

4th Quarter, 2012





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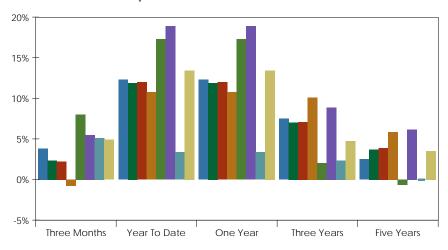
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Equity Index Performance (in GBP)

Performance History



Performance Returns%

	Three Months	Year To Date	One Year	Three Years	Five Years
■ FTSE All Share	3.8	12.3	12.3	7.5	2.5
■ FT: World	2.3	11.8	11.8	7.0	3.7
■ FT: World ex UK	2.2	11.9	11.9	7.0	3.9
■ FT: AWI North America	-0.8	10.7	10.7	10.1	5.8
■ FT: Developed Europe ex UK	8.0	17.3	17.3	2.0	-0.6
■ FT: Developed Asia Pac x Jp	5.4	18.9	18.9	8.8	6.1
■ FT AW: Japan	5.1	3.3	3.3	2.3	-0.0
MSCI Emerging Markets GD	4.9	13.4	13.4	4.8	3.5

The Fiscal Cliff dominated headlines leading up to the end of the year. The deal that was eventually achieved could have been much worse and may have led to recession in the US had both sides stuck to their guns. The moral credibility of the financial services industry was further tarnished when it was revealed that certain traders at UBS had manipulated the LIBOR Yen rate by "spoofing" false trades. The abuse was described as epic in scale by the US regulator and resulted in fines totalling \$1.5bn. Siegmund Warburg would not have been impressed by a terrible year that included the jailing of a rogue trader and a \$377m loss on the botched Facebook IPO. US and UK regulators are making plans to ensure that creditors can cover the losses of any future failing global banks in which taxpayers will be protected and shareholders should expect to be wiped out. The only red numbers for quarter four from the major indexes were seen in North America as the European indexes led the way. Apple shares fell more than 20% over the quarter amid fears that such growth as previously seen is unsustainable. The OECD reduced its growth forecast for the world's advanced economies from 2.2% to 1.4% for 2013. Globally, Financials was the strongest sector over both the last quarter and 2012. Telecoms was the biggest loser over Q4 and Utilities lost most over the year. The price of crude oil futures ended the quarter steady at \$111 per barrel. The FTSE World was up by 2.3% (GBP) over quarter four 2012 and is ahead by 11.8% over one year (GBP).

UK GDP increased by 1% in the third quarter of 2012. Monetary policy was kept on hold amid expectations that the economy will contract in quarter four. Unemployment was down at 2.5m, a rate of 7.8%. George Osborne is considering following the continental example and imposing levies on trunk routes to unlock investment in the highway network. He also approved 30 gas fired power stations in an attempt to boost private sector infrastructure investment. RBS is to slash bonuses to cover the cost of a potential £350m fine for its part in the LIBOR rate rigging scandal. HSBC and Standard Chartered have agreed to pay over \$2.5bn in fines to US authorities over alleged money laundering. JP Morgan is close to a £500m settlement with the government over tax avoided through an offshore trust for bonus payments. Technology was the strongest sector over the quarter once again and Telecoms continued to be the weakest. The FTSE All Share was up 3.8% (GBP) over the fourth quarter and remains ahead over one year, now by 12.3% (GBP).

The EU fell into recession over Q3 and looks set to remain there through the start of 2013 as France and Germany are expected to release figures confirming Q4 contraction. The ECB cut its growth forecast for 2013 from +0.5% to a further contraction averaging -0.3% amidst already record unemployment figures. New car sales in Europe slowed to a 15 year low during 2012 and those conditions are expected to continue throughout 2013. Peugeot expects to cut a further 1.5k jobs by the end of 2014 to reduce overcapacity at home, welcome news to investors. Carlos Slim, the world's richest man, experienced a loss close to EUR 2bn on investments in struggling telecoms companies Telekom Austria and Holland's KPN after the values fell by more than 40%. Boris Johnson urged the industrialist Lakshmi Mittal to "Venez a Londres!" (Come to London) following the allegations made of lying and blackmail at ArcelorMittal by the governing Socialist party in France. Eurozone GDP contracted by 0.1% in quarter three following the 0.2% decrease in quarter two and unemployment increased again to a record 11.8%. The FTSE Developed Europe ex UK index returned 8% (GBP) over quarter four and 17.3% (GBP) over the year.

The deal that brought the US back from the edge of the Fiscal Cliff is likely to have an economic impact further into 2013. A fiscal drag of 1.5% on GDP will follow the expiry of the tax holiday adding \$1000 to the average family bill. 155,000 jobs were added to US payrolls in December as the economy continued its modest growth. The unemployment rate dropped from the previous quarter to 7.8% (12.2m). The Fed said that it plans to keep interest rates at close to zero until unemployment drops below 6.5%. Car sales jumped by 13% last year, the fastest growth witnessed in over 20 years. GM, Ford and Chrysler all posted sales gains for December 2012 over the same month in 2011. BP agreed a record breaking criminal penalty of \$4.5bn for the 2010 Deepwater Horizon catastrophe. Financials was by far the strongest sector over the quarter, Technology beating Telecoms to being the weakest. The FTSE North America index returned -0.8% (GBP) over the fourth quarter and 10.7% (GBP) for the year.

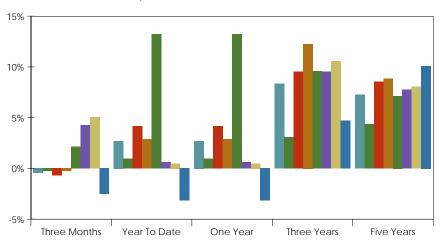
Japan slipped into a recession in the six months to the end of quarter three. Exports dropped for a sixth straight month in December; to China by 14.5% and to the EU by 20%. The incoming Liberal Democrat government will borrow to boost the economy and take a much tougher line than the ousted Democrats in all matters including dealings with China. The FTSE Japan returned 5.1% (GBP) for quarter four and the FTSE Developed Asia Pacific ex Japan returned 5.4% (GBP). Only in the west is 13 viewed as an unlucky number and Asian markets are expected to continue onwards and upwards throughout the year of the snake. The World Bank improved its forecast for Chinese growth up from 8.1% to 8.4% based on stimulus measures and infrastructure projects and backed by a return to manufacturing growth. Xi Jinping, the new Chinese president addressed his subjects for the first time on 15th November. Indian GDP dropped to 5.3% from 5.5% over the previous quarter. Argentina was ordered to pay \$1.3bn to hedge funds that refused to restructure their debts following the 2001 default making the possibility of a second default more real. Gold finished down quarter on quarter ending the year at \$1,660 per ounce. The MSCI Emerging Markets index returned 4.9% (GBP) for the fourth quarter and 13.4% (GBP) for the year.





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	-0.4	2.7	2.7	8.4	7.2
■ FTSE All Stock 0-5 Yr. Gilts	-0.2	1.0	1.0	3.1	4.3
FTSE All Stock 5-15 Yr. Gilts	-0.7	4.2	4.2	9.5	8.5
FTSE All Stock > 15 Yr. Gilts	-0.2	2.9	2.9	12.2	8.9
■ ML STG N-Gilts All Stocks	2.2	13.2	13.2	9.6	7.1
■ FTSE Index Linked	4.3	0.6	0.6	9.5	7.7
FTSE Index Linked 5+ yrs	5.0	0.5	0.5	10.6	8.1
JPM GBI Global	-2.5	-3.2	-3.2	4.7	10.1

The OECD urged policymakers to consider further easing to stimulate growth, as it revised down its growth forecast. The global economy is expected to grow by only 2.9% in 2012 and 3.4% in 2013, down from the 3.4% and 4.2% predictions made earlier this year. However global private sector output expanded at the fastest pace for nine months in December, according to the JPMorgan Global Manufacturing & Services Purchasing Managers Index (PMI). At 53.7 in December, the services sector led the growth with strongest rates of increase from the US and India. The Eurozone and Japan were the principal drags on the global economy, both seeing output contracting further while UK economic output stagnated. Japan's economy shrank by 0.9% in the third quarter, entering recession for the fifth time in 15 years. The newly elected Liberal Democrat party called for substantial increase in fiscal stimulus to tackle deflation and revive the economy. China's growth appears to have stabilised as December's final Manufacturing PMI, posted 51.5, the highest index reading since May 2011. Central bank interventions continue to hold core government bond yields at historic lows. This saw investors chasing better yielding assets and resulted in global high yield corporate bond issuance at a record high in 2012. Over the quarter and year to date the JPM Global Govt Bond index declined -2.5% and -3.2% while the Barclays Capital Global Aggregate Corporate Bond index delivered +1.2% and +6.3% (all GBP).

In the UK the Monetary Policy Committee (MPC) held the Bank rate at 0.5%, and QE unchanged at £375bn. Minutes of the MPC November meeting indicated that they view the Treasury's decision to transfer £37bn of coupons from the APF, as a form of QE while starting to question the effectiveness of more monetary loosening. Data showed an increase in mortgage approvals in November and the BoE's Q4 survey reveals a noticeable easing in credit conditions, signs that it's Funding for Lending Scheme (FLS) may be starting to feed down to households. The Office for Budget Responsibility (OBR) cut their economic growth forecasts, revising 2012 to contract by 0.1% instead of growing by 0.8% as forecast in March. The Chancellor's Autumn Statement proved to be fiscally neutral, recognising that it will require another year of austerity to meet his fiscal mandate of eliminating the structural deficit over the next 5 years as borrowing projections were increased. Official data showed UK GDP grew by 1.0% in Q3, buoyed by higher consumer spending and service sector activity resulting from the Olympics. The latest PMI for the services sector registered 48.9 in December, the lowest since April 2009. Given that the sector accounts for two thirds of UK business activity, fears that output contracted in the 4th quarter and the prospect of a "triple dip" recession have arisen. In spite of these concerns, improved global risk sentiment saw UK bond yields rise over Q4. The benchmark 10-year gilt yield rose over the quarter from 1.72% to close at 1.85%. The FTSE All Stock Gilt index returned -0.4% for the quarter and +2.7% year to date while the ML Sterling Non Gilts gained +2.2% and +13.2% (all GBP) over the same periods.

