

Northamptonshire Pension Fund

Monitoring Report
Quarter to
31 March 2023

Chris West
May 2023



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Please also note:

- The value of investments can go down as well as up and you may not get back the amount you have invested. In addition investments denominated in a foreign currency will fluctuate with the value of the currency.
- The valuation of investments in property based portfolios, including forestry, is generally a matter of a valuer's opinion, rather than fact.
- When there is no (or limited) recognised or secondary market, for example, but not limited to property, hedge funds, private equity, infrastructure, forestry, swap and other derivative based funds or portfolios it may be difficult for you to obtain reliable information about the value of the investments or deal in the investments.
- Care should be taken when comparing private equity / infrastructure performance (which is generally a money-weighted performance) with quoted investment performance (which is generally a time-weighted performance). Direct comparisons are not always possible.

Chris West

Executive Dashboard

Funding

The present value of the Fund's liabilities was £2.4bn as at quarter end. We note that the liabilities as at 31 March 2023 are now rolled forward from the 31 March 2022 actuarial valuation, whereas previously they have been based on the 2019 actuarial valuation.

The Fund's assets (including cash) increased over the quarter by £100.4m to £3,213m as at 31 March 2023. The Fund's assets (including cash) have decreased by £102.4m over the last twelve months.

The estimated funding level at 31 March 2023 was c.135%, the same as at 31 December 2022. For comparison, the funding level at 31 March 2022 (the date of the last actuarial valuation) was 113%.

Asset Allocation

During the reported period there was an investment of c. £40m to UBS Gilts.

Overweight		Underweight		
Alternatives	+2.5%	Fixed Income	-2.0%	
		Equities	-0.6%	

Please note that these positions are relative to the previous strategic benchmark allocations and we will revert to those agreed at the March 2023 Committee meetings from the Q2 2023 report onwards.

Performance

Short Term Performance

The Fund underperformed the benchmark over the quarter (returning 3.2% vs 3.7%)

Key Contributors to Relative Performance - Quarter

Outperformance by Baillie Gifford - Global Equity	+0.6%
Outperformance by Liontrust - UK Equity	+0.3%
Underperformance in Private Equity	-0.6%
Underperformance by CBRE - Property	-0.6%

Performance Summary

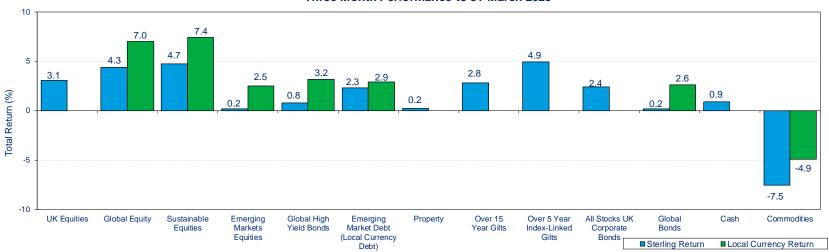
	Fund	B'mark
Quarter (%)	3.2	3.7
1 Year (%)	-4.8	-3.8
3 Years (% p.a.)	9.7	9.4

Manager Research

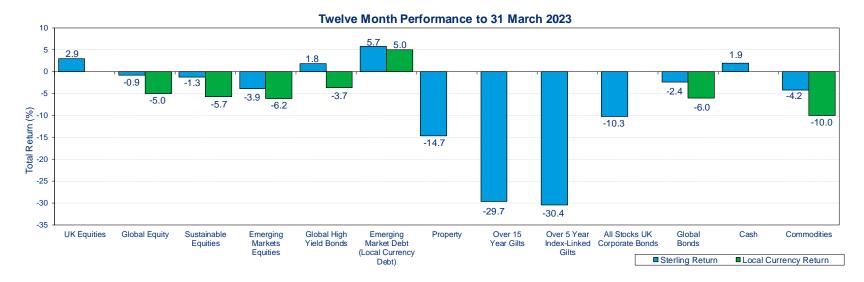
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Market Index Performance

