



London Borough of Hillingdon

Investment Risk & Analytical Services

June 30, 2019

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Client Commentary

Total Scheme Commentary

Despite a weak May, April and June were very positive for equity markets globally. Continuing low interest rates and expectations for cuts supported returns in the plus months while ongoing trade disputes and hostile rhetoric reduced confidence in the middle month of quarter two. Emerging market performance continues to be harder hit by these trade tensions and developed markets more resilient. From the last quarter of 2018 when Telecoms was the top performer it bounced down to be the weakest over both short and long term Q1 and now is the strongest again over both periods. Real Estate was the weakest performing UK sector over both the most recent quarter and the year. The FTSE All Share was up 3.3% (GBP) over the second quarter and is ahead over one year by 0.6% (GBP).

The past year has brought about much uncertainty in the bond markets. 2018 saw the US Federal reserve increase rates four times and there had been promise of more increases to come in 2019. Investor and market panic which had been evident at the end of Q4 has since been followed by a retreat in 2019. UK Inflation figures showed a slowdown to 1.9% but remain close to the 2% target set by the Bank. The overall themes remain largely the same this quarter as the bank commented that future interest rates should be gradual and limited. According to the office for national statistics, pay increased by +3.4% in the 3 months to February, but is still not rising as much as it was prior to the global financial crisis. UK Government 10 year bond yields ended the quarter at +0.83%. The FTSE All-Stock index delivered a total return of +1.31% in Sterling terms over the quarter whilst the ML Sterling Non-Gilts index returned 2.04% for the same period.

Brexit continued to dominate much of the news in the UK and it still remains unclear when or if Brexit will happen and on what terms it will happen. Prime Minister May will be stepping down from No 10 and the UK are due to leave the EU on October 31st. This uncertainty has caused a sharp slowdown in manufacturing and numbers from the service sector are evidence of this. In the UK, Q2 2019 saw Sterling weaken against the Dollar, Euro and Yen. The UK Manufacturing PMI dropped to the lowest level since early 2013. This drop was caused by a slump in both output and new orders in June. The consumer price index including owner occupiers' housing costs rose by 1.9% in the year to May 2019. Falling airfares and car prices were the main downward contributors offset by rising prices for furniture and furnishings, games and toys and accommodation services.

Within this environment the London Borough of Hillingdon returned +3.27% which was ahead of the Total Plan benchmark of +2.87%. In monetary terms this is a gain in assets of £34.7 million and the value of the combined scheme now stands at £1,096 million as at 30th June 2019.

The Scheme's one year return of +4.21% is 0.52% behind the benchmark of +4.73% following four consecutive quarters of underperformance. While over the longer periods, with ten positive quarters over the last 3 years, the Scheme has narrowly outperformed, producing a return of 8.13% over three year versus 8.05%. Then the scheme continues to outperform over the 5 year period where we observe figures of 7.81% per annum (vs the benchmark 7.71%). Then since inception in September 1995, the Fund remains ahead of target by 8 basis points with an annualised return of 7.02% against a target of 6.93%.

Manager Commentary

AEW UK

The AEW UK Property Fund posted a total return of 11.14%, beating the IPD UK PPF I AI Balanced Funds Index for the second time since September 2018. Rolling one year returns now sees gains, with the mandate returning 6.66% versus 3.44% for the IPD Index. They continue to be ahead over the three year period returning 9.27% against the benchmark of 6.85%. This translates as a 2.43% relative outperformance. With positive absolute returns in all but two periods and only five quarters in the red on a relative basis, growth ahead of benchmark is seen since the fund inception. Since the funds inception date of July 2014, the fund return is 11.01%, leading to an outperformance of 2.42% when compared to the IPD figure of 8.59%.

JP Morgan

In the latest quarter JP Morgan posted an increase in assets of +2.87% leading to an outperformance of +1.88% when compared to the 0.99% target for the 3 Month LIBOR + 3% p.a. Then with positive results in only two of the last four quarters, the one year return of +6.28% is in modest territory although is ahead of the 4.03% target by 2.25%. Then over three years they post returns above the benchmark with figures of 4.21% vs 3.73%. Since the mandate funded their return of 3.92% is just ahead of the target return of 3.70% on an annualised basis.

Legal & General 1

There was a reorganisation of assets in both Legal & General 1 and 2 portfolios towards the end of 2018. Equity assets were moved to the No 1 account and fixed income to the No2 account. Over the last three months the Legal & General No. 1 mandate post a return of +4.67% in line with the custom fixed weight blended benchmark. In the period since inception in October 2016, they return 7.05%, which is below the benchmark return of 7.14%.

Legal & General 2

The No 2 Legal & General mandate returned +1.84% against +1.93% for the second quarter against the custom fixed weight blended benchmark consisting of FTSE Index Linked 15+ years, FTSE Index Linked and iBoxx UK Non-Gilts. In the period since inception, they return 6.08% against 6.58% for the benchmark.

Client Commentary (cntd)

Manager Commentary

London CIV Ruffer

The absolute return strategies employed by London CIV Ruffer translated into a 135 basis point outperformance of the 3-mth Sterling LIBOR target. The investment remains underwater over the one year time period. Outperformance remains in the longer periods. This is seen in a three year return of 2.69% versus 0.72%, then similarly for the five years with figures of 4.23% against 0.71%, culminating in since inception (May 2010) figures of 4.83% versus 0.84% per annum, which translates as a relative return of 3.99%. This manager shows one of the largest outperformance of all the schemes managers over the since inception period.

