

# Review for period to 31 December 2012

Avon Pension Fund



JLT INVESTMENT CONSULTING

## Section One – Executive Summary

- This report is produced by JLT Investment Consulting ("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.
- This version of the report has been prepared for the Investment Panel, based on initial WM data. A full version of this report will be reported to the full Committee meeting once the final WM data has been received. In particular, the initial WM data does not include 1-year returns so these are approximated based on the last four quarters.

### Fund Performance

- The value of the Fund's assets increased by £80m over the fourth quarter of 2012 to £2,873m.

### Strategy

- Equity markets generally produced strong returns, with all of the major regions apart from the US producing positive returns over the quarter. Over the last twelve months Japanese equity returns were positive but reduced in Sterling terms by the weakening of the Yen, whereas other regions produced double-digit returns.
- The three year benchmark equity returns remain slightly below the assumed strategic returns due to the effect of falling markets in 2011.
- Bond returns have been high over the last three years and ahead of the assumed strategic return. This was a result of falling bond yields, although only corporate bond yields have continued to fall over the last six months. Gilt yields remain at historically low levels.
- Overseas Fixed Interest and hedge funds performed below the assumed strategic return.
- Whilst the three-year property return remains ahead of the strategic return, the bulk of the performance came from 2010 and 2011, with the small modest return over the most recent year being a result of income (rent) rather than capital growth.

### Managers

- In line with general market returns, all managers have produced positive returns over the last quarter, with the exception of Partners Property. In relative terms, it has been a mixed quarter with seven funds outperforming and eight funds underperforming.
- The four fund-of-hedge fund managers, TT International and Blackrock Multi-Asset have produced negative relative returns over three years and hence have not met their three-year target performance.
- TT made changes in Q4 2011 and performance has improved, with one year performance at target level and the 3 year rolling measure improving. Man restructured the portfolio in Oct 2012 and the Panel are meeting them on 22 Feb 2013 to review the impact on performance. The Panel are also meeting Schroder Global Equity on 22 Feb 2013 to review the disappointing performance since inception.
- Whilst Invesco and Schoders Property outperformed their benchmarks, they have not met their respective targets.
- The SSgA Europe ex UK Enhanced Equity pooled fund has fallen in size such that Avon's investment now represents over 90% of the pooled fund holdings.

### Avon Pension Fund

- Stenham has recently changed the focus of its business strategy, focussing away from growing its institutional business to focus on servicing existing investors and strategic acquisition and joint venture projects.

#### **Key points for consideration**

- Consideration should be given to the potential impact on the SSgA Europe ex UK Enhanced Equity Fund following its fall in size. This should be taken into account in when implementing any changes to the strategic asset allocation following the review currently being undertaken.
- The performance of Stenham and any changes to the team should be monitored closely following the announcement of their change in business strategy.
- The changes introduced to the MAN fund of hedge fund portfolio have yet to show any material benefit in terms of investment performance.
- The Fund is currently undergoing an investment strategic view. This should be taken into account before any manager or asset allocation changes are made.

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## Section Two – Market Background

The figures below cover the three and twelve months to the end of December 2012.

### Market Statistics

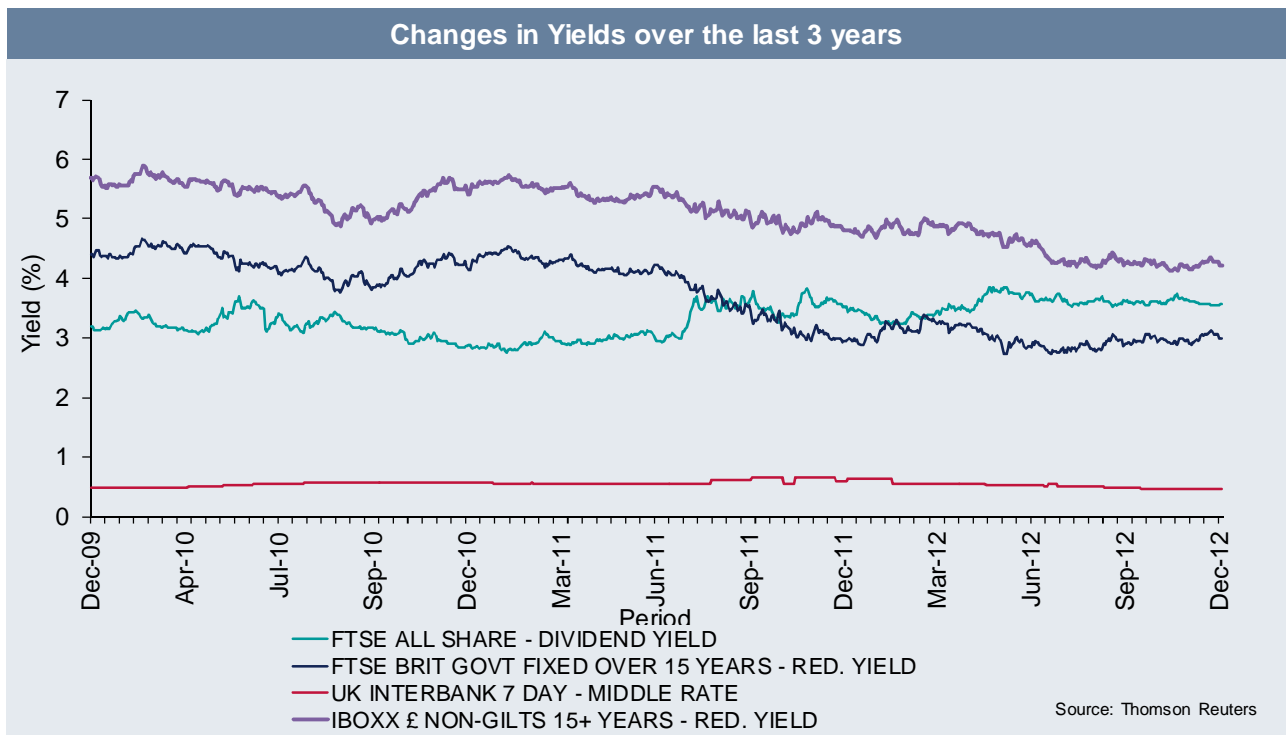
Market Returns Growth Assets	3 Mths %	1 Year %	Change in Sterling	3 Mths %	1 Year %
UK Equities	3.8	12.3	Against US Dollar	0.7	4.6
Overseas Equities	2.4	12.1	Against Euro	-1.8	3.0
USA	-0.9	11.2	Against Yen	11.9	17.5
Europe	7.9	17.4	<b>Yields as at 31 December 2012</b>	<b>% p.a.</b>	
Japan	5.1	3.3	UK Equities	3.6	
Asia Pacific (ex Japan)	5.5	17.5	UK Gilts (>15 yrs)	3.0	
Emerging Markets	5.1	12.8	Real Yield (>5 yrs ILG)	-0.1	
Property	0.5	2.4	Corporate Bonds (>15 yrs AA)	4.1	
Hedge Funds	2.0	8.1	Non-Gilts (>15 yrs)	4.2	
Commodities	-3.9	-4.3			
High Yield	3.9	14.1			
Cash	0.1	0.5			
Market Returns Bond Assets	3 Mths %	1 Year %	Absolute Change in Yields	3 Mths %	1 Year %
UK Gilts (>15 yrs)	-0.2	2.9	UK Gilts (>15 yrs)	0.1	0.1
Index-Linked Gilts (>5 yrs)	5.0	0.5	Index-Linked Gilts (>5 yrs)	-0.2	0.2
Corporate Bonds (>15 yrs AA)	0.5	9.9	Corporate Bonds (>15 yrs AA)	0.1	-0.6
Non-Gilts (>15 yrs)	1.6	13.1	Non-Gilts (>15 yrs)	0.0	-0.6
Inflation Indices	3 Mths %	1 Year %			
Price Inflation - RPI	1.1	3.1			
Price Inflation - CPI	1.2	2.7			
Earnings Inflation *	-0.3	1.2			

\* = subject to 1 month lag

## Market Background



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



The graph above shows the historic yields for gilts, corporate bonds, UK equities and UK cash over the last three years. The trend over 2011 and the first half of 2012 shows falling gilt yields, which stabilised over the second half of 2012, whilst corporate bond yields continued to fall.

The table below compares general market returns (i.e. not achieved Fund returns) to 31 December 2012, with assumptions about returns made in the Investment Strategy agreed in 2009.

Asset Class	Strategy Assumed Return % p.a.	3 year Index Return % p.a.	Comment
UK Equities	8.4	7.5	Behind the assumed strategic return due to negative returns in 2011. Both 2010 and 2012 produced double-digit positive returns, latterly partly attributable to market intervention by regulators.
Global Equities	8.4	6.9	
UK Gilts	4.7	12.2	Significantly ahead of the assumed strategic return as gilt yields fell significantly during 2011. Over the last twelve months, gilt yields have stabilised giving a 2012 gilt return of 2.9%. Corporate bond yields have continued to fall.
Index Linked Gilts	5.1	10.6	
UK Corporate Bonds	5.6	9.4	
Overseas Fixed Interest	5.6	4.7	Behind the assumed strategic return. The return has been negative over the last twelve months, affected by rising yields within European bonds, whilst US yields remained reasonably stable.
Fund of Hedge Funds	6.6	1.8	Behind the assumed strategic return. Low LIBOR levels could lead to continued low performance.
Property	7.4	8.2	Ahead of the assumed strategic return, although reduced from the last quarter and driven by the higher returns of 2010 and 2011.

Source: Statement of Investment Principles, Thomson Reuters.

See appendix A for economic data and commentary

## Section Three – Fund Valuations

- The table below shows the asset allocation of the Fund as at 31 December 2012, 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 2012 Value £'000	Proportion of Total %	Strategic Benchmark Weight %
UK Equities	573,926	20.0	18.0
Overseas Equities	1,217,607	42.4	42.0
Bonds	597,123	20.8	20.0
Fund of Hedge Funds	215,521	7.5	10.0
Cash (including currency instruments)	55,145	1.9	-
Property	213,927	7.4	10.0
	1		
<b>TOTAL FUND VALUE</b>	<b>2,873,250</b>	<b>100.0</b>	<b>100.0</b>

Source: Data provided by WM Performance Services

- The value of the Fund's assets increased by £80m over the fourth quarter of 2012 to £2,873m. Each asset class contributed positively to the increase, with the largest contributors being overseas equities, UK equities and bonds.
- In terms of the asset allocation, market movements resulted in a shift towards equities as they performed better than other asset classes. This moved the allocation slightly further away from the strategic benchmark weights.
- The valuation of the investment with each manager is provided on the following page.



Manager	Asset Class	30 September 2012		Net new money £'000	31 December 2012	
		Value	Proportion of Total		Value	Proportion of Total
		£'000	%		£'000	%
Jupiter	UK Equities	121,709	4.4	-	124,793	4.3
TT International	UK Equities	137,884	4.9	-	144,716	5.0
Invesco	Global ex-UK Equities	185,007	6.6	-	186,292	6.5
Schroder	Global Equities	171,023	6.1	-	174,947	6.1
SSgA	Europe ex-UK Equities and Pacific incl. Japan Equities	84,902	3.0	-	90,327	3.1
Genesis	Emerging Market Equities	140,956	5.0	-	147,442	5.1
MAN	Fund of Hedge Funds	61,995	2.2	-	62,264	2.2
Signet	Fund of Hedge Funds	64,713	2.3	-	66,339	2.3
Stenham	Fund of Hedge Funds	32,957	1.2	-	33,360	1.2
Gottex	Fund of Hedge Funds	53,313	1.9	-	53,559	1.9
BlackRock	Passive Multi-asset	1,271,197	45.5	2,000	1,305,849	45.4
BlackRock (property fund)	Equities, Futures, Bonds, Cash (held for property inv)	66,102	2.4	-6,100	60,381	2.1
RLAM	Bonds	166,193	6.0	-	172,159	6.0
Schroder	UK Property	130,228	4.7	-	131,330	4.6
Partners	Property	80,408	2.9	6,148	87,078	3.0
Record Currency Mgmt	Dynamic Currency Hedging	2,815	0.1	-	8,249	0.3
Record Currency Mgmt 2	Overseas Equities (to fund currency hedge)	7,114	0.3	-	8,924	0.3
Internal Cash	Cash	14,431	0.5	-2,048	15,242	0.5
Rounding		-	0.0	-	-1	0.1
<b>TOTAL</b>		<b>2,792,947</b>	<b>100.0</b>	<b>0</b>	<b>2,873,250</b>	<b>100.0</b>

