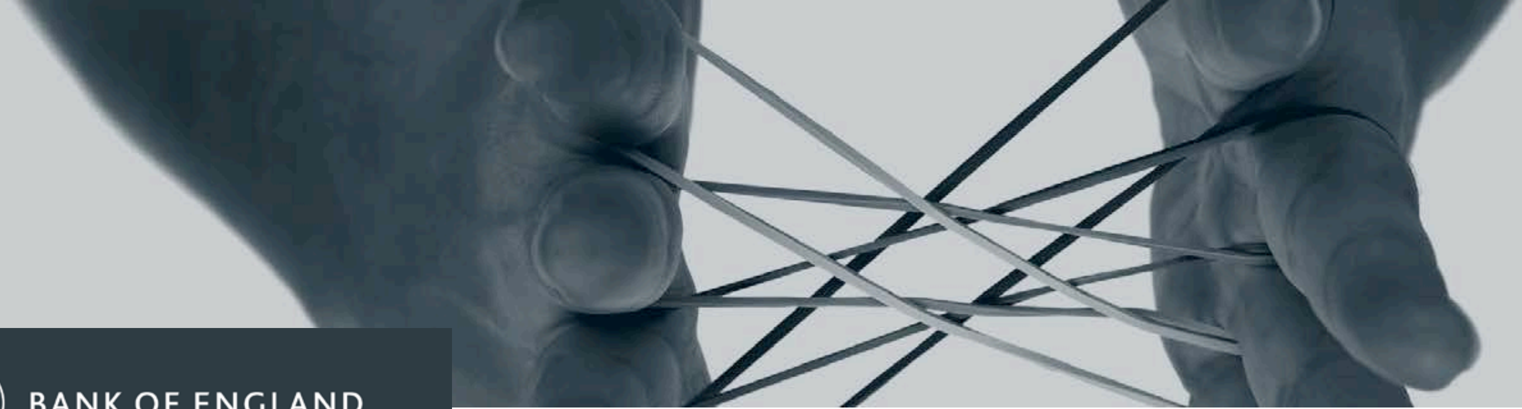


BANK OF ENGLAND

Market finance and financial stability: will the stretch cause a strain?

Alex Brazier

Executive Director for Financial Stability Strategy and Risk

1 February 2018

Brevan Howard Centre for Financial Analysis, Imperial College London

2008:

a market correction leads to a **global crisis**

The crisis cost everyone in the UK

£20,000

2018: a 'macroprudential' objective

… to guard against the financial system disrupting growth of the wider economy

Banking system

Standards in place to ensure banks can keep lending through economic shocks

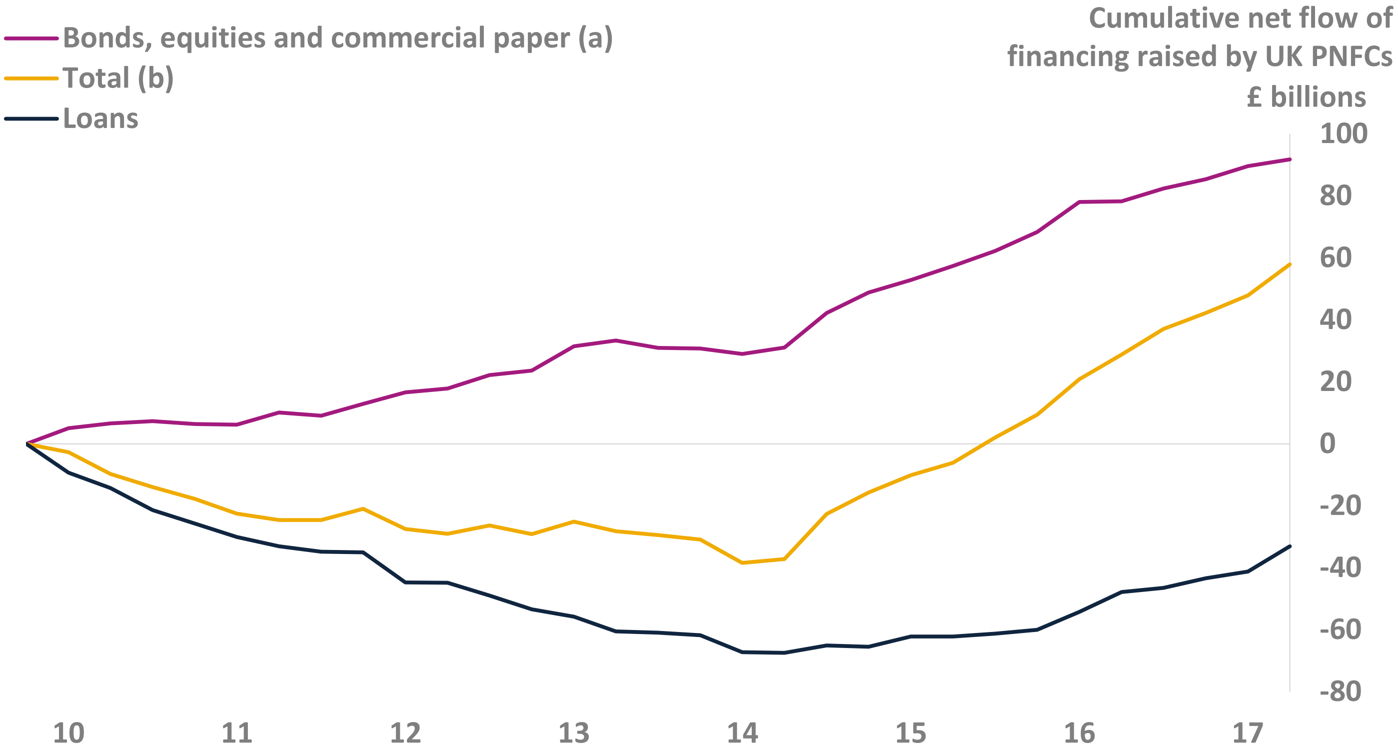
Indebtedness

Limits set on high LTI mortgage lending

Market finance

The next frontier

Companies increasingly rely on market-based finance



Sources: Bank of England and Bank calculations.
(a) Data cover funds raised in both sterling and foreign currency, converted to sterling. Seasonally adjusted. Bonds and commercial paper are not seasonally adjusted.
(b) Owing to the seasonal adjustment methodology, the total series may not equal the sum of its components.

