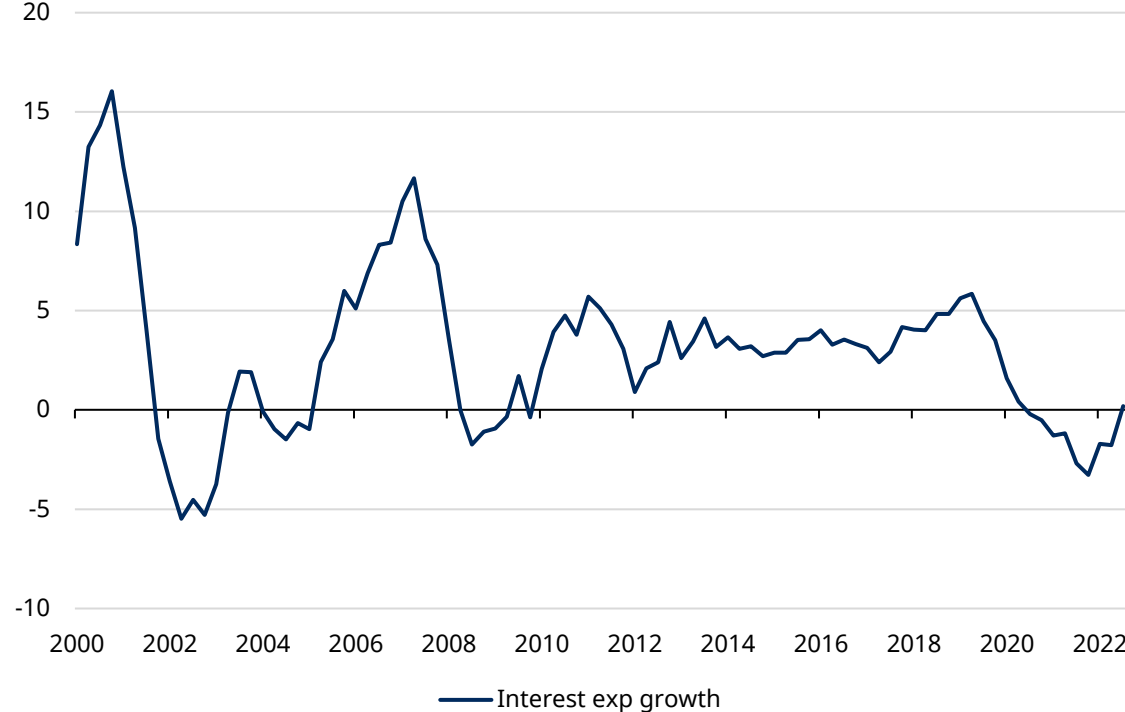
US HY interest coverage ratio

Last 12 months EBITDA to interest expense



US HY annual interest expense growth

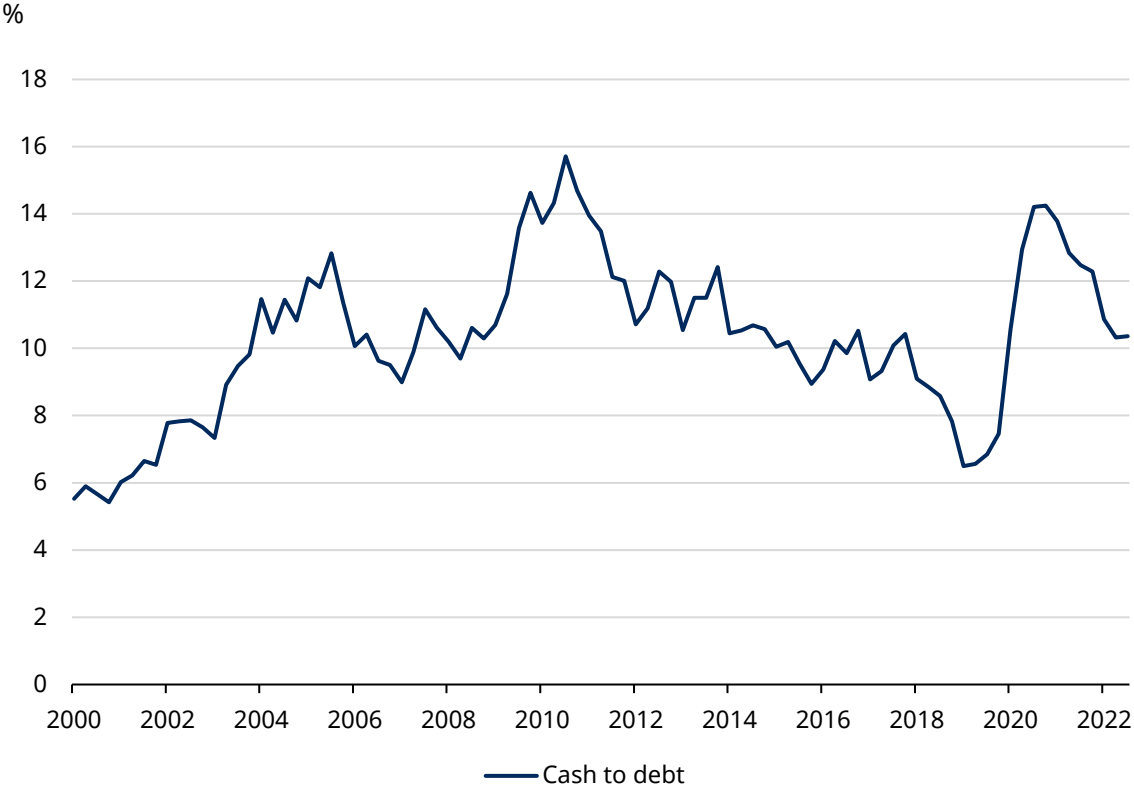
%



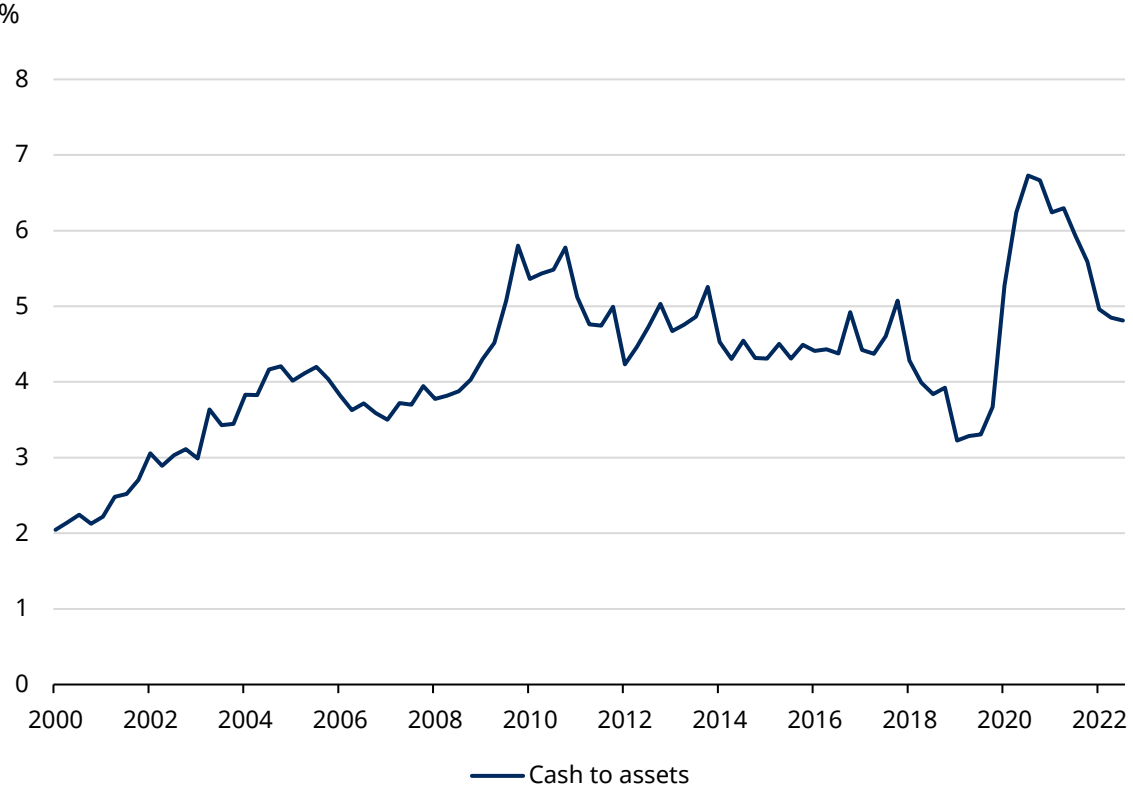
Source: Schroders, Bloomberg, Median issuer ex-Financials. Data as of Q3 2022.

US HY cash levels have fallen noticeably

US HY cash to debt



US HY cash to assets

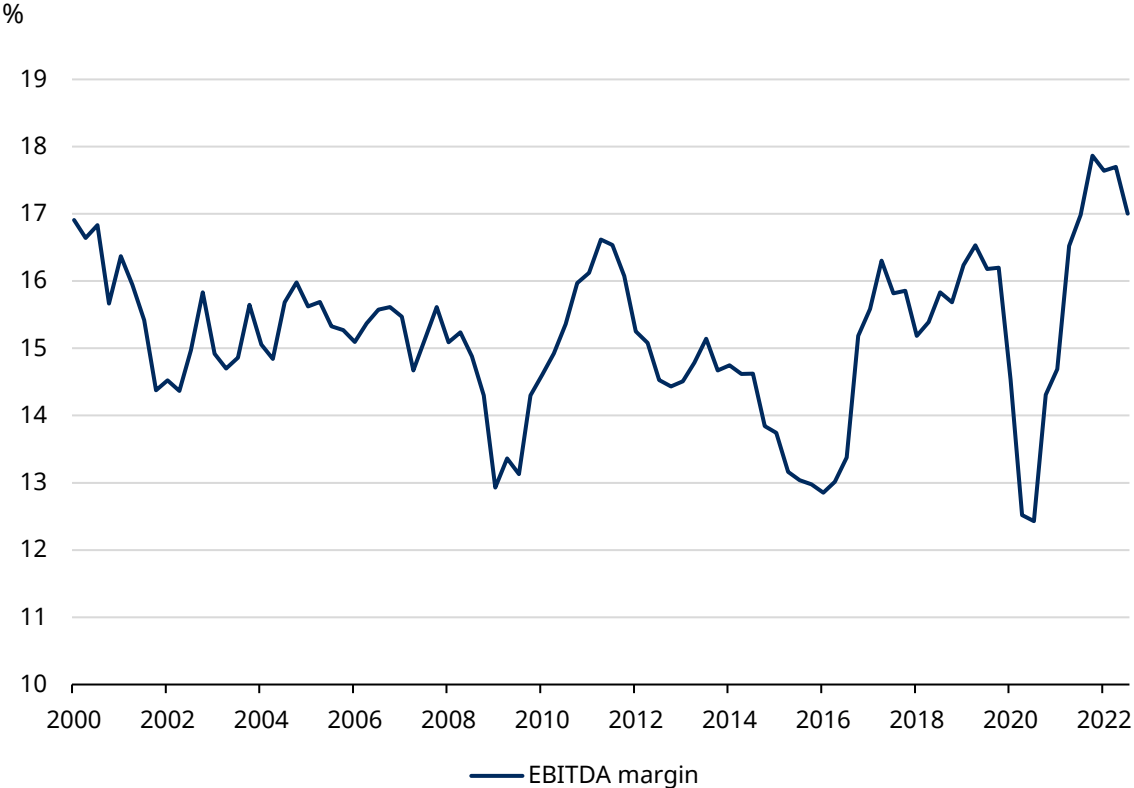


Source: Schroders, Bloomberg, Median issuer ex-Financials. Data as of Q3 2022.

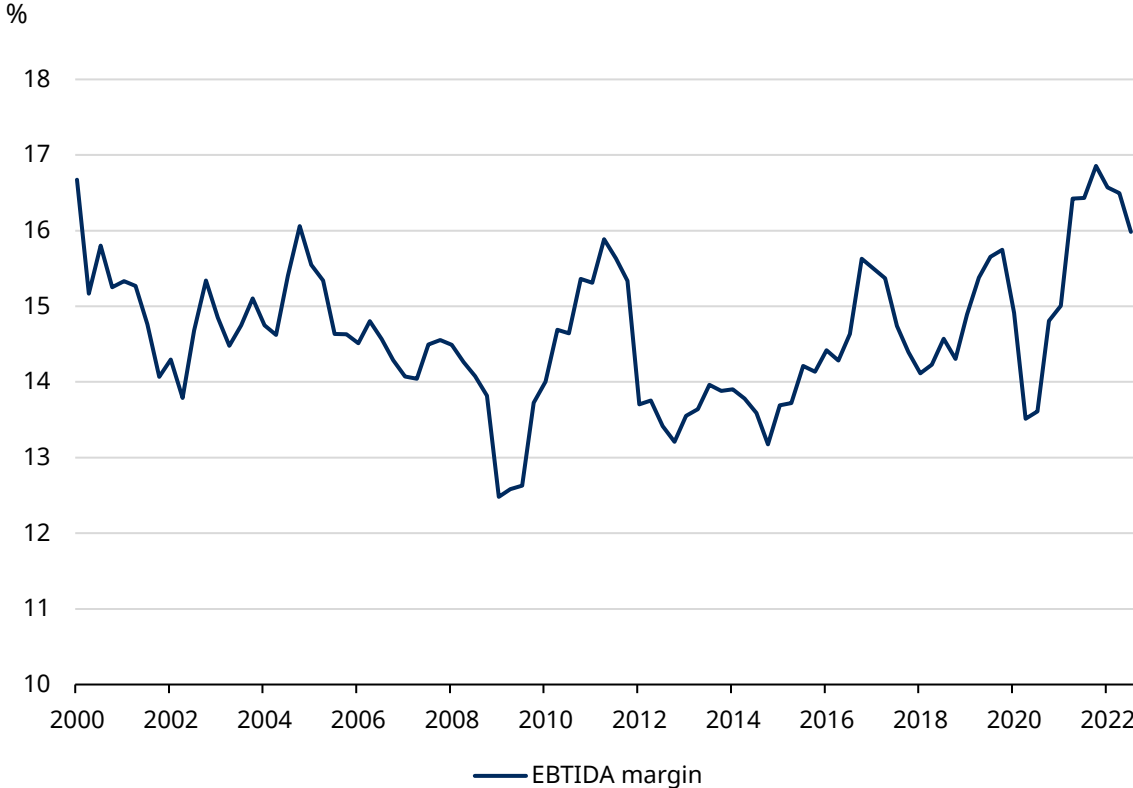
US HY corporate margins

Margins have started to fall

US HY EBITDA margin



US HY ex-energy EBITDA margin

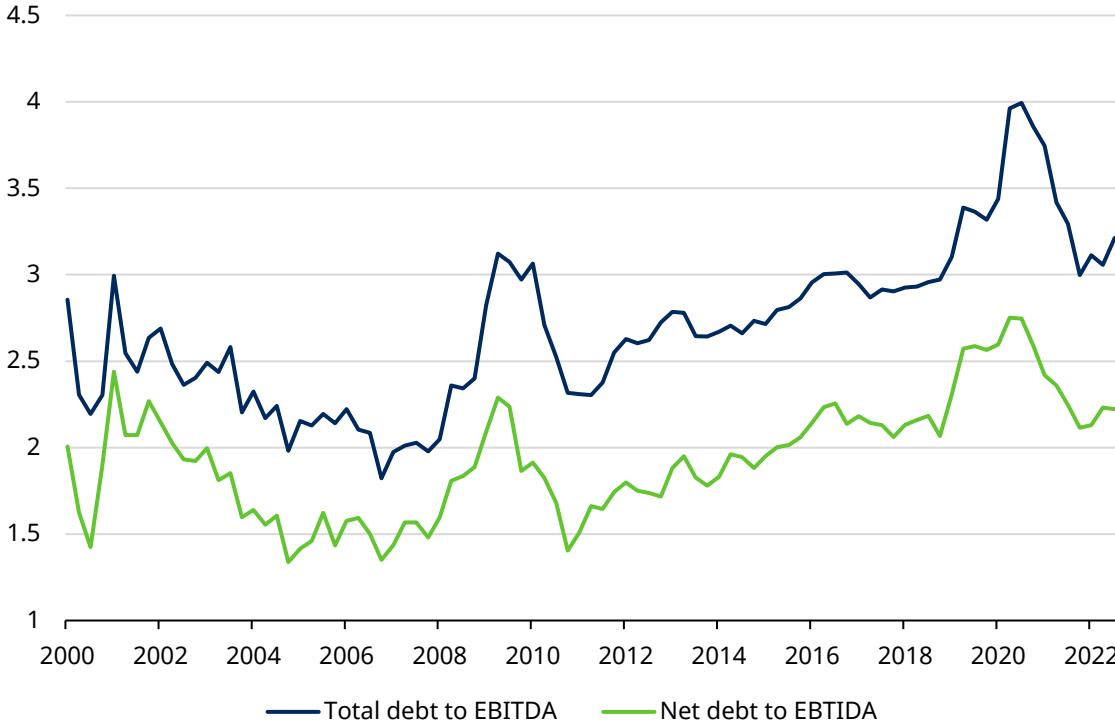


Source: Schroders, Bloomberg, Median issuer ex-Financials. Data as of Q3 2022.