Three Month Performance to 31 March 2023

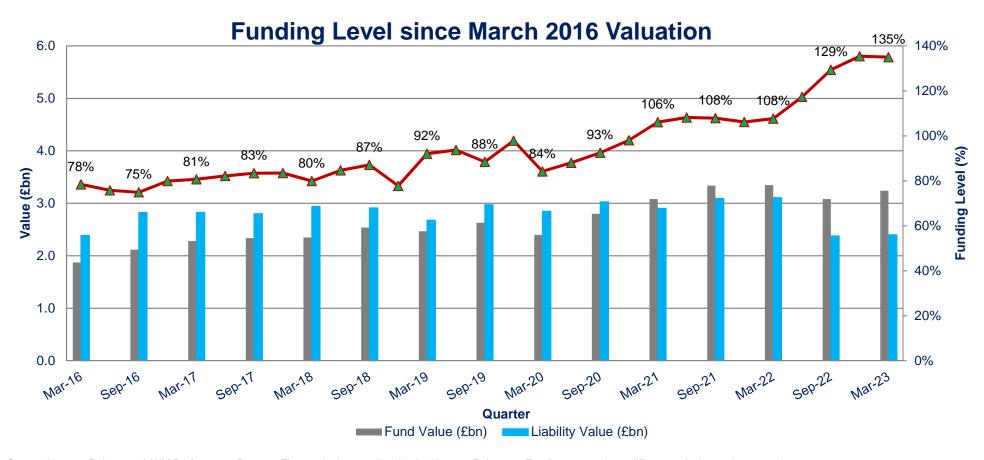


Source: Refinitiv.



Source: Refinitiv.

Funding



Source: Hymans Robertson & WM Performance Reports. Figures don't reconcile with the Hymans Robertson Funding report due to differences in the total asset value. The Funding Level is a ratio of assets to liabilities.

- There has been a general trend from 2016 of a rise in both liabilities and assets, though more recently the estimated value of the liabilities has fallen due to rises in gilt yields, which has led to an increase in the funding level as the assets have not fallen to the same degree.
- There was an increase in funding level at the March 2016. March 2019 and March 2022 valuations.
- The funding level as at 31 March 2022 was 135%, which is the same as the funding level as at 31 December 2022.

Allocation

	31/12/2022 Market Value (£M)	31/03/2023 Market Value (£M)	31/12/2022 Allocation (%)	31/03/2023 Allocation (%)	31/03/2023 B'mark (%)	31/03/2023 B'mark Range (%)
Total Invested Assets	3,108.0	3,213.2	100.0	100.0	100.0	
Equities	1,645.4	1,749.3	52.9	54.4	55.0	50.0 - 60.0
Fixed Income	561.8	579.7	18.1	18.0	20.0	15.0 - 25.0
Alternatives	900.7	884.2	29.0	27.5	25.0	20.0 - 30.0

Source: Investment Managers, Link Asset Services and Mercer.

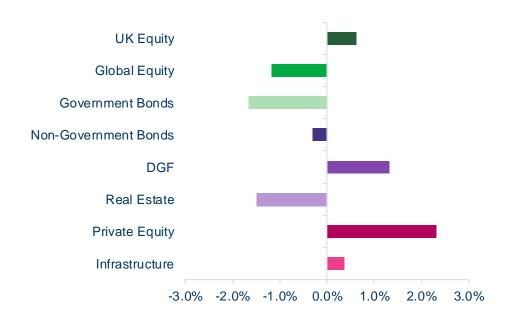
Figures may not sum to total due to rounding. Please note that these positions are relative to the previous strategic benchmark allocations and we will revert to those agreed at the March 2023 Committee meetings from the Q2 2023 report onwards.

The total market value shown in the table above at quarter end excludes assets invested in Catapult's Private Equity (c. £0.5m at the start and end of the quarter) and cash (c. £9.6m at the start of quarter and c. £10.2m at the end of quarter).

Benchmark Asset Allocation as at 31 March 2023

Infrastructure. UK Equity, Private Equity, 5.0% 8.8% 5.0% Real Estate. 10.0% DGF. 5.0% Equities 55.0% Fixed 20.0% Non-Government Global Equity, Bonds, 10.0% 46.3% Government Bonds, 10.0%

Deviation from Benchmark Asset Allocation



Manager Allocation (1/3)

