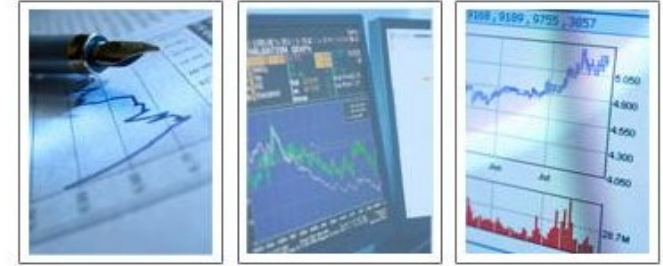


P O R T F O L I O  
E V A L U A T I O N  
L I M I T E D



Specialists in Investment Risk and Return Evaluation

Quarterly Risk and Return Analysis  
Total Fund

Worcestershire County Council Pension Fund

Period ending 31<sup>st</sup> December 2021



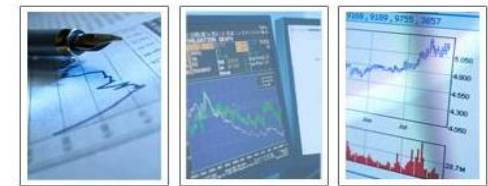
Specialists in Investment Risk and Return Evaluation



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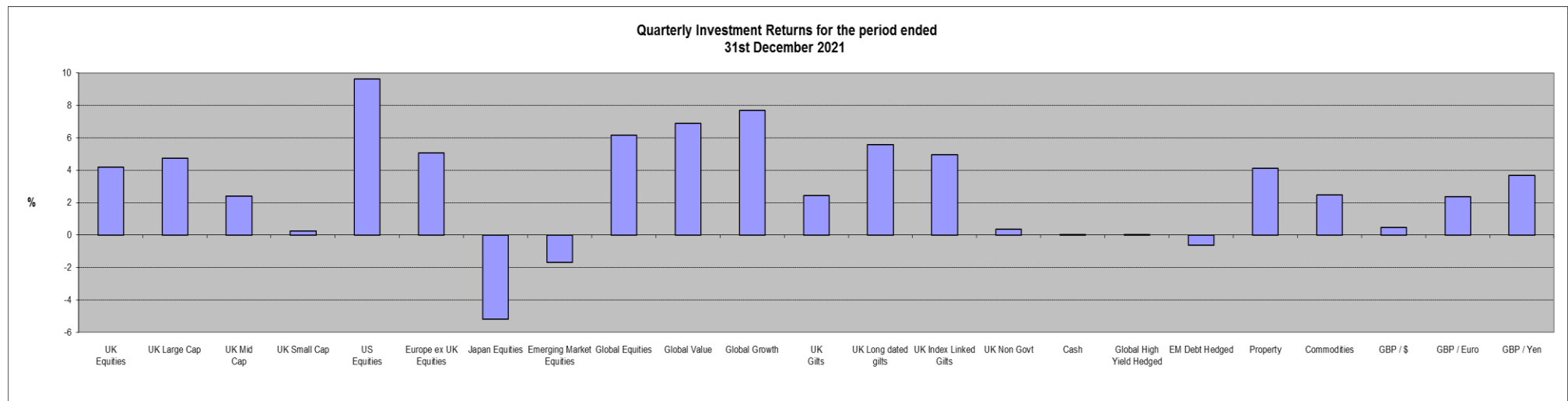
### **Worcestershire County Council Pension Fund Total Fund**

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## Portfolio Evaluation Ltd Market Commentary Q4 2021 (Sterling)

Quarter 4 has witnessed markets continuing to perform positively; in fact, excluding Japan and Emerging Market Equities, all equity asset classes have had positive returns. Bonds have also had low positive returns. Looking at the year results we can also see strong market returns (from equities and some alternative asset classes) except for bonds. Small cap equities and commodities have had very strong returns over the year reflecting global economic recovery. Within global sectors, the majority have had positive returns with notable high returns from Technology, Financials and Electrics and Electronics. The most notable negative returns over the year have been seen from China and Consumer Services. Despite Omicron, many major economies, with the exceptions of Japan and the Eurozone (primarily due to Germany), saw positive economic growth.



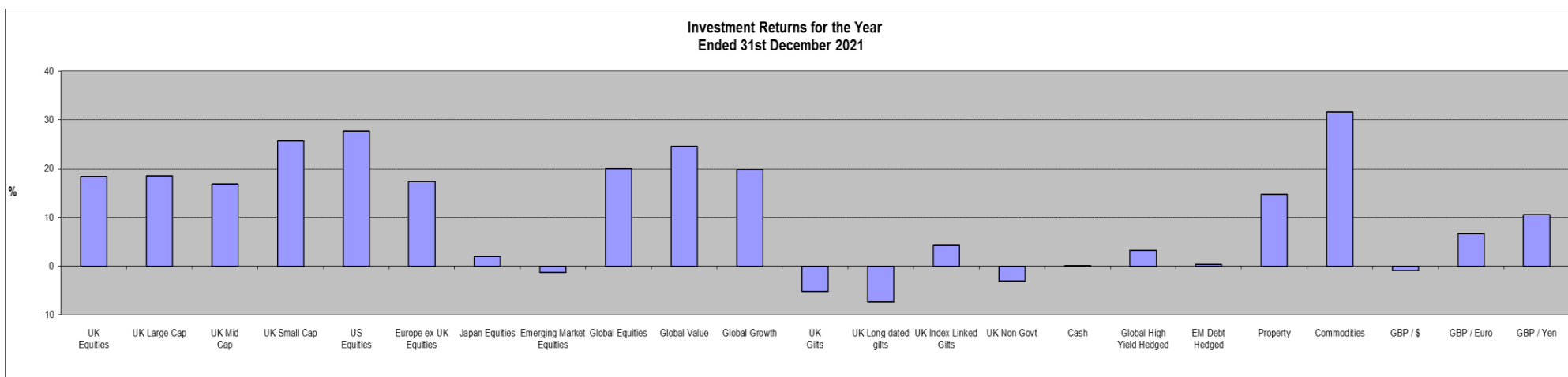
Going into 2022, many economic commentators expect global economic growth to continue, albeit at a lower rate than 2021. This is partly due to potential consumption growth due to rising income, and partly to a continued recovery. In fact, many market commentators remain overweight equities, commodities and alternative investments whilst remaining cautious about government bonds and corporate bonds.

There are several factors that will influence markets including;

- Inflation – this is increasing throughout the world and whilst it may be persistent (particularly in those sectors that have already witnessed high inflation) most commentators do not expect it to be a permanent feature.
- Central Bank and government policies post pandemic - will need to be finely balanced as the support measures will need to be unwound. At some time we must all start paying for government largesse in respect of COVID-19, this will probably be achieved by higher levels of taxation.



