

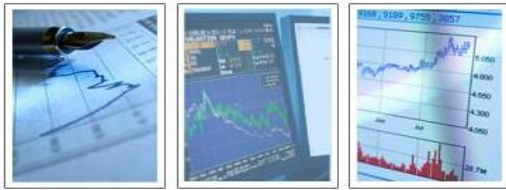
Quarterly Risk and Return Analysis
Total Fund

Worcestershire County Council Pension Fund



Specialists in Investment Risk and Return Evaluation

Period ending 31st March 2019

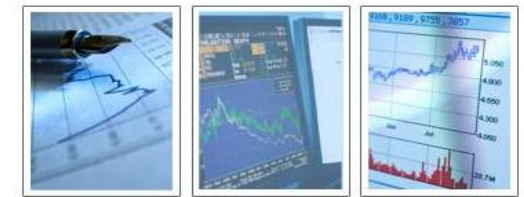


Specialists in Investment Risk and Return Evaluation

Contents

Worcestershire County Council Pension Fund Total Fund

• Portfolio Evaluation Market Commentary	01
• Worcestershire County Council Pension Fund Commentary	03
• Total Fund Overview	05
• Attribution To Total Fund Excess Return Analysis - Quarter End	06
• Attribution to Total Fund Excess Return Analysis – Year End	07
• Attribution to Total Fund Excess Return Analysis – 3 Year End	08
• Manager Performance Summary	09
• Reconciliation Analysis	10



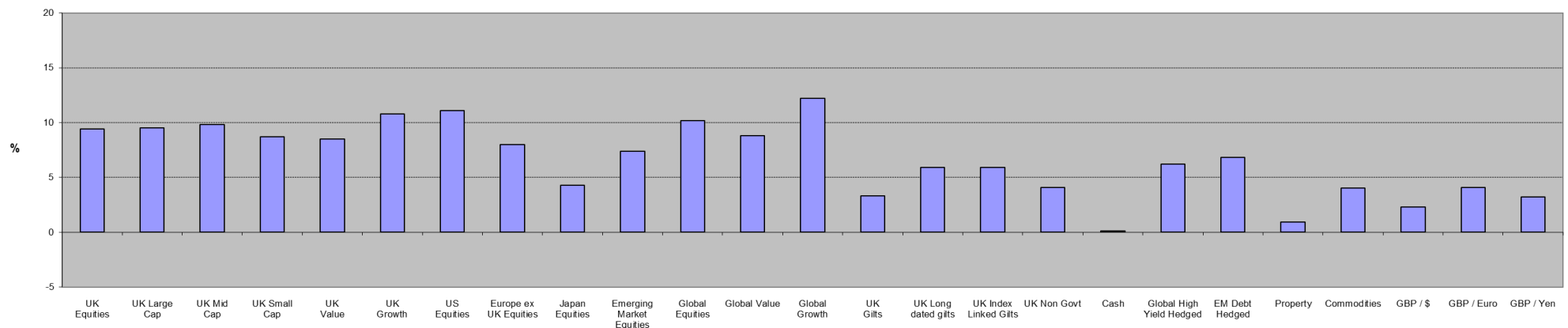
Portfolio Evaluation Ltd Market Commentary Q1 2019 (Sterling)

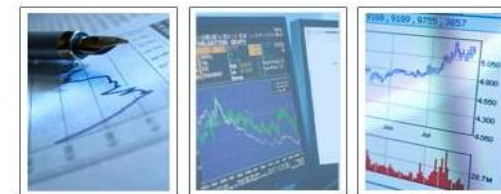
After a disappointing quarter and year ended December 2018 most markets bounced back in the quarter ended March 31 2019 to an extent that left the losses posted in 2018 largely recovered.

The last quarter of 2018 saw markets fall due largely to increase uncertainty caused by a number of factors including central banks discussing raising rates and / or easing quantitative easing, slower global economic growth (of particular note was China) which some saw as being a precursor to a potential recession, trade war issues (US and China), increased market volatility, and some geopolitical concerns. The first quarter of 2019 saw many of these concerns reduce as the US authorities reduced the likelihood of short term interest rate hikes, the Chinese have undertaken measures to reduce the decline in economic growth due to monetary tightening, there have been positive steps gained in global trade discussions and inflation seems muted in developed markets. The response to this has been a rise global markets.

