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Dorset County Pension Fund

Investment report: Q3 2021



Executive summary

Portfolio performance summary

- **Q3 2021**
 - Benchmark returns over the quarter were **+9.95% (+£34.2m)**, which was driven by a rise in inflation expectations.
 - The portfolio underperformed the benchmark over the quarter, with relative performance of **-0.15% (-£0.6m)**.

- **Since inception:**
 - Benchmark returns of **+8.96% pa (+£174.7m)** since inception as a result of falls in long-term interest rates
 - Discretionary positioning has added **+0.98% pa (+£21.0m)** to the Fund's portfolio return.

Portfolio position

- Your inflation hedge ratio (as a % of actuarial liabilities) was **30.3%** at the end of September.
- The portfolio leverage is **c.2.00x** as at 30 September 2021, which means it can withstand a c.2.1% fall in inflation expectations prior to the leverage exceeding c.3.5x.

Dorset County Pension Fund

Key metrics at 30 September 2021



Inflation hedge ratios

	30-Jun-21, £k	30-Sep-21, £k
Portfolio IE01	1,562,0	1,570.2
Benchmark IE01	1,564,6	1,573.2
Actuarial liability IE01*	5,182.2	5,182.2
Portfolio inflation hedge ratio*	30.1%	30.3%
Benchmark inflation hedge ratio*	30.2%	30.4%

- **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	9.80	22.37	5.11	5.42	9.94
Benchmark	9.95	21.91	5.23	4.12	8.96
Relative	0.07	0.46	-0.12	1.30	0.98

*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)	427.8	354.2	289.7	232.9	182.9	138.7
Leverage multiple	2.00	2.21	2.48	2.84	3.35	4.10

- 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 £854.8m at 30 September 2021.

Leverage (through time)**



- A c.2.1% 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 at 30 September 2021



	Value £m	Interest rate sensitivity (PV01)		Inflation sensitivity (IE01)	
		£k	% of liabilities	£k	% of liabilities
Conventional gilts	-4.6	-25.3	3.5%	0.0	0.0%
Index-linked gilts	538.1	-1,318.7	182.5%	1,288.3	81.9%
Corporate bonds	5.1	-11.9	1.6%	11.6	0.7%
Repurchase agreements	-125.4	3.3	-0.5%	0.0	0.0%
RPI Swaps	8.6	-24.0	3.3%	270.3	17.2%
Interest rate swaps	-39.8	640.7	-88.7%	0.0	0.0%
Liquidity	33.8	0.0	0.0%	0.0	0.0%
Futures	0.6	15.5	-2.1%	0.0	0.0%
High Grade ABS Fund	11.4	0.0	0.0%	0.0	0.0%
Total return swap	0.0	0.0	0.0%	0.0	0.0%
Total assets	427.8	-720.5	99.7%	1,570.2	99.8%
Liability benchmark	376.9	-722.7	100.0%	1,573.2	100.0%
Liability benchmark inflation only	854.8	-	-	1,573.2	100.0%
Leverage	2.0x				

- 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 2021



	3 months %	1 year %	3 years % p.a.	5 years % p.a.	Since inception % p.a.
Portfolio	9.80	22.37	5.11	5.42	9.94
Benchmark	9.95	21.91	5.23	4.12	8.96
Relative	-0.15	0.46	-0.12	1.30	0.98

	3 months £	1 year £	3 years cumulative £	5 years cumulative £	Since inception cumulative £
Portfolio	33,587,991	69,501,770	46,984,165	79,371,596	195,728,249
Benchmark	34,150,449	68,261,664	47,311,790	60,788,692	174,724,213
Relative	-562,457	1,240,106	-327,625	18,582,904	21,004,036

Data stated as at 30 September 2021. Performance is quoted gross of fees and in sterling terms. Inception date: 31 October 2012

Quarter 3 2021:

- Unleveraged return: if we adjust for the leverage in the portfolio, the benchmark return over the quarter was 4.09% as a proportion of the value of the inflation exposure hedged and the portfolio return was 4.03% on that basis.
- The Asset Benchmark Return (to compare to State Street) was 8.65% over the quarter.
- The benchmark performed positively over the quarter, which was driven by a rise in inflation expectations. Gilts outperforming swaps also contributed positively to benchmark performance, while the rise in long term interest rates contributed negatively.
- The portfolio underperformed the benchmark over the quarter by 0.15% due to inflation positioning relative to the benchmark over a period where there were large changes in inflation expectations, particularly at shorter maturities.

