4TH QUARTER • 2018 UK FOUNDATIONS AND ENDOWMENTS COMPARATIVE ASSET ALLOCATION AND TOTAL RETURN

NOTES ON THE DATA

DATA COLLECTION. Included in this analysis for the quarter ended 31 December 2018 are 29 UK-based foundations and endowments. The average market value of participating UK foundations and endowments was £261.5 million and the median market value was £121.4 million for the quarter ended 31 December 2018.

The notation of *n* denotes the number of foundations and endowments included in each analysis. Returns are denominated in pounds sterling.

Asset allocation is generated using the investment manager structure for each client. Every investment product, fund, and vehicle that a client is invested in is assigned an asset class. Asset classes for a given investment product, fund, or vehicle are maintained across all clients to ensure comparability. The statistics throughout this analysis are calculated on an equal-weighted basis.

ASSET CLASSES. In Figures 1–3, global equity includes global ex UK equities (developed and emerging); hedge funds include long/short hedge funds and absolute return (ex distressed securities); private equity and venture capital include nonventure private equity, venture capital, and other private investments; real assets and inflation-linked bonds include public and private real estate, commodities, global inflation-linked bonds, private oil & gas/natural resources, timber, and public energy/natural resources; and bonds includes UK bonds, global ex UK bonds, and high-yield bonds. In Figure 3, global bonds includes global ex UK bonds (developed and emerging). One institution reported an allocation to 'other', which represents an allocation to investment managers with a balanced funds strategy.

PRIVATE INVESTMENT PERFORMANCE REPORTING METHODOLOGIES. Of the 20 foundations and endowments in this analysis with an allocation to private investments (approximately 1% of the total investment pool or greater), all 20 report private investment performance using a flat basis methodology. Total investment pool return for fourth quarter 2018 includes marketable asset performance for 1 October 2018 to 31 December 2018. Private investment portion of the investment pool is represented by a flat return (0%) for 1 October 2018 to 31 December 2018.



CALCULATION OF THE SHARPE RATIO. The Sharpe ratio is defined as the excess return, or the return over the risk-free rate, on a portfolio divided by the total volatility as measured by the standard deviation of the portfolio. The most common approach to measuring risk is by the Sharpe ratio, which shows how much return above the risk-free rate (UK three-month Libor) the investor has earned per unit of risk (defined as standard deviation of returns). The higher the Sharpe ratio, the more the investor has been compensated for each unit of risk taken. The ratio is a measure of reward relative to total volatility. The formula is:

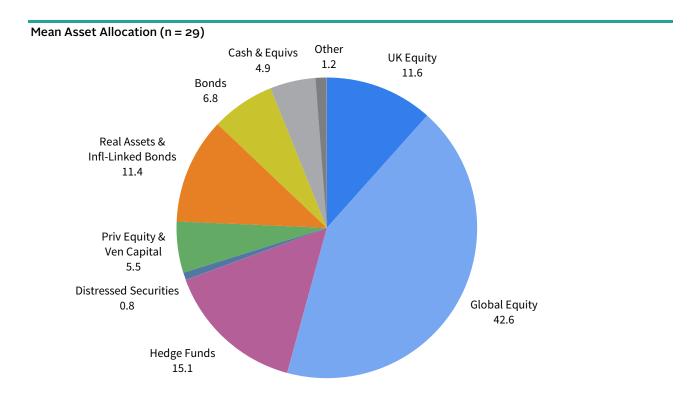
$$\frac{R_p - R_f}{S_p} = \text{Sharpe Ratio}$$

Where:

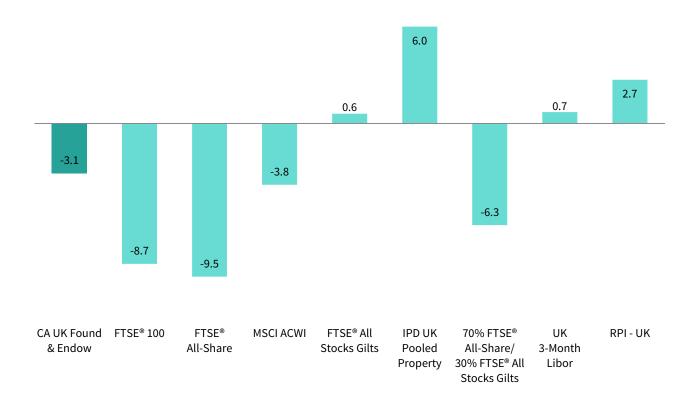
- R_{p} is the arithmetic average of composite quarterly returns;
- + R_f is the arithmetic average of UK three-month Libor (risk-free) quarterly returns; and
- S_{p} is the quarterly standard deviation of composite quarterly returns.



