

## Market Price Monitor

### Local Equity Markets

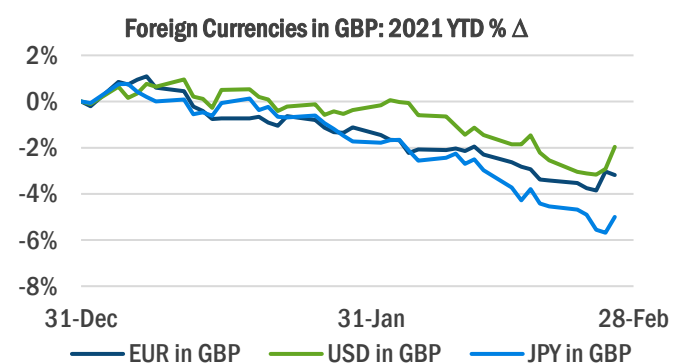
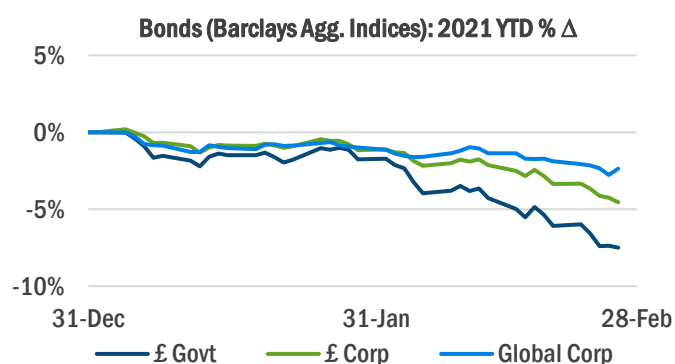
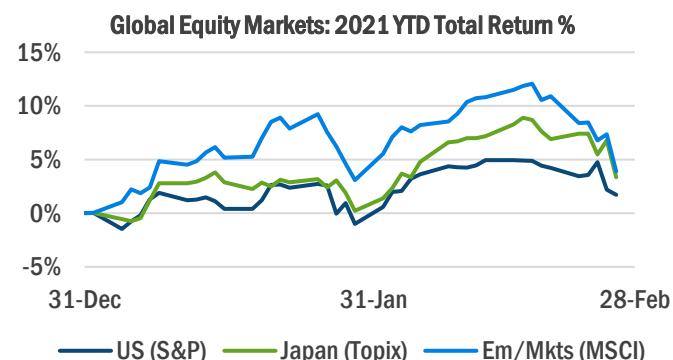
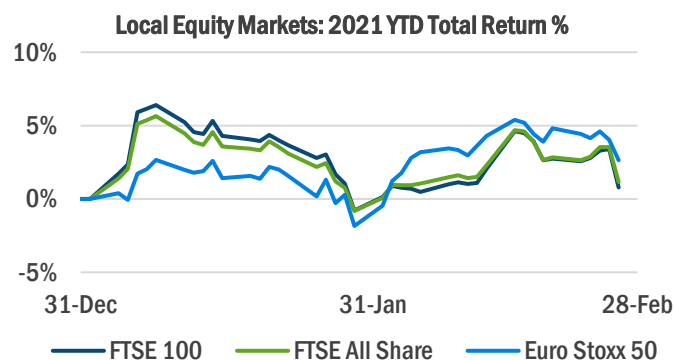
- Equity markets had a strong performance in February on the back of encouraging vaccine rollouts and infection declines, despite some losses in the last week from inflation concerns.
- The FTSE 100 index gained 1.6%.
- The Euro Stoxx 50 returned 4.6%.

### Global Equity Markets

- Developed economies outperformed their emerging markets counterparts in February, with the S&P 500 and the Japanese Topix indices returning 2.8% and 3.1%, respectively.
- The MSCI Emerging Markets index was up 0.8% at month-end.

### Bond/FX Markets

- Bond markets experienced material losses during the month, as long-term inflation concerns added to bond market volatility.
- The British government bond index lost 5.8%, down 7.5% year-to-date.
- The British and global corporate bond indices were down 3.4% and 1.4%, respectively.
- The British Pound had a strong performance in February, gaining 3.3%, 2.1% and 1.6%, against the Japanese Yen, Euro and US Dollar respectively.



