YOUR MARKET AND INVESTMENT UPDATE

Q4 2021

West Midlands Pension Fund

REDINGTON

West Midlands Pension Fund

ISO/IEC 27001 Information Security Management

QAS Institute and Faculty of Actuaries Quality Assurance Scheme

WHAT HAPPENED DURING THE QUARTER

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Market Summary

While asset returns in 2021 for the most part continued the strong returns seen in recent years, the economic environment is potentially very different heading into 2022 compared with the last 10 years. The return of inflation across developed economies outside Japan presents central banks with challenges not seen since the 1970s.

While interest rate rises could reduce demand-induced inflation, they are not so effective against supply-induced inflation, and the degree of tightening currently priced into the market assumes a relatively quick return to the disinflationary trends of the 2010s. Overestimating the interest rate sensitivity of the economy could lead to inflation remaining high for an extended period; underestimating it could lead to a recession.

Key Points for You

- Expected Returns rose by c.10bps from Q3 2021, primarily due to increasing expected returns across most asset classes (see appendix). However, due to rounding, the Fund's expected return is shown as Gilts + 3.4%.
- Asset-side risk, as measured by VaR 95%, decreased slightly from 16.2% at 30 September 2021 to 15.8% at 31 December 2021. This was largely driven by greater levels of diversification within the portfolio.
- The Pension Risk Management Framework ("PRMF") in this report contains asset-only monitoring metrics. Our proposed PRMF, which includes liability-based metrics, has been included in the appendices.

Market Data

Equity Index	Level	Change since 30-Sep-21	Change since 31-Dec-20
FTSE 100 (Total Return)	7314	4.7%	18.4%
S&P 500 (Total Return)	9987	9.7%	28.7%
EuroStoxx 50 (Total Return)	1870	6.5%	24.1%
Nikkei 225 (Total Return)	48376	-2.1%	6.7%
MSCI World (Total Return)	7429	8.1%	24.2%
MSCI Emerging Markets (Total Return)	743	-0.9%	-0.2%
FX			
USD vs GBP	1.35	0.4%	-1.1%
EUR vs GBP	1.19	2.3%	6.3%
JPY vs GBP	155.8	3.9%	10.3%
Credit Spreads			
Sterling Non-Gilt Index	69	-3 bps	-31 bps
Sterling Non-Gilt 15Y+ Index	137	1 bps	-21 bps
Global Investment Grade	87	4 bps	-16 bps
US Investment Grade	100	6 bps	-13 bps
Global High Yield	334	0 bps	-48 bps
European High Yield	290	19 bps	-36 bps

Market Data

UK Gilts	Level	Change since 30-Sep-21	Change since 31-Dec-20
10Y	0.99	-5 bps	75 bps
30Y	1.11	-27 bps	32 bps
UK Nominal Swaps			
10Y	1.44	23 bps	104 bps
30Y	1.21	-6 bps	63 bps
Gilt Breakeven Inflation			
10Y	3.93	6 bps	73 bps
30Y	3.39	-13 bps	30 bps
UK RPI Swap			
10Y	6.34	44 bps	328 bps
30Y	4.69	20 bps	150 bps
UK Gilt Real Rates			
10Y	-2.94	-11 bps	2 bps
30Y	-2.28	-14 bps	2 bps
US TIPS			
20Y	-0.51	-17 bps	-11 bps
30Y	-0.45	-28 bps	- 18 bps

