Quarterly Funding & Investment Report

End June 2021

Prepared for: North Yorkshire Pension Fund
Prepared by: Aon
Date: 27 August 2021

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At a glance…

A high level summary of your investments and funding

At a glance…

Funding

Over the quarter, the funding level has improved by c.6%, and the surplus has increased by c.£220m, primarily due to higher returns on assets relative to the expectation. The funding level remains significantly above the funding level at the 2019 valuation.

Asset Allocation and Implementation

A number of short/medium term changes to the asset allocation have been considered by the Committee in light of the recently agreed long-term investment strategy which will take some time to implement.

Performance

Total Fund performance is strong and ahead of composite benchmark over the quarter, 1 year and 3 year periods to 30 June 2021.

Market Background and Investment Outlook

Improving economic data over the quarter in most countries and global vaccination roll-outs provided continued optimism over economic recovery.

Inflation rates have moved higher in the major economies. Current inflation levels are being driven by rising production costs across supply chains. Importantly, economic forecasters are near-unanimous that these are temporary supply-demand imbalances and that inflation will fall back in 2022.

Bonds are, as ever, still big news. After a strong run up early in the year, yields have fallen steadily, badly confounding consensus views.

The equity risk premium versus bonds is supportive for equities, but the problem is unrealistic expectations on the economy and interest rates. Markets have moved up a long way and though peril is not imminent, equity markets cannot be easily trusted with new money today.

Key actions

1. The Committee to consider strategic allocation and rebalancing ranges to Baillie Gifford LTGG, BCPP Global Alpha and BCPP UK equities – see separate report.

Key Stats

Assets

£4,783m

Assets increased by £1,208m since last valuation

£3,575m at 2019 valuation

Funding level

130%

Funding increased by 16% since 2019 valuation

114% at 2019 valuation

Return on Assets Since 2019 Valuation

+14.3% pa

Current Assets Expected Return (10 year p.a.)

+5.3%

0.3% decrease since 2019 Valuation

5.6 % at 2019 valuation

Long-term Strategy Expected Return (10 year p.a.)

+5.6% -

No change since 2019 Valuation

5.6% at 2019 valuation

Discount rate

4.0%

0.2% decrease since 2019 Valuation

4.2% at 2019 valuation

Current Assets Value at Risk (1 Year 1 in 20)

£1,056m

Long-term Strategy Assets Value at Risk (1 Year 1 in 20)

£966m

Estimated Total Employer cost

14.0%

Estimated Total Employer cost decreased by 4.6% since 2019 valuation

18.6% at 2019 valuation

Funding

A review of your funding position and contributions

Funding position – ongoing funding target

Funding level

130.4%

at end June 2021

Up from 124.7% at end March 2021 and remains up from 114.4% at 31 March 2019

Surplus

£1,115.9m

at end June 2021

Up from £893.4m at end March 2021 and remains up from £449.8m at 31 March 2019

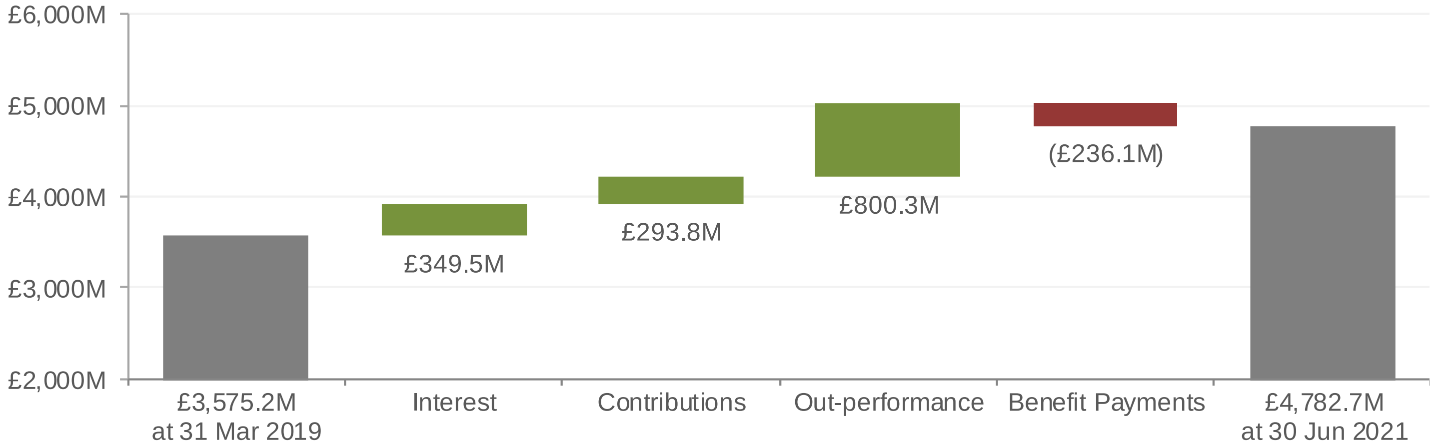
Comments

The funding level has improved, and the surplus has increased, primarily due to higher returns on assets relative to the expectation.

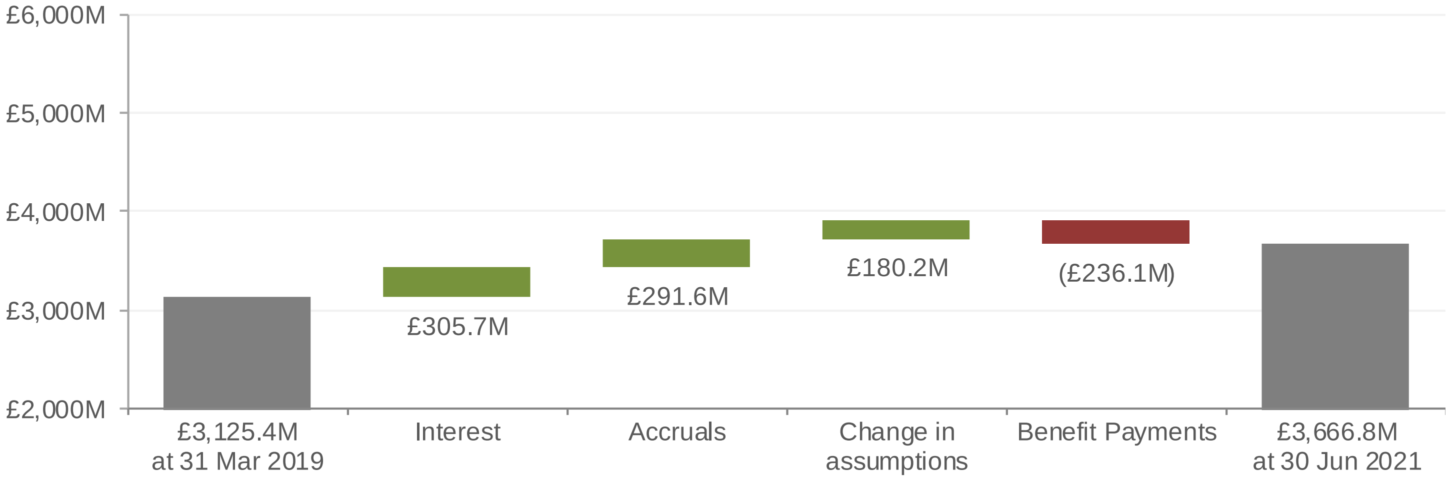
Change to funding level since valuation at 31 March 2019

Analysis – ongoing funding target

Reason for change since 31 March 2019 – Asset Attribution



Reason for change since 31 March 2019 – Liability Attribution



Comments

Since the valuation the surplus has increased by £666.1M. This has been primarily driven by an increase in asset values.

