

Asset Price Monitor

Local Equity Markets

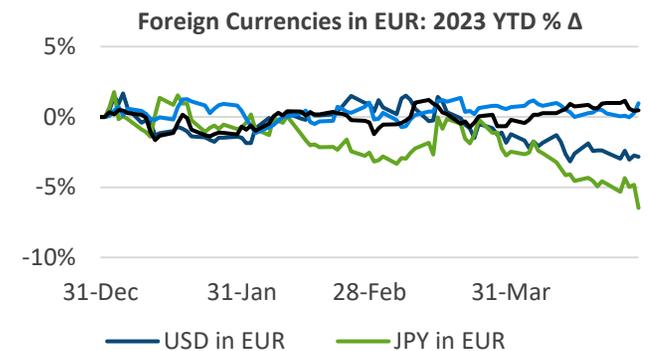
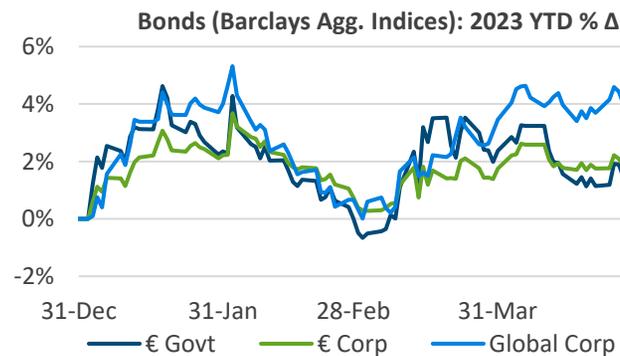
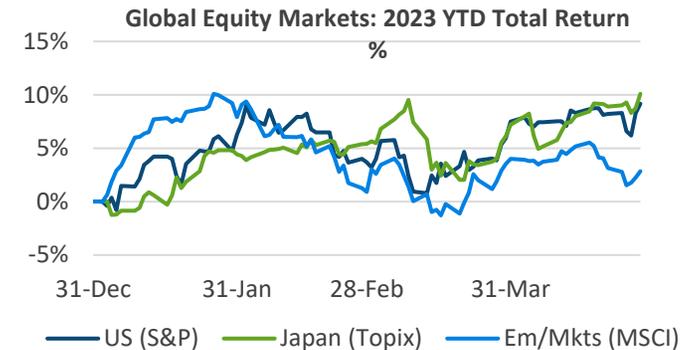
- Most major global equity markets had a positive performance in April as global growth generally trended to the upside.
- The Euro Stoxx 50 index was up 1.8% in April, gaining 16.3% year-to-date.
- The FTSE 100 index gained 3.4%, returning 7.1% year-to-date.

Global Equity Markets

- Developed market equities outperformed their emerging market counterparts, with the S&P 500 up 1.6% and the Topix index gaining 2.7%. Meanwhile, the MSCI Emerging Market index was down 1.1%.

Bond/FX Markets

- The European government bond index ended the month relatively flat, whereas the European corporate bond index was up 0.7%.
- The Euro had a mixed performance, gaining 1.6% against the US Dollar and 4.1% against the Japanese Yen, but ended the month relatively flat against the British Pound.



Total Returns as of April 28, 2023

	Euro Stoxx 50	FTSE 100	SMI	US (S&P)	Japan (Topix)	Em/Mkts (MSCI)	€ Govt	€ Corp	CHF in EUR	USD in EUR	JPY in EUR	GBP in EUR
1 Month	1.8%	3.4%	4.1%	1.6%	2.7%	-1.1%	-0.1%	0.7%	0.7%	-1.6%	-4.1%	0.3%
3 Month	5.8%	2.6%	4.1%	2.7%	5.4%	-4.7%	0.0%	0.2%	1.2%	-1.4%	-5.8%	0.5%
1 Year	18.8%	8.2%	-2.8%	2.7%	11.3%	-6.1%	-8.2%	-4.3%	4.2%	-4.3%	-8.8%	-4.4%
YTD	16.3%	7.1%	9.5%	9.2%	10.1%	2.9%	2.3%	2.5%	0.5%	-2.8%	-6.5%	1.0%

