

# Cambridge University Endowment Fund

## Quarterly Investor Report

QUARTER ENDED 31<sup>ST</sup> MARCH 2023

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## Fund and Unit Value

The net asset value of the Fund at 31<sup>st</sup> March 2023 was **£ 3,920.4m**.

The unit value was **£67.52**.

The total net return for the quarter was **2.3%**.

## Chief Investment Officer's Quarterly Review

### Market Overview

The first quarter of 2023 (the third quarter of the CUEF Financial Year 2022-23) saw a reversal of declines experienced at the end of 2022, with equities generally performing strongly. This strong performance was despite several challenging factors, including increasing interest rates in the US, UK and Europe and the resulting collapse of Silicon Valley Bank, along with a number of other smaller deposit-takers in the US.

In developed markets, value stocks saw something of a resurgence following a protracted period of under-performance, as investors continued to shy away from technology stocks. In emerging markets, the long-awaited post-COVID re-opening in China drove a strong rally at the start of the year, although this subsequently petered out; and then reversed based on ongoing geopolitical concerns.

### CUEF Performance

This review of the CUEF's performance covers the first quarter of 2023 calendar year, which corresponds to the third quarter of the CUEF's Financial Year 2022-23. Additional commentary is provided for the CUEF's year-to-date performance (nine months of the financial year).

The total net return for the quarter ended 31<sup>st</sup> March 2023 was +2.3%, somewhat below the CUEF's "New 65/35" benchmark which was +4.7%, primarily due to the private equity portfolio remaining flat through the period. For the first nine months of the Financial Year, the CUEF's total net return was +3.0%, outperforming the Fund's "New 65/35" Benchmark which was +2.2%.

Over the longer 33-month period since 1st July 2020, the CUEF's net annualised return was +9.2%, substantially higher than the "New 65/35" benchmark (+4.4%), demonstrating the strength of the CUEF's multi-asset portfolio model over the long run.

A full breakdown of CUEF performance is provided in Figure 1 below, including data for the quarter reported, the Financial Year to Date, as well as performance for the 2022 calendar year for reference. This is followed by performance commentary for each major asset class.

Figure 1: CUEF Investment Performance

	Calendar Q1 2023	Financial Year 22/23 To Date (Jul 22 – Mar 23)	Calendar Year 2022	Since 1 July 2020 *	Trailing 10 Years (Jul 12 – Jun 22)
	Cumulative	Cumulative	Cumulative	Annualised	Annualised
<b>CUEF</b>	<b>+2.3%</b>	<b>+3.0%</b>	<b>-4.0%</b>	<b>+9.2%</b>	<b>+10.8%</b>
UK CPI + 5%	+2.6%	+9.7%	+16.0%	+11.7%	+7.6%
"New 65/35" Benchmark **	+4.7%	+2.2%	-14.8%	+4.4%	+8.7%
"Old 65/35" Benchmark	+4.2%	+2.2%	-12.6%	+4.6%	+9.4%
MSCI ACWI ex. fossil fuels***	+5.2%	+7.9%	-9.9%	+9.6%	+12.0%
MSCI ACWI ex. fossil fuels (USD)	+8.1%	+9.9%	-20.0%	+9.4%	+9.0%
MSCI ACWI (USD)	+7.4%	+10.1%	-18.0%	+10.1%	+9.3%
FTSE All-Share	+3.1%	+8.4%	+0.3%	+11.2%	+6.9%
Barclays Global Agg. Bonds (GBP-Hedged)	+2.6%	-0.7%	-12.2%	-3.8%	+1.7%
FTSE British Govt Index-Linked Bonds	+4.3%	-11.1%	-33.6%	-11.5%	+3.9%
MSCI UK Quarterly Property	+0.1%	-15.5%	-8.9%	+2.6%	+8.6%

Data sources:

CPI data from the Office for National Statistics (ONS), CUEF returns calculated based on CUEF Net Asset Value, other data sourced from Bloomberg and UCIM internal reporting.

Notes:

- CUEF returns are net of fees. All index returns in Pounds Sterling unless stated.

\* 1<sup>st</sup> July 2020 is the date at which various material changes to UCIM's general portfolio approach (and risk limits) were formally incepted by the UCIM Board, and as such, when the new UCIM team's "track record" is considered to have begun.

