Avon Pension Fund

Review for period to 31 December 2013

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1 Executive Summary

This report is produced by JLT Employee Benefits ("JLT") to assess the performance and risks of the investment managers of the Avon Pension Fund (the "Fund"), and of the Fund as a whole.

Funding level

- There is expected to have been an improvement in the funding level by around 3% over the fourth quarter of 2013.
- The drivers of the improvement were:
  - A positive asset return, following positive returns from most managers, in particular from the equity-based funds.
  - A smaller negative effect from the liabilities, as inflation-linked liabilities rose due to higher inflation expectations. Additionally, the valuation interest rate was slightly increased, reducing the value placed on liabilities, however this effect was offset by the unwinding of the liabilities.

Fund performance

- The value of the Fund's assets increased by £129m over the fourth quarter of 2013 to £3,299m. The total Fund (including the impact of currency hedging) outperformed the Fund's strategic benchmark over the quarter by 1.4%, producing an absolute return of 4.1%.

Strategy

- Equity markets were generally positive over the last quarter. The highest returns were from the USA (+7.9%) with other Western developed markets returning around 5%. Emerging market equities fell by 0.7%, whereas Japanese and Asia Pacific equities returned 0.1% and 0.0% respectively.
- The USA was also the best performer in equity markets over the last twelve months, at 30.4%. UK, European and Japanese equities all produced returns in excess of 20%. Emerging market equities (-5.3%) and Asia Pacific (1.3%) lagged.
- The three year developed market equity returns remained ahead of the assumed strategic return but the emerging market equity return is significantly behind its assumed strategic return over 3 years.
- Gilt and corporate bond markets produced small negative returns as bond yields rose. Over the three year period returns remain ahead of the assumed strategic return as poor 2010 returns fell out of the rolling three year period.
- The Overseas Fixed Interest return has fallen to -0.7% p.a. over three years. This has been affected by rising yields within European bonds, and more recently by healthy US economic data and the announcement that the US Federal Reserve would start to scale back its asset purchase programme.
- Hedge funds remain below the assumed strategic returns but the Property return is now just ahead as returns improve.

Managers

- Returns from all managers were positive in absolute terms over the last quarter, with the exception of Genesis (-0.3%) and SSgA Pacific (-0.2%). The best performing funds were the UK equity funds, TT (8.8%) and Jupiter (7.6%).
- The highest one-year returns also came from the UK equity managers, with Jupiter at 31.0% and TT at 28.3%.
- Over three years, SSgA Pacific and Genesis were affected by relatively poor returns in Asia and the emerging markets. SSgA Pacific's return has fallen from 8.1% p.a. to 4.3% p.a. and Genesis' return has fallen from 1.8% p.a. to -0.9% p.a. This is due to market returns and both managers have actually outperformed their benchmarks over this period, meeting their objectives.
- TT outperformed over three years but did not meet their three-year target.
- The only other managers to not meet their three-year target were the hedge fund managers, who each produced negative relative returns over 3 years, but Stenham and Gottex both outperforming 1 year targets.
- Both the SSgA Europe ex UK and Pacific incl Japan enhanced equity pooled funds remain at a size such that Avon's investment now represents almost all of the pooled fund holdings. However, the Panel has previously concluded that the funds could be sustained even if the Avon Pension Fund was the only investor.

Key points for consideration

- Emerging market equities could continue to suffer negative sentiment as growth rates slow and the US tapers its asset purchase programme.
  - Most commentators suggest weak returns are due to negative sentiment rather than fundamental structural concerns;
  - With the recent increase in the strategic allocation to this area, the Panel should consider these factors in the context of the long-term outlook for outperformance versus developed markets despite short term sentiment and volatility.
- Whilst it is too short a period to draw any concrete conclusions, there does not appear to have been any immediate negative impact on the performance of the Schroder Global Equity Portfolio following the departure of Virginie Maisonneuve.
- In January 2014, State Street were fined £22.9m by the FCA for overcharging six clients that used its transition management service between June 2010 and September 2011. We note that this was a different part of the business to their fund management and does not affect the funds.

2 Market Background

The figures below cover the three months, 1 year and 3 years to the end of December 2013.

Market Statistics

Yields as at 31 December 2013	% p.a.
UK Equities	3.28
UK Gilts (>15 yrs)	3.58
Real Yield (>5 yrs ILG)	0.03
Corporate Bonds (>15 yrs AA)	4.42
Non-Gilts (>15 yrs)	4.63

Absolute Change in Yields	3 Mths %	1 Year %	3 Years %
UK Equities	-0.13	-0.29	0.39
UK Gilts (>15 yrs)	0.17	0.58	-0.56
Index-Linked Gilts (>5 yrs)	0.07	0.10	-0.46
Corporate Bonds (>15 yrs AA)	0.11	0.35	-1.00
Non-Gilts (>15 yrs)	0.12	0.41	-0.77

Market Returns Bond Assets	3 Mths %	1 Year %	3 Years % p.a.
UK Gilts (>15 yrs)	-1.8	-5.9	6.9
Index-Linked Gilts (>5 yrs)	-0.9	0.6	7.6
Corporate Bonds (>15 yrs AA)	-0.3	0.0	7.8
Non-Gilts (>15 yrs)	-0.3	-0.6	8.0

* Subject to 1 month lag

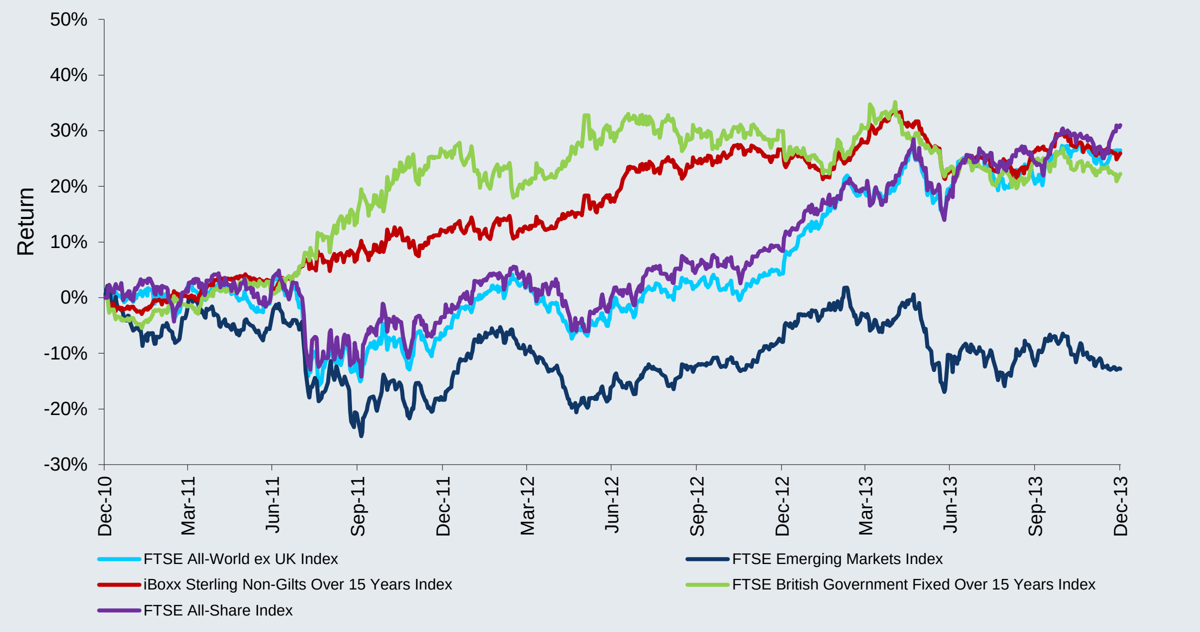
Source: Thomson Reuters and Bloomberg

Market Returns Growth Assets	3 Mths %	1 Year %	3 Years % p.a.
UK Equities	5.5	20.8	9.4
Overseas Equities	5.0	21.2	8.1
USA	7.9	30.4	14.1
Europe	5.2	24.0	7.4
Japan	0.1	25.0	4.0
Asia Pacific (ex Japan)	0.0	1.3	0.5
Emerging Markets	-0.7	-5.3	-4.5
Property	4.7	10.9	7.1
Hedge Funds	4.2	10.0	5.2
Commodities	-2.5	-3.1	-2.6
High Yield	1.5	6.0	7.7
Emerging Market Debt	1.5	-5.3	6.1
Senior Secured Loans	2.2	9.2	6.3
Cash	0.1	0.4	0.5