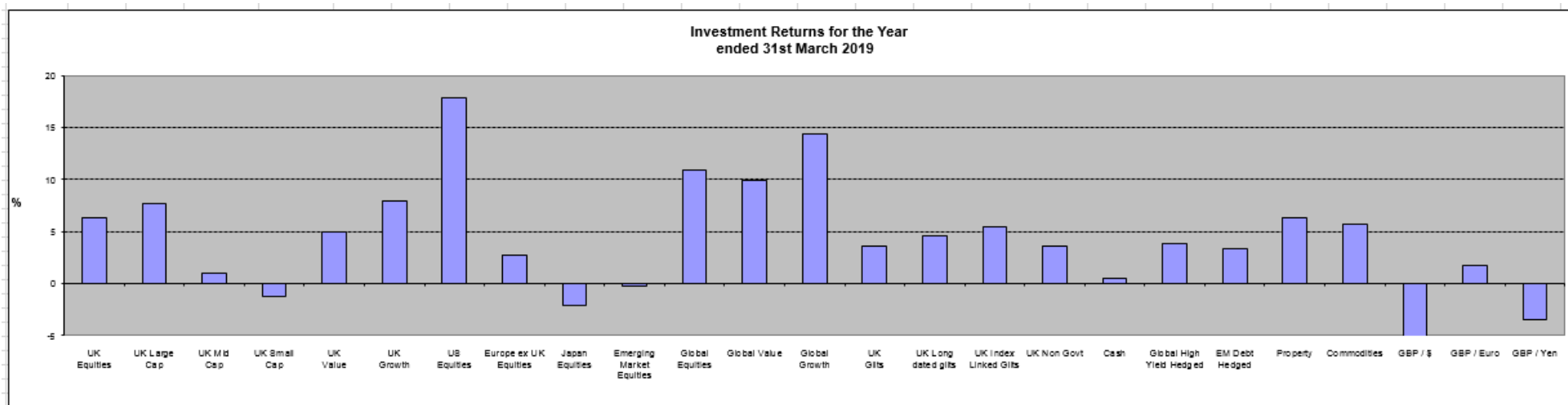
Looking forwards market commentators continue to expect lower global economic growth and corporate earnings growth with the Eurozone looking particularly vulnerable. Many investors seem to expect growth to continue into 2020 and potentially to 2021 as the outlook for a recession gets moved back due partly positive central bank actions and benign inflation. However despite this quarter many market commentators are discussing more defensive strategies going forwards, and many are also viewing emerging markets positively.

Quarterly Investment Returns for the period ended 31st March 2019





Within the UK the obsession and lack of resolution with Brexit has continued through the 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. The more positive global outlook this quarter saw growth outperform value however the market return was very sector specific led by Technology, Basic Materials and Consumer Goods (except for Autos). Given market events over the last 12 months UK equities have shown mixed results over time, however Technology Healthcare, Basic Materials and Oil & Gas sectors have been strong performers whilst Financials, Industrials, Consumer Goods and Consumer Services have dragged.



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) or visit our website at 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 31st March 2019

QUARTERLY SUMMARY: **Worcestershire County Council Pension Fund Return: 4.8% Benchmark Return: 7.5% Excess Return: -2.7%**

- The Fund achieved a total return of 4.8%. Equities were the highest returning asset class generating a return of 5.5%, the Corporate Bond Fund followed generating a return of 4.8%. Infrastructure assets also had a positive return of 0.6% whilst Property assets had a negative return of -1.1%. Within equities, passive equities were the highest returning assets at 9.8% followed by the alternatives at 9.5% and the active equity pool generating 6.5%. The equity protection strategy was a negative return generator at -14.3% which is reflective of market movements during quarter 1 of 2019
- The Fund underperformed its benchmark by -2.7%. This was dominated by the equity protection portfolio which is managed by River and Mercantile; this accounted for 2.4% of the attribution to excess return 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 significant underweight position held in the (relatively) high returning UK equity assets. Stock selection within the active equity EMM portfolios and Nomura all dragged on the Total Equity and Total Fund excess returns. The JPM Corporate Bond Fund outperformed, whilst property and infrastructure underperformed their respective benchmarks. Within Infrastructure, the Stonepeak Infrastructure Core Fund generated the highest outperformance with a positive excess return of 18% compared to its respective benchmark
- All index funds tracked their benchmarks as expected
- The latest valuation data supplied by VENN, Walton Street, Green, EQT and Stonepeak was for period ending December 2018. While for the Invesco Real Estate UK Residential Fund we have been supplied only an inception contract note without any December 2018 or Q1 2019 valuation data.

YEAR SUMMARY: **Worcestershire County Council Pension Fund Return: 4.4% Benchmark Return: 6.7% Excess Return: -2.3%**

- Over the year the Fund has generated a return of 4.4% underperforming its benchmark by -2.3%. The EQT Mid-Market Credit II and Property had the highest positive returns generating 8.4% and 5.2% respectively. Both Equities and the Corporate Bond Fund also generated positive returns of 4.6% and 3.3% respectively. Infrastructure was the lowest returning asset class generating 2.5% over the year. Within the equity pool the alternatives were the highest return generators at 13.2%, followed by the passive pool generating 9.4%. The active pool generated a negative return of -1.5%; only the Emerging Markets fund via Schroder generated a positive return over this period
- Stock selection was the dominant contributor of the underperformance over the year due to the negative returning equity protection strategy coupled with the underperformance generated via the active equity pool; note that both Nomura and JPM generated negative returns versus their positive returning benchmarks. Infrastructure assets also contributed to the underperformance; all underlying UK Infrastructure Funds have all underperformed their respective benchmarks, while Stonepeak and First State have outperformed. Property assets were also a source of underperformance albeit to a much lower degree; only the US Walton Street Fund outperformed its respective benchmark
- 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. Being overweight the high returning Alternatives pool coupled with the underweight exposure to the Corporate Bond portfolio both generated positive excess via asset allocation
- 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: 11.7% Benchmark Return: 11.2% Excess Return: 0.5%

