

YOUR MARKET AND INVESTMENT UPDATE

Q1 2020

West Midlands Pension Fund



Private and Confidential



WHAT HAPPENED DURING THE QUARTER



Philip Rose
(CIO, Strategy
& Risk)

Market Summary

The spread of the COVID-19 pandemic has led to a rapid downturn across both the general economy and financial markets, with the falls in both equity and credit markets being if anything more rapid than those seen in 2008. Both central banks and governments have responded with economic stimulus packages of unprecedented size and scope, but these are pushing against falls in GDP and rises in unemployment that far exceed anything seen in recent history. Market liquidity should be viewed in the context of the size of the moves seen in asset prices and the availability of unlimited monetary firepower from central banks to support markets. Efforts to stimulate spending through monetary and fiscal policy may prove limited as the unknown timescale of the coronavirus means that lockdowns and other social distancing policies may need to remain in place until a vaccine is available.

Market Data

Equity Index	Level	Change since 31-Dec-19	Change since 29-Mar-19
FTSE 100 (Total Return)	5317	-23.8%	-18.4%
S&P 500 (Total Return)	5269	-19.6%	-7.0%
EuroStoxx 50 (Total Return)	1156	-25.3%	-13.9%
Nikkei 225 (Total Return)	30979	-19.2%	-8.8%
MSCI World (Total Return)	4213	-20.1%	-9.6%
MSCI Emerging Markets (Total Return)	506	-19.1%	-13.0%
FX			
USD vs GBP	1.24	-6.4%	-4.7%
EUR vs GBP	1.13	-4.9%	-3.1%
Credit Spreads			
Sterling Non-Gilt Index	202	91 bps	75 bps
Sterling Non-Gilt 15Y+ Index	247	81 bps	70 bps
Global Investment Grade	265	165 bps	150 bps
US Investment Grade	298	186 bps	171 bps
Global High Yield	760	425 bps	391 bps
European High Yield	628	360 bps	305 bps

Key Points for You

- Risk, as measured by VaR 95%, increased from 14.9% to 15.5% over the quarter. This has been driven by the significant market volatility over Q1 2020.
- Expected return increased from Gilts + 3.3% to Gilts + 3.5% over the quarter. This was primarily driven by higher expected returns for credit assets as credit spreads widened over the period, offsetting the lower expected return contribution from equities as a result of the lower allocation.

Market Data

UK Gilts	Level	Change since 31-Dec-19	Change since 29-Mar-19
10Y	0.36	-49 bps	-68 bps
30Y	0.84	-52 bps	-73 bps
UK Nominal Swaps			
10Y	0.60	-43 bps	-61 bps
30Y	0.61	-51 bps	-77 bps
Gilt Breakeven Inflation			
10Y	2.99	-23 bps	-37 bps
30Y	2.68	-46 bps	-76 bps
UK RPI Swap			
10Y	3.32	-12 bps	-19 bps
30Y	2.77	-40 bps	-70 bps
UK Gilt Real Rates			
10Y	-2.63	-26 bps	-31 bps
30Y	-1.84	-5 bps	3 bps
US TIPS			
20Y	0.15	-50 bps	-72 bps
30Y	0.17	-48 bps	-84 bps

VIEWS FROM THE ASSET CLASS SPECIALISTS



	<p>Kate Mijakowska LDI and Government Bonds</p>	<p>UK real yields experienced an extreme level of volatility in Q1 2020. Yields fell initially as investors sought safe-haven assets. However, as the liquidity crisis unfolded, bonds sold off, with 20-year index-linked gilt yields increasing by 0.85% from trough to peak, only to fall back down on the Bank of England's announcement of its £200bn Quantitative Easing programme. Overall, gilt real yields were down 0-0.2% across the curve. Due to the volatility in real yields as well as moves in FX and synthetic equities, some of the LDI strategies will have seen calls for collateral top-ups as well as capital distributions. The liquidity crisis also led to an increase in repo spreads, which saw levels as high as Sonia+0.8%. However, repo spreads have now come back down to around Sonia+0.3%. During Q1, the government published a consultation regarding proposed changes to RPI, which Redington is in the process of responding to.</p>
	<p>Oliver Wayne Liquid Markets: Equities</p>	<p>Equity markets fell sharply in the first quarter of 2020 as investors reacted to the escalation of the COVID-19 pandemic. Emerging markets slightly underperformed developed markets, in part due to a headwind from strong US dollar performance. The China A Share market recorded a negative return but significantly outperformed other major indices. All sectors in the MSCI All Country World Index produced negative returns, with energy and financials hit hardest. Volatility remained exceptionally high throughout the quarter. Against this backdrop, companies with low-volatility characteristics, such as strong balance sheets, provided some downside protection. From a factor perspective, the market leadership remained unchanged, with quality and momentum outperforming across developed and emerging markets. Value factors – which went into the quarter with some ties to cyclicality – felt the most pain, materially underperforming the broader market. Smaller companies underperformed larger companies across both developed and emerging markets.</p>
	<p>Tom Wake-Walker Liquid Markets: Multi-Asset</p>	<p>What was a relatively benign quarter for multi-asset strategies quickly transformed in late February to be one of the most eventful ever. Both discretionary and systematic strategies with equity beta suffered to varying degrees depending on their risk level going into the COVID-19 drawdown period. Many either automatically or discretionarily de-risked throughout March, with ongoing concerns around the extent of the economic and market fallout. Managers with a trend-following component generally benefitted from short positioning in commodities, long bond holdings and low to negative equity exposure. Commodities – with the exception of gold – struggled, as the Saudi-Russia oil price war and a predicted global slowdown weighed on returns. Within equity style premia, value continued to underperform while momentum and defensive exposures held up strongly. As a whole, multi-asset managers were generally able to provide some diversification during the quarter, with those running at a lower net equity exposure understandably outperforming.</p>

