

# The Index Investor

*Why Pay More for Less?*

## Model Portfolio Update

We are making a number of changes to our model portfolios as we start the new year. First, we are changing the weights used in calculating our global bond market index to 50 percent U.S. dollar issues, and 50% non-U.S. dollar issues, based on new information received from the International Securities Markets Association on the face value of bonds that have been issued in different currencies. As regular readers know, there is much less information available about the world's bond markets than there is about the world's equity markets, and this has been a continuing source of frustration for us. Last year we switched to a weighting scheme based on market capitalizations. In retrospect, however, we decided that the lack of information available on this measure made it subject to a number of flaws. As a result, we have switched back to a weighting system that is based on the face value of the bonds outstanding, as calculated by the ISMA (which estimated the total world fixed income market size to be U.S. \$6.5 trillion at the end of 2002).

The second change we are making is the replacement of the Dow Jones Energy Sector I-Share (ticker IYE) as the proxy for our allocation to commodities in our non-U.S. dollar model portfolios. As you may recall, we originally included IYE as a substitute for an index vehicle such as the Oppenheimer Real Assets Fund (QRABX) which directly invests in the commodities themselves. Unfortunately, the latter was not available in many markets outside the United States. Our logic at the time was that IYE tracked the performance of energy stocks, and the Goldman Sachs Commodity Index (tracked by QRABX) was relatively heavily weighted toward energy commodities. We cautioned, however, that it was an imperfect substitute at best, and that while the performance of IYE and QRABX had tracked reasonably closely in the past, there was no guarantee they would do so in the future. Last year's results for these two vehicles proved that we were

all too right (although we wish this wasn't the case!). In short, equity market factors dominated commodity market factors when it came to the performance of IYE, and it delivered negative returns while QRABX delivered positive returns. In other words, the true commodity investment delivered the diversification benefits we had expected from our allocation to this asset class, while IYE did not. Our hope is that this year we will see more retail commodity index products introduced in the currency zones we cover, which will create more opportunities for making effective allocations to this important asset class.

With those two important changes in mind, let's now move on to how our model portfolios performed in January. The objective of our first set of model portfolios is to deliver higher returns than their respective benchmarks, while taking on no more risk. The benchmark for the first portfolio in this group is an aggressive mix of 80% domestic equities, and 20% domestic bonds. Through the end of January, this benchmark had returned (4.7%) in Pounds, while our model portfolio had returned (2.8%). For the sake of comparison, we have also compared our model portfolios to a set of global benchmarks. In this case, the global benchmark is a mix of 80% global equities, and 20% global bonds. Through the end of January, it had returned (4.7%).

The benchmark for the second portfolio in this group is a mix of 60% domestic equities and 40% domestic bonds. Through the end of last month, it had returned (3.2%), while our model portfolio had returned (2.0%), and the global benchmark had returned (3.8%).

The benchmark for the third portfolio in this group is a conservative mix of 20% domestic equities and 80% domestic bonds. Through the end of last month, it had returned (0.3%), while our model portfolio had returned (0.4%) and the global benchmark (2.2%).

The objective of our second set of model portfolios is to deliver less risk than their respective benchmarks, while delivering at least as much return. The benchmark for the first portfolio in this group is an aggressive mix of 80% domestic equities, and 20%

domestic bonds. Through the end of last month, this benchmark had returned (4.7%), while our model portfolio had returned (3.2%). For the sake of comparison, we have also compared our model portfolios to a set of global benchmarks. In this case, the global benchmark is a mix of 80% global equities, and 20% global bonds. Through the end of last month, it had returned (4.7%).

The benchmark for the second portfolio in this group is a mix of 60% domestic equities and 40% domestic bonds. Through the end of last month, it had returned (3.2%), while our model portfolio had returned (1.1%), and the global benchmark had returned (3.8%).

The benchmark for the third portfolio in this group is a conservative mix of 20% domestic equities and 80% domestic bonds. Through the end of last month, it had returned (0.3%), while our model portfolio had returned (0.1%) and the global benchmark (2.2%).