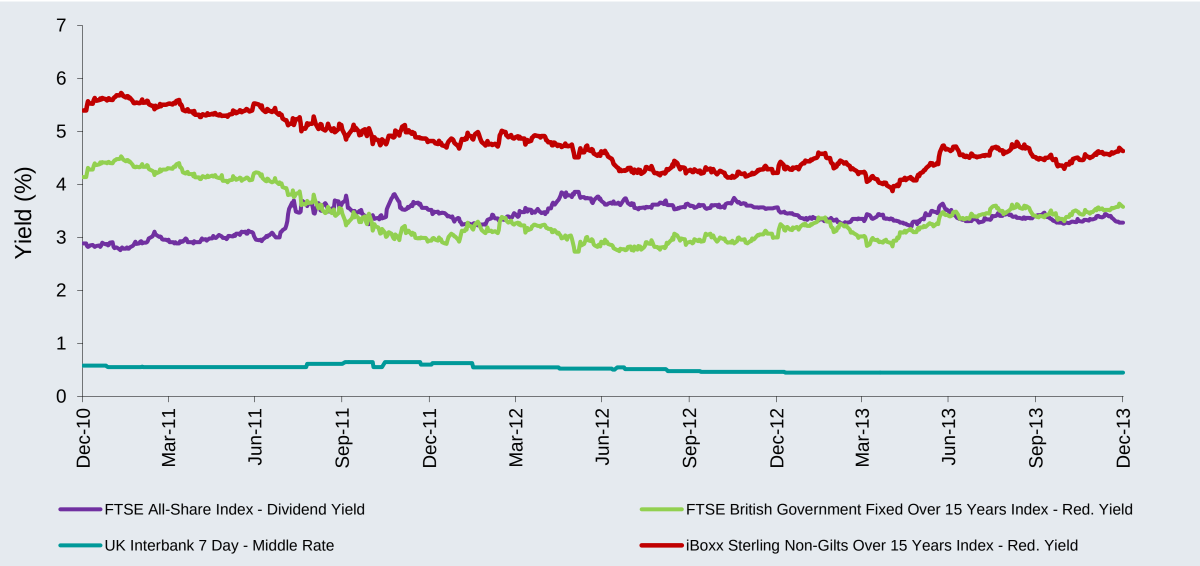
Change in Sterling	3 Mths %	1 Year %	3 Years % p.a.
Against US Dollar	2.3	1.9	1.9
Against Euro	0.5	-2.5	1.0
Against Yen	9.6	23.9	11.1

Inflation Indices	3 Mths %	1 Year %	3 Years % p.a.
Price Inflation – RPI	0.6	2.7	3.5
Price Inflation – CPI	0.5	2.0	3.0
Earnings Inflation *	-0.1	0.8	1.4

Market Summary charts



The graph above shows market returns for the last three years; both the medium-term trend and the short-term volatility.



The trend over the last 3 years until the end of April 2013 shows falling UK gilts and corporate bond yields, whilst the dividend yield on the FTSE All-Share Index has risen. Bond yields have increased slightly in the last 8 months whilst the dividend yield has remained relatively flat.

The table below compares general market returns (i.e. not achieved Fund returns) to 31 December 2013, with assumptions about returns made in the Investment Strategy agreed in 2013.

Asset Class	Strategy Assumed Return % p.a.	3 year Index Return % p.a.	Comment
Developed Equities	8.25	8.8	Ahead of the assumed strategic return following strong returns throughout the period apart from mid-2011. This quarter, markets have continued to rise although not as strongly as in Q4 2010 (which has fallen out of the 3-year return), hence returns are lower than in the last report.
Emerging Market Equities	8.75	-4.5	In contrast to long term performance, the 3-year return from emerging market equities has fallen significantly due to negative sentiment from slowing growth and the withdrawal of capital as the US begins to taper its asset purchase programme.
UK Gilts	4.5	6.9	Ahead of the assumed strategic return as gilt yields fell significantly during 2011. Index-linked returns fell over the last quarter as UK inflation continued to decline.
Index Linked Gilts	4.25	7.6	
UK Corporate Bonds	5.5	6.8	
Overseas Fixed Interest	5.5	-0.7	Behind the assumed strategic return, falling to a negative absolute return. In the last quarter, healthy US economic data and speculation over when the Federal Reserve would scale back its asset purchase programme put upward pressure on US bond yields. "Core" European bonds followed the US lead, whilst Europe's peripheral markets (Italy, Spain, Portugal, Ireland and Greece) delivered good quarterly performance but their three year returns were still affected by rising yields.
Fund of Hedge Funds	6.0	2.7	Behind the assumed strategic return following a negative return in 2011. More recently returns have been improving, with the return over the last twelve months being 7.7%.
Property	7.0	7.1	This is now slightly ahead of the assumed strategic return and continues to improve as property prices begin to rise.

Source: Statement of Investment Principles, Thomson Reuters.

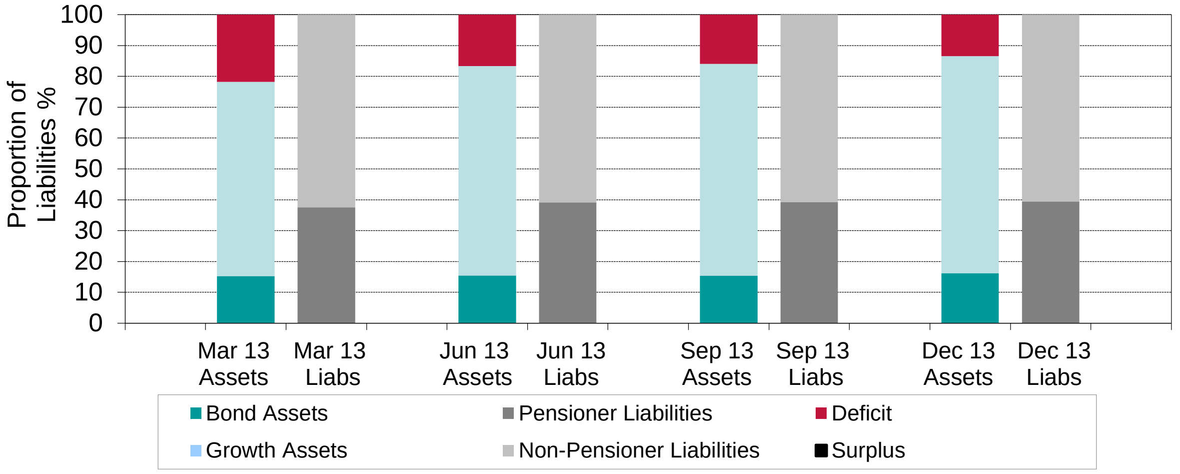
See appendix A for economic data and commentary.

3 Consideration of Funding Level

This section of the report considers the estimated funding level of the Fund. Firstly, it looks at the Fund asset allocation relative to its liabilities. Then it looks at market movements, as they have an impact on both the assets and the estimated value placed on the liabilities.

Asset allocation and liability split

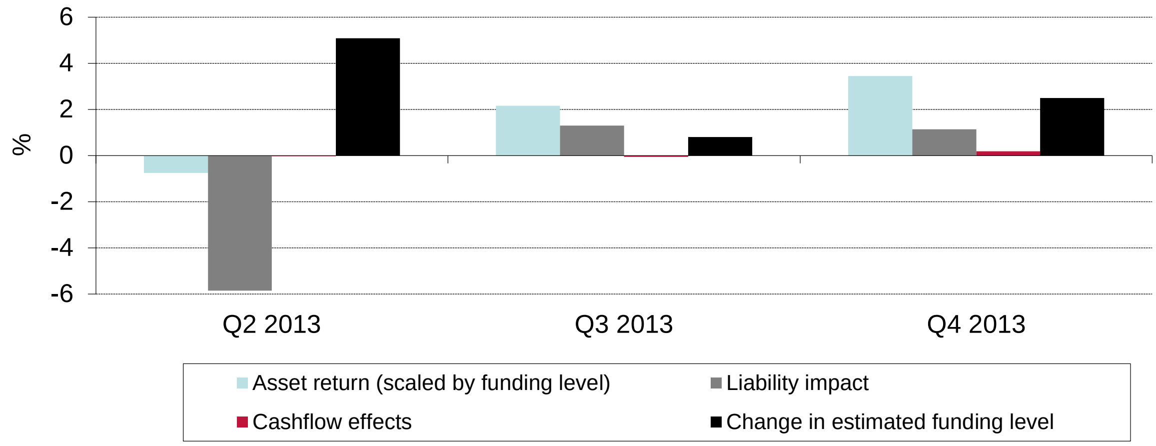
- The chart below shows the allocation of the Fund to Bond and Growth assets against the estimated liability split, which is based on changes in gilt yields underlying the Scheme Actuary's calculation of liabilities. The reference yield used for the liabilities is the Mercer Gilt yield (see appendix for definition). The liability benchmark is based on the valuation results from 31 March 2013.
- These calculations do not take account of any unexpected changes to the Fund membership or changes to the demographic assumptions and should not be construed as an actuarial valuation.