Stretched asset prices can strain the real economy

Stretched market and collateral prices adjust

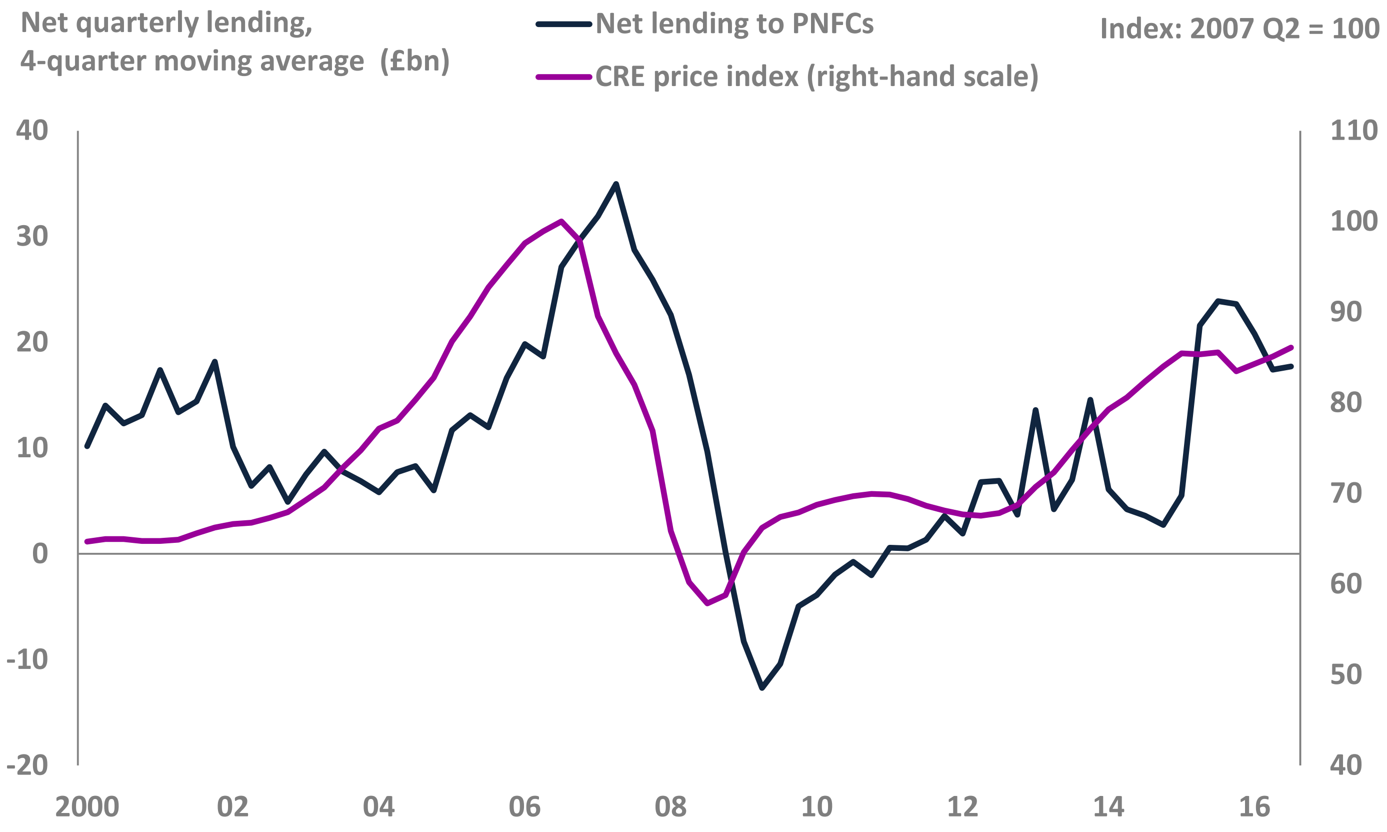
↓

Corporate debt overhang

Deleveraging ↓

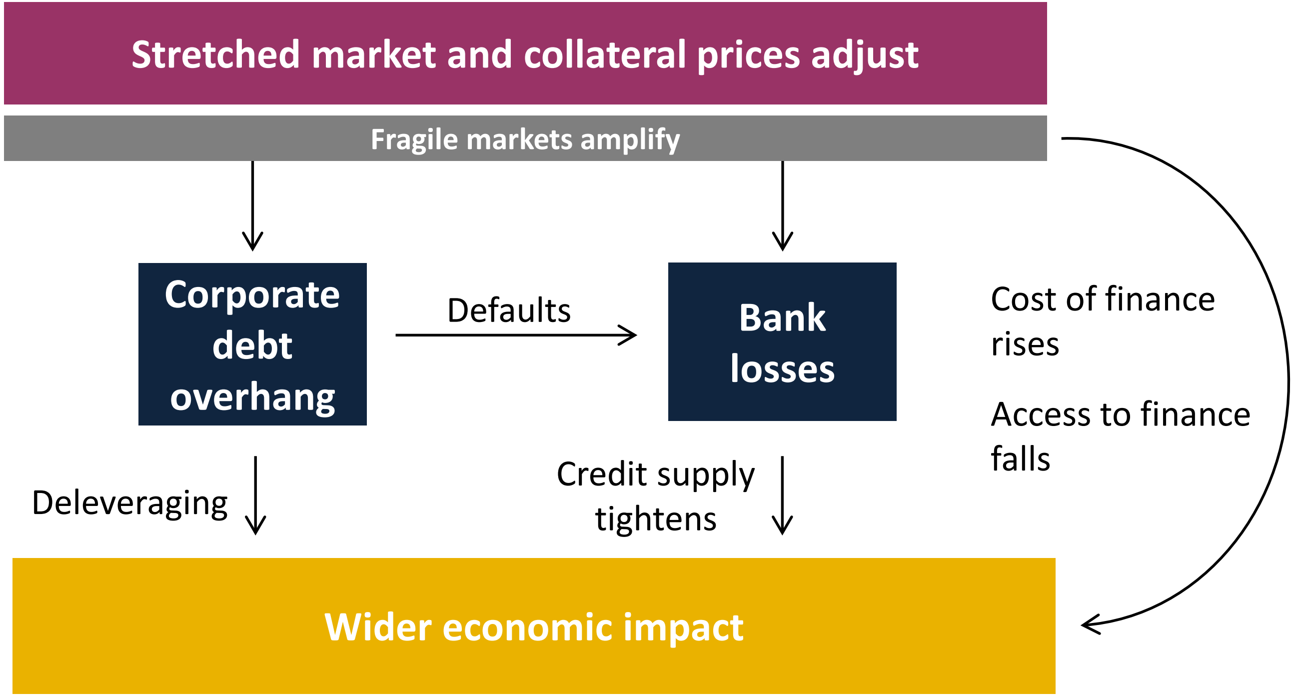
Wider economic impact

Falling commercial property prices lead to lower lending



Sources: MSCI Inc., ONS and Bank calculations.

Stretched asset prices as a danger for the economy, back to our channels:



Four questions:

Have corporate bond and commercial property prices become stretched?

Yes

Do levels of corporate debt rely on these stretched valuations?

Not in the UK, but global picture shows we can't take that for granted

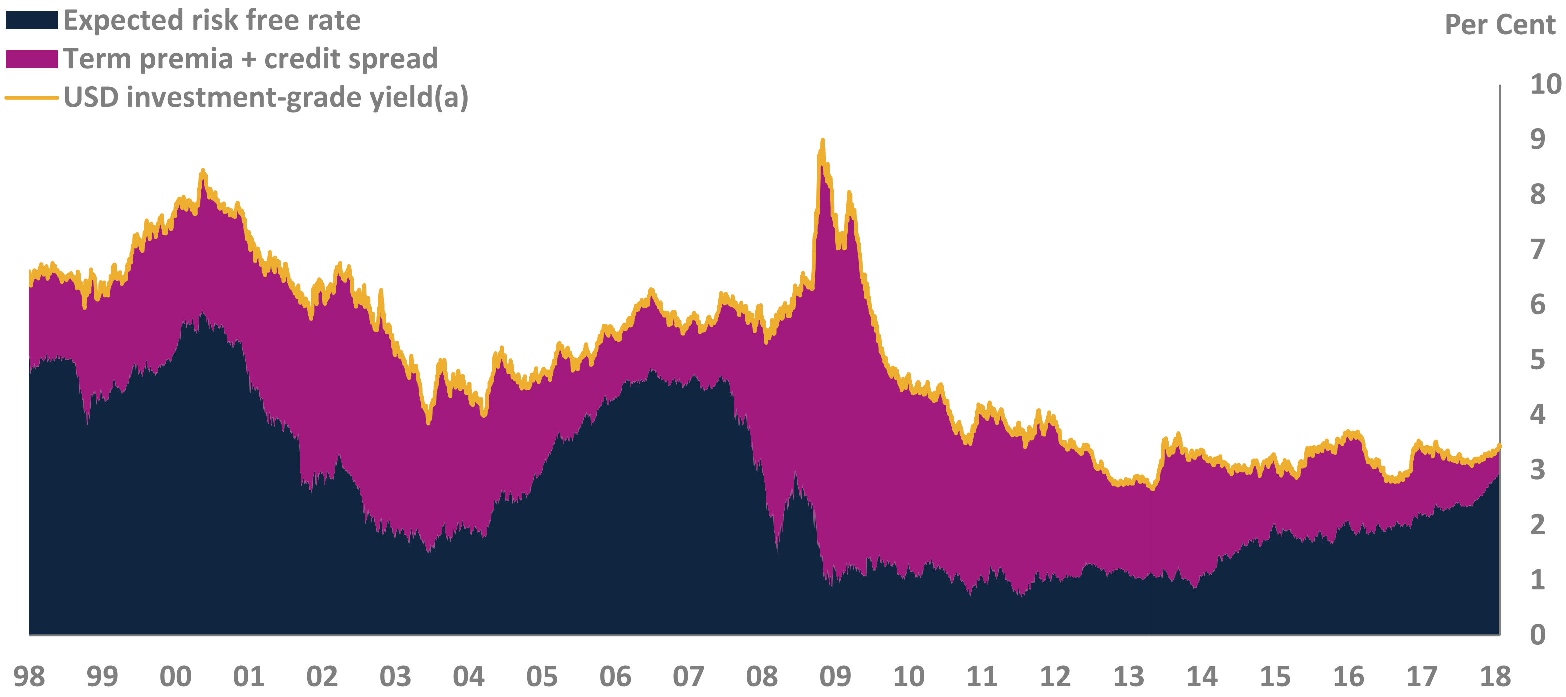
Is the banking system exposed to an adjustment?

It can withstand severe adjustments

Are markets prone to amplifying adjustments?

Some developments raise questions that need exploring

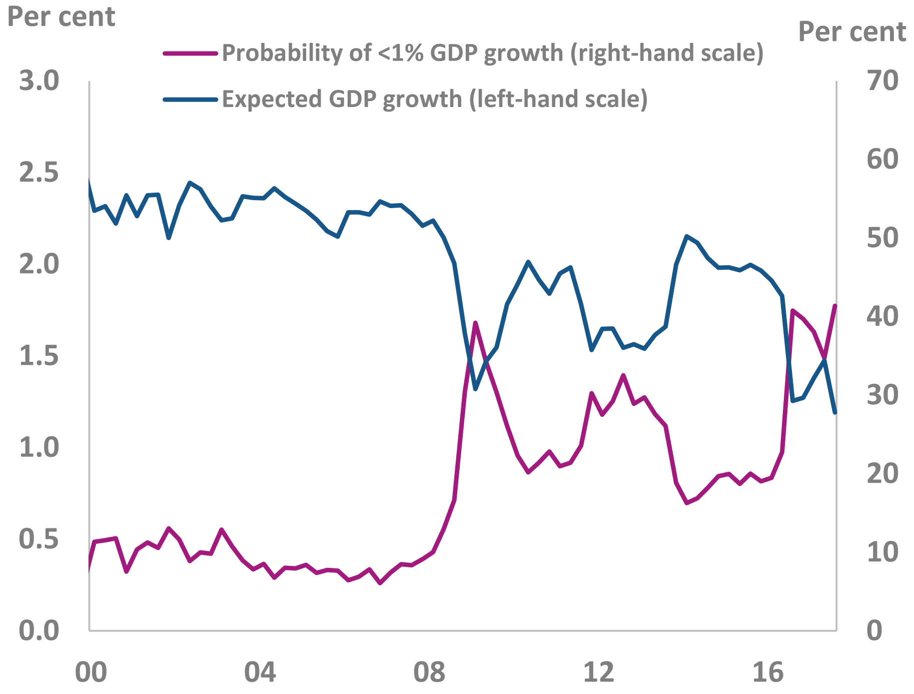
Globally, combined premium for interest rate and credit risk is at an historic low…



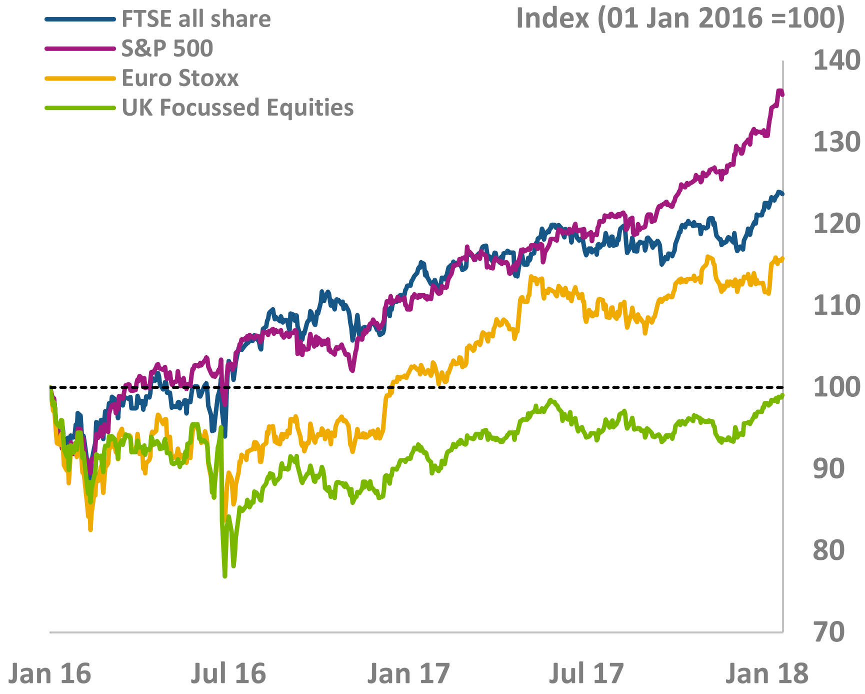
Sources: ICE BofAML, Federal Reserve Bank of New York, and Bank calculations.

(a) The chart shows USD investment-grade corporate bond yield and the expected risk free rate (based on a risk free rate that has a maturity that is similar to the duration of the corporate bond index over the period shown. The difference between the corporate bond yield and the expected risk free rate is the term premia plus the credit spread.

