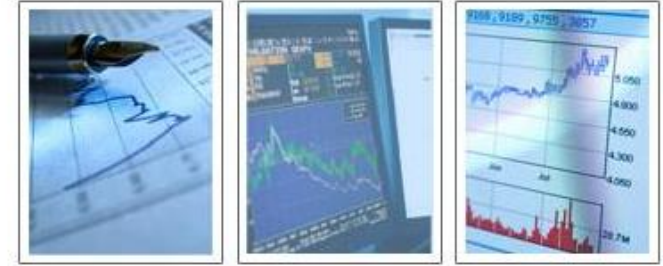


P O R T F O L I O  
E V A L U A T I O N  
L I M I T E D

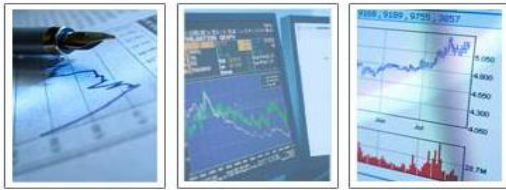


Specialists in Investment Risk and Return Evaluation

Quarterly Risk and Return Analysis  
Total Fund

Worcestershire County Council Pension Fund

Period ending 30<sup>th</sup> June 2019



Specialists in Investment Risk and Return Evaluation

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## Worcestershire County Council Pension Fund Total Fund

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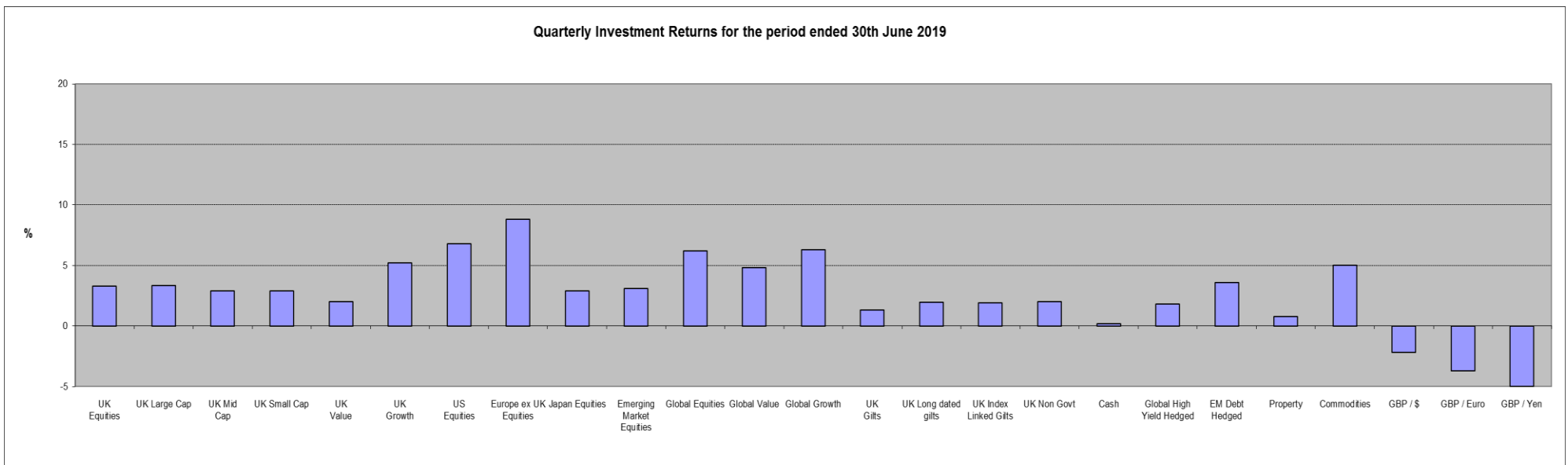


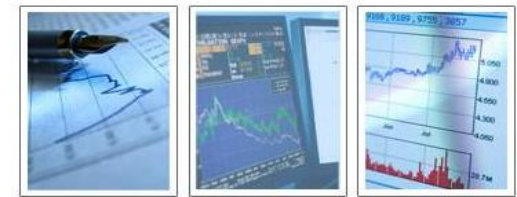
## Portfolio Evaluation Ltd Market Commentary Q2 2019 (Sterling)

After a positive first quarter and year most markets continued with positive returns, albeit at a more subdued level, in the quarter ended June 2019. The markets continue upwards, even after a small equity correction in May that was followed by a sharp recovery in June despite lower economic growth and lower corporate earnings growth. Some of this could be due to continued global economic growth (albeit slower) supported by dovish central bank policy, continuing low inflation and positive consumer demand (it should be noted that there is in the developed world a lower supply of available workers). The positive global outlook this quarter saw growth stocks continue to outperform value but the difference between the two was less than in periods last year.

