

Volume 30 //

# Acuity

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## Portfolio returns - expect the unexpected



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## “ How many millionaires do you know who have become wealthy by investing in savings accounts? I rest my case ”

Robert G. Allen

All investors know that risk and return are related – taking on more (sensible) risk should provide higher returns, over time. Yet there are no guarantees. Advisers will often talk about target or expected returns from portfolios needed to deliver the financial goals of the client. Where do they come from and how can they be used sensibly?

### Investing - simple but not easy

Investing is a simple process: invest your cash into a portfolio of assets – such as equities, bonds and property – and hopefully watch it grow, over time, into a bigger pot that can be used to fund future expenditure. How big that pot ends up being is a function of the amount it starts with, the rate of return that the markets deliver and any additions or withdrawals made.

But it is not easy: estimating future returns is an important – if tricky – part of the financial planning process. Advisers may provide you with an ‘expected’ rate of return for a portfolio as a guide to what it might deliver, on average, over time. These forward-looking assumptions are best based on a horizon of 20 years or more. Trying to make short-term guesstimates of market returns in the next year or two would be speculation. In a statistical sense, the ‘expected’ return is the average of possible returns weighted by their likelihood of occurring, not the only outcome that may occur.

### Establishing sensible expected portfolio returns

At its simplest, the expected return of an investor’s portfolio is the sum of the expected returns of each asset class in the portfolio weighted by their allocations<sup>1</sup>. For example, if we assume that equities have an expected return of 5% p.a. above inflation and bonds have an expected return of 2% p.a. above inflation, then a portfolio that contains 60% equities and 40% bonds will have an expected return of:

***$(60\% \times 5\%) + (40\% \times 2\%) = 3.8\%$ , above inflation, on average, over time.***

This expected return is not, in any form, a promise or guarantee that this level of return will be delivered consistently, year in, year out. The one certainty in investing is the uncertainty of short-term market returns. Even longer-term rates of return can be uncertain.

## Using after-inflation returns

The reason why using after-inflation returns – known as ‘real’ returns in the world of economics – is common, is that it allows investors to ignore the impact of inflation and to think in today’s money terms. For example, it is far easier to think about withdrawing £40,000 a year in 20 years’ time, in today’s money, than trying to think what this number would be in 20 years’ time after 3% inflation (in fact it is £72,245!). Compounding a portfolio by an expected real return provides a useful indication of how much purchasing power that portfolio might have in today’s money, at some point in the future.

## Establishing sensible asset-class returns

The maths is the easy part of establishing expected portfolio returns, at least in the simple pro-rating process above. The hard part is making long-term returns assumptions for each asset class. No crystal balls exist to see into the future. In fact, it is the uncertainty of outcome that delivers returns; higher returns come with greater outcome uncertainty.

Consider a saver placing a deposit with a bank for a year; she or he knows that the interest rate is unlikely to change much during this period, i.e. the distribution of possible returns is narrow, and the outcome can be estimated reasonably well. This greater certainty of outcome results in a low rate of return. On the other hand, an investor holding equities has virtually no ability to guess what next year’s return will be – the market could go up 30% or down 50%, i.e. the distribution of returns is wide - but over a longer time period, a higher rate of return than cash is more likely, as a consequence.

The figure below illustrates the annual returns over the past 46 years for global equities, which delivered around 4% above inflation over the period, alongside UK cash which delivered a little over 1% above inflation. It is evident that the return journey for investors was anything but a straight line return of 4% a year for equities, and although less uncertain for cash, the latter delivered real losses during the period under review.