Investors are pricing in downside risks to UK growth…

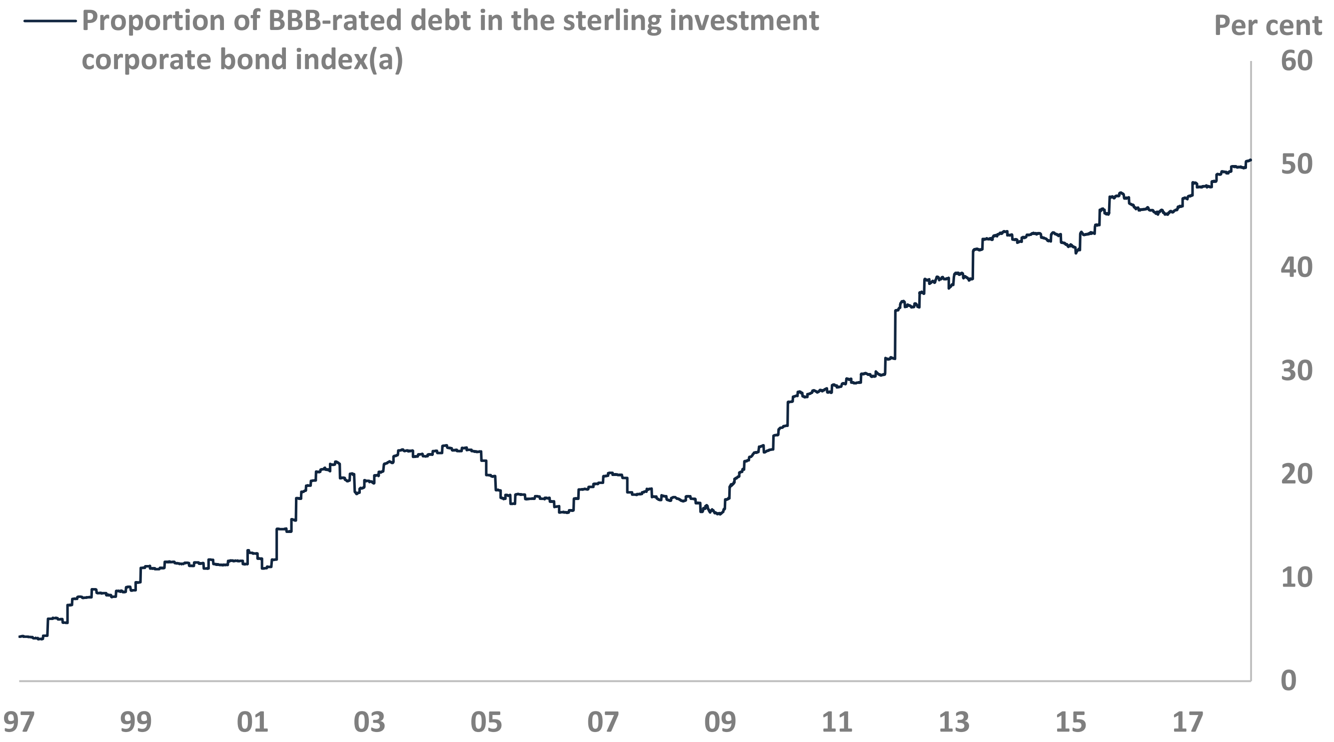


Sources: Bank of England and Bank calculations.
(a) Calculated from the distributions of external forecasters' predictions for UK GDP growth two years ahead, sampled by the Bank and as reported in the Inflation Report each quarter.



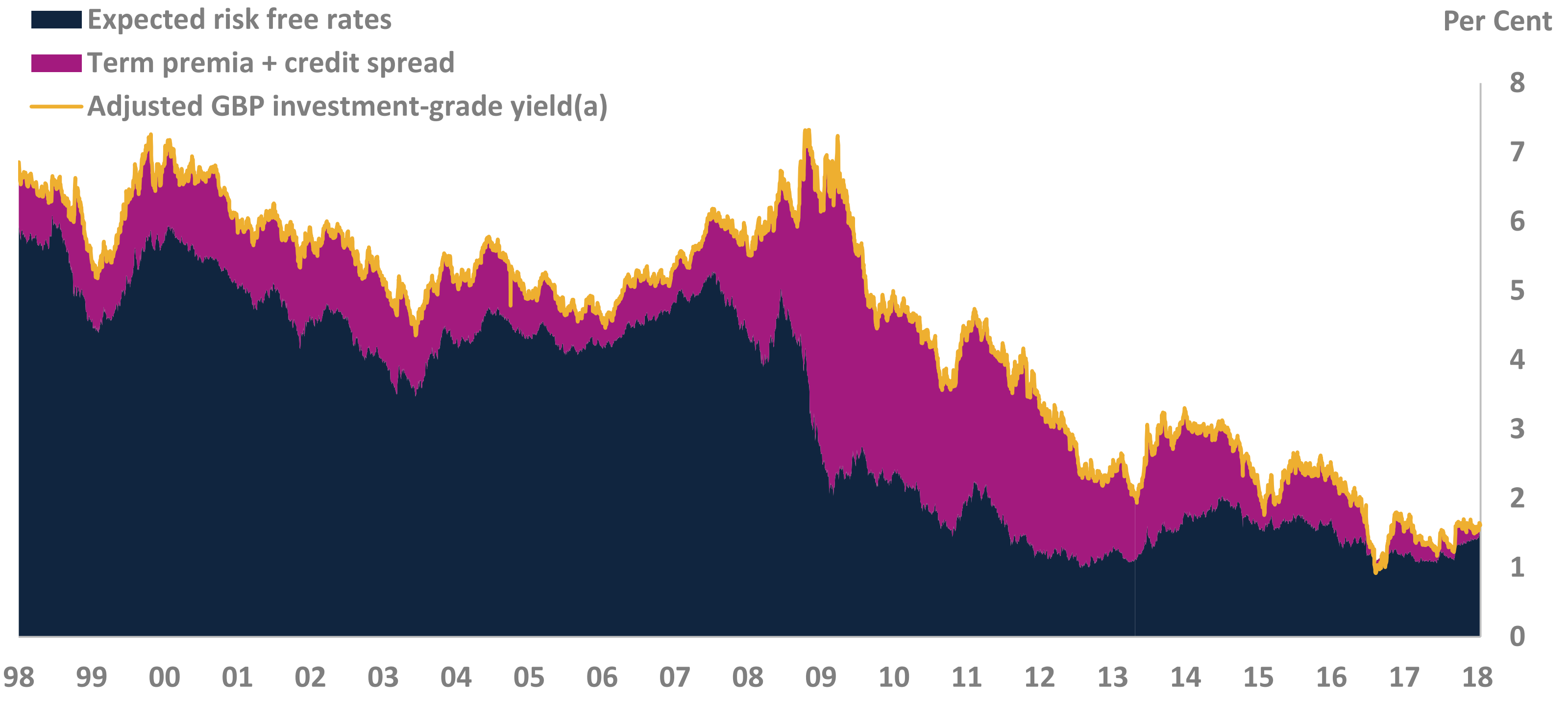
Sources: Bloomberg Finance LP, Thomson Reuters Datastream and Bank calculations.

Corporate bond market has tilted towards companies with lower credit ratings and bonds of longer duration



Sources: ICE BofAML and Bank calculations.
(a) The chart shows the proportion, as measured by market value, of the ICE BofAML sterling investment-grade index that is rated BBB. This index can be used as a representative measure of the sterling investment-grade corporate bond market. However, the index may not capture all sterling investment-grade corporate bonds and alternative indices may contain different proportions of BBB-rated bonds.

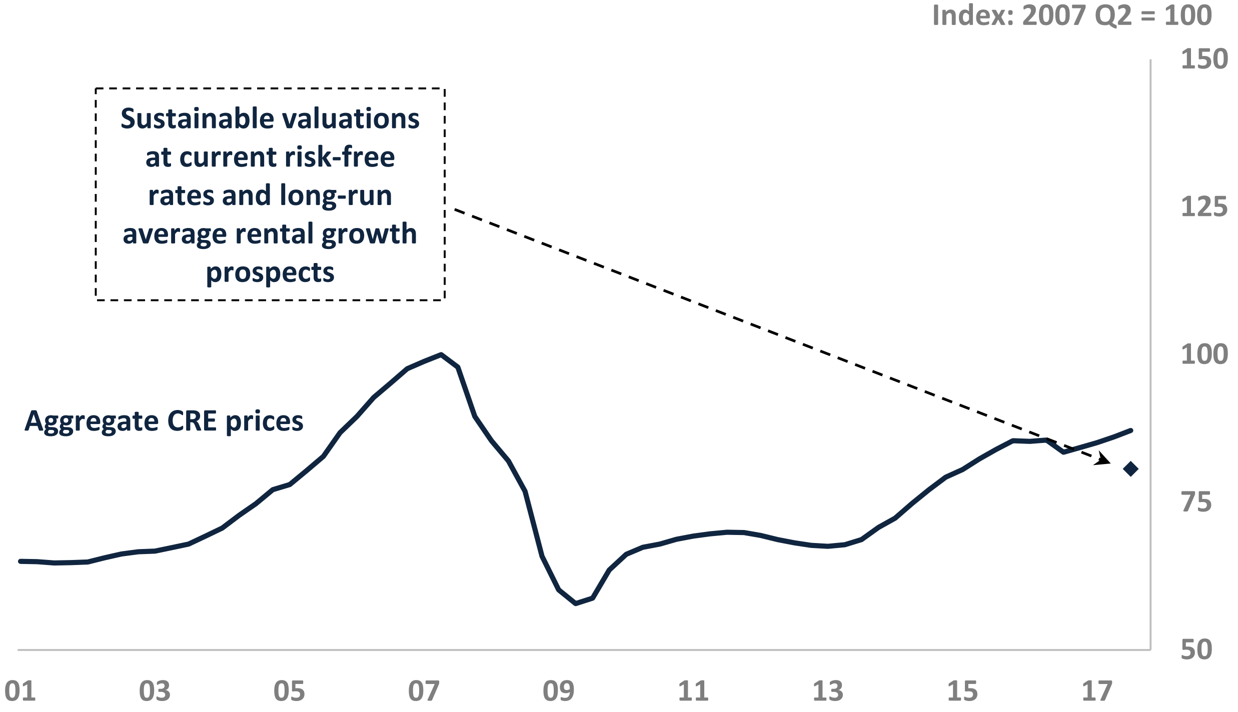
Allowing for this, there is zero compensation for risk in sterling corporate bonds



Sources: ICE BofAML, Bloomberg, and Bank calculations.

