

Third Quarter 2022 Investment Report

PREPARED FOR:

Derbyshire County Council Pension Fund: Pensions and Investment Committee Meeting

DECEMBER 2022

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Investment Report for Derbyshire County Council Pension Fund

This report has been prepared by Anthony Fletcher "External Investment Advisor" of Derbyshire County Council Pension Fund (the Fund). At the request of the Pension and Investment Committee the purpose of the report is to fulfil the following aims: -

- Provide an overview of market returns by asset class over the last quarter and 12 months.
- An analysis of the Fund's performance by asset class versus the Fund specific benchmark for the last quarter and the last 12 months.
- An overview of the economic and market outlook by major region, including consideration of the potential impact on the Fund's asset classes
- An overview of the outlook for each of the Funds asset classes for the next two years; and recommend asset class weightings for the next quarter together with supporting rationale.

The report is expected to lead to discussions with the in-house team on findings and recommendations as required. The advisor is expected to attend quarterly meetings of the Pensions and Investment Committee to present his views and actively advise committee members. To the extent this report contains advice it is intended as strategic advice to inform the investment strategy statement rather than investment advice.

Meeting date 7th December 2022 Date of paper 18th November 2022



1. Market Background (Third quarter 2022)

The third quarter proved to be challenging for most investors, with only temporary optimism that Central Banks would soon end their rate hikes. Markets continued to grapple with high inflation, slowing economic growth, a strong US dollar, and accelerated interest rate hikes.

Equity and bond market prices went up in the first half of the quarter, until the US Fed reminded investors that they were focussed on reducing inflation with a speech by the Fed Chair at Jackson Hole and 2 additional 0.75% rate hikes. As a result, global equities declined by -6.1% over the course of the quarter. Emerging market performance was even worse down -11.5%, impacted by the dual headwinds of slowing Chinese growth and a strong US dollar. In local currency terms US equities fell -4.9%; followed by European and UK equities at -3.7% and -3.4% respectively.

In Sterling terms as can be seen in table 1 below over 3 months to the end of September all bond market returns were negative, whereas equity prices were mixed the result of a strong US dollar. Over 12 months only US equity and Property markets have delivered a positive return. Global corporate and government bond indices also fell sharply with the worst performance coming from UK Gilts and UK investment grade credit falling by -12.8% and -12.6% respectively, while global government bond returns were down -6.7% and emerging market bonds in hard currency terms only fell by -4.6%.

The period since July has been very difficult for global bond markets with rising inflation and more aggressive than expected increases in interest rates from the world's major central banks. But it was an almost perfect storm for the UK government bond markets. Gilts with their very long duration are especially vulnerable to rising interest rates and inflation. This was compounded by the decisions taken by the short-lived Conservative government under Liz Truss. The successive announcements of a more generous than expected Energy Price Guarantee and then the un-funded tax cuts in Kwasi Kwarteng's "Fiscal Event", were sufficient to send an already fragile government bond market into a tailspin.

In the run up to its Communist party congress in October, China maintained its Zero Covid policy resulting in lockdowns and a marked slowing of economic activity, which called for further easing of fiscal and monetary policy. Tensions over Taiwan with the US were not helped by the Speaker of the US House of Representatives Nancy Pelosi, deciding to visit Taiwan during her tour of Asia and Japan in early August.

The US dollar continued to strengthen against all currencies, most notably versus the Yen but also against the Pound and the Euro, by virtue of its safe haven status and higher US bond yields and interest rates.

Most commodity prices continued to decline over the quarter as demand slowed on weaker expected economic growth. Oil and agricultural commodity prices continued to fall following the substitution of Russian supplies and the deal to re-open the flow of grains from Ukraine, by sea. The pressure on goods prices may have also been eased by shorter delivery times and falling shipping costs.

I do not believe we have seen the peak in interest rates or bond yields nor the low in equity prices in this cycle, but it is true that longer term forecast returns are beginning to look more attractive and volatility is potentially opening up opportunities especially in bond markets for long term investors.



Chart 1: - Annualised rates of quarter on quarter GDP growth.



Source: - Bloomberg

Table 1, below shows the total investment return in pound Sterling for the major asset classes, using FTSE indices except where noted; for the month of October 2022 and the 3 and 12 months to the end of September 2022.

% TOTAL RETURN DIVIDENDS REINVESTED

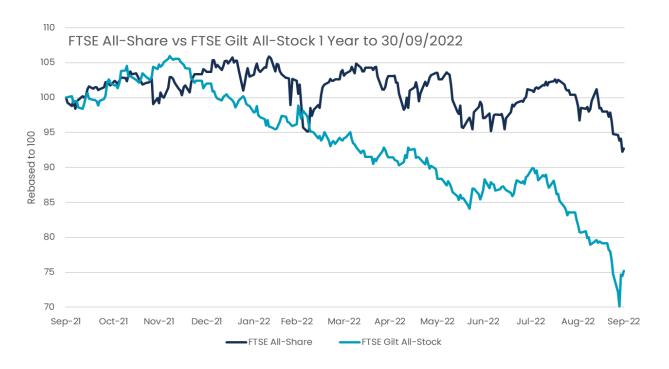
MARKET RETURNS

		Period end 30th September 2022		
	October 2022	3 months	12 months	
Global equity FTSE All-World	+2.7	+1.6	-3.3	
Regional indices				
UK All Share	+3.1	-3.4	-4.0	
North America	+4.6	+3.4	+0.4	
Europe ex UK	+4.4	-2.0	-9.5	
Japan	-0.6	+0.9	-13.6	
Emerging Equity Markets	-7.0	-2.3	-8.7	
UK Gilts - Conventional All Stocks	+3.3	-12.8	-23.3	
UK Gilts - Index Linked All Stocks	-4.6	-9.3	-25.9	
UK Corporate bonds*	+5.0	-12.6	-24.5	
Overseas Government Bonds**	-0.7	-6.7	-11.9	
UK Property quarterly^	-	-2.5	+11.6	
Sterling 7 day SONIA	+0.2	+0.4	+0.7	

 $^{^{\}wedge}$ MSCI indices * ICE £ Corporate Bond, UC00; **ICE global government ex UK LOC, N0L1



Chart 2: - UK bond and equity market returns - 12 months to 30th September 2022



Source: - Bloomberg

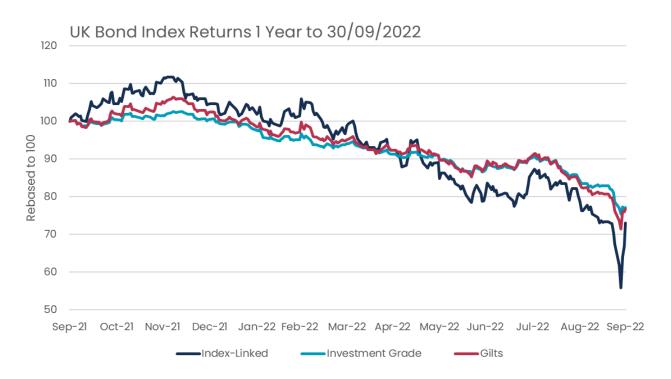
Table 2: - Change in Bond Market yields over the quarter and 12 months.

