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Dorset County Pension Fund

Investment report: Q3 2022



Executive summary



Portfolio performance summary

- **Q3 2022**
 - Benchmark returns over the quarter were **+2.44% (+£7.7m)**, which was driven by a fall in inflation expectations and rising government bond yields.
 - The portfolio outperformed the benchmark over the quarter, with relative performance of **+0.14% (+£0.6m)**.
- **Since inception:**
 - Benchmark returns of **+6.65% pa (+£131.5m)** since inception as a result of falls in long-term interest rates and an increase in inflation.
 - Discretionary positioning has added **+0.83% pa (+£19.8m)** to the Fund's portfolio return.

Portfolio position

- Your inflation hedge ratio (as a % of actuarial liabilities) was **18.3%** at the end of September.
- The portfolio leverage is **c.1.6x** as at 30 September 2022, which means it can withstand a >3% fall in inflation expectations prior to the leverage exceeding c.3.5x.

Dorset County Pension Fund

Key metrics at 30 September 2022



Inflation hedge ratios

	30-Jun-22, £k	30-Sep-22, £k
Portfolio IE01	1,104.8	961.6
Benchmark IE01	1,105.2	962.4
Actuarial liability IE01*	5,233.5	5,269.0
Portfolio inflation hedge ratio*	21.1%	18.3%
Benchmark inflation hedge ratio*	21.1%	18.3%

- **IE01**: Sensitivity (in £ terms) to a 0.01% (basis point) increase in inflation.
- This table shows an estimate of the proportion of the Fund's actuarial liabilities that are hedged by the portfolio. This also shows the portfolio is very close to the benchmark in terms of its total inflation sensitivity.

Performance

	3 months %	1 year %	3 years % ann.	5 years % ann.	Since inception % ann.
Portfolio	2.58	-12.19	-1.85	1.36	7.48
Benchmark	2.44	-11.89	-2.00	0.91	6.65
Relative	0.14	-0.30	0.15	0.45	0.83

*Source: Barnett Waddingham. Estimate with Insight calculations. Actuarial liability data as at 30 September 2018. Actuarial liability IE01 is scaled based on the present value of the actuarial liabilities relative to the mandate cashflow value (see appendix for formula)

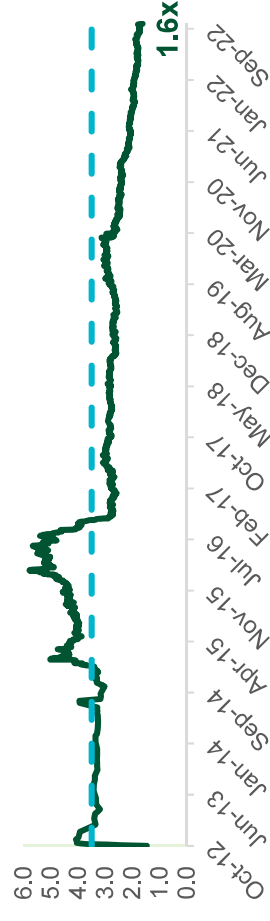
** Leverage = exposure value of inflation linked liabilities hedged / portfolio asset value. *** This is a proxy for the proposed notification level of Fund value/IE01<125.

Change in long-term inflation expectations

	0.0%	-0.5%	-1.0%	-1.5%	-2.0%	-2.5%
Expected value of collateral (£m)	383.3	338.0	297.8	262.1	230.2	201.8
Leverage multiple	1.63	1.71	1.81	1.92	2.04	2.19

- The above table shows stress tests for long-term inflation rates. The Fund can support a >2.5% fall in long-term inflation expectations prior to running out of collateral to support the hedge.
- The exposure value of inflation-linked liabilities hedged was £623.1m at 30 September 2022.

Leverage (through time)**



- A >3% fall in inflation would take the Fund to c.3.5x leverage

What happens to leverage when inflation falls?