- Based on financial market values, investment returns and cashflows into the Fund, the estimated funding level increased by around 3% over the fourth quarter of 2013, all else being equal. This was driven by:
  - » A positive asset return, following positive returns from most managers, in particular from the equity-based funds.
  - » A smaller negative effect from the liabilities, as inflation-linked liabilities rose due to higher inflation expectations. Additionally, the valuation interest rate was slightly increased, reducing the value placed on liabilities, however this effect was offset by the unwinding of the liabilities.
- At the valuation date, 31 March 2013, the Scheme was 78% funded. Since then financial market movements, actual cashflows, and investment returns are expected to have increased the overall funding level to 87%. This improvement has come from both positive asset returns and a reduced value placed on the liabilities, due to a higher interest rate assumption.

Scheme performance relative to estimated liabilities

- The chart below shows, quarter by quarter, the return on the assets and the impact on the liabilities due to changes in financial market values and expected member movements.
- As detailed above, such movements in liabilities are based upon the bond yield underlying the Scheme Actuary's calculation of liabilities.

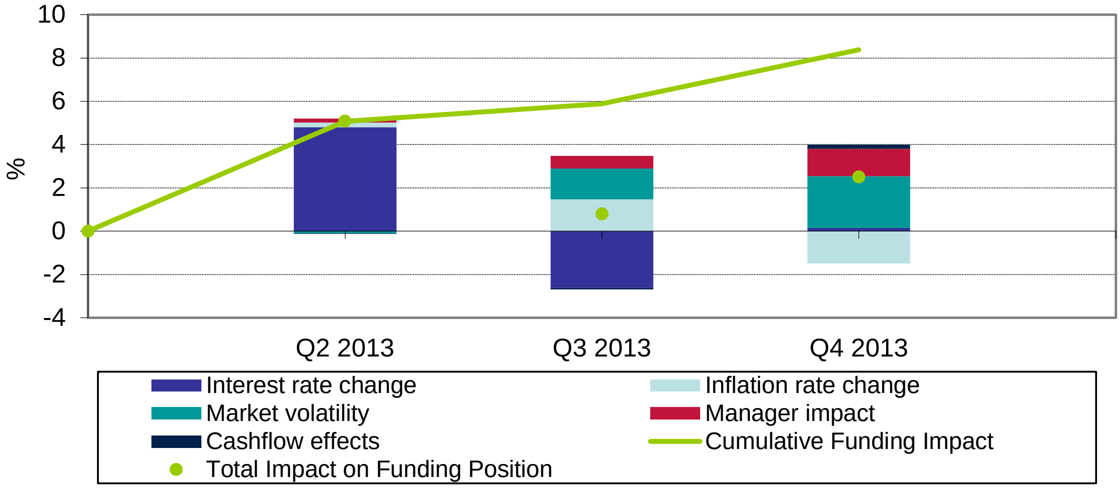


Note : A decrease in liabilities and an increase in assets improves the funding level and vice-versa.

- The graph above shows that the Fund's assets, scaled to take into account the estimated funding level, have produced an absolute return of 3.4%, over the last quarter.
- The value placed on the liabilities increased by 1.1% due to a small increase in the inflation assumption used to value inflation-linked liabilities.
- Overall, the combined effect has led to an increase in the estimated funding level to 87% (from 84% at 30/09/2013).

Key drivers of performance against the estimated liabilities

- The chart below shows the main contributors to the change in the estimated funding level. For reference, please note that the underlying calculations are based on the Mercer gilt yield.



- 'Interest rate change' reflects the impact caused by the difference in the duration of the liabilities compared to the assets. As the liabilities have a longer duration than the assets, when yields rise, this has a positive impact, as in Q2 2013. Over Q4 2013 there was a small rise in yields but this effect was offset by the unwinding of the liabilities, giving a negligible 'interest rate change' effect this quarter.
- The Market Implied (RPI) inflation assumption rose by 0.1% p.a. over the quarter. This gives a negative contribution as future inflation-linked payments are higher.
- For Growth assets, 'Market volatility' is simply the (benchmark) return on the assets; for Bond assets it is the return less the return that would be expected given the changes in bond yields. This has had a positive impact over the quarter as equity markets posted positive returns.
- 'Manager impact' is the investment performance compared to the strategic benchmark. This was positive over the last quarter.
- The small 'cashflow effects' reflect factors such as pension payments, contributions and disinvestments. This was negligible over the last three quarters.
- Overall the investment factors have had a positive impact on the estimated funding level of the Fund over the last quarter.
- Over the nine month period since 31 March 2013, investment factors have had a positive effect, due both to a reduced value placed on the liabilities ('interest rate change') and positive asset returns from both markets ('market volatility') and manager outperformance ('manager impact').

4 Fund Valuations

The table below shows the asset allocation of the Fund as at 31 December 2013, with the BlackRock Multi-Asset portfolio and the BlackRock property portfolio (assets "ring fenced" for investment in property) split between the relevant asset classes.

Asset Class	31 December 2013 Value £'000	Proportion of Total %	Strategic Benchmark Weight %
Developed Market Equities	1,721,609	52.2	40.0
Emerging Market Equities	145,731	4.4	10.0
Diversified Growth Funds (DGF)	315,186	9.6	10.0
Bonds	621,730	18.8	20.0
Fund of Hedge Funds	162,737	4.9	5.0
Infrastructure	-	-	5.0
Cash (including currency instruments)	81,021	2.5	-
Property	250,853	7.6	10.0
TOTAL FUND VALUE	**3,298,868**	**100.0**	**100.0**

Source: Data provided by WM Performance Services

- The value of the Fund's assets increased by £129m over the fourth quarter of 2013 to £3,299m. Approximately £315m was invested into DGF.
- In terms of the asset allocation, the move from Man and Blackrock into Pyford, Barings and RLAM has reduced the developed market equity allocation and hedge fund allocation and introduced DGFs.
- Deviations from the strategic benchmark weight will continue during the period that changes to the investment strategy, agreed in 2013, are implemented. The overweight position to developed market equities relative to emerging market equities is expected to be reduced during Q1 2014.
- An allocation to infrastructure is expected to be built up over time.

Manager	Asset Class	30 September 2013 Value £'000	30 September 2013 Proportion of Total %	Net new money £'000	31 December 2013 Value £'000	31 December 2013 Proportion of Total %
Jupiter	UK Equities	151,976	4.8	-	163,577	5.0
TT International	UK Equities	171,207	5.4	-	185,688	5.6
Invesco	Global ex-UK Equities	223,388	7.0	-	236,622	7.2
Schroder	Global Equities	203,330	6.4	-	215,489	6.5
SSgA	Europe ex-UK Equities and Pacific incl. Japan Equities	105,517	3.3	-	107,799	3.3
Genesis	Emerging Market Equities	146,181	4.6	-	145,731	4.4
MAN	Fund of Hedge Funds	63,607	2.0	-61,898	1,651	0.1
Signet	Fund of Hedge Funds	65,903	2.1	-	66,477	2.0
Stenham	Fund of Hedge Funds	35,966	1.1	-	37,657	1.1
Gottex	Fund of Hedge Funds	55,755	1.8	-	56,953	1.7
BlackRock	Passive Multi-asset	1,430,170	45.2	-307,013	1,170,637	35.5
BlackRock (property fund)	Equities, Futures, Bonds, Cash (held for property inv)	51,032	1.6	-6,300	45,915	1.4
RLAM	Bonds	196,005	6.2	45,000	242,148	7.3
Schroder	UK Property	139,246	4.4	-	146,148	4.4
Partners	Property	97,169	3.1	6,800	105,871	3.2
Record Currency Mgmt	Dynamic Currency Hedging	7,877	0.2	-	21,421	0.6
Record Currency Mgmt 2	Overseas Equities (to fund currency hedge)	7,426	0.2	-	9,092	0.3
Pyrford	DGF	-	-	105,000	104,320	3.2
Barings	DGF	-	-	210,000	210,866	6.4
Internal Cash	Cash	17,970	0.6	8,411	24,807	0.8
Rounding		-	-	-	-1	-
TOTAL		**3,169,725**	**100.0**	**0**	**3,298,868**	**100.0**

