

1st Quarter, 2013





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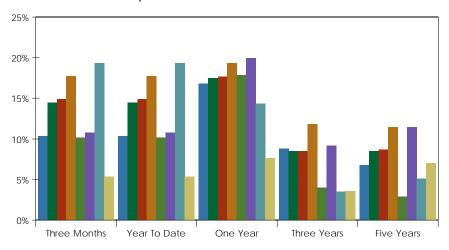
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Equity Index Performance (in GBP)

Performance History



Performance Returns%

	Three Months	Year To Date	One Year	Three Years	Five Years
■ FTSE All Share	10.3	10.3	16.8	8.8	6.7
■ FT: World	14.5	14.5	17.5	8.5	8.5
■ FT: World ex UK	14.9	14.9	17.6	8.5	8.7
FT: AWI North America	17.7	17.7	19.3	11.8	11.5
■ FT: Developed Europe ex UK	10.2	10.2	17.8	4.0	2.9
■ FT: Developed Asia Pac x Jp	10.8	10.8	20.0	9.2	11.4
■ FT AW: Japan	19.3	19.3	14.3	3.5	5.1
■ MSCI Emerging Markets GD	5.4	5.4	7.6	3.6	7.0

Europe grabbed the headlines back from the US over quarter one 2013 reminding everyone that it remains the biggest threat to the world economy. Eurozone GDP is down, unemployment is up and the Central Bank confirmed recession and a gloomy outlook. The latest crisis in Cyprus horrified many when faced with the reality that savers could be forced to write off chunks of capital to pay for bad bank debts. However, global stocks were sitting at cyclical highs at the end of the quarter based on renewed optimism over the US economy. 2012 showed itself to be a year of declining correlation amongst risk assets. Investors were willing to take more risk as good companies were bought and those with lower expectations sold. This points to investors being less concerned about geo-political risk and financial instability than they have been in recent times. The only red numbers for quarter one from the major indexes were seen in the Emerging Markets (when viewed in USD), Japan and North America led with strong growth. Globally, Health Care was the strongest sector over both the last quarter and 12 months followed by consumer services. Basic Materials was the biggest loser over Q1 and the year. The price of crude oil futures ended the quarter steady at \$111 per barrel. The FTSE World was up by 14.5% (GBP) over quarter one 2013 and is now ahead by 17.5% over one year (GBP).

UK GDP dropped by 0.3% in the fourth quarter of 2012. UK retail sales grew at their fastest rate in more than three years in February. The UK service sector also grew at its fastest pace for five months. That followed a January in which industrial production unexpectedly fell. Predictions of a property rally following mortgage subsidies unveiled in the budget helped lift housebuilding firms to pre-credit crunch levels. HSBC is poised to unveil one of the biggest profits in the history of banking, expected to be in excess of \$20bn and in spite of the \$1.9bn fine paid to the US to settle claims of money laundering for drug cartels and terrorists. The EU clampdown on banker's bonuses enjoyed the unusual status of being seen by many as an attack on the UK but one largely supported by the British public. Unemployment was slightly up at the end of the year at 7.9%. Telecoms was the strongest sector over the quarter following consecutive quarters as weakest, now replaced at the bottom by Basic Materials. The FTSE All Share was up 10.3% (GBP) over the first quarter and remains ahead over one year, now by 16.8% (GBP).

Eurozone GDP was confirmed at -0.6% for quarter four 2012. The ECB is predicting a drop of -0.5% for 2013 increased from -0.3%. Unemployment now stands at 19m (11.9%) having grown by 1.9m over one year. People have been caught attempting to flee Cyprus with suitcases full of notes by both sea and air. The tiny nation became the first in the Eurozone to apply capital controls limiting transactions and transfers to try to protect the banks which were closed for almost two weeks. The strength of the Euro has hindered the competitiveness of European industry according to the chief executives of L'Oreal and Michelin. Since August it has risen by 7% against the dollar and 28% against Yen. PSA Peugeot Citroen posted a record EUR 5bn loss for 2012 and its financing arm received a EUR 1.2bn government lifeline. In contrast BMW unveiled a 5.9% rise in pre-tax profits for 2012 as it benefitted from booming sales in US and China. Germany supplanted the UK as the most sought-after region for European property investment although London remains the most popular city. The FTSE Developed Europe ex UK index returned 10.2% (GBP) over quarter one and 17.8% (GBP) over the year.

Ending March, the S&P 500 surpassed its closing high set in 2007 (before the onset of the financial crisis) returning from the low of the period recorded in March 2009. The US services sector grew at its fastest pace in a year in February. House prices, new home sales and consumer sales were all up over Q1 suggesting the US economy is gathering some momentum. US payrolls grew in March but at a slower rate, although overall unemployment has fallen to 7.7%. The Fed stress tests identified Goldman Sachs one of the weaker financial firms on Wall Street but were positive for Citigroup who announced plans for a \$1.2bn share buyback. Apple's fall from grace continued as Google climbed to 2/3 of their rivals worth from just 1/3 six months ago. Apple's shares are now 40% below their highs. US Q4 GDP finally settled on an expansion of 0.1% although it looked like being -0.1% down for several weeks. The FTSE North America index returned 17.7% (GBP) over the first quarter and 19.3% (GBP) for the year.

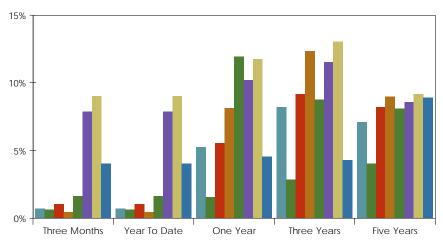
Haruhiko Kuroda, the new governor of the bank of Japan is expected to try to boost growth and inflation through monetary stimulus. Japanese Q4 GDP was confirmed at +0.2% but CPI continued to decline as factory output dropped and despite a 15% decrease in the value of Yen. Sony plans to launch its PS4 games console at Christmas in a bid to challenge Microsoft's Xbox and offset continuing losses on its TV business. The FTSE Japan returned 19.3% (GBP) for quarter one and the FTSE Developed Asia Pacific ex Japan returned 10.8% (GBP). Brazil and China agreed a \$30bn currency swap that will guarantee smooth trade between the countries regardless of the global economy. China's economy returned its slowest growth in more than a decade over 2012 as demand was sapped by the lumbering global economy with recession in the Eurozone key. However Q4 itself showed positive signs from the increased construction activity, rising house prices and positive quarterly growth year on year. South Korea's Samsung, the world's largest electronics company by sales, expects to issue strong Q1 operating profits of \$7.7bn, up 53% year on year. Gold concluded a second consecutive quarterly loss for the first time since 2001, ending March at \$1,600 per ounce. The MSCI Emerging Markets index returned 5.4% (GBP) for the first quarter and 7.6% (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	0.7	0.7	5.3	8.2	7.1
■ FTSE All Stock 0-5 Yr. Gilts	0.6	0.6	1.6	2.9	4.0
FTSE All Stock 5-15 Yr. Gilts	1.0	1.0	5.5	9.2	8.2
FTSE All Stock > 15 Yr. Gilts	0.5	0.5	8.1	12.3	9.0
■ ML STG N-Gilts All Stocks	1.6	1.6	11.9	8.8	8.1
■ FTSE Index Linked	7.9	7.9	10.2	11.5	8.6
FTSE Index Linked 5+ yrs	9.0	9.0	11.7	13.0	9.1
JPM GBI Global	4.0	4.0	4.6	4.3	8.9

The global economy started 2013 with a marked improvement in risk sentiment on 2012, as the US averted the fiscal cliff with a partial deal while fears of a Greek debt default and a forced exit from the Eurozone, receded on the European Central Bank's (ECB) pledge last year to support the euro "no matter what". This saw global equity markets soar to post crisis highs while benchmark government bond yields rose modestly. However global investors grew more cautious in March, reacting to the revival of European sovereign debt concerns. Italy's inconclusive election in February remained at impasse and Cyprus eventually agreed a EUR10bn bailout rescue package with international lenders. The global economy maintained steady growth through Q1 2013 with the JPMorgan Global Manufacturing & Services Purchasing Manager's Index (PMI) posting 53.1 in March, up marginally from February. Stronger output growth was seen in China, Japan and the UK, while growth slowed in the US, Germany, India, Brazil, Russia and Ireland. In a bold attempt to end nearly 2 decades of deflation, the new governor of the Bank of Japan (BoJ), Haruhiko Kuroda announced an aggressive expansion to its asset purchase programme which will double its holdings of long-term government bonds to JPY270trn (US\$2.72trn, STG1.78trn) over the next 2 years. China's official PMI for services climbed to 55.6 in March on the back of a buoyant construction sector. For the first quarter 2013, the JPM Global Govt Bond index has returned +4.0% (GBP), while the Barclays Capital Global Aggregate Corporate Bond index delivered +5.8% (GBP).

In the UK the Monetary Policy Committee (MPC) continued to hold the Bank rate at 0.5%, and QE unchanged at £375bn as surveys in March came in with mixed data. The manufacturing PMI improved to 48.3 but still indicates contraction in the sector while the services survey increased to a seven month high of 52.4. Exports remain weak due to subdued demand but collectively the UK appears to have narrowly avoided a triple dip recession. The Chancellor George Osborne presented his fiscally neutral Budget in March, in which he indicated that national debt would rise to 85.6% of GDP in 2016/17 and not drop until 2017/18. The Office for Budget Responsibility (OBR) has halved its forecast for GDP growth in 2013 to 0.6%, down from 1.2% in December. Housing received a boost with a new guarantee scheme for mortgage lending, enabling first time buyers without a 20% deposit to take out a mortgage. Chancellor Osborne also changed the Bank of England's (BoE) inflation remit to allow greater latitude on deviations of inflation from its 2% target but also suggesting that the MPC consider using "explicit forward guidance", effectively pledging to hold bank rates very low for a specified period. Gilt yields have been volatile over the quarter, hitting a 12 month high of 2.2% in February as ratings agency Moody's downgraded the UK's AAA sovereign credit rating, down to AA1 and investors began to question the UK's safe haven status. The inconclusive Italian election and the Cypriot banking crisis saw gilt and large corporate yields fall sharply. Over the quarter the benchmark 10-year gilt yield rose from 1.85% at the end of December, reaching 2.20% mid-February before falling back to close at 1.78%. The FTSE All Stock Gilt index returned +0.7% (GBP) for the quarter while the ML Sterling Non Gilts gained +1.6% (GBP).