Example

£350m invested to hedge £1,050m of inflation-linked liabilities

Duration (average maturity) of 20 years

Leverage is 3.0x



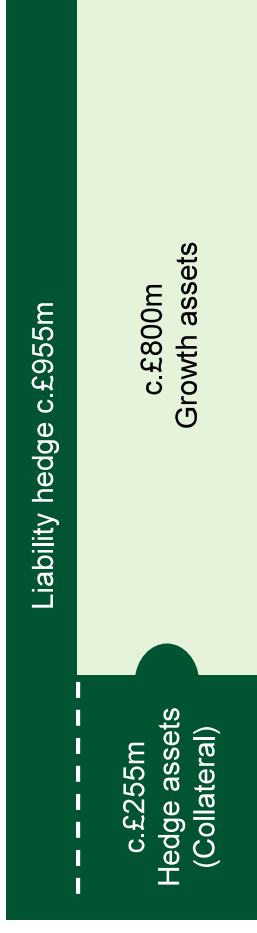
Scenario: Inflation expectations falls by 0.5%

Liabilities fall by c.£95m on £1,050m hedge

Hedge assets fall in value by c.£95m

Amount in LDI funds is now only £255m, supporting a £955m hedge

Overall this increases leverage from 3.0x to 3.7x



For illustrative purposes only.

Dorset County Pension Fund

Valuation and exposure as at 30 September 2022



	Value		Interest rate sensitivity (PV01)		Inflation sensitivity (IE01)	
	£m	£k	£k	% of benchmark	£k	% of benchmark
Conventional gilts	-20.3	10.3		-1.9%	0.0	0.0%
Index-linked gilts	362.9	-794.1		147.2%	790.9	82.2%
Corporate bonds	3.3	-7.1		1.3%	7.1	0.7%
Futures	1.4	12.0		-2.2%	0.0	0.0%
Repurchase agreements	-101.1	1.3		-0.2%	0.0	0.0%
Liquidity	18.6	0.0		0.0%	0.0	0.0%
High Grade ABS Fund	11.1	0.0		0.0%	0.0	0.0%
Total bond and liquidity assets	275.9	-777.5		144.2%	798.0	82.9%
Index-linked gilt benchmark component	339.7	-787.3		146.0%	784.7	81.5%
RPI swaps	41.1	-48.4		9.0%	163.6	17.0%
Interest rate swaps	66.3	291.1		-54.0%	0.0	0.0%
Total swap assets	107.4	242.7		-45.0%	163.6	17.0%
Swap liability benchmark component	-14.8	248.0		-46.0%	177.7	18.5%
Total assets	383.3	-534.8		99.1%	961.6	99.9%
Liability benchmark	324.8	-539.3		100.0%	962.4	100.0%
Liability benchmark inflation only	623.1	-		-	962.4	100.0%
Leverage multiple (inflation)	1.6					

- The value of the liability benchmark reflects the Net Asset Value of the portfolio of gilts and swaps that are used as the benchmark for the liability hedging portfolio which was last updated on 3 March 2020.
- PV01: change in present value resulting from a 0.01% upward shift in long-term interest rates
- IE01: change in present value resulting from a 0.01% upward shift in long-term inflation expectations
- Leverage = exposure value of inflation linked liabilities hedged / portfolio asset value

Performance

Performance summary

As at 30 September 2022



	3 months %	1 year %	3 years % p.a.	5 years % p.a.	Since inception % p.a.
Portfolio	2.58	-12.19	-1.85	1.36	7.48
Benchmark	2.44	-11.89	-2.00	0.91	6.65
Relative	0.14	-0.30	0.15	0.45	0.83
	3 months £	1 year £	3 years cumulative £	5 years cumulative £	Since inception cumulative £
Portfolio	8,291,533	-44,509,849	-19,139,057	15,587,631	151,218,401
Benchmark	7,693,228	-43,267,739	-20,996,491	9,207,438	131,456,474
Relative	598,305	-1,242,110	1,857,434	6,380,192	19,761,926