- Interest rates are expected to increase globally, but again will need to be balanced so as not to generate significant sell offs and weaken consumer demand.
- Supply chain issues – these may persist in certain sectors but are expected to ease generally.
- Energy prices – a large issue, particularly in Europe and the UK. High increases in costs are expected and could dampen consumer demand unless well managed by governments.
- Within the UK, the ‘imperfections’ in the Brexit deal need to be addressed and if not resolved effectively could lead to higher inflation and supply chain issues.
- There are also additional risks. In respect of COVID-19, the impact of variants, and vaccine efficacy, the lack of vaccine roll-out in many emerging markets and the resistance of some demographic groups to vaccine uptake. As always, geo-political risks are evident.
- We must also be aware of the impact and need to address moving to a carbon neutral world. In 2021 we witnessed an increase in natural problems, be they drought, high temperatures, flooding or fires etc. causing problems on a global scale. The UNCCC (COP 26) held in Glasgow in 2021 had hoped to establish a global road map towards being carbon neutral. The lack of concrete plans and the ‘kicking the can down the road’ approach of many key countries has resulted in it being a ‘cop out’. However, as investors are fueling a green transition that will result in pressure on companies, this may result in a move towards resolving this; however, we are unlikely to keep the global temperature increase under 1.5%.



Risk within asset classes and correlations has decreased over the year. The outlook for market risk is uncertain but is expected to be lower as risks due to the pandemic reduce.

**For further information** If you would like further information about the topics contained in this newsletter or would like to discuss your investment performance requirements please contact Nick Kent or Deborah Barlow (e-mail: [nick.kent@portfolioevaluation.net](mailto:nick.kent@portfolioevaluation.net)) or visit our website at [www.portfolioevaluation.net](http://www.portfolioevaluation.net). Please note that all numbers, comments and ideas contained in this document are for information purposes only and as such are not investment advice in any form. Please remember that past performance is not a guide to future performance.

## Worcestershire County Council Pension Fund - Commentary

### Period ending 31<sup>st</sup> December 2021

**QUARTERLY SUMMARY:**      **Worcestershire County Council Pension Fund Return: 4.3%**      **Benchmark Return: 3.6%**      **Excess Return: 0.7%**

- Note that the Fund and its benchmark have been updated for the current quarter. This includes the creation of a new Total Fixed Income Fund to incorporate the Total Corporate Debt Fund (Bridgepoint portfolios) and the Total Corporate Bond Fund (LGPSC). New investments were also made into the LGPSC All World Passive Climate Fund, infrastructure and property. Note that some of this data is lagged. The allocation to Alternative Equities has been increased to 15% with reductions in the active equity benchmark and passive. Note that the Fund remains overweight Alternative Equities. We have also updated the Strategic Asset Allocation target for Property and Infrastructure to 20%; however please note that this remains a target as funding is continued and therefore, as per instructions, the short term benchmark asset allocation remains capped at the current invested weight of these assets with the remaining 'unspent' strategic asset allocation (currently 4.3%) remaining in UK equities.
- The Fund and its benchmark have both generated positive returns, and the Fund has outperformed its benchmark by 0.7% excess. The EPO over this period has had a positive influence on the excess return and the Total Fund return. Other areas of positive excess have been generated via the outperforming Infrastructure assets along with both active equity portfolios; Nomura and LGPSC Emerging Markets. The only notable area of underperformance has been the property assets and whilst the alternatives have underperformed relative to their benchmark, as the Total Fund is overweight this relatively high returning asset class the contribution to excess performance of the Total Fund has been positive.
- Within the primary asset classes, infrastructure assets were the highest returning generators over the quarter at 6.5% outperforming their respective benchmark of 2.8%. Equity assets followed (inc EPO) generating a return of 4.5% whilst equities ex EPO the return was a slightly lower 3.9% (i.e. the EPO has added value this quarter). Within equities, the alternative pool was the highest return generator at 7.1% whilst the total active portfolios were both generators of negative returns (however both outperformed their respective negative returning benchmarks). Property generated a return of 1.4% whilst bonds were the lowest return generators at 0.4%.
- The Fund has been impacted negatively by being underweight UK equities as this has provided the collateral for the EPO strategy (this is held in short dated bonds) therefore reducing the exposure to this asset group. In effect, the Fund may appear to have a negative excess return contribution due to benchmark mismatch as the benchmark has not been adjusted to reflect the collateral programme. Additionally, the 'unspent' strategic asset allocation budget for Infrastructure and Property increases the UK equity benchmark weight exacerbating the asset allocation attributed return contribution. However please note that the structure and objective of the EPO (including the collateral) is expected to counterbalance this underweight UK position and return expectations; it has generally achieved this.
- The Fund has been negatively impacted by Property as this has 'lagged' the primarily listed equity benchmark.
- The latest valuation data supplied by Bridgepoint, Green Investment Bank, Gresham House, Hermes, Invesco – UK Property Fund, Stonepeak Partners, VENN and Walton Street is lagged by three months and was for periods ending September 2021.

**YEAR SUMMARY:      Worcestershire County Council Pension Fund      Return: 11.7%      Benchmark Return: 12.7%      Excess Return: -1.0%**

- The Fund and its benchmark have both generated positive returns, but the Fund has underperformed its benchmark by -1.0% excess. The underperformance has been primarily generated by equity assets and partly by the performance of the property assets which significantly underperformed their benchmark (please note that the equity benchmark is based upon listed equity indices which have had relatively strong performance over the last twelve months). With the exception of the infrastructure pool and total passive equities (due to the benchmark weighting having a lower exposure to the higher returning North America and European benchmarks) all other primary asset classes have underperformed.
- The Fund has been impacted negatively by being underweight UK equities as this has provided the collateral for the EPO strategy (this is held in short dated bonds) therefore reducing the exposure to this asset group. In effect, the Fund may appear to have a negative excess return contribution due to benchmark mismatch as the benchmark has not been adjusted to reflect the collateral programme. Additionally, the 'unspent' strategic asset allocation budget for Infrastructure and Property increases the UK equity benchmark weight exacerbating the asset allocation attributed return contribution. However please note that the structure and objective of the EPO (including the collateral) is expected to counterbalance this underweight UK position and return expectations; it has generally achieved this. The options overlay programme has increased the Fund return over the year and has performed as expected (it should be noted that the bond collateral part of the strategy did perform in line with a short dated bond index; however within the structure of the Fund no benchmark is assigned to these assets.
- Equity assets were the highest return generators over the year and excluding the overlay generated a return of 13.1%. Within equities the passive pool was the highest return generator closely followed by the alternatives generating similar returns of 21.7% and 21.5% respectively. The passives outperformed overall due to different weightings in the fund versus the benchmark whilst the alternatives underperformed their respective benchmark. The active equity pool were low returning assets at 1.6% and underperformed their respective benchmark by -0.7% excess. Nomura generated a return of 3.3% in line with their benchmark whilst the LGPSC Emerging portfolio generated a negative -0.2% return versus its positive 1.0% returning benchmark.
- Within bonds, the LGPS Central Corporate Bond Fund generated a negative return of -2.1% but matched the performance of its benchmark whilst corporate debt generated a positive return of 5.1% but underperformed the return of its benchmark. Property generated a return of 3.0% and has underperformed by -11.9% excess. Infrastructure had a return of 11.7% and outperformed by 1.3%.

