Quarterly Funding & Investment Report

End December 2021

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Agenda Item 9

Prepared for: North Yorkshire Pension Fund

Prepared by: Aon

Date: 4 March 2022

Signatory of: UK STEWARDSHIP CODE | 2021

For professional clients only

AON

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1. At a glance…

A high level summary of your investments and funding

At a glance…

Funding

The funding level has fallen over the quarter (down by 0.6%), primarily due to a fall in the discount rate assumption, partially offset by slightly higher returns on assets relative to the expectation. The funding level remains 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 agreed by the Committee in light of the recently agreed long-term investment strategy. The Fund's initial investment in the Border to Coast Multi Asset Credit took place over Q4 2021.

Performance

The Fund underperformed the composite benchmark over the quarter and 1 year period. Performance is ahead of the composite benchmark over the 3 year period to 31 December 2021.

Market Background and Investment Outlook

The discovery of the Omicron variant, a new highly mutated coronavirus strain, cast doubt on the strength of global economic growth over the quarter. Inflation rates worldwide continued to trend higher, leading to major central banks phasing out pandemic-era asset programs and hinting at accelerated interest rate hike schedules. However, equity markets were able to shrug off inflation and growth concerns, posting solid gains in Q4 2021.

The start of 2022 has, however, seen a marked change in market tone. Tested by an anticipation of faster rises in central bank interest rates and a sharp move in global bond yields, equities have looked shakier. This weak start could be a blip, or an indication that market resilience is facing a sterner test this year. We suspect the latter.

Manager news

Post quarter-end, Baillie Gifford announced some staff changes on the LTGG strategy. We view these as largely cosmetic with no material change to the intellectual input behind the strategy.

Key actions

1. The Committee to consider possibility of an allocation within the Fund to the Border to Coast Climate Opportunities fund – covered under a separate report

2. The Committee to consider commitment amounts for next series of Border to Coast Infrastructure and Private Credit funds – covered under a separate report

Key Stats – Q4 2021

Assets

£4,929m

Assets increased by £1,354m since last valuation

£3,575m at 2019 valuation

Funding level

129%

Funding increased by 15% since 2019 valuation

114% at 2019 valuation

Return on Assets Since 2019 Valuation

+12.7% pa

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

+5.2%

0.4% decrease since 2019 Valuation

5.6 % at 2019 valuation

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

+5.5%

0.1% decrease since 2019 Valuation

5.6% at 2019 valuation

Discount rate

3.9%

0.3% decrease since 2019 Valuation

4.2% at 2019 valuation

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

£951m

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

£945m

Estimated Total Employer cost

15.0%

Estimated Total Employer cost decreased by 3.6% since 2019 valuation

18.6% at 2019 valuation

2. Funding

A review of your funding position and contributions

Funding position – ongoing funding target

Funding level

128.9%

at end December 2021

Down from 129.5% at end September 2021 but remains up from 114.4% at 31 March 2019

Surplus

£1,105.5m

at end December 2021

Up from £1,095.5m at end September 2021 and remains up from £449.8m at 31 March 2019

Comments

The funding level has deteriorated very slightly since the previous quarter, primarily due to a fall in the discount rate assumption, however this has been partially offset by slightly higher returns on assets relative to the expectation.

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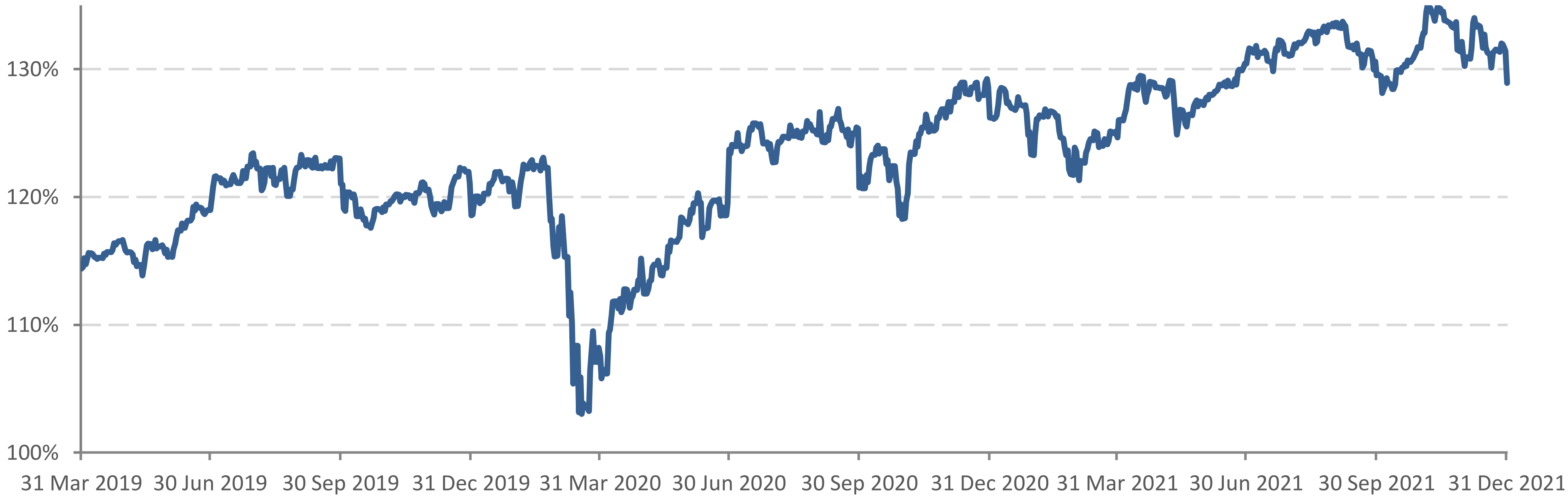
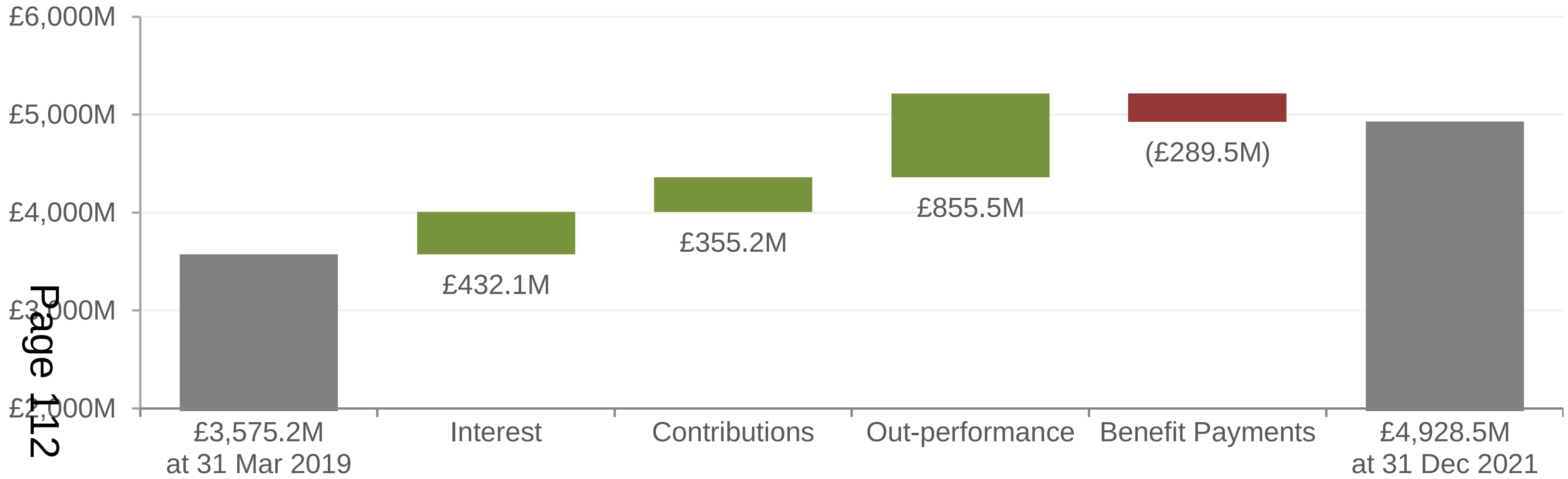
Change to funding level since valuation at 31 March 2019