Total Returns as of February 26, 2021												
	FTSE 100	FTSE All Share	Euro Stoxx 50	US (S&P)	Japan (Topix)	Em/Mkts (MSCI)	£ Govt	£ Corp	Global Corp	EUR in GBP	USD in GBP	JPY in GBP
1 Month	1.6%	2.0%	4.6%	2.8%	3.1%	0.8%	-5.8%	-3.4%	-1.4%	-2.1%	-1.6%	-3.3%
3 Month	4.1%	5.1%	4.5%	5.6%	6.4%	11.6%	-5.9%	-2.8%	-1.2%	-3.2%	-4.1%	-6.2%
1 Year	1.3%	3.5%	12.1%	31.3%	26.4%	36.5%	-4.3%	1.8%	5.7%	0.8%	-8.0%	-6.7%
YTD	0.8%	1.2%	2.6%	1.7%	3.4%	3.9%	-7.5%	-4.5%	-2.4%	-3.2%	-2.0%	-5.0%

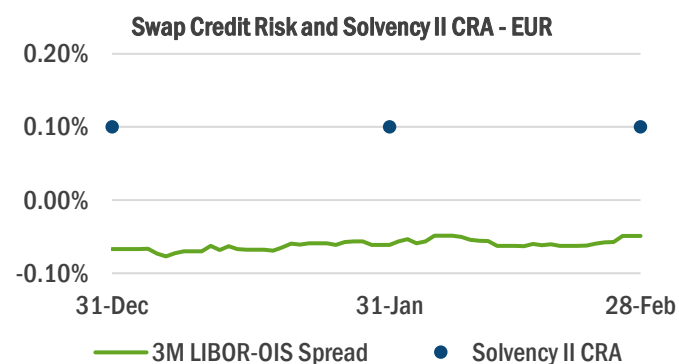
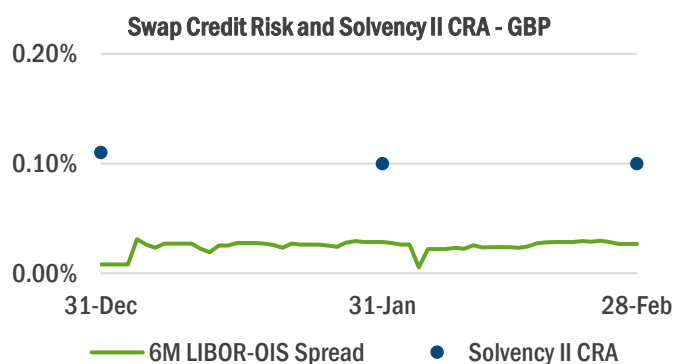
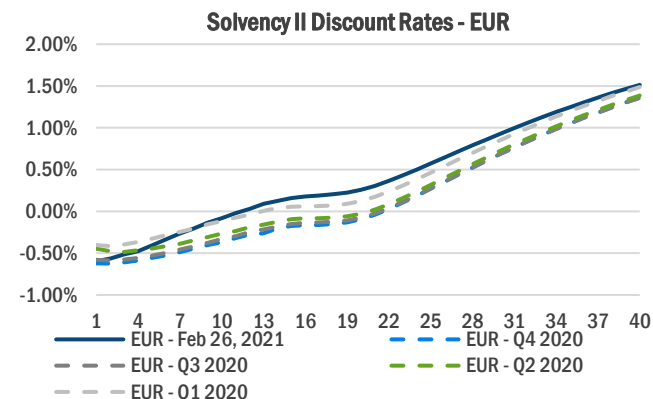
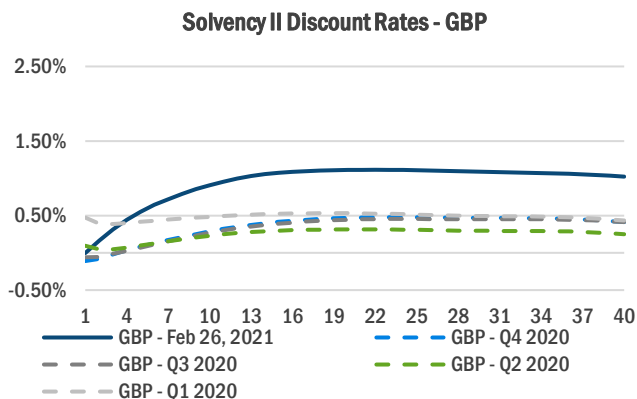
## Solvency II Monitor - Rates

### Risk Free Rates

- Risk-free rates increased at all terms in February, with medium to longer-term rates seeing the largest increase.
- Both the 10 and 20-year GBP risk-free rates increased by 46 basis points.
- The 30-year GBP risk-free rate rose by 43 basis points, while the 5-year rate saw an increase of 36 basis points.
- The 20-year EUR risk-free rate increased by 24 basis points, meanwhile the 10 and 30-year EUR rates increased by 21 and 18 basis points, respectively.