- Over the three year period, the Fund has generated a return of 11.7% outperforming the benchmark by 0.5%. Equities generated the highest asset class return at 12.8%. Property and Infrastructure followed with positive returns of 8.3% and 6.7% respectively, with the JPM Corporate Bond Fund generating the lowest return of the Total Fund with +3.3%. It should be noted that all primary asset classes and fixed income assets have successfully outperformed their respective benchmarks
- Stock selection within the active equity assets has proved particularly successful; the passive equity pool 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. Both Alternative and Active Equity pools were also positive contributors to the asset allocation positive excess, however, the overweight off benchmark exposure to the equity protection portfolio has reduced the positive 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 (+0.48% v -0.38%) whilst in positive markets the level of excess generated while outperforming is less (+0.25% v -0.45%).
- 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: £2.7bn

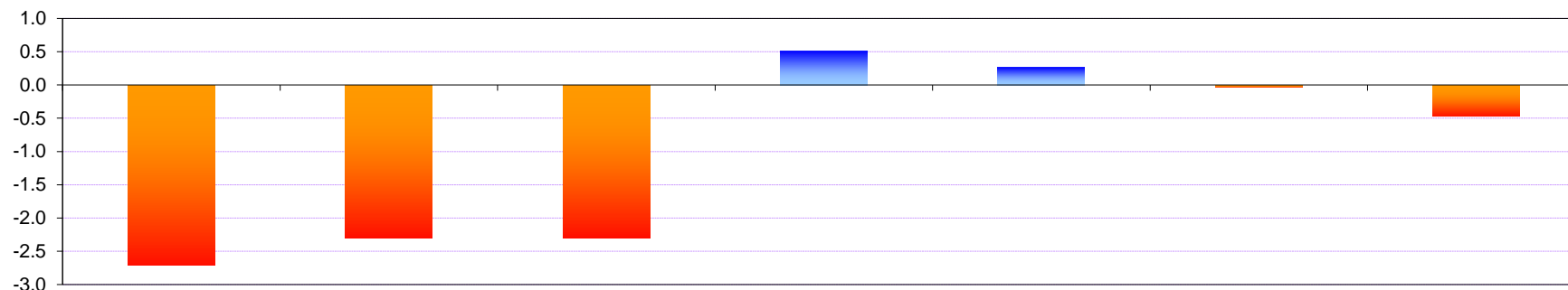
Total Fund Overview

Worcestershire CC Pension Fund

Report Period: Quarter Ending March 2019



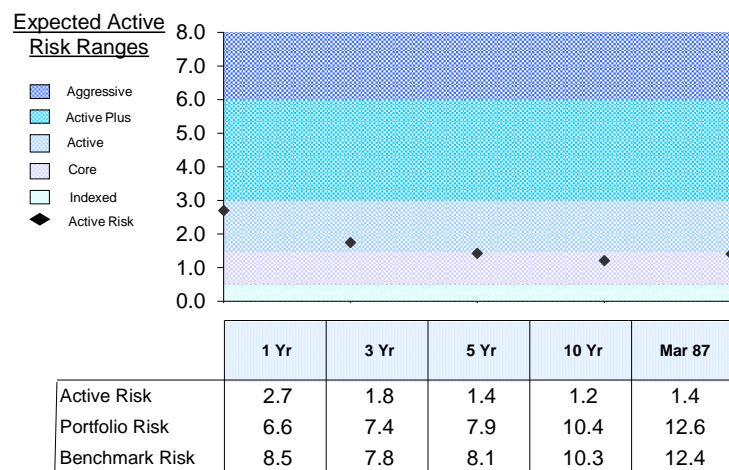
Excess Return Analysis (%)



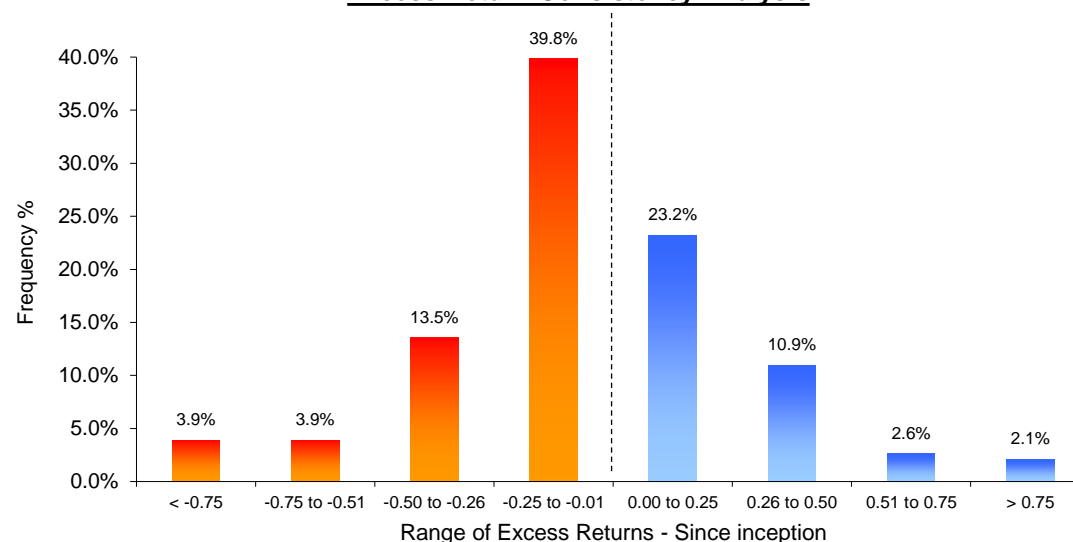
	QTR	YTD	1 Yr	3 Yr	5 Yr	10Yr	Since Mar 87 (p.a.)
Excess Return	-2.7	-2.3	-2.3	0.5	0.3	0.0	-0.5
Portfolio Return	4.8	4.4	4.4	11.7	9.2	11.4	8.0
Benchmark Return	7.5	6.7	6.7	11.2	8.9	11.4	8.5