VIEWS FROM THE ASSET CLASS SPECIALISTS

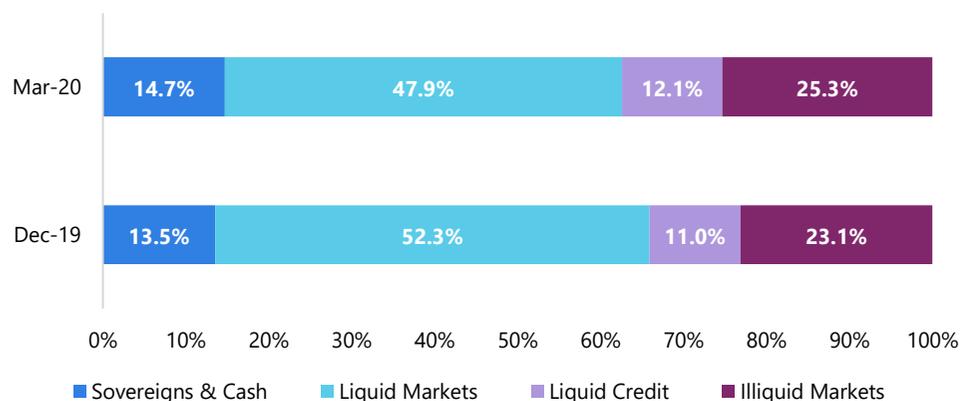


	 <p>Chris Bikos Liquid & Semi-Liquid Credit</p>	<p>The spread of COVID-19 profoundly affected global markets in the first quarter. Government bond yields fell (prices rose) as investors favoured their perceived safety, and credit spreads widened across the board. Most central banks cut interest rates and restarted monetary stimulus to similar – if not greater – levels to the ones seen during the Global Financial Crisis more than 10 years ago. That said, duration was not enough to offset the losses from credit spread widening. For example, US long-dated IG returned -5.3% despite rates dropping by 1%, as spreads widened by more than 1.5%. Across the credit spectrum, high yield and emerging markets were the biggest losers. Managers with large energy exposure suffered even more with oil prices collapsing during the period. Liquidity – or rather the lack of it – was another feature in this environment. However, markets started showing some signs of stability and new issuance – especially in investment grade – came back. Finally, the Fed launched a new version of the Term Asset-Backed Securities Loan Facility (TALF 2.0), and several managers are raising capital to take advantage of the cheap funding terms and wide spread levels in structured credit.</p>
	 <p>Tom Duggan Illiquid Credit</p>	<p>2020 started with a familiar risk-on sentiment across most markets; however, it is clear that Q1 2020 came to be defined by COVID-19 and the end of an 11-year bull market. Within illiquid credit the focus moved swiftly from Chinese supply chain disruption to wholesale re-underwriting and engagement across all portfolio companies. The immediate focus for managers has been striking accurate 31st March valuations which, in some markets such as property, is challenging to unachievable. With this being said, most interest payments will be made for Q1 as the measures were largely taken in the last few weeks of March; as such, we see further mark-downs and significant stress as we head into Q2 2020. A number of funds have raised new capital via contingent capital and dislocation vehicles in order to take advantage of the wider spread levels and depressed asset prices.</p>
	 <p>Jaspal Phull Illiquid Markets</p>	<p>Strict rules introduced on social distancing on March 23rd has effectively shut down all non-essential businesses. Whilst the impact on the economy has been immediate, over the coming months it is likely to vary widely by sector, with footfall-dependent businesses such as physical retail, restaurants and entertainment being the most vulnerable. On the other end of the spectrum, food retail and the logistics units needed to support food supply and home delivery are likely to benefit. Given the unprecedented situation, many UK property funds – both retail & non-retail – have gated. Unlike previous occasions, however, this has not been due to redemptions, but rather the inability of valuers to correctly value assets. Little trading is expected over the next quarter due to the difficulty of making site visits and the lack of transparency around where pricing is likely to settle.</p>