**THREE YEAR SUMMARY:      Worcestershire County Council Pension Fund      Return: 10.6% p.a.      Benchmark Return: 10.9% p.a.      Excess Return: -0.3% p.a.**

- Over the three-year period, the Fund has generated a positive return of 10.6%, but has underperformed the benchmark by -0.3%p.a. It should be noted that there has been a significant number of new mandates established in that timeline especially in the property, infrastructure and bond asset classes and the EMM equity portfolio has been restructured.
- The equity protection overlay program has decreased the Fund return over the three-year period and given the volatility and variation in returns in markets this is liable to easily fluctuate (relative to benchmark). This is to be expected as equity markets have been largely positive. However, it should also be noted that the EPO strategy has lowered the volatility of the Fund as expected.
- The Total Risk and Active risk are consistent with a typical multi asset class fund that uses both passive and active strategies.

Client: Worcestershire County Council Pension Fund  
 Manager: Multi-manager  
 Mandate: Total Fund  
 Asset Class: Combined Assets  
 Benchmark: Worcestershire Total Fund Index  
 Inception: 31-Mar-1987  
 Mkt Val: £3.6bn

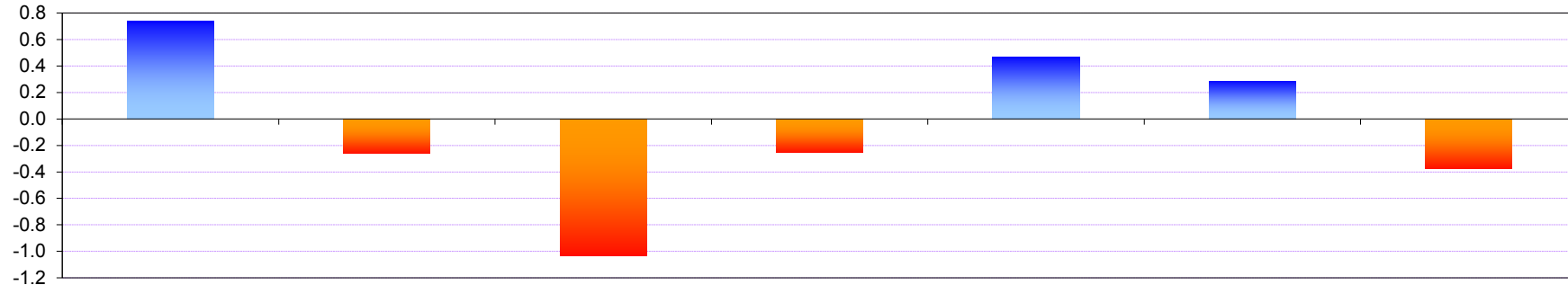
## Total Fund Overview

### Worcestershire CC Pension Fund

#### Report Period: Quarter Ending December 2021



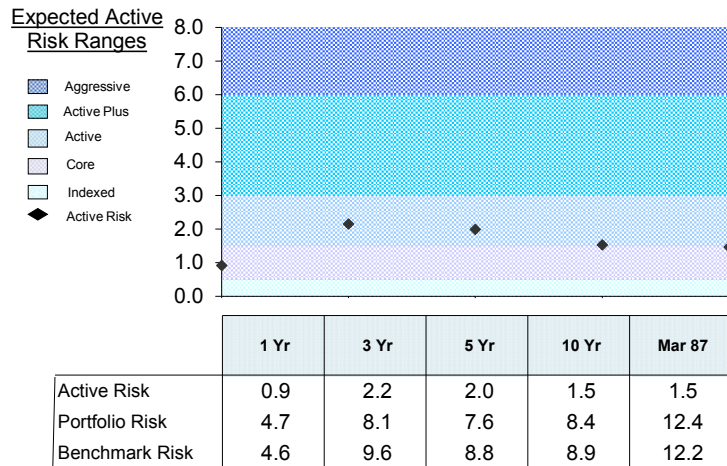
#### Excess Return Analysis (%)



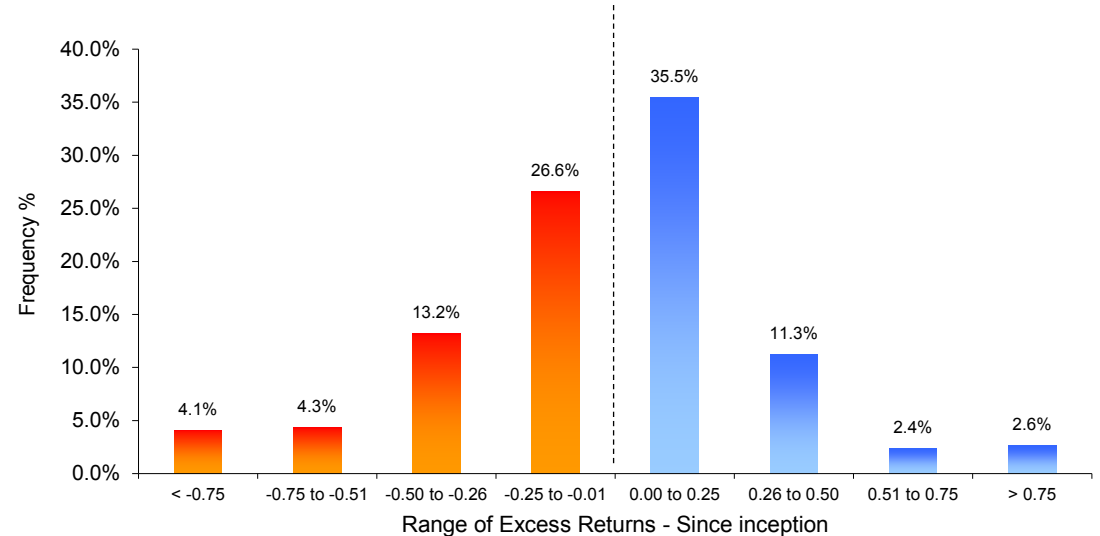
	QTR	Fin YTD	1 Yr	3 Yr	5 Yr	10Yr	Since Mar 87 (p.a.)
Excess Return	0.7	-0.3	-1.0	-0.3	0.5	0.3	-0.4
Portfolio Return	4.3	9.8	11.7	10.6	8.5	9.9	8.2
Benchmark Return	3.6	10.1	12.7	10.9	8.0	9.7	8.5