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

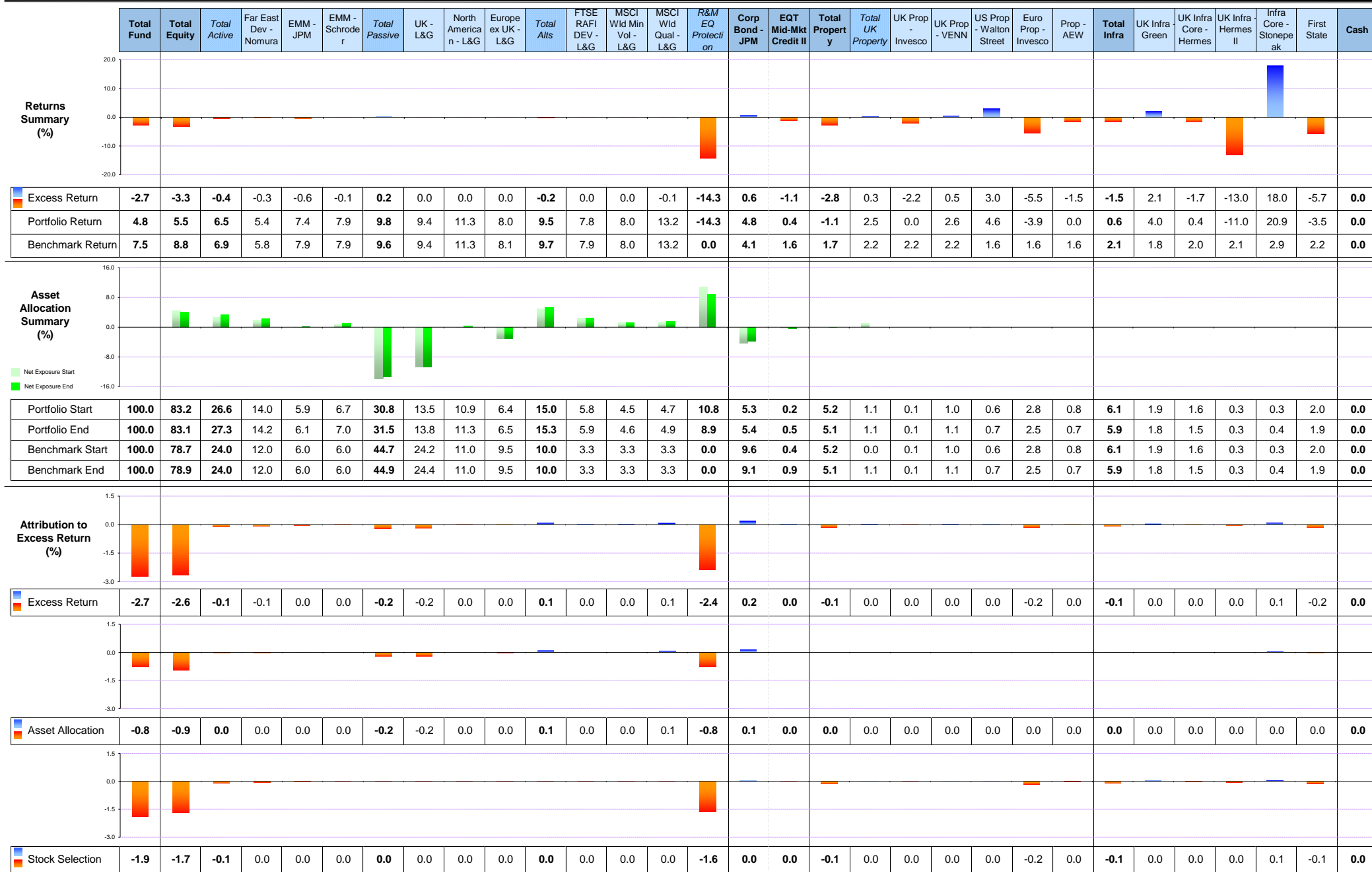


Ex-Post Active Risk measures the volatility of the actual excess returns achieved by the Portfolio/Fund.