The ECB left interest rates unchanged at 0.75% and revised down its growth forecasts as "economic weakness extends into 2013". Pressure on periphery debt markets eased considerably towards year end, due to the ECB's statement to do "whatever it takes" accompanied by the launch of the Outright Monetary Transactions (OMT) programme. Yields on government debt in Italy, Spain and particularly in Greece are well down from levels seen earlier this year. Italy's 2-year borrowing costs fell, successfully selling EUR11.75bn of government debt at the end of December even amid political uncertainty as PM Monti resigned. Greek bond yields plunged to their lowest since March 2011 after the ECB accepted their eligibility as collateral. This was on top of the rally caused by S&P's credit rating upgrade from "selective default" to -B. France's weakening economic outlook convinced Moody's to downgrade to Aa1 from Aaa. 10-year yields on Spanish, Italian and Greek bonds have fallen over the quarter from 6.0%, 5.2% and 19.7% to 5.3%, 4.5% and 11.8% respectively. The Eurozone economy has continues to contract, albeit at a slower rate as the December Eurozone Composite PMI came in at 47.2, a nine month high. Unemployment in the Eurozone increased for a fourth consecutive month to hit a record high of 11.8% in November. The benchmark German Bund 10-year yield fell from 1.46% in September to 1.32% at the end of the year. The iTraxx Europe 5yr CDS index, representative of 125 investment grade entities, tightened from 136.2 at the end of September to close the quarter at 117.5. The JPM European Govt Bond index returned +1.8 and +9.4% for Q4 and the year to date respectively, while the Barclay Capital Euro Aggregate Credit index was up at +2.8% and +13.1% (all EUR) for the same periods.

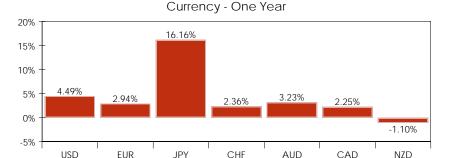
US GDP growth in Q3 was revised up to 3.1% (annualised) following higher exports and consumer spending. That and the Markit Composite PMI average of 58.0 in the 4th quarter, suggest the economy continued to expand towards the end of 2012. However the political backdrop - the Presidential election with the re-election of President Obama and the fractious negotiations on averting the US 'fiscal cliff', ensured uncertainty in the markets throughout the last quarter of the year. Unemployment was unchanged from last quarter at 7.8%. In an effort to drive the recovery forward, the US Federal Reserve has tied its interest rate policy to the state of the economy. At the December meeting the FOMC announced that interest rates would be kept exceptionally low until unemployment falls below 6.5% and would not increase as long as inflation forecast 1-2 years ahead is not higher than 2.5%. The Fed's asset purchase programme was increased to \$85bn of Treasury and mortgage backed securities a month, essentially open-ended as also linked to substantial improvement in the labour market. In the bond markets, the record low borrowing costs and demand for higher yielding alternatives to governments pushed US corporate debt sales to a record \$1.4tm in 2012, according to Dealogic data. The 10-year benchmark Treasury yield at 1.64% at the beginning of the quarter, closed the year at 1.76%. This saw the JPM US Govt Bond index down for the quarter at -0.1% and up for the year at +2.2% while the Barclay Capital US Aggregate Corporate Bond index gained +1.1% and +9.8% (all USD) over the same periods.





Currency Performance (in GBP)





	Three Months	Year To Date	One Year	Three Years	Five Years
United States dollar	0.66	4.48	4.48	0.22	-4.05
European Union euro	-1.79	2.94	2.94	3.04	-1.98
Japanese yen	11.22	16.12	16.12	-2.24	-9.17
Swiss franc	-1.98	2.35	2.35	-3.83	-8.29
Australian dollar	0.82	3.22	3.22	-4.56	-7.40
Canadian dollar	1.85	2.25	2.25	-1.50	-3.87
New Zealand dollar	1.35	-1.10	-1.10	-3.96	-5.44

The fourth quarter of 2012 saw a strengthening of the EURO against the Dollar, Sterling and Yen. Sterling strengthened against the Dollar and Yen. In the same period, the Dollar weakened against the Euro and Sterling. The Yen was the big story of the quarter, seeing large losses against all the major currencies. Japan has seen a sharp decline in exports to China over the three months to 31-December-2012, reflecting a slowdown in Chinese growth and the lingering damage of a territorial dispute in the East China Sea. In November, the falling exports to China helped to push the Japan's trade deficit to \$11.3bn, the third largest monthly deficit in more than 30 years and the fifth consecutive monthly decline. The deteriorating trade balance will put pressure on Japan's new prime minister, Shinzo Abe, to fulfil his campaign promise to inflate the economy, weaken the currency and return the country to a growth path. Mr Abe, the seventh prime minister in as many years, has vowed to fight deflation by easing monetary policy and weakening the yen. The Bank of Japan has resumed its asset purchasing, adding a further Y10tn to the easing programme. In late December, Australia's government abandoned a long-held pledge to return its budget to surplus, blaming a painfully high Australian Dollar, low export earnings and lower company profits for generating a large hole in tax takings. Treasurer Wayne Swan said cutting spending further to achieve its pledge of a small surplus in the fiscal year, to June 2013, would threaten economic growth and be self defeating.

In the UK, Q4 2012 saw Sterling strengthen against the Dollar and Yen and weaken against the Euro. Minutes from the latest Monetary Policy Committee meeting, held in early December, showed that only one member (David Miles) preferred to increase the size of the asset purchase programme, by a further £25 billion, to a total of £400 billion. However, all nine MPC members voted to keep rates at the historic low of 0.5%. The annual rate of inflation in the UK, as measured by the consumer price index, rose to 2.7% in November, up 0.2% from the August figure of 2.5%. The largest price rises were seen in the cost of fruit, bread and cereals, as well as in energy bills. CPI inflation is now expected by many investors and economists to creep up further in 2013 as further increases in electricity and gas prices take effect. Unemployment in the UK fell by 82,000 to 2.51 million in the 3 months to October 2012. This was the biggest quarterly fall in unemployment since 2001. The jobless rate fell to 7.8%, down 0.3% from the previous quarter. Employment rose by 40,000 to 29.6 million, the highest figure since records began in 1991. House prices fell 0.1% in December and ended 2012 down 1.0% according to figures from Nationwide building society. The average price of a home at is now quoted at £162,262. Sterling closed the quarter up against the Yen and Dollar by 11.2%, 0.7% respectively and down against the Euro by 1.8%.

In the US, much attention has been focused on the November 6 election, which saw Barack Obama re-elected for a second term, and the fiscal cliff at the end of December. In the run up to the end-of-year deadline to avert the fiscal cliff - swooping tax rises and spending cuts that threatened to derail the US economy - businesses pulled back on their spending until a resolution was found. Factory activity also stagnated on the back of weaker consumer confidence levels in the US as well as slowing growth in China and a weak Europe. The US manufacturing sector rebounded slightly in December even as slowing domestic demand and global growth momentum stalled activity in the final months of 2012. Without a doubt, the US housing market has been the most successful sector of the US economy this year. Prices rose in 18 of 20 US cities in October compared to a year ago, pushed up by rising sales and a decline in the supply of available homes. The Case Stiller home-price index, increased 4.3% in October compared to a year ago. Rising home prices allow lenders to be more generous with home financing, which allows even more prospective home buyers to access the market, further driving up home prices. Higher values give consumers more confidence to go out and spend money which stimulates the real estate market and the broader economy. The US un-employment rate has remained steady at 7.8% in December. The US economy needs to add 90,000 jobs per month to keep up with population growth. The number of unemployed in the US now stands at 12.2 million. The US trade deficit stood at \$42.2bn in October 2012. Exports stood at \$180.5 billion and imports at \$222.8 billion. The goods deficit with China increased from \$29.1 billion in September to \$29.5 billion in October with exports increasing by \$2.0 billion (primarily soybeans) to \$10.8 billion, and imports increasing by \$2.4 billion (primarily computers and toys, games and sporting goods) to \$40.3 billion. The Dollar ended the quarter down against the Euro and Sterling by 2.5% and 0.7% respectively and up against the Yen by 11.7%.

In the Euro area, the Euro strengthened against the Sterling, Dollar and Yen this quarter. The governing council of the European Central Bank left interest rates unchanged at 0.75% in December. President Mario Draghi provided a gloomy assessment of the euro-zone economy, acknowledging that some members of the bank's governing council pushed for a rate cut and opened the door to such a move if conditions do not improve. In the 17-nation eurozone, inflation rate fell in November to a 2-year low of 2.2% and estimated to remain at this level in December. The lower inflation rate would make it easier for the central bank if it were to decide to cut its interest rate. Unemployment in the eurozone hit a fresh high of 18.8 million in November. The jobless in the 17-country region reached a new high of 11.8% in November, the highest since the launch of Europe's monetary union in 1999. The highest unemployment rate was recorded in Spain (26.6%) and Greece (26.0%). The lowest rates were recorded in Austria (4.5%) and Germany at (5.4%). Much of the increase in the overall unemployment rate is being directly attributed to the austerity measures that have been imposed over much of Europe. The Euro ended the quarter up against the Dollar, Sterling and Yen by 2.5%, 1.8% and 13.0% respectively.





Scheme Performance

Global equity markets, with the exception of the US, pushed on during the final quarter of 2012 and Japan aside finished the year with double digit growth; while UK Gilts fell, but Index-linked regained ground and Corporates continued to grow. Against this backdrop the London Borough of Hillingdon returned 3.12% beating the Total Plan benchmark of 2.18% by 93 basis points. In monetary terms this is a growth in assets of £19.2 million and the value of the combined scheme now stands at £631.72 million as at 31st December 2012. During this period £6.4 million was withdrawn from the scheme, specifically from SSGA Drawdown and the cash account, while Marathon was terminated and the £60 million was moved into an SSGA Global Equity Fund. Looking further into the analysis the main drivers were the outperformance of Ruffer and UBS, who between them make up over a third of the fund, although this was offset by UBS Property. In allocation terms most mandates are in line with the neutral position with the only notable impact coming from SSGA Global Equity due to the investment in this fund.

