Mercer

Risk management framework

Monthly monitoring report: 30 June 2022

Clwyd Pension Fund

July 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

Overall funding position at 30 June 2022

- Ahead of existing recovery plan
- New funding level trigger introduced at 110%

The funding position is 95% which is ahead of the target by around 2%. There is continuing uncertainty in the outlook for future returns and inflation which could impact on the future funding requirements.

Liability hedging mandate at 31 March 2022

- Insight in compliance with investment guidelines
- Outperformed the benchmark marginally over Q4 2021
- Hedge ratios in line with target levels

No triggers breached over Q1 2022.

Synthetic equity mandate at 30 June 2022

- Insight in compliance with investment guidelines
- Outperformed 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 June 2022

- Currency hedging overlay implemented in the QIF in August 2019
- As at 30 June 2022, the market value of the currency hedge since inception on 22 August 2019 was -£7.3m

No action required.

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

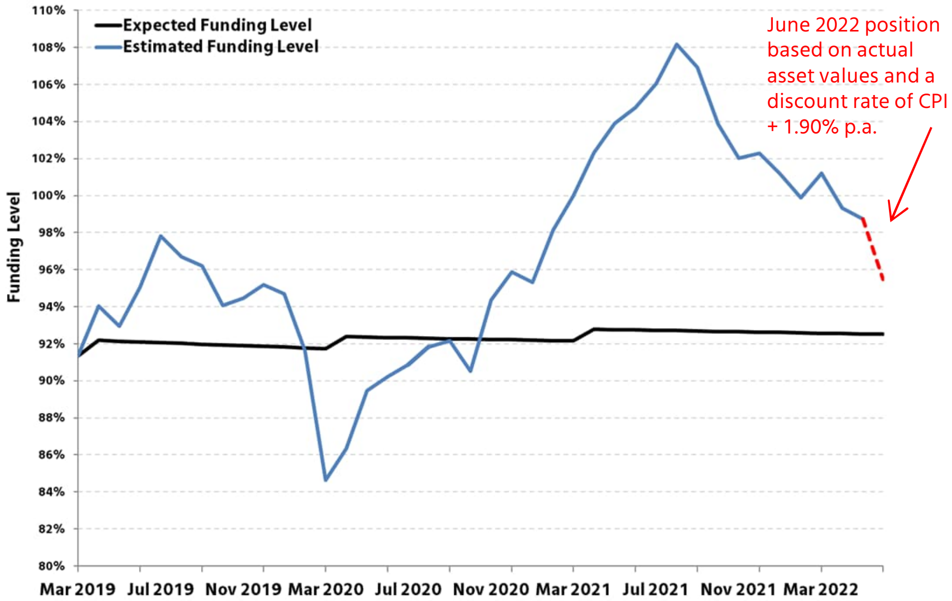
- The Cash Plus Fund has underperformed the benchmark since inception and also over the quarter. We will continue to monitor performance.
- The Insight QIF can sustain at least a 2.7% rise in interest rates or 1.7% fall in inflation without eliminating all headroom.

Overall, the collateral waterfall has returned £10.0m at 31 December 2021 since implementation at 31 January 2019 versus the previous structure.

The Fund has sufficient collateral to withstand the stresses as at 31 December 2021. No action required.

Funding level monitoring to 30 June 2022

Estimated funding position since 31 March 2019



The actual funding level figures include allowance for the impact of the McCloud judgment and GMP equalisation from 31 May 2021

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 a consistent approach to the 2019 valuation 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 30 June 2022 was around 93%.

The **blue line** shows an estimate of the progression of the funding level from 31 March 2019 to 31 May 2022. The **red dashed line** shows the progression of the estimated funding level over June 2022. At 30 June 2022, we estimate the funding level and deficit to be:

95% (£108m)

