

INTRODUCTION

SAFE ASSETS NEED SOME ACTIVE RISK

A 'risk-free' investment should be the starting point before a solution can be individually tailored

Volatility is the standard definition of risk. If you know the volatility of an investment, then through some simple statistics you also know the probability of a good or a bad outcome. So volatility is simply a measure of uncertainty. It expresses the extent to which the return from a security, or portfolio of securities, varies around an average level.

Many individual investors are confused. They recognise the objective to turn €1 into something larger and they generally accept that they will need to take some risk to do so. But they need a strategy and they generally don't have the knowledge or time to study the subject. This is achievable only through sophisticated investment management matched to their own circumstances and the flexibility to make adjustments if those circumstances change.

Investors, however, often feel they've missed out if they don't get full exposure to a market rise. Yet they are not willing to risk losing much on the downside. So how can a balance be achieved?

» EXPECTATIONS

Managing risk is the same as managing expectations. In constructing a portfolio you are not trying to preclude the investor from taking advantage of positive market movements. You are just controlling their exposure to those market movements in order to limit the exposure to the downside. Risk and reward need to be balanced. If you want full exposure to the equity market then you need to understand the implied risk in making that decision.

If you assume that an investor will always want to maximise the investment return, and will always seek to minimise costs, the key variable in establishing their portfolio needs is their tolerance to risk. Once you know the investor's tolerance of a bad outcome from their investments, you can convert it into a measure of the

maximum risk you can take. This 'risk budget' is the key insight required to determine the construction of a portfolio that matches their needs.

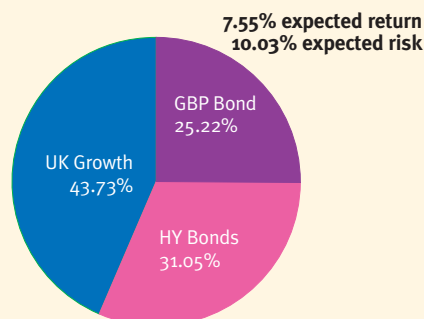
But how do you determine the budget specific to each individual investor? First you must start with the risk-free investment solution. This portfolio of assets will achieve the goal with 100 per cent certainty. As you move away from this portfolio, you take on active risk and introduce a probability of not achieving the goal. You also need less capital upfront, as you would normally take on risk in expectation of earning higher returns.

The risk budget is the maximum active volatility that can be accepted given a risk-free solution and a fixed tolerance for failure. If you take this tolerance together with the expectations for the future behaviour of market returns, then an "acceptable probability of not achieving a

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Ben Leadsom, BGI

Selected asset structure



7.55% expected return
10.03% expected risk

Source: BGI

1

goal” can be translated into an “acceptable volatility of portfolio returns compared to the risk-free portfolio”.

In asking the questions to retail investors and by using terminology consistent with “value at risk”, it is possible to extract their risk tolerance in a way that empowers them to make it a fair and accurate reflection of their true requirements. For example:

- What is the sum required at the end of the period to satisfy requirements?
- How long has the investor got – for example one year, three years, five years, 10 years?

The risk budget for each portfolio will be identified through establishing the investor’s tolerance for not achieving the desired outcome. For example:

- What chance of losing capital is he prepared to take? – for example 5 per cent (one in 20), 10 per cent (one in 10), 20 per cent (one in five).
- What is an acceptable chance of not achieving the target return per annum?

» ULTIMATE BLEND

There is a concept that you can use that is designed to create the ultimate risk and reward blend of investments. The efficient frontier is a curve that describes the best possible trade-off that exists between risk and return. Each point on the efficient frontier defines an efficient allocation across asset classes, for a given set of assumptions about future market behaviour. Inputs required to create this efficient frontier include the available asset classes, the funds and their benchmarks, an analysis of tracking errors and correlation of performance, and expected future returns from each asset.

With an efficient frontier, you can establish the optimal allocation across the asset classes for a given risk budget. Using a mathematical technique called mean variance optimisation, you can also determine the portfolios with

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the highest potential return for a given level of risk.

For most risk levels, the outcome will be a mixed global portfolio of traditional and alternative investments within the risk constraints set. The most efficient portfolio for each risk budget is the one that maximises the return on the investor’s portfolio without breaching the investor’s

» BALANCED BUDGET

risk budget.

Take a simple example. An investor may have a particular goal that can be achieved with 100 per cent certainty by holding a portfolio of index-linked bonds. You can establish from the answers to the questions above, that the investor has a risk (volatility) budget of 10 per cent per annum. By optimising the portfolio allocation on to the efficient frontier, you might determine that the best portfolio allocates 40 per cent to global equities and 60 per cent to global bonds. This becomes the investor’s benchmark portfolio. (See Chart 1.)

There are varying degrees of risk even within asset classes. For example, one fund may be more volatile than another so you need to manage these variations within the context of an overall portfolio.

If you are not confident that you can select those managers who have skill to generate alpha, then you should stick with indexed funds. Also, if you have active managers whose portfolio volatility changes frequently, this can make them difficult to assess within a risk budget. Instead, you should seek managers who specifically target and control active risk. By including active as well as passive managers, it is possible to extend the efficient frontier and achieve a small additional return at each level of risk.

Intermediaries have a history of helping people to construct portfolios with less emphasis on matching assets with liabilities. However, clients increasingly require a quantitative approach and it is important to give individual investors an understanding of their tolerance of risk within a quantitative framework.

In an environment of low expected returns there is a premium attached to the ability of an investment manager to maximise the available returns in order to justify the level of risk in the portfolio. Finding the best investment manager for each investor means finding the most efficient allocation across the available asset classes without breaching the individual’s risk budget.

*Ben Leadsom, head of product development,
BGI Europe*

» CORPORATE STATEMENT

Established more than 30 years ago, Barclays Global Investors Limited (BGI) is today one of the world’s largest fund managers. BGI, a subsidiary of Barclays PLC, is one of the world’s leading financial services providers and has a significant international presence, with 10 offices worldwide and a 2100-strong workforce. BGI currently manages £460bn (€705bn) in assets for over 2300 clients around the world. BGI offers a range of products for institutional, private and retail clients.

BARCLAYS GLOBAL INVESTORS

Contact:

- BGI broker line
Tel: +44 (0) 800 731 2443
- Main switchboard (UK)
Tel: +44 (0) 20 7668 8000