

4th Quarter, 2011





## **Executive Report**

- 3 International Overview
- **6** Plan Commentary
- 8 Scheme & Manager Performance
- 11 Balance Sheet
- 12 Combined Fund Performance
- Component Returns
- Manager Fund Performance

## **Appendix**

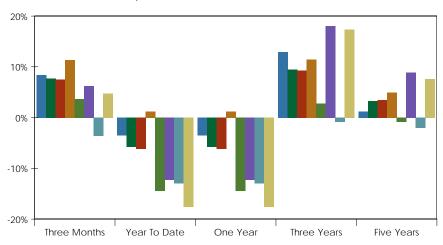
- 38 Benchmarks
- **39** Glossary of Risk Formulae
- 40 Glossary of Risk Formulae contd
- 41 Glossary of Equity Characteristics
- 42 Glossary of Fixed Income Characteristics
- 43 Disclaimer





### Equity Index Performance (in GBP)

#### Performance History



#### Performance Returns%

	Three Months	Year To Date	One Year	Three Years	Five Years
■ FTSE All Share	8.4	-3.5	-3.5	12.9	1.2
■ FT: World	7.7	-5.8	-5.8	9.4	3.3
■ FT: World ex UK	7.5	-6.1	-6.1	9.2	3.4
FT AW North America	11.3	1.2	1.2	11.4	4.8
■ FT: Developed Europe ex UK	3.6	-14.4	-14.4	2.7	-0.9
■ FT: Developed Asia Pac x Jp	6.2	-12.3	-12.3	17.9	8.8
■ FT AW: Japan	-3.6	-12.9	-12.9	-0.8	-2.0
MSCI Emerging Markets GD	4.7	-17.6	-17.6	17.3	7.6

The sovereign debt crisis in the Eurozone has been the main news story in town; moving markets across asset classes and dominating headlines over the year. Most commentators are of the opinion that 2012 will not be any easier as the other key problems persist; rising global inflation, the American deficit and stalling growth in the Emerging economies. Political hot potatoes can be found throughout the world as governments seek to keep the populace calm while assuaging the anxieties of foreign investors through public budget cuts. Apart from Japan the major stock markets finished 2011 with a strong quarter of returns in the black but all major markets except the US remain in the red for the calendar year itself. Oil & Gas, Industrials and Consumer Services stocks were the strongest sectors over the quarter, Utilities and Telecoms gained the least. Hedge Funds ended 2011 with their highest cumulative net subscriptions since the collapse of Lehman Brothers. The price of crude oil futures ended the year up from September at \$110 per barrel. The FTSE World was up by 7.7% (GBP) over quarter four 2011 but remains behind over one year returning -5.8% (GBP).

The UK vetoed attempts by Germany and France to change EU treaties to impose tighter fiscal rules on the Eurozone and raise more money from taxes on financial transactions. George Osbourne conceded that the deficit position was £33bn worse in the autumn budget than it had been in the spring. Britain's banks reduced their lending exposure to peripheral Eurozone counterparts. Excluding Financials, companies in the FTSE 100 are sitting on roughly £130bn and look likely to keep hoarding. Some has been handed back as dividends or share buy-backs, the latter driving up earnings per share by reducing the number in circulation. Inflation fell to 5% at the start of the quarter driven down by supermarket discounting but is still way above the 2% BoE target rate. The unemployment rate rose to 8.3% at 2.6m, a 17 year high. UK GDP grew by 0.6% in the third quarter of 2011 following an upward revision. Industrials were the leading sector over quarter four, Utilities the weakest. The FTSE All Share was up 8.4% (GBP) over the fourth quarter but remains down by -3.5% (GBP) over the year.

Eurozone inflation fell to 2.8% in December and GDP grew by 0.2% in Q3. Moody's cut Spain's rating to A1 at the start of the quarter. The European Commission argues that credit ratings agencies should have their freedom of speech restricted amid accusations their erratic and subjective decisions have aggravated the sovereign crisis. President Sarkozy intends to introduce the financial transaction tax in France, with agreement from the trade unions, even if it is not adopted by the wider EU. Ms Merkel is more cautious given the divided opinion of the Germans. Germany reported its first unemployment rise since February 2010 to 7% mid quarter. Eurozone unemployment stands at a Euro era high of 16.6m. Mario Monti formed an emergency Italian government of technocrats in Italy to lead the country through the EUR200bn of debt maturing by the end of April. Activity in the Eurozone manufacturing sector fell for a fifth successive month in December. The FTSE World Europe ex UK index returned 3.3% (GBP) over quarter four and -14.7% (GBP) over the year.

All comments coming from the US claim that the world's largest economy is weathering the European debt crisis and well set for growth in 2012. The unemployment rate unexpectedly fell to 8.5%, the lowest since February 2009. 1.6m jobs were added during 2011. Mortgage approvals were not stimulated by Operation Twist as roughly half of households are in negative equity or distress and unable to refinance. Early in the quarter legislators clashed with China over its currency intervention once again by passing a law that would impose higher tariffs on imports considered to be unfairly State subsidised. US exports to Europe have shrunk to 18% while those to the Pacific Rim are at 24% showing the importance of China as a trading partner. US GDP grew by 2% in quarter three following a downward revision. All sectors gained over the final quarter, Oil & Gas leading the way and Utilities gaining the least. The FTSE North America index returned 11.3% (GBP) over the fourth quarter and 1.2% (GBP) for the year.

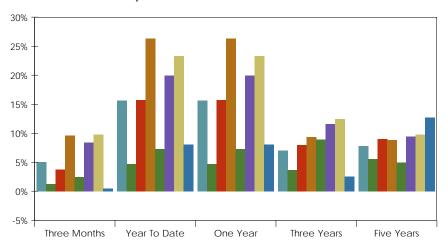
Japan's economy expanded strongly over quarter three following three consecutive quarters of decline as supply chains disrupted by the March earthquake were fully restored. The Eurozone crisis has impacted on exports from Japan as investors continue to view the yen as a safe haven making Japanese goods less competitive. The FTSE Japan returned -3.6% (GBP) for quarter four; the FTSE Asia Pacific ex Japan returned 5.6% (GBP). China's economy moderated to its slowest pace in 2 years in quarter 3 as GDP slowed to 9.1% with the government seeking to engineer a soft landing. Chinese inflation also slowed to 5.5% in October. India's economic growth also slowed to a 2 year low and Brazil's economy is predicted to expand by 3.1% this year compared to 7.5% last year. Economic slowdown in the US and Europe is undermining export demand for manufactured goods. Following the release of the latest data, only Russia from the BRICs group exhibited increased growth over quarter three. The IMF forecasts economic growth of 5% this year for sub-Saharan Africa rising to 6% next year. Australia could be negatively affected by lower commodity prices given slowing global industrial production. Diamond prices are poised to outpace gold over the next four years due to increased sales in the emerging economies. Gold showed good absolute performance over the year but finally slowed ending the year at \$1,570 per ounce. MSCI Emerging Markets index returned 4.7% (GBP) for the fourth quarter and -17.6% (GBP) for 2011.





### Fixed Income Index Performance (in GBP)

#### Performance History



#### Performance Returns %

	Three Months	Year To Date	One Year	Three Years	Five Years
■ FTSE All Stock Index	5.0	15.6	15.6	7.0	7.8
■ FTSE All Stock 0-5 Yr. Gilts	1.2	4.7	4.7	3.7	5.5
FTSE All Stock 5-15 Yr. Gilts	3.7	15.6	15.6	7.9	9.0
FTSE All Stock > 15 Yr. Gilts	9.6	26.3	26.3	9.3	8.8
■ ML STG N-Gilts All Stocks	2.4	7.2	7.2	8.9	4.9
■ FTSE Index Linked	8.4	19.9	19.9	11.6	9.4
FTSE Index Linked 5+ yrs	9.8	23.3	23.3	12.4	9.7
JPM GBI Global	0.4	8.0	8.0	2.5	12.7

The optimism at the start of 2011 was based on strengthening global economic growth in most countries however a number of economic shocks throughout the year have meant that 2011 was a much more difficult market environment than in 2010. Rising inflation was exacerbated by political unrest in the Middle East and North Africa, the earthquake in Japan with the resultant surge in energy prices and financial market uncertainty in Europe. Emerging economies were hit particularly hard by inflation. The post earthquake reconstruction effort will be the main driver of growth in Japan, but the domestic economy is struggling. With interest rates in the US, UK and Europe at all time lows; central banks have been more focused on liquidity programmes. China has also started monetary easing, reducing bank's reserve requirement ratios. The on-going sovereign debt crisis in Europe deepened in the last quarter of the year shaking investor confidence as markets remain unimpressed by EU leaders' proposals to resolve the crisis. Investor risk aversion continues to see safe haven flows into the investment grade bond markets with bonds outperforming stocks globally. Current yields in sovereign markets like the US and Germany are being held down by low short rates and safe haven flows. The JPM Global Govt Bond index has increased +8.0% (GBP) for the year ending December 2011 while the Barclays Capital Global Aggregate Corporate Bond index delivered +5.1% (GBP).

In the UK, the Chancellor's Autumn Statement downgraded the near-term economic outlook substantially pushing borrowing numbers higher. Measures were largely fiscally neutral with deficit reduction still the key driver. Inflation has slowed for the second month in a row down to 4.8% y/y in November from 5.0% in October. The UK unemployment rate remains unchanged at 8.3%. The UK manufacturing sector showed signs of stabilisation in December's Purchasing Managers Index (PMI) rising to 49.6 from 47.7 in November however over Q4 as a whole, output and new orders reflect the largest falls since Q2 2009. Longer term interest rates have dropped and 10-year yields have reached new lows in reaction to market expectations that the Bank rate will hold at 0.5% until Q1 2014, the BoE's purchases re-activated in October and risk aversion caused by the euro area crisis. The benchmark 10-year gilt yield continues to track lower, closing the quarter at 1.98% down from 2.42% at the end of September. The FTSE All Stock Gilts returned +5.0% (GBP) and +15.6% (GBP) for the quarter and year to date respectively while the ML Sterling Non Gilts gained +2.4% (GBP) and +7.2% (GBP).

Focus remained on the euro area in the fourth quarter as market pressures forced the resignations of Greek PM Papandreou and then Italian PM Berlusconi, installing interim governments led by Lucas Papademos and Mario Monti respectively. Economic conditions are continuing to deteriorate with the December composite PMI coming in at 48.3, up from 47.0 in November but still under 50 signalling contraction for the 4th consecutive month. The latest proposals from the December Summit include a larger financial safety net and reforms to foster increased fiscal co-operation in the euro area however markets remain unconvinced with the threat of imminent credit rating downgrades for 'core' countries. Facing the threat of recession, the ECB has cut the interest rate by 0.25% twice in consecutive months back down to 1.0% in December and provided additional liquidity to the banking sector with 3yr long term refinancing operations (LTRO). Improved appetite for Italian and Spanish bonds saw yields fall at the end of the year, as the Treasury in Rome priced 2022 bonds to yield 6.98% in their last auction compared with 7.56% at the end of November. The benchmark German Bund 10-year yield closed the quarter slightly down at 1.83% compared to 1.89% at the end of September. Over the 4th quarter the iTraxx Europe 5yr CDS index, representative of 125 investment grade entities across 6 sectors reflected the volatility in the markets contracting to 150.5 at the end of October, peaking at 208.2 the next month before closing at 173.5. The JPM European Govt Bond index returned +1.7% (EUR) and +7.2% (EUR) for the quarter and year to date while the respective figures for the Barclay Capital Global Aggregate Credit index are +4.0% (EUR) and +8.1% (EUR).

