



50
years

somewhat
different

Deferred annuities at retirement

An undervalued product concept

Karin Fröhling, General Manager

Longevity 12
Chicago, September 29, 2016

hannover **re**[®]

Immediate annuity versus deferred annuity

Standard approach

Immediate annuity

- ▶ Customer pays single premium at age
Age 60 - 70
- ▶ Annuity starts immediately

Deferred annuity

- ▶ Customer pays premium at age
Age 40 – 50
- ▶ Annuity starts 10 – 25 years later

Challenging longevity and interest risk management

Immediate annuity versus deferred immediate annuity

Existing but unpopular product

Immediate annuity

- ▶ Customer pays single premium at age
Age 60 – 70
- ▶ Annuity starts immediately

Deferred immediate annuity

- ▶ Customer pays premium at age
Age 60 – 70
- ▶ Annuity starts 10 – 25 years later

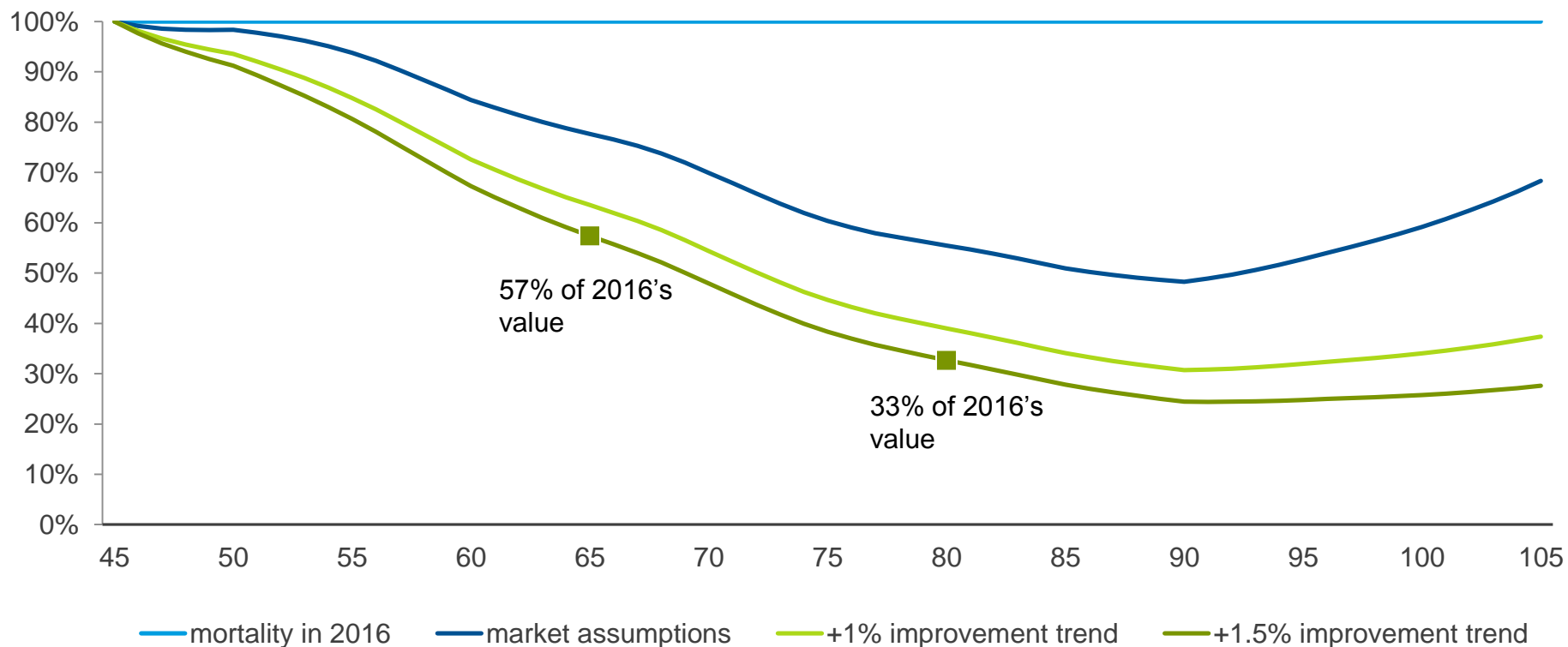
Comparable longevity risk / investment risk shared with customer