The good result this period feeds into the longer numbers, producing an outperformance of 1.09% in 2012 with returns of 9.07% versus 7.89%. Over the year Ruffer and UBS continue to be the main drivers coupled with positive effects from Marathon while the main detractor was Private Equity assets. Once again allocation is fairly balanced with just a small negative impact coming from underweighting UBS and the exposure to the unbenchmarked Macquarie fund. The 3 year numbers show a 0.64% relative return, but then underperformance is still seen for the 5 year and since inception, although since September 1995 this is just 2 basis points with an annualised return of 6.41% against 6.44%.

Manager Performance

JP Morgan

In the latest quarter JP Morgan investments grew a further 1.69% which compared to the 0.88% target of the 3 Month LIBOR + 3% translates as a 0.81% relative outperformance. This means they finish the year with a return of 7.23% which compares favourably with the benchmark of 3.26%, while since inception (November 2011) the return drops to 6.83%, but this is still 2.85% ahead of target on a relative annualised basis.

Macquarie

Macquarie portfolio was in the red again in the fourth quarter, with a return of -0.10%, which means for the last twelve months they are the worst performers with -15.37%. Since inception in September 2010 they've delivered six negative quarterly returns out of nine, leading to an annualised loss of -11.60%.

At present no benchmark has been applied to this mandate.

M&G Investments

Over the fourth quarter of 2012, M&G produced a 1.05%, which was just 7 basis points behind the 3 Month LIBOR +4% p.a. target. Over the last year the account registers exactly 5% against 4.86% whilst since inception at the end of May 2010, the portfolio return falls to 4.55% pa return whilst the benchmark remains 4.86% pa. While the since inception Internal Rate of Return for this portfolio is now ahead of the target with a figure of 5.17% opposed to the comparator of 5.06%.

Ruffer

The Ruffer portfolio returned 2.49% during the quarter and against the return of 0.15% for LIBOR 3 Month GBP delivers an outperformance of 2.33%. This culminates in a 2012 return of 3.36% against 0.97% for the target, resulting in the 2.36% outperformance. While since inception (May 2010) seven out of ten quarters show positive returns and lead to figures of 3.83% versus 0.84% per annum, which translates as a relative return of 3.56%.





Manager Performance

Private Equity

The private equity assets, consisting of funds with Adam Street and LGT, regained some of the losses seen in the previous period returning 1.51% and 4.22% respectively in the latest quarter. This results in the one year figures demonstrating positive absolute returns with Adam Street on 6.73% and LGT with 6.46%. Over the longer periods, the outlook over which private equity investments should be measured, improvements in the absolute returns are seen over three years with Adam Street increasing to 12.07% and LGT with 10.21% for the same period. However, since their respective inceptions in May 2004 and January 2005, while LGT posts 8.19% pa, Adam Street drops to just 0.76% pa.

At present no benchmark has been applied to these mandates.

SSGA

The SSGA passively managed portfolio produced a return of 1.10% in the quarter which was a mere 1 basis point over the benchmark; further analysis confirms the passive nature with all categories aligned with their respective indices. So for 2012 they produce an 11.40% return, which is still just behind target, while over 3 years the per annum return falls to 7.59% which sits just 5 basis points above the benchmark. Since inception (November 2008) a return of 12.83% pa is only 6 basis points above the benchmark, but the passive nature is best demonstrated by the 3 year R squared and beta figures of 1, while the tracking error is just 0.16.

SSGA Drawdown

The SSGA Drawdown fund posted 0.97% in the latest period with the blended benchmark showing 1.08%, the fourth quarter in a row of underperformance. Which mean for the year they demonstrate the lowest relative return with -2.33%, however, these results are entirely due to the mandate being over 60% in the liquidity fund for much of the year as opposed to the 50/50 split of the benchmark. The results seen in 2012 feed into all longer periods, although since inception the weights average out over time and the gap over longer periods closes slightly with the funds annualised return of 5.12% against 5.60% for the benchmark.

SSGA Global Equity

During October 2012, the Marathon mandate was terminated and the funds temporarily moved into an SSGA Global Equity account measured against the FTSE All World Index. In the short time they have been invested they post a return of 2.98% since 23rd October, while the index for the same period is 1.86%, resulting in an outperformance of 1.09%.

UBS

The UBS UK Equity again posted the highest absolute return of all mandates with 6.73%, which also means they demonstrated the biggest relative return of 2.80% when compared to the FTSE All Share figure of 3.82%. Looking into the attribution analysis, stock selection was the main driver with outperformance in all but two sectors, but the most notable being Consumer Services (0.92%) and Financials (0.82%). Whilst asset allocation detracted from these gains with the positive decision of overweighting Consumer Services (0.24%) more than offset by underweighting Financials (-0.23%) and overweight in Telecoms (-0.16%). These results are mirrored over one year, with UBS again delivering the highest absolute and relative figures, with returns of 17.76% vs. 12.30%. This 4.86% relative return is also attributable to selection effects in Financials (2.63%) and Consumer Services (1.75%) which is offset by negative asset allocation with the main impact being underweighting Financials (-0.58%). UBS maintain this outperformance over three years but across longer periods they start to fall below the benchmark, although they still demonstrate outperformance since inception with figures of 9.83% versus 8.75% on an annualised basis.

UBS Property

The UBS Property portfolio broke the run of positive returns with a figure of -1.36%, the lowest of all mandates, and although the IPD UK PPFI All Balanced Funds index also was in the red, at -0.40% this translates as an underperformance of -0.97% (also the lowest of all mandates). This also feeds into the one year as the portfolio now shows a loss of-0.09%, which is -1.17% behind the IPD. All long periods also demonstrate underperformance and with the exception of the 6.07% pa return over three years, absolute returns are also negative. Since inception, in March 2006, these losses stand at -1.06% and while the benchmark also falls with -0.39%, the underperformance is now 68 basis points.





Active Contribution

By Manager

			Excess	Relative	Active Contribution			Excess	Relative	Active Contribution			Excess	Relative	Active Contribution	Active Contribution
	Portfolio	Benchmark	Return	Return	10/12	Portfolio	Benchmark	Return	Return	11/12	Portfolio	Benchmark	Return	Return	12/12	4Q 2012
Adam Street	0.36	-	0.36	-	74,590.75	0.53	-	0.53	-	109,316.63	0.62	-	0.62	-	129,984.40	313,891.78
JP Morgan	0.66	0.29	0.37	0.36	268,986.94	0.47	0.29	0.18	0.18	131,374.76	0.56	0.29	0.27	0.27	198,870.73	599,232.44
LGT	1.58	-	1.58	-	262,219.07	1.48	-	1.48	-	244,582.04	1.10	-	1.10	-	186,144.10	692,945.21
Macquarie	-2.31	-	-2.31	-	-135,162.42	2.47	-	2.47	-	141,014.63	-0.20	-	-0.20	-	-12,366.87	-6,514.66
Marathon	0.76	-	0.76	-	0.00	0.00	-	0.00	-	0.00	0.00	-	0.00	-	0.00	0.00
M&G Investments	0.04	0.37	-0.33	-0.33	-45,034.88	0.00	0.37	-0.37	-0.37	-50,140.95	1.01	0.37	0.64	0.64	94,755.49	-420.34
Nomura	-0.50	-	-0.50	-	-6,830.09	-42.89	-	-42.89	-	-37,112.84	19.47	-	19.47	-	7,679.61	-36,263.32
Ruffer	-0.76	0.06	-0.82	-0.82	-955,807.79	1.48	0.04	1.44	1.44	1,658,703.91	1.76	0.05	1.72	1.72	2,010,361.65	2,713,257.77
SSGA	0.60	0.60	-0.00	-0.00	-2,360.59	2.06	2.06	-0.00	-0.00	-690.33	1.10	1.09	0.01	0.01	10,863.24	7,812.32
SSGA Drawdown	0.26	0.34	-0.08	-0.08	-6,987.56	0.53	0.63	-0.10	-0.09	-8,270.00	0.17	0.10	0.07	0.07	4,036.37	-11,221.18
SSGA Global Equity	-	=	-	-	0.00	1.92	1.86	0.06	0.06	37,773.55	0.62	0.98	-0.35	-0.35	-219,216.16	-181,442.61
UBS	1.20	1.03	0.17	0.16	193,020.79	2.84	1.75	1.09	1.07	1,295,264.05	2.55	0.99	1.56	1.55	1,898,971.11	3,387,255.95
UBS Property	0.26	0.25	0.01	0.01	4,405.96	-0.80	0.01	-0.81	-0.81	-403,153.05	-0.83	-0.66	-0.17	-0.17	-81,912.16	-480,659.25

Total Fund Market Value at Qtr End: £631.7 M







Scheme Performance	è			<u>Thr</u> <u>Mon</u>				<u> Үе</u> <u>То Г</u>				On Ye		
	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	631.7	100.00	3.12	2.18	0.95	0.93	9.07	7.89	1.18	1.09	9.07	7.89	1.18	1.09
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	21.1	3.34	1.51	-	-	-	6.73	-	-	-	6.73	-	-	-
JP Morgan	74.7	11.83	1.69	0.88	0.82	0.81	7.23	3.85	3.38	3.26	7.23	3.85	3.38	3.26
LGT	17.1	2.70	4.22	-	-	-	6.46	-	-	-	6.46	-	-	-
Macquarie	6.3	1.00	-0.10	-	-	-	-15.37	-	-	-	-15.37	-	-	-
Marathon	0.0	0.00	0.76	-	-	-	14.88	-	-	-	14.88	-	-	-
M&G Investments	14.9	2.36	1.05	1.12	-0.07	-0.07	5.00	4.86	0.14	0.13	5.00	4.86	0.14	0.13
Ruffer	119.2	18.87	2.49	0.15	2.33	2.33	3.36	0.97	2.39	2.36	3.36	0.97	2.39	2.36
SSGA	123.3	19.53	3.80	3.79	0.01	0.01	11.40	11.48	-0.08	-0.07	11.40	11.48	-0.08	-0.07
SSGA Drawdown	6.1	0.97	0.97	1.08	-0.11	-0.11	4.11	6.60	-2.49	-2.33	4.11	6.60	-2.49	-2.33
SSGA Global Equity	62.1	9.83	-	-	-	-	-	-	-	-	-	-	-	-
UBS	123.5	19.55	6.73	3.82	2.91	2.80	17.76	12.30	5.46	4.86	17.76	12.30	5.46	4.86
UBS Property	49.0	7.75	-1.36	-0.40	-0.96	-0.97	-0.09	1.10	-1.19	-1.17	-0.09	1.10	-1.19	-1.17