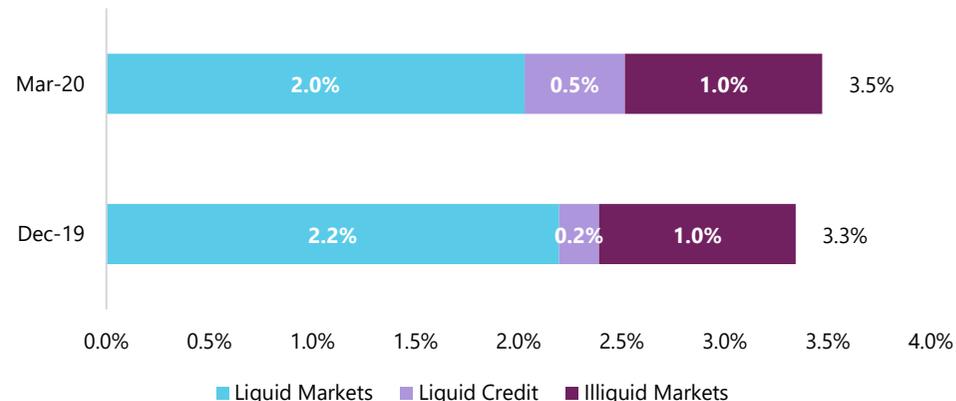
YOUR ASSET ALLOCATION AND EXPOSURE



Asset Allocation Change

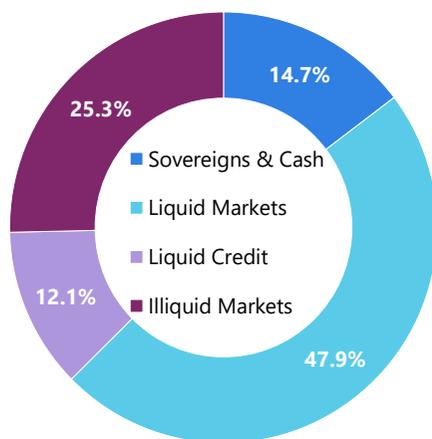


Expected Return Contribution Change (over gilts)



Note, asset class expected returns are in the appendix.