BOND MARKET % YIELD TO MATURITY	30 th June 2022	30 th September 2022	Quarterly Change %	30 th September 2021	Current 18 th November 2022		
UK GOVERNMENT	BONDS (G	ILTS)					
10 year	2.24	4.09	+1.85	1.02	3.24		
30 year	2.58	3.83	+1.25	1.37	3.39		
All Stocks ILG	-1.14	-0.15	+0.99	-2.54	-0.40		
OVERSEAS 10 YEA	OVERSEAS 10 YEAR GOVERNMENT BONDS						
US Treasury	2.97	3.80	+0.83	1.49	3.83		
Germany	1.37	2.11	+0.74	-0.19	2.02		
Japan	0.23	0.25	+0.02	0.07	0.25		
NON-GOVERNMENT BOND INDICES							
Global corporates	4.22	5.28	+1.06	1.66	5.09		
Global High yield	9.00	9.79	+0.79	4.43	8.94		
Emerging markets	7.03	7.82	+0.79	3.77	7.23		

Source: - Trading economics and ICE Indices G0LI, G0BC, HW00, EMGB, 18th November 2022.

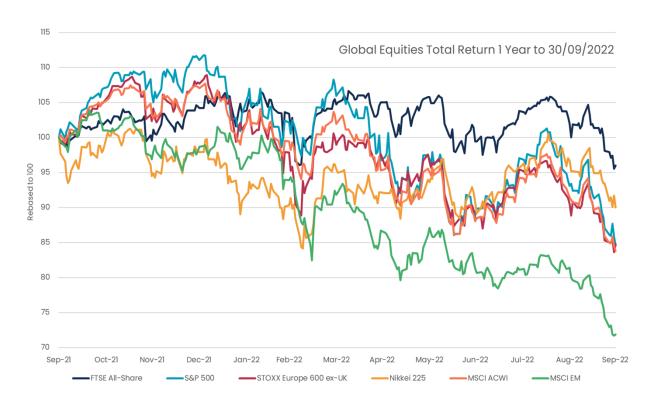


Chart 3: - UK Bond index returns, 12 months to 30th September 2022.



Source: - Bloomberg

Chart 4: - Global equity market returns in local currency, 12 months to 30th September 2022.



Source: - Bloomberg



Recent developments (October till the 18th November 2022)

Central banks have remained hawkish quarter to date with the ECB, followed by the US Fed and the Bank of England (BoE) all increasing interest rates by 0.75%. While their statements continue to refer to the need to combat inflation, once again markets have chosen to ignore what they say and focus on the increasing weakness of economic activity in the face of rising inflation, interest rates and falling real incomes. As a result, asset markets have rallied with the prices of bonds and equities higher at the time of writing. Which means that once again I am of the view that returns could be lower rather than higher for the rest of the quarter.

In the UK we have a new conservative government led by Rishi Sunak and he has sought to try and heal the splits within the conservative party by appearing to be more inclusive in his appointments to the Cabinet, including keeping Jeremy Hunt as Chancellor and Suella Braverman at the Home Office. As a result, the radical tax cutting, pro-growth agenda of the Liz Truss government has been replaced with the austerity of tax hikes and further spending cuts. Admittedly the UK is a poorer country post Covid and we need to accept that. But we are the only developed economy that is pursuing this policy and arguably the austerity agenda of the Cameron / Osbourne period has been proven not to have worked.

In the US the Mid-term elections did not lead to the Red Wave that Mr Trump was hoping for but nonetheless he has chosen to run for the Republican nomination for President in 2024. At the time of writing the Democrats have lost the House of Representatives by 1 seat giving the Republicans a majority of 2 seats. The Senate has still to be decided, because the result in Georgia was so close that there needs to be a "run off" vote in December, if this seat goes to the Democrats, they may still optically have control of the Senate and the legislative agenda.

In China, however Mr Xi secured himself another historic, un-opposed and previously unconstitutional in the post Mao period, third term as President. The tragedy of the war in Ukraine continues.



2. Investment Performance

Table 3 shows the performance of the Derbyshire Pension Fund versus the Fund specific benchmark for the quarter and year to 30th September 2022. Over 12 months, Growth assets underperformed whereas Income and Protection assets outperformed. All the individual active Growth asset managers underperformed their respective benchmarks, with the exception of the US and Private Equity managers.

Over 10 years the Fund has achieved a total return of 7.5% per annum, net of fees.

Table 3: - Derbyshire Pension Fund and Benchmark returns

% TOTAL RETURN (NET)					
30 [™] SEPTEMBER 2022	3 MOI	NTHS	12 MONTHS		
	Derbyshire Pension Fund	Benchmark	Derbyshire Pension Fund	Benchmark	
Total Growth Assets	+0.2	+0.1	-7.1	-5.0	
UK Equity Total Overseas Equity North America Europe Japan Emerging markets Global Sustainable Equity Global Private Equity Total Protection Assets	-3.7 +1.1 +4.7 -2.0 +1.4 -3.8 +2.0 +3.9	-3.4 +1.0 +3.4 -2.0 +0.9 -2.3 +1.5 +1.8	-6.2 -10.0 +0.4 -9.3 -16.7 -14.0 -9.9 +14.1	-4.0 -5.4 +0.4 -9.5 -13.6 -8.7 -3.4 -4.7	
UK & Overseas Government UK & Overseas Inflation Linked Global Corporate bonds Total Income Assets	-11.3 -8.6 -8.7 + 0.2	-12.8 -9.3 -8.7 - 0.4	-20.5 -22.8 -22.6 + 5.8	-23.3 -25.9 -21.0 + 5.1	
Multi-asset Credit Infrastructure Property (all sectors) Internal Cash	+0.3 +2.3 -2.2 +0.3	+1.6 +0.9 -3.0 +0.4	-3.2 +9.7 +9.8 +0.4	-1.7 +2.8 +12.2 +0.7	
Total Fund	-1.3	-1.9	-6.6	-5.9	

Total fund value on 30th September 2022 £5,702 million

At the end of September, the Fund was broadly neutral growth assets, within equity the Fund was underweight Global sustainable with a small overweight to the UK and a residual position in US Equity. The Fund was also 3% underweight protection assets and just over 1% overweight income



assets relative to the strategic benchmark. Over the third quarter of 2022, the Fund outperformed with both asset allocation and stock selection decisions making a positive contribution. The underweight allocation to Protection assets made the largest contribution. As the Fund holds a significant portion of its growth assets outside of the UK, the strength of the US dollar made a significant contribution to returns over the three and twelve months to the end of September.