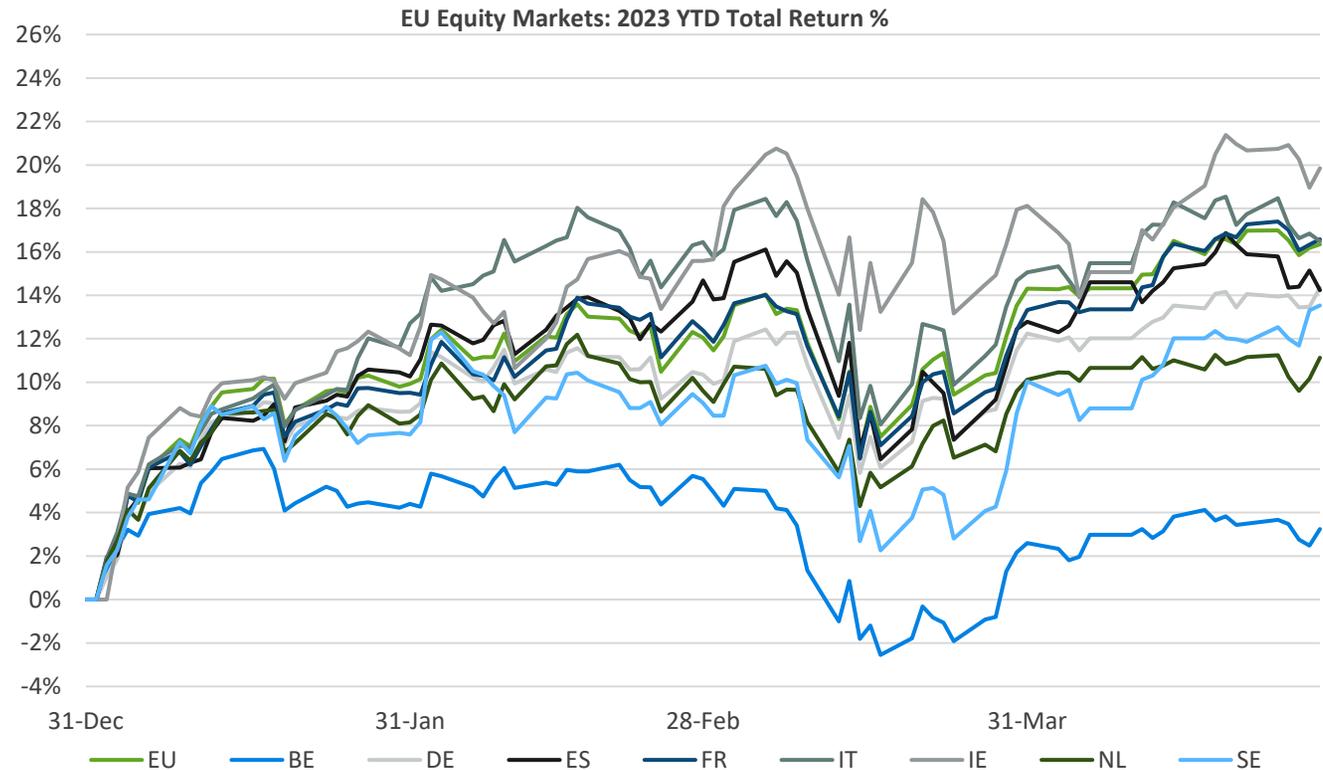
Milliman Financial Risk Management

EuroZone Market Monitor – 28 April 2023

Data sources: Bloomberg; Barclays; EuroStat; EIOPA; ONS; Milliman FRM

Eurozone Equity

- European equity markets had a positive performance across the board in April.
- The Swedish equity market was the best performer in April, up 3.2%.
- The Irish equity market remains the outperformer in the region year-to-date, having returned 19.8% during this period.
- The Belgian equity market made the smallest gain in the month, up 0.6%. It also remained as the laggard performer year-to-date, having gained 3.2% so far in 2023.



