



Risk management framework

Monthly monitoring report: 31 December 2021

Clwyd Pension Fund
January 2022

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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?

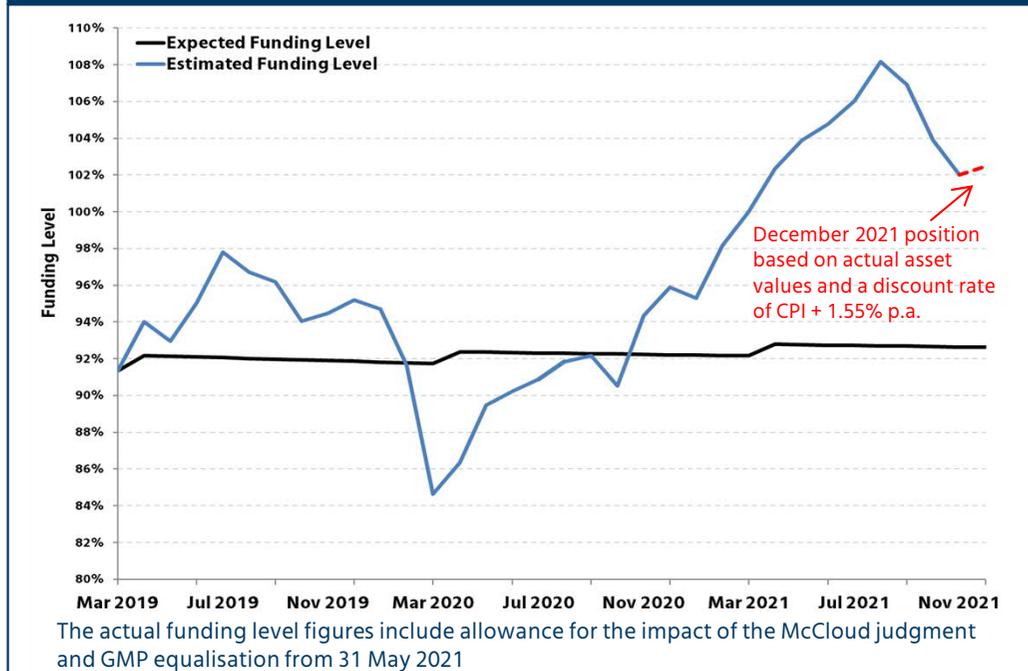
Executive summary

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

	<p>Overall funding position at 31 December 2021</p> <ul style="list-style-type: none"> • Ahead of existing recovery plan • New funding level trigger introduced at 110% 	<p>The funding position is 102% which is ahead of the target by around 9%. There is continuing uncertainty in the outlook for future returns and inflation which could impact on the future funding requirements.</p>
	<p>Liability hedging mandate at 30 September 2021</p> <ul style="list-style-type: none"> • Insight in compliance with investment guidelines • Outperformed the benchmark marginally over Q3 2021 	<p>No triggers breached over Q3 2021.</p>
	<p>Synthetic equity mandate at 30 September 2021</p> <ul style="list-style-type: none"> • Insight in compliance with investment guidelines • Underperformed the benchmark over Q3 2021 	<p>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.</p>
	<p>Currency hedging at 31 December 2021</p> <ul style="list-style-type: none"> • Currency hedging overlay implemented in the QIF in August 2019 • As at 31 December 2021, the market value of the currency hedge since inception on 22 August 2019 was £11.4m 	<p>No action required.</p>
	<p>Cash Plus Funds, collateral and counterparty position at 30 September 2021</p> <ul style="list-style-type: none"> • The Cash Plus Fund has underperformed the benchmark since inception, but the collateral waterfall outperformed over Q3 2021. We will continue to monitor performance. • The Insight QIF can sustain at least a 3.0% rise in interest rates or 1.8% fall in inflation without eliminating all headroom. 	<p>Overall, the collateral waterfall has returned £9.6m at 30 September 2021 since implementation at 31 January 2019 versus the previous structure.</p> <p>The Fund has sufficient collateral as at 30 September 2021. No action required.</p>

Funding level monitoring to 31 December 2021

Estimated funding position since 31 March 2019



Comments

The **black line** shows a projection of the **expected** funding level from the 31 March 2019 valuation based on the assumptions (and contributions) outlined as part of the 2019 actuarial valuation. The expected funding level at 31 December 2021 was around 93%.

The **blue line** shows an estimate of the progression of the funding level from 31 March 2019 to 30 November 2021. The **red dashed line** shows the progression of the estimated funding level over December 2021. At 31 December, we estimate the funding level and surplus to be:

102% £56m*

From December 2021 we have incorporated *only the membership experience impact* of the 2021 interim funding review which has reduced the funding level by c2% in isolation. No other changes e.g. actuarial assumptions have been incorporated. The Fund's position was ahead of the expected funding level at 31 December 2021 by around 9% on the current funding basis.

Funding Level Triggers

Following a breach of the 100% soft trigger, it was concluded at the FRMG on 9 July 2021 that the funding level was not currently sufficiently high to warrant de-risking in a traditional sense via a change in long term strategy.