All returns for periods in excess of 1 year are annualised. The portfolio return is net. □

#### Ex-Post Active Risk Analysis (%)



#### Excess Return Consistency Analysis

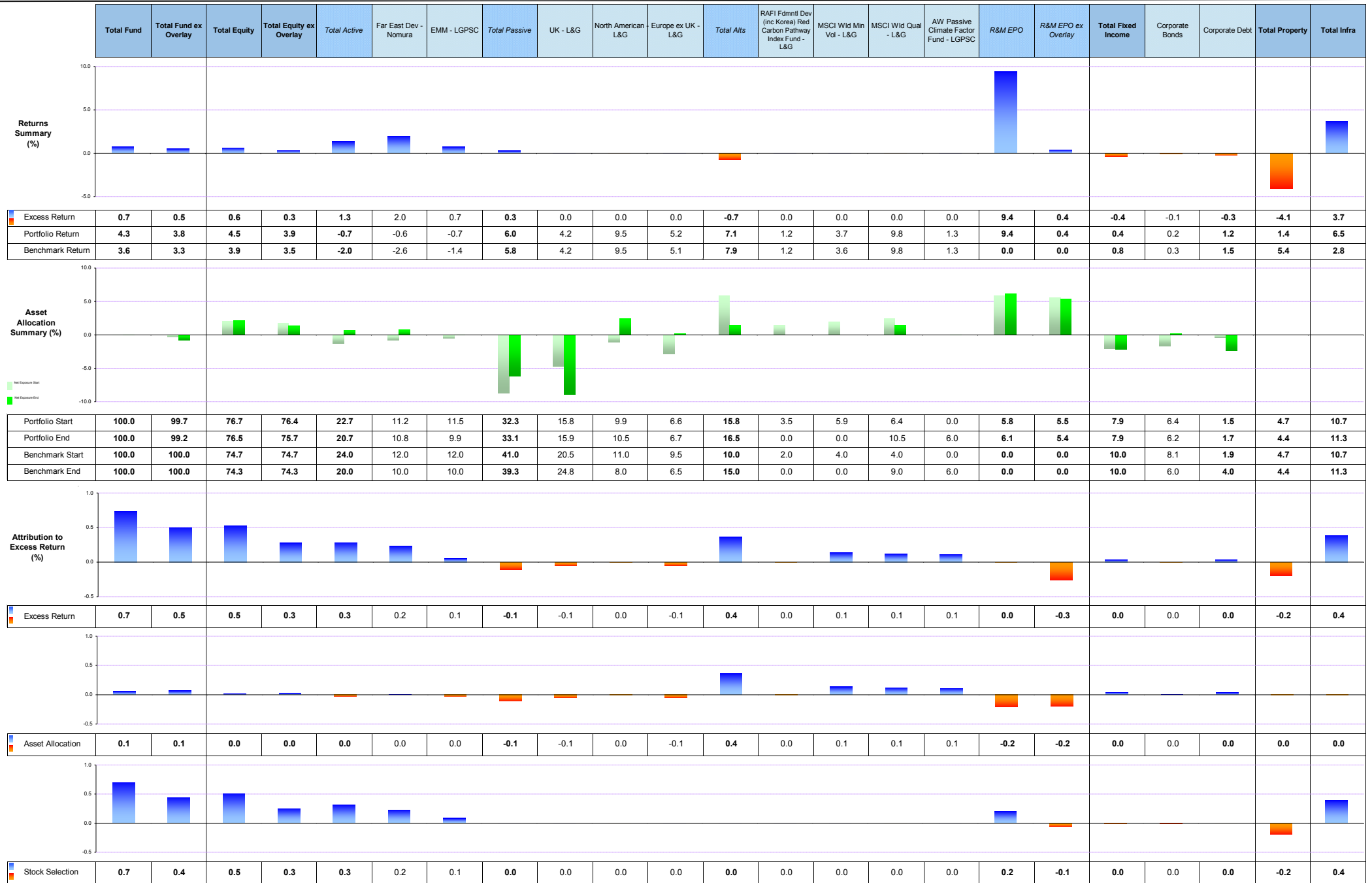


**Ex-Post Active Risk** measures the volatility of the actual excess returns achieved by the Portfolio/Fund.

**Excess Return Consistency Analysis** measures the frequency of the Portfolio/Fund's outperformance (Blue) and underperformance (Red) versus its benchmark, calculated using monthly (or quarterly if indicated) returns since inception.

**Attribution to Total Fund Excess Return Analysis  
Worcestershire County Council Pension Fund  
for Quarter Ended 31st December 2021**

Market Value: £3.6bn



The Returns Summary details the Portfolio, Benchmark and Excess Returns. The Excess Returns are plotted, the Asset Allocation Summary details the weights held by the portfolio and benchmark in each asset class/manager. The green plots are the overweight/underweight exposures of the Fund (v Fund benchmark) at the beginning and end of the period. The Attribution to Excess Return, identifies how each asset class/manager has contributed to the overall excess return of the Total Fund. It is broken down into Asset Allocation (how successful the decision to overweight/underweight each asset class was) and then into Stock Selection (how well each manager's decisions have performed). The Asset Allocation plus the Stock Selection excess returns are all additive and equal the Total Excess Return of the Fund.



