HEALTH WEALTH CAREER

CLWYD PENSION FUND

RISK MANAGEMENT FRAMEWORK MONTHLY MONITORING REPORT 31 JULY 2019

August 2019

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MAKE TOMORROW, TODAY MERCER

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?

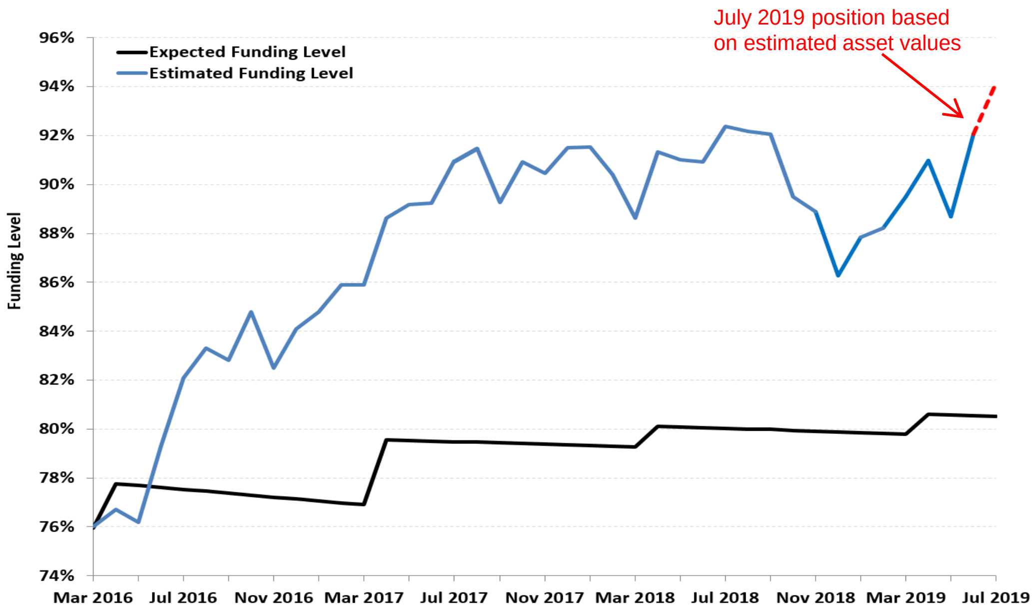
EXECUTIVE SUMMARY

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

●	**Overall funding position** • Ahead of existing recovery plan • Funding level below the first soft trigger	In absolute terms the funding position is c.13% ahead of target. However 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 marginally below target levels	No action required.
●	**Synthetic equity mandate** • Insight in compliance with investment guidelines • Outperformed the benchmark over the quarter and since inception • Maturity constraints as expected	A dynamic protection structure was implemented in Q2 2018. This is being monitored in terms of performance and protection levels. Refinements to the strategy are being implemented following the FRMG in July.
●	**Cash Plus Fund** • Outperformed over Q1 2019 • Collateral waterfall performing as expected • Management team stable and no change in manager rating • Allocation of £56m remains appropriate	Collateral waterfall framework was implemented in Q1 2019. No action required.
●	**Collateral and counterparty position** • Collateral within agreed constraints • The Insight QIF can sustain at least a 1.0% rise in interest rates and fall in inflation, in combination with a 35% fall in equity markets without eliminating all collateral	No action required. A currency hedging overlay is due to be implemented within the QIF in August (subject to agreement); the Fund has sufficient collateral to withstand this.

FUNDING LEVEL MONITORING TO 31 JULY 2019

Estimated funding position since 31 March 2016



The positions from April 2018 onwards have been adjusted to reflect the actual 2018 and 2019 revaluation/pension increase awarded.

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 2016 valuation based on the assumptions (and contributions) outlined in the 2016 actuarial valuation. The *expected* funding level at 31 July 2019 was around 81%.

The **blue line** shows an estimate of the progression of the funding level from 31 March 2016 to 30 June 2019. The **red line** shows the progression of the estimated funding level over July 2019. At 31 July 2019, we estimate the funding level and deficit to be:

94% (£127m*)

This shows that the Fund's position was ahead of the expected funding level at 31 July 2019 by around 13% on the current funding basis.