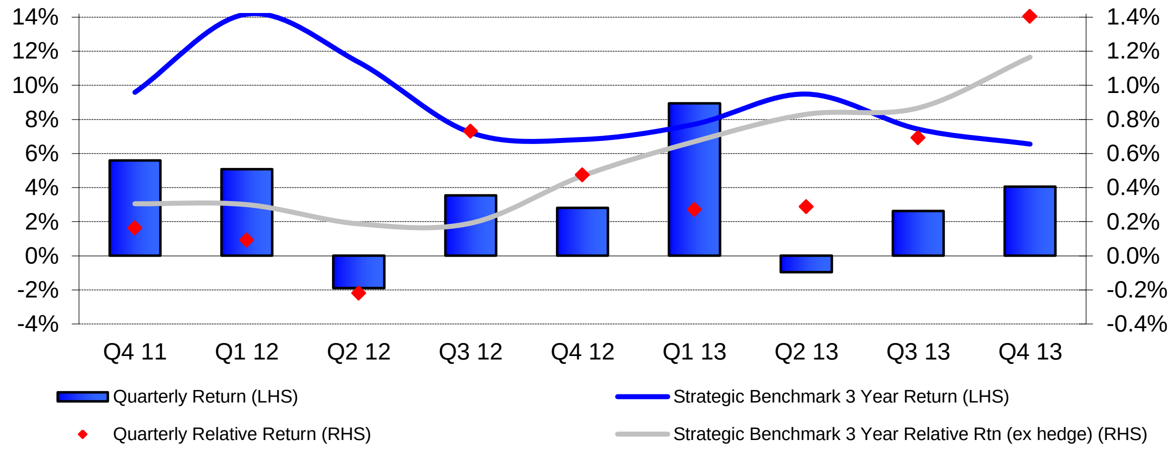
Source: Avon Pension Fund Data provided by WM Performance Services

5 Performance Summary

Total Fund performance

The chart below shows the absolute performance of the total Fund's assets over the last 3 years.

Total Fund absolute and relative performance



fund	3 months (%)	1 year (%)	3 years (% p.a.)
Total Fund (inc currency hedge)	4.1	15.2	N/a
Total Fund (ex currency hedge)	3.6	14.9	7.8
Strategic Benchmark (no currency hedge)	2.6	12.2	6.6
Relative (inc currency hedge)	+1.4	+2.7	N/a

Source: Data provided by WM Performance Services

Strategy performance

The table below shows the strategic allocation to each of the major asset classes and the benchmark returns over the quarter and year to 31 December 2013.

Asset Class	Weight in Strategic Benchmark		Index returns	Contribution to total benchmark	Index returns	Contribution to total benchmark
	Sep 13	Dec 13	Q4 2013	(quarter)	1 year	(1 year)
UK Equities	18%	15%	5.5%	0.8%	20.8%	3.5%
Overseas Equities	42%	25%	5.7%	1.4%	20.2%	7.5%
Emerging Market Equities	-	10%	-0.4%	-0.0%	n/a	-0.0%
Diversified Growth Funds	-	10%	1.1%	0.1%	n/a	0.1%
UK Government Bonds	6%	3%	-1.8%	-0.1%	-5.9%	-0.3%
UK Corporate Bonds	5%	8%	0.0%	0.0%	0.9%	0.0%
Index Linked Gilts	6%	6%	-0.9%	-0.1%	0.6%	0.0%
Overseas Fixed Interest	3%	3%	-3.6%	-0.1%	-6.4%	-0.2%
Fund of Hedge Funds	10%	10%	1.1%	0.1%	5.6%	0.6%
Property	10%	10%	4.3%	0.4%	9.1%	0.9%
Total Fund	**100%**	**100%**		**2.6%**		**12.2%**

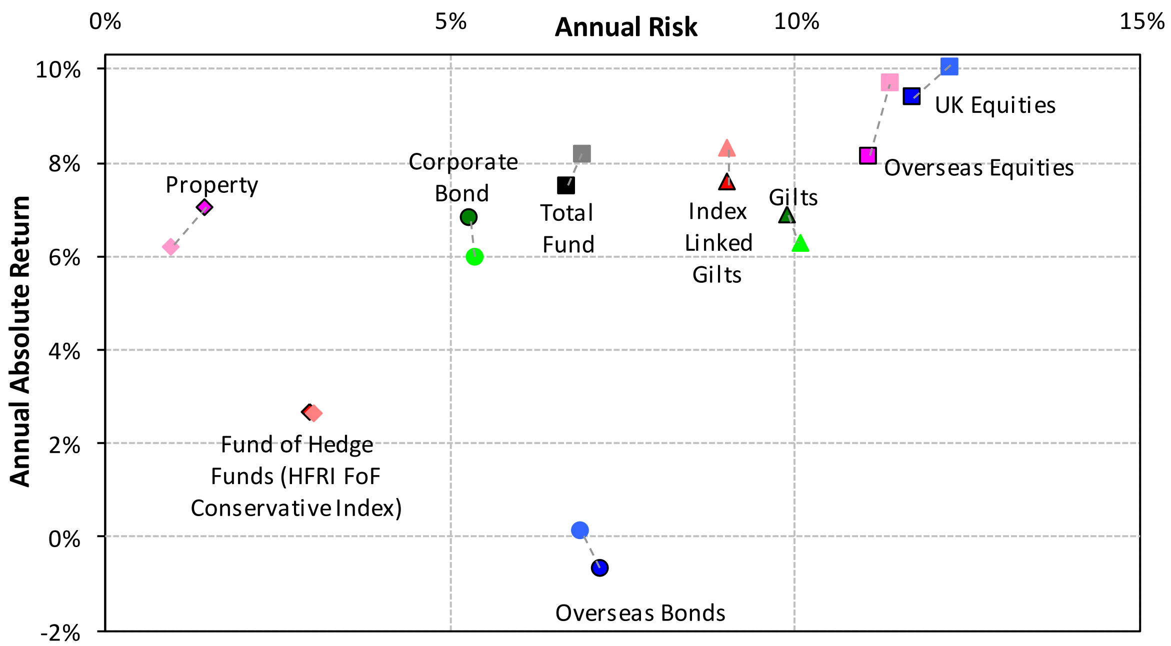
- The December 2013 benchmark return is that held by WM to partly reflect the changes to the investment strategy, agreed in 2013, whilst they are implemented. Over 2014, UK and Overseas equities will be combined into "developed equity" and 5% of the benchmark allocation to Fund of Hedge Funds will be replaced by infrastructure.
- **Market impact:** Developed Equities continued to provide strong returns over quarter four, led by the US due to healthy economic data.
- Emerging market equity returns were subdued following negative sentiment from slowing growth and the withdrawal of capital as the US begins to taper its asset purchase programme.
- UK Government bonds posted a negative return over the quarter and year as yields rose. Corporate bonds continued to outperform as investors sought higher yields. The indications that the US would scale back its asset purchase programme caused overseas bond yields to rise, and hence prices to fall.
- Property posted a strong return over the last quarter as prices began to rise.
- **Currency impact:** The above Overseas Equities returns are in Sterling terms and therefore lower than they would have been, because Sterling strengthened relative to the US Dollar, Yen and Euro over the three month period; and relative to the US Dollar and Yen over the one year period (offsetting slight Euro strengthening over the one year period).
  - Record's hedging activity added 1.9% and 1.3% to US, Euro and Japanese equity returns over the three month and one year periods respectively.
- **Strategic Benchmark:** Over both the three month and one year periods the strategic benchmark was driven by equities, with the Fund benefiting from a high allocation to the asset class.
- Property also contributed to the strategic benchmark, particularly over the last quarter.

Risk Return Analysis

The chart below shows the 3 year absolute return ("Annual Absolute Return") against the 3 year volatility of absolute returns ("Annual Risk"), based on monthly/quarterly (as available) data points in sterling terms, to the end of December 2013 of each of the underlying asset benchmarks, along with the total Fund strategic benchmark. We also show the position as at last quarter, as shadow points.

