

FOR PROFESSIONAL CLIENTS AND QUALIFIED INVESTORS ONLY
NOT TO BE REPRODUCED WITHOUT PRIOR WRITTEN APPROVAL
PLEASE REFER TO ALL RISK DISCLOSURES AT THE BACK OF THIS DOCUMENT

Dorset County Pension Fund

Investment report: Q4 2019



Executive summary

Portfolio performance summary

- **Q4 2019:**
 - Benchmark returns over the quarter were **-12.0% (-£43.5m)** due to 1) a fall in inflation expectations, particularly at shorter maturities; and 2) interest rates rising across the curve
 - Discretionary positioning added **+0.55% (+£2.1m)** as a result of the overweight position to longer-dated inflation versus the middle of the curve. This had a positive impact on relative performance as longer-dated inflation fell by less over the quarter
- **Since inception:**
 - Benchmark returns of **+8.3% pa (+£109m)** since inception as a result of falls in long-term interest rates
 - Discretionary positioning has added **+1.2% pa (+£20.0m)** to the Fund's portfolio return

Portfolio position

- Your inflation hedge ratio (as a % of actuarial liabilities) was **39.7%** at the end December
- The portfolio leverage is **c.2.94x** as at 31 December 2019, which means it can withstand a >2.0% fall in inflation expectations
 - we have a trigger to notify you if the leverage exceeds c.3.5x

Looking forward

- The Fund is considering the implications of the potential reforms to RPI and the implications on the hedge

Dorset County Pension Fund

Key metrics at 31 December 2019



Inflation hedge ratios

	30-Sep-19, £k	31-Dec-19, £k
Portfolio IE01	2,330.3	2,048.0
Benchmark IE01	2,334.0	2,149.9
Actuarial liability IE01*	5,146.0	5,164.0
Portfolio inflation hedge ratio*	45.3%	39.7%
Benchmark inflation hedge ratio*	45.4%	39.7%

- **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

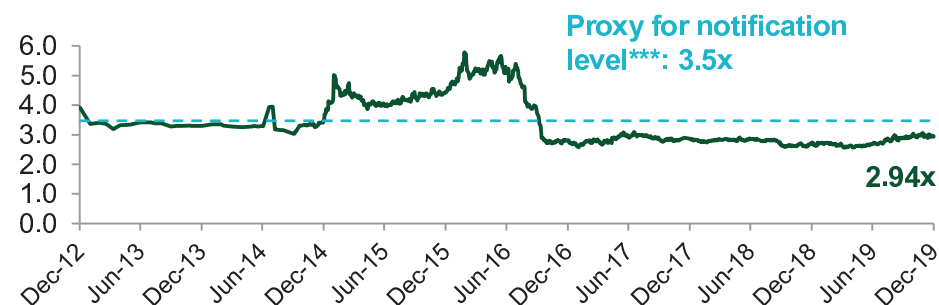
	3 months %	1 year %	3 years % ann.	5 years % ann.	Since inception % ann.
Portfolio	-11.42	-5.80	-0.97	5.87	9.50
Benchmark	-11.97	-6.39	-2.91	4.45	8.30
Relative	0.55	0.59	1.94	1.41	1.20

Collateral adequacy testing

	Change in long-term inflation expectations					
	0.0%	-0.5%	-1.0%	-1.5%	-2.0%	-2.5%
Expected value of collateral (£m)	362.5	266.7	183.0	109.5	44.9	-12.1
Leverage multiple	2.94	3.64	4.86	7.45	16.73	-57.18

- The above table shows stress tests for long-term interest rates and long-term inflation rates. The Fund can support a >2.0% fall in long-term inflation expectations prior to running out of collateral to support the hedge.

Leverage (through time)**



- A 0.5% fall in inflation would take the Fund to a 3.5x leverage

*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.

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 31 December 2019



	Value	Interest rate sensitivity (PV01)		Inflation sensitivity (IE01)	
	£m	£k	% of benchmark	£k	% of benchmark
Conventional gilts	14.0	-15.2	2.6%	0.0	0.0%
Index-linked gilts	439.8	-1,116.0	192.4%	1,094.0	53.4%
Corporate bonds	4.4	-11.0	1.9%	10.8	0.5%
Repurchase agreements	-34.3	0.4	-0.1%	0.0	0.0%
RPI swaps	-0.9	-13.3	2.3%	803.7	39.2%
Interest rate swaps	-96.6	697.0	-120.2%	0.0	0.0%
Liquidity	24.9	0.0	0.0%	0.0	0.0%
Futures	0.3	22.7	-3.9%	0.0	0.0%
Insight High Grade ABS Fund ¹	11.0	0.0	0.0%	0.0	0.0%
Total return swap	-0.1	-141.0	24.3%	139.5	6.8%
Total assets	362.5	-576.4	99.4%	2,048.0	99.9%
Liability benchmark	319.1	-579.9	100.0%	2,049.9	100.0%

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

¹ Insight Libor Plus Fund changed its name to Insight High Grade ABS Fund on 2 January 2020 and has a benchmark of 1 month SONIA.

Performance

Performance summary

As at 31 December 2019



	3 months %	1 year %	3 years % p.a.	5 years % p.a.	Since inception % p.a.
Portfolio	-11.42	-5.80	-0.97	5.87	9.50
Benchmark	-11.97	-6.39	-2.91	4.45	8.30
Relative	0.55	0.59	1.94	1.41	1.19

	3 months £	1 year £	3 years £ cum.	5 years £ cum.	Since inception £ cum.
Portfolio	-41,353,876	-19,265,311	-14,918,669	63,389,608	129,003,582
Benchmark	-43,459,162	-21,360,728	-32,043,733	44,916,040	108,993,803
Relative	2,105,286	2,095,416	17,125,064	18,473,568	20,009,779

Data stated as at 31 December 2019. Performance is quoted gross of fees and in sterling terms. Inception date: 31 October 2012

Quarter 4 2019:

- Unleveraged return: if we adjust for the leverage in the portfolio: the benchmark return over the quarter was -3.88% as a proportion of the value of the inflation exposure hedged and the portfolio return was -3.69% on that basis.
- The Asset Benchmark Return (to compare to State Street) was -10.72% over the quarter.
- The benchmark performed negatively over the quarter due to 1) a fall in inflation expectations, particularly at shorter maturities; and 2) interest rates rising across the curve
- The overweight position to longer-dated inflation versus the middle of the curve had a positive impact on relative performance as longer-dated inflation fell by less over the quarter