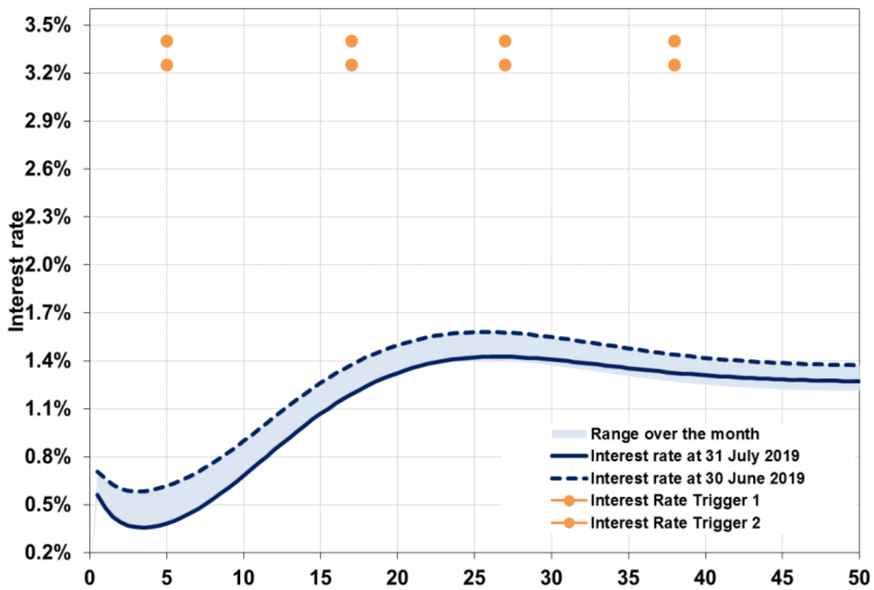
Uncertainty continues to be prevalent in the investment environment due to ongoing external political and fiscal factors. This could mean that the likelihood of achieving the assumed real returns going forward has fallen. To illustrate the impact, a reduction of 0.25% p.a. in the assumed future investment return/real discount rate would reduce the funding level by c.4% to c.90% with a corresponding increase in deficit of £93m to £220m.

This will be kept under review in light of changing market conditions.

**Asset values estimated based on market indices and an estimate of performance of the Insight liability hedging mandate from 30 June 2019 to 31 July 2019. We will monitor this estimate over time against the actual position once final asset values are available, and update the asset values on a monthly basis.*

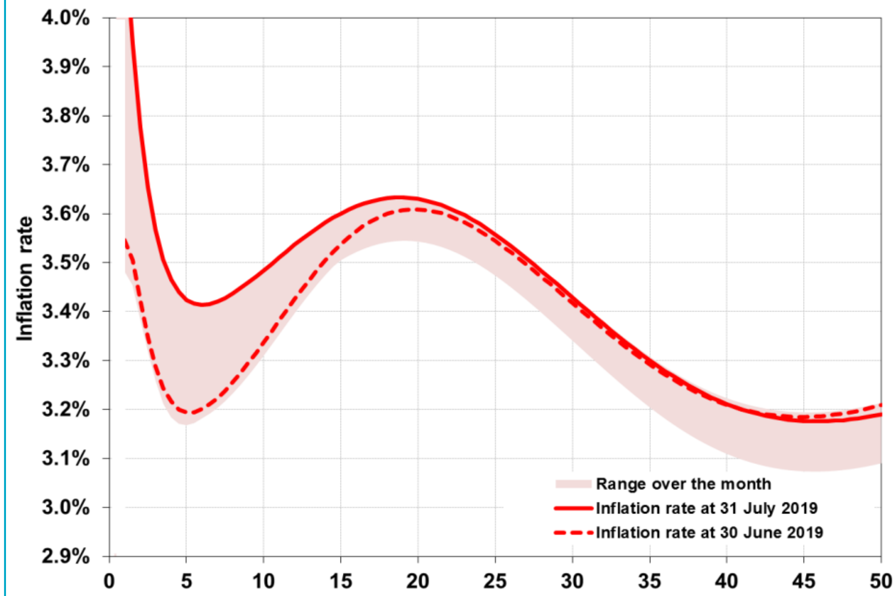
UPDATE ON MARKET CONDITIONS AND TRIGGERS

Change in interest rates



Date	Band 1	Band 2	Band 3	Band 4	Actual
31 March 2019	23.2%	19.4%	19.5%	20.8%	20.1%

Change in inflation rates (note: different scale)



Date	Band 1	Band 2	Band 3	Band 4	Actual
31 March 2019	38.6%	43.0%	36.3%	43.5%	40.3%

Comments

Interest rates fell across the curve over July 2019; the average fall experienced was c. 0.2% p.a..

Based on market conditions as at 31 July 2019, yields would need to rise by c.1.8% p.a. before the Fund would hit any of the revised interest rate triggers implemented by Insight in Q3 2017.

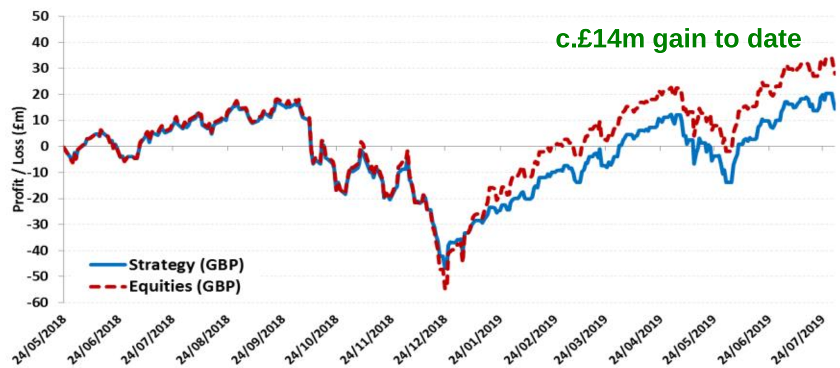
Comments

Inflation expectations rose at short term durations but remained relatively stable at longer durations.