M&G Investments

M&G posted a gain in Q2 by producing a return of 12.83% against the 3 Month LIBOR +4% p.a. target of 1.23%, demonstrating an outperformance of 11.60%. This is a turnaround from the underperformance seen in quarter one, the full year return is now ahead of the benchmark by 3.87%, coming from figures of 8.91% against 5.04%. Over the three and five year the account registers figures of 10.60% vs 4.72% and 9.48% vs 4.71% respectively; since inception (May 2010) return falls slightly to 7.47% pa whilst the benchmark is 4.72% pa. Although the since inception Internal Rate of Return moves further ahead of target with a figure of 8.46% opposed to the comparator of 4.60%.

Macquarie

Over the last three months, Macquarie produced a growth of 7.34%, against the 0.99% for the 3 Month LIBOR +3% p.a. this translates as an outperformance of 6.36%. With twelve consecutive quarters of positive absolute returns and eleven positive relative returns, outperformance is seen in all longer periods. Over the rolling year a double digit growth of 15.55% beats the target of 4.03% by 11.51%, similarly the three year result of 14.27% versus 3.72% exhibits positive relative return at 10.55%. The annualised return over 5 years rises to 18.00%, and remains ahead of the 3.70% seen for the benchmark; then since inception (September 2010) the 6.51% is ahead of the target of 3.72%. Although the since inception Internal Rate of Return for this portfolio jumps to 13.28%, which is ahead of the benchmark figure of 3.69%.

UBS

During Q2 the UBS UK Equity investments returned +1.12%, behind the +3.26% for the FTSE All Share. Looking into the attribution analysis this underperformance was largely due to selection effects. The most significant being the negative returns in Consumer Services (-65bps) and weak performance in Financials (-57bps), while the largest positive impact comes from Consumer Goods (+25 bps). Allocation decisions had a small positive impact with the most significant being the underweighting in Consumer Goods (+56 bps) although this was muted by overweighting in Telecommunications (-14bps). The manager remains behind over the one year, stemming from figures of -5.23% vs +0.57% which translates as a relative return of -5.76%. This is largely attributable to selection effects, the biggest impacts come from both Industrials (-206bps) and Financials (-150 bps). The longer time periods show a positive picture, with three and five years ahead of the index, culminating in a since inception (January 1989) return of 9.79% versus 8.63% on an annualised basis.

Manager Commentary

Premira Credit

The Premira Credit Fund saw a growth of 1.77% over the second quarter of 2019, this was just ahead of the 3 Month LIBOR +4% p.a. target of 1.23%. The fund has outperformed in three of last four quarters and are still ahead of target, leading to an outperformance of 0.43%, created from figures of 5.46% against 5.04%. Then since the start of December 2014 when the fund incepted, the fund posts a return of 8.32% against the benchmark of 4.68%, leading to a relative position of 3.64%.

UBS Property

In continuation from the previous period, the latest quarter for the UBS Property posted an underperformance of -0.17%, generated from a return of 0.43% against the IPD UK PPFI All Balanced Funds index of 0.60%. Over the one year the manager is now behind the index, with a full year return of +2.61% vs +3.44%. The previous good run of results particularly during 2015 leads to high absolute returns staying ahead of the IPD target over the five year periods with a return of 8.76% against 8.29%. Then since inception, in March 2006, the fund return falls to 3.98% per annum which is line with the benchmark.

Private Equity

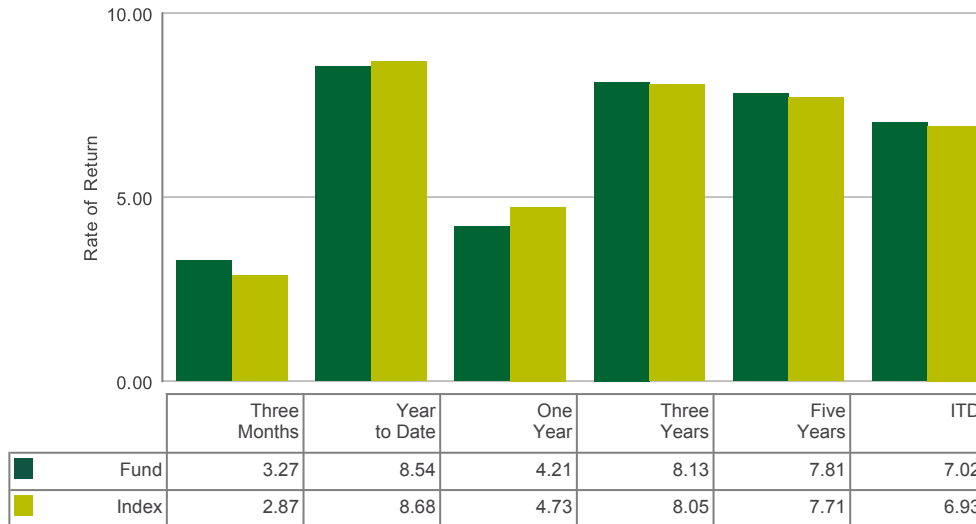
The private equity assets saw a 7.71 rise in value for LGT. Adam Street also saw an increase of 10.32%. Over the longer periods, the outlook over which private equity investments should be measured, returns remain positive. LGT maintain a run of over 3 years of growth with figures of 15.06%, 18.32% and 19.25% for the one, three and five year periods respectively, while Adam Street posted 15.99%, 14.18% and 17.20% over the same periods. Adam St are behind the proxy benchmark of MSCI AC World +4% p.a. over the three and five year period (which shows 18.13% and 17.37%). LGT are ahead over the five year outperforming by 188bps. Then since their respective inceptions in January 2005 and May 2004, Adam Street drops to 7.52% pa, while LGT sees a more modest dip to 11.71%.

Epoch

Over the second quarter the investment in Epoch's income equity fund generated a return of +3.93%. Since inception (November 2017) the fund has observed a modest rise in value +4.78% compared to the MSCI World figure of +7.75%, this leads to a relative return of -2.97%.