\*\* The "New" 65:35 Composite Benchmark reflects slight alterations in the construction of this benchmark to better reflect the currency exposure of the CUEF itself. The "Old" 65:35 Composite Benchmark is presented for comparison. Past performance is not indicative of future returns.

\*\*\* MSCI ACWI ex. fossil fuels data from 1<sup>st</sup> July 2020 onwards.

Appendix 1 (p.16-17) shows the breakdown of the Fund's assets by currency, geographic region, and sector.

# Asset Class Review

## Public Equity

The CUEF's public equity portfolio returned +5.0% during the quarter, narrowly underperforming its MSCI ACWI ex fossil fuels benchmark (+5.2%). Strong performance by the portfolio's developed markets book (+6.5% in Sterling terms, versus +5.6% for the benchmark) was offset both by underperformance in emerging markets (+0.6% versus +1.6%) and by the portfolio's overweight in the latter category (relative to the MSCI ACWI index).

Within developed markets, pleasingly, there was widespread strong absolute and relative performance. Of note, one fund manager which specialises in the biotechnology sector, achieved returns of +12.1%, despite falling prices across that sector, predicated on the pending acquisition of one of its portfolio companies. On the downside, a Japan-focused small to mid-cap fund manager suffered from a decline in the share price of one portfolio company following disappointing market guidance.

In the emerging markets, although marginally positive, performance was more variable across specific markets, with notable outperformance from one fund manager which deploys a specialised stock selection strategy across various markets in Asia, but weaker performance from two managers focused on China only.

In the first quarter of the calendar year, CUEF incepted one new fund manager in the biotechnology sector and increased the size of its existing position in an information technology focused fund. Following the end of the quarter, and in line with the revised asset allocation targets, a number of small reductions in positions were made across the public equity portfolio. Further detail on the CUEF's updated asset allocation targets is provided in the "Focus Section" on p.10-12 below.

For the financial year to date, the public equity portfolio returned +7.0%, broadly in line with its benchmark, the MSCI All Company World Index (ex. fossil fuels), which was +7.9% for the same period.

## Private Equity

The CUEF's private equity portfolio declined -0.8% in Sterling terms during the quarter. Performance was variable across this part of the portfolio, with no clear trends emerging and valuations driven by specific actions and events within each manager's portfolio. Notable positive contributions came from one firm that specialises in software companies (+8.4% in Sterling) and one firm focused on small-cap consumer businesses (+10.7% in local currency). This performance was more than offset by mark downs in a secondaries manager (-2.4% in local currency) and several of the CUEF's recent immature investments as they generated negative returns as fees are called on committed capital.

Capital calls in the three months to 31<sup>st</sup> March 2023 were approximately £20m, less than half of the volume in the previous quarter. These were mainly directed towards a number of buyout investments in specialist sectors such as electrical components, sensors and consultancy services. Distributions were £28 million during the quarter.

During the quarter, three fund commitments were finalised, representing a combined total of \$75m (US Dollars). Post quarter end, a further two fund commitments and one co-investment have been completed.

For the financial year to date, the private equity portfolio is flat at -0.1% in Sterling terms.

### **Absolute Return and Credit**

The performance of the CUEF's absolute return and credit portfolio was steady, rising a modest +1.4% in local currency terms (-0.3% in Sterling). The portfolio consists of twelve core manager positions; during the quarter, nine of these managers recorded positive returns in local currency.

The portfolio benefitted from strong performance by a number of specialist managers, including a fixed income arbitrageur (+9.0%) and a distressed credit manager (+6.8% in one of its funds), the latter taking advantage of dislocation in the financial services sector in the early part of the year. Conversely, one of our funds which specialises in financial services underperformed, driven by its key short positions, despite performing well through the US regional banking shock, helped in particular by a short position in Silicon Valley Bank.

Following the end of the quarter reported here, we have made modest increased allocations to a number of the more liquid constituents of the absolute return and credit book, funded from trims made in public equity and excess cash – increasing the size of this asset class within the overall CUEF portfolio from 20% to 23% of CUEF assets. Further detail on amendments to the CUEF's asset allocation targets is provided in the specific focus section below.

For the nine months of the Financial Year to date, Absolute Return and Credit is up +5.8% in local currency terms (+4.7% in Sterling).

### **Real Assets**

The CUEF's real assets portfolio returned -1.5% in Sterling terms in the first three months of the calendar year, below the benchmark which was -0.5%.

