REPORT PREPARED FOR

Worcestershire Pension Fund

March 2023

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Independent Investment Advisor's report for the Pension Committee meeting

22 March 2023

Fond farewells

Not the normal introduction to my report, but this isn't a normal moment. In March the Fund loses two faithful servants: Michael Hudson and Rob Wilson. Both became involved with the Fund five years ago and in that time, they have totally transformed the governance and professionalism in which the Fund is managed, such that it is safe to say that in this respect we are now one of the very best managed Funds in the LGPS. Rob in particular has had an enormous part to play in this, his will be hard act to follow. I'm sure that Sherief is up to the task! I wish Michael well in his new role at Cambridgeshire and to Rob, my thanks for being such a joy to work with and I wish you well for a long and happy retirement, at whichever garden centre café you settle in!!

Global overview

Q4 was a very positive quarter for risk assets generally, with equities and credit rebounding from losses in Q3 as investors have grown more optimistic that inflation may have peaked and Central Banks will soon have reason to end their rate hikes. Inflation still remains uncomfortably high however, and Central Bank rhetoric has so far remained hawkish generally. Long-term bond yields showed little overall movement (with the exception of UK gilts returning to normality), while short-term yields generally rose as monetary policy was tightened further. Additional positive impetus was provided by China's relaxing of its zero-COVID policy, improving the outlook for growth in its economy, and by the surprising resilience of European gas supplies, reducing oil/gas prices and easing fears of recession: oil and gas finished the year only 10% and 20% above their end-2021 levels. Equity markets rallied this quarter, especially beleaguered European and Emerging Markets, although global equities are overall unchanged from June 2022 levels, despite volatile price moves in this period. The UK was one of the best-performing equity markets, and sterling recovered some of its earlier losses versus the dollar. Value stocks (+14.2%) outperformed growth (+4.6%) by a wide margin this quarter.

GDP growth and labour markets: Despite the ongoing recovery from the pandemic, the impact of tight monetary policy and the war in Ukraine are expected to slow growth, particularly in the UK and Europe. Labour markets have to date remained strong with unemployment at very low levels historically for the US, UK and Europe (3.5%, 3.7%, and 6.0% respectively from the most recent data).
The 'new' UK Government under Rishi Sunak has restored order to gilt markets and sterling by promising fiscally conservative plans. Markets have so far looked favourably on this and returned bond yields to their former positions relative to peer yields.

It is worth highlighting the following themes, impacting investment markets:

Inflation – the story after the peak. While YoY CPI inflation appears to have now peaked for the US, UK and Europe, concern remains over how rapidly and to what level inflation will fall. There are indications of inflation becoming more entrenched, but investors appear to be pricing in a more rapid cut in rates than that which Central banks are currently forecasting. Perhaps the misstep by the Fed in 2021 of calling inflation 'transitory' has reduced markets' trust. Euro inflation reached 10.6% in October, a fresh high, however this fell in November to 10.1%. Similarly for the UK, a high of 11.1% was reached in October before falling in November. For the US, the high in CPI appears to have been reached in June at 9.1% and has since declined to 7.1%.

Inflation vs Recession – the next stage for monetary policy. Monetary policy continued to tighten in most major developed countries, with the Fed, the BoE and the ECB all raising rates several times in Q4. Markets now expect rates to peak at ~4.5% for the UK, ~5% for the US, and a little over 3% for the ECB which indicates hiking cycles are coming towards their end. In addition, the Bank of Japan (BoJ) surprised markets by lifting the yield ceiling for their 10-year bond to 0.5% from 0.25%. The BoJ noted this was to restore proper market function, but as the BoJ owns over half of the bonds on issue investors have questioned if there is another rationale for the change. Prime Minister Kishida has also announced they will discuss the BoJ's inflation target approach when a new BoJ Governor starts his term in April.

A return to fixed income? The repricing of debt of all forms, following the rapid rises in interest rates last year, has increased yields on many debt asset classes, potentially increasing long-term returns. Interest rates are now in a more volatile phase, in marked contrast to the repressed volatility of the past decade of QE, so this potential for improved returns is likely to come with increased volatility.

Equity valuations reflect "mild" recession – earnings on watch in 2023. Following the 18% decline in US equities this year they are now trading at 16.5x forward earnings, below the 10-year average of 17.2x, but up from 15x in Q3. Over the course of Q4, expectations for 2023 earnings fell by -4.4% with much of the negative impact expected in the first half of 2023, and some of the leading economic indicators (e.g., ISM survey data) are starting to signal a decline. Investors appear willing to look through any potential decline in earnings but clearly there remains a risk to earnings, as corporate profit margins remain elevated by historical standards, and inflating costs may yet impact these.