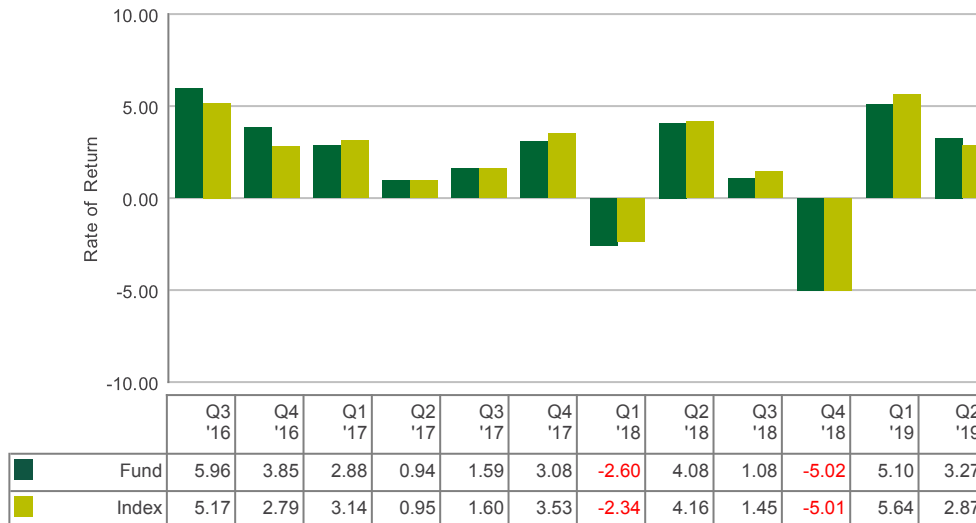
Executive Summary

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

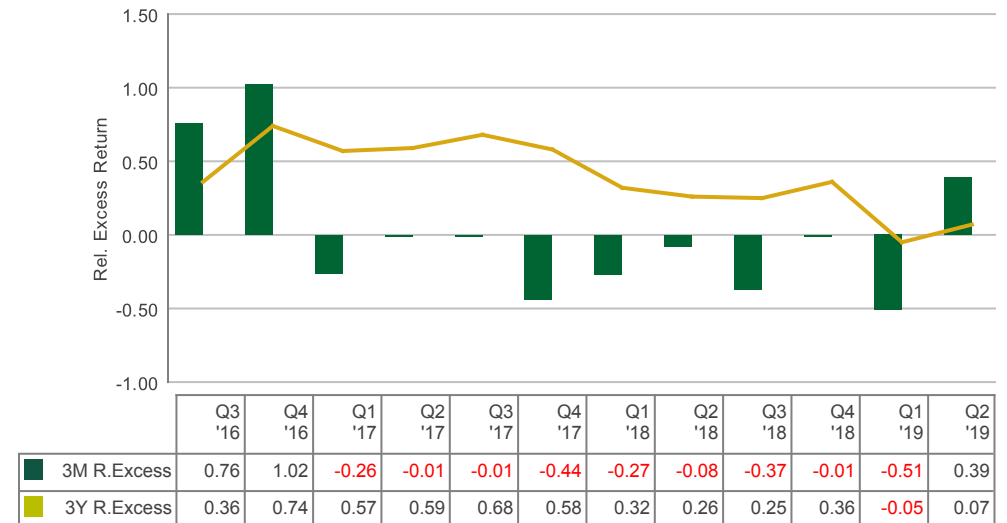
RISK STATISTICS

	1 Yr	3 Yrs	5 Yrs
Return	4.21	8.13	7.81
Index Return	4.73	8.05	7.71
Relative Excess Return	-0.50	0.07	0.09
Standard Deviation	5.47	4.82	5.03
Index Standard Deviation	5.67	4.70	4.88
Tracking Error	0.90	1.00	1.09
Information Ratio	-0.58	0.07	0.09
Sharpe Ratio	0.58	1.54	1.41
Index Sharpe Ratio	0.65	1.56	1.44
Sortino Ratio	0.88	2.99	2.65
Treynor Ratio	3.34	7.37	7.06
Jensen's Alpha	-0.34	0.04	0.06
Relative Volatility (Beta)	0.95	1.01	1.01
R Squared	0.98	0.96	0.95

Index: Total Plan Benchmark. Risk Free Index: JP Morgan 3 month Cash (GBP)