**Attribution to Total Fund Excess Return Analysis  
Worcestershire County Council Pension Fund  
for Year Ended 31st December 2021**

Market Value: £3.6bn

	Total Fund	Total Fund ex Overlay	Total Equity	Total Equity ex Overlay	Total Active	Far East Dev - Nomura	EMM - LGPSC	Total Passive	UK - L&G	North American - L&G	Europe ex UK - L&G	Total Alts	RAFI Fdmntl Dev (inc Korea) Red Carbon Pathway Index Fund - L&G	MSCI Wid Min Vol - L&G	MSCI Wid Qual - L&G	AW Passive Climate Factor Fund - LGPSC	R&M EPO	R&M EPO ex Overlay	Total Fixed Income	Corporate Bonds	Corporate Debt	Total Property	Total Infra	
<b>Returns Summary (%)</b>																								
Excess Return	-1.0	-1.4	-1.6	-1.8	-0.7	0.0	-1.2	1.0	0.1	0.0	-0.3	-0.8	0.0	0.0	-0.1	0.0	2.7	-2.6	-0.4	0.0	-0.9	-11.9	1.3	
Portfolio Return	11.7	11.4	13.4	13.1	1.6	3.3	-0.2	21.7	18.4	28.1	17.3	21.5	19.6	12.5	27.1	1.3	2.7	-2.6	0.4	-2.1	5.1	3.0	11.7	
Benchmark Return	12.7	12.8	14.9	14.8	2.2	3.3	1.0	20.7	18.3	28.1	17.6	22.3	19.6	12.5	27.2	1.3	0.0	0.0	0.8	-2.1	6.0	14.9	10.4	
<b>Asset Allocation Summary (%)</b>																								
Portfolio Start	100.0	99.6	78.0	77.6	26.3	14.0	12.3	30.2	11.7	12.2	6.4	14.9	3.2	5.8	5.9	0.0	6.6	6.1	0.0	5.2	1.4	4.7	10.7	
Portfolio End	100.0	99.2	76.5	75.7	20.7	10.8	9.9	33.1	15.9	10.5	6.7	16.5	0.0	0.0	10.5	6.0	6.1	5.4	7.9	6.2	1.7	4.4	11.3	
Benchmark Start	100.0	100.0	74.5	74.5	24.0	12.0	12.0	40.5	20.0	11.0	9.5	10.0	3.3	3.3	3.3	0.0	0.0	0.0	0.0	7.9	2.1	4.7	10.7	
Benchmark End	100.0	100.0	74.3	74.3	20.0	10.0	10.0	39.3	24.8	8.0	6.5	15.0	0.0	0.0	9.0	6.0	0.0	0.0	10.0	6.0	4.0	4.4	11.3	
<b>Attribution to Excess Return (%)</b>																								
Excess Return	-1.0	-1.4	-0.9	-1.3	-0.4	-0.2	-0.2	-0.4	-0.4	0.2	-0.2	0.6	0.1	0.1	0.3	0.1	-0.7	-1.0	0.0	0.3	0.0	-0.6	0.2	
<b>Asset Allocation</b>																								
Asset Allocation	-0.4	-0.4	-0.8	-0.8	-0.2	-0.1	-0.1	-0.4	-0.4	0.2	-0.2	0.6	0.1	0.1	0.3	0.1	-0.8	-0.8	0.0	0.4	0.1	0.0	0.0	
<b>Stock Selection</b>																								
Stock Selection	-0.6	-1.0	-0.1	-0.5	-0.2	0.0	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.3	0.0	0.0	-0.1	-0.6	0.2	

# Attribution to Total Fund Excess Return Analysis - Annualised Worcestershire County Council Pension Fund for 3 Year Period Ended 31st December 2021

Market Value: £3.6bn

	Total Fund	Total Fund ex Overlay	Total Equity	Total Equity ex Overlay	Total Active	Far East Dev - Nomura	EMM - LGPSC	EMM - JPM	EMM - Schroder	Total Passive	UK - L&G	North American - L&G	Europe ex UK - L&G	Total Alts	RAFI Fdmntl Dev (inc Korea) Red Carbon Pathway Index Fund - L&G	MSCI Wid Min Vol - L&G	MSCI Wid Qual - L&G	AW Passive Climate Factor Fund - LGPSC	R&M EPO	R&M EPO ex Overlay	Total Fixed Income	Corporate Bonds	Corporate Debt	JP Morgan Corp Bond	Total Property	Total Infra	
<b>Returns Summary (%)</b>																											
Excess Return	-0.3	-0.8	0.0	-0.6	0.7	2.0	-0.1	0.1	1.7	1.4	0.1	0.0	-0.2	-0.8	0.0	0.1	-0.1	0.0	-5.8	-1.6	-0.4	1.1	1.8	1.1	-7.7	-1.2	
Portfolio Return	10.6	11.1	11.9	12.5	10.5	11.9	5.3	12.1	13.7	15.5	8.4	23.6	15.3	15.8	12.4	9.6	25.3	1.3	-5.8	-1.6	0.4	9.8	8.3	10.8	1.9	8.3	
Benchmark Return	10.9	11.9	11.8	13.1	9.8	9.9	5.4	12.0	12.0	14.0	8.3	23.6	15.5	16.6	12.4	9.5	25.3	1.3	0.0	0.0	0.8	8.7	6.5	9.7	9.6	9.4	
<b>Asset Allocation Summary (%)</b>																											
Portfolio Start	100.0	99.7	83.2	82.8	26.6	14.0	0.0	5.9	6.7	30.8	13.5	10.9	6.4	15.0	5.8	4.5	4.7	0.0	10.8	9.0	0.2	0.0	0.2	5.3	5.2	6.1	
Portfolio End	100.0	99.2	76.5	75.7	20.7	10.8	9.9	0.0	0.0	33.1	15.9	10.5	6.7	16.5	0.0	0.0	10.5	6.0	6.1	5.4	7.9	6.2	1.7	0.0	4.4	11.3	
Benchmark Start	100.0	100.0	78.7	78.7	24.0	12.0	0.0	6.0	6.0	44.7	24.2	11.0	9.5	10.0	3.3	3.3	3.3	0.0	0.0	0.0	0.4	0.0	0.4	9.6	5.2	6.1	
Benchmark End	100.0	100.0	74.3	74.3	20.0	10.0	10.0	0.0	0.0	39.3	24.8	8.0	6.5	15.0	0.0	0.0	9.0	6.0	0.0	0.0	10.0	6.0	4.0	0.0	4.4	11.3	
<b>Attribution to Excess Return (%)</b>																											
Excess Return	-0.3	-0.8	0.1	-0.5	0.1	0.3	-0.2	0.0	0.0	0.0	0.2	0.1	-0.3	0.4	0.0	0.0	0.3	0.0	-0.5	-1.0	0.0	0.3	0.0	0.0	-0.5	-0.1	
<b>Asset Allocation</b>																											
Asset Allocation	-0.5	-0.5	-0.9	-0.8	-0.2	0.0	-0.1	0.0	0.0	0.0	0.1	0.1	-0.2	0.3	0.0	0.0	0.3	0.0	-1.0	-0.9	0.0	0.2	0.0	0.0	0.0	0.0	
<b>Stock Selection</b>																											
Stock Selection	0.4	-0.3	1.0	0.3	0.3	0.3	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.5	-0.1	0.0	0.0	0.0	0.0	-0.5	-0.1	

Manager Return Analysis  
Worcestershire County Council Pension Fund  
for Period Ended 31st December 2021