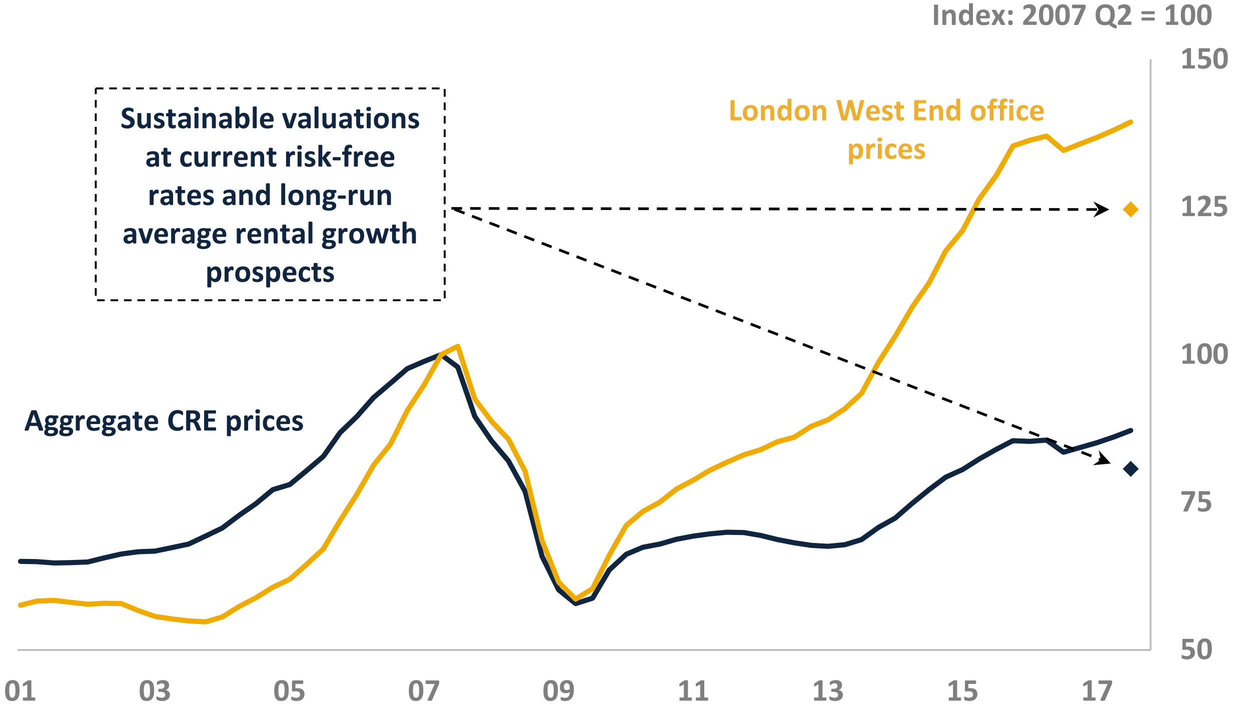
(a) The chart shows GBP investment-grade corporate bond yield and the expected risk free rate (based on a risk free rate that has a maturity that similar to the duration of the corporate bond index over the period shown. The difference between the corporate bond yield and the expected risk free rate is the term premia plus the credit spread.

Commercial real estate prices appear stretched



Sources: Bloomberg, Investment Property Forum, MSCI Inc. and Bank calculations.
(a) Sustainable valuations are estimated using an investment valuation approach and are based on an assumption that property is held for five years. The sustainable value of a property is the sum of discounted rental and sale proceeds. The rental proceeds are discounted using a 5-year gilt yield plus a long-run average estimated risk premium, and the sale proceeds are discounted using a 20-year, 5-year forward gilt yield plus a long-run average risk premium. The sale price is determined by rental yields equal to a 20-year, 5-year forward gilt yield plus a long run average risk premium minus long-run average rental growth. Expected rental value at the time of sale is based on Investment Property Forum Consensus forecasts. The sustainable valuations are determined by assumptions about the rental yield at the time of sale: either rental yields remain at their current levels (at the upper end), or rental yields revert to their 15-year historic average (at the lower end). For more details, see Crosby, N and Hughes, C (2011), ‘The basis of valuations for secured commercial property lending in the UK’, Journal or European Real Estate Research, Vol. 4, No. 3, pages 225–42.

… especially in London's West End



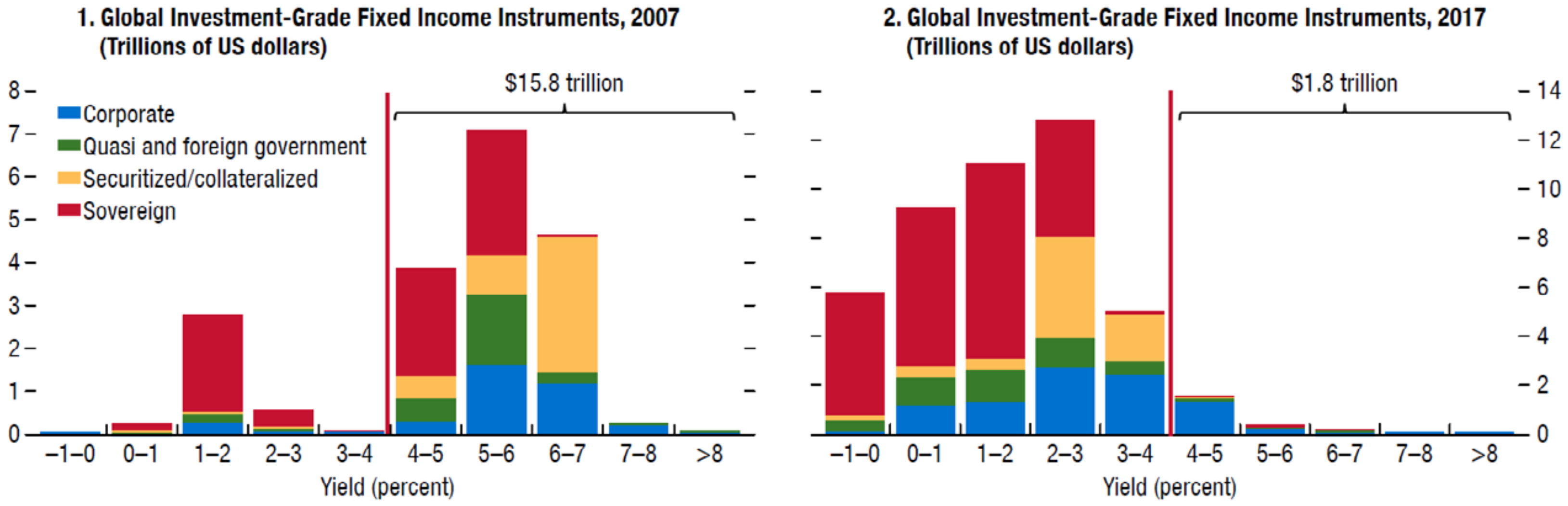
Sources: Bloomberg, Investment Property Forum, MSCI Inc. and Bank calculations.
(a) Sustainable valuations are estimated using an investment valuation approach and are based on an assumption that property is held for five years. The sustainable value of a property is the sum of discounted rental and sale proceeds. The rental proceeds are discounted using a 5-year gilt yield plus a long-run average estimated risk premium, and the sale proceeds are discounted using a 20-year, 5-year forward gilt yield plus a long-run average risk premium. The sale price is determined by rental yields equal to a 20-year, 5-year forward gilt yield plus a long run average risk premium minus long-run average rental growth. Expected rental value at the time of sale is based on Investment Property Forum Consensus forecasts. The sustainable valuations are determined by assumptions about the rental yield at the time of sale: either rental yields remain at their current levels (at the upper end), or rental yields revert to their 15-year historic average (at the lower end). For more details, see Crosby, N and Hughes, C (2011), 'The basis of valuations for secured commercial property lending in the UK', Journal or European Real Estate Research, Vol. 4, No. 3, pages 225–42.

The stock of bonds yielding >4% has all but disappeared

Figure 1.16. Global Fixed Income Markets and US Corporate Credit Investor Base

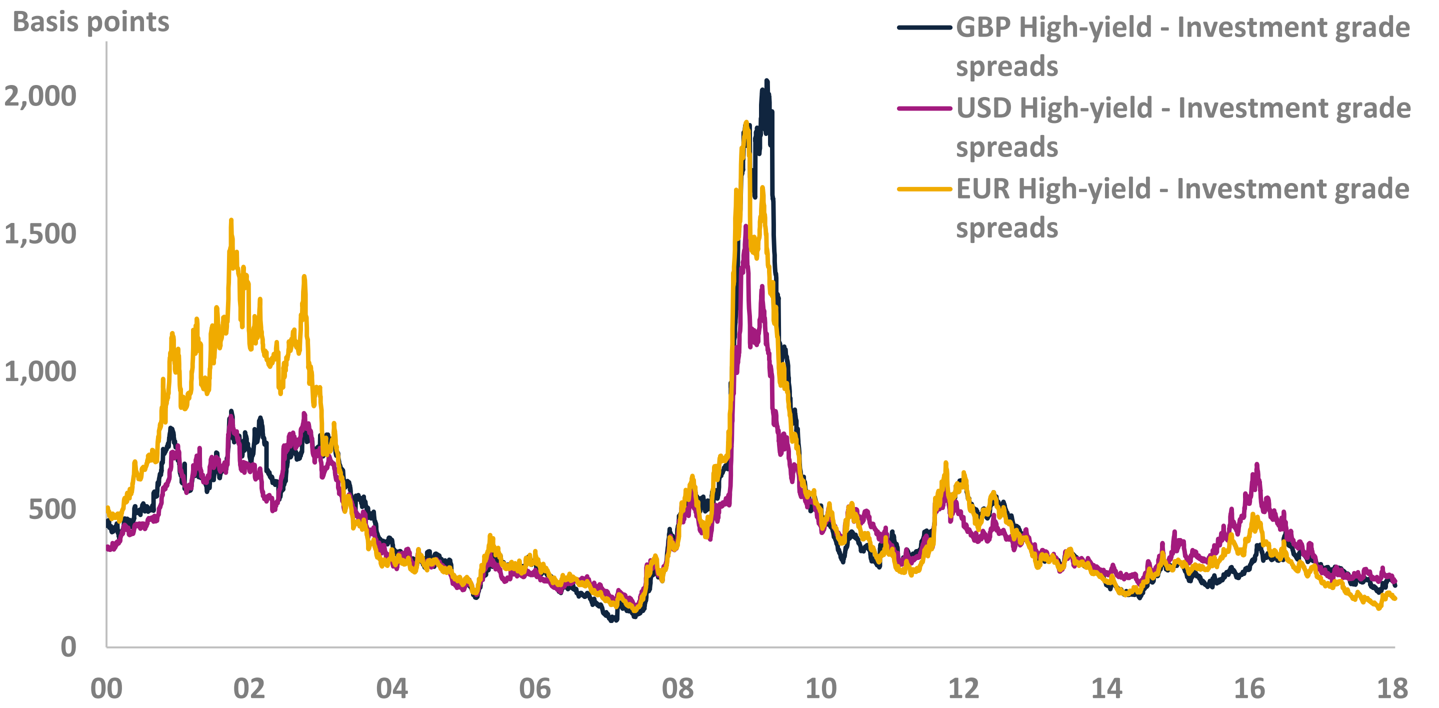
In 2007, a variety of asset classes generated returns in excess of 4 percent.