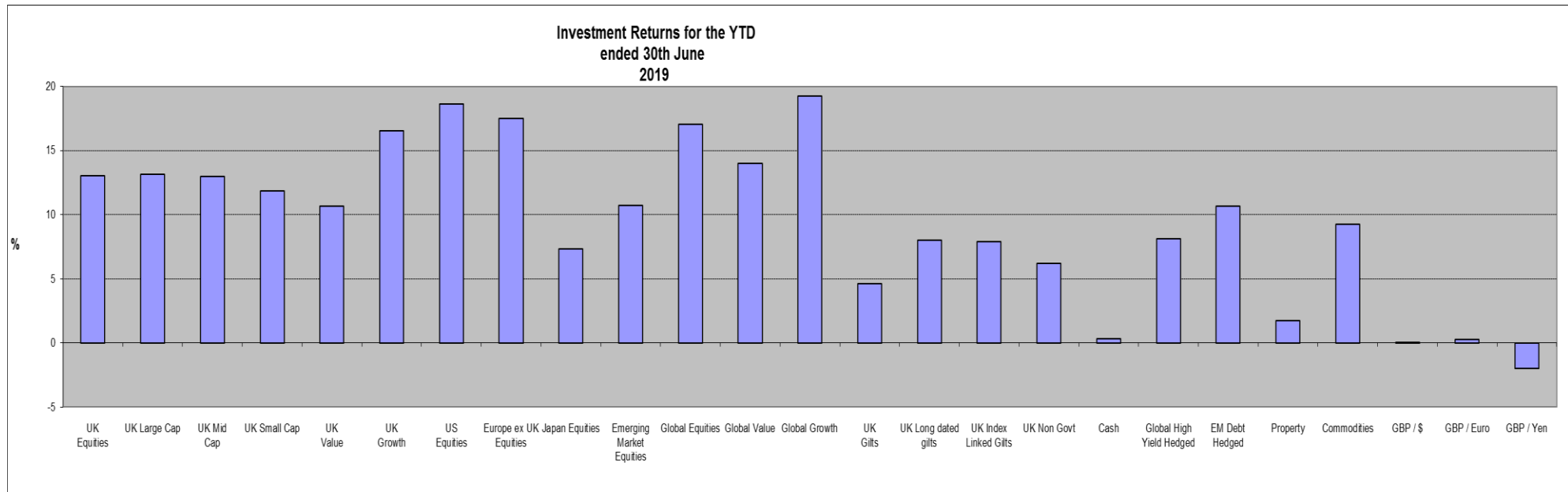
It would appear that markets are set to remain in a late market cycle phase for a while given the economic growth and it is not uncommon for markets to produce positive returns in this phase of the market; however this can be more volatile. Looking forwards market commentators continue to expect lower global economic growth and corporate earnings growth with the Eurozone looking particularly vulnerable. Many investors seem to expect growth to continue into 2020 and potentially to 2021 as the outlook for a recession gets moved back due partly positive central bank actions and benign inflation. However despite the last 6 months many market commentators are discussing more defensive strategies going forwards, and many are also viewing emerging markets positively. Commentators are also investing more in bonds to secure income and as a defensive move.

Quarterly Investment Returns for the period ended 30th June 2019





Within the UK the obsession and lack of resolution with Brexit has continued through yet another quarter. This continues to lower the economic growth outlook and reduce the willingness of both companies and investment managers to invest in the UK. The 'high street' sector continues to struggle with high costs and lower revenues whilst business is still reviewing how to proceed in the future. Despite posting significant equity market gains the concerns about the future outlook helps to explain the relatively lack lustre performance of UK stockmarkets when compared to many others.



Market volatility has continued to increase as a result of the outlook and in particular the risk levels between asset classes has also increased as diversification benefits reduce. Many commentators expect this to continue throughout 2019.

**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 Tel: +44 (0)1937 841434 (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 30<sup>th</sup> June 2019

**QUARTERLY SUMMARY:**      **Worcestershire County Council Pension Fund**    **Return: 4.0%**    **Benchmark Return: 4.5%**    **Excess Return: -0.6%**

- The Fund achieved a total return of 4.0%. Equities excluding the River and Mercantile overlay was the highest returning asset class generating a return of 4.9%; the equity protection strategy was a negative return generator over the quarter and therefore when viewing the equity assets including the overlay the return lowers to 4.2%. The overlay has also therefore negatively impacted the return of the Total Fund which generated 4.0% including the overlay but a higher 4.5% return when excluding the overlay. The Corporate Bond Fund followed generating a return of 3.7%. Property assets also had a positive return of 2.4%, whilst Infrastructure assets returned a positive 2.2%. Within equities, alternative equity assets were the highest returning asset class at 6.3%, followed by passive equities at 5.6% and the active equity pool generating 4.6%.
- The Fund underperformed its benchmark by -0.6% & -0.1% including and excluding the overlay respectively. This was dominated by the equity protection portfolio which is managed by River and Mercantile; this accounted for -0.9% of the attribution to excess return when including the overlay but this was not unexpected given markets movements during the quarter, as well as the structure of the Fund (for example the bond collateral and options). Asset allocation also detracted from excess via the underweight position held in the high returning European equity assets. Stock selection within the active equity EMM portfolios and Nomura reduced the negative excess with positive stock selection at Total Equity (ex. overlay) and Total Fund (ex. overlay) level. The JPM Corporate Bond Fund and property outperformed, whilst infrastructure aligned against their respective benchmarks. Within Infrastructure, the Green UK Infrastructure Fund was the highest return generator with 3.8%, it was also the only infrastructure fund to outperform its respective benchmark. Although, all infrastructure funds generated positive returns
- All index funds tracked their benchmarks as expected, except for Europe ex. UK which experienced minor underperformance
- The latest valuation data supplied by VENN, Walton Street I, Green, EQT, Invesco Real Estate UK Residential Fund and Stonepeak was for period ending March 2019. The Fund invested in Walton Street II US Property Fund on the 28<sup>th</sup> of June 2019.