The objective of our third set of model portfolios is not to outperform a benchmark index, but rather to deliver a minimum level of compound annual return over a ten-year period. Through last month, our 12% target return portfolio has returned (2.7%) year-to-date, our 10% target return portfolio has returned (3.7%) our 8% target return portfolio has returned (2.2%), and our 6% target return portfolio has returned (1.1%).

## **Equity Market Valuation Update**

As we have previously noted, our valuation analysis rests on two fundamental assumptions: that over the long term, labor productivity growth in our six major regions will converge at between 2.5% and 3.5% per year, and that the long term real equity risk premium is 4.0% per year. Given those assumptions, here is our updated analysis at 31 January, 2003:

Country	Real Risk Free Rate	Equity Risk Premium	Required Real Rate of Return on Equities	Expected Real Growth Rate*	Current Dividend Yield
Australia	3.17%	4.0%	7.17%	4.3%	3.9%
Canada	3.19%	4.0%	7.19%	4.1%	2.1%
Eurozone	2.20%	4.0%	6.20%	3.5%	3.8%
Japan	2.22%	4.0%	6.22%	3.2%	1.1%
U.K.	2.01%	4.0%	6.01%	3.5%	4.0%
U.S.A.	2.70%	4.0%	6.70%	4.4%	1.9%

*\*This reflects not only 3.5% productivity growth, but also expected labor force growth.*

Country	Implied Index Value*	Current Index Value at 1/31/03	Current/Implied (productivity growth @3.5%)	Current/Implied (productivity growth at 2.5%)
Australia	283.34	208.51	74%	99%
Canada	141.01	207.48	147%	195%
Eurozone	155.70	110.63	71%	97%
Japan	26.74	73.40	275%	365%
U.K.	376.59	236.31	63%	88%
U.S.A.	289.17	350.05	121%	174%

*\* Assuming 3.5% future productivity growth*

As you can see, even in the more pessimistic case of 2.5% annual productivity growth, the U.K. equity market appears to be undervalued. The same can be said for the Eurozone, but to a lesser extent. On the other hand, markets in Japan, Canada, and the United States still appear to be overvalued.

## **New Pricing Model at Index Investor**

Those of you receiving subscription renewal notices this month will see that we have responded to customer feedback and implemented a new pricing model this year.

Whereas in the past we had included a copy of our book with a one year subscription to *The Index Investor*, we have now separated these two offerings. Renewal subscriptions to *The Index Investor* will now be available for either U.S. \$25 for one year or U.S. \$40 for two years, while the book will be available for U.S. \$19.95 (reflecting the fact that its content is now more than a year old). Finally, we are also providing two new free benefits to readers who renew their subscriptions. First, a pdf collection of all of our feature articles from 2002, and second, free access to a new offering we will launch later this year called "Investing After Retirement". If you have any questions about our new pricing plan, please feel free to get in touch.

### **What Do You Want Us to Write About This Year?**

At the start of the new year, we also wanted to ask you once again to send us your ideas for the stories and issues you would like to see us research and write about this year. Each year we start out with a draft editorial plan for the upcoming twelve months, but always find that we end up changing it based on questions and input we have received from you. Inevitably, you catch some interesting things that we miss, and all of us are better as a result of your efforts. So, please, don't be shy about sending us your ideas!

### **Another Report on Performance Persistence**

In September of last year, The Australian Securities and Investment Commission published [A Review of Research on the Past Performance of Managed Funds](#). We read this document over the holidays, and found that it was the best summary of the research on this critical issue that we had ever seen. [The full report will shortly be available for download in the Research section of our site].

The ASIC report begins by noting the central issue it attempts to resolve: "how useful is past performance information when consumers (or their advisers) are selecting an Australian managed fund?" [Essentially a mutual fund or unit trust, for our non-Australian readers].

