

London Borough of Hillingdon

Investment Risk & Analytical Services

March 31, 2017

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Client Commentary

Total Scheme Commentary

A steady quarter for equity markets saw the absence of any red numbers from the major indexes in US Dollar, Sterling and Euros terms, Although stock markets ended March up from the year end they were up and down during Q1 as the global economy rides the Donald Trump roller coaster and tries to predict what's going to happen or fail to happen next. Index returns might have ended higher but for falls towards the end of March when the S&P 500 tumbled 1.2% on worries about the feasibility of the Trump pro-business agenda. UK GDP in Q4 grew at 0.7%, the same rate as in Q3 making a growth rate of 1.8% for 2016. Barclays reported a pre-tax profit of £3.2bn for 2016, up £1.1bn year on year. Little has been made in the press of the stream of good news coming out of Europe; 14 consecutive quarters of growth, a falling unemployment rate back into single figures and business sentiment at a 6 year high. Q4 Eurozone growth was estimated at 0.5%, outstripping the US. The great hope is that the downward EM trend is over and that businesses will take the initiative as the driver of global growth. With the oil price has stabilising, Emerging Markets are outperforming Developed counterparts. Globally, Technology gained most value over Q1 one but Basic Materials was the top performer over 12 months. Oil & Gas lost most value over the quarter and Telecoms was the worst sector over one year. The FTSE World was up by 5.6% (GBP) over quarter one 2017 and returned 32.9% (GBP) over the year. Within the UK bond market, the 10-year Gilt traded in a wide range over the quarter, seeing a print as low as 1.07% and trading as high as 1.53% before settling at 1.14%. The FTSE All Stock Gilt Index returned 1.62% and the ML Sterling Non-Gilts returned 1.81%.

Against this backdrop the London Borough of Hillingdon returned 2.88% which leads to an underperformance of -26 basis points against the Total Plan benchmark of 3.14%. In monetary terms this is a growth in assets of £25.7 million and the value of the combined scheme now stands at £956.5 million as at 31st March 2017. This period the GMO Global mandate was terminated and the capital used to fund another Legal & General balanced mandate. While £11.6 and £7.2 million was taken from Private Equity and M&G respectively, with £15 million transferred to JP Morgan and £2.5 million to Premira. Looking further into the analysis the results seen were driven by selection effects, the most notable being in Private Equity and Newton both with an impact of -21 bps, with a further -16 bps caused by UBS, the largest positive coming from the terminated GMO mandate with +17 bps. While within allocation, with weights closely in line with the strategic position leading to a minimal impact.

With the previous run of four consecutive quarters posting both positive absolute and relative figures the Scheme's one year return of 18.46% is 1.55% ahead of the benchmark of 16.65%. The largest impact once again comes from selection, the most significant in Ruffer (+1.27%) coupled with UBS UK Equity (+1.10%), although these are slightly offset by the negative effect from Newton (-0.93%). While allocation has a negative impact coming from underweighting the now terminated State Street Gilts and Newton, while overweighting AEW and Premira. While over the longer periods, the Scheme continues to outperform, producing a return of 9.96% over three year versus 9.34%, while for 5 years we see figures of 9.80% versus 8.94% per annum. Then since inception in September 1995, the Fund remains ahead of target by 15 basis points with an annualised return of 7.23% against a target of 7.07%.

Manager Commentary

AEW UK

In the latest quarter AEW UK Property produced a growth of 1.79%, although this falls -18 basis points below the IPD UK PPFI All Balanced Funds index figure of 1.97%. However, with positive absolute returns in all but one period since inception and only four quarters in the red on a relative basis, growth ahead of benchmark is seen in all longer periods. For the rolling one year a return of 5.78% against the benchmark of 5.15% translates as a 0.59% relative return. Then in the short period since inception in June 2014, the fund return is 10.96%, leading to an outperformance of 0.86% when compared to the IPD figure of 10.02%.

