REPORT PREPARED FOR

Worcestershire Pension Fund

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Global overview

The Fund faced a challenging Q1: rising inflation pressures were exacerbated by Russia's invasion of Ukraine, while central banks' increasingly tough rhetoric led to increased fears that tighter monetary policy may lead to recession. In addition, China faced a new wave of COVID infections, and implemented severe lockdowns in major cities, impacting growth in March. As a result, global equities fell -5.0% over the quarter, with only UK equities bucking the trend (up +2.9%); European and Emerging markets equities suffered most (down -8.9% and -7.0% respectively). Value-oriented stocks experienced more muted declines than growth stocks (-1.2% for the MSCI World Value Index vs -9.8% for the MSCI World Growth Index). Corporate and government bond indices also declined (for the UK indices, by -6.5% and -7.2% respectively), while the hard currency emerging market bond index fell -10.0%, posing a significant challenge to "traditionally diversified" portfolios. Real assets (commodities, real estate) fared better, and the USD strengthened against most currencies.

GDP growth: While growth generally remained positive in Q1 for developed markets, the growth rates are already well below Q4 comparatives, and face further headwinds from Russia's invasion of Ukraine. The US posted a -0.4% quarterly decline[1], the Eurozone +0.3% and the UK saw growth of 0.8%. In China, the Chinese Communist Party is continuing to stick to a zero-Covid policy, which has led to widescale lockdowns, including in the financial hub of Shanghai; this has cast doubt on the viability of the +5.5% official target growth over 2022. The World Bank has revised its expected global GDP growth for 2022 from +4.1 to +3.2%. Over the last year, strong corporate earnings have provided significant momentum to global equity markets, however, there are now increased fears that Q1 earnings could disappoint investors as firms face challenges on two fronts with pricing pressures affecting both margins and curtailing consumer demand.

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

Inflation: Inflationary expectations are now reasonably well discounted by markets (US inflation is expected to average some 4% in 2022, falling to between 2.5 and 3% in 2023), and it is possible that year-on-year inflation is close to reaching its peak, but there are clearly risks to this. The inflationary aspect of Russia's invasion of Ukraine has so far been most acutely felt through the pricing in energy markets, with consumers facing rising fuel and heating costs. This could be further exacerbated by calls for European nations to boycott Russian energy imports, which provide the Kremlin with approximately $400 million

[1] Note: US GDP has been restated to be consistent with the calculation method in other regions.

per day. Furthermore, the increasing focus on energy security is likely to cause sustained upward pressure on consumers' energy bills. Food costs, particularly wheat, have also increased due to the war given that Russia and Ukraine are among the world's largest exporters. Nonetheless, wage growth has so far lagged behind inflation, despite a tight labour market. If this were to change it is likely to keep inflation above the policy target rate for longer.

Monetary policy is tightening, and interest rates are increasing, but rates remain negative in real terms: The Federal Reserve increased interest rates by 25bps on 16th March, their first increase since 2018, with the expectation that US rates may peak around 3% in 2023. In addition, the Fed is expected to start briskly reducing its holdings of high-quality bonds ("quantitative tightening"), which could put more upward pressure on long term rates and tighten credit conditions. The Bank of England also increased the base rate by 25bps in both February and March (to 0.75%) while more hawkish members of the ECB have called for the next rate hike as early as the summer.

Increasing risk of recession: With many of the inflationary pressures being "supply-side", the ability of the central banks to rein in price rises without causing a recession is coming under increased scrutiny. The recent inversion of the US yield curve (with 10-year yields falling below 2-year yields, implying expectations of weakening growth) added to concerns. Market expectations still do not have a recession as the "base case" - employment remains high, consumers well financed and post-COVID recovery momentum continues – but it is no longer a "tail risk". Europe looks more exposed that the US, due to its greater exposure to Russian energy and emerging market exports.

Summary and Market Background

The value of the Fund in the quarter fell slightly to £3.5bn, a decrease of £79m compared to the end December value of £3.58bn. The Fund produced a return of -2.9%% over the quarter, which was -0.9% behind the benchmark. The main reason for the underperformance was due to both of the active equity mandates performing poorly against benchmark along with the property and fixed income investments. The equity protection strategy has made a positive contribution to performance. Over a 12-month period the Fund recorded a negative relative return against the benchmark of -1.6% (6.7% v. 8.3%). The Fund has performed inline or ahead of benchmark over the three, five and ten year periods, details of which can be found in Portfolio Evaluation Limited's report.