Ever increasing life expectancy

2016 mortality comparison for 45 year old male

Proportion of cohort mortality to calendar year mortality in 2016

in %

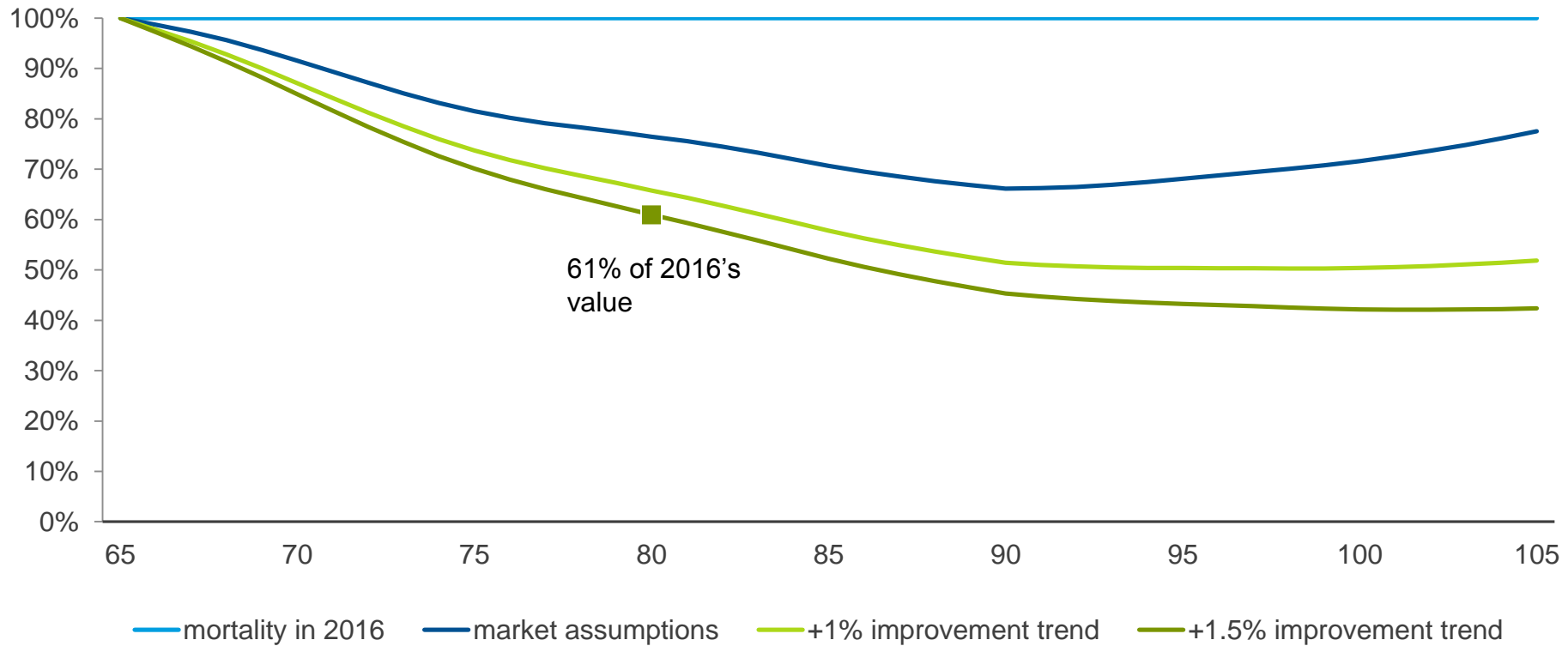


SPIA / DIA Annuities

Less exposure to improvement trend

Proportion of cohort mortality to calendar year mortality in 2016

in %



Cash flow comparison

Deferred immediate annuity requires substantially lower investment

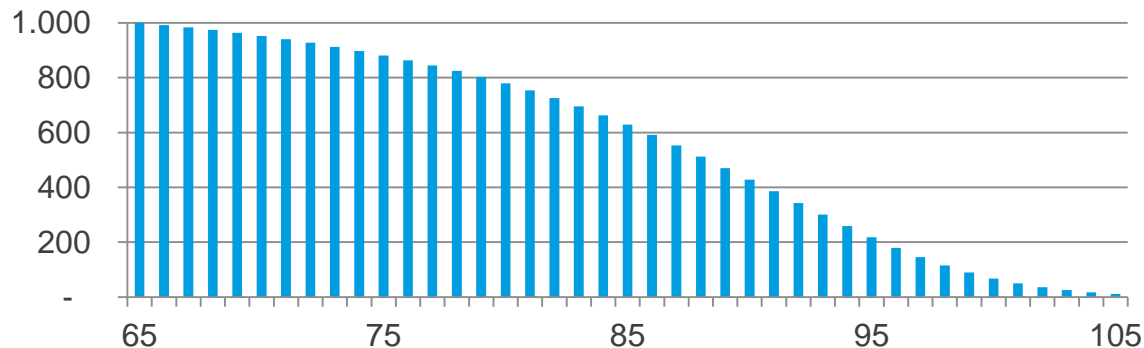
Immediate annuity

in USD

Single premium at age 65:

19,500 USD

for an annual annuity of 1,000 USD from age 65 until death



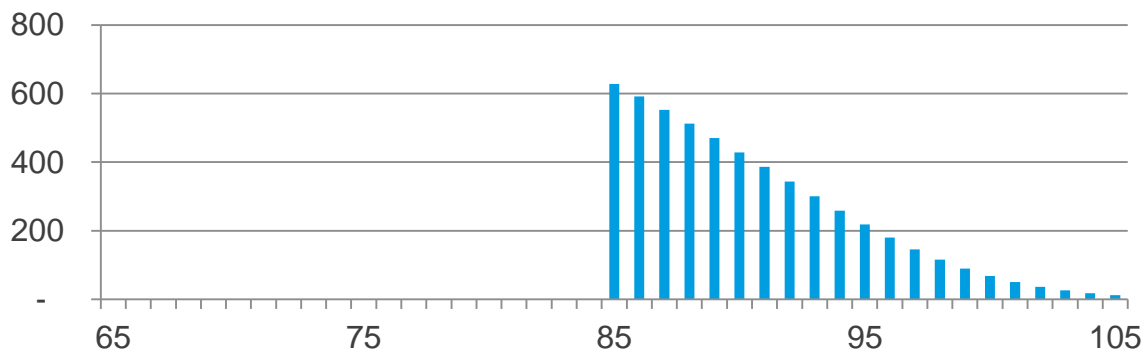
Deferred immediate annuity

in USD

Single premium at age 65:

4,100 USD

for an annual annuity of 1,000 USD from age 85 until death



Survivor rate weighted pension. All calculations before margins and expenses, flat interest rate of 1.5% p.a. for male life

Improvement stress in monetary terms

When does the risk start?

	PV today's mortality	PV market improvement assumptions	PV +1% improvement trend	
Age 45, deferred annuity with start age 65	12,500	14,900	16,500	+1,600
Age 45, immediate annuity	29,500	32,000	33,600	+1,600
Age 65, deferred immediate annuity with start age 85	3,000	4,100	5,000	+900
Age 65, immediate annuity	18,000	19,500	20,500	+1,000

1,000 annual pension, all calculations before margins and expenses, flat interest rate of 1.5% p.a. for male life

Risk driven by duration

Cost of capital

The insurer's view point

$$\text{CoC} = \text{MRC} \times \text{PV} \left(\sum_r f_r E_{r,i} \right)$$

MRC: Minimal Return on Capital

f_r : Risk factor for risk r

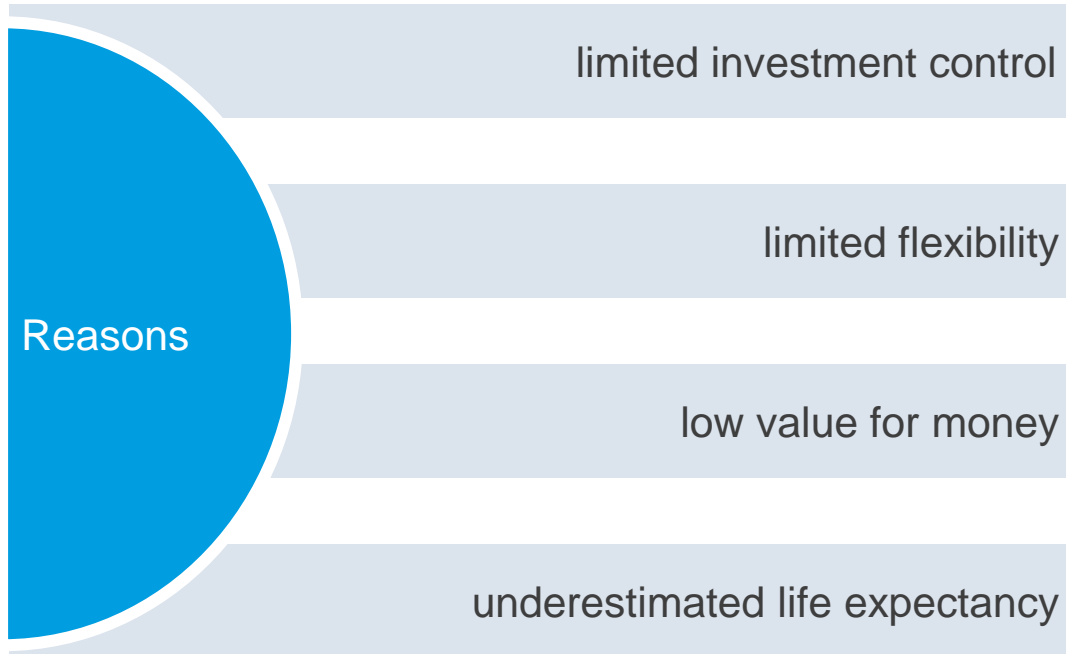
$E_{r,i}$: Exposure of risk r for period i defined as $\text{PVFP}(\text{Best Estimate}_i) - \text{PVFP}(\text{Stress}_{r,i})$