GMO Global

During the first quarter of 2017 the GMO Global mandate was terminated, with the £63.1 million of funds invested in a new Legal & General balanced mandate.

JP Morgan

In the latest quarter JP Morgan offset the previous quarter's losses by posting a growth in assets of 2.30% leading to an outperformance of 1.42% when compared to the 0.87% target for the 3 Month LIBOR + 3% p.a. Then with good results in the three other quarters in 2016, the one year return of 8.15% is ahead of the 3.66% target by 4.33%. Then over three and five years they are aligned with the benchmark with figures of 3.69% vs 3.66% and 3.68% vs 3.64% respectively. Then in just over 5 years since the mandate funded their return of 4.16% is +47 basis points above the target return of 3.67% on an annualised basis.

Legal & General 1

At the end of October 2016 the Legal & General mandate was funded, in it's first full quarter of investment they post a return of 4.42% against 4.27% for the custom fixed weight blended benchmark consisting of FTSE equity indices, FTSE Index Linked and iBoxx UK Non-Gilts. In the short 5 month period since inception, they return 5.31% against 5.18% for the benchmark. Further analysis demonstrates the passive strategy with all funds roughly in line with their respective benchmark return.

Client Commentary (cntd)

Manager Commentary

London CIV Ruffer

This quarter assets within the London CIV Ruffer portfolio remained flat, meaning the 0% return when compared to the LIBOR 3 Month GBP figure of 0.13%, leads to a relative return of -0.12%. However with the previous three quarters of positive absolute and relative returns, the one year period exhibits a growth of 12.48% against the target of 0.65%. Then with only three quarter's in the red in the last five years, outperformance remains in the longer periods. This is seen in a three year return of 7.32% versus 0.66%, then similarly for the five years with figures of 6.68% against 0.73%, culminating in since inception (May 2010) figures of 6.48% versus 0.87% per annum, which translates as a relative return of 5.56%.

M&G Investments

In contrast to the previous period, in the latest quarter M&G demonstrates the lowest absolute return and one of the worst relative returns, after the Private Equity. Their return of -1.77% against the 3 Month LIBOR +4% p.a. target of 1.11%, translates as an underperformance of -2.85%. Driven by the previous good results, the full year return leads the benchmark by 13.35%, coming from figures of 18.62% against 4.65%. Over the three and five year the account registers figures of 10.04% vs 4.65% and 8.24% vs 4.64% respectively; since inception (May 2010) return falls slightly to 7.20% pa whilst the benchmark is 4.71% pa. Although the since inception Internal Rate of Return moves further ahead of target with a figure of 8.51% opposed to the comparator of 4.47%.

Macquarie

Over the last three months, Macquarie produced a growth of 2.25%, against the 0.87% for the 3 Month LIBOR +3% p.a. this translates as an outperformance of 1.37%. With eleven consecutive quarters of positive absolute and relative returns, outperformance is seen in all longer periods. Over the rolling year a growth of 22.41% beats the target of 3.65% by 18.11%, the highest relative return over this period; similarly the three year result of 18.28% versus 3.65% also exhibits the best relative return at 14.12%. The annualised return over 5 years falls to 10.38%, but still ahead of the 3.64% seen for the benchmark; then since inception (September 2010) the 3.96% is just ahead of the target of 3.70%. Although the since inception Internal Rate of Return for this portfolio jumps to 12.83%, which is ahead of the benchmark figure of 3.65%.

Newton

In the first quarter of 2017 Newton produced a return of 4.71%, although this was a relative return of -1.48% when compared to the 6.28% seen for the FTSE World Index +2%. With four consecutive quarter's of underperformance, they fall -6.91% short of the benchmark over the year, generated from figures of 25.83% versus 35.16%. Then with nine underperforming quarters over the last twelve the three year return falls just short with figures of 17.43% versus 18.54%; then since inception in January 2013, the fund return of 15.30% falls short of the yardstick of 17.10% by -1.54% on an annualised basis.

