Annuities in Denmark: Risk-Sharing in Accumulation and Payout Phases

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Agenda

• The Danish pension system – background information

• Risk Sharing – active workers and pensioners, pension institutions, the government (the public purse)

• Unit linked products

• The case for welfare reform
The three pillars of the Danish pension system

Public pensions

Public pension
ATP Lifelong Pension

Occupational pension plans

Private pension plans

Pillar I

Pillar II

Pillar III
The three pillars of the Danish pension system - funding

<table>
<thead>
<tr>
<th>Pillar</th>
<th>Type of pension</th>
<th>Financing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pillar I</strong></td>
<td>Public Pension</td>
<td>Tax financed: pay-as-you-go</td>
</tr>
<tr>
<td></td>
<td>ATP Lifelong Pension</td>
<td>Fully funded: employer and employee contributions</td>
</tr>
<tr>
<td><strong>Pillar II</strong></td>
<td>Occupational pension plan</td>
<td>Fully funded: employer and employee contributions. Defined contribution. Tax deductible.</td>
</tr>
<tr>
<td></td>
<td>Pension schemes for certain civil servants</td>
<td>Unfunded: tax-financed defined benefit plan</td>
</tr>
<tr>
<td><strong>Pillar III</strong></td>
<td>Private pension plan</td>
<td>Fully funded: private contributions. Tax deductible</td>
</tr>
</tbody>
</table>
## The three pillars of the Danish pension system – short description

### Pillar I

| Public Pension | -Pays benefits to people older then age 65/67.  
|                | -Two parts: a flat universal pension and an income dependent supplement  
|                | -Subject to a residency test: full benefits if more than 40 years residency in Denmark  
| ATP Lifelong Pension | -Established by law and entails social security features.  
|                | -Pays benefits to people older than age 65. |

### Pillar II

| Occupational pension plans | -Established by collective labor agreements between employers and labor unions  
|                            | -Supplement to the publicly provided pensions  
|                            | -Pays benefits to people older than age 60 as annuities, phased withdrawals or lump sum transfer  
|                            | -Death and disability benefits. |

### Pillar III

| Private pension plans | -Supplement to pillar II savings  
|                       | -Pays benefits to people over age 60 as annuities, phased withdrawals or lump sum transfer  
|                       | -Death and disability benefits. |
Occupational Pension Plans – Contribution Rate

Pct. of gross salary

Danish Insurance Association
Economic significance of pension payouts – replacement ratios

Average expected replacement ratios for different groups of education in 2000 and 2045

The blue part is public pension and the pink part is private pension.
Annuities in the Danish pension system

Public pensions

- Public pension and ATP
- Annuities

Occupational pension plans

- Annuities
- Phased withdrawals
- Lump sum
- Distribution unknown
- 2006: 45 pct. of contributions went to annuities

Private pensions

- Private pension plans
- Annuities
- Phased withdrawals
- Lump sum
- Distribution unknown
- 2006: 13 pct. of contributions went to annuities

Pillar I

Pillar II

Pillar III
Annuities in the Danish pension system

Distribution of tax-deductable contributions to pension schemes

- Annuities
- Phased withdrawals
- Lump sum
Risk-Sharing in Denmark

Active workers and pensioners – Pillar I

- Political
  - basic state pension
  - financial (demography)
Risk-Sharing in Denmark

Active workers and pensioners – Pillar II and III

- Financial
  - annuitization risk
  - inflation risk
- Insurance risks
  - early death, disability, longevity
  - reliance on phased withdrawal
- Guaranteed benefits - can the pension institution deliver?
- Tax system

Investment risk during accumulation phase
Risk-Sharing in Denmark

Pension institutions

- Commercial
- Political

- Guarantees
  - investment risk – shared with the insured
  - cost

- Duration mismatch

interest rate – falling/rising
Risk-Sharing in Denmark

The government

- No formal obligation for pillar II and III
- Deferred wealth (deferred taxes)
- Social poverty (Pillar I)
- Low savings rate
- Financial instability (demography). Pillar II and III alleviate this problem and puts discipline on public expenditure
- Pension provider bankruptcy
Unit linked products

• A relatively recent feature of the Danish pension industry.

• Prompted by the reduction in guaranteed investment returns and preference for individual choice.

• Unit-linked products are part of the solution to the problems with the guaranteed pension environment.
Unit link products - development

Gross premiums for unit linked products

DKK billion

<table>
<thead>
<tr>
<th>Year</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
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<tbody>
<tr>
<td>Value</td>
<td>6</td>
<td>6</td>
<td>8</td>
<td>10</td>
<td>16</td>
</tr>
</tbody>
</table>

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Conclusions regarding the Danish pension system

• The 3 pillars support each other
• Overall vulnerability reduced by 3 pillar approach
• Basic income distribution objectives are met
• Supplementary pensions fully funded
• Vulnerable towards increasing longevity
Welfare reforms

- The Danish government set up a Welfare Commission to analyze the challenges posed by the demographic changes to come.
- The Welfare Commission expressed support for the three-pillar pension system in its 2005 rapport.
- Recommendation: introduction of some obligatory pension savings for people falling outside the scope of the present pillar II and III.
- Recommendation: expand the incentives to rely more on annuities as the preferred payout method.
Welfare reforms
- why are they necessary?

Fewer people in the workforce to provide for people outside the workforce

Source: Welfare Commission
Welfare reforms - why are they necessary?

No reforms: Development in public income and expenses

<table>
<thead>
<tr>
<th>Year</th>
<th>Pct. of GDP</th>
<th>Income</th>
<th>Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>50</td>
<td>54</td>
<td>52</td>
</tr>
<tr>
<td>2010</td>
<td>50</td>
<td>54</td>
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<td>54</td>
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<tr>
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<tr>
<td>2040</td>
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</tr>
<tr>
<td>2050</td>
<td>50</td>
<td>54</td>
<td>52</td>
</tr>
</tbody>
</table>

Source: Welfare Commission
Welfare reforms – what happened?

• Relatively little!
• Planning for the long term future is politically difficult
• But reform will be on the agenda