Total Fund Market Value at Qtr End: £631.7 M







Scheme Performance		<u>Thr</u> <u>Ye</u> s				<u>Fiv</u> <u>Yea</u>					Incep 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	6.62	5.94	0.67	0.64	1.74	2.57	-0.82	-0.80	30/09/95	6.41	6.44	-0.03	-0.02
By Manager			_	D. I. ii			_	D				_	D 1 "
	Portfolio	Benchmark	Excess Return	Relative Return	Portfolio	Benchmark	Excess Return	Relative Return	Inception Date	Portfolio	Benchmark	Excess Return	Relative Return
Adam Street	12.07	-	-	-	7.11	-	-	-	31/01/05	0.76	-	-	-
JP Morgan	-	-	-	-	-	-	-	-	08/11/11	6.83	3.87	2.96	2.85
LGT	10.21	-	-	-	6.60	-	-	-	31/05/04	8.19	-	-	-
Macquarie	-	-	-	-	-	-	-	-	30/09/10	-11.60	-	-	-
Marathon	-	-	-	-	-	-	-	-	09/06/10	8.68	-	-	-
M&G Investments	-	-	-	-	-	-	-	-	31/05/10	4.55	4.86	-0.31	-0.30
Ruffer	-	-	-	-	-	-	-	-	28/05/10	4.43	0.84	3.59	3.56
SSGA	7.59	7.54	0.05	0.05	-	-	-	-	30/11/08	12.83	12.77	0.06	0.06
SSGA Drawdown	4.28	4.90	-0.62	-0.59	-	-	-	-	30/06/09	5.12	5.60	-0.48	-0.46
SSGA Global Equity	-	-	-	-	-	-	-	-	23/10/12	2.98	5.44	-2.46	-2.33
UBS	7.78	7.48	0.30	0.28	3.84	4.12	-0.28	-0.27	31/12/88	9.83	8.75	1.08	0.99
UBS Property	6.07	6.62	-0.55	-0.52	-2.76	-1.97	-0.80	-0.81	31/03/06	-1.06	-0.39	-0.67	-0.68

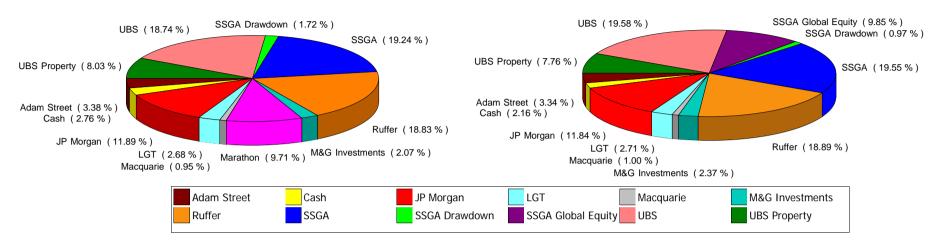
Total Fund Market Value at Qtr End: £631.7 M





Weighting at Beginning of Period

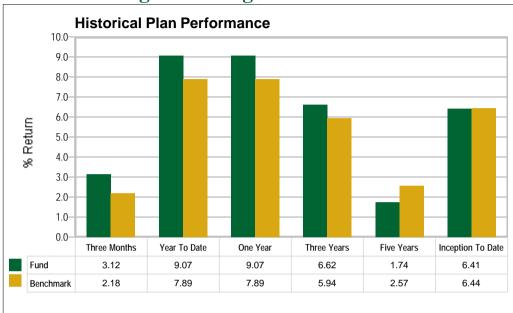
Weighting at End of Period

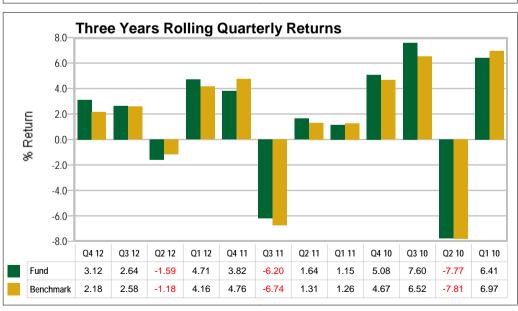


	Opening Market Value	% of Fund	Net Investment	Appreciation	Income Received	Closing Market Value	% of Fund
	£(000)		£(000)	£(000)	£(000)	£(000)	
London Borough of Hillingdon	618,846	100.00	-6,367	17,261	1,978	631,719	100.00
Adam Street	20,882	3.37	-114	309	6	21,082	3.34
Cash	17,027	2.75	-3,418	0	10	13,618	2.16
JP Morgan	73,462	11.87	0	1,243	0	74,704	11.83
LGT	16,580	2.68	-200	697	0	17,077	2.70
Macquarie	5,840	0.94	470	-6	0	6,304	1.00
Marathon	59,991	9.69	-60,584	593	0	0	0.00
M&G Investments	12,782	2.07	1,991	156	-0	14,930	2.36
Nomura	16	0.00	186	-173	18	47	0.01
Ruffer	116,286	18.79	0	2,490	401	119,176	18.87
SSGA	118,833	19.20	0	4,515	0	123,348	19.53
SSGA Drawdown	10,621	1.72	-4,600	82	-0	6,102	0.97
SSGA Global Equity	-	-	60,346	1,778	0	62,124	9.83
UBS	115,726	18.70	0	6,754	1,032	123,512	19.55
UBS Property	49,629	8.02	-1	-1,189	512	48,951	7.75







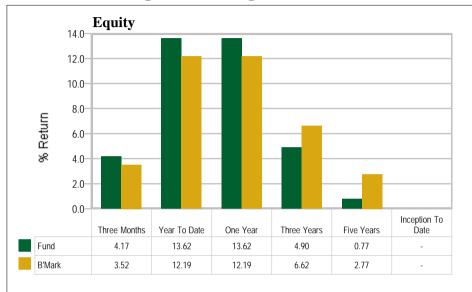


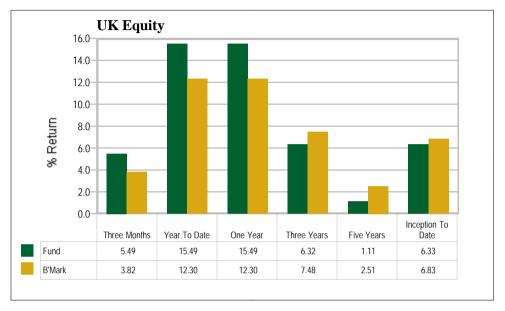
Risk Statistics - 3 years	Fund	B'mark
Performance Return	6.62	5.94
Standard Deviation	7.66	7.45
Relative Return	0.64	
Tracking Error	1.27	
Information Ratio	0.53	
Beta	1.02	
Alpha	0.58	
R Squared	0.97	
Sharpe Ratio	0.71	0.64
Percentage of Total Fund	100.0	
Inception Date	Sep-1995	
Opening Market Value (£000)	618,846	
Net Investment £(000)	-6,367	
Income Received £(000)	1,978	
Appreciation £(000)	17,261	
Closing Market Value (£000)	631,719	