The equity protection strategy mandate with River & Mercantile has been *implemented to secure some protection to the funding level* against a relatively significant fall in equity values. One of the key decisions within the asset allocation review was to continue with a relatively high percentage of the Fund’s assets (70%) being invested in equities. It was decided that an equity protection overlay will form part of the overall risk management strategy, with the objective of continuing to provide some protection to the funding level in the event of future significant falls in equity markets (as seen in Q1 2020). With the benefit of experience gained from the earlier stages of the equity protection strategy, the positioning of the strategy will be monitored more closely going forwards, looking in particular at the dynamic movements of the three individual regional markets covered by the strategy (US, Europe and UK).

Work has continued towards increasing the allocation to the alternatives portfolio (up to 20% from 15%) in a cost effective manner. The Fund has been working with LGPS Central to identify what part they could play in this process and how that would work alongside the existing investments, ensuring that a suitable diversification of investments is maintained and as appropriate, enhanced. It was agreed at the PISC meeting on 21st September to allocate £50m to the First Sentier and £75m to the Stonepeak follow on funds, subject to fee negotiations. This has now been finalised. A provisional allocation of £30m was also made to the LGPS Central Infrastructure Fund, subject to detailed proposals being approved. Progress has continued with an investment of a minimum of £150m into Gresham House Forestry Funds, spread over three years, which will be held within the property portfolio. The first tranche of £50m committed and already substantially drawn down is into the Gresham House Forestry Growth & Sustainability Fund, with a further £65m committed to the Gresham House Forest Fund VI, with a large draw down due in April. Consideration will now be given to the options available for the final tranche within this current allocation.

The work commissioned by the Pensions Committee to manage Environmental, Social and Governance (ESG) and Climate issues in a more proactive manner across all of the Fund investments has continued, by considering possible alternatives to the current passive mandates that would incorporate a greater focus on ESG considerations, while seeking to maintain or enhance returns in a risk-controlled manner. Following the PISC approval to switch the Fundamentally Weighted (Value) element into the LGIM Quality companies portfolio and to transition the Low Volatility element of the LGIM Alternative Factors portfolio to the LGPS Central All World Climate Multi Factor Fund, these transitions took place in October and November respectively. These elements contained the highest exposures to carbon within the Fund, so this clearly demonstrates that decisive action has followed on from the research and discussions that have taken place over the last two years. Following due consideration at the PISC meeting on 24th November, it was agreed that 15% of the value of the passive market capitalisation portfolio would be transitioned to the LGPSC Global Sustainable Investment Fund, allocated to Liontrust (60%) and Baillie Gifford (40%). Post the period end, £200m was duly transitioned to this Fund. Now it is time to pause, while the Triennial valuation is undertaken and the outcomes from that are considered in the Strategic Asset Allocation Review later in the year.

Performance during Q1 2022 has again been a bit of a mixed bag, although on this occasion we have succeeded in being in some of the right places, like UK equities. The sad events in Ukraine understandably unsettled markets, although from the Fund perspective valuations held relatively steady at the quarter end. It is going to take some time for all the implications to work through, both at the economic level but also on the global political level. Clearly there are some major inflationary issues to consider around commodities, not just energy related but food and materials as well. 15% of UK timber supply is from Russia, so that will need to be re-sourced! With the notable exception of the UK, most equity and bond markets had a challenging quarter, with a not surprising increase in volatility. Our active equity managers certainly struggled, but to be fair to them this was to be expected. Our managers are unlikely to have an exposure to Saudi oil stocks for example, which rose 50%! These are unusual times in which usual disciplines will be challenged. In performance terms Nomura (Pacific) showed an underperformance of -2.8%, with China being the most problematic element. LGPS Central (Emerging Markets) really had a torrid quarter, underperforming by -6.8%, with all three managers contributing their own woes to that. LGPS Central (Corporate Bonds) were -0.3% behind their benchmark. The total property fund showed an underperformance against our own benchmark of -2.8%, but is showing an improving trend. The result is probably not helped by the lagged reports that some of the managers have, so showing December numbers against a March benchmark position. Infrastructure performed well, which given our heavier weighting versus property enhanced the total alternatives performance.

The passive equities outperformed the alternative passive strategies by 3.3% (-1.8% v. -5.1%). Passive equities outperformed active market equities by 3.1% (-1.8% v. -6.7%), which reflects the average better performance from the passive index markets in comparison to the Far East and Emerging Markets portfolios. Out of the passive geographies, the UK won this time, up 0.6% over the quarter, while North America was down -2.0% and Europe down -7.2%.