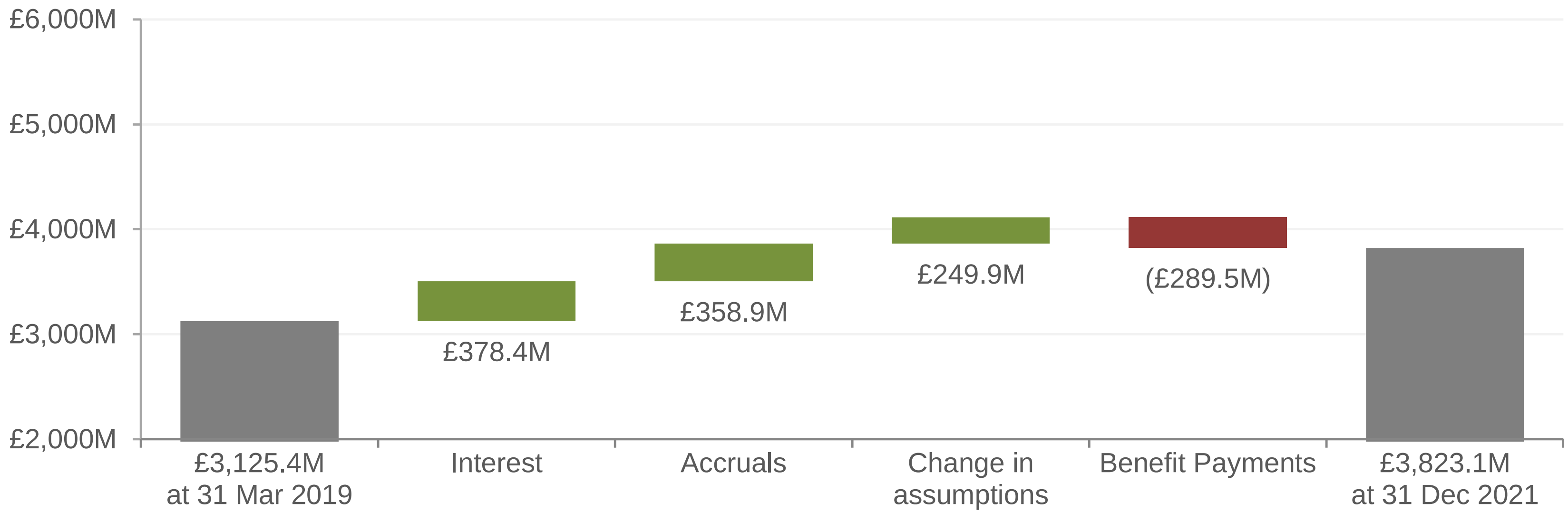


Analysis – ongoing funding target

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 £655.7M. This has been primarily driven by an increase in asset values.

Aggregate Employer contributions – ongoing funding target

Total employer contribution rate

15.0%

at end December 2021

Up from 14.2% at end September 2021 but down from 18.6% at 31 March 2019.

Employer cost of accrual

22.8%

at end December 2021

Up from 22.3% at end September 2021 and from 20.2% 31 March 2019

Comments

The cost of accrual has increased since the last quarter and since the 2019 valuation due to the fall in net discount rate.

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.

3. Asset allocation

A review of your strategic asset allocation

Asset allocation – Q4 2021

Asset Group	Manager	Valuation (£m)	Current allocation	Long-term strategy (31 December 2021)	Difference	Rebalancing Range	Possible action
Equities		**2,650.8**	**53.8%**	**50.0%**	**+3.8%**		
	BCPP UK equity	188.6	3.8%	4.0%	-0.2%	TBC	
	BCPP Global Equity	1,356.0	27.5%	28.0%	-0.5%	+/- 5%	
	Baillie Gifford LTGG	817.6	16.6%	18.0%	-1.4%	+/- 3%	
	Dodge & Cox	286.5	5.8%	0.0%	+5.8%		
	Fidelity	2.1	0.0%	0.0%	0.0%		
Absolute Return		**342.7**	**7.0%**	**0.0%**	**+7.0%**		
	Newton Real Return	180.7	3.7%				
	Leadenhall Remote Risk	57.4	1.2%				
	Leadenhall Diversified	55.0	1.1%				
	Leadenhall Nat Cat	49.7	1.0%				
Property		**330.3**	**6.7%**	**7.5%**	**-0.8%**	**TBC**	
	Hermes	39.0	0.8%				
	L&G	85.0	1.7%				
	Threadneedle	206.3	4.2%				

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

Asset allocation – Q4 2021 (cont'd)

Asset Group	Manager	Valuation (£m)	Current allocation	Long-term strategy (31 December 2021)	Difference	Rebalancing Range	Possible action
Infrastructure		**119.6**	**2.4%**	**10.0%**	**-7.6%**		
	BCPP Infrastructure 1A	23.7	0.5%				
	BCPP Infrastructure 1B	95.9	1.9%				
Private Credit		**97.4**	**2.0%**	**5.0%**	**-3.0%**		
	BCPP Private Credit	30.1	0.6%				
	Arcmont	30.7	0.6%				
	Pemira	36.6	0.7%				
Non-Investment Grade Credit		**241.0**	**4.9%**	**5.0%**	**-0.1%**	**TBC**	
	PIMCO	1.2	0.0%				
	BCPP Multi Asset Credit	239.8	4.9%				
Investment Grade Credit		**354.3**	**7.2%**	**7.5%**	**-0.3%**	**TBC**	
	BCPP Investment Grade Credit	354.3	7.2%				
Gilts		**784.4**	**15.9%**	**15.0%**	**+0.9%**	**TBC**	
	M&G	0.0	0.0%				
	BCPP Index Linked Bonds	784.3	15.9%				