Equity Returns as of April 28, 2023

	EU	Belgium	Germany	Spain	France	Italy	Ireland	Netherlands	Sweden
1 Month	1.8%	0.6%	1.9%	1.3%	2.9%	1.2%	1.5%	0.9%	3.2%
3 Month	5.8%	-1.1%	5.2%	3.6%	6.5%	3.4%	7.7%	2.7%	5.5%
QTD	1.8%	0.6%	1.9%	1.3%	2.9%	1.2%	1.5%	0.9%	3.2%
YTD	16.3%	3.2%	14.4%	14.2%	16.6%	16.5%	19.8%	11.1%	13.5%

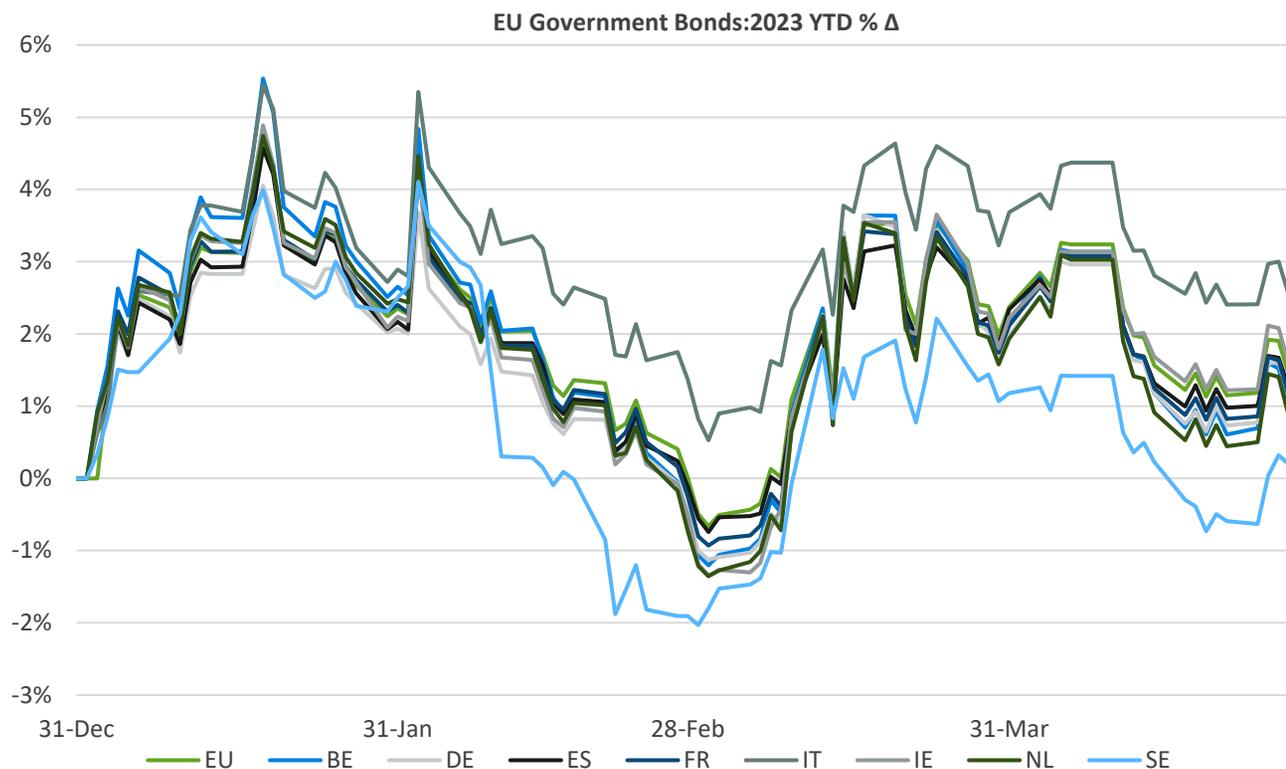
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EuroZone Market Monitor – 28 April 2023

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Eurozone Government Bonds

- The major European government bond indices had a mixed performance in April.
- The Swedish government bond index saw the largest decline, down 0.5%. The index remains the laggard performer in the region for the year, having returned 0.7% year-to-date.
- The Irish government bond index was the outperformer, up 0.3% in April.
- The Italian government bond index has seen the largest gain for the year, up 3.4% year-to-date.