It has been agreed that Insight will not resume monitoring of the level of inflation hedging until the interest rate and inflation hedge ratios have been aligned.

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

Strategy versus equity index

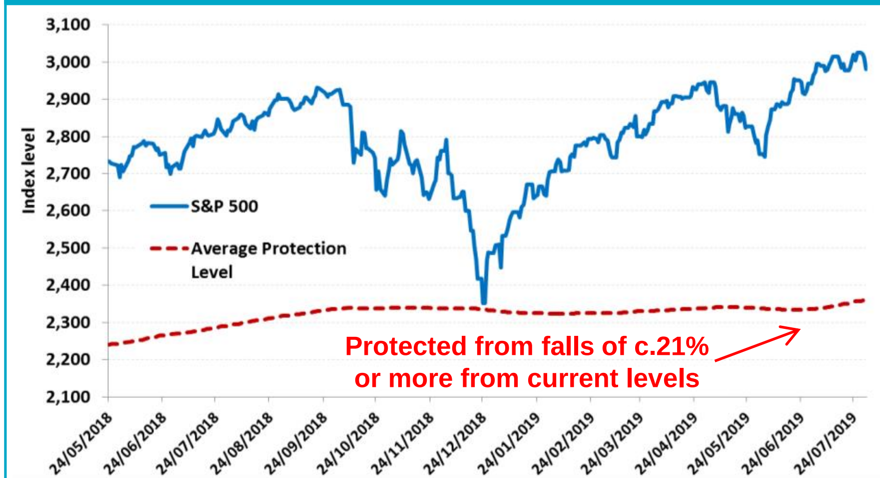


GBP returns	Equity return	Hedging return	Financing return	Costs	Overall return	Relative return
MTD	1.32%	(0.09%)	(0.03%)	(0.02%)	1.18%	(0.14%)
YTD	21.89%	(4.59%)	(1.73%)	(0.25%)	15.33%	(6.56%)
Since Inception	8.42%	(3.05%)	(0.88%)	(0.45%)	4.05%	(4.37%)

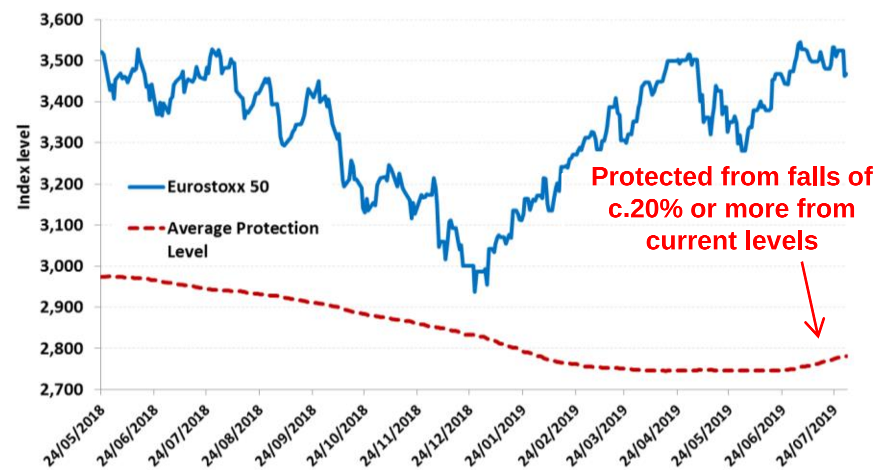
Comments

- The Fund implemented a dynamic equity protection strategy on 24 May 2018 with exposure of £362m. As at 31 July 2019, there was a gain incurred of c. £14m on the strategy since inception, relative to a c. £28m gain had the Fund invested in passive equities (with no frictional costs).
- Positive equity returns meant that the strategy exhibited a negative hedging return over July as a premium was paid for protection that was not needed. The Fund has also experienced an overall loss on the financing return over the month.
- From inception on 8 March 2019 to 31 July 2019 the currency hedging has contributed a £0.2m loss relative to an unhedged position. This is due to the continuing weakening of Sterling since inception.
- From 1 August 2019, the Fund implemented revisions to the equity protection mandate that increased the protection level by 5%. This will ensure that the Fund is better protected in the event of a downside as the protection will kick in sooner.

US equity exposure



European equity exposure



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.
- London Interbank Offer Rate (LIBOR) - An interest rate at which banks can borrow funds from other banks in the London interbank market.

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