Over 3 years to the end of September, each of the broad asset categories in the Fund has outperformed the benchmark and the total return of the whole Fund, net of fees was 2.8% p.a. compared to the benchmark return of 2.2% p.a.

Growth assets – Equity performance

Growth asset aggregate performance in the third quarter was slightly ahead of the strategic benchmark with the only UK and Emerging market portfolios delivering both a negative absolute and relative returns. Over the quarter the residual European equity exposure was sold out completely. All the other managers delivered both a positive absolute return and outperformed their respective benchmarks. Over 12 months, at the aggregate level, the active equity portfolio delivered a negative absolute return that was worse than the benchmark. The Private Equity portfolio strongly outperformed its benchmark, the performance of the US was positive and in-line with its benchmark.

While the third quarter performance of growth assets has improved, year to date the most significant contribution to the Fund's underperformance comes from the recent relative performance of global sustainable equity, despite its underweight allocation. Over 10 years growth assets have returned on average 9.3% p.a. compared to 8.9% p.a. for the benchmark.

Protection assets - Fixed Income Performance

The Fund remains underweight its allocation to UK government bonds and has less interest rate sensitivity than the benchmark. As a result, the government bond portfolio significantly outperformed the benchmark over 3 and 12 months. Global corporate bonds underperformed as yields increased and credit spreads also widened. The recent aggressive sell-off in government bonds means over 10 years protection assets have on average only returned +0.4% each year compared to the benchmark return of +0.7% p.a.

Income assets – Property, Infrastructure and MAC

Over the quarter and the year, the combined portfolio of income assets has outperformed the benchmark, due to the strong performance of Infrastructure. Over 12 months a better period for measuring returns only Infrastructure outperformed and while MAC and the aggregate property portfolio underperformed, on a relative basis the direct property portfolio significantly outperformed the funds in the in-direct portfolio. Over 10 years Income assets have on average returned 10.1% each year compared to the benchmark return of 4.8% p.a.



3. Economic and Market outlook

Economic outlook

The global economy is widely expected to slow over the next 12 months and fall into recessionary territory either in the fourth quarter of 2022 or the first quarter of 2023. The negative macroeconomic influences are much higher inflation and interest rates than expected earlier in the year. Caused by the strength and dis-locations of the post covid recovery and in hind-sight the slow removal of super easy monetary and fiscal policy, compounded by higher energy and food prices as a result of the war in Ukraine. However, at the same time, the residual tail winds of tight labour markets, excess household savings and reasonable corporate earnings continue to provide a diminishing but positive support for growth. As a result, countries are experiencing weakness in different parts of their economies. In the US, the housing market is in recession, due to higher mortgage rates. In Europe and the UK, the higher cost of energy is probably the main factor and in China their zero covid policy is having a significant dampening effect on domestic consumption.

While labour markets remain tight and vacancies are still above pre-pandemic levels they have started to fall and more importantly real earnings growth is negative due to higher inflation. The outlook for manufacturing has also worsened with composite leading indicators suggesting economic activity is contracting.

Composite Purchasing Managers' Index (PMI) Job vacancies Indexed to 100 at pre-pandemic peak Index level 180 70 160 140 60 120 55 100 50 80 45 60 40 40 35 20 02 '06 '08 '10 112 '13 415 '16 117 '18 '19 '20 US Eurozone UK

Chart 5: - Job Vacancies and composite PMI's (leading indicators of growth)

Source: - JPMorgan Asset management October 2022

Inflation

As I mentioned last time inflation is going to be higher but different depending on where you live and the vulnerability of your respective economy. Hence, I expect the rate of inflation to vary significantly between regions. Energy prices are going to be the biggest driver of the outcome

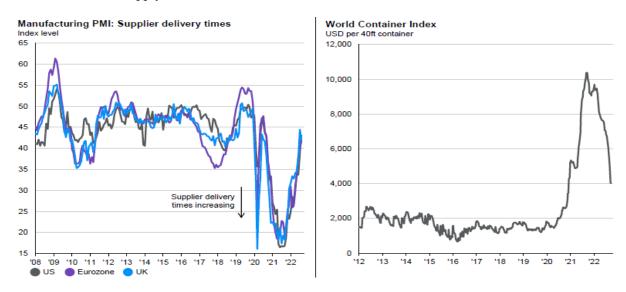


everywhere, and it is how the countries deal with the shock and the underlying resilience of their economy and energy policy that will cause the variance.

The US is relatively immune to higher gas prices because of its abundant supply enabling it to be a net exporter. The UK and then Europe are probably most exposed to higher energy prices. The UK, because of its reliance on gas fired power stations for "base load" electricity generation and the lack of any meaningful storage means it is dependent on the spot market price of gas. Europe because of its reliance on supply of gas from Russia. The good news is, thus far the UK and Europe has experienced a mild start to winter, which has enabled Europe to fill its huge storage capacity. While the UK doesn't have any significant storage it has benefitted from a fall in the spot price as demand has been lower than the market expected. UK energy prices are still more than double what they were this time last year. The main problem from here is that higher energy prices feed into the rest of the economy pushing up costs, which in turn leads to higher wage demands, not a great outcome when unemployment is low and demand for workers high.

As I mentioned last quarter there is good news on inflation, as chart 6 shows Supplier delivery times and world container rates are falling, as global supply chains repair themselves.

Chart 6: - Global supply chains.

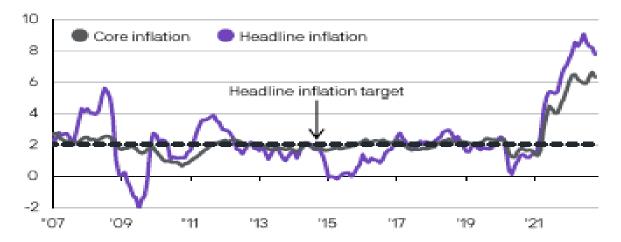


Commodity prices are also falling from elevated levels, Industrial metal prices are down 25% and oil prices are down 40% from their peak in the last year. How much of this is a repair of global production and supply chains and how much is falling demand is uncertain at this stage. More directly related to the war in Ukraine, most agricultural commodities and wheat prices, in particular, have fallen back to where they were before the invasion.

