



NORTHERN
TRUST

London Borough of Hillingdon

Investment Risk & Analytical Services

December 31, 2020

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Client Commentary

Total Scheme Commentary

Total Scheme Commentary

Despite a difficult 2020 there were many other political, social and environmental events that dominated headlines outside of the global pandemic. On the social scene: there was the news of Megxit, George Floyd's death and the subsequent Black Lives Matter movement. In the US, two NASA astronauts were sent into orbit and news of Joe Biden winning the US presidential election. Furthermore, the Cryptocurrency Bitcoin surged past £20,000 for the first time at the end of Q4. Global government bond performance was mixed, there was a wide divergence in yields recorded here. US yields rose (which consequently meant prices fell) and corporate bonds gained ground, meanwhile German yields fell further into negative territory. The Barclays Global Aggregate GBP returned -2.32% for the quarter, the hedged version of the index returned +0.77%. In the UK, a Brexit deal was agreed on the 24th December despite Prime Minister Johnson having earlier warned that there was a "strong possibility" that the UK would fail to strike a post-Brexit trade deal. The growing likelihood of a no-deal Brexit and new lockdown measures drove bond yields lower over Q4, although this was offset by optimism around the news of vaccines in November. Economic recovery in the UK stalled in October with GDP growing by just 0.4% month-on-month, down from September's 1.1% month-on-month growth. The FTSE All Stock Index finished the quarter up by +0.63% and at +8.27% for the year. The equity comeback was quite remarkable; down 34% in March and ending the year up 16% (USD). Similar stories followed the Great Depression and the crash of 2009 but the speed of this recovery was notable. Much is owed to Consumer Discretionary, IT and North America, the companies that sit within those groups helped to keep the world turning while we all holed up (but largely continued to work) until the storm passed. Volatility hasn't gone away, at the end of October global equities endured their worst week since March then November and December were both strong. UK Pound Sterling's value fluctuated during the quarter, particularly during December as the UK-EU trade agreement deadline approached. By the end of Q4, GBP had gained 5.7% versus USD, 1.3% versus the Euro and 3.5% against the Yen. From one day to the next, guarded messages from either side of the negotiating table appeared to dictate the direction of GBP with any hint of a no deal leading to swift downturns, which were usually corrected at the first sight of more promising developments. In the end, a potential no deal crisis was averted as trade talks were successfully completed at the 11th hour. A combination of a weaker dollar and the successful culmination of the EU trade talks led to sterling reaching a 2-year high versus the greenback, before falling back slightly as news surfaced of a new, more contagious COVID strain originating from north Kent. However, this was not enough to stop the Pound reaching its highest point against the dollar on the final day of the year.

Within this environment the London Borough of Hillingdon returned +5.41% which was ahead of the Total Plan benchmark of +4.93%. In monetary terms this is a gain in assets of £58.2 million and the value of the combined scheme now stands at £1,134 million as at 31st December 2020. The Scheme's one year return of +1.16% is 4.18% behind the benchmark of +5.58% following this quarter's outperformance. While over the longer periods, despite nine positive quarters over the last 3 years, the Scheme has again underperformed, producing a return of 3.27% over three years versus 5.09%. Then the scheme continues to underperform over the 5 year period where we observe figures of 7.13% per annum (vs the benchmark 7.87%). Then since inception in September 1995, the Fund remains behind

Manager Commentary

AEW UK

The AEW UK Property Fund posted a total return of +10.98%, beating the IPD UK PPFI AI Balanced Funds Index and continuing the outperformance seen during the previous quarter. Rolling one year returns continue to see losses, with the mandate returning -4.97% versus -1.05% for the IPD Index

They are ahead over the three year period returning 2.94% against the benchmark of 2.32%. This translates as 0.60% relative underperformance. With positive absolute returns in all but two periods and three quarters in the red on a relative basis, growth is observed and ahead of benchmark over three years. Since the funds inception date of July 2014, the fund return is 7.71%, leading to an outperformance of approx 1.2% when compared to the IPD figure of 6.49%.

JP Morgan

In the latest quarter JP Morgan posted an increase in assets of +4.93% leading to an outperformance of +4.15% when compared to the 0.76% target for the 3 Month LIBOR + 3% p.a. Then with positive results in three of the last four quarters, the one year return of +6.91% is in positive territory and is ahead of the 3.62% target by over 3%. Then over three years they post returns ahead of the benchmark with figures of 4.28% vs 3.83%. Since the mandate funded their return of 4.24% is 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. LGIM portfolio now represent almost 23% of the scheme as of 31st December 2020. Over the last three months the Legal & General No. 1 mandate post a return of +2.9% in line with the custom fixed weight blended benchmark. In the period since inception in October 2016, they return 9.1%, which is just below the benchmark return of 9.2%.

Legal & General 2

The No 2 Legal & General mandate returned 0.47% against 0.82% for the fourth 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 remain broadly in line with the benchmark returning 6.4% against 6.9% for the benchmark.

Client Commentary (cntd)

Manager Commentary

London CIV Ruffer

The absolute return strategies employed by London CIV Ruffer translated into a 443 basis point outperformance of the 3-mth Sterling LIBOR target. The investment is above the benchmark over all longer term periods. This is seen in a five year return of 5.21% versus 0.72%, then similarly for the since inception period (May 2010) figures of 5.47% versus 0.82% per annum, which translates as a relative return of over 4%.

M&G Investments

M&G posted further losses in Q4 by producing a return of -3.50% against the 3 Month LIBOR +4% p.a. target of 1.00%, demonstrating an underperformance of 4.45%. This is the fourth consecutive quarter of underperformance and the full year return remains behind the benchmark by 33.82%, coming from figures of -30.76% against 4.62%. Over the three and five year the account registers figures of -7.69% vs 4.83% and 0.22% vs 4.72% respectively; since inception (May 2010) returns improve to 3.03% 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 7.56% opposed to the comparator of 4.60%.