	PV market assumptions*	Cost of capital
Age 65, deferred immediate annuity with start age 85	4,100	500
Age 65, immediate annuity	19,500	550

* before margins and expenses, 1000 annual pension, flat interest rate of 1.5% p.a. for male life

Cost of capital driven by duration

Why do people abstain from buying annuities?

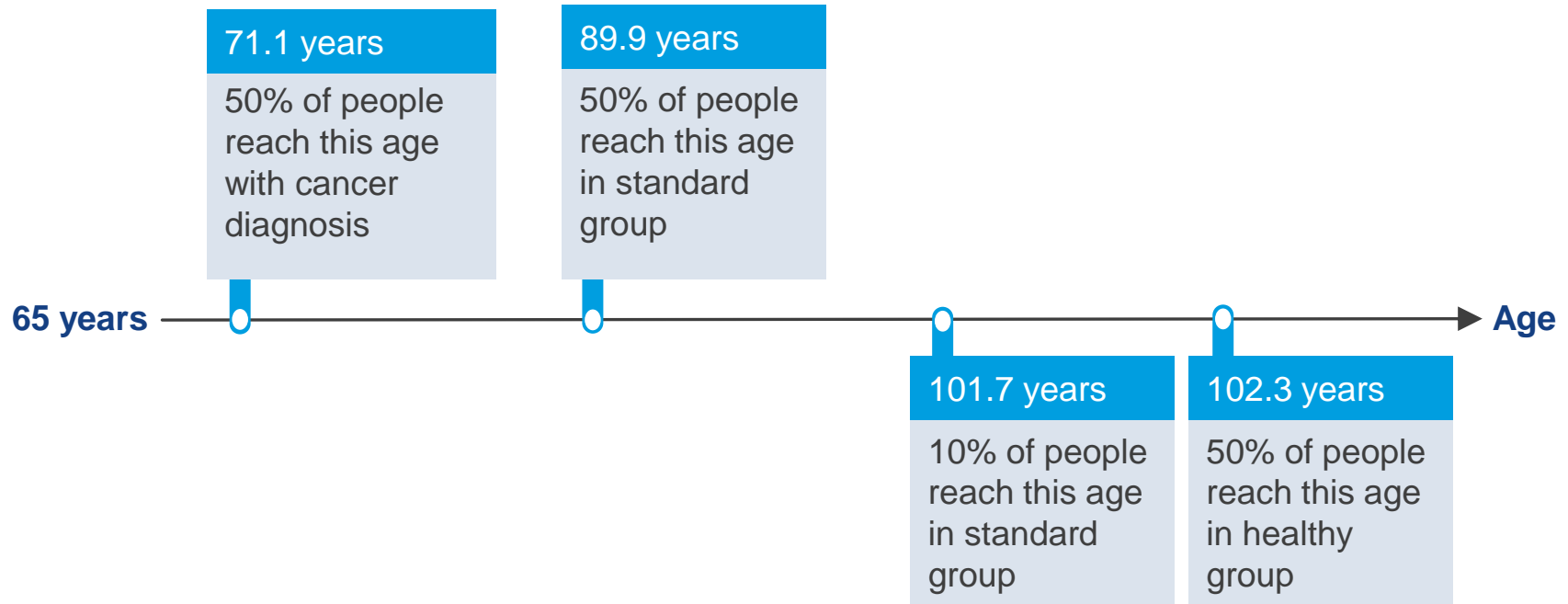


Does a deferred immediate annuity help?

