

## LPFA Investment Performance Report as at 31 October 2016

### Final Month End Data

#### Purpose and summary

This report sets out LPFA investment performance data as at 31 October 2016.

#### Net Asset Values and LPFA Asset Mix at 31 October 2016:

31 October 2016	Funds		Exposure		Policy Portfolio		
	£m	%	£m	%	Benchmark	Minimum	Maximum
Equities:	2,138.92	41.8%	2,501.92	48.9%	47.5%	40.0%	60.0%
Fixed Income:	0.00	0.0%	0.00	0.0%	2.5%	0.0%	15.0%
Credit:	192.71	3.8%	192.71	3.8%	7.5%	0.0%	10.0%
Private Equity:	479.89	9.4%	479.89	9.4%	7.5%	5.0%	15.0%
Real Estate:	263.17	5.1%	263.17	5.1%	10.0%	5.0%	15.0%
Infrastructure:	389.80	7.6%	389.80	7.6%	7.5%	5.0%	15.0%
Total Return:	699.28	13.7%	699.28	13.7%	15.0%	0.0%	20.0%
Cash:	802.48	15.7%	439.48	8.6%	2.5%	0.0%	10.0%
<i>Diversified Growth Fund:</i>	<i>145.05</i>	<i>2.8%</i>	<i>145.05</i>	<i>2.8%</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<b>Total</b>	<b>5,111.31</b>	<b>100%</b>	<b>5,111.31</b>	<b>100%</b>	<b>100.0%</b>		

- The asset values are based on final month end data from the custodian JP Morgan.
- In the funds table final asset data from JP Morgan has been grouped by asset class.
  - Total return includes the Insight bonds plus hedge fund and the Blackrock hedge fund
  - Commodities are included in the infrastructure line
  - The Blackrock co-investment is included in credit
  - Cash includes the mark to market of the currency hedge and Liability Driven Investment (LDI) portfolio
  - The LPFA credit portfolio is invested in relatively illiquid sub investment grade credit
- The data in the exposure table has been produced by adjusting the funds table:

- Net synthetic equity exposure of £363m has been added to the public equities line (the synthetic equity option positions expired during October).
- Derivative mark to market values, the Insight LDI fund and the currency hedge remain treated as being functionally equivalent to cash and included within the cash line.

For the purposes of the sensitivity analysis in this report the exposure table is adjusted further to reflect the diversified growth fund assets as follows:

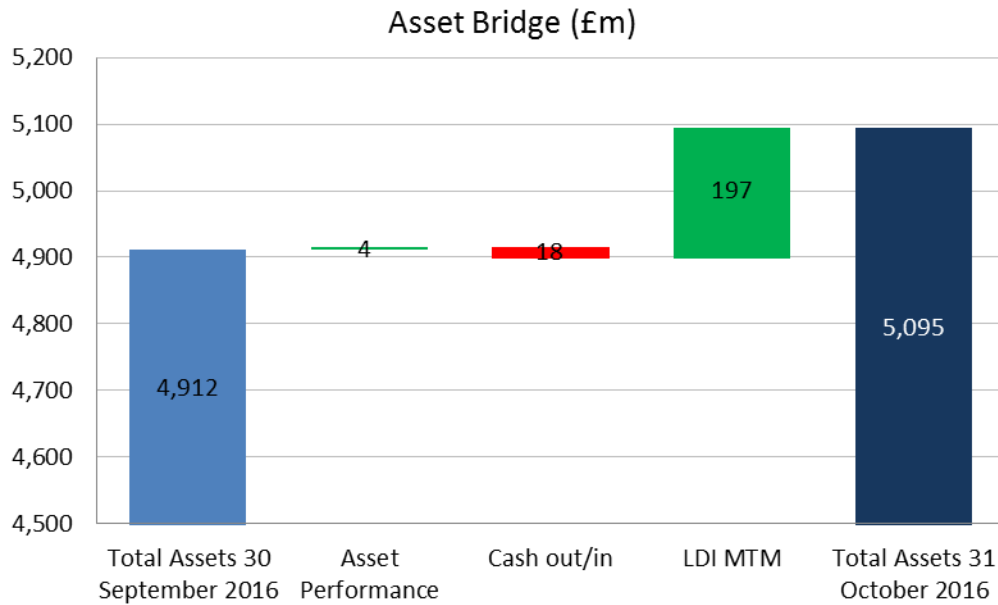
- Diversified growth fund assets split 43% public equities, 37% fixed income, 11% cash, 6% hedge funds, and 3% real estate.