Bond Returns as of April 28, 2023

	EU	Belgium	Germany	Spain	France	Italy	Ireland	Netherlands	Sweden
1 Month	-0.1%	-0.2%	0.0%	-0.2%	-0.1%	-0.3%	0.3%	0.0%	-0.5%
3 Month	0.0%	-0.7%	-0.1%	-0.1%	-0.3%	0.5%	0.3%	-0.6%	-1.8%
QTD	-0.1%	-0.2%	0.0%	-0.2%	-0.1%	-0.3%	0.3%	0.0%	-0.5%
YTD	2.3%	2.0%	2.0%	2.1%	2.0%	3.4%	2.6%	1.9%	0.7%

Liability Valuation Monitor

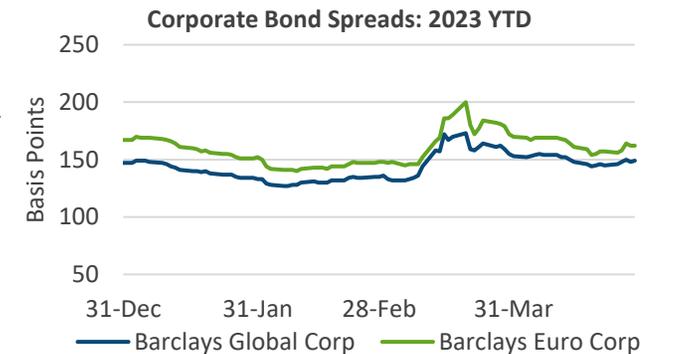
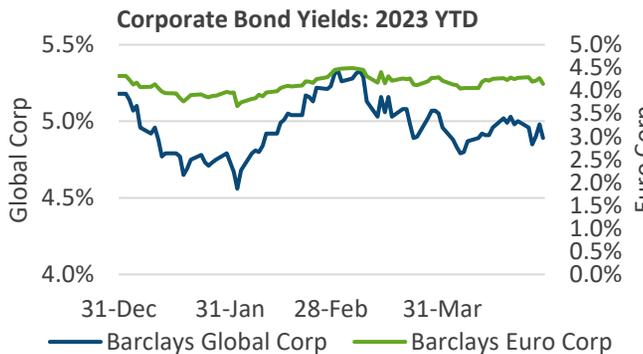
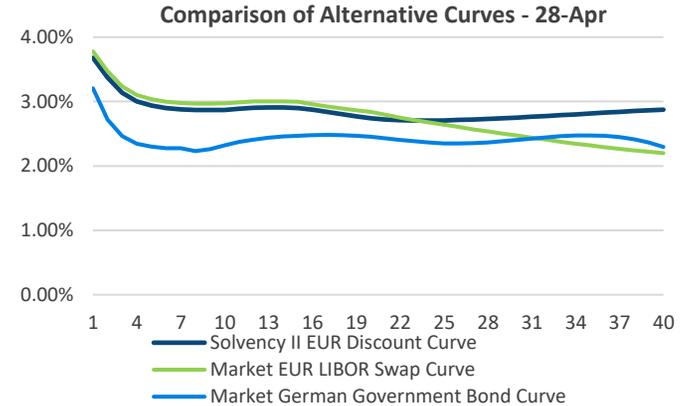
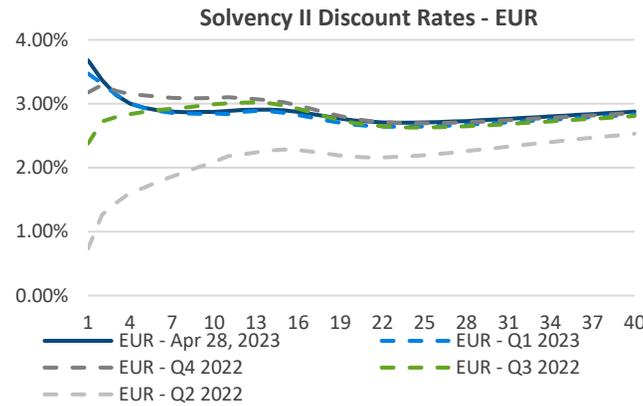
Risk Free Rates

- EUR risk-free rates increased at all terms in April.
- The 1 and 20-year EUR risk-free rates increased by 21 and 7 basis points, respectively.