Aggregate Employer contributions – ongoing funding target

Total employer contribution rate

14.0%

at end June 2021

Down from 16.4% at end March 2021 and down from 18.6% at 31 March 2019.

Employer cost of accrual

22.3%

at end June 2021

Same as 22.3% at end March 2021 but up from 20.2% 31 March 2019

Comments

The cost of accrual is unchanged since the last quarter but is higher than at the 2019 valuation due to the fall in net discount rate.

However, the total aggregate employer contribution rate remains below the 2019 valuation figure due to the improvement in the funding level. This has reduced further since the last quarter due to a further improvement in funding level.

Notes

Cost of accrual includes allowance for McCloud/cost management costs in line with the overall allowance in the 2019 valuation of 0.9% of pay.

The total employer contribution rate quoted above is based on the average total employer contribution rates across the Fund. Individual employer contributions can be very different to the average figure across the Fund shown above depending on their own characteristics, membership profile and funding target. The individual employer contributions will next be reviewed at the triennial valuation at 31 March 2022.

Asset allocation

A review of your strategic asset allocation

Asset allocation – Q2 2021

Asset Group	Manager	Valuation (£m)	Current allocation	Long-term strategy	Difference	Rebalancing Range	Possible action
		30 June 2021					
Equities		**2,887.1**	**60.4%**	**50.0%**	**+10.4%**	**TBC**	
	BCPP UK equity	179.7	3.8%	TBC			
	BCPP Global Equity	1,294.0	27.1%	TBC			
	Baillie Gifford LTGG	868.0	18.1%	TBC			
	Dodge & Cox	281.1	5.8%	-			
	Veritas	261.9	5.5%	-			
	Fidelity	2.4	0.1%	-			
Absolute Return		**339.5**	**7.1%**	**0.0%**	**+7.1%**	**TBC**	
	Newton Real Return	174.5	3.6%				
	Leadenhall Remote Risk	58.4	1.2%				
	Leadenhall Diversified	55.3	1.2%				
	Leadenhall Nat Cat	51.3	1.1%				
Property		**291.2**	**6.1%**	**7.5%**	**-1.4%**	**TBC**	
	Hermes	36.0	0.8%				
	L&G	74.5	1.6%				
	Threadneedle	180.7	3.8%				

Source: BNYM, Aon. Note: Numbers may not sum due to rounding.

Asset allocation – Q2 2021 (cont'd)

Asset Group	Manager	Valuation (£m)	Current allocation	30 June 2021 Long-term strategy	Difference	Rebalancing Range	Possible action
Infrastructure		**14.5**	**0.3%**	**10.0%**	**-9.7%**	**TBC**	
	BCPP Infrastructure 1A	10.5	0.2%				
	BCPP Infrastructure 1B	4.0	0.1%				
Private Credit		**94.0**	**2.0%**	**5.0%**	**-3.0%**	**TBC**	
	BCPP Private Credit	9.6	0.2%				
	Arcmont	42.2	0.9%				
	Pemira	42.1	0.9%				
Non-Investment Grade Credit		**198.3**	**4.1%**	**5.0%**	**-0.9%**	**TBC**	
	PIMCO	198.3	4.1%				
Investment Grade Credit		**197.5**	**4.1%**	**7.5%**	**-3.4%**	**TBC**	
	BCPP Investment Grade Credit	197.5	4.1%				
Gilts		**682.0**	**14.3%**	**15.0%**	**-0.7%**	**TBC**	
	M&G	356.4	7.5%				
	LGIM Equity Protection (inc collateral)	177.3	3.7%				
	BCPP Index Linked Bonds	148.3	3.1%				

Source: BNYM, Aon. Note: Numbers may not sum due to rounding.

Asset allocation – Q2 2021 (cont'd)

Asset Group	Manager	Valuation (£m)	Current allocation	Long-term strategy	Difference	Rebalancing Range	Possible action
		30 June 2021					
Cash		**78.7**	**1.6%**	**0.0%**	**+1.6%**	**TBC**	⚠
	Internal Cash	28.4	0.6%				
	Treasury Cash	50.3	1.1%				
Total		**4,782.7**	**100.0%**	**100.0%**			

Source: BNYM, Aon. Note: Numbers may not sum due to rounding.

Strategy implementation update

A number of changes to asset allocation were considered by the Committee in light of the recently agreed investment strategy as part of a separate report at the June Pension Fund Committee meeting.

Decisions taken:

- An investment in Border to Coast's listed alternatives fund agreed in principle
- Terminate the investment with Veritas:
  - Reinvest the proceeds in Border to Coast's corporate bond fund up to the target weighting of 7.5%
  - Reinvest the balance of proceeds into PIMCO's diversified income fund
- Allow the remaining equity protection to expire in July 2021
- Terminate the conditional currency hedging arrangement with LGIM
- Agreement given to invest cash in excess of 0.5% of the value of the Fund into PIMCO's diversified income fund
- The mandate with M&G be terminated and the proceeds reinvested into Border to Coast's Index Linked Bonds fund
- The proposed strategic benchmark allocations for the equity managers be noted, with a decision to be made once further consideration of the style balance has be undertaken.

Transitions and cashflows

The following rebalancing activities took place over the quarter:

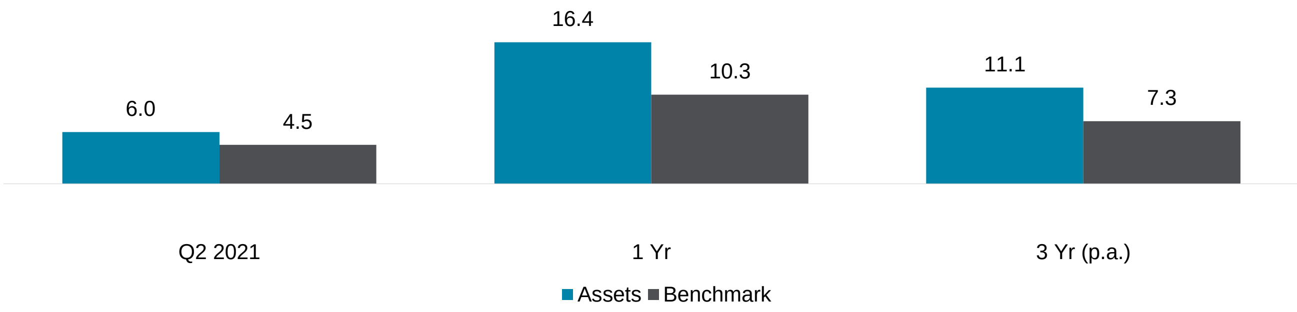
- £80m was invested in the Border to Coast's corporate bond fund.
- Border to Coast made eight Infrastructure capital calls in the quarter totalling £3.0m and six Private Credit capital calls totalling £4.4m.
- £30m was disinvested from Veritas.
- £50m was disinvested from Treasury Cash fund along from the cash proceeds from Veritas to cover the new Border to Coast investment and capital calls made above in the quarter.