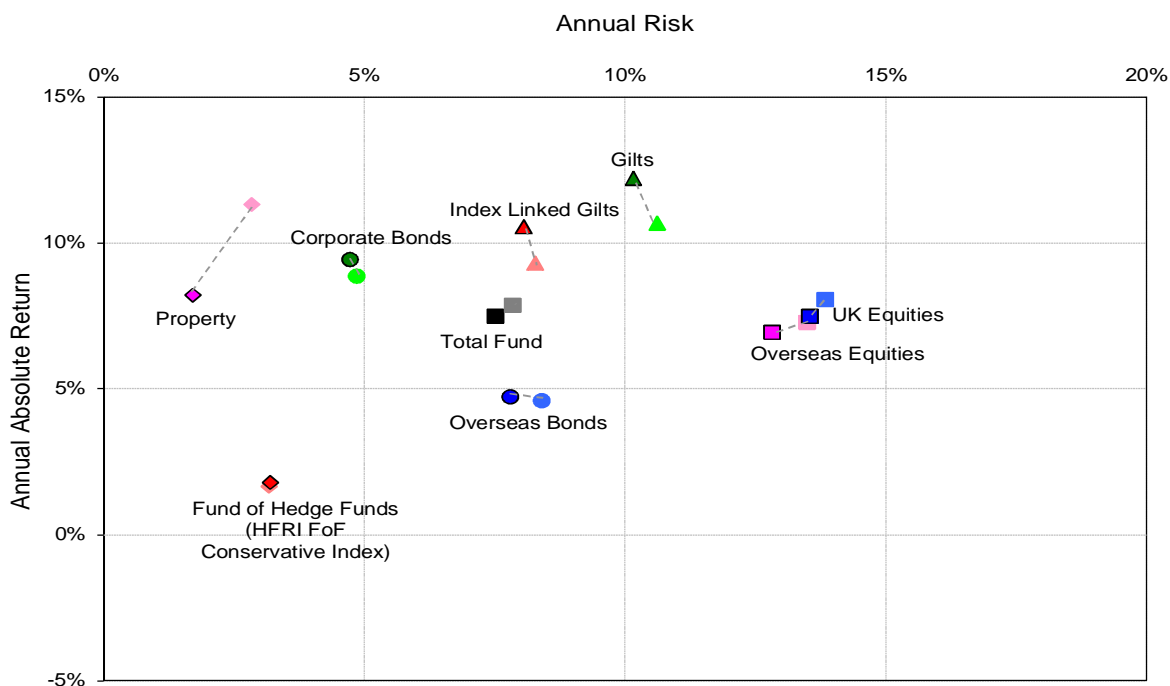
Source: Avon Pension Fund, Data provided by WM Performance Services.

## Section Four – Performance Summary

### 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 2012 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 15.

#### 3 Year Risk v 3 Year Return to 31 December 2012



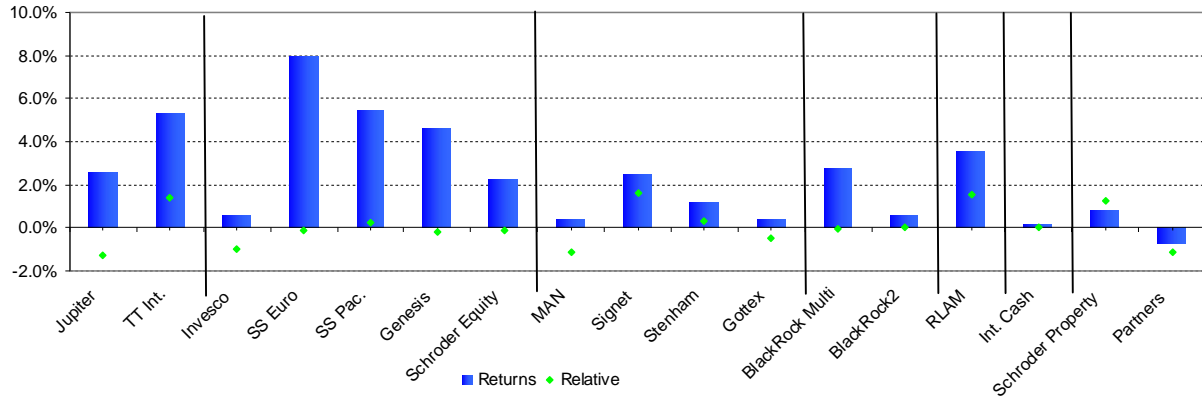
Source: Data provided by Thomson Reuters

- All of the underlying benchmarks have produced a positive return over the period (3 years p.a.).
- The change in the risk/return characteristics over the last quarter is not as marked as in previous quarters, except for property.
- The risk has fallen across all of the asset classes, bar a marginal increase for hedge funds.
- The 3 year returns on bonds has risen, in particular gilts. For conventional gilts, this was a result of a 4.3% fall from Q4 2009 falling out of the analysis, which had a greater impact than the negative return in the most recent quarter.
- Index-linked gilts continue to rise over the last quarter, taking the 3-year return to over 10% p.a.
- The 3-year property return has fallen from 11.3% p.a. to 8.2% p.a. Whilst total returns continue to be positive due to the rental element, the high returns of 2009 have fallen out of the analysis.
- The asset class with the highest return over 3 years is now conventional gilts, at 12.2% p.a., with the bulk of this growth in 2011. Property has fallen from highest to fourth highest.
- Both UK and overseas equity returns are slightly below their assumed strategic return of 8.4% p.a., with overseas fixed interest and hedge funds also remaining below their strategic return. The 3 year return on the other asset classes (property, gilts, index linked gilts and corporate bonds) remain above the respective strategic returns, although mainly due to good returns prior to 2012.

### Aggregate manager performance

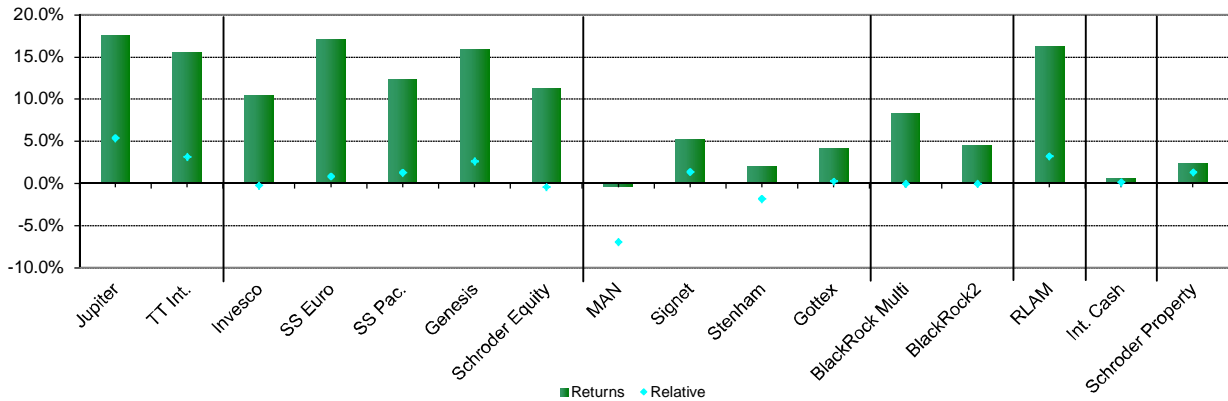
- The charts below show the absolute return for each manager over the quarter, one year and three years to the end of December 2012. The relative quarter, one year and three year returns are marked with green and blue dots respectively.

Absolute and relative performance - Quarter to 31 December 2012

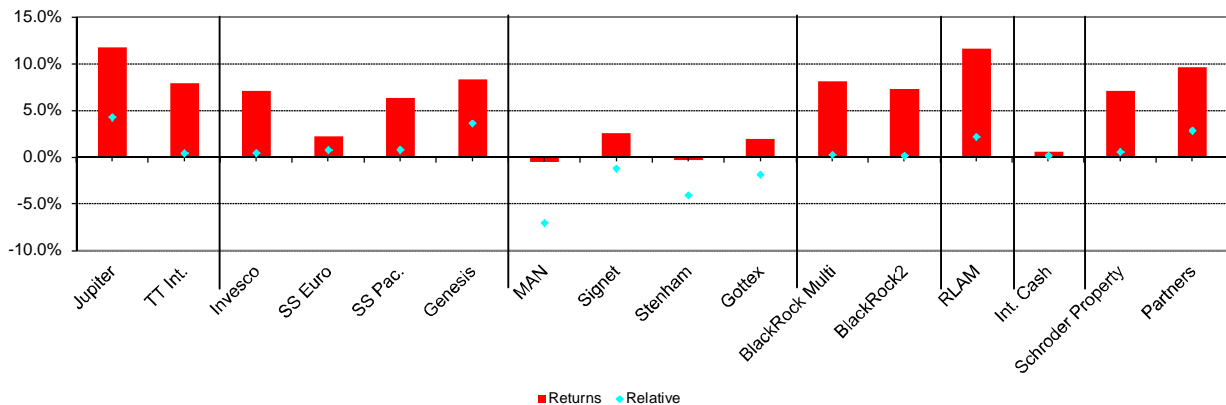


Partners data is lagged by 1 quarter.

Absolute and relative performance - Year to 31 December 2012



Absolute and relative performance - 3 years to 31 December 2012



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 2012. 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.

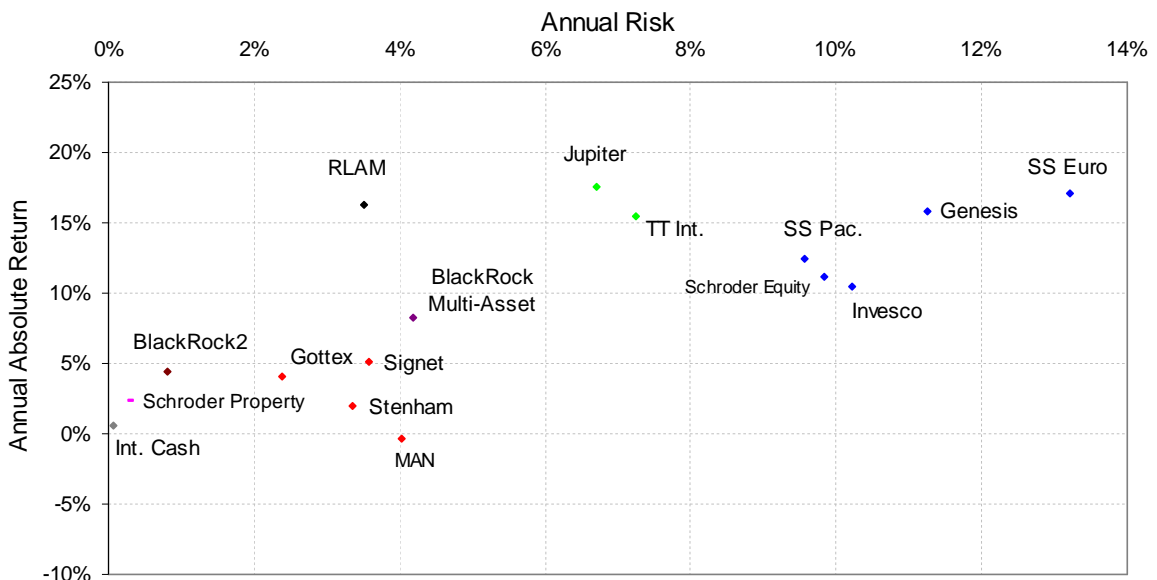
Manager / fund	3 months (%)	1 year (%)	3 years (% p.a.)	3 year performance versus target
Jupiter	-1.3	+5.3	+4.2	Target met
TT International	+1.2	+3.1	-0.8	Target not met
Invesco	-0.9	-0.3	+0.4	Target not met
SSgA Europe	+0.2	+0.8	+0.5	Target met
SSgA Pacific	+0.2	+1.3	+0.8	Target met
Genesis	-0.3	+2.6	+3.4	Target met
Schroder Equity	-0.1	-0.5	N/A	N/A
Man	-1.1	-7.0	-7.1	Target not met
Signet	+1.6	+1.4	-1.2	Target not met
Stenham	+0.3	-1.8	-4.1	Target not met
Gottex	-0.4	+0.3	-1.8	Target not met
BlackRock Multi - Asset	-0.1	0.0	-0.4	Target not met
BlackRock 2	+0.1	-0.1	+0.1	Target met
RLAM	+1.6	+3.2	+2.2	Target met
Internal Cash	+0.1	+0.2	+0.2	N/A
Schroder Property	+1.2	+1.3	+0.6	Target not met
Partners Property	-1.1	N/A	+2.8	N/A

Source: Data provided by WM Performance Services  
Data for Partners is lagged by 1 quarter.