FIGURE 1 INVESTMENT POOL MEAN ASSET ALLOCATION AND TOTAL RETURN Period Ended 31 December 2018 • Percent (%)



One-Year Nominal Mean Return and Relevant Benchmarks (n = 29)

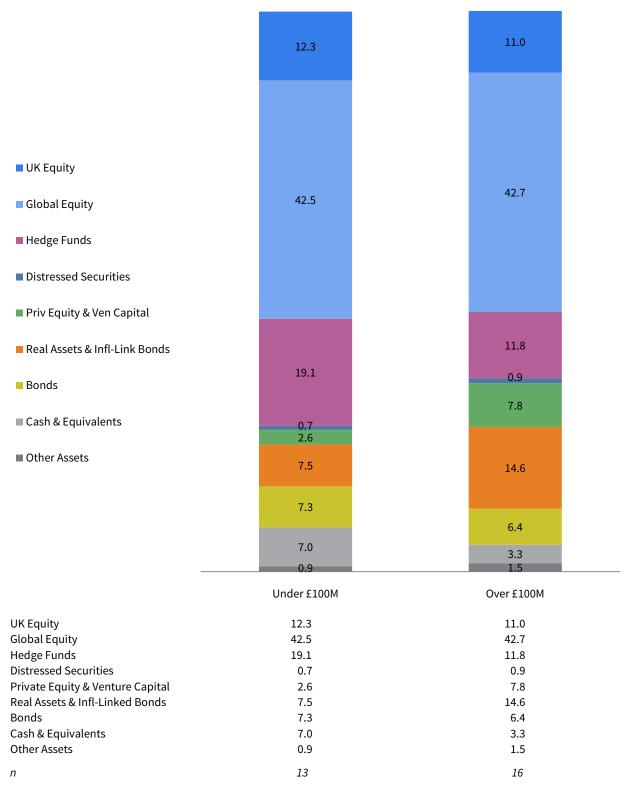


Sources: UK foundation and endowment data as reported to Cambridge Associates LLC. Index data are provided by FTSE International Limited, Investment Property Databank (IPD), MSCI Inc., Thomson Reuters Datastream, and UK Office for National Statistics. IPD data provided 'as is' without any express or implied warranties. MSCI data provided 'as is' without any express or implied warranties.



FIGURE 2 INVESTMENT POOL MEAN ASSET ALLOCATION BY ASSET SIZE

As at 31 December 2018 • Percent (%)



Source: UK foundation and endowment data as reported to Cambridge Associates LLC.



FIGURE 3 DETAILED ASSET ALLOCATION BY ASSET SIZE

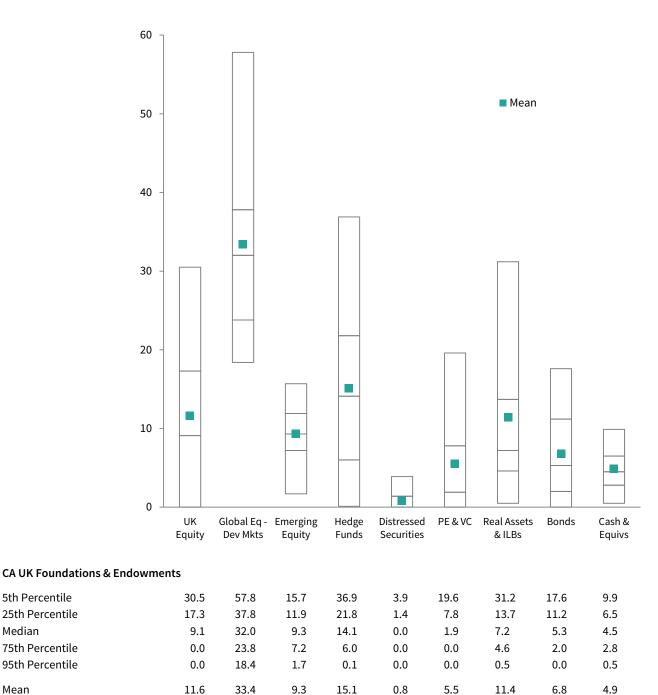
As at 31 December 2018 • Percent (%)