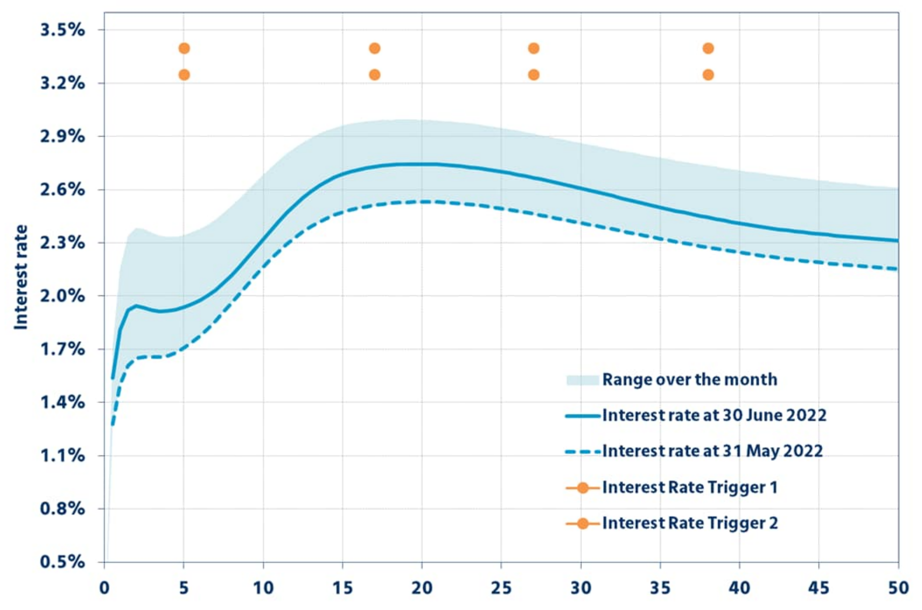
From October 2021 we have incorporated *the membership experience impact* of the 2021 interim funding review which has reduced the funding level by c2% in isolation. The Fund's position was ahead of the expected funding level based on the 2019 valuation expectations at 30 June 2022 by around 2% on the current funding basis.

Uncertainty continues to be prevalent in the investment and fiscal environments due to the geo-political uncertainty and economic outlook – in particular inflation which has a direct impact on the Fund's liabilities. In particular when assessing the funding levels from 31 March 2022 onwards above, we have incorporated an allowance for observed inflation since September 2021 which will impact on the 2023 pension increase. For these funding levels we have also approximately allowed for the change in interest rate and inflation outlook when considering the appropriate discount rate as noted above.

The funding position and appropriate assumptions will be considered in more detail as part of 2022 actuarial valuation and the outcomes will be reported separately in the next few months. The monitoring report will then be reset versus the 2022 valuation.

Update on market conditions and triggers

Change in interest rates



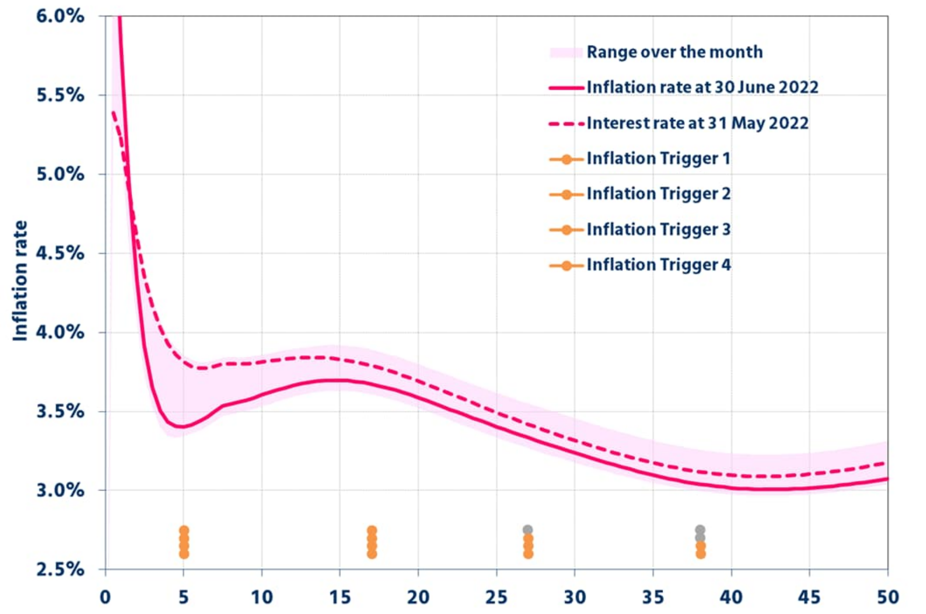
Date	Band 1	Band 2	Band 3	Band 4	Actual
31 March 2022	19.54%	20.41%	21.85%	33.83%	25.81%

