



Northern Trust | Investment Risk & Analytical Services

London Borough of Hillingdon

30-06-2016



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Client Commentary

Total Scheme Commentary

Forex volatility is the theme of 2016 so far. The pound hit 30 year lows versus the US dollar and investors scrambled for the safe havens of gold and government bonds following the shock result of the UK referendum on EU membership. This led to the Bank of England pumping £3.1bn into the banking system, however Credit ratings agencies took the decision to downgrade the UK noting that Brexit would likely be mildly negative for UK-focused corporates. Equity markets perked up during Q2 after a disappointing start to the year but currency returns make all the difference between red and black over the last twelve months. The World Bank lowered its forecast for global growth to 2.4% from 2.9% and warned that the initiative to bring emerging nation income up to developed world levels has been set back decades by the economic slowdown and commodities slump. Globally, Oil & Gas gained most value over quarter two and Utilities were the best performer over the year. Technology lost most over the quarter but over twelve months Financials is now the worst performer. Oil was up \$10 over the three months to finish the second quarter at \$50. The FTSE World was up by 8.7% over the quarter and returned 14.6% over the year. The JPM Global Government Bond Index returned 11.4% for the quarter while the Barclays Capital Global Aggregate Corporate Bond index was up 9.8%.

Against this backdrop the London Borough of Hillingdon returned 4.64% which leads to an outperformance of 3 basis points against the Total Plan benchmark of 4.60%. In monetary terms this is a growth in assets of £37.0 million and the value of the combined scheme now stands at £846.2 million as at 30th June 2016. This increase comes in spite of a withdrawal of £0.5 million, this period the Kempen global equity mandate was terminated, along with small disinvestments from GMO, UBS Property and Private Equity, the majority of this was transferred to Newton, while additional investment was also made with Premira and Macquarie. Looking further into the analysis the results seen were driven by selection effects, the most notable being Ruffer's impact of 40 bps, with Macquarie adding a further 24 bps, this was partly offset by the terminating Kempen mandate, detracting -17 bps. While within allocation, there is a negative impact the most significant being underweight Newton and State Street Gilts, while overweighting AEW

After a good start to 2016 the Scheme is ahead of the benchmark by 10 basis points over the rolling one year period, coming from a return of 7.85% against the benchmark of 7.74%. The largest impact comes from selection in Macquarie (+54 bps) coupled with UBS Property and Newton (both +37 bps), although these are offset by the negative effects in GMO (-49 bps) and UBS Equity (-42 bps). Similar to the quarter allocation has a negative impact coming from underweighting Newton and State Street Gilts. While over the longer periods, the Scheme continues to outperform, producing a return of 7.81% over three year versus 7.63%, while for 5 years we see figures of 7.62% versus 6.96% per annum. Then since inception in September 1995, the Fund remains ahead of target by 8 basis points with an annualised return of 6.86% against 6.77%.

Manager Commentary

AEW UK

In the second quarter of the year AEW UK Property grew 2.64%, relatively this is a 2.54% outperformance when compared to the IPD UK PPFI All Balanced Funds index figure of 0.10%. With positive absolute returns in every period since inception and only two quarters in the red on a relative basis, growth ahead of benchmark is seen in all periods. For the rolling one year a return of 13.58% against the benchmark of 7.16% translates as exactly a 6% relative return. Then in the short period since inception in June 2014, the fund return is 13.65%, leading to an outperformance of 2.15% when compared to the IPD figure of 11.26%.

GMO Global

The GMO Global mandate regained the slight losses from the previous period with a return of 0.27% over the last three months, although measured against the OECD CPI G7 (GBP) Index figure of 0.80%, translates as an underperformance of -53 basis points. Driven by the Q3 2015 results longer periods also demonstrate underperformance; with the full year showing the worst relative return seen of -5.73%. Then in the short period since the start of November 2014 when the fund inceptioned, a return of -2.38% against the benchmark of 0.63% leads to a shortfall of -2.99%.

JP Morgan

During the latest quarter JP Morgan produced their best figures in over four years with growth of 2.90% leading to an outperformance of exactly 2% when compared to the 0.89% target for the 3 Month LIBOR + 3% p.a. Coupled with the good results in the previous period, longer time periods are now all ahead of target, they exhibit outperformance of 1.00% and 0.03% over the one and three years respectively. While since November 2011 their return of 3.73% is 8 basis points above the target return of 3.64% on an annualised basis.

Newton

In the second quarter of 2016 Newton produced a return of 8.35%, although this was a relative return of -0.81% when compared to the 9.23% seen for the FTSE World Index +2%. This broke the short run of outperformance, however they still post one of the highest relative returns over one year with 11.08%, coming from figures of 28.94% versus 16.08%. Although with nine underperforming quarters over the last twelve the three year return falls just short with figures of 13.17% vs 13.42%; then since inception in January 2013, the fund return of 13.88% falls short of the yardstick of 13.93% by just 4 basis points.

**Client Commentary (cntd)****Manager Commentary****M&G Investments**

This quarter M&G broke the run of underperformance by beating the 3 Month LIBOR +4% pa target of 1.13% by 3.68%, posting a return of 4.85%. This more than makes up for the three previous quarters, leading to one year figures of 5.20% against 4.59%. Driven by the previous good results, all longer periods are ahead of target. Over the three and five year the account registers figures of 7.06% vs 4.57% and 6.53% vs 4.66% respectively; since inception (May 2010) return falls slightly to 5.95% pa whilst the benchmark is 4.69% pa. Although the since inception Internal Rate of Return moves further ahead of target with a figure of 6.73% opposed to the comparator of 4.42%.

Macquarie

In the latest quarter, once again Macquarie posted the best relative return this period of 9.72%, generated from a return of 10.69% against 0.89% for the 3 Month LIBOR +3% pa. With eight consecutive quarters of positive absolute and relative returns the one year return of 31.86% beats the target of 3.59% by 27.29%, again the highest relative return over this period. Then while three and five years remain ahead, they fall below the target since inception (September 2010), a shortfall of -0.97%, derived from a return of 2.68% against the target of 3.68%. Although the since inception Internal Rate of Return for this portfolio jumps to 12.48%, which is ahead of the benchmark figure of 3.59%.

London CIV Ruffer

In the latest period the Ruffer portfolio produced a 3.77% return which was 3.61% above the LIBOR 3 Month GBP figure of 0.16%. This offsets the poor result seen in Q3 2015, meaning the one year period edges just ahead of the target of 0.60% with a growth in assets of 0.75%. Then with only 2 quarter's in the red in the last four years outperformance remains in the longer periods. This is seen in a three year return of 4.64% versus 0.56% increasing to 5.73% against 0.66% over five years, culminating in since inception (May 2010) figures of 5.89% versus 0.68% per annum, which translates as a relative return of 5.18%.

Private Equity

Over the latest period private equity assets show positive absolute returns, LGT continued their almost 3 year run of growth with a figure of 9.13%, while Adam Street posted 6.01%. Over the longer periods, the outlook over which private equity investments should be measured, returns remain positive. Over one and three years they both exhibit some of the highest returns (only matched by Macquarie and UBS Property), Adam Street posts 22.53% and 17.05%, while LGT is 35.07% and 14.33% respectively. While over five years both see a slight fall with Adam Street at 14.693%, while LGT posts 10.76%. Then since their respective inceptions in January 2005 and May 2004, Adam Street drops to 5.83% pa, while LGT sees a slight dip to 10.13%. At present no benchmark has been applied to these mandates.