Category: Total Fund Gross of Fees. Calculation Frequency: Monthly

LONDON BOROUGH OF HILLINGDON ROLLING QUARTERS TOTAL FUND GROSS OF FEES



Index: Total Plan Benchmark

Investment Hierarchy

Account/Group -% Rate of Return	Ending Market Value GBP	Ending Weight	Three Months			Year to Date			One Year		
			Port	Index	Relative Excess	Port	Index	Relative Excess	Port	Index	Relative Excess
London Borough of Hillingdon	1,095,695,467	100.00	3.27	2.87	0.39	8.54	8.68	-0.13	4.21	4.73	-0.50
Total Plan Benchmark											
AEW UK	60,224,183	5.50	11.14	0.60	10.48	3.07	0.90	2.15	6.66	3.44	3.11
LBH22 AEW Benchmark											
JP Morgan	93,248,404	8.51	2.87	0.99	1.86	7.44	2.04	5.29	6.28	4.03	2.16
LBH15 JPM LIBOR +3%pa											
Legal & General 1	224,177,669	20.46	4.67	4.67	-0.00	15.64	15.64	-0.00	6.42	6.48	-0.06
LBH26 L&G Benchmark											
Legal & General 2	165,055,167	15.06	1.84	1.93	-0.09	8.21	8.26	-0.05	6.99	7.83	-0.78
LBH27 L&G Benchmark											
M&G Investments	7,995,163	0.73	12.83	1.23	11.46	10.31	2.53	7.58	8.91	5.04	3.69
LBH10 3 Month LIBOR +4%pa											
Macquarie	28,133,870	2.57	7.34	0.99	6.29	7.78	2.04	5.62	15.55	4.03	11.07
LBH14 Macquarie LIBOR +3%pa											
Premira Credit	65,180,152	5.95	1.77	1.23	0.54	3.28	2.53	0.73	5.46	5.04	0.40
LBH24 Premira LIBOR +4%pa											
UBS	130,669,682	11.93	1.12	3.26	-2.07	9.71	12.97	-2.89	-5.23	0.57	-5.76
LBH04 UBS Benchmark											
UBS Property	70,243,405	6.41	0.43	0.60	-0.17	0.52	0.90	-0.38	2.61	3.44	-0.80
LBH06 UBS Property Benchmark											
Adam Street	11,905,933	1.09	10.32	7.12	2.99	3.00	18.66	-13.19	15.99	14.59	1.22
Adam Street PE Bmark											
LGT	4,519,191	0.41	7.71	7.12	0.55	7.04	18.66	-9.79	15.06	14.59	0.41
LGT PE Bmark											
Epoch Investment P Income	152,941,017	13.96	3.93	6.48	-2.39	12.28	17.06	-4.09	10.84	10.30	0.49
LBH11001 MSCI World ND											
London CIV Ruffer	69,564,560	6.35	1.59	0.25	1.34	4.79	0.55	4.22	-1.24	1.03	-2.25
LBH11003 Ruffer BM Libor											

Investment Hierarchy(2)

Account/Group -% Rate of Return	Three Years			Five Years			Inception to Date			Inception Date
	Port	Index	Relative Excess	Port	Index	Relative Excess	Port	Index	Relative Excess	
London Borough of Hillingdon Total Plan Benchmark	8.13	8.05	0.07	7.81	7.71	0.09	7.02	6.93	0.08	30/09/1995
AEW UK LBH22 AEW Benchmark	9.27	6.85	2.27	11.01	8.59	2.22	11.01	8.59	2.22	30/06/2014
JP Morgan LBH15 JPM LIBOR +3%pa	4.21	3.73	0.47	3.53	3.71	-0.18	3.92	3.70	0.21	08/11/2011
Legal & General 1 LBH26 L&G Benchmark	-	-	-	-	-	-	7.05	7.14	-0.09	31/10/2016
Legal & General 2 LBH27 L&G Benchmark	-	-	-	-	-	-	6.08	6.58	-0.47	22/02/2017
M&G Investments LBH10 3 Month LIBOR +4%pa	10.60	4.72	5.62	9.48	4.71	4.56	7.47	4.72	2.62	31/05/2010
Macquarie LBH14 Macquarie LIBOR +3%pa	14.27	3.72	10.17	18.00	3.70	13.79	6.51	3.72	2.70	30/09/2010
Pemira Credit LBH24 Pemira LIBOR +4%pa	8.14	4.72	3.27	-	-	-	8.32	4.68	3.47	30/11/2014
UBS LBH04 UBS Benchmark	11.03	9.00	1.86	6.66	6.31	0.32	9.79	8.63	1.07	31/12/1988
UBS Property LBH06 UBS Property Benchmark	5.39	6.35	-0.90	8.76	8.29	0.44	3.98	3.98	0.00	31/03/2006
Adam Street Adam Street PE Bmark	14.18	18.13	-3.34	17.20	17.37	-0.14	7.52	-	-	31/01/2005
LGT LGT PE Bmark	18.32	18.13	0.16	19.25	17.37	1.60	11.71	-	-	31/05/2004
Epoch Investment P Income LBH11001 MSCI World ND	-	-	-	-	-	-	4.78	7.75	-2.76	08/11/2017
London CIV Ruffer LBH11003 Ruffer BM Libor	2.69	0.72	1.95	4.23	0.71	3.49	4.83	0.84	3.95	28/05/2010

Market Value Summary - Three Months

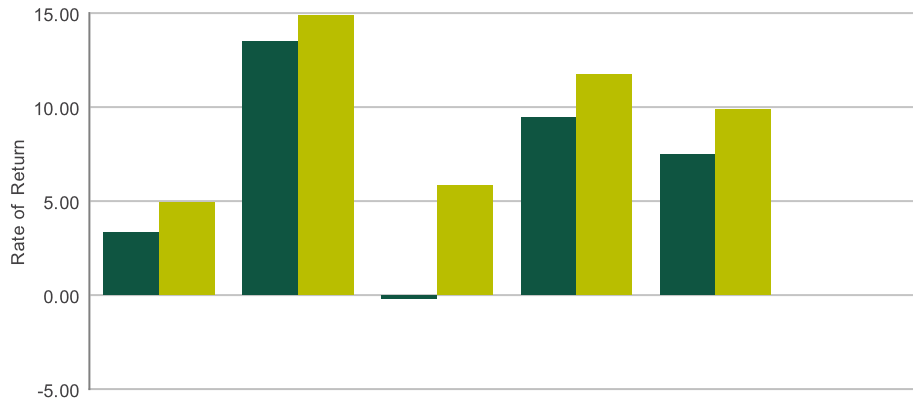
Account/Group	31/03/2019 Market Value	31/03/2019 Weight	Net Contribution*	Income	Fees	Appreciation	30/06/2019 Market Value	30/06/2019 Weight	Change in Weight
London Borough of Hillingdon	1,062,249,838	100.00	-1,318,432	6,669,859	20,269	28,094,202	1,095,695,467	100.00	0.00
AEW UK	54,186,487	5.10	0	1,530,470	0	4,507,226	60,224,183	5.50	0.40
JP Morgan	82,707,366	7.79	8,000,000	0	0	2,541,039	93,248,404	8.51	0.72
Legal & General 1	214,195,555	20.16	-17,966	0	17,966	10,000,080	224,177,669	20.46	0.30
Legal & General 2	128,804,757	12.13	34,103,037	0	2,304	2,147,372	165,055,167	15.06	2.94
M&G Investments	9,259,628	0.87	-2,110,676	681	0	845,530	7,995,163	0.73	-0.14
Macquarie	27,371,997	2.58	-1,203,634	313,707	0	1,651,800	28,133,870	2.57	-0.01
Premira Credit	64,440,344	6.07	-400,000	1,104,118	0	35,690	65,180,152	5.95	-0.12
UBS	131,174,064	12.35	-1,963,002	1,662,640	0	-204,021	130,669,682	11.93	-0.42
UBS Property	76,520,613	7.20	-6,610,257	732,487	0	-399,439	70,243,405	6.41	-0.79
Adam Street	11,462,175	1.08	-677,117	0	0	1,120,876	11,905,933	1.09	0.01
LGT	4,688,239	0.44	-520,797	32	0	351,717	4,519,191	0.41	-0.03
Cash & Other Assets	7,574,421	0.71	4,187,320	20,518	0	54,813	11,837,072	1.08	0.37
Epoch Investment P Income	147,156,298	13.85	0	1,306,627	0	4,478,092	152,941,017	13.96	0.11
London CIV Ruffer	102,707,895	9.67	-34,105,341	-1,422	0	963,428	69,564,560	6.35	-3.32
Cash & Other Assets	0	0.00	0	0	0	0	0	0.00	0.00

