

Risk Adjusted Returns: “We obsess about risk, so you don’t have to”

Research note

2012

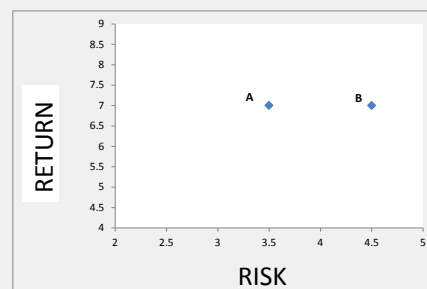
If the crisis in 2008 taught investors to be concerned about risk management, the crisis in 2011 taught them to be obsessive about it. This is particularly so for investors in the bond market. Bond market returns are asymmetric; an investor either gets paid interest and then their money back at the end of the loan, or they don't and the loan defaults. Many investors in Greek sovereign bonds are facing this very prospect. It is important to note, however, that there is no upside potential to compensate for those bonds that have defaulted. So focussing on risk management should necessarily be a key focus, if not an obsession, for bond managers.

Colonial First State Global Asset Management ('CFSGAM') believes that fixed interest is as much about risk management as it is about return management. Our starting point for any investment decision is risk – How risky is this investment on a standalone basis? What will it do to the overall risk of the portfolio? Is this consistent with our clients' risk objectives? Our systems, people and processes are all focussed on identifying, measuring and managing risk. We believe in adding an investment to a portfolio only when markets are offering an appropriate reward for the risk we take. Conversely, when the market is no longer offering an appropriate reward for the investment, we will sell that risk. This obsession with risk helps us to deliver for our clients superior risk-adjusted returns.

Traditional measures of investment manager performance, such as excess return, tracking error and information ratio, fail to appropriately distinguish between higher risk and lower risk portfolios.

For example, looking at the first chart to the right, where risk is on the horizontal axis and return is on the vertical axis, it is clear that any rational investor would choose portfolio A as being superior to portfolio B. Portfolio A offers the same amount of return but with less risk.

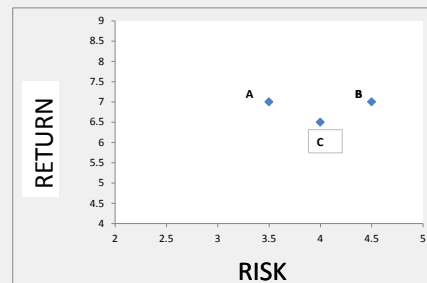
Chart 1



The picture starts to get murky, however, as soon as we introduce a benchmark portfolio into the mix.

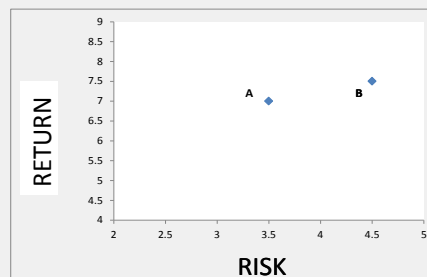
In the second chart, the 'Index' is presented by portfolio C. Here it is possible that portfolios A & B look similar in all the traditional measures of risk and return: same return, same tracking error, same return above the benchmark. Portfolio A, however, is still a clearly preferred outcome but how can we quantify how much better Portfolio A is over Portfolio B? Tracking error and information ratios do not differentiate between good risk (Portfolio A) and bad risk (Portfolio B).

Chart 2



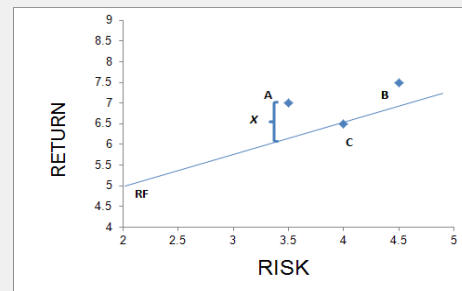
Likewise in the third chart it is even more difficult to identify which portfolio offers the best risk adjusted return. Portfolio B has a higher return but at a higher risk. Has Portfolio B added enough return to justify the additional risk added? Neither tracking error nor information ratio provides an answer to this question.

Chart 3



The problem is resolved by a measure known as Jensen’s Alpha¹, or ‘Ex Post’ Alpha. This construct measures the distance the portfolio is above (or below) the line that runs from the risk free portfolio, cash, through the benchmark². This measure is commonly used in empirical finance and is analogous to the capital markets line in the Capital Asset Pricing Model (CAPM).

Chart 4



Represented by the symbol X in chart 4, Jensen’s Alpha measures the excess return of a portfolio on a risk-adjusted basis, giving preference to portfolios that deliver their returns with lower than market risk than those which only add return by adding risk³.

The table below highlights our risk-adjusted value-add, or Jensen’s Alpha across our strategy range.

The data provided shows our returns to the end of November 2011. The green shaded returns are where we have delivered over 30 basis points per annum of Jensen’s Alpha with the blue shading showing those results that are positive, but less than 30 basis points. The pink zones are where we have failed to deliver superior risk-adjusted returns. The table shows CFSGAM is very successful, broadly across all strategies and across all time periods, at constructing efficient risk-adjusted portfolios delivering, in most cases, very strong risk-adjusted alpha.

Strategy	Fund name	1 yr %	2 yrs %	3 yrs %	5 yrs %
Australian Bonds	Wholesale Australian Bond Fund	0.89	0.59	0.71	0.02
Australian Sovereign Bonds	Wholesale Sovereign Australian Bond Fund	1.25	0.62	0.60	0.23
Australian Inflation	Wholesale Aust. Inflation-Linked Bond Fund	0.98	0.44	0.13	-0.28
Australian Credit	Wholesale Aust. Corporate Debt Fund	1.44	1.79	0.99	0.03
Australian Sovereign Inflation	Wholesale Government Inflation-Linked Bond Fund	1.53			
Diversified Fixed Income	Wholesale Diversified Fixed Interest Fund	3.08	3.09	5.38	1.16
Global Sovereign Bonds	Wholesale Global Bond Fund	0.98	0.57	0.18	0.26
Global Credit vs Australian Benchmark	Wholesale Global Credit Fund	4.22	4.04	4.81	0.36
Global Credit vs Global Benchmark	Wholesale Global Corporate Bond Fund	2.22			
High Yield	Wholesale International High Yield Fund	2.97	3.23	3.69	2.08
Asian Bonds	Wholesale Asian Bond Fund	1.28	2.15	3.19	

The Global Fixed Interest and Credit team at CFSGAM obsess about risk. We strive to deliver quality risk-adjusted returns across all of our portfolios. This focus is important for a bond manager at the best of times. In the worst of times, it is critical.

¹ Jensen, M.C., “The Performance of Mutual Funds in the Period 1945-1964,” Journal of Finance 23, 1968, pp. 389-416

² Jensen’s alpha = Portfolio Return – [Risk Free Rate + Portfolio Beta * (Market Return – Risk Free Rate)]

³ Note that the original CAPM model is based on expected returns, not realised returns and does not calculate the appropriate outcome where actual returns from the risk asset or market portfolio are less than the risk free rate. Thus for shorter term results care needs to be taken when interpreting the results. The expected returns of the market should be above risk-free rate in the long run, the investor would invest in the risk-free asset instead.

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