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

Asset allocation – Q4 2021 (cont'd)

Asset Group	Manager	Valuation (£m)	Current allocation	Long-term strategy	Difference	Rebalancing Range	Possible action
		31 December 2021					
Cash		**8.0**	**0.2%**	**0.0%**	**+0.2%**	**TBC**	✓
	Internal Cash	8.0	0.2%				
	Treasury Cash	0.0	0.0%				
Total		**4,928.5**	**100.0%**	**100.0%**			

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

Investment strategy update

Decisions taken at the November Pension Fund Committee meeting:

- The Pension Fund Committee decided it may be appropriate to further consider an investment in Border to Coast's Global Property fund in 2022, with no firm commitment at this stage, and with appropriate due diligence checks to be undertaken.
- The Pension Fund Committee decided they would like to explore Border to Coast's Climate Opportunities Fund in more detail, by undertaking a review and due diligence checks to ensure that the investment would be appropriate.

Implementation actions over Q4 2021:

- The addition of Border to Coast's Multi Asset Credit fund into the portfolio;
  - The assets held in PIMCO's Diversified Income fund were transferred over to the Border to Coast Multi Asset Credit fund over the course of October and November 2021.

Transitions and cashflows

The following rebalancing activities took place over the quarter:

- £240m of assets was transferred from PIMCO's Diversified Income fund into Border to Coast's Multi Asset Credit fund.
- Border to Coast made nineteen Infrastructure capital calls in the quarter totalling £80m and eleven Private Credit capital calls totalling £11m.

- £50m was disinvested from PIMCO's Diversified Income fund.
- £12m was disinvested from M&G.
- £5m was disinvested from Treasury Cash fund along with the cash proceeds from the other disinvestments to cover the capital calls made above in the quarter.

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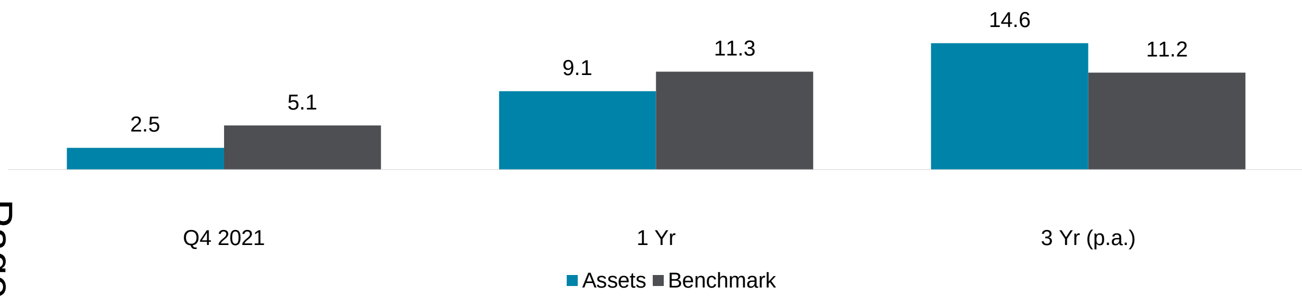
4. Fund performance

A review of your investment performance

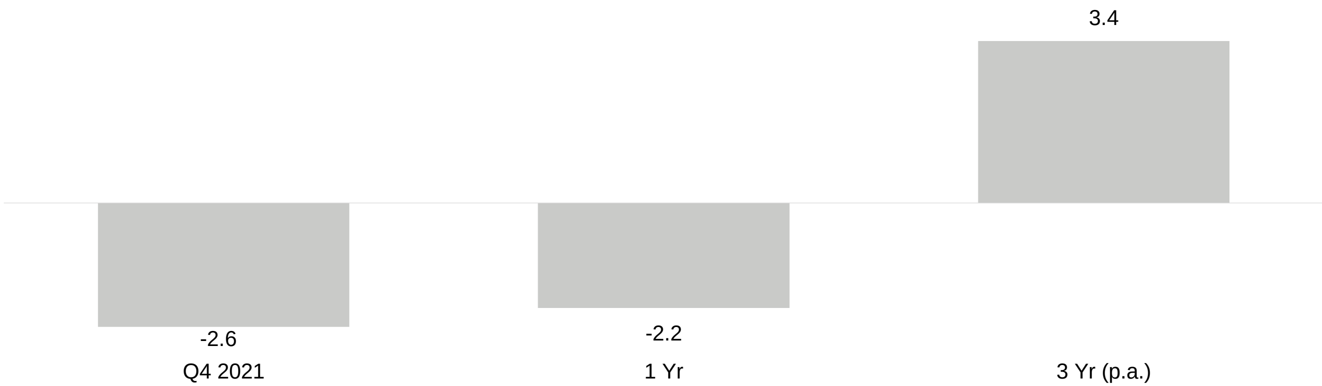
Total Fund performance – Snapshot

Fund performance & benchmark



Relative performance

Relative Return (%)



Source: BNYM, Aon

Quarterly (relative)

-2.6%

The Fund underperformed the benchmark returning 2.5% vs 5.1% over the quarter.

3 year (relative)