### Manager and Total Fund risk v return

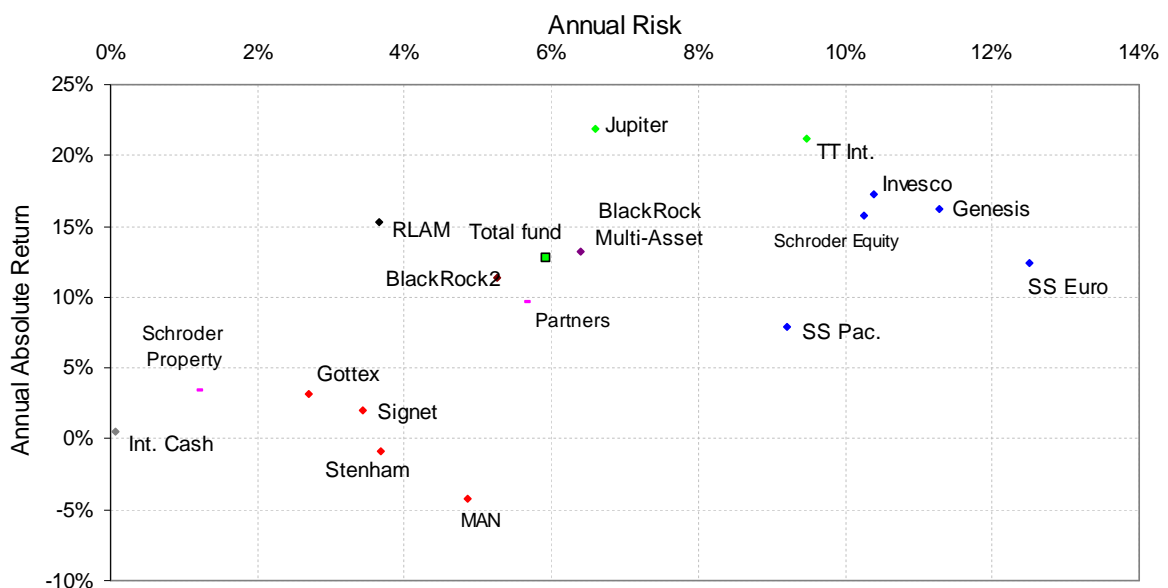
- The chart below shows the 1 year absolute return (“Annual Absolute Return”) against the 1 year volatility of absolute returns (“Annual Risk”), based on monthly/quarterly (as available) data points in sterling terms, to the end of December 2012 of each of the funds. We also show the same chart, but with data to 30 September 2012 for comparison.
- Note that the scales are different on the charts below, and that the December total will be in the final report.

**1 Year Risk v 1 Year Return to 31 December 2012**



Source: Data provided by WM Performance Services

**1 Year Risk v 1 Year Return to 30 September 2012**

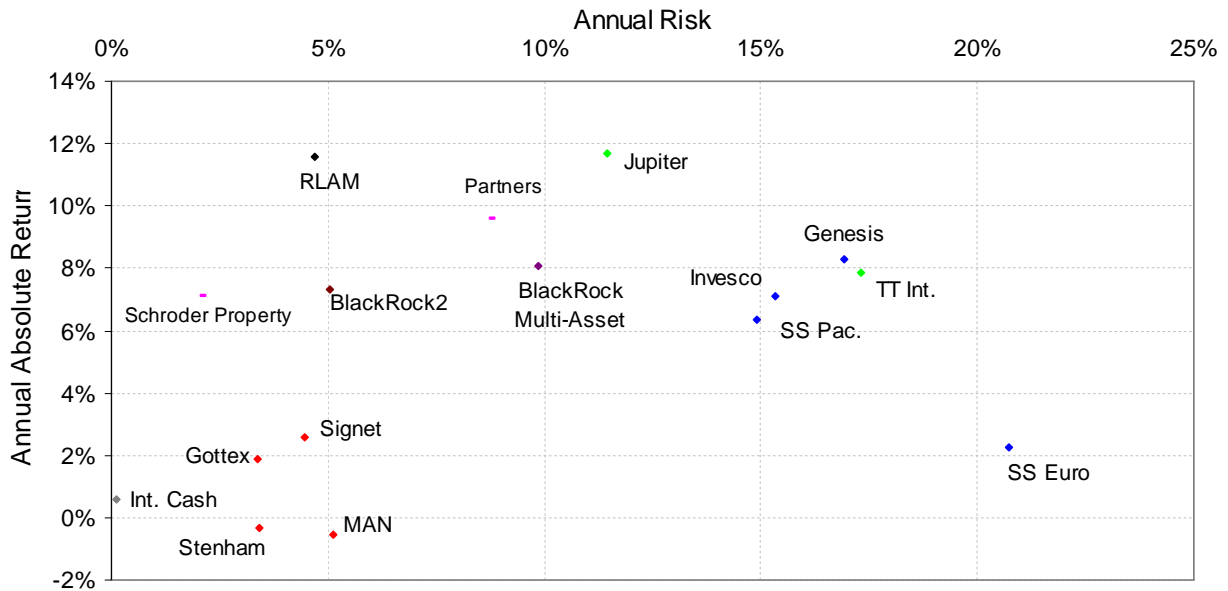


Source: Data provided by WM Performance Services

- The managers are colour coded by asset class, as follows:
  - Green: UK equities
  - Red: fund of hedge funds
  - Maroon: multi-asset
  - Grey: internally managed cash
  - Green Square: total Fund
  - Blue: overseas equities
  - Black: bonds
  - Brown: BlackRock No. 2 portfolio
  - Pink: Property
  
- The one-year returns are lower to December than September for all of the equity-based funds apart from the European and Pacific enhanced indexation funds with SSgA.
- The one-year hedge fund returns have all improved. Only MAN has a negative absolute one-year return at -0.4%, improving from -4.2% at the end of September.
- The BlackRock No.2 return has fallen from 11.4% to 4.4%.
- The one-year risk has remained broadly unchanged for most funds, the notable exceptions being a fall for TT and the two BlackRock funds.

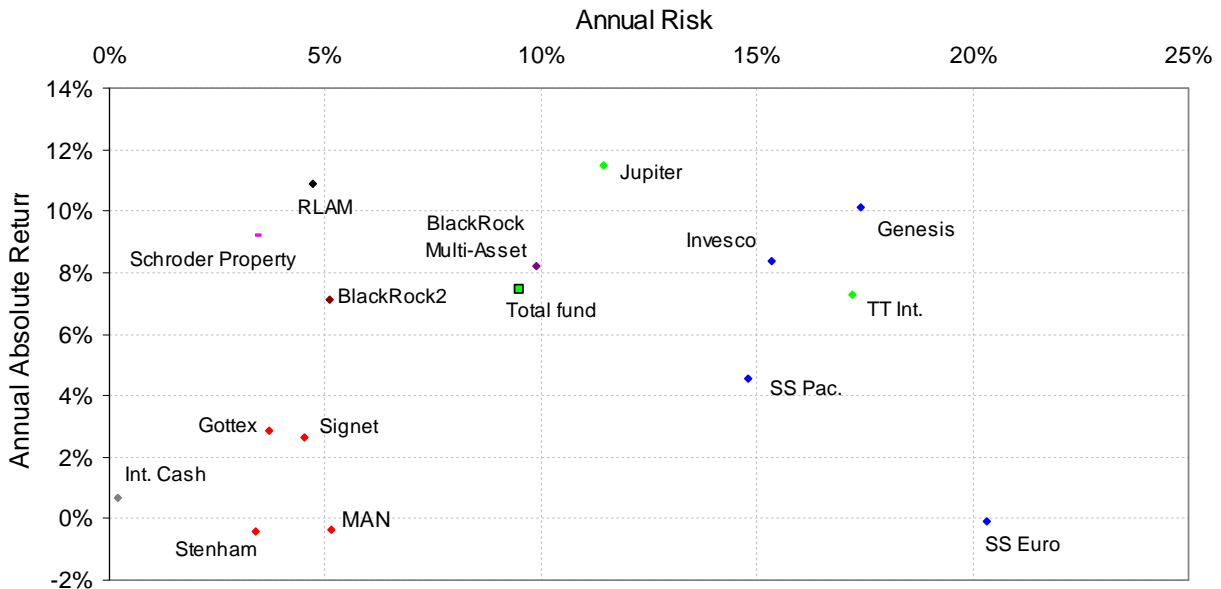
- The chart below shows the 3 year absolute return (“Annual Absolute Return”) against the 3 year volatility of absolute returns (“Annual Risk”), based on monthly/quarterly (as available) data points in sterling terms, to the end of December 2012 of each of the funds. We also show the same chart, but with data to 30 September 2012 for comparison. The Total to December 2012 will be shown in the final version of this report.

**3 Year Risk v 3 Year Return to 31 December 2012**



Source: Data provided by WM Performance Services

**3 Year Risk v 3 Year Return to 30 September 2012**



Source: Data provided by WM Performance Services

- The managers are colour coded by asset class, as follows:
  - Green: UK equities
  - Red: fund of hedge funds
  - Maroon: multi-asset
  - Grey: internally managed cash
  - Blue: overseas equities
  - Black: bonds
  - Brown: BlackRock No. 2 portfolio
  - Green Square: total Fund

- The three year returns are broadly unchanged compared to last quarter, apart from an improvement in the SSgA funds and a deterioration in Schroders' Property and the Gottex hedge fund.
- The 3-year risk figures have also remained at a broadly consistent level across all funds. 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 10.

### Conclusion

- The strongest returns over the 1 year period are from equity funds, and the corporate bonds (RLAM). Each of these produced a double-digit return.
- Over three years the picture is more mixed, with Jupiter SRI equities and RLAM corporate bonds both just over 11.5% p.a. The other equity, property and multi-asset funds generally produced 6-8% p.a., with the hedge funds lowest at 0-3% p.a.
- As expected, the Fund of Hedge Fund managers have provided low volatility over both the 1 and 3 year period. However, over the longer 3 year period they have all underperformed their assumed strategic return. RLAM corporate bonds and Schroders' property also shows a low volatility.



## Section Five – Individual Manager Performance

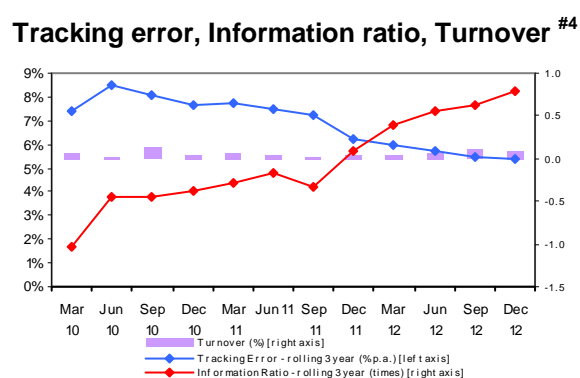
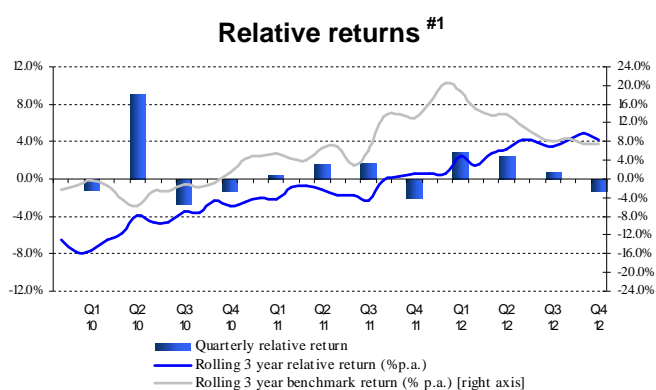
- This section provides a one page summary of the key risk and return characteristics for each investment manager. An explanatory summary of each of the charts is included in the Glossary in Appendix A, with a reference for each chart in the chart title (e.g. #1). A summary of mandates is included in Appendix B, which shows the benchmark and outperformance target for each fund.

### Key points for consideration

- The sustainability of the SSgA Europe ex UK Enhanced Equity Fund was assessed previously following a large fall in its size. The conclusion was that the Fund could be sustained even if the Avon Pension Fund was the only investor. This view should be reconfirmed following a further large redemption and any implications considered when implementing the current strategy review.
- The performance of Stenham and any changes to the team should be monitored closely following the announcement of their change in business strategy. In particular, reassurance should be sought that the portfolio will continue to receive the necessary resource to meet its objectives.
- The changes introduced to the MAN fund of hedge fund portfolio have yet to show any material benefit in terms of investment performance, although the restructuring is still underway.

## Jupiter Asset Management – UK Equities (Socially Responsible Investing)

Mandate	Benchmark	Outperformance target	Inception date
UK equities (Socially Responsible Investing)	FTSE All Share	+2%	April 2001
Value (£'000)	% Fund Assets	Tracking error	Number of holdings:
£124,793	4.3	5.4%	58



### Performance

	3 months (%)	1 year * (%)	3 years (% p.a.)
Fund	2.5	17.5	11.7
Benchmark	3.8	12.2	7.5
Relative	-1.3	+5.3	+4.2

Source: Data provided by WM Performance Services, and Jupiter.

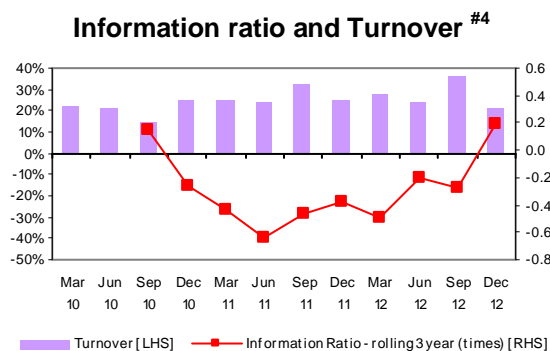
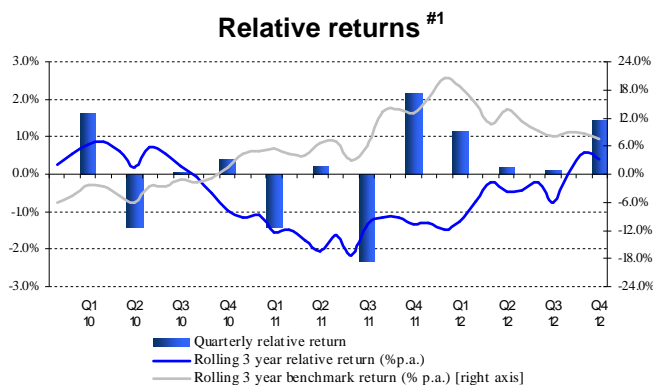
\* 1 Year returns are estimated by JLT.