Min -3.32  2.94 Max

*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

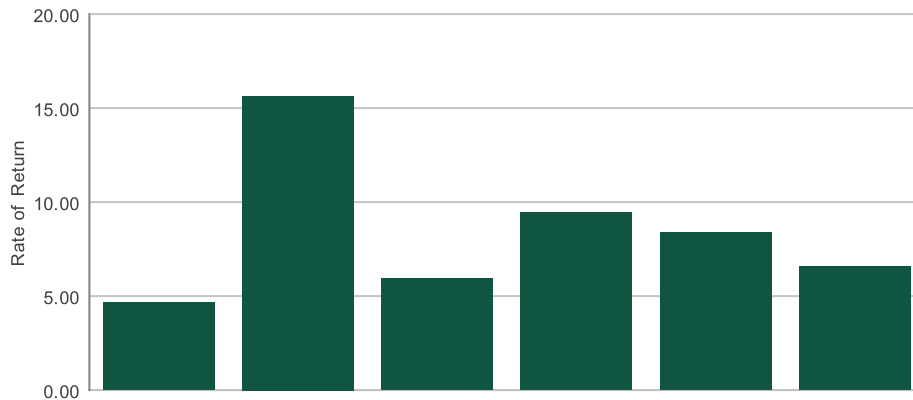
EQUITY



	Three Months	Year to Date	One Year	Three Years	Five Years	ITD
Category	3.34	13.47	-0.21	9.43	7.49	-
Index	4.91	14.89	5.85	11.73	9.86	-

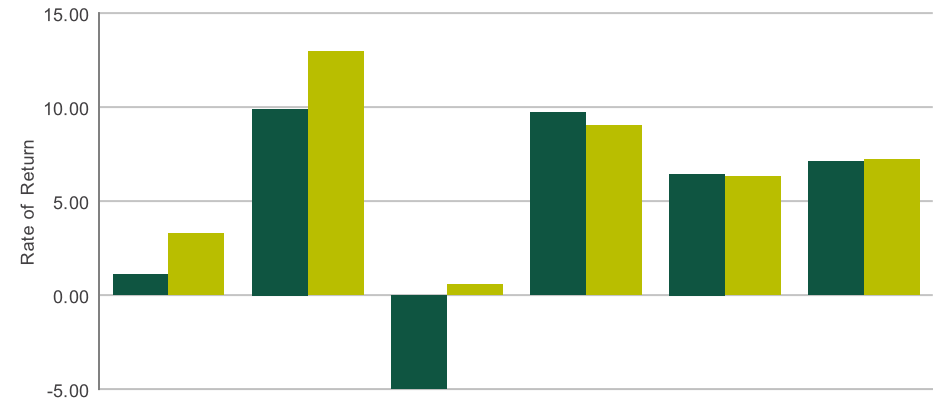
Index: Total Equity Benchmark

OVERSEAS EQUITIES



	Three Months	Year to Date	One Year	Three Years	Five Years	ITD
Category	4.67	15.64	5.93	9.43	8.39	6.57

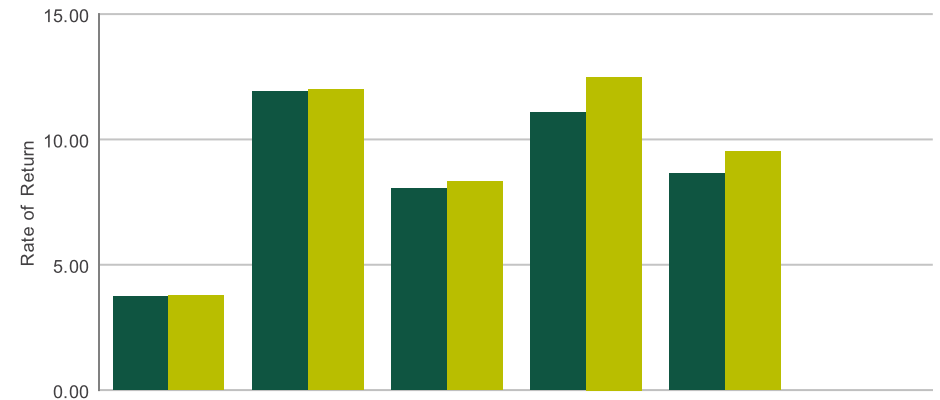
UNITED KINGDOM



	Three Months	Year to Date	One Year	Three Years	Five Years	ITD
Category	1.11	9.90	-4.96	9.72	6.44	7.10
Index	3.26	12.97	0.57	9.00	6.31	7.20