The UK real estate investment market environment has been muted, following rises in the UK base rate over the last year. One of the CUEF's legacy positions with a UK real estate manager fell 6.7% in the quarter, primarily as a result of increases in interest rates flowing through to capitalisation rates. The CUEF's largest real estate investment, a portfolio of industrial property, fell a more modest -0.2% in the first quarter. We are encouraged by this manager signing new leases at significantly higher rates and occupancy levels which remain above 90%, reflecting the tight supply of available units in the market.

For the financial year to date, although the CUEF's real assets portfolio has fallen -10.3%, it has performed slightly better than its benchmark, which has fallen by -13.0% over the same period.

## Asset Allocation

The CUEF's asset allocation on 31<sup>st</sup> March 2023 is shown below, along with the comparison against previous quarter and our revised long-term target. Following the biennial review of the CUEF's asset allocation, the long-term target asset allocation has been revised. A full discussion of the process and outcomes of the review are provided below in the "Focus Section" on p.10-12 of the report; in and will be discussed in further detail on the quarterly investor call on Wednesday 5<sup>th</sup> July (calendar invitation and Zoom link have been provided to investors and are included in "Key Dates" on p.9 below.)

Figure 2 – CUEF Asset Allocation Summary

	Last Quarter	Current Quarter		New Long-Term Target Allocation
	31 Dec 22	31 Mar 23		
	%	£	%	
Total Equity	64.3%	£2,569m	65.5%	60-65%
Public Equity	40.0%	£1,652m	42.1%	30-35%
Private Equity	24.3%	£917m	23.4%	30%
Real Assets	7.8%	£292m	7.5%	10-12.5%
Absolute Return & Credit	21.1%	£787m	20.1%	20-22.5%
Cash & Fixed Income	6.8%	£272m	6.9%	5%
TOTAL	100.0%	£3,920m	100.0%	100%

Data source: UCIM internal reporting.

## Sustainability

Against the three pillars of our Sustainable Investment Strategy, the following progress has been made since the last report:

### Investing to achieve a phased transition to "net zero"

As of 31<sup>st</sup> March 2023, the CUEF's conventional energy exposure was 2.5%, meaningfully below the MSCI ACWI's 4.9% and representing a reduction of 130 basis points since 30<sup>th</sup> June 2022.

### Engaging to decarbonise the real economy

The final workshop of the third cohort of the "Net Zero by 2038" programme, delivered in partnership with the Cambridge Institute for Sustainability Leadership (CISL), was hosted in Cambridge in May. The cohort focused on our partners based on the West Coast of the US and senior team members from seven firms attended.

18 firms representing c.\$150bn of assets managed globally have now completed this programme and we can point to tangible impact from this partnership approach to engaging with our investment managers. For example, after completing the course, one private equity manager in the CUEF's portfolio started to report a full inventory of its portfolio companies' Scope 1,2 and 3 emissions, essential to fully understanding the emissions intensity of its portfolio. This manager then started working with companies to align with a 1.5 degree future; and in July 2022, the first company in its portfolio set a science-based target.

## **Reporting with transparency and accountability to our stakeholders**

Tilly Franklin, Joel Beckman and Honor Fell attended an in-person meeting with eight college Green Officers in May, coordinated by Cambridge Zero. UCIM's educational materials were positively received and questions from attendees included interest in UCIM's approach to engagement; to investment in enablers of fossil fuel companies such as the finance and banking sector; the steps that can be taken to reduce emissions from agriculture; and UCIM's timeline to reach net zero.

UCIM continues to host its six-week sustainable investment internship programme, further outlined in the UCIM Organisation section below.

## **UCIM Organisational Update**

As communicated in the previous investor report, we said goodbye to Anne Marie Fleurbaaij on 30<sup>th</sup> April 2023. We wish her all the very best as she takes up her new role on 1<sup>st</sup> July 2023.

As reported last quarter, we are pleased to report that we have recruited Sarah Wood as Associate Director, Marketable Assets, to focus on the oversight of the CUEF's equities portfolios, reporting to Benoit Ramsay. Sarah will be joining the UCIM team on 24<sup>th</sup> July from her prior position as Assistant Portfolio Manager at Mondrian Investment Partners, a value-oriented asset management firm.

Vincent Rustill, Senior Investment Analyst, passed Level 3 of the CFA examinations in April. We congratulate Vincent on this positive milestone in his professional development.