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 March 2019

Market Value: £2.7bn



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 over/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 over/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 March 2019**

Market Value: £2.7bn

	Total Fund	Total Equity	Total Active	Far East Dev - Nomura	EMM - JPM	EMM - Schroder	Total Passive	UK - L&G	North America n - L&G	Europe ex UK - L&G	Total Alts	FTSE RAFI DEV - L&G	MSCI Wld Min Vol - L&G	MSCI Wld Qual - L&G	R&M EQ Protection	Corp Bond - JPM	EQT Mid-Mkt Credit II	Total Property	Total UK Property	UK Prop - Invesco	UK Prop - VENN	US Prop - Walton Street	Euro Prop - Invesco	Prop - AEW	Total Infra	UK Infra Green	UK Infra Core - Hermes	UK Infra Hermes II	Infra Core - Stonepeak	First State	Cash
Returns Summary (%)																															
Excess Return	-2.3	-2.5	-3.2	-3.1	-6.6	-0.5	1.1	0.1	0.1	-0.2	-0.6	0.1	0.0	-0.1	-5.5	0.1	2.5	-1.8	0.2	0.0	-1.9	10.2	-4.5	-5.9	-5.9	-1.0	-9.3	-16.0	5.6	4.6	0.0
Portfolio Return	4.4	4.6	-1.5	-1.7	-4.7	1.4	9.4	6.5	17.6	2.7	13.2	7.7	15.5	18.1	-5.5	3.3	8.4	5.2	4.6	0.0	7.1	16.7	2.0	2.5	2.5	6.5	-0.9	-9.0	17.6	9.8	0.0
Benchmark Return	6.7	7.0	1.7	1.4	1.9	1.9	8.3	6.4	17.5	2.9	13.7	7.7	15.5	18.1	0.0	3.2	5.9	7.0	4.4	0.0	9.0	6.5	6.5	8.4	8.4	7.6	8.4	7.0	12.0	5.2	0.0
Asset Allocation Summary (%)																															
Portfolio Start	100.0	86.5	29.4	15.8	6.5	7.0	33.0	14.9	11.0	7.2	14.5	5.8	4.2	4.4	9.6	5.3	0.0	4.7	0.8	0.0	0.0	0.5	2.6	0.7	3.6	1.9	1.7	0.0	0.1	0.0	0.0
Portfolio End	100.0	83.1	27.3	14.2	6.1	7.0	31.5	13.8	11.3	6.5	15.3	5.9	4.6	4.9	8.9	5.4	0.5	5.1	1.1	0.1	1.1	0.7	2.5	0.7	5.9	1.8	1.5	0.3	0.4	1.9	0.0
Benchmark Start	100.0	82.5	24.0	12.0	6.0	6.0	48.5	28.0	11.0	9.5	10.0	3.3	3.3	3.3	0.0	10.0	0.0	3.9	0.8	0.0	0.0	0.5	2.6	0.7	3.5	1.9	1.7	0.0	0.1	0.0	0.0
Benchmark End	100.0	78.9	24.0	12.0	6.0	6.0	44.9	24.4	11.0	9.5	10.0	3.3	3.3	3.3	0.0	9.1	0.9	5.1	1.1	0.1	1.1	0.7	2.5	0.7	5.9	1.8	1.5	0.3	0.4	1.9	0.0
Attribution to Excess Return (%)																															
Excess Return	-2.3	-2.1	-1.2	-0.7	-0.5	-0.1	0.1	0.0	0.0	0.1	0.2	0.0	0.1	0.1	-1.2	0.2	0.0	-0.1	0.0	0.0	0.0	0.1	-0.1	0.0	-0.3	0.0	-0.1	0.0	0.1	-0.1	0.0
Asset Allocation	-0.5	-0.7	-0.3	-0.2	0.0	-0.1	0.1	0.0	0.0	0.1	0.2	0.0	0.1	0.1	-0.7	0.2	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
Stock Selection	-1.8	-1.4	-1.0	-0.5	-0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	0.0	0.0	-0.1	0.0	0.0	0.0	0.1	-0.1	0.0	-0.3	0.0	-0.1	0.0	0.0	-0.1	0.0

Attribution to Total Fund Excess Return Analysis - Unannualised
Worcestershire County Council Pension Fund
for 3 Year Ended 31st March 2019