Manager Commentary

Premira Credit

The Premira Credit Fund saw a growth of 2.51% over the first quarter of 2017, this compares favourably with the 3 Month LIBOR +4% p.a. target of 1.11%. Coupled with the previous period's results, the one year is ahead of target with figures of 9.58% versus 4.65%, creating an outperformance of 4.71%. Then since the start of December 2014 when the fund incepted, the fund posts a return of 10.02% against the benchmark of 4.61%, leading to a relative position of 5.18%.

UBS

During Q1 the UBS UK Equity investments returned of 2.80% compared to the FTSE All Share figure of 4.02%, lading to an underperformance of -1.18%. Looking into the attribution analysis, allocation was the main driver with the most significant being underweight Consumer Goods (-0.96%), coupled with overweighting Oil & Gas (-0.42%) and the cash drag. Within selection the slight positive impact is caused by the effect in Basic materials (+0.35%), slightly offset by the underperformance in Utilities (-0.26%). With the previous good run of results they remain ahead over the one year, figures of 32.89% vs 21.95% translates as a relative return of 12.20%. This is attributable to both allocation and selection, the biggest impacts come from both overweighting Basis Materials (2.41%) and selection in the sector (2.00%), combined with the selection effect in Financials (2.38%); while the largest negative impact was once again the drag from the 3% cash exposure. This feeds into the longer time periods, with three and five years ahead of the index, culminating in a since inception return of 10.31% versus 8.94% on an annualised basis.

UBS Property

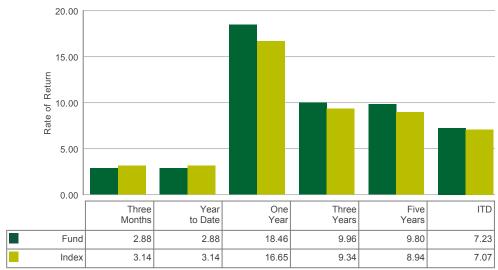
In the latest period the UBS Property broke the run of underperformance by beating the IPD UK PPFI All Balanced Funds index by 0.51%, generated from figures of 2.49% against 1.97%. Although this is not quite enough to overturn the one year deficit, with a full year return of 2.51% falling -1.14% behind the IPD target of 3.69%. However, the previous good run of results prior to the last year leads to high absolute returns staying ahead of the IPD target over the longer periods, peaking over the three year with a return of 12.18% against 10.18%. Then since inception, in March 2006, the fund return falls to 3.61% per annum while the benchmark shows 3.40%, translating as an outperformance of 20 basis points.

Private Equity

Over the latest period private equity assets remained constant - a drop in value of -1.66% for Adam Street and a 2.18% increase for LGT). Over the longer periods, the outlook over which private equity investments should be measured, returns remain positive. LGT maintain a run of over 3 years of growth with a figures of 22.80%, 18.13% and 14.03% for the one, three and five year periods respectively, while Adam Street posted 20.58%, 20.18% and 16.50% over the same periods; both exhibit some of the highest returns seen. Although they fall short of the proxy benchmark of MSCI AC World +4% p.a. which shows 37.05%, 20.49% and 17.14%. Then since their respective inceptions in January 2005 and May 2004, Adam Street drops to 6.58% pa, while LGT sees a slight dip to 10.52%.

