

Market Price Monitor

Local Equity Markets

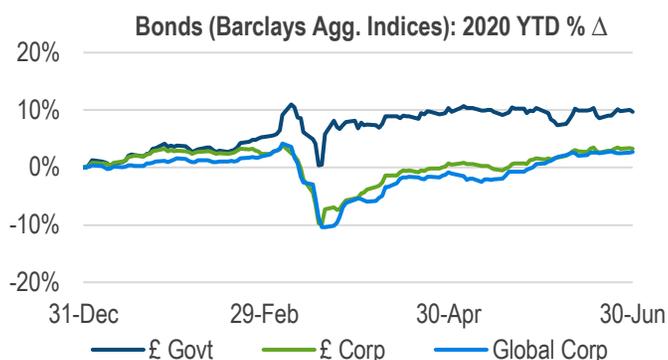
- Equity markets had a positive performance in June as they ended a very strong quarter by making gains for the third straight month.
- As economies continue to reopen, we have seen improving economic data and extended monetary and fiscal stimulus measures, along with a strong recovery in the equity markets
- The FTSE 100 index ended the month up 1.7%, having gained 9.1% during Q2.
- The Euro Stoxx 50 index returned 6.5% in June.

Global Equity Markets

- Emerging markets outperformed their developed economies counterparts in June.
- The MSCI Emerging Markets index gained 7.4%; meanwhile the S&P 500 was up 2% at month-end.
- The Japanese equity market was the laggard performer, ending the month down 0.2%.

Bond/FX Markets

- The British government bond index was down 0.6% at month-end.
- In contrast, both the British and global corporate bond indices were up in June, returning 1.6% and 2.1%, respectively.
- The British Pound lost 1% against the Euro in June, while making marginal gains of 0.2% and 0.3% against the US Dollar and the Japanese Yen, respectively.



	Total Returns as of June 30, 2020											
	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	1.7%	1.5%	6.5%	2.0%	-0.2%	7.4%	-0.6%	1.6%	2.1%	1.0%	-0.2%	-0.3%
3 Month	9.1%	10.2%	17.8%	20.5%	11.2%	18.2%	2.6%	9.0%	8.6%	2.6%	0.2%	0.1%
1 Year	-13.8%	-13.0%	-4.5%	7.5%	3.1%	-3.0%	11.9%	7.1%	5.8%	1.4%	2.6%	2.6%
YTD	-16.9%	-17.5%	-12.0%	-3.1%	-8.2%	-9.7%	9.7%	3.3%	2.7%	7.3%	7.1%	7.9%

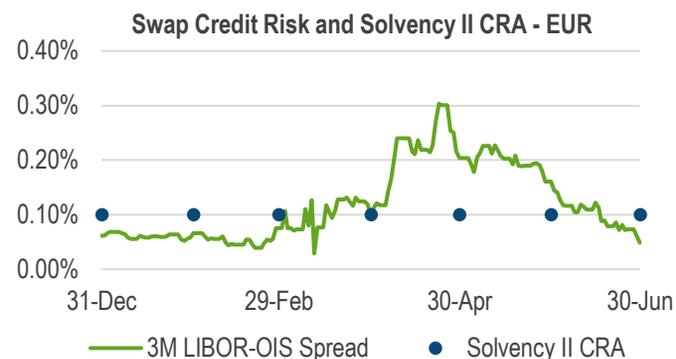
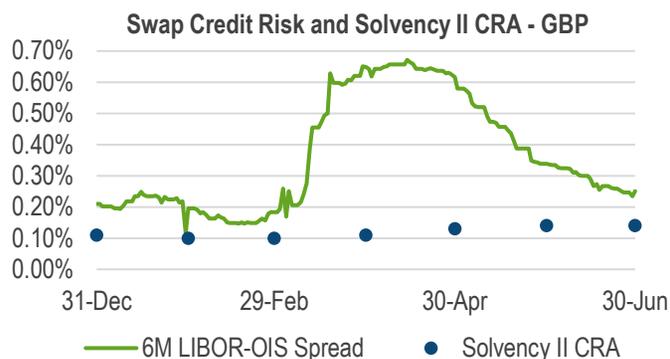
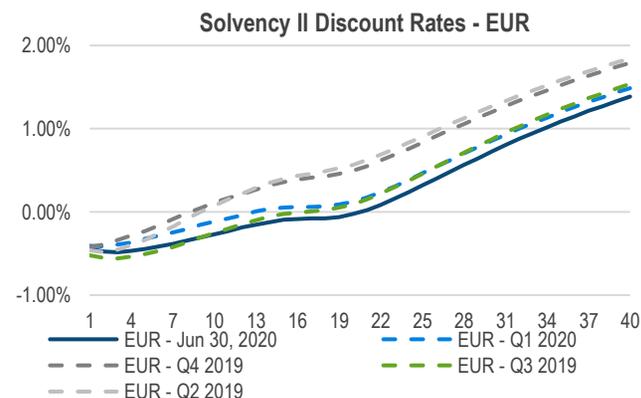
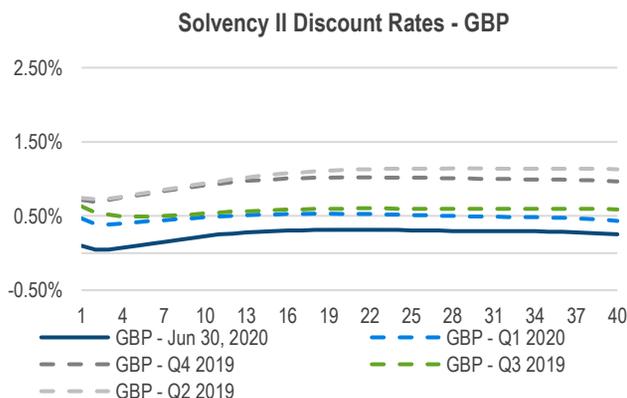
Solvency II Monitor - Rates