It then goes on to describe the wide scope of the previous research it summarizes. "In this paper, we undertake an extensive review of the academic literature on the persistence of managed fund performance...Of the 100 or so relevant studies from the past 40 years, we have focused on the more recent studies, and the studies with the more robust methodology. The majority of these studies look at U.S. funds, whilst a significant number have examined U.K. funds. We also consider some 11 studies of the performance of Australian funds, and devote more detail to a few of these larger studies. A majority of these studies looked at equity funds, but some also considered fixed interest funds. Although the studies address a common topic, they are characterized more by their differences than similarities: the studies cover different time periods, use different benchmarks, and reach different conclusions."

One of the aspects we liked best about this report is the fact that it has "kept in mind the situation facing retail investors and [therefore] focused on the studies which are most relevant to real world situations where returns must be adjusted for fees, consumers have an investment horizon of at least several years, and where frequent switching between funds incurs both cost and inconvenience."

The report also makes an important distinction between two related concepts. "Performance persistence can be defined as a positive relation between performance ranking in an initial period, and in a subsequent ranking period. Two forms of persistence, absolute and relative, have been distinguished in the literature. An [actively managed] fund possesses absolute performance persistence if it is able to consistently beat a specific benchmark index... [The essential question here is] can funds add value in the sense of 'beating the market'? ... This has implications for the merits of actively managed versus index funds. However, this issue is not the focus of this report... Recently, more attention has been focused on whether past performance of individual funds can be used as a guide to their future performance. This issue is also referred to as "performance persistence"...A fund possesses relative performance persistence if its performance is consistently above the average performance of a cohort of similar funds.

Evidence of relative performance persistence has implications for investor choices between funds."

After a lengthy but fascinating critical review of the relevant academic research, the ASIC report concludes that "good past performance seems to be, at best, a weak and unreliable predictor of future good performance over the long term. About half the studies found no correlation at all between good past and future performance. Where persistence was found, this was more frequently in the shorter term (one to two years) than in the medium to long term, which may be more relevant to the typical periods over which consumers hold managed funds...[Moreover], where persistence was found, the "out-performance" margin tended to be small. Where studies found persistence, some specifically reported that frequent swapping to best performing funds would not be an effective strategy, due to the cost of swapping...Where persistence was found, studies also came to inconsistent conclusions about which time periods (historical and future) were correlated. One recent study investigated this in detail, and found that the general pattern appeared to be symmetrical; short term past performance was only correlated with short term future performance, while medium term past performance was only correlated (if at all) with medium term future performance."

Finally, the report noted that "there are plausible explanations for these conclusions about the low persistence of past performance...Fund managers constantly strive to match the performance of their competitors. If one firm is outperforming its peers, others will try to copy its methods and/or hire away its staff. If [the relatively more successful fund] attracts a large inflow of funds, it is likely to be difficult to place these funds and maintain relative performance, if it is an active as opposed to a passive [index] fund." Interestingly, the report also concluded that "the future return on investments is extremely hard to predict, so a considerable part of a fund's performance compared to its peers may be due to random luck." Finally, the report also noted that its "findings are consistent with other research [on the merits of active investing versus indexing] that shows that it is hard for fund managers to consistently outperform the relative benchmark index."

In short, this report provides further support for the core beliefs of The Index Investor: First, very few active investment managers can "beat the market" over ten years or more (net of sales loads, expenses, and taxes). Second, the few that can are impossible to identify in advance. Given this, the way to achieve superior long term investment performance is to define the asset allocation strategy that is right for you, and then efficiently implement it through the use of low cost index mutual funds and exchange traded funds. Everything else is unnecessary complication that prevents you from spending more time on the things that are truly important in your life.

## **We Need More Prudent Experts**

[The following is an oped piece recently written by Susan Miller, president of The Index Investor. ]

According to federal regulations, the trustee of your pension plan is required "to act with the care, skill, prudence and diligence under the prevailing circumstances that a prudent person acting in a like capacity and familiar with such matters would use." In the investment business, this is known as the "prudent expert" rule.

