



Risk management framework

Monthly monitoring report: 30 September 2020

Clwyd Pension Fund

October 2020

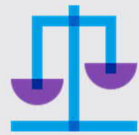
Nick Page FIA CERA



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 June 2020



= as per or above expectations



= to be kept under review



= action required



Overall funding position

- Behind existing recovery plan following COVID-19 market volatility
- Funding level below the first soft trigger

In absolute terms the funding position is slightly behind target. There is continuing uncertainty in the outlook for future returns which could impact on the future funding requirements.



Liability hedging mandate

- Insight in compliance with investment guidelines
- Outperformed the benchmark over the quarter and since inception
- Hedge ratios in line with target levels following restructure

Reversed inflation trade in September ahead of fears of rising inflation.



Synthetic equity mandate

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

A dynamic protection structure was implemented in late May 2018. Refinements have been made in August 2019. No action required.



Currency hedging

- Currency hedging overlay implemented in the QIF in August 2019.
- As at 30 June 2020, the market value of the currency hedge since inception on 22 August 2019 was £-0.6m

No action required.



Cash Plus Funds, collateral and counterparty position

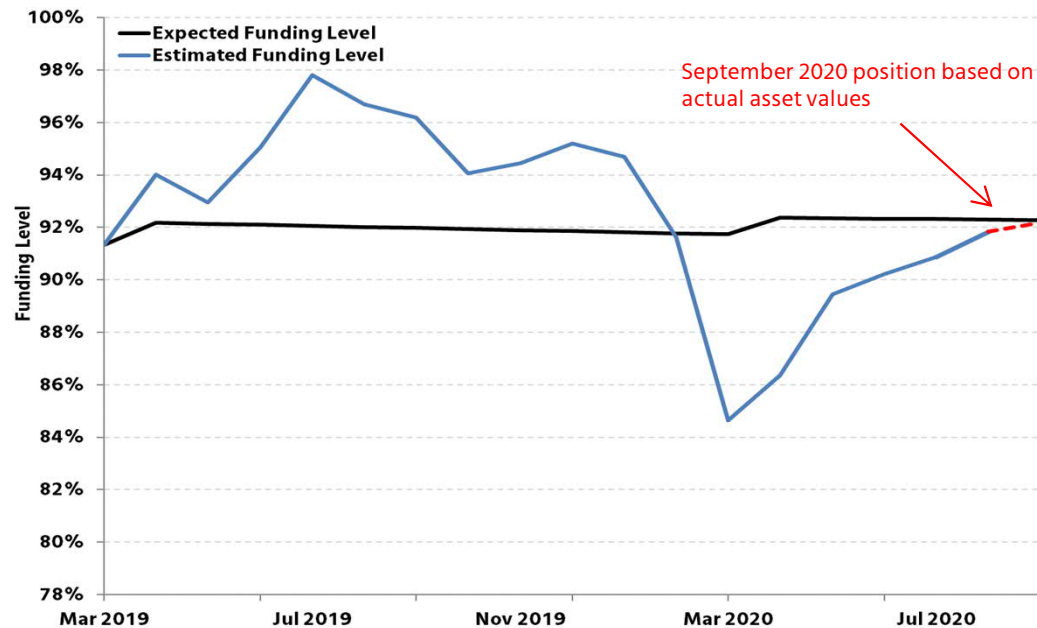
- The Cash Plus Fund has underperformed the benchmark since inception, but the collateral waterfall outperformed over the quarter. We will continue to monitor performance.
- The Insight QIF can sustain at least a 0.6% rise in interest rates or 0.4% fall in inflation without eliminating all headroom.

Overall, the collateral waterfall has decreased by £1.2m at 30 June 2020 since implementation at 31 January 2019 versus the previous structure.

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

Funding level monitoring to 30 September 2020

Estimated funding position since 31 March 2019



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

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 30 September 2020 was around 92%.

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

92% (£170m*)

This shows that the Fund's position was the same as the expected funding level at 30 September 2020 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 could mean that the likelihood of achieving the assumed real returns 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.88% with a corresponding increase in deficit of £95m to £265m.