+3.4%

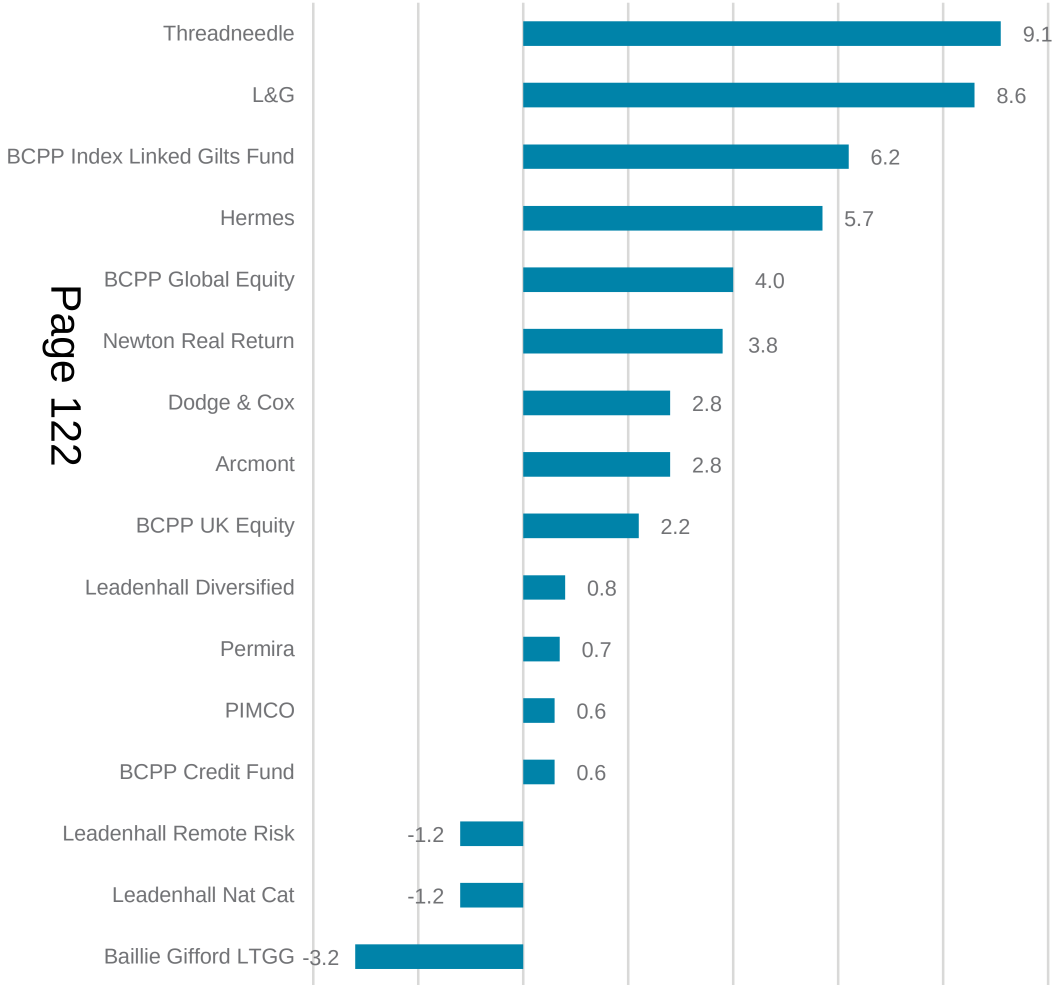
Over 3 years the Fund has outperformed the benchmark returning 14.6% vs 11.2%.

Comments

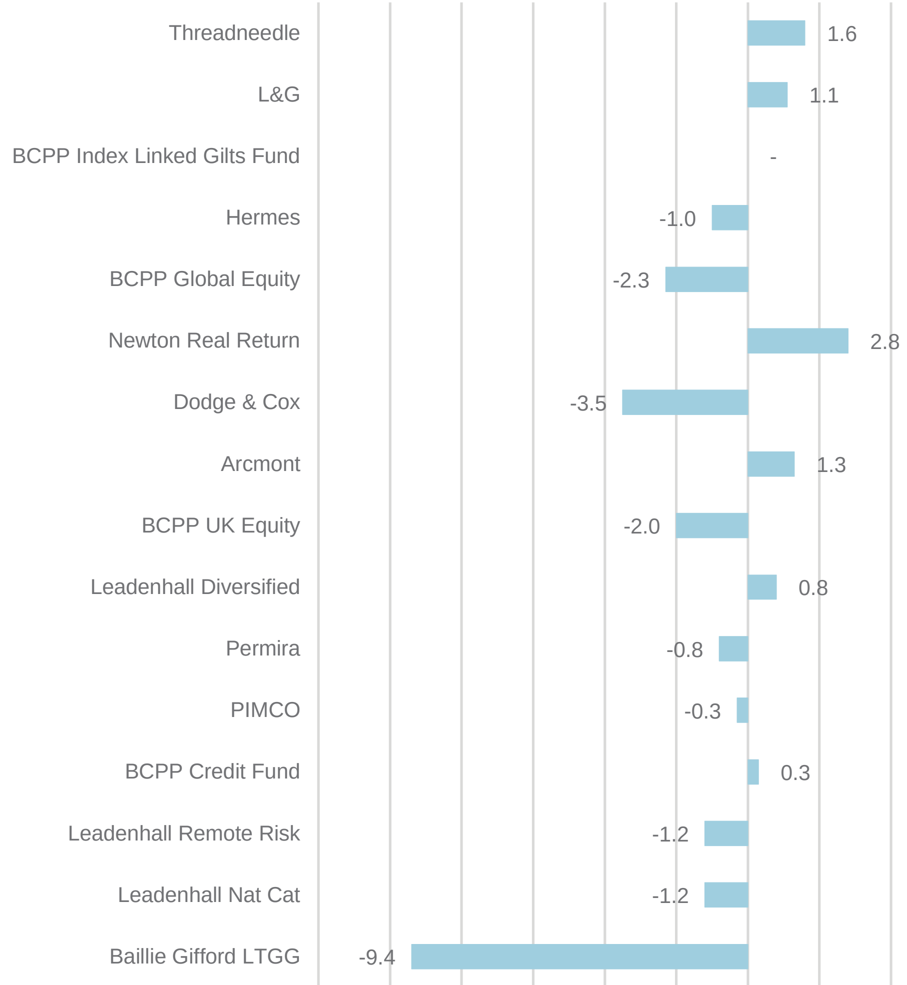
Total Fund performance is behind the composite benchmark over the quarter and 1 year period but ahead of the compositive benchmark over 3 year period to 31 December 2021.

Manager performance – Quarter Snapshot

Absolute performance



Relative performance



Source: BNYM, Managers, Aon.
Note: BCPP Infrastructure returns and BCPP Private Credit returns not shown during initial investment drawdown phase.

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	17.3	18.3	-1.0	-	-	-	7.4	6.2	+1.2
Global Equity									
BCPP Global Equity	19.3	20.1	-0.8	-	-	-	15.1	16.9	-1.8
Baillie Gifford LTGG	4.1	20.0	-15.9	38.5	18.4	+20.1	18.3	10.3	+8.0
Dodge & Cox	21.4	20.1	+1.3	13.8	18.5	-4.7	9.6	12.6	-3.0
Absolute Return									
Diversified Growth									
Newton Real Return	7.3	1.0	+6.3	8.9	0.7	+8.2	4.2	0.5	+3.7
Insurance-Linked									
Leadenhall Remote Risk	-0.2	0.0	-0.2	2.3	0.3	+2.0	2.2	0.3	+1.9
Leadenhall Diversified	-0.4	0.0	-0.4	1.1	0.3	+0.8	0.7	0.3	+0.4
Leadenhall Nat Cat	-4.3	0.0	-4.3	-1.5	0.3	-1.8	-2.7	0.3	-3.0
Property									
Hermes	17.7	18.0	-0.3	5.9	5.9	0.0	8.2	5.6	+2.6
L&G	19.7	19.1	+0.6	6.7	6.2	+0.5	7.7	5.7	+2.0
Threadneedle	21.5	19.1	+2.4	6.5	6.2	+0.3	8.7	5.6	+3.1

Source: BNYM, Managers, Aon.
Hermes, L&G, Threadneedle; IPD data was used for benchmarking purposes, total fund performance was calculated using BNYM data.
Note: BCPP Infrastructure returns and BCPP Private Credit returns not shown during initial investment drawdown phase.