Market Value: £3.6bn

				QTR			Year To Date			1 Year			3 Year			5 Year			10 Year			Since Inception										
Benchmark	Incep Date	Market Value (£m)	Weight	PF	BM	ER	PF	BM	ER	PF	BM	ER	PF	BM	ER	PF	BM	ER	PF	BM	ER	PF	BM	ER								
<b>Total Equity Fund</b>	<b>Client Specific Weighted Index</b>	<b>Mar-16</b>	<b>2,735.3</b>	<b>76.5</b>	<b>4.5</b>	<b>3.9</b>	<b>0.6</b>	<b>10.6</b>	<b>11.2</b>	<b>-0.6</b>	<b>13.4</b>	<b>14.9</b>	<b>-1.6</b>	<b>11.9</b>	<b>11.8</b>	<b>0.0</b>	<b>9.2</b>	<b>8.5</b>	<b>0.7</b>				<b>11.9</b>	<b>11.2</b>	<b>0.7</b>							
<b>Total Equity Fund ex Overlay</b>	<b>Client Specific Weighted Index</b>	<b>Mar-16</b>	<b>2,707.6</b>	<b>75.7</b>	<b>3.9</b>	<b>3.5</b>	<b>0.3</b>	<b>9.8</b>	<b>10.9</b>	<b>-1.1</b>	<b>13.1</b>	<b>14.8</b>	<b>-1.8</b>	<b>12.5</b>	<b>13.1</b>	<b>-0.6</b>	<b>9.0</b>	<b>9.3</b>	<b>-0.2</b>				<b>11.7</b>	<b>11.8</b>	<b>-0.1</b>							
<i>Total Active Equity Fund</i>	Client Specific Weighted Index	Mar-16	740.9	20.7	-0.7	-2.0	1.3	-0.1	0.3	-0.4	1.6	2.2	-0.7	10.5	9.8	0.7	8.5	7.8	0.7				11.9	11.0	0.8							
Far East Developed Fund - Nomura	Client Specific Weighted Index	Feb-03	385.1	10.8	-0.6	-2.6	2.0	1.5	1.4	0.2	3.3	3.3	0.0	11.9	9.9	2.0	8.9	7.4	1.4	10.2	9.5	0.7	10.3	10.0	0.3							
Emerging Markets Fund - LGPSC	FTSE All World Emerging Market Index	Jul-19	355.7	9.9	-0.7	-1.4	0.7	-1.7	-0.9	-0.9	-0.2	1.0	-1.2										5.3	5.4	-0.1							
<i>Total Passive Equity Fund</i>	Client Specific Weighted Index	Mar-16	1,184.8	33.1	6.0	5.8	0.3	16.4	15.5	0.9	21.7	20.7	1.0	15.5	14.0	1.4	10.3	9.4	0.9				12.6	11.6	0.9							
UK Equity Fund - L&G	FTSE All Share Index	Dec-15	570.5	15.9	4.2	4.2	0.0	12.5	12.5	0.1	18.4	18.3	0.1	8.4	8.3	0.1	5.6	5.4	0.2				7.9	7.8	0.2							
North American Equity Fund - L&G	FTSE All World North American Index	Dec-15	374.1	10.5	9.5	9.5	0.0	22.2	22.2	0.0	28.1	28.1	0.0	23.6	23.6	0.0	16.2	16.2	0.1				19.3	19.2	0.0							
Europe ex UK Equity Fund - L&G	FTSE Developed Europe Ex. UK Index	Dec-15	240.3	6.7	5.2	5.1	0.0	14.5	14.7	-0.2	17.3	17.6	-0.3	15.3	15.5	-0.2	10.2	10.4	-0.2				12.2	12.4	-0.2							
<i>Total Alternatives Fund</i>	20% RAFI/40% MSCI WL Min/40% MSCI WL Qual	Mar-16	589.7	16.5	7.1	7.9	-0.7	17.7	18.6	-0.9	21.5	22.3	-0.8	15.8	16.6	-0.8	11.3	11.9	-0.6				13.7	14.3	-0.6							
RAFI Fundamental Dev (inc Korea) Reduced Carbon	RAFI Fundamental Dev Custom Reduced Carbon	Dec-15	0.0	0.0	1.2	1.2	0.0	8.3	8.3	0.0	19.6	19.6	0.0	12.4	12.4	0.0	8.2	8.2	0.0				12.5	12.6	0.0							
Pathway Index Fund - L&G	Pathway 3% Index																															
MSCI World Min Vol TR Fund - L&G	MSCI World Minimum Volatility Net Index	Dec-15	0.0	0.0	3.7	3.6	0.0	11.8	11.8	0.1	12.5	12.5	0.0	9.6	9.5	0.1	8.0	7.9	0.1				11.6	11.5	0.1							
MSCI World Quality TR Fund - L&G	MSCI World Quality Total Return Net Index	Dec-15	374.2	10.5	9.8	9.8	0.0	24.6	24.7	-0.1	27.1	27.2	-0.1	25.3	25.3	-0.1	18.0	18.1	-0.1				19.5	19.6	-0.1							
All World Passive Climate Factor Fund - LGPSC	FTSE AW Climate Bal Com Factor Net	Nov-21	215.5	6.0	1.3	1.3	0.0																1.3	1.3	0.0							
<i>Equity Protection - River &amp; Mercantile</i>		Jan-18	219.9	6.1	9.4	0.0	9.4	8.0	0.0	8.0	2.7	0.0	2.7	-5.8	0.0	-5.8							0.6	0.0	0.6							
<i>Equity Protection - River &amp; Mercantile ex Overlay</i>		Jan-18	192.2	5.4	0.4	0.0	0.4	-2.4	0.0	-2.4	-2.6	0.0	-2.6	-1.6	0.0	-1.6								-3.2	0.0	-3.2						
<b>Total Fixed Income Fund</b>	<b>60% LGPSC Corp Index &amp; 40% Absolute Return +6%</b>	<b>Apr-03</b>	<b>281.5</b>	<b>7.9</b>	<b>0.4</b>	<b>0.8</b>	<b>-0.4</b>																<b>0.4</b>	<b>0.8</b>	<b>-0.4</b>							
<i>Total Corporate Bond Fund</i>	LGPS Corporate Bond Index	Mar-20	221.8	6.2	0.2	0.3	-0.1	2.0	2.0	0.0	-2.1	-2.1	0.0											9.8	8.7	1.1						
LGPS Central Corporate Bond Fund	LGPS Corporate Bond Index	Mar-20	221.8	6.2	0.2	0.3	-0.1	2.0	2.0	0.0	-2.1	-2.1	0.0											9.8	8.7	1.1						
<i>Total Corporate Debt Fund</i>	Absolute Return +6%	May-18	59.7	1.7	1.2	1.5	-0.3	4.2	4.5	-0.3	5.1	6.0	-0.9	8.3	6.0	2.3									10.9	6.1	4.8					
Bridgepoint Direct Lending II GBP	Absolute Return + 6.5%	May-18	59.7	1.7	1.2	1.6	-0.4	4.2	4.8	-0.6	5.1	6.5	-1.4	8.3	6.5	1.8										10.9	6.6	4.3				