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

Funding Level Triggers

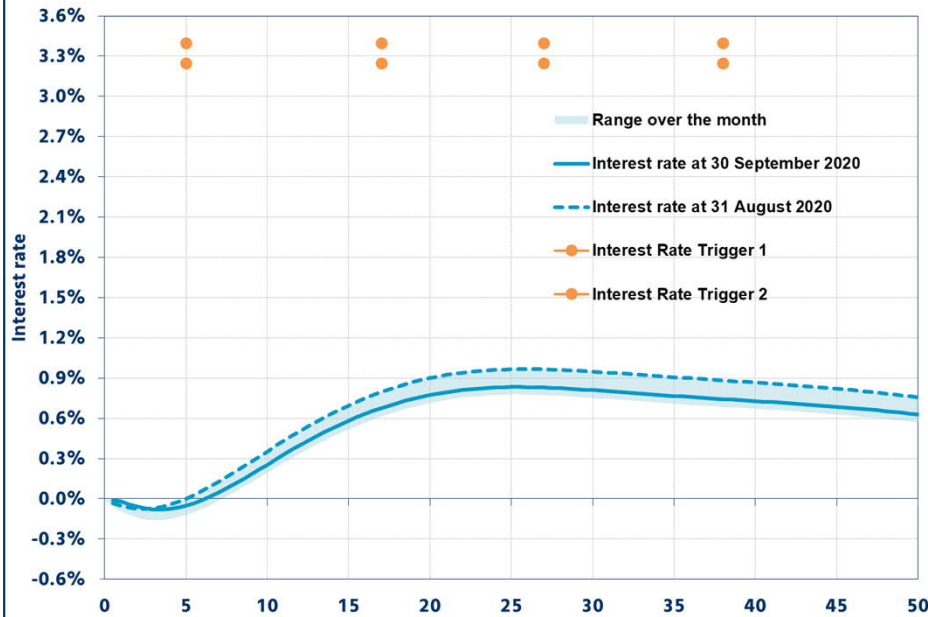
It was concluded at the FRMG on 20 June 2017 that the funding level is not currently sufficiently high to warrant de-risking in a traditional sense via a change in long term strategy.

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.

*Asset values based on assets provided by Mercer investment consultants as at 30 September 2020.

Update on market conditions and triggers

Change in interest rates



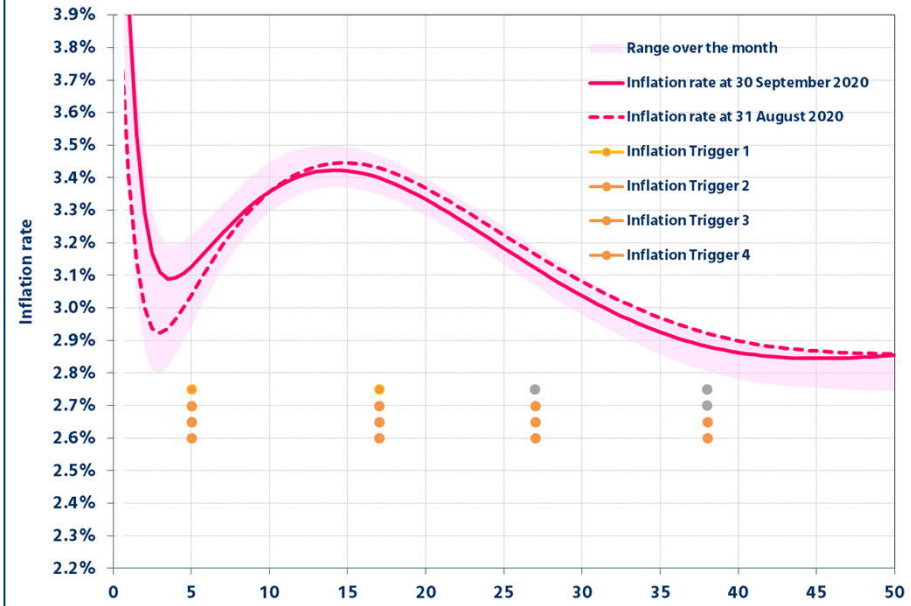
Date	Band 1	Band 2	Band 3	Band 4	Actual
30 June 2020	18.4%	18.1%	18.2%	15.9%	17.5%

Comments

Over September, interest rates fell across the curve, with an average decrease of c. 0.1% p.a.