As of this month, the **Solvency II risk-free discount rates** are calculated independently based on applying the Smith-Wilson Extrapolation to swap rates sourced from Bloomberg and applying the Credit Risk Adjustment as defined in the Technical Specs. For the official published curves please refer to the [EIOPA](#) website.

Corporate Bonds

- Both the European and global corporate bond yields decreased by 7 basis points in April.
- Global and European credit spreads tightened by 4 and 8 basis points, respectively.
- The marginal increase in risk-free rates was offset by the tightening in corporate bond spreads, resulting in small gains for the European corporate bond index.



	Change in Solvency II Discount (bps)						Change in Corporate Bond Yields (bps)		Change in Corporate Bond Spreads (bps)	
	1Y	Y5	Y10	Y20	Y30	Y40	Global Corp	Euro Corp	Global Corp	Euro Corp
Since Q1 2023	21	1	2	7	6	4	-7	-7	-4	-8
Since Q4 2022	50	-20	-22	-2	2	2	-29	-18	2	-5
Since Q3 2022	130	6	-12	4	8	7	-49	-9	-31	-63
Since Q2 2022	294	125	78	57	45	34	55	91	-26	-56

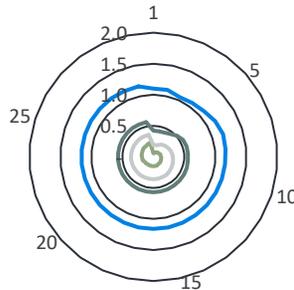
Solvency II Monitor - Spreads

Fundamental Spreads

- The fundamental spread data shown is for the end of March.
- There were no material changes since the last report.

Fundamental Spreads %

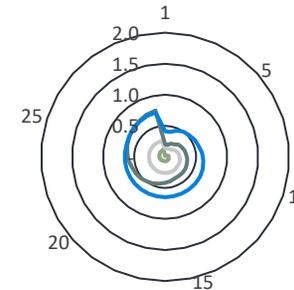
EUR: Financial



— AAA — AA — A — BBB

EUR Financial Fundamental Spread %					
	1Y	Y5	Y10	Y20	Y30
AAA	0.06	0.10	0.13	0.16	0.23
AA	0.19	0.26	0.33	0.36	0.36
A	0.42	0.51	0.57	0.57	0.57
BBB	1.10	1.10	1.16	1.16	1.16
EUR Financial 'Before Floor' %					
	1Y	Y5	Y10	Y20	Y30
AAA	0.00	0.04	0.08	0.16	0.23
AA	0.04	0.07	0.11	0.18	0.26
A	0.06	0.12	0.19	0.32	0.42
BBB	0.14	0.22	0.32	0.45	0.57

EUR: Non-Financial



— AAA — AA — A — BBB

EUR Non-Financial Fundamental Spread %					
	1Y	Y5	Y10	Y20	Y30
AAA	0.02	0.03	0.06	0.08	0.12
AA	0.14	0.17	0.25	0.26	0.26
A	0.20	0.29	0.37	0.52	0.76
BBB	0.41	0.52	0.64	0.65	0.73
EUR Non-Financial 'Before Floor' %					
	1Y	Y5	Y10	Y20	Y30
AAA	0.00	0.01	0.04	0.08	0.12
AA	0.00	0.04	0.09	0.17	0.26
A	0.04	0.15	0.27	0.52	0.76
BBB	0.11	0.21	0.34	0.55	0.73

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), and is bounded between 0.10 and 0.35. We show actual LIBOR-OIS spread levels and the defined CRA, for 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 31/03/23. **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.

