

MANAGEMENT BY ACTIVE RISK BUDGETING: HOW TO COPE WITH A LOW-RATE ENVIRONMENT WITHOUT BETRAYING CONVICTIONS



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“Currently, more than five trillion dollars in government debts are traded at negative rates. Although this situation may last several decades, as in Japan, negative rates have a significant impact on the profitability of multi-asset portfolios. Low rates also reduce the potential for diversification of the bond asset class in portfolios, since correlation between high-risk assets and bonds is on the rise.”



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THE DEATH KNEEL FOR TRADITIONAL BALANCED MANAGEMENT

Balanced management consists of diversifying capital by asset class so as to reach a profitability target in the long term. In other words, it involves applying the rule of “don’t put all your eggs in one basket” to the letter. In general, it results in between 40% and 60% of the capital being allocated to bonds, with the remainder divided among riskier asset classes such as equities, credit, real estate and alternative vehicles. This type of approach is particularly poorly suited to dealing with the current challenges. First of all, their profitability is set to fall, since rates are very low. Secondly, their risk and drawdown are set to rise, as a result of the declining ability to diversify bonds. The financial crisis of 2008 already revealed the vulnerability of this type of portfolio to a sudden “re-correlation” between asset classes.

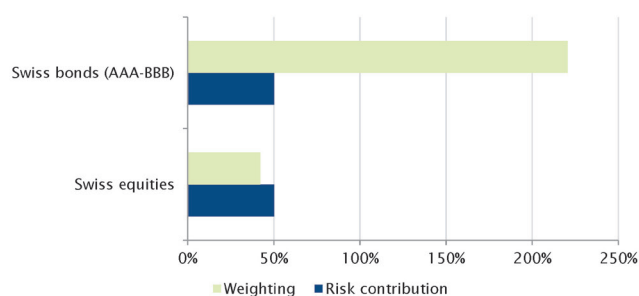
PASSIVE RISK BUDGETING

First-generation risk-based methods became very popular after the financial crisis of 2008 and were a direct response to the problems faced by traditional balanced management during that period. Their objective is to avoid an excessive concentration of sources of risk and thereby actively manage portfolio volatility. These methods are based on an extremely strong premise: In the long term, all asset classes have an identical risk/return ratio. Consequently, they totally ignore future profitability (i.e., valuation level) of assets.

There are multiple risk-based allocation methods. Risk parity is the best known among them and divides risk by asset class in an equally balanced way. The resulting capital allocation overweights assets with little risk and with weak correlation with other assets in the portfolio.

Investments managed with this type of approach have obtained excellent results over the last decade in terms of both absolute cost and risk/return ratio. The main factors that explain this good performance are sound risk diversification of the managed portfolios but also their very strong overweighting in government bonds. Graph I illustrates the optimal composition of a risk parity portfolio allocating the same proportion of risk to Swiss bonds and Swiss equities with a target annualised volatility of 10%. The calculations are dated 31 December 2015 using a three-year history for the SBI AAA-BBB and SPI indices.

According to Graph I, it appears that such a portfolio is probably not optimal in the current environment of extremely low interest rates. In addition, the target volatility can only be achieved with very high leverage.



Graph I: Composition of a risk parity portfolio of Swiss equities and bonds

ACTIVE RISK BUDGETING

Second-generation risk-based allocation methods question the premise according to which all asset classes offer identical risk-adjusted profitability over the long term. In fact, the long-term profitability of different asset classes is affected by two macroeconomic components whose cycles generally extend over several years: growth and inflation. For example, in a deflationary environment (low growth/degrowth and negative inflation), government bonds outperform equities. However, in a pro-cyclical environment (strong growth and high inflation), equities and commodities generally produce better returns than government bonds.

Within active risk budgeting, the portion of risk allocated to each asset class is no longer uniquely determined by the risk, but equally depends on the macroeconomic environment and, therefore, views of the future yield of each class. Strong overweightings of overvalued assets with a low future yield are thus avoided. On the other hand, this approach remains very protective in terms of risk management and strongly limits the negative impact that may be caused by emotion or human error when portfolio construction is based solely on macroeconomic views.

The adopted approach is represented in the (simplified) example below. In this case, the view is expressed in the form of an expected return represented in the second column of the table. The third column of the table represents the risk budget resulting from the expected return. The last column represents the difference between the capital allocated by the active risk budgeting approach and the passive approach where all asset classes have an identical budget (risk parity).

Risk budgets attributed to asset classes expected to offer a significant (low) yield are higher (lower) than those for the risk parity approach. In the example, this translates into a sharp decrease in the weight of Swiss bonds in favour of mainly foreign equities and foreign real estate. However, the weight of Swiss bonds is not zero, and a part of the allocation is carried over to foreign bonds, even if their expected yield is only slightly higher than that of Swiss bonds. This example perfectly illustrates the contribution of risk to the allocation process, which enables a good degree of risk diversification to be maintained, as well as compliance with the portfolio volatility budget, while integrating investment views.

Asset class	Expected alpha	Risk budget		Assets weighting less risk-parity weighting
		Assets	Risk parity	
Swiss equities	5%	19%	17%	2%
Global equities	10%	37%	17%	5%
Swiss bonds	1%	2%	17%	-13%
Foreign bonds	2%	3%	17%	1%
Swiss real estate	3%	11%	17%	2%
Foreign real estate	8%	28%	17%	4%

Table 1 : Allocation by active risk budgeting versus risk parity

SYZ Asset Management has used an approach based on an active risk allocation to manage funds and mandates since 2003. Risk budgets are determined on the basis of scores (preferences) assigned to each asset class by the investment committee. This makes it possible to obtain portfolios with the most diversified risk possible while being exposed to sources of risk with the biggest payoffs.

Even if the volatility of risk-based products is actively managed, portfolios can suffer losses that are sometimes significant and difficult for investors to digest. These losses can arise when, as in the spring of 2013 during the Fed Tapering, all asset classes decline simultaneously. This is why the investment solution based on active risk allocation is complemented by dynamic management of the portfolio drawdown.

CONCLUSION

In a highly volatile market environment, in which the number of instruments offering recurring returns is in sharp decline and sources of diversification are running dry, the weighting of risk management in the investment process is probably set to increase further. An investment process that integrates risk is not incompatible with high-conviction management. On the contrary, active risk-based approaches enable portfolios to be exposed to the views of the least risk-tolerant manager and thus to maximise portfolios' risk/return ratio.

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