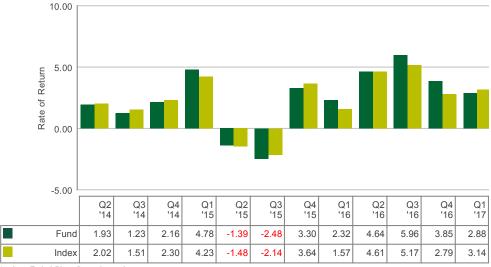
Executive Summary

LONDON BOROUGH OF HILLINGDON TOTAL FUND GROSS OF FEES



Index: Total Plan Benchmark

LONDON BOROUGH OF HILLINGDON ROLLING QUARTERS TOTAL FUND GROSS OF FEES

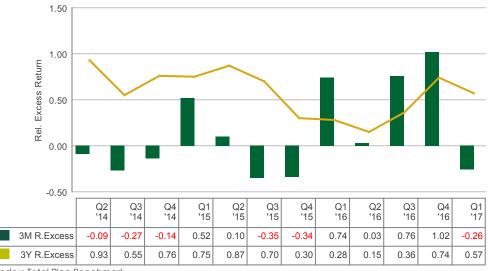


Index: Total Plan Benchmark

Risk Statistics	3 Yrs	5 Yrs
Return	9.96	9.80
Index Return	9.34	8.94
Excess Return	0.62	0.86
Standard Deviation	4.96	5.28
Index Standard Deviation	4.69	4.95
Tracking Error	1.13	1.10
Information Ratio	0.55	0.78
Sharpe Ratio	1.88	1.72
Index Sharpe Ratio	1.85	1.66
Sortino Ratio	-	3.19
Treynor Ratio	9.04	8.68
Jensen's Alpha	0.33	0.44
Relative Volatility (Beta)	1.03	1.05
R Squared	0.95	0.96

Index: Total Plan Benchmark. Risk Free Index: JP Morgan 3 month Cash (GBP) Category: Total Fund Gross of Fees.

LONDON BOROUGH OF HILLINGDON ROLLING QUARTERS TOTAL FUND GROSS OF FEES



Index: Total Plan Benchmark

Investment Hierarchy

		,		Three Months			Year to Date			One Year	
Account/Group -% Rate of Return	Ending Market Value GBP	Ending Weight	Port	Index	Relative Excess	Port	Index	Relative Excess	Port	Index	Relative Excess
London Borough of Hillingdon	956,496,312	100.00	2.88	3.14	-0.26	2.88	3.14	-0.26	18.46	16.65	1.55
Total Plan Benchmark											
AEW UK	47,565,189	4.97	1.79	1.97	-0.18	1.79	1.97	-0.18	5.78	5.15	0.59
LBH22 AEW Benchmark											
JP Morgan	54,622,301	5.71	2.30	0.87	1.42	2.30	0.87	1.42	8.15	3.66	4.33
LBH15 JPM LIBOR +3%pa											
Legal & General 1	224,558,272	23.48	4.42	4.27	0.15	4.42	4.27	0.15	-	-	-
LBH26 L&G Benchmark											
Legal & General 2	63,374,228	6.63	-	-	-	-	-	-	-	-	-
LBH27 L&G Benchmark											
London CIV Ruffer	104,453,932	10.92	0.00	0.13	-0.12	0.00	0.13	-0.12	12.48	0.65	11.76
LBH11 Ruffer BM LIBOR											
M&G Investments	23,822,576	2.49	-1.77	1.11	-2.85	-1.77	1.11	-2.85	18.62	4.65	13.35
LBH10 3 Month LIBOR +4%pa											
Macquarie	27,651,020	2.89	2.25	0.87	1.37	2.25	0.87	1.37	22.41	3.65	18.11
LBH14 Macquarie LIBOR +3%pa											
Newton	137,948,370	14.42	4.71	6.28	-1.48	4.71	6.28	-1.48	25.83	35.16	-6.91
LBH19 FTSE World Index +2%											
Premira Credit	38,316,673	4.01	2.51	1.11	1.38	2.51	1.11	1.38	9.58	4.65	4.71
LBH24 Premira LIBOR +4%pa											
UBS	130,151,100	13.61	2.80	4.02	-1.18	2.80	4.02	-1.18	32.89	21.95	8.97
LBH04 UBS Benchmark											
UBS Property	69,443,005	7.26	2.49	1.97	0.51	2.49	1.97	0.51	2.51	3.69	-1.14
LBH06 UBS Property Benchmark											
Adam Street	17,624,053	1.84	-1.66	6.77	-7.89	-1.66	6.77	-7.89	20.58	37.05	-12.01
Adam Street PE Bmark											
LGT	9,455,636	0.99	2.18	6.77	-4.30	2.18	6.77	-4.30	22.80	37.05	-10.40
LGT PE Bmark											

