Mercer

Risk management framework

Monthly Monitoring Report: 30 April 2023

Clwyd Pension Fund

May 2023

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welcome to brighter

Overriding objectives

Stable and affordable contribution rate

Versus

Achieve returns in excess of CPI required under funding arrangements

Objectives are two-fold but conflicting

- Risk needs to be taken in order to achieve returns, but risk does not guarantee returns

Need to ensure a reasonable balance between the two objectives

- Do you need to take the same level of risk when 70% funded (say) as when 110% funded?

Executive summary

= as per or above expectations = to be kept under review = action required

Overall funding position at 30 April 2023

- Broadly in line with expected funding level
- Funding level above 100%

The funding position is 105% which is broadly in line with the expected funding level from the 2022 valuation. There is continuing uncertainty in the outlook for future returns and inflation which is being considered when updated the funding position.

Liability hedging mandate at 31 December 2022

- Insight in compliance with investment guidelines
- Underperformed the benchmark over Q4 2022
- Hedge ratios broadly in line with new target levels

There were a number of interest rate triggers breached over Q3 2022. No triggers have been hit over Q2 2023.

Synthetic equity mandate at 30 April 2023

- Insight in compliance with investment guidelines
- Underperformed the benchmark over the month

A dynamic protection structure was implemented in late May 2018, with refinements made in November 2020. The TRS structure rolled on 23 May 2021 with no further changes to the strategy. No action required.

Currency hedging at 30 April 2023

- Currency hedging overlay implemented in the QIAIF in August 2019
- As at 31 April 2023, the market value of the currency hedge on physical equities since inception on 22 August 2019 was -£13.7m

No action required.

Cash Plus Funds, collateral and counterparty position at 31 December 2022

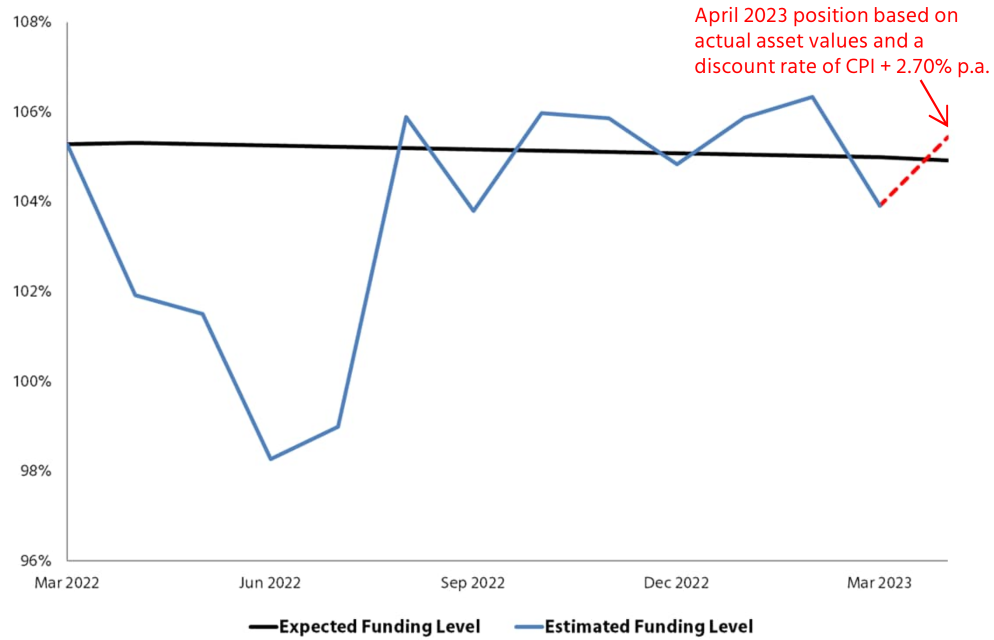
- The Cash Plus Fund has underperformed the benchmark since inception and also over the quarter. We will continue to monitor performance.
- The Insight QIAIF can sustain over a 2.4% rise in interest rates or over 3.0% fall in inflation without eliminating all headroom.

