



Joint Colloquium of the IACA, PBSS and IAAHS Sections of the International Actuarial Association

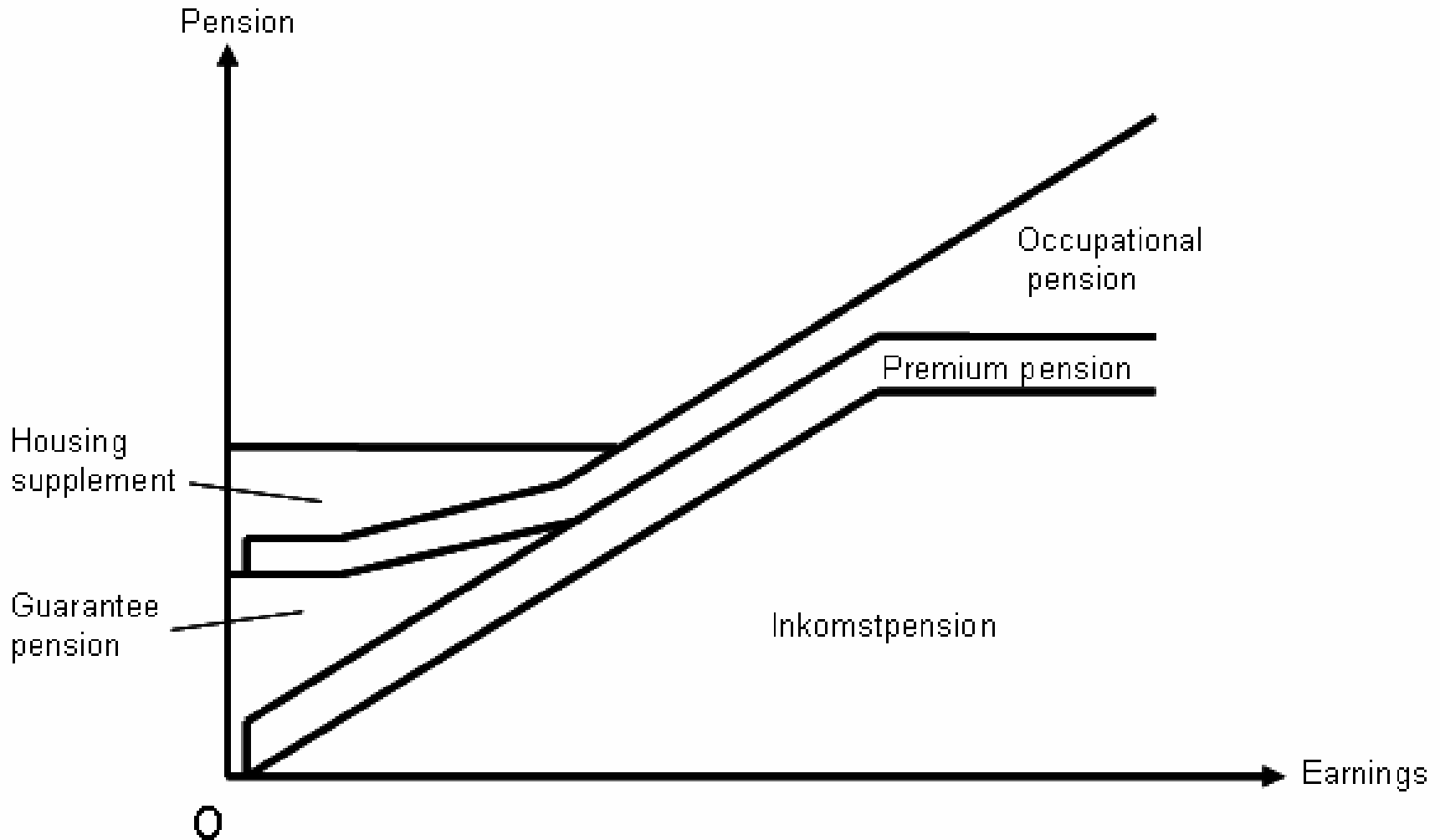
Westin Copley Place Hotel, Boston, U.S.A. – 4-7 May 2008

**“Risks and income adequacy for the individual in a notional
defined contribution setting - the interaction of public
pensions, public cash benefits to the elderly and occupational
pensions - the case of Sweden”**

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The Swedish pension's schemes portfolio



Risks and the distribution of risks in each scheme for the individual

	Inkomstpension, NDC; contribution rate = 16%	Premium pension, funded part; contribution rate = 2.5%	Occupational pensions; contribution rate = 2.5 to 4.5%	Guarantee pension, housing supplements; tax financed
Rate of return, indexing	<p><u>Earnings period</u>: average wages. Co-living generations share the fruits of good years and the burden of lean years.</p> <p><u>Retirement period</u>: “adjustment” index: average wage minus 1.6% due to front-loading</p> <p>Financial stability by: automatic balance mechanism, when activated rate of return is lower.</p>	Investment risk borne by the individual	Investment risk borne by the individual	Price indexed. Co-living generations do not share the fruits of good years or the burden of lean years.