Energy crisis: off the boil, but not gone. While the immediate threat of blackouts in Europe this winter has probably been avoided, and gas storage levels are high, the problem is not over. Furthermore. China's reopening is likely to increase demand pressure on global supplies.

Summary and Market Background

The value of the Fund in the quarter rose to £3.434bn, an increase of £177m compared to the end September value of £3.257bn. The Fund produced a return of 3.8% over the quarter, which was 0.7% ahead of the benchmark. The main reason for the outperformance was attributed to the Property, Infrastructure and Corporate Bond mandates. The process of winding up of the equity protection strategy was completed during the quarter. Over a 12-month period the Fund recorded a negative relative return against the benchmark of -1.4% (-4.3% v. -2.9%). The Fund has performed at or near the benchmark over the three-, five- and ten-year periods, details of which can be found in Portfolio Evaluation Limited's report.

As stated above the equity protection strategy in its current form has been liquidated, due to the former manager being taken over by another company, with the lead personnel either not joining the new owner or subsequently leaving. It is important that the capability to implement protection is maintained, given that the asset allocation continues to have a relatively high percentage of the Fund's assets (70%) invested in equities. The equity protection strategy forms part of the overall risk management arrangements, with the objective of continuing to provide some protection to the funding level in the event of future significant falls in equity markets. The initial work to reinstate the ability to implement equity protection as and when required in the future has commenced, although this might take some time to put in place.

The Triennial Actuarial Valuation currently being undertaken by Mercers has not shown anything that is unexpected or that would require major changes in the Fund's asset allocation. Currently the main items that need to be considered are ensuring that the mix of assets are appropriate to deal with a) inflation likely to be running at a higher level than we have been accustomed to in recent years and b) a higher cash flow requirement to accommodate the increase in pension payments resulting from higher inflation. The Fund has experienced a lot of changes in the way that the investment assets are managed over the last three years, partly as a result of the pooling of those assets with LGPS Central. This has carried a high price in the short term, so a period of consolidation would now be prudent. The process of evolution to keep the Fund in good shape should continue however, the details of that are contained within the Strategic Asset Allocation review, so as to ensure that we have sufficient liquidity along with the right mix of investments to diversify risk and to meet the longer-term objectives.

We also need to be cognisant of the constantly rising expectations and requirements relating to ESG and climate change considerations. Considerable progress has already been made in this respect by the Fund and by LGPS Central, but this is an evolving process and consideration needs to be given to the pace of next steps and what they should be. A review

of progress to date and consideration of future objectives was undertaken at a workshop on 8th February.

Performance during Q4 2022 has once again been a bit of a mixed bag, but also has highlighted the value of having a diversified portfolio of asset types. It was pleasing to see a recovery in values for the public market assets after three disappointing quarters, and although on a wider basis property value (in the UK in particular) suffered some major falls, our mix of investments fared relatively very well. Although the impact of inflation on the cost of living was really starting to manifest itself, markets generally seemed to be trying to look through the economic gloom to potentially better times ahead.

In performance terms from our active managers Nomura (Pacific) showed an underperformance of -1.1% and LGPS Central (Emerging Markets) underperformed by -0.2%, with two out of three managers contributing to that. It is good to see a net positive contribution in Q4 from the LGPS Central Global Sustainable Active Funds, with the Targeted strategy outperforming by 4.1%, but sadly the Thematic strategy pulled that down a bit by underperforming by -0.6%. LGPS Central (Corporate Bonds) slightly underperformed the benchmark, by -0.2%. The total property fund showed an outperformance against our own benchmark of 9.9%, which is an encouraging position given the hiatus seen in UK property in general during Q4. Hopefully potential recession won't damage that position and in the context of the long-term nature of the Fund's investment strategy these irritations are not significant detractors from overall performance. Infrastructure continued to perform well.

The passive equities outperformed the alternative passive strategies by 4.9% (7.7% v. 2.8%). Passive equities also outperformed the active equity strategies, by 5.4% (7.7% v. 2.3%). Out of the passive geographies Europe was the winner (11.7%), with the UK (8.9%) next, with North America (-0.5%) being the laggard this time.

Equities

Global equities rose sharply in Q4, as inflation appears to have now peaked and investors expect that Central Banks will not need to maintain restrictive monetary policies for as long as they have been guiding. Given the rise in equity markets, the VIX decreased by -31.5%, from 32 to 22, although this level is above the pre-COVID-19 average.