VIEWS FROM THE ASSET CLASS SPECIALISTS

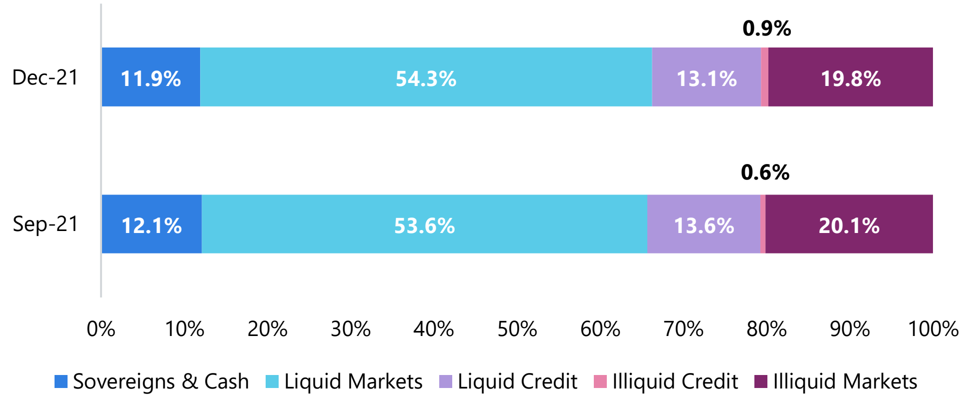
		**Kate Mijakowska** **Government Bonds**	UK nominal yields were volatile in Q4 2021. Yields rose initially, as oil prices continued to soar, and 20-year nominal yields peaked at 1.5%. Gilts then rallied sharply in November, amid concerns about the potential impact of the new Covid variant. In December, yields moved up again, and the Bank of England's Monetary Policy Committee voted to increase the base rate from 0.1% to 0.25%. Over the quarter, the nominal UK yield curve flattened, with the 20-year point down 17bps and the 5-year up 18bps. UK inflation prints continued to rise, with December year-on-year CPI reaching a 10-year high at 5.4%. The Bank of England now expects inflation to peak at 6% in Q2 this year. Inflation expectations over the quarter rose 20bps at the 5-year point but only 3bps at 20-year tenor. The UK Debt Management Office issued a new 2073 index-linked gilt over the quarter, the first extension of the index-linked gilt curve since 2013.
		**Oliver Wayne** **Liquid Markets (Equities)**	Global developed markets (DM) delivered strong absolute returns. The best-performing market was the US, driven by the technology sector. The UK and European markets also posted positive returns. Emerging market (EM) equities underperformed developed markets (DM) and generated negative absolute returns. The strength of the US dollar was a headwind in many markets and there were a number of country-specific issues, most notably in Turkey where there is extreme volatility in the currency due to a surge in inflation. From a factor perspective, Quality was the only factor group that generated positive excess returns in DM. From a size perspective, larger companies continued to outperform smaller companies in DM, which is a reflection of the narrow market leadership. In EM, all the major factor groups delivered positive excess returns. Smaller companies also meaningfully outperformed larger companies. This is a continuation of the trend for 2021. The resulting backdrop for active management was favourable in EM and challenging in DM.
		**Tom Wake-Walker** **Liquid Markets (Multi-Asset)**	Most multi-asset and liquid alternative strategies generated positive returns in Q4 as – broadly speaking – the major asset classes increased in value into year-end despite some fears over the Omicron Covid-19 variant. Equity markets led the way, with commodities broadly positive while bond pricing was volatile but largely flat. Within commodities, managers with long exposure to industrials and agriculturals benefited as supply constraints aligned with continued resurging demand, while short exposure to energies generated some positive returns for trend following strategies. Risk parity strategies were generally positive for the quarter as equities, inflation-linked bonds and commodities performed strongly. Inflation-linked bonds' performance was also advantageous to discretionary strategies holding exposure as a risk mitigant against inflationary pressures. Trend following strategies were largely flat as gains on short bond positioning were offset by losses in equities. Equity style premia strategies performed strongly, with momentum, defensive and more alpha-oriented signals positive.