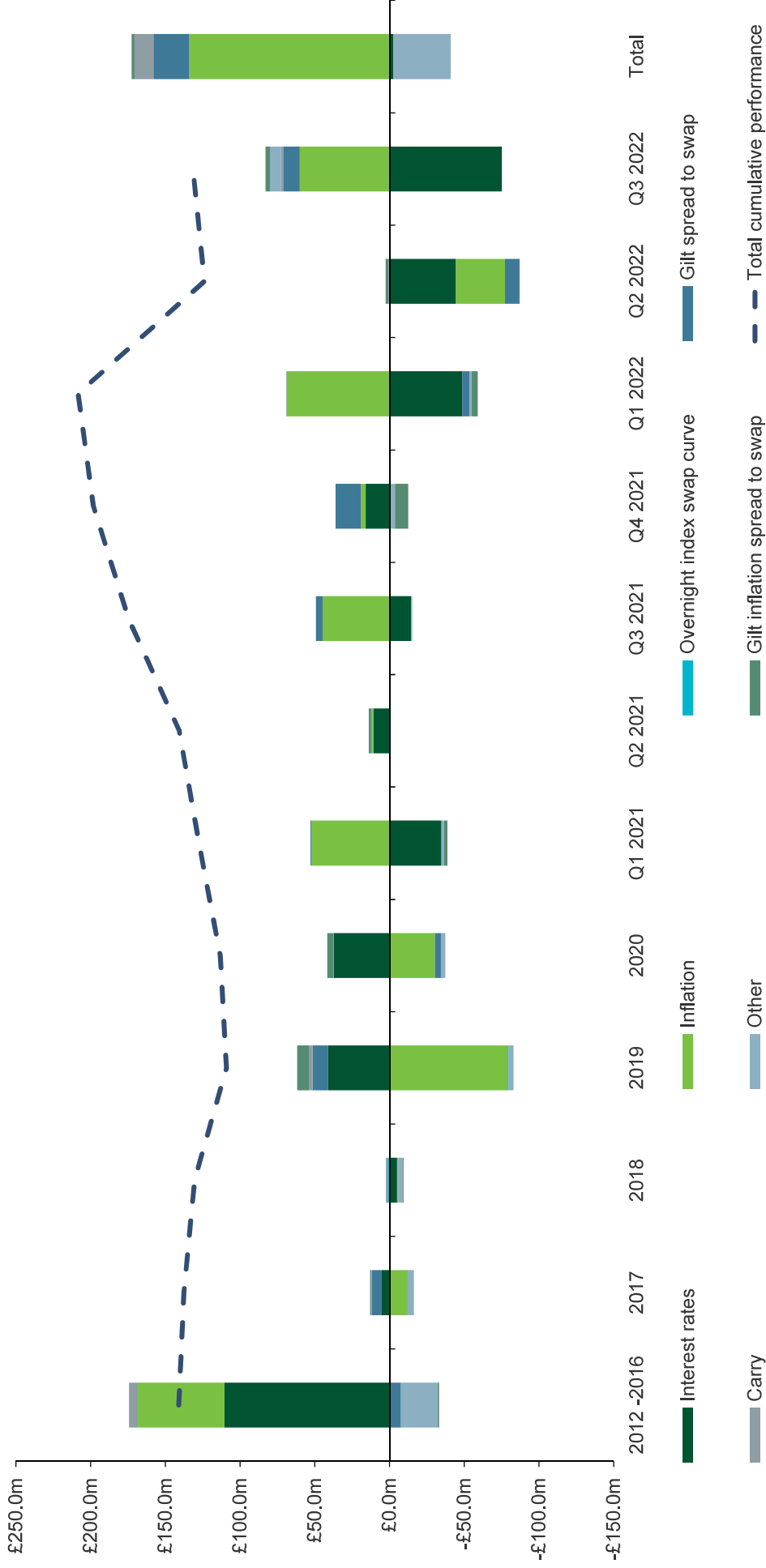
Data stated as at 30 September 2022 . Performance is quoted gross of fees and in sterling terms. Inception date: 31 October 2012