Euro IG leverage is back to 2018 level

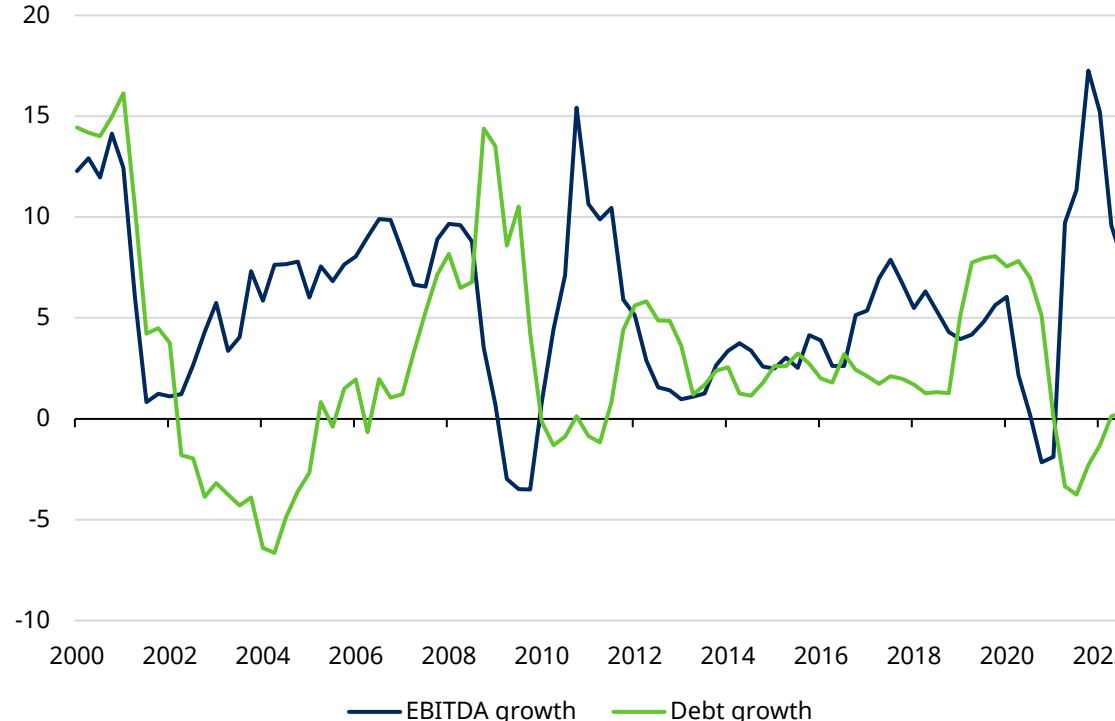
Euro IG leverage

Debt to last 12 months EBITDA



Euro IG EBITDA and debt growth (last 12 months)

%

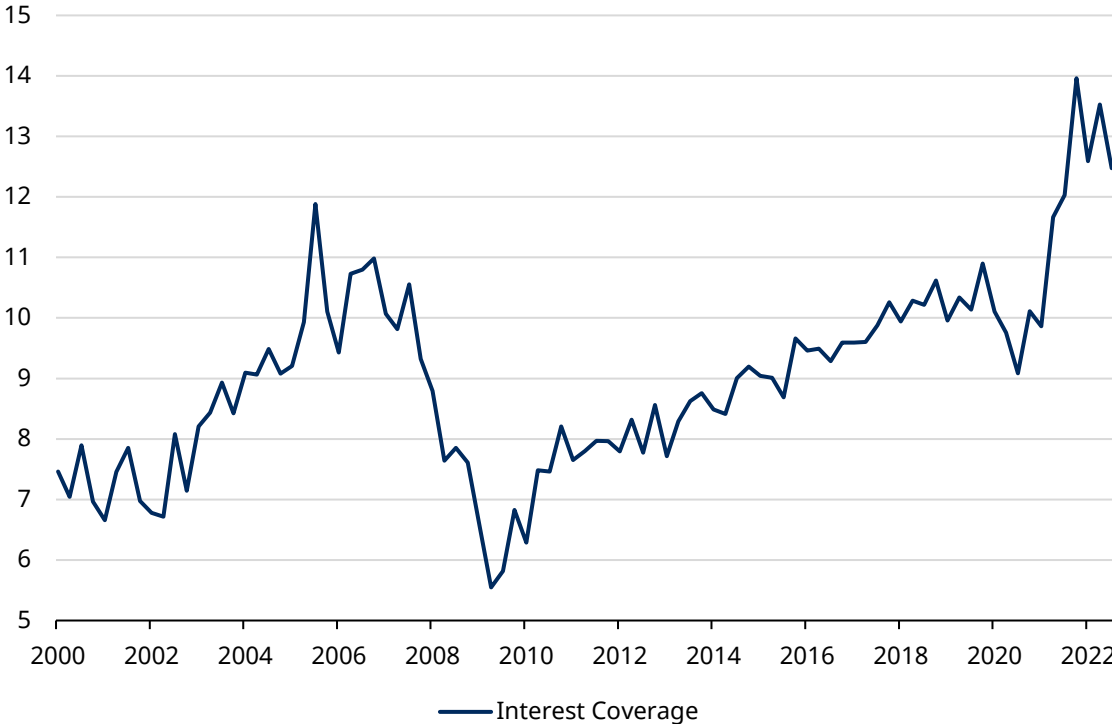


Source: Schroders, Bloomberg, Median issuer ex-Financials. Data as of Q3 2022.

Euro IG interest coverage is very strong despite falling in 2022

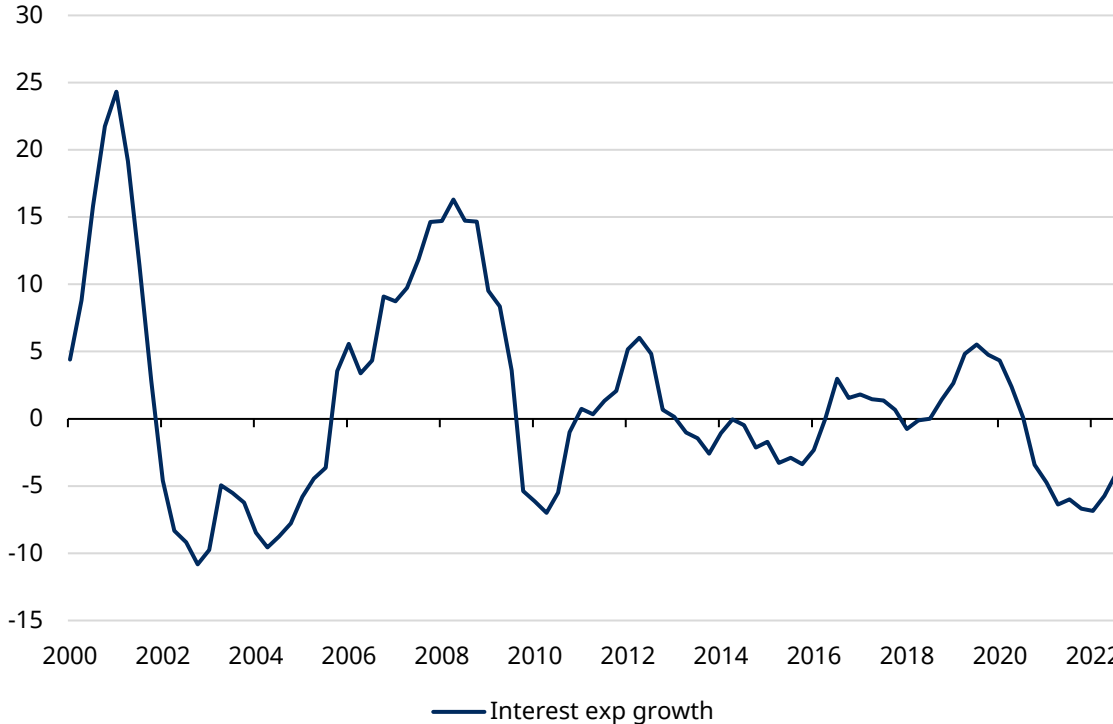
Euro IG interest coverage ratio

Last 12 months EBITDA to interest expense



Euro IG annual interest expense growth

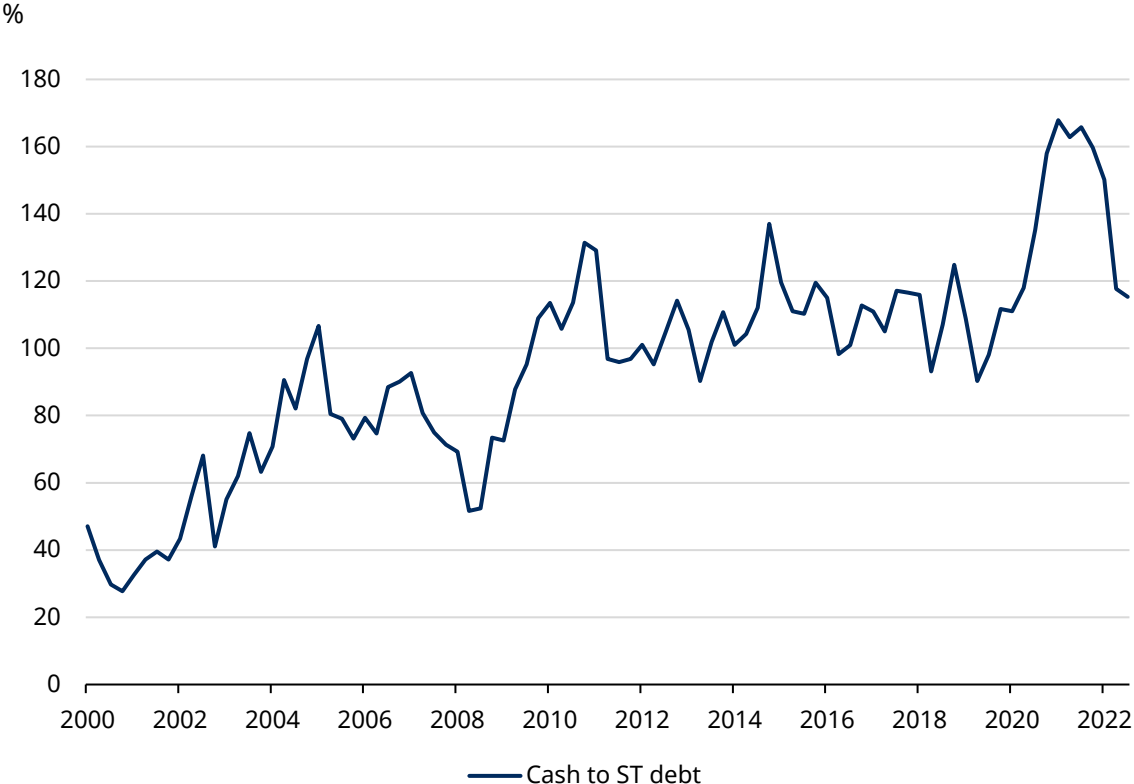
%



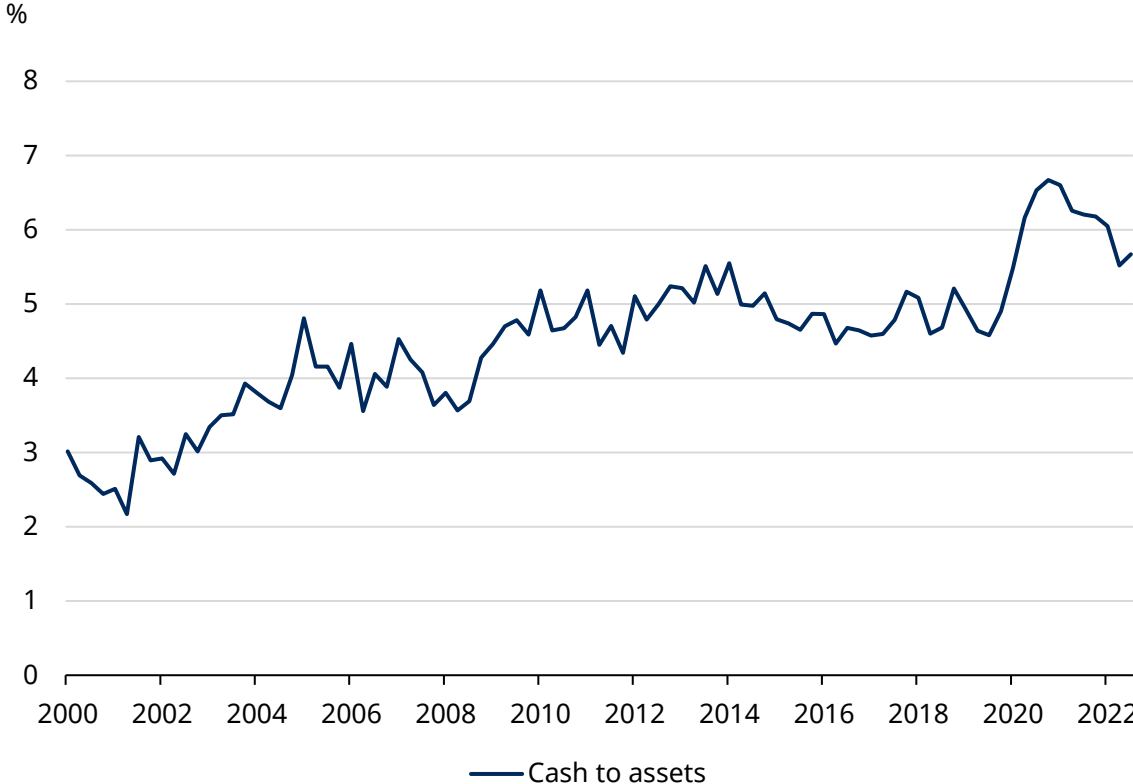
Source: Schroders, Bloomberg. Median issuer ex-Financials. Data as of Q3 2022.