Fund performance

A review of your investment performance

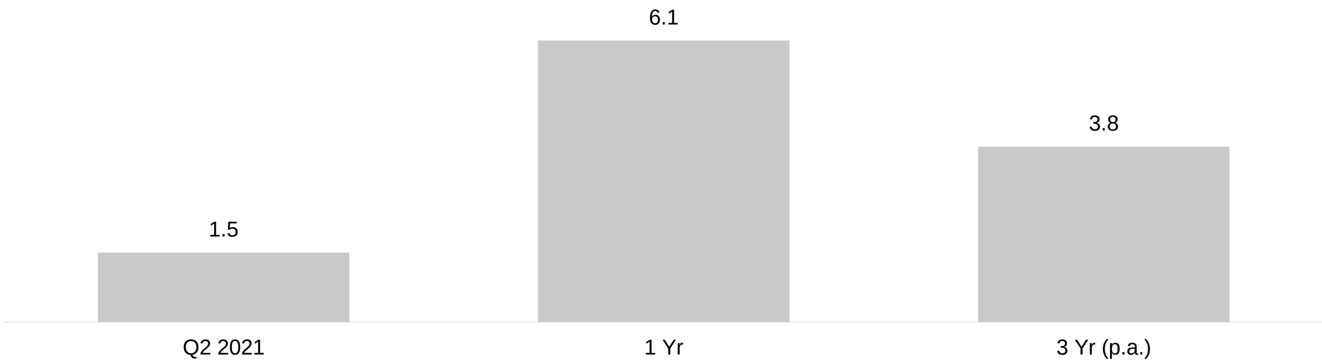
Total Fund performance – Snapshot

Fund performance & benchmark



Relative performance

Relative Return (%)



Source: BNYM, Aon

Quarterly (relative)

+1.5%

The Fund outperformed benchmark returning 6.0% vs 4.5% over the quarter.

3 year (relative)

+3.8%

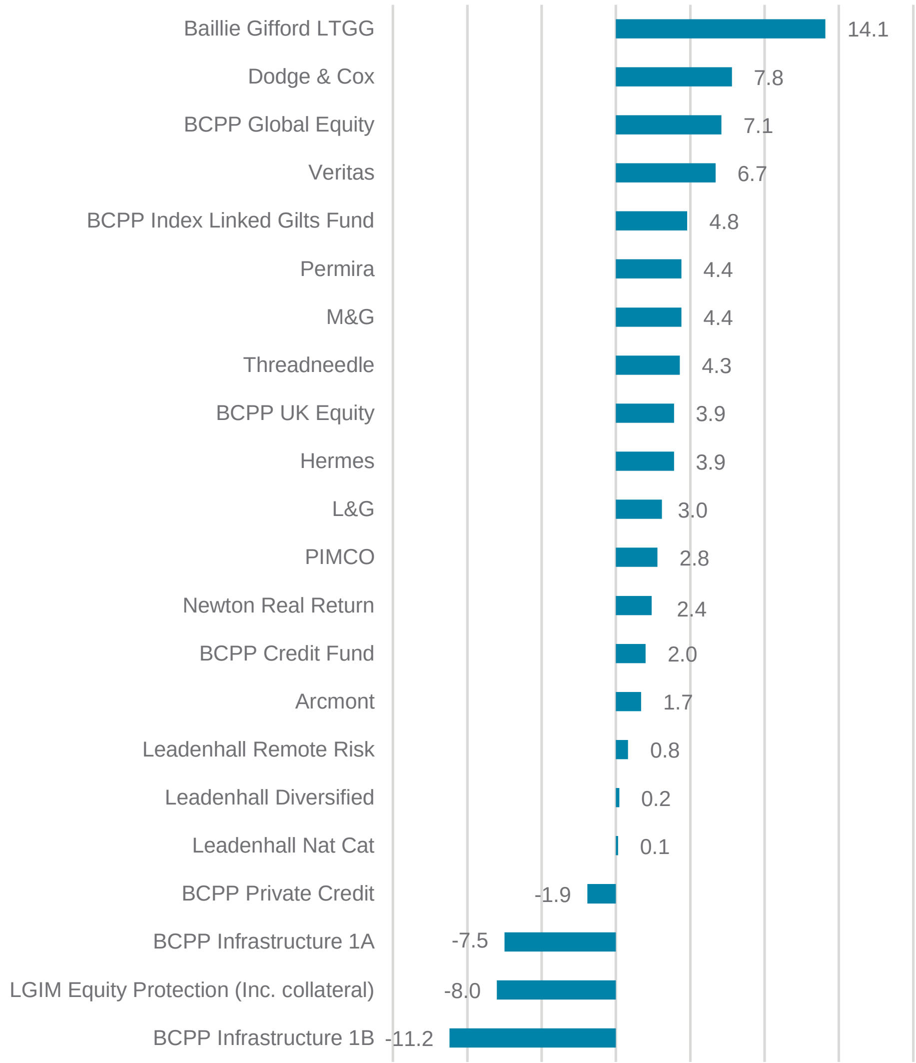
Over 3 years the Fund has outperformed the benchmark returning 11.1% vs 7.3%.