Q3 2022:

- Unleveraged return: if we adjust for the leverage in the portfolio, the benchmark return over the quarter was 1.08% as a proportion of the value of the inflation exposure hedged and the portfolio return was 1.17% on that basis.
- The Asset Benchmark Return (to compare to State Street) was 2.14% over the quarter.
- The benchmark performed positively over the quarter, which was driven by a rise in long-term inflation rates and partly offset by rising government bond yields.
- The portfolio outperformed the benchmark over the quarter which was driven by inflation positioning with an overweight to longer maturities where inflation levels are higher than in the middle of the curve.

Benchmark performance attribution

30 September 2022



Dorset County Pension Fund

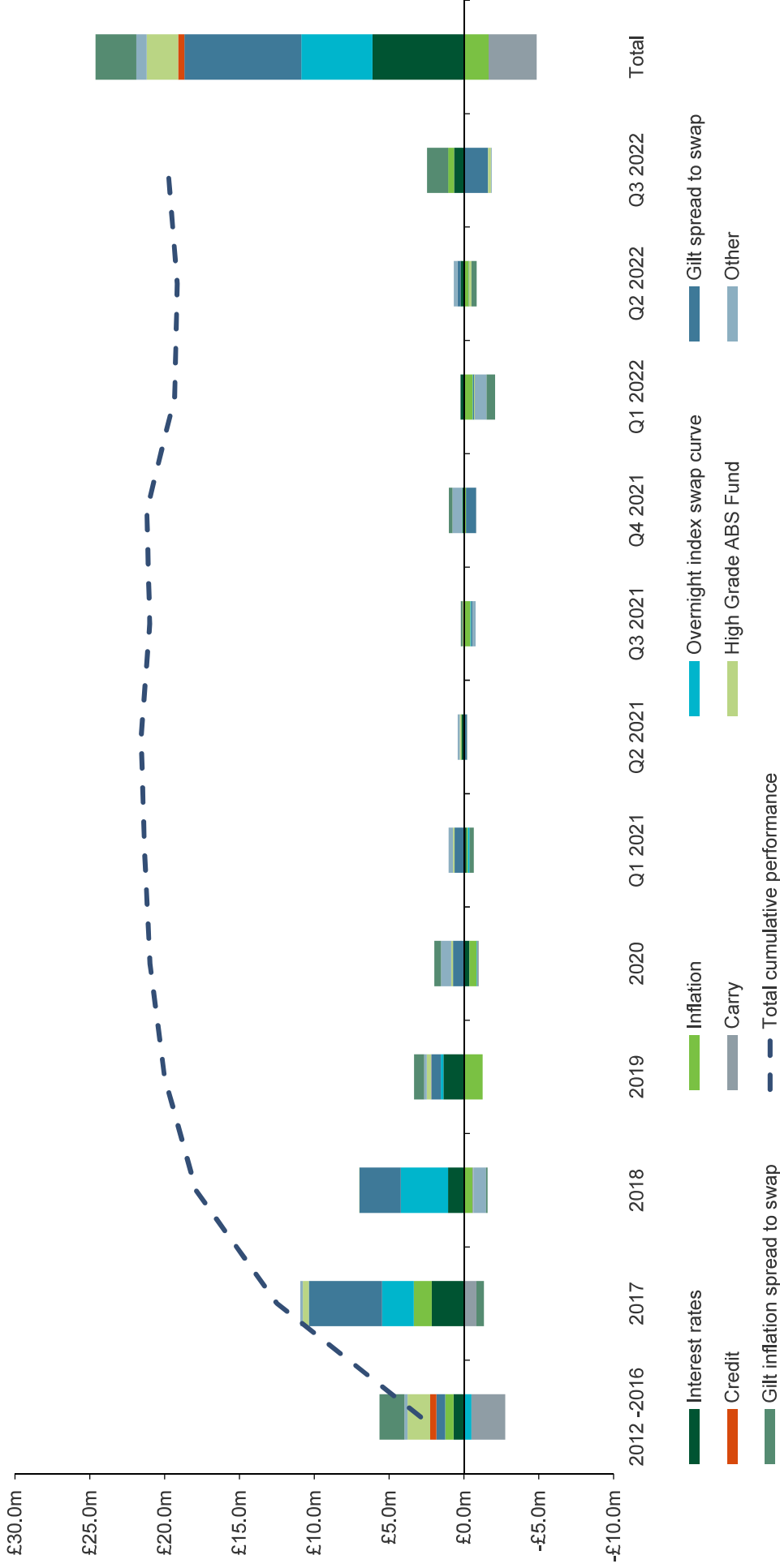
Benchmark performance attribution to 30 September 2022



