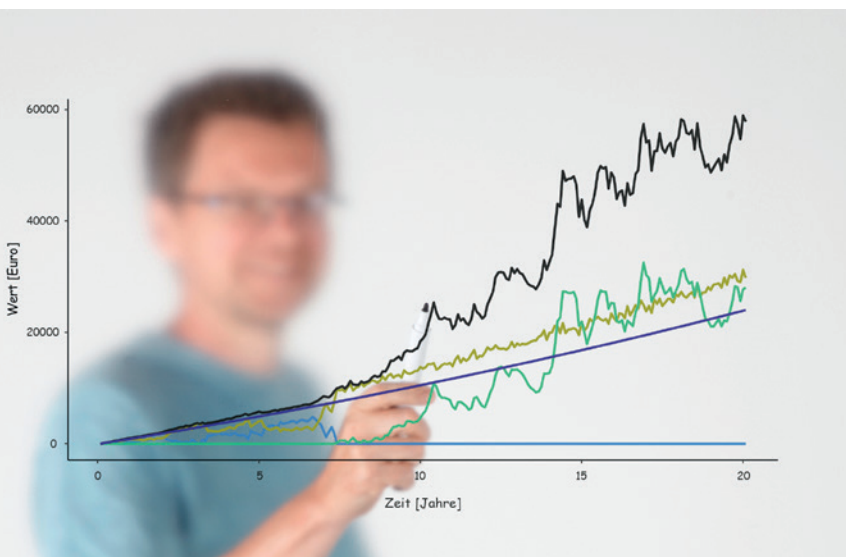


Mathematics Creates Transparency – Making Secure Provision for Old Age



The basis for this is provided by mathematics from the Fraunhofer ITWM. Since 2017, the PIA has been assigning each state-subsidized pension product a risk-reward classification for the standardized information sheet. Their standard comprises five classes - from one as strongly safety-oriented to five as yield-oriented. As a rule, a rising risk level is linked to increasing opportunities for returns. Interested parties are thus provided with a standardized assessment framework for products, which captures the key characteristics of the policies and allows them to compare rates.

PIA Provides Insight with the Help of Mathematics

Since 2016, a team from the “Financial Mathematics” department has been carrying out classification for state-subsidized pension products on behalf of “Produktinformationsstelle Altersvorsorge gGmbH (PIA).” A model that has set standards and has now been adapted to make company pension plan contracts objectively comparable.

Old-age provision in Germany is based on three pillars: mandatory systems under public law (including statutory pension insurance), occupational pension schemes and private pension contracts. The latter include products that are subsidized by the state, for example through the so-called Riemer pension. In the meantime, the range of products is very complex and it is difficult for consumers to keep an overview. To alleviate uncertainty and create more transparency, the Ministry of Finance introduced a classification for state-subsidized contracts, including, for example, the Riemer products. In order to be subsidized, they must comply with legal requirements and be classified.

For this purpose, the PIA was founded as a non-profit organization. An ITWM team from the department “Financial Mathematics” has been working for the PIA for more than six years and evaluates the insurance tariffs. Both are entrepreneurially separated. The contract simulations for the classification into chance-risk classes are carried out at Fraunhofer ITWM.

“We have already evaluated several thousand contracts and PIA has classified them. The PIA basic model was developed by our institute and is now considered the industry standard,” says Dr. Roman Horský. “In this way, we ensure greater transparency for policyholders. Of course, we cannot predict long-term economic developments, but models simulate different development scenarios based on the current economic situation. This is always changing, which is why the parameters of our simulation model are also readjusted annually,” emphasizes the financial mathematician. PIA communicates the risk classification alone and does not provide specific tips or advice on the selection of a product.

“We have already come to appreciate the close cooperation with Fraunhofer ITWM during the establishment of the Pension Improvement Act. With the consortium ‘Das Rentenwerk’, we have also entered completely new territory.”

Dr. Normann Pankratz

Member of the Board of Management Debeka Versicherungen



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Setting Industry Standards Also for Company Pension Plans

This basic model has become established in recent years. At the European level, a market model that is recognized in the industry is needed. The German Actuarial Association (DAV) recommends the use of the PIA basic model, and other countries have already adopted this proposal in an adapted form.

An adapted model for comparing rates could also support insured persons in the area of “company pension plans”. This pillar of old-age provision includes further different tariffs and the offers include different model calculations as well as performance indicators. It is difficult

for interested parties to evaluate the products. Therefore the ITWM team is now working together with Debeka on a project for more transparency. The insurance company has developed a new pension product for the company pension plan to be offered in 2023.

Similar to other pension products the key product figures important for sales are to be determined on the basis of a mathematical model. The goal also here: To create an evaluation framework for tariffs that to create a fair comparison of offers enables. Ideally, a cross-pillar standard should emerge that makes it easier for the insured persons to assess their pension provision their pension provision in a holistic manner.

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 To read the full interview with Dr. Normann Pankratz, go to: www.itwm.fraunhofer.de/interview-debeka