Comments

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

Based on market conditions as at 30 June 2022, yields would need to rise by c. 0.5% 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
31 March 2022	38.79%	22.78%	33.18%	62.06%	41.76%

Comments

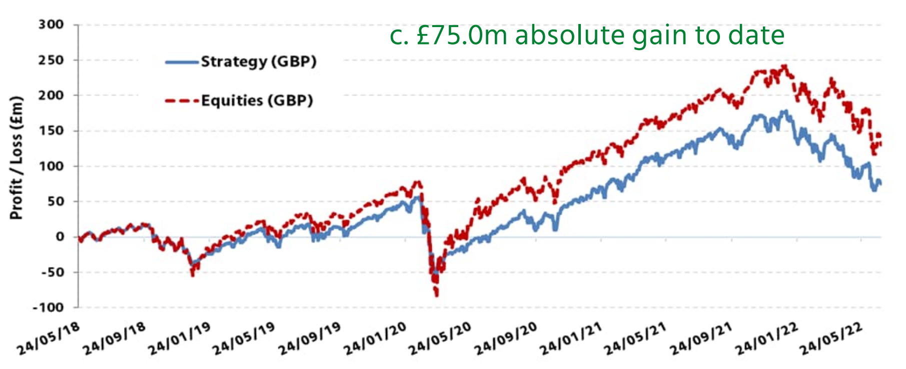
Inflation expectations fell across all but the shortest maturities over the period.

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

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

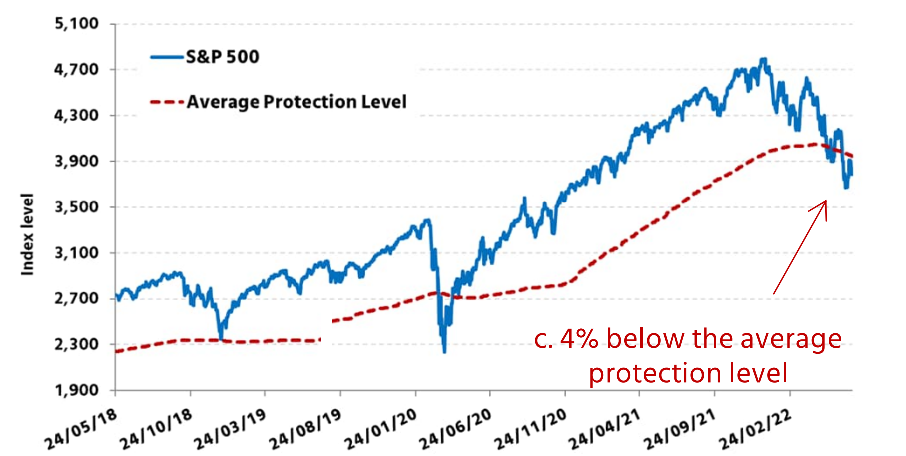


GBP returns	Equity return	Hedging return	Financing return	Costs	Overall return	Relative return
MTD	(10.4%)	3.5%	1.5%	(0.1%)	(5.4%)	4.5%
YTD	(24.5%)	4.3%	1.1%	(0.2%)	(18.8%)	5.7%
SI (per annum)	8.2%	(1.7%)	(1.3%)	(0.5%)	4.7%	(3.5%)