Comments

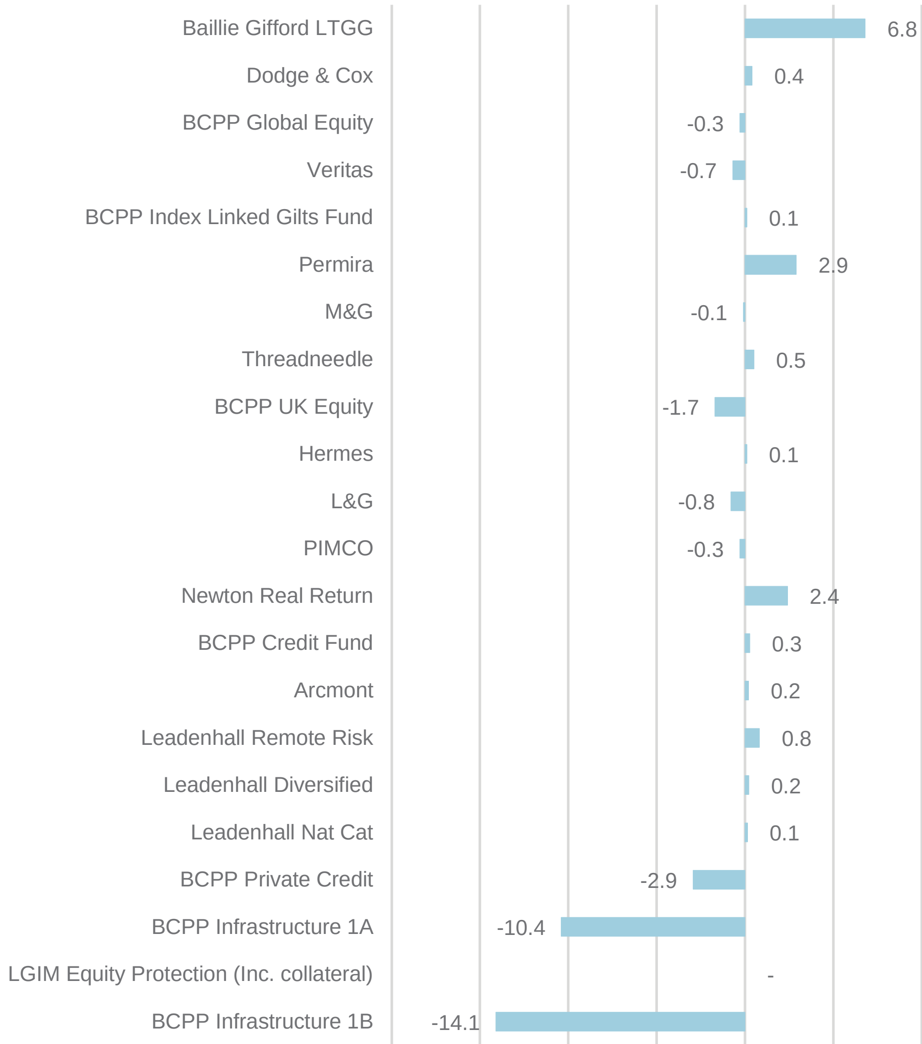
Total Fund performance is ahead of composite benchmark over the quarter, 1 year and 3 year periods to 30 June 2021.

Manager performance – Quarter Snapshot

Absolute performance



Relative performance



Source: BNYM, Managers, Aon

Manager performance – Longer term

	1 Year (%)			3 Years (% p.a.)			Since inception		
	Perf	B'mark	Rel	Perf	B'mark	Rel	Perf	B'mark	Rel
Equity									
UK Equity									
BCPP UK Equity	31.0	21.5	+9.5	-	-	-	6.8	4.5	+2.3
Global Equity									
BCPP Global Equity	30.8	25.1	+5.7	-	-	-	16.7	17.0	-0.3
Baillie Gifford LTGG	45.4	25.0	+20.4	35.1	13.3	+21.6	19.5	10.1	+9.4
Dodge & Cox	37.5	25.1	+12.4	10.5	13.4	-2.9	10.0	12.3	-2.3
Veritas	18.6	25.1	-6.5	13.0	13.4	-0.4	12.3	12.3	0.0
Absolute Return									
Diversified Growth									
Newton Real Return	13.2	0.1	+13.1	7.7	0.4	+7.3	4.1	0.4	+3.7
Insurance-Linked									
Leadenhall Remote Risk	5.2	0.0	+5.2	3.3	0.4	+2.9	3.2	0.4	+2.8
Leadenhall Diversified	2.0	0.0	+2.0	0.9	0.4	+0.5	1.0	0.4	+0.6
Leadenhall Nat Cat	-4.4	0.0	-4.4	-2.4	0.4	-2.8	-2.1	0.4	-2.5
Property									
Hermes	7.6	8.5	-0.9	3.8	3.3	+0.5	7.5	5.6	+1.9
L&G	7.3	8.5	-1.2	2.5	3.0	-0.5	6.5	5.5	+1.0
Threadneedle	8.3	8.5	-0.2	2.8	3.0	-0.2	7.7	5.4	+2.3

Source: BNYM, Managers, Aon

Manager performance – Longer term (cont'd)

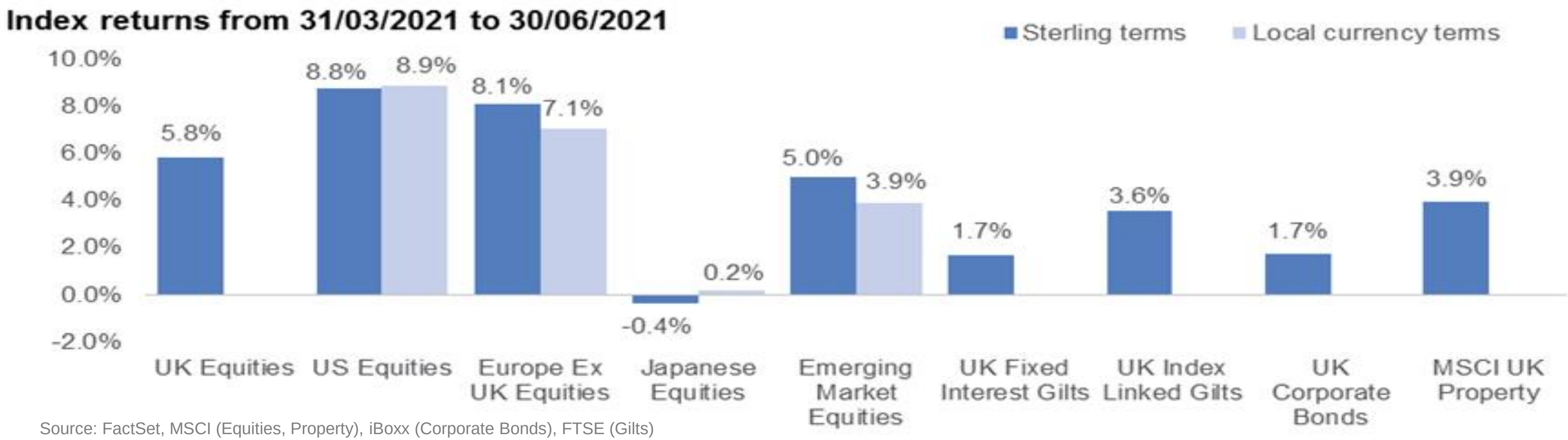
	1 Year (%)			3 Years (% p.a.)			Since inception		
	Perf	B'mark	Rel	Perf	B'mark	Rel	Perf	B'mark	Rel
Illiquid credit									
BCPP Private Credit	-3.3	4.1	-7.4	--	-	-	-7.0	4.1	-11.1
Arcmont	6.7	6.0	+0.7	5.8	6.0	-0.2	6.8	6.0	+0.8
Permira	11.6	6.0	+5.6	6.4	6.0	+0.4	8.4	6.0	+2.4
Investment grade credit									
BCPP Investment Grade Credit	-	-	-	-	-	-	2.2	0.2	+2.0
Non-investment grade credit									
PIMCO	-	-	-	-	-	-	4.2	3.6	+0.6
Gilts									
M&G	-5.6	-6.3	+0.7	6.0	5.9	+0.1	8.5	8.0	+0.5
BCPP Index Linked Bonds	-	-	-	-	-	-	0.6	-2.1	+2.7
Total	**16.4**	**10.3**	**+6.1**	**11.1**	**7.3**	**+3.8**	**8.4**	**8.1**	**+0.3**

