

Economico Flash ⚡ #19

Investment strategy: "Garbage in, garbage out" portfolio optimization

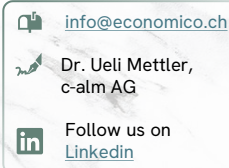
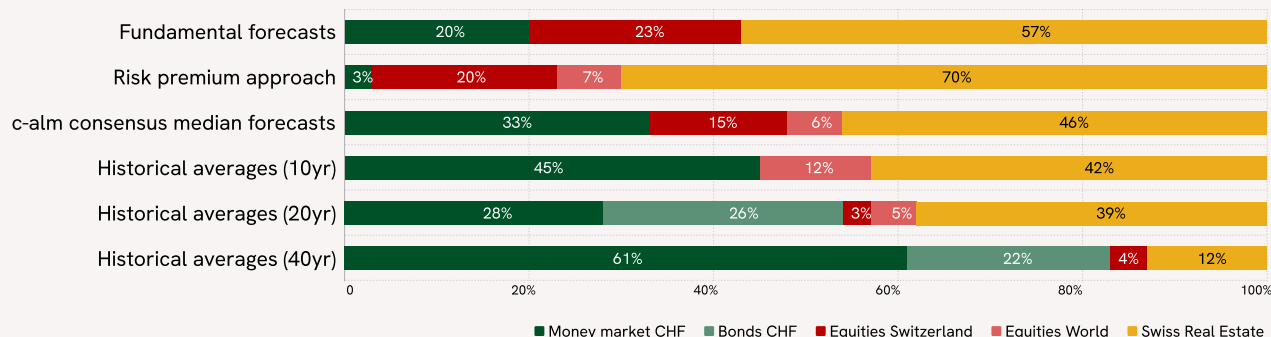


Chart of the week: "Optimized portfolios" with a target return of 3.0% and varying the return estimation method



Source: Own calculations based on [Augur yield forecasts](#) as at 31.12.2024, risk forecasts determined from 20yr history

In the previous Flashes, we laid the foundations for putting together our desired portfolio with individual risk profiling ([Flash 14](#) and [15](#)), a discussion of the asset classes and benchmarks to be considered ([Flash 18](#)) and the allocation of risk/return forecasts ([Flash 17](#)).

The omnipresent and popular approach to portfolio construction in the industry is portfolio optimization. This goes back to a contribution by Harry M. Markowitz in 1952, who claimed to be able to transform so-called inefficient portfolios into efficient portfolios by adjusting the portfolio composition using a non-linear quadratic equation. A portfolio is efficient if the optimizer can no longer find a portfolio composition with a higher (expected) return for the same (expected) risk.

The optimization equation must be fed with **numerous assumptions**, namely

- Which **asset classes** are available to the optimizer? In [Flash 18](#), we explained that the degree of freedom in the choice of asset classes is enormous.
- What **return and risk expectations** are assigned to the selected asset classes? In our tour d'horizon from [Flash 17](#) through the methods available for this purpose, we illustrate the big scope for design.
- Finally, the weightings of the individual asset classes can be assigned **minimum or maximum restrictions**. These limits, which then largely anticipate the optimization result, often fall from the sky.

The "optimal portfolio" spit out by the optimizer is of course only as good as the (numerous) inputs with which the optimizer was fed: "Garbage in, garbage out." In the chart of the week, we show how even a variation in the method chosen to estimate the expected returns has a significant impact on the composition of the optimal portfolio.

Why then does the now 70-year-old optimization equation persist so stubbornly despite these obvious weaknesses and feel like the basis of every investment proposal produced by the industry? Well, the advisor can refer to the optimizer - the god from the machine (deus ex machina) - in his portfolio proposal, which frees him from the obligation of having to justify the proposal in a professional and well-founded manner. Attractive and simple. It is questionable whether this is also in the customer's interest.

Economico does not use portfolio optimization when compiling [standard portfolios](#). We approach the important allocation issues in portfolio composition with sound economic expertise and common sense. We will go into more detail in the coming Flashes.

Takeaways

- Portfolio optimization: "Garbage in, garbage out"
- Build your portfolio with common sense