Manager Commentary**Premira Credit**

There was no price change in the Premira Credit Fund again this quarter, meaning their 0% return was below the 3 Month LIBOR +4% p.a. target of 1.13%. Comparable analysis will only be seen over a longer period, but in the short period since the start of December 2014 when the fund inceptioned, the fund posts a return of 8.65%, while the benchmark shows 4.49%.

SSGA

The passive SSGA portfolio produced a quarterly return of 6.34%, just -3 basis points below the benchmark; further analysis confirms the passive nature with all categories aligned with their respective indices. So over the year they produce a 7.53% return, which also falls -3 basis points short of the target, while over 3 years the return increases to 8.01% pa which is just -4 basis points behind the benchmark. Since inception (November 2008) a return of 11.18% pa which exactly matches the benchmark, the passive nature is also demonstrated by the R squared and beta figures of 1, while the tracking error is just 0.22.

UBS

During Q2 the UBS UK Equity investments were just ahead of the benchmark, with a return of 4.75% compared to the FTSE All Share figure of 4.70%. Looking into the attribution analysis, the stand-out positive impact was overweighting Oil & Gas (1.01%), however this effect was negated by selection, mainly caused by Consumer Services (-0.94%). However, the good start to 2016 is not enough to offset the 1 year deficit, with figures of -1.07% vs 2.21% leading to a relative return of -3.21%. This is attributable to both allocation and selection, with the biggest impact coming from the underweight of Consumer Goods (-2.40%), partly offset by overweighting Oil & Gas (0.97%). While in selection, the most significant impact was in Financials (-1.42%), while the largest positive impact came from Basic Materials (1.10%). UBS fall just short over the tree year period, but then due to the previous good results, especially in 2013, maintain outperformance over the longer time periods, translating as a since inception return of 9.65% versus 8.59% on an annualised basis.

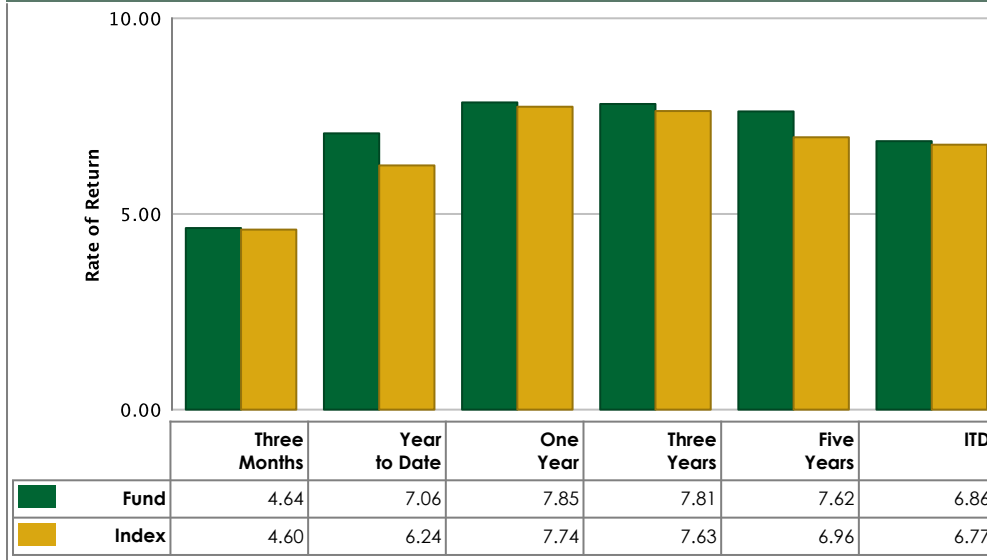
UBS Property

Over the second quarter the UBS Property assets fell for the first time since Q4 2012, with a figure of -0.53%, which against the IPD UK PPFI All Balanced Funds index figure of 0.10%, translates as a relative return of -0.63%. With the previous good run of results, high absolute returns staying ahead of the IPD target remain over the longer periods, peaking over the three year with a return of 14.64% against 12.51%. Then since inception, in March 2006, the fund return falls to 3.57% per annum while the benchmark shows 3.29%, translating as an outperformance of 27 basis points.