Source: BNYM, Managers, Aon

Market outlook and background

Aon’s views on the market outlook and snapshot of investment markets and key economic data

Market – Background Q2 2021



Source: FactSet, MSCI (Equities, Property), iBoxx (Corporate Bonds), FTSE (Gilts)

Equities

Global equities continued to perform well over the quarter. The MSCI AC World index posted a 7.2% return in local terms and a 7.4% return in sterling terms.

US equities performed the best, returning 8.9% over the quarter in local currency terms. The labour market continued to improve, with the US unemployment rate falling to 5.8% in May. This was the first time the US unemployment rate has fallen below 6% since the start of the pandemic. Meanwhile, Core personal consumption expenditure (PCE), the Fed's preferred inflation measure, continued to break records as it recorded the largest year-on-year jump in three decades, with the index rising 3.4% in May.

Bonds

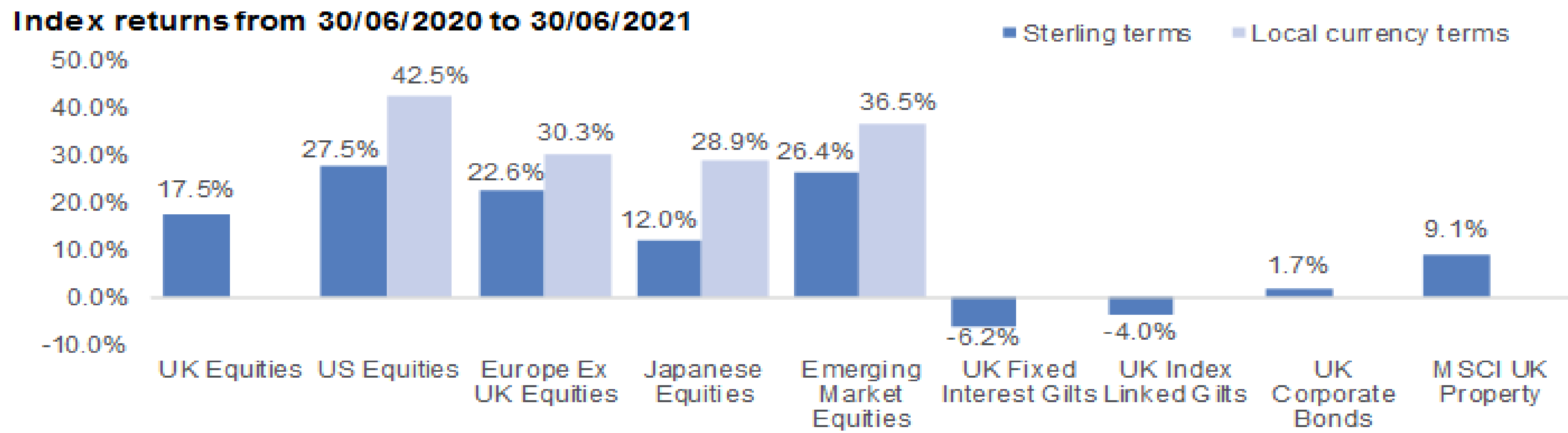
UK investment grade credit spreads continued to contract as credit markets performed well, the return on the iBoxx Sterling Non-Gilt Index rose by 1.7% over Q2, driven by falling government bond yields.

Gilts

Bond yields fell over the quarter, most markedly in the US, as the US Federal Reserve (Fed) held its target range for interest rates unchanged at 0-0.25% but brought forward projections for rate rises to 2023. The Bank of England unanimously kept its base rate unchanged at 0.1% amid fears of rising inflation. The Monetary Policy Committee also upgraded both UK inflation and growth forecasts.

The FTSE All Stocks Gilts Index and the FTSE All Stocks Index-Linked Gilts Index returned 1.7% and 3.6%, respectively, as gilt yields followed US treasury yields lower.

Market – Background 12 month



Source: FactSet, MSCI (Equities, Property), iBoxx (Corporate Bonds), FTSE (Gilts)

Equities

US equities posted the strongest return over the year, helped by their high exposure to large technology companies. The US Senate approved a $1.9tn US economic relief package soon after Democrat Joe Biden was sworn in as US President in January 2021, which fed market expectations of stronger US growth and inflation.

UK equity gains were limited in the second half of 2020 as the UK economy struggled with a high virus death rate and Brexit worries. However, agreement on a Brexit deal with the EU and an impressive vaccination program resulted in better returns over the first half of 2021.

Bonds

Credit markets benefited from risk-on investor sentiment over the year, with credit spreads continuing to contract to ever tighter levels. UK investment-grade credit spreads (the difference between corporate and government bond yields), based on the iBoxx Sterling Non-Gilt Index, fell by 53bps to 101bps.

Gilts

The pandemic, Brexit uncertainty and increased expectations of a BOE rate cut to negative levels caused UK gilt yields to fall to extreme lows in summer 2020. However, yields started to edge up across maturities in Q3 as global risk sentiment improved and inflation expectations gathered pace. In Q1 2021, gilt yields rose sharply, driven by optimism in the light of several vaccine discoveries, further fuelled by the US stimulus package. In Q2 2021, UK nominal government bond yields fell across most maturities as variant virus risks, and worries over global fiscal and monetary stimulus peaking surfaced.

Investment Outlook

- Bonds are, as ever, still big news. After a strong run up early in the year, yields have fallen steadily, badly confounding consensus views.
- The Covid-19 delta variant's high transmissibility puts full economic reopening in jeopardy. Effective vaccines make 2020- style shutdowns less likely but consumer hesitation and business disruption are risks.
- The Bank of England will find it very difficult to tighten its monetary stance any time soon. The risks of premature tightening are too high.
- Our view that the run-up in gilt yields early this year would not be sustained has been borne out. Yield curves have retreated but show an anticipation of some modest rises in yields over the next few years.
- We are downgrading high yield credit, after a blistering performance and valuations at multi-decade highs. Lowest rated issues have done best. This trend is unlikely to continue ahead even though a big shake-down may be avoided. Investment grade credit is on better ground.
- We address the often-asked ESG performance reward question. It is more difficult than it looks to have a 'quantitative' answer, but we argue that this does not negate the ESG investing case.
- The equity risk premium versus bonds is supportive for equities, but the problem is unrealistic expectations on the economy and interest rates. Markets have moved up a long way and though peril is not imminent, equity markets cannot be easily trusted with new money today.
- Diversifiers are hardly going to be the rage after a twelve year bull market, but this is exactly what makes this a good time to appraise portfolio buffers. We take a subset of hedge fund strategies as an example of how diversification works, quietly doing what they are supposed to.