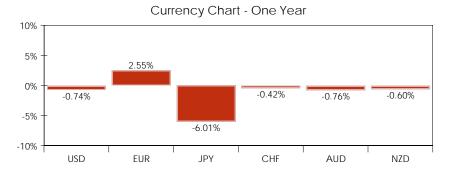
In contrast to the signs of recession in the euro area and the UK, increasingly positive US data over the 4th quarter included a further fall in the unemployment rate in December to a near 3 year low of 8.5%. The Conference Board's consumer confidence index rose to its highest level since April reaching 64.5 up from 55.2 in November. Economic activity in the manufacturing sector expanded in December for the 29th consecutive month, as the Institute for Supply Management (ISM) survey registered 53.9 (over 50 signalling expansion) on the back of improved output, employment and new orders. The Federal Reserve left interest rates unchanged at near 0% at December's FOMC meeting and will continue with its bond buying stimulus programme Operation Twist. The programme shows some signs of success with long yields markedly lower, while yields are also being held down by safe haven flows due to the European sovereign debt crisis. The 10-year benchmark Treasury yield starting the year at 3.37% has dropped to close Q4 at 1.88%. For the quarter and year to date the JPM US Govt Bond index returned +0.9% (USD) and +9.9% (USD) respectively while the Barclay Capital US Aggregate Corporate Bond index returned +1.9% (USD) and +8.1% (USD).





### Currency Performance (in GBP)





	Three Months	Year To Date	One Year	Three Years	Five Years
United States dollar	-0.24	-0.74	-0.74	2.59	-4.61
European Union euro	3.06	2.55	2.55	4.87	-4.30
Japanese yen	-0.42	-6.01	-6.01	-2.87	-13.35
Swiss franc	2.67	-0.42	-0.42	-1.72	-9.94
Australian dollar	-5.58	-0.76	-0.76	-10.26	-9.86
New Zealand dollar	-2.27	-0.60	-0.60	-7.03	-6.63

The fourth quarter of 2011 has seen a continued trend of the weakening Euro and strengthening of the Dollar. The Euro lost ground against the US Dollar, Sterling, Yen and the Dollar saw gains against Sterling and Euro, but a small weakening against the Yen. The rise in the Renminbi has slowed to a crawl in the recent months as a drop off in demand has hit Chinese exports. China's exports grew 13.8% in November from a year earlier, slowing from a 15.9% increase in October. Imports grew 22.1% year-on-year, less than the 28.7% rise a month earlier, in another sign of weakening in the domestic economy. Mr Hu, China's president, said China would not deliberately pursue a trade surplus. Japan continues to struggle with the Bank of Japan downgrading its assessment of the Japanese economy as sliding exports and expensive energy imports caused the largest November trade deficit on record. Australia's unemployment rate unexpectedly fell to 5.7 per cent in November increasing the likelihood that the Reserve Bank of Australia, the central bank, will continue raising the cash rate throughout next year as the economy gains momentum. Switzerland's triple A credit rating remains undented, government debt is going down, interest rates have dropped to near historic lows and prices are falling. But still, the Swiss are worried. Since the Eurozone crisis, foreign money has flooded into Switzerland, a traditional haven, forcing the Swiss National Bank in September to set a floor of SFr1.20 against the euro in order to rein in the strength of the franc. Even with the floor in place, the SNB admits the franc is still high.

In the UK, signs of a modest improvement in the UK economy have emerged, with the first rise in lending to businesses in months. The construction sector to expand in December, rather than contracting as most economists expected. Lending to private, non-financial companies - the backbone of the economy - rose by £1.8bn in November from October, more than offsetting the declines of the previous two months. Britain's high rate of annual inflation slowed in December for the third month in a row. The 4.2% annual rise in the consumer price index - down from 4.8% in the previous month and a peak of 5.2% in September - was widely expected and reflected heavy discounting on the high street and lower fuel prices. Unemployment rose by 118,000 to another 17-year high of 2.68m in the three months to November, the Office for National Statistics said. The jobless rate increased more rapidly than expected to 8.4 per cent of the workforce, up 0.3 percentage points on the previous quarter and the highest since January 1996. Economists had predicted 8.3 per cent. Youth unemployment continued to rise, with the number of 16 to 24-year-olds out of work up 52,000 to 1.04m. However, that figure includes 313,000 full-time students looking for part-time work. 1.13m workers went on strike in November, virtually all in the November 30 stoppage over public sector pensions. UK house prices have fallen this quarter, ending the year 1.3% below levels at the end of 2010. The average price of a house is the lowest since July 2009 and almost 20% below the pre-financial crisis peak. Sterling closed the quarter down against the USD by 0.2% and the Yen by 0.4%, however it gained against the Euro by 3.1%.

In the US, In the absence of a definitive solution to the Eurozone debt crisis, and alongside the weakening global economy, the dollar is continuing to enjoy its safe haven status throughout Q4 2011. US consumers were optimistic as the outlook for jobs improved. Consumer sentiment rose for a fifth consecutive month to its highest level since May. Stronger than expected job creation in December suggested that economic growth is picking up, and sentiment will probably be boosted by the continued fall in the unemployment rate. Unemployment has seen a surprise drop to 8.5% in December from the 9.1% seen in September 2011. US house prices continue to fall, again dashing expectations that the housing market will stabilise, posing a continued threat to economic growth in 2012. Even with the falling prices, the US housing market finished 2011 on a stronger note with sales of previously owned homes rising the most in December since the beginning of the year. US housing starts reached an 18-month high in November, while permits for new construction were at their best since March 2010, raising hopes that the depressed housing market may be strengthening. The US trade deficit widened 10.4% in November to the highest level since June as companies imported more expensive foreign oil. The trade gap grew to \$47.8bn, higher than the \$45bn that economists expected. Imports accelerated by the most since May, rising 1.3% to \$226bn. Meanwhile,, exports declined 0.9% to \$178bn. The Dollar ended the quarter gaining against the Sterling and Euro by 0.2% and 3.3% respectively, however it was down compared to the Yen by 0.2%.

In the Euro area, the Euro weakened further against the Dollar, Yen and Sterling this quarter. Eurozone unemployment surged to a fresh record late last year as economic confidence tumbled to a two-year low and even Germany's robust industrial sector showed signs of weakness, which pointed to a marked contraction in activity in the final months of 2011. The latest gloomy economic news indicated the 17-country monetary union was being buffered badly by worries over its debt crisis as well as fiscal austerity measures and slower global growth - with Italy among its worst hit member states. Eurozone inflation has started its decent as the region's economy heads towards recession. Annual inflation in the 17 country block dropped from 3.0% in November to 2.8% in December. The favourable medium term inflation outlook is a good indicator that the ECB may cut rates in the coming months. The ECB cut its main interest rate by 0.25% in December to 1.0%, its lowest rate ever, but is unlikely to rush into cuts in official borrowing costs. It is waiting to see whether the 489bn EURO it provided in 3 year loans to Eurozone banks in December helps ease fears about banking stability and tensions in government bond markets. The unemployment rate in the Eurozone remains stable at 10.3% of the work force in November, compared to 8.6% in the US calculated on the same basis. In Spain, the unemployed rate is approaching 22.9% of the workforce, more than double the European Union average. The Euro ended the quarter down against the US Dollar, Sterling and Yen by 3.3%, 3.19% and 3.5% respectively.





#### Scheme Performance

During a quarter which saw most of the main asset class benchmarks recover ground lost in Q3, the London Borough of Hillingdon returned 3.82% versus the Total Plan composite benchmark which returned 4.80%; this resulted in a relative return of -0.94%. In monetary terms this is a growth in assets of £21.5 million increasing the value of the combined scheme to £583.7 million, despite £2.2 million being withdrawn from the scheme during this period. On a 'look through' basis Ruffer's Absolute Return Fund beat its liquidity benchmark and contributed to performance. This was more than offset by the Private Equity assets which, during this short period in terms of the investments longer term aspiration, considerably lagged their global equity comparator. In allocation terms most mandates are in line with the neutral position with the largest impact would be the underweight of the UBS mandate.

Over one year the scheme has earned a meagre 0.12% which was 0.14% behind benchmark. Observing the three year period, replacing the large gain achieved against the benchmark in Q4 2008 results in the plan falling 0.77% behind, with the benchmark returning 9.63% pa and the plan trailing this with 8.79% pa. Since inception the plan and benchmark have earned similar returns of 6.25% pa and 6.35% pa respectively.

#### **Manager Performance**

#### Fauchier

During the latest quarter Fauchier declined 1.21% and relative to the target benchmark, LIBOR 3 month + 5%, which returned 1.48%, this resulted in a relative underperformance of 2.66%. Since funding in June 2010, Fauchier has trailed the benchmark in four out of six quarters, and the last three consecutively. The since inception performance is negative with a loss of 1.39% pa for the assets versus 5.87% for the benchmark, resulting in a relative return of -6.86%.

#### **Goldman Sachs**

During the latest quarter the Goldman Sachs mandate was terminated and the funds moved into the new JP Morgan portfolio.

#### JP Morgan

This new account funded in November with assets reallocated from Goldman Sachs, and appreciated to £69.6 million by the end of the period, accounting for just under 12 per cent of the scheme assets.

#### Macquarie

The Macquarie portfolio recorded a deficit of 11.35% during the quarter more than offsetting Q3s respectable return. The since inception (September 2010) return is back in negative territory recording an annualised loss of 8.47%.

At present no benchmark has been applied to this mandate.

#### Marathon

In quarter four the Marathon portfolio partly reversed the significant loss of the previous period posting a return of 5.27%, however this was against the benchmark MSCI World index return of 7.85%. As a result, Marathon now registers underperformance over the one year of -8.58% versus -4.84%. Since inception there have been four periods of underperformance countered with two of outperformance, of which the first quarter incumbent was nearly four per cent ahead relatively. Consequently the since inception result is limited to a relative loss of 79 bps, the portfolio returning 4.90% pa against 5.73% pa.





#### **Manager Performance**

#### **M&G Investments**

Month LIBOR +4% p.a. target of 1.24%. For one year the account earns 4.37% versus 4.91% whilst since inception at the end of May 2010, the portfolio registers a 4.26% pa Internal Rate of Return for this portfolio is 5.05%.

#### Ruffer

The Ruffer portfolio earned 2.81% during the quarter and against the return of 0.22% for LIBOR 3 Month GBP, delivered a relative outperformance of 2.58%. For one year the account earns 1.69% versus 0.80% whilst since inception at the end of May 2010, the portfolio registers a 5.12% pa return against the benchmark of 0.77% pa.

#### **Private Equity**

The private equity assets, consisting of funds with LGT and Adam Street, both posted negative returns during quarter four. The latter incurred a loss of 3.83% whilst the former faired marginally better down 3.07%. Although lagging behind the other managers in O4, over the one year they are the plans top two components. Adam Street delivered a significant 14.73% and LGT posted 10.25%. Over three years both funds deliver near zero returns; since their respective inceptions in May 2004 and January 2005 LGT returns of 8.42% pa and Adam Street losses 0.08% pa.

At present no benchmark has been applied to these mandates.

#### **SSGA**

The SSGA passively managed portfolio rose 6.71% in the quarter but was slightly behind the benchmark with a relative loss of 5bps. With the underlying components largely in line with their respective benchmarks, a selection gain of 16 bps earned locally in the Asia Pacific region was offset by unfavourable currency movement in the region. The growth in asset over the last three months was not enough to place the one year return in positive territory, with the portfolio losing 2.10%, however this was slightly ahead of the benchmark by 15 bps. Reaching the three year milestone, a respectable gain of 10.91% pa was earned against 10.80% pa for the yardstick, whilst since inception the portfolio earned 13.30% pa.