### Comments

- Jupiter are outperforming their 3 year performance target.
- The Fund's allocation to Cash (6.5%) increased compared to last quarter (5.6%) but remains below the 7% limit.
- The industry allocation has continued to remain considerably different to the benchmark allocation (as expected from Socially Responsible Investing), so the variability of relative returns (volatility) is expected to be high. Over Q4 2012, Jupiter was significantly underweight in Oil and Gas, Consumer Goods, Basic Materials and Financials, with significant overweight positions in Consumer Services, Industrials, Utilities, Telecommunications and Technology. This relative allocation is consistent with previous quarters.
- The improvement in the information ratio is evidence of more consistent relative returns over 2011 and 2012 as the poorer returns from 2008 and 2009 fall out of the rolling 3-year figures. In addition, the fall in the tracking error has contributed to the information ratio improvement.

## TT International – UK Equities (Unconstrained)

Mandate	Benchmark	Outperformance target	Inception date
UK equities (unconstrained)	FTSE All Share	+3-4%	July 2007
Value (£'000)	% Fund Assets	Tracking error	Number of holdings
£144,716	5.0	2.6%	54



### Performance

	3 months (%)	1 year * (%)	3 years (% p.a.)
Fund	5.0	15.4	7.3
Benchmark	3.8	12.3	8.1
Relative	+1.2	+3.1	-0.8

Source: Data provided by WM Performance Services, and TT International.

\* 1 Year returns are estimated by JLT.

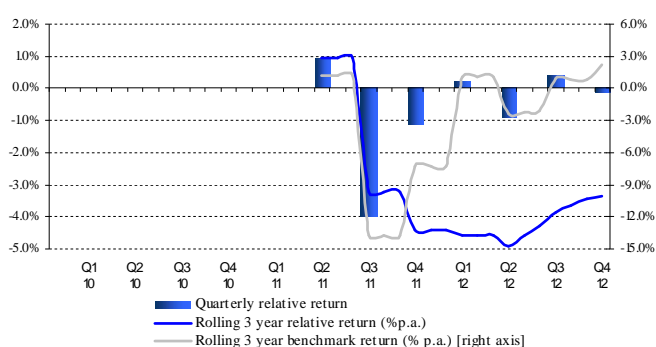
### Comments

- TT made changes to the team and process in Q4 2011. The Panel met TT last quarter and were satisfied that performance had improved considerably since changes made, with one year performance at target level and the 3 year rolling measure improving.
- The Fund held an overweight position in Basic Materials by 3.4% and was underweight Utilities and Financials, by 3.1% and 2.9% respectively, at the end of the quarter.
- Turnover, over the fourth quarter, decreased significantly to 20.9% compared to the last quarter's number of 36.6%.
- The 3 year tracking error (proxy for risk relative to the benchmark) has remained broadly consistent over the last few quarters, to stand at 2.57%. However, there has been a consistent decrease since Q3 2010, when it was 3.12%.
- The 3 year information ratio (risk adjusted return), increased by 0.47 after a decrease last quarter.

## Schroder – Global Equity Portfolio (Unconstrained)

Mandate	Benchmark	Outperformance target	Inception date
Global Equities (Unconstrained)	MSCI AC World Index Free	+3.5-4.5%	April 2011
Value (£'000)	% Fund Assets	Tracking error	Number of holdings
£174,947	6.1	N/A	N/A

Relative returns #1



Performance

	3 months (%)	1 year * (%)	3 years (% p.a.)
Fund	2.2	11.2	N/A
Benchmark	2.3	11.7	N/A
Relative	-0.1	-0.5	N/A

Source: Data provided by WM Performance Services, and Schroders

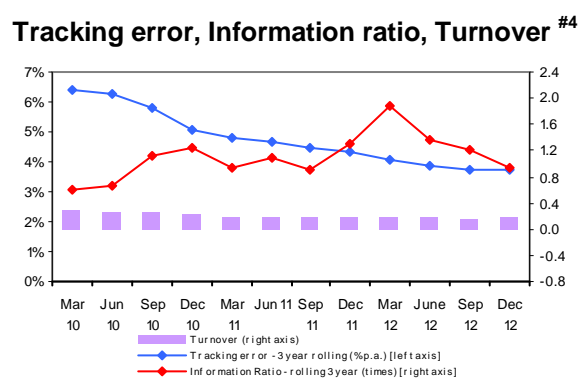
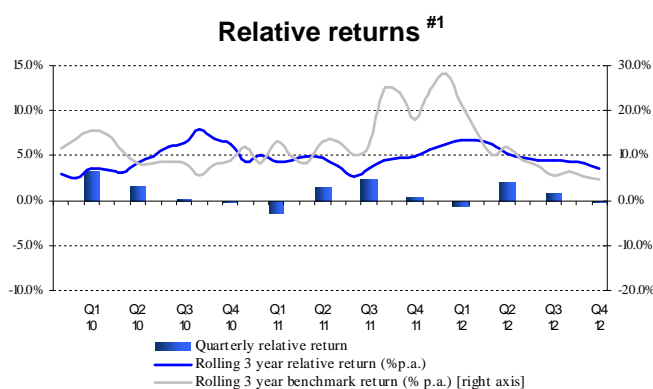
\* 1 Year returns are estimated by JLT.

### Comments

- The return over the last quarter was close to the benchmark, with the since-inception return continuing to be below the benchmark.
- In general, stocks with greater sensitivity to global growth trends mostly outperformed over the last quarter whilst defensive stocks were de-rated. In line with this, IT stock Infineon Technologies was the portfolio's top performer, consistent with their view that the semi-conductor cycle is bottoming. The financials sector also contributed positively, in particular Santander Mexico. Their largest underperformer was energy stock BG Group, with consumer discretionary stock Dollar General also detracting from performance.
- The strongest regions were Continental Europe and Emerging markets, the latter benefiting from more positive economic data in China. The principal detractor by region was Japan.
- They have moved to an overweight position in Continental Europe, reducing Japan, partly due to their relative performance. They remain overweight in Africa/Middle East, and underweight in the UK and North America.
- In terms of sectors, the Fund increased its holding in industrials to 16.1%, which is 5.7% above the index weight.
- Schroder continue to pursue companies which should benefit from longer-term global trends. The portfolio is balanced between defensive stocks (e.g. a stock which is not dependent on economic conditions such as stocks in pharmaceuticals or food) and more cyclical industries.
- Schroder's approach to stock selection is not constrained by the benchmark. They focus on stock-specific situations where they feel there is sustainable growth and valuation upside.
- Officers will continue to monitor performance and Schroder are meeting the Panel on 22<sup>nd</sup> February 2013.

## Genesis Asset Managers – Emerging Market Equities

Mandate	Benchmark	Outperformance target	Inception date
Emerging Market equities	MSCI EM IMI TR	-	December 2006
Value (£'000)	% Fund Assets	Tracking error	Number of holdings
£147,442	5.1	3.7%	164



### Performance

	3 months	1 year *	3 years
	(%)	(%)	(% p.a.)
Fund	4.6	15.8	8.2
Benchmark	4.9	13.2	4.8
relative	-0.3	+2.6	+3.4

Source: Data provided by WM Performance Services, and Genesis.

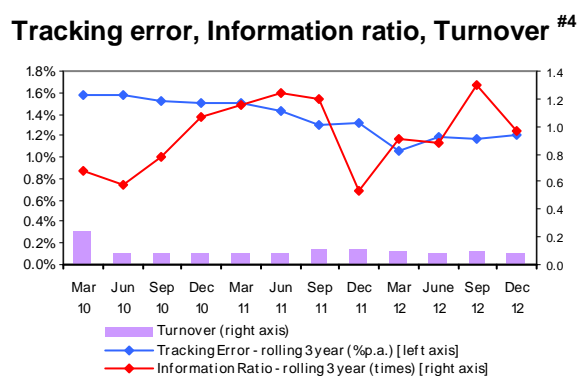
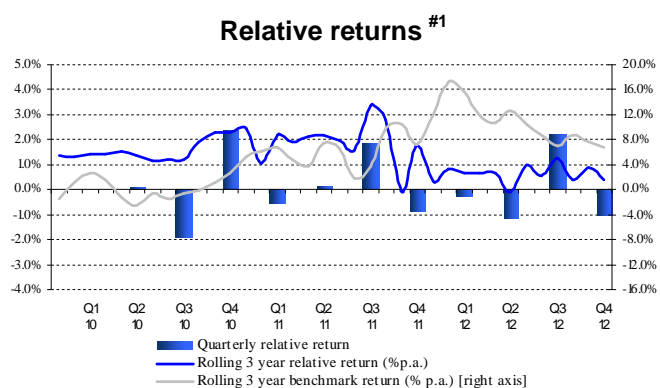
\* 1 Year returns are estimated by JLT.

### Comments:

- Genesis are achieving significant outperformance of the benchmark over 3 years.
- The Fund is overweight to India, South Africa and Russia, and underweight to China and South Korea, although note that the over- and underweights are a result of Genesis' stock picking approach, rather than taking a view on countries.
- The 3 year tracking error (proxy for risk relative to the benchmark) continued to remain the same as 3.7% in Q4 2012. This is the 1<sup>st</sup> quarter after 11 consecutive quarters that the tracking error has not fallen. The 3 year information ratio (risk adjusted return), fell from 1.2 to 0.9.
- The allocation to Cash (1.5%) decreased slightly compared to the previous quarter (1.9%).
- On an industry basis, the Fund is overweight Consumer Staples (+6.0%), Health Care (+2.7%) and Materials (+1.8%). The Fund is underweight to Consumer Discretionary (-4.9%), Energy (-4.6%) and Telecom Services (-2.2%). These are broadly similar positions to last quarter.

## Invesco – Global ex-UK Equities (Enhanced Indexation)

Mandate	Benchmark	Outperformance target	Inception date
Global ex-UK equities enhanced (Enhanced Indexation)	MSCI World ex UK NDR	+0.5%	December 2006
Value (£'000)	% Fund Assets	Tracking error	Number of holdings
£186,292	6.5	1.2%	365



### Performance

	3 months (%)	1 year * (%)	3 years (% p.a.)
Fund	0.7	10.4	7.1
Benchmark	1.6	10.7	6.7
relative	-0.9	-0.3	+0.4

Source: Data provided by WM Performance Services, and Invesco.

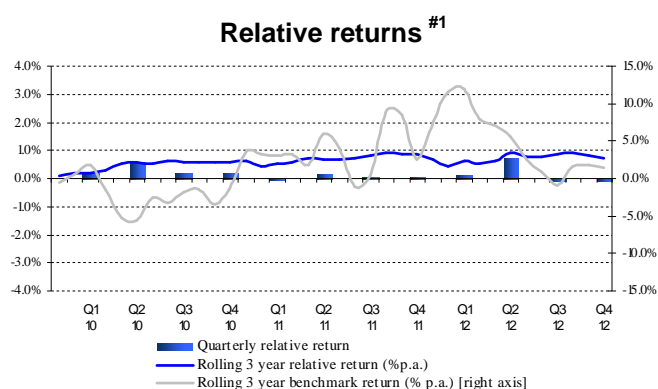
\* 1 Year returns are estimated by JLT.

### Comments:

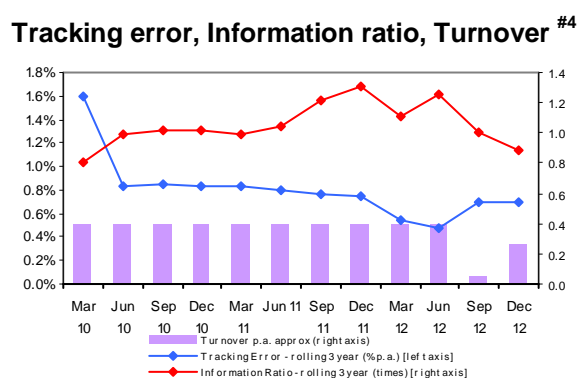
- Over the last quarter, all strategies continued to be negative contributors except for Country selection.
- The absolute volatility has decreased to 7.7% at the end of the fourth quarter compared to 8.9% at the end of the third quarter.
- The turnover for this quarter of 8.5% decreased from 10.4% in the previous quarter. The number of stocks (365) remained at par compared to the previous quarter (365).
- The industry allocation is relatively in line with the benchmark industry allocations. Apart from Materials (-1.1%), all industry allocations were broadly within +/- 1.0% of benchmark weightings as expected from this mandate.
- The number of stocks held in this portfolio remains appropriate for the enhanced indexation approach.
- Invesco's 3 year performance has returned above the benchmark but fallen to below their outperformance target.