Although the European Central Bank (ECB) left interest rates unchanged at 0.75%, ECB President Draghi indicated that potential for an interest rate cut was rising, saying that the ECB was "ready to act" as economic weakness increasingly impacts core Eurozone countries. Evidence of the fragile nature of the economy came in the March data. At the start of the year, sentiment towards the Eurozone was improving but the Italian election stalemate and Cyprus's bailout has undermined that confidence. Lack of progress in forming a new government impacted Italy's 5yr treasury sale and spreads between Italian 10-yr bonds and German 10-yr bunds widened to 3 month highs. Cyprus narrowly avoided a collapse of its banking system, agreeing a last minute EUR10bn bailout rescue package with the 'troika' - the heads of the EU, ECB and the International Monetary Fund (IMF) but was forced to introduce capital controls. The Markit Eurozone Composite PMI declined to 46.5 in March compared to 47.9 in February and shows that output has fallen in 18 of the past 19 months. Out of the four largest euro nations, France saw the steepest downturn in activity for four years while Germany has slowed to near stagnation. The German IFO business climate survey fell from 104.6 in February to 103.6 for the first time in six months adding to signs that the German economy is losing momentum. The benchmark German Bund 10-year yield rose over the quarter from 1.32% at year-end but closed slightly down at 1.29%. The iTraxx Europe 5yr CDS index, representative of 125 investment grade entities, tightened slightly from 117.5 at the end of December to close the quarter at 115.9. The JPM European Govt Bond index returned -0.5% (EUR) for Q1 while the Barclay Capital Euro Aggregate Credit index posted +0.4% (EUR).

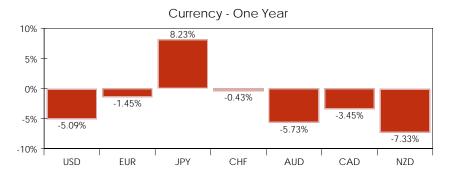
The Federal Open Market Committee (FOMC) meeting in March left policy unchanged with asset purchases at \$85bn of mortgage backed and long term US Treasuries per month while interest rates remain exceptionally low being linked to the unemployment rate falling below 6.5%. Unemployment has fallen to 7.7%, a five year low. Fourth quarter annualised GDP growth was revised up from +0.1% to +0.4% while the OECD's estimate of annualised growth of +3.5% for Q1 2013 looks on target based on current surveys. This has prompted speculation that the Fed would start to slow the scale and pace of its QE programme before the end of the year. However the Conference Board Index of consumer attitudes fell sharply in March as the sequester of \$85bn of federal budget cuts came into force at the beginning of the month on top of the New Year tax rises. US Treasuries gained throughout March as resurgent fears over the Eurozone helped bonds claw back losses from January and February, to end the quarter only slightly weaker after a turbulent start to the year when investors were betting on a strengthening economy. The 10-year benchmark Treasury yield rose from 1.76% over the quarter to over 2% before closing at 1.85%. This saw the JPM US Govt Bond index down for the quarter at -0.2% (USD) while the Barclay Capital US Aggregate Corporate Bond index lost -0.1% (USD) over the same period.





Currency Performance (in GBP)





	Three Months	Year To Date	One Year	Three Years	Five Years
United States dollar	-6.81	-6.81	-5.09	0.03	-5.38
European Union euro	-4.18	-4.18	-1.45	1.78	-1.18
Japanese yen	1.56	1.56	8.23	0.24	-6.52
Swiss franc	-3.42	-3.42	-0.43	-3.49	-6.25
Australian dollar	-7.23	-7.23	-5.73	-4.21	-8.04
Canadian dollar	-4.80	-4.80	-3.45	0.08	-5.58
New Zealand dollar	-8.38	-8.38	-7.33	-5.51	-6.66

The first quarter of 2013 saw a strengthening of the Dollar against the Euro, Sterling and Yen. The Yen, in turn, lost ground against the Dollar, Euro and Sterling. Japan's Prime Minister Shinzo Abe has for the first time raised the possibility that the world's third-largest economy could struggle to achieve the target of 2% inflation within two years that he has made a pillar of his economic policy. In an exchange with Seiji Maehara, an opposition politician and former economy minister, Mr Abe said the Bank of Japan should not pursue the inflation target "at all costs". Since Mr Abe swept to victory in December on a platform of aggressive monetary and fiscal stimulus to overturn more than a decade of deflation, the Yen has fallen steeply against leading currencies, sending the stock market higher. The Australian dollar rose against the US dollar, Euro and Sterling this quarter. Q1 2013 saw the Australian prime minister, Julia Gillard, set to sign a currency deal enabling the Australian dollar to be converted directly into the Chinese yuan, slashing costs for thousands of businesses. The Australian dollar is the third country, after the US and Japan, to secure such an agreement with China, which is Australia's top trading partner. The Chinese Yuan closed the quarter flat against the Dollar at 0.1608 US Dollars. In China's foreign exchange spot market, the yuan is allowed to rise or fall by only 1% from the central parity rate each trading day.

In the UK, Q1 2013 saw Sterling weaken against the Dollar and Euro strengthen against the Yen. The governor of the Bank of England called for more monetary stimulus for the second successive month in March. The Monetary Policy Committee voted nine-nil in favour of maintaining interest rates at 0.5%, and six-three in favour of maintaining the size of the asset purchasing programme at £375bn. The annual rate of inflation in the UK, as measured by the consumer price index, rose to 2.8% in February, up 0.1% from the November figure of 2.7%. The largest upward contributions to the change in the CPI measure of inflation came from domestic fuel bill increases and prices for cameras and games, where competition has abated. Unemployment in the UK rose by 7,000 to 2.52 million in the 3 months to January 2013. The jobless rate remained 7.8%. The number of young people aged 16-24 without a job rose to 993,000 over the three months, taking the youth unemployment rate to 21.2%. House prices rose for the fourth successive quarter according to the figures released by mortgage lender Halifax. Prices in the first three months of the year were up 1.2% on the previous quarter and up 1.1% on the same period in 2012. The average price of a UK home is now £163,943, more than £35,000 below the peak seen in August 2007. Sterling closed the quarter down against the Dollar and Euro by 6.8% and 4.2% respectively and up against the Yen by 1.6%.

In the US, in early March, US president Barack Obama signed into effect a wave of steep spending cuts which he has warned could damage the US economy. The cuts, drawn up 2 years ago, will take \$85bn from the US federal budget this year. The IMF has warned that the cuts could slow global economic growth. US consumer confidence fell sharply in March, a closely-watched report has suggested. The Conference Board's index of consumer attitudes fell by 7.0 points from 66.7 in December to 59.7 in March. The research group primarily blamed the fall on US federal budget cuts that came into force at the start of March. For the first time since 2006, quarterly home price movements in the US remained positive over winter. The latest Home Data Index report from real estate firm Clear Capital shows that in the first 3 months of 2013 prices increased nationally by 0.9% and the firm forecasts further growth of 1.7% over the remainder of the year. Prices are up 6.5% over the last 12 months. The US un-employment rate reduced from 7.8% in December to 7.6% in March, its lowest monthly jobless rate since December 2008. This figure looks a little misleading since, in March alone, half a million people dropped out of the labour force, creating the illusion of falling unemployment with the drop related to so many people having given up looking for jobs. The teenage unemployment rate stands at 24.2%. The number of unemployed in the US now stands at 11.7 million. The US trade deficit stood at \$43.0bn in February 2013. Exports stood at \$186.0 billion, strengthened by the exports of industrial goods (up 4.5% from January) and cars (up 1.6%). Meanwhile, imports held steady at \$228.9 billion. US imports of foreign cars rose 4.3% between January and February to reach \$24.8 billion. On a 12 month basis, the US trade deficit has dropped by 3.5%. The Dollar ended the quarter up against the Euro, Sterling and Yen by 2.6%, 6.8% and 8.4% respectively.

In the Euro area, the Euro strengthened against the Sterling and Yen this quarter but lost ground against the Dollar. The big news in Europe was the Cyprus bail out and investor haircuts where investors with more than EUR 100,000 face the reality of losing 60% of their bank deposits. The single currency is still perceived as largely overvalued despite having weakened quite considerably since a five month high at \$1.3648 early in February. The single currency traded at \$1.2855 just after the Cyprus bailout. The governing council of the European Central Bank held interest rates unchanged at 0.75% in February, for the ninth month in a row. The jobless in the 17-country region reached a new high of 12.0% in February, the highest since the launch of Europe's monetary union in 1999. The unemployment figures come as manufacturing output data showed a further contraction in production in March compared with February, a negative change that suggests unemployment could deteriorate further. Greece and Spain remain the countries with the worse unemployment rates at over 26%. In Cyprus, unemployment rose from 10.2% to 14.0% over the 12 months to February 2013, a rise that highlights the devastating impact of the debt crisis on the small island that was bailed out by international creditors in late March. The Euro ended the quarter up against the Sterling and Yen by 4.2% and 5.7% respectively and down against the Dollar by 2.6%.