Risks and the distribution of risks in each scheme for the individual

	Inkomstpension , NDC; contribution rate = 16%	Premium pension, funded part; contribution rate = 2.5%	Occupational pensions; contribution rate = 2.5 to 4.5%	Guarantee pension, housing supplements; tax financed
<p>Low earnings capacity due to</p> <ul style="list-style-type: none"> -unemployment -sickness/disability -child rearing -conscription -higher education 	<p>Contributions are paid on remunerations from social insurance; debited respective social insurance</p> <p>Non-contributory benefits are credited to the individual accounts; paid by the state budget</p>	<p>Contributions are paid on remunerations from social insurance; debited respective social insurance</p> <p>Non-contributory benefits are credited to the individual accounts; paid by the state budget</p>		<p>Income tested benefit aiming at poverty protection</p>

Risks and the distribution of risks in each scheme for the individual

	Inkomstpension , NDC; contribution rate = 16%	Premium pension, funded part; contribution rate = 2.5%	Occupational pensions; contribution rate = 2.5 to 4.5%	Guarantee pension, housing supplements; tax financed
Mortality risk, individual longevity	Annuities obligatory; unisex life tables used	Annuities obligatory; unisex life tables used	Annuities “obligatory”	Life-long benefits if own pension is below threshold
over-all (cohort) longevity	Increased longevity decreases yearly benefit. Increases in cohort’s longevity after retirement: no direct effect on yearly benefit, may trigger the automatic balancing	Increased longevity decreases the yearly benefit. Borne by the individual, not the working generation		

Expected outcome

Cohort born	...turns 65 in	Life-expectancy effect on benefits if retirement at age 65	Expected life at 65	Pension age needed	Time as pensioner	Comparison of expected time as pensioner
1930	1995	0 %	82 y. 5 m	65 y.	17 y. 5 m.	0
1938	2003	-5 %	83 y. 4 m.	65 y. 8 m.	17 y. 8 m.	+3 m.
1940	2005	-5 %	83 y. 7 m.	65 y. 9 m.	17 y. 10 m.	+5 m.
1945	2010	-9 %	84 y. 3 m.	66 y. 3 m.	18 y.	+7 m.
1950	2015	-11 %	84 y. 10 m.	66 y. 7 m.	18 y. 3 m.	+10 m.
1955	2020	-13 %	85 y. 3 m.	66 y. 11 m.	18 y. 4 m.	+11 m.
1960	2025	-14 %	85 y. 7 m.	67 y. 2 m.	18 y. 5 m.	+1 y.
1965	2030	-15 %	86 y. 11 m.	67 y. 5 m.	18 y. 6 m.	+1 y. 1 m.
1970	2035	-16 %	86 y. 3 m.	67 y. 7 m.	18 y. 8 m.	+1 y. 3 m.
1975	2040	-17 %	86 y. 7 m.	67 y. 10 m.	18 y. 9 m.	+1 y. 4 m.
1980	2045	-18 %	87 y. 10 m.	68 y.	18 y. 10 m.	+1 y. 5 m.
1985	2050	-19 %	87 y.	68 y. 2 m.	18 y. 10 m.	+1 y. 5 m.
1990	2055	-19 %	87 y. 1 m.	68 y. 2 m.	18 y. 11 m.	+1 y. 6 m.

Source: Swedish Social Insurance Agency
2008

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Expected outcome

Pension outcome for women with varying behaviour profiles in relation to a full career man

	Full Career Woman/Full Career Man	Full time /Part time Woman/ Full Career Man	10-year Woman /Full Career Man	Part-time Woman/Full Career Man
Annual own annuities	80-100	80*	35-45	60-70
Replacement rate	100-120	100-120	120-145	100-125
Rate of return	115-130	120*	310-400	120-130

* The outcome is the same for all educational groups
 Source: Ståhlberg, et al (2005)

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