### **Adjusted Risk Exposure**

31 October 2016	Risk Exposure		Policy Portfolio		
	£m	%	Benchmark	Minimum	Maximum
Equities:	2,565.07	50.2%	47.5%	40.0%	60.0%
Fixed Income:	53.73	1.1%	2.5%	0.0%	15.0%
Credit:	192.71	3.8%	7.5%	0.0%	10.0%
Private Equity:	479.89	9.4%	7.5%	5.0%	15.0%
Real Estate:	266.84	5.2%	10.0%	5.0%	15.0%
Infrastructure:	389.80	7.6%	7.5%	5.0%	15.0%
Total Return:	708.25	13.9%	15.0%	0.0%	20.0%
Cash:	455.01	8.9%	2.5%	0.0%	10.0%
<b>Total</b>	<b>5,111.31</b>	<b>100%</b>	<b>100%</b>		

- The risk exposure table excludes the interest rate and inflation rate exposure of the LDI portfolio. As at end October 2016 the LDI portfolio has a £0.6m per basis point interest rate exposure (PV01) and a £5.6m per basis point inflation rate exposure (IE01). The risk exposure table and the interest rate and inflation rate exposure of the LDI portfolio have been used to produce the sensitivity information on page 6.
- The LPFA credit portfolio is invested in relatively illiquid sub investment grade credit.
- Around 15% of Public and Private Equity is invested in the UK equity market, with the majority of equity exposure taken in the United States.
- LPFA has established a foreign exchange hedging program to reduce currency risk but overall, after allowance for that program, LPFA is short of around GBP1.6bn Sterling, mainly against USD (GBP 1bn) and EUR (GBP300m).

The change in total net asset value over October 2016 is explained as follows:



Note: Total assets at 31 October 2016 are based on **final data received from JP Morgan**, the October solvency report reflected assets based on preliminary data from JP Morgan.

“Total Assets” has also been updated since October’s Solvency report was prepared to reflect a Total Assets of £5,095m rather than £5,107m.

## Recommendations:

[1] Executive Committee is asked to note this report.

Report date: 31 October 2016

Lead Officer: Tom Richardson

Compliance Checks

---

### Governance issues:

The monthly Investment Performance report is provided to all Board Members and is published on LPFA's website monthly. It is a key document to track the financial development of the fund.

### Financial implications:

Implicit in this report.

### Legal implications:

None – The production of this report is voluntary in nature.

### Risk implications:

This report is part of the process to manage and monitor the key investment and financial risks facing the fund.

### Equalities impact:

Scheme Members will have the opportunity to request alternative formats as required.

### Social, environmental, health and ethical issues:

The move to greater online publication is in line with LPFA's environmental initiatives.

### Communication issues:

The report is published monthly on the LPFA website.

### Other relevant / supporting documentation:

None.