Finally, with the programme now in its third year, we are looking forward to welcoming four interns to UCIM during July and August. Two interns are joining from the University, to focus on supporting our sustainable investment work, while the two others are joining from the GAIN ("Girls are Investors") and 10,000 Black Interns access programmes, respectively. Each will support the investment team across a range of activities, as well as carrying out an independent research project during their six weeks with UCIM.



## Key dates

As provided in the email sent to investors on 14<sup>th</sup> June 2023, please note the following key dates for forthcoming investor information:

Date	Information
<b>Wednesday 5th July</b> (2.00pm)	Quarterly investor call - <a href="#">Zoom link</a> Meeting ID: 881 9463 1444 Passcode: 468126
<b>Thursday 6th July</b>	Circulation of an updated Trust Deed and Information Memorandum for CUEF investors, including a covering letter summarising the changes for Unitholders; primarily to reflect the inception of the newly constituted Cambridge University Endowment Trustee Body (CUETB).
<b>Friday 21st July</b>	Preliminary unit value for the financial year ended 30 <sup>th</sup> June 2023 circulated to CUEF investors.

In addition, we will be circulating provisional reporting dates for the 2023-24 Financial Year in the coming weeks, so investors can add these to their schedules and diaries.

# Focus section – CUEF Asset Allocation and Stress Test

## CUEF Portfolio Biennial Asset Allocation Review

### Background and Objectives

In 2019, UCIM set out an updated asset allocation strategy, advocating a measured reduction in public equity assets in favour of increased allocations to both private equity and absolute return and credit. The former is viewed as a key driver of returns in the portfolio, whereas the latter is intended to reduce volatility and provide liquidity to the balance of the portfolio during market corrections.

The asset allocation strategy and targets were subsequently approved by the UCIM Board and reviewed by the Investment Advisory Board (“IAB”). The resulting asset allocation is regularly communicated to investors in quarterly and annual reporting.

UCIM has since conducted a biennial exercise, evaluating this asset allocation strategy based on long-term forecasts for returns and correlations across asset classes. This section provides a summary of the Asset Allocation Review carried out in April 2023, which was subsequently approved by the UCIM Board and reviewed by the IAB.

### Process

Given the long-term nature of the CUEF’s investment horizon, a 20-year forecast was selected as the most appropriate timeline for asset class return and correlation assumptions. A mean-variance modelling approach was used, based on projected real returns for each asset class, aiming to identify the portfolios which would optimise returns for a given level of risk (the “Efficient Frontier”). Additional assumptions included standard deviations and performance by sub-asset class, and correlations between asset classes. Constraints included risk limits and liquidity. These assumptions were based on an extensive review of historical averages, relative performance of the CUEF’s fund managers, and a wide range of available forecasts, which were debated among the UCIM team prior to adoption.

### Outcome

The analysis suggested that, while the CUEF could continue to achieve its return target of CPI + 5% through its current allocation, the return target is reliant, to a large degree, on the selection of fund managers who can continue to outperform market benchmarks over the long-term.

Consistent with prior reviews, the exercise also demonstrated the potential to achieve greater returns by incrementally increasing the allocation to private equity compared to public equity; and by increasing the allocation to the CUEF’s relatively uncorrelated absolute return and credit and real assets portfolios.

Consequently, a proposal to adjust the CUEF's asset allocation targets was proposed to the UCIM Board in April 2023, reviewed by the Investment Advisory Board, and subsequently approved. The new target allocation has been set using ranges for some asset classes, rather than a series of fixed points, to provide greater flexibility to adapt to prevailing market conditions. The current allocation, previous and new target allocations are shown in Figure 1 below.