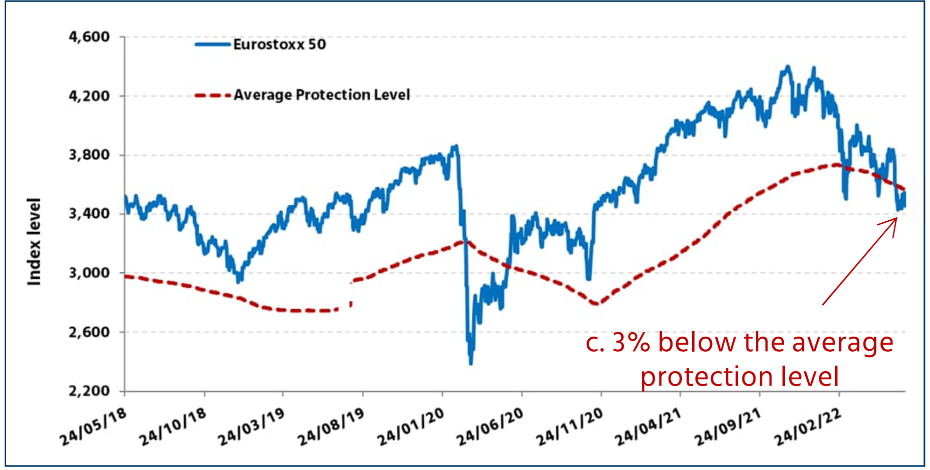
Comments

- 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 fell materially over June, though the equity protection mandate outperformed unprotected equity due to a positive return from the hedging leg. The strategy has outperform passive equities both over the month and year to date. As at 30 June 2022, there was a gain of c. £75.0m on the equity strategy since inception, relative to a c. £134.7m gain had the Fund invested in passive equities (with no frictional costs).
- From inception on 8 March 2019 to 30 June 2022, the currency hedge of the market value of the synthetic equity mandate has resulted in a c. £16.4m loss relative to an unhedged position, as sterling has weakened at an overall level since inception.

US equity exposure

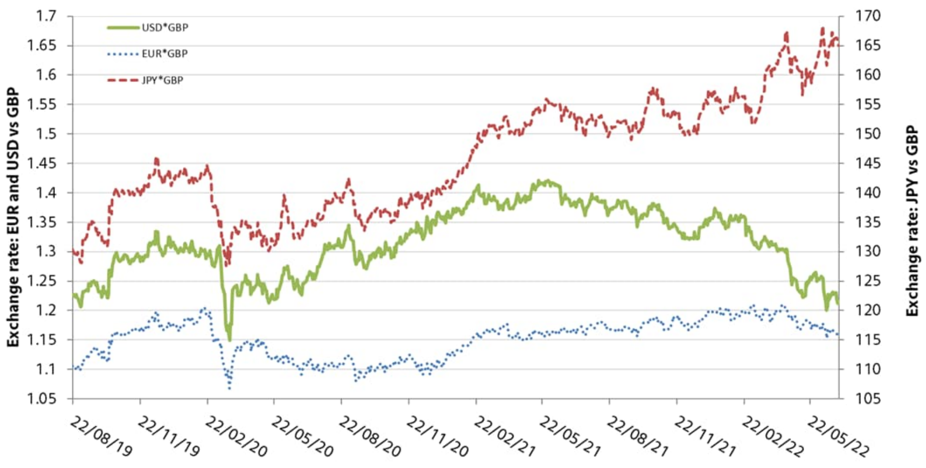


European equity exposure (note different scale)



Developed market physical equity currency hedge

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 June 2022, the market value of the currency hedge since inception on 22 August 2019 was -£7.3m.
- The market value of the currency hedge has fallen materially over June, driven primarily by a major weakening of sterling against the dollar and a weakening versus the euro, partially offset by a strengthening versus the yen.

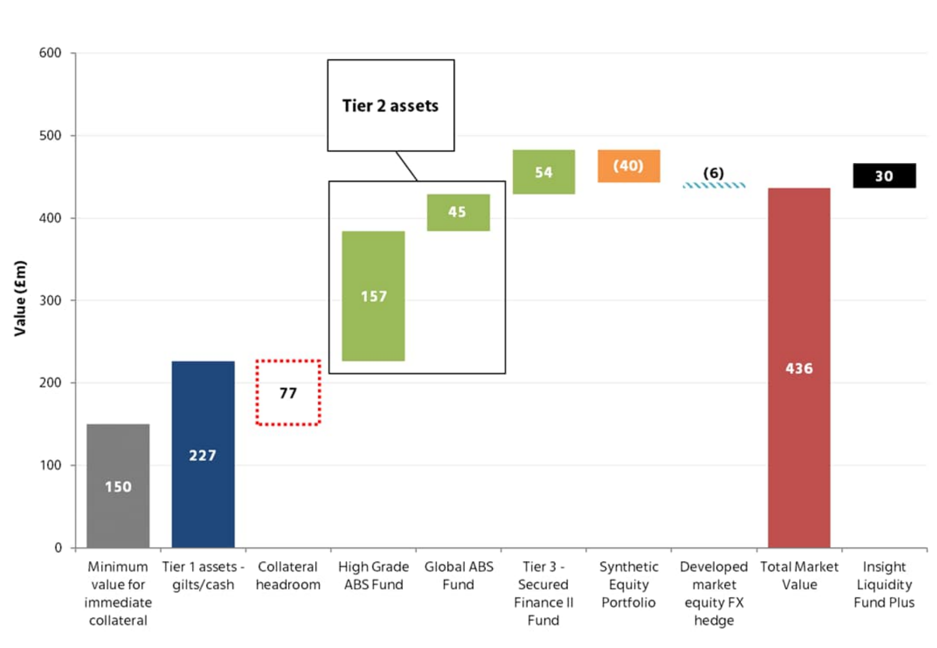
	Currency basket weight	FX performance (since inception*)	FX change in performance since 31 May 2022
EUR	14%	£1.7m	(£0.3m)
JPY	7%	£4.1m	£0.3m
USD	79%	(£13.1m)	(£6.5m)
	100%	**(£7.3m)**	**(£6.5m)**