Macquarie

Over the last three months, Macquarie produced losses of 0.84%, against the 0.76% for the 3 Month LIBOR +3% p.a. this translates as an underperformance of 1.59%. With nine quarters of positive absolute returns and seven positive relative returns, outperformance is seen in all longer periods. Over the rolling year a growth of 6.06% is ahead of the target of 3.62% by 2.35%. By contrast the three year result of 10.07% versus 3.83% exhibits positive relative return over 6%. The annualised return over 5 years rises to 13.70%, and remains ahead of the 3.72% seen for the benchmark; then since inception (September 2010) the 6.20% is ahead of the target of 3.71%. Although the since inception Internal Rate of Return for this portfolio jumps to 11.77%, which is ahead of the benchmark figure of 2.99%.

Manager Commentary

Premira Credit

The Premira Credit Fund saw an increase of 1.69% over the fourth quarter of 2020, this was ahead of the 3 Month LIBOR +4% p.a. target of 1.00%. The fund has outperformed in three of the last four quarters but are behind target, leading to an underperformance of 1.01%, created from figures of 3.57% against 4.62%. Then since the start of December 2014 when the fund incepted, the fund posts a return of 7.43% against the benchmark of 4.69%, leading to a relative position of over 2%.

UBS Property

The latest quarter for the UBS Property posted an underperformance of 0.71%, generated from a return of 1.37% against the IPD UK PPFI All Balanced Funds index of 2.10%. Over the one year the manager is behind the index, with a full year return of -2.42% vs -1.05%. The previous good run of results particularly during 2015 leads to high absolute returns staying just ahead of the IPD target over the ten year period with a return of 6.59% against 6.42%. Then since inception, in March 2006, the fund return falls to 3.40% per annum which is broadly in line with the benchmark.

Private Equity

The private equity assets saw a 3.90% rise in value for Adam Street. LGT also saw an increase of 8.59%. 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 11.99% and 16.24% for the three and five year periods respectively, while Adam Street posted 11.99% and 12.74% 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 show double digit gains of 14.27% and 18.59%). LGT are behind over the five year underperforming by over 190bps. Then since their respective inceptions in January 2005 and May 2004, Adam Street drops to 7.44% pa, while LGT sees a more modest dip to 11.07%.

Epoch

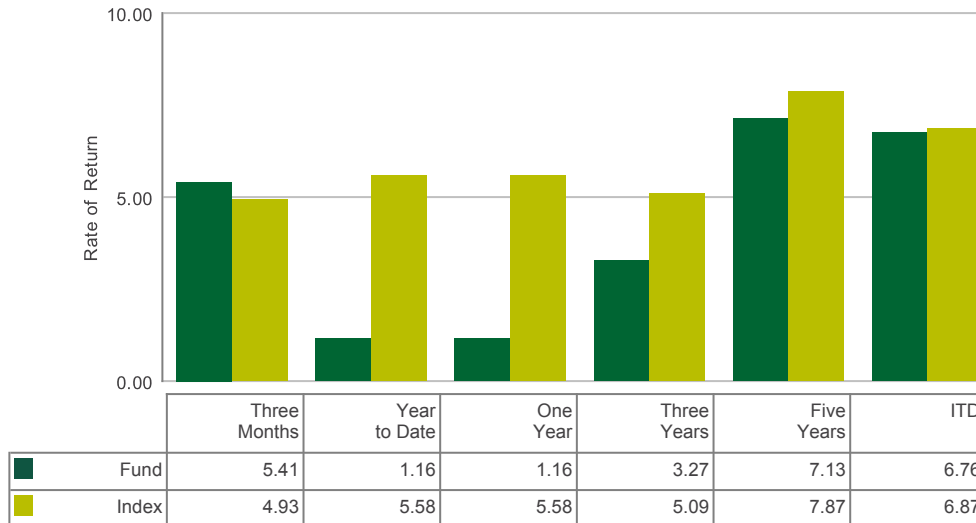
Over the fourth quarter the investment in Epoch's income equity fund generated a return of +5.70%. Since inception (November 2017) the fund has observed a modest rise in value 2.71% compared to the MSCI World figure of +9.51%, this leads to a relative return of over -6%.

LCIV Infrastructure Fund

The LCIV Infrastructure fund was launched in quarter two and the valuation at 31st December was £8.95m