In 2017, corporate debt is the only significant asset class that provides a comparable return.



Sources: IMF Global Financial Stability Report October 2017.

The difference between spreads on high-yield and investment-grade corporate bonds have shrunk to pre-crisis levels



Four questions:

Have corporate bond and commercial property prices become stretched?

Yes

Do levels of corporate debt rely on these stretched valuations?

Not in the UK, but global picture shows we can’t take that for granted

Is the banking system exposed to an adjustment?

It can withstand severe adjustments

Are markets prone to amplifying adjustments?

Some developments raise questions that need exploring

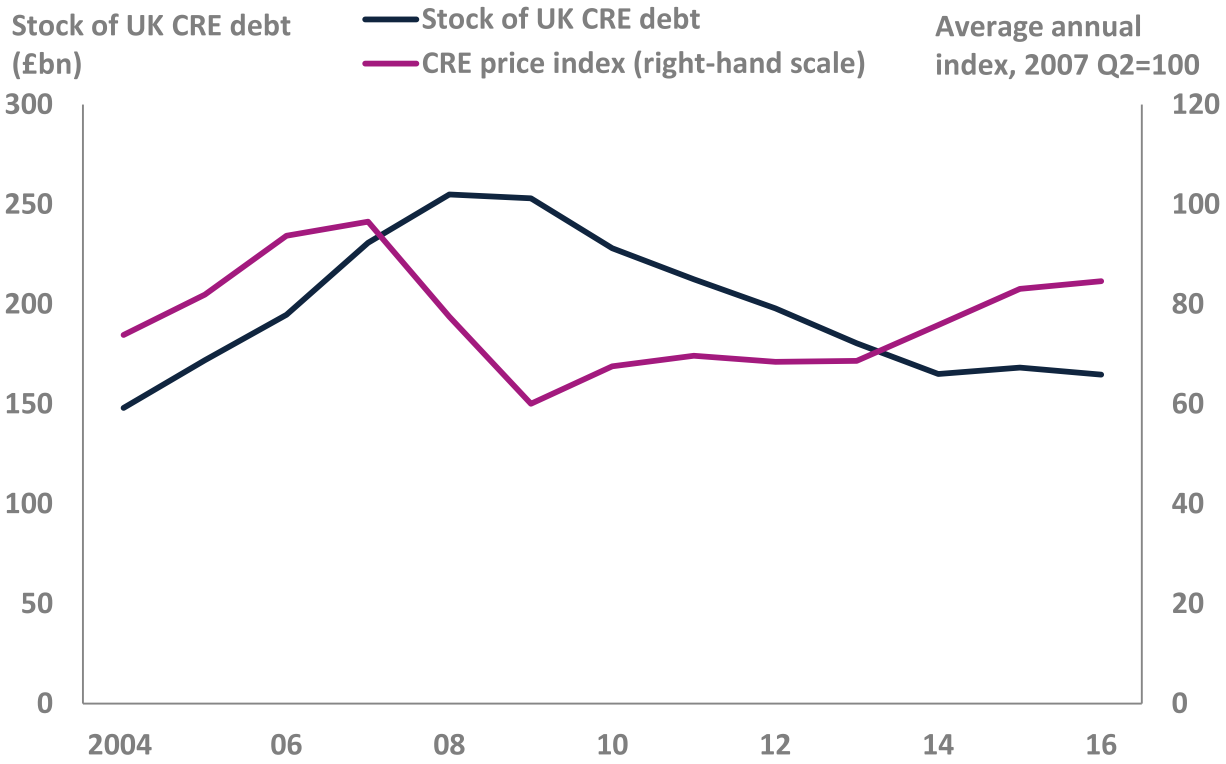
UK corporate debt to GDP has not increased over the decade

Table 1.1. Sovereign and Nonfinancial Private Sector Debt-to-GDP Ratios
(Percent)

		Advanced Economies									Emerging Market Economies									
		JPN	CAN	USA	GBR	ITA	AUS	KOR	FRA	DEU	CHN	BRA	IND	ZAF	TUR	MEX	RUS	SAU	ARG	IDN
General Government	2006	184	70	64	41	103	10	29	64	66	25	66	77	31	45	38	10	26	70	36
	2016	239	92	107	89	133	41	38	96	68	44	78	70	52	28	58	16	13	54	28
Households	2006	59	74	96	90	36	105	70	44	65	11	14	10	39	9	12	8	12	4	11
	2016	57	101	79	88	42	123	93	57	53	44	23	10	35	18	16	16	15	6	17
Nonfinancial Corporations	2006	100	76	65	79	67	73	83	56	49	105	39	38	33	27	14	32	28	20	14
	2016	92	102	72	73	71	79	100	72	46	165	44	45	37	67	28	52	50	12	23
Total	**2006**	**343**	**221**	**225**	**210**	**205**	**187**	**183**	**164**	**180**	**142**	**118**	**125**	**104**	**81**	**64**	**49**	**66**	**93**	**61**
	2016	**388**	**295**	**259**	**250**	**246**	**243**	**232**	**226**	**168**	**254**	**145**	**125**	**124**	**113**	**103**	**84**	**78**	**73**	**68**

Sources: IMF Global Financial Stability Report October 2017. Used Bank for International Settlements; Haver Analytics; IMF, World Economic Outlook database; and IMF staff calculations.
Note: Dark shading denotes a higher debt-to-GDP ratio in 2016 than in 2006. The table shows debt at market values. Advanced economy nonfinancial corporate debt is shown net of estimated intercompany loans where data are available. Data labels in the table use International Standardization Organization (ISO) codes.

Amongst companies investing in commercial property, debt levels are below pre-crisis



Sources: De Montfort University and MSCI Inc.

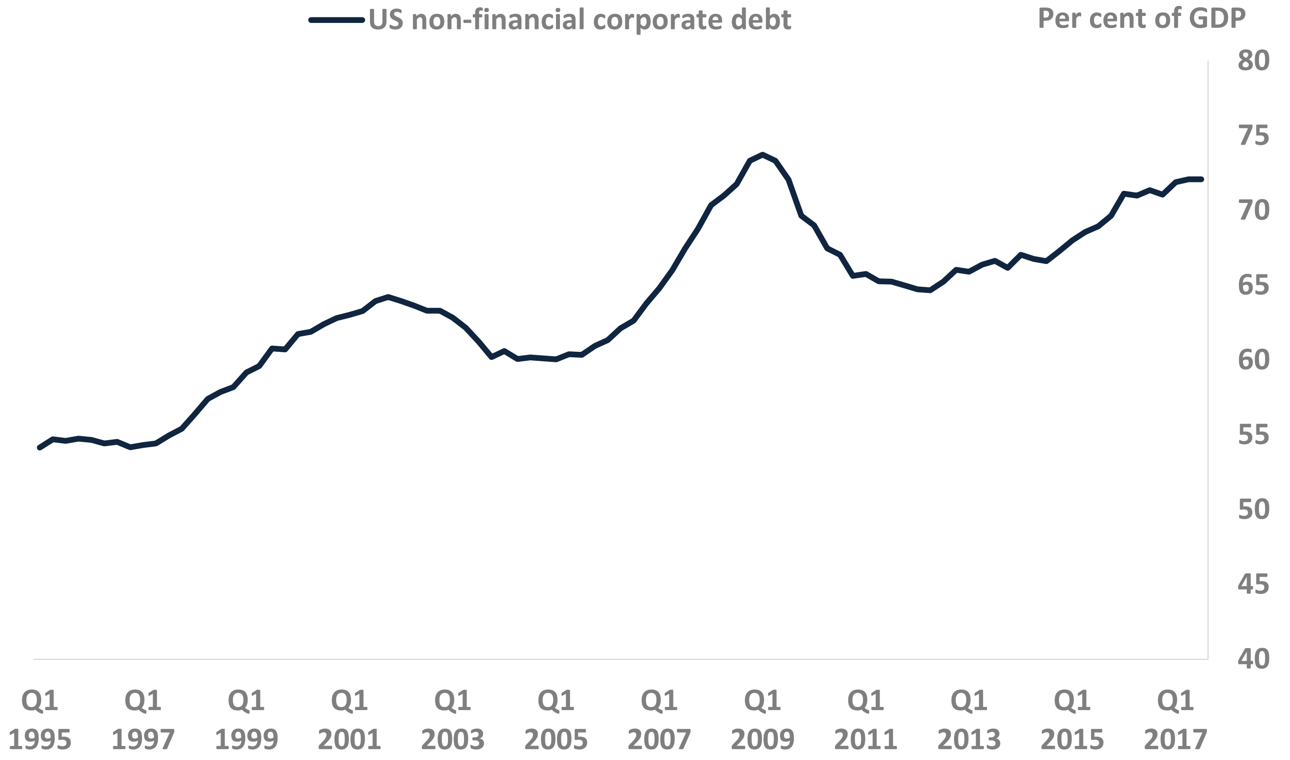
Developments in the world economy show we cannot take this for granted…

Table 1.1. Sovereign and Nonfinancial Private Sector Debt-to-GDP Ratios
(Percent)

		Advanced Economies									Emerging Market Economies									
		JPN	CAN	USA	GBR	ITA	AUS	KOR	FRA	DEU	CHN	BRA	IND	ZAF	TUR	MEX	RUS	SAU	ARG	IDN
General Government	2006	184	70	64	41	103	10	29	64	66	25	66	77	31	45	38	10	26	70	36
	2016	239	92	107	89	133	41	38	96	68	44	78	70	52	28	58	16	13	54	28
Households	2006	59	74	96	90	36	105	70	44	65	11	14	10	39	9	12	8	12	4	11
	2016	57	101	79	88	42	123	93	57	53	44	23	10	35	18	16	16	15	6	17
Nonfinancial Corporations	2006	100	76	65	79	67	73	83	56	49	105	39	38	33	27	14	32	28	20	14
	2016	92	102	72	73	71	79	100	72	46	165	44	45	37	67	28	52	50	12	23
Total	**2006**	**343**	**221**	**225**	**210**	**205**	**187**	**183**	**164**	**180**	**142**	**118**	**125**	**104**	**81**	**64**	**49**	**66**	**93**	**61**
	2016	**388**	**295**	**259**	**250**	**246**	**243**	**232**	**226**	**168**	**254**	**145**	**125**	**124**	**113**	**103**	**84**	**78**	**73**	**68**