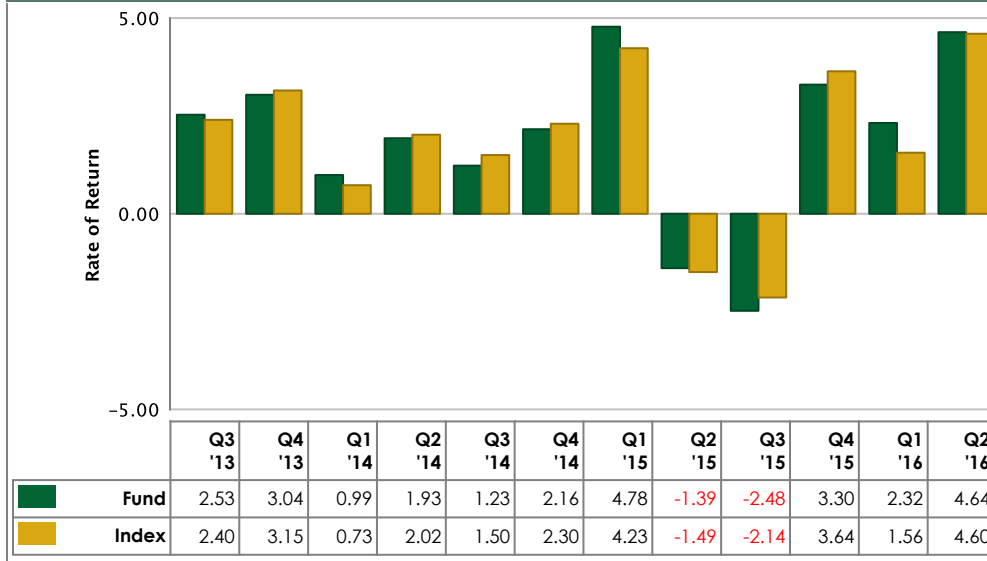
Executive Summary

London Borough of Hillingdon Total Fund Gross of Fees



Index: Total Plan Benchmark

London Borough of Hillingdon Rolling Quarters Total Fund Gross of Fees



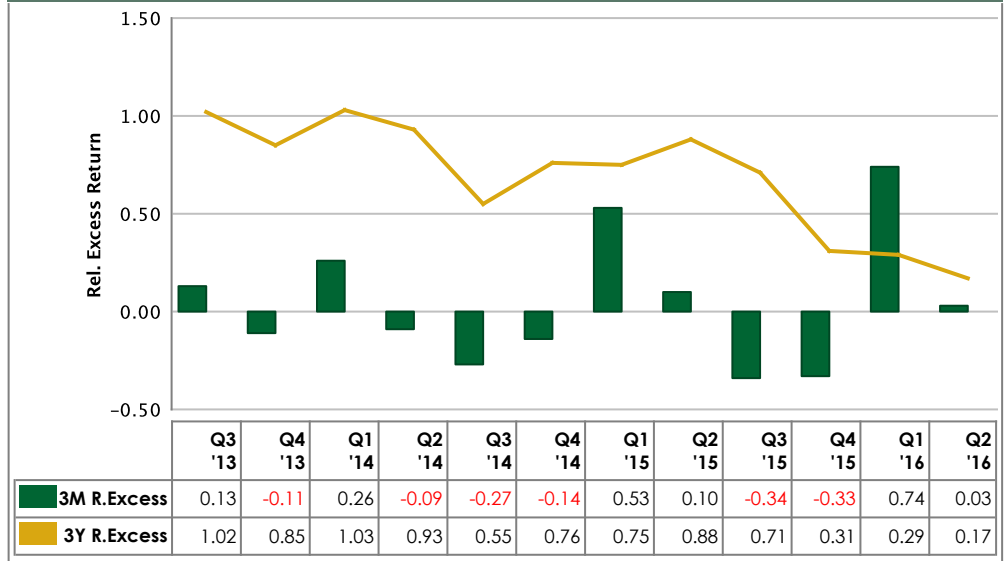
Index: Total Plan Benchmark

Risk Statistics

	3 Yrs	5 Yrs
Return	7.81	7.62
Index Return	7.63	6.96
Excess Return	0.18	0.67
Standard Deviation	5.17	5.77
Index Standard Deviation	5.06	5.56
Tracking Error	1.05	1.25
Information Ratio	0.18	0.53
Sharpe Ratio	1.39	1.17
Index Sharpe Ratio	1.38	1.10
Sortino Ratio	-	1.90
Treynor Ratio	7.16	6.68
Jensen's Alpha	0.16	0.55
Relative Volatility (Beta)	1.00	1.01
R Squared	0.96	0.95

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

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	846,165,489	100.00	4.64	4.60	0.03	7.06	6.24	0.78	7.85	7.74	0.10
Total Plan Benchmark											
Adam Street	19,148,428	2.26	6.01	-	-	11.07	-	-	22.53	-	-
AEW UK	37,148,140	4.39	2.64	0.10	2.54	5.32	1.20	4.07	13.58	7.16	6.00
LBH22 AEW Benchmark											
GMO Global	59,206,319	7.00	0.27	0.80	-0.53	0.23	1.20	-0.96	-5.15	0.62	-5.73
LBH23 GMO Global											
JP Morgan	37,664,475	4.45	2.90	0.89	2.00	5.21	1.79	3.36	4.63	3.60	1.00
LBH15 BM JP Morgan BM											
Kempen	5,648	0.00	-	-	-	-	-	-	-	-	-
LBH20 Kempen MSCI World +2%											
LGT	10,861,970	1.28	9.13	-	-	19.49	-	-	35.07	-	-
M&G Investments	40,966,002	4.84	4.85	1.13	3.68	4.82	2.27	2.49	5.20	4.59	0.58
LBH10 3 Month Libor GBP +4%Pa											
Macquarie	22,601,659	2.67	10.69	0.89	9.72	19.39	1.78	17.30	31.86	3.59	27.29
LBH14 Macquarie Libor +3%											
Newton	125,965,781	14.89	8.35	9.23	-0.81	17.33	13.00	3.83	28.94	16.08	11.08
LBH19 FTSE World Index +2%											
Premira Credit	28,209,967	3.33	-0.00	1.13	-1.12	0.00	2.27	-2.22	7.95	4.59	3.21
LBH24 Premira											
London CIV Ruffer	96,381,312	11.39	3.77	0.16	3.61	3.94	0.31	3.63	0.75	0.60	0.15
LBH11 Ruffer Benchmark											
SSGA	168,335,825	19.89	6.34	6.38	-0.03	7.85	7.91	-0.06	7.53	7.56	-0.03
LBH07 SSGA Benchmark											
State Street Gilts	24,772,180	2.93	13.36	13.39	-0.02	-	-	-	-	-	-
LBH25 FTSE Index Linked											
UBS	102,593,396	12.12	4.75	4.70	0.05	6.15	4.27	1.80	-1.07	2.21	-3.21
LBH04 UBS Benchmark											
UBS Property	70,899,026	8.38	-0.53	0.10	-0.63	0.83	1.20	-0.37	11.47	7.16	4.03
LBH06 UBS Property Benchmark											



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	7.81	7.63	0.17	7.62	6.96	0.62	6.86	6.77	0.08	30/09/1995
Total Plan Benchmark										
Adam Street	17.05	-	-	14.69	-	-	5.83	-	-	31/01/2005
AEW UK	-	-	-	-	-	-	13.65	11.26	2.15	30/06/2014
LBH22 AEW Benchmark										
GMO Global	-	-	-	-	-	-	-2.38	0.63	-2.99	31/10/2014
LBH23 GMO Global										
JP Morgan	3.61	3.57	0.03	-	-	-	3.73	3.64	0.08	08/11/2011
LBH15 BM JP Morgan BM										
Kempen	-	-	-	-	-	-	-	-	-	31/01/2013
LBH20 Kempen MSCI World +2%										
LGT	14.33	-	-	10.76	-	-	10.13	-	-	31/05/2004
M&G Investments	7.06	4.57	2.38	6.53	4.66	1.78	5.95	4.69	1.21	31/05/2010
LBH10 3 Month Libor GBP +4%Pa										
Macquarie	12.06	3.57	8.20	4.24	3.66	0.55	2.68	3.68	-0.97	30/09/2010
LBH14 Macquarie Libor +3%										
Newton	13.17	13.42	-0.22	-	-	-	13.88	13.93	-0.04	24/01/2013
LBH19 FTSE World Index +2%										
Premira Credit	-	-	-	-	-	-	8.65	4.49	3.99	30/11/2014
LBH24 Premira										
London CIV Ruffer	4.64	0.56	4.05	5.73	0.66	5.03	5.89	0.68	5.18	28/05/2010
LBH11 Ruffer Benchmark										
SSGA	8.01	8.05	-0.04	7.66	7.67	-0.01	11.18	11.18	0.00	30/11/2008
LBH07 SSGA Benchmark										
State Street Gilts	-	-	-	-	-	-	15.18	15.25	-0.06	04/03/2016
LBH25 FTSE Index Linked										
UBS	5.42	5.86	-0.41	7.65	6.27	1.30	9.65	8.59	0.98	31/12/1988
LBH04 UBS Benchmark										
UBS Property	14.64	12.51	1.90	9.68	8.44	1.15	3.57	3.29	0.27	31/03/2006
LBH06 UBS Property Benchmark										



