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# Dorset County Pension Fund

Investment report: Q4 2021



# Executive summary

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## Portfolio performance summary

- **Q4 2021**
  - Benchmark returns over the quarter were **+6.22% (+£23.4m)**, which was driven by a rise in inflation expectations.
  - The portfolio outperformed the benchmark over the quarter, with relative performance of **0.05% (+£0.2m)**.
- **Since inception:**
  - Benchmark returns of **+9.42% pa (+£198.2m)** since inception as a result of falls in long-term interest rates
  - Discretionary positioning has added **+0.97% pa (+£21.2m)** to the Fund's portfolio return.

## Portfolio position

- Your inflation hedge ratio (as a % of actuarial liabilities) was **31.8%** at the end of December.
- The portfolio leverage is **c.1.97x** as at 31 December 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 31 December 2021



### Inflation hedge ratios

	30-Sep-21, £k	31-Dec-21, £k
Portfolio IE01	1,570.2	1,643.0
Benchmark IE01	1,573.2	1,647.1
Actuarial liability IE01*	5,178.0	5,171.2
<b>Portfolio inflation hedge ratio*</b>	<b>30.3%</b>	<b>31.8%</b>
<b>Benchmark inflation hedge ratio*</b>	<b>30.4%</b>	<b>31.9%</b>

- **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	6.26	26.87	6.76	4.64	10.39
Benchmark	6.22	26.77	6.45	3.36	9.42
<b>Relative</b>	<b>0.05</b>	<b>0.09</b>	<b>0.30</b>	<b>1.28</b>	<b>0.97</b>

\*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)

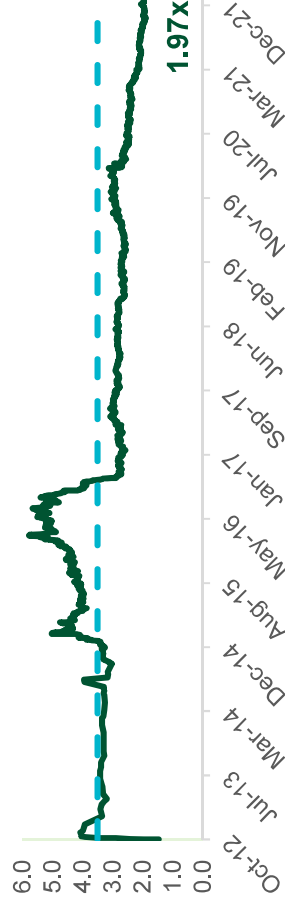
\*\* Leverage = exposure value of inflation linked liabilities hedged / portfolio asset value. \*\*\* This is a proxy for the proposed notification level of Fund value/IE01<125.

### Change in long-term inflation expectations

	0.0%	-0.5%	-1.0%	-1.5%	-2.0%	-2.5%
Expected value of collateral (£m)	451.3	374.4	306.9	247.6	195.4	149.2
Leverage multiple	1.98	2.18	2.44	2.78	3.26	3.97

- 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 £891.4m at 31 December 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



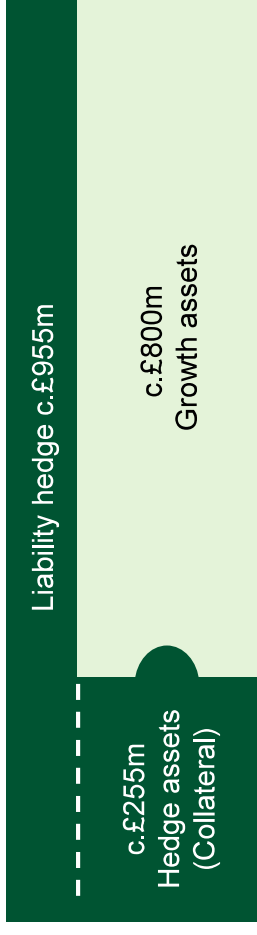
## Scenario: Inflation expectations falls by 0.5%

