Comparison of fee structures and investment concepts for the German Riester-Rente

Uwe Wystup
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Angstige beleggers betalen hoge prijs

Garantieproducten zijn duur en inceptal niet nodig. Volgens professor Uwe Wystup protesteert vooral de derven industrie van de gecreëerde schijnzekerheid. Een interview over het nut van opties voor beleggers die inzetten op de lange termijn.
**Example**

**Investor**
- Investment horizon: 35 years
- Starting at age: 30
- Retire when: 65
- Invest monthly: 100 Euro
- Annual salary: 30,000 Euro
- Start on: Jan 1, 2008
- 1 child, 2 years at start, bonus paid until age 25, i.e. 23 years

**Federal bonus**
- As of Jan 1, 2008
- Retirement saving statutes (Altersvermögensgesetz AVmG)
- 154 Euro per year
- 185 Euro per child per year

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**Investors are scared of**

**Fictitious Price Index with Crashes**

Source: own simulation
Investors are also scared of

Fictitious Index Price with Asset Melt Down

Source: own simulation

What's invested is guaranteed

Total amount invested: 100 x 12 x 35 = 42,000 EUR

Value of total amount after Inflation of 2% p.a.: 21,000 EUR
Product-Classification: Allianz RiesterRente mit Fonds und Garantie

Fees
- Initial fee: 4% of all payments and bonus, distributed uniformly over the first 5 years
- Administration: 5.5% on each payment and federal bonus
- Frequency: 1.5% extra fee for monthly payments.
- Account fee per year: 0.4% of the floor
- Subscription fee: 0%
- Management fee: 1.52% in the strategy "Chance"

Investment strategy
- Actuarial reserve fund
- Floor calculated with current rate of 2.25%
- Surplus share
- Remaining amount: equity fund “dit Strategiefonds Wachstum Plus”

Product-Classification: Nürnberger Fondsgebundene Zulagen-Rente Doppel-Invest

Fees
- Initial fees: 5% of the total payments distributed uniformly over the first 5 years
- Fee on bonus: 4% for sales, 2% for admin
- Administration: 5% of the payments (without frequency surcharge)
- Frequency: 5% extra for monthly payments.
- Account fees p.a.: 0.15% of the payments and bonus paid until that time
- Subscription fee: 0% (not stated in writing; statement by MLP Hotline on Oct 8 2007)
- Management fee: depends on choice of fund

Investment strategy
- Floor calculated with current rate of 2.25%
- Surplus share
- Guaranty generated with ComInvest Garant Dynamic
- This fund guarantees annually per 31 July max(80% \cdot \text{PriceOfLastYear}, 80% \cdot \max \text{daily Fixings})
- Remaining amount: TGF
- Monthly readjustment
Product-Classification: DWS Riester Rente Premium

Fees
– Initial fee: 5.5% of all payments up to age 60 uniformly distributed over the first 5 years
– Fees on bonus: 5%
– Account fee p.a.: 15.40 Euro
– No further fees on administration, frequency, subscription fee
– Management fee: fund of funds 1.5% additionally 0.05% taxe d’abonnement
– in the bond funds: 0.75%

Investment strategy
– individual CPPI
– Floor: Zero bond curve

Product-Classification: AXA TwinStar Rente Invest

Fees
– Initial fees: from the monthly payments without bonus

\[
\frac{15 + 1.68 \cdot (35 - 15)}{35 \cdot 12} \%
\]
– are charged, uniformly distributed over the first 5 years.
– Fees on bonus: 7% until 4 years before 65
– Administration: 5% of the payments
– Account fee: 24 Euro per year
– Subscription fee: 0%

An still more fees
– Management fee: 1.50%
– Guaranty cost: 0.48% of the fund value p.a.
– Kick-back: 0.80% p.a. of the fund value

Investment strategy
– Variable Annuities
Distinction is made by:
- Fee structure
- Investment concept

Decision helpers
- Morgen & Morgen
  (only path-independent fees)
- Stiftung Warentest:
  Comparing all investments
- Studies

Consequence for the investor:
- Confusing, impossible to compare anything
Screenshot of Morgen&Morgen Comparison software, AV-WIN 3.60

Computation by Morgen & Morgen
(analogous AV-WIN 3.60)

<table>
<thead>
<tr>
<th>Issuer</th>
<th>DWS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tarif</td>
<td>DWS RiesterRente Premium</td>
</tr>
<tr>
<td>M&amp;M</td>
<td>Cost ratio(%) 8.10</td>
</tr>
</tbody>
</table>

Source: Morgen & Morgen Comparison software, Morgen & Morgen Computation

Calculation assumptions: Starting at age: 30 beginning: 01.01.2007, Retirement with: 65, annual payments, Highest possible payment with full Riester bonus during the entire lifetime of the contract

Influence of Path-Independent Fees

<table>
<thead>
<tr>
<th>Product</th>
<th>Using</th>
<th>Per Maturity</th>
<th>Paid</th>
<th>Per Maturity</th>
<th>Cost ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>DWS</td>
<td>39,743</td>
<td>64,502</td>
<td>42,000</td>
<td>69,544</td>
<td>92.7%</td>
</tr>
<tr>
<td>NUE</td>
<td>36,890</td>
<td>60,549</td>
<td>43,830</td>
<td>72,585</td>
<td>83.4%</td>
</tr>
<tr>
<td>AXA</td>
<td>37,294</td>
<td>59,574</td>
<td>42,000</td>
<td>69,544</td>
<td>85.7%</td>
</tr>
<tr>
<td>ALL</td>
<td>38,399</td>
<td>63,425</td>
<td>42,549</td>
<td>70,457</td>
<td>90.0%</td>
</tr>
</tbody>
</table>