Investment Hierarchy(2)

		Three Years			Five Years		1	nception to Date		
Account/Group -% Rate of Return	Port	Index	Relative Excess	Port	Index	Relative Excess	Port	Index	Relative Excess	Inception Date
London Borough of Hillingdon	9.96	9.34	0.57	9.80	8.94	0.79	7.23	7.07	0.15	30/09/1995
Total Plan Benchmark										
AEW UK	-	-	-	-	-	-	10.96	10.02	0.86	30/06/2014
LBH22 AEW Benchmark										
JP Morgan	3.69	3.66	0.03	3.68	3.64	0.04	4.16	3.67	0.47	08/11/2011
LBH15 JPM LIBOR +3%pa										
Legal & General 1	-	-	-	-	-	-	5.31	5.18	0.13	31/10/2016
LBH26 L&G Benchmark										
Legal & General 2	-	-	-	-	-	-	1.88	1.88	-0.00	22/02/2017
LBH27 L&G Benchmark										
London CIV Ruffer	7.32	0.66	6.61	6.68	0.73	5.91	6.48	0.87	5.56	28/05/2010
LBH11 Ruffer BM LIBOR										
M&G Investments	10.04	4.65	5.15	8.24	4.64	3.44	7.20	4.71	2.38	31/05/2010
LBH10 3 Month LIBOR +4%pa										
Macquarie	18.28	3.65	14.12	10.38	3.64	6.51	3.96	3.70	0.25	30/09/2010
LBH14 Macquarie LIBOR +3%pa										
Newton	17.43	18.54	-0.94	-	-	-	15.30	17.10	-1.54	24/01/2013
LBH19 FTSE World Index +2%										
Premira Credit	-	-	-	-	-	-	10.02	4.61	5.18	30/11/2014
LBH24 Premira LIBOR +4%pa										
UBS	8.60	7.69	0.85	12.97	9.67	3.01	10.31	8.94	1.26	31/12/1988
LBH04 UBS Benchmark										
UBS Property	12.18	10.18	1.82	9.53	8.47	0.98	3.61	3.40	0.20	31/03/2006
LBH06 UBS Property Benchmark										
Adam Street	20.18	20.49	-0.26	16.50	17.14	-0.54	6.58	-	-	31/01/2005
Adam Street PE Bmark										
LGT	18.13	20.49	-1.95	14.03	17.14	-2.65	10.52	-	-	31/05/2004
LGT PE Bmark										

Market Value Summary - Three Months

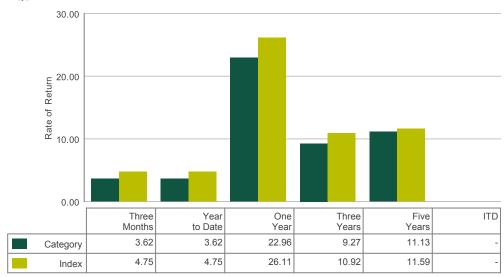
Account/Group	31/12/2016 Market Value	31/12/2016 Weight	Net Contribution*	Income	Fees	Appreciation	31/03/2017 Market Value	31/03/2017 Weight Cl	nange in Weight
London Borough of Hillingdon	930,748,900	100.00	-1,000,062	3,977,623	62	22,769,851	956,496,312	100.00	0.00
AEW UK	46,730,459	5.02	0	546,524	0	288,207	47,565,189	4.97	-0.05
GMO Global	60,319,132	6.48	-62,124,073	0	0	1,832,925	27,985	0.00	-6.48
JP Morgan	38,695,892	4.16	15,000,000	0	0	926,410	54,622,301	5.71	1.55
Legal & General 1	215,052,876	23.11	0	0	0	9,505,396	224,558,272	23.48	0.37
Legal & General 2	-	-	62,250,073	0	0	1,124,155	63,374,228	6.63	-
London CIV Ruffer	104,451,447	11.22	-105	285,093	0	-282,504	104,453,932	10.92	-0.30
M&G Investments	31,320,084	3.37	-7,220,152	-1,734	0	-275,622	23,822,576	2.49	-0.87
Macquarie	26,844,879	2.88	197,020	319,953	0	289,169	27,651,020	2.89	0.01
Newton	131,743,855	14.15	0	0	0	6,204,516	137,948,370	14.42	0.27
Premira Credit	34,940,082	3.75	2,500,000	1,181,250	0	-304,659	38,316,673	4.01	0.25
State Street Gilts	0	0.00	0	0	0	0	0	0.00	0.00
UBS	126,606,807	13.60	0	1,008,594	0	2,535,700	130,151,100	13.61	0.00
UBS Property	67,755,726	7.28	0	608,302	0	1,078,977	69,443,005	7.26	-0.02
Adam Street	19,290,336	2.07	-1,348,201	26,464	0	-344,546	17,624,053	1.84	-0.23
LGT	9,701,461	1.04	-455,430	6	0	209,600	9,455,636	0.99	-0.05
Cash & Other Assets	17,295,865	1.86	-9,799,194	3,172	62	-17,872	7,481,971	0.78	-1.08