Euro IG cash levels

Euro IG cash to short term debt



Euro IG cash to assets

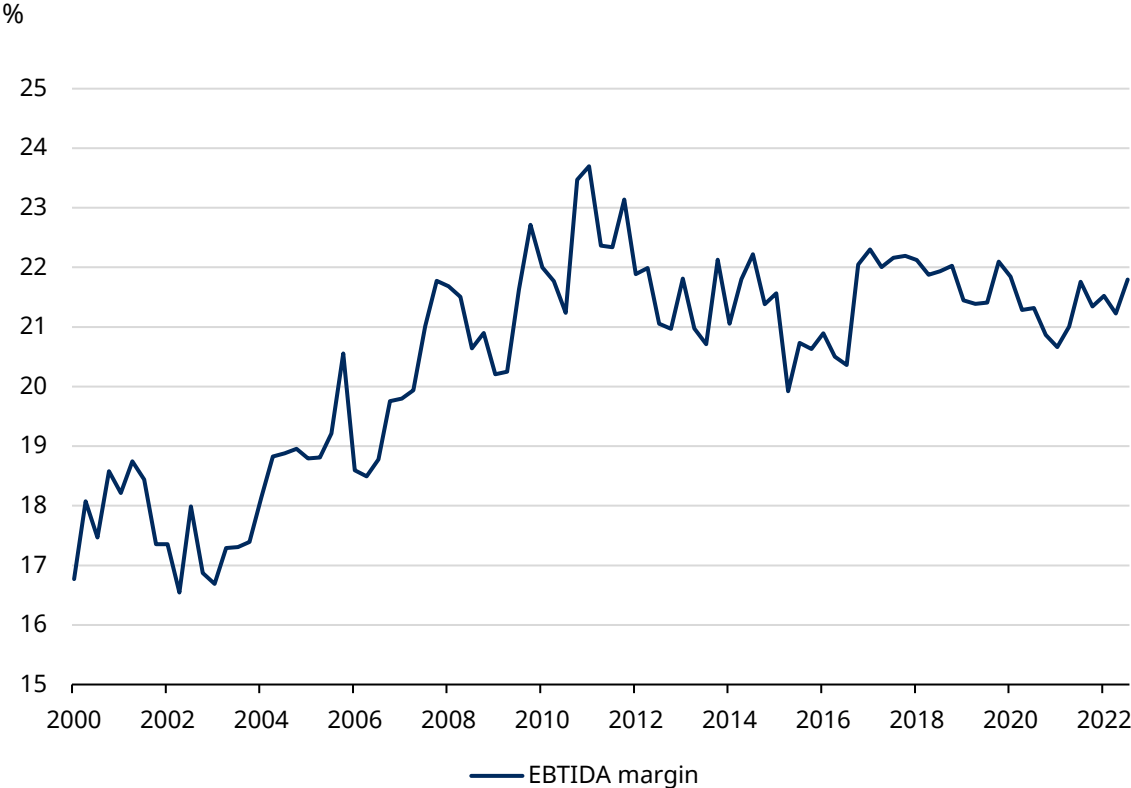


Source: Schroders, Bloomberg. Median issuer ex-Financials. Data as of Q3 2022.

Euro IG corporate margins

Recovery in margins has been less impressive than in US IG

Euro IG EBITDA margin



Euro IG net profit margin



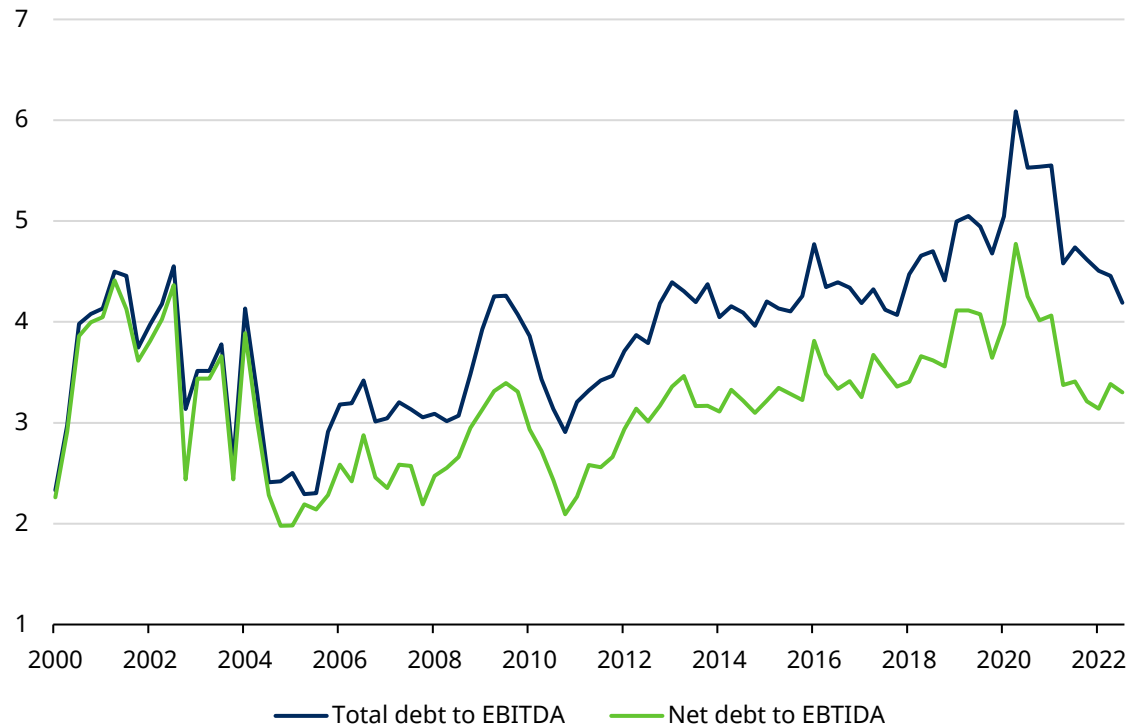
Source: Schroders, Bloomberg, Median issuer ex-Financials. Data as of Q3 2022.

Euro HY leverage

Net leverage seems to be stabilising after a sharp drop

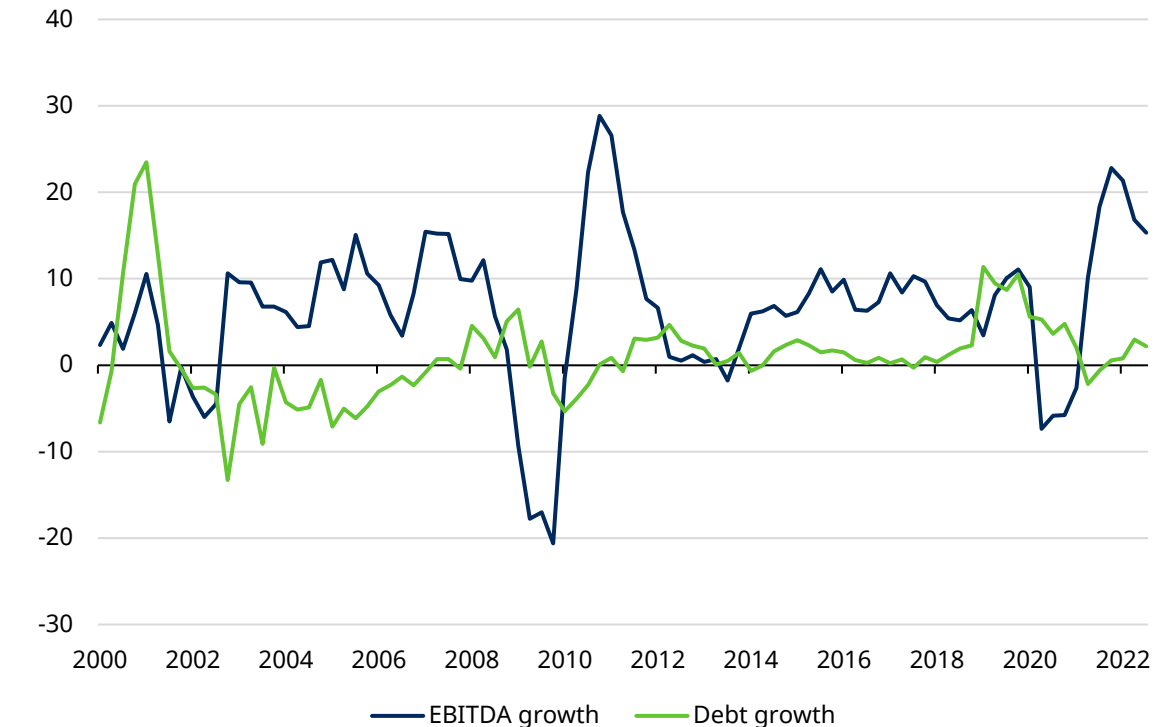
Euro HY leverage

Debt to last 12 months EBITDA



Euro HY EBITDA and debt growth (last 12 months)

%

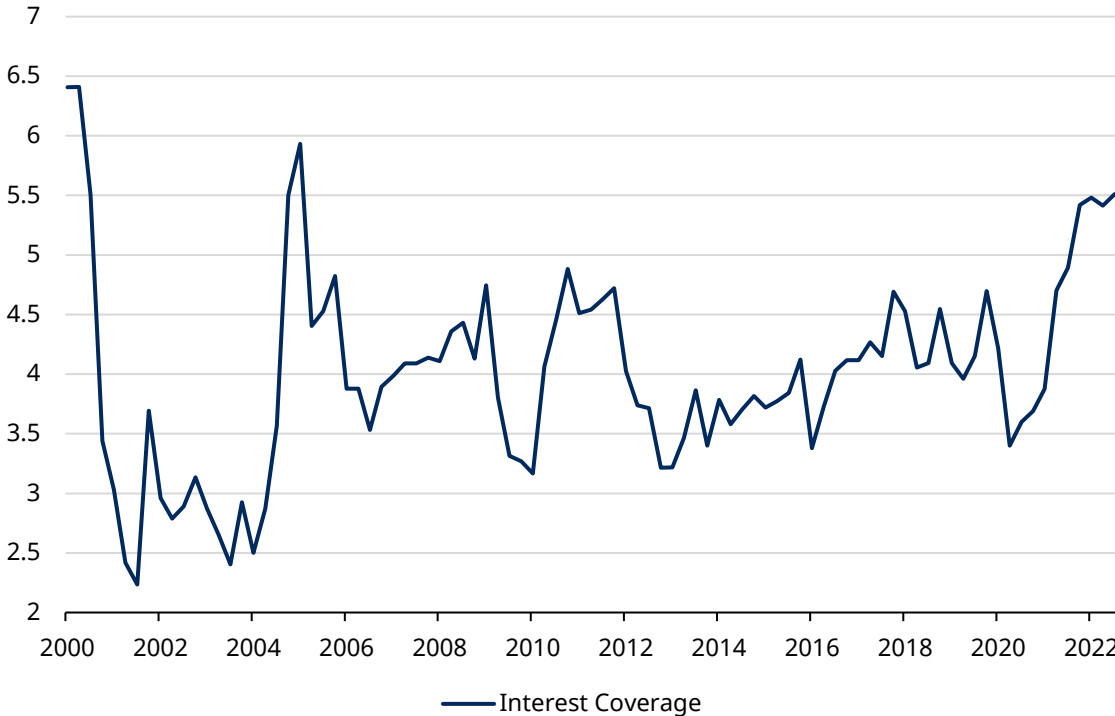


Source: Schroders, Bloomberg. Median issuer ex-Financials. Data as of Q3 2022.