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									
Arcmont	8.7	6.0	+2.7	7.2	6.0	+1.2	7.2	6.0	+1.2
Permira	4.9	6.0	-1.1	5.5	6.0	-0.5	7.5	6.0	+1.5
Investment grade credit									
BCPP Investment Grade Credit	-2.1	-3.1	+1.0	-	-	-	1.4	-0.3	+1.7
Non-investment grade credit									
PIMCO	0.8	1.2	-0.4	-	-	-	3.4	3.2	+0.2
Gilts									
BCPP Index Linked Bonds	4.3	4.0	+0.3	-	-	-	7.3	5.0	+2.3
Total	**9.1**	**11.3**	**-2.2**	**14.6**	**11.2**	**+3.4**	**8.4**	**8.2**	**+0.2**

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Source: BNYM, Managers, Aon.
Note: BCPP Infrastructure returns and BCPP Private Credit returns not shown during initial investment drawdown phase.

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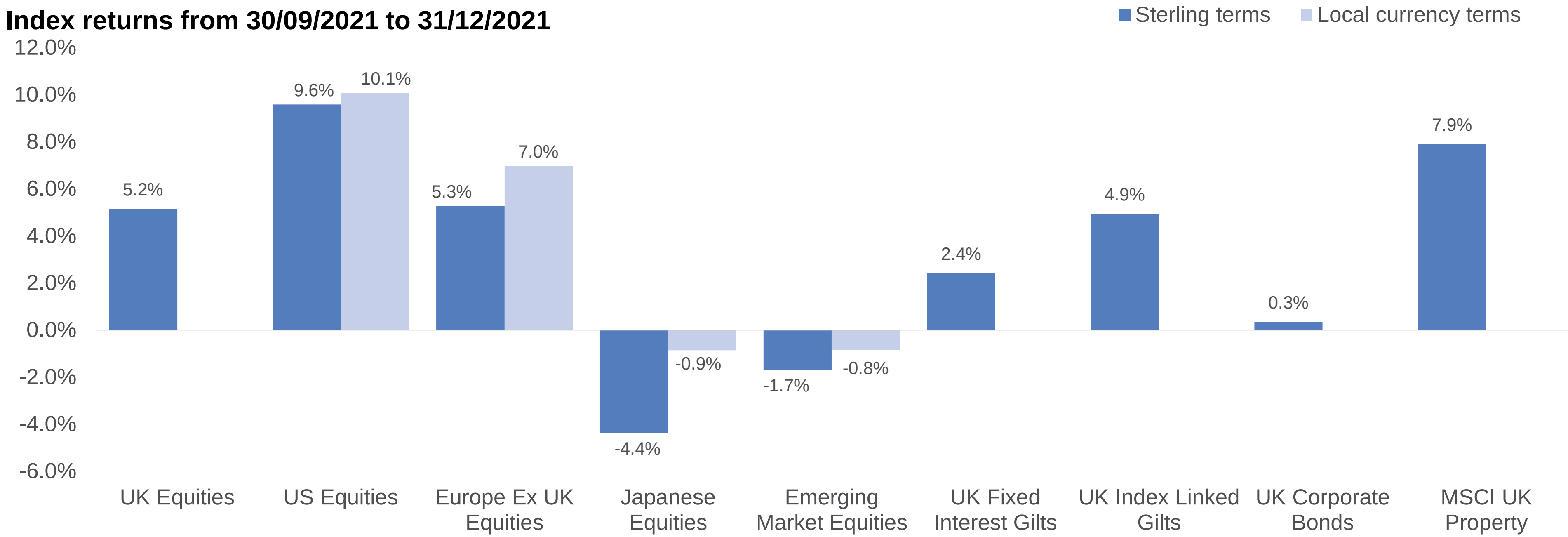
5. Market background and investment outlook

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

Market – Background Q4 2021



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

Equities

Global equity markets rose despite concerns about the new Omicron variant and high inflationary pressures.

The MSCI AC World index posted a 7.1% return in local terms and a 6.3% return in sterling terms.

US equities performed the best, returning 10.1% over the quarter in local currency terms and 9.6% in sterling terms. Though returns were strong over the overall quarter, equity market momentum waned towards the end of the year due to the discovery of the Omicron variant.

Bonds

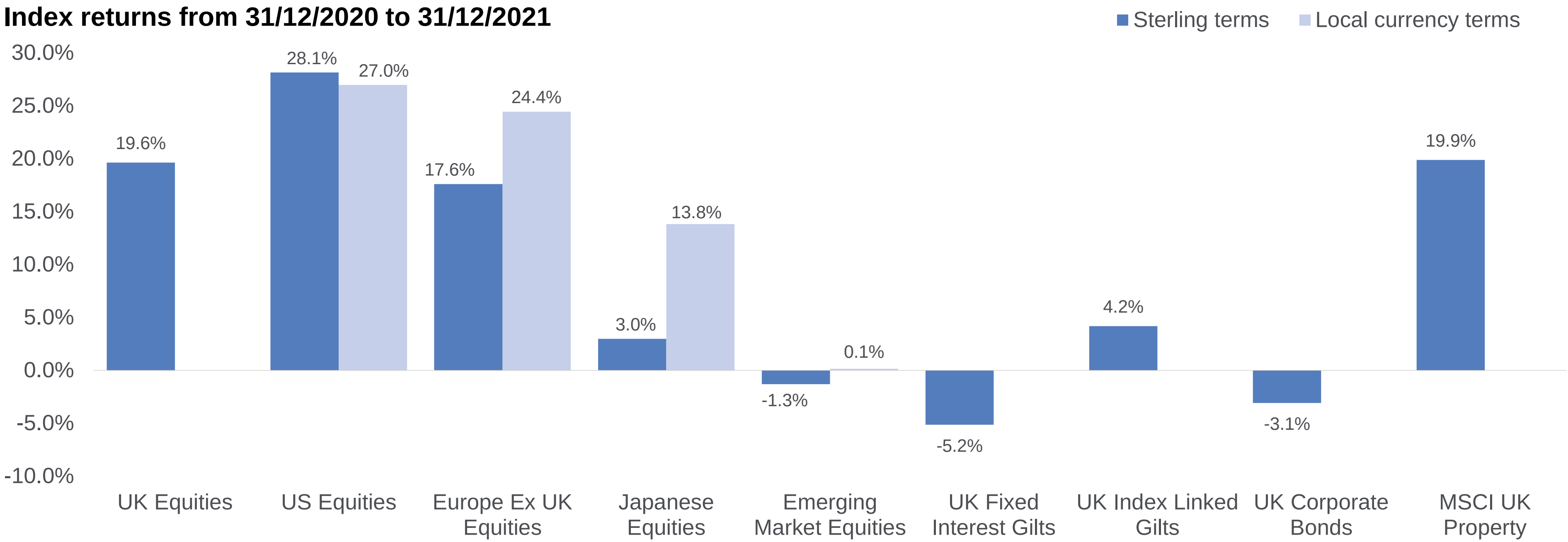
UK investment-grade credit spreads widened, resulting in underperformance against gilts, although a small positive return of 0.3% was still achieved over Q4.