Based on market conditions as at 30 September 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 June 2020	36.3%	23.2%	27.5%	40.4%	32.5%

Comments

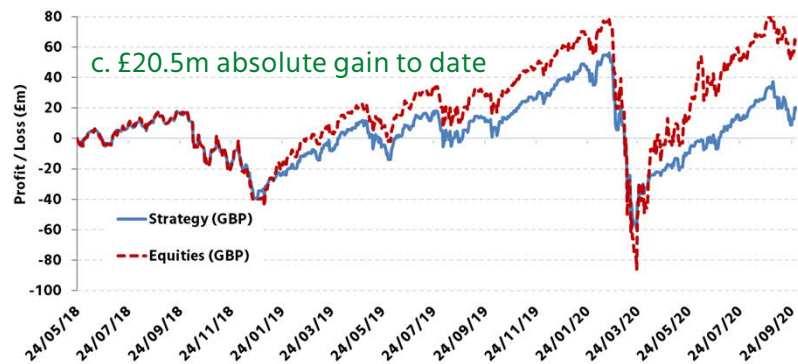
Over September, inflation expectations increased at shorter durations, whilst falling slightly at medium and longer durations.

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. This will be reflected in future reports.

*Hedge ratios calculated with reference to 2016 valuation cash flow analysis and relying on a discount rate of gilts + 2.0% p.a..

Update on equity protection mandate

Strategy versus equity index

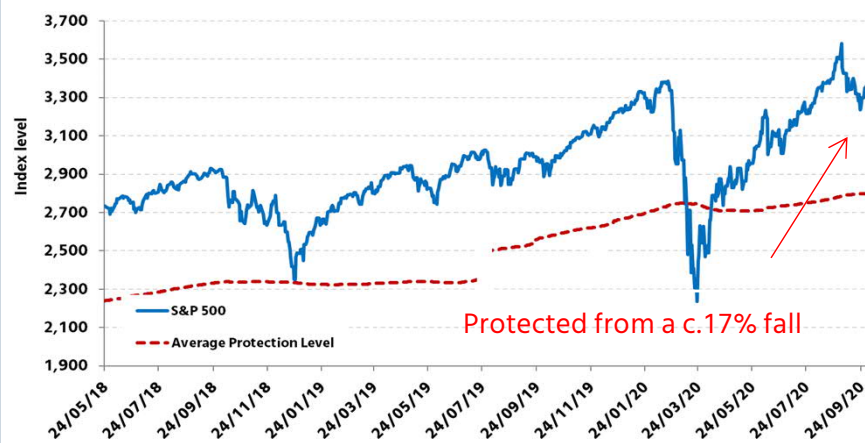


GBP returns	Equity return	Hedging return	Financing return	Costs	Overall return	Relative return
MTD	(4.3%)	0.2%	1.0%	(0.1%)	(3.1%)	1.2%
YTD	0.8%	(0.4%)	(4.3%)	(0.4%)	(4.3%)	(5.1%)
Since Inception	17.6%	(5.1%)	(5.6%)	(1.1%)	5.7%	(11.9%)

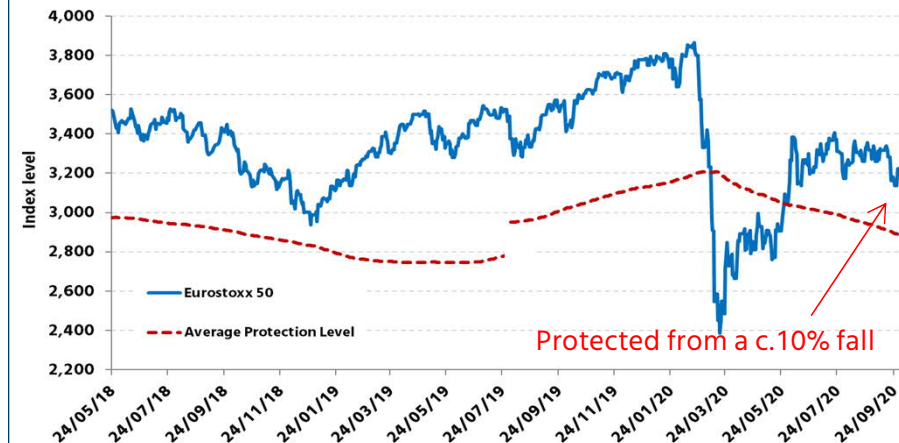
Comments

- The Fund implemented a dynamic equity protection strategy on 24 May 2018 with exposure of £362m. The equity protection strategy was revised at the beginning of August 2019, increasing the protection level by 5%. This increase is to ensure that the Fund is better protected in the event of a downside as the protection will kick in sooner. This has been funded by selling protection at extreme falls.
- Negative equity returns during September meant that the strategy exhibited positive hedging and financing return over the month.
- As at 30 September 2020, there was a gain of c. £20.5m on the strategy since inception, relative to a c. £64.3m gain had the Fund invested in passive equities (with no frictional costs).
- From inception on 8 March 2019 to 30 September 2020 the currency hedge of the market value of the synthetic equity mandate has contributed a c. £5.5m loss relative to an unhedged position given the weakness in Sterling.

