London Market Monitor - 31 March 2021

Data sources: Bloomberg; Barclays; EIOPA; Oxford-Man Institute; ONS; Milliman FRM

5%

0%

-5%

-10%

31-Dec

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31-Mar

Market Price Monitor

Local Equity Markets

- Most major equity markets had a very strong performance in March, as optimism around the global economic outlook continued to grow following successful vaccine rollouts.
- The FTSE 100 index gained 4.2% in March, up 5% for Q1 2021.
- The Euro Stoxx 50 index was up 7.9% at month-end.

Global Equity Markets

- Developed economies continued to outperform their emerging markets counterparts in March, with the S&P 500 and the Japanese Topix index gaining 4.4% and 5.7%, respectively.
- In contrast, the MSCI Emerging Markets index lost 1.5% in March.

Bond/FX Markets

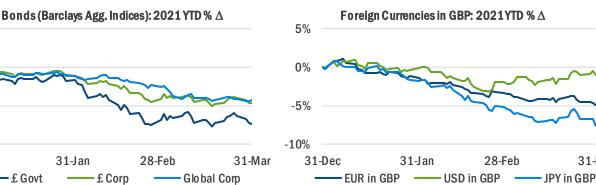
- The British government and corporate bond indices ended the month relatively flat. Meanwhile, the global corporate bond index was down 1.9% at month-end.
- The British Pound had mixed performance in March, gaining 2.7% and 1.8% against the Japanese Yen and the Euro. However, ended the month 0.9% weaker against the US Dollar.



31-Jan

• £ Govt





Total Returns as of March 31, 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	4.2%	4.0%	7.9%	4.4%	5.7%	-1.5%	0.1%	-0.1%	-1.9%	-1.8%	0.9%	-2.7%
3 Month	5.0%	5.2%	10.8%	6.2%	9.3%	2.3%	-7.4%	-4.7%	-4.2%	-4.9%	-1.1%	-7.6%
1 Year	21.9%	26.7%	44.4%	56.4%	42.1%	58.9%	-5.7%	9.8%	11.7%	-3.8%	-10.1%	-12.5%
YTD	5.0%	5.2%	10.8%	6.2%	9.3%	2.3%	-7.4%	-4.7%	-4.2%	-4.9%	-1.1%	-7.6%

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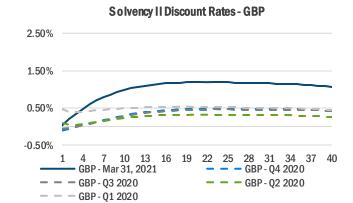
Solvency II Monitor - Rates

Risk Free Rates

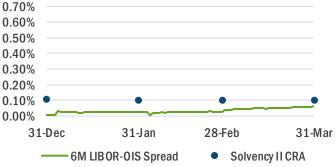
- Similar to the month before, GBP riskfree rates increased at all terms in March, with medium to longer term rates seeing the largest increase.
- Both the 10 and 30-year GBP risk-free rates increased by 7 basis points, while the 20-year rate climbed by 8 basis points.
- Shorter term EUR risk-free rates declined marginally, with the 1-year rate falling by 2 basis points in March.
- In contrast, medium to longer term EUR risk-free rates increased. The 20year EUR risk-free rate climbed by 12 basis points, meanwhile the 10 and 30-year rates increased by 5 and 10 basis points, respectively.

Credit Risk Adjustment

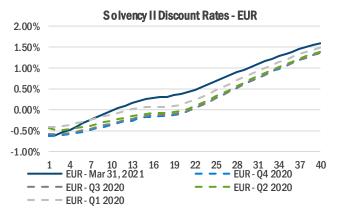
 Both the GBP and EUR CRAs were unchanged and remain floored at 10 basis points.

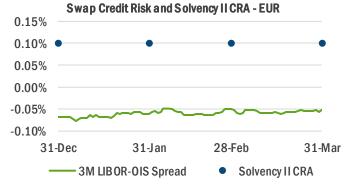






Change in GBP Discount and CRA (bps)										
	1Y	Y5	Y10	Y20	Y30	CRA				
Since Q4 2020	14	52	69	72	69	-1				
Since Q3 2020	9	53	71	74	71	-3				
Since Q2 2020	-7	50	75	87	86	-4				
Since Q1 2020	-44	18	50	65	67	-1				





Change in EUR Discount and CRA (bps)

	1Y	Y5	Y10	Y20	Y30	CRA
Since Q4 2020	1	15	34	47	34	0
Since Q3 2020	-4	12	30	45	34	0
Since Q2 2020	-17	4	24	40	30	0
Since Q1 2020	-21	-8	9	25	17	0