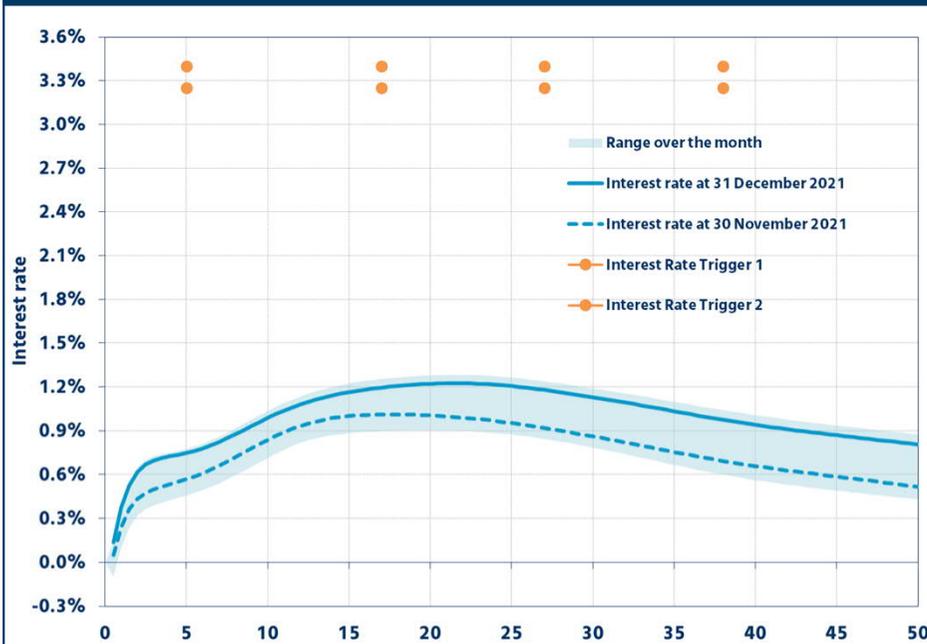
It was agreed that a new trigger will be put in place to prompt FRMG discussions regarding potential actions as the funding level approaches 110% on the equivalent to the 2019 valuation funding basis. This funding level will be monitored approximately by Mercer on a daily basis.

Uncertainty continues to be prevalent in the investment environment due to the potential economic impact of the COVID-19 pandemic. This means that the likelihood of achieving the assumed real returns at the last valuation has fallen. To illustrate the impact, a further reduction of 0.25% p.a. in the assumed future investment return/discount rate would reduce the funding level by c.4% to c.98% with a corresponding decrease in surplus of £103m to a deficit of £47m.

This will be kept under review in light of changing market conditions and the economic outlook.

Update on market conditions and triggers

Change in interest rates



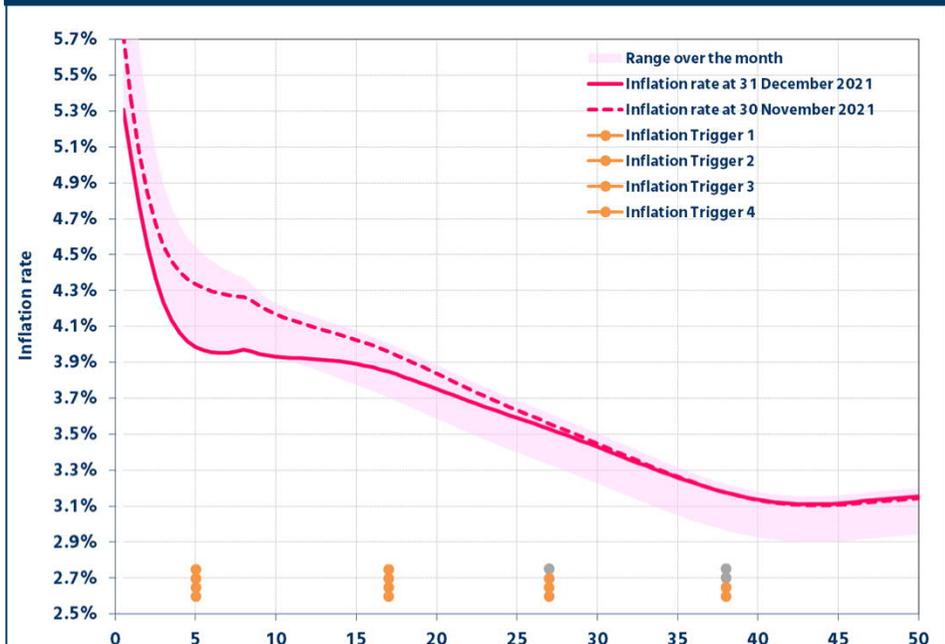
Date	Band 1	Band 2	Band 3	Band 4	Actual
30 September 2021	19.68%	18.74%	21.58%	29.28%	23.5%

Comments

Over the month of December, interest rates rose across the curve.

Based on market conditions as at 31 December 2021, yields would need to rise by c. 2.0% p.a. before the Fund would hit any of the revised interest rate triggers implemented by Insight in Q3 2017.