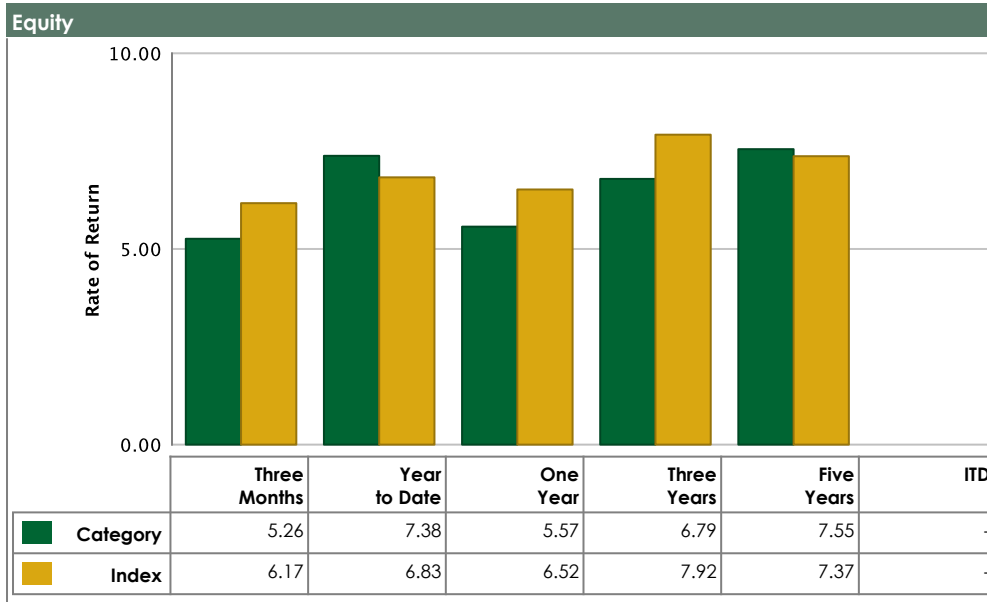
Market Value Summary - Three Months

Account/Group	31/03/2016 Market Value GBP GOF	Net Contribution*	Income	Fees	Appreciation	30/06/2016 Market Value GBP GOF
London Borough of Hillingdon	809,140,479	-499,999	4,393,228	0	33,131,781	846,165,489
Adam Street	19,195,306	-1,116,734	0	0	1,069,855	19,148,428
AEW UK	36,191,586	0	613,110	0	343,444	37,148,140
Cash & Other Assets	4,623,003	-3,493,003	1,522	0	146,565	1,278,087
GMO Global	62,040,984	-3,000,000	0	0	165,335	59,206,319
JP Morgan	36,602,574	0	0	0	1,061,901	37,664,475
Kempfen	87,317,171	-86,962,042	61,173	0	-410,654	5,648
LGT	10,828,307	-892,510	-98	0	926,271	10,861,970
London CIV Ruffer	92,876,238	1	138,477	0	3,366,596	96,381,312
M&G Investments	39,069,580	0	222	0	1,896,199	40,966,002
Macquarie	18,943,562	1,475,711	-443	0	2,182,830	22,601,659
Newton	30,395,510	86,657,463	0	0	8,912,808	125,965,781
Premira Credit	20,345,263	7,864,705	0	0	-1	28,209,967
SSGA	158,294,560	0	0	0	10,041,266	168,335,825
State Street Gilts	21,851,933	0	0	0	2,920,247	24,772,180
State street tansition A/c		311,314	124,757	0	-309,496	126,575
UBS	97,937,021	0	1,479,915	0	3,176,461	102,593,396
UBS Property	72,627,269	-1,344,904	1,974,532	0	-2,357,871	70,899,026
UBS Tactical	612	0	62	0	26	700

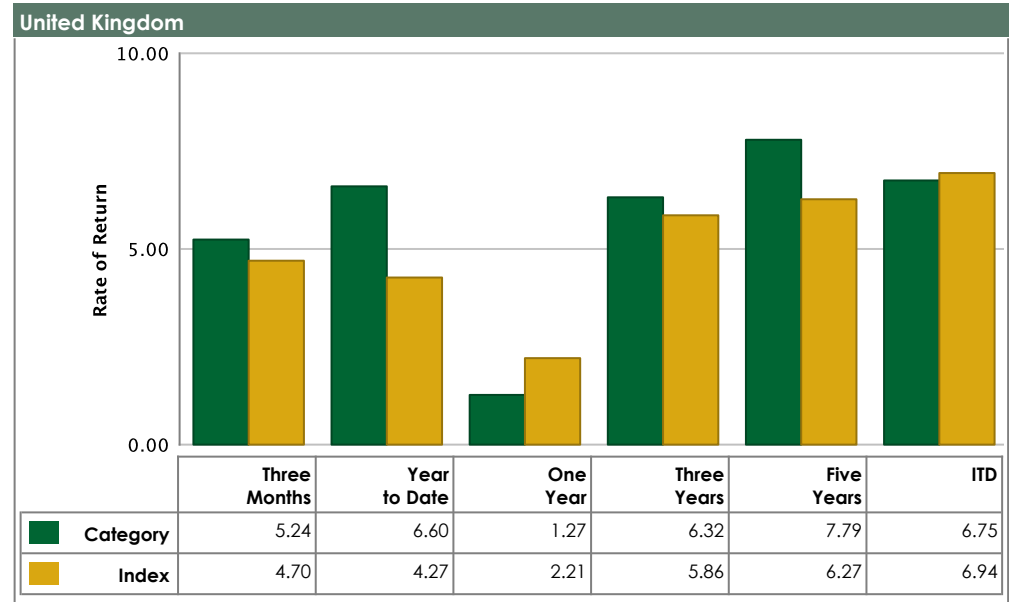
*Net Contributions include Cash Contributions/Distributions, Security Deliveries/Receipts, Fees/Fee Rebates, Inter Account transfers for Consolidations & Benefits Payments.
Copied History or Backloaded Data may not display the correct Contributions/Withdrawals creating misrepresentation.