Chart 7 shows the core and headline Inflation data from the US to November, which suggests that headline inflation may now be trending lower after ticking up in the early summer.



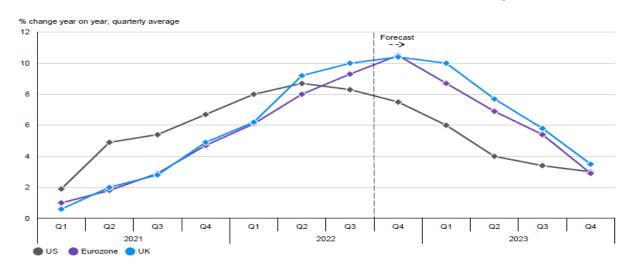
Chart 7: - Inflation – year over year change in US headline and core inflation.



Source: - JPMAM 11th November 2022

Unfortunately, the situation in the UK and Europe is not yet improving, in October headline CPI increased to 11.1% in the UK and 10.6% in the Euro Area. Chart 8 below shows the revised median forecasts for inflation over the next 5 quarters.

Chart 8: - Economists' median forecasts of headline CPI, in the US, UK and Europe



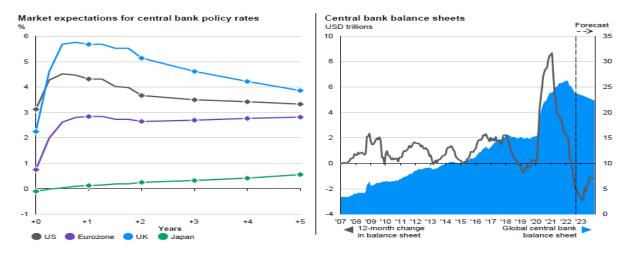
Source: - JPMAM 16^{th} November 2022

Central Banks

The Fed continued its aggressive tightening policy throughout the period and as of November the Fed Funds rate is now 4% and is expected to reach 5% by the middle of 2023. After a late start the ECB has also increased rates from -0.5% to +1.5%, with the 2 most recent changes matching the 0.75% of Fed rate rises, the ECB's Repo rate is expected to hit 3% by June next year. At the moment the ECB is only using interest rates to tighten monetary policy but, in order to maintain an orderly market in peripheral government bond markets, it is still a net buyer. In September the Fed started is QT programme and in November was joined by the BoE. Both central banks are now net sellers of bonds on their balance sheets which will have the effect of further tightening monetary policy.



Chart 9: - LHS - Market expected level of central bank interest rates from October 2022, yearly for the next 5 years. RHS – Change in global central bank balance sheets.



Source: - JPMAM November 2022

As can be seen from chart 9 on the left hand side above the interest rate futures market is expecting US rates to continue to rise in the next 12 months before falling towards the end of 2023. Whereas expectations for UK and Europe suggest rates will not be falling until 2024 and the Bank of Japan is barely expected to change rates! The right hand chart is potentially more interesting. The blue area represents the increased holdings of bonds on central bank balance sheets since the GFC, to facilitate QE (left hand scale). The line represents the annual pace of purchases which was huge in the pandemic (right hand scale). What this chart shows is that central banks are planning to be tightening policy using rate hikes and at the same time selling down the balance sheet. Effectively doubling up on tightening monetary policy. QT as it's known is currently being used by the US Fed and the BoE.

At its meeting in August the Bank of England raised rates by 0.5% to 1.75% and then increased them again by 0.5% in September, when the market was expecting a 0.75% increase given the BoE's own August forecast of inflation later in the year! Despite the imminent announcement by the new Liz Truss government of the "Energy Price Guarantee", that was known to be funded by increased borrowing. Maybe they could be forgiven for not expecting the extreme market response to a further round of un-funded tax cuts announced in Kwasi Kwarteng's "Fiscal Event", but one might have expected the Treasury to have at least let the BoE know in advance so they could be prepared for the chance of increased market volatility. When UK Gilt yields increased dramatically in the days after the "Fiscal Event" the BoE was forced to act to ensure financial stability.

While the ex-post narrative is that no-one has been dis-advantaged by the outcome of the market volatility during the short lived Truss Administration, this is patently not true. The credibility of the UK as a place of financial stability has been undermined, investors have lost money and security, a government has been changed and Taxpayers are worse off. In the aftermath of the volatility many have sought to blame corporate pension funds and their LDI strategies. Strategies that the BoE, the FCA, the Pensions Regulator and the investment consultant community have consistently promoted as prudent and appropriate for pension funds to use when hedging their, interest rate dependent, liabilities. At its meeting in November the BoE announced an even worse economic outlook, weaker growth, higher inflation and interest rates, for longer, and it raised the base rate by 0.75% to 3%.



Government bonds

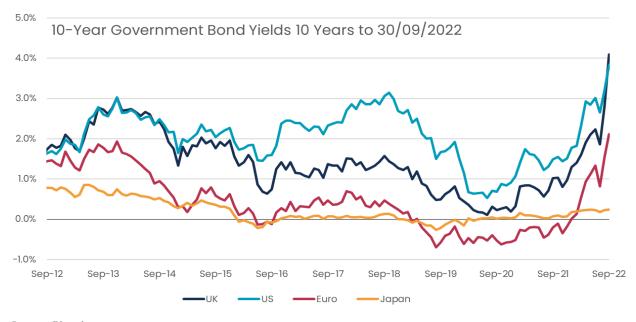
As can be seen in chart 10 below government bond yields except in Japan are higher than they have been for 10 years and indeed the negative return from bonds as shown in table 1 above have been the worst in modern history. Since the end of the quarter yields have again fallen on the false expectation in my opinion that the central banks will not increase rates much further. As can be seen in table 6 below I believe interest rates and bond yields may rise further, for at least another year.

However much of the overvaluation caused by QE and excess demand from UK corporate pension funds may be behind us. The problem going forward is supply, budget deficits are high requiring a high level of government borrowing especially when tax receipts may be lower due to a shrinking economy. On top of this the US Fed and BoE have decided to sell their stock of government bonds acquired via QE back to the market. Finally, especially in the UK, demand for gilts from corporate pension funds is likely to be lower as their LDI strategies will be less levered in future and because, higher yields have lowered their liabilities.