Change in inflation rates (note: different scale)



Date	Band 1	Band 2	Band 3	Band 4	Actual
30 September 2021	34.82%	21.23%	29.92%	62.13%	39.6%

Comments

Over the month of December, inflation expectations fell at shorter tenors and were broadly unchanged at longer tenors.

The target hedge ratios for the portfolio are 20% for interest rates and 40% for inflation expectations. No triggers were breached in December.

Update on equity protection mandate

Strategy versus equity index



GBP returns	Equity return	Hedging return	Financing return	Costs	Overall return	Relative return
MTD	5.7%	(1.1%)	0.1%	(0.0%)	4.7%	(1.0%)
YTD	33.4%	(5.0%)	0.2%	(0.4%)	28.1%	(5.2%)
SI (per annum)	18.3%	(3.9%)	(2.0%)	(0.5%)	11.9%	(6.4%)

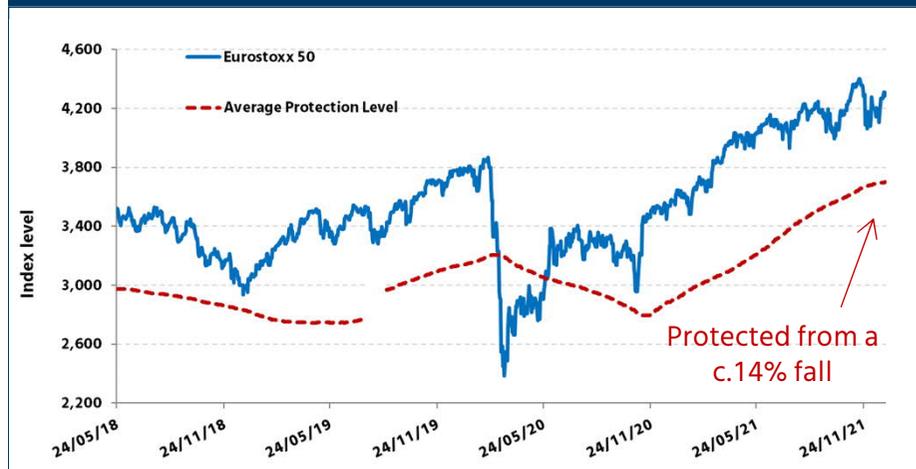
Comments

- 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 two 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 December, resulting in positive performance for the strategy over the month. As at 31 December 2021, there was a gain of c. £175.6m on the equity strategy since inception, relative to a c. £238.6m gain had the Fund invested in passive equities (with no frictional costs).
- From inception on 8 March 2019 to 31 December 2021, the currency hedge of the market value of the synthetic equity mandate has resulted in a c. £1.1m loss relative to an unhedged position, as sterling has weakened at an overall level since inception.

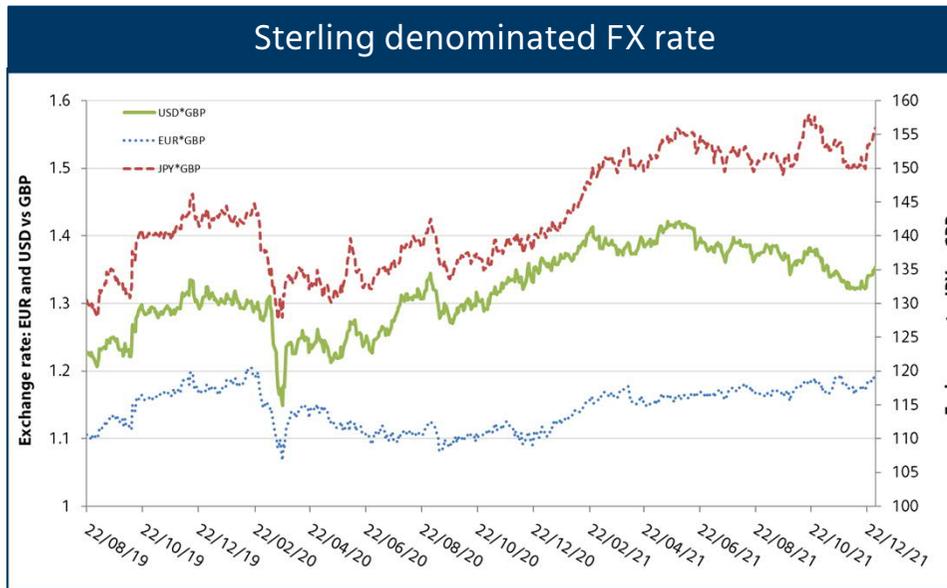
US equity exposure



European equity exposure (note different scale)



Developed market physical equity currency hedge



- 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 31 December 2021, the market value of the currency hedge since inception on 22 August 2019 was £11.4m.
 - The market value of the currency hedge has increased over December due to a strengthening of sterling against all three major currencies.

	Currency basket weight	FX performance (since inception*)	FX change in performance since 30 November 2021
EUR	15%	£2.3m	£0.4m
JPY	8%	£3.2m	£0.7m
USD	77%	£6.0m	£3.6m
	100%	£11.4m	£4.8m

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

Figures may not sum due to rounding.

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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