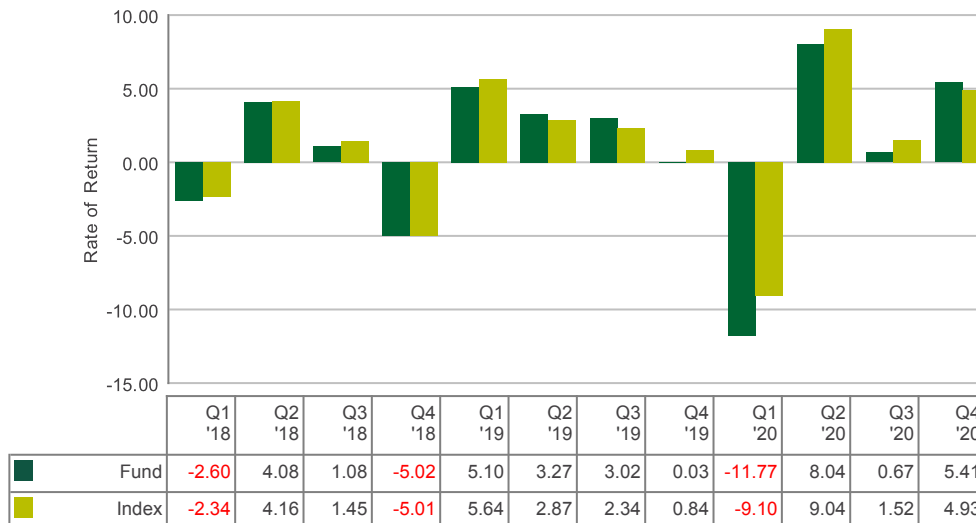
Executive Summary

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

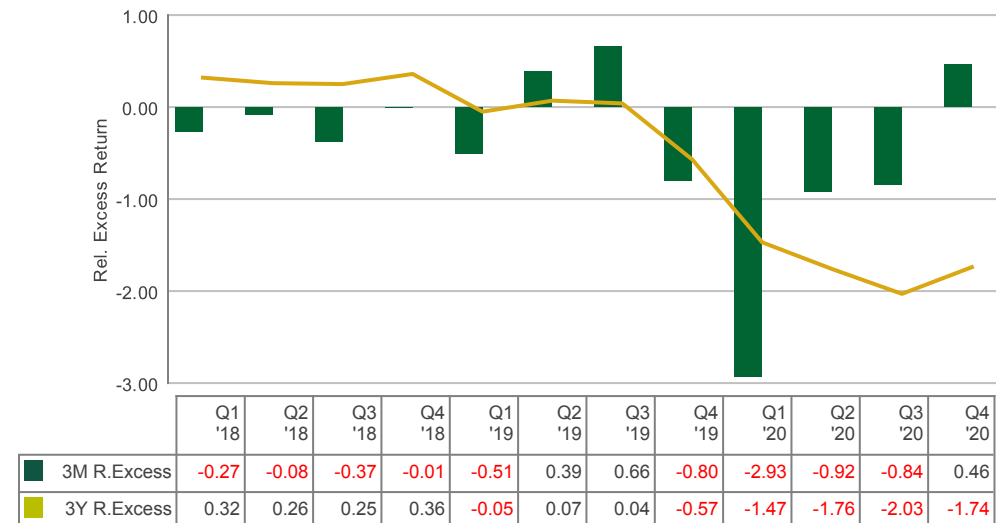
RISK STATISTICS

	3 Mos	1 Yr	3 Yrs	5 Yrs
Return	5.41	1.16	3.27	7.13
Index Return	4.93	5.58	5.09	7.87
Excess Return	0.49	-4.42	-1.83	-0.74
Standard Deviation	-	11.48	7.72	6.78
Index Standard Deviation	-	10.17	7.11	6.14
Tracking Error	-	1.85	1.47	1.43
Information Ratio	-	-2.39	-1.24	-0.52
Sharpe Ratio	-	0.05	0.32	0.95
Index Sharpe Ratio	-	0.49	0.60	1.17
Jensen's Alpha	-	-4.67	-1.99	-1.23
Relative Volatility (Beta)	-	1.12	1.07	1.08
R Squared	-	0.99	0.97	0.96
Beginning MV (in 000s)	1,075,588	1,125,558	1,008,837	793,975
Net Contributions (in 000s)	11	-4,564	19,075	11,883
Income (in 000s)	3,469	16,676	61,724	87,876
Appreciation (in 000s)	54,770	-3,832	44,202	240,104
Ending MV (in 000s)	1,133,838	1,133,838	1,133,838	1,133,838

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	Policy Weight	Three Months			Year to Date			One Year			Inception Date
				Port	Index	Relative Excess	Port	Index	Relative Excess	Port	Index	Relative Excess	
London Borough of Hillingdon	1,133,837,958	100.00	-	5.41	4.93	0.46	1.16	5.58	-4.18	1.16	5.58	-4.18	30/09/1995
Total Plan Benchmark													
Adam Street	8,336,673	0.74	-	3.90	9.27	-4.92	11.13	17.22	-5.19	11.13	17.22	-5.19	31/01/2005
Adam Street PE Bmark													
AEW UK	57,893,517	5.11	-	10.98	2.10	8.70	-4.97	-1.05	-3.97	-4.97	-1.05	-3.97	30/06/2014
LBH22 AEW Benchmark													
Cash & Other Assets	3,783,010	0.33	-	-	-	-	-	-	-	-	-	-	31/10/2017
Cash & Other Assets	10,757,880	0.95	-	-1.66	-	-	-1.79	-	-	-1.79	-	-	30/09/2008
Epoch Investment P Income	59,842,263	5.28	-	5.70	7.78	-1.93	-3.26	12.32	-13.88	-3.26	12.32	-13.88	08/11/2017
LBH11001 MSCI World ND													
JP Morgan	111,928,019	9.87	-	4.93	0.76	4.15	6.91	3.62	3.17	6.91	3.62	3.17	08/11/2011
LBH15 JPM LIBOR +3%pa													
LCIV Infrastructure Fund	8,951,085	0.79	-	0.00	0.76	-0.75	0.00	3.62	-3.49	0.00	3.62	-3.49	14/11/2019
LBH11004 3M Libor +3%													
Legal & General 1	268,530,466	23.68	-	10.33	10.42	-0.08	12.50	12.85	-0.31	12.50	12.85	-0.31	31/10/2016
LBH26 L&G Benchmark													
Legal & General 2	154,752,667	13.65	-	1.20	2.11	-0.89	11.24	11.94	-0.62	11.24	11.94	-0.62	22/02/2017
LBH27 L&G Benchmark													
LGIM - Future World Equity IND	185,556,227	16.37	-	8.25	8.25	-0.00	-	-	-	-	-	-	23/09/2020
LBH29 L&G Benchmark													
LGIM LPI Income Property	49,030,498	4.32	-	1.54	0.37	1.17	-	-	-	-	-	-	11/03/2020
LBH28 L&G RPI													
LGT	3,215,756	0.28	-	8.59	9.27	-0.62	10.14	17.22	-6.04	10.14	17.22	-6.04	31/05/2004
LGT PE Bmark													
London CIV Ruffer	58,650,245	5.17	-	4.46	0.02	4.43	10.16	0.62	9.48	10.16	0.62	9.48	28/05/2010
LBH11003 Ruffer BM Libor													
M&G Investments	1,839,622	0.16	-	-3.50	1.00	-4.45	-30.76	4.62	-33.82	-30.76	4.62	-33.82	31/05/2010
LBH10 3 Month LIBOR +4%pa													
Macquarie	24,965,296	2.20	-	-0.84	0.76	-1.59	6.06	3.62	2.35	6.06	3.62	2.35	30/09/2010
LBH14 Macquarie LIBOR +3%pa													