In the US, the S&P 500 rose by 7.5% and the NASDAQ fell by -1.0% as markets rallied due to falling inflation data, but investors remain wary of growth and tech stocks. A number of tech companies have announced staff layoffs and cost cutting measures in a response to investor concerns.

UK equities rallied in Q4, rising 8.7% as investors welcomed the government leadership change and return to normal market functioning of gilts following the BoE's intervention. Energy price declines amid warmer temperature and rising inventories of natural gas also helped temper inflation expectations. The BoE raised the base rate to 3.5% in December, however two committee members voted to keep rates unchanged which could signal the

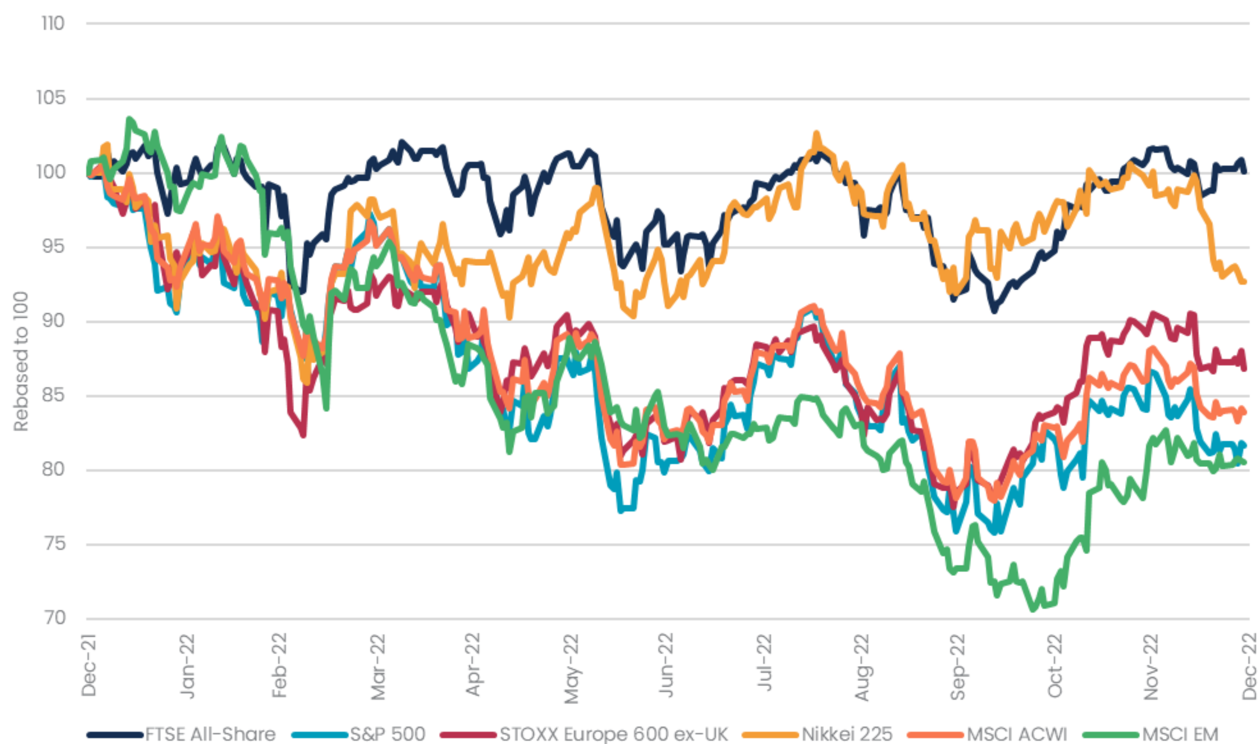
start of a shift toward more dovish policy. Q4 GDP was at 0.0%, a 0.3% improvement from its November report.

The Euro Stoxx 50 rose by 14.9% in Q4 as investors were cheered by inflation data declining in the quarter, albeit it is still at high levels. Inflation in Europe has been particularly high due to the impact of energy prices following Russia’s invasion of Ukraine and consequent impact to European energy supply.

Japanese equities underperformed other equity markets, rising by only 0.7% in Q4. Japanese equities performed well in the quarter until core CPI in December was announced at a 40-year high and the BoJ increased the ceiling of the trading range for the 10-year bond to 0.5% (from 0.25%) which proved a headwind for equities. While inflation remains well below other major economies, investors are wary of a hawkish pivot at upcoming BoJ meetings due to the upcoming retirement of Governor Kuroda. The yen reached a high (i.e., a weak yen) of 150 vs the US dollar during Q4 but ended the year at 131 following the inflation peak and yield curve adjustment.