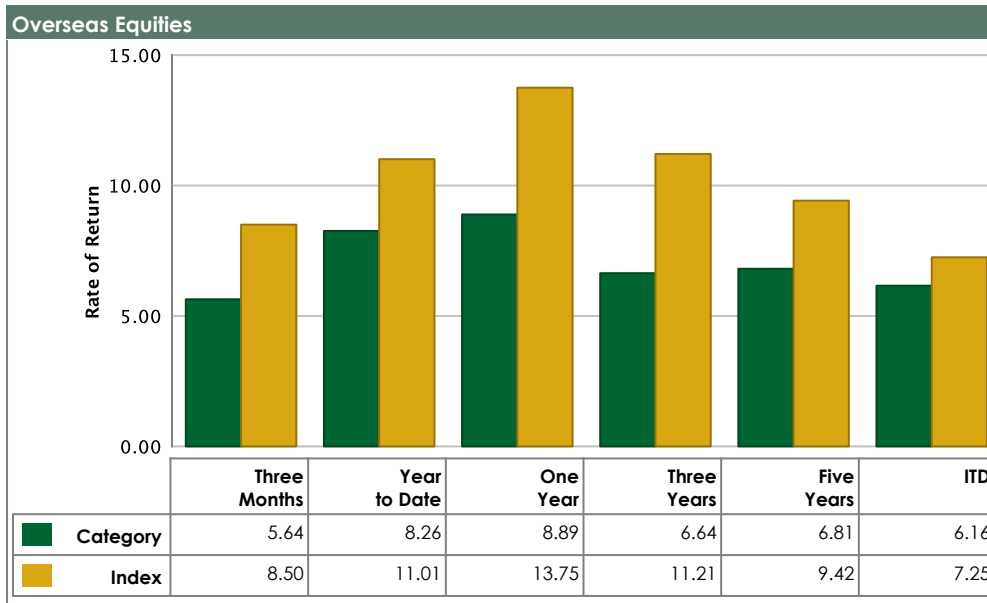
Historical Performance



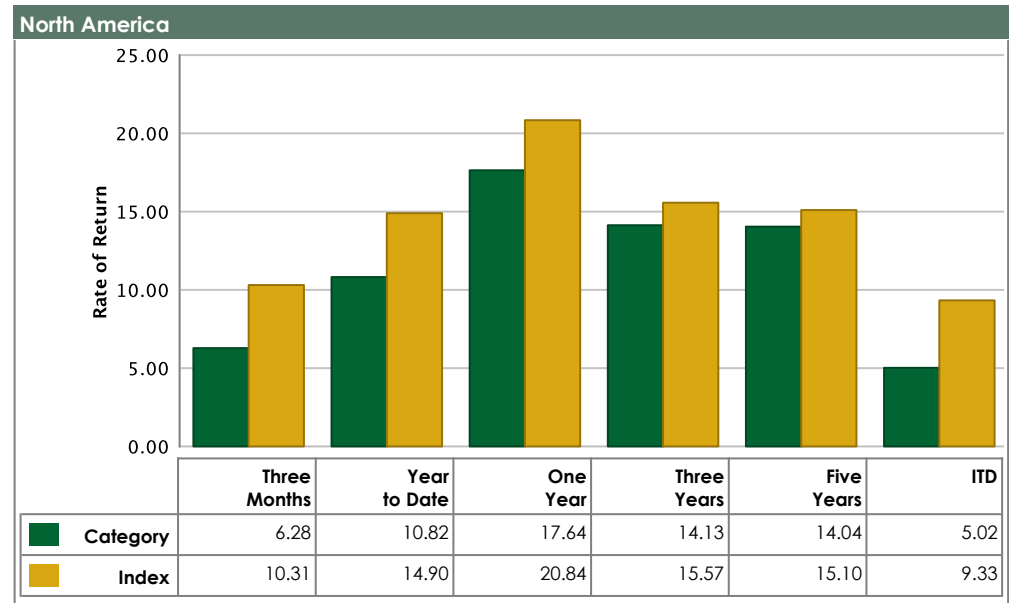
Index: Total Equity Benchmark



Index: FTSE All Share UK Equity



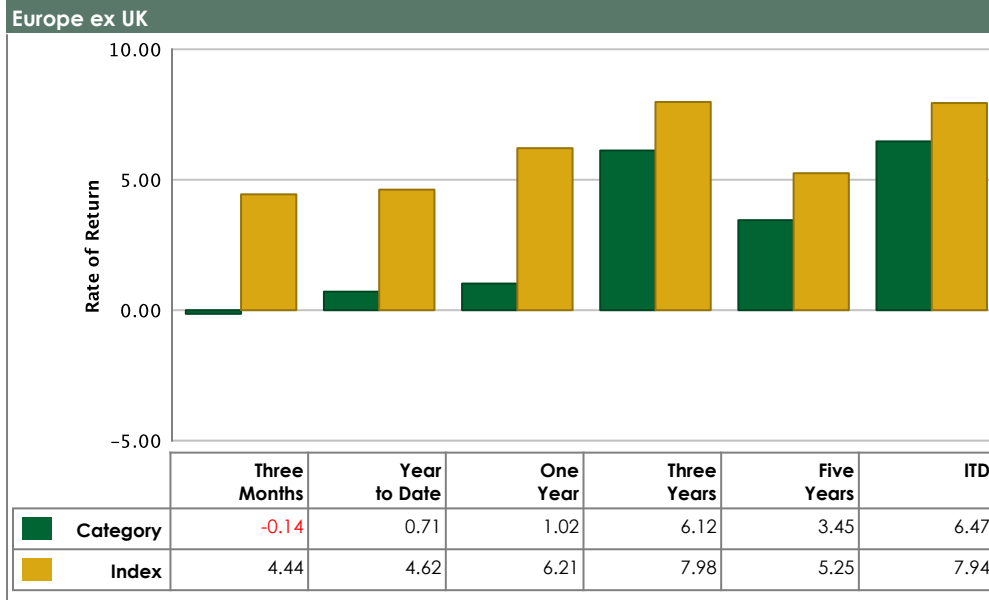
Index: Total O'seas Equity Benchmark



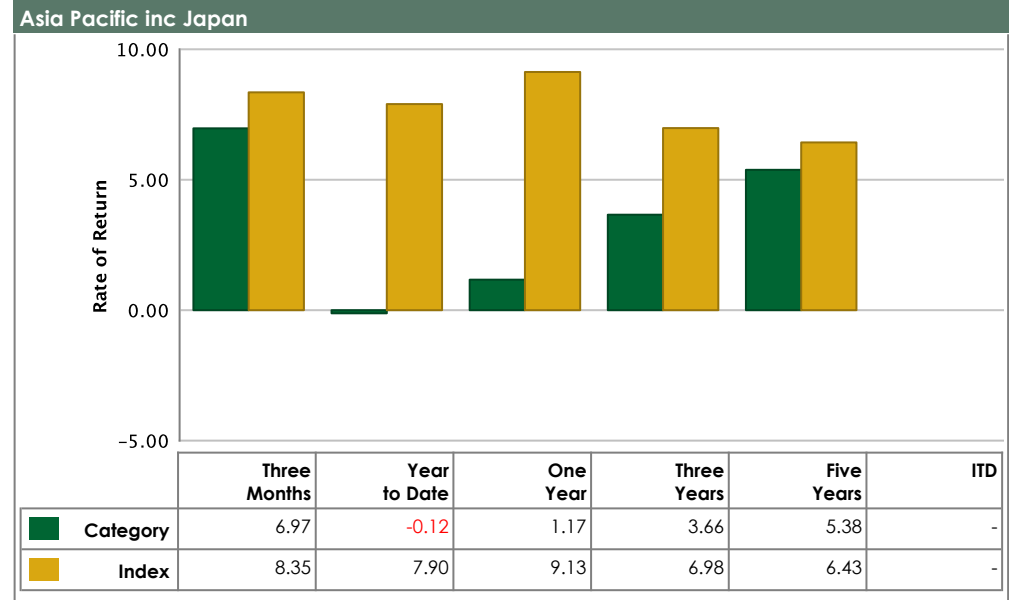
Index: FTSE North America



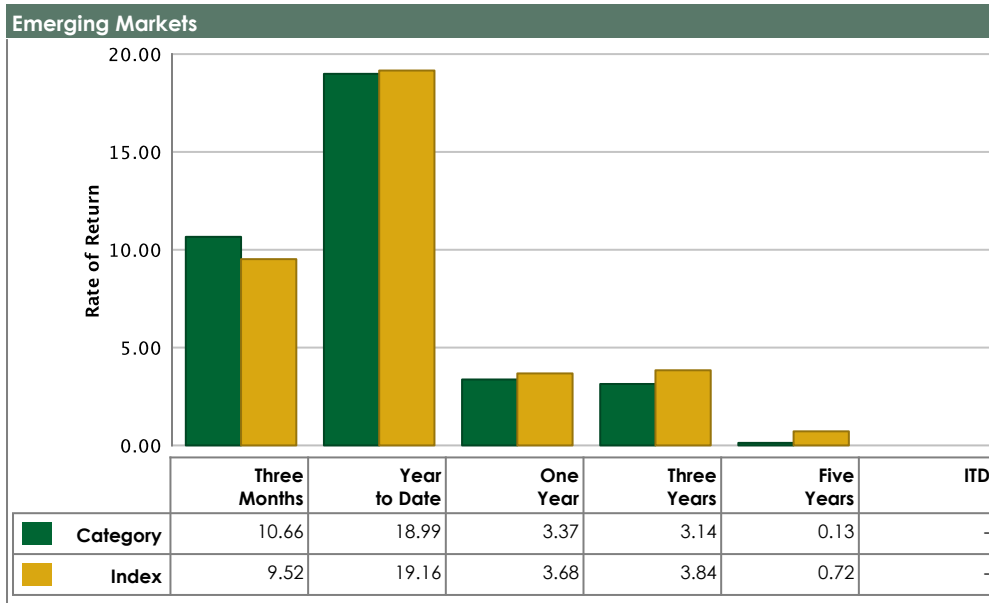
Historical Performance



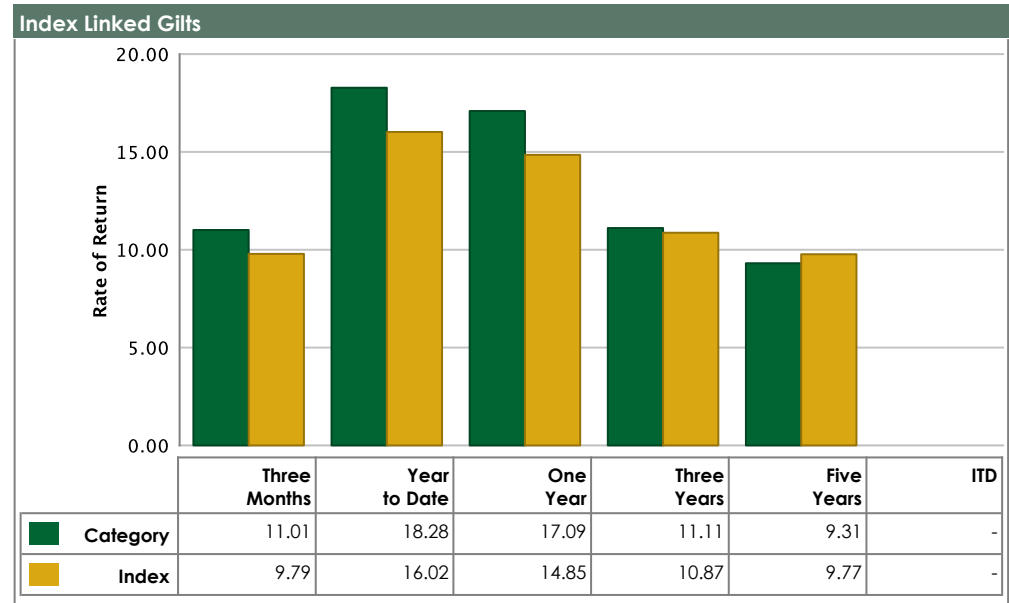
Index: FTSE AW Dev Europe ex UK



Index: FTSE AW Dev Asia Pacific



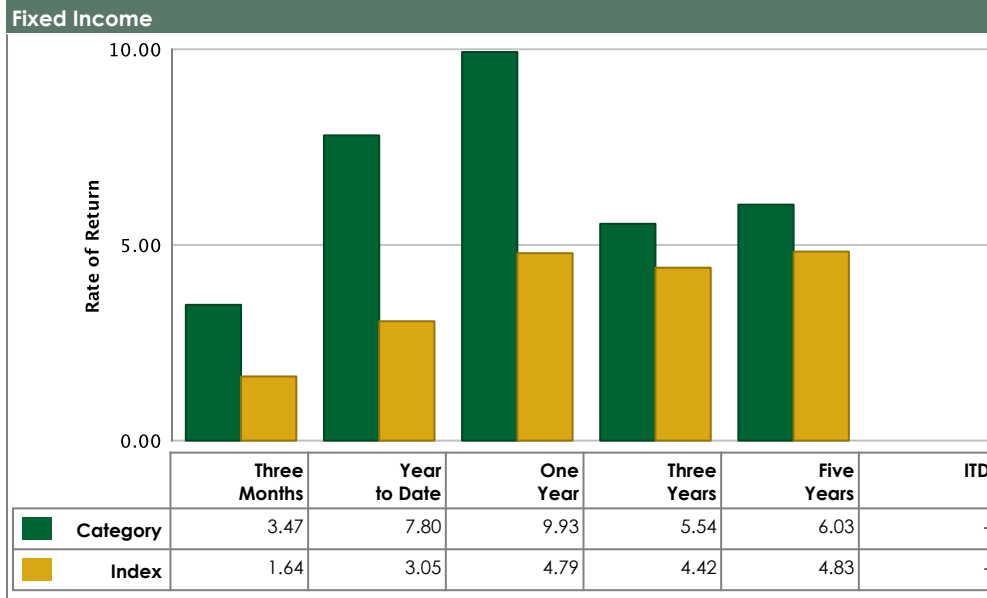
Index: LBH Emerging Markets



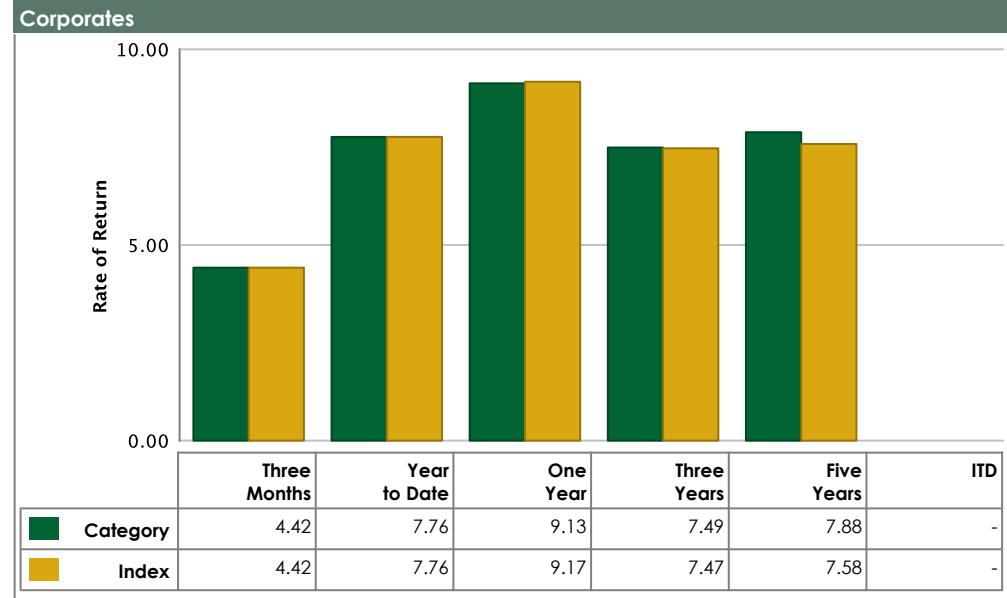
Index: LBH Index Linked Benchmark



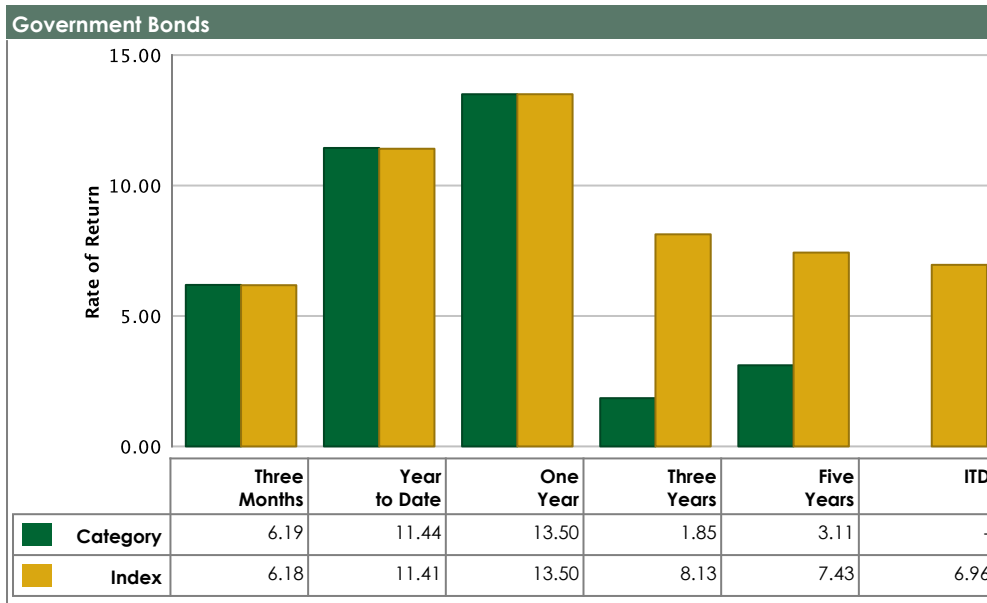
Historical Performance



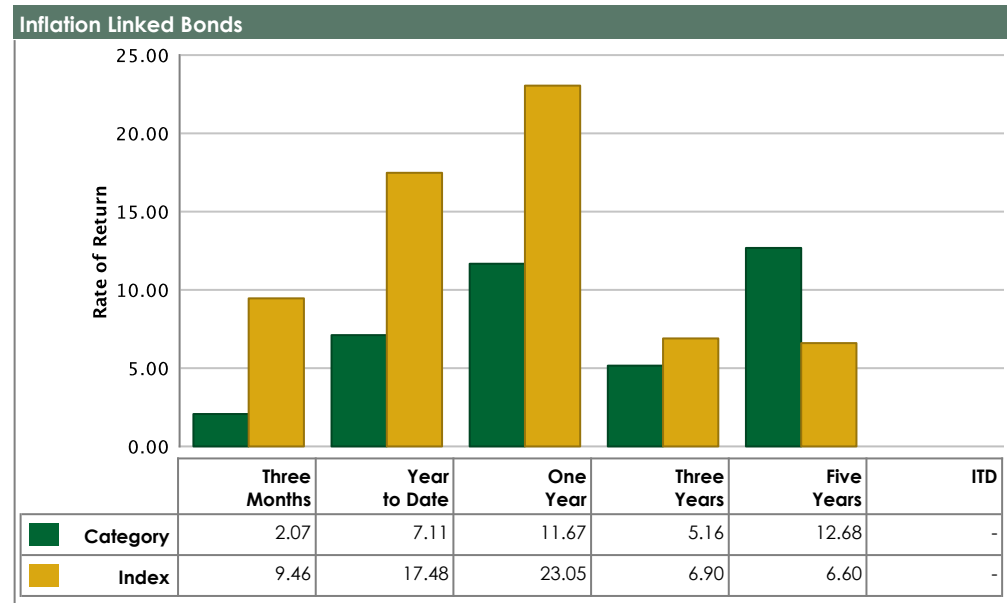