<i>Bridgepoint Direct Lending II EURO</i>	Absolute Return + 6.5%	May-18	69.5	N/A	1.1	1.6	-0.5	8.3	4.8	3.4	10.6	6.5	4.1	9.4	6.5	2.9											11.1	6.6	4.5			
Bridgepoint Direct Lending III GBP	Absolute Return +6%	May-21	N.A.																													
<i>Bridgepoint Direct Lending III EURO</i>	Absolute Return +6%	May-21	N.A.																													
<b>Total Property Fund</b>	<b>60% MSCI UK &amp; 40% Abs Ret +7.5%</b>	<b>Mar-16</b>	<b>156.6</b>	<b>4.4</b>	<b>1.4</b>	<b>5.4</b>	<b>-4.1</b>	<b>4.7</b>	<b>12.5</b>	<b>-7.8</b>	<b>3.0</b>	<b>14.9</b>	<b>-11.9</b>	<b>1.9</b>	<b>9.6</b>	<b>-7.7</b>	<b>4.6</b>	<b>8.6</b>	<b>-4.0</b>				<b>5.5</b>	<b>8.4</b>	<b>-2.9</b>							
<i>Total UK Property Fund</i>	Absolute Return +9%	Jul-18	54.4	1.5	2.0	2.2	-0.2	3.6	6.7	-3.1	4.6	9.0	-4.4	5.2	9.0	-3.8										5.4	9.0	-3.6				
UK Property Fund - Invesco	Absolute Return +9%	Oct-18	42.7	1.2	2.3	2.2	0.1	2.9	6.7	-3.8	3.5	9.0	-5.5	0.6	9.0	-8.5											0.5	9.0	-8.5			
UK Property Fund - VENN	Absolute Return +9%	Jul-15	11.6	0.3	1.1	2.2	-1.1	5.8	6.7	-0.9	6.8	9.0	-2.2	8.0	9.0	-1.0	10.6	9.0	1.6								10.9	9.1	1.8			
US Property Fund - Walton Street GBP	Absolute Return +6.5%	Feb-16	1.3	0.0	3.3	1.6	1.8	5.4	4.8	0.6	6.8	6.5	0.3	1.1	6.5	-5.4	3.8	6.5	-2.7								9.2	6.3	2.9			
US Property Fund - Walton Street USD	Absolute Return +6.5%	Feb-16	1.8	N/A	0.9	1.6	-0.7	4.0	4.8	-0.8	5.4	6.5	-1.1	2.2	6.5	-4.3	4.6	6.5	-1.9									7.2	6.3	0.8		
US Property Fund - Walton Street II GBP	Absolute Return +7%	Jun-19	8.8	0.2	4.3	1.7	2.6	6.8	5.2	1.6	8.4	7.0	1.4															5.1	7.0	-1.9		
US Property Fund - Walton Street II USD	Absolute Return +7%	Jun-19	11.9	N/A	1.9	1.7	0.2	5.4	5.2	0.2	6.9	7.0	-0.1																6.4	7.0	-0.5	
Euro Property Fund - Invesco GBP	Absolute Return +6.5%	Feb-16	64.1	1.8	-0.3	1.6	-1.9	4.4	4.8	-0.4	-1.2	6.5	-7.7	-1.1	6.5	-7.6	2.5	6.5	-4.0										4.3	6.4	-2.1	
Euro Property Fund - Invesco EURO	Absolute Return +6.5%	Feb-16	76.3	N/A	2.0	1.6	0.4	5.9	4.8	1.1	5.3	6.5	-1.2	1.3	6.5	-5.2	3.0	6.5	-3.5											3.3	6.4	-3.1
Euro Property Fund - Venn Property Debt Fund II GBP	Absolute Return +6%	Aug-20	8.0	0.2	1.5	1.5	0.0	0.2	4.5	-4.3																						
Euro Property Fund - Venn Prop Debt Fund II EURO	Absolute Return +6%	Aug-20	9.3	N/A	0.1	1.5	-1.3	3.0	4.5	-1.5																						
Forestry Growth & Sustainability Fund - Gresham House	Absolute Return +6%	Dec-21																														
Property Fund - AEW	UK RPI +4%	Oct-17	20.0	0.6	3.3	3.8	-0.5	9.0	9.9	-1.0	10.9	11.5	-0.6	3.5	7.6	-4.1																
<b>Total Infrastructure Fund</b>	<b>70% UK CPI +5.5% &amp; 30% Abs Return +10%</b>	<b>Mar-16</b>	<b>403.9</b>	<b>11.3</b>	<b>6.5</b>	<b>2.8</b>	<b>3.7</b>	<b>11.4</b>	<b>8.7</b>	<b>2.7</b>	<b>11.7</b>	<b>10.4</b>	<b>1.3</b>	<b>8.3</b>	<b>9.4</b>	<b>-1.2</b>	<b>7.8</b>	<b>8.9</b>	<b>-1.1</b>				<b>7.7</b>	<b>8.8</b>	<b>-1.1</b>							
UK Infrastructure Fund - Green	Absolute Return +7.6%	Apr-15	45.3	1.3	9.9	1.8	8.0	16.1	5.6	10.4	17.1	7.6	9.5	6.6	7.6	-1.0																
BSIF Housing and Infrastructure	Absolute Return +8%	May-20	27.8	0.8	0.0	1.9	-1.9	-15.2	5.9	-21.2	-7.9	8.0	-15.9																			
BSIF II Infrastructure Fund	Absolute Return +9%	Sep-21																														
UK Infrastructure Core Fund - Hermes	Absolute Return +8.4%	May-15	53.1	1.5	0.2	2.0	-1.8	-2.7	6.2	-9.0	2.0	8.4	-6.4	2.0	8.4	-6.4	3.7	8.4	-4.7													
UK Infrastructure Fund - Hermes II	Absolute Return +8.5%	Jun-18	46.8	1.3	0.3	2.1	-1.8	-1.1	6.3	-7.4	-0.5	8.5	-9.0	-3.6	8.5	-12.1																
Infrastructure Core Fund - Stonepeak III GBP	Absolute Return +12%	Jan-18	115.7	3.2	9.7	2.9	6.8	23.9	8.9	15.0	21.6	12.0	9.7	31.7	12.0	19.7																
Infrastructure Core Fund - Stonepeak III USD	Absolute Return +12%	Jan-18	156.0	N/A	7.2	2.9	4.4	22.3	8.9	13.5	27.1	12.0	15.1	33.8	12.0	21.8																
Infrastructure Core Fund - Stonepeak IV	Absolute Return +12%	Nov-21																														
First Sentier EDFI II GBP	Absolute Return +9%	Jun-18	115.2	3.2	9.7	2.2	7.5	15.7	6.7	9.0	13.8																					