	& Endo	CA UK Foundations & Endowments (n = 29)		Under £100M (n = 13)		Over £100M (n = 16)	
Asset Class	Mean	Median	Mean	Median	Mean	Median	
UK Equity	11.6	9.1	12.3	16.1	11.0	3.2	
Global Equity	42.6	42.8	42.5	43.2	42.7	41.3	
Developed Markets	33.4	32.0	32.0	33.0	34.4	30.7	
Emerging Markets	9.3	9.3	10.5	9.8	8.3	8.8	
Hedge Funds	15.1	14.1	19.1	16.4	11.8	9.8	
Long/Short Hedge Funds	3.9	1.5	4.2	0.0	3.6	2.2	
Absolute Return (ex Distressed)	11.2	11.1	14.9	15.1	8.2	7.5	
Distressed Securities	0.8	0.0	0.7	0.0	0.9	0.0	
Hedge Fund Structure	0.5	0.0	0.6	0.0	0.5	0.0	
Private Equity Structure	0.3	0.0	0.1	0.0	0.5	0.0	
Private Equity & Venture Capital	5.5	1.9	2.6	1.8	7.8	4.5	
Non-Venture Private Equity	3.0	1.2	2.0	0.0	3.8	2.0	
Venture Capital	1.9	0.0	0.2	0.0	3.2	0.0	
Other Private Investments	0.6	0.0	0.4	0.0	0.8	0.4	
Real Assets & Inflation-Linked Bonds	11.4	7.2	7.5	6.5	14.6	7.9	
Private Real Estate	4.2	0.0	0.5	0.0	7.3	0.1	
Private Partnerships	0.4	0.0	0.5	0.0	0.3	0.0	
Direct Property Holdings	3.9	0.0	0.0	0.0	7.0	0.0	
Public Real Estate	4.3	0.0	3.7	0.0	4.9	0.0	
Commodities	0.7	0.0	0.9	0.0	0.4	0.0	
Inflation-Linked Bonds (UK)	0.3	0.0	0.4	0.0	0.3	0.0	
Inflation-Linked Bonds (ex UK)	1.5	0.8	1.6	0.0	1.4	0.8	
Private Oil & Gas/Natural Resources	0.0	0.0	0.0	0.0	0.0	0.0	
Timber	0.2	0.0	0.2	0.0	0.1	0.0	
Public Energy/Natural Resources	0.2	0.0	0.1	0.0	0.3	0.0	
Bonds	6.8	5.3	7.3	7.6	6.4	5.0	
UK Bonds	1.3	0.0	0.9	0.0	1.7	0.0	
Global Bonds	5.3	4.3	6.4	5.7	4.4	4.1	
Developed Markets	4.4	3.4	5.1	4.2	3.8	3.3	
Emerging Markets	0.9	0.2	1.3	0.0	0.6	0.2	
High-Yield Bonds	0.1	0.0	0.0	0.0	0.3	0.0	
Cash & Equivalents	4.9	4.5	7.0	5.7	3.3	3.2	
Other Assets	1.2	0.0	0.9	0.0	1.5	0.0	

Source: UK foundation and endowment data as reported to Cambridge Associates LLC.

FIGURE 4 ASSET ALLOCATION DISTRIBUTION

As at 31 December 2018 • Percent (%)



Source: UK foundation and endowment data as reported to Cambridge Associates LLC.



5th Percentile

25th Percentile

75th Percentile

95th Percentile

Median

Mean

n = 29

FIGURE 5 SUMMARY OF INVESTMENT POOL RETURNS

Periods Ended 31 December 2018 • Percent (%)

Nominal Total Returns

	Latest		Average Annual Compound Nominal Ret				
	Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	
CA UK Foundations & End	dowments						
Mean	-7.2	-5.0	-3.1	7.7	6.8	8.4	
Median	-6.7	-4.1	-2.4	7.8	6.6	8.2	
High	-3.9	-0.9	3.3	11.7	10.6	10.6	
5th Percentile	-4.9	-2.2	3.0	10.1	9.7	10.3	
25th Percentile	-6.0	-3.4	-1.1	8.6	7.7	8.8	
75th Percentile	-7.5	-6.0	-5.0	6.9	5.8	7.6	
95th Percentile	-9.8	-9.0	-8.2	5.3	5.1	7.1	
Low	-18.7	-18.0	-15.7	4.1	4.3	6.8	
п	29	29	29	26	25	19	
Benchmarks							
FTSE [®] 100	-9.6	-10.2	-8.7	6.8	3.9	8.3	
FTSE [®] All-Share	-10.2	-11.0	-9.5	6.1	4.1	9.1	
MSCI ACWI	-10.7	-5.7	-3.8	11.9	9.9	10.8	
FTSE [®] All Stocks Gilts	1.9	0.2	0.6	4.1	5.2	4.5	
IPD UK Pooled Property	2.3	4.4	6.0	9.5	9.0	2.2	
UK 3-Month Libor	0.2	0.4	0.7	0.5	0.5	0.7	
RPI - UK	0.5	1.5	2.7	3.1	2.4	3.0	