This chart can be compared to the 3 year risk vs return managers' chart on page 13.

3 Year Risk v 3 Year Return to 31 December 2013

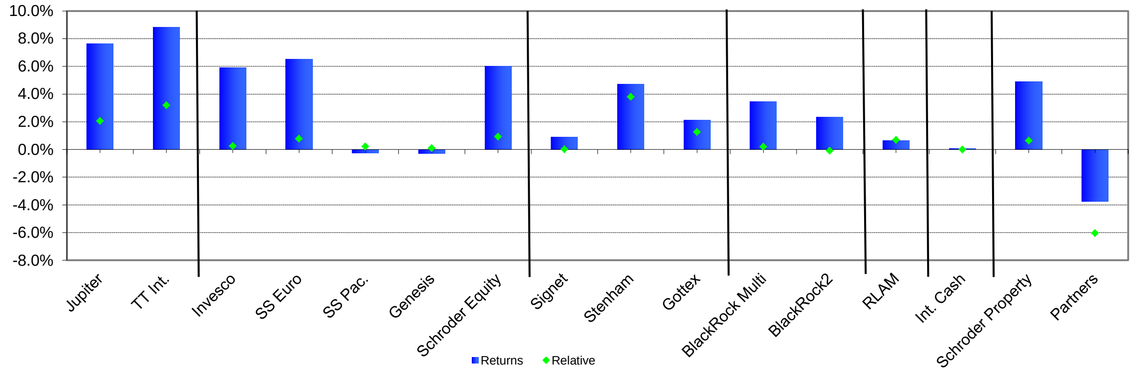


- All of the underlying benchmarks except overseas bonds have produced a positive return over the period (3 years p.a.).
- The three year return has decreased for both UK and overseas equities but increased for gilts and corporate bonds. Equities produced positive returns over the final quarter of 2013, but the higher returns of Q4 2010 have fallen out of the analysis. Conversely, bonds fell in the final quarter of 2013 as yields rose, but there were larger falls in Q4 2010.
- Equities remain the best performing asset class over three years, followed by index-linked gilts, property and conventional gilts.
- The property return continues to increase.
- The hedge funds index continues to produce steady returns, with very little change in the rolling 3 year return.
- Overseas bonds moved to a negative 3 year absolute return as US bond yields rose.
- In terms of risk, the three-year volatility has decreased slightly for each of the asset classes apart from property and overseas bonds.
- The three-year return on UK equities, gilts, index-linked gilts and corporate bonds remain above their assumed strategic return. Overseas bonds and hedge funds remain below their assumed strategic return, whist property is now marginally ahead of its assumed strategic return

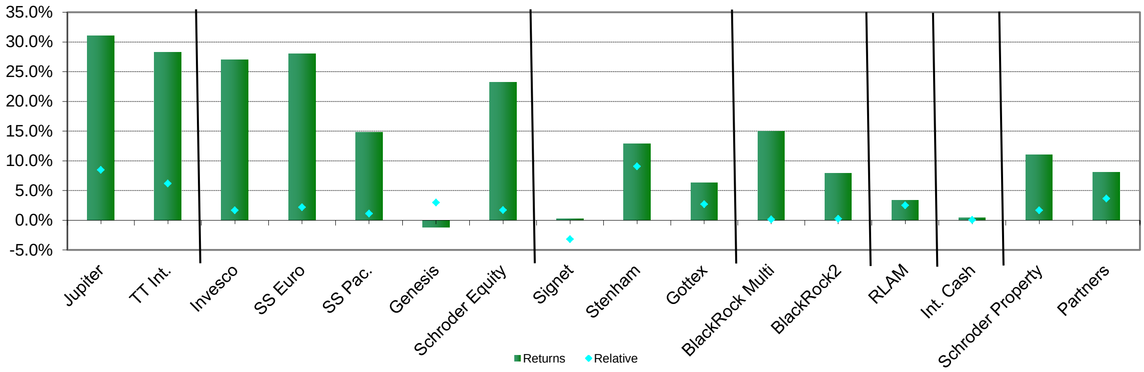
Aggregate manager performance

The charts below show the absolute return for each manager over the quarter, one year and three years to the end of December 2013. The relative quarter, one year and three year returns are marked with green and blue dots respectively.

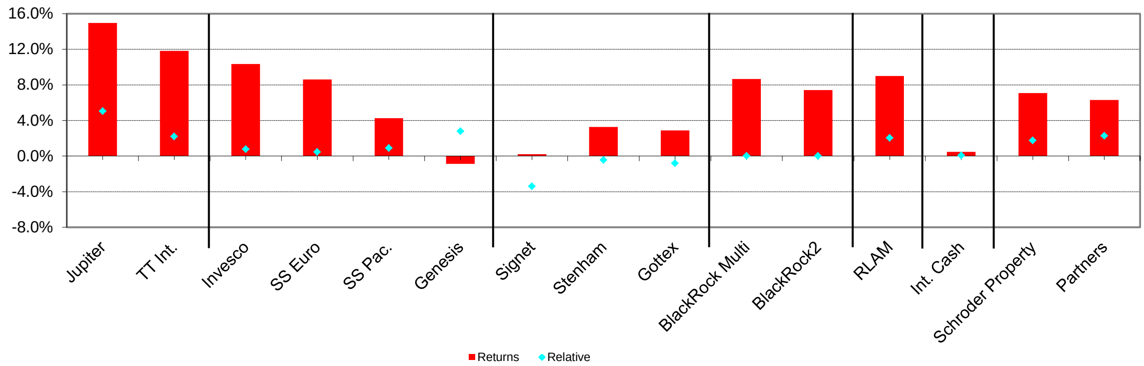
Absolute and relative performance - **Quarter to 31 December 2013**



Absolute and relative performance - **Year to 31 December 2013**



Absolute and relative performance - **3 years to 31 December 2013**



Source: Data provided by WM Performance Services

The table below shows the relative returns of each of the funds over the quarter, one year and three years to the end of December 2013. Returns in blue text are returns which outperformed the respective benchmarks, red text shows an underperformance, and black text represents performance in line with the benchmark.

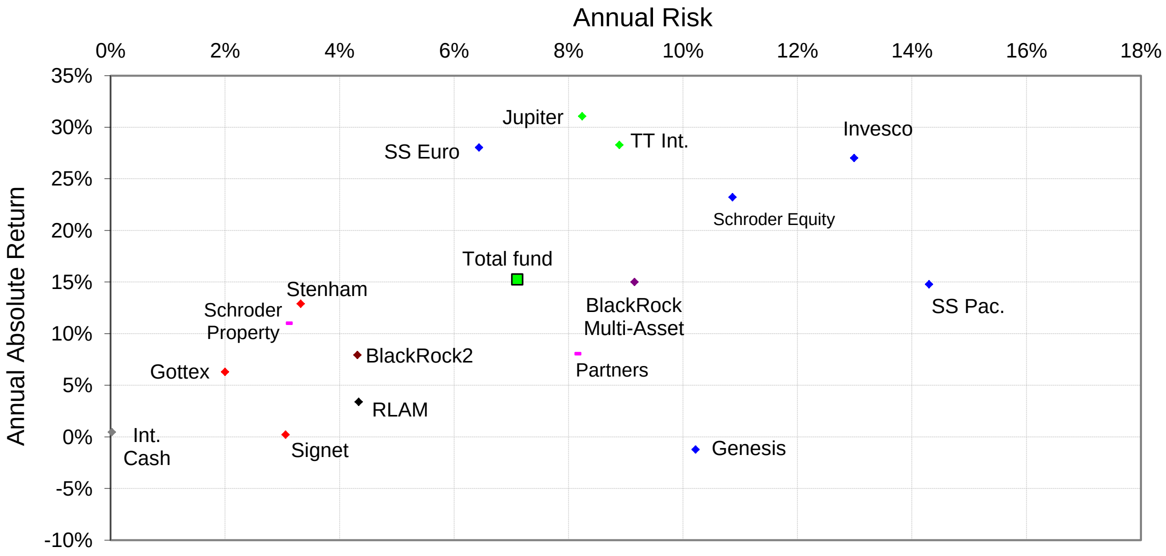
Manager / fund	3 months (%)	1 year (%)	3 years (% p.a.)	3 year performance versus target
Jupiter	+2.1	+8.5	+5.1	Target met
TT International	+3.2	+6.2	+2.2	Target not met
Invesco	+0.2	+1.7	+0.8	Target met
SSgA Europe	+0.8	+2.2	+0.5	Target met
SSgA Pacific	+0.2	+1.1	+0.9	Target met
Genesis	+0.1	+3.0	+2.8	Target met
Schroder Equity	+0.9	+1.7	NA	N/A
Signet	0.0	-3.2	-3.4	Target not met
Stenham	+3.8	+9.1	-0.4	Target not met
Gottex	+1.3	+2.7	-0.8	Target not met
BlackRock Multi - Asset	+0.2	+0.1	0.0	Target met
BlackRock 2	-0.1	+0.3	0.0	Target met
RLAM	+0.7	+2.5	+2.1	Target met
Internal Cash	0.0	+0.1	+0.1	N/A
Schroder Property	+0.6	+1.7	+1.8	Target met
Partners Property	-6.0	+3.7	+2.3	N/A