Aon’s latest thinking

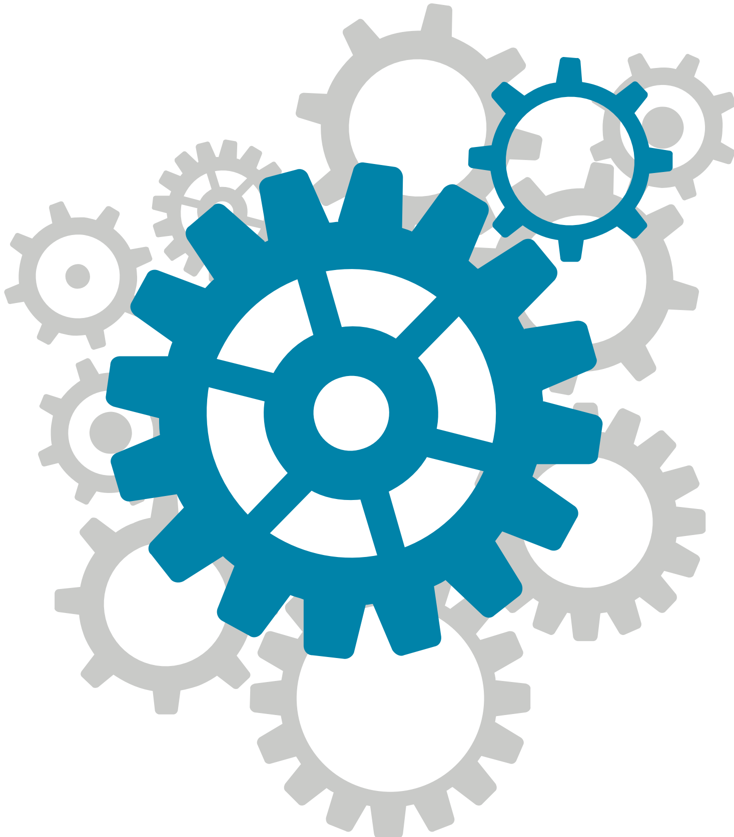
Our latest investment ideas for you

Diversifying equity portfolios…

… are markets wanting too much?

Our conviction in equities as a driver of returns remains. However, passive, market cap equity investments currently have a high concentration of stocks, with just 5 stocks making up around 14% of the MSCI World Index. Such high levels of concentration combined with construction methodology based on historical performance can lead to enhanced risks in a changing investment environment.

Many clients have benefitted from strong performance of technology stocks such as Apple and Amazon, among others, but now is a good time to re-assess the risks that large allocations to such companies pose to your investment strategy.



The dilemma for the Bank of England…

… Is there an inflation problem?

Inflation rates have moved higher in the major economies; suspicions lurk that governments will try to inflate their way out of huge deficits and that central banks will let them. Current inflation levels are being driven by rising production costs across supply chains, particularly in manufacturing industries, because the retooling of the global economy is rapid following last year's depressed output levels. Importantly, economic forecasters are near-unanimous that these are temporary supply-demand imbalances and that inflation will fall back in 2022.

There is an anomaly in the UK over inflation pricing given the RPI reform and this provides more support for some underweighting on inflation hedging given currently high hedging costs, but any such action requires careful management. We do not think that the risk of much higher inflation beyond the near-term is large enough to merit large portfolio shifts.

Green gilts…

… what's happening?

As part of a raft of climate initiatives to help achieve net zero emissions by 2050, in the Spring Budget the government confirmed that the summer of 2021 would see the UK issue its first green gilt, with a further issuance planned for later in the year. Green gilts are similar economically to gilts, with the proceeds being used to achieve projects with positive environmental objectives.

Since 2019, UK pension scheme trustees have had to demonstrate how they consider environmental, social and governance factors in their decision making. Trustees may wish to consider whether this extends to investing in green gilts within their LDI portfolio by having a strategic allocation.

"Green gilts"

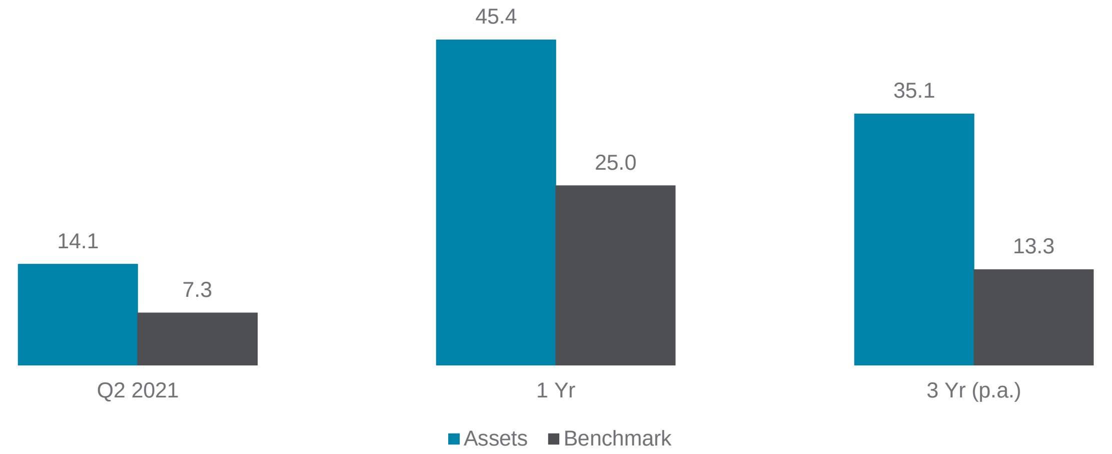
These are similar economically to gilts but with the proceeds being explicitly used to achieve projects with a positive environmental objective, such as renewable energy, green buildings, clean transportation, water management, biodiversity conservation, sustainable land use and climate change.

Manager review

Aon ratings and understanding manager performance

Baillie Gifford - LTGG

Scheme performance & benchmark



Performance comments

Long Term Global Growth outperformed in Q2 2021, leaving the strategy broadly in line with its benchmark year to date. After the exceptional performance in 2020, the value / cyclicals rally and fears of resurgent inflation took their toll on LTGG's portfolio of growth stocks in Q1 but latterly, this rally stalled and growth-orientated businesses returned to favour.

The main positive performance contributors over the period included Moderna and BioNTech (momentum from COVID vaccine sales) and NVIDIA (benefiting from solid demand for its graphics processing in gaming, artificial intelligence, self-driving cars, genomics etc.)