Risk Free Rates

- GBP Risk-free rates declined at short to medium terms, while increasing at longer terms.
- The 1-year GBP risk-free rate fell by 8 basis points, while the 5-year rate declined by 6 basis points.
- In contrast, the 30-year GBP risk-free rate increased by 3 basis points.
- EUR Risk-free rates declined at all terms in June, with the shorter-term rates seeing the largest decrease.
- The 1-year EUR risk-free rate fell by 11 basis points, while the 5-year rate saw a 7 basis points decline.

Credit Risk Adjustment

- Both the GBP and EUR CRAs remained unchanged at 14 and 10 basis points, respectively.



Change in GBP Discount and CRA (bps)						
	1Y	Y5	Y10	Y20	Y30	CRA
Since Q1 2020	-38	-32	-25	-22	-20	3
Since Q4 2019	-62	-68	-68	-71	-71	3
Since Q3 2019	-53	-39	-31	-29	-30	3
Since Q2 2019	-65	-69	-71	-81	-85	3

Change in EUR Discount and CRA (bps)						
	1Y	Y5	Y10	Y20	Y30	CRA
Since Q1 2020	-4	-12	-15	-15	-13	0
Since Q4 2019	-2	-22	-38	-53	-48	0
Since Q3 2019	8	6	-1	-12	-15	0
Since Q2 2019	2	-11	-35	-60	-54	0

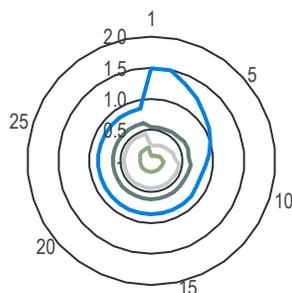
Solvency II Monitor - Spreads

Fundamental Spreads

- There were no material changes since the last report.

Fundamental Spreads %

GBP - Financial

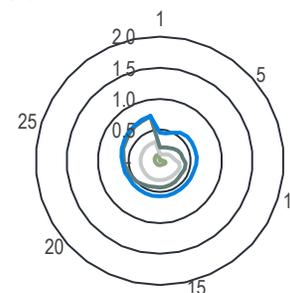


— AAA — AA — A — BBB

GBP Financial Fundamental Spread %					
	1Y	Y5	Y10	Y20	Y30
AAA	0.08	0.11	0.19	0.18	0.22
AA	0.25	0.31	0.45	0.44	0.44
A	0.55	0.58	0.62	0.62	0.62
BBB	1.49	1.14	0.84	0.86	0.86

GBP Financial 'Before Floor' %					
	1Y	Y5	Y10	Y20	Y30
AAA	0.00	0.04	0.08	0.16	0.22
AA	0.04	0.06	0.11	0.19	0.26
A	0.06	0.13	0.20	0.33	0.45
BBB	0.15	0.25	0.35	0.49	0.61

GBP - Non-Financial



— AAA — AA — A — BBB

GBP Non-Financial Fundamental Spread %					
	1Y	Y5	Y10	Y20	Y30
AAA	0.00	0.01	0.10	0.07	0.10
AA	0.11	0.16	0.34	0.31	0.31
A	0.22	0.29	0.42	0.50	0.73
BBB	0.45	0.59	0.57	0.57	0.74

GBP Non-Financial 'Before Floor' %					
	1Y	Y5	Y10	Y20	Y30
AAA	0.00	0.01	0.04	0.07	0.10
AA	0.00	0.04	0.08	0.16	0.24
A	0.04	0.14	0.26	0.50	0.73
BBB	0.11	0.22	0.34	0.55	0.74

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 30/06/20.