Emerging market equities performed strongly (+9.6%) with sentiment improving in China following the announcement of COVID-19 restrictions easing, and US dollar weakness provided a boost.

Global Equity Markets Performance



Source: Bloomberg. All in local currency.
FTSE All- Share Index (Ticker: ASX Index) S&P 500 Index (Ticker: SPX Index) STOXX Europe 600 (Ticker: SXXP Index)
Nikkei 225 Index (Ticker: NKY Index) MSCI World Index (Ticker: MXWO Index) MSCI Emerging Markets (Ticker: MXEF Index)

Fixed Income

Medium- and longer-term bond yields were largely rangebound in Q4 as investors weighed expected declines in inflation against Central Banks' desires to ensure inflation is stamped out. Additionally, employment data generally has remained strong which provides the impetus for Central Banks to hike rates now while labour markets are viewed as strong enough to withstand it. In corporate bonds, high-yield credit outperformed as spreads tightened over the quarter but remain around their long-term average level. Emerging market bonds rose 7.8% in local currency, and 8.1% in hard currency.

The US 10-year Treasury yield rose marginally in Q4, ending at 3.88% from 3.83%. The 2-year yield rose in Q4, from 4.22% to 4.41%, as the yield curve inverted further. US rates rose initially in the quarter as core inflation data continued to be strong and Fed speakers maintained the narrative that hawkish policy needed to be maintained. Later in the quarter rates fell though, as markets maintained the view that the Fed will pivot and cut rates in 2023 as inflation falls, spurred by recent falls in monthly CPI data. The Fed raised short term rates to 4.25-4.5% as at end of Q4.

The UK 10-year Gilt yield fell from 4.09% to 3.67% and 2-year from 4.30% to 3.56%. The declines largely reflected markets returning to normal following the spike in yields in Q3 following the Truss government 'mini budget' and occurred despite the BoE hiking rates by 125bps. While Gilt rates fell sharply over the quarter, UK Gilts now trade in a similar relative position to peer government bonds as they did before Q3.

European government bonds had a total return of -2.1% in Q4. Yield curves flattened or inverted during the quarter, as short end rates rose in response to the ECB raising its policy rate to 2.5% during the quarter and noted it expects to hike rates further based on its inflation outlook. Long-end rates rose less, as investors view inflation as likely to fall steadily. The German 10-year bund yield increased from 2.11% to 2.57%, and Italy's went up from 4.51% to 4.70%.

US high-yield bonds outperformed investment grade, returning 4.2%, and European high-yield bonds returned 4.7%. Investment-grade bonds returned 6.4% in the UK, 1.7% in Europe and 3.6% in the US.

Currencies

In currencies, sterling strengthened sharply against the US dollar (+8.2%) but fell against the euro (-0.8%) over the fourth quarter. The principal driver was the appointment of Rishi Sunak as Prime Minister who is viewed as likely to pursue a more fiscally conservative agenda, and the BoE's intervention in gilt markets to stabilise yields. Overall, the US dollar fell in Q4 (Dollar index -7.7%), reversing much of the Q3 gains. Over the year 2022, the Dollar Index rose +8.2%. Notably, the US dollar also fell against the Japanese yen by -9.4% in Q4 as the BoJ shocked markets in December by increasing the top range at which the 10 year bond could yield.

Commodities

Energy prices fluctuated during Q4 as investors mulled over China re-opening, risk of looming recessions in Europe, UK, USA, and warmer weather than expected reducing near term demand for natural gas. Precious metals rose as the US dollar declined and also received a boost from falling interest rates.

US gas prices fell -33.9% over Q4, reversing some of the sharp gains earlier in 2022 as winter weather has been warmer than expected (reducing demand) and inventories have been higher than previously expected.

Brent crude oil fell -2.3% in Q4. Prices have been volatile as fears of a fall in demand from a global recession and structural trends toward renewable energy have clashed with supply side dynamics relating to Russia's invasion of Ukraine, OPEC production, and the US releasing oil from its Strategic Petroleum Reserve. Brent closed the quarter at $86 per barrel.

Gold and Copper rose 9.9% and 11.7% respectively in Q4, with gold rising as interest rates and the US dollar declined, as well as reports of Central Banks including China and Turkey increasing their purchases. Copper rose as China, a significant copper importer, announced the start of COVID-19 re-opening. Gold and copper closed Q4 at 1,826 USD/toz and 381 USD/lb, respectively.