Market Value: £2.7bn

	Total Fund	Total Equity	Total Active	Far East Dev - Nomura	EMM - JPM	EMM - Schrod er	Total Passive	UK - L&G	North America n - L&G	Europe ex UK - L&G	Other Overse as (Capital	Total Alts	FTSE RAFI DEV - L&G	MSCI Wld Min Vol - L&G	MSCI Wld Qual - L&G	R&M EQ Protecti on	Corp Bond - JPM	EQT Mid- Mkt Credit	Total Propert y	Total UK Propert y	UK Prop - Invesco	UK Prop - VENN	US Prop - Walton Street	Euro Prop - Invesco	Prop - AEW	Total Infra	UK Infra - Green	UK Infra Core - Hermes	UK Infra - Hermes II	Infra Core - Stonep eak	First State	Cash
Returns Summary (%)																																
Excess Return	1.9	0.5	3.0	2.4	0.3	8.7	1.6	0.9	0.0	-0.7	-10.5	-1.7	-0.4	0.2	-0.6	5.1	1.5	3.9	4.5	-2.0	-6.7	11.6	10.7	1.5	-2.2	-4.9	-3.3	-6.6	-16.0	-13.6	-1.5	0.0
Portfolio Return	39.6	43.5	50.2	46.1	50.5	58.9	40.8	32.2	60.7	36.8	-0.1	47.5	46.3	41.8	58.5	5.1	10.1	8.4	27.2	4.6	0.0	41.1	31.5	22.3	7.7	21.5	21.3	20.8	-8.9	1.6	5.9	0.0
Benchmark Return	37.7	43.0	47.2	43.7	50.2	50.2	39.3	31.3	60.7	37.6	10.3	49.2	46.7	41.6	59.1	0.0	8.6	4.6	22.7	6.7	6.7	29.5	20.8	20.8	9.9	26.4	24.6	27.4	7.0	15.2	7.4	0.0
Asset Allocation Summary (%)																																
Portfolio Start	100.0	84.7	27.0	15.0	5.7	6.2	36.1	28.3	1.7	6.0	9.3	12.4	3.7	4.5	4.3	0.0	6.9	0.0	4.6	0.0	0.0	1.2	0.2	3.2	0.0	3.8	1.8	2.0	0.0	0.0	0.0	0.0
Portfolio End	100.0	83.1	27.3	14.2	6.1	7.0	31.5	13.8	11.3	6.5	0.0	15.3	5.9	4.6	4.9	8.9	5.4	0.5	5.1	1.1	0.1	1.1	0.7	2.5	0.7	5.9	1.8	1.5	0.3	0.4	1.9	0.0
Benchmark Start	100.0	81.7	24.0	12.0	6.0	6.0	47.7	27.2	11.0	9.5	0.0	10.0	3.3	3.3	3.3	0.0	10.0	0.0	4.7	0.0	0.0	1.4	0.2	3.1	0.0	3.6	1.7	1.9	0.0	0.0	0.0	0.0
Benchmark End	100.0	78.9	24.0	12.0	6.0	6.0	44.9	24.4	11.0	9.5	0.0	10.0	3.3	3.3	3.3	0.0	9.1	0.9	5.1	1.1	0.1	1.1	0.7	2.5	0.7	5.9	1.8	1.5	0.3	0.4	1.9	0.0
Attribution to Excess Return (%)																																
Excess Return	1.9	0.5	0.9	0.5	-0.1	0.4	0.1	0.1	0.2	-0.2	-0.1	0.2	0.0	0.0	0.2	-0.6	1.3	0.0	0.3	0.2	0.1	0.1	0.0	0.1	0.0	-0.3	-0.1	-0.1	-0.1	0.1	-0.1	0.0
Asset Allocation	0.8	-0.5	0.0	0.2	-0.1	0.0	-0.1	-0.1	0.2	-0.2	0.1	0.3	0.0	0.0	0.2	-0.8	1.2	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
Stock Selection	1.1	1.0	0.8	0.4	0.0	0.5	0.2	0.2	0.0	0.0	-0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.3	0.2	0.1	0.1	0.0	0.1	0.0	-0.3	-0.1	-0.1	-0.1	0.1	-0.1	0.0

Manager Return Analysis
Worcestershire County Council Pension Fund
for Period Ended 31st March 2019