Detractors from performance centred on the continuation of Chinese government intervention in specific markets. The main negative impact was on TAL Education, but the share prices of Pinduoduo (online food shopping) and Tencent (broad online services platform) were also notably weak. The strategy is overweight to China. While the negative sentiment has continued into Q3, the LTGG team believes it can shape its long term exposure to avoid those businesses most vulnerable to government intervention.

New and notable

There is no change to our Buy recommendation.

Buy

Reviewed: August 2021

Ratings detail

ODD:	A1 pass	**Risk:**	●●○○
Business:	●●●●	**Perf:**	●●●○
Staff:	●●●●	**Terms:**	●●●○
Process:	●●●○	**ESG:**	Integrated

Key info

Appointed: 29 September 2006

Vehicle: Baillie Gifford Long Term Global Growth (+3% over 5-10yrs)

Mandate: Global Unconstrained Equities

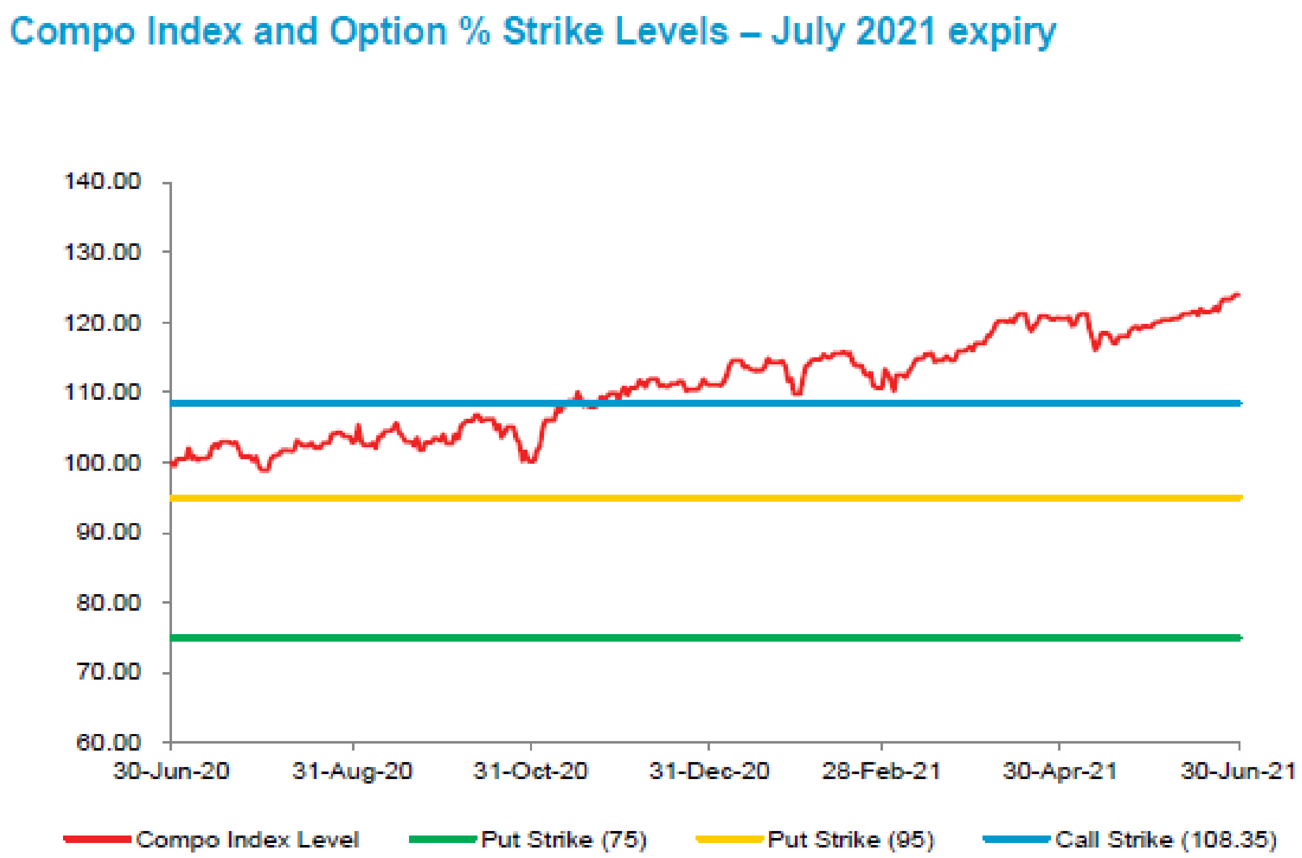
Benchmark: FTSE All World Index from 31 March 2008

Target: To outperform the benchmark by 3% p.a. over rolling three-year periods.

Fee scale: Base fee of 0.30% plus performance fee of 8% on outperformance more than the benchmark (up to a maximum outperformance of 5%) for the period since inception.

Source: BNY Mellon, data for periods longer than 12 months are annualised.

LGIM Equity Protection



Key info

Expiry: 1 July 2021

Current status: Upper Review Trigger was triggered based off of the 9 November 2020 closing index level (1,819.84).

The Fund paid for the downside protection by giving up returns beyond a certain level. Specifically, this is at a level where markets are c.8% above from where we put the protection on in 2020.

The equity options are performing in line with expectations. In aggregate, the value of the equity options decreased as equity markets continued to rise over the quarter.

Action: The Committee let the options expire on 1 July 2021.

Source: LGIM

Further information

Key reference information about your scheme

Reference – Manager fees

Manger	Fees
BCPP – UK Equity	0.31% on the first £1.2bn.
BCPP – Global Equity	0.34% (assuming AUM of £5bn)
Baillie Gifford – LTGG	Base fee of 0.30% plus performance fee of 8% on outperformance more than the benchmark (up to a maximum outperformance of 5%) for the period since inception
Dodge & Cox – Global Equity	0.6% for all assets
Veritas – Global Equity	0.51% for all assets
Newton – Real Return Fund	0.65% p.a.
Hermes – Property Unit Trust	Base Fee of 0.4% of NAV Performance fee of 17.5%, calculated on outperformance on a 3-year annualised basis, capped at 0.4% p.a. Overall fee is capped at 0.8% p.a.
Legal & General – Managed Property Fund	First £2.5m 0.70%; Next £2.5m 0.65%; Thereafter 0.60%
Threadneedle – Property Fund	Base Fee of 0.75% of NAV
Leadenhall – Insurance Linked Securities	Remote: Base fee of 0.4%; Diversified: Base fee of 1%; Nat Cat: Base fees of 0.9% p.a. and 10% performance fee over a hurdle of 1-month UK Treasury Bill rate +2%
M&G – Liability Matching Bonds	First £25m 0.25%; Next £25m 0.20%; Next £200m 0.15%; Thereafter 0.13%

Reference – Manager fees

Manger	Fees
Arcmont – Private Debt	1.0% for < EUR 100m
Permira – Private Debt	0.9% for <EUR 50m
PIMCO – Diversified Income	Standard fee 0.69% with a 0.27% rebate. Net 0.42% p.a.
BCPP – Investment Grade Credit	0.09% p.a. (estimated by BCPP)
BCPP – Infrastructure Series 1A, 1B	c.1.0% p.a. (estimated by BCPP)
BCPP – Private Credit 1A/B	c.0.75% - 1.5% p.a. with performance fees of 10%-20% depending on underlying strategy (estimated by BCPP).