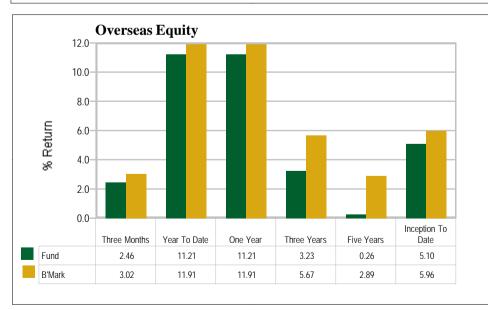


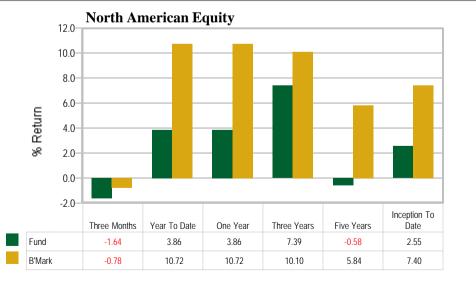






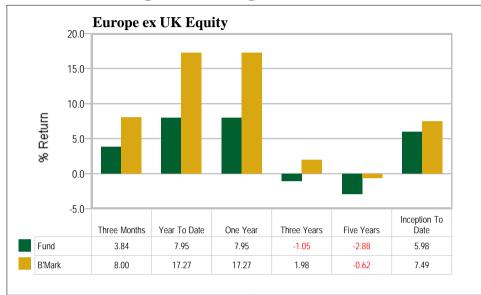


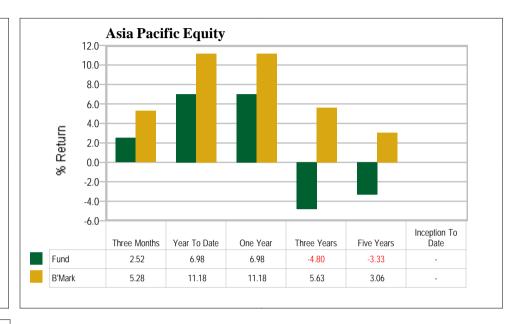


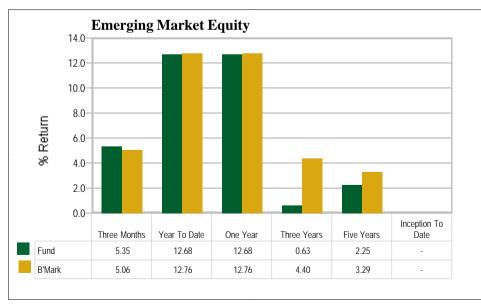






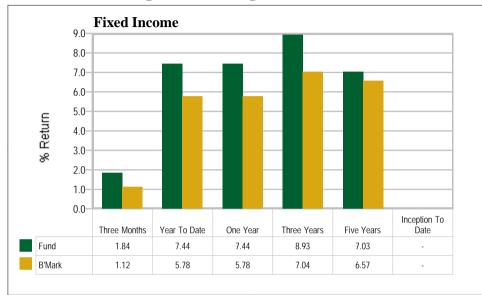


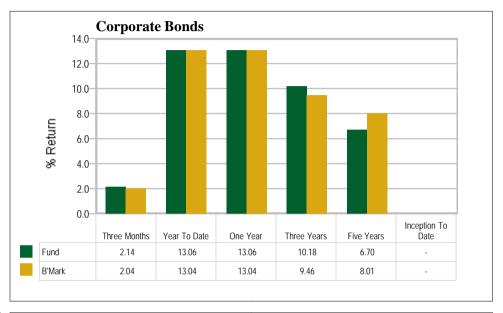


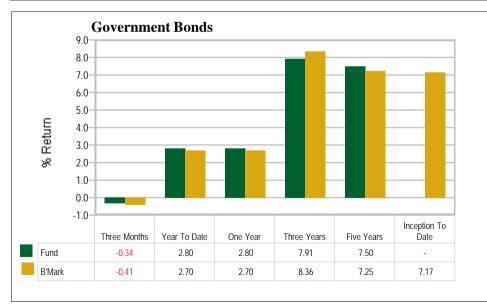


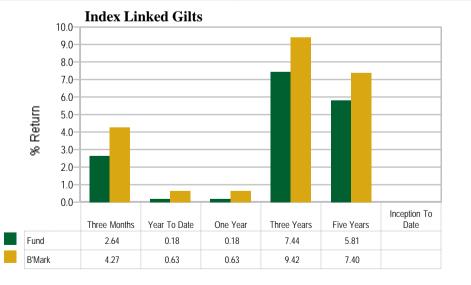








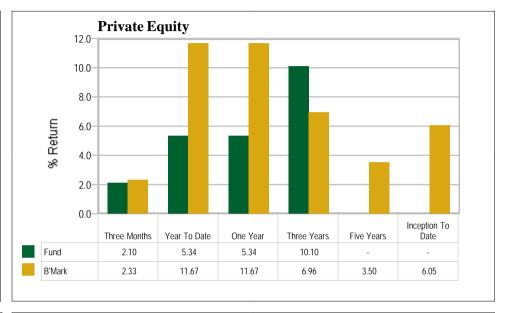


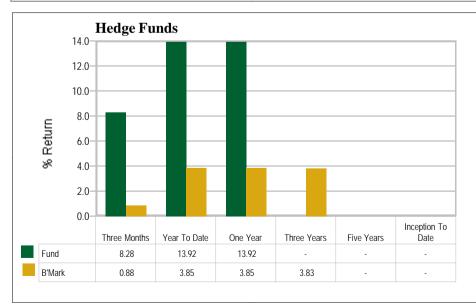


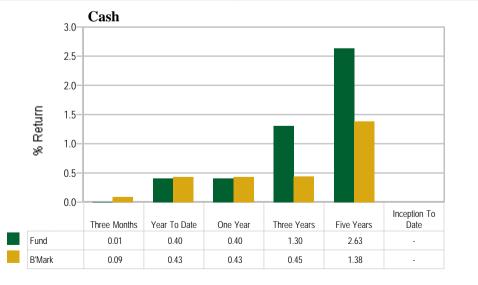










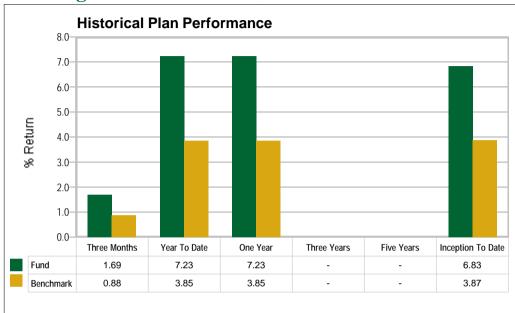


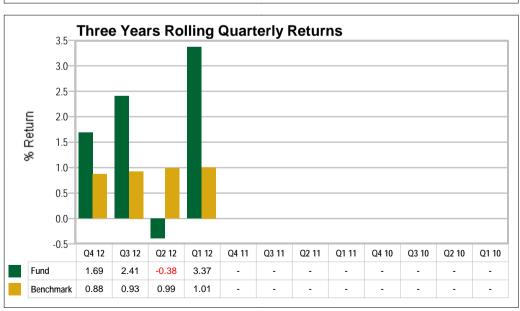


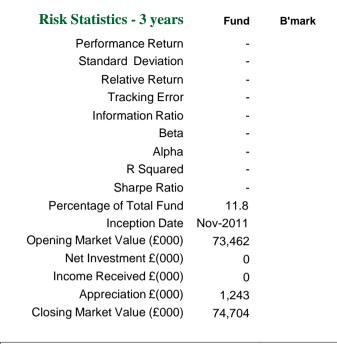


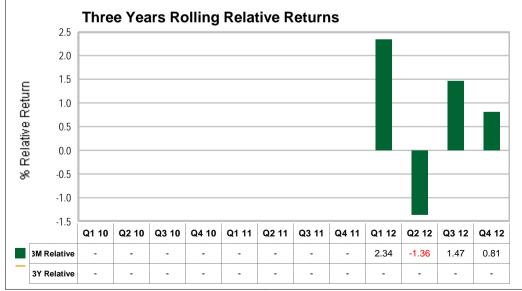


JP Morgan





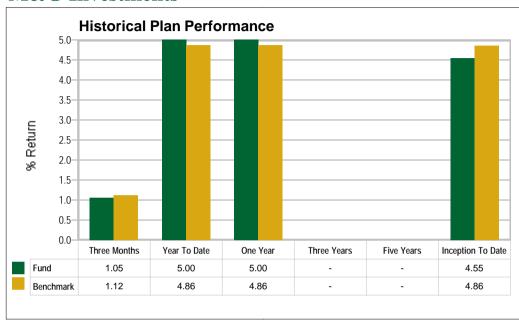


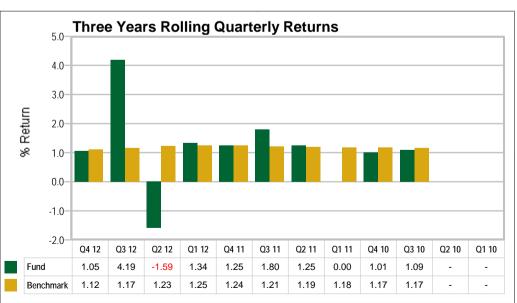


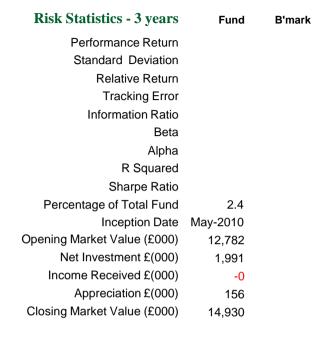


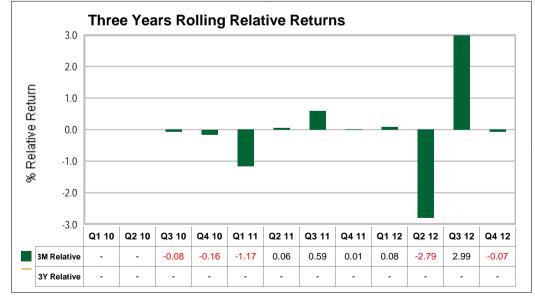


M&G Investments







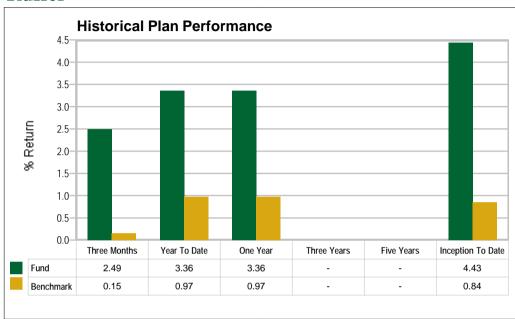


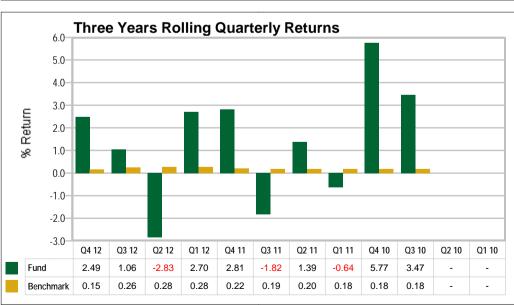


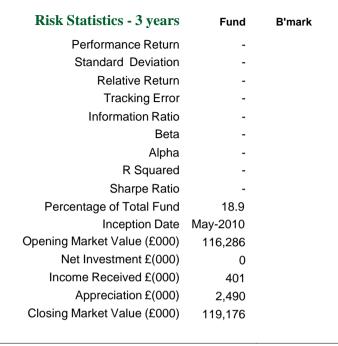


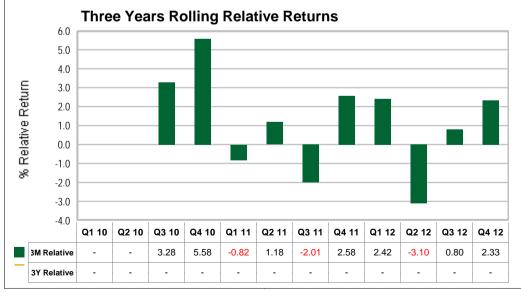


Ruffer



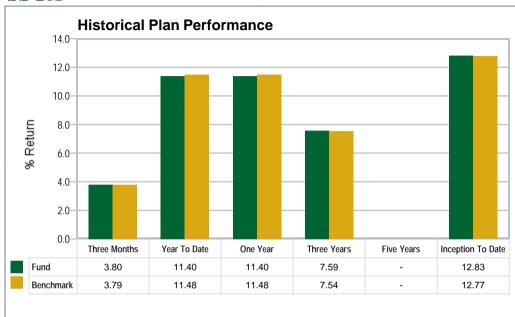


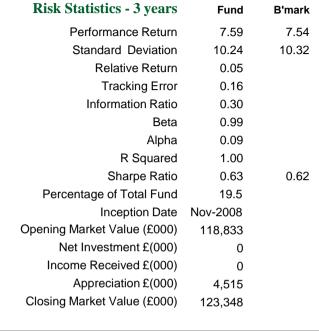


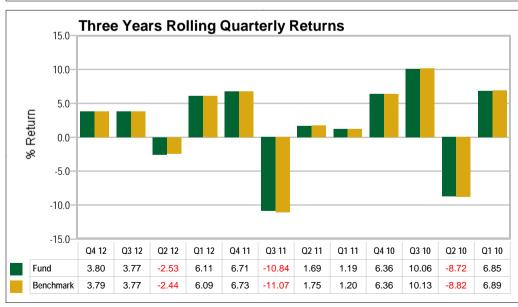


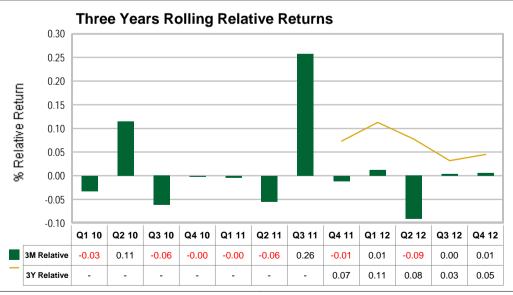






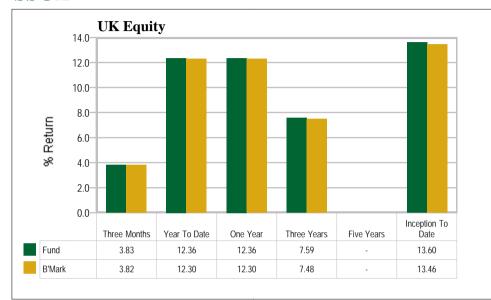




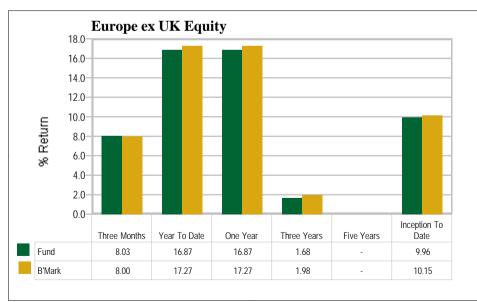


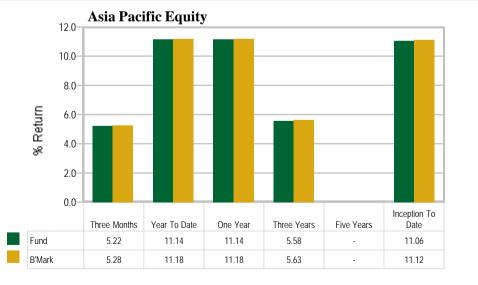






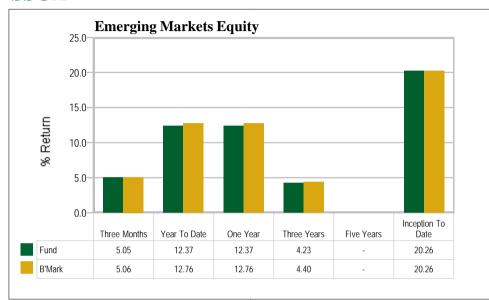


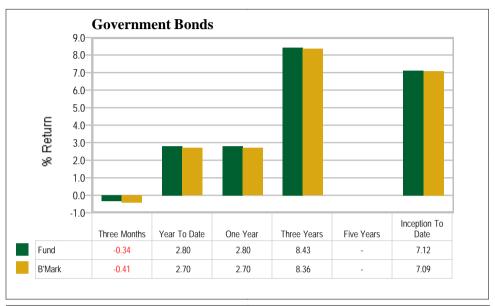


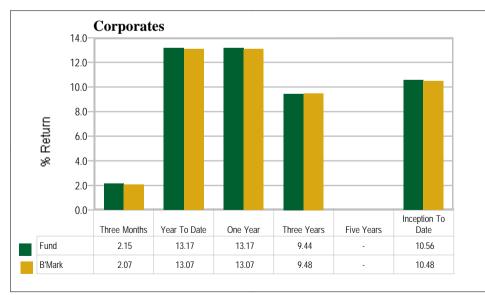


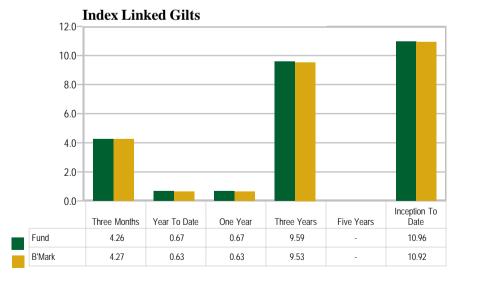








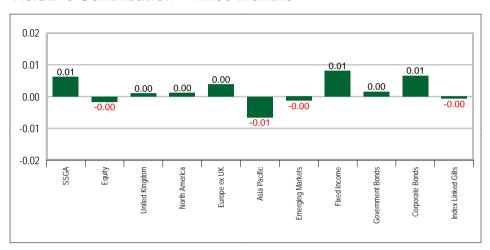






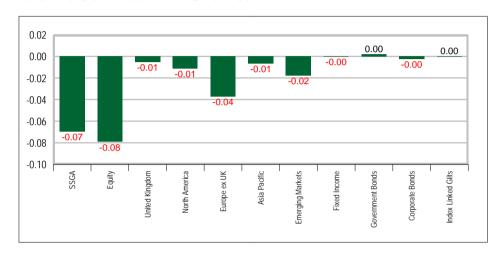


Relative Contribution - Three Months



	Return	Benchmark	Relative Return	Asset Allocation	Stock Selection	Currency Effect	Relative Contribution
SSGA	3.80	3.79	0.01	0.00	0.60	-0.59	0.01
Equity	4.00	-	4.00	0.00	0.65	-0.65	-0.00