Scheme Performance

Equity markets across the world continued to rise during the first quarter of 2013 with developed markets posting double digit growth; Gilts and Corporates saw modest rises, with Index-Linked Gilts once again leading the way. Against this backdrop the London Borough of Hillingdon returned 7.84% beating the Total Plan benchmark of 6.82% by 95 basis points. In monetary terms this is a growth in assets of £49.5 million and the value of the combined scheme now stands at £680.3 million as at 31st March 2013. During this period the £64 million in the temporary SSGA account along with £4 million from Cash was used to fund the two new mandates (Kempen & Newton), while Macquarie and M&G also received some additional funds. Looking further into the analysis the main factor was the outperformance of Ruffer coupled with the Global Equity managers, although this was slightly offset by Private Equity. In allocation terms most mandates are in line with the neutral position with the only impacts coming from the small value in Nomura and the noise caused by the transition between the global equity mandates

The good result this period feeds into the longer numbers, producing an outperformance of 1.52% over the year with returns of 12.33 % versus 10.64%. Over the year Ruffer continues to be the main driver with selection effects in UBS also notable, while the main detractor was once again Private Equity assets. Similar to the quarter, allocation is fairly balanced with just a small negative impact coming from underweighting UBS. The 3 year numbers show a 1.13% relative return, but then underperformance is still seen for the 5 year period. However, since inception in September 1995, the Fund is now ahead of target by 3 basis points with an annualised return of 6.78% against 6.74%.

Manager Performance

JP Morgan

In the latest quarter JP Morgan investments grew a further 0.37%, although compared to the 0.87% target of the 3 Month LIBOR + 3% translates as a -0.49% relative underperformance, the lowest of all mandates. Over the last year they remain ahead of the target with a return of 4.12% against the benchmark of 3.71%, while since inception (November 2011) the return increases further to 5.87% and this is 1.98% ahead of target on a relative annualised basis.

Macquarie

In contrast to the previous two quarters the Macquarie portfolio posted a positive return at 3.69%, which means for the last twelve months they see flat growth. Since inception in September 2010 they've delivered six negative quarterly returns out of ten, leading to an annualised loss of -9.20%.

At present no benchmark has been applied to this mandate.

M&G Investments

Over the first quarter of 2013, M&G produced a 2.09%, which in contrast to the previous quarter is an outperformance of 0.97% when compared to the 3 Month LIBOR +4% p.a. Over the last year the account registers 5.78% against 4.72% whilst since inception at the end of May 2010, the portfolio return falls to 4.90% pa return whilst the benchmark is 4.83% pa. While the since inception Internal Rate of Return for this portfolio moves further ahead of the target with a figure of 5.74% opposed to the comparator of 4.72%.

Ruffer

The Ruffer portfolio produced its highest absolute return since inception with 10.33%, also the highest for all mandates this period and against the return of 0.13% for LIBOR 3 Month GBP delivers an outperformance of 10.19%. This feeds into all longer periods, so over the last twelve month post a return of 11.03% against 0.82 for the target, resulting in the 10.13% outperformance. While since the inception of the fund in May 2010 eight out of eleven quarters show positive returns and lead to figures of 7.70% versus 0.82% per annum, which translates as a relative return of 6.83%.





Manager Performance

Private Equity

The private equity assets, consisting of funds with Adam Street and LGT, produced good growth returning 9.62% and 5.78% respectively in the latest quarter. This results in the one year figures demonstrating positive absolute returns with Adam Street on 14.98% and LGT with 10.99%. Over the longer periods, the outlook over which private equity investments should be measured, returns drop slightly but remain fairly high with Adam Street falling to 11.70% for three years and LGT with 10.79% for the same period. However, since their respective inceptions in May 2004 and January 2005, while LGT posts 8.63% pa, Adam Street drops to 1.87% pa.

At present no benchmark has been applied to these mandates.

SSGA

The SSGA passively managed portfolio produced a return of 10.32% in the quarter which exactly matched the benchmark; further analysis confirms the passive nature with all categories aligned with their respective indices. So over the year they produce an 15.82% return, which is just 9 basis points behind target, while over 3 years the per annum return falls to 8.74% which sits just 5 basis points above the benchmark. Since inception (November 2008) a return of 14.61% pa is also 5 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 0.99% in the latest period with the blended benchmark showing 0.86%, breaking the run of underperformance. Then for the one year period they demonstrate the lowest relative return with 1.56%, 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. Similar results are seen in 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 5.04% against 5.46% for the benchmark.

SSGA Global Equity

During January 2013, the temporary SSGA Global Equity account was terminated and the investment used to fund two new mandates. Kempen was funded with £44 million and is measured against the MSCI All World Index and Newton received £21 million and is measured against the FTSE World Index +2%.

UBS

UBS UK Equity produced a return of 9.94%, although this is 35 basis points short of the FTSE All Share figure of 10.32%. Looking into the attribution analysis, asset allocation was the main driver with the large underweight of Consumer Goods leading to -0.73% slightly offset by underweighting Basic Materials (0.25%) and overweight in Consumer Services (0.24%). Whilst within stock selection value added by Oil & Gas and Financials stocks is countered by underperformance in Industrials. These results were not enough to drag the one year numbers down and demonstrate the highest absolute return with 20.06% and the second highest relative figure of 2.82%. This outperformance is attributable to selection effects and again it's Financials (1.69%) and Oil & Gas (1.17%) which lead the way. This is offset by negative asset allocation with underweight in Consumer Goods still the most significant decision (-1.03%). 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 10.16% versus 9.10% on an annualised basis.

UBS Property

The UBS Property portfolio offset some of the previous quarter's losses with a return of 0.61%, although it still fell behind the IPD UK PPFI All Balanced Funds index at 1.07%. This also feeds into the one year as the portfolio now shows a loss of-0.09%, which is -1.44% behind the IPD. All long periods also demonstrate underperformance and with the exception of the 4.56% pa return over three years, absolute returns are also negative. Since inception, in March 2006, these losses stand at -0.94% and while the benchmark also falls with -0.22%, the underperformance is now 72 basis points.





Active Contribution

By Manager

			Excess	Relative	Active Contribution			Excess	Relative	Active Contribution			Excess	Relative	Active Contribution	Active Contribution
	Portfolio	Benchmark	Return	Return	01/13	Portfolio	Benchmark	Return	Return	02/13	Portfolio	Benchmark	Return	Return	03/13	1Q 2013
Adam Street	2.54	-	2.54	-	525,559.65	4.75	-	4.75	-	1,007,402.09	2.06	-	2.06	-	456,834.74	1,989,796.48
JP Morgan	0.28	0.29	-0.01	-0.01	-9,616.64	-0.18	0.29	-0.47	-0.47	-353,118.66	0.28	0.29	-0.01	-0.01	-9,517.50	-372,252.80
Kempen	-	-	-	-	0.00	4.29	4.84	-0.54	-0.52	-252,380.71	1.57	2.53	-0.96	-0.93	-452,212.19	-704,592.90
LGT	5.51	-	5.51	-	936,888.52	1.14	-	1.14	-	200,792.41	-0.88	-	-0.88	-	-153,976.08	983,704.84
Macquarie	7.26	0.29	6.97	6.95	440,340.93	-2.13	0.29	-2.41	-2.40	-212,036.28	-1.23	0.29	-1.52	-1.51	-131,682.83	96,621.82
M&G Investments	0.86	0.37	0.49	0.49	78,653.76	0.00	0.37	-0.37	-0.36	-59,372.73	1.22	0.37	0.85	0.84	137,262.60	156,543.63
Newton	-	-	-	-	0.00	3.08	4.59	-1.51	-1.44	-342,954.10	1.89	1.93	-0.04	-0.04	-8,225.73	-351,179.83
Nomura	3.30	-	3.30	-	64,956.84	-75.14	-	-75.14	-	-1,367,365.44	1.45	-	1.45	-	6,377.40	-1,296,031.20
Ruffer	5.74	0.04	5.70	5.70	6,795,399.27	1.75	0.04	1.70	1.70	2,149,054.35	2.55	0.04	2.50	2.50	3,211,742.68	12,156,196.30
SSGA	5.75	5.76	-0.00	-0.00	-4,745.08	2.71	2.70	0.01	0.01	14,707.60	1.56	1.57	-0.01	-0.01	-17,112.69	-7,150.17
SSGA Drawdown	-0.60	-0.49	-0.10	-0.10	-6,294.64	0.60	0.50	0.10	0.10	5,857.96	1.00	0.86	0.14	0.14	8,552.72	8,116.04
UBS	6.62	6.37	0.24	0.23	320,158.80	2.07	2.28	-0.21	-0.21	-283,791.20	1.03	1.40	-0.38	-0.37	-511,147.98	-474,780.38
UBS Property	0.26	0.39	-0.13	-0.13	-62,162.64	0.07	0.32	-0.24	-0.24	-120,466.41	0.28	0.37	-0.09	-0.09	-43,192.53	-225,821.58

Total Fund Market Value at Qtr End: £680.3 M







Scheme Performance	ee			<u>Thr</u> <u>Mon</u>				<u> Үе</u> <u>То Г</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	680.3	100.00	7.84	6.82	1.01	0.95	7.84	6.82	1.01	0.95	12.33	10.64	1.68	1.52
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	22.6	3.33	9.62	-	-	-	9.62	-	-	-	14.98	-	-	-
JP Morgan	75.0	11.02	0.37	0.87	-0.50	-0.49	0.37	0.87	-0.50	-0.49	4.12	3.71	0.41	0.40
LGT	17.3	2.54	5.78	-	-	-	5.78	-	-	-	10.99	-	-	-
Macquarie	8.5	1.25	3.69	0.87	2.82	2.79	3.69	0.87	2.82	2.79	-0.01	-	-	-
M&G Investments	16.4	2.40	2.09	1.11	0.98	0.97	2.09	1.11	0.98	0.97	5.78	4.72	1.06	1.01
Ruffer	131.5	19.33	10.33	0.13	10.20	10.19	10.33	0.13	10.20	10.19	11.03	0.82	10.21	10.13
SSGA	136.1	20.00	10.32	10.32	-0.01	-0.01	10.32	10.32	-0.01	-0.01	15.82	15.92	-0.10	-0.09
SSGA Drawdown	6.2	0.91	0.99	0.86	0.13	0.13	0.99	0.86	0.13	0.13	4.39	6.05	-1.65	-1.56
UBS	135.8	19.96	9.94	10.32	-0.38	-0.35	9.94	10.32	-0.38	-0.35	20.06	16.77	3.29	2.82
UBS Property	49.3	7.24	0.61	1.07	-0.46	-0.46	0.61	1.07	-0.46	-0.46	-0.09	1.38	-1.46	-1.44