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 31 December 2021



	Value		Interest rate sensitivity (PV01)		Inflation sensitivity (IE01)	
	£m	£k	£k	% of liabilities	£k	% of liabilities
Conventional gilts	-10.2	-9.8	-9.8	1.3%	0.0	0.0%
Index-linked gilts	573.4	-1,412.6	-1,412.6	184.2%	1,378.0	83.7%
Corporate bonds	5.4	-12.7	-12.7	1.7%	12.4	0.8%
Repurchase agreements	-106.7	1.1	1.1	-0.1%	0.0	0.0%
RPI Swaps	12.8	-24.8	-24.8	3.2%	252.7	15.3%
Interest rate swaps	-52.7	674.0	674.0	-87.9%	0.0	0.0%
Liquidity	17.9	0.0	0.0	0.0%	0.0	0.0%
Futures	0.1	15.1	15.1	-2.0%	0.0	0.0%
High Grade ABS Fund	11.4	0.0	0.0	0.0%	0.0	0.0%
Total return swap	0.0	0.0	0.0	0.0%	0.0	0.0%
<b>Total assets</b>	<b>451.3</b>	<b>-769.6</b>	<b>-769.6</b>	<b>100.4%</b>	<b>1,643.0</b>	<b>99.8%</b>
<b>Liability benchmark</b>	<b>400.4</b>	<b>-766.7</b>	<b>-766.7</b>	<b>100.0%</b>	<b>1,647.1</b>	<b>100.0%</b>
<b>Liability benchmark inflation only</b>	<b>891.4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,647.1</b>	<b>100.0%</b>
<b>Leverage</b>	<b>2.0x</b>					

- 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 31 December 2021



	3 months %	1 year %	3 years % p.a.	5 years % p.a.	Since inception % p.a.
Portfolio	6.26	26.87	6.76	4.64	10.39
Benchmark	6.22	26.77	6.45	3.36	9.42
<b>Relative</b>	<b>0.05</b>	<b>0.09</b>	<b>0.30</b>	<b>1.28</b>	<b>0.97</b>
	3 months £	1 year £	3 years cumulative £	5 years cumulative £	Since inception cumulative £
Portfolio	23,635,335	85,132,271	71,094,692	75,441,333	219,363,585
Benchmark	23,445,195	84,929,183	67,814,877	57,131,872	198,169,408
<b>Relative</b>	<b>190,141</b>	<b>203,088</b>	<b>3,279,814</b>	<b>18,309,462</b>	<b>21,194,177</b>

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

## Quarter 4 2021:

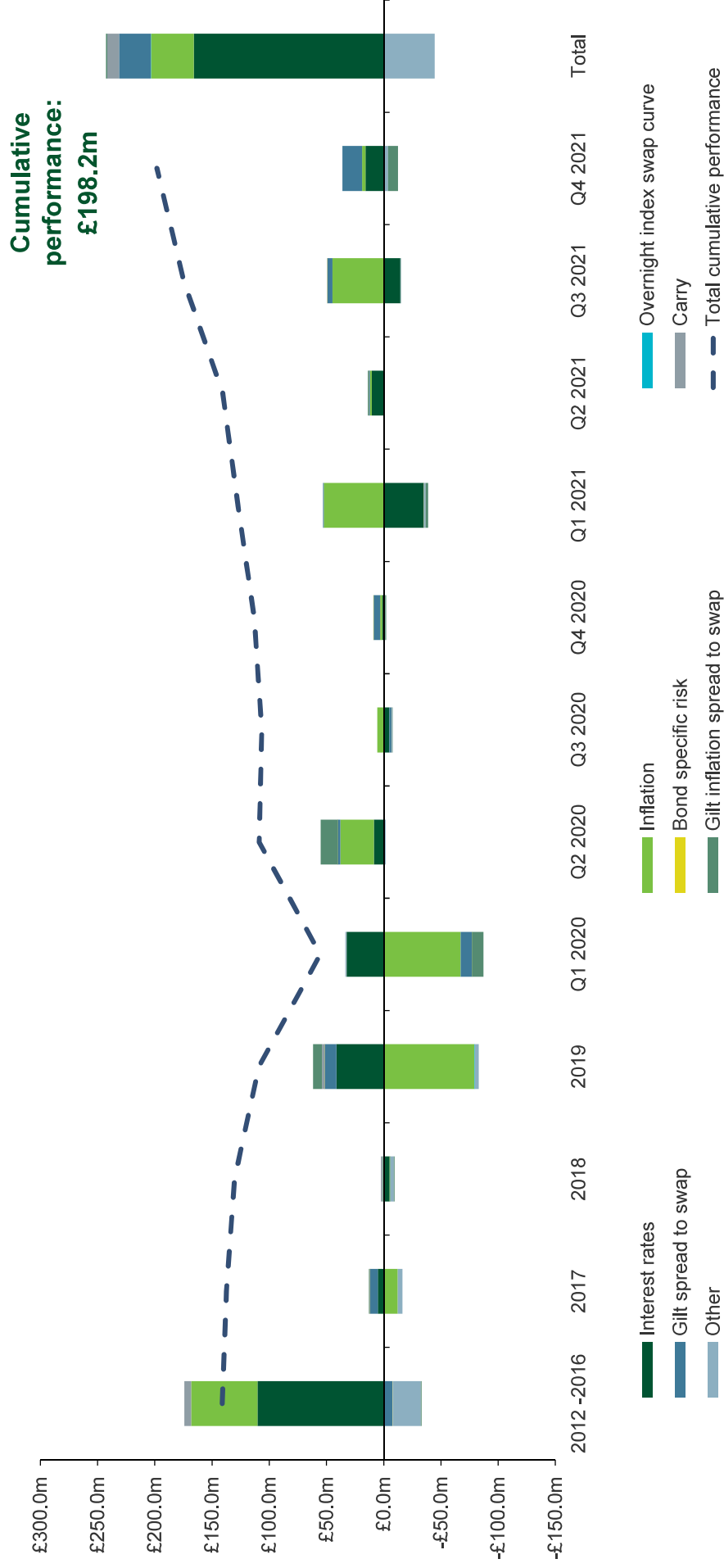
- Unleveraged return: if we adjust for the leverage in the portfolio, the benchmark return over the quarter was 2.76% as a proportion of the value of the inflation exposure hedged and the portfolio return was 2.79% on that basis.
- The Asset Benchmark Return (to compare to State Street) was 5.48% over the quarter.
- The benchmark performed positively over the quarter, which was driven by a fall in long-term interest rates and as a result of gilts outperforming swaps.
- The portfolio performed broadly in line with the benchmark over the quarter, with a small outperformance of +0.05%.