Account/Group -% Rate of Return	Ending Market Value GBP	Ending Weight	Policy Weight	Three Months			Year to Date			One Year			Inception Date
				Port	Index	Relative Excess	Port	Index	Relative Excess	Port	Index	Relative Excess	
Premira Credit LBH24 Premira LIBOR +4%pa	60,334,248	5.32	-	1.69	1.00	0.68	3.57	4.62	-1.01	3.57	4.62	-1.01	30/11/2014
UBS	-30,799	-0.00	-		-	-		-	-		-	-	31/12/1988
UBS Property LBH06 UBS Property Benchmark	65,501,285	5.78	-	1.37	2.10	-0.71	-2.42	-1.05	-1.39	-2.42	-1.05	-1.39	31/03/2006

Investment Hierarchy(2)

Account/Group -% Rate of Return	Ending Market Value GBP	Ending Weight	Policy Weight	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	1,133,837,958	100.00	-	3.27	5.09	-1.74	7.13	7.87	-0.69	6.76	6.87	-0.10	30/09/1995
Total Plan Benchmark													
Adam Street	8,336,673	0.74	-	11.99	14.27	-2.00	12.74	18.59	-4.93	7.44	-	-	31/01/2005
Adam Street PE Bmark													
AEW UK	57,893,517	5.11	-	2.94	2.32	0.60	5.73	4.23	1.44	7.71	6.49	1.15	30/06/2014
LBH22 AEW Benchmark													
Cash & Other Assets	3,783,010	0.33	-	-	-	-	-	-	-	-	-	-	31/10/2017
Cash & Other Assets	10,757,880	0.95	-	0.93	-	-	2.40	-	-	-0.68	-	-	30/09/2008
Epoch Investment P Income	59,842,263	5.28	-	3.16	10.16	-6.36	-	-	-	2.71	9.51	-6.21	08/11/2017
LBH11001 MSCI World ND													
JP Morgan	111,928,019	9.87	-	4.28	3.83	0.44	5.35	3.72	1.57	4.24	3.70	0.52	08/11/2011
LBH15 JPM LIBOR +3%pa													
LCIV Infrastructure Fund	8,951,085	0.79	-	-	-	-	-	-	-	0.00	3.64	-3.51	14/11/2019
LBH11004 3M Libor +3%													
Legal & General 1	268,530,466	23.68	-	8.64	8.84	-0.19	-	-	-	9.09	9.24	-0.14	31/10/2016
LBH26 L&G Benchmark													
Legal & General 2	154,752,667	13.65	-	5.43	6.04	-0.57	-	-	-	6.40	6.96	-0.52	22/02/2017
LBH27 L&G Benchmark													
LGIM - Future World Equity IND	185,556,227	16.37	-	-	-	-	-	-	-	2.67	2.67	-0.00	23/09/2020
LBH29 L&G Benchmark													
LGIM LPI Income Property	49,030,498	4.32	-	-	-	-	-	-	-	-2.10	1.09	-3.16	11/03/2020
LBH28 L&G RPI													
LGT	3,215,756	0.28	-	11.49	14.27	-2.43	16.24	18.59	-1.98	11.07	-	-	31/05/2004
LGT PE Bmark													
London CIV Ruffer	58,650,245	5.17	-	4.08	0.83	3.23	5.21	0.72	4.46	5.47	0.82	4.61	28/05/2010
LBH11003 Ruffer BM Libor													
M&G Investments	1,839,622	0.16	-	-7.69	4.83	-11.94	0.22	4.72	-4.30	3.03	4.72	-1.61	31/05/2010
LBH10 3 Month LIBOR +4%pa													
Macquarie	24,965,296	2.20	-	10.07	3.83	6.02	13.70	3.72	9.63	6.20	3.71	2.40	30/09/2010
LBH14 Macquarie LIBOR +3%pa													

Account/Group -% Rate of Return	Ending Market Value GBP	Ending Weight	Policy Weight	Three Years			Five Years			Inception to Date			Inception Date
				Port	Index	Relative Excess	Port	Index	Relative Excess	Port	Index	Relative Excess	
Premira Credit LBH24 Premira LIBOR +4%pa	60,334,248	5.32	-	5.45	4.83	0.59	6.29	4.72	1.50	7.43	4.69	2.63	30/11/2014
UBS	-30,799	-0.00	-		-	-		-	-		-	-	31/12/1988
UBS Property LBH06 UBS Property Benchmark	65,501,285	5.78	-	1.36	2.32	-0.94	2.88	3.94	-1.01	3.40	3.54	-0.13	31/03/2006