## SSgA – Europe ex-UK Equities (Enhanced Indexation)

Mandate	Benchmark	Outperformance target	Inception date
Europe ex-UK equities (enhanced indexation)	FTSE AW Europe ex UK	+0.5%	December 2006
Value (£'000)	% Fund Assets	Tracking error	Number of holdings
£31,165	1.1	0.7%	233



### Performance



	3 months (%)	1 year * (%)	3 years (% p.a.)
Fund	8.1	17.1	2.2
Benchmark	7.9	16.3	1.7
relative	+0.2	+0.8	+0.5

Source: Data provided by WM Performance Services, and SSgA.

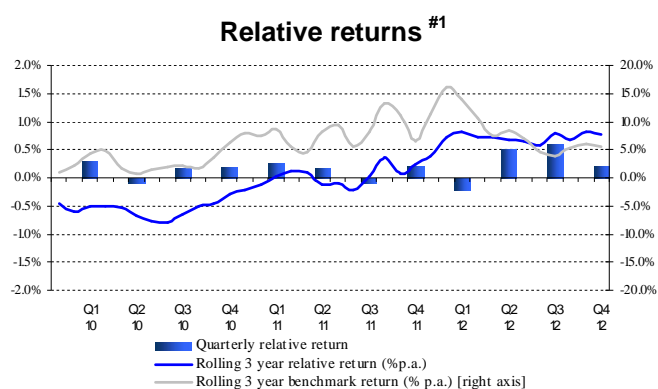
\* 1 Year returns are estimated by JLT.

### Comments:

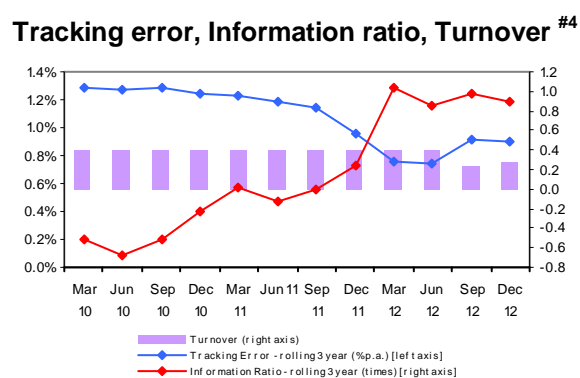
- France, Germany and Switzerland make up over 60% of the fund's benchmark - it is overweight in all three countries.
- As previously reported, the pooled fund fell in size from £306.12million as at 31 March 2011, to £46.85million as at 30 June 2011. As at the end of the third quarter of 2012, it was £113.53 million. It has now again, decreased significantly during Q4 2012 and as at 31 December 2012 it is £36.24 million.
- Turnover has increased from 5.2% to 26.3%, closer to that previously seen. The tracking error has remained in line with the previous quarter.
- The information ratio has fallen further this quarter following a decrease in the previous quarter.

## SSgA – Pacific incl. Japan Equities (Enhanced Indexation)

Mandate	Benchmark	Outperformance target	Inception date
Pacific inc. Japan equities	FTSE AW Dev Asia Pacific	+0.5%	December 2006
Value (£'000)	% Fund Assets	Tracking error	Number of holdings
£59,162	2.0	0.9%	446



### Performance



	3 months (%)	1 year * (%)	3 years (% p.a.)
Fund	5.5	12.4	6.4
Benchmark	5.3	11.1	5.6
relative	+0.2	+1.3	+0.8

Source: Data provided by WM Performance Services, and SSgA.

\* 1 Year returns are estimated by JLT.

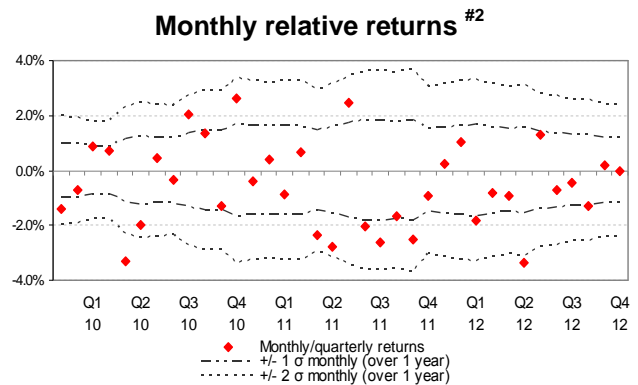
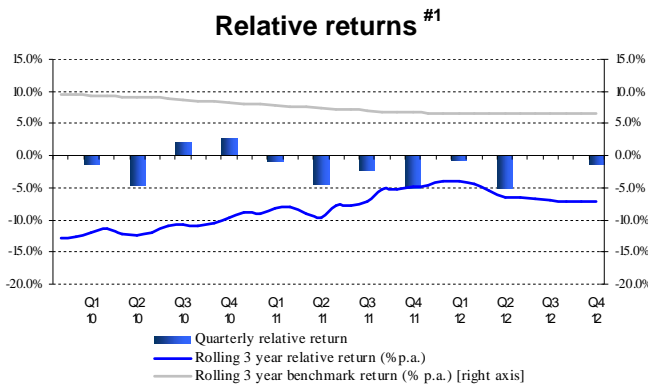
### Comments:

- In terms of country allocation, there are no significant deviations away from the benchmark. Just under half of the fund is invested in Japan.
- Turnover has increased 27.8% after a fall in the previous quarter.
- The information ratio (+0.90) has decreased compared to the previous quarter (+0.98).
- The tracking error of the fund has remained the same as compared to the previous quarter.

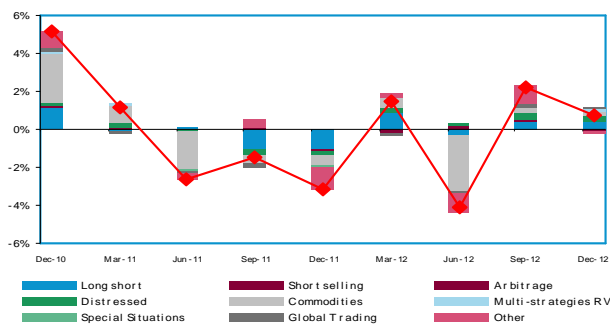


## MAN – Fund of Hedge Funds

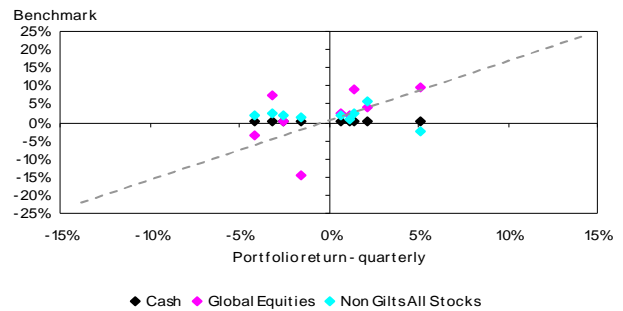
Mandate	Benchmark	Portfolio volatility (3 yr p.a.)	Inception date
Fund of Hedge Funds	3 month LIBOR +5.75%	5.4%	August 2007
Value (£'000)	% Fund Assets	Number of funds	
£62,264	2.2	47	



### Hedge fund strategies and source of return #6



### Correlation with indices #7



### Performance

	3 months (%)	1 year * (%)	3 years (% p.a.)
Fund	0.4	-0.4	-0.5
Benchmark	1.5	6.6	6.6
relative	-1.1	-7.0	-7.1

Source: Data provided by WM Performance Services, and MAN.

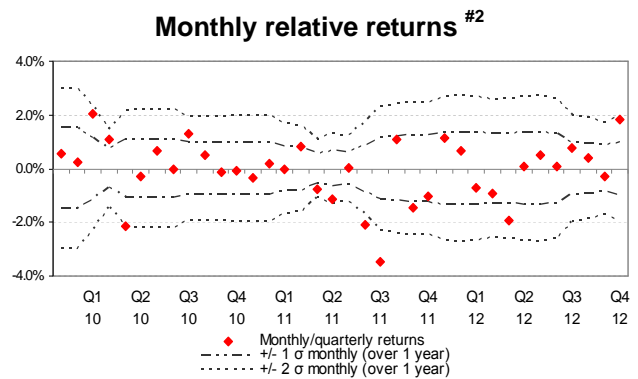
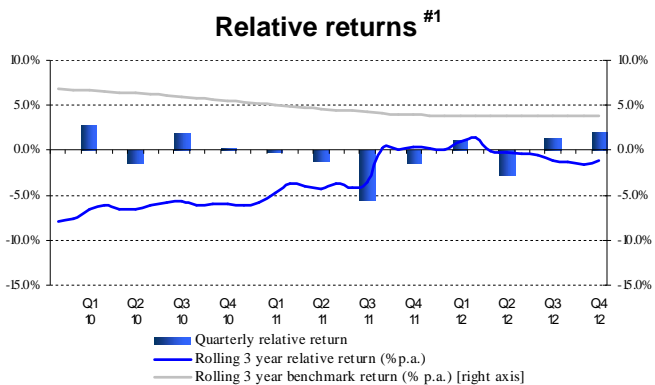
\* 1 Year returns are estimated by JLT.

### Comments:

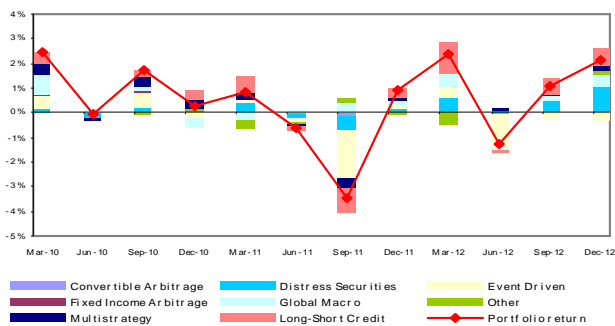
- MAN have restructured the portfolio, increasing concentration and more dynamic allocations. The restructure completed in Oct 2012 and so the impact on performance has yet to be determined. The Panel are meeting MAN on Feb 22<sup>nd</sup> to review how effective the restructure has been in achieving improved performance.
- MAN has a higher outperformance target than the other fund of hedge fund managers. This is partly responsible for a weaker long-term performance. Their 3 year absolute performance remains negative at -0.5% p.a.

## Signet – Fund of Hedge Funds

Mandate	Benchmark	Portfolio volatility (3 yr p.a.)	Inception date
Fund of Hedge Funds	3 month LIBOR +3.0%	5.1%	August 2007
Value (£'000)	% Fund Assets	Number of funds	
£66,339	2.3	44	

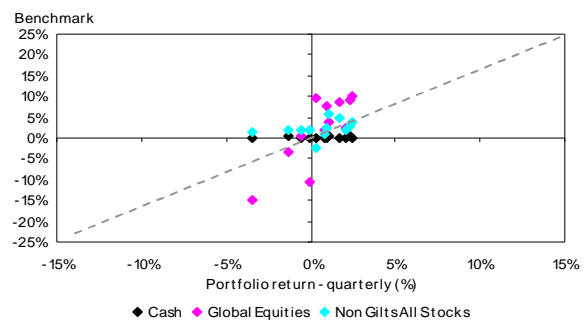


### Hedge fund strategies and source of return #6



### Performance

### Correlation with indices #7



	3 months (%)	1 year * (%)	3 years (% p.a.)
Fund	2.5	5.2	2.6
Benchmark	0.9	3.8	3.8
relative	+1.6	+1.4	-1.2

Source: Data provided by WM Performance Services, and Signet.

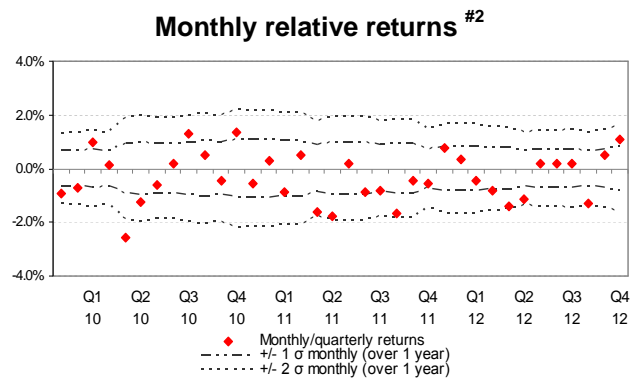
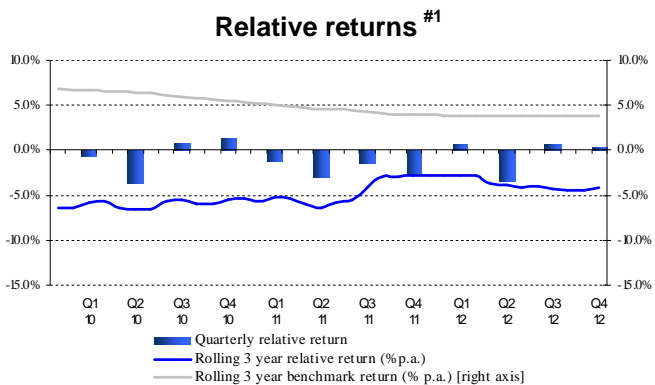
\* 1 Year returns are estimated by JLT.