# Benchmark performance attribution

## As at 31 December 2021



Over Q4, the benchmark rose in value, which was driven by a fall in long-term interest rates.





# Dorset County Pension Fund

Benchmark performance attribution to 31 December 2021



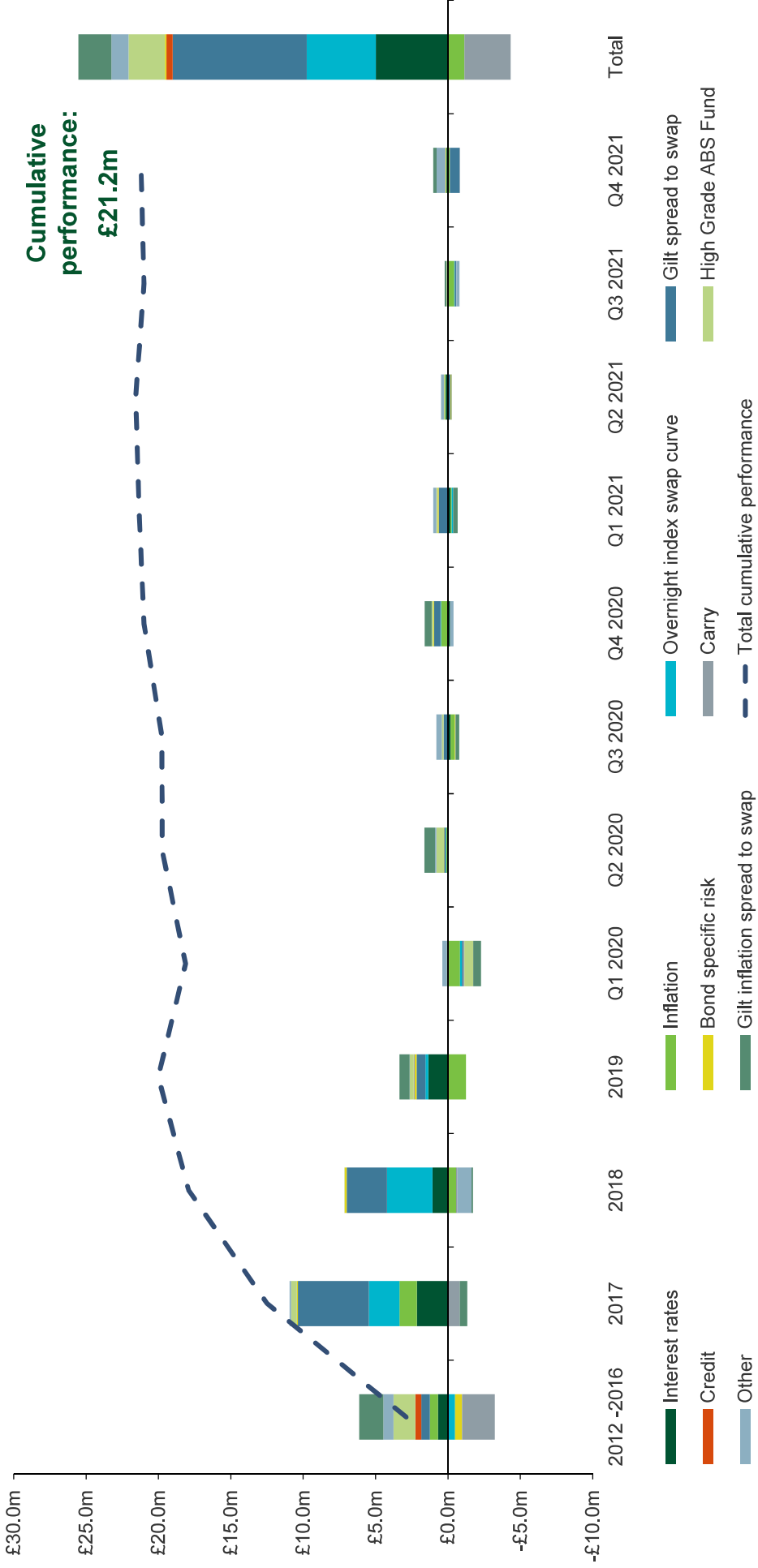
£m	2012-2016	2017	2018	2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Total
Interest rates	110.4	5.2	-5.1	41.3	32.5	8.5	-5.0	1.2	-34.9	10.5	-14.5	15.9	166.0
Inflation	57.9	-12.2	-0.7	-79.0	-67.3	29.4	5.5	1.8	52.4	1.5	44.8	3.1	37.2
Overnight index swap curve	0.0	0.0	0.8	-0.5	0.0	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	-9.8	1.9	-1.7	5.7	0.6	0.7	4.3	17.0	27.8
Gilt inflation spread to swap	-0.8	0.7	-0.8	7.8	-9.9	15.1	-0.2	-0.8	-2.1	1.2	0.0	-8.9	1.1
Bond specific risk	-0.3	0.0	0.0	0.0	-0.1	0.1	-0.1	0.2	-0.2	0.0	0.1	-0.6	-0.8
Carry	5.9	0.5	1.5	2.3	0.3	0.0	-0.1	-0.1	-0.1	0.0	0.0	-0.1	10.2
Other	-24.3	-4.3	-2.8	-3.5	0.8	-1.8	-0.8	-1.2	-1.4	-0.7	-0.6	-3.0	-43.7
<b>Total</b>	<b>141.0</b>	<b>-3.5</b>	<b>-7.2</b>	<b>-21.4</b>	<b>-53.5</b>	<b>53.3</b>	<b>-2.3</b>	<b>6.8</b>	<b>14.2</b>	<b>13.1</b>	<b>34.2</b>	<b>23.4</b>	<b>198.2</b>
<b>Total cumulative performance</b>	141.0	137.5	130.4	109.0	55.5	108.8	106.5	113.2	127.5	140.6	174.7	198.2	-