## Appendix 2 – Internal Performance Summary

Month	Opening Value	Net cash inflow/ (outflow)	Return from investments	Closing Value	Investment Return excl LDI	LDI Contribution to Return %	Total Investment Return (inc LDI)	
	£m	£m	£m	£m	%		%	
Nov-15	4,587.22	(2.94)	25.38	4,609.66	1.32%	-0.77%	0.55%	
Dec-15	4,609.66	(11.52)	0.72	4,598.86	-0.44%	0.46%	0.02%	
Jan-16	4,598.86	(0.13)	(127.54)	4,471.19	-0.98%	-1.79%	-2.77%	
Feb-16	4,471.19	2.42	(82.72)	4,390.89	0.56%	-2.41%	-1.85%	
Mar-16	4,390.89	0.99	152.98	4,544.86	2.80%	0.68%	3.48%	
Apr-16	4,544.86	(6.01)	10.96	4,549.81	0.22%	0.02%	0.24%	
May-16	4,549.81	(9.77)	16.55	4,556.59	1.23%	-0.87%	0.36%	
Jun-16	4,556.59	(8.89)	61.34	4,609.04	2.32%	-0.97%	1.35%	
Jul-16	4,609.04	(6.16)	29.19	4,632.07	1.61%	-0.97%	0.63%	
Aug-16	4,632.07	0.58	105.95	4,738.61	0.53%	1.75%	2.29%	
Sep-16	4,738.61	(6.15)	179.70	4,912.15	1.32%	2.48%	3.79%	
Oct-16	4,912.15	(18.28)	201.13	5,095.00	0.07%	4.03%	4.10%	
Time Period					Annualised return excl LDI (%)		Annualised return (%)	Benchmark RPI+3%
Financial YTD	4,544.86	(54.67)	604.81	5,095.00	13.22%		24.07%	5.44%
Last 12 months	4,587.22	(65.85)	573.63	5,095.00	11.01%		12.63%	5.04%
Last 3 years	4,821.74	(614.72)	887.98	5,095.00	5.99%		6.15%	4.78%

Details of the IRR since inception for the relevant holdings are detailed below.