Total Fund Market Value at Qtr End: £680.3 M







Scheme Performance		<u>Thr</u> <u>Ye</u> s	<u>ree</u> ars			<u>Fiv</u> Yea					<u>Incep</u> <u>To D</u>		
	Portfolio	Benchmark	Excess Return	Relative Return	Portfolio	Benchmark	Excess Return	Relative Return	Inception Date	Portfolio	Benchmark	Excess Return	Relative Return
London Borough of Hillingdon	7.09	5.89	1.20	1.13	5.07	5.49	-0.42	-0.40	30/09/95	6.78	6.74	0.03	0.03
By Manager													
	Portfolio	Benchmark	Excess Return	Relative Return	Portfolio	Benchmark	Excess Return	Relative Return	Inception Date	Portfolio	Benchmark	Excess Return	Relative Return
Adam Street	11.70	-	-	-	11.14	-	-	-	31/01/05	1.87	-	-	-
JP Morgan	-	-	-	-	-	-	-	-	08/11/11	5.87	3.82	2.05	1.98
LGT	10.79	-	-	-	5.25	-	-	-	31/05/04	8.63	-	-	-
Macquarie	-	-	-	-	-	-	-	-	30/09/10	-9.20	-	-	-
M&G Investments	-	-	-	-	-	-	-	-	31/05/10	4.90	4.83	0.07	0.07
Ruffer	-	-	-	-	-	-	-	-	28/05/10	7.70	0.82	6.88	6.83
SSGA	8.74	8.68	0.06	0.05	-	-	-	-	30/11/08	14.61	14.55	0.06	0.05
SSGA Drawdown	3.90	4.50	-0.61	-0.58	-	-	-	-	30/06/09	5.04	5.46	-0.42	-0.39
UBS	9.13	8.78	0.35	0.32	7.87	7.95	-0.08	-0.07	31/12/88	10.16	9.10	1.06	0.97
UBS Property	4.56	5.35	-0.78	-0.74	-2.05	-0.99	-1.06	-1.07	31/03/06	-0.94	-0.22	-0.72	-0.72

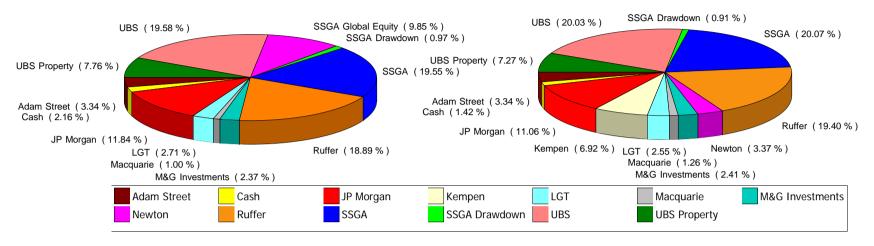
Total Fund Market Value at Qtr End: £680.3 M





Weighting at Beginning of Period

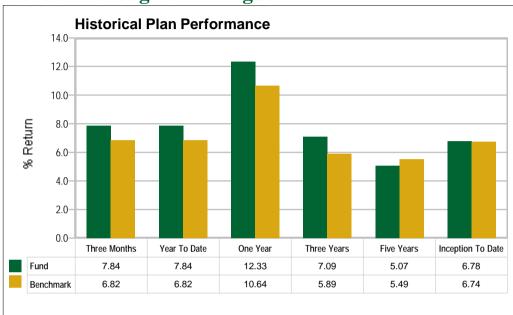
Weighting at End of Period

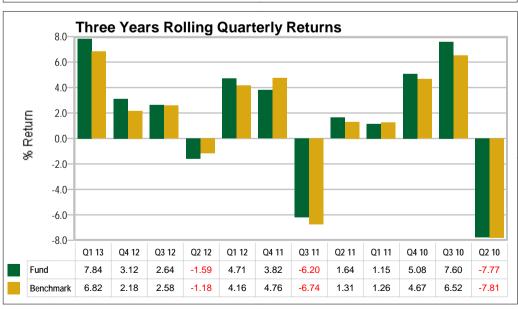


	Opening Market Value	% of Fund	Net Investment	Appreciation	Income Received	Closing Market Value	% of Fund
	£(000)		£(000)	£(000)	£(000)	£(000)	
London Borough of Hillingdon	631,719	100.00	-954	47,267	2,264	680,295	100.00
Adam Street	21,082	3.34	-455	1,990	10	22,629	3.33
Cash	13,618	2.16	-4,000	0	15	9,634	1.42
JP Morgan	74,704	11.83	0	276	0	74,981	11.02
Kempen		0.00	44,299	2,585	0	46,884	6.89
LGT	17,077	2.70	-776	985	0	17,286	2.54
Macquarie	6,304	1.00	2,060	173	0	8,536	1.25
M&G Investments	14,930	2.36	1,087	334	0	16,351	2.40
Newton		0.00	21,370	1,449	0	22,819	3.35
Nomura	47	0.01	-1,454	1,815	39	447	0.07
Ruffer	119,176	18.87	0	11,712	599	131,488	19.33
SSGA	123,348	19.53	0	12,724	0	136,072	20.00
SSGA Drawdown	6,102	0.97	0	61	0	6,163	0.91
SSGA Global Equity	62,124	9.83	-64,260	2,136	0	0	0.00
UBS	123,512	19.55	0	11,243	1,035	135,790	19.96
UBS Property	48,951	7.75	-0	-264	564	49,251	7.24

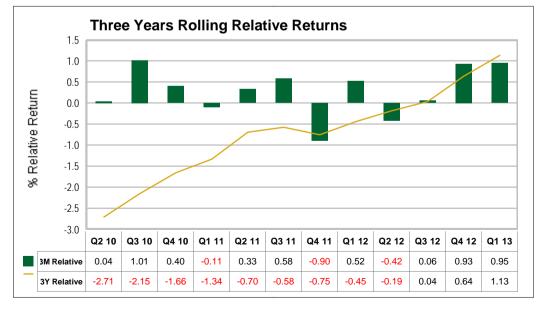






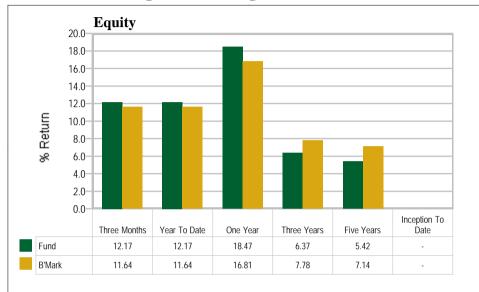


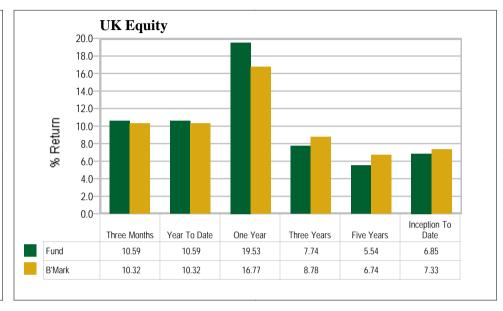
Risk Statistics - 3 years	Fund	B'mark
Performance Return	7.09	5.89
Standard Deviation	7.19	6.74
Relative Return	1.13	
Tracking Error	1.32	
Information Ratio	0.91	
Beta	1.05	
Alpha	0.92	
R Squared	0.97	
Sharpe Ratio	0.82	0.70
Percentage of Total Fund	100.0	
Inception Date	Sep-1995	
Opening Market Value (£000)	631,719	
Net Investment £(000)	-954	
Income Received £(000)	2,264	
Appreciation £(000)	47,267	
Closing Market Value (£000)	680,295	