Only Product cover!
- Additional path-dependent fees will be taken
CPPI

Initial amount: 100 Euro
Guarantee level: 100 Euro
Present value: 96 Euro

Assumed maximum loss: -20%
(Allocation factor: 5)

Buffer: 4 Euro
(4 = 100 - 96)

Stocks: 20 Euro
(= 4 / 20%)

Bonds: 80 Euro
(= 100 - 20)

Assumed maximum loss: -20%
(Allocation factor: 5)

Stock market 100
Stock: 20
Bond: 80
Portfolio value: 100
Present value Guarantee level: 96
Buffer: 4

Stock market 110
Stock: 22
Bond: 82
Portfolio value: 104
Present value Guarantee level: 98
Buffer: 6

+ 10%
CPPI

Discussion: Crash-Puts

<table>
<thead>
<tr>
<th>Stock market</th>
<th>110</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stocks</td>
<td>30</td>
</tr>
<tr>
<td>Bond</td>
<td>74</td>
</tr>
<tr>
<td>Portfolio value</td>
<td>104</td>
</tr>
<tr>
<td>Present value Guarantee level</td>
<td>98</td>
</tr>
<tr>
<td>Buffer</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stock market</th>
<th>99</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stocks</td>
<td>27</td>
</tr>
<tr>
<td>Bond</td>
<td>75</td>
</tr>
<tr>
<td>Portfolio value</td>
<td>102</td>
</tr>
<tr>
<td>Present value Guarantee level</td>
<td>99</td>
</tr>
<tr>
<td>Buffer</td>
<td>3</td>
</tr>
</tbody>
</table>

- 10%

Portfolio value: 102

Simulation model

Merton Jump-Diffusion

© Uwe Wystup: Riester-Pension Plan page 17

© Uwe Wystup: Riester-Pension Plan page 18
### Simulation model

![Merton Jump-Diffusion](image)

### Scenarios

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Bullish</th>
<th>Standard (MSCI)</th>
<th>Crash</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø Volatility</td>
<td>15%</td>
<td>12.8%</td>
<td>15%</td>
</tr>
<tr>
<td>Ø Return</td>
<td>8%</td>
<td>6%</td>
<td>4%</td>
</tr>
<tr>
<td>Ø Jumps per year</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
</tr>
<tr>
<td>Minimal jump size</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Ø Jump size above minimum</td>
<td>0.82%</td>
<td>0.82%</td>
<td>0.82%</td>
</tr>
</tbody>
</table>

Results: Capital after 35 years

<table>
<thead>
<tr>
<th>Product</th>
<th>Bullish</th>
<th>Standard</th>
<th>Crash</th>
<th>Standard no child</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No fees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DWS</td>
<td>234,778</td>
<td>121,818</td>
<td>67,584</td>
<td>121,322</td>
</tr>
<tr>
<td>NUE</td>
<td>198,167</td>
<td>108,189</td>
<td>64,328</td>
<td>106,744</td>
</tr>
<tr>
<td>AXA</td>
<td>230,638</td>
<td>121,547</td>
<td>69,801</td>
<td>119,645</td>
</tr>
<tr>
<td>ALL</td>
<td>128,853</td>
<td>83,101</td>
<td>61,799</td>
<td>83,528</td>
</tr>
</tbody>
</table>

Federal bonus amounts to:
- No child: Using interest rate of 5% p.a. 154 p.a. will be 16,000 after 35 years
- Conclude: bonus essentially finances the contract

Return in the standard scenarios:
- 3.8% would generate 120,000 EUR without any fees

Average stock ratios
Distribution of capital at time of retirement

With DWS or AXA a Riester saver is 10 times more likely to become a millionaire than winning the state lottery.
### Financial crises based scenarios

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Crash</th>
<th>Super Crash</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø Volatility</td>
<td>15%</td>
<td>16%</td>
</tr>
<tr>
<td>Ø Return</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Ø Jumps per year</td>
<td>5.2</td>
<td>6.24</td>
</tr>
<tr>
<td>Minimal jump size</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Ø Jump size above minimum</td>
<td>0.82%</td>
<td>0.82%</td>
</tr>
</tbody>
</table>

### Results: Capital after 35 years

<table>
<thead>
<tr>
<th>Product</th>
<th>Crash average</th>
<th>Super Crash average</th>
<th>Super Crash median</th>
</tr>
</thead>
<tbody>
<tr>
<td>DWS</td>
<td>67,584</td>
<td>67,492</td>
<td>50,054</td>
</tr>
<tr>
<td>NUE</td>
<td>64,328</td>
<td>64,251</td>
<td>48,938</td>
</tr>
<tr>
<td>AXA</td>
<td>69,801</td>
<td>69,297</td>
<td>54,764</td>
</tr>
<tr>
<td>ALL</td>
<td>61,799</td>
<td>61,794</td>
<td>57,062</td>
</tr>
</tbody>
</table>

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**Sources**


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