Euro HY interest coverage

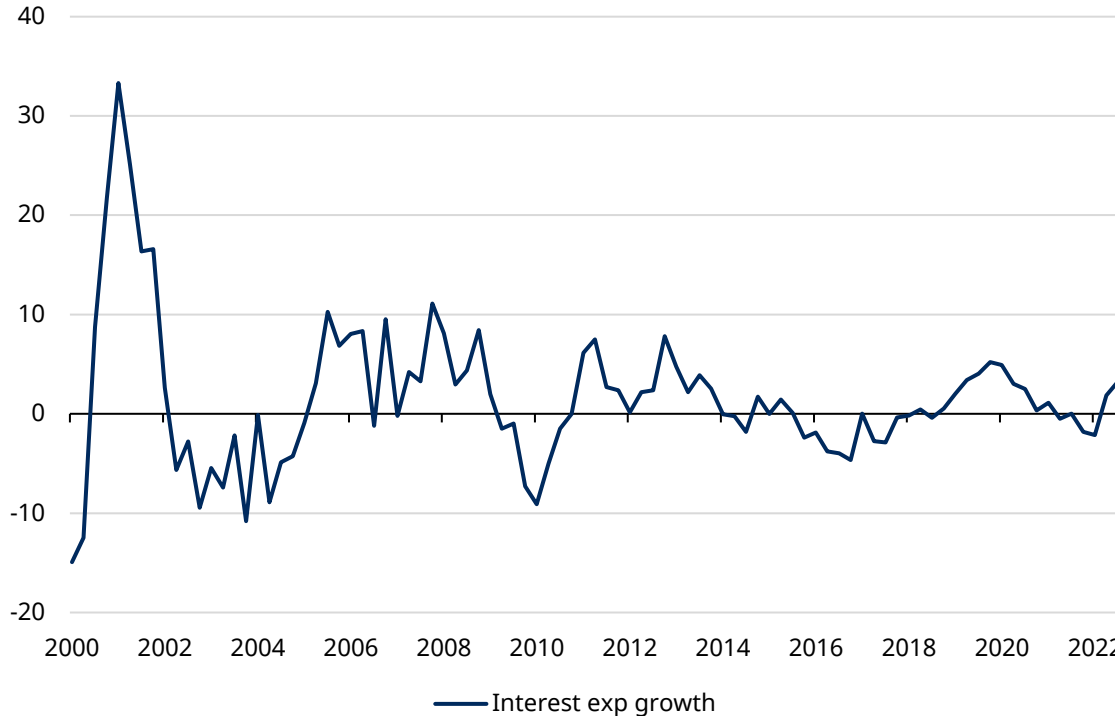
Euro HY interest coverage ratio

Last 12 months EBITDA to interest expense



Euro HY annual interest expense growth

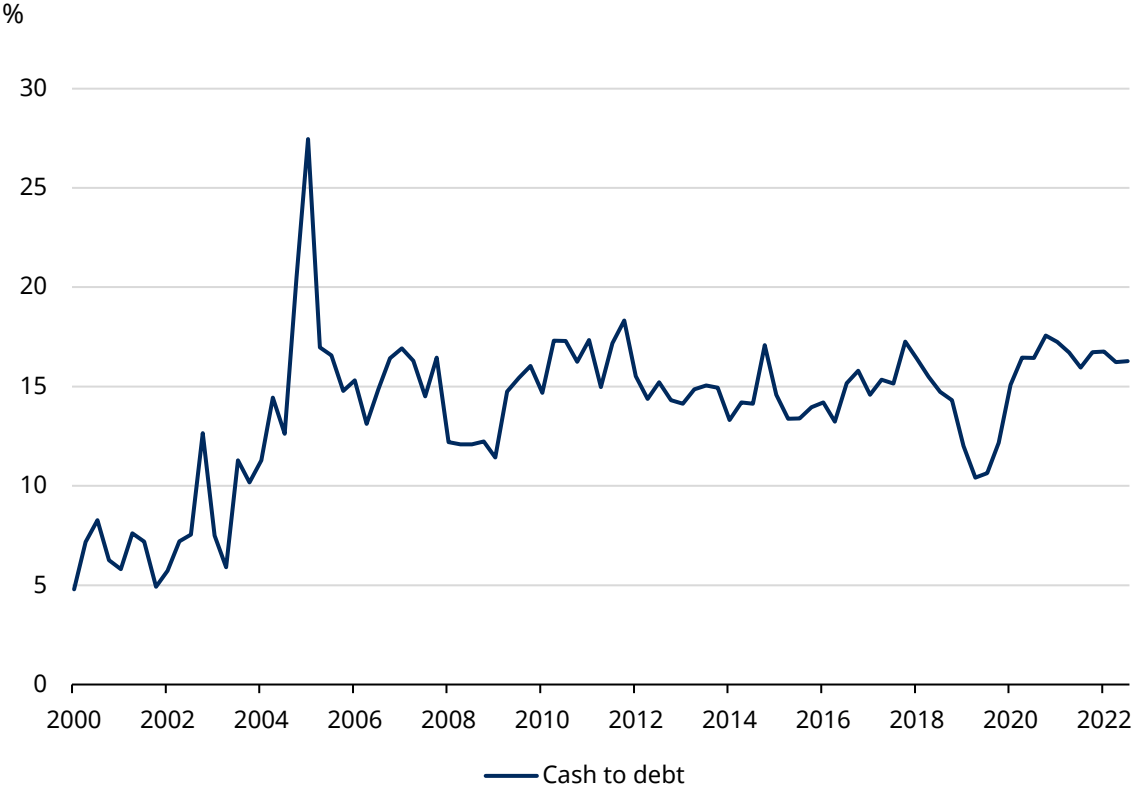
%



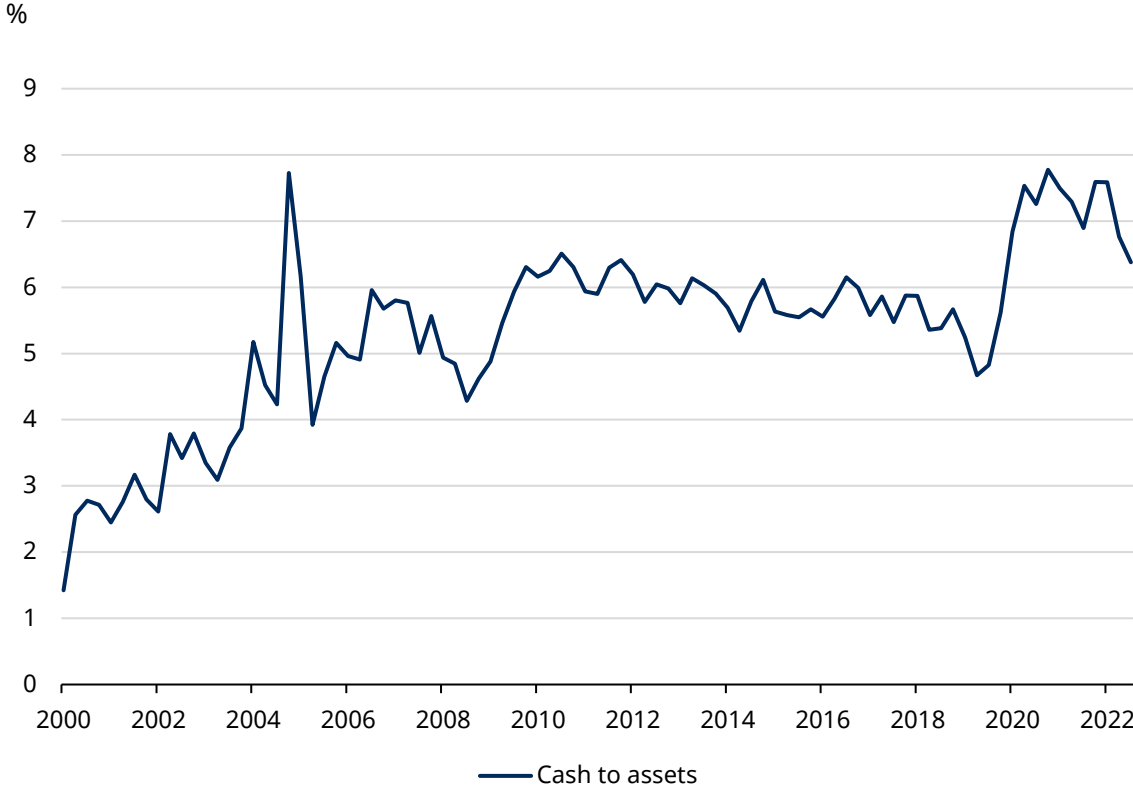
Source: Schroders, Bloomberg, Median issuer ex-Financials. Data as of Q3 2022.

Euro HY cash levels

Euro HY cash to debt



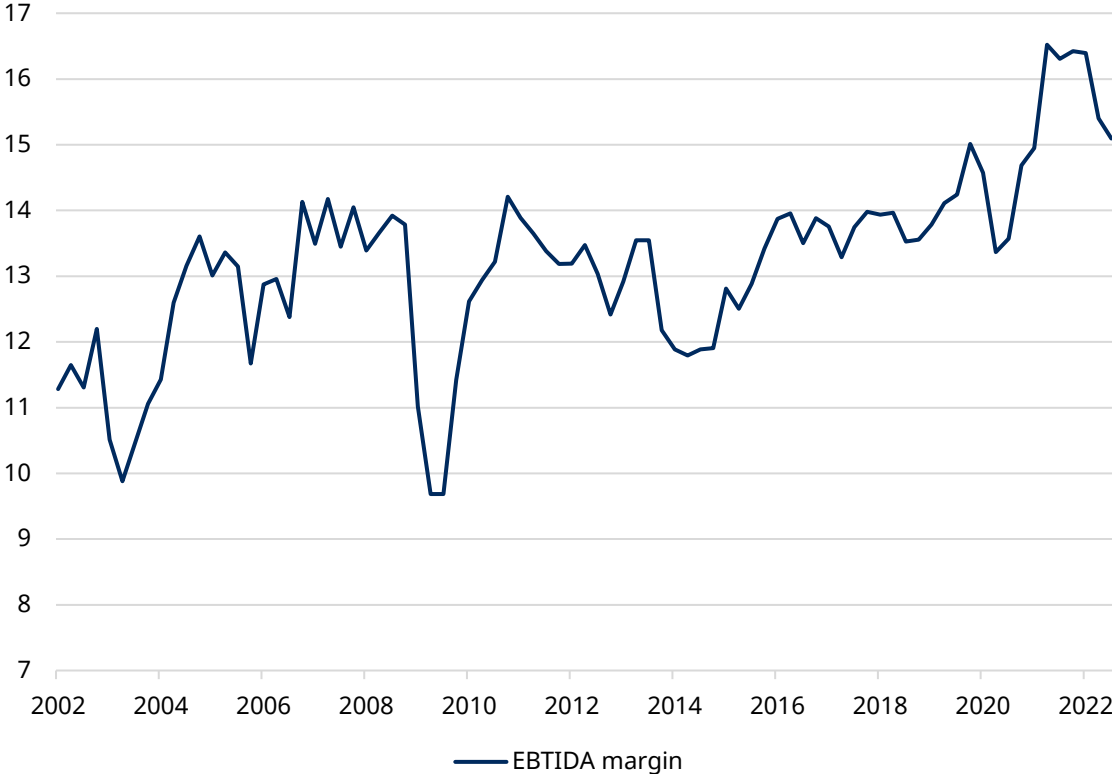
Euro HY cash to assets



Source: Schrodgers, Bloomberg. Median issuer ex-Financials. Data as of Q3 2022.

Euro HY corporate margins

Euro HY EBITDA margin



Source: Schroders, Bloomberg. Median issuer ex-Financials. Data as of Q3 2022.

Schroders

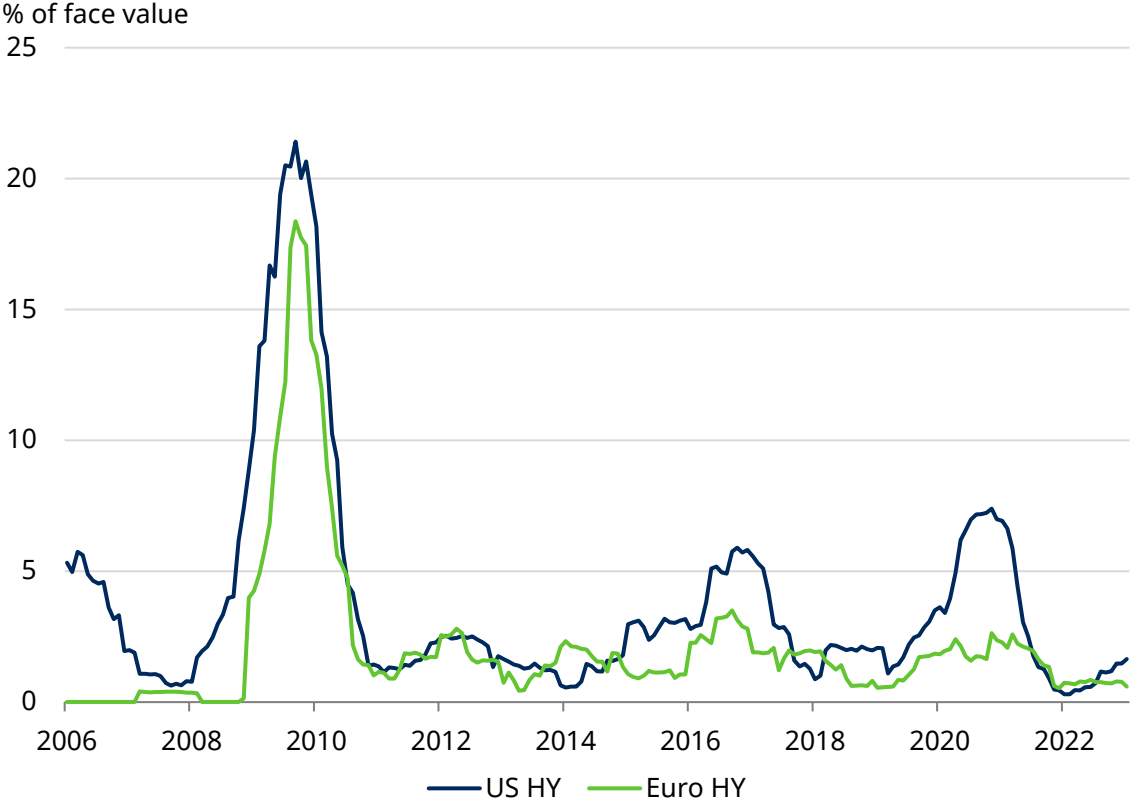


Corporate credit

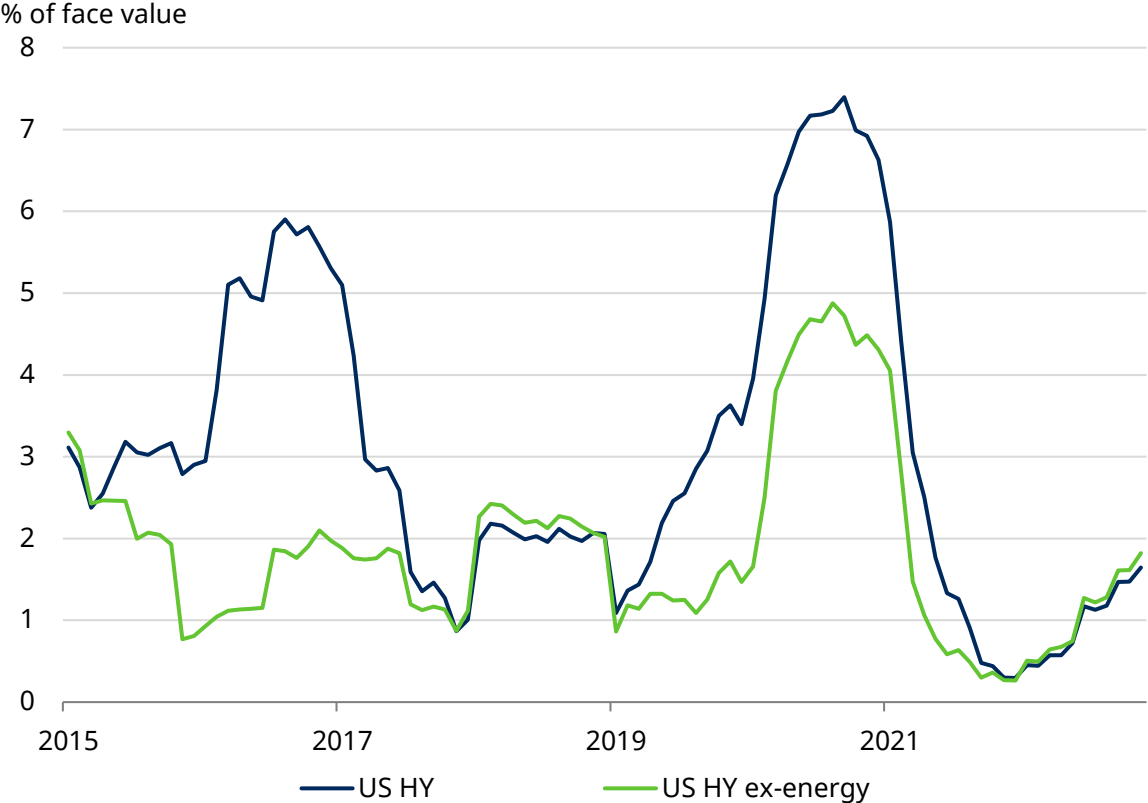
Technicals

HY default rates are rising from low levels

HY par default rate (last twelve months)



US HY par default rate (last twelve months)

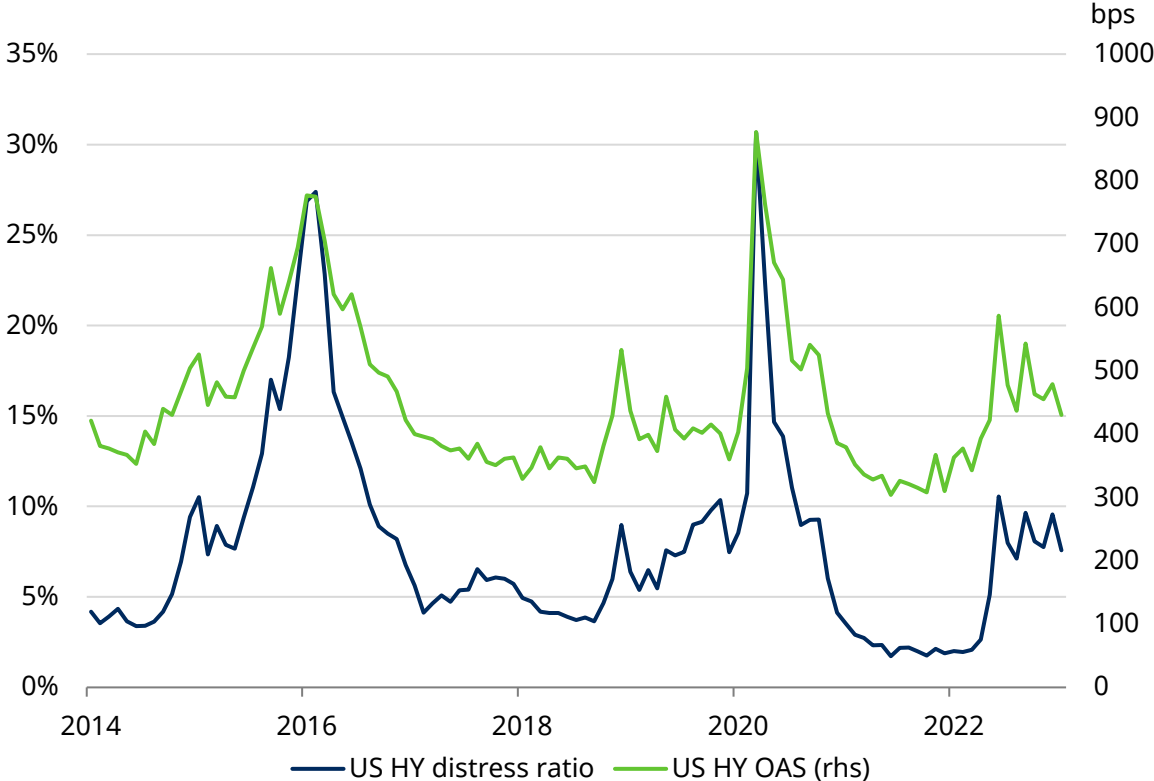


Source: Schroders, BofA Global Research, Moody's. Data as at 31 January 2023.