This is probably going to sound counter-intuitive, but the increase in yields may present an opportunity for a long-term investor. The increase in interest rates and risk free government bond yields means that all investments have become potentially more attractive. In recent years investors have had to "hunt for yield" by investing in more risky markets. If they can now invest in bonds with a reasonable level of yield, why would they take the riskier asset? And herein lies the conundrum, if the base level of potential return for all assets has increased, because they have all become cheap, then bonds may still turn out to be the least attractive option in terms of future expected returns.

I believe the opportunity needs to be considered in the context of the risks the Fund needs to take, but accept that relative to other opportunities, government bonds may become cheaper. In the case of non-government bonds, they may already be cheap enough to consider increasing exposure.

Chart 10: - Government bond yields, last 10 years.



Source: - Bloomberg



Non-government bonds

Chart 11 below, shows the excess yield spread for both investment grade non-government and high yield bonds to the end of the quarter. As can be seen from the chart spreads narrowed and then widened by the end of the quarter. Once again, spreads are lower today than they were at the end of September, and once again I find myself expecting yields to rise. But this time round I believe the total yield of investment grade non-government bonds may be high enough to compensate for their interest rate sensitivity and default risk and may be cheap enough to consider increasing exposure. I still believe that high yield bonds and loans owned as part the Multi-asset Credit allocation can deliver better returns. These assets have much lower interest rate sensitivity (duration), much higher yields, and because many have floating rather than fixed coupons, they can continue to benefit from rising interest rates.

High yield assets are more sensitive to the economy, so the expected slowdown in economic growth has increased the risk of default especially for more leveraged parts of the economy. However, I still expect Multi-asset Credit funds with their mix of low duration bonds and floating rate loans to outperform both government and investment grade non-government bonds in line with their higher risk. Provided the pace of downgrades and defaults does not increase significantly, as the key to success with this asset class, is picking managers with the skill (or luck) to avoid defaults.

12.0% Global Credit Spreads 10 Years to 30/09/2022 OAS (%) 10.0% 8.0% 6.0% 4.0% 2.0% 0.0% Sep-16 Sep-12 Sep-13 Sep-17 Sep-18 Sep-21 Sep-22 Sep-14 Rolling 5-Year Average IG OAS Global IG Corporate OAS Global HY Corporate OAS -Rolling 5-Year Average HY OAS

Chart 11: - Credit spreads, extra yield over government bonds, last 10 years.

Source: - Bloomberg

Equities

Regional equity market returns were much more mixed in Sterling terms in the third quarter. The strength of the US dollar disguising returns in local currency terms. Hence like bond markets, local currency equity market returns were very poor indeed and many regional indices and sectors are technically in a bear market.



Just as last quarter, since the end of the quarter equity markets have rallied on reasonable earnings reports and as mentioned above the idea that central banks may be close to the end of the tightening cycle. They are also looking at the leading indicators shown in chart 6 above pointing to improvement in global supply chains, and falling US inflation in chart 7, rather than negative implications of charts 5 and 9, which highlight the weakening manufacturing and employment outlook, and the competition for capital, implied by the increased primary and secondary supply of government bonds.

Having said that valuations as shown in chart 12 below, have improved because asset prices are lower and as shown in chart 13 potential 10 year annualised returns have improved compared to last year. However, I am more cautious on the outlook for equity market than I am for bond markets.

GDP

Table 4 shows the consensus forecasts for GDP growth in calendar 2022 and 2023 and my expectations in August and November 2022.

Table 4: - GDP forecasts - Consensus versus Advisor expectations.

% CHANGE YOY								
2022						20	23	
	AUGL	JST	NOVEM	NBER	AUGUST NOVEMBE		MBER	
	Consensus	AF	Consensus	AF	Consensus	AF	Consensus	AF
US	1.7	1.5	1.8	1.5	0.7	0.5	0.2	0.5
UK	3.4	3.0	4.2	3.0	0.1	0.0	-0.9	-1.0
Japan	1.4	1.4	1.5	1.4	1.6	1.4	1.4	1.2
EU	2.8	2.0	3.1	2.0	1.4	1.0	0.1	-0.5
China	3.7	5.0	3.2	4.0	5.4	5.4	4.5	4.5
SE Asia	5.3	5.3	5.5	5.5	4.6	4.6	4.2	4.2

Source: - Consensus Economics November 2022

Between August and November consensus forecasts for GDP growth in 2022 have been revised higher as actual growth outcomes have been better than expected. This outcome has been aided by the willingness of households to dip into the savings built up during the covid pandemic to maintain spending despite higher prices. The consensus has also become more pessimistic for growth in 2023 but is only predicting an annual contraction in UK growth, with weak positive year over year growth in the US, Japan and the Euro-Area.

As I have said in the past, I do not know what the growth numbers will actually turn out to be, but I still expect growth in the developed economies in 2022 and 2023 to be generally weaker than the consensus except in the US in 2023 where I expect it to be stronger. I also believe that growth in the



Euro-Area could, like the UK, be negative for all of 2023. The price and the availability of Gas being the main driver of the difference in the growth outcome in these 2 regions.

Growth in developing economies could turn out to be stronger as they generally did not ease monetary policy to the same extent as the developed economies during the pandemic and they were quicker to tighten into the recovery. As a result, they are now in the position to stimulate growth by easier monetary and fiscal policy, this is especially true of China. Also, if the Chinese government could find a "face-saving" way of ending it's Zero Covid policy or accept the use of more effective vaccines, growth in the region could turn out to be much stronger in 2023.

The Chinese economy grew by +3.9% yoy in third quarter of 2022, picking up from a +0.4% growth rate in the second quarter, boosted by new expansionary policy decisions aimed at reviving activity ahead of the Communist party congress in October. The latest figure was released just a day after President Xi Jinping secured a historic third term, however the statistics agency warned that the recovery was still not solid due to domestic and global headwinds. September data showed a mixed recovery in China, with retail sales rising the last in 4 months, but export growth is at a 5-month low, and the jobless rate hitting its highest since June. Meantime, industrial output rose the most in 7 months, due to faster rises in output of both manufacturing and mining. Beijing no longer mentions the target growth rate of 5.5% for 2022 and pledged easier lending and other measures to boost growth in future. The GDP data was originally scheduled for October the 18th but was delayed until the Party Congress ended.

The US economy grew at an annualised rate of +2.6% in the third quarter, rebounding from a contraction in the first half of the year. The biggest positive contribution came from net trade up 2.8%, as the trade deficit narrowed. Imports fell 6.9%, while exports were up 14.4%, led by Exports of LNG, petroleum products, non-automotive capital goods, and financial services. At the same time, non-residential investment jumped 3.7%, boosted by increases in equipment and intellectual property. The housing market remains a drag on activity as mortgage rates rise, residential investment fell for the 6th quarter by -26.4%. Consumer spending, the largest component of US GDP, grew at a slower rate with higher outlays on services, led by health care offset a decrease in goods, namely motor vehicles and food and beverages.