#### **Manager Performance**

#### SSGA Drawdown

Over the fourth quarter, M&G investments posted a return of 1.25%, in line with the 3 The SSGA Drawdown fund was marginally ahead of the custom benchmark in the fourth guarter with a return of 1.30% versus 1.23%. Longer-term, the fund is 19bps above the benchmark over one year and 30bps ahead from inception. For the latest period, the account return against the benchmark of 4.86% pa. However, please note that the since inception is split in line with the benchmark 50/50, the slight outperformance of the cash fund is the main driver of the small outperformance, which continues into the one year result which is coupled with a slight over weight to the better performing Corporate Bond Fund.

UBS UK Equity increased 7.80% over the quarter and, in relative terms, was 54 bps behind the FTSE All Share which returned 8.39%. The portfolio has lagged the benchmark for seven of the last twelve quarters. Of this quarters loss, the 0.74% stock selection deficit was the most significant detraction to performance from the sectors of Consumer Services (-1.01%) and Financials (-0.58%), although by Oil & Gas (+0.66%) partly counteracted the outcome. Whilst asset allocation enhanced the overall return by 20 basis points the largest contributor being the decision to be underweight Financial (16bps). Over one year a similar picture unfolds. An asset allocation gain of 2.35% was observed. Of that, underweighting Basic Materials (1.37%) and Financials (0.86%) which were laggards was highly beneficial. This was however partly offset by underweighting Consumer Goods (-1.14%) a leading sector over 2011. The portfolio stock selection loss more than offset any advantage; stock picking in Consumer Services (-2.49%) and Financials (-1.83%) did the most damage. This was further exacerbated by almost a one per cent loss from Technology, such that an overall stock selection shortfall of 4.18% was recorded. Apart from the inception to date relative performance, which stands at +0.83% (9.50% pa versus 8.60% pa), UBS exhibits relative underperformance across all longer periods, with -1.46% for three years and -2.12% over five years.

#### **UBS Property**

The UBS Property portfolio posted a return of 1.64% during the period slightly ahead of the IPD UK PPFI All Balanced Funds index, which returned 1.60%. Over one year the portfolio achieved a respectable 7.56%, 35 bps ahead of benchmark. Replacing the 13 per cent loss of Q4 2008 improves the three year interval such that the portfolio has earned 4.12% pa, however a relative underperformance of 1.50% is suffered. Since inception, in March 2006, there are losses of 1.23% pa versus 0.60% pa for both mandate and yardstick.





#### **Active Contribution**

#### By Manager

	Portfolio	Benchmark	Excess Return	Relative Return	Active Contribution 10/11	Portfolio	Benchmark	Excess Return	Relative Return	Active Contribution 11/11	Portfolio	Benchmark	Excess Return	Relative Return	Active Contribution 12/11	Active Contribution 4Q 2011
Adam Street	-3.48	=	-3.48	-	-732,870.37	2.63	-	2.63	=	535,184.08	-2.91	=	-2.91	-	-610,210.56	-807,896.86
Fauchier	-1.72	0.49	-2.20	-2.19	-544,740.65	0.51	0.49	0.02	0.02	5,047.30	0.00	0.50	-0.50	-0.49	-121,401.01	-661,094.35
Goldman Sachs	0.70	=	0.70	-	346,482.17	2.36	-	2.36	-	219.94	1.20	-	1.20	-	114.54	346,816.66
JP Morgan	-	-	-	-	0.00	-1.14	0.24	-1.38	-1.37	-956,664.39	1.75	0.34	1.42	1.41	974,122.15	17,457.77
LGT	0.40	-	0.40	-	66,204.08	-1.29	-	-1.29	-	-215,783.69	-2.19	-	-2.19	-	-363,277.54	-512,857.15
Macquarie	-4.13	=	-4.13	-	-59,591.37	-8.62	-	-8.62	=	-124,411.00	1.20	-	1.20	-	15,843.48	-168,158.90
Marathon	8.61	6.49	2.12	1.99	1,125,547.84	-3.73	0.12	-3.85	-3.84	-2,090,667.30	0.67	1.15	-0.47	-0.47	-250,070.70	-1,215,190.16
M&G Investments	0.00	0.41	-0.41	-0.41	-32,741.99	-0.01	0.41	-0.42	-0.42	-38,191.35	1.26	0.42	0.84	0.84	77,033.87	6,100.52
Nomura	3.34	-	3.34	-	678,066.63	4.14	-	4.14	-	3,813.77	-0.59	-	-0.59	-	-567.97	681,312.43
Ruffer	0.87	0.07	0.80	0.80	893,507.23	1.28	0.07	1.21	1.21	1,374,600.92	0.63	0.08	0.55	0.55	633,233.68	2,901,341.82
SSGA	5.92	5.95	-0.03	-0.03	-32,378.60	-0.24	-0.21	-0.03	-0.03	-37,452.79	1.00	0.98	0.02	0.02	18,020.60	-51,810.79
SSGA Drawdown	0.72	0.91	-0.19	-0.19	-20,235.33	-0.62	-0.79	0.17	0.17	15,322.25	1.21	1.11	0.09	0.09	8,508.70	3,595.62
UBS	8.78	7.89	0.89	0.83	936,023.39	-1.45	-0.37	-1.08	-1.08	-1,135,378.19	0.56	0.84	-0.28	-0.28	-298,297.64	-497,652.44
UBS Property	0.51	0.59	-0.08	-0.08	-37,295.22	0.86	0.53	0.34	0.33	163,300.39	0.26	0.48	-0.22	-0.22	-107,328.51	18,676.66

Total Fund Market Value at Qtr End: £583.7 M







Scheme Performance	e			<u>Thr</u> <u>Mon</u>				<u>Ye.</u> <u>To D</u>				<u>Or</u> <u>Ye</u>		
	Market Value £m	% of Fund	Portfolio	Benchmark	Excess Return	Relative Return	Portfolio	Benchmark	Excess Return	Relative Return	Portfolio	Benchmark	Excess Return	Relative Return
London Borough of Hillingdon	583.7	100.00	3.82	4.80	-0.98	-0.94	0.12	0.26	-0.14	-0.14	0.12	0.26	-0.14	-0.14
By Manager														
	Market Value £m	% of Fund	Portfolio	Benchmark	Excess Return	Relative Return	Portfolio	Benchmark	Excess Return	Relative Return	Portfolio	Benchmark	Excess Return	Relative Return
Adam Street	20.4	3.49	-3.83	-	-	-	14.73	-	-	-	14.73	-	-	-
Fauchier	24.3	4.16	-1.21	1.48	-2.70	-2.66	-2.91	5.92	-8.82	-8.33	-2.91	5.92	-8.82	-8.33
JP Morgan	69.7	11.94	-	-	-	-	-	-	-	-	-	-	-	-
LGT	16.2	2.78	-3.07	-	-	-	10.25	-	-	-	10.25	-	-	-
Macquarie	1.3	0.23	-11.35	-	-	-	-11.95	-	-	-	-11.95	-	-	-
Marathon	52.6	9.02	5.27	7.85	-2.58	-2.39	-8.58	-4.84	-3.74	-3.93	-8.58	-4.84	-3.74	-3.93
M&G Investments	9.2	1.58	1.25	1.24	0.01	0.01	4.37	4.91	-0.54	-0.52	4.37	4.91	-0.54	-0.52
Ruffer	115.3	19.76	2.81	0.22	2.59	2.58	1.69	0.80	0.89	0.88	1.69	0.80	0.89	0.88
SSGA	110.7	18.97	6.71	6.76	-0.05	-0.05	-2.10	-2.25	0.15	0.15	-2.10	-2.25	0.15	0.15
SSGA Drawdown	9.3	1.60	1.30	1.23	0.07	0.07	3.94	3.74	0.20	0.19	3.94	3.74	0.20	0.19
UBS	104.9	17.97	7.80	8.39	-0.59	-0.54	-5.33	-3.46	-1.87	-1.94	-5.33	-3.46	-1.87	-1.94
UBS Property	49.0	8.39	1.64	1.60	0.04	0.04	7.56	7.19	0.37	0.35	7.56	7.19	0.37	0.35

Total Fund Market Value at Qtr End: £583.7 M







Scheme Performance		<u>Thi</u> <u>Ye</u>				<u>Fiv</u> <u>Yea</u>					Incept To D		
	Portfolio	Benchmark	Excess Return	Relative Return	Portfolio	Benchmark	Excess Return	Relative Return	Inception Date	Portfolio	Benchmark	Excess Return	Relative Return
London Borough of Hillingdon	8.79	9.63	-0.84	-0.77	1.19	2.35	-1.17	-1.14	30/09/95	6.25	6.35	-0.10	-0.09
By Manager	Portfolio	Benchmark	Excess Return	Relative Return	Portfolio	Benchmark	Excess Return	Relative Return	Inception Date	Portfolio	Benchmark	Excess Return	Relative Return
Adam Street	0.47	-	-	-	5.48	-	-	-	31/01/05	-0.08	-	-	-
Fauchier	-	-	-	-	-	-	-	-	30/06/10	-1.39	5.87	-7.26	-6.86
JP Morgan	-	-	-	-	-	-	-	-	08/11/11	0.60	0.58	0.02	0.02
LGT	-0.30	-	-	-	9.28	-	-	-	31/05/04	8.42	-	-	-
Macquarie	-	-	-	-	-	-	-	-	30/09/10	-8.47	-	-	-
Marathon	-	-	-	-	-	-	-	-	09/06/10	4.90	5.73	-0.83	-0.79
M&G Investments	-	-	-	-	-	-	-	-	31/05/10	4.26	4.86	-0.59	-0.57
Ruffer	-	-	-	-	-	-	-	-	28/05/10	5.12	0.77	4.36	4.32
SSGA	10.91	10.80	0.11	0.10	-	-	-	-	30/11/08	13.30	13.16	0.13	0.12
SSGA Drawdown	-	-	-	-	-	-	-	-	30/06/09	5.52	5.21	0.32	0.30
UBS	11.24	12.88	-1.65	-1.46	0.93	3.11	-2.18	-2.12	31/12/88	9.50	8.60	0.90	0.83
UBS Property	4.12	5.71	-1.58	-1.50	-3.54	-3.20	-0.34	-0.35	31/03/06	-1.23	-0.60	-0.64	-0.64