Gilts

The UK gilt curve flattened on the back of Omicron and growth worries over the fourth quarter, driving the positive performance of UK fixed-interest government bonds. After falling in October and November, yields picked up in December as global inflation reached ever-higher levels. The Bank of England raised policy rates whilst the Fed accelerated its tapering pace.

The FTSE All Stocks Gilts Index returned 2.4% over the quarter. The FTSE All Stocks Index-Linked Gilts Index returned 4.9% as increasing inflation expectations caused breakevens to rise.

Market – Background 12 month



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

Equities

Global equities generated strong positive returns over the last twelve months, boosted by optimism over Covid-19 vaccine roll-outs, supportive monetary and fiscal policies, and improving economic data. However, the discovery of the new Covid-19 variants cast doubts over the prospect of global economic growth in 2021. Inflation rates worldwide continued to increase, as supply chain problems and rising wages persisted. Leading to major central banks indicating the end of pandemic-era asset purchase programs and hinting at accelerated interest rate hikes to help ease persistent inflation.

Bonds

Credit markets were underwhelmed over the year as they declined from risk-averse sentiment during the fourth quarter. UK investment-grade credit spreads (the difference between corporate and government bond yields), based on the iBoxx Sterling Non-Gilt Index, were unchanged at 108bps.

Gilts

Optimism over global economic recovery in the light of several vaccine discoveries and stimulus packages drove global government bond yields higher at the beginning of 2021. However, in Q2 2021, yields fell back as variant virus risks and worries over a slower pace of global economic recovery arose. Nominal yields then picked up once more over the third quarter, driving the negative performance of UK fixed-interest government bonds. Yields rose on the back of brought-forward interest rate hike expectations against the background of rising inflation and central bank indications that they were considering policy rate increases.

Global Outlook

Market resilience being tested

The closing months of the year had demonstrated the US equity market's long-standing resilience. Other regions, particularly emerging markets, struggled, but US equities sailed through worries over rising inflation and interest rates alongside the rapid spread of the Omicron variant. The UK also had a fairly good end to the year for domestic equities and bonds, though worries over inflation and rising Bank of England interest rates did start to impact gilts and corporate bonds. UK commercial property again demonstrated its pandemic resilience, capital values reviving strongly.

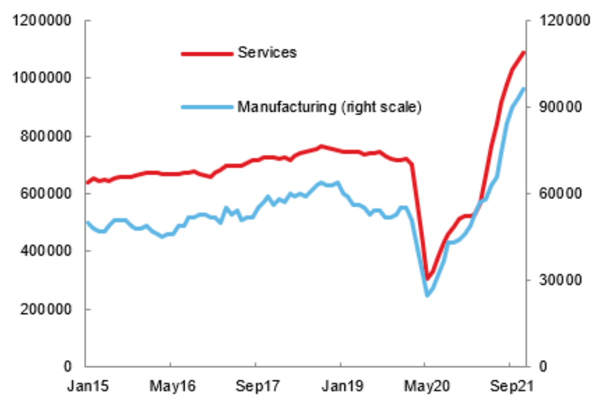
The start of 2022 has, however, seen a marked change in market tone. Tested by an anticipation of faster rises in central bank interest rates and a sharp move in global bond yields, equities have looked shakier. This weak start could be a blip, or an indication that market resilience is facing a sterner test this year. We suspect the latter.

UK inflation and the labour market

Some of the factors behind UK inflation moving still higher are clearly global. Supply chain pressures are universal. The impact of the faster spread of the Omicron variant in recent weeks has worsened some production constraints for suppliers of raw materials and manufactures. Energy prices have also risen further, reflecting strong demand, weak supply, and low inventories. These trends argue for persistence in price pressures well into 2022, which is disappointing for those hoping for a quick fall in inflation.

While some of these supply pressures should fade in time, the more concerning factor for UK inflation is the state of the labour market. Even though the economy has only just managed to climb back to its pre-Covid output levels of early 2020, the labour market is tight, surprisingly so. Unfilled vacancies are at record highs (see chart).

High unfilled vacancies in a tight UK labour market



Source: ONS, Macrobond

The cause is significant shrinkage of the workforce in the economy since the pandemic's onset. Whether to take early retirement or for other lifestyle reasons, many have decided to leave the labour market. Males of working age not looking for work have risen by around 400,000 to about 3.7m recently. Brexit-related outmigration is also a factor. This means that the economy's supply capacity, i.e., the output it can generate without raising inflation, has reduced somewhat. Unless productivity rises markedly to compensate, which has not happened to date, inflationary pressure will come through at lower output levels than pre-pandemic. This is already a factor behind rising UK inflation.

Investment outlook

Interest rates and gilt yields

How far can the bank raise rates?

The Bank of England has already started raising interest rates, largely out of concern that the tight labour market will embed current price pressures into inflation expectations, impacting wage and price setting ahead. Since rates are rising from about zero, even the three or four rises signalled in rates markets for 2022 will still leave them very low, well below inflation. Still, it is a big change from a long period of being so near zero. Bank rate has averaged a little under 0.5% since the start of 2010. If bank rate does reach the 1% level by year-end as markets signal currently, it would therefore be quite a break with the past decade.

How the economy reacts to rising rates is unclear. Even as wage settlements creep up, inflation is rising faster, pressuring the consumer. If the economy is already set to slow, the upward creep in interest rates could lead to an unwelcome, deeper slowdown. On this scenario, the Bank may have to slow or even abandon planned rate increases in time. The ultimate path for rates is therefore highly uncertain. It is worth noting that interest rate forecasts have overestimated actual rate paths for many years.

Long duration gilt yields staying low

Gilt yields have fluctuated in a series of sharp moves in both directions for the last two years, but still show no clear upward direction on an underlying basis. This suggests that even though expectations for interest rates during 2022/23 have moved higher, longer-term expectations still see low interest rates persisting. 20 year benchmark gilt yields, though moving up in early 2022, are still no higher than year-ago levels and barely above pre-pandemic levels. It is only shorter-duration (3-5 year) yields that have broken out of previous ranges, reflecting recent expectations that policy rates will be moving higher than pre-pandemic levels.

The gilt price anomaly we see is not in the absolute level of yields but rather the relative pricing of index-linked gilts versus fixed. This largely reflects distorted prices in the index-linked market. It is nothing short of extraordinary that the market implied inflation rate over the next 25 years is higher than the average seen over the past decade, even though RPI inflation converges with much lower CPI inflation in just over eight years' time. We doubt that this reflects a genuine market view on inflation running so far above the Bank of England target over time; rather it is the outcome of a still large supply shortfall of inflation-linked bonds against a backdrop of continuing buoyant demand.

