Risk management framework

Monthly monitoring report: 31 December 2020

Clwyd Pension Fund

January 2021

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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 to 30 September 2020

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

Overall funding position

- In line with existing recovery plan
- Funding level below the first soft trigger

In absolute terms the funding position is ahead of target . There is uncertainty in the outlook for future returns and inflation which could impact on the future contribution requirements.

Liability hedging mandate

- Insight in compliance with investment guidelines
- Underperformed the benchmark marginally over the quarter
- Hedge ratios in line with target levels following restructure

Tactically increased inflation back up to target. No triggers breached over Q3 2020.

Synthetic equity mandate

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

No action required.

Currency hedging

- Currency hedging overlay implemented in the QIF in August 2019.
- As at 30 September 2020, the market value of the currency hedge since inception on 22 August 2019 was £3.1m

No action required.

Cash Plus Funds, collateral and counterparty position

- The Cash Plus Fund has underperformed the benchmark since inception, but the collateral waterfall outperformed over the quarter. We will continue to monitor performance.
- The Insight QIF can sustain at least a 1.4% rise in interest rates or 0.8% fall in inflation without eliminating all headroom.

Overall, the collateral waterfall has increased by £2.6m at 30 September 2020 since implementation versus the previous structure.

The Fund has sufficient collateral to withstand this as at 30 September 2020. No action required.

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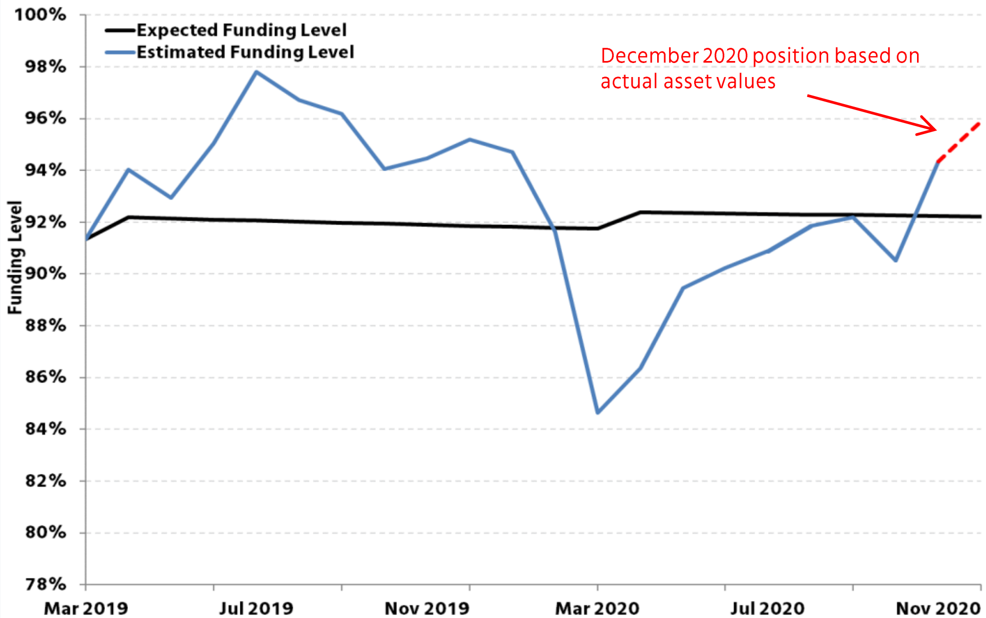
Funding level monitoring to 31 December 2020

Estimated funding position since 31 March 2019



The positions allow for the results of the 2019 actuarial valuation.

Funding Level Triggers

It was concluded at the FRMG on 20 June 2017 that the funding level is not currently sufficiently high to warrant de-risking in a traditional sense via a change in long term strategy.

It was agreed that a "soft" trigger will be put in place to prompt FRMG discussions regarding potential actions as the funding level approaches 100% on the current funding basis. This funding level will be monitored approximately by Mercer on a daily basis.

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 2020 was around 92%.

The **blue line** shows an estimate of the progression of the funding level from 31 March 2019 to 30 November 2020. The **red dashed line** shows the progression of the estimated funding level over December 2020. At 31 December 2020, we estimate the funding level and deficit to be:

96% (£91m*)

This shows that the Fund's position was ahead of the expected funding level at 31 December 2020 by around 4% on the current funding 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 (CPI + 1.55% p.a. at this update) going forward has fallen. To illustrate the impact, a reduction of 0.25% p.a. in the assumed future investment return/real discount rate would reduce the funding level by c.4% to c.92% with a corresponding increase in deficit of £93m to £184m.