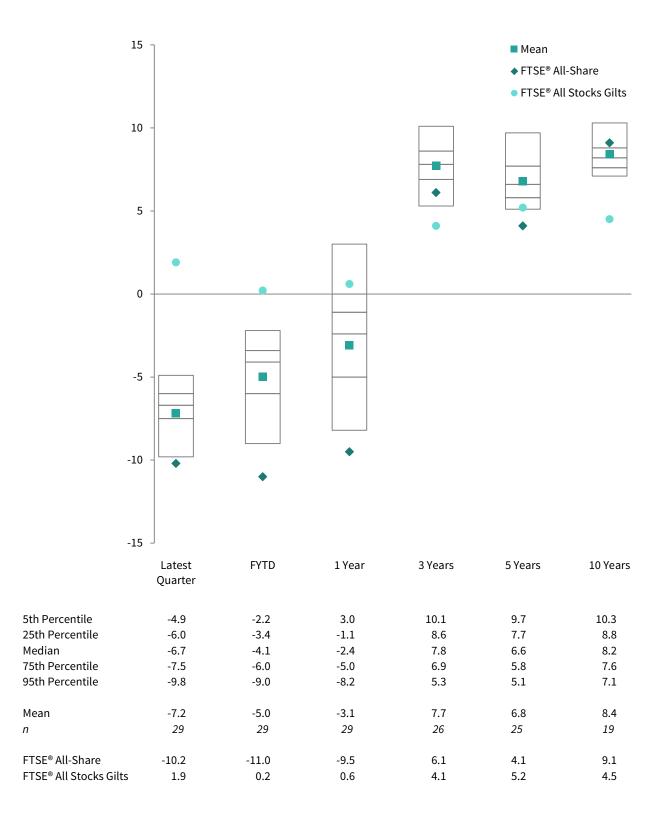
Real Total Returns

	Latest		Average Annual Compound Real Return			
	Quarter	FYTD	1 Year	3 Years	5 Years	10 Years
CA UK Foundations & End	dowments					
Mean	-7.7	-6.3	-5.7	4.4	4.3	5.2
Median	-7.2	-5.5	-5.0	4.5	4.0	5.0
High	-4.4	-2.4	0.5	8.3	7.9	7.4
5th Percentile	-5.4	-3.6	0.3	6.8	7.1	7.1
25th Percentile	-6.5	-4.8	-3.7	5.3	5.1	5.7
75th Percentile	-8.0	-7.3	-7.5	3.7	3.3	4.5
95th Percentile	-10.2	-10.3	-10.6	2.2	2.6	4.0
Low	-19.1	-19.2	-18.0	1.0	1.9	3.7
n	29	29	29	26	25	19
Benchmarks						
FTSE [®] 100	-10.1	-11.5	-11.1	3.5	1.4	5.1
FTSE [®] All-Share	-10.7	-12.3	-11.9	2.9	1.6	5.9
MSCI ACWI	-11.1	-7.0	-6.3	8.6	7.3	7.6
FTSE [®] All Stocks Gilts	1.4	-1.3	-2.1	1.0	2.8	1.5
IPD UK Pooled Property	1.8	2.9	3.2	6.2	6.4	-0.8
UK 3-Month Libor	-0.3	-1.0	-1.9	-2.5	-1.8	-2.2

Sources: UK foundation and endowment data as reported to Cambridge Associates LLC. Index data are provided by FTSE International Limited, Investment Property Databank (IPD), MSCI Inc., Thomson Reuters Datastream, and UK Office for National Statistics. IPD data provided 'as is' without any express or implied warranties. MSCI data provided 'as is' without any express or implied warranties. Note: Real returns are adjusted for inflation as measured by the UK Retail Price Index.