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

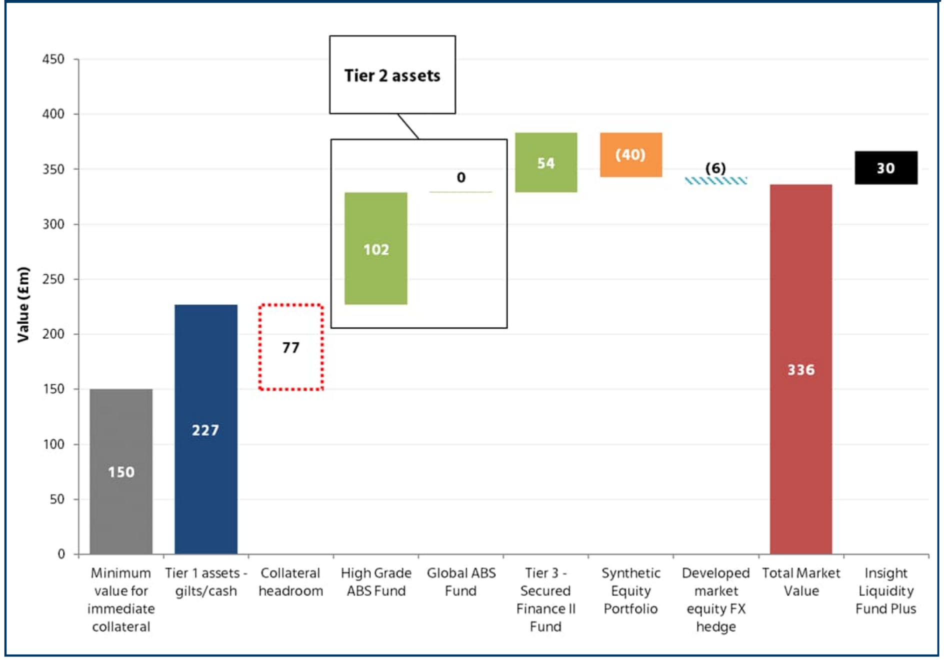
Figures may not sum due to rounding.

Exposures & collateral

Collateral Structure



Collateral Structure (post £100m disinvestment)



Illustrative monitoring test at 30 June 2022 (Base case)	No Custom TRS shock	With 20% Custom TRS shock
Liquid assets	Headroom + Tier 2	Headroom + Tier 2
Interest rate rise to eliminate (p.a.)	> 3.0%	2.7%
Inflation fall to eliminate (p.a.)	> 3.0%	1.7%

Illustrative monitoring test at 30 June 2022 (£100m disinvestment from Tier 2)	No Custom TRS shock	With 20% Custom TRS shock
Liquid assets	Headroom + Tier 2	Headroom + Tier 2
Interest rate rise to eliminate (p.a.)	> 3.0%	0.8%
Inflation fall to eliminate (p.a.)	2.0%	0.5%

Custom TRS shock is defined as a 20% fall in the value of the custom TRS (equivalent to a c. 40% fall in equity markets).
Assumes MV of structured equity is absorbed prior to Tier 1 assets being sold down.

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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