Investment outlook

Equities

Rotations and mini-cycles

The anticipation of interest rate rises and some upward pressure on bond yields in recent weeks has squeezed longer duration stocks. The US Nasdaq index or the S&P 500 technology sector is where the impact of rising interest rates is being watched, given its higher valuations and longer duration attributes. Going into 2022, market chatter has once again been heavy on a strong duration rotation under way, from technology and into financials and energy, sometimes expressed as away from 'growth' and towards 'value'. However, there is still little evidence that these rotations are much more than mini-cycles. Interest rates rose sharply in the early part of 2021 too, and much as in recent weeks, technology was squeezed. This was not sustained. Is 2022 to be different? To us, it seems unlikely that interest rate trends alone can claw back much, if at all, of this sector's cumulative outperformance over financials, the most important 'value' sector (see chart). The more modest claim that can be made, with some validity, is that interest rate trends and very high valuations in technology now stand in the way of its continued outperformance.

Technology's lead still looks impregnable
(Cumulative returns, January 2017=100)

Source: Aon, FactSet

Most market supports look weaker

Our downgrade to equities late last year was taken on a view that most of the market supports we could identify looked less durable coming into 2022. The earnings rebound in 2020/21 has been impressive, but the best of the recovery is over, and revisions are now no longer upwards. While there is no obvious threat to economic growth, fiscal and monetary stimulus to economies is now on the retreat so economic activity is less well supported. Also, labour, and other input cost pressures are featuring as drags in the way companies are issuing guidance on their financial results. Earnings growth has kept up with market gains so far, but this still leaves valuations at the very top end of historical ranges where vulnerability to any adverse market development is high.

Investment outlook

Equities

Most market supports look weaker (cont'd)

The liquidity and interest rate environment is also on the move this year to becoming much less benign for risky assets. In terms of implications, all of this suggests that this is a better environment for institutional investors who are looking to reduce equity risk in portfolios than it is for those planning to commit new money to the market.

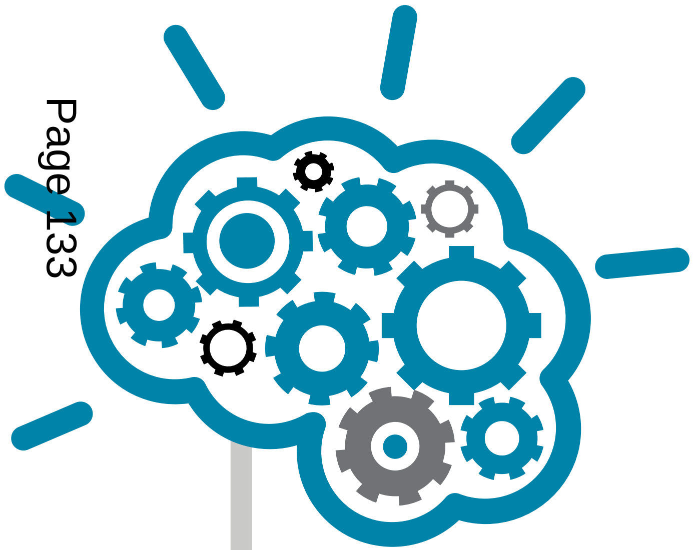
Geopolitical and hard to 'price' risks

Markets always find it difficult to allow for 'event risk'. The calculated risk of such events may be far from trivial, but a significant majority may still deem them to be unlikely over a near-term horizon. A good example is the risk of a Russian invasion of Eastern Ukraine. This is clearly possible in the near-term, though the high costs for Russia – loss of life, sanctions and more, may well prevent this occurring. It is our guess that a majority currently view these costs as high enough to deter Russia. This would well explain why the market impact so far from this threat has so far only been in directly impacted assets - Russian markets or in gas prices. If the majority view is wrong, and conflict ensues, a broader and larger market impact is probably unavoidable. Much the same could be said for other areas of conflict too, such as China-Taiwan or indeed other event risks for which setting a probability is difficult, such as a cyber-attack or a climate-change event that disables significant economic infrastructure. While the inability of markets to price event risk appropriately is hardly new, high asset prices across the board today raise the likelihood of a deeper market impact from any such event.

6. Aon’s latest thinking

Our latest investment ideas for you

The threat of new variants…



Omicron… and what next for global equities?

The latest highly mutated variant of Covid-19, Omicron, first discovered in South Africa, briefly rocked global equity markets towards the end of 2021.

Our view that global equities will produce low returns over the next few years still holds. A key risk for equity markets is persistent inflation as production costs, including wages, are an issue going into 2022 that is exacerbated by Covid-19 variants.

Portfolio diversification therefore remains key, and portfolios should be positioned to withstand weaker equity prospects and greater volatility.

Investing in a low carbon economy…

COP26… and an infrastructure opportunity?

The 26th annual *UN Conference of the Parties (COP26)* brought experts and decision-makers together to discuss urgent climate change action. The hope was to make more concerted progress, but progress was modest, and the commitments made leave the world on track for global warming of +2.4°C.

There will be rising demand for infrastructure investments aimed at galvanising the take-up of renewable energy and supporting the transition to a low carbon economy. Infrastructure can act as a useful diversifier, with cashflows linked to inflation and illiquidity premiums for schemes able to lock up capital.