Overall, the collateral waterfall has returned £4.9m at 31 December 2022 since implementation at 31 January 2019 versus the previous structure.

The Fund has sufficient collateral to withstand the stresses as at 31 December 2022. No action required.

Funding level monitoring to 30 April 2023

Estimated funding position since 31 March 2022



Funding Level Trigger

A funding level trigger is in in place to prompt FRMG discussions regarding potential actions as the funding level approaches 110%. This funding level will be monitored approximately by Mercer on a daily basis and if the trigger is breached an FRMG will be convened to discuss any required actions including whether a de-risking step should be undertaken via a change in the long term investment strategy. This will consider the impact on the risk/return profile and any effect on employer contribution requirements.

Comments

The **black line** shows a projection of the *expected* funding level from 31 March 2022 based on the assumptions (and contributions) outlined as part of the 2022 actuarial valuation. The expected funding level at 30 April 2023 was around 105%.

The **blue line** shows an estimate of the progression of the funding level from 31 March 2022 to 31 March 2023. The **red dashed line** shows the progression of the estimated funding level over April 2023. At 30 April 2023, we estimate the funding level and surplus to be:

105% / £117m

This update shows that the Fund's position at 30 April 2023 was marginally above the expected funding level from the 2022 valuation. New employer contributions from the valuation commenced from 1 April 2023 and over time the funding level is expected to fall due to employers running off the surplus.

Uncertainty continues to be prevalent in the investment and fiscal environments due to the Global and UK economic outlook – in particular UK inflation which has a direct impact on the Fund's liabilities. When assessing the funding levels above, we have incorporated an allowance for actual monthly CPI inflation to provide a better estimate of next years pension increase and therefore liability cashflows. When determining the appropriate discount rate, we have allowed for the correlation of asset returns to the change in real yields from the valuation date along with an appropriate adjustment to the expected return for growth assets due to the economic outlook, in line with the approach agreed at FRMG.

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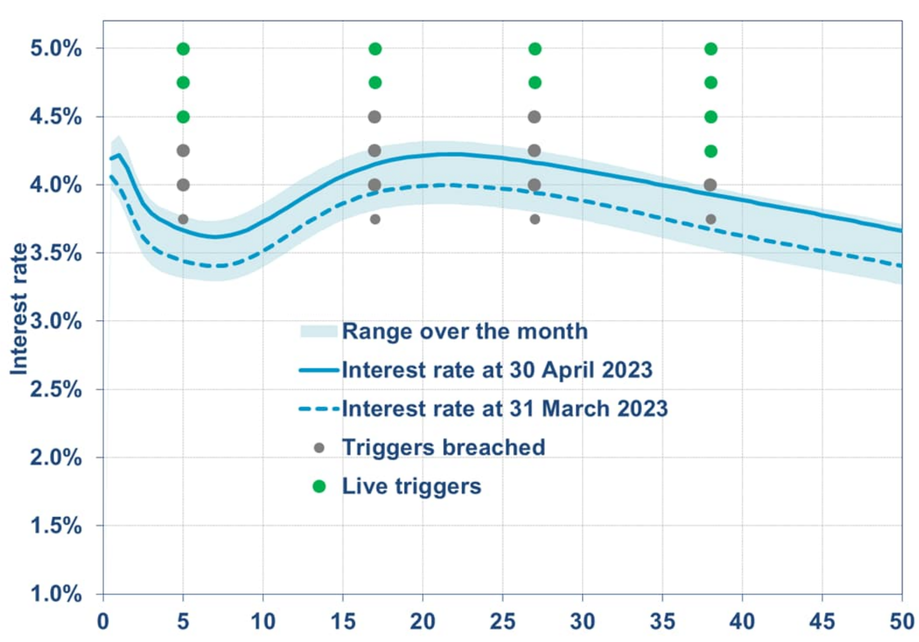
Update on market conditions and triggers