Index: LBH Fixed Income Benchmark



Index: LBH Non-Gilts Benchmark



Index: FTSE All Stock Index

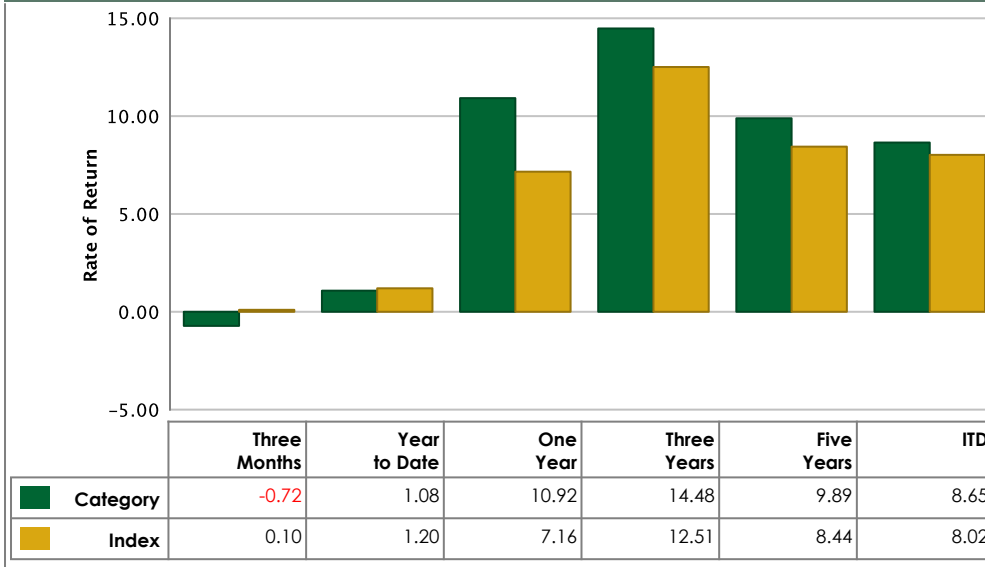


Index: Barclays Global Inflation Link



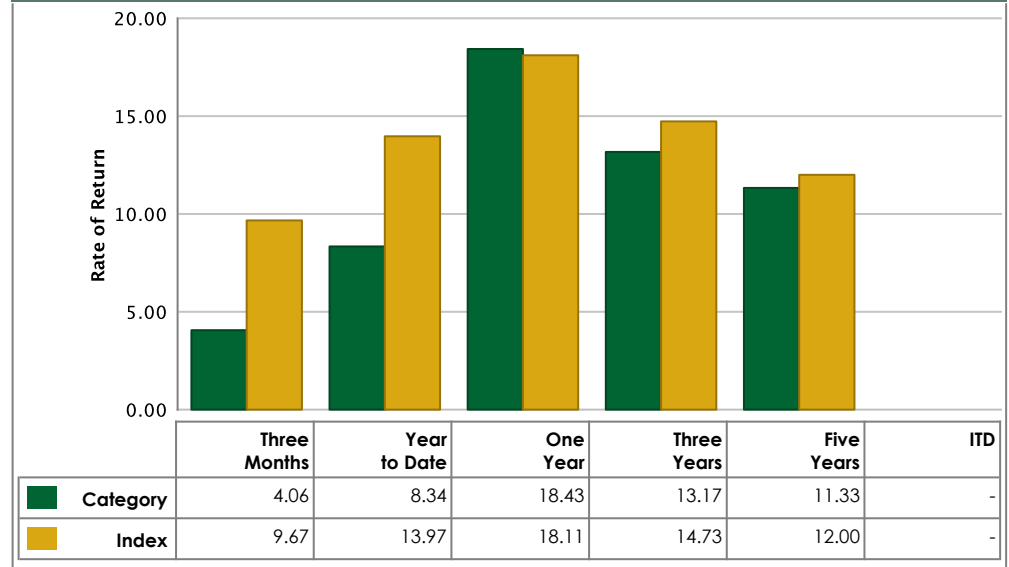
Historical Performance

Real Estates



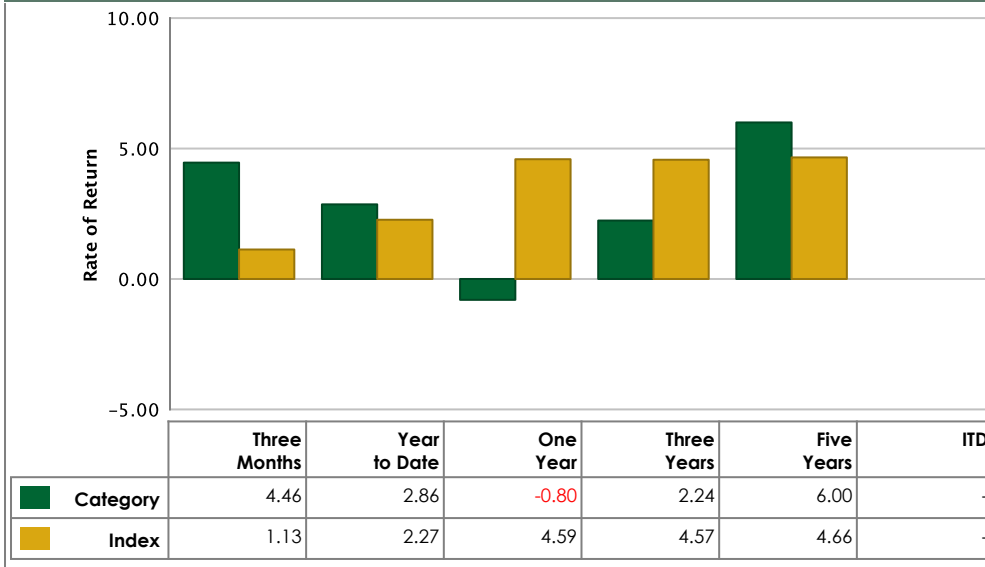
Index: IPD UK PPFI All Bal Funds Index

Private Equity



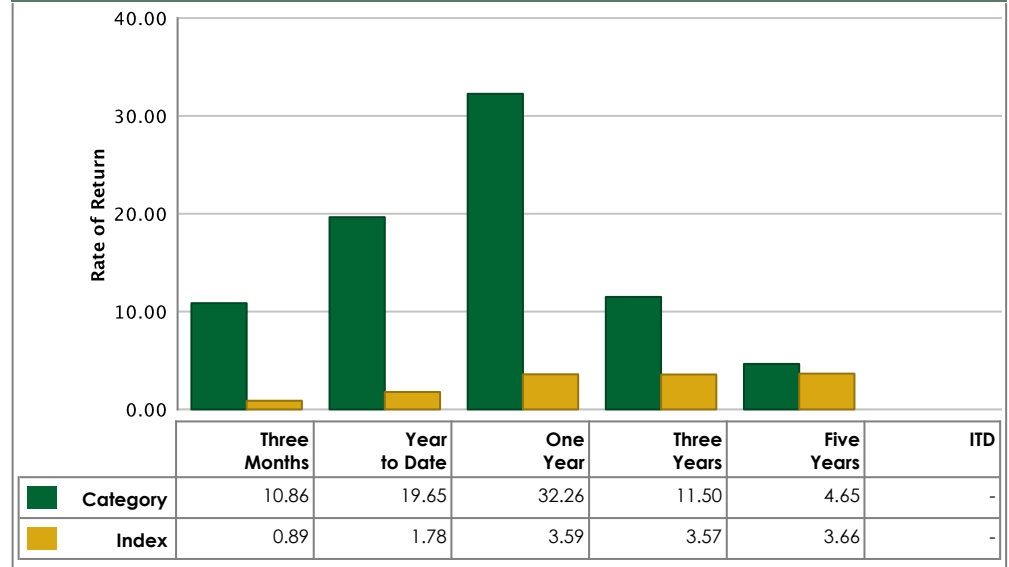
Index: Private Equity Benchmark

Hedge Funds



Index: LIBOR GBP 3 Month +4%

Infrastructure



Index: Infrastructure Benchmark



Benchmark Composition

Total Plan Benchmark

24.2	FTSE All Share
2.3	FTSE AW North America
2.2	FTSE AW Developed Europe ex UK
2.2	FTSE AW Developed Asia Pacific
0.6	FTSE All World All Emerging
14.1	FTSE World Index +2%