Total Fund Market Value at Qtr End: £583.7 M

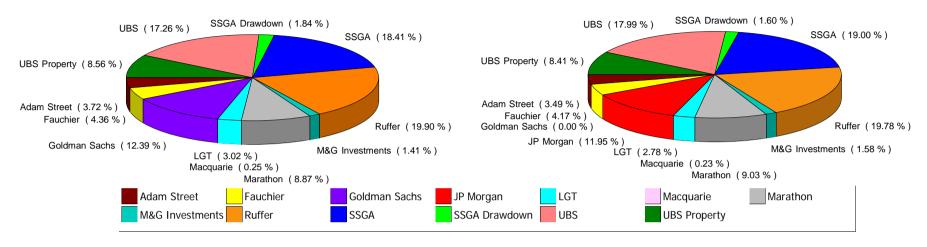






#### Weighting at Beginning of Period

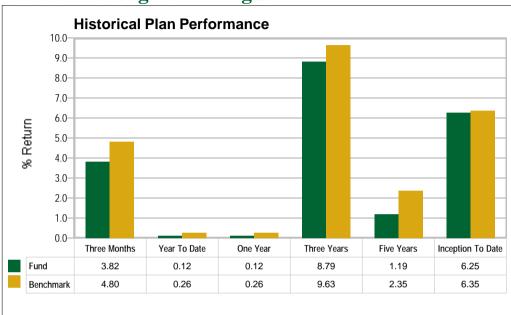
### Weighting at End of Period

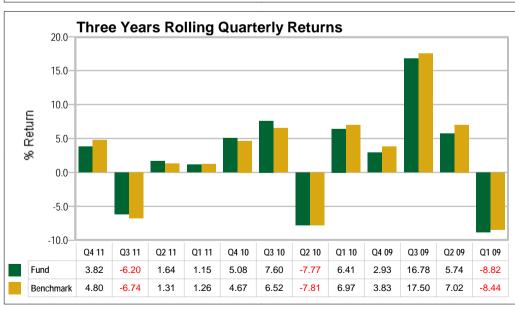


	Opening Market Value	% of Fund	Net Investment	Appreciation	Income Received	Closing Market Value	% of Fund
	£(000)		£(000)	£(000)	£(000)	£(000)	
London Borough of Hillingdon	564,347	100.00	-2,223	19,484	2,059	583,667	100.00
Adam Street	20,972	3.72	186	-806	0	20,352	3.49
Alliance Bernstein	-0	-0.00	0		0		0.00
Fauchier	24,584	4.36	0	-298	0	24,286	4.16
Goldman Sachs	69,826	12.37	-70,576	823	-64	10	0.00
JP Morgan	-		69,250	414	0	69,664	11.94
LGT	17,026	3.02	-306	-511	0	16,208	2.78
M&G Investments	7,959	1.41	1,135	115	-1	9,208	1.58
Macquarie	1,432	0.25	68	-165	0	1,334	0.23
Marathon	49,985	8.86	0	2,634	0	52,619	9.02
Nomura	206	0.04	-913	714	88	95	0.02
Ruffer	112,154	19.87	0	2,721	432	115,307	19.76
SSGA	103,762	18.39	0	6,967	0	110,728	18.97
SSGA Drawdown	10,341	1.83	-1,135	121	0	9,328	1.60
UBS	97,290	17.24	0	6,462	1,130	104,881	17.97
UBS Property	48,211	8.54	-5	319	473	48,998	8.39

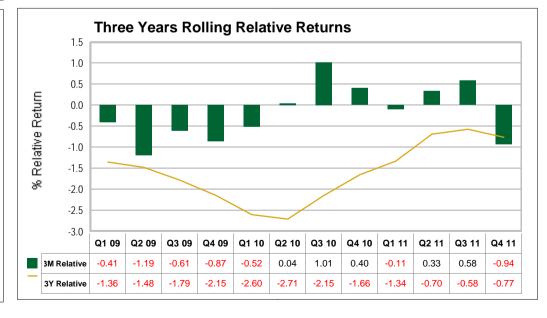






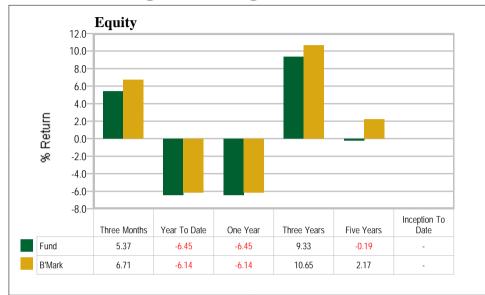


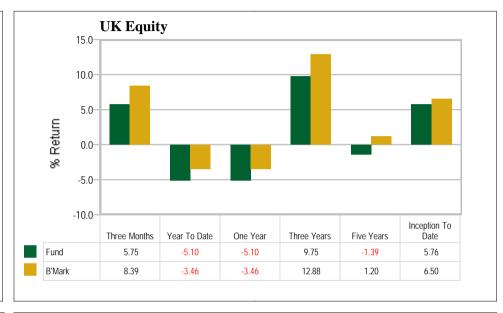
Risk Statistics - 3 years	Fund	B'mark
Performance Return	8.79	9.63
Standard Deviation	11.03	11.43
Relative Return	-0.77	
Tracking Error	1.59	
Information Ratio	-0.53	
Beta	0.96	
Alpha	-0.46	
R Squared	0.98	
Sharpe Ratio	0.66	0.72
Percentage of Total Fund	100.0	
Inception Date	Sep-1995	
Opening Market Value (£000)	564,347	
Net Investment £(000)	-2,223	
Income Received £(000)	2,059	
Appreciation £(000)	19,484	
Closing Market Value (£000)	583,667	

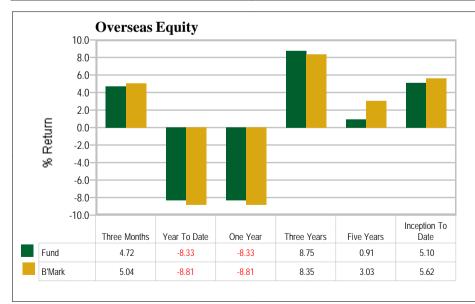


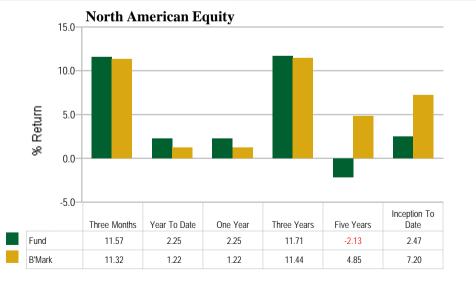






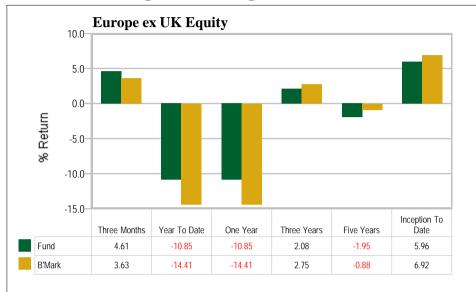


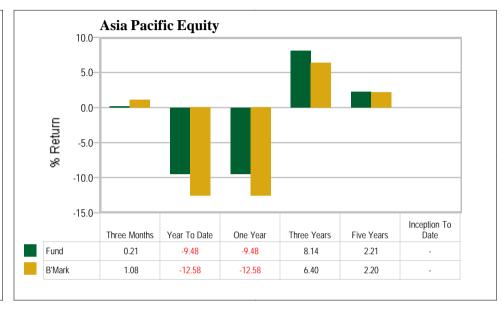


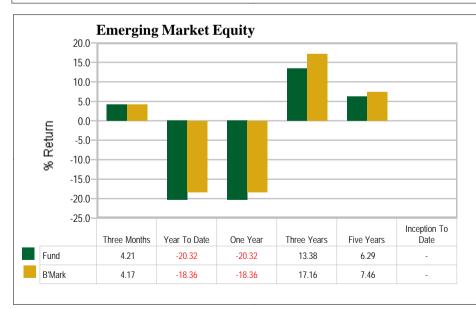


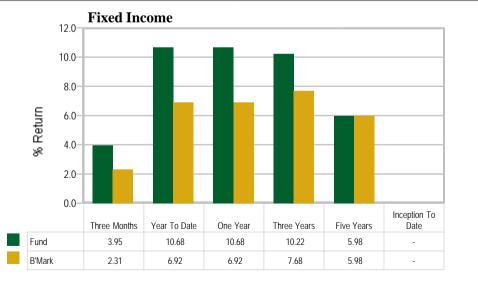




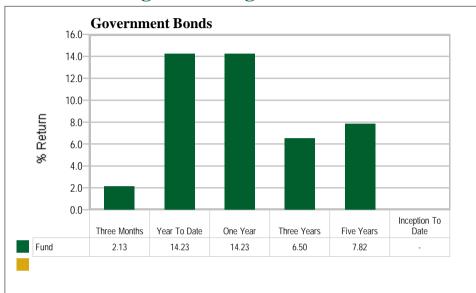


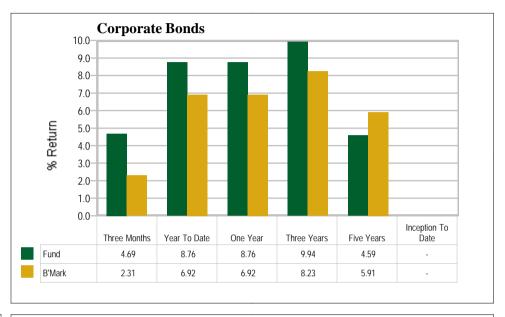


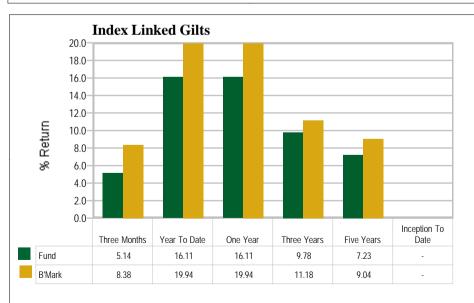








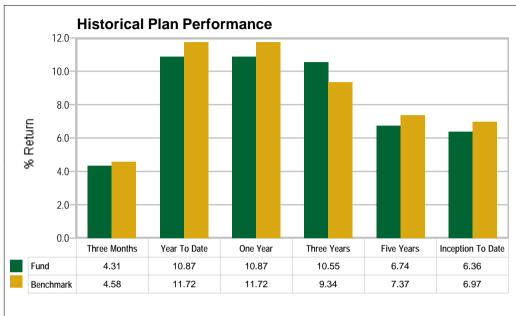


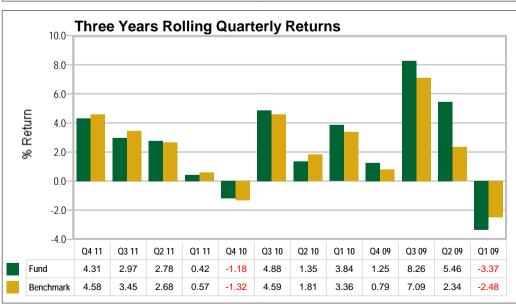




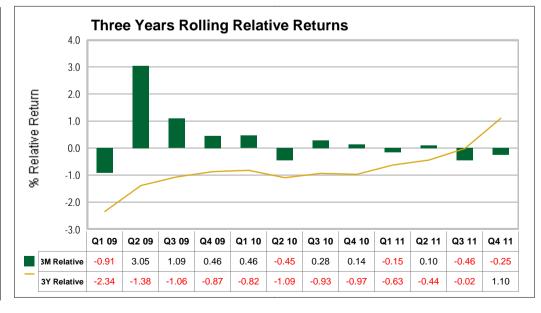


## **Goldman Sachs**





Risk Statistics - 3 years	Fund	B'mark
Performance Return	10.55	9.34
Standard Deviation	5.69	5.50
Relative Return	1.10	
Tracking Error	1.82	
Information Ratio	0.66	
Beta	0.98	
Alpha	1.28	
R Squared	0.90	
Sharpe Ratio	1.60	1.43
Percentage of Total Fund	0.0	
Inception Date	Dec-2001	
Opening Market Value (£000)	69,826	
Net Investment £(000)	-70,576	
Income Received £(000)	-64	
Appreciation £(000)	823	
Closing Market Value (£000)	10	