Change in interest rates



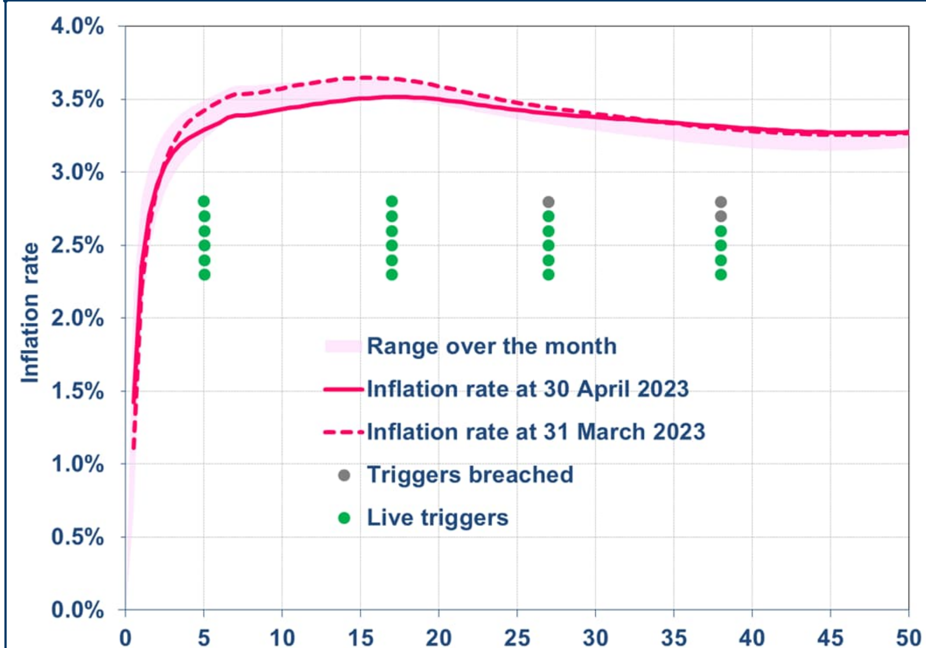
Date	Band 1	Band 2	Band 3	Band 4	Actual
31 December 2022	50.6%	52.3%	51.2%	48.6%	50.7%

Comments

Relative to the position at the end of March, yields rose across the curve over April 2023.

As at 30 April 2023, the fourth interest rate trigger had been breached in two of the maturity bands, with the third trigger breached in three of the four bands. At each trigger, the hedge ratio is increased by c. 10% in that maturity band. A number of further triggers were breached over May, which will be reflected in next month's report.

Change in inflation rates



Date	Band 1	Band 2	Band 3	Band 4	Actual
31 December 2022	40.8%	23.3%	33.6%	62.6%	39.6%

Comments

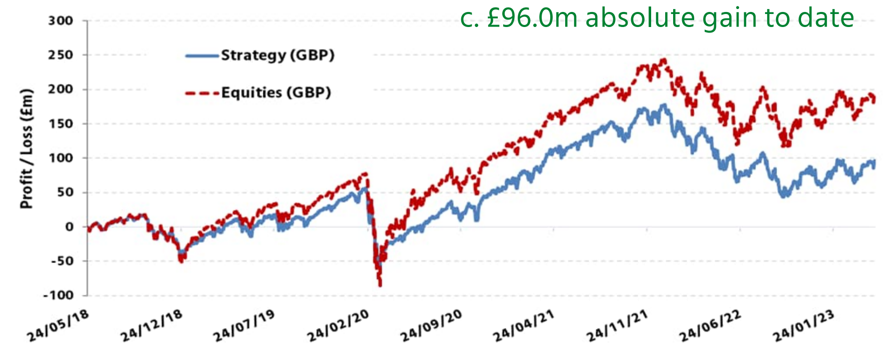
Inflation expectations fell slightly at the short end of the curve and remained stable at the long end of the curve over April 2023.

The target hedge ratios for the portfolio are 50% for interest rates and 40% for inflation expectations.

Hedge ratios calculated with reference to 2019 valuation cash flow analysis and relying on a discount rate of gilts + 3.9% p.a..