Detailed Asset Allocation

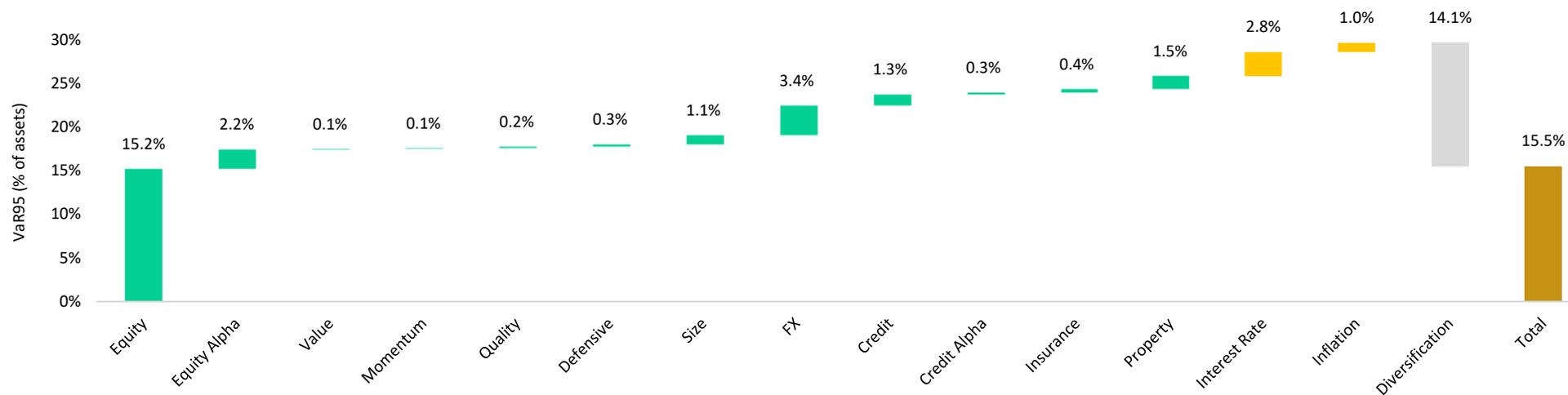


- 3.8% Cash GBP
- 6.5% Index-Linked Gilts
- 2.3% Nominal Gilts
- 2.1% US TIPS
- 2.9% ACS LGPS Global Equity Dividend Growth Factor
- 12.2% ACS LGPS Global Ex UK Passive Equity
- 9.2% ACS LGPS All World Eq Climate Multi Factor Fund
- 5.6% ACS LGPS UK Equity Passive Fund
- 8.2% Emerging Markets
- 4.7% Global Equities - External
- 3.0% Global Equities - Internal
- 2.0% Sustainable Equity Fund
- 0.1% Overseas Legacy Passive Equities
- 0.0% UK Equities
- 4.2% Corporate Debt GBP
- 4.6% Emerging Market Debt Funds
- 3.3% Other Fixed Interest (Secured Loans)
- 2.7% Direct Infrastructure
- 6.5% Direct Property
- 2.6% Indirect Infrastructure
- 2.3% Indirect Property
- 1.5% Insurance-Linked Securities
- 1.4% Opportunistic Funds
- 8.4% Private Equity/Secondaries

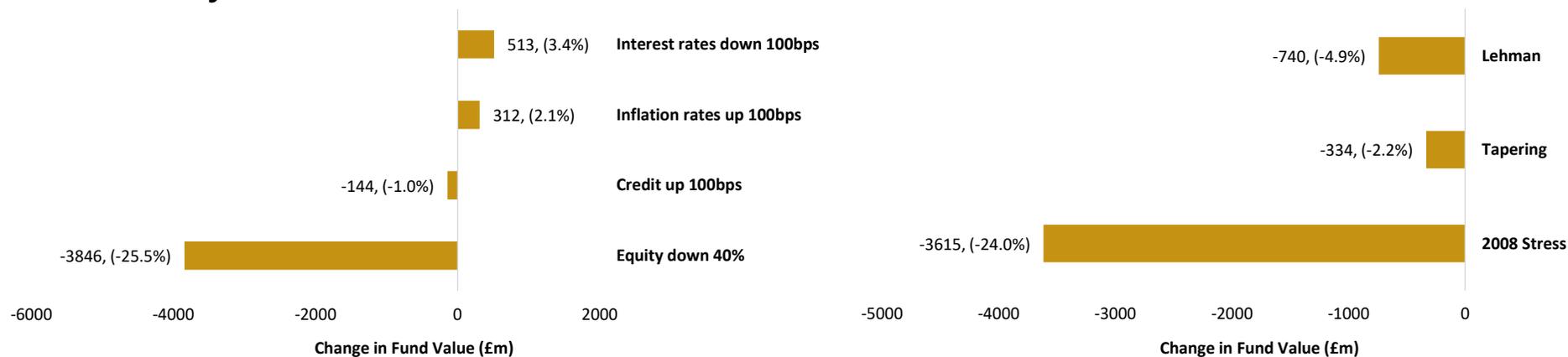
HELPING YOU UNDERSTAND YOUR RISK



Current Value-at-Risk 95%



Scenario Analysis





APPENDICES

REDINGTON'S EXPECTED RETURNS – MARCH 2020



Asset Class	Expected Return (Gilts +)	Volatility	Expected Fees (p.a.)
Equity			
Developed Market Equities	3.8% -	17.7% ↑	0.0%-0.1%
Sustainable Equities	4.5% -	17.8% ↑	0.2%-0.4%
Emerging Markets Equities	4.8% -	21.5% ↑	0.1%-0.2%
China A Share Equities	6.1% -	31.0% ↓	0.3%-0.8%
Liquid Credit			
Corporate Debt GBP	2.1% ↑	6.0% ↑	0.1%-0.2%
Emerging Market Debt – Corporates	4.6% ↑	6.6% ↑	0.4%-0.6%
Emerging Market Debt – Local Currency Sovereign	5.3% ↑	15.0% ↑	0.5%-0.8%
Emerging Market Debt – Hard Currency Sovereign	4.3% ↑	9.0% ↑	0.5%-0.8%
Emerging Market Debt – Total Return	4.4% ↑	9.9% ↑	0.5%-0.8%
Multi-Class Credit Global	5.5% ↑	9.0% ↑	0.4%-0.7%
Illiquid Credit			
Diversified Matching Illiquids (Uninvested)	2.7% ↑	7.1% ↓	0.3%-0.5%
Opportunistic Illiquid Credit	4.8% ↑	13.9% ↑	1.0%-1.5% (+ performance fee)
Securitised Opportunities	4.5% ↑	8.1% ↑	0.5%-0.7%
Special Situations	8.6% ↑	17.6% ↑	1.0%-1.5% (+ performance fee)
Illiquid Markets			
Private Equity	3.6% ↓	26.2% ↑	1.0%-1.5% (+ performance fee)
Insurance-Linked Securities	4.8% -	12.4% -	1.0%-1.5%
Renewable Infrastructure	4.0% ↓	13.8% ↑	0.5%-0.7%

Fee data is estimated based on fees of preferred managers in each strategy. In practise 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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