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.

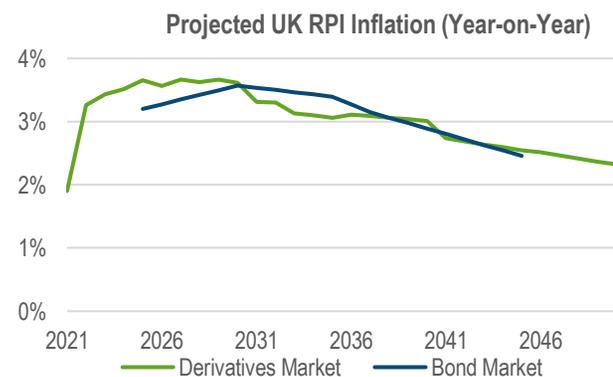
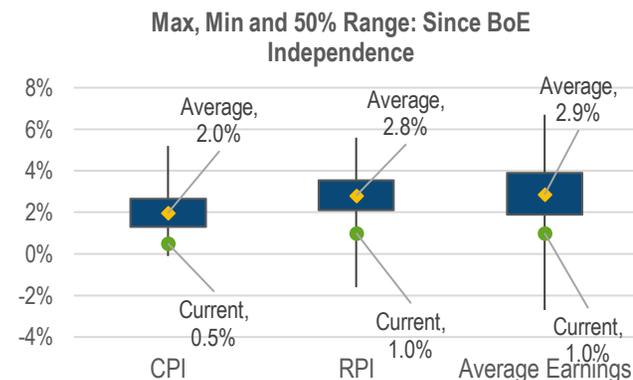
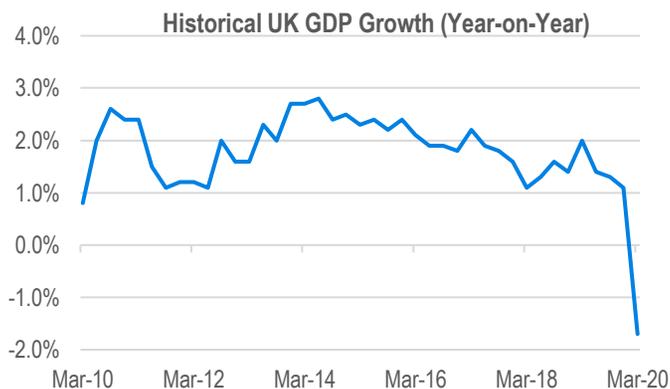
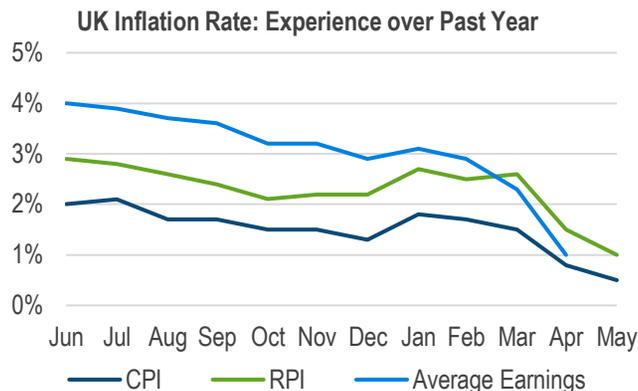
EIOPA fundamental spreads show the credit spread corresponding to the risk of default or downgrading of an asset. This is shown here across financial and non-financial assets, credit quality steps 0-3 and durations of 1-30 years. The data is provided by EIOPA and as of 30/06/20. **Fundamental spread** = 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 reading was 0.5% in May, a drop of 30 basis points from the previous month.
- UK's RPI fell by 50 basis points to 1% in May.
- According to the ONS: *"Falling prices for motor fuels and a variety of recreational and cultural goods resulted in the largest downward contributions. Rising prices for food and non-alcoholic drinks resulted in a partially offsetting upward contribution."*
- Average earnings fell by 130 basis points in April, posting a headline figure of 1%. March earnings inflation was revised to 2.3%.
- There were no material changes to the projected UK RPI curve from the previous month.
- UK's Q1 2020 GDP growth was revised lower by 10 basis points to -1.7%.