Min -6.48

^{*}Net Contributions include Cash Contributions/Distributions, Security Deliveries/Receipts, Fees/Fee Rebates, Inter Account transfers for Consolidations & Benefits Payments. Copied History or Backloaded Data may not display the correct Contributions/Withdrawals creating misrepresentation.

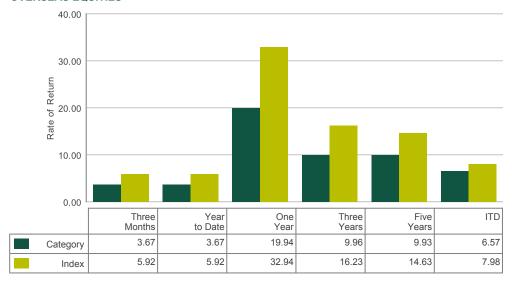
Historical Performance

EQUITY



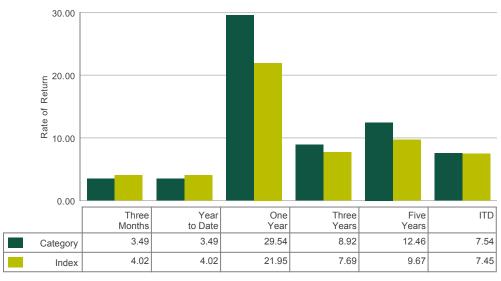
Index: Total Equity Benchmark

OVERSEAS EQUITIES



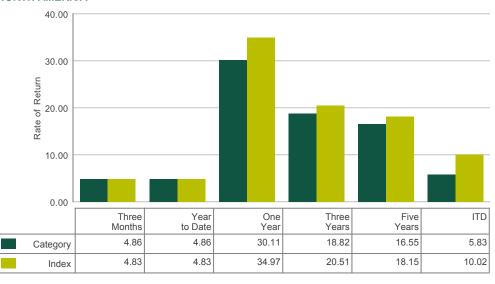
Index: Total O'seas Equity Benchmark

UNITED KINGDOM



Index: FTSE All Share UK Equity

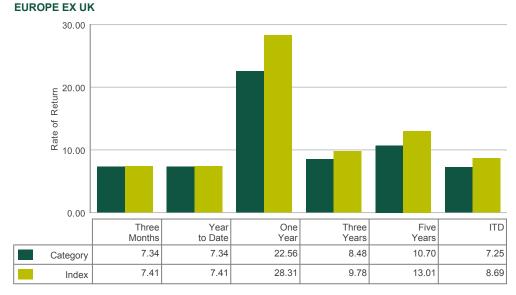
NORTH AMERICA



Index: FTSE North America

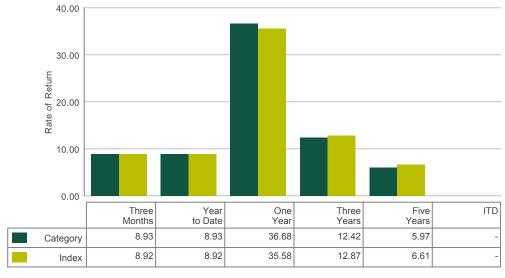
Historical Performance

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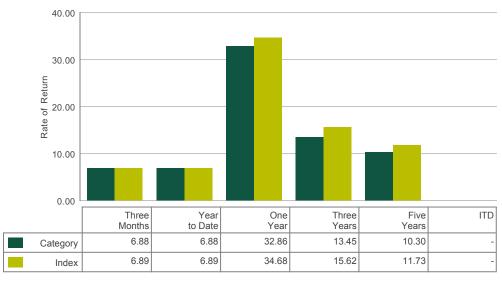
Index: FTSE AW Dev Europe ex UK