The advanced estimate of UK growth in the third quarter was -0.2% after an upwardly revised growth rate of +0.1% in the second quarter of 2022. The services sector delivered its first contraction since the end of the Covid lockdowns. Industrial production fell for a 7th consecutive quarter, manufacturing was down -2.3%, with mining and quarrying down -1%. In expenditure terms, household spending fell -0.5% and business investment shrank -0.5%. The UK's terms of trade improved with exports up +8% and imports down -3.2%. Compared to a year earlier, the British economy expanded +2.4%. The third quarter growth rate could mark the beginning of what is expected by the BoE to be the country's longest recession since records began. The economy is expected to contract -0.75% in the second half of 2022, continue to fall in 2023 and remain low in first half of 2024, as high inflation and interest rates and higher taxation negatively impact both households and businesses.

Japanese economic activity fell -0.3% in the three months to the end of September, following an upwardly revised +1.1% growth rate in the second quarter, preliminary data showed. This was the first GDP contraction since the third quarter of 2021, caused by global inflationary pressures and a



slump in the value of the Japanese yen. Private consumption grew at a slower pace, hit by another Covid wave in August despite efforts from the government to step up support for households. Meanwhile, business investment growth slowed, and government expenditure was flat after rising in the prior two quarters. Net trade was also a drag on the GDP, as exports rose +1.9% and imports jumped +5.2%.

The Eurozone economy was estimated to have expanded +0.2% in the three months to the end of September. This marks a sixth quarter of expansion, but it is the weakest rate of growth in the last 18 months. The German economy grew faster, while France, Italy and Spain all grew at a slower rate. Like the UK the Euro Area is expected to fall into recession with fourth quarter 2022 and the first quarter of 2023, expected to record negative growth rates, but unlike the UK growth is expected to be recovering in the second quarter of 2023.

Consumer Price Inflation

Table 5 shows the consensus forecasts for Consumer Price Inflation in calendar 2022 and 2023 and my expectations in August and November 2022.

Table 5: - Consumer Price Inflation forecasts - Consensus versus Advisor expectations

% CHANGE YOY								
2022					2023			
	AUG	JST	NOVE	MBER	AUGUST NOVEME		NBER	
	Consensus	AF	Consensus	AF	Consensus	AF	Consensus	AF
US	8.1	8.0	8.1	8.0	3.8	4.0	4.1	4.3
UK	9.1	10.0	8.9	10.0	6.7	7.0	7.1	7.0
Japan	2.0	1.5	2.3	1.5	1.4	1.5	1.7	1.9
EU	7.8	9.0	8.6	9.2	4.1	5.0	6.1	6.5
China	2.4	2.4	2.2	2.2	2.5	2.5	2.4	2.4
SE Asia	4.6	4.6	4.9	4.9	3.5	3.5	3.9	3.9

Source: - Consensus Economics November 2022

The consensus forecasts for inflation in 2022 have not materially changed since August, but they have been revised higher for 2023. As I said before I do not know what the peak rate of inflation will be, I suspect it may be higher than the consensus this year and next, but most importantly I believe as we can already see in the US, the rate in 2023 should be lower than whatever it turns out to be in 2022. The much milder start to the European Winter and the success of Europe's energy saving tips alongside its aggressive filling of storage capacity has led to falling gas prices. Having said that the gas price is still much higher than it was 12 and 18 months ago. The impact of higher gas prices will be less felt in the US because of abundant supply and in China and Asia because the region is less reliant on the use of gas for electricity generation and household heating.



Outside of energy prices which feed directly into the price of everything the global goods supply chain continues to improve despite covid induced disruption in China, with shipping rates and Container costs continuing to fall. Also as shown in table 4 above global growth is slowing and with much higher inflation real household incomes are falling faster. These factors are taking the heat out the economy and hence should lead to less demand pressure on prices. The outlook for inflation remains uncertain and it will be higher than we have been used to over the last 10 years but I still believe we will be past the current peak in a years' time.

After a false dawn in April, it looks as though US headline CPI is on a steady path downward trajectory. The annual inflation rate slowed for a 4th month in a row to +7.7% in October, the lowest rate since January. The cost of energy remains elevated but with all components advancing a slower pace, food price inflation also slowed slightly as did prices of used cars and trucks. On the other hand, the rate of inflation for shelter, which includes a contribution from rents and mortgages increased because of higher interest rates. Despite the fall in the headline CPI, inflationary pressures remain in the services sector, while the prices of goods have benefited from some improvements in supply chains.

The annual inflation rate in the UK jumped to 11.1% in October up from 10.1% in September, this is the highest inflation rate since October 1981, with main upward pressure coming from housing and energy (gas +129% and electricity +66%). However, the rise was constrained by the Energy Price Guarantee. Inflation would have risen to around 13.8% had the government not intervened to limit the price of household energy bills. Prices for food and non-alcoholic beverages also increased as workers remain in short supply and higher energy costs are passed on. On the other hand, transportation costs slowed as the price of Diesel fuel and Petrol stabilised and second-hand car prices actually fell by -2.7%.

Euro-Area CPI was +10.6% in October 2022, the highest rate on record since the inception of the Euro, caused by surging energy prices and currency weakness. The main upward pressure came from energy, followed by food, alcohol & tobacco, services and non-energy industrial goods. The annual rate of core inflation, which excludes volatile prices of energy, food, alcohol & tobacco, increased to 5.0% as higher energy prices work their way through the rest of the economy.

The annual inflation rate in Japan climbed to 3.7% in October, the highest reading since January 1991, the result of higher prices for imported raw commodities caused by a persistently weak Japanese yen. Upward pressure came from all components, with the largest increases coming from food, gas, electricity and water charges. Core consumer prices increased by 3.6% year-on-year, the most since February 1982.



4. The outlook for the securities markets

Bond Markets

In table 6, below I have set out my expectations for 3 month SONIA interest rates and benchmark 10 year government bond yields, over the next 6 and 12 months. They are not meant to be accurate point forecasts, more an indication of the possible direction of yields from November 2022.