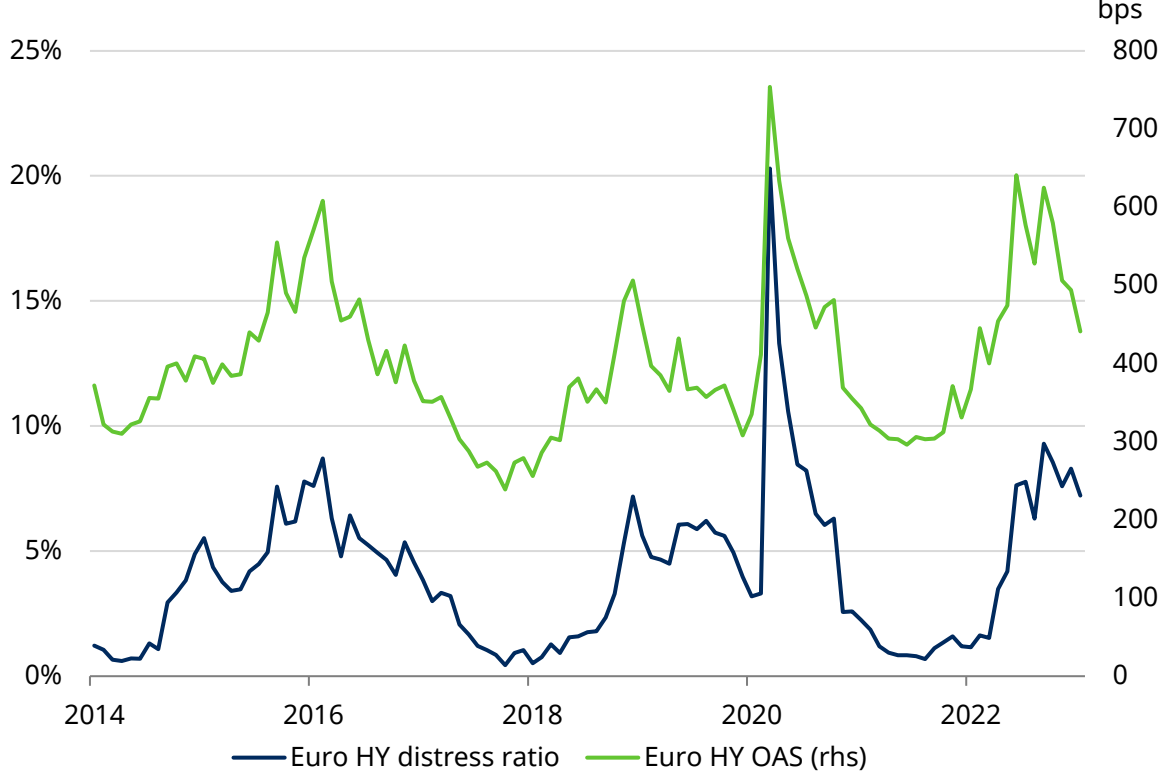
HY distress ratios

Higher distress is usually a harbinger of defaults

US HY distress ratio¹



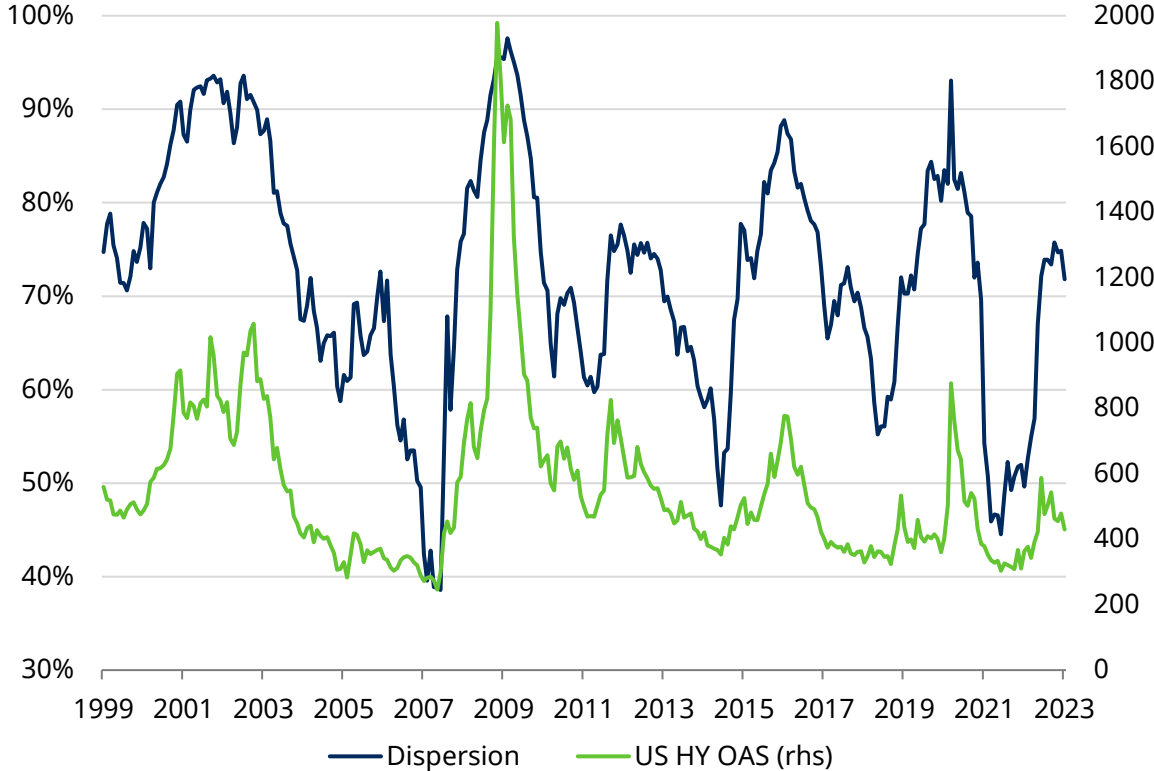
Euro HY distress ratio¹



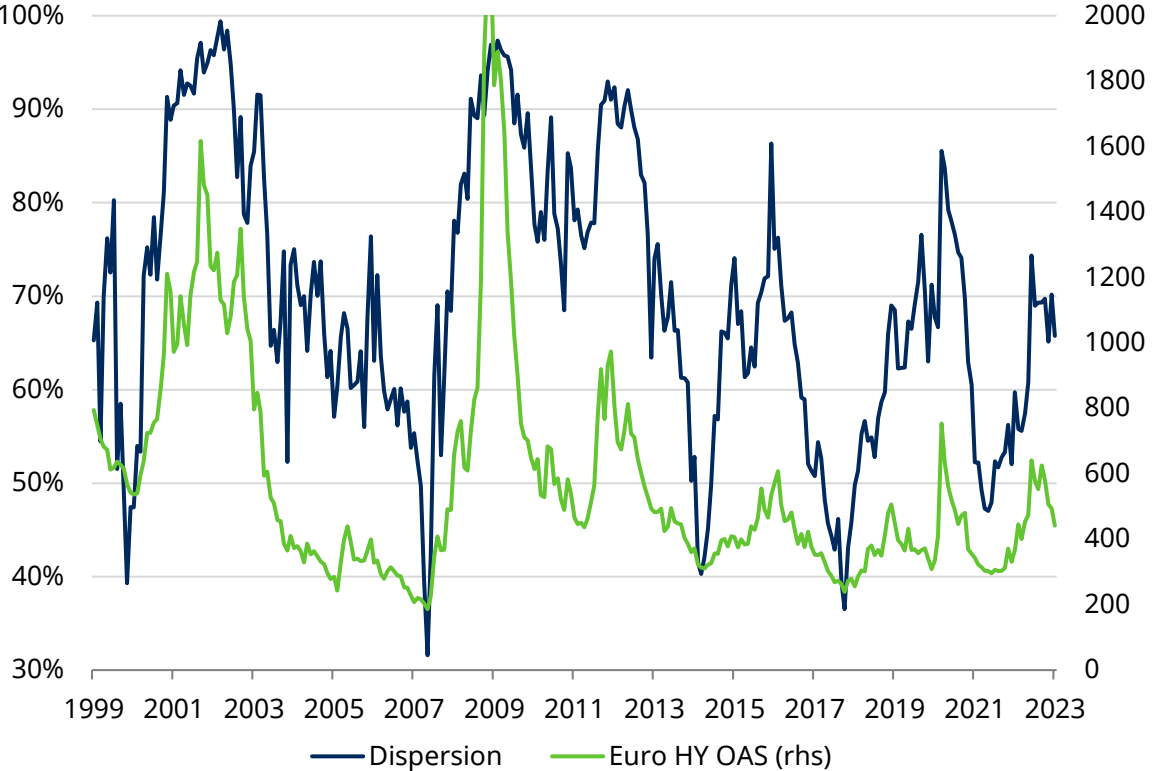
Source: Schroders, BofA Global Research, Moody's. Data as at 31 January 2023. ¹HY distress is defined as percentage of issues in the index trading with spreads > 1,000bp.

HY spread dispersion has fallen slightly

US HY dispersion¹ vs US HY spread



Euro HY dispersion¹ vs Euro HY spread



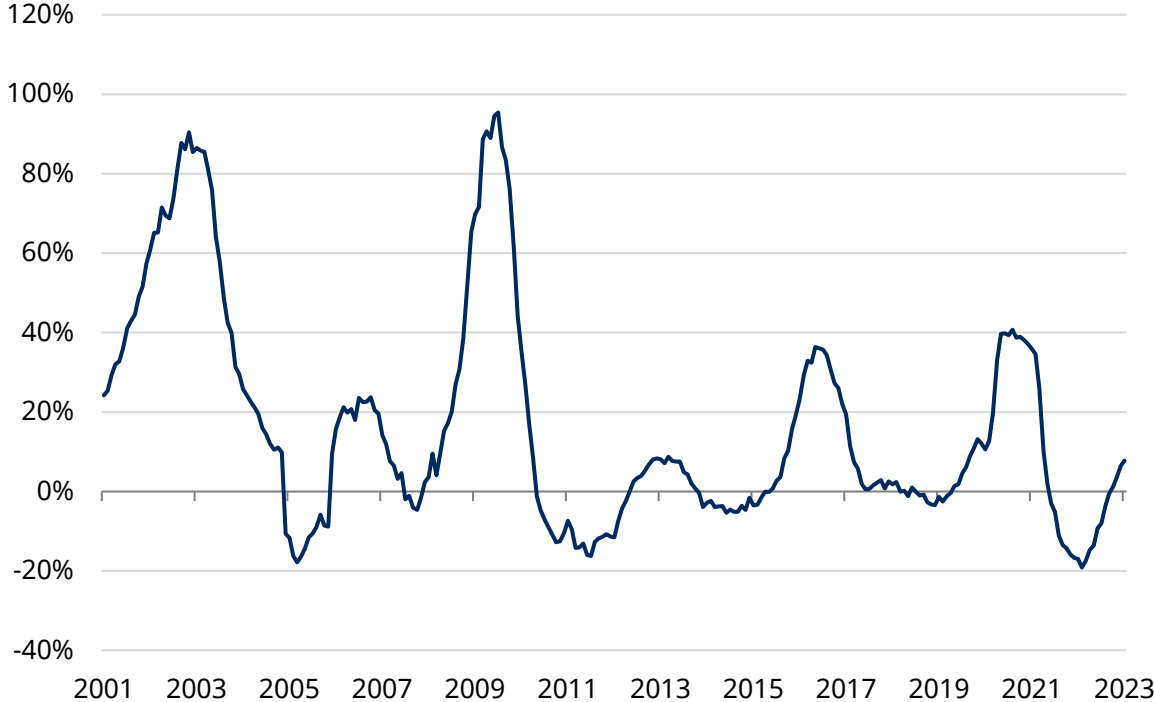
Source: Schroders, BofA Global Research. Data as at 31 January 2023. ¹ Proportion of face value in index marked outside +/-100bps of overall index level.

US HY ratings migration (net downgrades)

Indicator of changes in credit quality

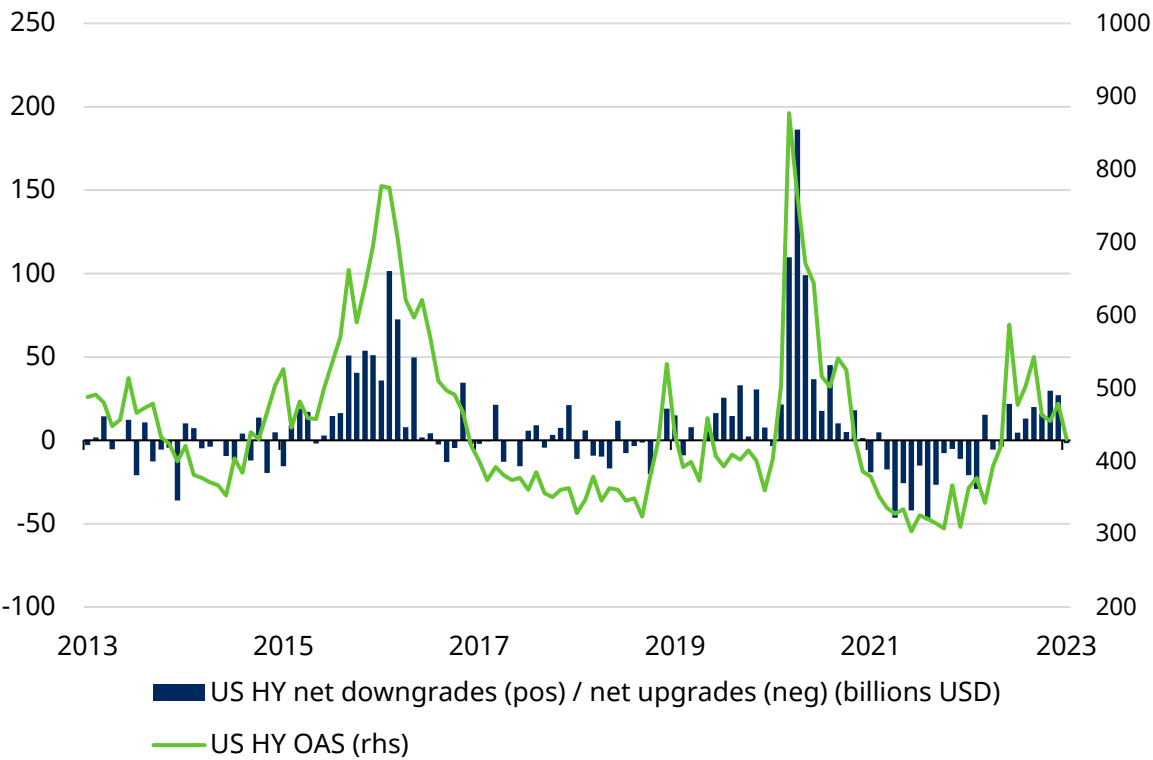
US HY net downgrades¹

Percentage of the HY index, last 12 months



US HY monthly net downgrades

Billions USD



Downgrades have started to outpace upgrades, a trend that's likely to continue

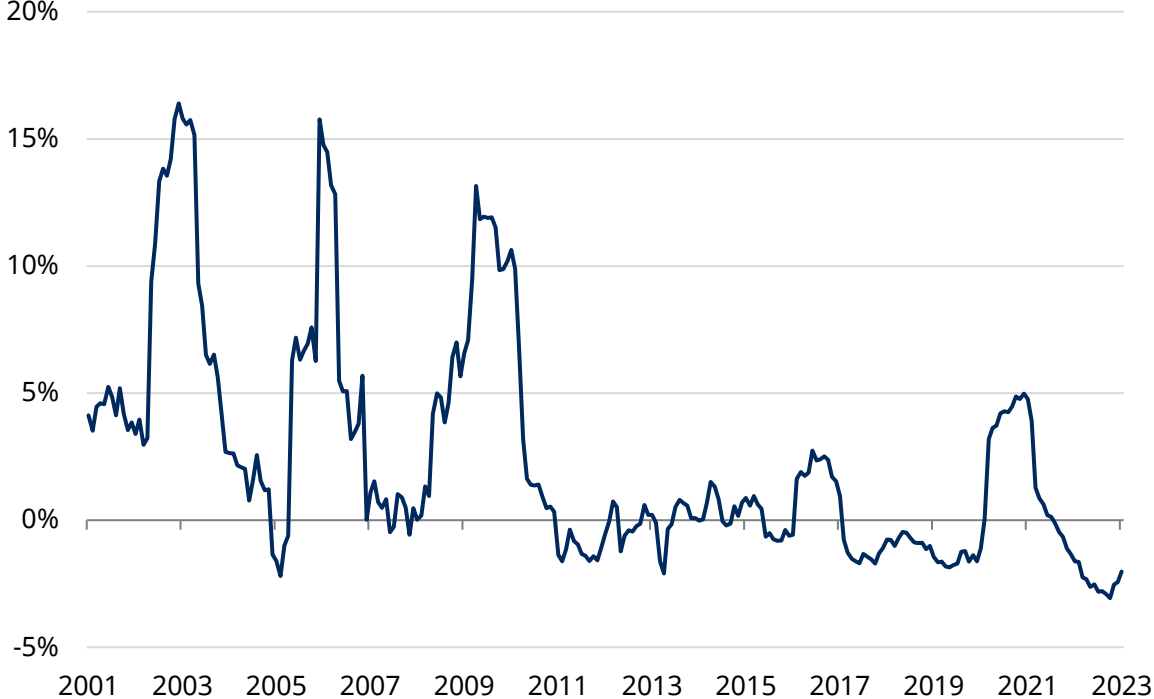
Source: BofA Global Research, Refinitiv Datastream. Data as at 31 January 2023. ¹Face value of downgraded HY bonds minus face value of upgraded bonds divided by face value of the index. Excludes upgrades from HY to IG.