**YEAR SUMMARY:**      **Worcestershire County Council Pension Fund**    **Return: 5.5%**    **Benchmark Return: 6.3%**    **Excess Return: -0.8%**

- Over the year the Fund has generated a return of 5.5% underperforming its benchmark by -0.8%; when excluding the equity options overlay, the Total Fund underperformed by -0.5%. The J P Morgan Corporate Bond Fund and Equities had the highest positive returns generating 8.2% and 5.6% respectively (6.1% for Total equities ex. Overlay). Both Property and Infrastructure assets also generated positive returns of 4.7% and 3.8% respectively. EQT Mid-Market Credit II was the lowest return, generating 1.3% over the year. Within the equity pool, the alternatives were the highest return generators at 12.1%, followed by the passive pool generating 6.7%. The active pool generated a positive return of 3.6%; Schroders EMM Fund generated the highest positive return over this period with 8.0%
- Stock selection was the dominant contributor of the underperformance over the year due to the underperforming property and infrastructure funds coupled with the underperformance generated via the active equity pool; note that both Nomura and JPM generated positive returns but significantly underperformed their respective benchmarks. Infrastructure assets contribution to the underperformance was primarily caused by Hermes and First State. The River and Mercantile Equity Protection Fund excluding the equity options overlay was the only significant positive stock selection within the Total Fund
- Asset allocation was a negative contributor over the year via the overweight exposure to the negative returning Active Equity portfolios; Nomura and the 'off benchmark' exposure to the equity protection portfolio both including and excluding the equity options overlay. Being significantly underweight in the low returning UK equity assets coupled with the overweight exposure to the alternative equity assets both generated positive excess via asset allocation; UK equity assets to a more significant extent
- The Total Risk and Active risk are consistent with a typical multi asset class fund that uses both passive and active strategies.

**THREE YEAR SUMMARY AND LONGER:    Worcestershire County Council Pension Fund    Return: 10.7%    Benchmark Return: 10.6%    Excess Return: 0.1%**

- Over the three year period, the Fund has generated a return of 10.7% outperforming the benchmark by 0.2%, while also outperforming its benchmark by 0.3% when excluding the River and Mercantile equity options overlay. Equities generated the highest asset class return at 11.6% including the River and Mercantile overlay, and 11.8% excluding the overlay. Property and Infrastructure followed with positive returns of 7.7% and 7.2% respectively, with the JPM Corporate Bond Fund generating the lowest return of the Total Fund with +3.5%
- Stock selection within the active equity assets has proved particularly successful; both the active and passive equity pools also contributed positively as did the property pool. Asset allocation over the three year time period was also a positive contributor due to the underweight exposure to the (relatively) low returning Corporate Bond Fund. The active equity pool was the only positive contributing equity asset pool to the asset allocations positive excess. Additionally, the overweight off benchmark exposure to the equity protection portfolio including the equity options overlay has significantly dragged on the Total Fund negative asset allocation excess
- Over the past three year period, this Fund has successfully outperformed for more observations than underperformed. This has occurred in both positive and negative markets. It is notable that when markets are negative the average excess return generated when outperforming is higher (+0.54% v -0.38%) whilst in positive markets the level of excess generated while outperforming is less (+0.25% v -0.55%).
- 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: £2.9bn