*Figure 1 – Current, Previous Target and New Target Asset Allocations*

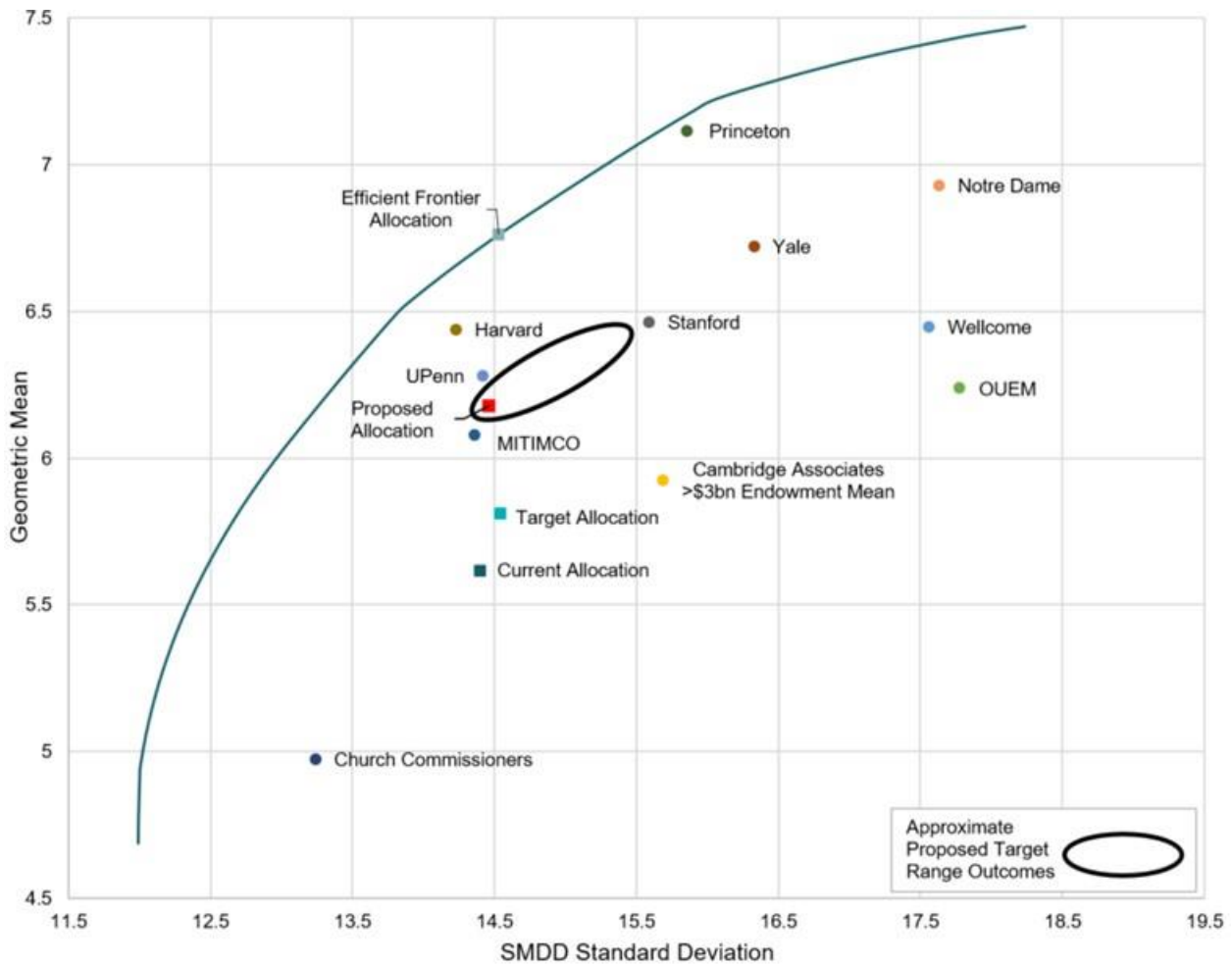
Asset Class	Asset Allocation (31-Mar-23)	Previous Target Allocation	New Target Allocation
Public Equity	42.1%	40.0%	<b>30.0-35.0%</b>
Private Equity	23.4%	25.0%	<b>30.0%</b>
Real Assets	7.5%	10.0%	<b>10.0-12.5%</b>
Absolute Return and Credit	20.1%	20.0%	<b>20.0-22.5%</b>
Cash and Fixed Income	6.9%	5.0%	<b>5.0%</b>
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

## Peer Group Review

To provide further context, UCIM analysed several peer institutions' forecast return and volatility using their most recently disclosed asset allocations (generally 30<sup>th</sup> June 2022). Figure 2 below shows several peer institutions benchmarked against the CUEF's new target asset allocation. It shows that some peers are forecast to achieve higher returns, but with commensurably higher risk. The chart also shows the CUEF's and peers positioning relative to the "Efficient Frontier", noting the balance struck between achieving optimal returns, maintaining liquidity and managing risk.

UCIM will repeat the Asset Allocation Review" in 2025, although this exercise can be brought forward in the event of material changes in the long-term investment outlook.