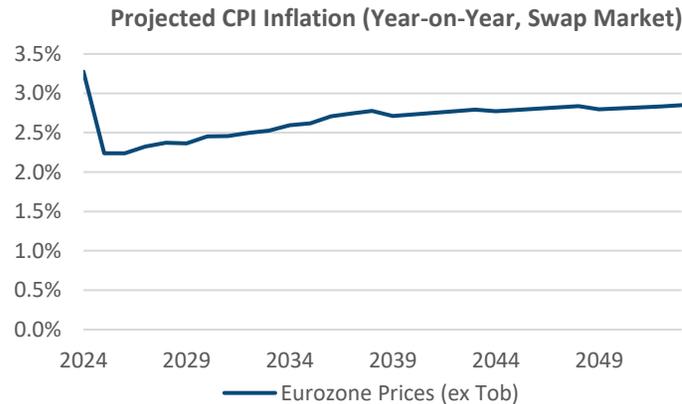
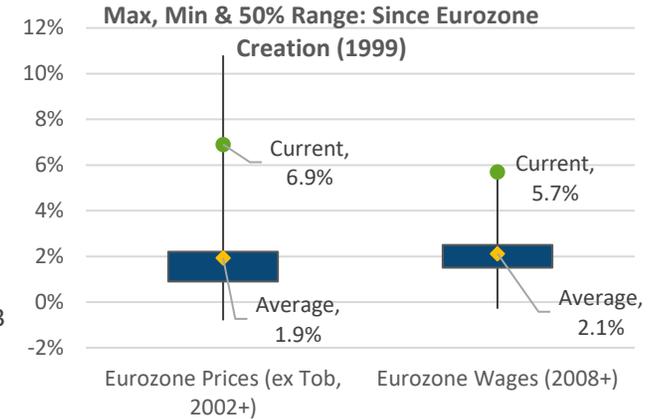
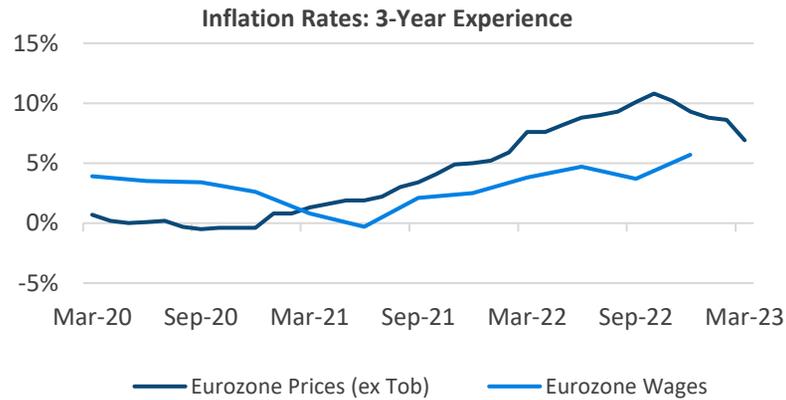
Milliman Financial Risk Management

EuroZone Market Monitor – 28 April 2023

Data sources: Bloomberg; Barclays; EuroStat; EIOPA; ONS; Milliman FRM

Inflation Monitor

- Eurozone price inflation dropped to 6.9% in March, a decline of 170 basis points from the previous month.
- There were no updates to wage inflation this month.
- Eurozone Q1 2023 GDP growth declined by 50 basis points to 1.3%, after the previous quarter's figure was revised lower by 10 basis points.