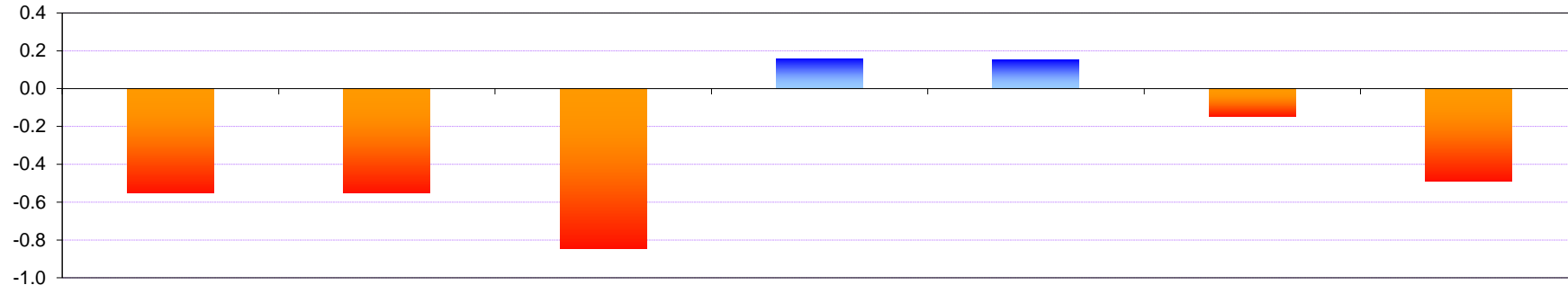
## Total Fund Overview

### Worcestershire CC Pension Fund

Report Period: Quarter Ending June 2019



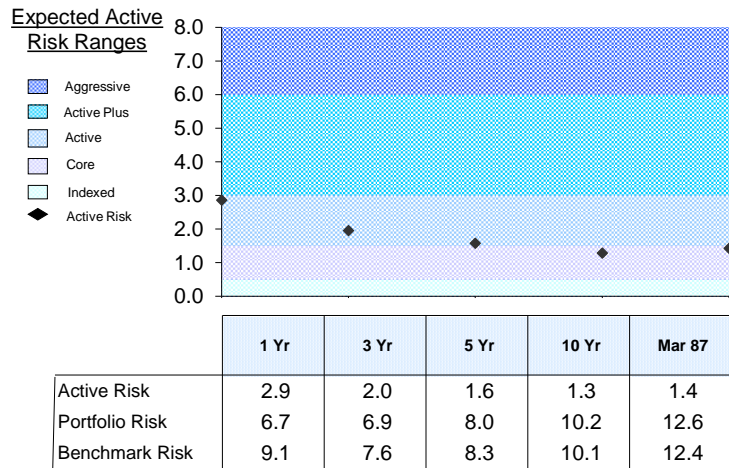
#### Excess Return Analysis (%)



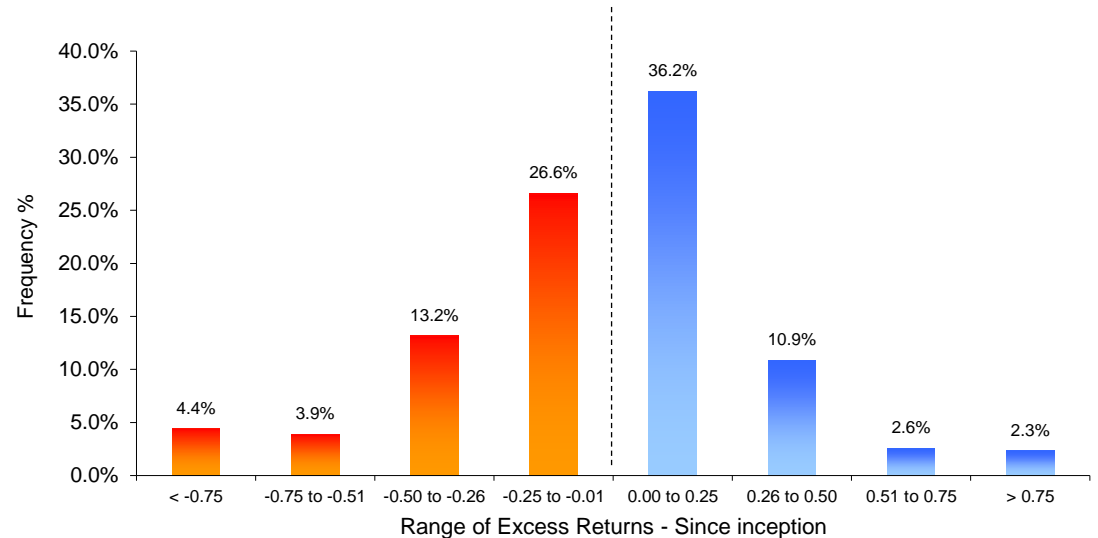
	QTR	YTD	1 Yr	3 Yr	5 Yr	10Yr	Since Mar 87 (p.a.)
Excess Return	-0.6	-0.6	-0.8	0.2	0.2	-0.1	-0.5
Portfolio Return	4.0	4.0	5.5	10.7	9.5	10.9	8.1
Benchmark Return	4.5	4.5	6.3	10.6	9.3	11.0	8.6

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 - Unannualised  
Worcestershire County Council Pension Fund  
for 3 Year Ended 30th June 2019**