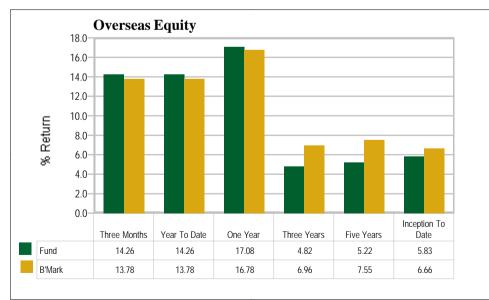


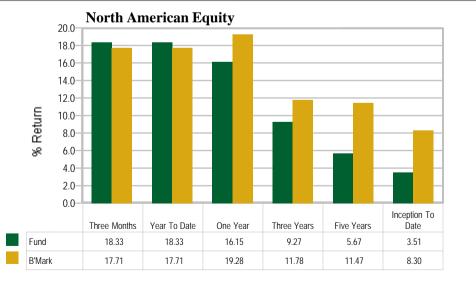






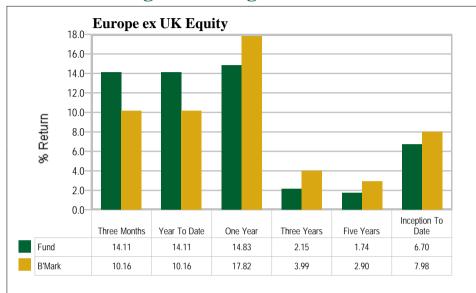


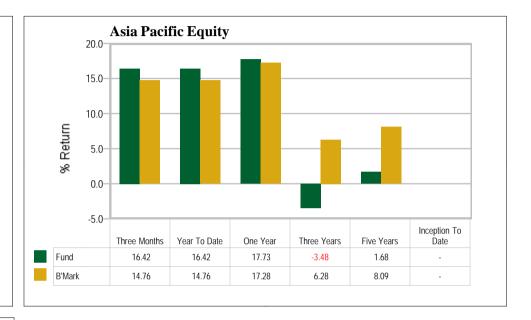


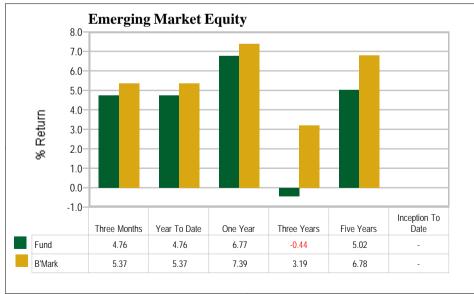






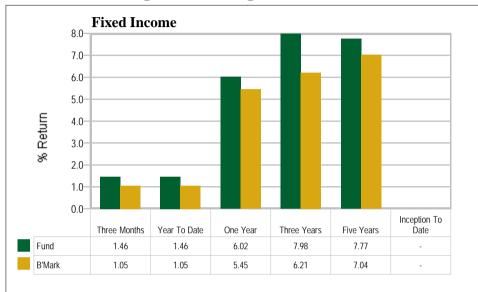


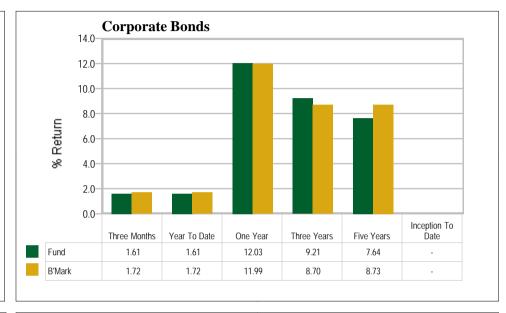


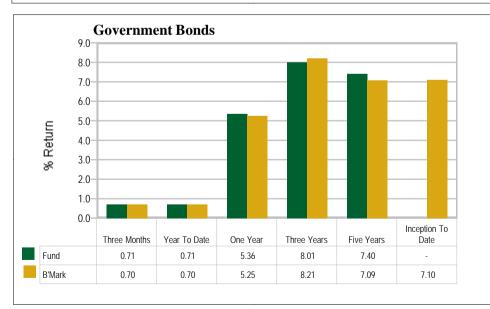


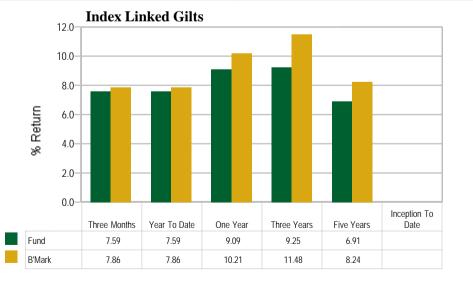








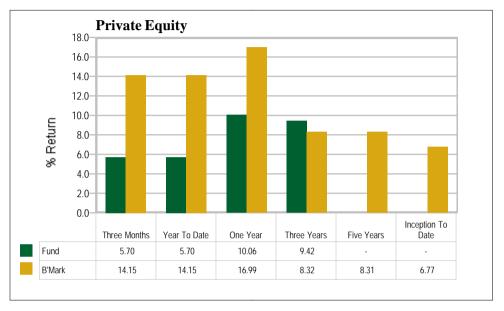


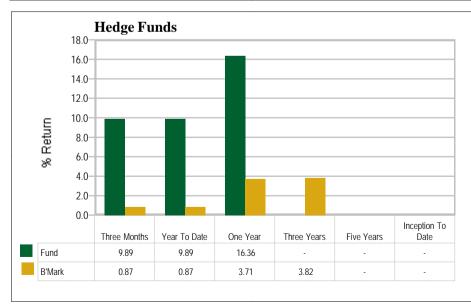


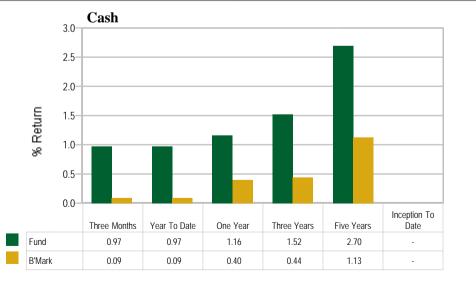










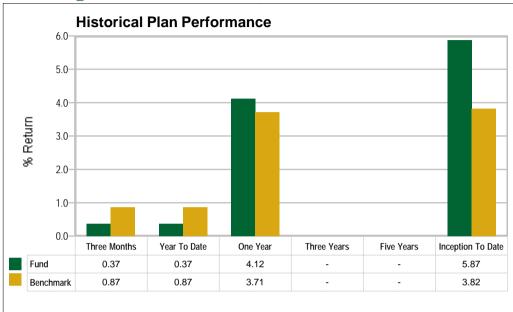


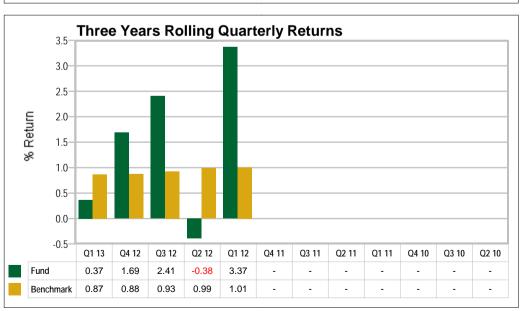


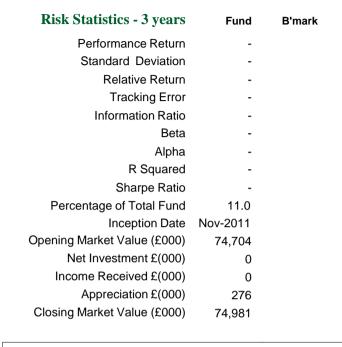


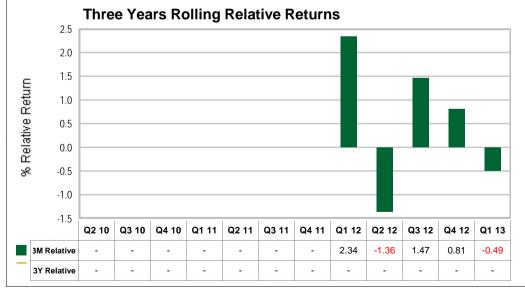


JP Morgan







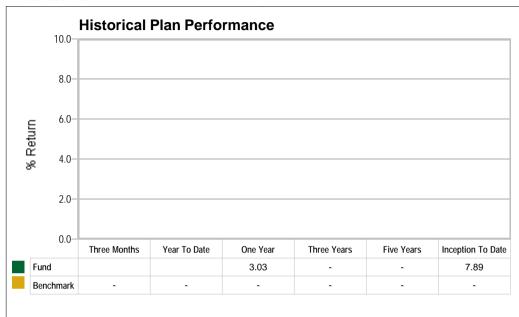


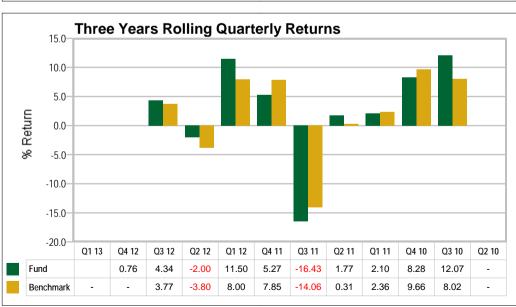




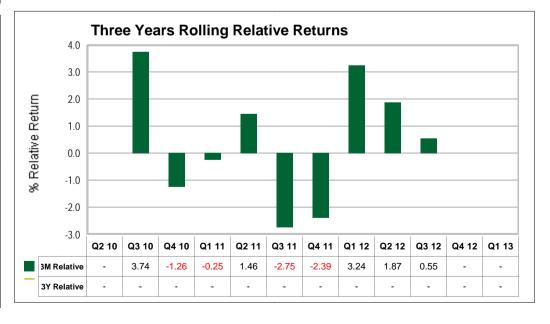


Marathon





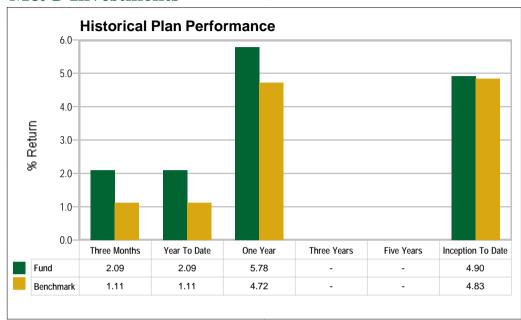
Risk Statistics - 3 years	Fund	B'mark
Performance Return	-	
Standard Deviation	-	
Relative Return	-	
Tracking Error	-	
Information Ratio	-	
Beta	-	
Alpha	-	
R Squared	-	
Sharpe Ratio	-	
Percentage of Total Fund	0.0	
Inception Date	Jun-2010	
Opening Market Value (£000)	0	
Net Investment £(000)	0	
Income Received £(000)	0	
Appreciation £(000)	0	
Closing Market Value (£000)	0	