Broadly speaking, pension plans fall into two categories. Defined benefit plans pool all employees' retirement savings, and in return guarantee a certain level of retirement income. These savings are allocated to different asset classes, and investments within each asset class are generally managed by professional investment managers, under the supervision of the plan trustee. Defined benefit plans place quite a bit of risk on the shoulders of the companies that sponsor them. If their investment performance does not generate sufficient funds to pay the anticipated benefits to retirees, the company has to increase the size of the contributions it makes to the plan, which reduces the funds it has available to distribute to its shareholders, and/or invest in new projects. To reduce their risk, in recent years companies have replaced many defined benefit plans with defined contribution plans, such as 401k and 403b plans. These plans shift most of the risk onto

the shoulders of the plan participants. Under a defined contribution plan, the company only guarantees that it will contribute a certain amount to the plan each year. It does not guarantee a minimum level of income to retirees, because under a defined contribution plan, employees themselves (rather than professional money managers) are responsible for deciding how to divide their retirement savings between a limited number of mutual funds chosen for their plan by its trustee.

The prudent expert rule implies that, when making their decisions, pension plan trustees should take into account the latest academic research findings in the area of investment management. In this regard, we note that over the past few years, more and more evidence has accumulated in support of two propositions: First, because of their higher expenses, very few active investment managers can deliver higher returns than those on the relevant market index fund over a holding period of ten years or more. Second, it is impossible to identify in advance the few active managers who will, due to luck or skill, actually end up "beating the market" in the future. This implies that a trustee acting as a "prudent expert" should focus on defining an asset allocation strategy that is appropriate to their plan's long term goals, and strongly consider the potential benefits of using low cost index mutual and exchange traded funds to implement it.

Fiduciaries of the top two hundred defined benefit plans in the U.S. (which manage almost three trillion dollars in assets) seem to agree with these findings. At the end of 2001, they had indexed in aggregate thirty percent of the assets for which they are responsible. Unfortunately, this was not the case at the top two hundred defined contribution plans, where only about eighteen percent of the assets held by plan participants had been invested in index products at the end of 2001. What accounts for this difference? Three possible explanations come to mind.

The first is that defined contribution plan participants are acting rationally: given their low levels of savings relative to their retirement income goals, they have no choice but to "swing for the fences" and hope that the active managers they entrust with their funds turn out to be the next Warren Buffets. The second explanation is that investors aren't

acting rationally at all, and invest in active funds because they are overconfident about their ability to identify managers who will outperform index funds over the long term. The third explanation is that these plans' fiduciaries have either failed to provide participants with adequate information about the potential advantages of indexing, and/or have failed to include in their plans an adequate range of index funds.

Whatever the cause of the problem, defined contribution plan participants' heavy investment in actively managed funds will likely generate lower long term returns than equivalent investments in index funds. And we may all end up paying a very high price for this choice. In the not-to-distant future, many people approaching the expected end of their working lives will open their pension statements and realize that their assets are insufficient to provide the income they assumed they would have in their retirement years. Of course, it might turn out that these new retirees will just accept a lower standard of living, or perhaps find part time jobs. However, given the substantial voting power of disappointed Baby Boomers, we think these two outcomes are far less likely than a third one: calls for higher Social Security benefits, and the higher taxes (or spending cuts) that will be needed to pay for them. In short, while the heavy use of actively managed funds in defined contribution plans has been very profitable for the mutual fund industry, it may end up being very painful for the rest of us.