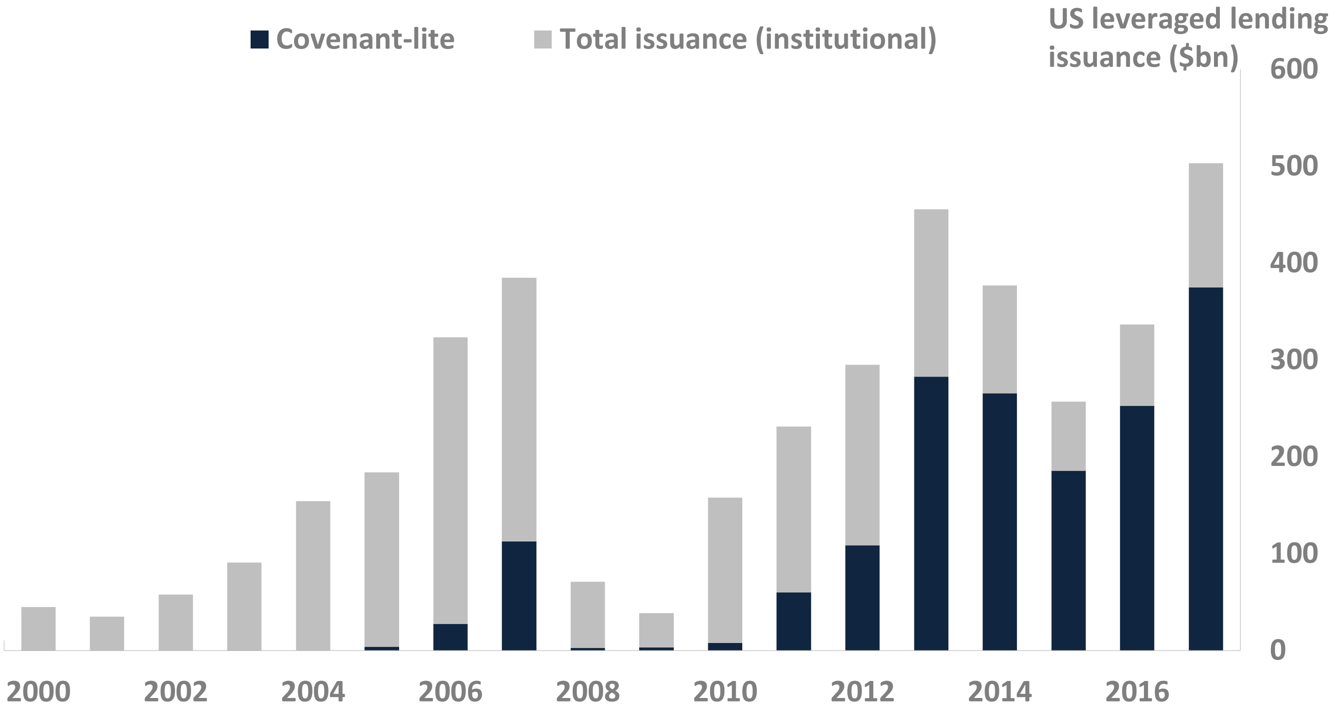
Sources: IMF Global Financial Stability Report October 2017. Used Bank for International Settlements; Haver Analytics; IMF, World Economic Outlook database; and IMF staff calculations.
Note: Dark shading denotes a higher debt-to-GDP ratio in 2016 than in 2006. The table shows debt at market values. Advanced economy nonfinancial corporate debt is shown net of estimated intercompany loans where data are available. Data labels in the table use International Standardization Organization (ISO) codes.

In the United States, levels of non-financial corporate sector debt nearing previous peaks



Sources: Institute of International Finance and Bank calculations
Note: Q3 2017 figure is an IIF estimate

Record US leveraged lending issuance has been accompanied by an increase in 'covenant-lite' loans



Sources: LCD, an offering of S&P Global Market Intelligence and Bank calculations.
(a) Based on data for public syndication transactions, and excluding private bilateral deals.
(b) Only includes institutional issuance. It does not include leveraged lending issuance that is pro-rata.
(c) Covenant-lite is defined as loans that have bond-like financial incurrence covenants rather than traditional maintenance covenants that are normally part and parcel of a loan agreement.

Four questions:

Have corporate bond and commercial property prices become stretched?

Yes

Do levels of corporate debt rely on these stretched valuations?

Not in the UK, but global picture shows we can't take that for granted

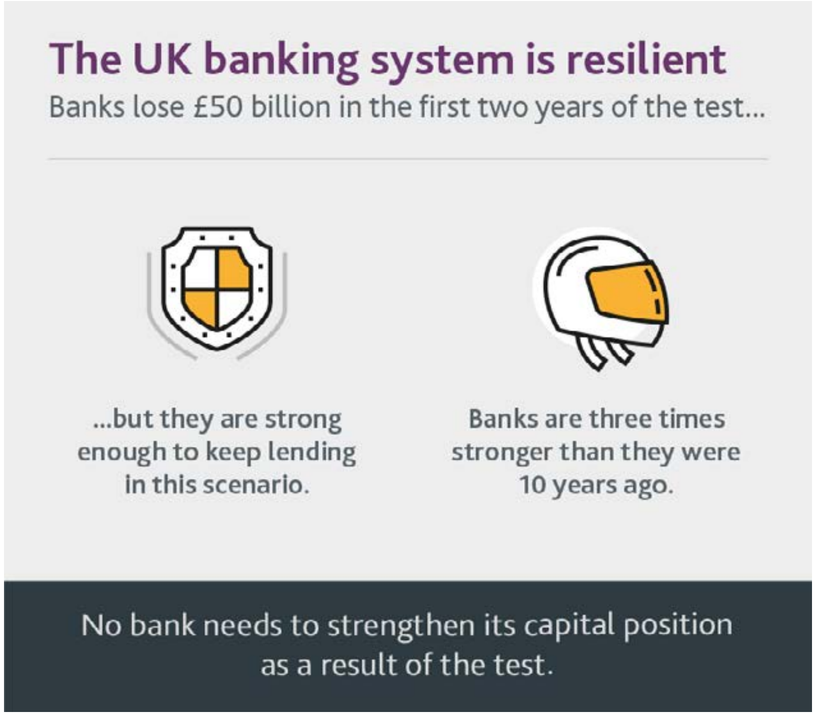
Is the banking system exposed to an adjustment?

It can withstand severe adjustments

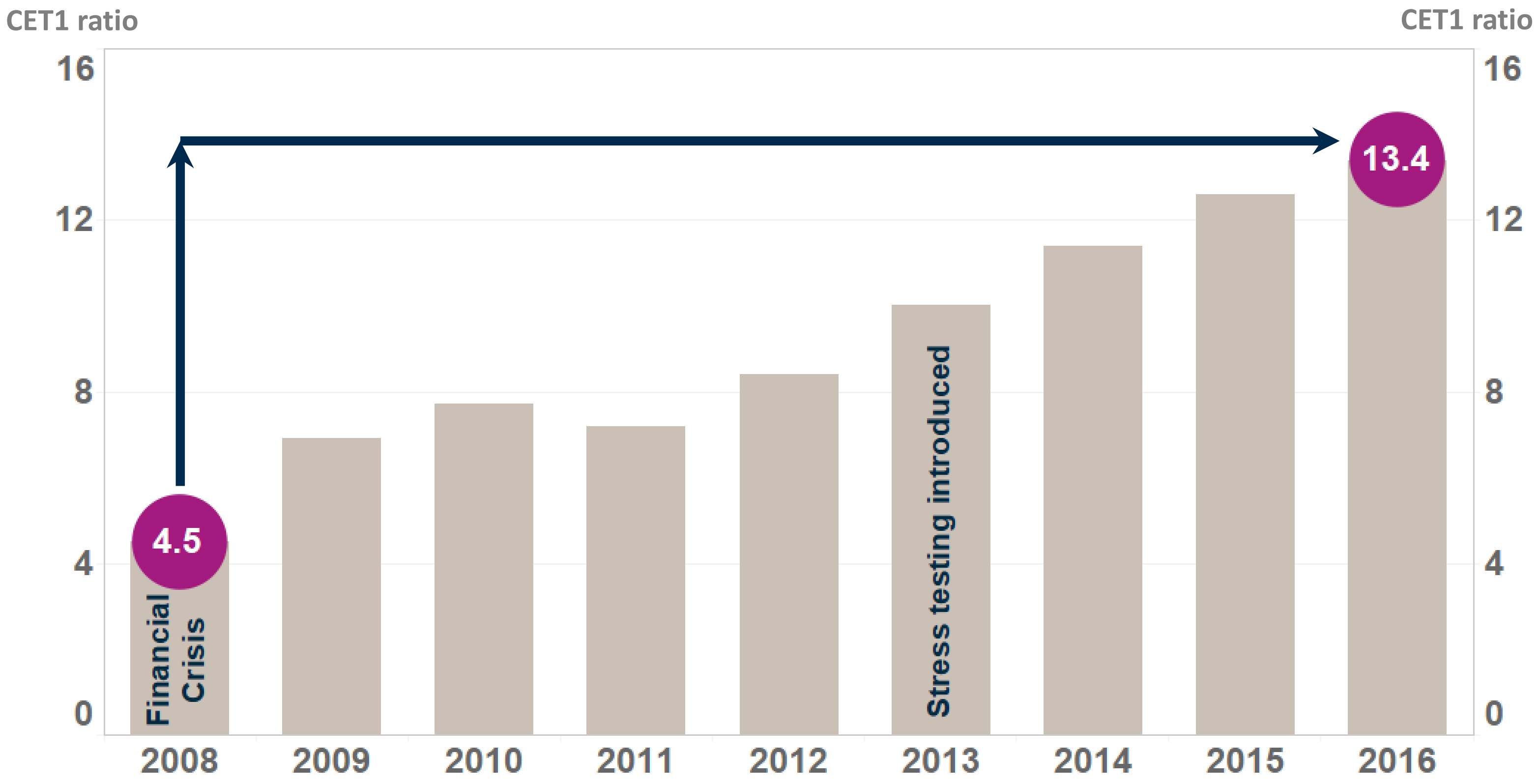
Are markets prone to amplifying adjustments?