United Kingdom	3.83	3.82	0.00	-0.00	0.00	-0.00	0.00
North America	-0.80	-0.79	-0.02	0.00	-0.01	0.01	0.00
Europe ex UK	8.03	8.00	0.03	0.00	-0.01	0.01	0.00
Asia Pacific	5.22	5.28	-0.06	-0.00	0.71	-0.71	-0.01
Emerging Markets	5.05	5.06	-0.02	-0.00	-0.04	0.04	-0.00
Fixed Income	1.78	-	1.78	0.00	-0.05	0.06	0.01
Government Bonds	-0.34	-0.41	0.07	0.00	0.00	-0.00	0.00
Corporate Bonds	2.15	2.07	0.08	-0.00	-0.05	0.06	0.01
Index Linked Gilts	4.26	4.27	-0.00	-0.00	-0.00	0.00	-0.00

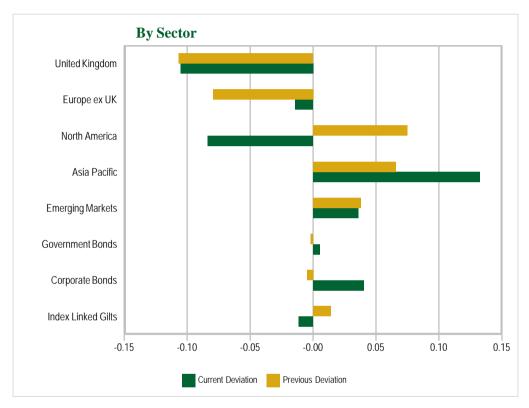
Relative Contribution - One Year



	Return	Benchmark	Relative Return	Asset Allocation	Stock Selection	Currency Effect	Relative Contribution
SSGA	11.40	11.48	-0.07	-0.01	0.49	-0.55	-0.07
Equity	12.63	-	12.63	-0.01	0.84	-0.89	-0.08
United Kingdom	12.36	12.30	0.05	-0.02	0.02	-0.00	-0.01
North America	10.67	10.73	-0.05	0.00	0.01	-0.02	-0.01
Europe ex UK	16.87	17.27	-0.35	-0.00	0.02	-0.05	-0.04
Asia Pacific	11.14	11.18	-0.03	0.01	0.96	-0.97	-0.01
Emerging Markets	12.37	12.76	-0.35	-0.00	-0.17	0.15	-0.02
Fixed Income	11.59	-	11.59	-0.00	-0.35	0.35	-0.00
Government Bonds	2.80	2.70	0.10	0.00	0.00	-0.00	0.00
Corporate Bonds	13.17	13.07	0.09	-0.00	-0.35	0.35	-0.00
Index Linked Gilts	0.67	0.63	0.04	0.00	0.00	-0.01	0.00

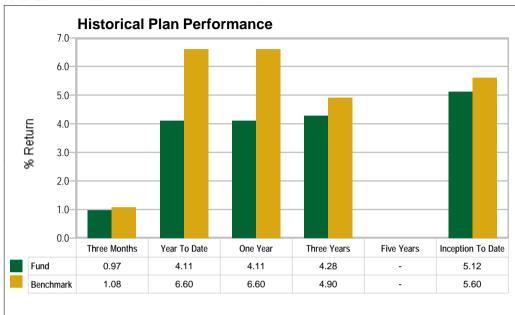


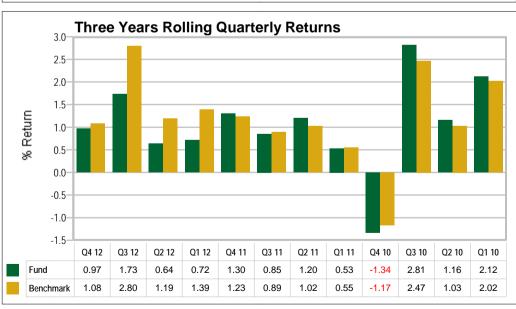




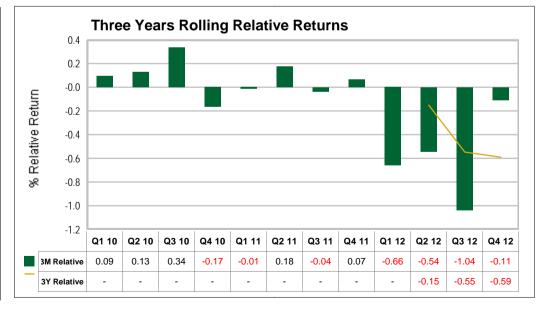
	Current Quarter	Previous Quarter	Current Benchmark	Current Deviation	Previous Benchmark	Previous Deviation
United Kingdom	43.89	43.89	44.00	-0.11	44.00	-0.11
Europe ex UK	10.99	10.92	11.00	-0.01	11.00	-0.08
North America	10.92	11.07	11.00	-0.08	11.00	0.07
Asia Pacific	11.13	11.07	11.00	0.13	11.00	0.07
Emerging Markets	3.04	3.04	3.00	0.04	3.00	0.04
Government Bonds	1.51	1.50	1.50	0.01	1.50	-0.00
Corporate Bonds	8.54	8.50	8.50	0.04	8.50	-0.00
Index Linked Gilts	9.99	10.01	10.00	-0.01	10.00	0.01