Source: Data provided by WM Performance Services

Manager and Total Fund risk v return

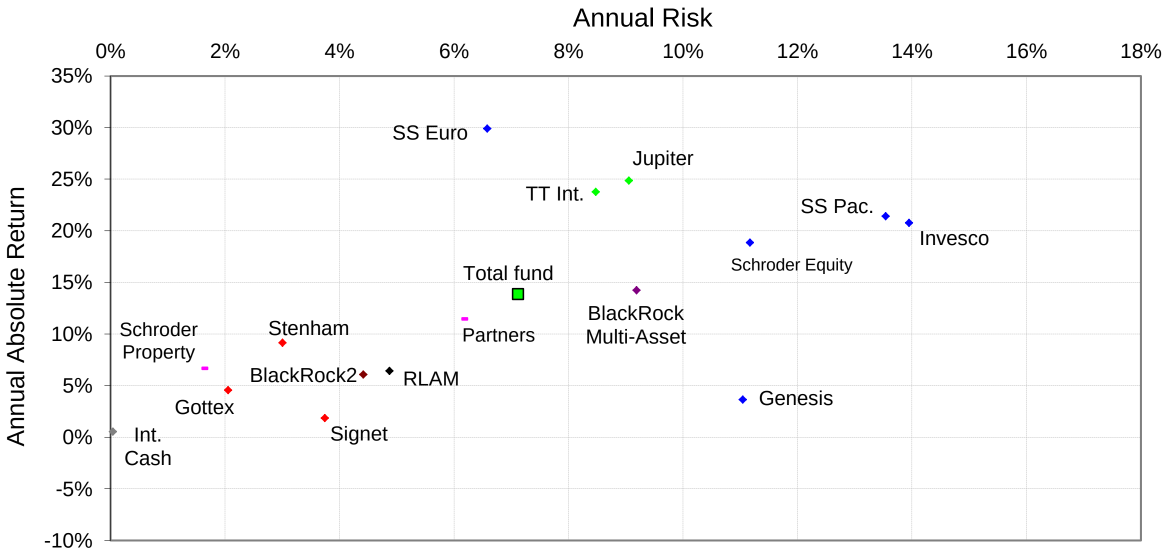
The chart below shows the 1 year absolute return (“Annual Absolute Return”) against the 1 year volatility of absolute returns (“Annual Risk”), based on monthly/quarterly (as available) data points in sterling terms, to the end of December 2013 of each of the funds. We also show the same chart, but with data to 30 September 2013 for comparison.

1 Year Risk v 1 Year Return to 31 December 2013



Source: Data provided by WM Performance Services

1 Year Risk v 1 Year Return to 30 September 2013



Source: Data provided by WM Performance Services

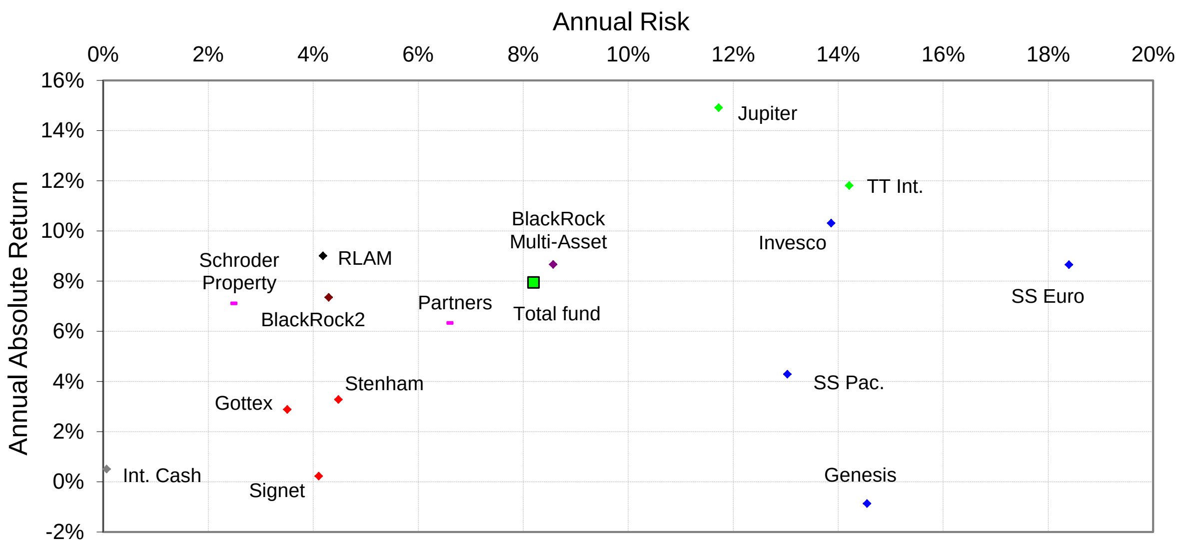
The managers are colour coded by asset class, as follows:

- Green: UK equities — Blue: overseas equities
- Red: fund of hedge funds — Black: bonds
- Maroon: multi-asset — Brown: BlackRock No. 2 portfolio
- Grey: internally managed cash — Pink: Property
- Green Square: total Fund

- The highest one-year returns came from the UK equity managers, with Jupiter at 31.0% and TT at 28.3%. Marginally behind were Invesco, SSgA Europe and Schroder equity, all with returns above 20%.
- SSgA Pacific and Genesis were affected by relatively poor returns in Asia and the emerging markets. The Genesis emerging equity return has fallen from 3.6% to -1.2%.
- Other notable movements in the one-year return were Schroders Property (up from 6.7% to 11.0%) and RLAM (down from 6.4% to 3.4%)
- The one year-risk figures have remained reasonably stable, apart from Schroders Property (up from 1.6% to 3.1%) as last quarter's return was significantly higher than the more stable lower returns of the previous four quarters.

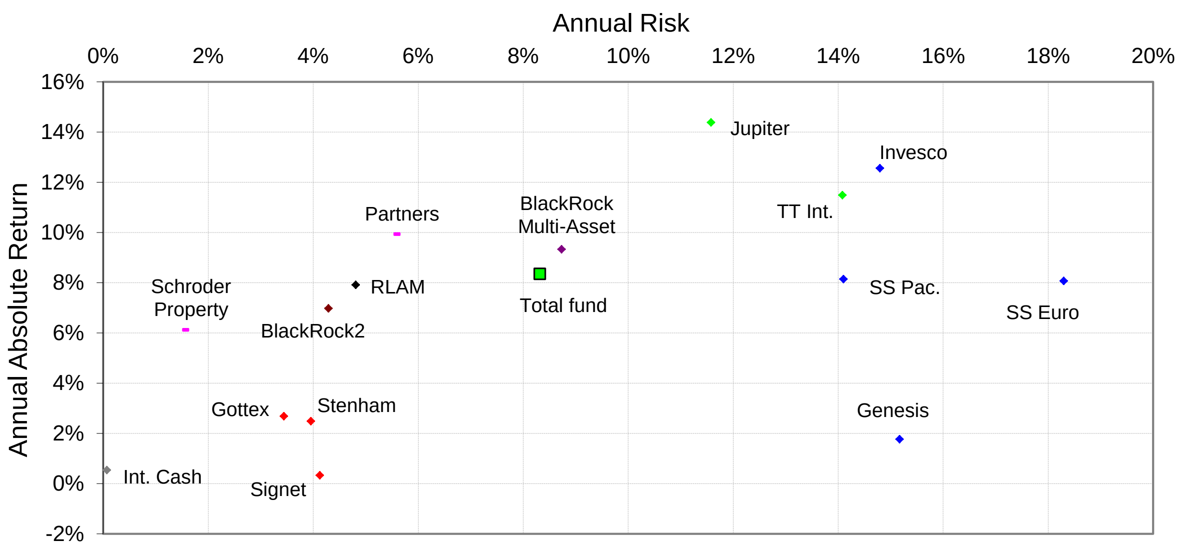
The chart below shows the 3 year absolute return ("Annual Absolute Return") against the 3 year volatility of absolute returns ("Annual Risk"), based on monthly/quarterly (as available) data points in sterling terms, to the end of December 2013 of each of the funds. We also show the same chart, but with data to 30 September 2013 for comparison.