Method

The funding update has been prepared in accordance with the framework below.

- This funding update is consistent with the calculations for the formal actuarial valuation as at 31 March 2019. The assumptions used have been modified only insofar as is necessary to maintain consistency with the approach set out in the latest Funding Strategy Statement, reflecting the change in the effective date and in relevant market conditions.
- The funding update is projected from the results of the formal actuarial valuation as at 31 March 2019 and is therefore approximate. Since the update is not based on up-to-date membership data, it becomes more approximate the longer the period of time that has elapsed since the last actuarial valuation.
- The funding update takes account of the following over the period since the last formal actuarial valuation:
  - Cashflows into and out of the Fund estimated based on the 2019 valuation results;
  - Actual price inflation and its impact on benefit increases.
- Demographic experience since the last formal actuarial valuation has been assumed to be in line with the assumptions set out in the 2019 Valuation Report.
- This update is designed to give a broad picture of the direction of funding changes since the actuarial valuation but does not have the same level of reliability as, and therefore does not replace the need for, formal actuarial valuations.
- It does not reflect any changes to assumptions which would be made if a full actuarial valuation were to be carried out to reflect, for example, changes to the investment strategy or economic outlook.
- For the purpose of this funding update, we have used an un-audited value of the assets as at 30 June 2021 provided by the Administering Authority
- The whole of fund total employer contribution rates shown in this funding update allow for a recovery period ending 31 March 2041 and allow for any surplus in excess of 110% to be recovered as set out in the Funding Strategy Statement
- The assumptions used in this funding update are as follows:

	Discount rate	Pay growth	Pension increases
31 March 2019	4.20%	3.35%	2.10%
31 March 2021	4.00%	3.45%	2.20%
30 June 2021	4.00%	3.45%	2.20%

Risk/Return Assumptions

- The table below sets out the asset and liability return assumptions over 10 years, together with the asset allocation and exposures used. These are based on Aon's Capital Market assumptions as at 30 June 2021.

High level asset class	Expected Return (10 year median % p.a.)	Expected Volatility (10 year % p.a.)
Equities	6.5	19.6
Property	5.5	12.6
Infrastructure	7.7	15.8
Illiquid credit	4.0	5.5
Investment grade credit	1.9	8.1
Non-investment grade credit		
- Current allocation (PIMCO)	3.2	9.3
- Long term allocation (High Yield Credit)	3.3	10.0
Absolute Return	3.7	6.1
Gilts	0.5	7.3
Cash	0.6	1.0

Note: all statistics are 10 year median expected returns/volatility of returns.

Correlation Table

High level asset class	Equities	Government Bonds	Liquid inv. grade credit	Absolute return	Infrastructure	Property	Private Credit	Current non-investment grade credit	Long term non-investment grade credit	Cash
Equities	100%	-10%	6%	75%	64%	39%	28%	56%	54%	-3%
Government Bonds		100%	54%	11%	-4%	-3%	4%	-1%	-4%	33%
Liquid inv. grade credit			100%	32%	4%	6%	63%	39%	33%	37%
Absolute return				100%	54%	25%	37%	59%	52%	20%
Infrastructure					100%	19%	13%	24%	21%	0%
Property						100%	24%	24%	27%	4%
Private Credit							100%	61%	63%	21%
Current non-investment grade credit								100%	87%	10%
Long term non-investment grade credit									100%	4%
Cash										100%

Data and assumptions

Date of calculation	30 June 2021
Number of simulations	5000
Time horizon	10 years
Asset value	£ 4,782,728,665

- Illiquid Growth is made up of a blend of 37.5% EU and 62.5% US Infrastructure in line with BCPP's mandate.
- Illiquid Credit modelled as combination of Senior Direct Lending (for Arcmont and Permira) and Whole Property Debt (for BCPP).
- Gilts are modelled as a 90% long-duration index-linked gilts and 10% long-duration fixed-interest gilts.
- Property is modelled as UK Property.
- Liquid IG Credit modelled as UK corporate bonds (A-rated with average duration of 10 years)
- Liquid Non-IG Credit modelled as Broad multi asset credit for the Current allocation (PIMCO) and as high yield credit for the long term allocation.
- Absolute Return is modelled as 50% Newton RRF modelled as Capital Preservation DGF, and 50% Leadenhall Insurance Linked Securities modelled as a blend of Aggressive, Conservative and Moderate ILS.
- The Fund has an allocation to Equities which make up 50% of the long term allocation.
- For modelling purposes (and for consistency with the approach taken by the Actuary) we do not allow for any outperformance from active management (alpha).
- We have not allowed for the impact of equity protection on the risk and return of the portfolio
- Equities have been modelled using region splits in line with the long term allocation:

Passive UK Equity	10%
Passive Global Equity (including Emerging Markets)	90%

Key assumptions of the model (1)

- The purpose of the model is to consider and monitor the return and risk characteristics of the current and long term investment strategy of the Scheme.
  - The analysis considers the expected return of the Scheme's investment strategy and the 1-in-20 downside 5th percentile Value at Risk implied by the strategy.
  - These metrics are considered as at the stated quarter-end.

- Investment risk is included in the model outputs but this is not the only risk that the Scheme faces; other risks include covenant risk, longevity risk, timing of member options, basis risks and operational risks.
- Investment risk has been calculated on an asset only basis.

Key assumptions of the model (2)

- The calculation of portfolio risk is approximate;
  - The calculation considers (5000 stochastic) simulations of returns over a single year of the Scheme's investment strategy.
  - The simulations are constructed using Aon Solution's Asset Model – the details and assumptions of which are outlined in this appendix.
  - The calculation does not take into account any cashflows payable over the year; if cashflows are expected to be material the result is likely to be different.
  - Risks are attributed into the categories outlined in the chart only; the investment strategy may be exposed to further risk categories not shown.
  - The calculation does not take into account longevity risk (i.e. liability values increasing due to members living longer than assumed).
  - Owing to these approximations, a more detailed ALM study is likely to result in a different result to the VaR calculation.
  - Other portfolios with different risk and return characteristics may be available to the Scheme along the journey to full funding.

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This presentation should be read in conjunction with:

- The report on the most recent actuarial valuation of the North Yorkshire Pension Fund dated 30 March 2020
- The latest Funding Strategy Statement

If you require further copies of any of these documents, please let me know.

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