Retirement planning

Why an annuity is essential

► Example 65-year old male:



Annuity provides financial security for lifetime

Single premium comparison

SPIA versus DIA

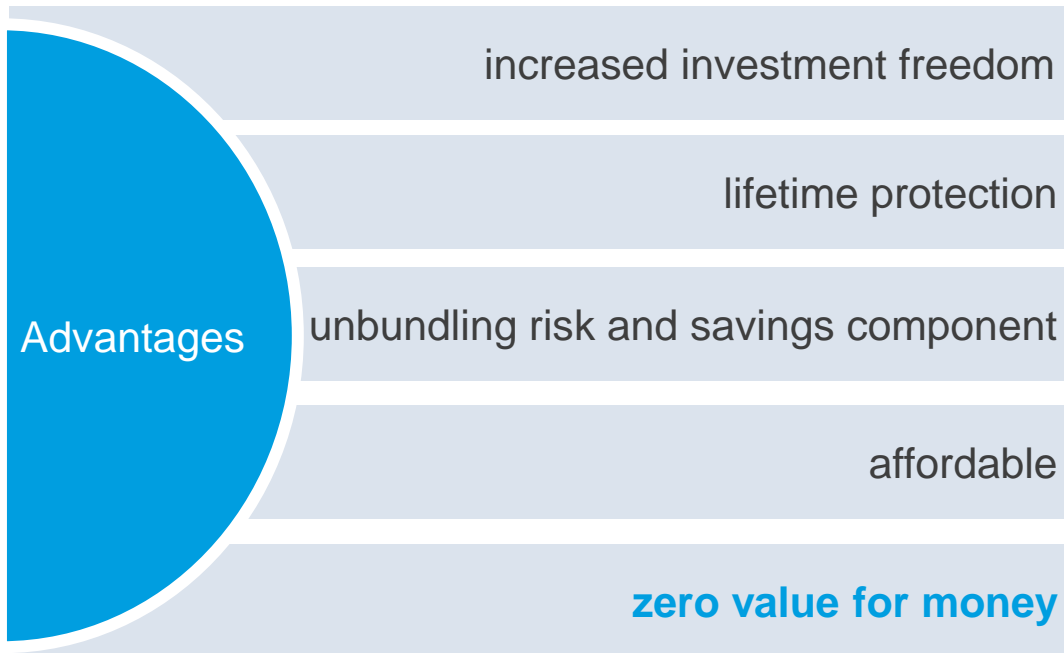
	PV todays mortality	PV market improvement assumptions
Age 45, deferred annuity with start age 65	12,500	14,900
Age 45, immediate annuity	29,500	32,000
Age 65, deferred immediate annuity with start age 85	3,000	4,100
Age 65, immediate annuity	18,000	19,500

1,000 annual pension, all calculations before margins and expenses, flat interest rate of 1.5% p.a. for male life

Deferred immediate annuity requires less investment

Deferred immediate annuity at retirement

Customer perception?



Marketing of insurance concept is key

Underwritten annuity

An interesting concept for immediate and deferred annuities

Standard Annuity

- ▶ Subsidization of healthy people by annuitants with reduced life expectancy
- ▶ Not attractive for people with average or reduced life expectancy




Enhanced Annuity

- ▶ Individual survival curves depending on state of health and lifestyle
- ▶ Fair price for each and every annuitant

Fair price increases customer potential and marketability

Keep in mind

- 
- Marketing of insurance concept important
 - Financial security for old age
 - Premiums materially lower for deferred immediate annuities
 - Risk driven by duration
 - Managing longevity and interest risk remains challenging

Our aging society requires lifestyle protection

Contact details



Karin Fröhling
General Manager
Life Annuities

Karl-Wiechert-Allee 50
30625 Hannover

Tel: +49 5115604-1943
karin.froehling@hannover-re.com
<http://www.hannover-re.com>

Disclaimer

The information provided in this presentation does in no way whatsoever constitute legal, accounting, tax or other professional advice.

While Hannover Rück SE has endeavoured to include in this presentation information it believes to be reliable, complete and up-to-date, the company does not make any representation or warranty, express or implied, as to the accuracy, completeness or updated status of such information.

Therefore, in no case whatsoever will Hannover Rück SE and its affiliated companies or directors, officers or employees be liable to anyone for any decision made or action taken in conjunction with the information in this presentation or for any related damages.

© Hannover Rück SE. All rights reserved.

Hannover Re is the registered service mark of Hannover Rück SE.