Market Value: £2.9bn

	Total Fund	Total Fund ex Overlay	Total Equity	Total Equity ex Overlay	Total Active	Far East Dev - Nomura	EMM - JPM	EMM - Schroder	Total Passive	UK - L&G	North American - L&G	Europe ex UK - L&G	Total Alts	FTSE RAFI DEV - L&G	MSCI Wid Min Vol - L&G	MSCI Wid Qual - L&G	R&M EPO	R&M EPO ex Overlay	Corp Bond - JPM	EQT Mid-Mkt Credit II	Total Property	Total UK Property	UK Prop - Invesco	UK Prop - VENN	US Prop - Walton Street	US Prop - Walton Street II	Euro Prop - Invesco	Prop - AEW	Total Infra	UK Infra - Green	UK Infra - Core - Hermes	UK Infra - Hermes II	Infra Core - Stonepeak	First State	Cash
<b>Returns Summary (%)</b>																																			
Excess Return	0.6	1.0	-1.0	-0.4	3.5	1.5	2.7	10.0	1.1	0.8	0.2	-0.7	-2.0	-0.4	0.0	-0.6	-0.3	-5.4	2.0	1.6	2.4	-3.3	-12.6	10.4	2.7	0.0	0.4	-1.4	-3.6	1.8	-7.4	-18.1	-14.8	-3.4	0.0
Portfolio Return	35.8	36.2	39.0	39.6	43.9	39.5	45.1	52.4	39.5	30.3	55.8	42.6	43.0	42.9	33.9	57.5	-0.3	-5.4	10.8	7.8	25.0	5.7	-3.6	39.9	23.5	0.0	21.2	10.2	23.1	26.3	20.0	-8.8	3.8	6.4	0.0
Benchmark Return	35.2	35.2	39.9	39.9	40.4	38.0	42.3	42.3	38.4	29.5	55.6	43.3	45.0	43.3	33.8	58.1	0.0	0.0	8.8	6.2	22.7	9.0	9.0	29.5	20.8	0.0	20.8	11.6	26.8	24.6	27.4	9.2	18.5	9.8	0.0
<b>Asset Allocation Summary (%)</b>																																			
Portfolio Start	100.0	100.0	85.0	85.0	27.4	15.3	5.8	6.4	44.9	27.7	11.4	5.8	12.7	3.7	4.7	4.3	0.0	0.0	6.6	0.0	4.8	0.0	0.0	1.4	0.3	0.0	3.1	0.0	3.6	1.7	1.9	0.0	0.0	0.0	0.0
Portfolio End	100.0	100.0	81.2	81.2	27.1	14.1	6.0	7.0	30.9	13.2	11.2	6.5	15.1	5.8	4.5	4.9	8.0	8.1	5.3	0.5	6.2	2.3	1.4	0.9	0.6	0.0	2.5	0.7	6.9	1.7	1.7	1.0	0.4	2.2	0.0
Benchmark Start	100.0	100.0	81.7	81.7	24.0	12.0	6.0	6.0	47.7	27.2	11.0	9.5	10.0	3.3	3.3	3.3	0.0	0.0	10.0	0.0	4.7	0.0	0.0	1.4	0.2	0.0	3.1	0.0	3.6	1.7	1.9	0.0	0.0	0.0	0.0
Benchmark End	100.0	100.0	76.9	76.9	24.0	12.0	6.0	6.0	42.9	22.4	11.0	9.5	10.0	3.3	3.3	3.3	0.0	0.0	9.2	0.8	6.2	2.3	1.4	0.9	0.6	0.0	2.5	0.7	6.9	1.7	1.7	1.0	0.4	2.2	0.0
<b>Attribution to Excess Return (%)</b>																																			
Excess Return	0.6	1.0	-0.6	-0.3	1.0	0.4	0.1	0.5	-0.1	0.3	0.0	-0.5	0.2	0.0	0.0	0.2	-1.7	-1.4	1.3	0.0	0.2	0.2	0.1	0.1	0.0	0.0	0.0	-0.2	0.0	-0.1	-0.1	0.1	-0.1	0.0	
<b>Asset Allocation</b>																																			
Asset Allocation	-0.2	0.5	-1.4	-0.7	0.0	0.1	-0.1	0.0	-0.3	0.1	0.0	-0.4	0.3	0.0	0.0	0.2	-1.3	-0.6	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Stock Selection</b>																																			
Stock Selection	0.9	0.5	0.7	0.3	1.0	0.3	0.2	0.6	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-0.8	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.0	0.0	-0.2	0.0	-0.1	-0.1	0.0	-0.1	0.0	

Manager Return Analysis  
Worcestershire County Council Pension Fund  
for Period Ended 30th June 2019