3 Year Risk v 3 Year Return to 31 December 2013



Source: Data provided by WM Performance Services

3 Year Risk v 3 Year Return to 30 September 2013



Source: Data provided by WM Performance Services

The managers are colour coded by asset class, as follows:

- Green: UK equities — Blue: overseas equities
- Red: fund of hedge funds — Black: bonds
- Maroon: multi-asset — Brown: BlackRock No. 2 portfolio
- Grey: internally managed cash — Pink: Property
- Green Square: total Fund

- The three-year returns have remained reasonably stable apart from the emerging market and Asia equity managers.
- SSgA Pacific's return has fallen from 8.1% p.a. to 4.3% p.a. and Genesis from 1.8% p.a. to -0.9% p.a. Both managers continue to outperform their respective benchmarks.
- The three-year risk figures have also remained stable. As would be expected, the equity-based funds have the highest volatility and hedge funds, property and fixed interest the lowest, in line with the market returns chart on page 8.

Conclusion

- The strongest returns over the one year period are from the equity funds. The one-year return was positive in absolute terms from all managers except for Genesis.
- Over three years, the best performer remains Jupiter at 15.0% p.a., some margin above the second best, TT, at 11.8% p.a.
- Hedge fund returns remain the lowest at around -2% p.a to 3% p.a. together with Genesis at -0.9% p.a.
- Generally returns were broadly consistent with those seen last quarter, with the exception of Genesis emerging markets equity and SSgA Pacific equity.
- The Fund of Hedge Fund and property managers continue to provide low volatility over both the 1 and three year period. However, over the longer three year period Fund of Hedge Funds have underperformed their assumed strategic return.

Appendix 1: Market Events

Asset Class	What happened? Positive Factors	Negative Factors
UK Equities	■ Business confidence, as measured by the Purchasing Managers Index (PMI), rose to 73.5 in December, its highest since March 2010. The PMI for the services sector stood at 58.8 in December, well above the 50 mark, separating growth from contraction. ■ The British Chamber of Commerce Quarterly Economic Survey, a major economic indicator closely watched by the Bank of England (BoE) and the Treasury upgraded its GDP growth forecast for 2014 to 2.7% in Q4 2013 from 2.2% in Q3 2013. ■ Unemployment fell more than expected in October to 7.4% (the lowest level since early 2009) from 7.6% a month earlier. The BoE has issued forward guidance indicating that interest rates are unlikely to increase above the current level of 0.5% until the unemployment rate falls to 7%.	■ Equity dividends have enjoyed an impressive lead over bond yields for some time. However, with gilt yields now on an upward trajectory and investment grade bond yields also on the rise, UK equities might face some headwinds. ■ Britain's trade deficit, plus the losses UK plc. made on its overseas ventures, rose to GBP 21 billion in Q3 from a deficit of GBP 6 billion in the previous quarter. As a percentage of GDP, the deficit was 5.1%, the largest share in more than 20 years.
Overseas Equities:		
North America	■ The US Federal Reserve (Fed) announced that it will scale back its asset purchase programme from the current USD 85 billion per month to USD 75 billion per month beginning January 2014. ■ The Fed also signalled that if the employment and inflation environment remains stable, it expects similar monthly cutbacks over the course of 2014. This would lead to a formal end to the quantitative easing programme towards the fourth quarter of 2014. ■ GDP grew by a robust 3.6% (revised) in the fourth quarter, while the unemployment level fell to 7.0% by the end of November. ■ The US congress passed a budget deal aimed at rolling back sharp spending cuts, known as the sequester, over the next two years. This will reduce the likelihood of another government shutdown in the near term.	■ The 10-year treasury yield (the benchmark interest rate) spiked over the 3% mark for the first time since July 2011 after the Fed's announcement that it plans to taper its bond-buying program. Higher interest rates could increase the cost of borrowing for the corporates and jeopardise the nascent recovery in the economy. ■ Following a 30% rally in the S&P 500 through 2013, there is some concern that equity valuations appear unsustainable.

Asset Class	What happened?	
	Positive Factors	**Negative Factors**
Europe	■ The ECB surprised markets in November by cutting its main refinancing rate to a record low of 0.25%, and while it is not expected to cut the rate again, it is likely to flood the markets with another round of cheap cash early 2014. ■ Business activity in the Eurozone, as measured by the PMI, rose to 52.1 in December, recording the second-highest reading since mid-2011. ■ Ireland became the first country to exit the EU bailout programme without a precautionary credit line on December 15.	■ The PMI for the services sector, which makes up a majority of the Eurozone's economy, dipped to 51.0 in December from 51.2 in November confounding expectations for a rise to 51.5. This indicated that growth in this sector has been weaker than anticipated. ■ Services firms cut prices again in the month of November, as they have done over the last two years, to facilitate business. The output price index rose to 48.6 from 47.9, still below the break-even mark.
Japan	■ The Japanese economy grew at an annualised pace of 1.9% in Q3 2013, the fourth successive quarter of growth, lending more credibility to the expansionary monetary policy embarked upon by Prime Minister Shinzo Abe. ■ The government dropped the word 'Deflation' in its description of the economy for the first time in four years as core consumer inflation hit a five year high—past the halfway mark of the 2% target. ■ According to BOJ's quarterly survey, business confidence amongst large manufacturers surpassed expectations and rose from 12 points in Q3 to 16 points in Q4, the highest level since 2007, suggesting that economic prospects largely remain upbeat.	■ Concerns remain over the ripple effects on the economy due to the proposed sales tax hike from the current 5% to 8% beginning April 2014. ■ The real wage scenario in the country could pose a serious challenge, as rising inflation coupled with less than desired wage increases will start to erode household spending power.
Asia Pacific	■ South Korea recorded its 23rd consecutive month of trade surplus owing to strong exports, which grew by 2.2% year-on-year. This marked the highest level of annual exports in the country's history.	■ Australia's GDP grew at an annualised rate of 2.3% in the third quarter of 2013, well below the consensus forecast of 2.6%. Economists argue that the nation needs to grow at a pace above 3% to curb the recent increases in the unemployment rate which currently stands at 5.7%.

Asset Class	What happened? Positive Factors	Negative Factors
Emerging Markets	▪ China, in its Third Plenum, announced sweeping reforms aimed at steering the nation from an investment-led developing nation to a consumption driven economy. The 60 point reform plan aims to achieve a sustainable growth and liberalise Chinese markets. ▪ After weak performance through 2013, the emerging market space appears to be attractive from a valuation perspective. ▪ China edged out the United States as the biggest trader of goods in 2013 as the value of its imports and exports crossed the USD 4 trillion mark for the year. The change in the pecking order reflects China's growing dominance in global trade. ▪ India's current account deficit fell to 1.2% from 5% a year ago as the government's efforts to curb exports of non-essential commodities, particularly gold, started to yield the desired results.	▪ In China, concerns grew over the domino effects of the ailments in the banking system as asset repurchase rates surged to record highs after a government official warned about possible bank failures in the coming year. ▪ Taiwan cut its growth forecast for 2014 to 2.6%, down from its earlier projection of 3.4%, reflecting weak prospects for one of the most export-oriented economies in the region. ▪ Most emerging market economies still face headwinds due to inflationary pressures and are raising interest rates to combat high prices. Brazil raised its interest rates for the sixth time since March 2012, while Indonesia raised interest rates to the highest level since 2009. ▪ Brazil's GDP shrank in Q3 2013 by 0.5% due to worsening fiscal imbalances, higher than target inflation and rising interest rates in the economy.
Gilts	▪ UK's GDP expanded by 0.8% in the third quarter, the strongest reading in over three years. Meanwhile, the International Monetary Fund (IMF) significantly upgraded Britain's growth outlook to 1.4% in 2013 and 1.9% in 2014.	▪ Market interest rates are expected to rise much sooner than expected as the BoE has brought forward its forecast for a drop in the unemployment to 7% by around 18 months from what was previously expected.
Index Linked Gilts	▪ With limited supply of paper and investors continuing to seek inflation protection, demand for index-linked gilts remains high, thus supporting prices.	▪ UK inflation continued to decline, reaching 2.0% in December 2013, affecting returns on index-linked instruments. ▪ In an environment where central banks are able to control inflation within a target range, there is a limited upside to the return expectations on these instruments.
Corporate Bonds	▪ Corporations continue to maintain healthy balance sheets. While, the relatively attractive yield from parts of the corporate bond market continue to attract investor interest.	▪ The corporate bond market still suffers from liquidity constraints while uncertainty looms over interest rate increases.