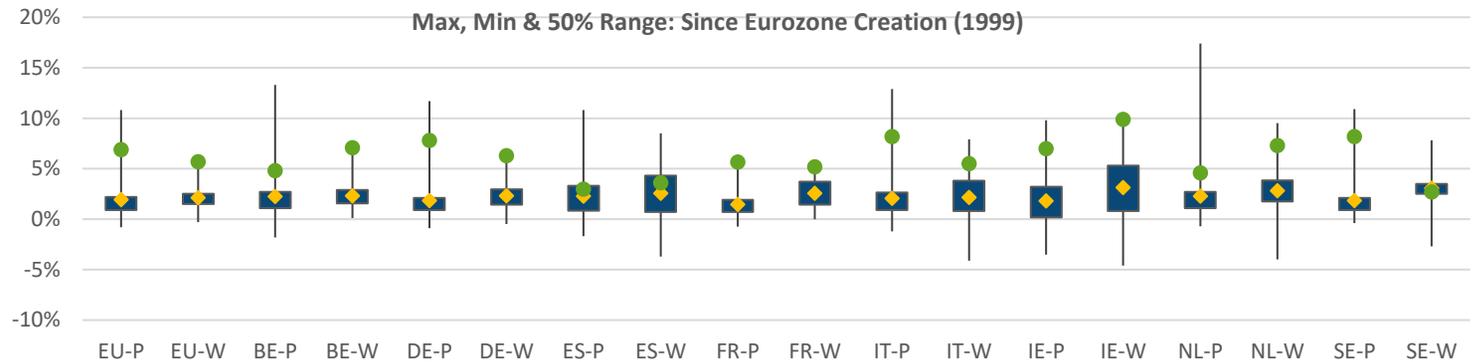
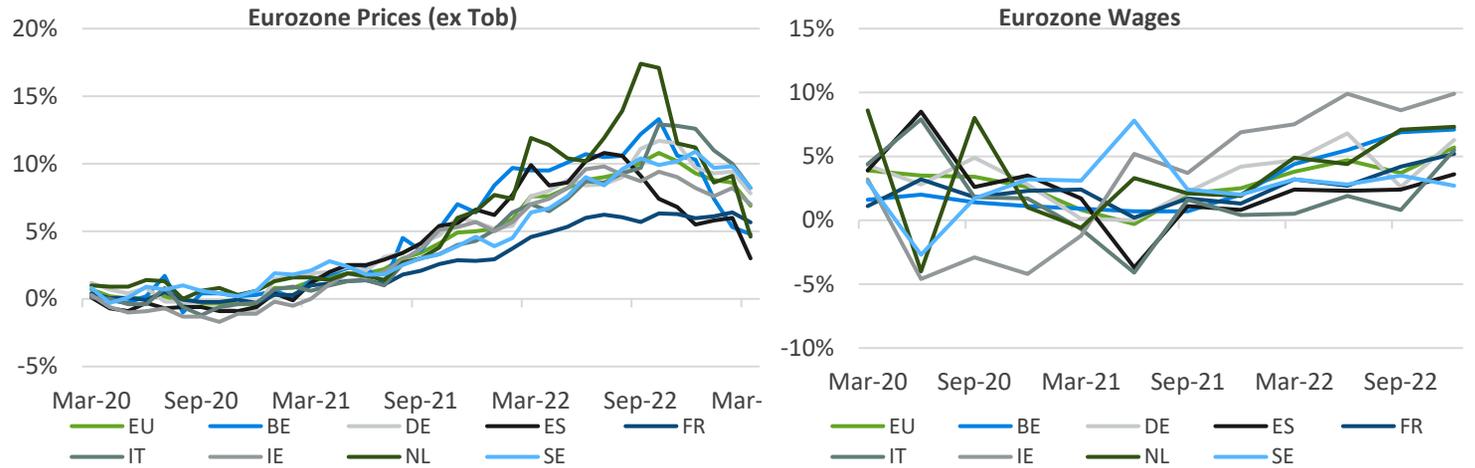
Milliman Financial Risk Management

EuroZone Market Monitor – 28 April 2023

Data sources: Bloomberg; Barclays; EuroStat; EIOPA; ONS; Milliman FRM

Inflation Monitor

- All major European economies saw their price inflation decrease in March. The Netherlands' inflation dropped the most, by 450 basis points to 4.6%.
- Belgian price inflation declined the least in March, by only 50 basis points, to 4.8%.
- Italian and Swedish price inflation shared the highest level in the region in March, both at 8.2%.
- Spain was the country with the lowest price inflation at 3.0%
- There were no updates to wage inflation this month.