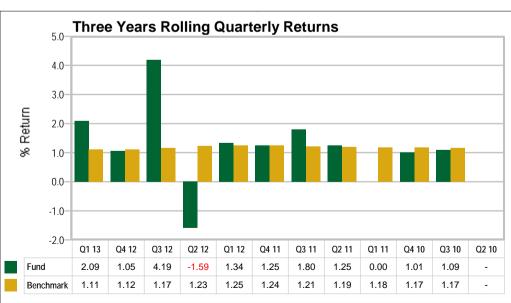




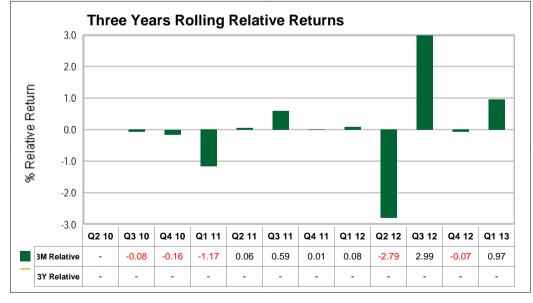


M&G Investments







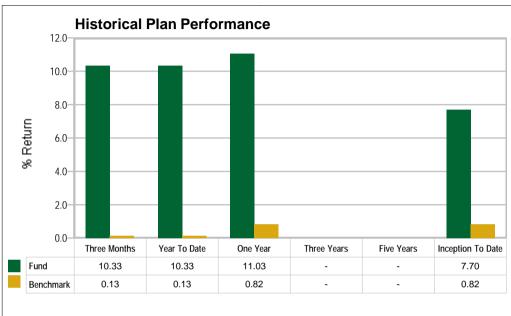


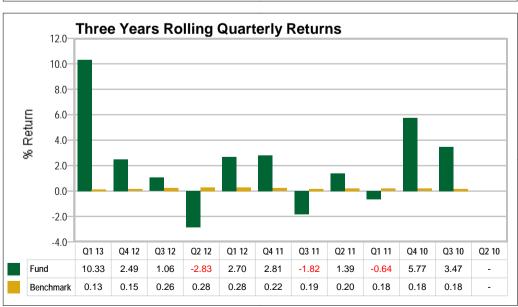


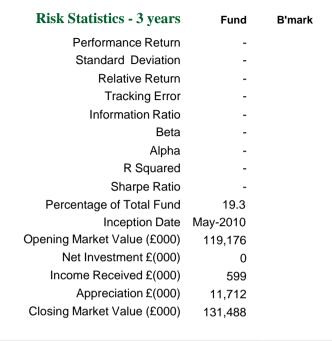


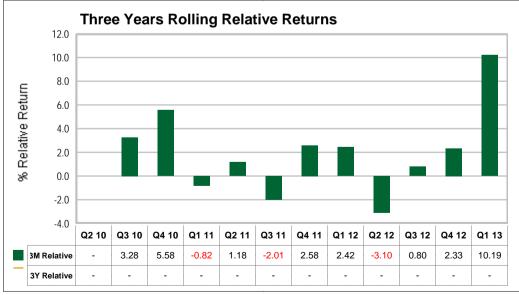


Ruffer









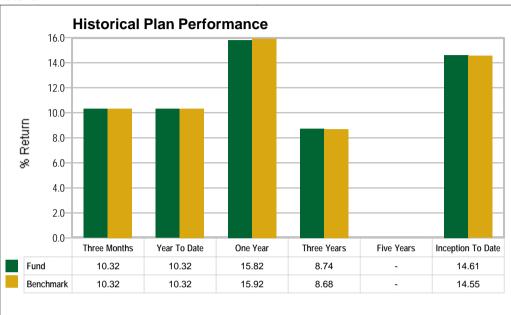


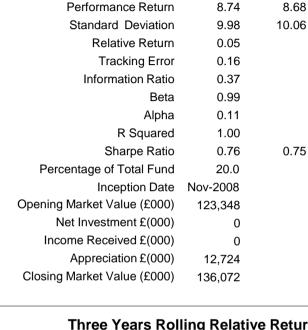
B'mark

Fund

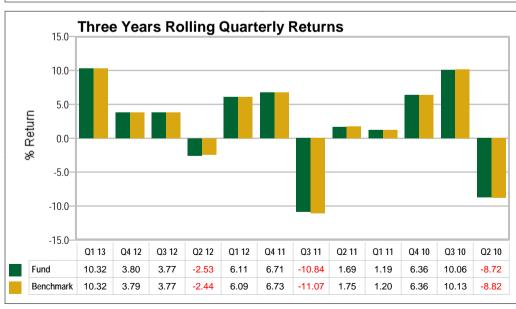


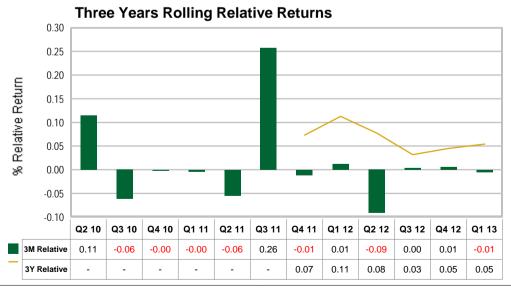
SSGA





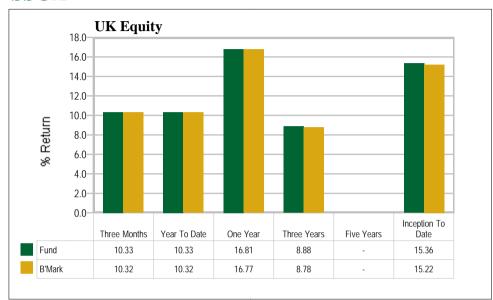
Risk Statistics - 3 years



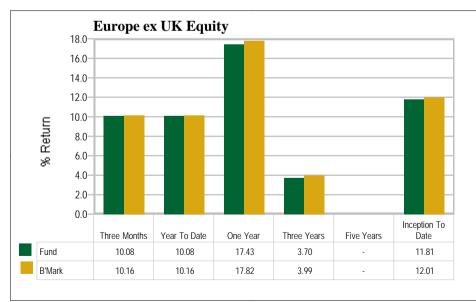








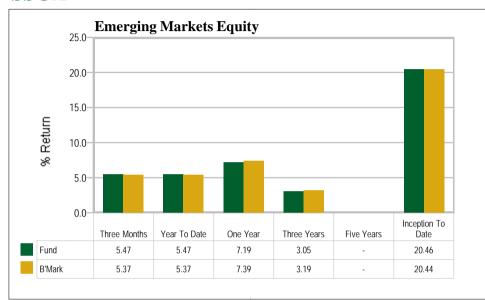


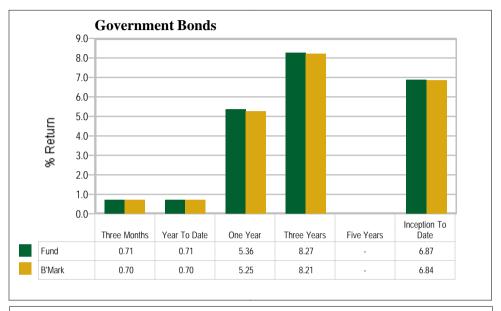


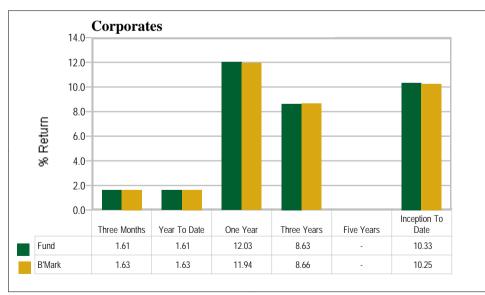


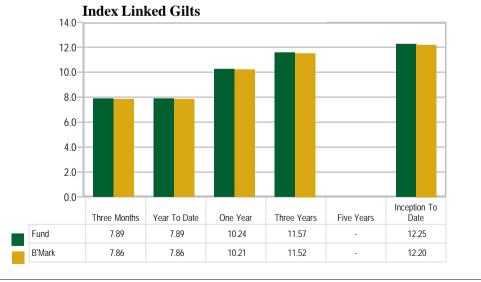








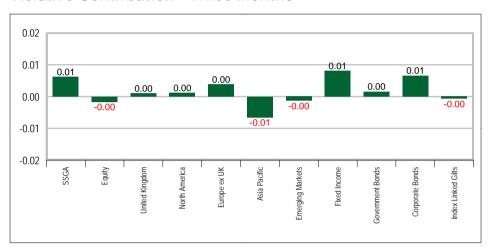






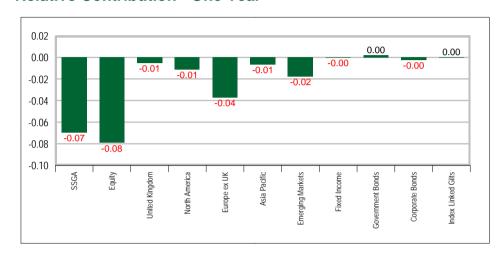


Relative Contribution - Three Months



	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

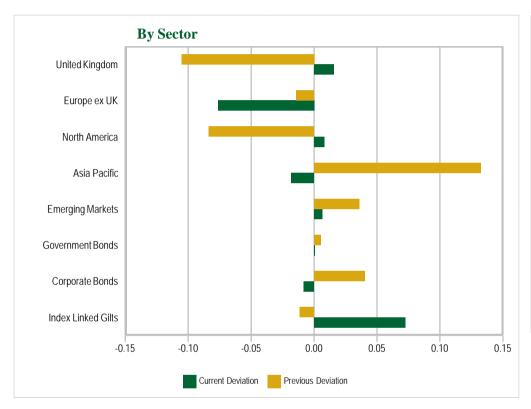
Relative Contribution - One Year



	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



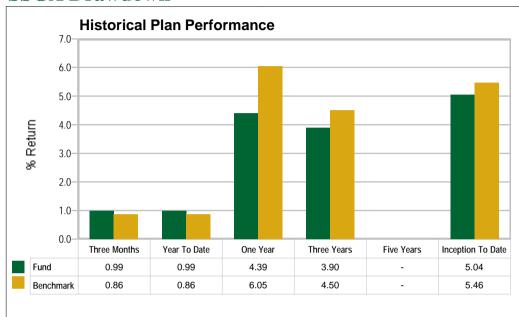


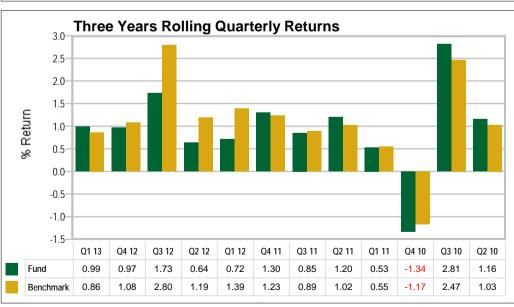


	Current Quarter	Previous Quarter	Current Benchmark	Current Deviation	Previous Benchmark	Previous Deviation
United Kingdom	44.02	43.89	44.00	0.02	44.00	-0.11
Europe ex UK	10.92	10.99	11.00	-0.08	11.00	-0.01
North America	11.01	10.92	11.00	0.01	11.00	-0.08
Asia Pacific	10.98	11.13	11.00	-0.02	11.00	0.13
Emerging Markets	3.01	3.04	3.00	0.01	3.00	0.04
Government Bonds	1.50	1.51	1.50	0.00	1.50	0.01
Corporate Bonds	8.49	8.54	8.50	-0.01	8.50	0.04
Index Linked Gilts	10.07	9.99	10.00	0.07	10.00	-0.01