Market Value: £2.9bn

	Benchmark	Incep Date	Market Value (£m)	Weight	QTR			Year To Date			1 Year			3 Year			5 Year			10 Year			Since Inception		
					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>2,328.9</b>	<b>81.2</b>	<b>4.2</b>	<b>5.0</b>	<b>-0.8</b>	<b>4.2</b>	<b>5.0</b>	<b>-0.8</b>	<b>5.6</b>	<b>6.1</b>	<b>-0.5</b>	<b>11.6</b>	<b>11.8</b>	<b>-0.3</b>							<b>13.2</b>	<b>13.3</b>	<b>-0.1</b>
<b>Total Equity Fund ex Overlay</b>	<b>Client Specific Weighted Index</b>	<b>Jan-00</b>	<b>2,330.6</b>	<b>81.2</b>	<b>4.9</b>	<b>5.0</b>	<b>-0.2</b>	<b>4.9</b>	<b>5.0</b>	<b>-0.2</b>	<b>6.1</b>	<b>6.1</b>	<b>0.0</b>	<b>11.8</b>	<b>11.8</b>	<b>-0.1</b>							<b>13.4</b>	<b>13.3</b>	<b>0.0</b>
<i>Total Active Equity Fund</i>	Client Specific Weighted Index	Mar-16	777.3	27.1	4.6	3.9	0.7	4.6	3.9	0.7	3.6	5.1	-1.5	12.9	12.0	0.9							14.9	14.0	0.9
Far East Developed Fund - Nomura	FTSE Developed Asia Pacific Index	Feb-03	403.1	14.1	4.2	4.1	0.1	4.2	4.1	0.1	0.5	1.8	-1.4	11.7	11.3	0.4	11.3	10.7	0.7	10.3	10.0	0.2	10.4	10.4	0.0
Emerging Markets Fund - JPM	FTSE All World Emerging Market Index	Dec-11	173.1	6.0	4.4	3.8	0.7	4.4	3.8	0.7	5.9	8.3	-2.4	13.2	12.5	0.7	9.4	9.5	-0.1				7.8	7.7	0.1
Emerging Markets Fund- Schroder	FTSE All World Emerging Market Index	Oct-11	201.2	7.0	5.5	3.8	1.7	5.5	3.8	1.7	8.0	8.3	-0.3	15.1	12.5	2.6	11.5	9.5	2.0				9.2	7.0	2.2
<i>Total Passive Equity Fund</i>	Client Specific Weighted Index	Mar-16	887.2	30.9	5.6	5.3	0.4	5.6	5.3	0.4	6.7	5.3	1.4	11.7	11.4	0.3							13.0	12.5	0.5
UK Equity Fund - L&G	FTSE All Share Index	Dec-15	378.8	13.2	3.2	3.3	0.0	3.2	3.3	0.0	0.6	0.6	0.1	9.2	9.0	0.2							10.1	9.9	0.2
North American Equity Fund- L&G	FTSE All World North American Index	Dec-15	321.3	11.2	6.8	6.8	0.0	6.8	6.8	0.0	14.1	14.1	0.1	15.9	15.9	0.1							18.6	18.6	0.0
Europe ex UK Equity Fund- L&G	FTSE Developed Europe Ex. UK Index	Dec-15	187.0	6.5	8.7	8.8	-0.2	8.7	8.8	-0.2	7.8	8.0	-0.1	12.6	12.8	-0.2							12.9	13.1	-0.2
<i>Total Alternatives Fund</i>	Client Specific Weighted Index	Mar-16	434.4	15.1	6.3	6.4	-0.1	6.3	6.4	-0.1	12.1	12.7	-0.6	12.7	13.2	-0.5							14.9	15.3	-0.4
FTSE RAFI DEV Fund - L&G	FTSE RAFI Developed 1000 QSR Net Index	Dec-15	165.0	5.8	5.7	5.7	0.0	5.7	5.7	0.0	6.9	6.9	0.0	12.6	12.7	-0.1							14.9	15.0	-0.1
MSCI World Min Vol TR Fund - L&G	MSCI World Minimum Volatility Net Index	Dec-15	130.1	4.5	6.9	7.0	0.0	6.9	7.0	0.0	15.4	15.5	0.0	10.2	10.2	0.0							16.1	16.1	0.0
MSCI World Quality TR Fund - L&G	MSCI World Quality Total Return Net Index	Dec-15	139.4	4.9	6.5	6.6	0.0	6.5	6.6	0.0	15.6	15.7	-0.1	16.3	16.5	-0.2							18.1	18.2	-0.1
Equity Protection - River & Mercantile		Jan-18	229.9	8.0	-5.2	0.0	-5.2	-5.2	0.0	-5.2	-1.3	0.0	-1.3										-0.2	0.0	-0.2
Equity Protection - River & Mercantile ex Overlay		Jan-18	231.6	8.1	0.1	0.0	0.1	0.1	0.0	0.1	4.2	0.0	4.2										3.5	0.0	3.5
<b>Corporate Bond Fund- JPM</b>	<b>Barclays Capital Global Aggregate - Ex Treasury, Ex Government Related 100% Hedged to GBP</b>	<b>Mar-03</b>	<b>151.1</b>	<b>5.3</b>	<b>3.7</b>	<b>3.4</b>	<b>0.3</b>	<b>3.7</b>	<b>3.4</b>	<b>0.3</b>	<b>8.2</b>	<b>7.6</b>	<b>0.6</b>	<b>3.5</b>	<b>2.8</b>	<b>0.6</b>	<b>3.9</b>	<b>3.5</b>	<b>0.4</b>	<b>6.1</b>	<b>5.6</b>	<b>0.6</b>	<b>5.2</b>	<b>5.3</b>	<b>-0.1</b>
<b>EQT Mid-Market Credit II</b>	<b>Absolute Return + 6.5%</b>	<b>May-18</b>	<b>12.9</b>	<b>0.4</b>	<b>-0.6</b>	<b>1.6</b>	<b>-2.2</b>	<b>-0.6</b>	<b>1.6</b>	<b>-2.2</b>	<b>1.3</b>	<b>6.5</b>	<b>-5.2</b>										<b>7.0</b>	<b>6.9</b>	<b>0.2</b>
<b>Total Property Fund</b>	<b>Client Specific Weighted Index</b>	<b>Mar-16</b>	<b>177.2</b>	<b>6.2</b>	<b>2.4</b>	<b>1.7</b>	<b>0.7</b>	<b>2.4</b>	<b>1.7</b>	<b>0.7</b>	<b>4.7</b>	<b>7.0</b>	<b>-2.4</b>	<b>7.7</b>	<b>7.1</b>	<b>0.7</b>							<b>8.5</b>	<b>7.1</b>	<b>1.4</b>
<i>Total UK Property Fund</i>	Absolute Return +9%	Jul-18	67.3	2.3	1.0	2.2	-1.2	1.0	2.2	-1.2													5.7	6.7	-1.0
UK Property Fund - Invesco	Absolute Return +9%	Oct-18	40.1	1.4	-3.6	2.2	-5.8	-3.6	2.2	-5.8													-3.6	6.7	-10.3
UK Property Fund - VENN	Absolute Return +9%	Jul-15	27.1	0.9	1.3	2.2	-0.9	1.3	2.2	-0.9	6.4	9.0	-2.7	11.9	9.0	2.9							10.5	9.2	1.4
US Property Fund- Walton Street GBP	Absolute Return + 6.5%	Feb-16	17.3	0.6	-0.4	1.6	-2.0	-0.4	1.6	-2.0	7.5	6.5	1.0	7.3	6.5	0.8							12.3	6.2	6.1
US Property Fund- Walton Street USD	N/A	Feb-16	N/A	N/A	2.0	0.0	2.0	2.0	0.0	2.0	6.2	0.0	6.2	6.6	0.0	6.6							8.7	0.0	8.7
US Property Fund- Walton Street II GBP	Absolute Return + 7.0%	Jun-19	1.6	0.1																			0.0	0.0	0.0
Euro Property Fund- Invesco	Absolute Return + 6.5%	Feb-16	71.3	2.5	3.8	1.6	2.2	3.8	1.6	2.2	3.8	6.5	-2.7	6.6	6.5	0.1							8.2	6.3	1.9
Property Fund- AEW	Absolute Return + 6.5%	Oct-17	19.8	0.7	2.3	1.6	0.7	2.3	1.6	0.7	4.8	6.5	-1.7										5.7	6.5	-0.8
<b>Total Infrastructure Fund</b>	<b>Client Specific Weighted Index</b>	<b>Mar-16</b>	<b>198.6</b>	<b>6.9</b>	<b>2.2</b>	<b>2.2</b>	<b>0.0</b>	<b>2.2</b>	<b>2.2</b>	<b>0.0</b>	<b>3.8</b>	<b>8.7</b>	<b>-4.9</b>	<b>7.2</b>	<b>8.2</b>	<b>-1.0</b>							<b>6.9</b>	<b>8.2</b>	<b>-1.3</b>
UK Infrastructure Fund - Green	Absolute Return +7.6%	Apr-15	50.2	1.7	3.8	1.8	1.9	3.8	1.8	1.9	9.4	7.6	1.8	8.1	7.6	0.5							6.5	7.6	-1.1
UK Infrastructure Core Fund - Hermes	Absolute Return +8.4%	May-15	47.9	1.7	1.4	2.0	-0.6	1.4	2.0	-0.6	-0.7	8.4	-9.1	6.3	8.4	-2.1							6.8	8.4	-1.6
UK Infrastructure Fund - Hermes II	Absolute Return +8.5%	Jun-18	27.5	1.0	0.2	2.1	-1.9	0.2	2.1	-1.9	-6.5	8.5	-15.0										-8.5	8.8	-17.3
Infrastructure Core Fund - Stonepeak	Absolute Return +12%	Jan-18	10.9	0.4	0.4	2.9	-2.5	0.4	2.9	-2.5	22.6	12.0	10.6										1.4	12.0	-10.7
First State Fund	Absolute Return +9%	Jun-18	62.1	2.2	2.1	2.2	-0.1	2.1	2.2	-0.1	6.5	9.0	-2.5										7.7	9.3	-1.6
<b>Worcestershire CC Total Fund ex Overlay</b>		<b>Mar-87</b>	<b>2,870.4</b>	<b>100.0</b>	<b>4.5</b>	<b>4.5</b>	<b>-0.1</b>	<b>4.5</b>	<b>4.5</b>	<b>-0.1</b>	<b>5.9</b>	<b>6.3</b>	<b>-0.5</b>	<b>10.8</b>	<b>10.6</b>	<b>0.3</b>	<b>9.5</b>	<b>9.3</b>	<b>0.2</b>	<b>10.9</b>	<b>11.0</b>	<b>-0.1</b>	<b>8.1</b>	<b>8.6</b>	<b>-0.5</b>
<b>Worcestershire CC Total Fund</b>		<b>Mar-87</b>	<b>2,868.8</b>	<b>100.0</b>	<b>4.0</b>	<b>4.5</b>	<b>-0.6</b>	<b>4.0</b>	<b>4.5</b>	<b>-0.6</b>	<b>5.5</b>	<b>6.3</b>	<b>-0.8</b>	<b>10.7</b>	<b>10.6</b>	<b>0.2</b>	<b>9.5</b>	<b>9.3</b>	<b>0.2</b>	<b>10.9</b>	<b>11.0</b>	<b>-0.1</b>	<b>8.1</b>	<b>8.6</b>	<b>-0.5</b>