## Model Portfolio Results

<i>These portfolios seek to maximize return while matching their benchmark's risk (standard deviation)</i>					
	<u>Ticker</u>	<b>YTD</b> <b>31Jan03</b>	Weight	Weighted Return	
		in Pounds		In Pounds	
<b>High Risk Portfolio</b>					
<i>Suggested US Index Funds</i>					<i>Suggested UK Index Funds</i>
<i>UK Benchmark</i>					
UK Equity ETF	EWU	-6.1%	80%	-4.9%	iShares FTSE ETF; HSBC FTSE 250; L&G UK Index; Virgin UK Index
UK Bond Index	JPM UK	1.2%	20%	0.2%	L&G All Stocks Gilt Index
			100%	-4.7%	
<i>Global Benchmark</i>					
US Equity Index (DJTMI ETF)	IYY	-4.8%	40%	-1.9%	Vanguard World Index
Vanguard Total International Market	VGTSX	-6.1%	40%	-2.5%	Vanguard World Index
Vanguard Total U.S. Bond Market Index	VBMFX	-2.3%	10%	-0.2%	Vanguard Global Government Bond Index
TRP International (Non US\$) Bond Fund	RPIBX	-0.4%	10%	0.0%	Vanguard Global Government Bond Index
			100%	-4.7%	
<i>Recommended</i>					
UK Equity ETF	EWU	-6.1%	32%	-2.0%	iShares FTSE ETF; HSBC FTSE 250; L&G UK Index; Virgin UK Index
Euro Area Equity ETF	EZU	-6.3%	15%	-0.9%	HSBC or L&G European Index
US Equity Index (DJTMI ETF)	IYY	-4.8%	18%	-0.9%	iShares S&P 500 ETF; Vanguard S&P 500; L&G US Index
UK Bond Index	JPM UK	1.2%	25%	0.3%	L&G All Stocks Gilt Index
Oppenheimer Real Asset Fund	QRABX	6.8%	10%	0.7%	iShares Resources ETF
			100%	-2.8%	

<i>These portfolios seek to maximize return while matching their benchmark's risk (standard deviation)</i>					
	<b>Ticker</b>	<b>YTD 31Jan03</b>	<b>Weight</b>	<b>Weighted Return</b>	
		in Pounds		In Pounds	
<b>Medium Risk Portfolio</b>					
<i>Suggested US Index Funds</i>					<i>Suggested UK Index Funds</i>
<b><i>UK Benchmark</i></b>					
UK Equity ETF	EWU	-6.1%	60%	-3.7%	iShares FTSE ETF; HSBC FTSE 250; L&G UK Index; Virgin UK Index
UK Bond Index	JPM UK	1.2%	40%	0.5%	L&G All Stocks Gilt Index
			100%	-3.2%	
<b><i>Global Benchmark</i></b>					
US Equity Index (DJTMI ETF)	IYY	-4.8%	30%	-1.4%	Vanguard World Index
Vanguard Total International Market	VGTSX	-6.1%	30%	-1.8%	Vanguard World Index
Vanguard Total U.S. Bond Market Index	VBMFX	-2.3%	20%	-0.5%	Vanguard Global Government Bond Index
TRP International (Non US\$) Bond Fund	RPIBX	-0.4%	20%	-0.1%	Vanguard Global Government Bond Index
			100%	-3.8%	
<b><i>Recommended</i></b>					
UK Equity ETF	EWU	-6.1%	27%	-1.7%	iShares FTSE ETF; HSBC FTSE 250; L&G UK Index; Virgin UK Index
Euro Area Equity ETF	EZU	-6.3%	12%	-0.8%	HSBC or L&G European Index
US Equity Index (DJTMI ETF)	IYY	-4.8%	14%	-0.7%	iShares S&P 500 ETF; Vanguard S&P 500; L&G US Index
UK Bond Index	JPM UK	1.2%	37%	0.4%	L&G All Stocks Gilt Index
Oppenheimer Real Asset Fund	QRABX	6.8%	10%	0.7%	iShares Resources ETF
			100%	-2.0%	