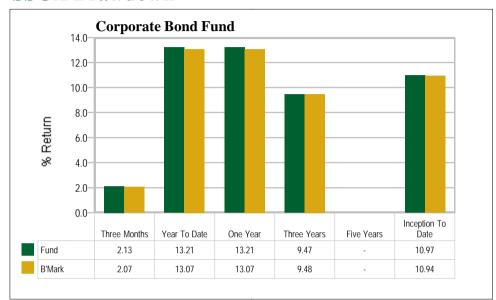


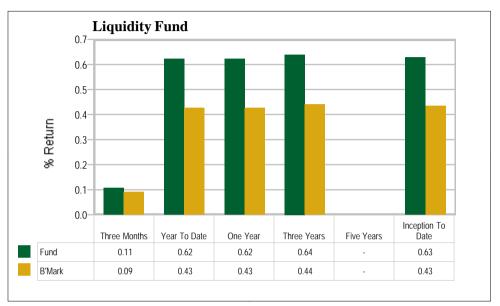
Risk Statistics - 3 years	Fund	B'mark
Performance Return	4.28	4.90
Standard Deviation	2.30	2.36
Relative Return	-0.59	
Tracking Error	0.77	
Information Ratio	-0.81	
Beta	0.93	
Alpha	-0.34	
R Squared	0.89	
Sharpe Ratio	1.35	1.58
Percentage of Total Fund	1.0	
Inception Date	Jun-2009	
Opening Market Value (£000)	10,621	
Net Investment £(000)	-4,600	
Income Received £(000)	-0	
Appreciation £(000)	82	
Closing Market Value (£000)	6,102	







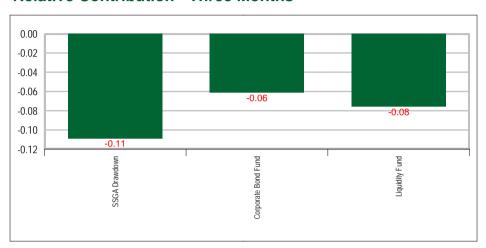






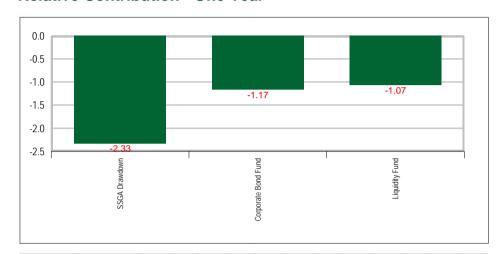


Relative Contribution - Three Months



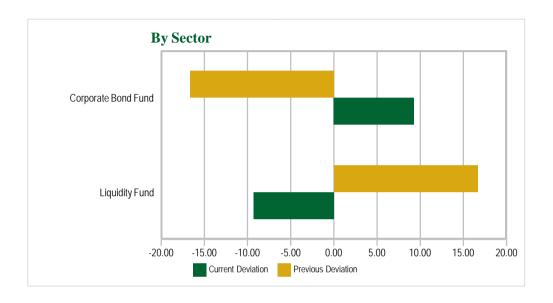
	Return	Benchmark	Relative Return	Asset Allocation	Stock Selection	Relative Contribution
SSGA Drawdown	0.97	1.08	-0.11	-0.18	0.04	-0.11
Corporate Bond Fund	2.13	2.07	0.06	-0.09	0.03	-0.06
Liquidity Fund	0.11	0.09	0.02	-0.09	0.01	-0.08

Relative Contribution - One Year



	Return	Benchmark	Relative Return	Asset Allocation	Stock Selection	Relative Contribution
SSGA Drawdown	4.11	6.60	-2.33	-2.41	0.19	-2.33
Corporate Bond Fund	13.21	13.07	0.13	-1.21	0.04	-1.17
Liquidity Fund	0.62	0.43	0.20	-1.21	0.15	-1.07

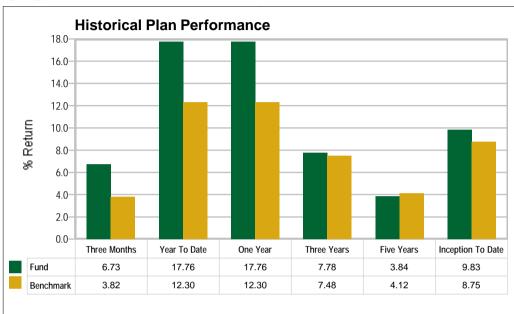


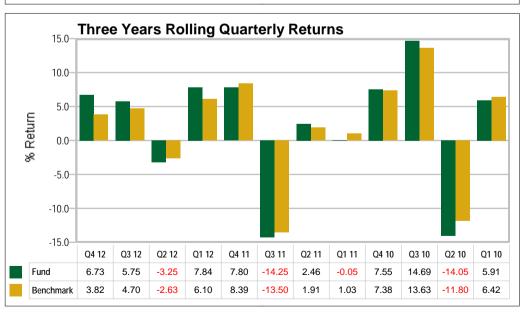


	Current Quarter	Previous Quarter	Current Benchmark	Current Deviation	Previous Benchmark	Previous Deviation
Corporate Bond Fund	59.27	33.35	50.00	9.27	50.00	-16.65
Liquidity Fund	40.73	66.65	50.00	-9.27	50.00	16.65







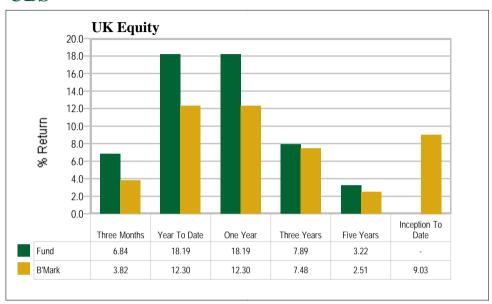


Risk Statistics - 3 years	Fund	B'mark
Performance Return	7.78	7.48
Standard Deviation	15.17	13.35
Relative Return	0.28	
Tracking Error	3.58	
Information Ratio	0.08	
Beta	1.11	
Alpha	-0.22	
R Squared	0.95	
Sharpe Ratio	0.43	0.47
Percentage of Total Fund	19.6	
Inception Date	Dec-1988	
Opening Market Value (£000)	115,726	
Net Investment £(000)	0	
Income Received £(000)	1,032	
Appreciation £(000)	6,754	
Closing Market Value (£000)	123,512	



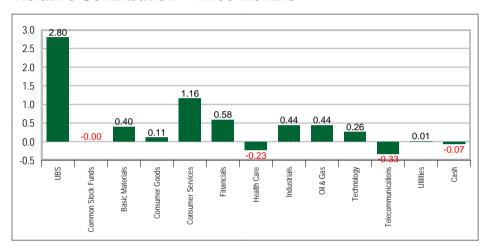






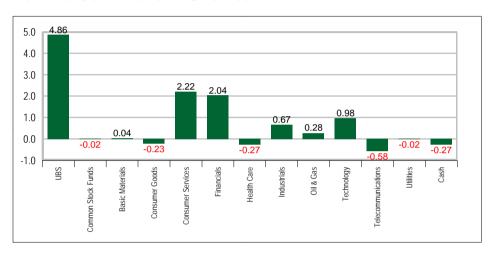


Relative Contribution - Three Months



	Return	Benchmark	Relative Return	Asset Allocation	Stock Selection	Relative Contribution
UBS	6.73	3.82	2.80	-0.60	3.42	2.80
Common Stock Funds	-20.00	-	-20.00	-0.00	0.00	-0.00
Basic Materials	14.51	8.16	5.87	-0.08	0.49	0.40
Consumer Goods	10.51	4.57	5.69	-0.03	0.15	0.11
Consumer Services	12.04	6.69	5.02	0.24	0.92	1.16
Financials	16.73	11.92	4.30	-0.23	0.82	0.58
Health Care	-4.70	-2.87	-1.88	-0.07	-0.16	-0.23
Industrials	7.84	3.77	3.92	-0.00	0.45	0.44
Oil & Gas	-0.73	-3.78	3.17	-0.14	0.58	0.44
Technology	48.87	12.16	32.73	-0.06	0.32	0.26
Telecommunications	-9.81	-7.64	-2.35	-0.16	-0.17	-0.33
Utilities	1.79	1.76	0.03	0.01	-0.00	0.01
Cash	0.05	-	0.05	-0.07	0.00	-0.07

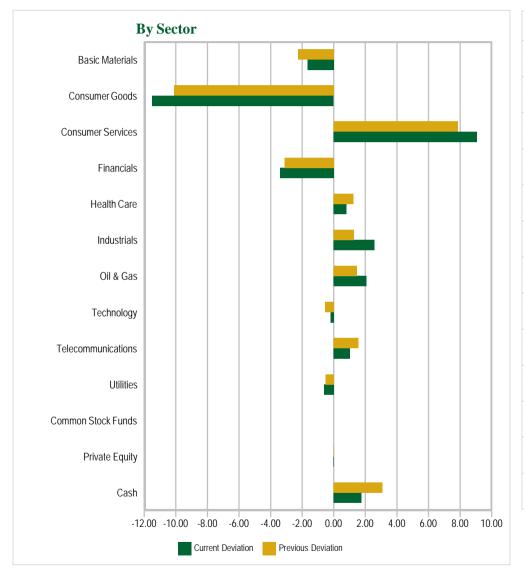
Relative Contribution - One Year



	Return	Benchmark	Relative Return	Asset Allocation	Stock Selection	Relative Contribution
UBS	17.76	12.30	4.86	-1.13	6.04	4.86
Common Stock Funds	-27.60	-	-27.60	-0.02	0.00	-0.02
Basic Materials	2.05	4.71	-2.54	0.17	-0.13	0.04
Consumer Goods	27.91	18.04	8.36	-0.47	0.24	-0.23
Consumer Services	31.63	18.16	11.40	0.46	1.75	2.22
Financials	54.07	33.62	15.30	-0.58	2.63	2.04
Health Care	-2.86	-1.51	-1.38	-0.15	-0.12	-0.27
Industrials	27.77	22.53	4.28	0.17	0.50	0.67
Oil & Gas	-4.73	-7.86	3.40	-0.34	0.62	0.28
Technology	138.73	32.10	80.72	0.00	0.98	0.98
Telecommunications	-6.52	-1.30	-5.29	-0.09	-0.49	-0.58
Utilities	17.89	18.25	-0.31	-0.01	-0.01	-0.02
Cash	0.59	-	0.59	-0.27	0.00	-0.27