		Investment	Adjusted Valuation	Inception
Grow th	Global Property	CBRE Global Osiris Luxembourg Fund	191,672,373	0.89
Grow th	Hedge Fund	Blackrock Co-Investment IV, L.P.	17,142,367	5.35
Grow th	Infrastructure	GMPF & LPFA Infrastructure LLP	129,523,119	-4.30
CFM	Infrastructure	Semperian	97,744,626	6.28
CFM	Infrastructure	Meridiam Infrastructure SICAR	45,726,781	11.81
Grow th	Infrastructure	The Energy & Minerals Group Fund III, L.P.	30,976,685	-2.62
Grow th	Infrastructure	Glennmont Clean Energy Fund Europe 1 'A' L.P. (aka BNP Paribas Clean Energy Fund 'A' L.P.)	21,476,589	7.79
Grow th	Infrastructure	3i Infrastructure, L.P.	17,379,000	27.63
Grow th	Infrastructure	Standard Chartered IL&FS Asia Infrastructure Growth Fund, L.P.	4,255,567	-3.55
Grow th	Infrastructure	Foresight Environmental Fund L.P.	4,155,810	-17.64
Grow th	Infrastructure	InfraRed Environmental Infrastructure Fund LP II (fka HSBC Environmental Infrastructure Fund LP II)	3,643,257	7.38
Grow th	Infrastructure	Impax New Energy Investor, L.P.	2,105,510	-15.60
Grow th	Infrastructure	Impax New Energy Investors II, LP	1,927,054	9.02
Grow th	Infrastructure	Pontoon Dock	424,105	-0.19
Grow th	Private Equity	Apollo Union Street Partners	72,150,518	2.49
Grow th	Private Equity	Hermes Private Equity Co-Investment Fund II, L.P.	60,838,606	39.01
Grow th	Private Equity	Permira Europe V, L.P.	39,146,178	11.28
Grow th	Private Equity	Adveq TMC II, L.P.	33,239,094	5.28
Grow th	Private Equity	Adveq TMC I, L.P.	32,572,847	19.25
Grow th	Private Equity	Pantheon USA Fund VIII Feeder	25,631,594	13.83
Grow th	Private Equity	Adveq TMC0 1, L.P	25,213,547	29.73
Grow th	Private Equity	M&G Debt Opportunities Fund III	23,951,457	6.29
Grow th	Private Equity	LGT Crown Asia-Pacific Private Equity plc	21,339,610	11.46
Grow th	Private Equity	Brookfield Brazil Agriland LLC	20,142,131	2.84
Grow th	Private Equity	Pantheon Europe Fund VI, L.P.	15,453,623	9.81
Grow th	Private Equity	Pantheon USA Fund VI	14,575,454	10.41
Grow th	Private Equity	HarbourVest Partners VIII - Cayman Buyout Fund L.P.	14,241,621	12.45
Grow th	Private Equity	Naxicap Opportunities V	13,619,779	22.75
Grow th	Private Equity	LGT Crown European Private Equity PLC	12,014,737	10.06
Grow th	Private Equity	Red Kite Mine Finance Fund I, L.P.	10,853,588	21.19
Grow th	Private Equity	HarbourVest Partners Cayman Cleantech Fund I L.P.	10,642,909	3.31
Grow th	Private Equity	Robeco Feeder Clean Tech Private Equity II	10,595,316	-11.19
Grow th	Private Equity	Dover Street VII Cayman Fund, L.P.	10,403,138	12.81
Grow th	Private Equity	Phaunos Timber Fund Ltd.	9,201,289	-15.82
Grow th	Private Equity	Pantheon USA Fund VII	9,091,173	12.45
Grow th	Private Equity	HarbourVest Partners VII - Cayman Buyout Fund L.P.	8,490,156	11.50
Grow th	Private Equity	HarbourVest Partners VIII - Cayman Venture Fund L.P.	8,375,299	12.95
Grow th	Private Equity	Cleantech Europe II (No 1)	8,130,651	3.56
Grow th	Private Equity	Ithaca, L.P.	7,724,791	14.13
Grow th	Private Equity	LGT Crown European Buyout Opportunites II PLC	7,649,116	8.11
Grow th	Private Equity	PGSF IV Feeder LP	7,571,368	16.09
Grow th	Private Equity	Montana Capital Partners OSP III	6,785,895	35.19
Grow th	Private Equity	Pantheon Asia Fund IV	6,709,099	13.79
Grow th	Private Equity	Bridges Ventures III, L.P.	6,663,650	-2.97
Grow th	Private Equity	Montana Capital Partners, L.P.	6,471,178	43.07
Grow th	Private Equity	HarbourVest HIPEP V - Partnership Fund	6,320,394	8.26
Grow th	Private Equity	New Energy Solutions II K/S	6,074,988	-8.32
Grow th	Private Equity	Hermes PEC III	5,317,994	-3.71
Grow th	Private Equity	LGT Crown Global Secondaries II PLC	4,677,259	20.21
Grow th	Private Equity	Pantheon Europe Fund IV	4,662,843	8.27
Grow th	Private Equity	CleanTech Europe (No.1) LP	4,659,874	-5.84
Grow th	Private Equity	Coller International Partners VII Feeder Fund, L.P. - Series B	4,418,915	34.77
Grow th	Private Equity	HarbourVest Partners VII - Cayman Venture Fund L.P.	4,018,393	9.58
Grow th	Private Equity	LGT Crown European Buyout Opportunities A PLC	3,688,712	10.54
Grow th	Private Equity	Pantheon Global Secondaries III	3,278,357	5.38
Grow th	Private Equity	HarbourVest Partners VIII - Cayman Mezzanine Fund L.P.	3,231,362	10.54
Grow th	Private Equity	HarbourVest Partners VII - Cayman Mezzanine Fund L.P.	2,133,540	8.59
Grow th	Private Equity	HarbourVest HIPEP IV - Supplemental European Companion Fund	1,691,451	13.16
Grow th	Private Equity	LGT Crown European Buyout Opportunities D PLC	1,251,339	12.23
Grow th	Private Equity	zouk Solar Opportunities Limited	1,033,810	9.45
Grow th	Private Equity	LGT Crown Global Secondaries PLC	664,898	7.56
Grow th	Private Equity	Capital Fund No. 1 LP	612,074	-7.22
			1,185,378,458	550.81

Significant valuation lags for some illiquid investments can lead to distortion of returns in the above table. Considering Internal Rate of Return (IRR) over the life of these long term assets can be a more informative performance indicator.

## **LGPS Compliance**

There were no breaches against LGPS Investment Regulations in October 2016.

<b>Test</b>	<b>Holding</b>	<b>Limit</b>
Any single sub-underwriting contract	0%	1%
Single Partnership	Highest CBRE 3.76%	5%
Total Partnership	19.65%	30%
The sum of all loans and deposits with local authorities	0.00%	10%
Total investments in unlisted securities	3.00%	15%
Any single holding	3i Infrastructure 0.34%	10%
All investments in unit trusts and open ended investment companies where they are managed by any one body	0.60%	25%
Any single insurance contract	0%	25%
Deposit with any single bank	Lloyds including amount held via GLA 0.69%	10%
Securities transferred under stock lending	0.00%	25%