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Application help

How to determine the expected net return according to FRP 4

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Introduction

• According to the new FRP 4 guideline, the expected net return of an investment strategy has to be taken into account explicitly when determining the actuarial interest rate.

• The estimate of the expected return has thus become more consequential.

• In the following presentation we will show you a possible estimation approach.
Overview of the new FRP 4

- The Swiss Chamber of Pension Actuaries issued a new guideline for the determination of the technical interest rate (FRP 4) at the general meeting on 25 April 2019.
- On 20 June 2019, the Occupational Pension Supervisory Commission has declared FRP 4 the minimum standard for all financial statements as of 31 December 2019.

- According to the new FRP 4, the technical interest rate should be lower than the expected net return of the investment strategy, including an appropriate margin.
- When determining the technical interest, the pension fund expert should also consider the «structure and characteristics» of the pension fund.
- As a further component, FRP 4 defines an upper limit for the technical interest rate.
Determination of the expected net return
Two approaches to determining the expected net return (1)

We determine the expected net return using two different approaches:

- **Expected net return (PPCmetrics)**
- **Expected net return (normalised risk premium at 2.5%)**

**Expected net return (PPCmetrics)**

- This estimation is based on the current interest rate of a 10-year Swiss Government bond (current risk-free interest rate).
- To this risk-free interest rate, a **risk premium** is added which is derived separately for each **asset class as best estimate according to our economic fundamental model**. If requested, we will be pleased to provide you with our documentation “PPCmetrics return/risk assumptions 2019”.
- In order to determine the net return, we estimate the **costs of a passive realisation** of the investment strategy. This is consistent with the definition of FRP 4, which explicitly refers to the net return of the investment strategy. The scope is hence on the costs of a mere implementation of the investment strategy - not on the actual operational implementation (e.g. via active mandates).
Two approaches to determining the expected net return (2)

- Expected net return (normalised risk premium at 2.5%)
  - Similar to the derivation of the PPCmetrics expected net return, we define the regulatory expected net return as a combination of risk-free interest rate and expected risk premium, minus asset management costs.
  - We estimate asset management costs in the same way as in our approach to estimate the PPCmetrics expected net return.
  - However, the risk-free interest rate and the risk premiums are calculated as best estimates based on the method defined in FRP 4 to determine the upper limit for the technical interest rate.
    - FRP 4 defines the risk-free interest rate as the average spot interest rate of the 10-year Swiss Confederation bonds of the last twelve end-of-month-values as of 30 September.
    - We interpret the derived surcharge on the risk free rate of 2.5% as an indication for the expected risk premium, as this surcharge is explicitly described as the difference between the return of a 10-year Swiss Government bond and the return of the Pictet BVG-40 Plus index (cf. comments on Chapter 3, FRP 4). Based on this approach, we normalise the PPCmetrics risk premiums so that an investment strategy following the Pictet BVG-40 Plus index results in a risk premium of exactly 2.5%.
Conclusion

• **Both approaches** are **suitable** for determining the net return of your investment strategy for the purpose of determining the technical interest rate.

• The **advantage** of the **PPCmetrics expected net return** is foremost its scientifically sound derivation. For this reason, we recommend that the pension fund's risk management should be based on PPCmetrics expected return.

• The **advantage** of our **alternative approach** resides in the lower dependence on the valuation date, which conceptually aligns this estimate with the valuation of pension liabilities from a financing point of view.

• You may use the PPCmetrics FRP 4 calculator to estimate the range of possible technical interest rates using the link below:

  • [https://www.ppcmetrics.ch/de/themen/frp-4-technischer-zinssatz/frp4-rechner](https://www.ppcmetrics.ch/de/themen/frp-4-technischer-zinssatz/frp4-rechner)
Annex
Asset Management Costs (1)
PPCmetrics approach

- We estimate all **expected returns net of asset management costs**.
- In the case of **real estate** and **alternative investments** cost-effective (passive) implementation is generally not possible. The expected costs therefore represent a significant part of the expected gross return. Therefore, based on our experience, the estimated **costs** of these asset classes are deducted directly from the estimated gross returns.

**Example** of calculation of expected return for alternative investments and real estate:

<table>
<thead>
<tr>
<th>Expected gross return</th>
<th>Risk premium +</th>
<th>Expected costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest rate level for risk-free investment</td>
<td>—</td>
<td>Expected net return</td>
</tr>
</tbody>
</table>
Asset Management Costs (2)

PPCmetrics approach

- In the case of **more liquid asset classes** a more cost-effective (passive) implementation is generally possible.
- To calculate the expected costs for these asset classes, we apply a **volume-based estimate** (the higher the volume, the lower the costs tend to be).
- This estimate is deducted from the weighted expected return on total assets.
- This approach is based on the assumption that clients with more costly implementations have a gross return expectation that excels the cost-efficient (passive) implementations by the return of the cost.
- When determining the net returns, **the pension fund’s specific TER** (Total Expense Ratio) **is not taken into account** as FRP 4 explicitly refers to the strategy return.
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