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

**Asset values based on assets provided by Mercer investment consultants as at 31 Decmber 2020.*

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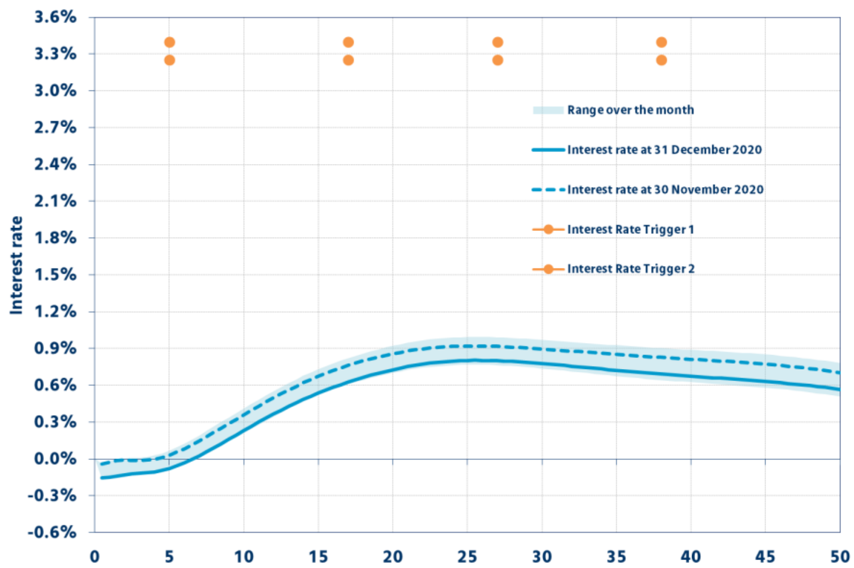
Update on market conditions and triggers

Change in interest rates



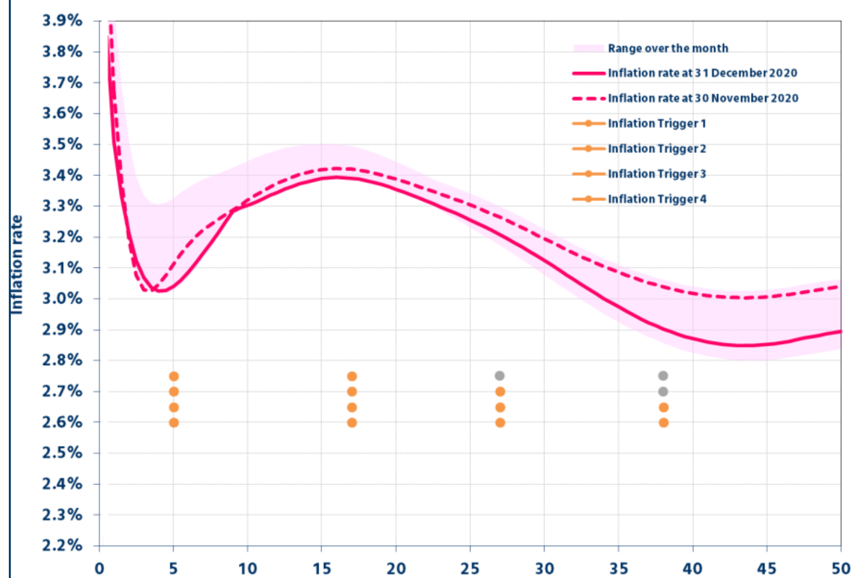
Date	Band 1	Band 2	Band 3	Band 4	Actual
30 September 2020	18.7%	18.5%	20.4%	21.7%	20.2%

Comments

Over the month of December, interest rates fell uniformly across the curve.

Based on market conditions as at 31 December 2020, yields would need to rise by c. 2.4% 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 2020	34.5%	21.7%	30.5%	63.2%	39.8%

Comments

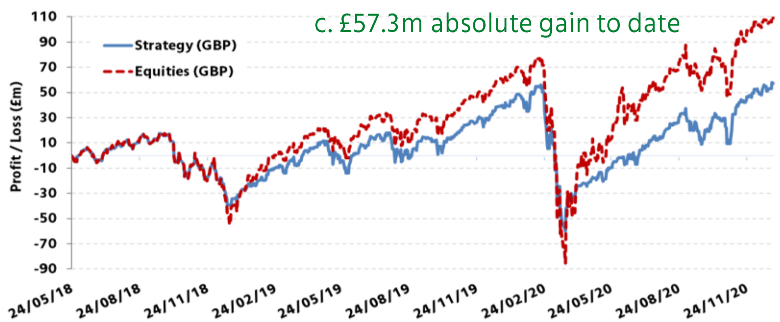
Over December, inflation expectations decreased for longer durations and at the short end of the curve, with expectations at medium durations rising slightly.

Trading took place over August and September to move to the new benchmark, which brings the portfolio back to a c.20% interest rate hedge ratio and c.40% inflation hedge ratio overall. No triggers were breached in December.

*Hedge ratios calculated with reference to 2019 valuation cash flow analysis and relying on a discount rate of gilts + 3.5% p.a..