Market Value: £2.7bn

	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
Total Equity Fund	Client Specific Weighted Index	Mar-16	2,263.4	83.1	5.5	8.8	-3.3	4.6	7.0	-2.5	4.6	7.0	-2.5	12.8	12.7	0.1				12.8	12.7	0.1			
<i>Total Active Equity Fund</i>	Client Specific Weighted Index	Mar-16	743.5	27.3	6.5	6.9	-0.4	-1.5	1.7	-3.2	-1.5	1.7	-3.2	14.5	13.8	0.8				14.5	13.8	0.8			
Far East Developed Fund - Nomura	FTSE Developed Asia Pacific Index	Feb-03	387.0	14.2	5.4	5.8	-0.3	-1.7	1.4	-3.1	-1.7	1.4	-3.1	13.5	12.8	0.6	11.2	10.5	0.7	11.0	10.9	0.1	10.2	10.2	0.0
Emerging Markets Fund - JPM	FTSE All World Emerging Market Index	Dec-11	165.7	6.1	7.4	7.9	-0.6	-4.7	1.9	-6.6	-4.7	1.9	-6.6	14.6	14.5	0.1	9.5	9.8	-0.2				7.4	7.4	0.0
Emerging Markets Fund- Schroder	FTSE All World Emerging Market Index	Oct-11	190.7	7.0	7.9	7.9	-0.1	1.4	1.9	-0.5	1.4	1.9	-0.5	16.7	14.5	2.2	11.3	9.8	1.5				8.8	6.7	2.0
<i>Total Passive Equity Fund</i>	Client Specific Weighted Index	Mar-16	859.3	31.5	9.8	9.6	0.2	9.4	8.3	1.1	9.4	8.3	1.1	12.1	11.7	0.4							12.1	11.7	0.4
UK Equity Fund - L&G	FTSE All Share Index	Dec-15	375.5	13.8	9.4	9.4	0.0	6.5	6.4	0.1	6.5	6.4	0.1	9.7	9.5	0.2							9.9	9.6	0.2
North American Equity Fund- L&G	FTSE All World North American Index	Dec-15	307.7	11.3	11.3	11.3	0.0	17.6	17.5	0.1	17.6	17.5	0.1	17.1	17.1	0.0							17.7	17.7	0.0
Europe ex UK Equity Fund- L&G	FTSE Developed Europe Ex. UK Index	Dec-15	176.1	6.5	8.0	8.1	0.0	2.7	2.9	-0.2	2.7	2.9	-0.2	11.0	11.2	-0.2							11.1	11.3	-0.2
<i>Total Alternatives Fund</i>	Client Specific Weighted Index	Mar-16	418.1	15.3	9.5	9.7	-0.2	13.2	13.7	-0.6	13.2	13.7	-0.6	13.8	14.3	-0.4							13.9	14.3	-0.4
FTSE RAFI DEV Fund - L&G	FTSE RAFI Developed 1000 QSR Net Index	Dec-15	159.7	5.9	7.8	7.9	0.0	7.7	7.7	0.1	7.7	7.7	0.1	13.5	13.6	-0.1							14.2	14.3	-0.1
MSCI World Min Vol TR Fund - L&G	MSCI World Minimum Volatility Net Index	Dec-15	124.5	4.6	8.0	8.0	0.0	15.5	15.5	0.0	15.5	15.5	0.0	12.3	12.3	0.0							15.1	15.1	0.0
MSCI World Quality TR Fund - L&G	MSCI World Quality Total Return Net Index	Dec-15	133.9	4.9	13.2	13.2	-0.1	18.1	18.1	-0.1	18.1	18.1	-0.1	16.6	16.7	-0.1							17.3	17.4	-0.1
<i>Equity Protection - River & Mercantile</i>		Jan-18	242.5	8.9	-14.3	0.0	-14.3	-5.5	0.0	-5.5	-5.5	0.0	-5.5										4.1	0.0	4.1
Corporate Bond Fund- JPM	Barclays Capital Global Aggregate - Ex Treasury, Ex Government Related 100% Hedged to GBP	Mar-03	145.8	5.4	4.8	4.1	0.6	3.3	3.2	0.1	3.3	3.2	0.1	3.3	2.8	0.5	3.7	3.4	0.3	5.6	5.2	0.4	5.0	5.2	-0.2
EQT Mid-Market Credit II	Absolute Return + 6.5%	May-18	14.0	0.5	0.4	1.6	-1.1																8.4	5.9	2.5
Total Property Fund	Client Specific Weighted Index	Mar-16	139.6	5.1	-1.1	1.7	-2.8	5.2	7.0	-1.8	5.2	7.0	-1.8	8.3	7.1	1.3							8.4	7.1	1.3
Total UK Property Fund	Absolute Return +9%	Jul-18	31.0	1.1	2.5	2.2	0.3																4.6	4.4	0.2
UK Property Fund - Invesco	Absolute Return +9%	Oct-18	2.0	0.1	0.0	2.2	-2.2																0.0	4.4	-4.4
UK Property Fund - VENN	Absolute Return +9%	Jul-15	29.0	1.1	2.6	2.2	0.5	7.1	9.0	-1.9	7.1	9.0	-1.9	12.2	9.0	3.2							10.9	9.2	1.7
US Property Fund- Walton Street GBP	Absolute Return + 6.5%	Feb-16	19.4	0.7	4.6	1.6	3.0	16.7	6.5	10.2	16.7	6.5	10.2	9.6	6.5	3.1							13.5	6.2	7.3
US Property Fund- Walton Street USD	N/A	Feb-16	24.7	N/A	2.2	0.0	2.2	6.1	0.0	6.1	6.1	0.0	6.1	5.5	0.0	5.5							8.7	0.0	8.7
Euro Property Fund- Invesco	Absolute Return + 6.5%	Feb-16	69.3	2.5	-3.9	1.6	-5.5	2.0	6.5	-4.5	2.0	6.5	-4.5	6.9	6.5	0.4							7.6	6.3	1.3
Property Fund- AEW	Absolute Return + 6.5%	Oct-17	19.9	0.7	0.0	1.6	-1.5	6.6	6.5	0.1	6.6	6.5	0.1										5.1	6.5	-1.4
Total Infrastructure Fund	Client Specific Weighted Index	Mar-16	161.9	5.9	0.6	2.1	-1.5	2.5	8.4	-5.9	2.5	8.4	-5.9	6.7	8.1	-1.4							6.7	8.1	-1.4
UK Infrastructure Fund - Green	Absolute Return +7.6%	Apr-15	50.3	1.8	4.0	1.8	2.1	6.5	7.6	-1.0	6.5	7.6	-1.0	6.6	7.6	-0.9							6.0	7.6	-1.6
UK Infrastructure Core Fund - Hermes	Absolute Return +8.4%	May-15	41.0	1.5	0.4	2.0	-1.7	-0.9	8.4	-9.3	-0.9	8.4	-9.3	6.5	8.4	-1.9							6.8	8.4	-1.6
UK Infrastructure Fund - Hermes II	Absolute Return +8.5%	Jun-18	7.9	0.3	-11.0	2.1	-13.0																-8.9	7.0	-16.0
Infrastructure Core Fund - Stonepeak	Absolute Return +12%	Jan-18	10.8	0.4	20.9	2.9	18.0	17.6	12.0	5.6	17.6	12.0	5.6										1.3	12.1	-10.7
First State Fund	Absolute Return +9%	Jun-18	51.9	1.9	-3.5	2.2	-5.7																5.9	7.4	-1.5
Worcestershire CC Total Fund		Mar-87	2,724.7	100.0	4.8	7.5	-2.7	4.4	6.7	-2.3	4.4	6.7	-2.3	11.7	11.2	0.5	9.2	8.9	0.3	11.4	11.4	0.0	8.0	8.5	-0.5