£m	2012-2016	2017	2018	2019	2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Total
Interest rates	110.4	5.2	-5.1	41.3	37.3	-34.9	10.5	-14.5	15.9	-48.7	-44.6	-75.2	-2.5
Inflation	57.9	-12.2	-0.7	-79.0	-30.5	52.4	1.5	44.8	3.1	68.9	-32.7	60.1	133.6
Overnight index swap curve	0.0	0.0	0.8	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Gilt spread to swap	-7.7	6.6	-0.1	10.3	-3.9	0.6	0.7	4.3	17.0	-5.0	-9.8	11.1	24.1
Gilt inflation spread to swap	-0.8	0.7	-0.8	7.8	4.2	-2.1	1.2	0.0	-8.9	-4.0	1.6	3.0	1.8
Carry	5.9	0.5	1.5	2.3	0.1	-0.1	0.0	0.0	-0.1	0.3	0.8	1.4	12.7
Other	-24.7	-4.2	-2.8	-3.5	-2.9	-1.6	-0.7	-0.5	-3.6	-1.3	-0.1	7.4	-38.5
Total	141.0	-3.5	-7.2	-21.4	4.2	14.2	13.1	34.2	23.4	10.2	-84.6	7.7	131.5
Total cumulative performance	141.0	137.5	130.4	109.0	113.2	127.5	140.6	174.7	198.2	208.4	123.8	131.5	-

Relative performance attribution

30 September 2022



Dorset County Pension Fund

Relative performance attribution to 30 September 2022



£m	2012 -2016	2017	2018	2019	2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Total
Interest rates	0.7	2.2	1.1	1.4	-0.4	-0.2	0.2	0.0	0.1	0.2	0.2	0.7	6.1
Inflation	0.6	1.2	-0.6	-1.2	-0.5	-0.1	0.1	-0.4	-0.1	-0.6	-0.3	0.4	-1.7
Overnight index swap curve	-0.5	2.1	3.2	0.2	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	4.8
Gilt spread to swap	0.6	4.9	2.8	0.6	0.7	0.6	-0.2	-0.1	-0.7	-0.1	0.2	-1.6	7.8
Gilt inflation spread to swap	1.7	-0.5	-0.1	0.7	0.4	-0.3	0.0	0.1	0.2	-0.6	-0.3	1.4	2.7
Credit	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Carry	-2.3	-0.8	-0.1	0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.2
High Grade ABS Fund	1.5	0.4	0.0	0.3	0.1	0.1	0.1	0.0	0.0	0.0	-0.2	-0.2	2.1
Other	0.2	0.2	-0.8	0.2	0.7	0.3	0.1	-0.2	0.7	-0.8	0.2	-0.1	0.7
Total	2.9	9.6	5.4	2.1	1.0	0.4	0.2	-0.6	0.2	-1.9	-0.2	0.6	19.8
Total cumulative performance	2.9	12.5	17.9	20.0	21.0	21.3	21.6	21.0	21.2	19.3	19.2	19.8	-