Benchmark performance attribution

As at 30 September 2021



Over Q3, the benchmark rose in value, which was driven by a rise in inflation expectations



Dorset County Pension Fund

Benchmark performance attribution to 30 September 2021



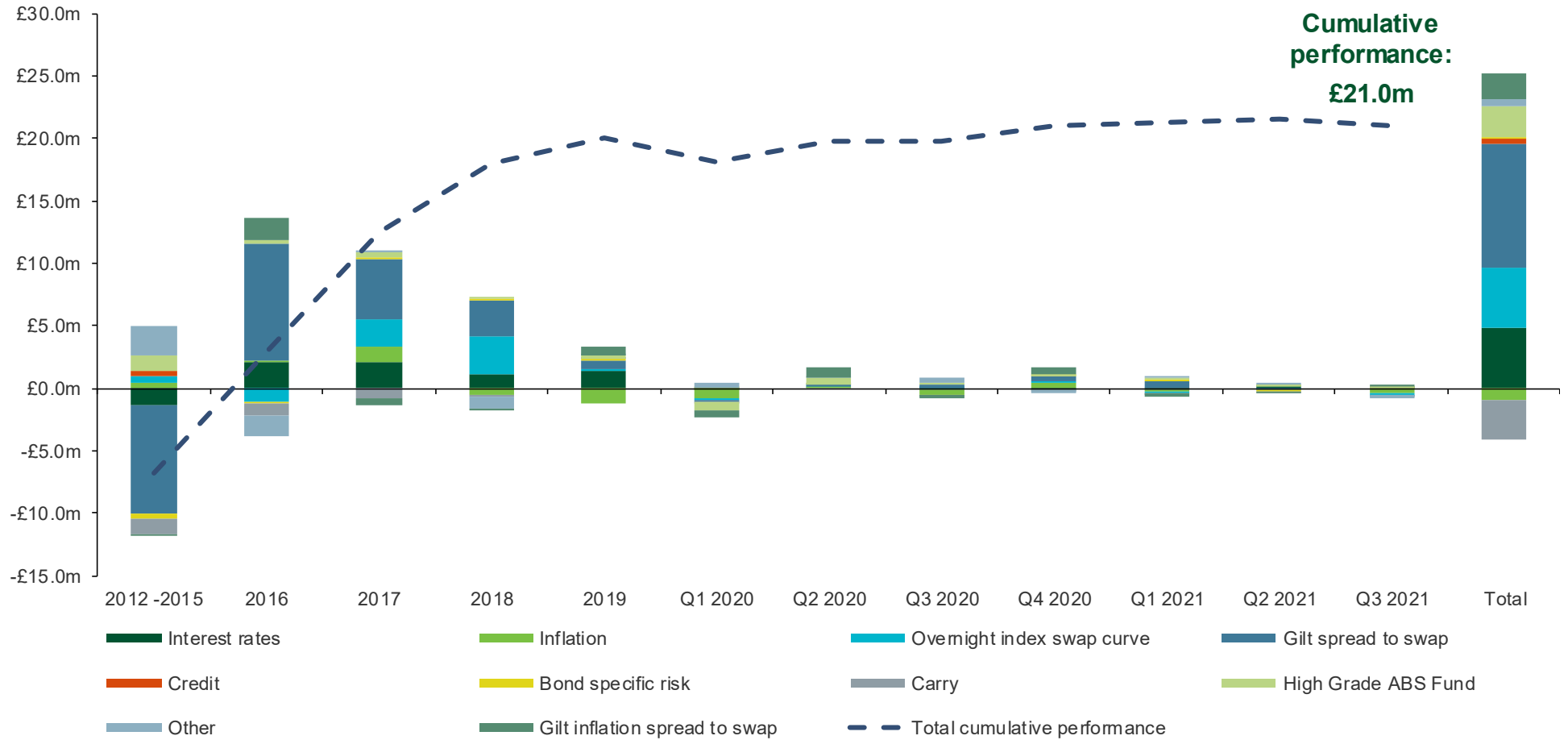
£m	2012 -2015	2016	2017	2018	2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Total
Interest rates	78.1	32.3	5.2	-5.1	41.3	32.5	8.5	-5.0	1.2	-34.9	10.5	-14.5	150.1
Inflation	2.2	55.7	-12.2	-0.7	-79.0	-67.3	29.4	5.5	1.8	52.4	1.5	44.8	34.1
Overnight index swap curve	0.0	0.0	0.0	0.8	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Gilt spread to swap	-15.2	7.6	6.6	-0.1	10.3	-9.8	1.9	-1.7	5.7	0.6	0.7	4.3	10.8
Gilt inflation spread to swap	-0.3	-0.5	0.7	-0.8	7.8	-9.9	15.1	-0.2	-0.8	-2.1	1.2	0.0	10.0
Bond specific risk	-0.3	0.0	0.0	0.0	0.0	-0.1	0.1	-0.1	0.2	-0.2	0.0	0.1	-0.2
Carry	5.5	0.5	0.5	1.5	2.3	0.3	0.0	-0.1	-0.1	-0.1	0.0	0.0	10.2
Other	-14.3	-10.0	-4.3	-2.8	-3.5	0.8	-1.8	-0.8	-1.2	-1.4	-0.7	-0.6	-40.7
Total	55.6	85.4	-3.5	-7.2	-21.4	-53.5	53.3	-2.3	6.8	14.2	13.1	34.2	174.7
Total cumulative performance	55.6	141.0	137.5	130.4	109.0	55.5	108.8	106.5	113.2	127.5	140.6	174.7	-