	31/12/2022 Market Value (£M)	31/03/2023 Market Value (£M)	31/12/2022 Allocation (%)	31/03/2023 Allocation (%)	31/03/2023 B'mark (%)
Total	3,108.0	3,213.2	100.0	100.0	100.0
Equities	1,645.4	1,749.3	52.9	54.4	55.0
UK Equity	283.0	301.2	9.1	9.4	8.8
Liontrust - UK Equity (a)	283.0	301.2	9.1	9.4	8.8
Global Equity	1,362.4	1,448.1	43.8	45.1	46.3
Active Global Equity	755.8	812.4	24.3	25.3	26.3
Newton - Global Equity (a)	296.5	313.8	9.5	9.8	8.8
Baillie Gifford - Global Equity (a)	168.5	195.6	5.4	6.1	8.8
Longview - Global Equity (a)	290.8	302.9	9.4	9.4	8.8
Passive Equity	606.6	635.8	19.5	19.8	20.0
UBS - Passive Equity (a)	606.6	635.8	19.5	19.8	20.0
Fixed Income	561.8	579.7	18.1	18.0	20.0
Government Bonds	255.2	268.1	8.2	8.3	10.0
UBS – Gilts ^(a)	255.2	268.1	8.2	8.3	10.0
Non-Government Bonds	306.6	311.6	9.9	9.7	10.0
Bluebay - Multi-Asset Credit	145.8	147.9	4.7	4.6	5.0
M&G - Multi-Asset Credit (a)	160.8	163.7	5.2	5.1	5.0

Source: Investment Managers, Link Asset Services and Mercer.

Figures may not sum to total due to rounding.

The total market value shown in the table above at quarter end excludes assets invested in Catapult's Private Equity (c. £0.5m at the start and end of the quarter) and cash (c. £9.6m at the start of quarter and c. £10.2m at the end of quarter).

The HarbourVest, Adams Street, AMP Capital, Allianz and JPM end of quarter valuations are provisional.

Please note that these positions are relative to the previous strategic benchmark allocations and we will revert to those agreed at the March 2023 Committee meetings from the Q2 2023 report onwards.

(a) The total market value invested in ACCESS is c. £2,260m at the start of quarter and c. £2,384m at the end of quarter.

Manager Allocation (2/3)

	31/12/2022 Market Value (£M)	31/03/2023 Market Value (£M)	31/12/2022 Allocation (%)	31/03/2023 Allocation (%)	31/03/2023 B'mark (%)
Alternatives	900.7	884.2	29.0	27.5	25.0
DGF	198.5	202.8	6.4	6.3	5.0
Baillie Gifford – DGF (a)	198.5	202.8	6.4	6.3	5.0
Real Estate	293.7	273.5	9.4	8.5	10.0
CBRE - Property	232.2	212.4	7.5	6.6	7.0
M&G - Residential Property	47.1	46.8	1.5	1.5	1.5
M&G - Shared Ownership	14.4	14.4	0.5	0.4	1.5
Private Equity	233.4	235.1	7.5	7.3	5.0
HarbourVest - Private Equity	130.3	129.2	4.2	4.0	
Adams Street - Private Equity	103.1	105.9	3.3	3.3	

Source: Investment Managers, Link Asset Services and Mercer.

Figures may not sum to total due to rounding.

The total market value shown in the table above at quarter end excludes assets invested in Catapult's Private Equity (c. £0.5m at the start and end of the quarter) and cash (c. £9.6m at the start of quarter and c. £10.2m at the end of quarter).

The HarbourVest, Adams Street, AMP Capital, Allianz and JPM end of quarter valuations are provisional.

Please note that these positions are relative to the previous strategic benchmark allocations and we will revert to those agreed at the March 2023 Committee meetings from the Q2 2023 report onwards.

(a) The total market value invested in ACCESS is c. £2,260m at the start of quarter and c. £2,384m at the end of quarter.

Manager Allocation (3/3)

	31/12/2022 Market Value (£M)	31/03/2023 Market Value (£M)	31/12/2022 Allocation (%)	31/03/2023 Allocation (%)	31/03/2023 B'mark (%)
Infrastructure	175.1	172.8	5.6	5.4	5.0
AMP Capital - Infrastructure Debt	35.5	34.7	1.1	1.1	
Allianz - Infrastructure Debt	12.1	11.9	0.4	0.4	
IFM - Infrastructure Equity	66.9	67.6	2.2	2.1	
JPM - Infrastructure Equity	60.6	58.6	2.0	1.8	

Source: Investment Managers, Link Asset Services and Mercer.

Figures may not sum to total due to rounding.