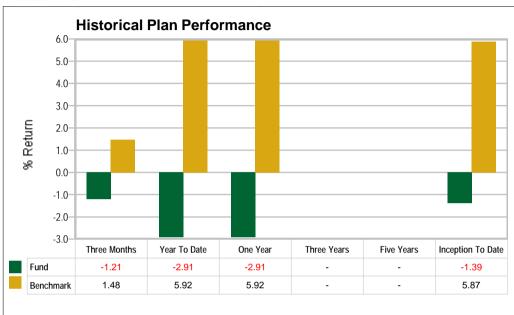


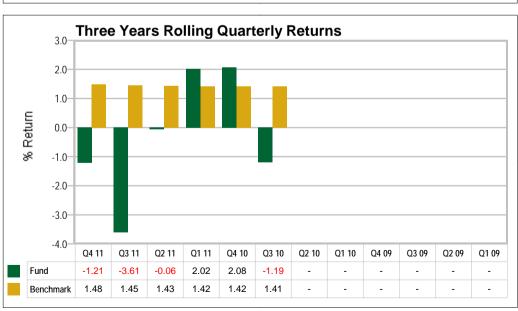




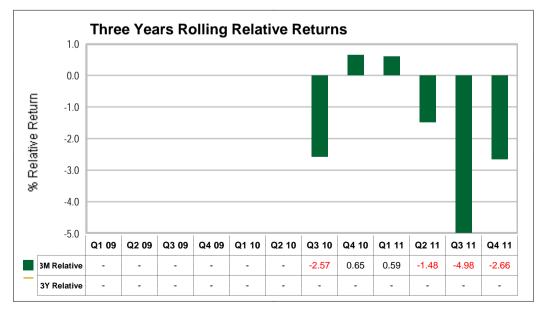


### **Fauchier**





Risk Statistics - 3 years	Fund	B'mark
Performance Return	-	
Standard Deviation	-	
Relative Return	-	
Tracking Error	-	
Information Ratio	-	
Beta	-	
Alpha	-	
R Squared	-	
Sharpe Ratio	-	
Percentage of Total Fund	4.2	
Inception Date	Jun-2010	
Opening Market Value (£000)	24,584	
Net Investment £(000)	0	
Income Received £(000)	0	
Appreciation £(000)	-298	
Closing Market Value (£000)	24,286	