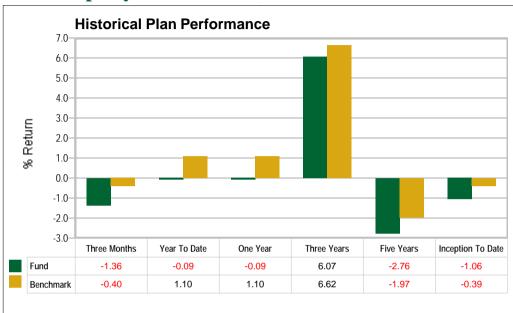


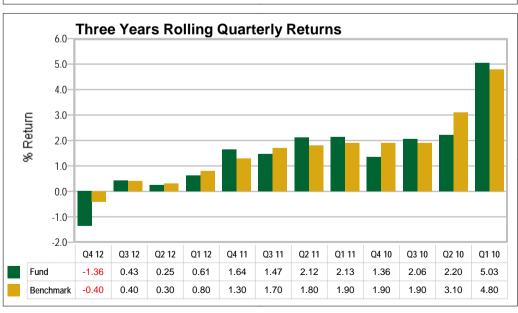
	Current Quarter	Previous Quarter	Current Benchmark	Current Deviation	Previous Benchmark	Previous Deviation
Basic Materials	8.80	7.65	10.47	-1.66	9.92	-2.27
Consumer Goods	2.29	3.54	13.77	-11.48	13.66	-10.12
Consumer Services	18.77	17.33	9.70	9.08	9.48	7.85
Financials	19.56	18.00	22.96	-3.41	21.11	-3.11
Health Care	7.77	8.79	6.96	0.81	7.54	1.25
Industrials	11.61	10.38	9.02	2.58	9.10	1.28
Oil & Gas	18.12	18.80	16.04	2.08	17.33	1.47
Technology	1.33	0.89	1.53	-0.20	1.44	-0.55
Telecommunications	6.68	8.01	5.64	1.03	6.44	1.58
Utilities	3.27	3.47	3.90	-0.63	3.97	-0.51
Common Stock Funds	0.00	0.00		0.00		0.00
Private Equity	0.03	0.04		0.03		0.04
Cash	1.76	3.10		1.76		3.10



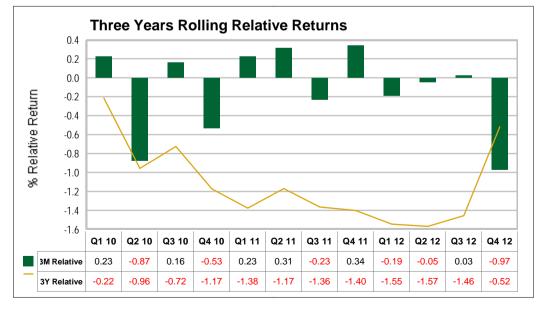


UBS Property





Risk Statistics - 3 years	Fund	B'mark
Performance Return	6.07	6.62
Standard Deviation	2.49	1.64
Relative Return	-0.52	
Tracking Error	1.78	
Information Ratio	-0.31	
Beta	1.05	
Alpha	-0.75	
R Squared	0.50	
Sharpe Ratio	1.96	3.31
Percentage of Total Fund	7.7	
Inception Date	Mar-2006	
Opening Market Value (£000)	49,629	
Net Investment £(000)	-1	
Income Received £(000)	512	
Appreciation £(000)	-1,189	
Closing Market Value (£000)	48,951	

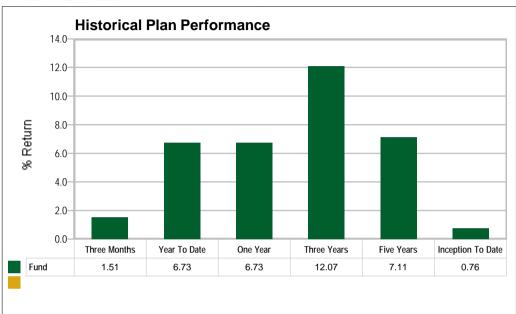




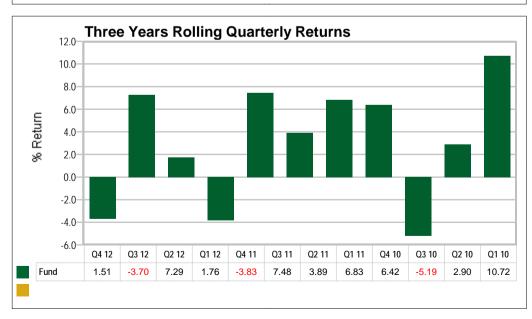


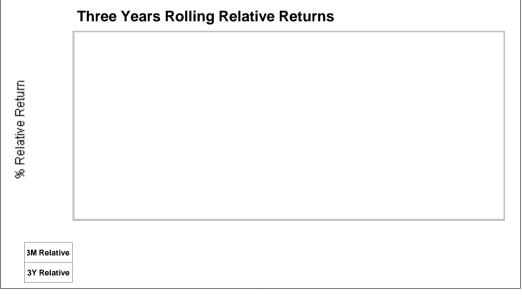


Adam Street





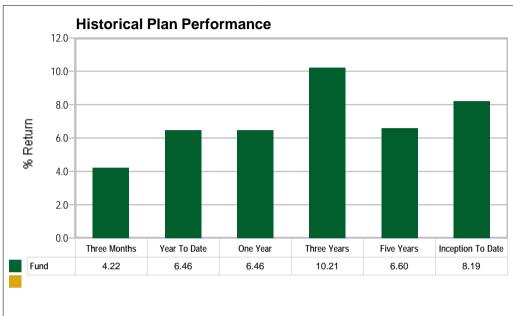


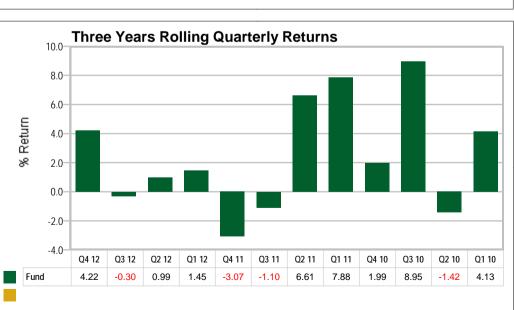




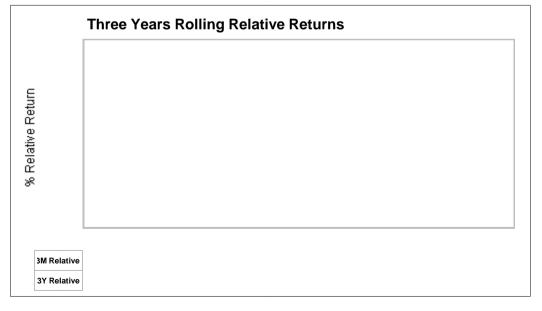


LGT





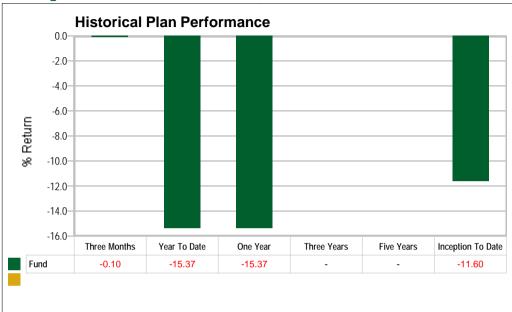


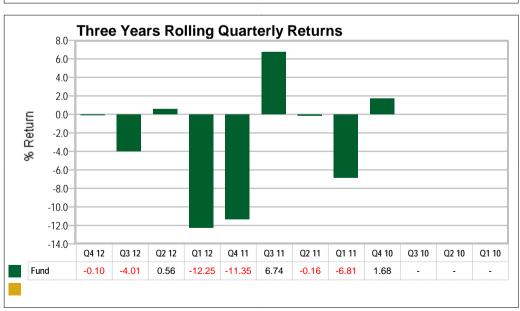


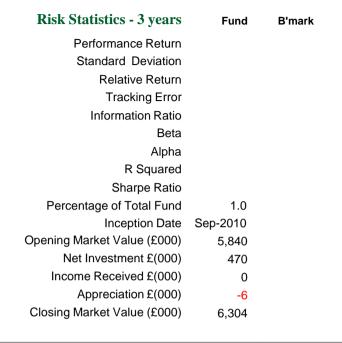


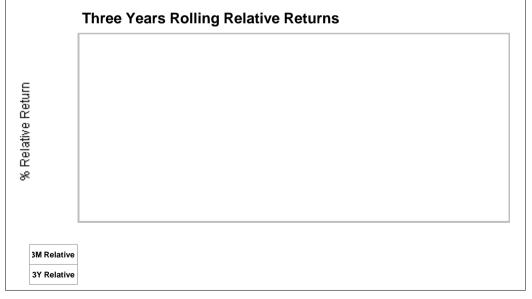


Macquarie













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
- 30.0 LIBOR 3 Month + 3%
- 4.0 FT 7 Day LIBID

JP Morgan

100.0 LIBOR 3 Month + 3%

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 FTSE Gilts All Stocks
- 10.0 FTSE Index Linked Gilts
- 8.5 ML Sterling Non-Gilts

SSGA Drawdown

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

SSGA Global Equity

100.0 FTSE All World

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 = $\sigma_{\it ER} \times \sqrt{p}$

Where	Equals
ER	Excess return (Portfolio Return minus Benchmark Return)
ER Return)	Arithmetic average of excess returns (Portfolio Return minus Benchmark
T	Number of observations

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.

Periodicity (number of observations per year)

Information Ratio

p

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

 σ_{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 liabilities, 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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