Active Alpha Investing: Redefining the Role of Fixed Income in a Portfolio

Goldman Sachs Asset Management

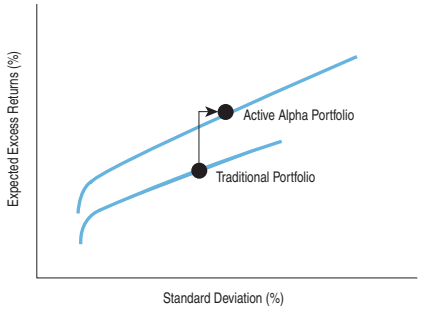
We believe one way to achieve potentially higher returns, without impacting overall portfolio risk, is to significantly increase active fixed income risk – an approach we call Active Alpha Fixed Income Investing.

By thoughtfully combining three key elements, an investor can successfully implement this approach. First, there must be a broad opportunity set of strategies and risks to employ in a portfolio. Second, managers must possess the skill to exploit these opportunities on a consistent basis. Lastly, different sources of active risk must be combined in a way that produces optimal risk diversification benefits. Active Alpha Fixed Income Investing employs a risk budgeting framework that harnesses these three elements in order to target the highest level of absolute returns for a given level of risk.

Improving portfolio performance through increased active bond risk

Active Alpha Fixed Income Investing can push up the efficient frontier for a bond portfolio to higher expected returns for any level of risk. Furthermore, taking more active risk actually extends the efficient frontier of fixed income investments further to the right (see figure 1). The Traditional Portfolio line ends earlier than the Active Alpha Portfolio line since the amount of risk that can be taken is typically limited. By taking active risks across a broader range of strategies, the amount of fixed income risk can increase to improve portfolio performance.

Figure 1: Improving the Efficient Frontier of Fixed Income Investments



Source: GSAM. For illustrative purposes only.

(i) Clear capacity to increase active fixed income risk

A typical institutional portfolio might have 65% equities and 35% bonds in terms of its asset allocation. However, in the Active Alpha Fixed Income Investing framework, it is more important to focus on risk allocation. In figure 2, contribution to total portfolio risk is dominated by equity market exposures (89.8%), with bond market exposure a modest 2.2%. Assuming the bond allocation employs 100 basis points of active risk/tracking error, active bond portfolio management contribution to total portfolio risk is a mere 0.1% and clearly has the capacity to increase.

(ii) Increasing active bond risk can improve the risk/reward ratio

If the active risk from bonds in the sample portfolio (65% equity/35% bonds) was tripled, from 100 to 300 basis points of tracking error, the rewards could be substantial. Since fixed income is 35% of the portfolio, tripling the active managers' tracking error adds 70 basis points of standalone risk to the portfolio (see figure 3). The standalone risk shows the individual risk exposures (two active and two passive) simply summed together, ignoring diversification benefits.

At first glance, adding 200 basis points of tracking error might seem aggressive if viewed in isolation. However, viewing risk at the total portfolio level yields a compelling insight: because active fixed income risk is the smallest risk in the portfolio and is uncorrelated with any of the other larger risks, the additional 200 basis points of active bond risk leads to only a 4 basis points increase in total portfolio risk. This marginal increase results from diversification benefits.

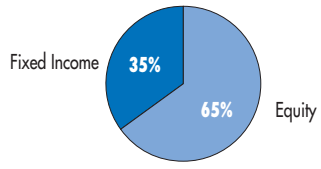
Meanwhile, the portfolio benefits from an increase in excess returns. In this analysis, which assumes a modest information ratio of 0.5, 35 basis points additional expected return is achieved. With only 4 basis points of additional risk, this is a compelling 8-to-1 risk/reward ratio.

Maximizing returns at any target risk

The success of Active Alpha Fixed Income Investing is ultimately determined by thoughtfully combining three basic elements: namely a broad opportunity set

Figure 2: Typical Pension Fund Asset Allocation

Asset Allocation

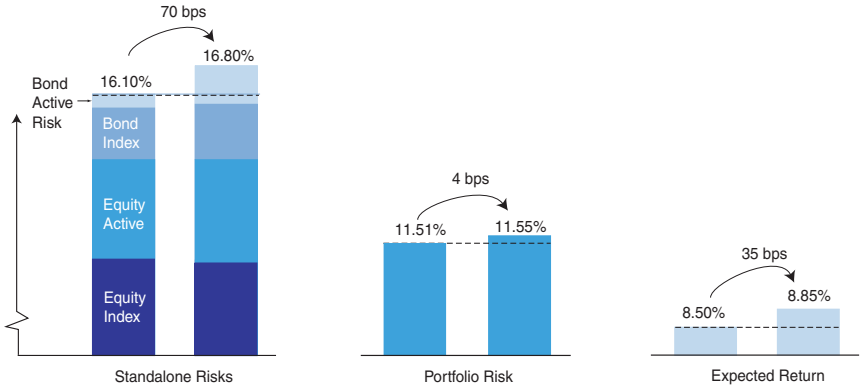


Resulting Risk Allocation

Risk Exposure	Contribution to Total Portfolio Risk
Passive Equity Beta	89.8%
Active Equity Alpha	7.9%
Passive Fixed Income Beta	2.2%
Active Fixed Income Alpha	0.1%

Source: GSAM. Calculations assuming equity index volatility of 16.8% annualised, active equity tracking error of 5% annualised, fixed income index volatility of 4.5% annualised, and active fixed income tracking error of 1% annualised. Data is based on strategic long-term assumptions made by GSAM's Global Investment Strategy's group. Please see disclosures for additional information.