Figure 2 – Review of Peer Group Asset Allocation, including CUEF new target range and “Efficient Frontier”\*



\*Source data: Endowment peer group reports

# CUEF Portfolio Annual “Stress Test” Review

## Background and Objectives

UCIM performs an annual “Stress Test” exercise to understand how the Fund will continue to meet its obligations under a range of economic scenarios.

This section summarises the results of the core “Stressed Scenario” tested. This scenario envisages public equity markets declining by 45% from 1<sup>st</sup> January 2023 over three years and remaining depressed for a prolonged period, while inflation remains relatively elevated.

## Key Assumptions for the Core “Stressed Scenario”

The following assumptions were used in the model for the core “Stressed Scenario” over a three-year timeline:

- A 45% decline in global public equity markets, phased over the three years, comparable to the 45% decline in the S&P 500 during the “dotcom” crash and the 51% reduction in the S&P 500 from 2007 to 2009, through the Global Financial Crisis (“GFC”)<sup>1</sup>
- Inflation falls more slowly than Bank of England forecasts at the time of the exercise in February 2023, from 10.4% to 8.0% and 6.0% over the three-year period<sup>2</sup>
- There is no asset class outperformance based on manager selection or diversification, with conservative assumptions for relative performance of private assets, real assets, fixed income and absolute return and credit
- Investors redeem 50% of their maximum allowable capital under current terms in year one
- Distributions to investors continue to be calculated and paid in line with the current distribution model

## Outcomes

Under this scenario, the analysis concluded that the CUEF would continue to be able to pay scheduled distributions and meet redemption requests throughout the period, without having to sell equities at depressed prices. Liquidity provided by the CUEF’s absolute return and credit portfolio was key to this outcome, with redemption notice periods being bridged through use of the CUEF’s two revolving credit facilities (“RCFs”).

The impact of a prolonged economic and market downturn would, of course, be negative in absolute terms. However, with established RCFs in place, combined with a developed and relatively uncorrelated absolute return and credit portfolio, the CUEF would be able to withstand such a scenario.

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<sup>1</sup> This assumption was regarded as conservative given that equity markets had already declined significantly from their peaks at the end of 2022.

<sup>2</sup> The Bank of England anticipates inflation falling from the February 2023 level of 10.4% to 4.0% by the end of 2023 and to 2.0% shortly thereafter <https://www.bankofengland.co.uk/explainers/will-inflation-in-the-uk-keep-rising>

## Summary

The annual “Stress Test” is an important and valuable exercise for UCIM, in terms of the process and potential implications for the portfolio. Hopefully it is also an important point of reassurance for investors of UCIM’s approach, our ability to safely steward capital (and the reliability of CUEF’s distributions) in a range of potentially adverse market conditions. UCIM will continue to run the stress test exercise annually. The results and recommended actions will be reported to the UCIM and Investment Boards and then communicated to CUEF investors.

## Leverage

UCIM reports quarterly three actual leverage measures for the CUEF:

- i) the CUEF's own internal method,
- ii) the AIFMD 'Gross' method and,
- iii) the AIFMD 'Commitment' method.<sup>3</sup>

The primary difference between the CUEF's own internal method and that employed by both AIFMD methods is that the latter set incorporates the entire notional value of some of the CUEF's investments; additionally, in the case of the AIFMD 'Gross' method, any hedging is disregarded.

Further detail regarding the calculation of these measures is included in Appendix 2.

As at 31<sup>st</sup> March 2023 the Fund had no leverage under the CUEF's own method and capital commitments outstanding of 20%. The AIFMD leverage ratios were as follows: 'Gross' method 150%, 'Commitment' method 93%. To aid investor understanding a breakdown of the main contributors to the actual 'Gross' and 'Commitment' leverage levels is provided in Appendix 3.

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<sup>3</sup> Leverage measures as set out in the Alternative Investment Fund Managers Directive ("AIFMD") 2011/61/EU and the Delegated Regulation 231/2013.