### Credit Risk Adjustment

- Both the GBP and EUR CRAs were unchanged and remain floored at 10 basis points.



	Change in GBP Discount and CRA (bps)					
	1Y	Y5	Y10	Y20	Y30	CRA
Since Q4 2020	11	47	62	64	62	-1
Since Q3 2020	6	48	64	67	64	-3
Since Q2 2020	-10	45	68	80	79	-4
Since Q1 2020	-48	14	42	58	59	-1

	Change in EUR Discount and CRA (bps)					
	1Y	Y5	Y10	Y20	Y30	CRA
Since Q4 2020	3	15	29	35	24	0
Since Q3 2020	-2	12	25	33	24	0
Since Q2 2020	-15	4	19	29	21	0
Since Q1 2020	-19	-8	4	14	8	0

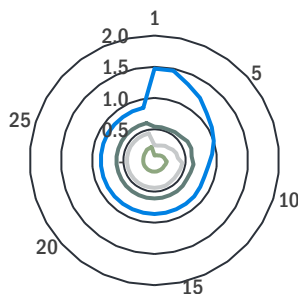
Solvency II Monitor - Spreads

Fundamental Spreads

- There were no material changes since the last report.

Fundamental Spreads %

GBP - Financial



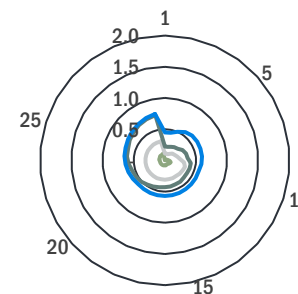
— AAA — AA — A — BBB

GBP Financial Fundamental Spread %					
	1Y	Y5	Y10	Y20	Y30
AAA	0.08	0.12	0.19	0.18	0.22
AA	0.24	0.30	0.44	0.44	0.44
A	0.54	0.57	0.61	0.61	0.61
BBB	1.47	1.13	0.84	0.86	0.86

GBP Financial 'Before Floor' %					
	1Y	Y5	Y10	Y20	Y30
AAA	0.00	0.04	0.08	0.15	0.22
AA	0.04	0.07	0.11	0.19	0.26
A	0.06	0.12	0.20	0.33	0.44
BBB	0.15	0.24	0.34	0.49	0.60

GBP - Non-Financial



— AAA — AA — A — BBB

GBP Non-Financial Fundamental Spread %					
	1Y	Y5	Y10	Y20	Y30
AAA	0.00	0.01	0.10	0.08	0.11
AA	0.11	0.16	0.34	0.31	0.31
A	0.22	0.28	0.42	0.51	0.74
BBB	0.45	0.59	0.57	0.57	0.76

GBP Non-Financial 'Before Floor' %					
	1Y	Y5	Y10	Y20	Y30
AAA	0.00	0.01	0.04	0.07	0.11
AA	0.00	0.04	0.08	0.17	0.25
A	0.04	0.14	0.26	0.51	0.74
BBB	0.11	0.23	0.35	0.57	0.76

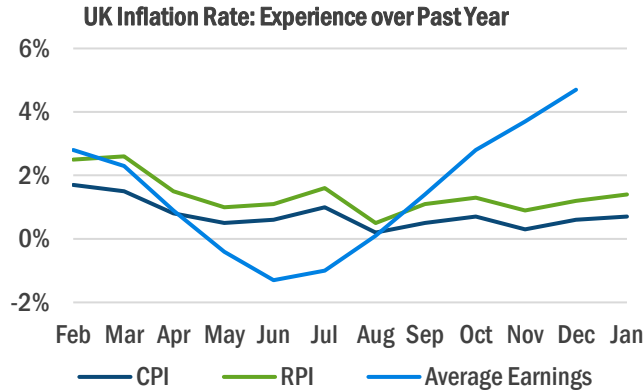
The **Solvency II risk-free discount rates** are based on applying the Smith-Wilson Extrapolation to LIBOR swap rates sourced from Refinitiv and applying the Credit Risk Adjustment as defined in the Technical Specs. The data is provided by EIOPA and as of 28/02/21.

The **Credit Risk Adjustment** is a component of the risk-free discount curve defined by EIOPA. It is calculated from actual experience in the 'LIBOR-OIS' spread (3 months for EUR, 6 months for GBP), and is bounded between 0.10 and 0.35. We show actual LIBOR-OIS spread levels and the defined CRA, for both GBP and EUR.