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

Total Fund Benchmark	CLIENT SPECIFIC BM AS AT JUNE 2017:	Notes:
	25.5% FTSE All Share 9.5% FTSE Developed Europe Ex UK 12% FTSE All World Emerging Markets 10% 1/3 FTSE RAFI DEV 1000 QSR Total Return NET & 1/3 MSCI World Minimum Vol Total Return NET & 1/3 MSCI World Quality Total Return NET 11% FTSE All World North America 12% FTSE Developed Asia Pacific Corp Bonds: 10% Barclays Global Agg Corporate Bond HEDGED into GBP Infrastructure: Weighted Client Specific Index Property: Weighted Client Specific Index	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 . 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&G for August. The fees applied may not be final or all of the fees for Worcestershire CC Total Fund Portfolio. Total Infrastructure and Total Property are measured against a weighted index of the funds underlying benchmarks. Historic data up to and including 31.03.2016 has been provided by the WM Co and L&G.

Total Fund Reconciliation Analysis
Worcestershire County Council Pension Fund
for Quarter Ended 31st March 2019



Market Value: £2.7bn

	31st Dec 2018		Net Investment (£000s)	Total Income (£000s)	Total Gain/Loss (£000s)	31st Mar 2019	
	Market Val (£000s)	Exposure (%)				Market Val (£000s)	Exposure (%)
Total Equity Fund	2,183,989	83.2	-40,000	0	119,437	2,263,426	83.1
<i>Total Active Equity Fund</i>	697,901	26.6	0	0	45,602	743,503	27.3
Far East Developed Fund - Nomura	366,664	14.0	0	0	20,355	387,020	14.2
Emerging Markets Fund - JPM	154,388	5.9	0	0	11,360	165,748	6.1
Emerging Markets Fund- Schroder	176,848	6.7	0	0	13,887	190,735	7.0
<i>Total Passive Equity Fund</i>	808,693	30.8	-26,914	0	77,567	859,346	31.5
UK Equity Fund - L&G	354,554	13.5	-11,789	0	32,752	375,517	13.8
North American Equity Fund- L&G	285,673	10.9	-9,512	0	31,567	307,728	11.3
Europe ex UK Equity Fund- L&G	168,466	6.4	-5,613	0	13,248	176,101	6.5
<i>Total Alternatives Fund</i>	394,299	15.0	-13,086	0	36,866	418,079	15.3
FTSE RAFI DEV Fund - L&G	153,029	5.8	-5,114	0	11,830	159,745	5.9
MSCI World Min Vol TR Fund - L&G	119,103	4.5	-3,928	0	9,304	124,479	4.6
MSCI World Quality TR Fund - L&G	122,166	4.7	-4,044	0	15,732	133,855	4.9
Equity Protection - River & Mercantile	283,096	10.8	0	0	-40,598	242,497	8.9
Corporate Bond Fund- JPM	139,150	5.3	0	0	6,624	145,774	5.4
EQT Mid-Market Credit II	5,620	0.2	0	0	8,371	13,991	0.5
Total Property Fund	136,263	5.2	4,729	0	-1,397	139,595	5.1
Total UK Property Fund	29,077	1.1	1,229	0	714	31,020	1.1
UK Property Fund - Invesco	2,003	0.1	0	0	0	2,003	0.1
UK Property Fund - VENN	27,074	1.0	1,229	0	714	29,017	1.1
US Property Fund- Walton Street	14,603	0.6	4,109	0	711	19,423	0.7
Euro Property Fund- Invesco	72,697	2.8	-608	0	-2,832	69,257	2.5
Property Fund- AEW	19,886	0.8	0	0	10	19,895	0.7
Total Infrastructure Fund	161,477	6.1	-601	0	1,000	161,876	5.9
UK Infrastructure Fund - Green	49,786	1.9	-1,456	0	1,968	50,298	1.8
UK Infrastructure Core Fund - Hermes	40,801	1.6	0	0	149	40,950	1.5
UK Infrastructure Fund - Hermes II	8,753	0.3	82	0	-959	7,876	0.3
First State Fund	53,829	2.0	0	0	-1,892	51,937	1.9
Infrastructure Core Fund - Stonepeak	8,307	0.3	773	0	1,734	10,814	0.4
Cash Fund	0	0.0	27,524	0	-27,524	0	0.0
Worcestershire CC Total Fund	2,626,498	100.0	-8,347	0	106,511	2,724,663	100.0