Update on equity protection mandate

Strategy versus equity index

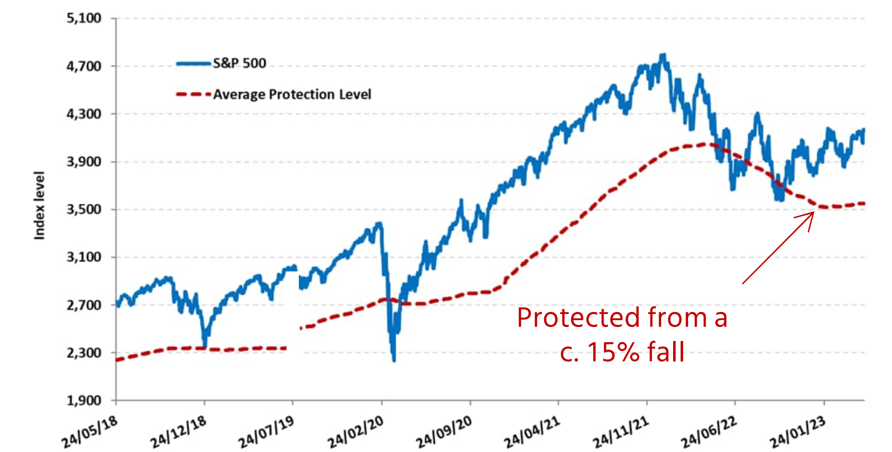


GBP returns	Equity return	Hedging return	Financing return	Costs	Overall return	Relative return
MTD	1.5%	(0.4%)	0.3%	(0.0%)	1.4%	(0.1%)
YTD	11.0%	(2.7%)	0.2%	(0.2%)	8.3%	(2.7%)
SI (per annum)	9.9%	(3.1%)	(1.4%)	(0.6%)	4.9%	(5.0%)

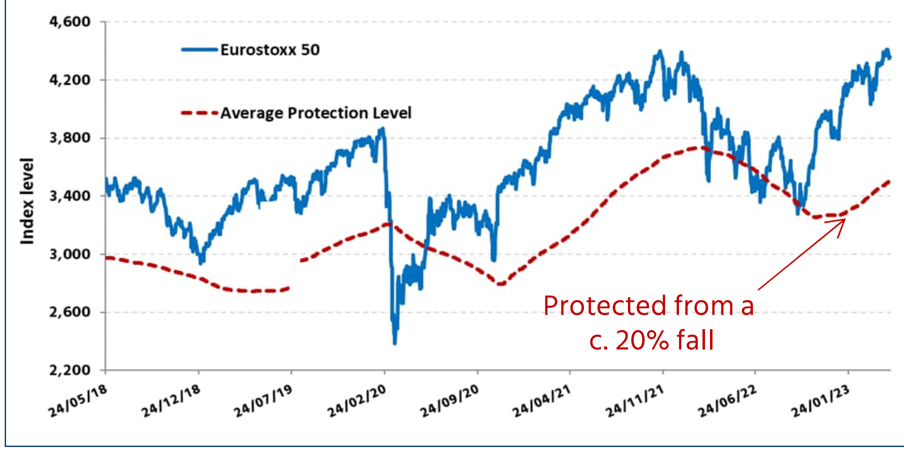
Comments

- The Fund implemented a dynamic equity protection strategy on 24 May 2018 with exposure of £362m. The equity protection strategy was revised in Q4 2020, increasing the call frequency to 2 weekly. This ensures that the Fund can participate in more upside as equity markets rise. The TRS structure was extended for a further 3 years on 23 May 2021 with no further changes to the strategy.
- Equity markets rose over April, the positive return was partially offset by the hedging leg producing negative returns.
- The strategy underperformed passive equities over the month. As at 30 April 2023, there was a gain of c. £96.0m on the strategy since inception.
- From inception on 8 March 2019 to 30 April 2023, the currency hedge of the market value of the synthetic equity mandate has resulted in a c. £17.5m loss relative to an unhedged position, as sterling has weakened versus the dollar since inception.