### Comments:

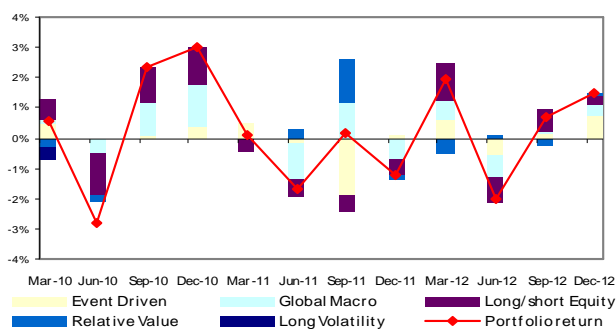
- Most strategies contributed to the positive absolute returns.
- There is little correlation between this Fund and cash or non gilt bonds, but a weak correlation with global equities. This suggests that this Fund acts as a good diversifier to the Avon Pension Fund's other asset classes.

## Stenham – Fund of Hedge Funds

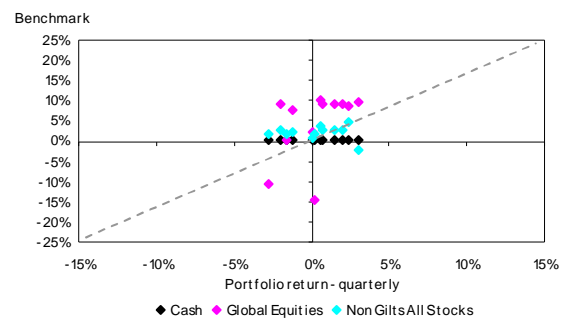
Mandate	Benchmark	Portfolio volatility (3 yr p.a.)	Inception date
Fund of Hedge Funds	3 month LIBOR +3.0%	3.1%	August 2007
Value (£'000)	% Fund Assets	Number of funds	
£33,360	1.2	33	



### Hedge fund strategies and source of return #6



### Correlation with indices #7



### Performance

	3 months	1 year *	3 years
	(%)	(%)	(% p.a.)
Fund	1.2	2.0	-0.3
Benchmark	0.9	3.8	3.8
relative	+0.3	-1.8	-4.1

Source: Data provided by WM Performance Services, and Stenham.

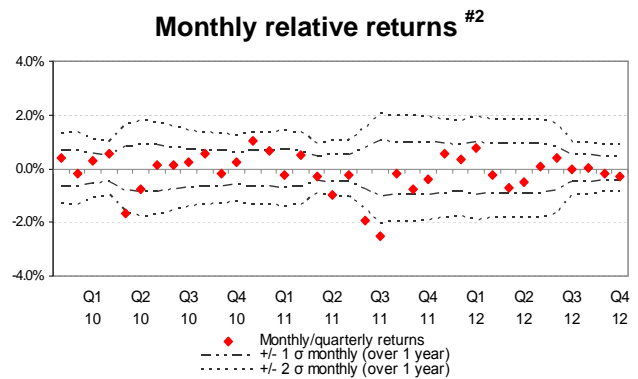
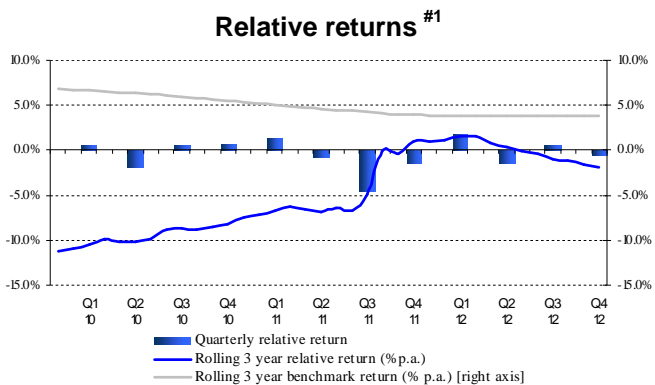
\* 1 Year returns are estimated by JLT.

### Comments:

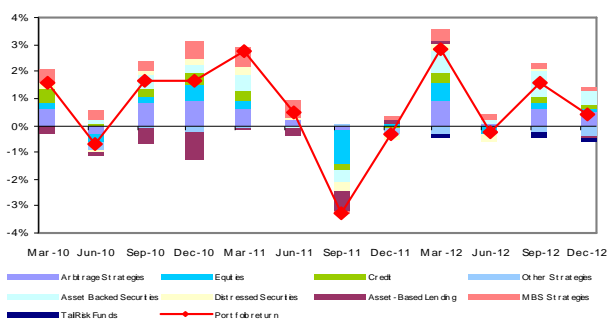
- Stenham has recently changed the focus of its business strategy, focussing away from growing its institutional business to focus on servicing existing investors and strategic acquisition and joint venture projects.
- The positive contribution to performance came from Event Driven (0.8%), Long/short Equity (0.4%), Global Macro (0.3%) and Relative Value (0.1%) strategies. Long Volatility was neutral.
- The allocation to the Global Macro and Long / Short Equity strategies made up 67.0% of the total Fund allocation. The allocation to Cash decreased from 3.0% to 1.0% over the quarter.
- There is no clear correlation between this Fund and cash, global equities or non gilt bonds. This suggests that this Fund acts as a good diversifier to the Avon Pension Fund's other asset classes.

## Gottex – Fund of Hedge Funds

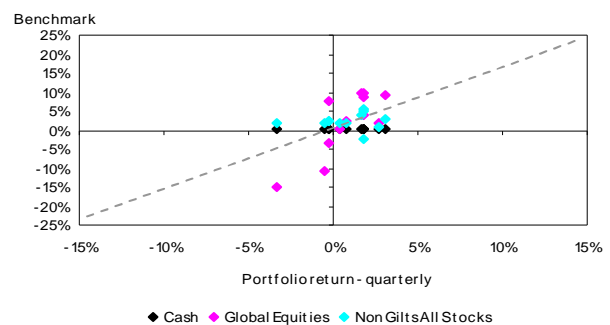
Mandate	Benchmark	Portfolio volatility (3 yr p.a.)	Inception date
Fund of Hedge Funds	3 month LIBOR +3.0%	2.7%	August 2007
Value (£'000)	% Fund Assets	Number of funds	
£53,559	1.9	Not available	



### Hedge fund strategies and source of return #6



### Correlation with indices #7



### Performance

	3 months	1 year *	3 years
	(%)	(%)	(% p.a.)
Fund	0.5	4.1	2.0
Benchmark	0.9	3.8	3.8
relative	-0.4	+0.3	-1.8

Source: Data provided by WM Performance Services, and Gottex.

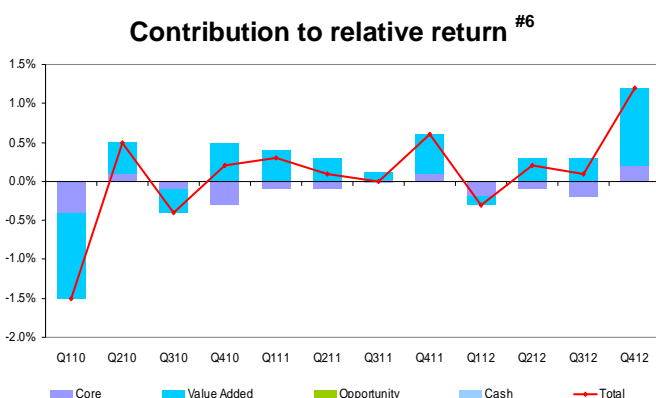
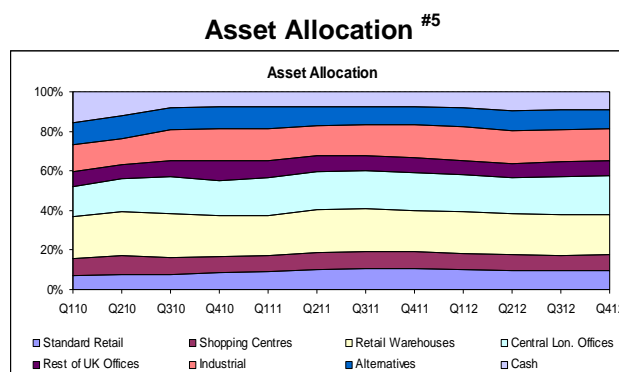
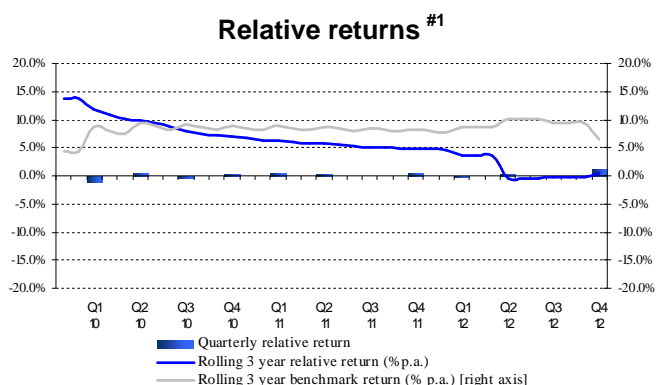
\* 1 Year returns are estimated by JLT.

### Comments:

- The Fund has a diverse range of strategy exposures, with continued major exposures to Asset Backed Securities, Mortgage Backed Securities and Fundamental MN Equity strategies. Allocations remained broadly in line with those in the earlier quarter.
- There is no clear correlation between this Fund and cash, global equities or non gilt bonds. This suggests that this Fund acts as a good diversifier to the Avon Pension Fund's other asset classes.

## Schroder – UK Property

Mandate	Benchmark	Outperformance target	Inception date
UK property	IPD UK pooled	+1.0%	February 2009
Value (£'000)	% Fund Assets	Tracking error	Number of funds
£131,330	4.6	Not available	N/A



**Performance**

	3 months (%)	1 year * (%)	3 years (% p.a.)
Fund	0.8	2.3	7.2
Benchmark	-0.4	1.0	6.6
relative	+1.2	+1.3	+0.6

Source: Data provided by WM Performance Services, and Schroders

\* 1 Year returns are estimated by JLT.

### Comments:

- Schroder were appointed to manage UK Property on a segregated, multi-manager basis. The investments held within the underlying funds are primarily direct, although some managers might use listed securities for diversification.
- Over the quarter, outperformance can be attributed to their exposure to West End offices and to income-focussed strategies.
- Performance was also strong in some of the alternative property sectors, particularly in those areas where rental growth is less correlated to the broader economic cycle. Schroder will continue to focus on this type of stock going forward.
- They are looking to reduce shopping centre exposure and increase alternatives, to bring these positions closer to their House View.
- Over the next twelve months, Schroder expect capital values to fall across some provincial secondary markets, with investor focus being on prime assets in London and the South East.
- In the longer term they expect property returns to average around 7% pa over the next five years.

## Partners – Overseas Property

- The mandate awarded to Partners by the Fund commenced in August 2009, although draw downs are being made gradually over time, and the full extent of the Fund's commitment has not yet been invested.
- Partners invest in direct, primary and secondary private real estate investments on a global basis.

## Portfolio update

To date, Partners have drawn down approximately £85 million, or approximately 64% of the Fund's intended commitment of approximately £132 million. A total of £7.56 million was drawn down over the quarter, just under half of which was from Direct Real Estate 2011. The draw downs commenced in September 2009.

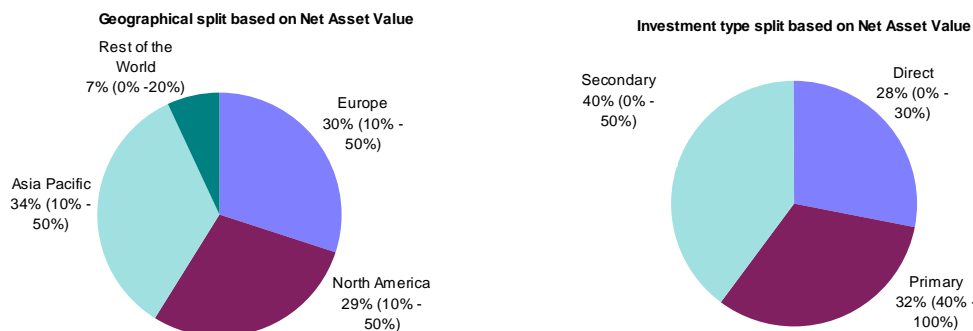
The funds invested to date have been split by Partners as follows:

Partners Fund	Net Drawn Down (£ Million)	Net Asset Value as at 31 December 2012 (£ Million)	Since inception Net IRR
Asia Pacific and Emerging Market Real Estate 2009	11.49	11.76	8.7%
Direct Real Estate 2011	6.82	6.52	-3.3%
Distressed US Real Estate 2009	13.93	13.77	10.4%
Global Real Estate 2008	29.70	30.91	8.8%
Global Real Estate 2011	11.60	11.53	6.4%
Real Estate Secondary 2009	11.83	12.59	15.0%
<b>Total</b>	<b>85.38</b>	<b>87.08</b>	<b>9.3%</b>

Source: Partners. (adjusted for cash flows), the above is Partners' valuation as at 31 December 2012.

The Net IRR is as expected, and in line with the mandate expectation.

The investments in the funds noted above have resulted in a portfolio that was, as at 31 December 2012, split regionally as shown in the chart on the left below, and across different investment types as shown on the right. We show in brackets for each region the current guideline allocations to each region that are in place for the Fund's portfolio.



Source: Partners

The changes to the geographical allocation and investment type over the quarter were small - North America increased by 3% and Secondary reduced by 2% in favour of Direct.