House of Lords' Report

- There were no further updates this month.



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

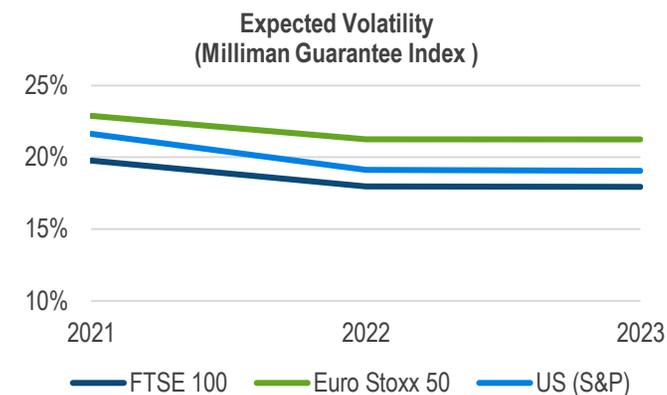
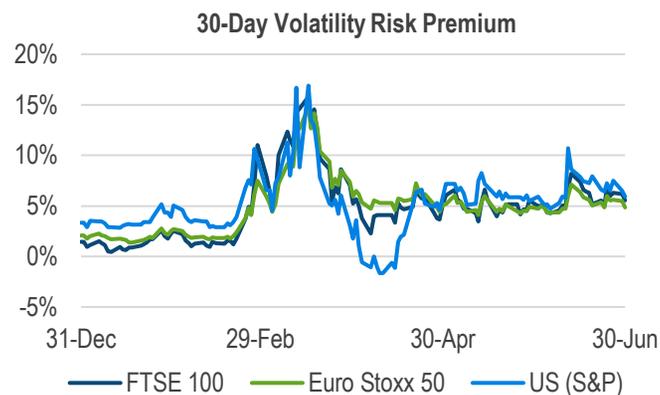
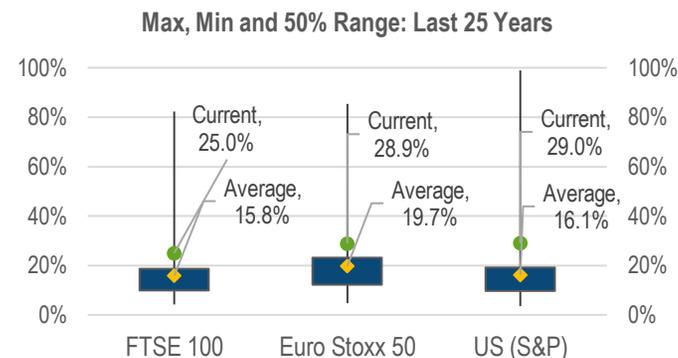
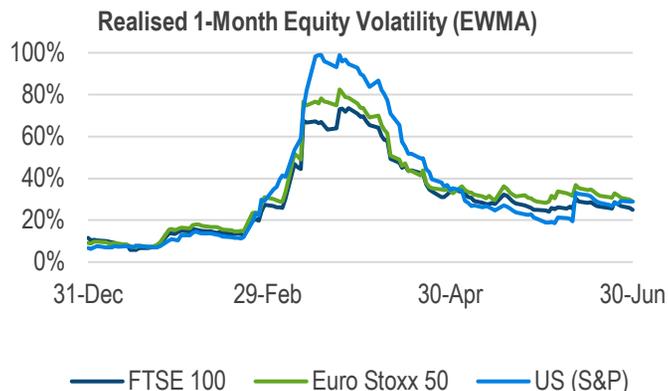
- **Consumer Price Index (CPI)** – measuring the monthly price of a basket of consumer goods and services
- **Retail Price Index (RPI)** – similar to CPI, but the main difference due the addition of mortgage payments, council tax and other housing costs
- **Average Earnings** – measuring the average 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 volatilities remained broadly unchanged in June, with the FTSE 100 and the Euro Stoxx 50 indices posting realised volatilities of 25% and 28.9% at month-end, respectively. The S&P 500 saw its realised volatility increasing to 29% by month-end.
- Volatility risk premiums also remained mainly unchanged in June, but remain elevated compared to those levels observed at year-end 2019.
- The FTSE 100 had a volatility risk premium of 5.6% at month-end; meanwhile the Euro Stoxx 50 and the S&P 500 indices posted volatility risk premiums of 4.9% and 5.9% at month-end, respectively.



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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