VIEWS FROM THE ASSET CLASS SPECIALISTS

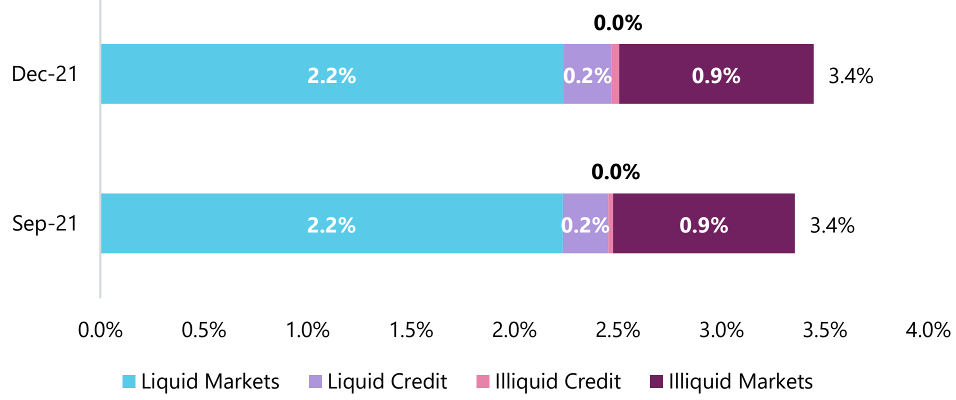
		**Chris Bikos** **Liquid & Semi-Liquid Credit**	10-year sovereign bond yields were largely unchanged over the quarter, with the front end of yield curves moving higher in the US and the UK as markets priced in a faster pace of rate hikes. Consequently, yield curves flattened, with short-maturity bonds being hit the most. In corporate bonds, long-duration credit posted positive total returns in both the US and the UK, outperforming shorter durations; this was driven primarily by rate movements. Performance in higher-yielding and lower-quality assets diverged, with US assets delivering a positive total return and European high yield detracting. Looking at emerging markets (EM), EM hard-currency bonds declined, with high yield significantly weaker, though investment-grade sovereign bonds saw positive returns. The picture was similar in local-currency sovereigns, too. Overall, waning central bank support and persistent inflationary pressure continue to be headwinds for fixed income markets going into next year.
		**Tricia Ward** **Illiquid Credit**	Borrower appetite remains high, but Q4 saw a slight deceleration in capital deployment, partly driven by uncertainty surrounding Covid, rising energy costs and supply-demand imbalances, and partly by stabilisation in private equity and private credit markets after the ferocity of deal-making in Q1 - Q3. Buoyant public equity markets and private equity exits contributed to a record c.$750bn of distributions (source: Preqin) in 2021, increasing private equity dry powder and private credit demand. Lenders are increasingly selective about deal quality and pricing, with a gradual prioritisation of established businesses over growth businesses. The Alternative Credit Council highlighted acceleration of ESG integration and engagement in private credit, though only 3/4 of managers identify this as a core investment focus. Amid concerns about rising interest rates, floating-rate loans with short-term reference rates remain attractive in direct lending, whilst contracted cashflows, asset security and appropriate covenants in specialty finance offer greater return stability versus fixed income, and diversification against headline risks.
		**Jaspal Phull** **Illiquid Markets**	UK commercial property growth increased 3.7% in December, the highest since the CBRE Monthly Index began, taking all property capital growth to 13.8% for 2021. Growth was driven predominantly by the industrial and logistics sectors. Q4 saw industrial sector capital values grow by 13.9%, more than Q2 and Q3 combined. Office activity remains more subdued; however, city centres have been resilient with premium office rents holding up. The focus on sustainability risks has increased substantially, with the Royal Institution of Chartered Surveyors issuing new guidance notes for valuers which includes taking sustainability into account when valuing commercial property. The market is already seeing "green premiums" for buildings with certifications; data suggests it can boost asset values by more than 12%. Demand for alternatives has increased materially. Life sciences investment more than tripled in 2021 and transaction volumes in the living sector grew by 80% over the year. Wholesale gas prices peaked over the quarter and have fallen sharply since; however, they remain three times higher than this time last year. The impact on the cost of living for the consumer is yet to be realised, as wholesale costs feed through into retail prices.

YOUR ASSET ALLOCATION AND EXPOSURE

Asset Allocation Change

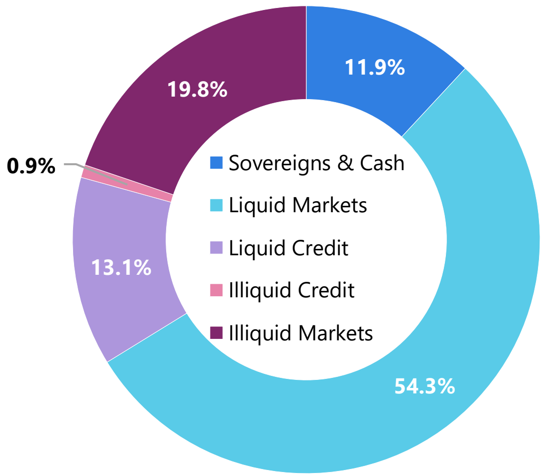


Expected Return Contribution Change (over gilts)



Note, asset class expected returns are in the appendix.