US equity exposure

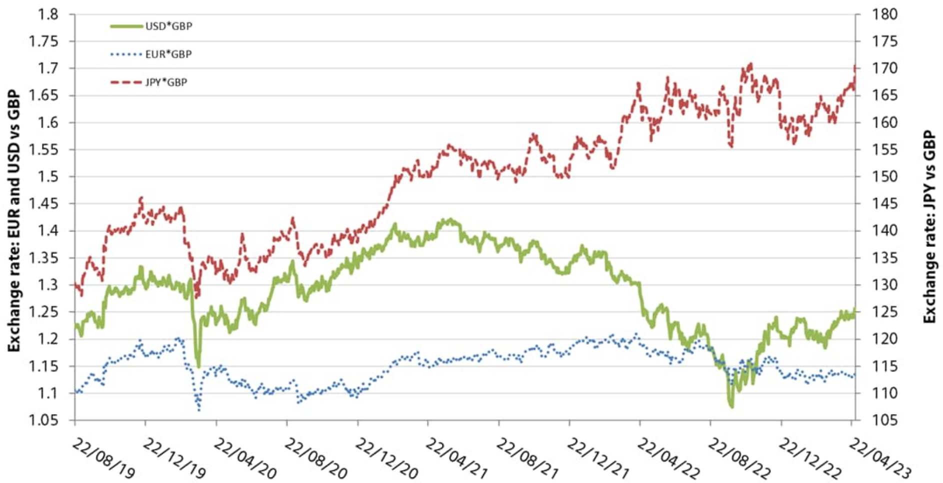


European equity exposure (note: different scale)



Developed market physical equity currency hedge

Sterling denominated FX rate



Comments

- A currency hedge was placed on the physical, developed equity portfolio to lock-in gains from sterling weakness and reduce currency risk.
- The hedge has been implemented via a currency overlay, using 3 month forward contracts, within the Insight QIAIF. The hedge is updated quarterly to allow for changes in the underlying equity exposure.
- As at 30 April 2023, the market value of the currency hedge since inception on 22 August 2019 was -£13.7m.
- The market value of the currency hedge rose over March as sterling appreciated against the dollar and the yen, and was relatively stable versus the euro.

	Currency basket weight	FX performance (since inception*)	FX change in performance since 31 March 2023
EUR	13%	£1.4m	£0.0m
JPY	7%	£4.4m	£0.2m
USD	80%	(£19.5m)	£1.2m
	100%	**(£13.7m)**	**£1.4m**

*Insight transacted on the currency hedge on 22 August 2019.

Figures may not sum due to rounding.

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Glossary

- **Actuarial Valuation** - The formal valuation assessment of the Fund detailing the solvency position and determining the contribution rates payable by the employers to fund the cost of benefits and make good any existing shortfalls as set out in the separate Funding Strategy Statement.
- **Collateral** – Liquid assets held by the Fund as security which may be used to offset the potential loss to a counterparty.
- **Counterparty** – Commonly an investment bank on the opposite side of a financial transaction (e.g. swaps).
- **Deficit** - The extent to which the value of the Fund's liabilities exceeds the value of the Fund's assets.
- **Dynamic protection strategy** – Strategy to provide downside protection from falls in equity markets where the protection levels vary depending on evolution of the market.
- **Equity option** – A financial contract in which the Fund can define the return it receives for movements in equity values.
- **Flightpath** - A framework that defines a de-risking process whereby exposure to growth assets is reduced as and when it is affordable to do so i.e. when "triggers" are hit, whilst still expecting to achieve the overall funding target.
- **Funding level** - The difference between the value of the Fund's assets and the value of the Fund's liabilities expressed as a percentage.
- **Funding & Risk Management Group (FRMG)** - A subgroup of Pension Fund officers and advisers set up to discuss and implement any changes to the Risk Management framework as delegated by the Committee. It is made up of the Clwyd Pension Fund Manager, Pension Finance Manager, Fund Actuary, Strategic Risk Adviser and Investment Advisor.
- **Hedging** - A strategy aiming to invest in low risk assets when asset yields are deemed attractive. Achieved by investing in government backed assets (or equivalent) with similar characteristics to the Fund future CPI linked benefit payments.
- **Hedge ratio** – The level of hedging in place in the range from 0% to 100%.
- **Insight QIAIF (Insight Qualifying Investor Alternative Investment Fund)** – An investment fund specifically designed for the Fund to allow Insight to manage the liability hedging and synthetic equity assets.

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