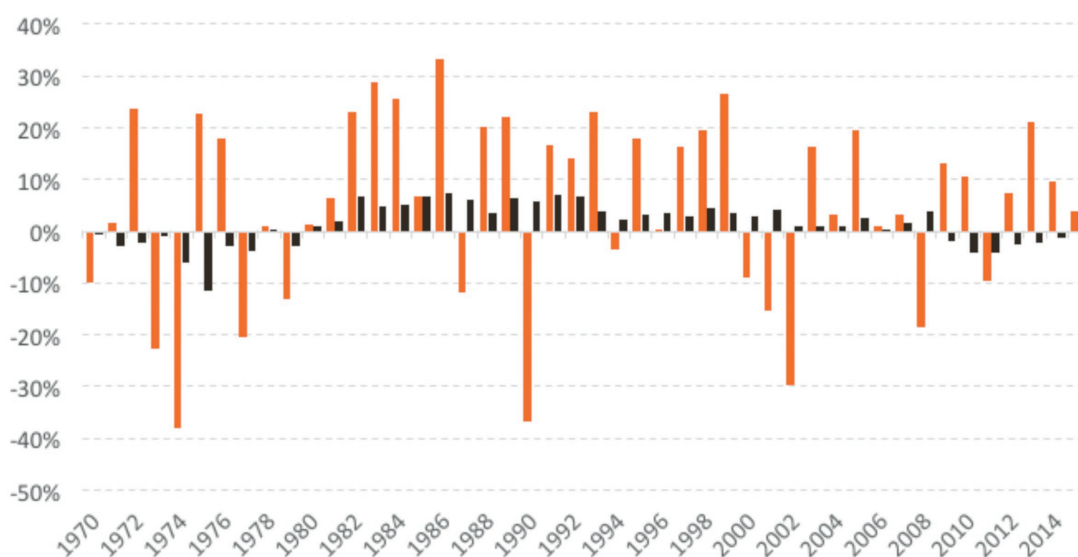


Figure 1: Annual after-inflation returns for global equities and UK cash in GBP - 1970-2015

Source: DFA Returns

The difference in risk between cash and equities is reflected in the fact that, over longer periods of time, equities have a greater likelihood of delivering a higher return than cash.

	Holding period (years)					
	2yrs	3yrs	4yrs	5yrs	10yrs	18yrs
Equities beat cash	68%	70%	72%	75%	91%	99%

Table 1: UK equities generally beat UK cash over time: 1900-2014

Source: Barclays Equity Gilt Study 2015

## The assumption-making process

It is inevitable that any assumptions made will be approximations. That does not mean that they cannot be reasonable and useful when based on sound analysis. The approach taken is summarised in the figure below.

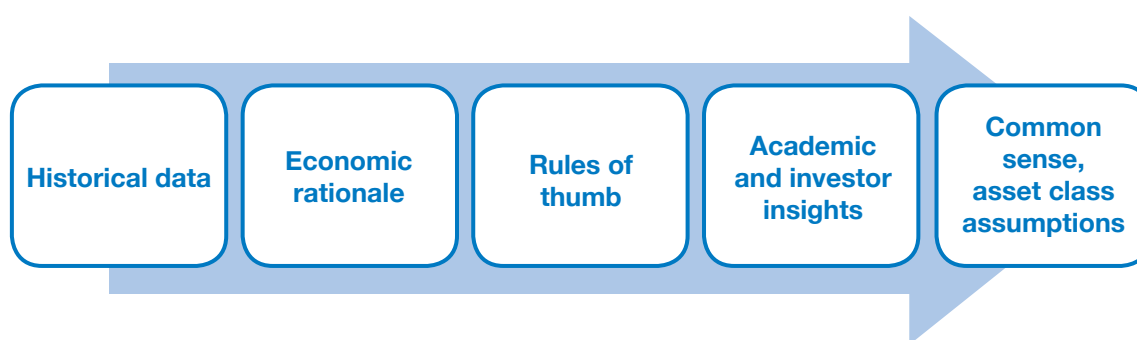


Figure 2: Making reasonable asset class assumptions

Source: Albion Strategic Consulting

## Using the insight from historical data

Fortunately, investors have a relatively long period of data for developed market equities, bonds and cash from 1900. This helps to provide insight into both the long-term returns and interim uncertainty of being an owner of companies compared to being a lender. As the table below illustrates, the long-run real returns for bonds and equities are around 2% and 5% respectively; yet over the past 15 years, equities have done poorly and bonds exceptionally well, compared to their long-run averages. It is evident that extrapolating short-term data is a naïve approach at best and is commonly referred to as ‘investing using the rear view mirror’.

	1900 - 2014	1965 - 2014	2000 - 2014
Cash	0.9%	0.9%	-0.4%
Bonds (1)	1.9%	4.3%	5.6%
Equities (2)	5.2%	5.2%	1.8%

Table 2: Global markets – Annualised Real Returns (US\$)

Notes: (1) Bond allocations based on GDP weights (2) 23 countries using market capitalisation weightings.

Source: Credit Suisse Global Investment Returns Yearbook 2015. Copyright © All rights reserved.

## Understanding the underlying economic rationale for returns

Over the long term, owners of equities receive cash dividends and the share price change resulting from real growth in corporate earnings. In the shorter-term, speculative returns can obviously have a significant effect on the total return that an investor enjoys. Equity ownership carries higher risks than owning bonds, including outcome uncertainty and ranking below lenders (bond holders) in corporate distress.