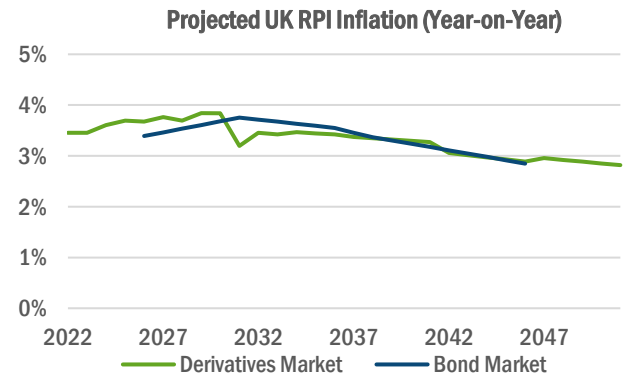
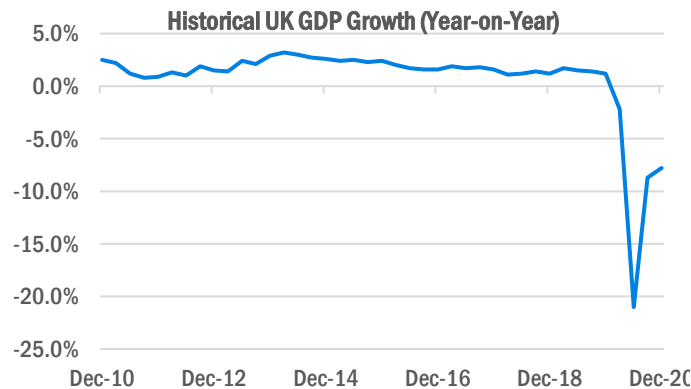
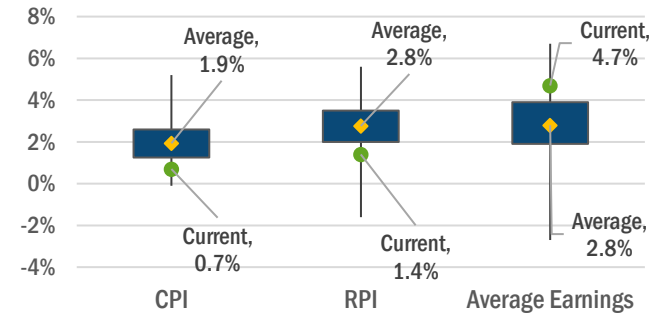
**EIOPA fundamental spreads** show the credit spread corresponding to the risk of default or downgrading of an asset. This is shown here across financial and non-financial assets, credit quality steps 0-3 and durations of 1-30 years. The data is provided by EIOPA and as of 28/02/21. **Fundamental spread** = maximum (probability of default + cost of downgrade; 35% of long-term average spread). In the tables we show the **'before floor'** measure = probability of default + cost of downgrade.

UK Inflation Monitor

- UK's CPI inflation increased by 10 basis points in January, posting a reading of 0.7%.
- UK's RPI inflation rose by 20 basis points to 1.4%.
- According to the ONS: "Furniture and household goods, restaurants and hotels, food, and transport had the largest upward contributions. While falling clothing and footwear prices had a downward effect."
- UK's average earnings continued to climb higher in December, with the headline figure coming in at 4.7%, an increase of 100 basis points, after the November reading was revised higher by 10 basis points to 3.7%.
- According to the ONS: "Annual growth in average employee pay continued to strengthen; the growth is driven in part by compositional effects of a fall in the number and proportion of lower-paid employee jobs, and by increased bonuses, which had been postponed earlier in the year."
- UK's Q4 2020 GDP growth figure was -7.8%, an increase of 90 basis points from the previous quarter, after the Q3 2020 figure was revised lower by 10 basis points to -8.7%.
- The projected UK RPI curve was higher in comparison to the previous month.



Max, Min and 50% Range: Since BoE Independence



Historical year-on-year inflation rate is assessed by the % change on:

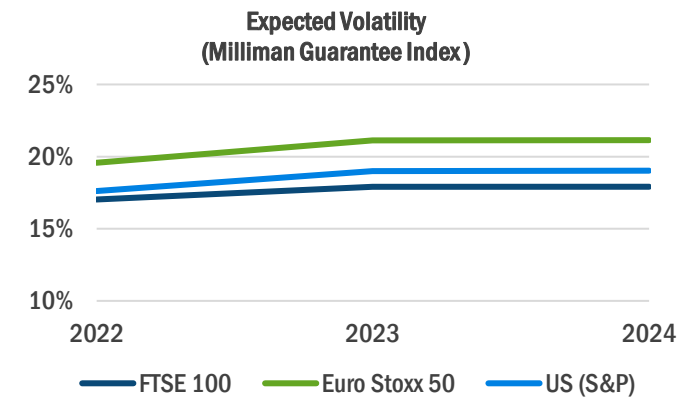
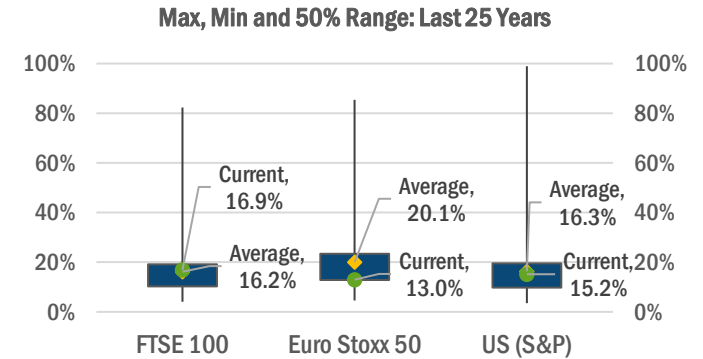
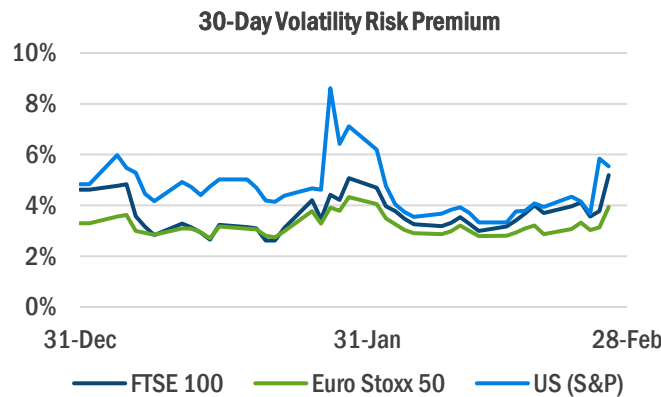
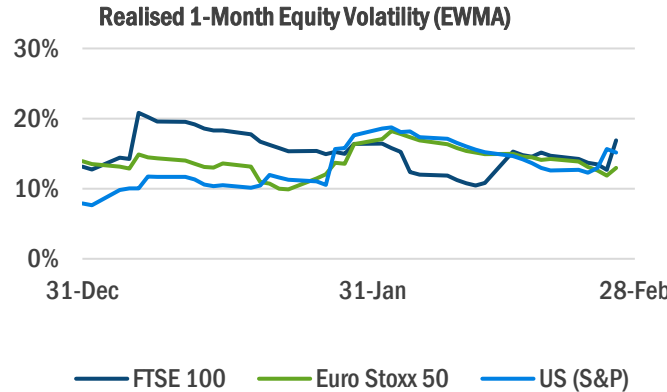
- **Consumer Price Index (CPI)** – measuring the monthly price of a basket of consumer goods and services
- **Retail Price Index (RPI)** – similar to CPI, but the main difference due the addition of mortgage payments, council tax and other housing costs
- **Average Earnings** – measuring the average total weekly employee remuneration over the previous 3 months.

Projection year-on-year inflation rate is the forward rate calculated from market data:

- **Derivatives Market View** – constructed from zero coupon inflation par swap rates against the RPI index at various tenors
- **Bond Market View** – constructed from the difference between the nominal rates implied by the conventional gilts and the real rates implied by the index-linked (RPI) gilts.

**Volatility and Hedging Cost Monitor**

- Realised volatility of the FTSE 100 index increased slightly in February, ending the month at 16.9%.
- In contrast, the realised volatility of the Euro Stoxx 50 and S&P 500 indices decreased to 13% and 15.2% by month-end, respectively.
- Volatility risk premiums subsided at the start of the month, but then increased again towards month end, reaching 5.5% for the S&P 500 and 5.2% for FTSE 100.



**Actual realised equity volatility** is measured by the weighted standard deviation of 1 month daily index change. The Exponentially Weighted Moving Average (EWMA) methodology places more importance to the recent returns in the calculation of the volatility.

**Volatility Risk Premium** is estimated as the difference between 30-day implied volatility and projected realised volatility (on data from the Oxford-Man Institute). This reflects the additional cost of hedging from purchasing a basket of options, in comparison to managing a dynamic delta hedge with futures (ignoring rolling transaction costs).

**Expected realised volatility** is an intermediate result from the [Milliman Guarantee Index™ \(MGI\)](#), which provides volatility parameters for variable annuity guarantee (VA) valuation and risk management. The levels shown are on an expected basis, and do not reflect any risk adjustment.



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