# Appendices

## Appendix 1 – Portfolio Composition

### Foreign Exchange Exposure – Total CUEF

	CUEF post FX hedge		
	Quarter End	Calendar Year End	Financial Year End
	31-Mar-23	31-Dec-22 <sup>4</sup>	30-Jun-22
<b>GBP</b>	<b>59.3%</b>	<b>59.1%</b>	<b>60.5%</b>
<b>USD</b>	<b>20.4%</b>	<b>19.7%</b>	<b>17.2%</b>
<b>Other Developed Market FX</b>	<b>8.0%</b>	<b>8.8%</b>	<b>9.9%</b>
of which EUR	2.0%	2.5%	4.5%
of which JPY	1.7%	2.0%	1.5%
of which CAD	0.5%	0.5%	0.5%
of which CHF	0.8%	0.9%	0.8%
of which Other	3.0%	3.0%	2.6%
<b>Emerging Market FX</b>	<b>12.3%</b>	<b>12.4%</b>	<b>12.4%</b>

### Geographic Region Exposure – Total CUEF

	CUEF		
	Quarter End	Calendar Year End	Financial Year End
	31-Mar-23	31-Dec-22 <sup>3</sup>	30-Jun-22 <sup>5</sup>
<b>Developed Markets</b>	<b>70.7%</b>	<b>70.0%</b>	<b>73.4%</b>
of which United States	33.6%	32.8%	34.9%
of which UK	19.2%	19.3%	22.4%
of which Europe ex-UK	11.7%	11.7%	10.2%
of which Japan	3.4%	3.7%	3.6%
of which Canada	0.9%	0.7%	0.6%
of which Other DM	1.8%	1.9%	1.8%
<b>Emerging Markets</b>	<b>12.8%</b>	<b>13.0%</b>	<b>13.1%</b>
<b>Balance<sup>6</sup></b>	<b>16.5%</b>	<b>17.0%</b>	<b>13.5%</b>

<sup>4</sup> Calendar year-end exposures for 31-Dec-22 amended from those stated in the last quarterly report following receipt of fund managers' reports post the CUEF reporting date.

<sup>5</sup> Financial year-end geographic exposure for 30-Jun-22 revised from those stated in the last quarterly report due to internal reclassification of markets.

<sup>6</sup> The Balance is predominantly non-directional exposure from the Absolute Return portfolio, a degree of leverage in Equities portfolio, Cash held at both a CUEF level and underlying managers, and a small portion of investments where a lack of data meant it could not be categorised.



## Appendix 1 (continued) – Portfolio Composition

### Sector Exposure – Total CUEF

	CUEF		
	Quarter End	Calendar Year End	Financial Year End
	31-Mar-23	31-Dec-22 <sup>7</sup>	30-Jun-22
Information Technology	20.3%	20.5%	20.0%
Consumer Discretionary	11.3%	11.1%	11.3%
Industrials	9.3%	9.0%	8.6%
Healthcare	9.2%	8.1%	9.7%
Real Estate	7.9%	8.0%	10.2%
Financials	6.0%	6.4%	5.9%
Consumer Staples	5.0%	4.8%	4.9%
Communication Services	4.6%	4.3%	4.5%
Materials	2.7%	2.7%	1.9%
Utilities	2.6%	2.8%	2.5%
Energy	2.5%	2.8%	3.5%
Balance <sup>8</sup>	18.4%	19.6%	17.0%

<sup>7</sup> Calendar year-end exposures for 31-Dec-22 amended from those stated in the last quarterly report following receipt of fund managers' reports post the CUEF reporting date.

<sup>8</sup> The Balance is predominantly non-directional exposure from the Absolute Return portfolio, a degree of leverage in Equities portfolio, Cash held at both a CUEF level and underlying managers, and a small portion of investments where a lack of data meant it could not be categorised.

## Appendix 2: UCIM Leverage Calculation Methods

Since the introduction in 2014 of the Alternative Investment Fund Managers Directive 2011/61/EU ("AIFMD") and the Delegated Regulation 231/2013, we have been reporting three leverage measures in the Investor Quarterly Report, these being calculated leverage in accordance with the 'Gross' and Commitment methods per AIFMD and in addition, calculated leverage using CUEF's own internal method.

### **Calculated leverage using the CUEF's own internal method:**

The CUEF's own internal method calculates the amount of leverage employed via cash borrowing or negative cash. Having grossed up derivative positions, this leverage is measured by comparing the net asset value of all investments except those in the Fixed Interest/Cash asset class with the total net asset value of the portfolio. So long as the Fixed Interest/Cash class is a positive percentage of the portfolio, there is no leverage in the portfolio using this method.