Periods Ended 31 December 2018 • Percent (%)

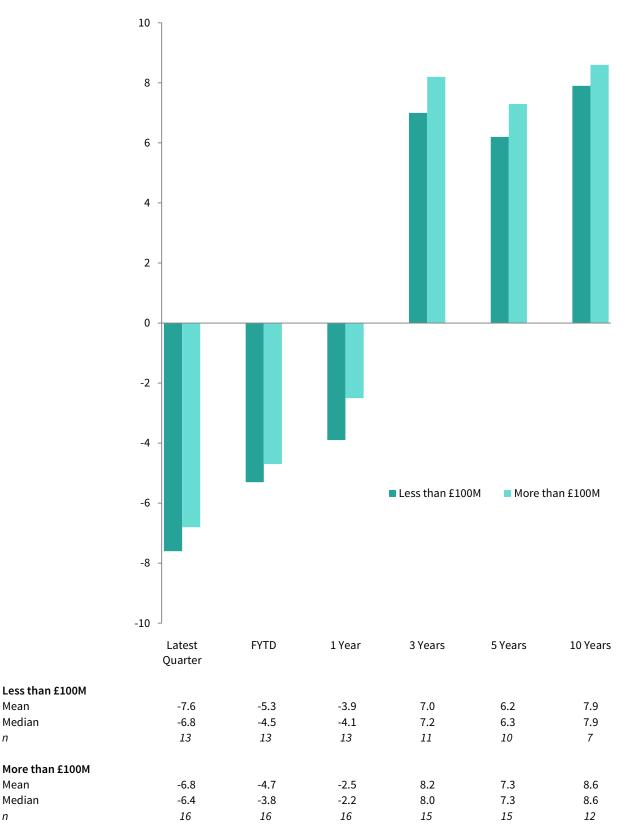


Sources: UK foundation and endowment data as reported to Cambridge Associates LLC. Index data are provided by FTSE International Limited. Note: Three-, five-, and ten-year returns are annualised.



FIGURE 7 NOMINAL TOTAL RETURN SUMMARY BY ASSET SIZE

Periods Ended 31 December 2018 • Percent (%)



Source: UK foundation and endowment data as reported to Cambridge Associates LLC. Note: Three-, five-, and ten-year returns are annualised.



Mean Median

Mean

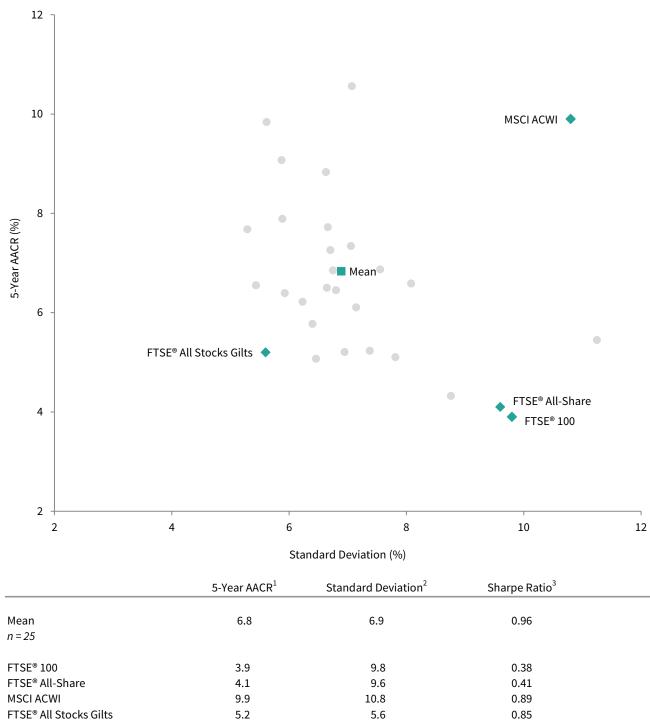
Median

п

п

FIGURE 8 STANDARD DEVIATION AND SHARPE RATIO

Five Years Ended 31 December 2018



Sources: UK foundation and endowment data as reported to Cambridge Associates LLC. Index data are provided by FTSE International Limited and MSCI Inc. MSCI data provided 'as is' without any express or implied warranties.

¹ Five-year geometric average annual compound returns.

² Annualised standard deviations are based on last five years of quarterly returns.

³ Sharpe Ratio = (Composite Performance - Risk-Free Rate) ÷ Annualised Standard Deviation. The risk-free rate is the UK three-month Libor.



PARTICIPANTS

The 29 May 1961 Charitable Trust Aberystwyth University The Art Fund **Barts Charity Big Win Philanthropy UK** The Burdett Trust Chelsea and Westminster Health Charity The Clothworkers' Company Comic Relief Council for World Mission Courtauld Institute of Art The Drapers' Group Esmée Fairbairn Foundation Guardian Media Group The Health Foundation The Henry Smith Charity International Tennis Federation Jesus College, Oxford King's College London The Legal Education Foundation Marie Curie Cancer Care The Nuffield Foundation Paul Hamlyn Foundation The Pilgrim Trust Royal Literary Fund The Society of Merchant Venturers Winchester College

Note: Two participating institutions wish to remain anonymous.

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