EMERGING MARKETS



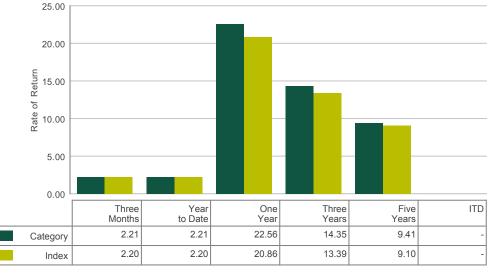
Index: LBH Emerging Markets

ASIA PACIFIC INC JAPAN



Index: FTSE AW Dev Asia Pacific

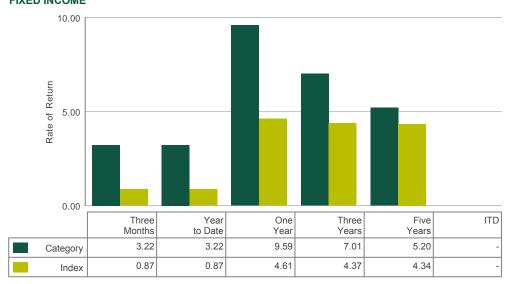
INDEX LINKED GILTS



Index: LBH Index Linked Benchmark

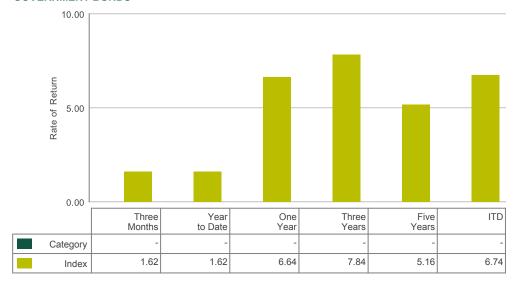
Historical Performance

FIXED INCOME



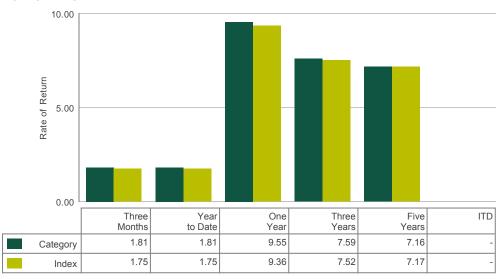
Index: LBH Fixed Income Benchmark

GOVERNMENT BONDS



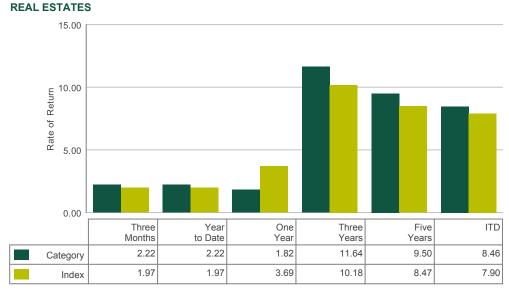
Index: FTSE All Stock Index

CORPORATES



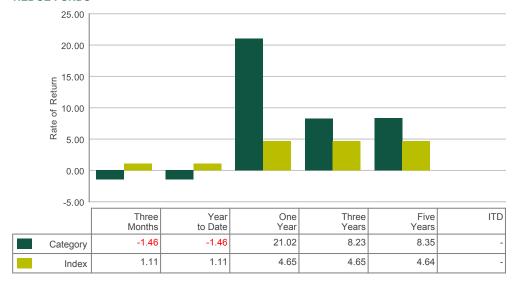
Index: LBH Non-Gilts Benchmark

Historical Performance



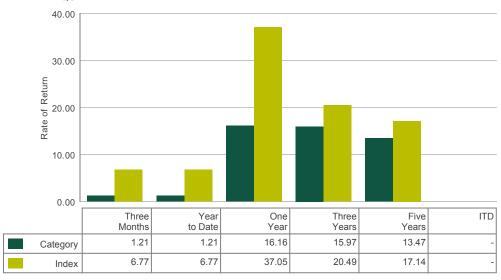
Index: IPD UK PPFI All Bal Funds Index

HEDGE FUNDS



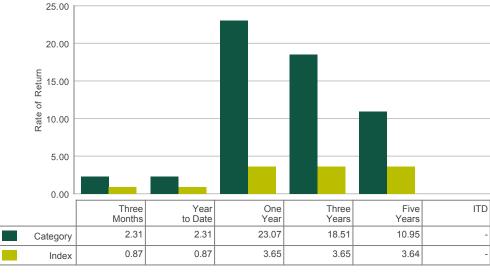
Index: LIBOR GBP 3 Month +4%

PRIVATE EQUITY



Index: Private Equity Benchmark

INFRASTRUCTURE



Index: Infrastructure Benchmark

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NORTHERN TRUST

Benchmark Composition

Total Pla	ın Benchmark	AEW UK		London (CIV Ruffer
22.63	FTSE All Share	100.0	IPD UK PPFI All Balanced Funds Index	100.0	LIBOR 3 Month Sterling
2.46	FTSE North America				
2.32	FTSE Developed Europe ex UK	JP Morgo	an	M&G Inv	estments