Market Value Summary - Three Months

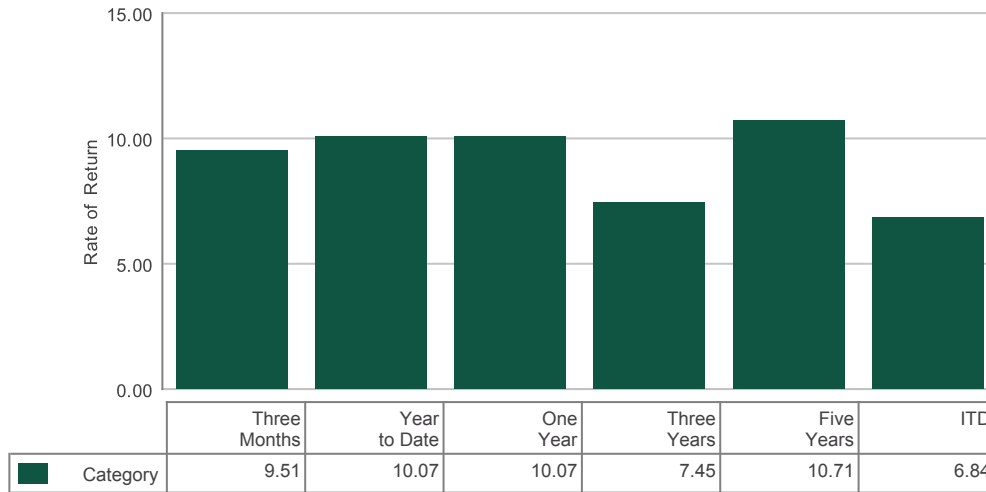
Account/Group	30/09/2020 Market Value	Net Contribution*	Income	Fees	Appreciation	31/12/2020 Market Value	31/12/2020 Weight	Change in Weight
London Borough of Hillingdon	1,075,588,420	10,978	3,468,976	99,694	54,769,584	1,133,837,958	100.00	0.00
Adam Street	9,440,836	-1,411,216	0	0	307,053	8,336,673	0.74	-0.14
AEW UK	52,165,265	0	820,023	0	4,908,229	57,893,517	5.11	0.26
Cash & Other Assets	0	3,783,010	0	0	0	3,783,010	0.33	0.33
Cash & Other Assets	14,139,621	-3,176,307	-46	0	-205,389	10,757,880	0.95	-0.37
Epoch Investment P Income	145,795,552	-94,000,000	1,249,966	0	6,796,746	59,842,263	5.28	-8.28
JP Morgan	96,848,986	10,000,000	0	0	5,079,034	111,928,019	9.87	0.87
LCIV Infrastructure Fund	3,752,100	5,198,985	0	0	0	8,951,085	0.79	0.44
Legal & General 1	243,404,069	-13,880	0	13,880	25,140,277	268,530,466	23.68	1.05
Legal & General 2	152,913,635	-1,936	0	1,936	1,840,968	154,752,667	13.65	-0.57
LGIM - Future World Equity IND	84,350,794	94,091,506	0	19,166	7,113,927	185,556,227	16.37	8.52
LGIM LPI Income Property	48,284,643	0	0	0	745,855	49,030,498	4.32	-0.16
LGT	3,251,550	-291,226	-12	0	255,444	3,215,756	0.28	-0.02
London CIV Ruffer	59,783,674	-3,783,010	-68	0	2,649,649	58,650,245	5.17	-0.39
M&G Investments	3,971,590	-1,993,206	-197	0	-138,565	1,839,622	0.16	-0.21
Macquarie	27,058,481	-1,880,907	313,971	0	-526,250	24,965,296	2.20	-0.31
Premira Credit	64,702,738	-5,368,620	528,000	0	472,130	60,334,248	5.32	-0.69
UBS	552,250	-582,951	-483	0	385	-30,799	-0.00	-0.05
UBS Property	65,172,636	-559,264	557,821	64,712	330,093	65,501,285	5.78	-0.28

Min -0.00  100.00 Max

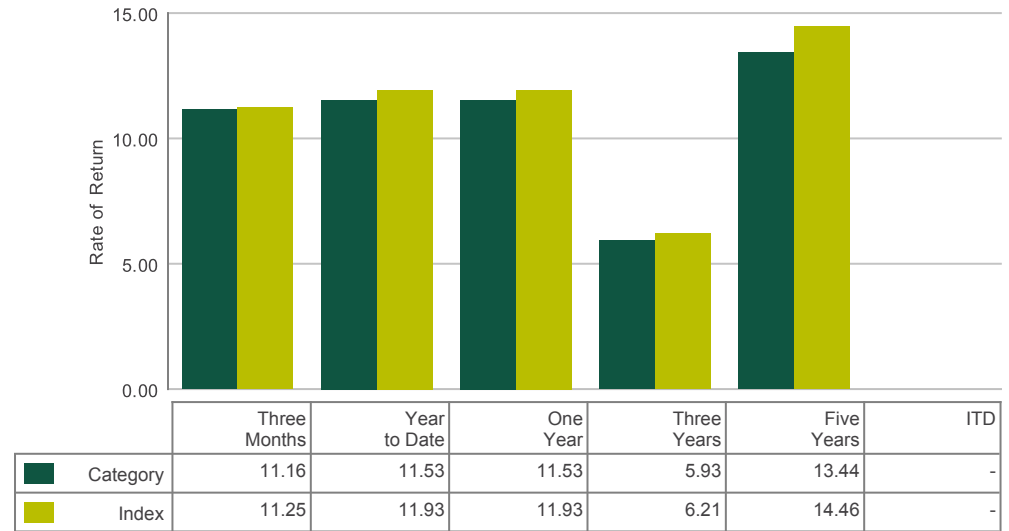
*Net Contributions include Cash Contributions/Distributions, Security Deliveries/Receipts, Fees/Fee Rebates, Inter Account transfers for Consolidations & Benefits Payments.
Copied History or Backloaded Data may not display the correct Contributions/Withdrawals creating misrepresentation.