US IG fallen angels/rising stars

Bonds downgraded from IG to HY

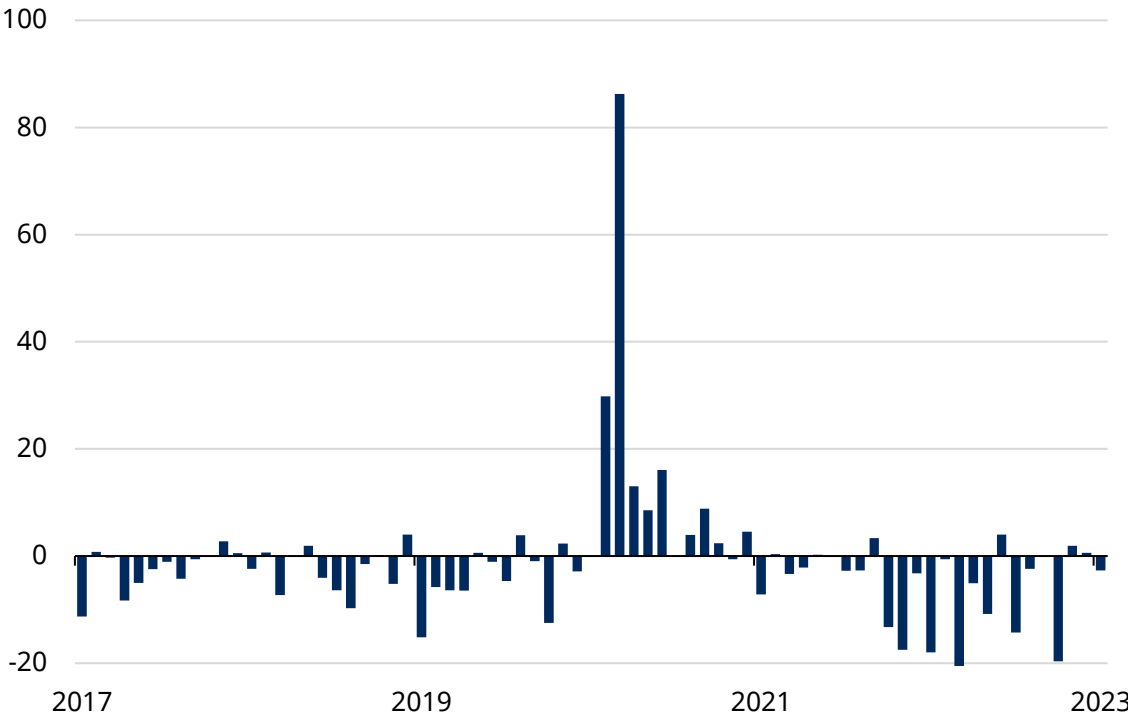
US IG net fallen angels¹

Percentage of the BBB index, last 12 months



US IG monthly net fallen angels

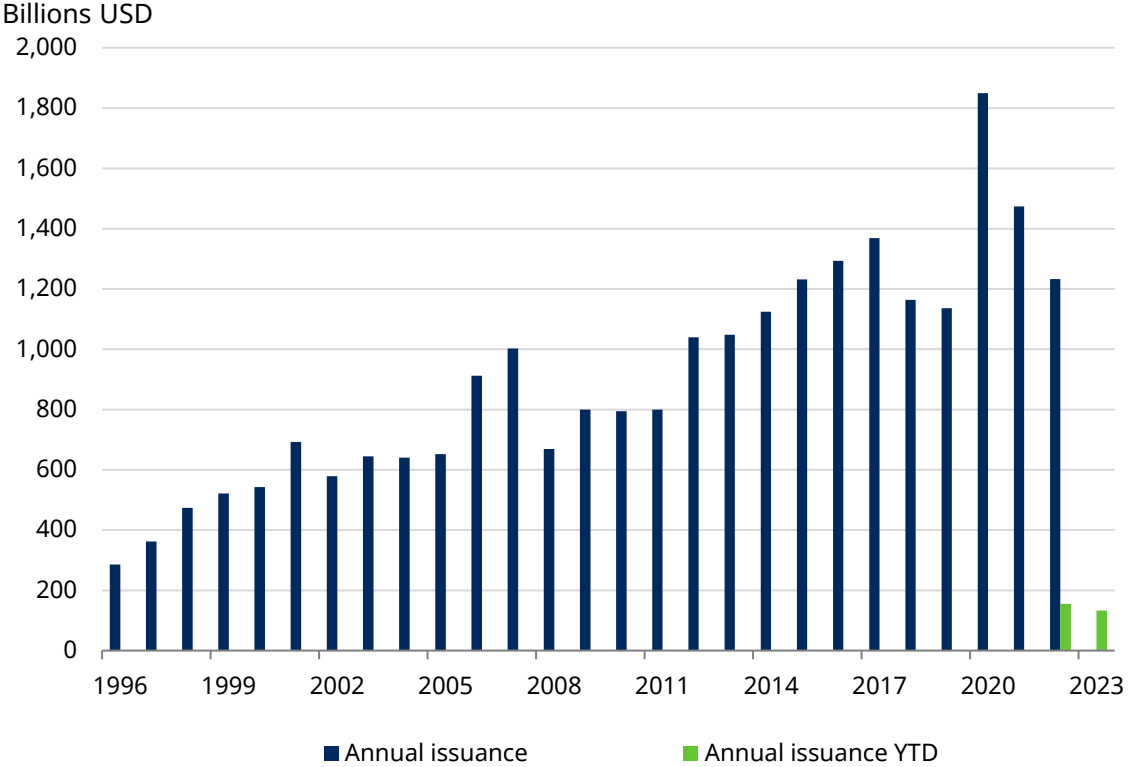
Billions USD



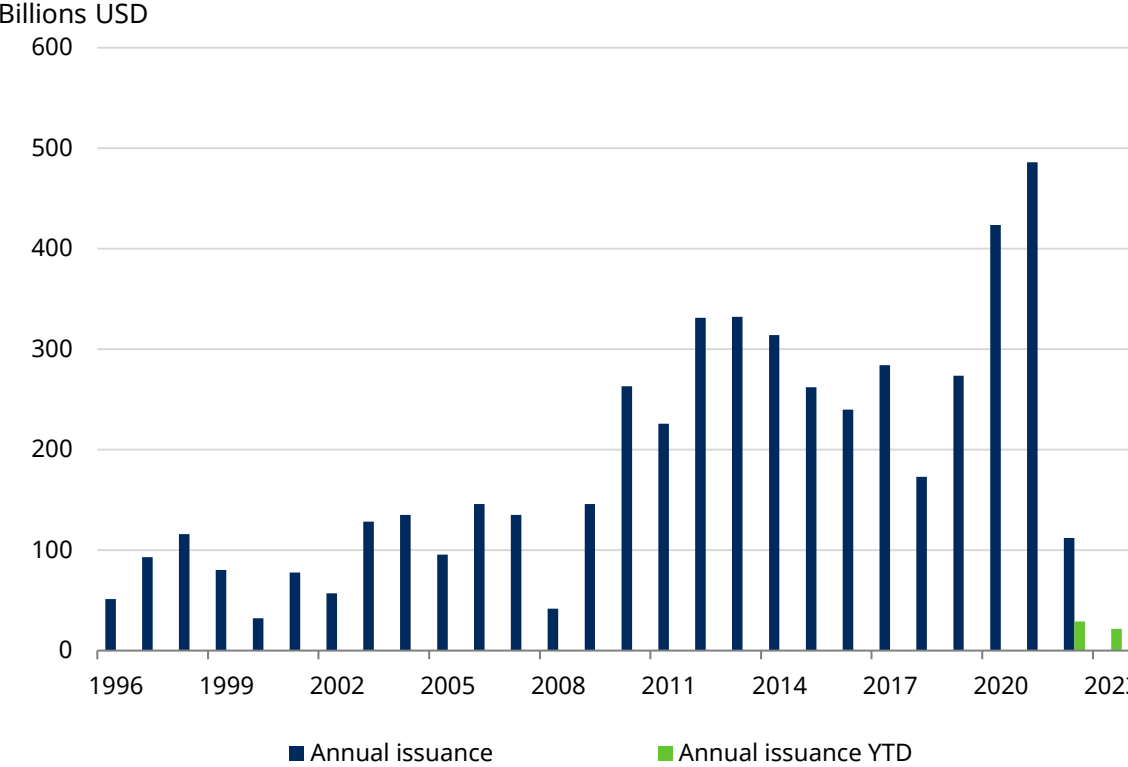
Source: BofA Global Research. Data as at 31 January 2023. ¹Face value of downgrades from IG to HY minus face value of upgrades from HY to IG, divided by face value of the BBB index

US IG and HY gross issuance

US IG gross issuance



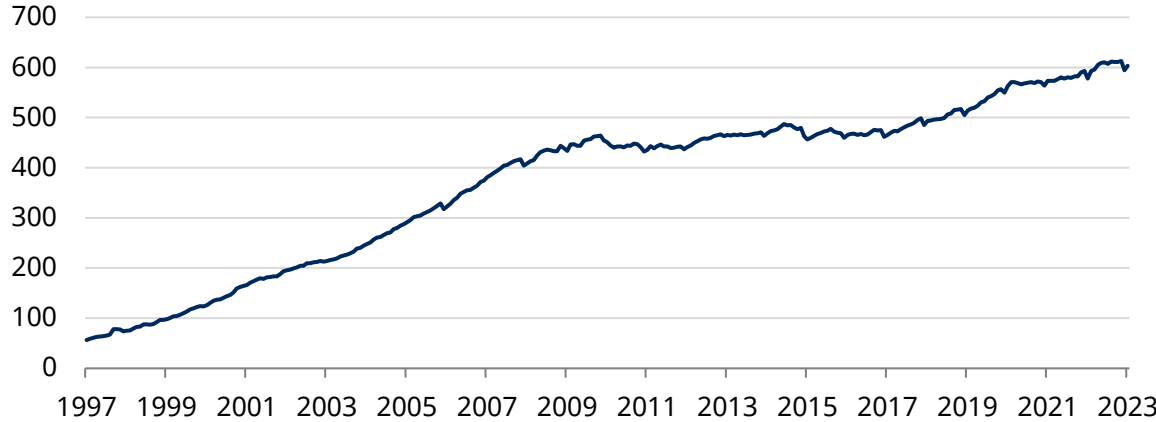
US HY gross issuance



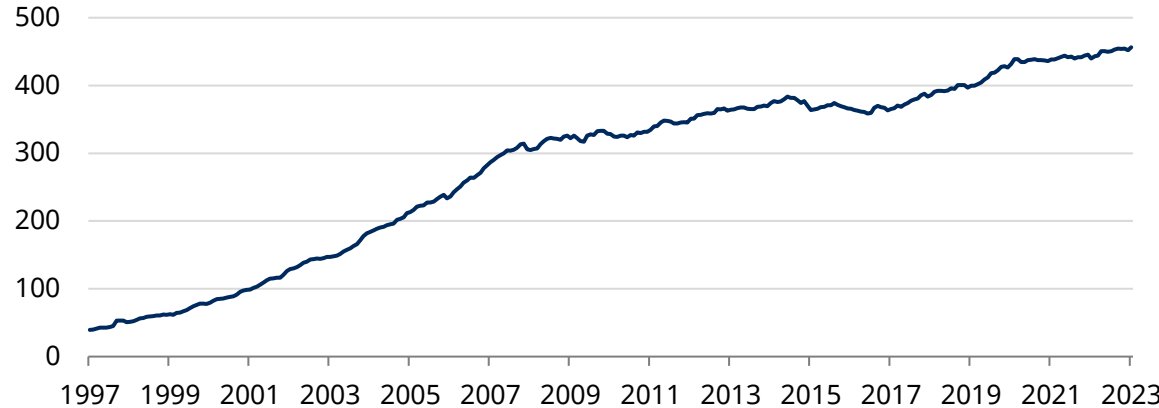
Source: Sifma. Data as at 31 January 2023.

IG bonds outstanding

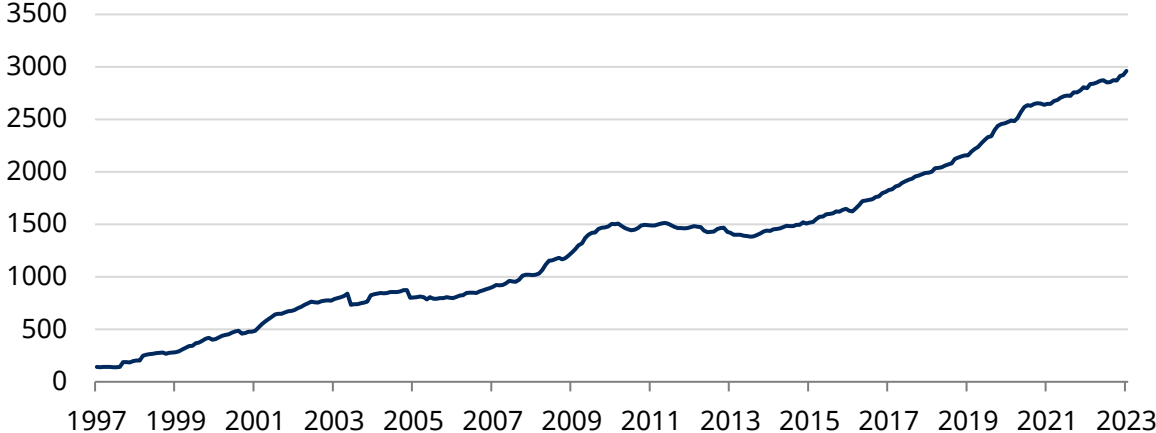
IG GBP non-gilts amount outstanding (bn GBP)



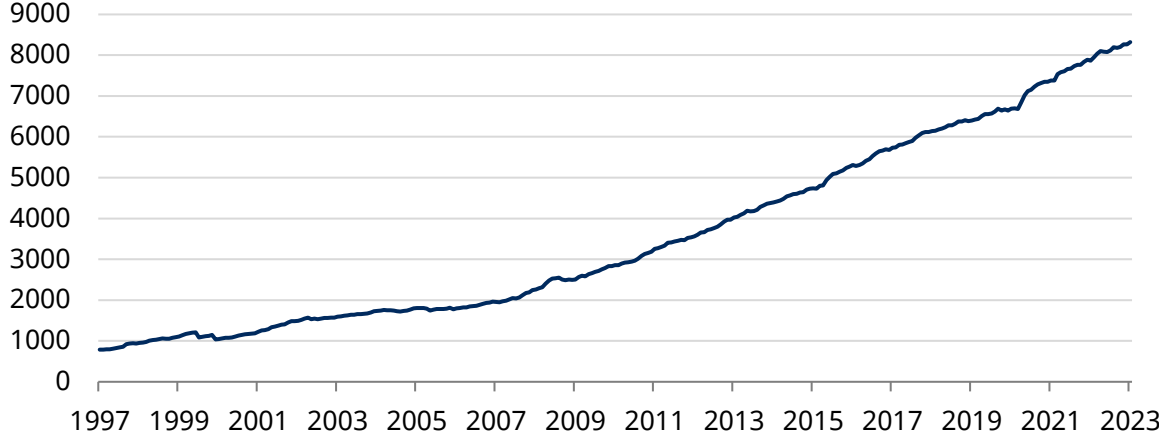
IG GBP corporates amount outstanding (bn GBP)



