Case study FX Consulting.
Deriving an appropriate FX benchmark.

The client's challenge.

An institutional pension provider with investment assets in the low double-digit billions invests – like many comparable pension schemes, pension funds and insurers – across a broad range of asset classes: from direct fixed-income holdings and credit strategies to equities, real estate, private equity and other alternative investments. A significant proportion of these positions is held not in euros but in a wide range of foreign currencies – from large, liquid currencies such as the US dollar and British pound to smaller, less liquid positions. This FX exposure arises for very different reasons. In some segments, it represents a deliberately selected source of diversification, while in others it is merely a by-product of the underlying investment decision and unrelated to the actual economic purpose of the respective asset class.

This was the client's core challenge: there was no robust FX benchmark tailored to its specific portfolio and liability structure against which the actual hedging approach could be assessed or aligned. In practice, this meant that decisions regarding the hedge ratio were often based on intuition, historical practice or broad assumptions – such as applying a fixed percentage hedge ratio 'based on experience' – rather than on a transparent quantitative framework.

In particular, it was unclear how efficient the existing, historically evolved hedging structure actually was compared with alternative approaches – in other words, whether the risk and return of the existing approach were appropriately balanced or whether unnecessary risk was being assumed without a corresponding expected return. This not only made ongoing management more difficult but also complicated communication with the management board, investment committee and supervisory bodies. Without a methodologically derived benchmark, there was little objective basis for explaining why a particular hedging level was appropriate – or for determining when a deviation from that level should be regarded as an active, deliberate decision rather than as a coincidental outcome.

7orca's solution.

7orca conducted a structured FX benchmark workshop with the client, using a series of consecutive steps to derive an appropriate FX benchmark. Together with the client, 7orca discussed the objectives of currency management within the context of the overall investment strategy – including the role that foreign currency risks should play in relation to the risk budget, the regulatory requirements to be considered and the level of complexity that could be accommodated within the existing governance framework.

On this basis, different benchmark approaches across a spectrum – ranging from a fully unhedged benchmark and a naive 50/50 benchmark to a fully hedged benchmark – were assessed and compared in terms of their impact on risk, return and diversification.

The analysis focused on a benchmark methodology based on strategic asset allocation (SAA). Rather than determining the hedge ratio in isolation or on the basis of a general assumption, this approach derives it directly from the client's strategic asset allocation and therefore considers, on an economically grounded basis, the actual contribution of the individual foreign currency positions to the risk–return profile of the overall portfolio.

For this purpose, 7orca used Monte Carlo simulation to calculate several thousand potential portfolio configurations across the foreign currencies for which hedge ratios could be freely determined. This provided a risk–return profile for the overall portfolio depending on the respective hedging level for each currency.

The minimum variance portfolio served as a central and particularly intuitive reference point within the simulation. It represents the hedging level for each currency that – based purely on quantitative analysis and independently of subjective market expectations – minimises the overall risk of the portfolio.

Another significant and distinct component of the analysis was the efficiency assessment of the existing hedging structure. The client's current structure was positioned within the same risk–return framework as the simulated benchmark candidates. This made it possible to assess objectively whether the existing hedging approach was already close to the efficiency frontier – and therefore offered an appropriate relationship between risk assumed and expected return – or whether it fell short of the quantitatively achievable optimum, thereby assuming unnecessary risk without a corresponding expected return.

Comparing the current structure with the minimum variance portfolio and the return-optimising Sharpe optimum demonstrated the range within which an economically appropriate hedge ratio for each currency could be expected to lie and quantified the optimisation potential embedded in the client's existing approach.

Client benefit.

At the end of the workshop, the client has a transparently and quantitatively derived FX benchmark tailored precisely to its individual portfolio structure, risk-bearing capacity and governance requirements – rather than relying on a general assumption or a historically evolved convention.