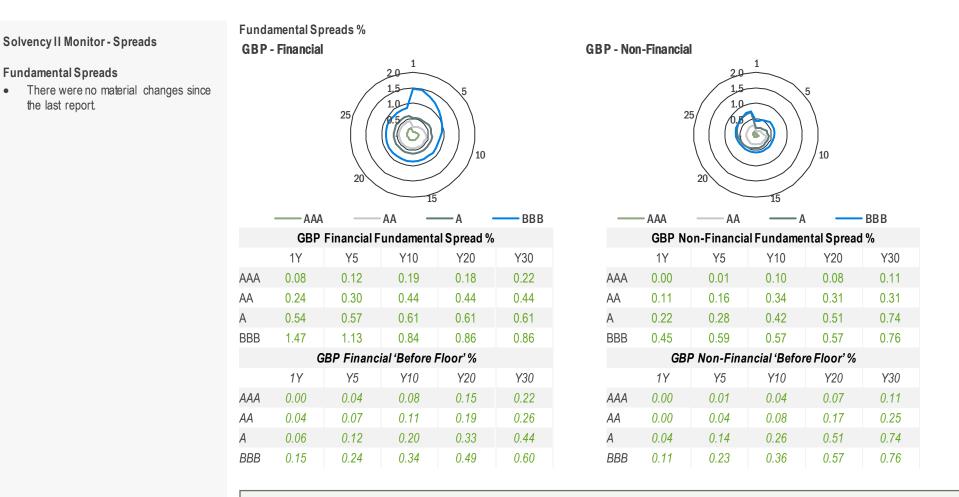


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The Solvency II risk-free discount rates are based on applying the Smith-Wilson Extrapolation to LIBOR swap rates sourced from Refinitiv and applying the Credit Risk Adjustment as defined in the Technical Specs. The data is provided by EIOPA and as of 31/03/21.

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 nonfinancial assets, credit quality steps 0-3 and durations of 1-30 years. The data is provided by EIOPA and as of 31/03/21. 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.



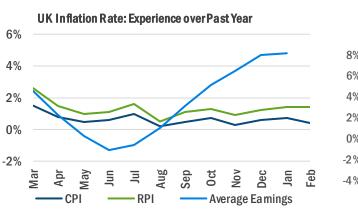
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UK Inflation Monitor

- UK's CPI inflation was 0.4% in February, a decline of 30 basis points from the previous month.
- UK's RPI inflation measure was unchanged at 1.4%.
- According to the ONS: "Falling prices for clothing, second-hand cars, and games, toys and hobbies resulted in the largest downward contributions. These were partially offset by large upward contributions from rising prices for motor fuels, and housing and household services overall."
- UK's average earnings continued to tick higher in January, seeing an increase of 10 basis points from the previous month to 4.8%.
- According to the ONS: "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 2020."
- UK's Q4 2020 GDP growth figure was revised higher by 50 basis points to -7.3%.
- The projected RPI curve was marginally higher at month-end in comparison to the previous month. Short to medium terms are projecting an inflation of just below 4%, indicative of market's high inflation perception at these terms.



8% Average, Average. Current, 6% 2.8% 1.9% 4.8% 4% 2% 0% Average 2.8% -2% Current. Current, -4% 0.4% 1.4%

CPI



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.



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Max, Min and 50% Range: Since BoE Independence

RPI

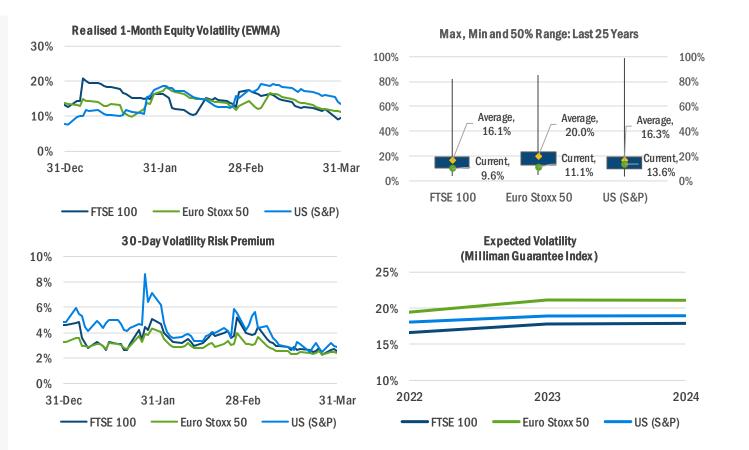
Average Earnings

London Market Monitor - 31 March 2021

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Volatility and Hedging Cost Monitor

- Realised volatilities of major indices declined in March, with the measure standing at 9.6% and 11.1% for the FTSE 100 and Euro Stoxx 50 indices at month-end.
- The realised volatility of the S&P 500 was 13.6% at the end of the month.
- Volatility risk premiums also dropped in March, reaching 2.6% and 2.4% for the FTSE 100 and Euro Stoxx 50 at month-end. The S&P 500 had a volatility risk premium of 2.9%.
- The volatility risk premiums on the FTSE 100 and Euro Stoxx 50 are now just above the levels seen before the pandemic crisis, whereas the measure for the S&P 500 is now back to a similar level seen prior to the pandemic crisis.



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 <u>Milliman Guarantee Index</u>™ (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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Chicago

71 South Wacker Drive Chicago, IL 60606 +1 855 645 5462

London

11 Old Jew ry London EC2R 8DU UK +44 0 20 7847 1557

Sydney

32 Walker Street North Sydney, NSW 2060 Australia +610 2 8090 9100

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