Some developments raise questions that need exploring

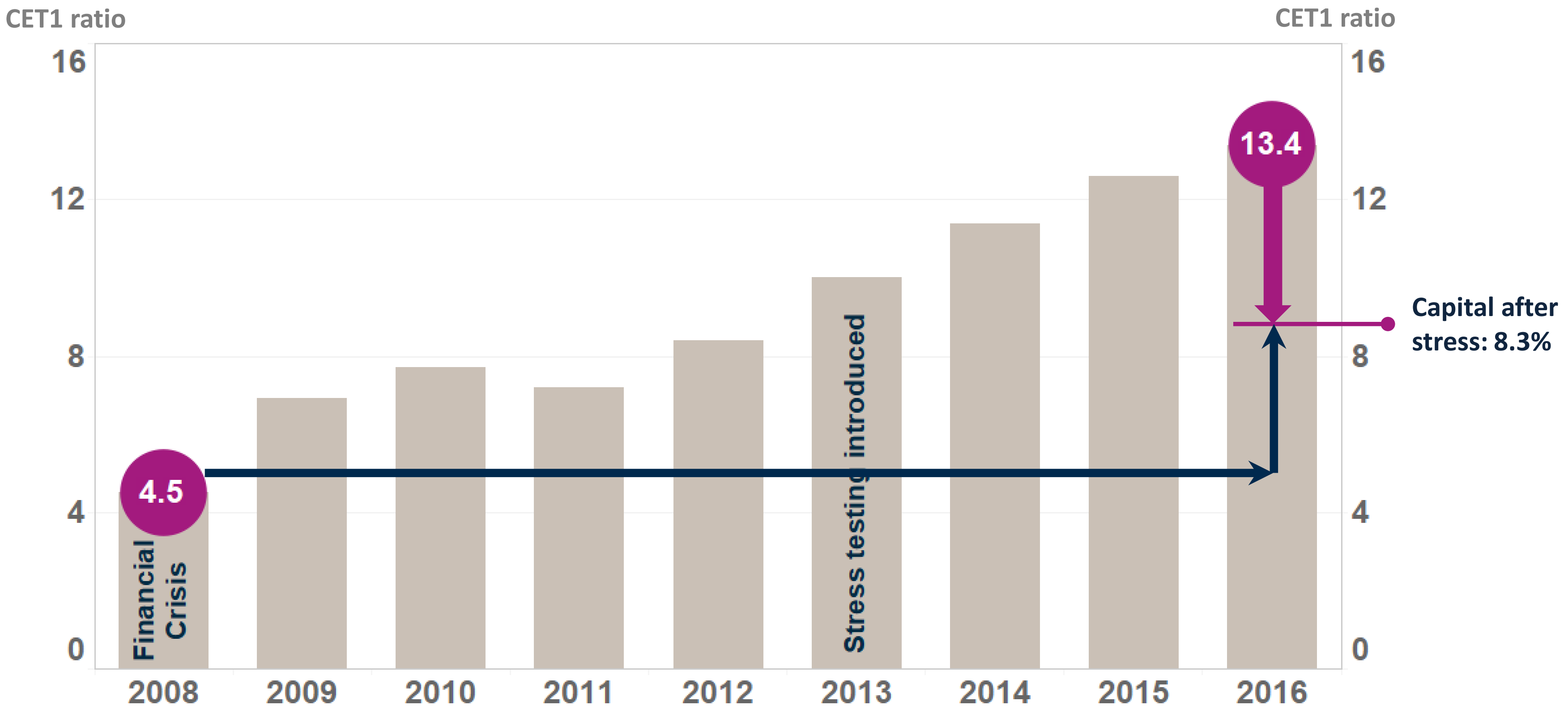
Bank of England 2017 stress test results



Banks have been increasing their capital ratios



Capital remains almost double pre-financial crisis levels even after the test



Four questions:

Have corporate bond and commercial property prices become stretched?

Yes

Do levels of corporate debt rely on these stretched valuations?

Not in the UK, but global picture shows we can't take that for granted

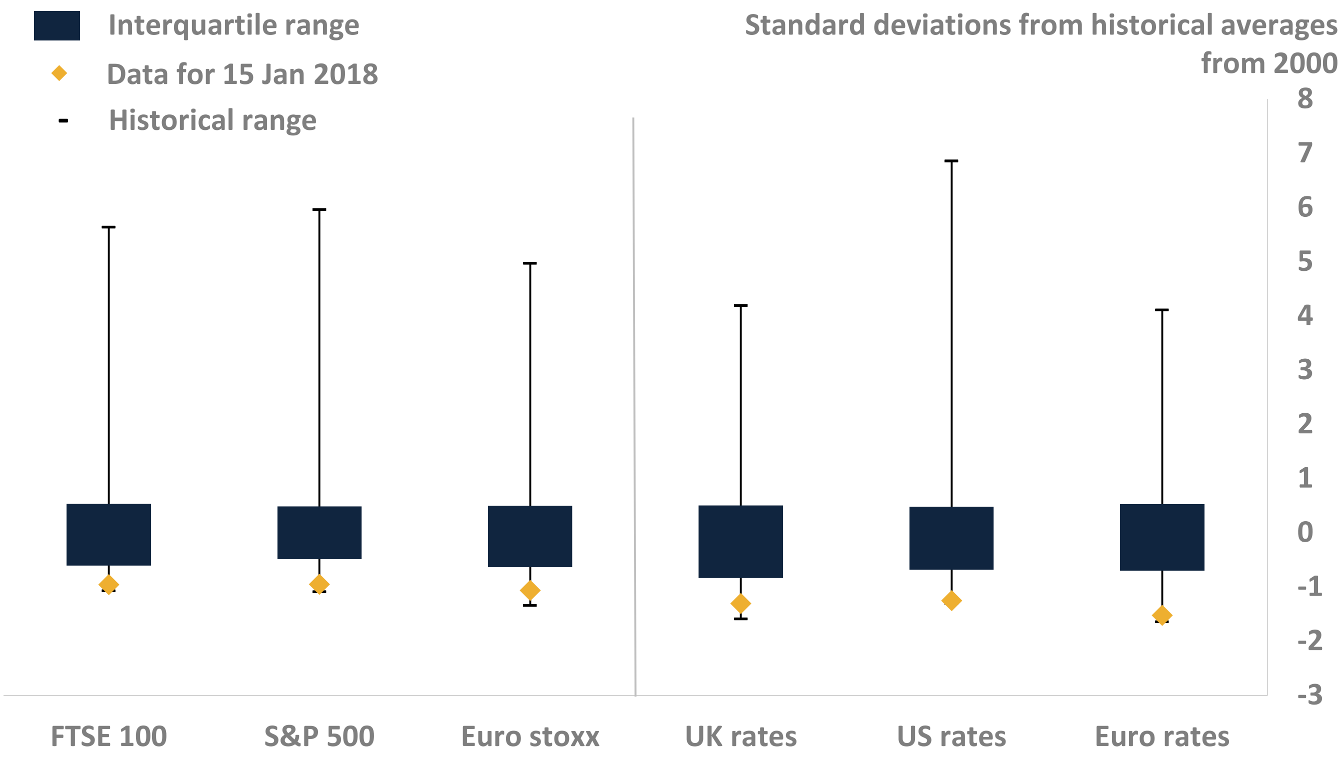
Is the banking system exposed to an adjustment?

It can withstand severe adjustments

Are markets prone to amplifying adjustments?

Some developments raise questions that need exploring

Stability has been a defining feature across a range of market prices



Sources: Barclays Live, BBA, Bloomberg, Chicago Mercantile Exchange, NYSE ICE and Bank calculations.
(a) Data starts from January 2000