1.37	FTSE Japan	100.0	LIBOR 3 Month + 3%	100.0	LIBOR 3 Month + 4%
0.96	FTSE Developed Asia Pacific ex Japan				
2.31	FTSE Emerging Markets	Legal & (General	Macqua	rie
14.41	FTSE World Index +2%	38.75	FTSE All Share	100.0	LIBOR 3 Month + 3%
4.81	FTSE Index Linked Gilts 15+ Years	10.53	FTSE World North America		
1.80	FTSE Index Linked Gilts	9.92	FTSE World Europe ex UK	Newton	
3.25	iBoxx Sterling Non-Gilts	5.88	FTSE Japan	100.0	FTSE World Index +2%
12.09	IPD UK PPFI All Balanced Funds Index	4.10	FTSE Developed Asia Pac ex Japan		
7.55	LIBOR 3 Month +3%	2.94	FTSE Emerging Markets	Permira	Credit
11.03	LIBOR 3 Month	13.34	FTSE Index Linked Gilts 15+ Years	100.0	LIBOR 3 Month + 4%
6.39	LIBOR 3 Month +4%	7.72	FTSE Index Linked Gilts		
1.63	FTSE AW Developed GBP Hedged	6.82	iBoxx Sterling Non-Gilts	UBS	
2.96	MSCI All Countries World Index +4%			100.0	FTSE All Share
2.03	FT 7 Day LIBID	Legal & (General		
		24.72	FTSE AW Developed GBP Hedged	UBS Prop	erty
		24.52	FTSE Emerging Markets	100.0	IPD UK PPFI All Balanced Funds Index
		25.67	FTSE Index Linked Gilts 15+ Years		
		25.09	iBoxx Sterling Non-Gilts		

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