PF = Portfolio Return BM = Benchmark Return ER = Excess Return

<b>Total Fund Benchmark</b>	<p>CLIENT SPECIFIC BM AS AT JUNE 2017:</p> <p>25.5% FTSE All Share</p> <p>9.5% FTSE Developed Europe Ex UK</p> <p>12% FTSE All World Emerging Markets</p> <p>10% 1/3 FTSE RAFI DEV 1000 QSR Total Return NET &amp; 1/3 MSCI World Minimum Vol Total Return NET &amp; 1/3 MSCI World Quality Total Return NET</p> <p>11% FTSE All World North America</p> <p>12% FTSE Developed Asia Pacific</p> <p>Corp Bonds: 10% Barclays Global Agg Corporate Bond HEDGED into GBP</p> <p>Infrastructure: Weighted Client Specific Index</p> <p>Property: Weighted Client Specific Index</p>	<p><b>Notes:</b></p> <p>Q2 2019: Invested into the Walton Street US Property Fund II on 28/06/2019 and the inclusion of Equity Protection - River &amp; Mercantile ex Overlay which follows in the Total Equity and Total Fund</p> <p>For the Total Fund benchmark the weightings for the Infrastructure and Property will match the actual drawdowns/market values of the funds, then the remainder will be put into UK Passive Equities .</p> <p>Fees/fund charges have been taken into account for the Total Fund return. Fees were found within the data for Hermes in July and L&amp;G for August. The fees applied may not be final or all of the fees for Worcestershire CC Total Fund Portfolio.</p> <p>Total Infrastructure and Total Property are measured against a weighted index of the funds underlying benchmarks.</p> <p>Historic data up to and including 31.03.2016 has been provided by the WM Co and L&amp;G.</p>
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Total Fund Reconciliation Analysis  
Worcestershire County Council Pension Fund  
for Quarter Ended 30th June 2019