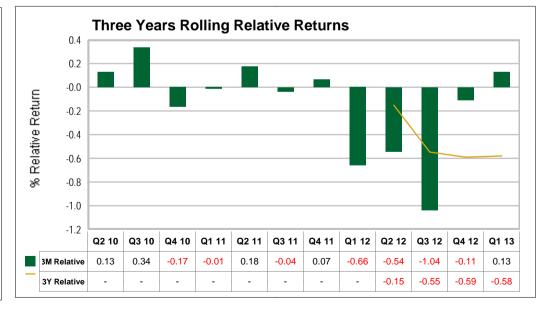






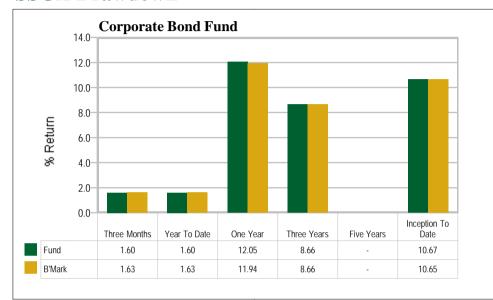


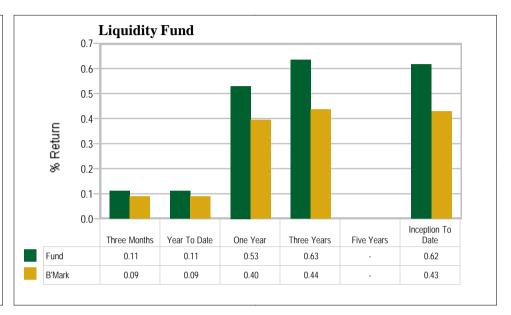
Risk Statistics - 3 years	Fund	B'mark
Performance Return	3.90	4.50
Standard Deviation	2.29	2.34
Relative Return	-0.58	
Tracking Error	0.77	
Information Ratio	-0.78	
Beta	0.93	
Alpha	-0.35	
R Squared	0.89	
Sharpe Ratio	1.19	1.42
Percentage of Total Fund	0.9	
Inception Date	Jun-2009	
Opening Market Value (£000)	6,102	
Net Investment £(000)	0	
Income Received £(000)	0	
Appreciation £(000)	61	
Closing Market Value (£000)	6,163	







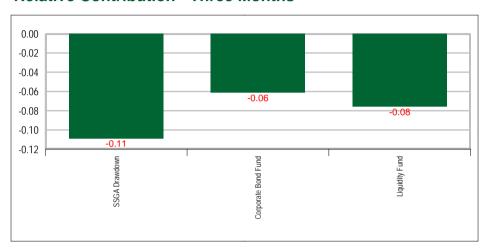






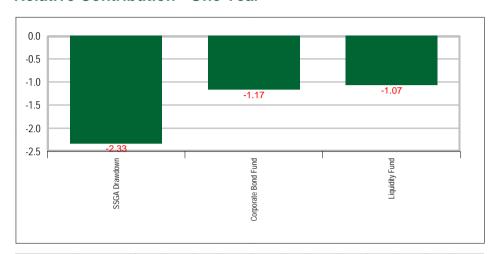


Relative Contribution - Three Months



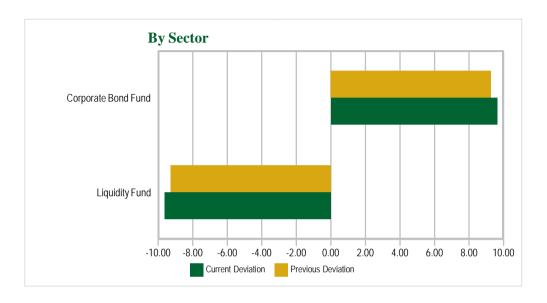
	Return	Benchmark	Relative Return	Asset Allocation	Stock Selection	Relative Contribution
SSGA Drawdown	0.97	1.08	-0.11	-0.18	0.04	-0.11
Corporate Bond Fund	2.13	2.07	0.06	-0.09	0.03	-0.06
Liquidity Fund	0.11	0.09	0.02	-0.09	0.01	-0.08

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





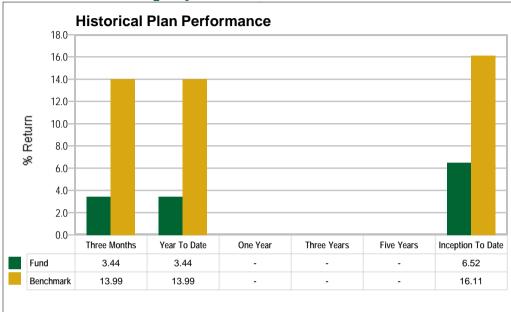
	Current Quarter	Previous Quarter	Current Benchmark	Current Deviation	Previous Benchmark	Previous Deviation
Corporate Bond Fund	59.63	59.27	50.00	9.63	50.00	9.27
Liquidity Fund	40.37	40.73	50.00	-9.63	50.00	-9.27



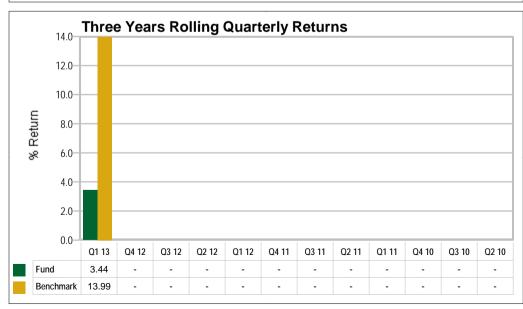


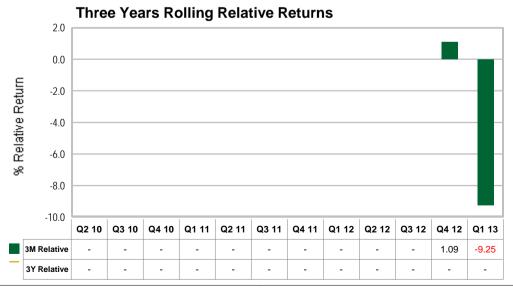


SSGA Global Equity







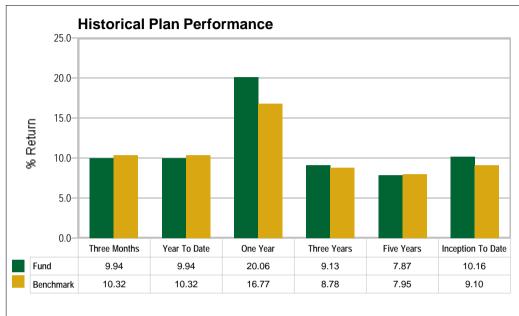


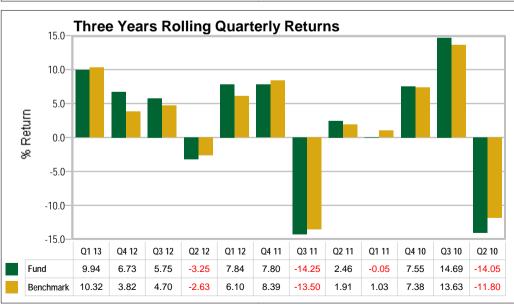




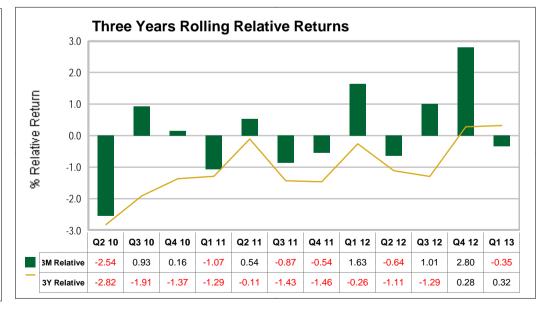


UBS





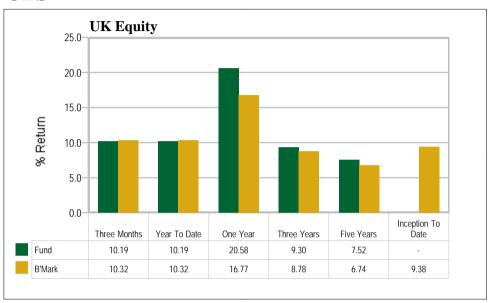
Risk Statistics - 3 years	Fund	B'mark
Performance Return	9.13	8.78
Standard Deviation	14.87	13.01
Relative Return	0.32	
Tracking Error	3.57	
Information Ratio	0.10	
Beta	1.12	
Alpha	-0.36	
R Squared	0.95	
Sharpe Ratio	0.54	0.59
Percentage of Total Fund	20.0	
Inception Date	Dec-1988	
Opening Market Value (£000)	123,512	
Net Investment £(000)	0	
Income Received £(000)	1,035	
Appreciation £(000)	11,243	
Closing Market Value (£000)	135,790	