Table 6: - Interest rate and Bond yield forecasts

%	CURRENT	JUNE 2023	DECEMBER 2023
UNITED STATES			
3month SONIA 10 year bond yield	4.67 3.83	5.5 5.25	5.5 5.0
UNITED KINGDOM			
3month SONIA 10 year bond yield	3.56 3.24	5.0 4.75	5.0 4.5
JAPAN			
3month SONIA 10 year bond yield	-0.04 0.25	0.0 0.25	0.0 0.25
GERMANY			
3month SONIA 10 year bond yield	1.43 2.02	3.5 3.75	3.5 3.5

Source: - Trading Economics; 18th November 2022

Over the summer all the major central banks continued their more aggressive pace of rate increases, as they sought to regain credibility and catch up with the rapidly increasing rate of inflation. With growth slowing the central banks find themselves in the difficult position of having to increase rates to tackle rampant inflation thereby running the risk of slowing the economy even more. The rapid change in policy rates has led to the worst ever performance of the developed economies government bond markets, as can be seen in Table 1 above.

After four, 0.75% increases the US Fed Funds rate is 4% and the yield curve is negatively sloped, which means the bond market expects a recession. Despite this at his recent press conference the Chair of the Federal Reserve suggested that "the ultimate level of interest rates will be higher than previously expected". Hence, as shown in table 6 above, I expect the Fed Funds rate to continue to rise and bond yields to rise with them.

At its meeting in November the Bank of England was pretty much forced to raise rates by 0.75% to 3% as the markets perceived that it had not acted fast enough in the year to date to tackle inflation. This is despite re-iterating its forecast that the UK is likely to enter the longest ever recorded period of



negative growth over the next couple of years. The ECB has acted much faster to increase rates, at the beginning of the year rates in Europe were -0.5%, after two 0.75% rate increases on September and October their equivalent of the base rate was 2%.

In my last report I mentioned that US bond market yields fell after the Fed's first 0.75% rate increase as they anticipated a "dovish tilt" to future increases. But Jerome Powell shot down that particular dove in a speech at the Jackson Hole central bankers meeting over the summer and followed it up with two further 0.75% rate hikes. At the end of September, the US 10 year yield was 0.8% higher at 3.8%. After the Fed's meeting in November the yield increased to 4.2% but yet again bond yields have fallen back to around 3.8%, despite the Fed's actions and speeches as the markets once again anticipate less tightening going forward.

At the end of September, the UK 10 year yield was 4.1%, 1.9% higher than it was at the end of June. While it would be reasonable to suggest that 0.8% of that increase could have been due to the increase in global bond yields, the rest of the increase, 1.1% is solely the responsibility of the short lived Liz Truss Government and her ill-fated Chancellor Kwasi Kwarteng's, "Fiscal Event", which had it not been for the intervention of the Bank of England could have led to much more serious problems for the Financial System. Since the intervention and supported by the actions of the new government under Rishi Sunak and Jeremy Hunt, the 10 year bond yield has fallen back to 3.2%.

Bond Market (Protection Assets) Recommendations

Despite the increase in bond yields since my last report, I still expect yields to rise as interest rates are increased. However, in 12 months' time slower growth and lower inflation could mean that bond yields start to fall even if there have been no cuts in interest rates. As a result, I anticipate negative returns in the short term. However, Protection assets and especially Index Linked Gilts and corporate bonds have become much more attractive as a medium term investment.

Therefore, I propose that the investment grade corporate allocation is increased from 1% underweight to neutral along with the Index Linked Gilt allocation. The increase in allocation would be funded from a reduced allocation to growth assets. I suggest remaining 1% underweight conventional gilts to reflect my negative outlook for interest rates and bond yields.

I would position the allocation in this way because the extra yield spread available from corporate bonds is currently very attractive, having widened dramatically on a weaker economic outlook but also because of forced selling by pension funds with liability driven investment strategies. Another beneficiary of this forced selling has been the Index Linked Gilt market where real yields have moved from an average of -2% to around zero real yield, which means for the first time in more than 10 years long term investors can receive a risk free rate of real return and genuine protection against inflation.

As usual in table 7 below I have updated the data and recalculated my estimates of the total return impact of rising yields for government and non-government bond indices based on their yield and interest rate sensitivity (Duration) over 3 and 12 months. The estimates show that there is very little income protection even for small increases in yield at current durations and spreads except in high yield bonds.



Table 7: - Total returns from representative bond indices

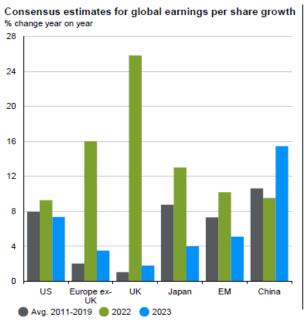
INDEX	YIELD TO MATURITY %	DURATION YEARS	YIELD INCREASE %	% TOTAL RETURN, HOLDING PERIOD	
				3 MONTHS	12 MONTHS
All Stock Gilts	3.31	10.4	0.5	-4.4	-1.9
All Stocks Linkers	-0.40	18.6	0.5	-9.4	-9.7
Global IG Corporate	5.10	8.9	0.5	-3.2	+0.7
Global High Yield	8.94	5.4	0.5	-0.5	+6.2

Source: - ICE Indices 18th November 2022

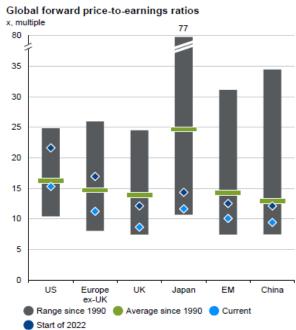
Equity Markets

Chart 12 below, left hand side, shows the consensus earnings per share growth estimates, for 2022 and 2023 compared to the annual average between 2011 and 2019. The right hand side shows, the current forward looking estimates of the price / earnings (P/E) ratio of the same market indices compared to the range and the average since 1990, except for China where the data only goes back to 1996, provided by JP Morgan Asset Management.

Chart 12: - LHS - Earnings per Share estimates, RHS - Price/Earnings Ratios, since 1990, China 1996









Since June earnings expectations for 2022 have been revised higher in Europe and the UK but lower in the US and China. More importantly earnings expectations for 2023 have been revised quite a bit lower in all regions except in China to reflect the worsening global economic outlook. This suggests to me that these forecasts are more realistic than the optimistic numbers we saw earlier in the year. The sharp year-to-date sell-off in equities has also led to declining valuations, ie markets have become cheaper with even the US below its long term average P/E ratio. As can be seen on the RHS of chart 12 above P/E ratios on most regional indices are close to the lows of the range since 1990.