IG EUR amount outstanding (bn EUR)



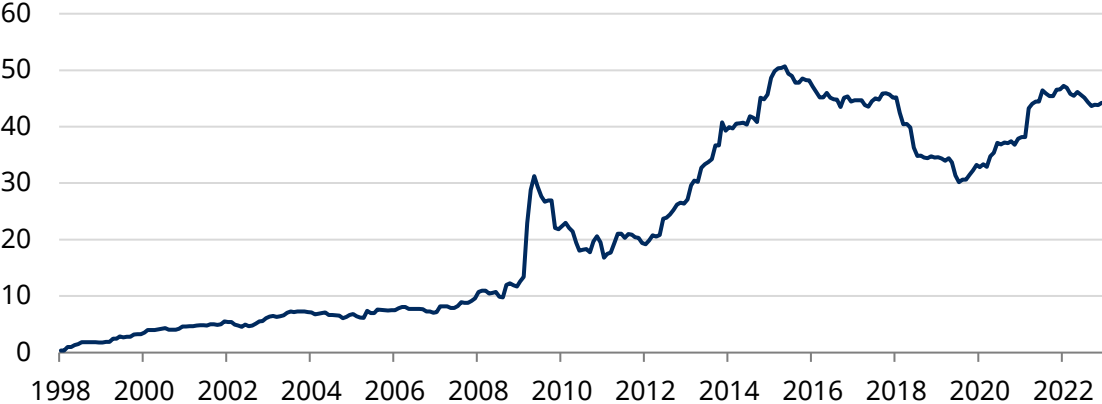
IG USD amount outstanding (bn USD)



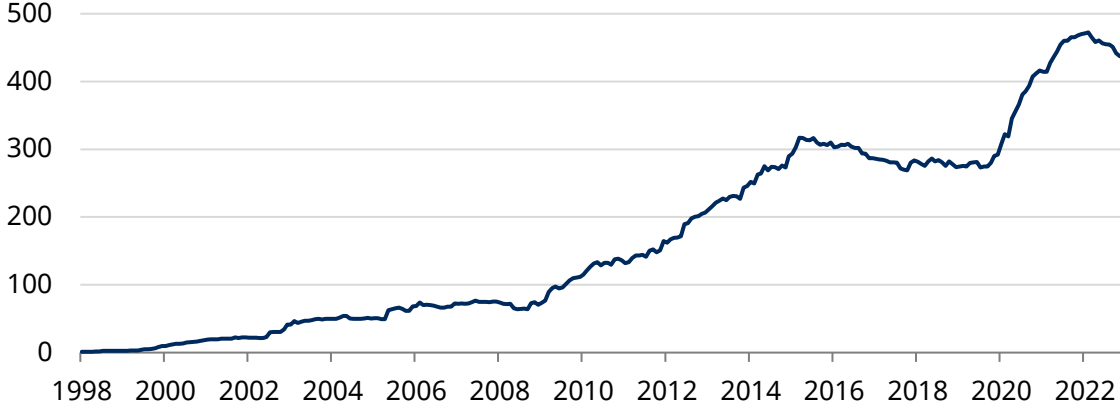
Source: Schroders, ICE Data Indices. Data as at 31 January 2023.

HY bonds outstanding

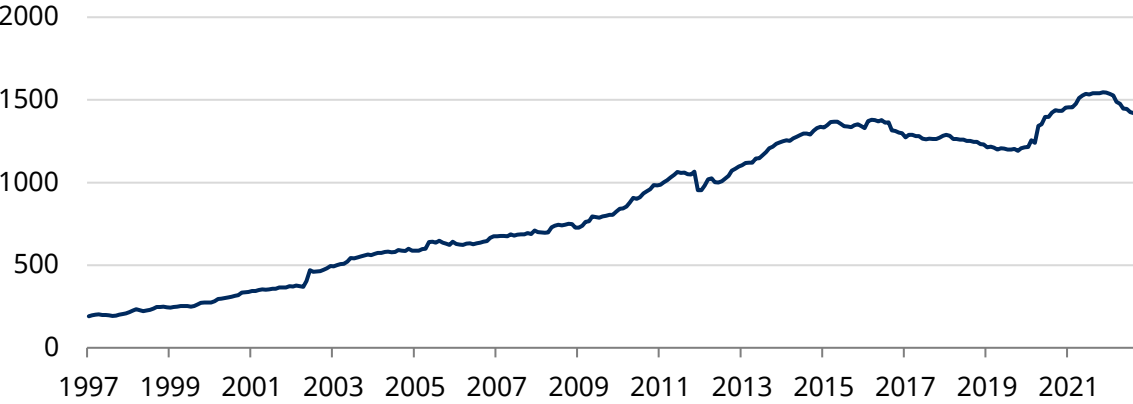
HY GBP amount outstanding (bn GBP)



HY EUR amount outstanding (bn EUR)



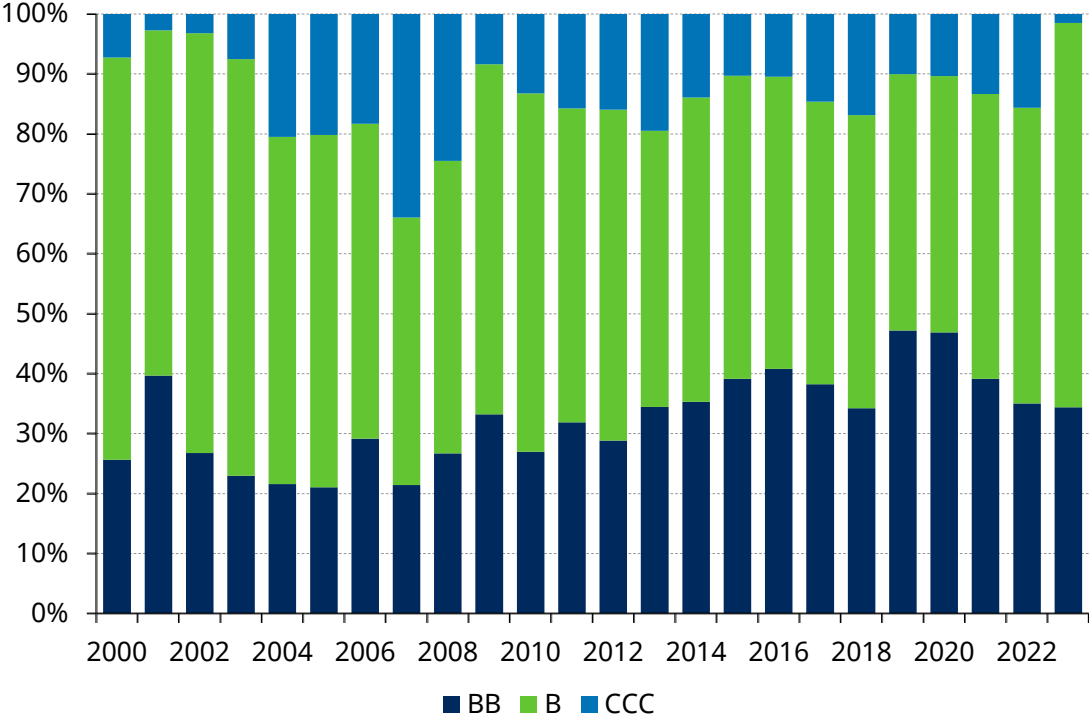
HY USD amount outstanding (bn USD)



Source: Schroders, ICE Data Indices. Data as at 31 January 2023.

Global HY issuance details

Issuance by rating (percentage of issuance)

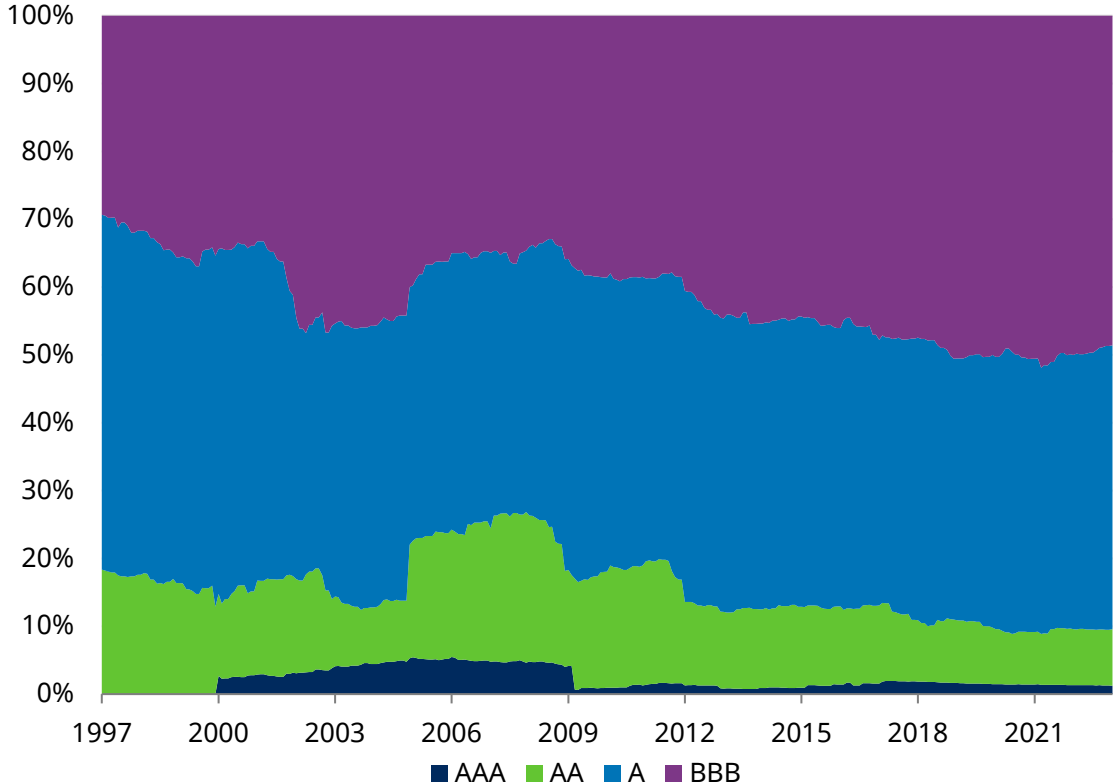


Source: Schroders, BofA Global Research, Moody's. Data as at 31 January 2023.

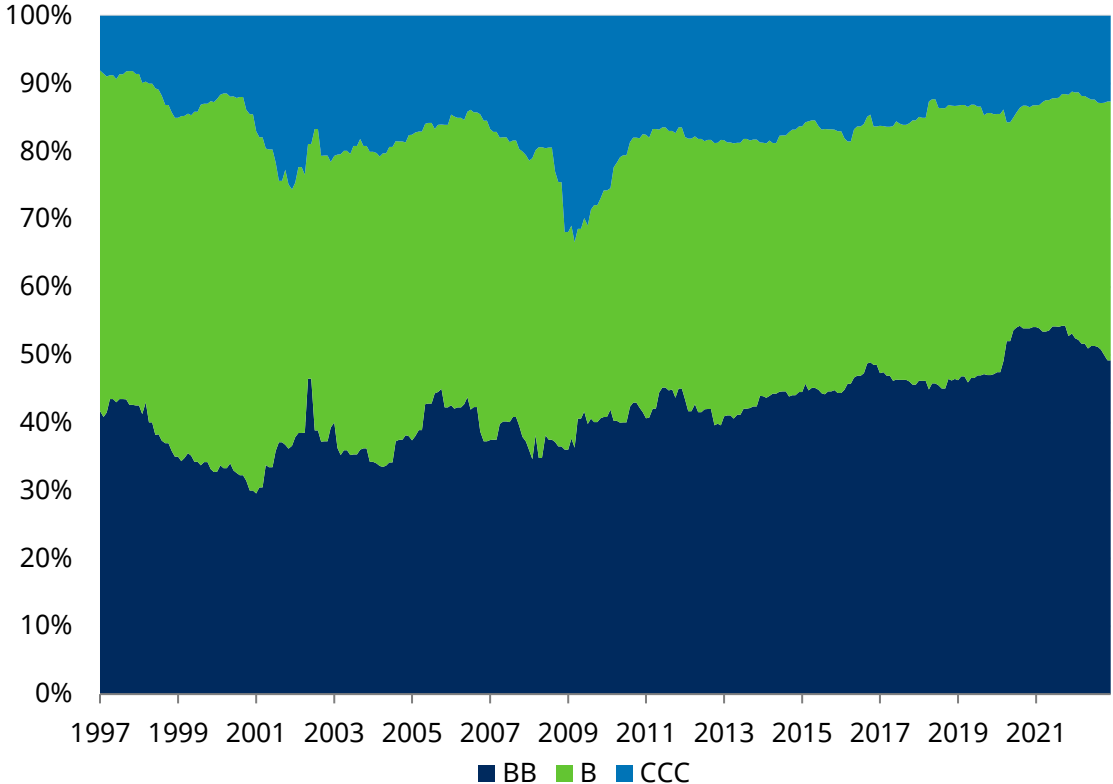
US dollar credit historical ratings split

Significant changes in credit quality over time

US IG ratings split



US HY ratings split



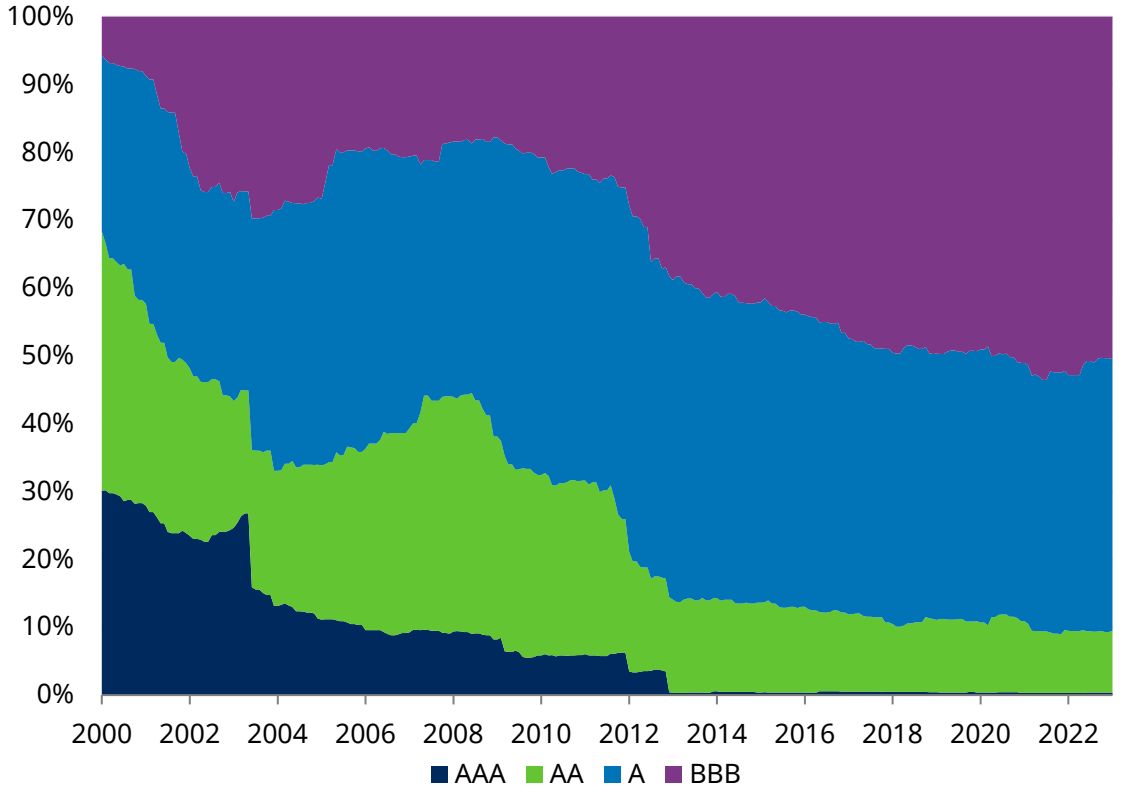
HY credit quality has started to worsen as rising stars, issuers upgraded from HY to IG, are exiting the HY index

Source: Schroders, Refinitiv Datastream. Data as at 31 January 2023.