Total Fund Reconciliation Analysis  
Worcestershire County Council Pension Fund  
for Quarter Ended 31st December 2021

Market Value: £3.6bn

	30th September 2021		Net Investment (£000s)	Total Income (£000s)	Total Gain/Loss (£000s)	31st December 2021	
	Market Val (£000s)	Exposure (%)				Market Val (£000s)	Exposure (%)
<b>Total Equity Fund</b>	<b>2,651,670</b>	<b>76.7</b>	<b>-39,542</b>	<b>-2,247</b>	<b>123,169</b>	<b>2,735,297</b>	<b>76.5</b>
<b>Total Equity Fund ex Overlay</b>	<b>2,641,256</b>	<b>76.4</b>	<b>-38,563</b>	<b>4</b>	<b>104,904</b>	<b>2,707,598</b>	<b>75.7</b>
<i>Total Active Equity Fund</i>	785,816	22.7	-40,000	0	-4,956	740,860	20.7
Far East Developed Fund - Nomura	387,655	11.2	0	0	-2,525	385,130	10.8
Emerging Markets Fund - LGPSC	398,161	11.5	-40,000	0	-2,432	355,729	9.9
<i>Total Passive Equity Fund</i>	1,117,476	32.3	0	0	67,357	1,184,833	33.1
UK Equity Fund - L&G	547,473	15.8	0	0	22,990	570,463	15.9
North American Equity Fund- L&G	341,528	9.9	0	0	32,585	374,113	10.5
Europe ex UK Equity Fund- L&G	228,475	6.6	0	0	11,782	240,257	6.7
<i>Total Alternatives Fund</i>	546,536	15.8	1,437	0	41,776	589,749	16.5
RAFI Fundamental Dev (inc Korea) Reduced Carbon Pathway Index Fund - L&G	121,004	3.5	-122,513	0	1,509	0	0.0
MSCI World Min Vol TR Fund - L&G	203,885	5.9	-211,351	0	7,466	0	0.0
MSCI World Quality TR Fund - L&G	221,647	6.4	122,511	0	30,076	374,234	10.5
All World Passive Climate Factor Fund - LGPSC	0	0.0	212,790	0	2,726	215,515	6.0
<i>Equity Protection - River &amp; Mercantile</i>	201,843	5.8	-979	-2	18,992	219,856	6.1
<i>Equity Protection - River &amp; Mercantile ex Overlay</i>	191,429	5.5	0	0	727	192,156	5.4
<b>Total Fixed Income Fund</b>	<b>274,047</b>	<b>7.9</b>	<b>6,438</b>	<b>0</b>	<b>1,027</b>	<b>281,511</b>	<b>7.9</b>
<i>Total Corporate Bond Fund</i>	221,415	6.4	0	0	389	221,804	6.2
LGPS Central Corporate Bond Fund	221,415	6.4	0	0	389	221,804	6.2
<i>Total Corporate Debt Fund</i>	52,631	1.5	6,438	0	639	59,707	1.7
Bridgepoint Direct Lending II	52,631	1.5	6,438	0	639	59,707	1.7
Bridgepoint Direct Lending III	0	0.0	0	0	0	0	0.0
<b>Total Property Fund</b>	<b>161,976</b>	<b>4.7</b>	<b>-6,703</b>	<b>827</b>	<b>1,338</b>	<b>156,610</b>	<b>4.4</b>
<i>Total UK Property Fund</i>	55,133	1.6	-1,849	0	1,089	54,373	1.5
UK Property Fund - Invesco	41,789	1.2	0	0	944	42,732	1.2
UK Property Fund - VENN	13,344	0.4	-1,849	0	145	11,641	0.3
US Property Fund- Walton Street	4,073	0.1	-2,901	0	129	1,301	0.0
US Property Fund- Walton Street II	8,780	0.3	-336	0	383	8,827	0.2
Euro Property Fund- Invesco	64,784	1.9	0	499	-730	64,054	1.8
Euro Property Fund-Venn Propert Debt Fund II	9,505	0.3	-1,618	0	138	8,026	0.2
Forestry Growth & Sustainability Fund - Gresham House	0	0.0	0	0	0	0	0.0
Property Fund- AEW	19,700	0.6	0	327	330	20,030	0.6
<b>Total Infrastructure Fund</b>	<b>368,077</b>	<b>10.7</b>	<b>13,891</b>	<b>1,792</b>	<b>21,891</b>	<b>403,859</b>	<b>11.3</b>
UK Infrastructure Fund - Green	42,000	1.2	-820	0	4,150	45,330	1.3
BSIF Housing and Infrastructure	25,656	0.7	2,119	0	12	27,786	0.8
BSIF II Infrastructure Fund	0	0.0	0	0	0	0	0.0
UK Infrastructure Core Fund - Hermes	52,972	1.5	0	0	99	53,071	1.5
UK Infrastructure Fund - Hermes II	46,653	1.3	0	0	130	46,783	1.3
Infrastructure Core Fund - Stonepeak III	93,831	2.7	12,592	0	9,247	115,670	3.2
Infrastructure Core Fund - Stonepeak IV	0	0.0	0	0	0	0	0.0
First Sentier EDIF II	106,967	3.1	0	1,792	8,253	115,219	3.2
First Sentier EDIF III	0	0.0	0	0	0	0	0.0
<b>Cash Fund</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>
<b>Worcestershire CC Total Fund ex Overlay</b>	<b>3,445,355</b>	<b>99.7</b>	<b>-24,937</b>	<b>2,619</b>	<b>129,160</b>	<b>3,549,578</b>	<b>99.2</b>
<b>Worcestershire CC Total Fund</b>	<b>3,455,770</b>	<b>100.0</b>	<b>-25,916</b>	<b>2,617</b>	<b>147,425</b>	<b>3,577,278</b>	<b>100.0</b>

Note: Cashflow into cash reflects sum of portfolio contributions minus net investments. It is assumed that cash for the Fund is held outside of the invested assets and is therefore withdrawn from the Total Fund