Looking at sector-level data helps explain some of the variation in 2022 and 2023 earnings expectations especially in Europe and the UK. Surging Oil and Gas prices have boosted 2022 earnings expectations for energy companies and basic materials companies have also benefited significantly from rising commodity prices. Conversely, earnings forecasts for consumer-facing companies have fallen due to growing fears of a squeeze on disposable incomes and some big earnings misses in the US Consumer discretionary sector. As can be seen in the green bars on the LHS of chart 12 above the commodity-heavy UK market is a prime example where, despite earnings downgrades for every other sector, overall earnings expectations are higher, thanks to the significant weighting of energy and materials. Looking at this data another way, in local currency terms the MSCI All Country World index is down -13.3% year to date (11th November), whereas the Value component is only down -3.6% and the Growth component is down -22.7%.

Chart 13, below shows JPMorgan Asset Management's most recent forward looking return forecasts for equity markets over the next 10 years, not surprisingly given the drawdowns (negative returns) we have seen year to date in equity markets these average return forecasts have been revised significantly higher.

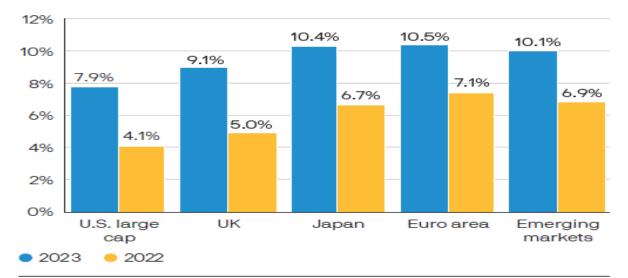


Chart 13: - JPMAM Long term capital market return forecasts, regional equity indices

Source: J.P. Morgan Asset Management; data as of September 30, 2022. Please note that we changed our forecasting methodology for MSCI China this year, now treating the market as an asset whose local currency is CNY. The change in our emerging market equity returns reflects this change.

Source: - JPM Asset Management., November 2022



Charts 12 above, suggests that in the equity markets are looking much cheaper in terms of P/E valuations relative to their history since 1990 and earnings expectations may have adjusted to reflect the economic reality especially for 2023. Chart 13 suggests that from where we are priced today based on the work done by JPMorgan Asset Management, average annual returns from equity markets are much more attractive than they were 12 months ago.

The year long sell off in equity markets and the evidence presented above suggests that the medium term outlook for equity returns has improved significantly. Valuations appear more reasonable and earnings estimates may be more realistic, but inflation has not yet peaked, interest rates have further to rise and we do not know how long or deep the expected recession may be. Hence, I am cautious on equity markets, especially in the more interest rate sensitive "growth sectors". I also believe future volatility may be higher, which suggests investors need to see meaningful "cheapness" in asset prices before committing new capital especially when bonds are looking much better value than they have done in a very long time.

Equity Market (Growth Assets), Recommendations

In the last quarter the Fund had legacy overweight's in European, US and UK equities and an underweight to Global sustainable equity due to risk and performance concerns with the managers selected to run the strategy. The relative performance of bonds and equity over the last quarter and the more attractive relative value of some sectors of the bond markets have led me to suggest that the Fund should consider a 1% underweight position in Growth assets.

Given the strong performance of US equity in both market and currency terms and the legacy nature of the position I would suggest that the Fund should sell this position and use the money to top up the Investment grade credit allocation to neutral from underweight. For now, I am happy to remain underweight global sustainable equity and overweight UK equity due to relative valuations and because I believe interest rates will continue to rise for some time increasing the pressure on "growth equity sectors" which are more highly represented in the global sustainable strategy than they are in the UK equity indices.

Income Assets

Once again, I have made no changes to the allocation to Income Assets but I would now fund the 2% over allocation to MAC 1% each from Growth and Protection Assets. Spreads have narrowed slightly since the end of the third quarter but the overall yield available combined with the low duration and floating rate nature of many of the asset classes suggests to me that MAC remains attractive, relative to longer duration assets in a rising interest rate environment.

Over the quarter the overall allocations to Infrastructure and Property have been increased closer to neutral for Property and overweight Infrastructure, mainly due to the denominator effect of other asset classes in the Fund performing poorly and the delayed nature of valuations in these asset classes.

As mentioned, before over the long term I would like to see the direct property allocation increase funded using net sales from the in-direct exposure. However, at the moment I believe there is an opportunity for the Fund to take advantage of distressed selling by other investors to increase its



exposure to in-direct property funds at a discount to NAV and thereby increase the overall property exposure to neutral.

Asset Allocation

The asset allocation set out in table 8 below, shows the Strategic Asset Allocation Benchmark and my suggested asset allocation weights relative to this benchmark as of the 15th August and the 18th November 2022. These allocations represent an ideal objective for the Fund based on my expectations for economic growth and market performance, but they do not take into consideration the difficulty and costs in reallocating between asset classes and the time needed by the In-house Team, their Pooling partner and investment managers to find correctly priced assets for inclusion in the Fund.

 Table 8: - Recommended asset allocation against the Strategic Benchmark.

The 2 righthand columns show my suggested allocations relative to the new strategic benchmark that came into effect on the 1st January 2022.

% ASSET CATEGORY	NEW DERBYSHIRE STRATEGIC WEIGHT 1 ST JANUARY 2022	ANTHONY FLETCHER 15 th August 2022	ANTHONY FLETCHER 18 TH NOVEMBER 2022
Growth Assets	55	0	-1.0
UK Equity	12	0	+1.0
Overseas Equity	43	0	0
North America	0	0	0
Japan	5	0	0
Emerging markets	5	0	0
Global Sustainable	29	0	-2
Private Equity	4	0	0
•			
Income Assets	25	+2	+2
Property	9	0	0
Infrastructure	10	0	0
Multi-asset Credit	6	+2	+2
Protection Assets	18	-2	-1
Conventional Gilts	6	-1	-1
UK index Linked	6	0	0
US TIPS	0	0	0
Investment grade	6	-1	0
credit			
Cash	2	0	0



Anthony Fletcher

Senior Adviser

anthony.fletcher@mjhudson.com

Appendix

References

Source material was provided by, including but not limited to, the following suppliers: -

- Derbyshire Pension Fund, PEL performance services
- FTSE and ICE Indices
- JP Morgan, Asset Management
- Bank of England, UK Debt Management Office, UK OBR, UK Treasury, ONS
- US Bureau of Labour Statistics, US Commerce Dept. The US Federal Reserve.
- Bank of Japan, Japan MITI
- ECB, Eurostat
- Bloomberg, FactSet, Markit and Trading Economics
- Financial Times, Daily Telegraph, Wall Street Journal, New York Times, Washington Post