Figure 3: Increasing Active Bond Risk Can Significantly Boost Returns With Only a Marginal Impact on Total Portfolio Risk



Expected returns and risk, as measured by the standard deviation of returns, are statistical estimates of hypothetical average returns of economic asset classes, derived from statistical models. Actual returns and risks are likely to vary from expected returns and risks. Expected return and risk models apply statistical methods and a series of fixed assumptions to derive estimates of hypothetical average asset class performance. Reasonable people may disagree about the appropriate statistical model and fixed assumptions. These models have limitations, as the assumptions may not be consensus views, or the model may not be updated to reflect current economic or market conditions. Accordingly, these models should not be relied upon to make predictions of actual future account performance. Goldman Sachs has no obligation to provide recipients hereof with updates or changes to such data. There is no guarantee that the above results can or will be achieved. Please see additional disclosures.

Figure 4: Broad Mandate Uses Active Risk Most Efficiently

		Narrow		Intermediate		Broad	
Active Risk Mix							
Active Strategy	Information Ratio	Constraint (bps)	Optimized Target (bps)	Constraint (bps)	Optimized Target (bps)	Constraint (bps)	Optimized Target (bps)
Duration/Yield Curve	0.25	300	280	300	230	300	110
Country Exposure	0.25	30	60	60	60	60	60
Currency Risk	0.40					150	150
Sector Rotation	0.30			80	80	100	100
Security Selection:							
Govt/Agency	0.30	20	20	20	20	20	20
MBS/ABS	0.60			50	50	50	50
Corporate Credit	0.45			70	70	70	70
High Yield	0.45					40	40
EMD	0.40					30	30
Sum of Standalone Active Risks			360		510		630
Less Diversification Benefit			(60)		(210)		(330)
Total Active Fixed Income Tracking Error (annualized)			**300**		**300**		**300**
Target Excess Return (annualized)			**92**		**156**		**220**
Active Risk Information Ratio			**0.31**		**0.52**		**0.73**

For illustrative purposes only.

combined with manager skill and inherent diversification benefits.

Generally speaking, the wider the opportunity set, the better. In the fixed income markets, there are thousands of securities for investors to evaluate, trade and incorporate into a portfolio. Likewise, there are a multitude of diverse active strategies that can be employed, such as interest rate, country, currency and sector. We can divide the opportunity set into top-down macro strategies and bottom-up relative value strategies.

Peer group analysis of active fixed income managers across a number of different strategies concludes that managers are skilful. In fact, the median manager has a fairly high information ratio, often above the conservative 0.5 assumption employed in the prior analysis.

The combination of many unrelated active strategies potentially reaps an enormous diversification benefit. When a large number of active strategies are employed, the benefit from risk diversification permits a higher level of active risk to be taken in each individual strategy while still keeping the total active risk constant.

Putting it all together in a risk budget

A broad investment opportunity set, investor skill and diversification benefits are necessary ingredients, but do not alone guarantee successful Active Alpha Fixed Income Investing. A risk budgeting framework that effectively combines these elements is also required.

An example of three risk budgets – Narrow, Intermediate and Broad opportunity sets – is shown in figure 4. The column labelled "Optimized Target" shows the amount of risk that should be assigned to that strategy to best balance investment skill, diversification benefit and potential return. The column marked "Constraint" indicates a maximum tracking error, which accounts for externally imposed investment constraints.

Target excess returns more than double as you move from the Narrow to Broad Portfolio. This is due to gaining access to higher information ratio strategies combined with access to greater diversification benefits with the information ratio improving from a relatively anaemic 0.31 to a much more inspiring 0.73. The Broad Portfolio is a vivid example of the potential of Active Alpha Fixed Income.

Conclusion

By offering return potential not traditionally associated with fixed income mandates, Active Alpha Fixed Income Investing can redefine the role of bonds in a portfolio. However, its power lies in its flexibility. Regardless of the amount of active risk an investor seeks, this framework serves to identify the optimal mix of opportunities, skills and diversification benefits to maximize targeted excess returns.

To discuss your fixed income investment needs please contact Sally Marshall, Head of UK Local Authority Business Development at Goldman Sachs Asset Management on: 020 7774 8487 or sally.marshall@gs.com. Visit our activealpha.gs.com website for further information.