This benefit operates on two levels

1. The derived benchmark can be implemented directly and thereby become the client's actual hedging approach without requiring additional design steps.
2. Irrespective of whether the client implements the hedge passively itself or outsources it to a third party for active management, the benchmark can serve as a reference against which the performance of active FX managers or asset managers can be assessed objectively and fairly.

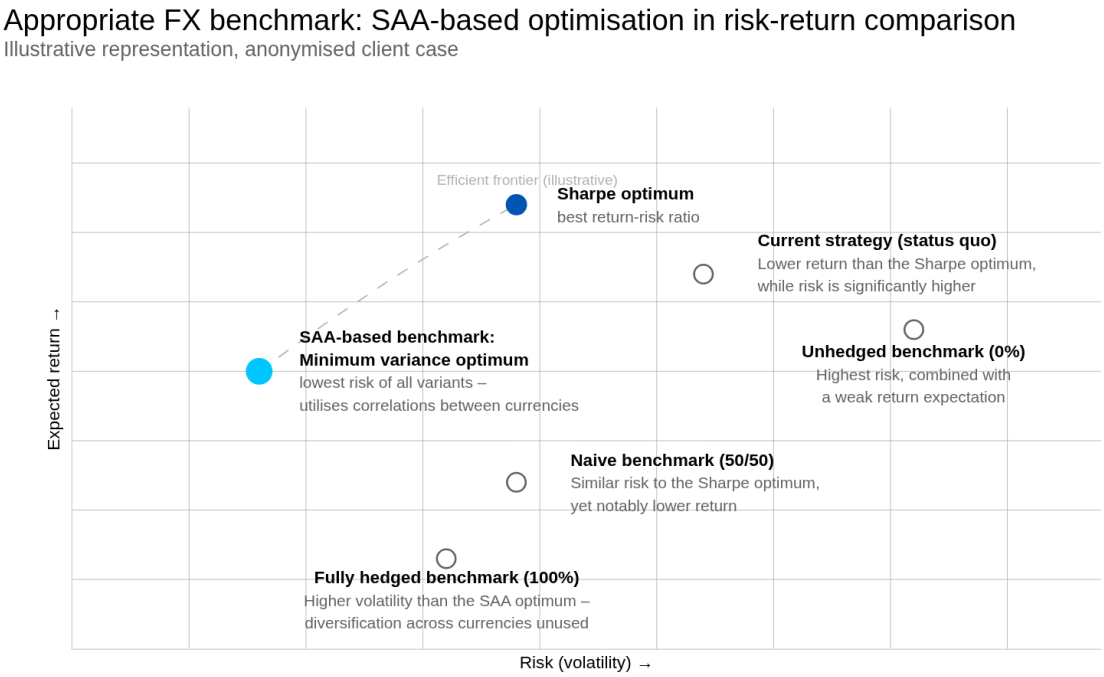
The additional efficiency assessment of the status quo hedging structure also provided the client with a clear, evidence-based assessment of its existing approach. The client can now determine specifically whether and to what extent the existing hedge was already efficient or whether unused optimisation potential remained.

This provides a robust basis for transparency and accountability vis-à-vis the management board, investment committee and supervisory bodies. Decisions regarding the hedging level can therefore be communicated and documented not merely on the basis of intuition but with a clear methodological rationale.

The benchmark framework has also been designed to remain viable over the long term. It can be updated with reasonable effort in response to changing market conditions, adjustments to the asset allocation or changes in the risk budget.

The FX benchmark workshop therefore provides not only a point-in-time analysis but also a repeatable and methodologically sound basis for the client's ongoing FX governance – an approach that can, in principle, be applied to institutional investors with complex FX exposure arising from multi asset portfolios, irrespective of their individual starting position.

Figure 1 for the case study



Source: 7orca – own representation

Disclaimer.
This case study provides an illustrative description of a methodological approach to deriving an FX benchmark. Its specific design and the resulting outcomes depend on the respective portfolio characteristics and framework conditions as well as on the underlying data, assumptions and model parameters. The presentation has been anonymised. (As at 12 August 2026)

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