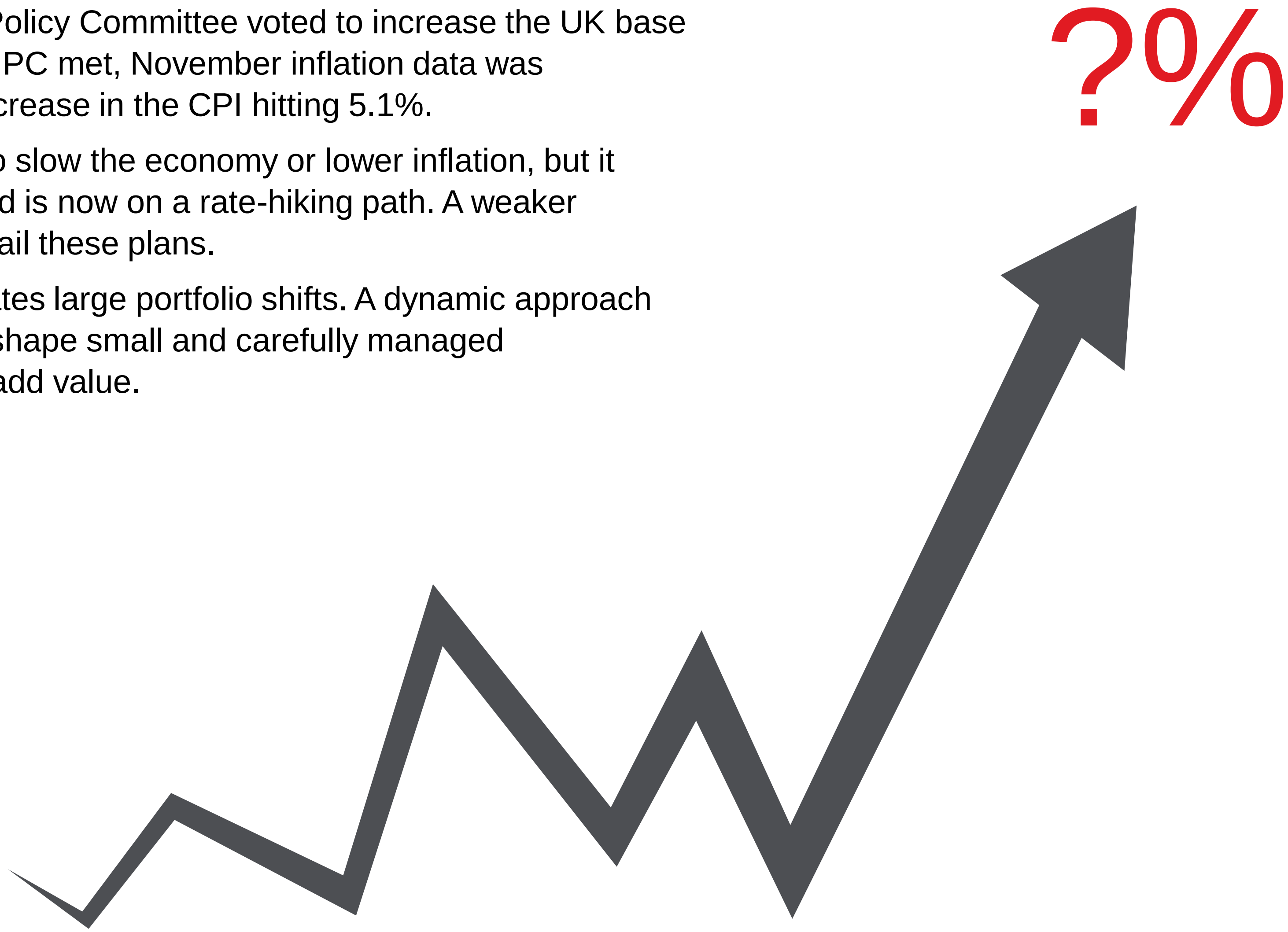
The Bank of England acts early…

…and further rate hikes anticipated

On 16 December, the Monetary Policy Committee voted to increase the UK base rate by 0.15% to 0.25%. As the MPC met, November inflation data was announced, with the 12-month increase in the CPI hitting 5.1%.

This hike is unlikely to do much to slow the economy or lower inflation, but it does suggest the Bank of England is now on a rate-hiking path. A weaker economy, however, could still derail these plans.

Increased yield volatility complicates large portfolio shifts. A dynamic approach to hedging, where tactical views shape small and carefully managed movements, has the potential to add value.



7. Manager review

Aon ratings and understanding manager performance

Baillie Gifford - LTGG

Scheme performance & benchmark

Page 137

Performance comments

The manager significantly underperformed in the final quarter of the year. Higher inflation and interest rate expectations worked against the strategy which consistently has a high allocation to higher growth companies.

Most growth-orientated strategies we follow also underperformed in the period. Presently, as one of the most growth-orientated strategies we follow, the level of outperformance in 2020 and then underperformance in 2021 is expected given the market environment. A continuation of the current market trend will prove challenging for the strategy. Longer-term performance remains very attractive.

Negative earnings or news flow in higher-growth stocks were heavily punished in the rising rates environment.

Moderna's shares were weak in the period, buffeted around by short-term Covid-19 vaccine-related news flow. The team's core long-term investment thesis is outside the COVID vaccine, noting dozens of promising vaccines in the pipeline, using the now de-risked mRNA technology.

Peloton significantly underperformed in the period, with a number of negative headlines around supply chain issues and changing consumption trends post-pandemic.

Buy

Reviewed: February 2022

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.

Baillie Gifford – LTGG (cont'd)

Major developments

Post quarter-end, Baillie Gifford announced some staff changes on the LTGG strategy. We view these as largely cosmetic with no material change to the intellectual input behind the strategy.

John MacDougall has returned to Edinburgh, following a two-year stint in Shanghai, and will resume his role as a decision-maker for LTGG. Returning to Edinburgh from Shanghai (where he continued to contribute to LTGG) he is re-formalized as a decision-maker.

Tom Slater will step down as a decision-maker, but he will continue to be a key contributor to LTGG as an analyst and will lead the Scottish Mortgage Investment Trust, which has a high degree of overlap with LTGG. Slater has been Head of US Equities at Baillie Gifford since 2015, and MacDougall's return will provide an opportunity to concentrate on this and other overlapping Lead-PM responsibilities being taken on.

Analysts Michael Pye, Robert Wilson and Gemma Barkhuizen will be promoted from within the team to become decision-makers, recognizing the input they've been providing.

This means that decision-makers for LTGG will be Mark Urquhart, John MacDougall, Michael Pye, Robert Wilson and Gemma Barkhuizen.

Buy

Reviewed: February 2022

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

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

8. Further information

Key reference information about your scheme

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 31 December 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%
30 September 2021	4.00%	3.45%	2.20%
31 December 2021	3.90%	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 31 December 2021.

High level asset class	Expected Return (10 year median % p.a.)	Expected Volatility (10 year % p.a.)
Equities	6.3	19.0
Property	5.6	12.6
Infrastructure	7.9	15.8
Illiquid credit	4.4	5.4
Investment grade credit	2.1	8.0
Non-investment grade credit	3.3	10.1
Absolute Return	3.8	6.0
Gilts	0.4	7.3
Cash	0.8	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	Non-investment grade credit	Cash
Equities	100%	-10%	6%	74%	61%	38%	28%	54%	-3%
Government Bonds		100%	53%	11%	-4%	-3%	4%	-3%	34%
Liquid inv. grade credit			100%	32%	4%	6%	63%	34%	37%
Absolute return				100%	52%	25%	37%	52%	19%
Infrastructure					100%	19%	14%	20%	0%
Property						100%	26%	27%	4%
Private Credit							100%	65%	20%
Non-investment grade credit								100%	5%
Cash									100%

Data and assumptions

Date of calculation	31 December 2021
Number of simulations	5000
Time horizon	10 years
Asset value	£ 4,928,517,121

- 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 high yield credit.
- 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 Fund.
  - The analysis considers the expected return of the Fund'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 Fund 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 Fund'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 Fund along the journey to full funding.

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The compliance is on the basis that North Yorkshire County Council is the addressee and the only user and that the update and projections in this funding update are for information only and do not contain the information you would need to make a decision on the contributions payable or the investment strategy. If you intend to make any decisions after reviewing this presentation, please let me know and I will consider what further information I need to provide to help you make those decisions.

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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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