<i>These portfolios seek to maximize return while matching their benchmark's risk (standard deviation)</i>					
	<b>Ticker</b>	<b>YTD 31Jan03</b>	<b>Weight</b>	<b>Weighted Return</b>	
		in Pounds		In Pounds	
<b>Low Risk Portfolio</b>					
<i>Suggested US Index Funds</i>					<i>Suggested UK Index Funds</i>
<b>UK Benchmark</b>					
UK Equity ETF	EWU	-6.1%	20%	-1.2%	iShares FTSE ETF; HSBC FTSE 250; L&G UK Index; Virgin UK Index
UK Bond Index	JPM UK	1.2%	80%	1.0%	L&G All Stocks Gilt Index
			100%	-0.3%	
<b>Global Benchmark</b>					
US Equity Index (DJTMI ETF)	IYY	-4.8%	10%	-0.5%	Vanguard World Index
Vanguard Total International Market	VGTSX	-6.1%	10%	-0.6%	Vanguard World Index
Vanguard Total U.S. Bond Market Index	VBMFX	-2.3%	40%	-0.9%	Vanguard Global Government Bond Index
TRP International (Non US\$) Bond Fund	RPIBX	-0.4%	40%	-0.2%	Vanguard Global Government Bond Index
			100%	-2.2%	
<b>Recommended</b>					
UK Equity ETF	EWU	-6.1%	8%	-0.5%	iShares FTSE ETF; HSBC FTSE 250; L&G UK Index; Virgin UK Index
Euro Area Equity ETF	EZU	-6.3%	8%	-0.5%	HSBC or L&G European Index
US Equity Index (DJTMI ETF)	IYY	-4.8%	7%	-0.3%	iShares S&P 500 ETF; Vanguard S&P 500; L&G US Index
Vanguard Emerging Markets	VEIEX	-2.2%	10%	-0.2%	Gartmor Emerging Markets Fund (not an index fund)
UK Bond Index	JPM UK	1.2%	60%	0.7%	L&G All Stocks Gilt Index
Oppenheimer Real Asset Fund	QRABX	6.8%	7%	0.5%	iShares Resources ETF
			100%	-0.4%	
<i>Global Bond Index = 50% US\$ plus 50% Non-US\$ Bonds</i>					

<i>These portfolios seek to minimize risk while matching their benchmark's returns.</i>					
	<u>Ticker</u>	<b>YTD 31Jan03</b>	<b>Weight</b>	<b>Weighted Return</b>	
		in Pounds		in Pounds	
<b>High Return Portfolio</b>					
<i>Suggested US Index Funds</i>					<i>Suggested UK Index Funds</i>
<b><i>UK Benchmark</i></b>					
UK Equity ETF	EWU	-6.1%	<b>80%</b>	<b>-4.9%</b>	iShares FTSE ETF; HSBC FTSE 250; L&G UK Index; Virgin UK Index
UK Bond Index	JPM UK	1.2%	<b>20%</b>	<b>0.2%</b>	L&G All Stocks Gilt Index
			<b>100%</b>	<b>-4.7%</b>	
<b><i>Global Benchmark</i></b>					
US Equity Index (DJTMI ETF)	IYY	-4.8%	<b>40%</b>	<b>-1.9%</b>	Vanguard World Index
Vanguard Total International Market	VGTSX	-6.1%	<b>40%</b>	<b>-2.5%</b>	Vanguard World Index
Vanguard Total U.S. Bond Market Index	VBMFX	-2.3%	<b>10%</b>	<b>-0.2%</b>	Vanguard Global Government Bond Index
TRP International (Non US\$) Bond Fund	RPIBX	-0.4%	<b>10%</b>	<b>0.0%</b>	Vanguard Global Government Bond Index
			<b>100%</b>	<b>-4.7%</b>	
<b><i>Recommended</i></b>					
UK Equity ETF	EWU	-6.1%	<b>20%</b>	<b>-1.2%</b>	iShares FTSE ETF; HSBC FTSE 250; L&G UK Index; Virgin UK Index
Euro Area Equity ETF	EZU	-6.3%	<b>18%</b>	<b>-1.1%</b>	HSBC or L&G European Index
US Equity Index (DJTMI ETF)	IYY	-4.8%	<b>17%</b>	<b>-0.8%</b>	iShares S&P 500 ETF; Vanguard S&P 500; L&G US Index
UK Bond Index	JPM UK	1.2%	<b>35%</b>	<b>0.4%</b>	L&G All Stocks Gilt Index
Oppenheimer Real Asset Fund	QRABX	-4.4%	<b>10%</b>	<b>-0.4%</b>	iShares Resources ETF
			<b>100%</b>	<b>-3.2%</b>	