1.9	FTSE Index Linked Gilts
1.7	BC Sterling Aggregate 100mm Non Gilts
0.3	FTSE All Stock Index
10.3	IPD UK PPFI All Balanced Funds Index
6.0	LIBOR 3 Month + 3%
11.9	LIBOR 3 Month
4.7	MSCI All Countries World Index
4.3	FTSE Index Linked Gilts 15+ Years
8.6	OECD CPI G7 (GBP) Index
4.7	LIBOR 3 Month + 4%

AEW UK

100.0	IPD UK PPFI All Balanced Funds Index
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GMO Global

100.0	OECD CPI G7 (GBP) Index
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JP Morgan

100.0	LIBOR 3 Month + 3%
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M&G Investments

100.0	LIBOR 3 Month + 4%
-------	--------------------

Macquarie

100.0	LIBOR 3 Month + 3%
-------	--------------------

Newton

100.0	FTSE World Index +2%
-------	----------------------

Permira Credit

100.0	LIBOR 3 Month + 4%
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Ruffer

100.0	3 Month Sterling LIBOR
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SSGA

44.0	FTSE All Share
11.0	FTSE World North America
11.0	FTSE World Europe ex UK
11.0	FTSE Pacific Basin ex Japan
10.0	FTSE Index Linked Gilts
8.5	ML Sterling Non-Gilts
3.0	FTSE All World All Emerging
1.5	FTSE Gilts All Stocks

State Street Gilts

100.0	FTSE Index Linked Gilts 15+ Years
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UBS

100.0	FTSE All Share
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UBS Property

100.0	IPD UK PPFI All Balanced Funds Index
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