The exposure to Primary continues to be below the guidelines, but short-term deviation from the allocation restrictions in place are expected at such an early stage of investment and we do not believe the current positioning to be of concern. In total, 50% of the commitments are allocated to primary investments.

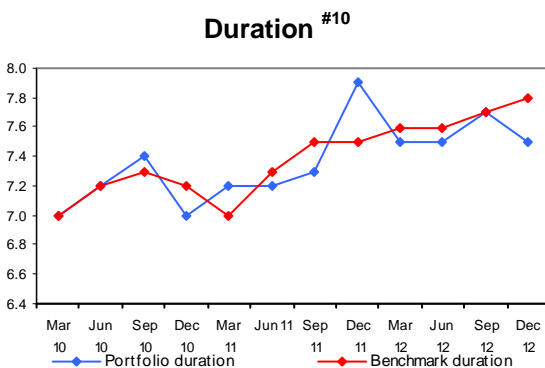
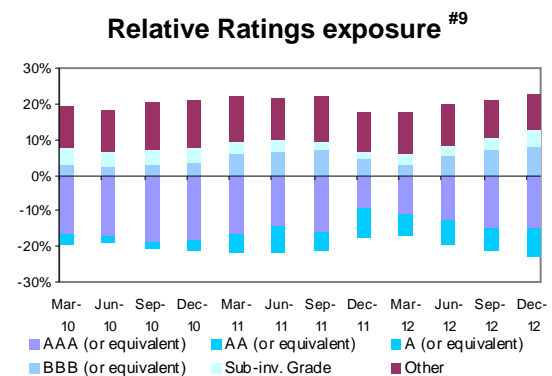
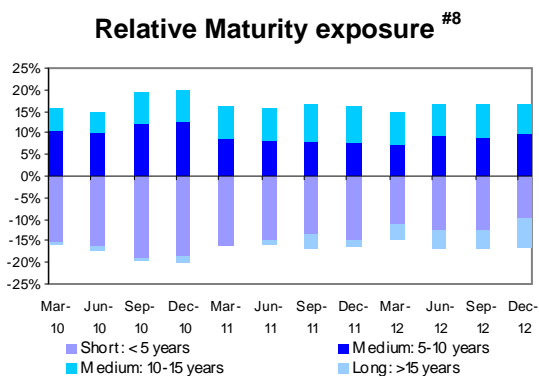
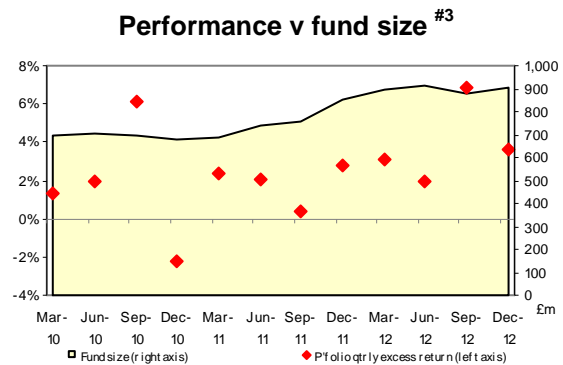
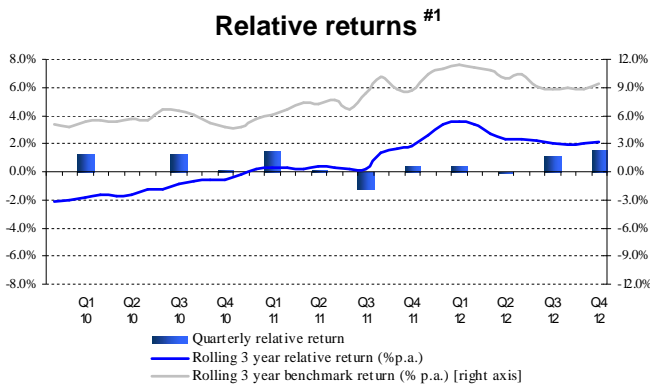
### Performance over Q4 2012

Distributions since inception total £9.46m, with distributions worth £1.76m over the most recent quarter.

Performance of Partners is lagged by 1 quarter. Performance over Q3 2012 was negative, with the manager producing a return of -0.7%, which was behind the benchmark by 1.1%.

## Royal London Asset Management – Fixed Interest

Mandate	Benchmark	Outperformance target	Inception date
UK Corporate Bonds	iBoxx £ non-Gilts all maturities	+0.8%	July 2007
Value (£'000)	% Fund Assets	Number of holdings	
£172,159	6.0	242	



**Performance**

	3 months (%)	1 year * (%)	3 years (% p.a.)
Fund	3.6	16.2	11.6
Benchmark	2.0	13.0	9.4
relative	+1.6	+3.2	+2.2

Source: Data provided by WM Performance Services, and RLAM \* 1 Year returns estimated by JLT.

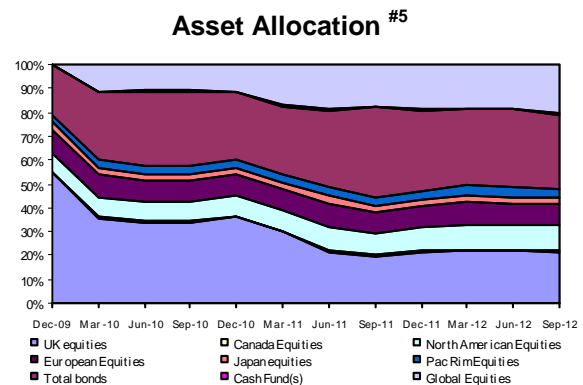
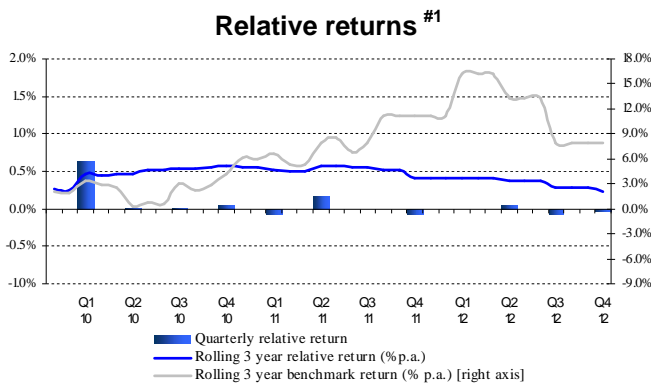
### Comments:

- RLAM have maintained a consistent philosophy for some time - the Fund remains significantly underweight to AAA and to a lesser extent AA and A rated bonds, and overweight BBB and unrated bonds.
- Similarly, RLAM favour medium term maturity bonds. This quarter they have moved to a more underweight position in long (over 15 year) bonds.
- Performance relative to the benchmark may be volatile in the short term due to RLAM's allocation to unrated bonds. These investments are not necessarily riskier or "junk status" and RLAM place their own rating on the bonds using their own research.



## BlackRock – Passive Multi-Asset

Mandate	Benchmark	Outperformance target	Inception date
Passive multi-asset	In line with customised benchmarks using monthly mean fund weights	0%	April 2003
Value (£'000)	% Fund Assets		
£1,305,849	45.4		



### Performance

	3 months	1 year *	3 years
	(%)	(%)	(% p.a.)
Fund	2.7	8.3	8.1
Benchmark	2.8	8.3	8.5
relative	-0.1	0.0	-0.4

Source: Data provided by WM Performance Services, and BlackRock

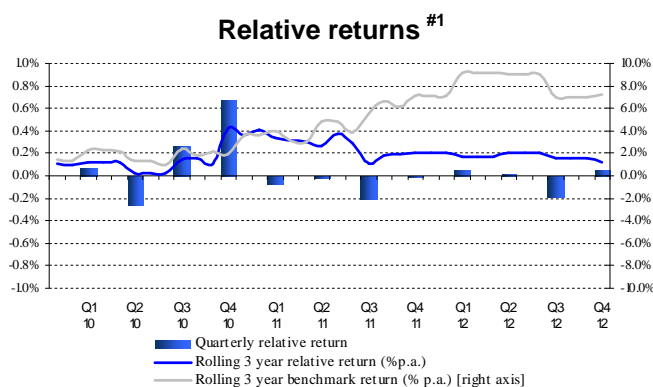
\* 1 Year returns are estimated by JLT.

### Comments:

- Being a passive mandate, with a customised benchmark based on the monthly mean fund weights, there is nothing unusual arising in risk and performance.
- The magnitude of the relative volatility in the portfolio remains small.
- Full information from Blackrock has not been received for this initial report, and will be included in the final report. Note that the asset allocation chart above has not been updated from the last report.

## BlackRock No.2 – Property account (“ring fenced” assets)

Mandate	Benchmark	Outperformance target	Inception date
Overseas property	Customised benchmarks using monthly mean fund weights	0%	September 2009
Value (£'000)	% Fund Assets		
£60,381	2.1		



## Performance

	3 months (%)	1 year * (%)	3 years (% p.a.)
Fund	0.6	4.4	7.3
Benchmark	0.5	4.5	7.2
relative	+0.1	-0.1	+0.1

Source: Data provided by WM Performance Services, and BlackRock

\* 1 Year returns are estimated by JLT.

### Comments:

- Full information from Blackrock has not been received for this initial report, and will be included in the final report.

## Appendix A – Market Events

Asset Class	What happened?	
	Positive Factors	Negative Factors
UK Equities	<ul style="list-style-type: none"> <li>UK equities were one of the better performing asset classes over the quarter, with the smaller and medium sized companies performing particularly well. Reasonable earnings growth, coupled in many cases with attractive yields, offset the relatively gloomier macro environment.</li> <li>CPI inflation remained within the Bank of England's target range over the quarter; the latest figure for CPI inflation is 2.7%.</li> <li>The UK Bank Rate remained at 0.5% over the quarter although there was no change to the level of QE, £375bn.</li> </ul>	<ul style="list-style-type: none"> <li>Activity in the UK's dominant services sector shrank at the fastest pace for more than three and a half years in December, adding to fears that GDP may have contracted in the final quarter of 2012. The Purchasing Managers' Index for the services sector registered a worse than expected fall in December and is now at the lowest level since April 2009.</li> <li>The number unemployed, 2.51m remains high although the unemployment rate has fallen from 8.0% to 7.8% over recent months. Increases in wages continue to be lower than the rate of inflation, putting further pressure on consumers.</li> </ul>
Overseas Equities		
North America	<ul style="list-style-type: none"> <li>Revised figures showed that US GDP grew at an annualised rate of 3.1% during the third quarter compared with the initial estimate of 2.0%.</li> <li>Signs of a recovery, an improvement in consumer confidence, increased housing demand and very easy monetary policy all combined to produce a positive backdrop.</li> </ul>	<ul style="list-style-type: none"> <li>Towards the end of the quarter uncertainty set in as the 'fiscal cliff' loomed. The recent elections resulted in a Democratic Senate, but a Republican House of Representatives – a recipe for deadlock and partisan politics. To the surprise of no-one a 'compromise' on the fiscal cliff was negotiated at the very last minute, but leaves several major questions postponed or unasked.</li> <li>The cuts in spending, roughly \$110 billion, due to be implemented on 1st January have only been delayed for two months and not cancelled. There is a view that the Republicans conceded defeat on the tax issue ('protecting millionaires' – an unwinnable argument) to prepare for the far more important fight on spending where the Democrats are on less favourable ground.</li> </ul>
Europe	<ul style="list-style-type: none"> <li>The ECB maintained interest rates over the quarter and announced a series of positive policy statements over the quarter in an attempt to stabilise investor confidence and improve liquidity in markets.</li> <li>The European Central Bank's commitment to do 'whatever it takes' to preserve the euro and some signs that Germany was willing to be more flexible in its attitude towards austerity packages across the region, have led to a strong 'relief' rally in prices in the last few months. Although the losses in 2011 have been recovered, European equity markets are still a long way off their previous highs.</li> </ul>	<ul style="list-style-type: none"> <li>Unemployment remains high - particularly in the peripheral Eurozone countries as austerity measures impact on confidence. Countries such as Spain and Greece are seeing unemployment in certain sections of the population in excess of 50%.</li> <li>Most analysts expect the Eurozone as a whole to remain in recession throughout 2013 (the 'official' forecast from the ECB is for growth of only 0.1%) with even Germany now thought to be heading into recession. The peripheral countries – the original cause of the Eurozone problems – are seeing an improvement in competitiveness (not surprisingly given the fall in labour costs) but at the expense of potentially explosive social disorder.</li> </ul>