<i>These portfolios seek to minimize risk while matching their benchmark's returns.</i>					
	<u>Ticker</u>	<b>YTD 31Jan03</b>	<b>Weight</b>	<b>Weighted Return</b>	
		in Pounds		in Pounds	
<b>Medium Return Portfolio</b>					
<i>Suggested US Index Funds</i>					<i>Suggested UK Index Funds</i>
<u><i>UK Benchmark</i></u>					
UK Equity ETF	EWU	-6.1%	60%	-3.7%	iShares FTSE ETF; HSBC FTSE 250; L&G UK Index; Virgin UK Index
UK Bond Index	JPM UK	1.2%	40%	0.5%	L&G All Stocks Gilt Index
			100%	<b>-3.2%</b>	
<u><i>Global Benchmark</i></u>					
US Equity Index (DJTMI ETF)	IYY	-4.8%	30%	-1.4%	Vanguard World Index
Vanguard Total International Market	VGTS X	-6.1%	30%	-1.8%	Vanguard World Index
Vanguard Total U.S. Bond Market Index	VBMFX	-2.3%	20%	-0.5%	Vanguard Global Government Bond Index
TRP International (Non US\$) Bond Fund	RPIBX	-0.4%	20%	-0.1%	Vanguard Global Government Bond Index
			100%	<b>-3.8%</b>	
<u><i>Recommended</i></u>					
UK Equity ETF	EWU	-6.1%	15%	-0.9%	iShares FTSE ETF; HSBC FTSE 250; L&G UK Index; Virgin UK Index
Euro Area Equity ETF	EZU	-6.3%	16%	-1.0%	HSBC or L&G European Index
US Equity Index (DJTMI ETF)	IYY	-4.8%	5%	-0.2%	iShares S&P 500 ETF; Vanguard S&P 500; L&G US Index
UK Bond Index	JPM UK	1.2%	44%	0.5%	L&G All Stocks Gilt Index
Global Bond Index	Custom	-1.4%	10%	-0.1%	Vanguard Global Government Bond Index
Oppenheimer Real Asset Fund	QRABX	6.8%	10%	0.7%	iShares Resources ETF
			100%	<b>-1.1%</b>	

<i>These portfolios seek to minimize risk while matching their benchmark's returns.</i>					
	<u>Ticker</u>	<b>YTD 31Jan03</b>	<b>Weight</b>	<b>Weighted Return</b>	
		in Pounds		in Pounds	
<b>Low Return Portfolio</b>					
<u>Suggested US Index Funds</u>					<u>Suggested UK Index Funds</u>
<u>UK Equity ETF</u>					
UK Equity ETF	EWU	-6.1%	20%	-1.2%	iShares FTSE ETF; HSBC FTSE 250; L&G UK Index; Virgin UK Index
UK Bond Index	JPM UK	1.2%	80%	1.0%	L&G All Stocks Gilt Index
			100%	<b>-0.3%</b>	
<u>Global Benchmark</u>					
US Equity Index (DJTMI ETF)	IYY	-4.8%	10%	-0.5%	Vanguard World Index
Vanguard Total International Market	VGTSX	-6.1%	10%	-0.6%	Vanguard World Index
Vanguard Total U.S. Bond Market Index	VBMFX	-2.3%	40%	-0.9%	Vanguard Global Government Bond Index
TRP International (Non US\$) Bond Fund	RPIBX	-0.4%	40%	-0.2%	Vanguard Global Government Bond Index
			100%	<b>-2.2%</b>	
<u>Recommended</u>					
UK Equity ETF	EWU	-6.1%	5%	-0.3%	iShares FTSE ETF; HSBC FTSE 250; L&G UK Index; Virgin UK Index
Euro Area Equity ETF	EZU	-6.3%	9%	-0.6%	HSBC or L&G European Index
UK Bond Index	JPM UK	1.2%	55%	0.7%	L&G All Stocks Gilt Index
Global Bond Index	Custom	-1.4%	25%	-0.3%	Vanguard Global Government Bond Index
Oppenheimer Real Asset Fund	QRABX	6.8%	6%	0.4%	iShares Resources ETF
			100%	<b>-0.1%</b>	
<i>Global Bond Index = 50% US\$ plus 50% Non-US\$ Bonds</i>					