Historical Performance

OVERSEAS EQUITIES

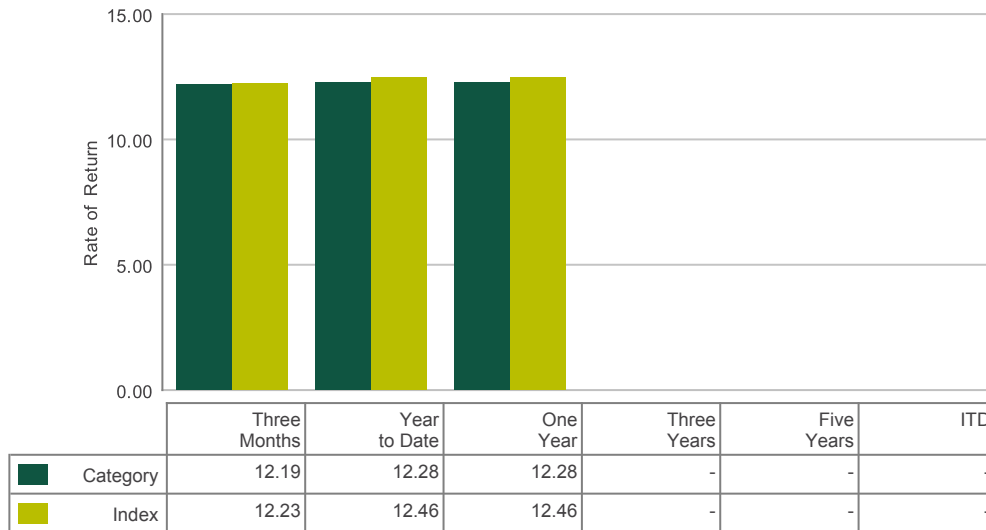


EMERGING MARKETS



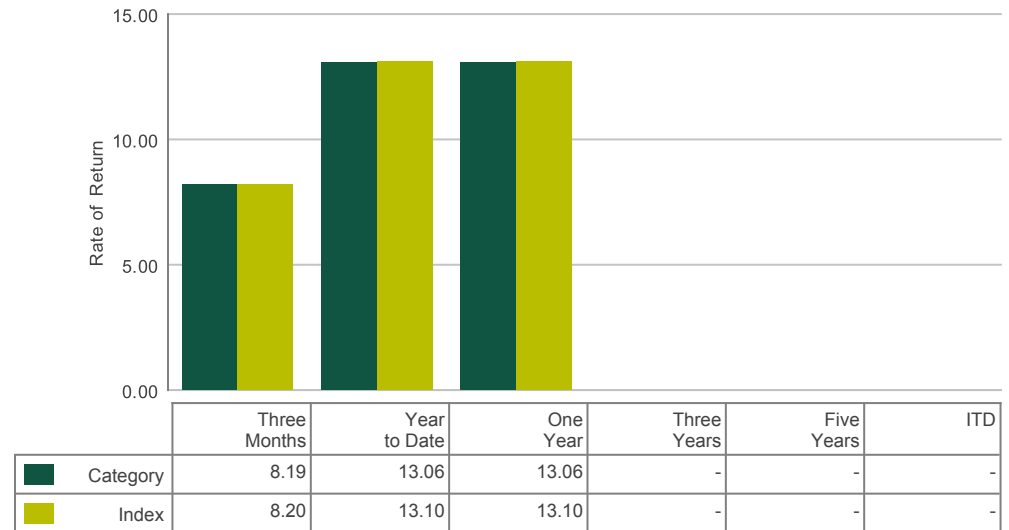
Index: LBH Emerging Markets

L&G GPCT WORLD DEV EQ IDX GBP HDG



Index: FTSE AW Developed HDG GBP

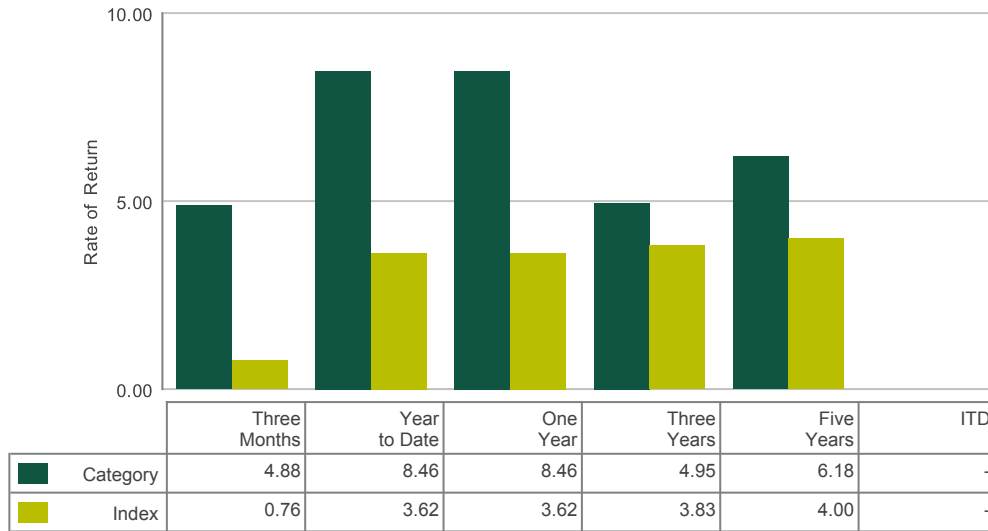
WORLD DEVELOPED EQUITY INDEX



Index: FTSE AW Developed

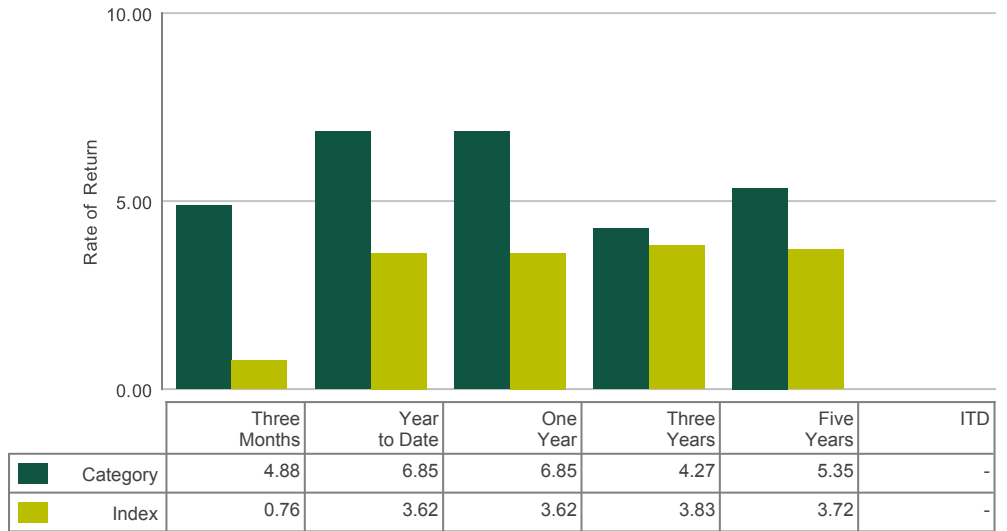
Historical Performance