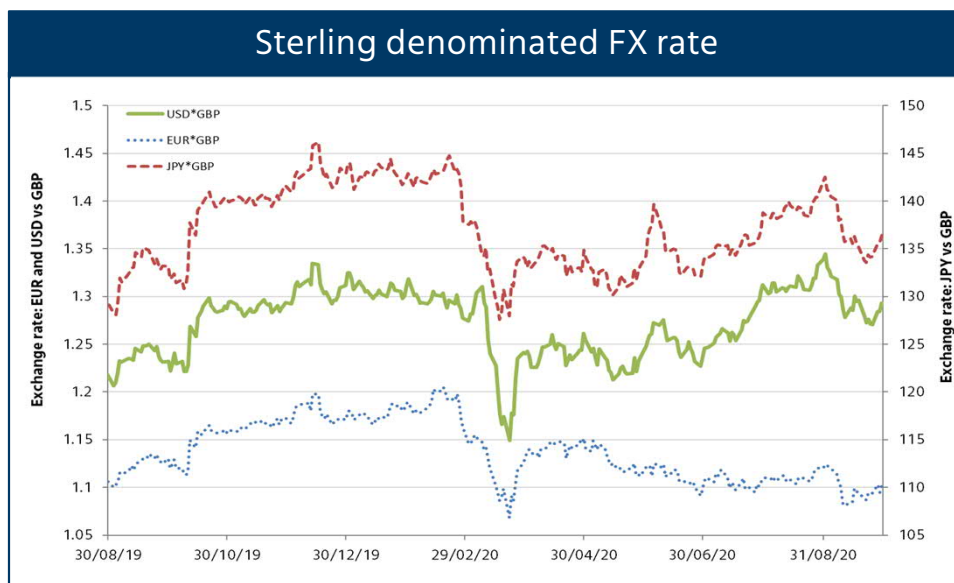
US equity exposure



European equity exposure



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 30 September 2020, the market value of the currency hedge since inception on 22 August 2019 was £3.1m.
 - The market value has fallen over September as Sterling continued to weaken against the other major currencies, in particular the US dollar and Yen.

	Currency basket weight	FX performance (since inception*)	FX change in performance since 31 August 2020
EUR	12%	£0.2m	(£0.2m)
JPY	9%	£0.9m	(£0.5m)
USD	79%	£2.0m	(£3.7m)
	100%	£3.1m	(£4.4m)

*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.

Important notices

References to Mercer shall be construed to include Mercer LLC and/or its associated companies.

© 2020 Mercer LLC. All rights reserved.

This contains confidential and proprietary information of Mercer and is intended for the exclusive use of the parties to whom it was provided by Mercer. Its content may not be modified, sold or otherwise provided, in whole or in part, to any other person or entity, without Mercer's prior written permission.

The findings, ratings and/or opinions expressed herein are the intellectual property of Mercer and are subject to change without notice. They are not intended to convey any guarantees as to the future performance of the investment products, asset classes or capital markets discussed. Past performance does not guarantee future results. Mercer's ratings do not constitute individualized investment advice.

Information contained herein has been obtained from a range of third party sources. While the information is believed to be reliable, Mercer has not sought to verify it independently. As such, Mercer makes no representations or warranties as to the accuracy of the information presented and takes no responsibility or liability (including for indirect, consequential or incidental damages), for any error, omission or inaccuracy in the data supplied by any third party.

This does not constitute an offer or a solicitation of an offer to buy or sell securities, commodities and/or any other financial instruments or products or constitute a solicitation on behalf of any of the investment managers, their affiliates, products or strategies that Mercer may evaluate or recommend.

For the most recent approved ratings of an investment strategy, and a fuller explanation of their meanings, contact your Mercer representative.

For Mercer's conflict of interest disclosures, contact your Mercer representative or see www.mercer.com/conflictsofinterest.

The analysis contained in this paper is subject to and compliant with TAS 100 regulations.



welcome to brighter