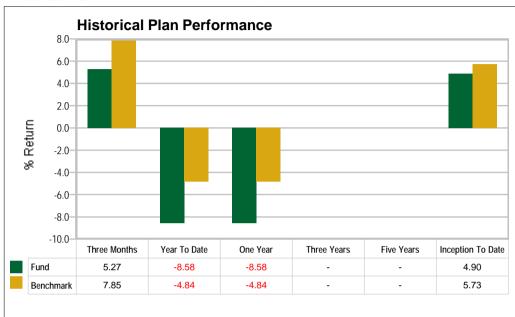




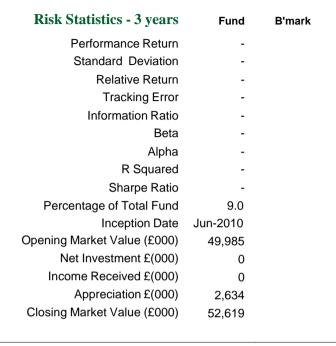


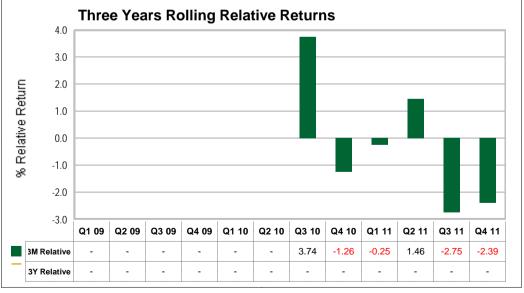


### **Marathon**





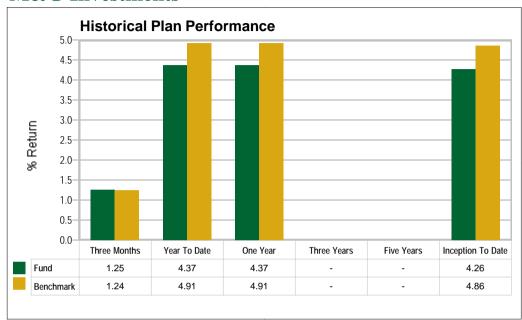


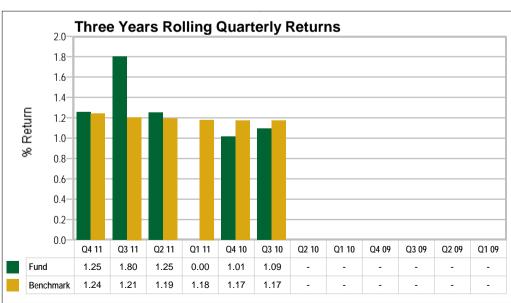




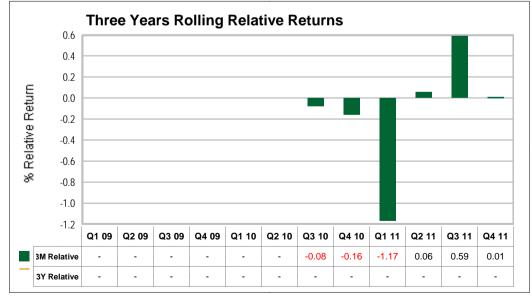


### **M&G** Investments







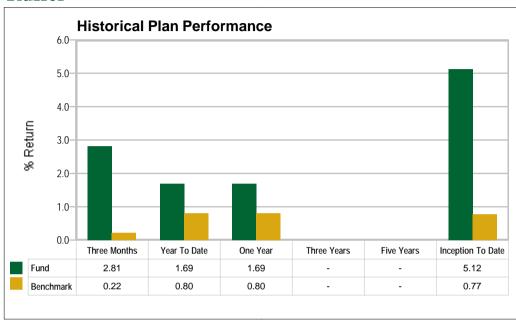


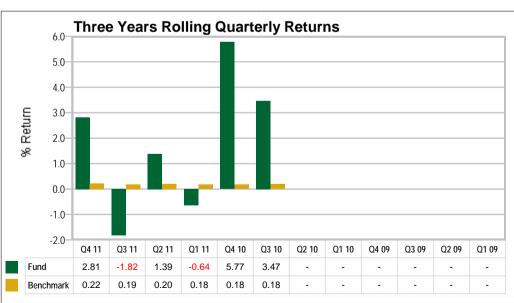


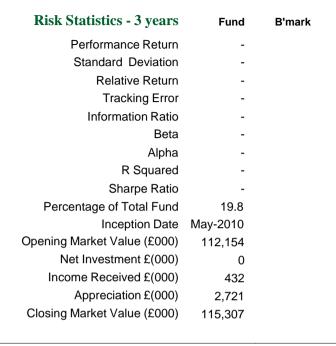


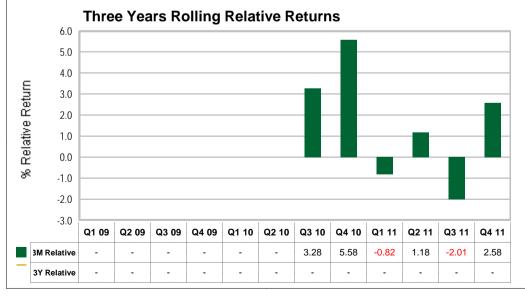


### Ruffer



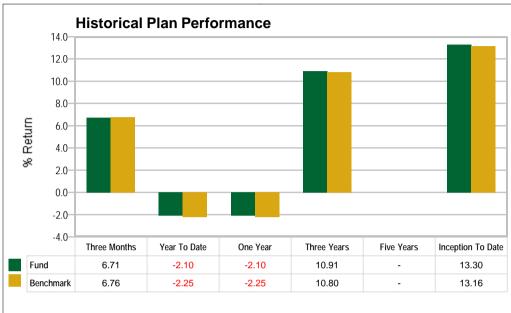


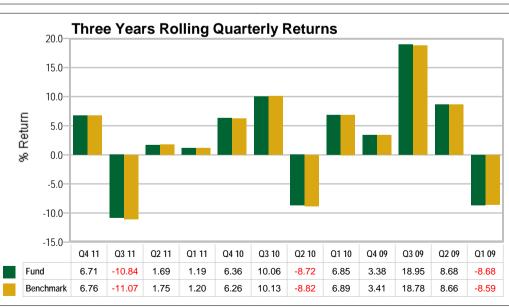


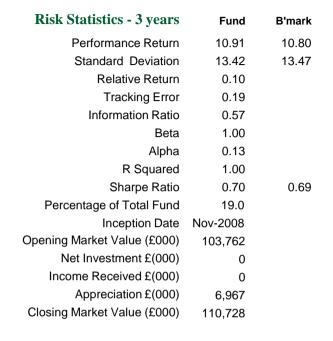


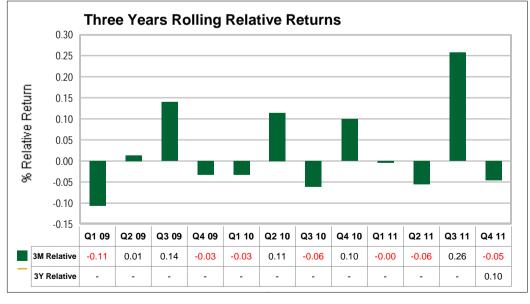






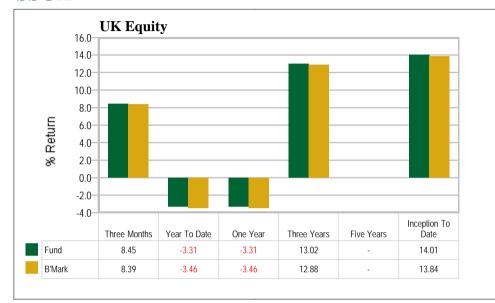


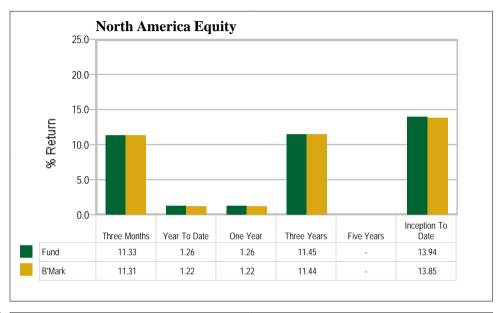


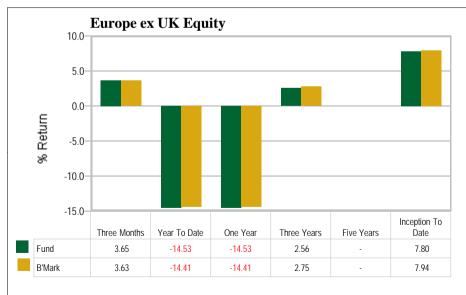








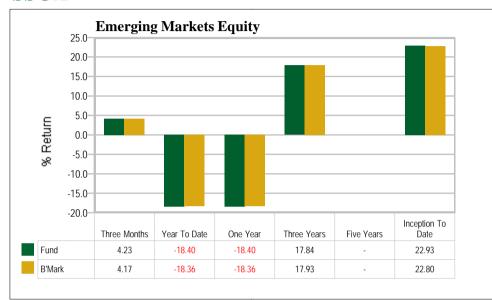


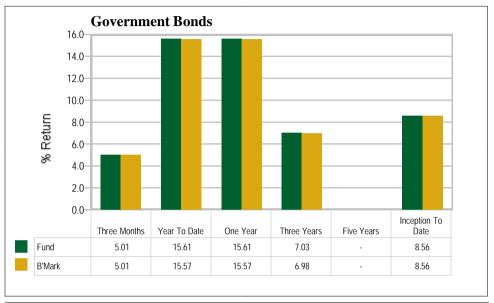


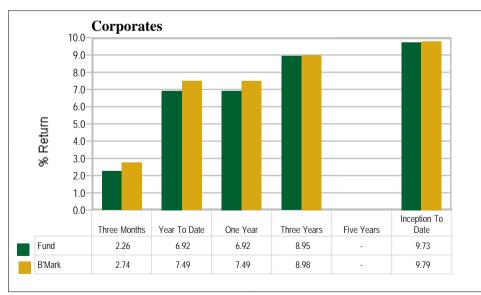


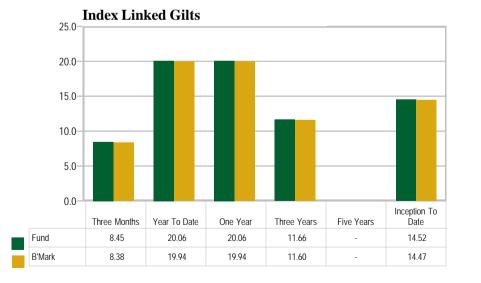








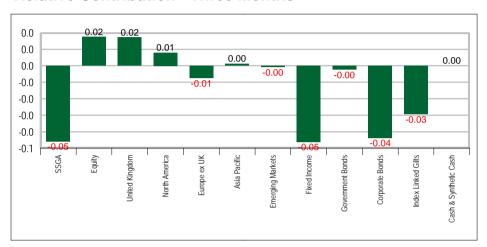






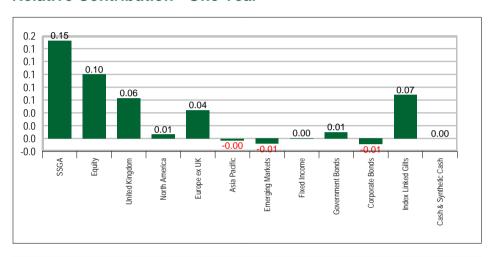


#### **Relative Contribution - Three Months**



	Return	Benchmark	Relative Return	Asset Allocation	Stock Selection	Currency Effect	Relative Contribution
SSGA	6.71	6.76	-0.05	-0.05	0.18	-0.19	-0.05
Equity	7.01	-	7.01	0.00	0.24	-0.22	0.02
United Kingdom	8.45	8.39	0.05	-0.00	0.02	-0.00	0.02
North America	11.33	11.31	0.02	-0.00	0.02	-0.01	0.01
Europe ex UK	3.65	3.63	0.02	-0.00	0.06	-0.06	-0.01
Asia Pacific	1.05	1.08	-0.03	0.01	0.16	-0.17	0.00
Emerging Markets	4.23	4.17	0.06	-0.00	-0.02	0.03	-0.00
Fixed Income	2.68	-	2.68	-0.01	-0.07	0.03	-0.05
Government Bonds	5.01	5.01	0.00	-0.00	0.00	0.00	-0.00
Corporate Bonds	2.26	2.74	-0.47	-0.01	-0.07	0.03	-0.04
Index Linked Gilts	8.45	8.38	0.07	-0.04	0.01	0.00	-0.03
Cash & Synthetic Cash	-	-	0.00	0.00	0.00	0.00	0.00

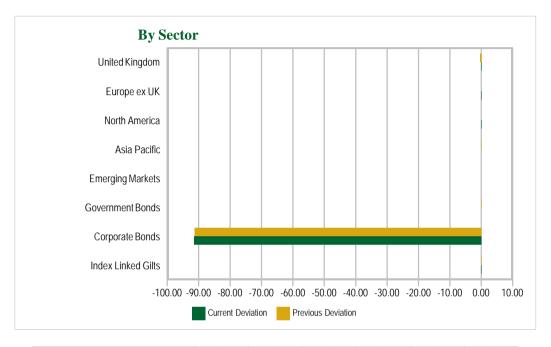
#### **Relative Contribution - One Year**



	Return	Benchmark	Relative Return	Asset Allocation	Stock Selection	Currency Effect	Relative Contribution
SSGA	-2.10	-2.25	0.15	0.16	-0.43	0.44	0.15
Equity	-6.10	-	-6.10	0.05	-0.36	0.41	0.10
United Kingdom	-3.31	-3.46	0.16	0.00	0.07	-0.01	0.06
North America	1.27	1.22	0.05	0.01	-0.02	0.02	0.01
Europe ex UK	-14.53	-14.41	-0.14	0.02	0.08	-0.06	0.04
Asia Pacific	-12.65	-12.58	-0.08	0.02	-0.28	0.26	-0.00
Emerging Markets	-18.37	-18.36	-0.02	-0.00	-0.21	0.21	-0.01
Fixed Income	8.20	-	8.20	0.04	-0.07	0.03	0.00
Government Bonds	15.61	15.57	0.04	0.01	0.00	0.00	0.01
Corporate Bonds	6.92	7.49	-0.53	0.04	-0.07	0.03	-0.01
Index Linked Gilts	20.06	19.94	0.10	0.06	0.01	0.00	0.07
Cash & Synthetic Cash	-	-	0.00	0.00	0.00	0.00	0.00





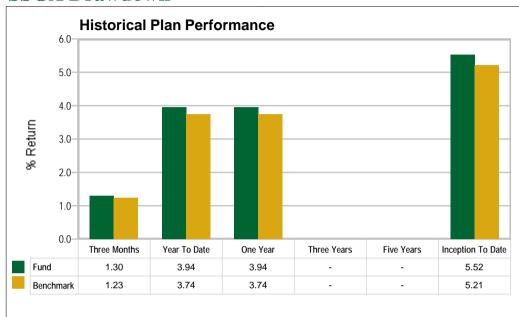


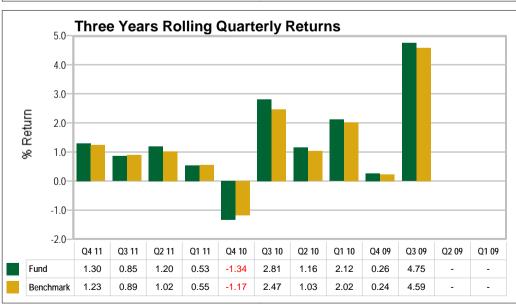
	Current Qtr	Previous Qtr	Current Benchmark	Current Deviation	Previous Benchmark	Previous Deviation
Equity	80.16	79.67		80.16		79.67
United Kingdom	44.13	43.64	44.00	0.13	44.00	-0.36
Europe ex UK	11.12	10.98	11.00	0.12	11.00	-0.02
North America	10.95	10.97	11.00	-0.05	11.00	-0.03
Asia Pacific	10.99	11.09	11.00	-0.01	11.00	0.09
Emerging Markets	2.97	2.99	3.00	-0.03	3.00	-0.01
Fixed Income	9.93	10.15		9.93		10.15
Government Bonds	1.49	1.53	1.50	-0.01	1.50	0.03
Corporate Bonds	8.44	8.63	100.00	-91.56	100.00	-91.37
Index Linked Gilts	9.91	10.18	10.00	-0.09	10.00	0.18



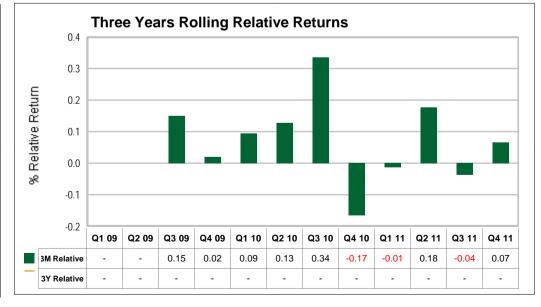






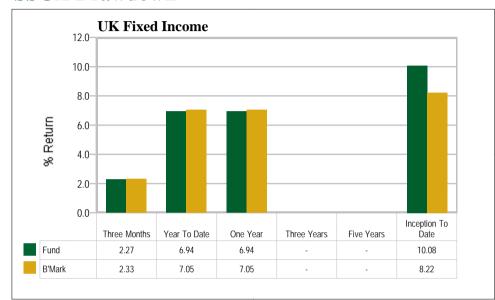


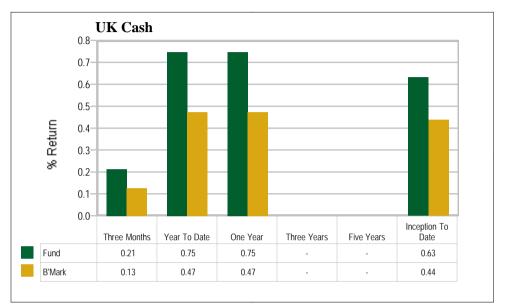
Risk Statistics - 3 years	Fund	B'mark
Performance Return	-	
Standard Deviation	-	
Relative Return	-	
Tracking Error	-	
Information Ratio	-	
Beta	-	
Alpha	-	
R Squared	-	
Sharpe Ratio	-	
Percentage of Total Fund	1.6	
Inception Date	Jun-2009	
Opening Market Value (£000)	10,341	
Net Investment £(000)	-1,135	
Income Received £(000)	0	
Appreciation £(000)	121	
Closing Market Value (£000)	9,328	







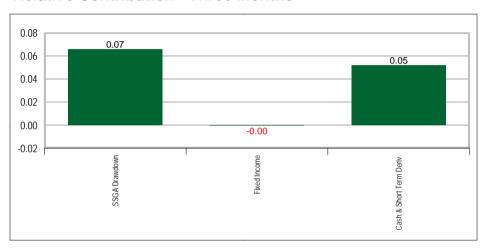






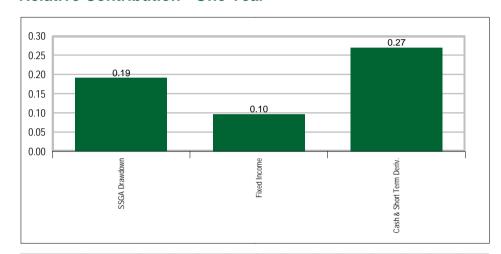


### **Relative Contribution - Three Months**



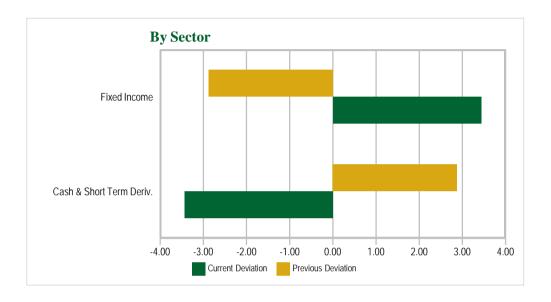
	Return	Benchmark	Relative Return	Asset Allocation	Stock Selection	Relative Contribution
SSGA Drawdown	1.30	1.23	0.07	0.03	0.02	0.07
Fixed Income	2.27	2.33	-0.05	0.02	-0.02	-0.00
Cash & Short Term Deriv.	0.21	0.13	0.09	0.01	0.04	0.05

#### **Relative Contribution - One Year**



	Return	Benchmark	Relative Return	Asset Allocation	Stock Selection	Relative Contribution
SSGA Drawdown	3.94	3.74	0.19	0.29	0.08	0.19
Fixed Income	6.94	7.05	-0.11	0.15	-0.05	0.10
Cash & Short Term Deriv.	0.75	0.47	0.27	0.14	0.13	0.27