Asset Class	What happened?	
	Positive Factors	**Negative Factors**
Property	■ In November 2013, the UK commercial property values registered their highest monthly gain since March 2010, marking seven consecutive months of rises in values. ■ Mortgage approvals in the UK rose to about a six-year high in November 2013. House prices are rising across the country with the fastest growth rate seen in London where prices are now 14% above their previous peak in 2007. ■ The Construction PMI hit 62.6 in November 2013—the highest reading since August 2007.	■ According to the changes to the capital gains tax structure announced by the chancellor George Osborne, foreign owners will be required to pay tax on gains in value on the UK properties starting April 2015. This move may dampen overseas investor sentiment into UK property market.

Economic statistics

	Quarter to 31 December 2013			Year to 31 December 2013		
	UK	Europe[1]	US	UK	Europe[1]	US
Real GDP growth	0.7%	n/a	0.8%	2.8%	n/a	2.7%
Unemployment rate	7.1%	11.1%[4]	6.7%	7.1%	11.1%[4]	6.7%
Previous	*7.7%*	*11.1%*	*7.3%*	*7.7%*	*11.0%*	*7.8%*
Inflation change[2]	0.5%	0.2%	-0.5%	2.0%	0.9%	1.5%
Manufacturing Purchasing Managers' Index	57.3	52.7	57.0	57.3	52.7	57.0
Previous	*56.7*	*51.1*	*56.2*	*51.4*	*47.5*	*50.7*
Quantitative Easing / LTRO [3]	£375bn	€1,018bn	$3,794bn	£375bn	€1,018bn	$3,794bn
Previous	*£375bn*	*€1,018bn*	*$3,539bn*	*£375bn*	*€1,018bn*	*$2,774bn*

Source: Thomson Reuters, market, Institute for Supply Management, Eurostat, United States Department of Labor, US Bureau of Economic Analysis. All figures to 31 December 2013 unless otherwise stated. "Previous" relates to data as at the previous quarter or year end.

(1) 15 Country Euro area; (2) CPI inflation measure; (3) Refers to amounts announced and therefore ignores changes due to debt maturing. LTRO refers to the European Central Bank's Long Term Refinancing Operation; (4) As at Nov 2013.

Appendix 2: Glossary of Terms

Term	Definition
Absolute Return	The actual return, as opposed to the return relative to a benchmark.
Annualised	Figures expressed as applying to 1 year.
Bond Assets	Assets held in the expectation that they will exhibit a degree of sensitivity to yield changes. The value of a benefit payable to a pensioner is often calculated assuming the invested assets in respect of those liabilities achieve a return based on UK bonds.
Growth Assets	Assets held in the expectation that they will achieve more than the return on UK bonds. The value of a benefit payable to a non-pensioner is often calculated assuming the invested assets in respect of those liabilities achieve a return based on UK bonds plus a premium (for example, if holding equities an equity risk premium may be applied). The liabilities will still remain sensitive to yields although the Growth assets may not.
Duration	The weighted average time to payment of cashflows (in years), calculated by reference to the time and amount of each payment. It is a measure of the sensitivity of price/value to movements in yields.
Funded Liabilities	The value of benefits payable to members that can be paid from the existing assets of the plan (i.e. those liabilities that have assets available to meet them).
High Yield	A type of bond which has a lower credit rating than traditional investment grade corporate bonds or government bonds. These bonds pay a higher yield than investment grade bonds.
Market Statistics Indices	The following indices are used for asset returns: UK Equities: FTSE All-Share Index Overseas Equities: FTSE AW All-World ex UK UK Gilts (>15 yrs or >20 yrs): FTSE Brit Govt Fixed Over 15 (or 20) Years Index Corporate Bonds(>15 yrs AA): iBoxx £ Corp 15+ Years AA Index Non-Gilts (>15 yrs): iBoxx £ Non-Gilts 15+ Years Index Index Linked Gilts (>5yrs): FTSE Brit Govt Index Link Over 5 Years Index Hedge Funds: CS/Tremont Hedge Fund Index Commodities: S&P GSCI Commodity GBP Total Return Index High Yield: Bank Of America Merrill Lynch Global High Yield Index Property: IPD Property Index (Monthly) Cash: 7 day London Interbank Middle Rate Price Inflation: All Items Retail Price Index Earnings Inflation: UK Average Weekly Earnings Index - Whole Economy excluding Bonuses
Market Volatility	The impact of the assets producing returns different to those assumed within the actuarial valuation basis, excluding the yield change and inflation impact.

Term	Definition
Mercer Gilt Yield	An estimate of the yield available on a notional portfolio of UK Government conventional gilt stocks whose cashflows approximately match the Fund's estimated benefit cashflows
Money-Weighted Rate of Return	The rate of return on an investment including the amount and timing of cashflows.
Non-Pensioner Liability	The value of benefits payable to those who are yet to retire, including active and deferred members.
Pensioner Liability	The value of benefits payable to those who have already retired, irrespective of their age.
Relative Return	The return on a fund compared to the return on another fund, index or benchmark. For IMAGE purposes this is defined as: Return on Fund less Return on Index or Benchmark.
Scheme Investments	Refers only to the invested assets, including cash, held by your investment managers.
Surplus/Deficit	The estimated funding position of the Scheme. This is not an actuarial valuation and is based on estimated changes in liabilities as a result of bond yield changes, asset movements and, if carried out, output from an asset liability investigation (ALI). If no ALI has been undertaken the estimate is less robust.
Three-Year Return	The total return on the fund over a three year period expressed in percent per annum.
Time-Weighted Rate of Return	The rate of return on an investment removing the effect of the amount and timing of cashflows.
Unfunded Liabilities	The value of benefits payable to members that cannot be paid from the existing assets of the Scheme (i.e. those liabilities that have no physical assets available to meet them). These liabilities are effectively the deficit of the Scheme.
Yield (Gross Redemption Yield)	The return expected from a bond if held to maturity. It is calculated by finding the rate of return that equates the current market price to the value of future cashflows.

Appendix 3: Summary of Mandates

Manager	Mandate	Benchmark	Outperformance target (p.a.)
Jupiter	UK Equities (Socially Responsible Investing)	FTSE All Share	+2%
TT International	UK Equities (Unconstrained)	FTSE All Share	+3-4%
Invesco	Global ex-UK Equities Enhanced (En. Indexation)	MSCI World ex UK NDR	+0.5%
Schroder	Global Equities (Unconstrained)	MSCI AC World Index Free	+4%
SSgA	Europe ex-UK Equities (Enhanced Indexation)	FTSE AW Europe ex UK	+0.5%
SSgA	Pacific inc. Japan Equities (Enhanced Indexation)	FTSE AW Dev Asia Pacific	+0.5%
Genesis	Emerging Market Equities	MSCI EM IMI TR	-
MAN	Fund of Hedge Funds	3M LIBOR + 5.75%	-
Signet	Fund of Hedge Funds	3M LIBOR + 3%	-
Stenham	Fund of Hedge Funds	3M LIBOR + 3%	-
Gottex	Fund of Hedge Funds	3M LIBOR + 3%	-
BlackRock	Passive Multi-asset	In line with customised benchmarks using monthly mean fund weights	0%
BlackRock	Overseas Property	Customised benchmarks using monthly mean fund weights	0%
RLAM	UK Corporate Bond Fund	iBoxx £ non-Gilts all maturities	+0.8%
Schroder	UK Property	IPD UK pooled	+1.0%
Partners	Global Property	IPD Global pooled	+2.0%
Cash	Internally Managed	7 day LIBID	

JLT Employee Benefits

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