Equities

Global equities had a challenging Q1. All tracked indexes, except for UK equities, suffered significant declines but followed differing paths. In March, most of the developed markets had regained some lost ground as the stalling Russian invasion eased fears of the conflict extending beyond Ukraine's borders. Unsurprisingly, the VIX increased by 19.4% in Q1, from 17.2 to 20.6.

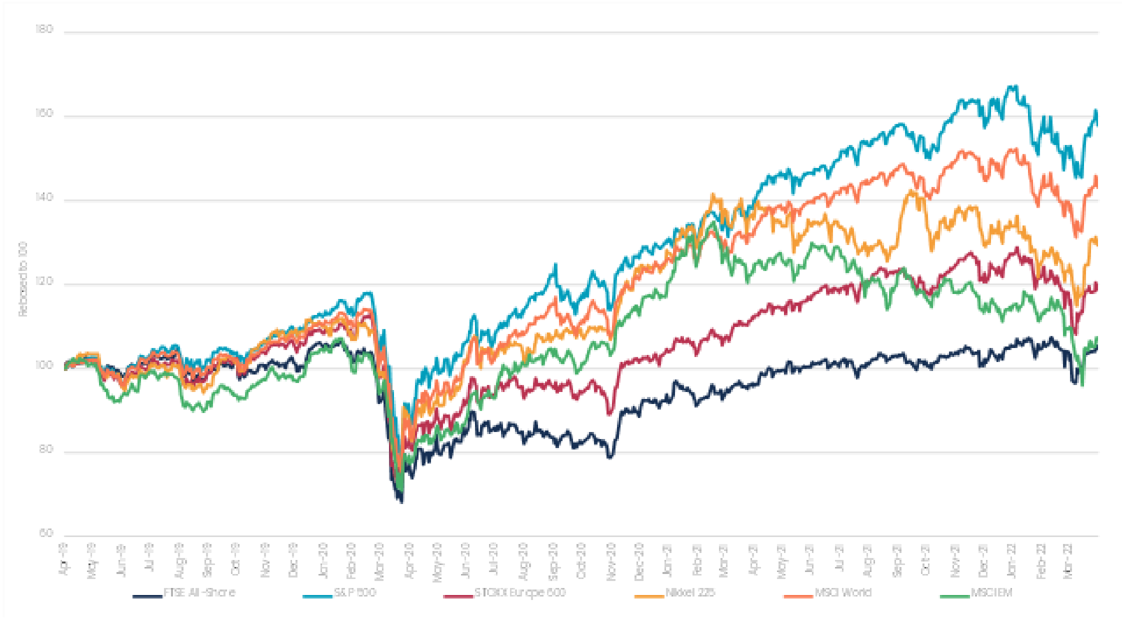
US equities, measured by the S&P 500, posted large losses over Q1 with the S&P 500 falling -5.2% and the tech-heavy NASDAQ falling by -8.9%. The communication services, technology, and consumer discretionary sectors all declined while energy and utility companies were positive, and defence stocks enjoyed double-digit growth over the quarter.

UK equities performed well over Q1, with both the FTSE 100 (+2.9%) and FTSE All-Share (+0.5%) indices delivering positive returns. Defence stocks along with the oil, mining, healthcare, and banking sectors all provided tailwinds for UK large caps. The consumer-focused constituents of the small and mid-cap sectors contributed to their underperformance

The Euro Stoxx 50 declined by -8.9% over Q1. Having started the quarter suffering more muted losses than other markets, the geopolitical impact of Russia's invasion caused significant pain across European markets. While sanctions have an obvious adverse effect on trade and capital flows, Russia's position as one of Europe's foremost energy suppliers reflects both further inflationary pressure and concerns around energy security. As such the energy sector was the only source of positive returns while consumer discretionary and information technology were hit hardest.

Emerging market equities fell over the quarter (-7.0%). The Moscow based MOEX Index declined around -30%, suffering widespread disruption and suspension of normal trading. This was followed by the removal of Russia from the MSCI Emerging Markets Index on 9th March. Chinese stocks also declined as China's zero-Covid policy faltered with surging cases and tens of millions of citizens placed under lockdown. The continued disruption was caused by the de-listing of some Chinese stocks from foreign exchanges. Brazilian markets continued to perform strongly with other net commodity exporters in the Gulf states and South Africa enjoying quarterly gains.

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

Global bonds were unusually volatile given the geopolitical situation and the macro-economic backdrop of accelerating inflation and interest rate hikes which underpinned the rise in bond yields. Investors rotated toward safe-haven assets as the war began in February but soon appeared to change stance. Government bond yields rose sharply (prices fell) in Europe, the UK, and the US due to monetary normalisation. Corporate bonds also saw significant negative returns and performed broadly in line with government bonds over the quarter.