The total market value shown in the table above at quarter end excludes assets invested in Catapult's Private Equity (c. £0.5m at the start and end of the quarter) and cash (c. £9.6m at the start of quarter and c. £10.2m at the end of quarter).

The HarbourVest, Adams Street, AMP Capital, Allianz and JPM end of quarter valuations are provisional.

Please note that these positions are relative to the previous strategic benchmark allocations and we will revert to those agreed at the March 2023 Committee meetings from the Q2 2023 report onwards.

⁽a) The total market value invested in ACCESS is c. £2,260m at the start of quarter and c. £2,384m at the end of quarter.

Manager Performance (1/2)

	2023 Q1 (%)	B'mark (%)	1 Yr (%)	B'mark (%)	3 Yrs (%)	B'mark (%)	5 Yrs (%)	B'mark (%)
Total	3.2	3.7	-4.8	-3.8	9.7	9.4	6.2	6.2
UK Equity	6.5	3.1	2.6	2.9	12.7	13.8	2.9	5.0
Liontrust - UK Equity	6.5	3.1	2.6	2.9	12.7	13.8	3.2	5.0
Global Equity	6.3	4.6	-1.5	-1.4	16.1	15.2	11.2	9.4
Newton - Global Equity	5.9	4.4	0.1	-1.4	14.8	15.5	10.9	9.7
Baillie Gifford - Global Equity	16.1	4.4	-12.4	-1.4	11.8	15.5		
Longview - Global Equity	4.2	4.4	5.8	-1.4	18.1	15.5		
UBS - Passive Equity	4.8	4.9	-1.3	-1.4	14.8	14.7	8.9	8.9
Fixed Income	3.2	3.9	-16.5	-16.8	-3.8	-3.9	-1.2	-0.7
UBS - Gilts	5.0	4.9	-30.6	-30.4	-10.9	-10.8	-4.8	-4.7
Bluebay - Multi-Asset Credit	1.4	2.8	-5.9	-1.7				
M&G - Multi-Asset Credit	1.8	2.8	1.9	-1.7				

Figures shown are net of fees and based on performance provided by the Investment Managers, Link Asset Services, Hymans, Mercer estimates and Refinitiv. For periods over one year the figures in the table above have been annualised.

M&G Multi-Asset Credit performance figures are reported by Link Asset Group with one month lag. M&G Shared Ownership last quarter performance is always assumed zero due the lag in final data. The HarbourVest, Adams Street, AMP Capital and Allianz quarterly returns are provisional.

Total Fund and Alternatives performances include quarterly performances for HarbourVest, Adams Street, AMP Capital, Allianz and JPM calculated by Mercer using a Modified Dietz approach based on data provided by these managers. Over the long term, performances are chain linked using quarterly Total Fund performances. Performance shown is net of illiquid mandates' fees. Performance for the underlying private equity and infrastructure mandates is shown in the GBP currency with a quarter lag. Benchmark performance shown for the underlying private equity mandates is the rolling 3 year MSCI World Index return, averaged on a quarterly basis.

Totals include performance of terminated mandates.

Manager Performance (2/2)

	2023 Q1 (%)	B'mark (%)	1 Yr (%)	B'mark (%)	3 Yrs (%)	B'mark (%)	5 Yrs (%)	B'mark (%)
Alternatives	-2.6	1.9	-4.1	-0.4	7.3	7.7	4.7	5.6
Baillie Gifford - DGF	2.2	1.8	-8.5	5.8	3.6	4.4	0.5	4.3
CBRE - Property	-8.6	-0.2	-12.8	-14.5	0.9	2.6	1.2	2.5
M&G - Residential Property	-0.7	1.5	0.9	6.0	1.8	6.0		
M&G - Shared Ownership	0.0	1.5	1.6	6.0				
HarbourVest - Private Equity	-7.4	2.2	16.4	8.9	29.1	8.9	24.3	9.2
Adams Street - Private Equity	-6.8	2.2	1.4	8.9	30.2	8.9	24.9	9.2
AMP Capital - Infrastructure Debt	-2.5	2.5	14.4	10.0	7.9	10.0	5.8	10.0
Allianz - Infrastructure Debt	9.0	1.0	-28.0	4.0	-9.4	4.0		
IFM - Infrastructure Equity	-0.4	2.5	19.7	10.0	12.0	10.0		
JPM - Infrastructure Equity	0.4	2.5	16.9	10.0				

Figures shown are net of fees and based on performance provided by the Investment Managers, Link Asset Services, Hymans, Mercer estimates and Refinitiv. For periods over one year the figures in the table above have been annualised.