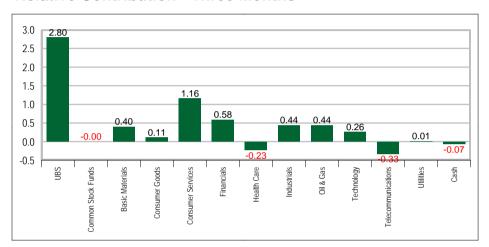
UBS





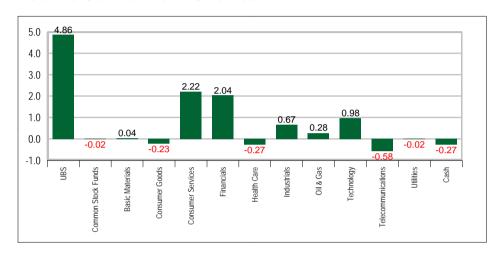
UBS

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

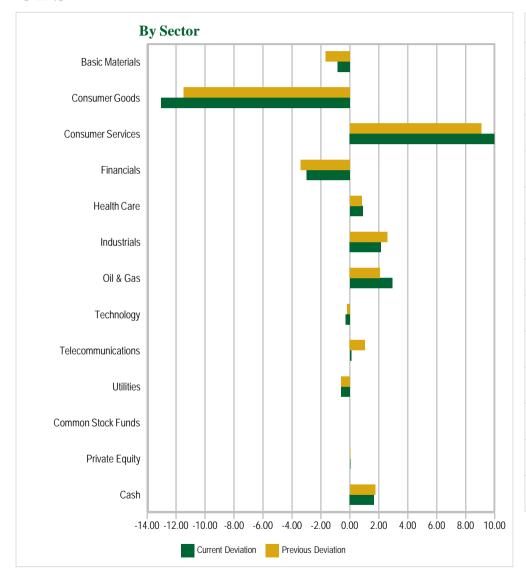


	Return	Benchmark	Relative Return	Asset Allocation	Stock Selection	Relative Contribution
UBS	17.76	12.30	4.86	-1.13	6.04	4.86
Common Stock Funds	-27.60	-	-27.60	-0.02	0.00	-0.02
Basic Materials	2.05	4.71	-2.54	0.17	-0.13	0.04
Consumer Goods	27.91	18.04	8.36	-0.47	0.24	-0.23
Consumer Services	31.63	18.16	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





UBS



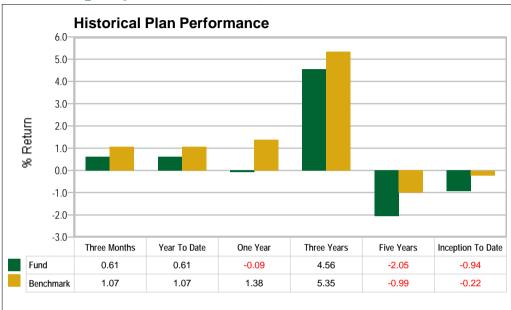
	Current Quarter	Previous Quarter	Current Benchmark	Current Deviation	Previous Benchmark	Previous Deviation
Basic Materials	7.93	8.80	8.78	-0.84	10.47	-1.66
Consumer Goods	1.46	2.29	14.51	-13.04	13.77	-11.48
Consumer Services	19.88	18.77	9.90	9.98	9.70	9.08
Financials	20.08	19.56	23.05	-2.97	22.96	-3.41
Health Care	8.13	7.77	7.24	0.90	6.96	0.81
Industrials	11.74	11.61	9.58	2.15	9.02	2.58
Oil & Gas	18.20	18.12	15.27	2.93	16.04	2.08
Technology	1.31	1.33	1.61	-0.30	1.53	-0.20
Telecommunications	6.32	6.68	6.22	0.10	5.64	1.03
Utilities	3.24	3.27	3.84	-0.60	3.90	-0.63
Common Stock Funds	0.00	0.00		0.00		0.00
Private Equity	0.03	0.03		0.03		0.03
Cash	1.68	1.76		1.68		1.76

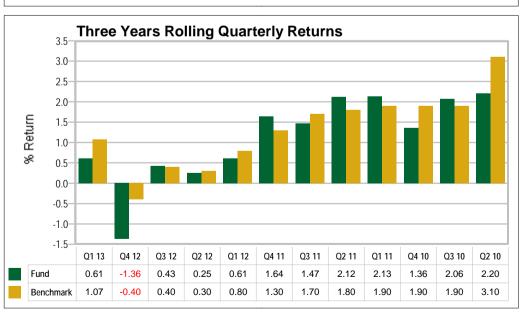






UBS Property





Risk Statistics - 3 years	Fund	B'mark
Performance Return	4.56	5.35
Standard Deviation	2.07	1.21
Relative Return	-0.74	
Tracking Error	1.58	
Information Ratio	-0.50	
Beta	1.08	
Alpha	-1.06	
R Squared	0.42	
Sharpe Ratio	1.64	3.45
Percentage of Total Fund	7.2	
Inception Date	Mar-2006	
Opening Market Value (£000)	48,951	
Net Investment £(000)	-0	
Income Received £(000)	564	
Appreciation £(000)	-264	
Closing Market Value (£000)	49,251	

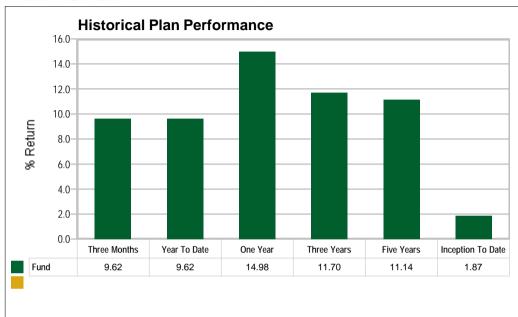






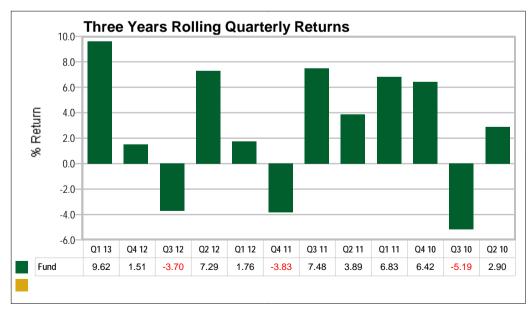
B'mark

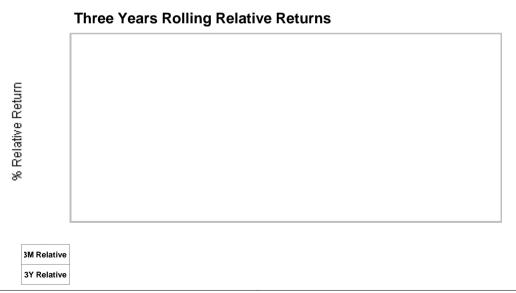
Adam Street





Fund



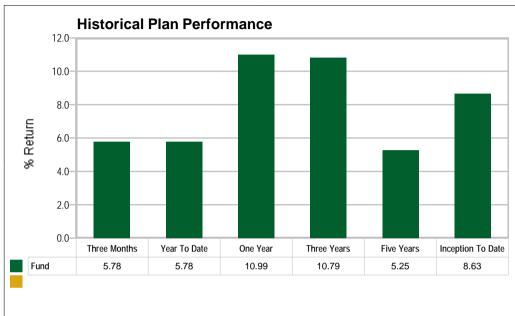




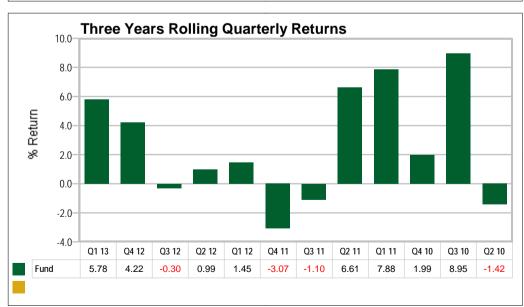


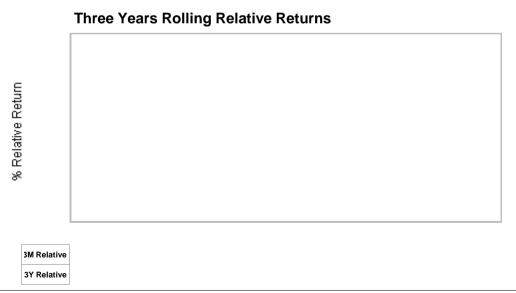


LGT







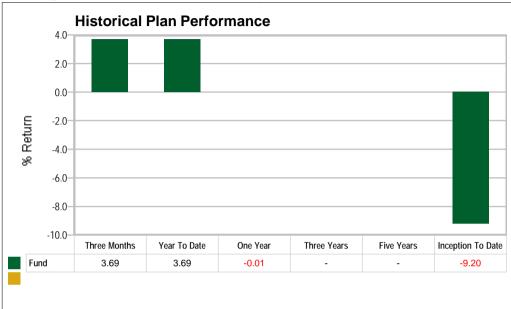


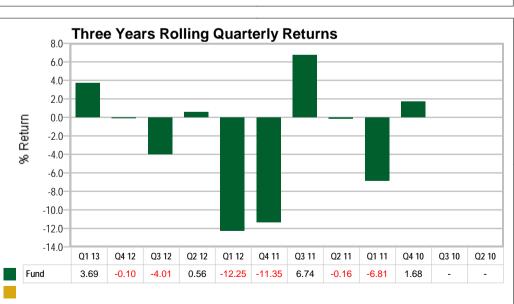




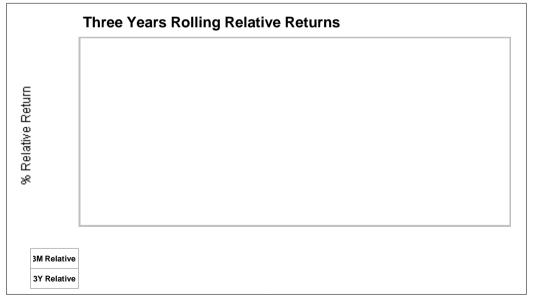


Macquarie













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 k 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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