The 10-year US Treasury Bond yield ended the quarter 83 basis points higher at 2.34%, with Treasuries as a whole providing a total return of -5.6%, with the 2-year yield rising from 0.73% to 2.34%. The 2-year and 10-year portion of the US Treasury yield curve flattened, briefly inverting in March for the first time since 2019 which sent a potential warning sign of a coming recession within a one-to-two-year window. To combat the 40-year high US inflation, which reached 8.5% in March, the US Federal Reserve raised interest rates to a target range of 0.25% to 0.5%, which was the first increase since 2018. The unemployment rate edged down to 3.6% and stood at its lowest level since before the pandemic, bolstering the case for the Fed to speed up the tightening of monetary policy in the fight against inflation.

The 10-year Gilt yield increased from 0.97% to 1.61%, with Gilts delivering a total return of -7.2%. Given the UK CPI jumped to a 30-year high of 7.0% in March 2022, the Bank of England raised rates twice in Q1, reaching 0.75% from 0.25% in December 2021. This was done despite concerns around the UK economic outlook and particularly the cost-of-living pressures on households, causing a significant purchasing power squeeze due to higher energy bills. Index-linked Gilts had returned -5.5% as the positive effect of higher inflation expectations were more than offset by the impact of increased interest rates.

European government bonds provided a total return of -5.3%. The ECB pivoted towards a more hawkish stance in February and outlined a plan to end bond purchases. The ECB further indicated that a first interest rate rise could potentially come in 2022. The annual Eurozone inflation rate surged to a record high of 7.5% in March, the highest since the introduction of the euro in 1992. The euro area unemployment rate dropped to 6.8% in February, the lowest level on record.

US high-yield bonds aligned with the global bonds market, returning -4.8%, with -4.1% performance for European high-yield bonds. Investment-grade bonds returned -6.5% in the UK, -5.3% in Europe and -7.7% in the US.

Currencies

In the first quarter of 2022, Sterling weakened against the Dollar (-0.3%) and the Euro (-2.9%), with rising living costs, weakening consumer sentiment, and greater uncertainty over inflation all undermining confidence in the UK's economic outlook. The Dollar had a strong quarter (Dollar Index +2.8%). The Euro weakened notably against the Dollar (-2.5%) as investors favoured the US over Europe amid heightened uncertainty. The Russian rouble experienced a sharp devaluation, with the decision to invade Ukraine being met by powerful economic retaliation from the West, severely threatening financial stability in Russia.

Commodities

Energy prices soared in the first quarter of 2022 with the Russian-Ukraine conflict putting further pressure on already rising prices. The situation exacerbated the effect of rising energy demand and ongoing supply constraints, which had already put upward pressure on energy prices in January. Precious metals also surged, with investors moving into traditional safe-haven assets following the Russian invasion.

Natural gas prices spiked to $5.64/MMBtu (+51.3%) in the US and to $39.22/MMBtu (+70.0%) in Europe. Russian gas is still flowing through to Europe in large quantities, but investors fear that these supplies could be disrupted by Western sanctions, or even cut off completely as fighting in Ukraine intensifies. Europe currently receives around 40% of its gas supplies from Russia, so is more reluctant to impose sanctions than the US, which has already banned Russian gas imports, and the UK, which will phase out imports by the end of the year. Nonetheless, Germany suspended certification of the Russian Nord Stream 2 pipeline.

Brent crude oil also experienced soaring prices in Q1 (+38.7%) and reached an intra quarter high of $128 a barrel, reflecting uncertainties about disruptions to supply and further sanctions related to Russia's invasion. The US was able to ban imports of oil from Russia due to its relatively low dependence on Russian supply.

Wheat recorded sharp price gains (CBOT Wheat +30.5%) on supply fears, with Russia and Ukraine together accounting for around 30% of global wheat exports. Wheat is a staple food upon which the most vulnerable depend on, so this disruption could have far-reaching consequences for global food security, with Egypt imposing price caps on bread.

Gold and Silver prices rose +6.6% and +7.6% respectively in Q1 as investors sought haven assets.

Nickel prices rose 54.7% over the month to $32,107/t. Trading of the metal on the London Metal Exchange was suspended in mid-March following a short squeeze, with prices doubling to a new record high during a single morning. The LME scrapped $3.9bn of trades prior to closing the market, stating that prices no longer reflected the underlying physical market.