Market Value: £2.9bn

	31st Mar 2019		Net Investment (£000s)	Total Income (£000s)	Total Gain/Loss (£000s)	30th Jun 2019	
	Market Val (£000s)	Exposure (%)				Market Val (£000s)	Exposure (%)
<b>Total Equity Fund</b>	<b>2,263,426</b>	<b>83.1</b>	<b>-30,000</b>	<b>0</b>	<b>95,475</b>	<b>2,328,901</b>	<b>81.2</b>
<b>Total Equity Fund ex Overlay</b>	<b>2,252,197</b>	<b>82.7</b>	<b>-30,000</b>	<b>0</b>	<b>108,358</b>	<b>2,330,555</b>	<b>81.2</b>
<i>Total Active Equity Fund</i>	743,503	27.3	0	0	33,821	777,324	27.1
Far East Developed Fund - Nomura	387,020	14.2	0	0	16,045	403,065	14.1
Emerging Markets Fund - JPM	165,748	6.1	0	0	7,354	173,103	6.0
Emerging Markets Fund- Schroder	190,735	7.0	0	0	10,421	201,156	7.0
<i>Total Passive Equity Fund</i>	859,346	31.5	-20,171	0	48,008	887,184	30.9
UK Equity Fund - L&G	375,517	13.8	-8,741	0	12,050	378,827	13.2
North American Equity Fund- L&G	307,728	11.3	-7,267	0	20,877	321,338	11.2
Europe ex UK Equity Fund- L&G	176,101	6.5	-4,163	0	15,081	187,019	6.5
<i>Total Alternatives Fund</i>	418,079	15.3	-9,829	0	26,198	434,448	15.1
FTSE RAFI DEV Fund - L&G	159,745	5.9	-3,743	0	9,003	165,005	5.8
MSCI World Min Vol TR Fund - L&G	124,479	4.6	-2,944	0	8,527	130,062	4.5
MSCI World Quality TR Fund - L&G	133,855	4.9	-3,142	0	8,668	139,381	4.9
<i>Equity Protection - River &amp; Mercantile</i>	242,497	8.9	0	0	-12,552	229,945	<b>8.0</b>
<i>Equity Protection - River &amp; Mercantile ex Overlay</i>	231,268	8.5	0	0	331	231,599	<b>8.1</b>
<b>Corporate Bond Fund- JPM</b>	<b>145,774</b>	<b>5.4</b>	<b>0</b>	<b>0</b>	<b>5,345</b>	<b>151,119</b>	<b>5.3</b>
<b>EQT Mid-Market Credit II</b>	<b>13,991</b>	<b>0.5</b>	<b>0</b>	<b>0</b>	<b>-1,063</b>	<b>12,928</b>	<b>0.5</b>
<b>Total Property Fund</b>	<b>139,595</b>	<b>5.1</b>	<b>35,194</b>	<b>911</b>	<b>2,427</b>	<b>177,217</b>	<b>6.2</b>
<i>Total UK Property Fund</i>	31,020	1.1	35,920	0	309	67,250	2.3
UK Property Fund - Invesco	2,003	0.1	38,203	0	-72	40,134	1.4
UK Property Fund - VENN	29,017	1.1	-2,283	0	382	27,116	0.9
US Property Fund- Walton Street	19,423	0.7	-2,036	0	-80	17,307	0.6
US Property Fund- Walton Street II	0	0.0	1,571	0	0	1,571	0.1
Euro Property Fund- Invesco	69,257	2.5	0	649	2,004	71,261	2.5
Property Fund- AEW	19,895	0.7	-262	262	194	19,827	0.7
<b>Total Infrastructure Fund</b>	<b>161,876</b>	<b>5.9</b>	<b>33,142</b>	<b>0</b>	<b>3,602</b>	<b>198,619</b>	<b>6.9</b>
UK Infrastructure Fund - Green	50,298	1.8	-1,989	0	1,889	50,198	1.7
UK Infrastructure Core Fund - Hermes	40,950	1.5	6,383	0	575	47,908	1.7
UK Infrastructure Fund - Hermes II	7,876	0.3	19,650	0	12	27,538	1.0
Infrastructure Core Fund - Stonepeak	10,814	0.4	0	0	45	10,860	0.4
First State Fund	51,937	1.9	9,098	0	1,081	62,116	2.2
<b>Cash Fund</b>	<b>0</b>	<b>0.0</b>	<b>-37,356</b>	<b>0</b>	<b>37,356</b>	<b>0</b>	<b>0.0</b>
<b>Worcestershire CC Total Fund ex Overlay</b>	<b>2,713,434</b>	<b>99.6</b>	<b>980</b>	<b>911</b>	<b>156,025</b>	<b>2,870,438</b>	<b>100.1</b>
<b>Worcestershire CC Total Fund</b>	<b>2,724,663</b>	<b>100.0</b>	<b>980</b>	<b>911</b>	<b>143,142</b>	<b>2,868,784</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