M&G Multi-Asset Credit performance figures are reported by Link Asset Group with one month lag. M&G Shared Ownership last quarter performance is always assumed zero due the lag in final data. The HarbourVest, Adams Street, AMP Capital and Allianz quarterly returns are provisional.

Total Fund and Alternatives performances include quarterly performances for HarbourVest, Adams Street, AMP Capital, Allianz and JPM calculated by Mercer using a Modified Dietz approach based on data provided by these managers. Over the long term, performances are chain linked using quarterly Total Fund performances. Performance shown is net of illiquid mandates' fees. Performance for the underlying private equity and infrastructure mandates is shown in the GBP currency with a quarter lag. Benchmark performance shown for the underlying private equity mandates is the rolling 3 year MSCI World Index return, averaged on a quarterly basis.

Totals include performance of terminated mandates.

Appendix

Appendix A

Benchmarks

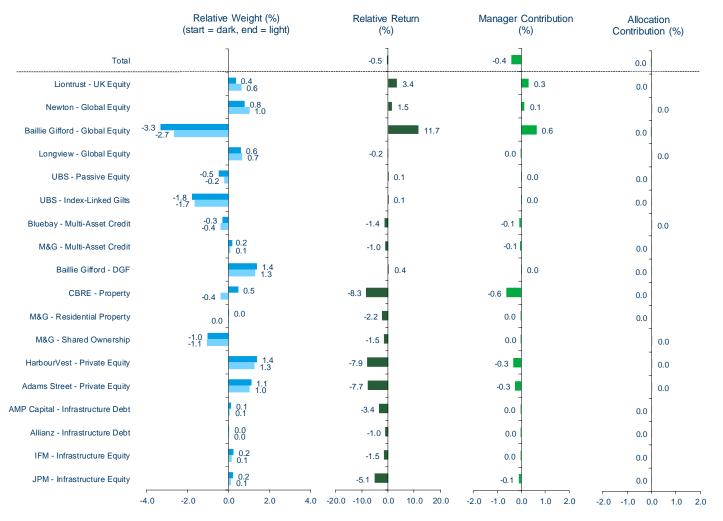
Name	B'mark (%) Performance Benchmarl	Tracking Error Expectation	
Total	100.0 -		
Liontrust - UK Equity	8.8 FTSE All-Share Index	+2.0% p.a. (gross of fees)	2.0% - 6.0% p.a.
Global Equity	46.3 -	-	-
Newton - Global Equity	8.8 MSCI AC World (NDR) Index	+2.0% p.a. (gross of fees)	2.0% - 6.0% p.a.
Baillie Gifford - Global Equity	8.8 MSCI AC World (NDR) Index	(-	-
Longview - Global Equity	8.8 MSCI World (NDR) Index	-	-
UBS - Passive Equity	20.0 Composite	To match the benchmark	-
Fixed Income	20.0 -	-	-
UBS - Gilts	10.0 Composite	To match the benchmark	-0.1% - 0.1% p.a.
Bluebay - Multi-Asset Credit	5.0 Composite	-	-
M&G - Multi-Asset Credit	5.0 Composite	-	-
Baillie Gifford - DGF	5.0 Bank of England UK Base Rate +3.5% p.a.	-	0.0% - 10.0% p.a.
Real Estate	10.0 -	-	-
CBRE - Property	7.0 MSCI All Balanced Property Funds Index	+1.0% p.a. (gross of fees)	0.0% - 3.0% p.a.
M&G - Residential Property	1.5 Absolute Return of 6.0% p.a.	-	-
M&G - Shared Ownership	1.5 Absolute Return of 6.0% p.a.	-	-
Private Equity	5.0 -	-	-
HarbourVest - Private Equity	MSCI World Index	+3.0% p.a. (gross of fees)	-
Adams Street - Private Equity	MSCI World Index	+3.0% p.a. (gross of fees)	-
Infrastructure	5.0 -	-	-
AMP Capital - Infrastructure Debt	IRR of 10.0% p.a.	-	-
Allianz - Infrastructure Debt	IRR of 4.0% p.a.	-	-