Relative performance attribution

As at 30 September 2021



The portfolio underperformed the benchmark over Q3 2021 due to inflation positioning relative to the benchmark



Dorset County Pension Fund

Relative performance attribution to 30 September 2021



£m	2012 -2015	2016	2017	2018	2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Total
Interest rates	-1.4	2.1	2.2	1.1	1.4	0.0	0.0	-0.2	-0.1	-0.2	0.2	0.0	4.9
Inflation	0.4	0.2	1.2	-0.6	-1.2	-0.8	0.1	-0.3	0.5	-0.1	0.1	-0.4	-1.0
Overnight index swap curve	0.6	-1.1	2.1	3.2	0.2	-0.1	0.0	0.0	0.0	-0.1	0.0	0.0	4.8
Gilt spread to swap	-8.7	9.3	4.9	2.8	0.6	-0.1	0.1	0.3	0.4	0.6	-0.2	-0.1	10.0
Gilt inflation spread to swap	-0.1	1.8	-0.5	-0.1	0.7	-0.5	0.7	-0.3	0.5	-0.3	0.0	0.1	2.0
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
Bond specific risk	-0.4	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.1	-0.1	0.0	0.1
Carry	-1.2	-1.0	-0.8	-0.1	0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-3.2
High Grade ABS Fund	1.2	0.3	0.4	0.0	0.3	-0.6	0.5	0.1	0.1	0.1	0.1	0.0	2.5
Other	2.3	-1.6	0.1	-1.0	0.0	0.3	0.1	0.4	-0.2	0.2	0.2	-0.2	0.6
Total	-6.8	9.7	9.6	5.4	2.1	-1.9	1.6	0.0	1.2	0.4	0.2	-0.6	21.0
Total cumulative performance	-6.8	2.9	12.5	17.9	20.0	18.1	19.7	19.8	21.0	21.3	21.6	21.0	-