Update on equity protection mandate

Strategy versus equity index

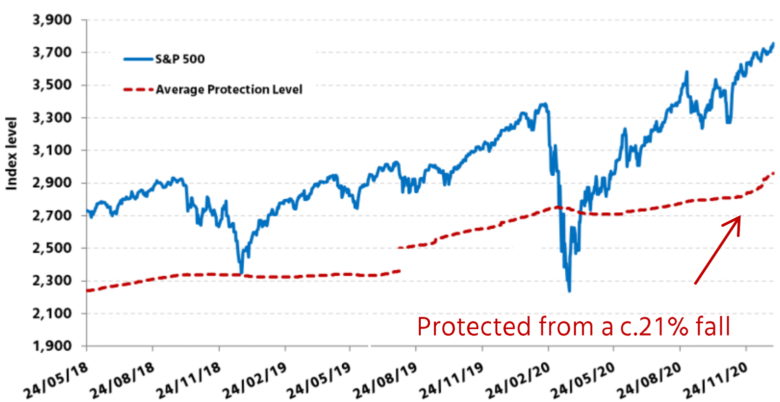


GBP returns	Equity return	Hedging return	Financing return	Costs	Overall return	Relative return
MTD	3.2%	(0.3%)	(0.1%)	(0.1%)	2.8%	(0.4%)
YTD	13.4%	(2.4%)	(5.4%)	(0.6%)	5.0%	(8.4%)
SI (per annum)	11.5%	(2.9%)	(2.8%)	(0.5%)	6.1%	(5.4%)

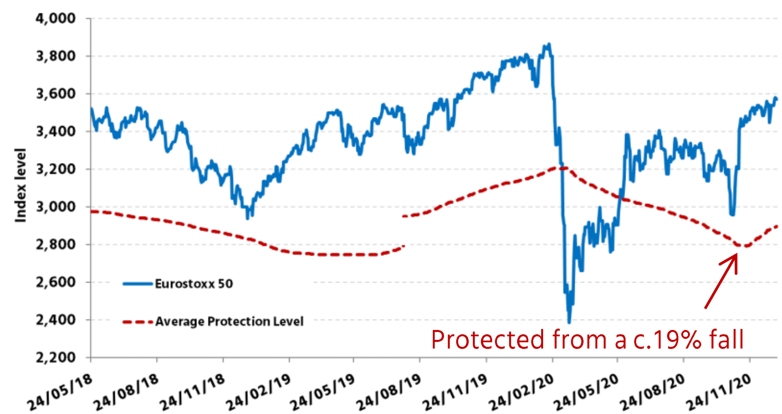
Comments

- The Fund implemented a dynamic equity protection strategy on 24 May 2018 with exposure of £362m. The equity protection strategy was revised in Q4, increasing the call frequency to two weekly. This increase is to ensure that the Fund can participate in more upside.
- Strong positive equity returns during December meant that the strategy underperformed, with both hedging and financing legs detracting from returns.
- As at 31 December 2020, there was a gain of c. £57.3m on the strategy since inception, relative to a c. £110.9m gain had the Fund invested in passive equities (with no frictional costs).
- From inception on 8 March 2019 to 31 December 2020 the currency hedge of the market value of the synthetic equity mandate has contributed a c. £1.8m loss relative to an unhedged position given the continued weakness in sterling since inception.

US equity exposure



European equity exposure



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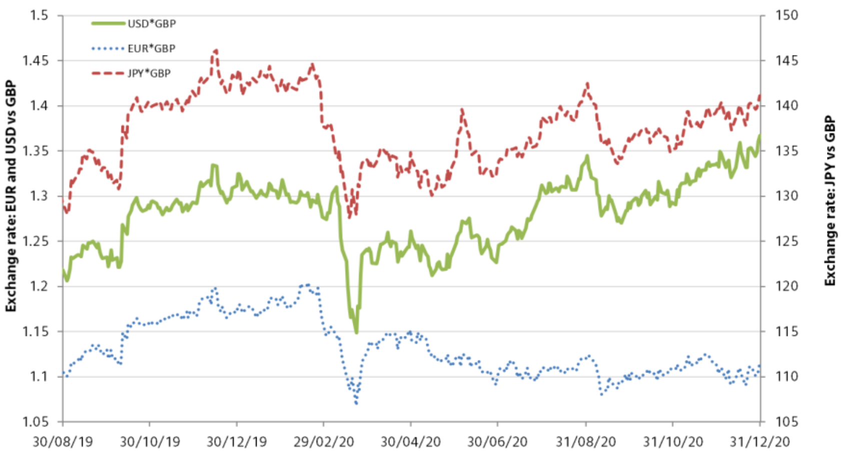
Developed market physical equity currency hedge

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 31 December 2020, the market value of the currency hedge since inception on 22 August 2019 was £10.4m.
- The market value has increased over December following sterling strengthening against the Yen and US dollar. Euro/GBP performance has been fairly flat.

	Currency basket weight	FX performance (since inception*)	FX change in performance since 30 November 2020
EUR	12%	£0.4m	-
JPY	9%	£1.5m	£0.2m
USD	79%	£8.5m	£3.0m
	100%	**£10.4m**	**£3.2m**

*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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