FIXED INCOME



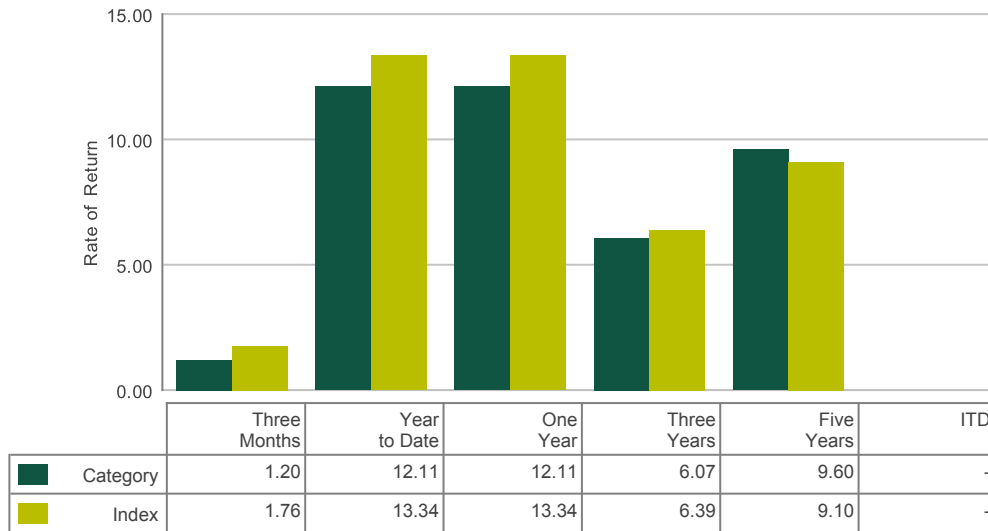
Index: LBH Fixed Income Benchmark

GLOBAL CORPORATE BONDS



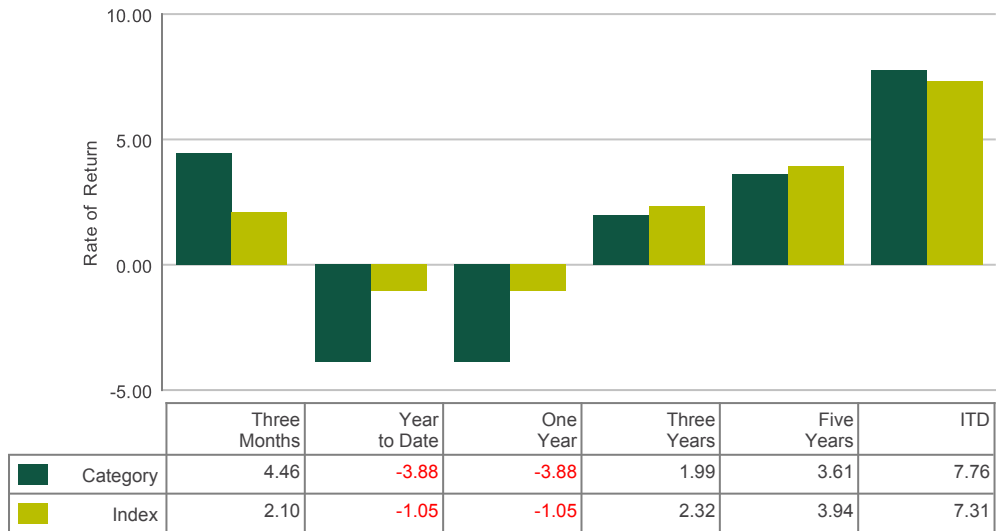
Index: LIBOR GBP 3 Month +3% pa

INDEX LINKED GILTS



Index: LBH Index Linked Benchmark

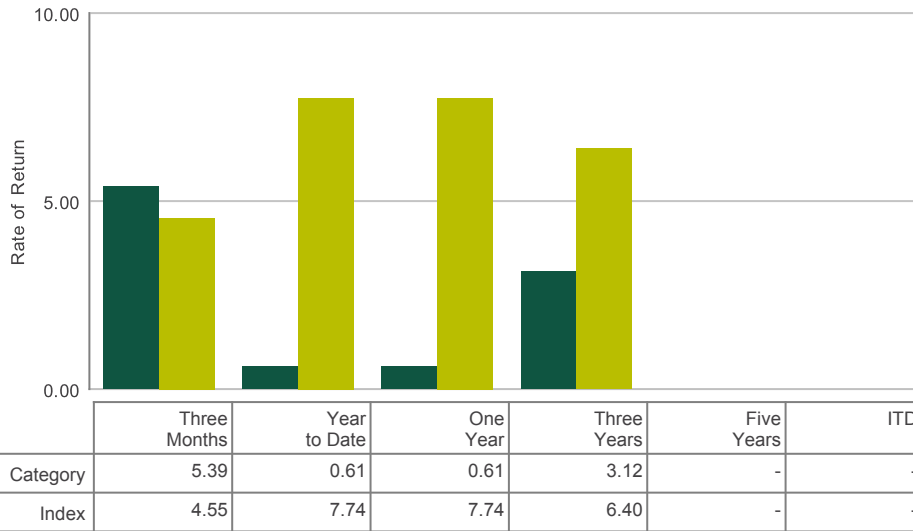
REAL ESTATES



Index: IPD UK PPF All Bal Funds Index

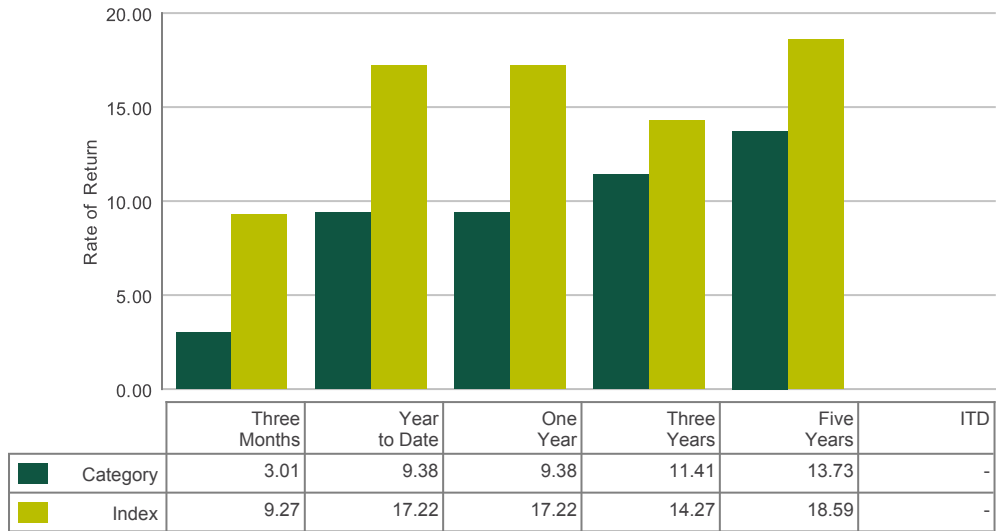
Historical Performance