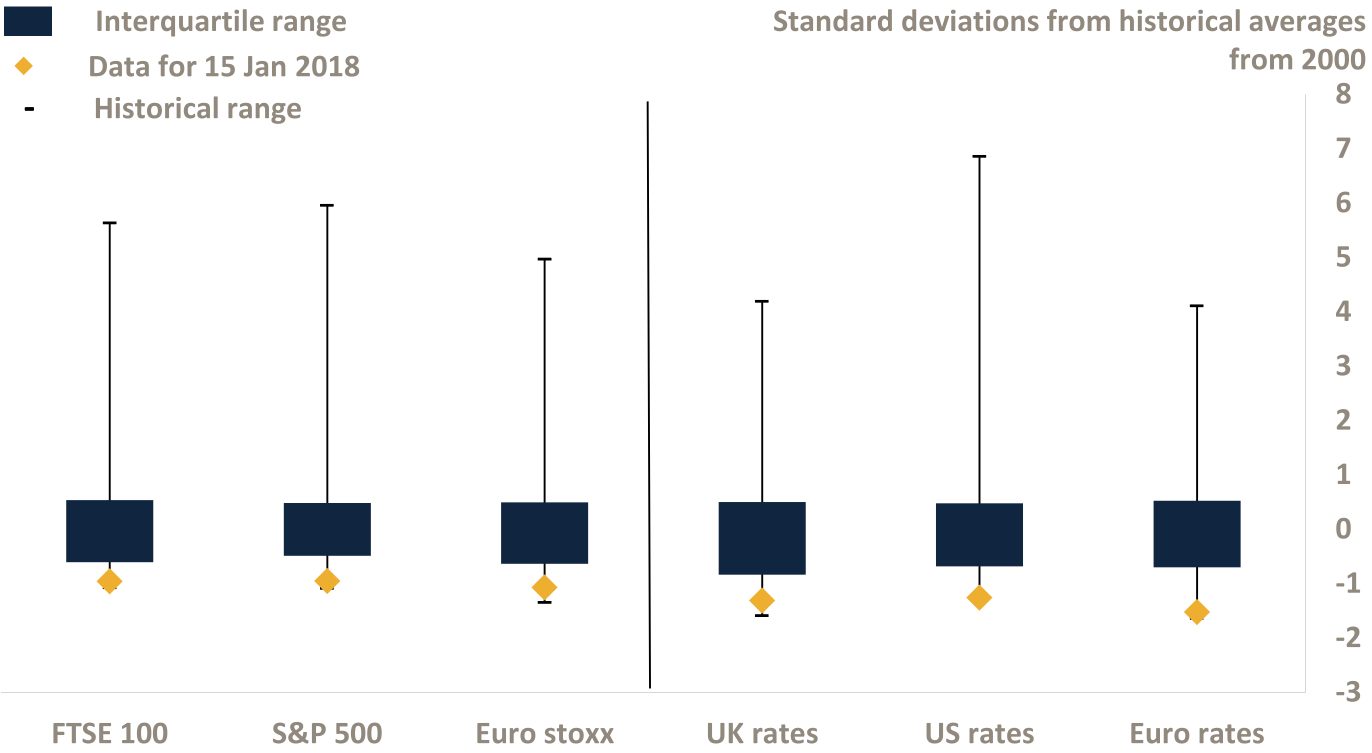
Low volatility begets low volatility

Low market volatility

Increasing supply of insurance

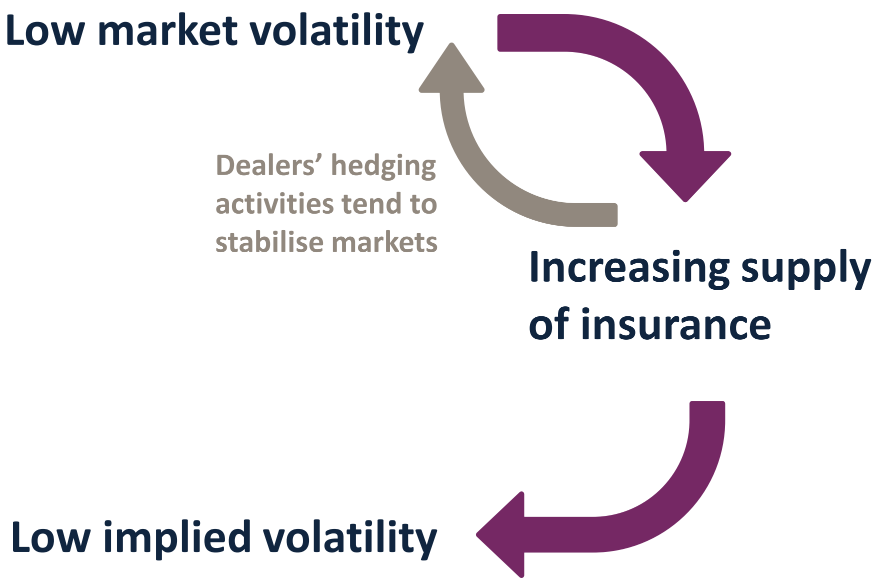
Low implied volatility

‘Implied volatility’ recently near all-time lows

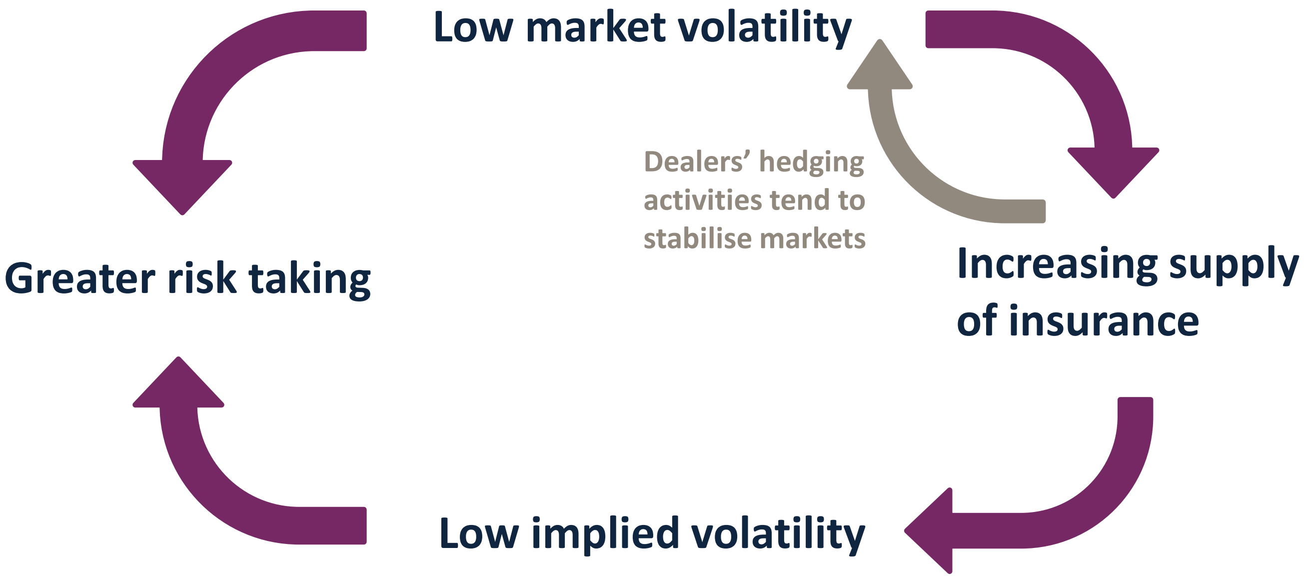


Sources: Barclays Live, BBA, Bloomberg, Chicago Mercantile Exchange, NYSE ICE and Bank calculations.
(a) Data starts from January 2000

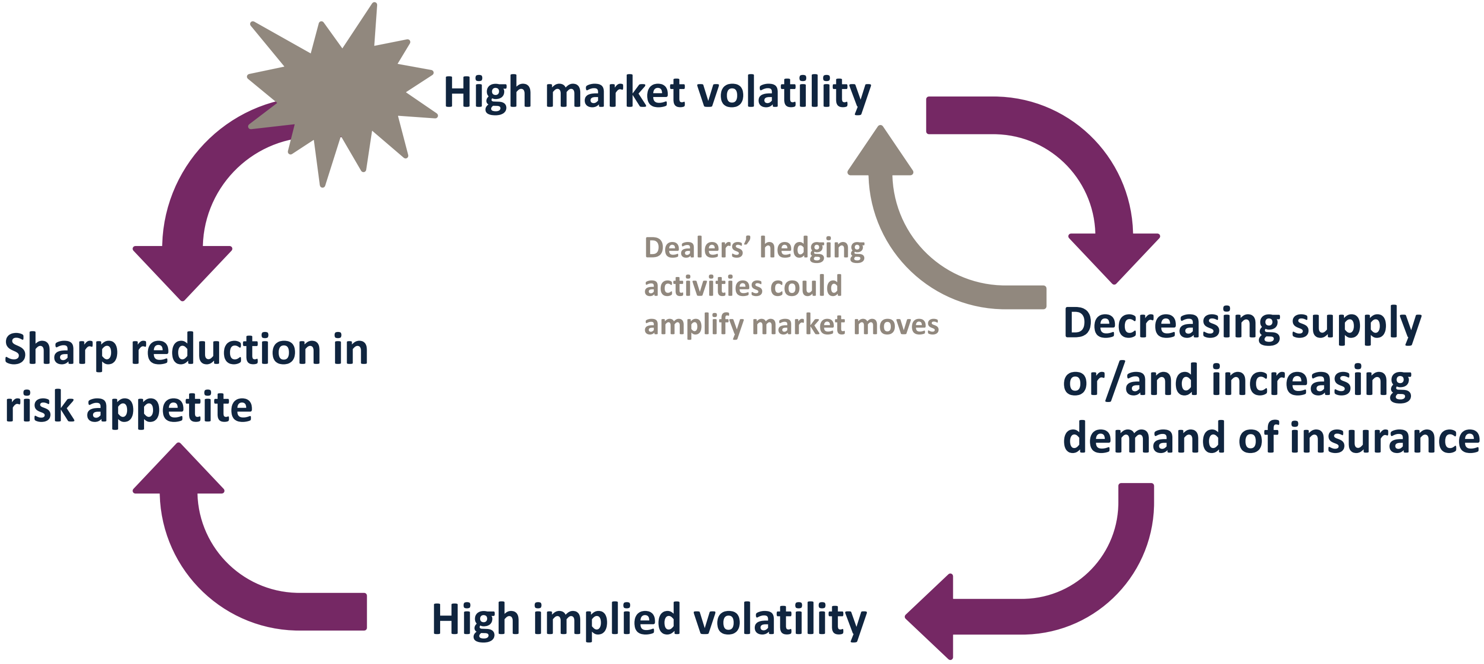
Low volatility begets low volatility



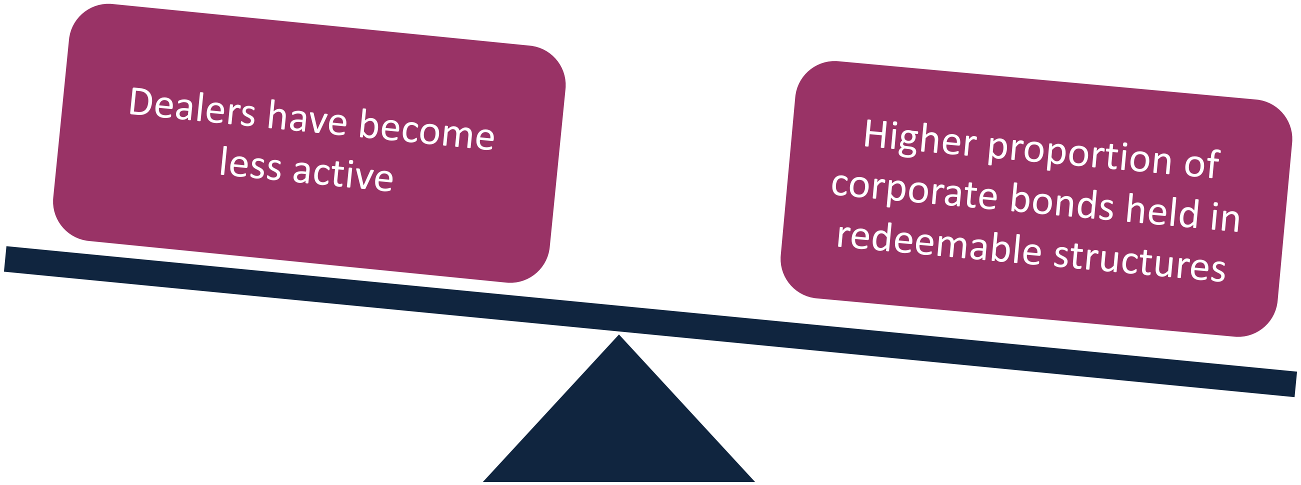
Low volatility begets low volatility



A shock can mean the whole thing goes into reverse



A liquidity imbalance in a bond market adjustment?



Four questions, and my four answers

Have corporate bond and commercial property prices become stretched?

Yes

Do levels of corporate debt rely on these stretched valuations?

Not in the UK, but global picture shows we can't take that for granted

Is the banking system exposed to an adjustment?

It can withstand severe adjustments

Are markets prone to amplifying adjustments?

Some developments raise questions that need exploring