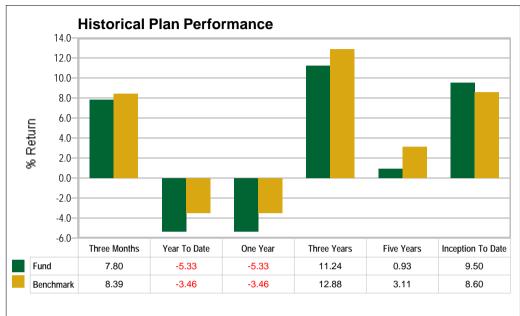


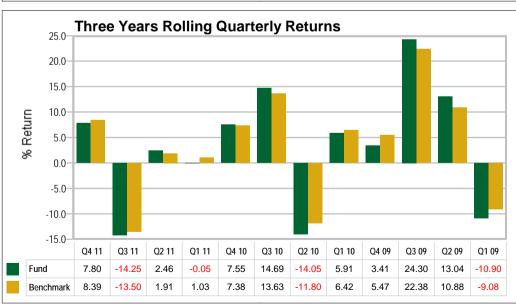
	Current Qtr	Previous Qtr	Current Benchmark	Current Deviation	Previous Benchmark	Previous Deviation
Fixed Income	53.44	47.13	50.00	3.44	50.00	-2.87
Cash & Short Term Deriv.	46.56	52.87	50.00	-3.44	50.00	2.87









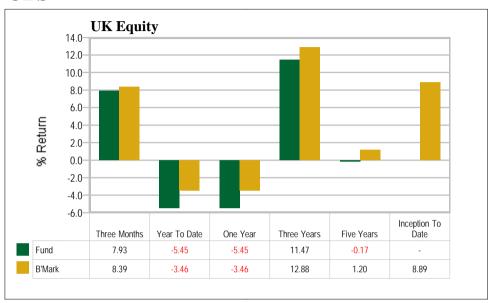


Risk Statistics - 3 years	Fund	B'mark
Performance Return	11.24	12.88
Standard Deviation	18.65	16.28
Relative Return	-1.46	
Tracking Error	4.42	
Information Ratio	-0.37	
Beta	1.12	
Alpha	-2.49	
R Squared	0.95	
Sharpe Ratio	0.52	0.70
Percentage of Total Fund	18.0	
Inception Date	Dec-1988	
Opening Market Value (£000)	97,290	
Net Investment £(000)	0	
Income Received £(000)	1,130	
Appreciation £(000)	6,462	
Closing Market Value (£000)	104,881	



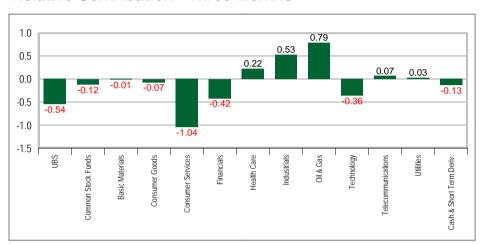






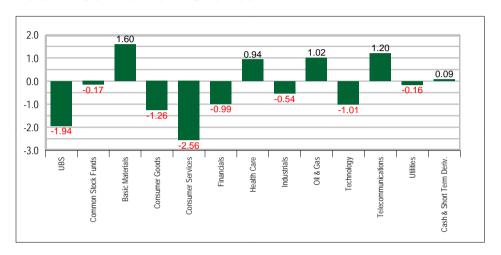


### **Relative Contribution - Three Months**



	Return	Benchmark	Relative Return	Asset Allocation	Stock Selection	Relative Contribution
UBS	7.80	8.39	-0.54	0.20	-0.74	-0.54
Common Stock Funds	-14.61	-	-14.61	-0.12	0.00	-0.12
Basic Materials	8.14	8.35	-0.19	0.00	-0.02	-0.01
Consumer Goods	7.78	8.67	-0.82	-0.04	-0.04	-0.07
Consumer Services	-1.25	7.10	-7.80	-0.04	-1.01	-1.04
Financials	-1.94	1.55	-3.44	0.16	-0.58	-0.42
Health Care	11.54	9.00	2.33	0.01	0.21	0.22
Industrials	15.89	10.34	5.03	0.04	0.49	0.53
Oil & Gas	21.24	17.34	3.33	0.13	0.66	0.79
Technology	-17.18	4.78	-20.96	0.00	-0.36	-0.36
Telecommunications	10.35	10.63	-0.25	0.09	-0.03	0.07
Utilities	-1.52	0.40	-1.91	0.08	-0.06	0.03
Cash & Short Term Deriv.	0.08	-	0.08	-0.13	0.00	-0.13

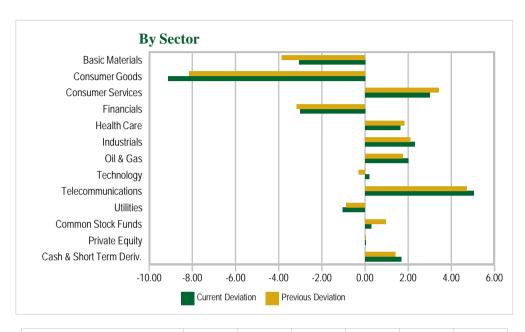
#### **Relative Contribution - One Year**



	Return	Benchmark	Relative Return	Asset Allocation	Stock Selection	Relative Contribution
UBS	-5.33	-3.46	-1.94	2.35	-4.18	-1.94
Common Stock Funds	-26.39	-	-26.39	-0.17	0.00	-0.17
Basic Materials	-25.32	-27.52	3.03	1.37	0.23	1.60
Consumer Goods	12.45	14.80	-2.04	-1.14	-0.12	-1.26
Consumer Services	-22.70	-5.52	-18.19	-0.08	-2.49	-2.56
Financials	-28.66	-19.16	-11.76	0.86	-1.83	-0.99
Health Care	24.44	18.70	4.83	0.45	0.49	0.94
Industrials	-6.98	0.02	-7.00	0.10	-0.63	-0.54
Oil & Gas	11.84	7.49	4.04	0.22	0.79	1.02
Technology	-44.81	8.97	-49.36	-0.03	-0.99	-1.01
Telecommunications	17.70	11.98	5.11	0.68	0.52	1.20
Utilities	4.17	9.18	-4.59	-0.01	-0.15	-0.16
Cash & Short Term Deriv.	0.96	-	0.96	0.09	0.00	0.09







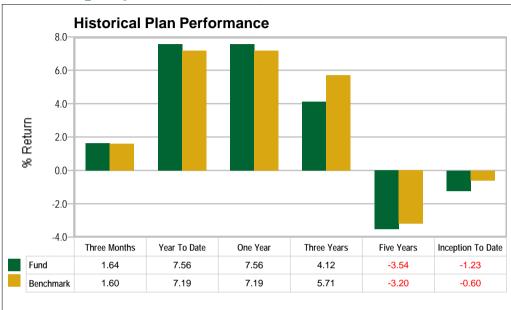
	Current Qtr	Previous Qtr	Current Benchmark	Current Deviation	Previous Benchmark	Previous Deviation
Basic Materials	8.13	6.86	11.19	-3.06	10.72	-3.85
Consumer Goods	4.24	5.19	13.37	-9.13	13.34	-8.15
Consumer Services	12.49	13.14	9.49	3.00	9.71	3.43
Financials	16.06	17.17	19.08	-3.01	20.33	-3.16
Health Care	9.66	9.89	8.01	1.64	8.06	1.83
Industrials	10.34	9.53	8.03	2.32	7.43	2.10
Oil & Gas	20.92	19.23	18.92	2.00	17.48	1.76
Technology	1.65	1.60	1.45	0.19	1.89	-0.30
Telecommunications	11.56	11.39	6.52	5.04	6.67	4.72
Utilities	2.90	3.50	3.93	-1.03	4.37	-0.88
Common Stock Funds	0.30	0.98		0.30		0.98
Private Equity	0.04	0.04		0.04		0.04
Cash & Short Term Deriv.	1.69	1.42		1.69		1.42

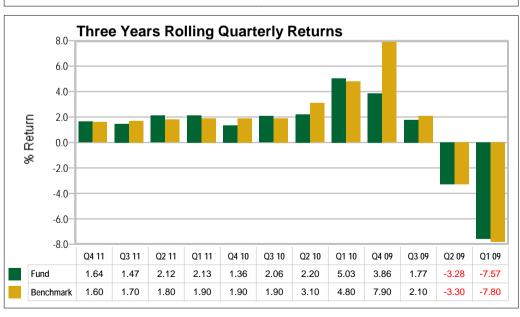






## **UBS Property**





Risk Statistics - 3 years	Fund	B'mark
Performance Return	4.12	5.71
Standard Deviation	4.27	4.36
Relative Return	-1.50	
Tracking Error	2.38	
Information Ratio	-0.66	
Beta	0.85	
Alpha	-0.87	
R Squared	0.74	
Sharpe Ratio	0.62	0.98
Percentage of Total Fund	8.4	
Inception Date	Mar-2006	
Opening Market Value (£000)	48,211	
Net Investment £(000)	-5	
Income Received £(000)	473	
Appreciation £(000)	319	
Closing Market Value (£000)	48,998	