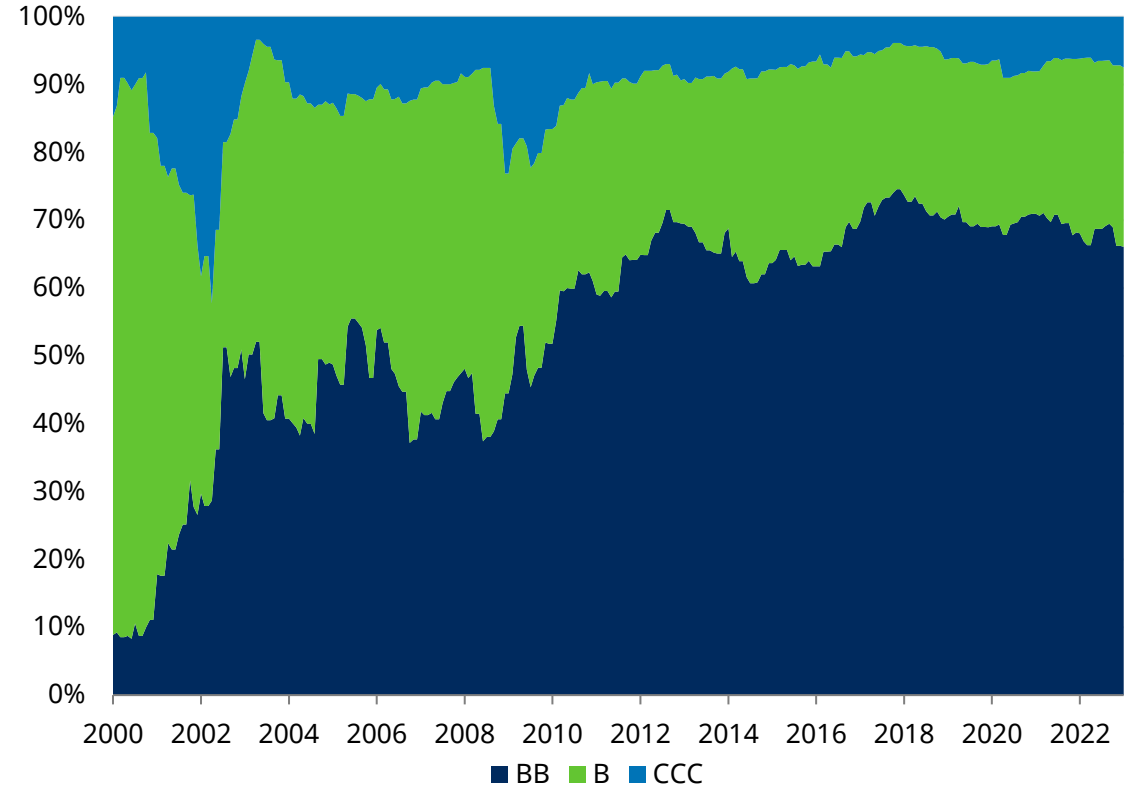
Euro credit historical ratings split

Significant changes in credit quality over time

Euro IG ratings split



Euro HY ratings split



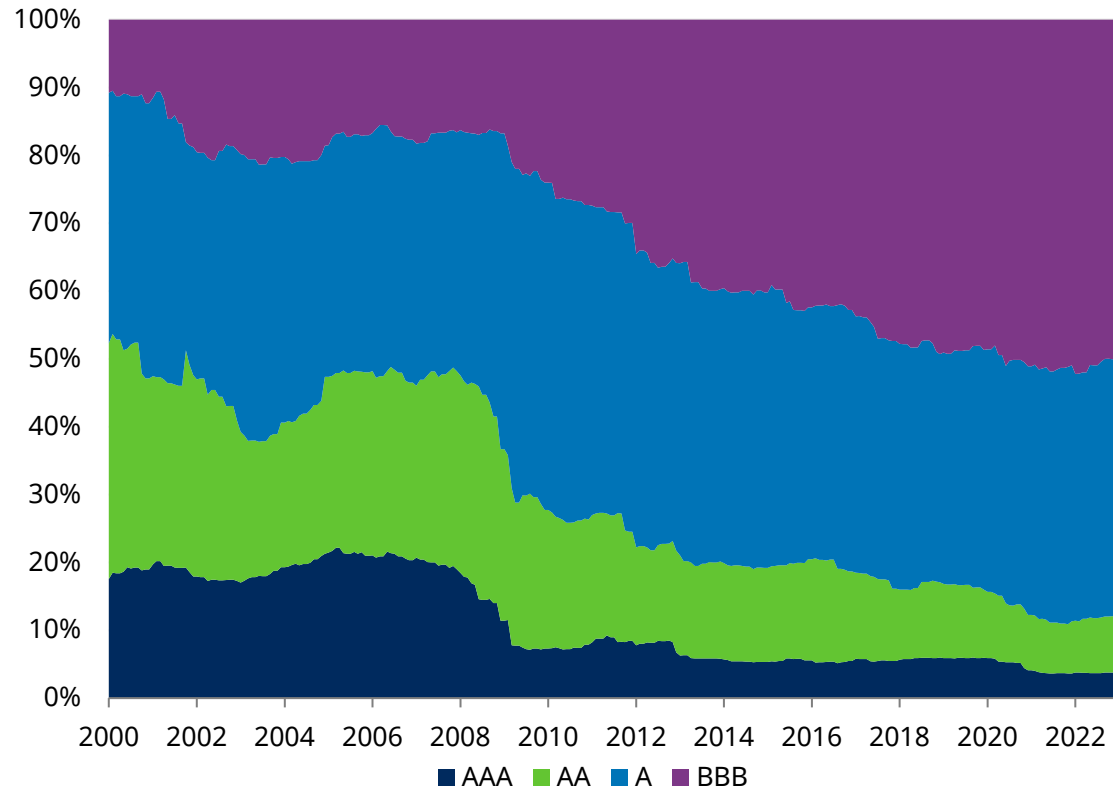
Credit quality has been stable in 2022

Source: Schroders, Refinitiv Datastream. Data as at 31 January 2023.

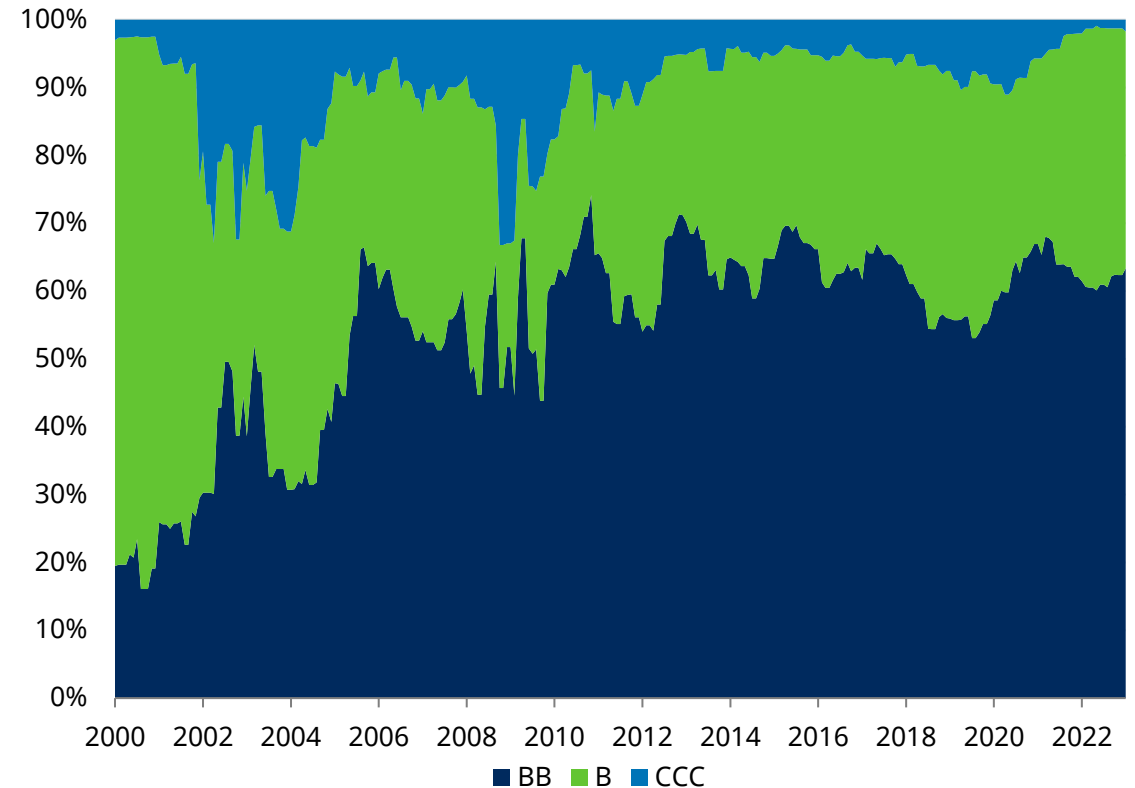
Sterling credit historical ratings split

Significant changes in credit quality over time

GBP IG ratings split

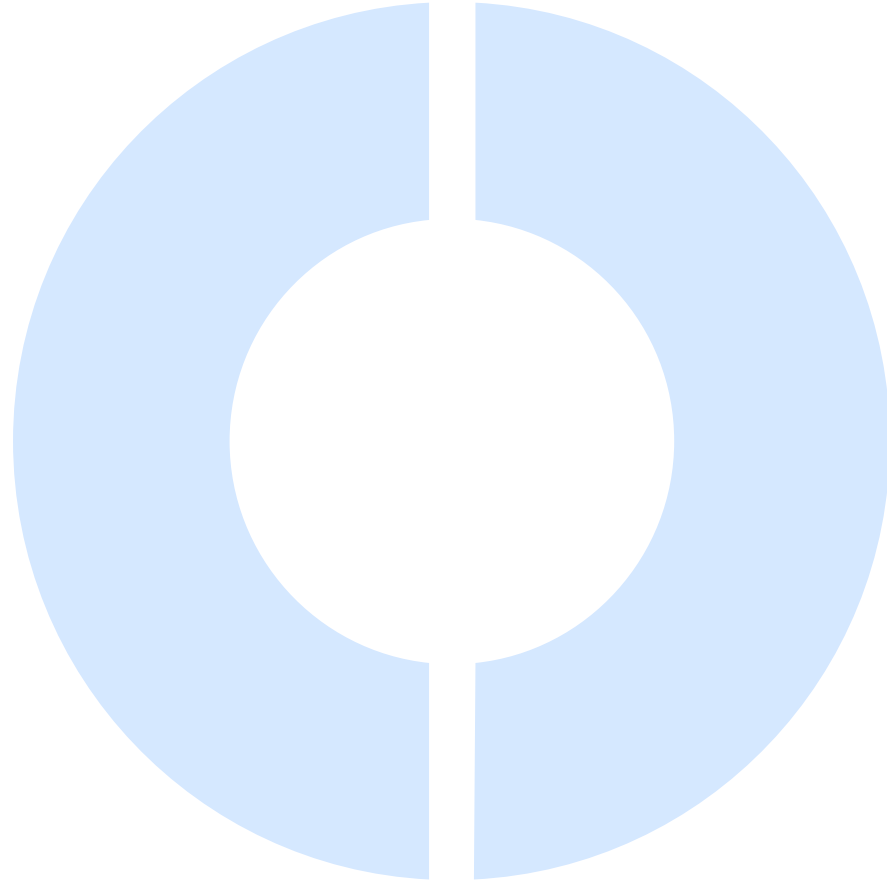


GBP HY ratings split



Source: Schroders, Refinitiv Datastream. Data as at 31 January 2023.

Schroders



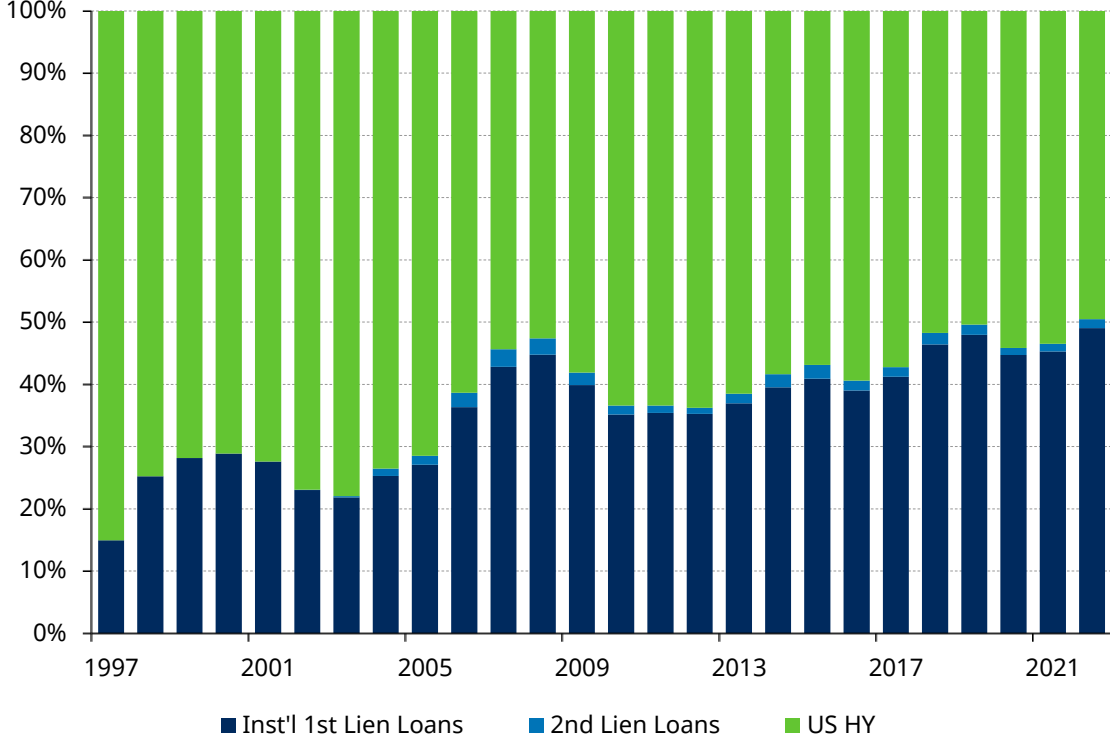
Appendix: Alternatives

US leveraged loans

US leveraged loan spread over 3-month LIBOR¹



Loans as a percentage of US leveraged finance market



Source: Schroders, BofA Global Research. Data as at 31 January 2023. ¹Based on the yield of S&P/LSTA U.S. Leveraged Loan 100 Index

List of indices

- **IG GBP non-gilts** - The ICE Data Indices Sterling Non-Gilt Index
- **IG GBP corporates** - The ICE Data Indices Sterling Corporate & Collateralized Index
- **IG Euro** - The ICE Data Indices Euro Corporate Index
- **IG USD** - The ICE Data Indices US Corporate Index

- **HY GBP** - The ICE Data Indices Sterling High Yield Index
- **HY Euro** - The ICE Data Indices Euro High Yield Index
- **HY USD** - The ICE Data Indices US High Yield Index

- **Hard EMD** - The JPM EMBI Global Diversified Index
- **Local EMD** - The JPM GBI-EM GLOBAL Divers Index
- **Corp. EMD** - The JPM CEMBI Broad Diversified Index

Important information (1 of 3)

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