<i>These portfolios seek to maximize the probability of achieving at least the target return over ten years, at the lowest possible risk.</i>					
	<b>Ticker</b>	<b>YTD 31Jan03</b>	<b>Weight</b>	<b>Weighted Return</b>	
		in Pounds		in Pounds	
<i>Suggested US Index Funds</i>					<i>Suggested UK Index Funds</i>
<b>12% Target Return</b>					
<i>Recommended</i>					
Euro Area Equity ETF	EZU	-6.3%	16%	-1.0%	HSBC or L&G European Index
US Equity Index (DJTMI ETF)	IYY	-4.8%	41%	-2.0%	iShares S&P 500 ETF; Vanguard S&P 500; L&G US Index
Vanguard Emerging Markets	VEIEX	-2.2%	8%	-0.2%	Gartmor Emerging Markets Fund (not an index fund)
UK Bond Index	JPM UK	1.2%	35%	0.4%	L&G All Stocks Gilt Index
			100%	<b>-2.7%</b>	
<b>10% Target Return</b>					
<i>Recommended</i>					
UK Equity ETF	EWU	-6.1%	13%	-0.8%	iShares FTSE ETF; HSBC FTSE 250; L&G UK Index; Virgin UK Index
Euro Area Equity ETF	EZU	-6.3%	18%	-1.1%	HSBC or L&G European Index
US Equity Index (DJTMI ETF)	IYY	-4.8%	35%	-1.7%	iShares S&P 500 ETF; Vanguard S&P 500; L&G US Index
Vanguard Emerging Markets	VEIEX	-2.2%	6%	-0.1%	Gartmor Emerging Markets Fund (not an index fund)
Vanguard Pacific	VPACX	-5.2%	3%	-0.2%	HSBC or L&G Japan Index
UK Bond Index	JPM UK	1.2%	22%	0.3%	L&G All Stocks Gilt Index
Global Bond Index	Custom	-1.4%	3%	0.0%	Vanguard Global Government Bond Index
			100%	<b>-3.7%</b>	

<i>These portfolios seek to maximize the probability of achieving at least the target return over ten years, at the lowest possible risk.</i>					
	<u>Ticker</u>	<b>YTD 31Jan03</b>	Weight	Weighted Return	
		in Pounds		in Pounds	
<i>Suggested US Index Funds</i>					<i>Suggested UK Index Funds</i>
<b>8% Target Return</b>					
<i>Recommended</i>					
UK Equity ETF	EWU	-6.1%	30%	-1.8%	iShares FTSE ETF; HSBC FTSE 250; L&G UK Index; Virgin UK Index
Euro Area Equity ETF	EZU	-6.3%	9%	-0.6%	HSBC or L&G European Index
Vanguard Emerging Markets	VEIEX	-2.2%	2%	0.0%	Gartmor Emerging Markets Fund (not an index fund)
UK Bond Index	JPM UK	1.2%	40%	0.5%	L&G All Stocks Gilt Index
Global Bond Index	Custom	-1.4%	19%	-0.3%	Vanguard Global Government Bond Index
			100%	<b>-2.2%</b>	
<b>6% Target Return</b>					
<i>Recommended</i>					
UK Equity ETF	EWU	-6.1%	13%	-0.8%	iShares FTSE ETF; HSBC FTSE 250; L&G UK Index; Virgin UK Index
Euro Area Equity ETF	EZU	-6.3%	3%	-0.2%	HSBC or L&G European Index
UK Bond Index	JPM UK	1.2%	42%	0.5%	L&G All Stocks Gilt Index
Global Bond Index	Custom	-1.4%	42%	-0.6%	Vanguard Global Government Bond Index
			100%	<b>-1.1%</b>	
<i>Global Bond Index = 50% US\$ plus 50% Non-US\$ Bonds</i>					