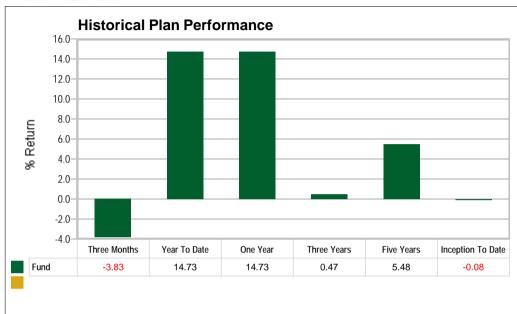




B'mark



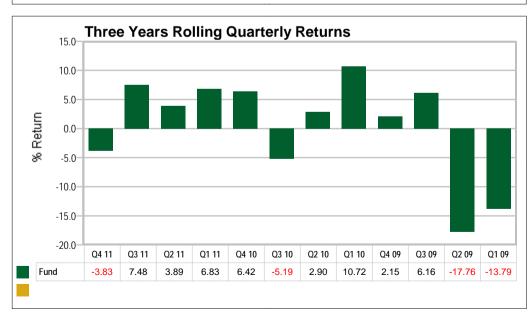
### **Adam Street**

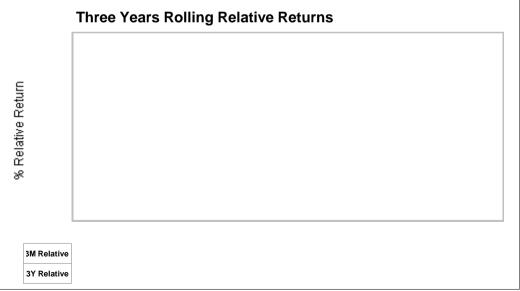




Fund

Risk Statistics - 3 years



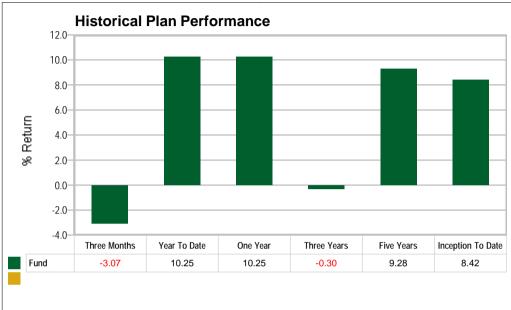


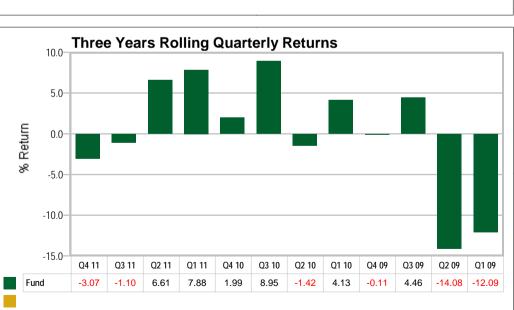


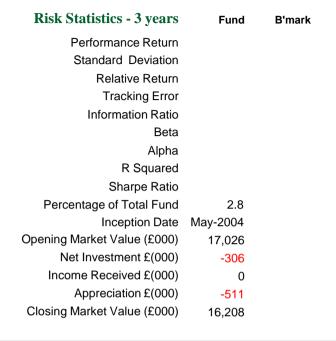


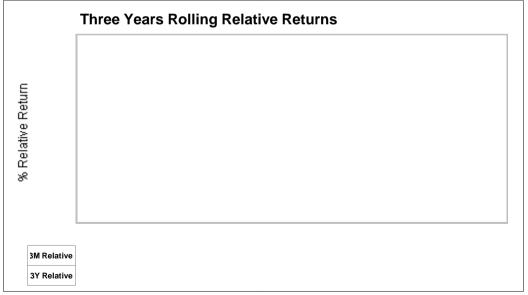


### **LGT**







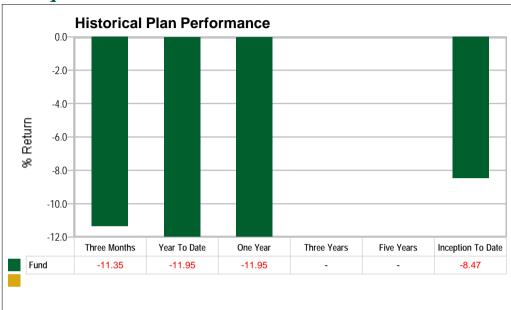




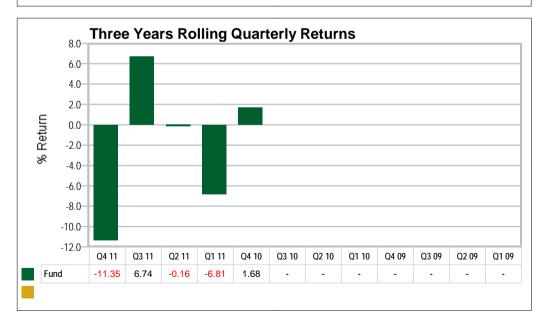


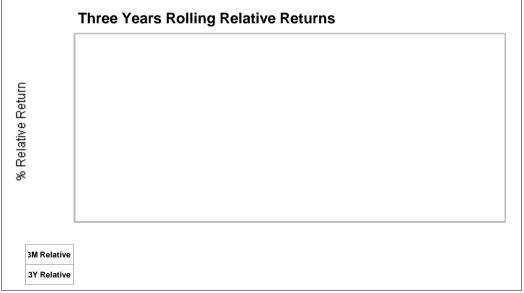


## Macquarie













#### **Total Plan Benchmark**

- 27.5 FTSE All Share
- 2.2 FTSE AW North America
- 2.2 FTSE AW Developed Europe ex UK
- 2.2 FTSE AW Developed Asia Pacific
- 0.4 FTSE All World All Emerging
- 4.0 FTSE Index Linked Gilts
- 3.0 IBOXX Sterling Non-Gilts
- 8.0 IPD UK PPFI All Balanced Funds Index
- 10.0 MSCI All Countries World ND Index
- 6.5 MSCI All Countries World Index
- 34.0 LIBOR 3 Month + 3%

#### **Fauchier**

100.0 LIBOR 3 Month + 5%

#### **Goldman Sachs**

70.0 ML Sterling Broad Market 30.0 FTSE Index Linked Gilts 5+ Yrs

#### Marathon

100.0 MSCI World

#### **M&G Investments**

100.0 LIBOR 3 Month + 4%

#### Ruffer

100.0 LIBOR 3 Month GBP

#### **SSGA**

- 44 0 FTSE All Share
- 11.0 FTSE World North America
- 11.0 FTSE World Europe ex UK
- 11.0 FTSE Pacific Basin ex Japan
- 3.0 FTSE All World All Emerging
- 1.5 FTA British Government Conventional Gilts All Stocks
- 10.0 FTA British Government Index Linked Gilts All Stocks
- 8.5 ML Sterling Non-Gilts

### **SSGA Drawdown**

- 50.0 ML Sterling Non-Gilts
- 50.0 FT 7 Day LIBID

### **UBS**

100.0 FTSE All Share

## **UBS Property**

100.0 IPD UK PPFI All Balanced Funds Index





#### Tracking Error

$$\sigma_{ER} = \sqrt{\frac{\sum (ER_t - \overline{ER})^2}{T}}$$
 for t=1 to T

Annualised tracking error =  $\sigma_{ER} \times \sqrt{p}$ 

Where	Equals
ER	Excess return (Portfolio Return minus Benchmark Return)
ER Return)	Arithmetic average of excess returns (Portfolio Return minus Benchmar
T	Number of observations
p	Periodicity (number of observations per year)

The tracking error measures the extent to which a portfolio tracks its benchmark. The higher the tracking error, the higher the variability of the portfolio returns around the benchmark. The tracking error will always be greater than zero, unless the portfolio is exactly tracking the benchmark.

#### Information Ratio

Information Ratio = 
$$\frac{\overline{ER}}{\sigma_{ER}}$$

Annualised Information Ratio = Information Ratio  $\times \sqrt{p}$ 

Where	Equals
ER Return)	Arithmetic average of excess returns (Portfolio Return minus Benchmar
T	Number of observations
p	Periodicity (number of observations per year)

The information ratio is a measure of risk adjusted return. The higher the information ratio, the higher the risk adjusted return.

#### Alpha

$$\alpha = \frac{\sum R_{yi}}{n} - \beta \frac{\sum R_{xi}}{n}$$

#### Where Equals

 $R_{xi}$  Market / Benchmark excess return (Benchmark return minus Risk Free Proxy return)

 $R_{yi}$  Portfolio excess return (Portfolio return minus Risk Free Proxy return)

eta Beta – measure of the sensitivity of a portfolio's rate of return against those of the market

n Number of observations

The alpha is the value added to the portfolio by the manager – the higher the alpha, the better the manager has done in achieving excess returns.

#### Beta

$$\beta = \frac{n \sum_{x_i} R_{y_i} - \sum_{x_i} R_{x_i}}{n \sum_{x_i} (R_{x_i})^2 - (\sum_{x_i} R_{x_i})^2}$$

#### Where Equals

 $R_{xi}$  Market / Benchmark excess return (Benchmark return minus Risk Free Proxy return)

 $R_{yi}$  Portfolio excess return (Portfolio return minus Risk Free Proxy return)

eta Beta – measure of the sensitivity of a portfolio's rate of return against those of the market

n Number of observations

The portfolio's beta is calculated by comparing the portfolio's volatility to the benchmark's volatility over time. The more sensitive a portfolio's returns are to movements in the benchmark, the higher the portfolio's beta will be. A beta greater than one implies the portfolio is more volatile than the benchmark, whilst a beta less than one implies the portfolio is less volatile than the benchmark.



#### R-Squared

$$r^{2} = \frac{(n\sum R_{xi}R_{yi} - \sum R_{xi}\sum R_{yi})}{[n\sum (R_{xi})^{2} - (\sum R_{xi})^{2}][n\sum (R_{yi})^{2} - (\sum R_{yi})^{2}]}$$

Where Equals

 $R_{xi}$  Market / Benchmark excess return (Benchmark return minus Risk Free Proxy return)

 $R_{vi}$  Portfolio excess return (Portfolio return minus Risk Free Proxy return)

*n* Number of observations

The  $R^2$  is the square of the correlation co-efficient between the portfolio return and the benchmark return in the above equation and is a measure of the fund's sensitivity to the benchmark, i.e. the percentage of the portfolio's movement that can be explained by movement in the benchmark. The  $R^2$  statistic ranges from 0 to 1 (or 0 to 100%) with a score of 1 indicating that all the portfolio's movement can be explained by the benchmark.

#### Sharpe Ratio

$$\frac{(R_{ap}-R_{af})}{\sigma_{ap}}$$

Where Equals

 $R_{ap}$  Annualised (portfolio) rate of return

 $R_{af}$  Annualised risk-free rate of return

 $\sigma_{ap}$  Annualised portfolio standard deviation

The Sharpe ratio measures the excess return over the risk-free rate per unit of volatility. For a given return, the lower the volatility of the portfolio, the higher the Sharpe ratio.







Price/Earnings Ratio (P/E)

Security Level Calculation:

Current price/Trailing 12 months earning per share

Description:

The price/earnings ratio is a traditional indicator of how much an investor is paying for a company's earning power. Stocks have a p/e greater than the market are usually considered to be growth stocks.

5 Year Earnings Per Share Growth Rate

Security Level Calculation:

None

Description:

This is the percentage change in the annual earning per share growth rate over the last five years of all stock in the portfolio. This measure is usually viewed as agrowth factor. A stock must have been public for at least five years to have this characteristic.

Price to Book Ratio

Security Level Calculation:

Current price/Most recent book value per share

Description:

This is usually considered to be a measure of "value", with stocks having high price to book ratios considered to be undervalued.

Dividend Yield

Security Level Calculation:

Dividend for current fiscal year/Period end closing price

Description:

This measures the annual rate that dividends are being paid by a company, including any extra dividends. High dividend yields can also be an attribute of value stocks.

Debt to Capital

Security Level Calculation:

Long term liabilties, deferred taxes, tax credits, minority interest/Sum of debt, total common equity and total preferred stock

Description:

This measure indicates the amount of leverage (debt) being used. A large debt to capital ratio is usually indicative of a highly leveraged company. Stocks having a zero value are still included in the total portfolio calculation.

Price to Sales Ratio

Security Level Calculation:

Current price/Annual sales per share

Description:

This is used primarily by value managers to identify companies having low profit margins. Value managers use this as another indicator in finding undervalued stocks with the potential for improved profitability. This measure varies in informational value by industry, as different industries have different price to sales ratio expectations.

Return on Equity Security Level Calculation: Net profits after taxes/Book value Description:

This relates a company's profitabaility to it's shareholders equity. A high ROE indicates that the portfolio is invested in companies that have been profitable. This measure is also impacted by financial leverage.





#### Coupon Rate

Description:

The stated interest rate of a bond. It is a money weighted average for the portfolio.

#### Years to Maturity

Description:

The average number of years to the maturity date of all bonds held in a portfolio. Often, managers will use the weighted average life for mortgages and mortgage backed securities since most mortgages are prepaid and never reach maturity.

#### Macaulay Duration

Description:

The mathematical estimate of a fixed income portfolio's sensitivity to a change in interest rates, computed as the weighted average time to receipt of the portfolio's cash flows. The Macaulay duration does not take the impact of embedded options into consideration and this usually results in a higher value than the effective duration.

#### Yield to Maturity

Description:

This is the rate of return that is expected if a fixed income security is held to maturity. It is essentially an internal rate of return that uses the current market value and all expected interest and principal cash flows.

#### Moody Quality Rating

Description:

This is a measure of the quality, safety and potential performance of a bond issue. Also indicates the creditworthiness of a security's issuer. Moody's evalutes the bond issues and assigns a code with Aaa as the highest and C as the lowest.







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