Name	B'mark (%) Performance Benchmark Performance Target	Tracking Error Expectation
IFM - Infrastructure Equity	IRR of 10.0% p.a	-
JPM - Infrastructure Equity	IRR of 10.0% p.a	-

Bluebay - Multi-Asset Credit: composite benchmark is 50% ICE BofAML Global High Yield Constrained and 50% Morningstar LSTA US Leveraged Loan 100 Hedged. M&G - Multi-Asset Credit: composite benchmark is 50% ICE BofAML Global High Yield Constrained and 50% Morningstar LSTA US Leveraged Loan 100 Hedged.

Appendix B

Detailed Attribution Analysis - Quarter



Please note that the relative return and relative weight charts use unrounded performance and allocation figures to calculate the relative difference, hence the numbers are not directly comparable to the implied relative difference given in the performance and allocation tables.

Figures shown for the private equity and infrastructure mandates (with the exception of IFM) are estimated in GBP to the quarter end date.

Explanation of Attribution Analysis Chart

The purpose of the attribution analysis chart is give a visual representation of the contribution of each portfolio to the relative performance of the Total Scheme against the Total Benchmark". The contribution is apportioned between "Manager Contribution" and "Allocation Contribution. Further explanation of the terms used in the chart is given below.

Relative Weight - This is the difference in percentage terms of the actual Scheme allocation and benchmark allocation at both the start and end of the period. A bar greater (less) than zero indicates that the Scheme was overweight (underweight) to that portfolio.

Relative Performance - This shows the relative performance of the portfolio against its benchmark performance. A bar greater than zero indicates there was outperformance, whereas a bar less than zero indicates underperformance.

Quarterly Manager Contribution - This shows the contribution at a total level of the relative performance achieved by the portfolio, taking into account the initial actual allocation. A larger allocation will lead to a greater contribution at a total level (all other things being equal).

Positive (negative) relative performance will result in positive (negative) manager contribution. Note that for passive mandates manager contributions should be close to zero, given its performance objective of tracking the benchmark. In calculation terms this is as follows:

```
Manager\ Contribution = (Performance_{pi} - Performance_{bi}) \times Initial\ Actual\ Allocation_{pi}
```

Quarterly Allocation Contribution - The allocation contribution shows whether a portfolio underweight / overweight position has had a positive or negative effect on the Total Scheme outperformance / underperformance in relation to the Total Scheme Benchmark.

For example, an overweight allocation to a portfolio whose benchmark performance was superior to that of the Total Scheme Benchmark would result in a positive contribution. In calculation terms this is as follows:

```
Allocation Contribution = (Performance_{bi} - Performance_{bT}) \times (Actual Allocation_{pi} - Benchmark Allocation_{bi})
```

Please note that the relative return and relative weight figures shown in the chart use unrounded performance and allocation figures to calculate the relative differences. Therefore, the numbers are not directly comparable to the implied relative differences given in the performance table and allocation tables.

Key: pi = portfolio I; bi = portfolio I benchmark; bT = Total Fund benchmark

Attribution for Quarters with Significant Events - In cases where there are significant events over the quarter (for example large cashflows, new or terminated portfolios), both manager and allocation contributions are first calculated for the underlying part periods. The quarterly contributions are then a sum of the part period contributions.

Appendix C

Investment Performance

Investment Performance to 31 March 2023	2022 Q2 (%)	2022 Q3 (%)	2022 Q4 (%)	2023 Q1 (%)	1 Yr (%)	3 Yrs (%)
Total	-7.6	-1.0	0.8	3.2	-4.8	9.7
Total Benchmark	-7.2	-1.5	1.5	3.7	-3.8	9.4

Figures shown are net of fees and are based on performance provided by the Investment Managers, Link Asset Services, WM, Mercer estimates and Refinitiv. Includes the performance of terminated mandates.

For periods over one year the figures in the table above have been annualised.

Total Fund performances include quarterly performances for the private market managers, calculated by Mercer using a Modified Dietz approach based on data provided by these managers (with the exception of IFM where performance is provided by the manager). Over the long term, performances are chain linked using quarterly Total Fund performances. Performance for these managers is net of illiquid mandates' fees, in GBP, and last quarter returns are provisional.



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