For bond holders, returns come from the receipt of interest paid on amounts lent (to companies and governments), and the return of capital at maturity of the bond. The interest paid will reflect the expectation for future levels of inflation, the likelihood of default, the amount of time that the money is lent for and the liquidity of the bond. Investors expect a real rate of return from employing their capital, which is affected by the competition for their capital.

## Using rules of thumb estimates for future equity returns

A commonly used rule of thumb<sup>2</sup> works on the basis that the return from equities is made up of the expected returns of enterprise (dividends received and the long-term real growth in earnings) and speculation<sup>3</sup> (the change in the price that investors are willing to pay for each £1 of earnings, reflected in the price-to-earning or P/E ratio). In the very long-term, market returns must equal the returns of enterprise.

$$\text{Real return} = [\text{Current dividend yield}] + [\text{Real growth in earnings}] +/- [\text{Change in P/E}]$$

Given a dividend yield of 2-3% and long-term real growth in earnings of around 2-3% in developed economies, a real return in the region of 5% is not unreasonable for developed market equity. Financial planning decisions made on assumptions materially higher than this should be viewed with a high degree of caution. Value and smaller companies, as well as emerging markets, have higher expected returns - perhaps 1% to 2% higher - than broad developed market allocations, raising portfolio expected returns.

## Using rules of thumb estimates for future bond returns

A simple rule of thumb is that government bond yields tend to be about 0.5% to 0.75% below nominal GDP. One can extrapolate from this that real yields should be around the same level below real GDP growth. Developed economies are expected to grow between 2% to 3% in real terms over the longer-term. On this basis a 2% real yield assumption is not unreasonable over the longer term.

## Academic and investor insights

Insight can also be gained from what practitioners and other professionals consider to be reasonable long-run estimates for asset class returns.

Asset class	DMS <sup>4</sup>	Yale <sup>5</sup>	JPM AM <sup>6</sup>	McKinsey <sup>7</sup>
Equity	3% to 3.5%	6%	4.5%	5% to 7%
Bonds	N/A	2%	0.5%	N/A

Table 3: Estimates of real returns from developed market equities and bonds

Source: See endnotes

Again, some consistency around 5% for developed market equities and 2% for bonds exist, although views, as one would expect, do vary.

## Using a good dose of common sense

Finally, it is important to remember that no-one has a crystal ball and expected returns come with a high degree of uncertainty in the short-term and, maybe, even the longer term. Astute advisers and investors should run a number of return scenarios to establish what this uncertainty would mean to them. Halving expected portfolio returns is not a bad starting point for a basic stress test.

## A word of caution

Sadly, it is not unusual to hear stories of less scrupulous advisers and product providers tempting investors with promises of spectacular returns on their portfolio. A useful rule in investing is that if it sounds too good to be true, it probably is. By and large, a return of 1% to 2% percent above inflation for bonds and 5% to 6% above inflation for equities is a sensible litmus test. Returns higher than these levels imply a material increase in the risks being taken on, which need to be fully understood.

Ironically, employing an adviser who is conservative about the expected returns that a portfolio will deliver, means you are likely to be better served over time. Their conservatism implies a greater understanding and honesty about capital market returns and the desire to do what is right for their clients.

**Finally, just as your adviser doesn't deserve praise if your portfolio delivers better than expected returns, remember not to beat him or her up if it hasn't delivered its expected returns since you last met up. Neither results are due to the skill, or lack of it, of a financial adviser!**

## End notes

1. It should be noted that simple pro-rating of returns by allocations tends to understate returns over long periods of time for portfolios that are regularly rebalanced. This is because the process of rebalancing results in assets that have done well being sold and re-invested in assets that have done less well, potentially resulting in a small rebalancing bonus.
2. Bogle, John. C., (1999) Common sense on mutual funds: New imperatives for the intelligent investor. NY: Wiley, 37
3. Keynes, J.M, (1936). The General Theory of Employment, Interest, and Money, Ch 12.
4. Credit Suisse Global Investment Returns Yearbook 2013.
5. The Yale Endowment Update 2014 (2015)
6. JP Morgan Asset Management Long-term, Capital Market Return Assumptions 2016 (29 October 2015)
7. Bing Cao, Bin Jiang, and Tim Koller, (2013), Whither the US equity markets? McKinsey & Co.

## Other notes and risk warnings

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