Index: FTSE All Share UK Equity

EMERGING MARKETS

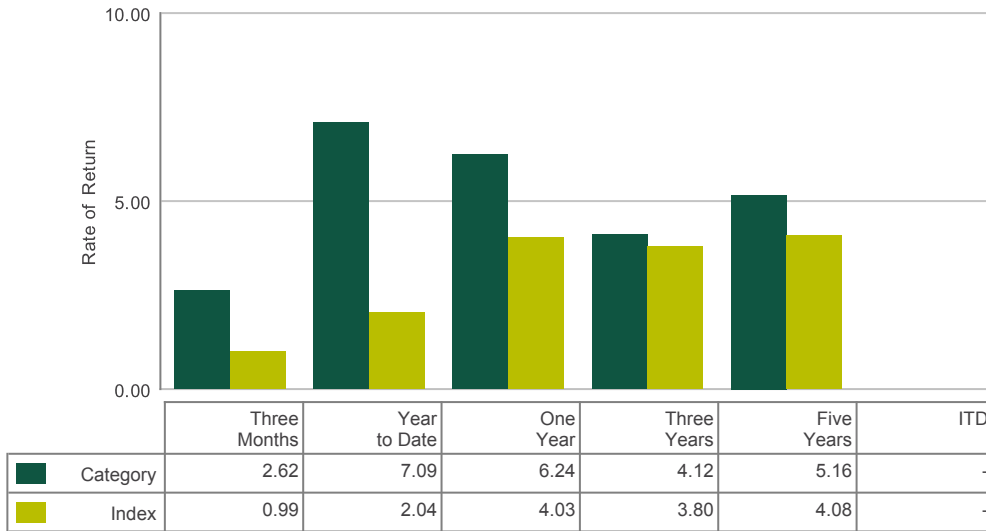


	Three Months	Year to Date	One Year	Three Years	Five Years	ITD
Category	3.72	11.92	8.04	11.06	8.64	-
Index	3.76	12.00	8.31	12.49	9.51	-