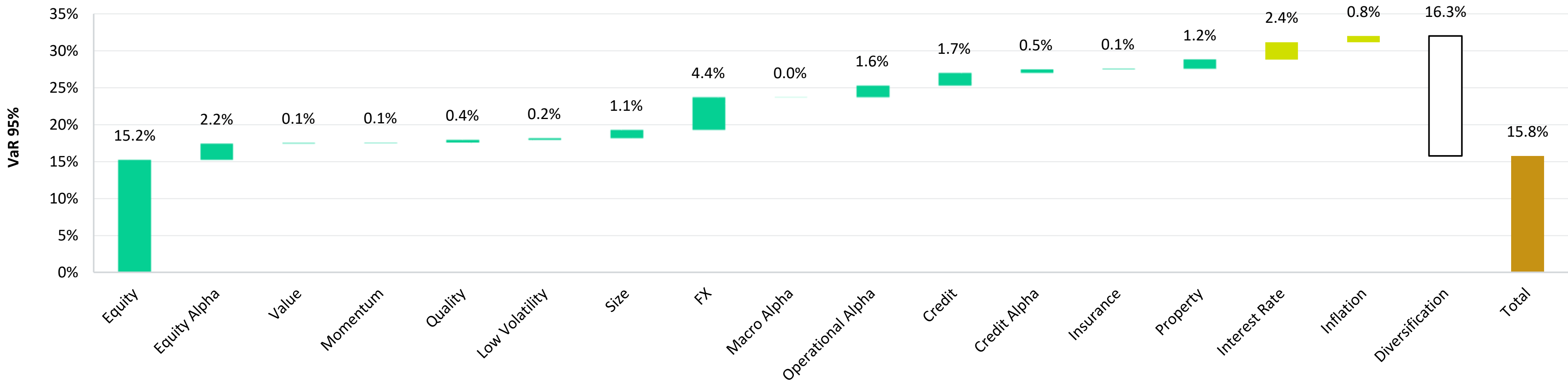
Detailed Asset Allocation



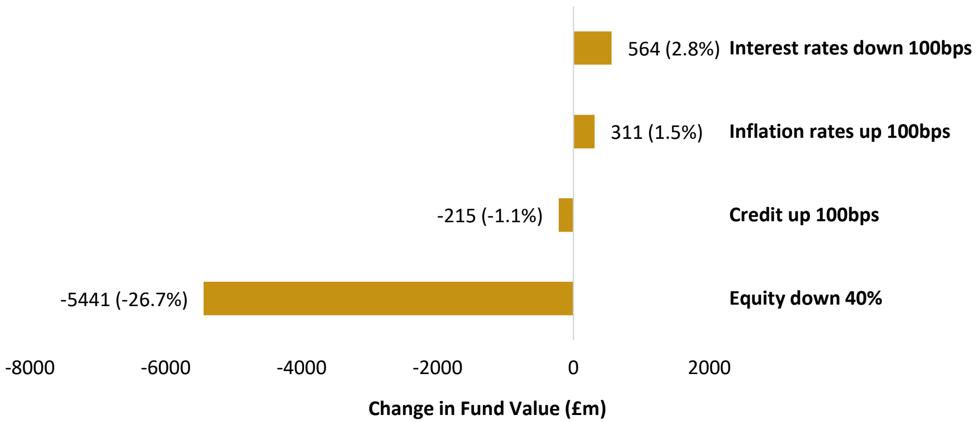
2.8% Cash
5.3% Index-Linked Gilts
1.6% Nominal Gilts
0.5% LGIM Overseas Bond Fund
1.7% US TIPS
5.9% ACS LGPS UK Equity Passive Fund
14.0% ACS LGPS Global Ex UK Passive Equity Fund
3.1% ACS LGPS Global Equity Dividend Growth Factor Fund
10.9% ACS LGPS All World Equity Climate Multi Factor Fund
6.0% LGPS Central Global Equity Multi Manager Fund
0.3% LGIM UK All Share
1.0% Global Active Futures
0.5% Equities held with Merrill Lynch
0.1% Smaller Equity Positions
2.5% Sustainable Equities - Impax
2.4% Sustainable Equities - RBC
0.6% Sustainable Equities - WHEB
2.4% Emerging Markets Equities - AGF
2.7% Emerging Markets Equities - BMO
1.7% Emerging Markets Equities - Mondrian
1.5% Aegon Short Dated Investment Grade Bond Fund
3.3% UK Corporate Bonds
1.0% LGPS Central Global Active IG Corporate Bond Fund
3.5% Multi-Class Credit
3.8% Emerging Market Debt Funds
0.9% Schroders FOCUS II / LGPS Credit Fund II
4.0% Infrastructure
7.1% Property
1.7% Opportunistic Funds
7.0% Private Equity

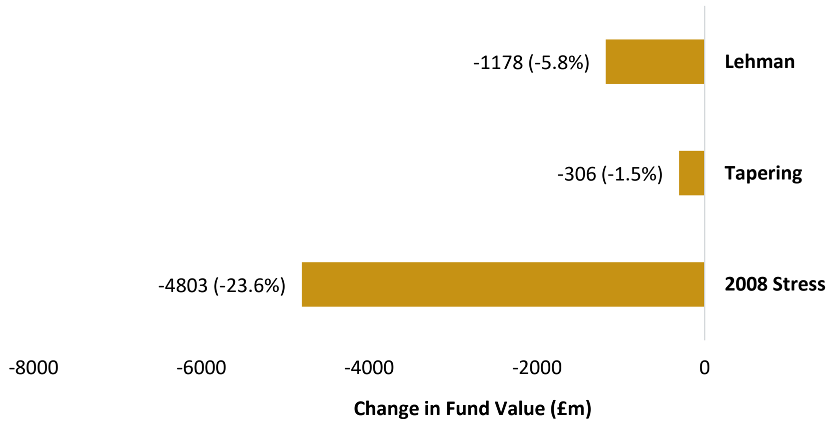
HELPING YOU UNDERSTAND YOUR RISK

Current Value-at-Risk 95% (Asset Only)