### **Calculated leverage using the AIFMD 'Gross' method:**

The AIFMD 'Gross' method considers the gross investment exposure of the Fund and in this scenario, all hedging to protect the portfolio from possible losses is disregarded. In addition, only base currency Fixed Interest/Cash amounts are deducted from the gross investment exposure. In the case of a global fund such as CUEF, where derivative instruments are used to hedge the portfolio, the 'Gross' method is particularly sensitive to the following:

- (1) Foreign Currency Hedges - The Fund holds investments in any currency without restriction and achieves the hedges as necessary by maintaining forward foreign currency contracts. In the case of a forward foreign currency contract, both the Sterling asset and the foreign currency liability are accounted for within Fixed Interest/Cash. Hence entering into such a contract could not increase leverage. However, leverage under the 'Gross' method ignores this hedging and grosses up the position. For instance, in a hypothetical example, if all investments in a fund were denominated in foreign currencies and all foreign currency exposure in the fund was hedged, the gross exposure would be 200%.
- (2) Asset Class Hedges - The Fund may from time to time hold futures contracts based on, for example, equity indices. In this case, the value of the exposure gained is shown gross within the appropriate asset class (for example, Public Equity or Real Assets) whilst the value of the liability to pay for the exposure is shown within Fixed Interest / Cash. The leverage calculation using the 'Gross' method grosses up these future positions and counts them as exposure that increases the leverage ratio.
- (3) Macro Hedges - The inclusion of notional contract sizes in the valuation methodology for interest rate derivatives leads to what can be considered an "overvaluation" of positions and overstatement of leverage. For the purposes of the gross investment exposure valuation such positions are calculated as follows: 'Gross' exposure valuation = number of contracts x notional contract size x market value of underlying asset x delta as per the conversion methodologies under AIFMD Delegated Regulations 231/2013, Annex II.

### **Calculated leverage using the AIFMD 'Commitment' method leverage:**

This method considers the gross investment exposure of the Fund as covered above in the 'Gross' method but allows reductions for hedging and netting strategies.

### Appendix 3: Leverage calculations as of 31st March 2023

Below is a breakdown of the contributors of the actual gross and commitment leverage levels to aid Investor understanding:

CUEF Leverage - CUEF own internal method	
	£m
<b>CUEF Net Asset Value</b>	<b>3,920.4</b>
Exclude: Fixed Interest / Cash Investments	-345.0
<b>Total Exclusions: CUEF own internal method</b>	<b>-345.0</b>
CUEF Total Investment Exposure - 'CUEF own' method	3,575.4
CUEF Net Asset Value	3,920.4
CUEF Leverage % - CUEF own internal method	91%
CUEF Leverage Limit % - CUEF own internal method	110%

CUEF Leverage - 'Gross' method	
	£m
<b>CUEF Net Asset Value</b>	<b>3,920.4</b>
Plus: Adjusted Derivative Positions	
- Plain Vanilla Options on Futures Contracts	0.0
- Futures	190.4
- Currency Contracts	1,240.0
Total CUEF Investment Position - 'Gross' method	5,350.8
Exclude cash and cash equivalents	-274.4
<b>Total Exclusions - 'Gross' method</b>	<b>-274.4</b>
CUEF Total Exposure excluding capital commitments- 'Gross Method'	5,076.4
CUEF Net Asset Value	3,920.4
CUEF Leverage % - 'Gross' method excluding capital commitments	129%
CUEF Capital Commitments (Private Equity)	791.4
CUEF Total Exposure excluding capital commitments- 'Gross Method'	5,867.7
CUEF Net Asset Value	3,920.4
CUEF Leverage % - 'Gross' method including capital commitments	150%
CUEF Leverage Limit % - 'Gross' method	5,000%

CUEF % Leverage - 'Commitment' method	
	<b>£m</b>
<b>CUEF Net Asset Value</b>	<b>3,920.4</b>
Plus: Adjusted Derivative Positions	
- Plain Vanilla Options on Futures Contracts	0.0
- Futures	190.4
- Currency Contracts	1,240.0
<b>Total CUEF Investment Position - 'Commitment' method</b>	<b>5,350.8</b>
Exclude: Hedging positions	-1,430.4
Exclude cash and cash equivalents	-274.4
<b>Total Exclusions - 'Commitment' method</b>	<b>-1,704.8</b>
CUEF Total Exposure excluding capital commitments- 'Commitment' method	3,646.0
CUEF Net Asset Value	3,920.4
CUEF Leverage % - 'Commitment' method	93%
CUEF Leverage Limit % - 'Commitment' method	5,000%