BALANCED FUNDS



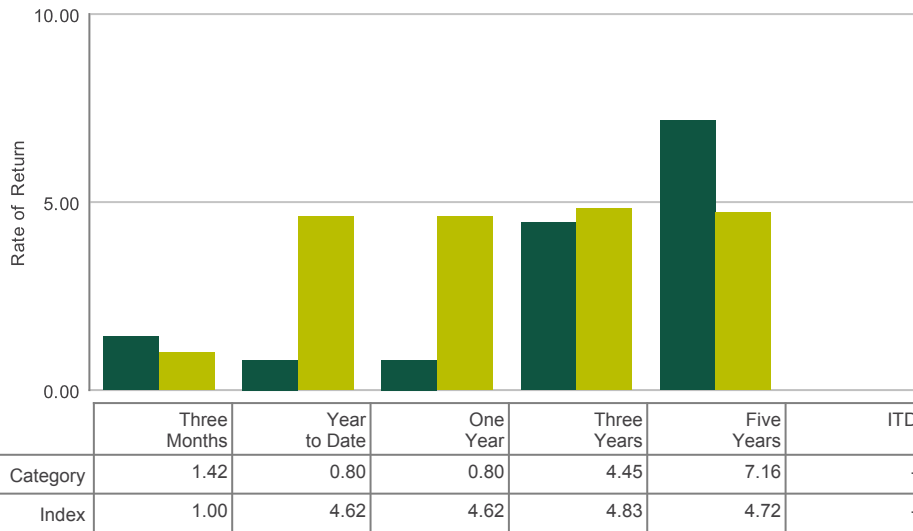
Index: Balanced Fund Benchmark

PRIVATE EQUITY



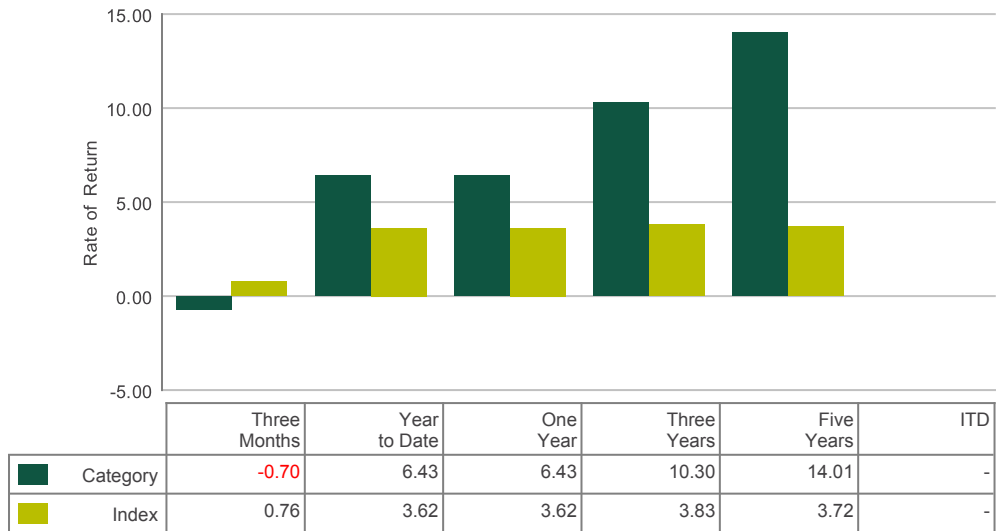
Index: MSCI ACWI +4% pa

PRIVATE CREDIT



Index: LIBOR GBP 3 Month +4% pa

INFRASTRUCTURE



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 PFI 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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