Scenario Analysis





APPENDICES

REDINGTON’S EXPECTED RETURNS – DECEMBER 2021

Asset Class	Expected Return (Gilts +)	Volatility	Expected Fees (p.a.)
Equity			
Developed Market Equities	3.9% ↑	16.7% ↓	0.0%-0.1%
Sustainable Equities	4.2% ↑	15.6% –	0.2%-0.4%
Emerging Markets Equities	4.5% ↑	20.1% ↓	0.1%-0.2%
China A Share Equities	5.8% ↑	30.8% –	0.3%-0.8%
Liquid Credit			
Corporate Debt GBP – Passive	0.8% ↑	6.5% ↑	0.1%-0.2%
Corporate Debt GBP – Active	1.1% ↑	6.6% ↑	0.2%-0.3%
Emerging Market Debt – Corporates	2.2% ↑	7.9% –	0.4%-0.6%
Emerging Market Debt – Local Currency Sovereign	3.0% ↑	14.9% ↑	0.5%-0.8%
Emerging Market Debt – Hard Currency Sovereign	2.0% ↑	9.5% –	0.5%-0.8%
Multi-Class Credit Global	2.4% ↑	7.6% ↓	0.4%-0.7%
Illiquid Credit			
Diversified Matching Illiquids (Uninvested)	2.6% ↑	7.1% –	0.3%-0.5%
Opportunistic Illiquid Credit	4.0% ↑	11.7% ↓	1.0%-1.5% (+ performance fee)
Securitised Opportunities	3.0% ↑	6.0% –	0.5%-0.7%
Special Situations	4.7% ↑	16.7% ↓	1.0%-1.5% (+ performance fee)
Illiquid Markets			
Private Equity	5.7% –	30.9% ↑	1.0%-1.5% (+ performance fee)
Insurance-Linked Securities	4.8% –	8.4% –	1.0%-1.5%
Renewable Infrastructure (Whole Projects)	3.7% –	13.7% ↓	0.5%-0.7% (+ performance fee)

The increase in volatility of credit assets is driven by changes in our credit risk modelling.
Fee data is estimated based on fees of preferred managers in each strategy. In practice, each fee would be negotiated for West Midlands and may be considerably lower.

GLOSSARY

Term	Description
Annual Management Charge (AMC)	The fee charged by the asset manager for managing the fund, typically expressed as an annual percentage on the invested assets. This excludes additional expenses, e.g. administrative costs, which when combined with the AMC make up a fund's total expense ratio (TER).
Credit Risk	The risk of financial loss as a result of the inability or unwillingness of an entity to make payments as they become due. Many types of relationships involve credit risk, such as those in which a company owes money to its suppliers (trade debt) or where a counterparty is required to make payments under a derivative contract (counterparty credit risk).
Credit Spread	The difference in the yield between two different bonds, due to different credit quality. The credit spread reflects the additional yield an investor can earn from taking incremental credit risk. Is it often quoted in relation to the yield on government bonds.
Inflation	The average rate at which prices (of products and services) increase over time. It gradually reduces the value of money over time – the higher the rate of inflation, the greater the erosion of value.
Risk Attribution	The process of attributing certain components of total risk to various sources such as inflation risk, credit risk, equity risk, etc.
Stress Testing	A tool used to assess a portfolio's exposure to large – but plausible – shocks. In the broadest sense, stress testing is a 'what if' exercise and can be modelled across various scenarios. For example, a stress test can be used to simulate the performance of a portfolio during 9/11, Black Monday and the Global Financial Crisis of 2007-08.
Value-at-Risk (VaR)	The minimum value that the Fund would expect to lose (at risk) for a given confidence level, over a given time horizon. We have used a 1-in-20 (i.e. 95%) confidence level. For example, if a portfolio's 95% 1-year VaR is £200 million, it would have a 5% chance (1-in-20) of suffering a loss over the year of £200 million or more.
Volatility	A measure of variability that is used as a common metric for risk. It represents the value of one standard deviation change in the value of an assets' return. Under certain assumptions, we are able to use this measure to calculate the probability of a given change in the value of the asset or portfolio.
Yield	The income return on an investment. It is based on the received cash flows of a security and is usually expressed as an annual percentage.
Yield Curve	A graphical representation showing the yields of a set of financial instruments by maturity. For example, the par interest rate swap curve or the UK Gilt curve.

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