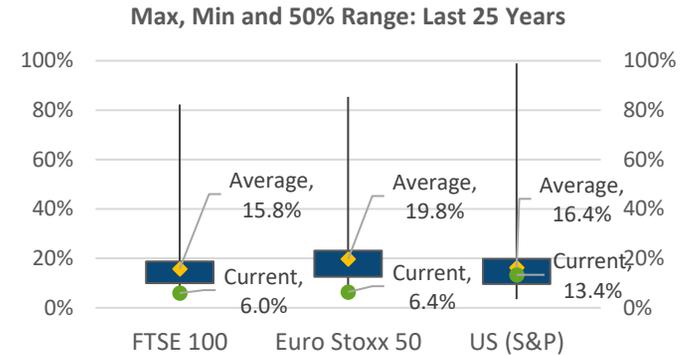
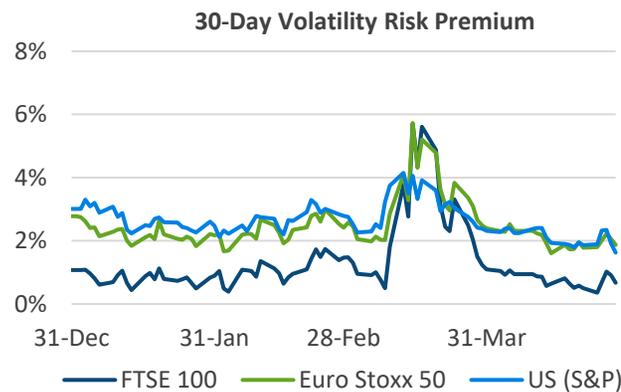
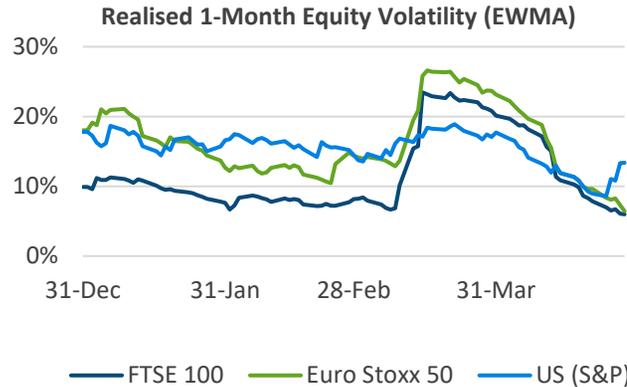


	EU-P	EU-W	BE-P	BE-W	DE-P	DE-W	ES-P	ES-W	FR-P	FR-W	IT-P	IT-W	IE-P	IE-W	NL-P	NL-W	SE-P	SE-W
Avg.	1.9%	2.1%	2.3%	2.3%	1.8%	2.3%	2.3%	2.6%	1.5%	2.6%	2.1%	2.2%	1.8%	3.2%	2.3%	2.8%	1.8%	3.1%
Cur	6.9%	5.7%	4.8%	7.1%	7.8%	6.3%	3.0%	3.6%	5.7%	5.2%	8.2%	5.5%	7.0%	9.9%	4.6%	7.3%	8.2%	2.7%

Volatility and Hedging Cost Monitor

- Realised volatilities on major indices decreased in April.
- The FTSE 100 ended the month with a realised volatility of 6.0%. The same measure stood at 6.4% and 13.4% on the Euro Stoxx 50 and the S&P 500, respectively.
- Volatility risk premiums on major indices also declined in April. The FTSE 100 had a volatility risk premium of 0.7% at month-end. The volatility risk premium on the Euro Stoxx 50 and the S&P 500 was 1.9% and 1.6%, respectively.

Please contact Milliman for more information on the basis and methodology used for these results.



Creating transformational improvement in the retirement savings industry.

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Milliman is among the world's largest providers of actuarial and related products and services. The firm has consulting practices in healthcare, property & casualty insurance, life insurance and financial services, and employee benefits. Founded in 1947, Milliman is an independent firm with offices in major cities around the globe.

Established in 1998, the practice includes professionals operating from four trading platforms around the world (Chicago, London, Amsterdam and Sydney).

[MILLIMAN.COM/FRM](https://www.milliman.com/frm)

Chicago

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

London

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

Sydney

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

Amsterdam

Haaksbergweg 75
Amsterdam, 1101 BR
Netherlands
+31 6 211 70 583

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