Index: LBH Emerging Markets

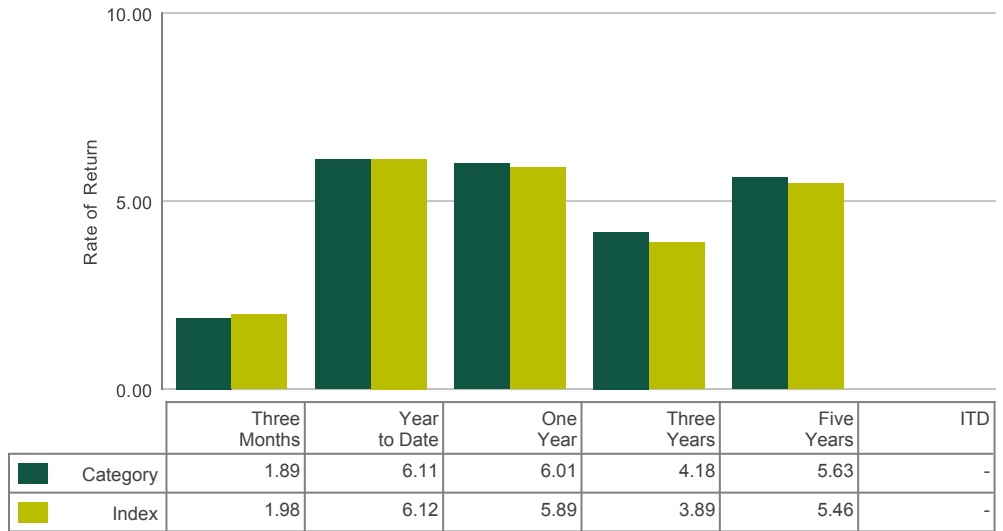
Historical Performance

FIXED INCOME



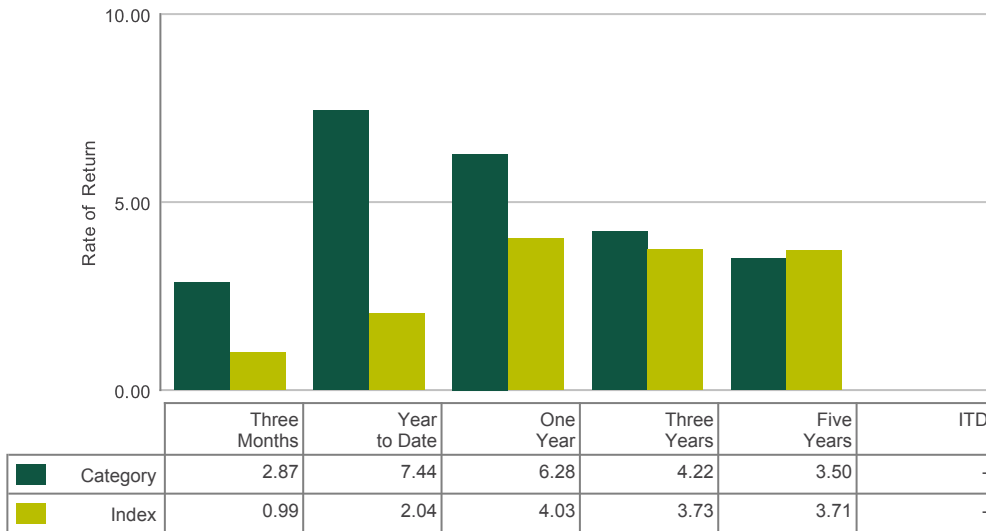
Index: LBH Fixed Income Benchmark

UK CORPORATE BONDS



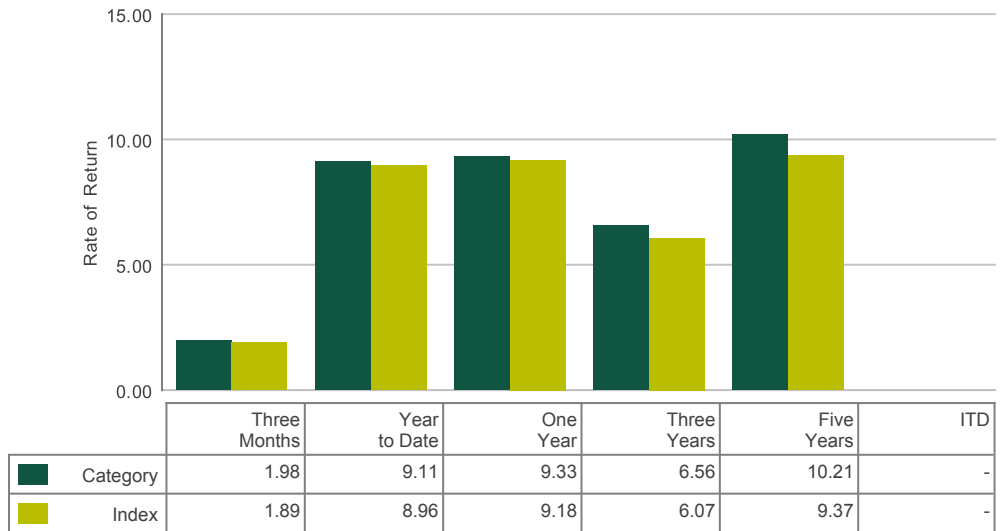
Index: LBH Non-Gilts Benchmark

GLOBAL CORPORATE BONDS



Index: LIBOR GBP 3 Month +3% pa

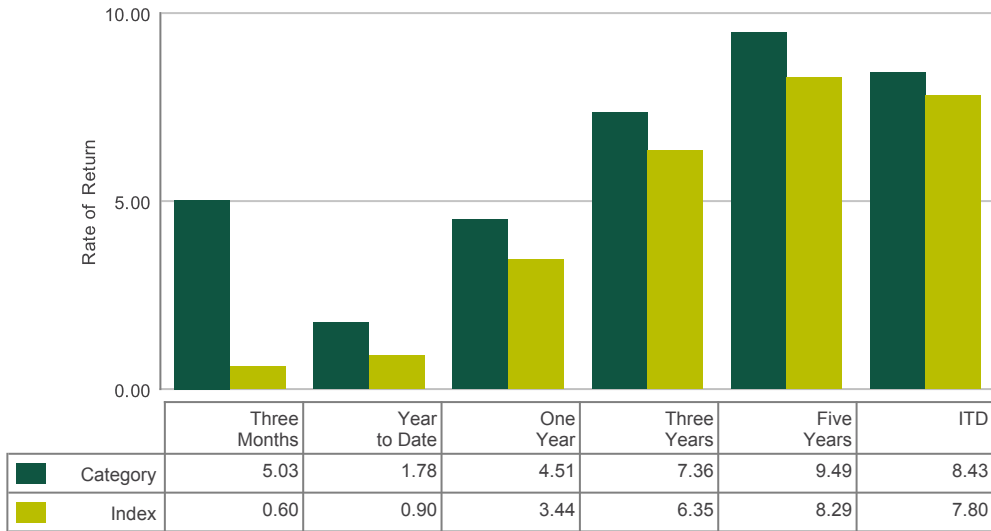
INDEX LINKED GILTS



Index: LBH Index Linked Benchmark

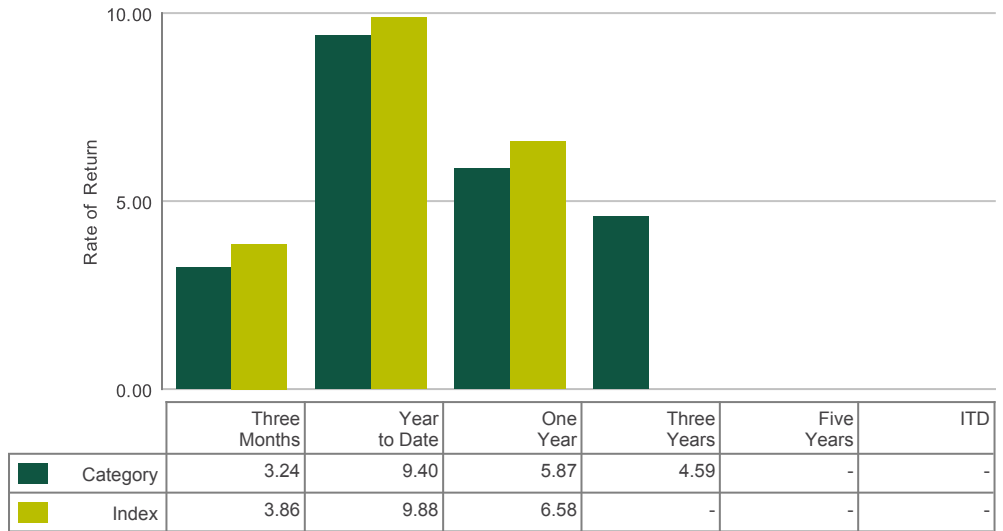
Historical Performance

REAL ESTATES



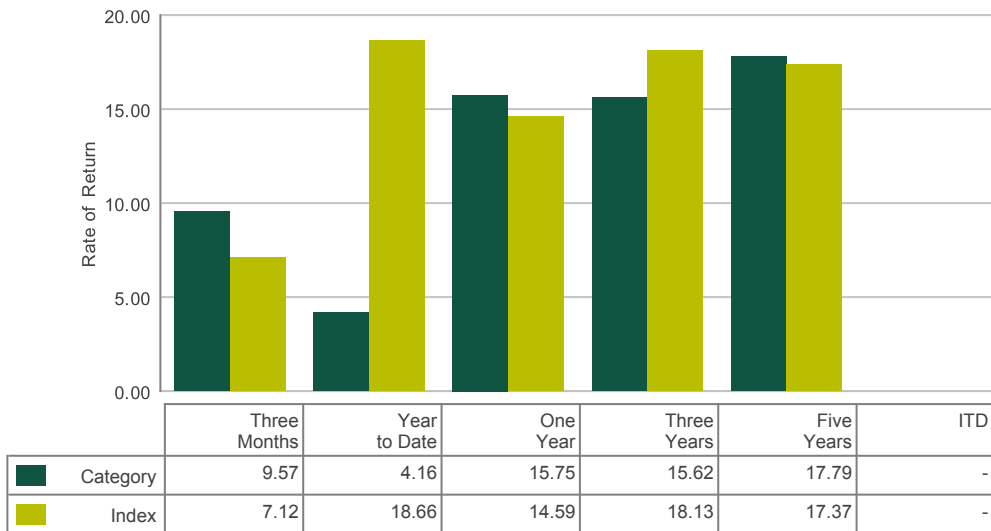
Index: IPD UK PPFI All Bal Funds Index

BALANCED FUNDS



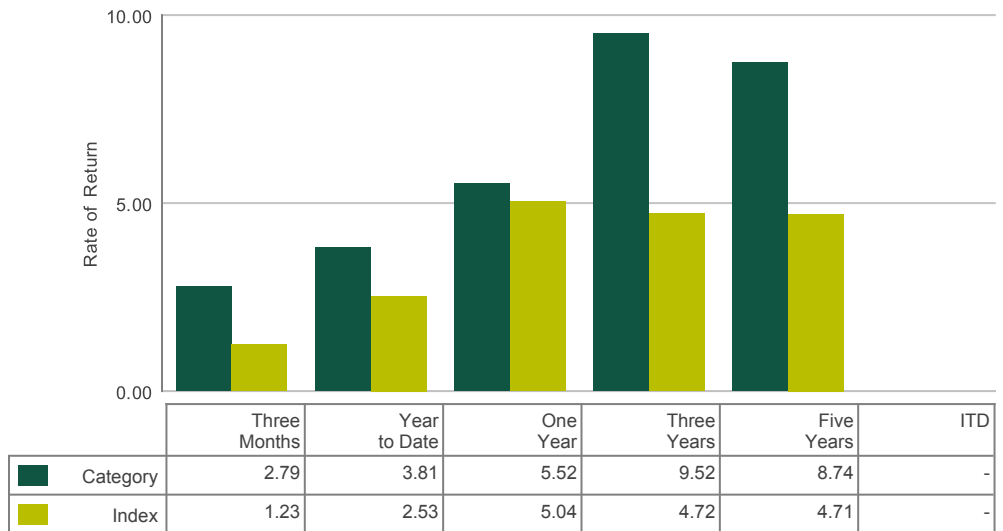
Index: Balanced Fund Benchmark

PRIVATE EQUITY



Index: MSCI ACWI +4% pa

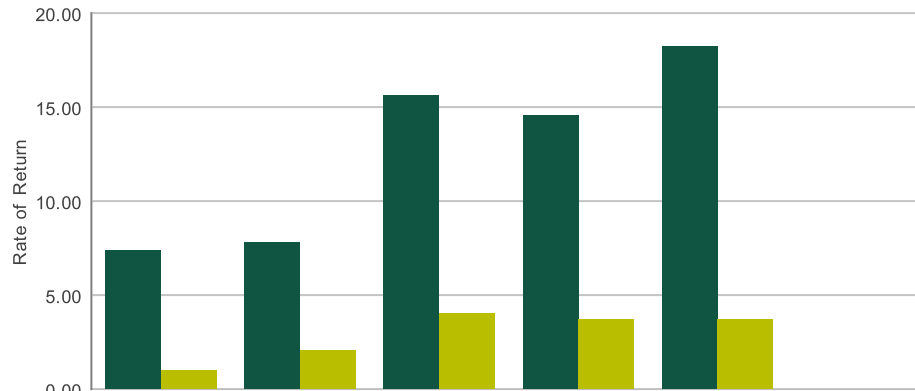
PRIVATE CREDIT



Index: LIBOR GBP 3 Month +4% pa

Historical Performance

INFRASTRUCTURE



	Three Months	Year to Date	One Year	Three Years	Five Years	ITD
Category	7.36	7.80	15.60	14.56	18.23	-
Index	0.99	2.04	4.03	3.72	3.70	-

Index: LIBOR GBP 3 Month +3% pa

Overall Fund BenchMark		
Index	Manager	%
FTSE All Share	UBS LGIM	12.04
FTSE World Developed Equity Index Currency Hedged	LGIM	8.17
FTSE World Developed Equity Index unHedged	LGIM	8.03
FTSE Emerging Markets	LGIM	2.96
IPD UK PPFI All Balanced Funds Index	UBS Property AEW	13.39
3 Month Libor +3%	JP Morgan Macquarie	10.53
MSCI World ND	Epoch/LCIV	13.47
3 Month Libor	Ruffer/LCIV	9.85
3 Month Libor +4%	M&G Permira	6.96
Markit iBoxx £ Non – Gilt	LGIM 2	3.11
FTSE A Govt Index – Linked (All Stocks)	LGIM 2	3.99
FTSE A Govt Index – Linked (Over 15 Year	LGIM 2	4.88
	Non Custody CashCash	0.81
MSCI All Countries World Index	Private Equity	1.79
		100.00

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