# Relative performance attribution

As at 31 December 2021



The portfolio closely tracked the benchmark over Q4 2021 with small outperformance (+£0.2m)



# Dorset County Pension Fund

## Relative performance attribution to 31 December 2021



£m	2012 -2016	2017	2018	2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Total
Interest rates	0.7	2.2	1.1	1.4	0.0	0.0	-0.2	-0.1	-0.2	0.2	0.0	0.1	5.0
Inflation	0.6	1.2	-0.6	-1.2	-0.8	0.1	-0.3	0.5	-0.1	0.1	-0.4	-0.1	-1.1
Overnight index swap curve	-0.5	2.1	3.2	0.2	-0.1	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	4.8
Gilt spread to swap	0.6	4.9	2.8	0.6	-0.1	0.1	0.3	0.4	0.6	-0.2	-0.1	-0.7	9.3
Gilt inflation spread to swap	1.7	-0.5	-0.1	0.7	-0.5	0.7	-0.3	0.5	-0.3	0.0	0.1	0.2	2.3
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	-0.5	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.1	-0.1	0.0	0.1	0.1
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	-0.6	0.5	0.1	0.1	0.1	0.1	0.0	0.0	2.5
Other	0.7	0.1	-1.0	0.0	0.3	0.1	0.4	-0.2	0.2	0.2	-0.2	0.6	1.2
<b>Total</b>	<b>2.9</b>	<b>9.6</b>	<b>5.4</b>	<b>2.1</b>	<b>-1.9</b>	<b>1.6</b>	<b>0.0</b>	<b>1.2</b>	<b>0.4</b>	<b>0.2</b>	<b>-0.6</b>	<b>0.2</b>	<b>21.2</b>
<b>Total cumulative performance</b>	2.9	12.5	17.9	20.0	18.1	19.7	19.8	21.0	21.3	21.6	21.0	21.2	-