Asset Class	What happened?	
	Positive Factors	Negative Factors
Japan	<ul style="list-style-type: none"> <li>Following the election of Shinzo Abe, there is a chance of radical measures emanating from the Bank of Japan. Whether these measures will be sufficient to satisfy investors, particularly foreign investors, only time will tell. In the past, a lower yen has been the trigger for improved stock market performance. As a result of exchange rate movements, the valuations of many high quality companies have fallen to attractive levels.</li> </ul>	<ul style="list-style-type: none"> <li>Mr. Abe has promised to put pressure on the traditionally ultra-conservative Bank of Japan to raise inflation and target recovery. There is a risk in this that Mr. Abe tries to be too radical with the Japanese economy and further deepens existing structural problems.</li> </ul>
Asia Pacific	<ul style="list-style-type: none"> <li>Asian Equities ticked up this quarter, after a year in which worries over the slowdown in China and the problems in Europe were uppermost in investors' minds. However, the recent relaxation of fiscal and monetary policy in China following the change in leadership has alleviated some of these concerns.</li> <li>Most central banks held their interest rate strategy, helping market confidence. The recovery that appears to have begun in China in the latter part of last year should continue, albeit at lower rates of growth than in the past. There will be no double-digit growth again for the foreseeable future. However 7% is the generally accepted figure for 2013.</li> </ul>	<ul style="list-style-type: none"> <li>Until there is clarification regarding the new regime's policies, there will inevitably be some concerns about the outlook for the Chinese economy.</li> <li>Exports to Europe and the US remain a concern as long as doubts about economic growth continue.</li> </ul>
Emerging Markets	<ul style="list-style-type: none"> <li>Emerging markets equities have started to outperform in the last few months after two years of the underperformance. With, in many cases, above average growth expectations coupled to relatively low valuations, there are obvious attractions to this asset class.</li> <li>Emerging market equities do not look expensive, but prices are likely to remain volatile affected by policy pronouncements elsewhere in the world.</li> </ul>	<ul style="list-style-type: none"> <li>Emerging Market equities over recent months have been the lowering of earnings expectations (given what has been happening globally) – thus putting a question mark over valuations.</li> <li>Political instability is the main investor concern at present with the political leadership of China changing and the uncertainties in the Latin America increasing proving a drag to growth.</li> </ul>
Gilts	<ul style="list-style-type: none"> <li>Despite Government bond yields remaining at near record lows, the demand for Gilts has proved resilient as the UK continues to be seen as a 'safe haven' status relative to other issuers of sovereign debt. In addition, the rate of CPI inflation is now within the Bank of England's target range. However expensive Gilts may look, until there is a perceived resolution to the problems of the Eurozone, this situation may continue for some time.</li> </ul>	<ul style="list-style-type: none"> <li>Towards the end of the quarter, yields rose slightly as revised UK GDP figures and other economic data suggested that the worst of the economic downturn might be over. Gilt yields are at an unsustainably low level and, at some stage, are likely to rise significantly as interest rates are raised to limit inflationary pressures as the economy recovers.</li> </ul>

Asset Class	What happened?	
	Positive Factors	Negative Factors
Index Linked Gilts	<ul style="list-style-type: none"> <li>With limited supply and investors continuing to seek inflation protection, demand for Index Linked Gilts remains high, thus supporting prices. Real yields remained slightly positive in Q4 as investors nervously awaited the review by the Office of National Statistics into the calculation of RPI. However, contrary to market expectations, the calculation basis for the RPI has been left unchanged which means that it will not be changed in order to bring RPI closer to CPI.</li> </ul>	<ul style="list-style-type: none"> <li>A negative real yield on long-dated index-linked stocks is unsustainable over the longer term in an environment in which central banks are able to successfully control inflation within a target range.</li> </ul>
Corporate Bonds	<ul style="list-style-type: none"> <li>Sterling Corporate Bonds produced a positive return, benefiting from the strength of corporate balance sheets and the higher yields relative to gilts. Investors also approved of the Eurozone's efforts to support the sovereign bond markets.</li> </ul>	<ul style="list-style-type: none"> <li>The Corporate Bond Market is currently suffering from a lack of liquidity meaning that trading is becoming more difficult.</li> </ul>
Property	<ul style="list-style-type: none"> <li>Tier 1 prime assets continue to outperform secondary and tertiary properties, as they have done throughout 2012.</li> </ul>	<ul style="list-style-type: none"> <li>The well established trend of overall void levels increasing in tandem with the lowering of capital values as well as falling rental yields continued through Q4. The lack of growth in the economy compounded these issues.</li> </ul>

## Economic statistics

	Quarter to 31 December 2012			Year to 31 December 2012		
	UK	Europe <sup>(1)</sup>	US	UK	Europe <sup>(1)</sup>	US
Real GDP growth	-0.3%	n/a	0.0%	0.0%	n/a	1.5%
Unemployment rate	7.7%	11.0% <sup>(4)</sup>	7.8%	7.7%	11.0% <sup>(4)</sup>	7.8%
Previous	7.9%	10.8% <sup>(u)</sup>	7.8%	8.4%	10.1% <sup>(u)</sup>	8.5%
Inflation change <sup>(2)</sup>	1.2%	0.4%	-0.8%	2.7%	2.2%	1.7%
Manufacturing Purchasing Managers' Index	51.4	47.5	50.7	51.4	47.5	50.7
Previous	48.4	46.1	51.5	49.6	46.9	53.1
Quantitative Easing / LTRO <sup>(3)</sup>	£375bn	€1,018bn	\$2,774bn	£375bn	€1,018bn	\$2,774bn
Previous	£375bn	€1,018bn	\$2,654bn	£275bn	€0bn	\$2,654bn

Source: Thomson Reuters, market, Institute for Supply Management, Eurostat, United States Department of Labor, US Bureau of Economic Analysis. All figures to 31 December 2012 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 November 2012; (u) Updated since our previous reports.

## Appendix B – Glossary of Terms

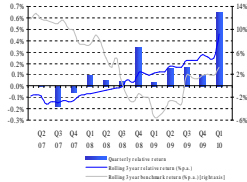
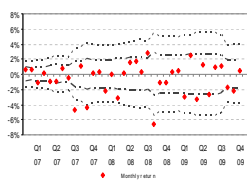
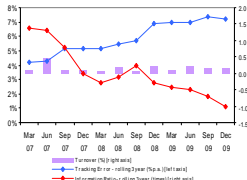
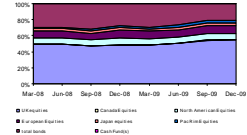
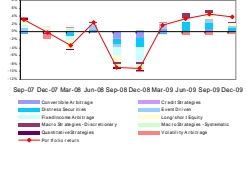
Term	Definition
Absolute Return	The actual return, as opposed to the return relative to a benchmark.
Annualised	Figures expressed as applying to 1 year.
Bond Assets	Assets held in the expectation that they will exhibit a degree of sensitivity to yield changes. The value of a benefit payable to a pensioner 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	<p>The following indices are used for asset returns:</p> <p>UK Equities: FTSE All-Share Index</p> <p>Overseas Equities: FTSE AW All-World ex UK</p> <p>UK Gilts (&gt;15 yrs or &gt;20 yrs): FTSE Brit Govt Fixed Over 15 (or 20) Years Index</p> <p>Corporate Bonds(&gt;15 yrs AA): iBoxx £ Corp 15+ Years AA Index</p> <p>Non-Gilts (&gt;15 yrs): iBoxx £ Non-Gilts 15+ Years Index</p> <p>Index Linked Gilts (&gt;5yrs): FTSE Brit Govt Index Link Over 5 Years Index</p> <p>Hedge Funds: CS/Tremont Hedge Fund Index</p> <p>Commodities: S&amp;P GSCI Commodity GBP Total Return Index</p> <p>High Yield: Bank Of America Merrill Lynch Global High Yield Index</p> <p>Property: IPD Property Index (Monthly)</p> <p>Cash: 7 day London Interbank Middle Rate</p> <p>Price Inflation: All Items Retail Price Index</p> <p>Earnings Inflation: UK Average Weekly Earnings Index - Whole Economy excluding Bonuses</p>
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.

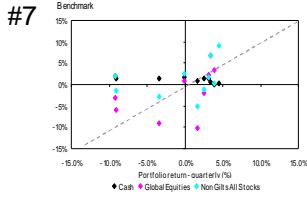
Term	Definition
Mercer Gilt Yield	An estimate of the yield available on a notional portfolio of UK Government conventional gilt stocks whose cashflows approximately match the Fund's estimated benefit cashflows
Money-Weighted Rate of Return	The rate of return on an investment including the amount and 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.



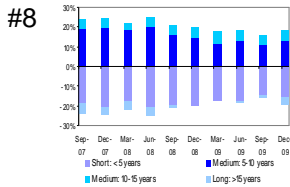
# Appendix C – Glossary of Charts

The following provides a description of the charts used in Section 5 and a brief description of their interpretation.

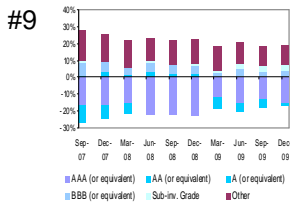
Reference	Description
<p>#1</p>  <p>This chart shows the quarterly relative return (blue bars) and rolling 3 year relative return (blue line) for the manager over 3 years/since inception. This shows the ability of the manager to achieve and outperform the benchmark over the medium term. The rolling 3 year benchmark absolute return (grey line) is overlaid to provide a context for relative performance, e.g. consistent underperformance in a falling market.</p>	<p>This chart shows the quarterly relative return (blue bars) and rolling 3 year relative return (blue line) for the manager over 3 years/since inception. This shows the ability of the manager to achieve and outperform the benchmark over the medium term. The rolling 3 year benchmark absolute return (grey line) is overlaid to provide a context for relative performance, e.g. consistent underperformance in a falling market.</p>
<p>#2</p>  <p>This chart shows the relative monthly returns for 3 years/since inception. It shows the level of fluctuation about the zero axis, i.e. the level of volatility of monthly returns and any tendency for positive or negative returns. The dotted lines show the standard deviation of returns over 1 year periods - this is a standard measure of risk which shows the magnitude of fluctuations of monthly returns. Under common <b>assumptions</b>, being within the inside dotted lines (i.e. 1 standard deviation) is roughly likely to occur 2/3rds of the time, while being within the outside lines is roughly likely to occur 1 in 20 times (i.e. 2 standard deviation - which is considered unlikely).</p>	<p>This chart shows the relative monthly returns for 3 years/since inception. It shows the level of fluctuation about the zero axis, i.e. the level of volatility of monthly returns and any tendency for positive or negative returns. The dotted lines show the standard deviation of returns over 1 year periods - this is a standard measure of risk which shows the magnitude of fluctuations of monthly returns. Under common <b>assumptions</b>, being within the inside dotted lines (i.e. 1 standard deviation) is roughly likely to occur 2/3rds of the time, while being within the outside lines is roughly likely to occur 1 in 20 times (i.e. 2 standard deviation - which is considered unlikely).</p>
<p>#4</p>  <p>This chart shows the 3 year annualised tracking error (this is the standard deviation of returns which shows the magnitude of the fund returns compared to the benchmark) and the 3 year information ratio (this is the excess return divided by the tracking error). If tracking error increases, the risk taken away from the benchmark increases, and we would expect an increase in the excess return over time (albeit more variable). The turnover is provided to show if any increase in risk is reflected in an increase in the level of active management, i.e. purchases/sales in the portfolio.</p>	<p>This chart shows the 3 year annualised tracking error (this is the standard deviation of returns which shows the magnitude of the fund returns compared to the benchmark) and the 3 year information ratio (this is the excess return divided by the tracking error). If tracking error increases, the risk taken away from the benchmark increases, and we would expect an increase in the excess return over time (albeit more variable). The turnover is provided to show if any increase in risk is reflected in an increase in the level of active management, i.e. purchases/sales in the portfolio.</p>
<p>#5</p>  <p>This chart shows the absolute asset allocation or hedge fund strategy allocation over time. This helps to identify any significant change or trends over time in allocation to particular asset allocations/hedge fund strategies.</p>	<p>This chart shows the absolute asset allocation or hedge fund strategy allocation over time. This helps to identify any significant change or trends over time in allocation to particular asset allocations/hedge fund strategies.</p>
<p>#6</p>  <p>These charts show the breakdown of the return provided by each of the different hedge fund strategies or asset classes over time - this provides a profile of where the returns come from, and should be compared with the volatility chart above to see if risk taken is being rewarded accordingly. The total portfolio return is also shown.</p>	<p>These charts show the breakdown of the return provided by each of the different hedge fund strategies or asset classes over time - this provides a profile of where the returns come from, and should be compared with the volatility chart above to see if risk taken is being rewarded accordingly. The total portfolio return is also shown.</p>



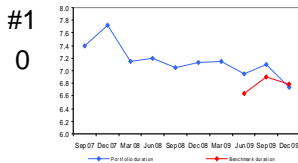
This chart plots the quarterly returns of the fund against quarterly returns of various indices. Any plots on the diagonal line represent the fund and the index achieving the same quarterly return - any below the line represents underperformance relative to the index, above the line represents outperformance. This is to highlight any apparent correlation between the fund returns and any particular index. If a fund is used as a diversifier from, say equities, we would expect to see a lack of returns plotted close to the diagonal line.



This chart shows the holding in short, medium and long maturity bonds relative to the benchmark. Over/underweight positions expose the fund to changes in the yield curve at different terms.



This chart shows the holding in bonds with different credit ratings. AAA is the highest grading (usually for government or supranational organisation bonds) while below BBB is sub-investment grade and has a considerably higher risk of default. The lower the grade the higher the risk and therefore the higher the return expected on the bond.



This chart shows the duration of the fund against the benchmark duration. It shows whether the fixed interest fund manager is taking duration bets against the benchmark.

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## Appendix D – 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	+3.5-4.5%
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	

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