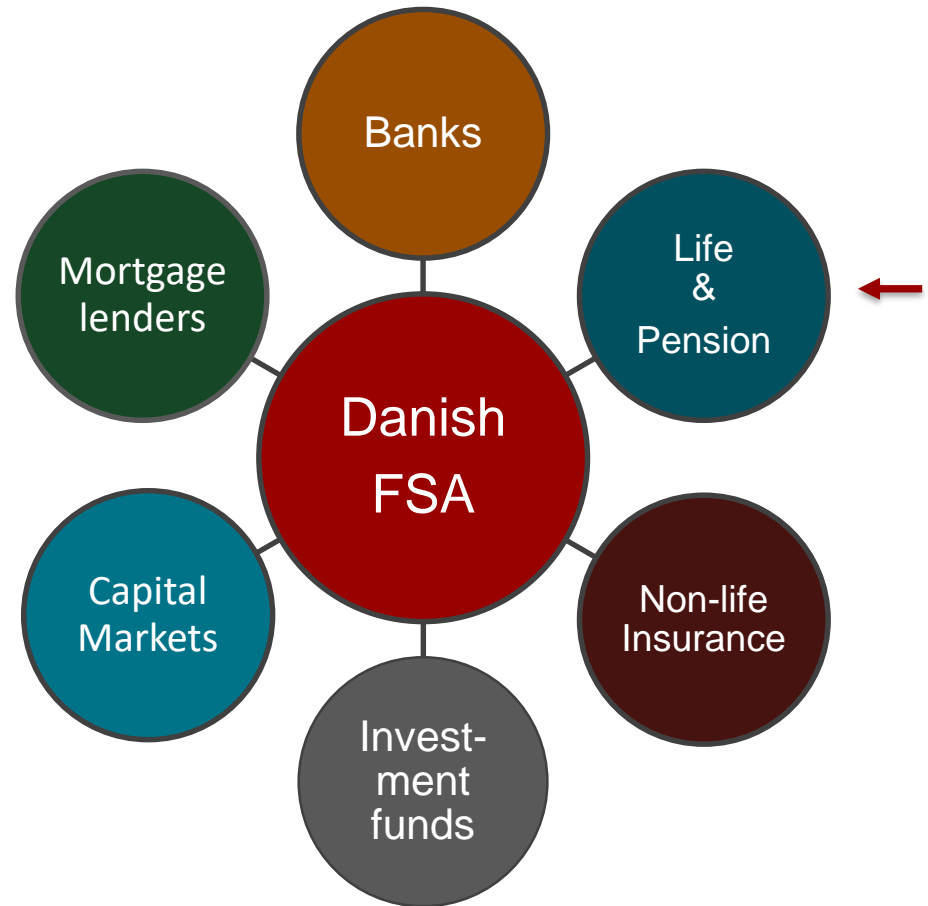


# The Danish DC Pensions - Beauties and Challenges

The Association of Chilean Pension Funds - AAFP  
Conference March 27 2018

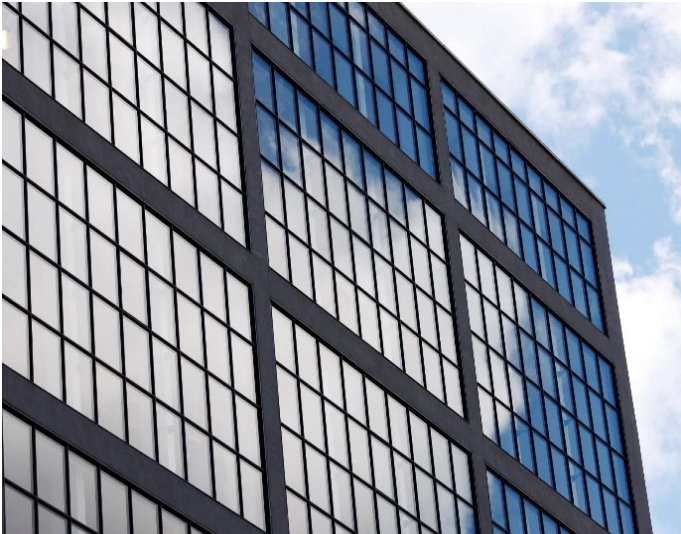
Henning Hansen

# The Danish FSA



## Danish FSA - Supervising Life Assurance & Pension Funds

---



### **We do (e.g.) :**

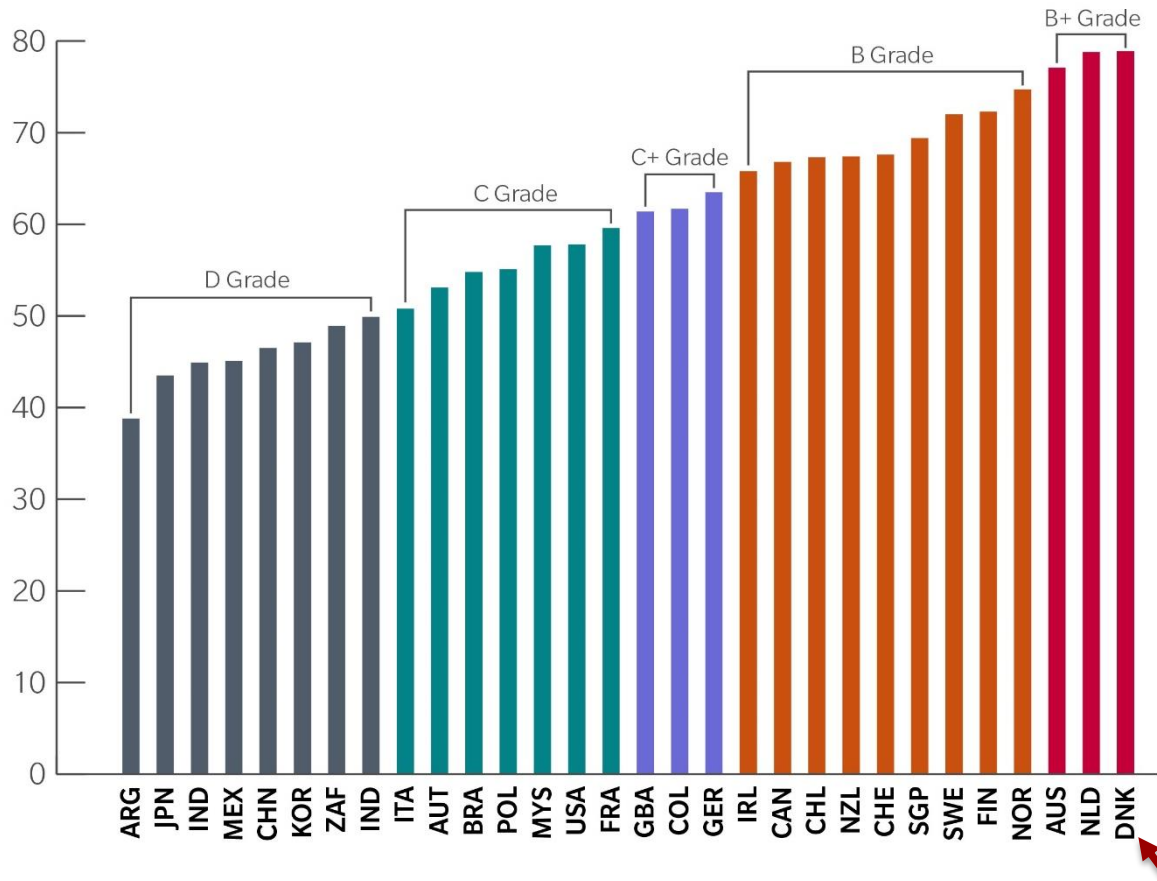
- On-site general inspections
- Theme based inspections and surveillances
- Off-site surveillance (QRT, ORSA, RSR & SFCR)
- Preparation of legislation
- Guidelines
- Longevity benchmark
- Fit & Proper approvals

### **We are (among other things) assessing that:**

- The management is running and controlling the pension provider in a sound manner (best practice)
- There is sufficient capital to cover assumed risks
- Decent and fair profit sharing among the pension savers
- Decent and fair profit sharing between the pension provider and the pension savers

## The Danish Pension System – Well recognized....

Melbourne Mercer Global pension Index 2017:



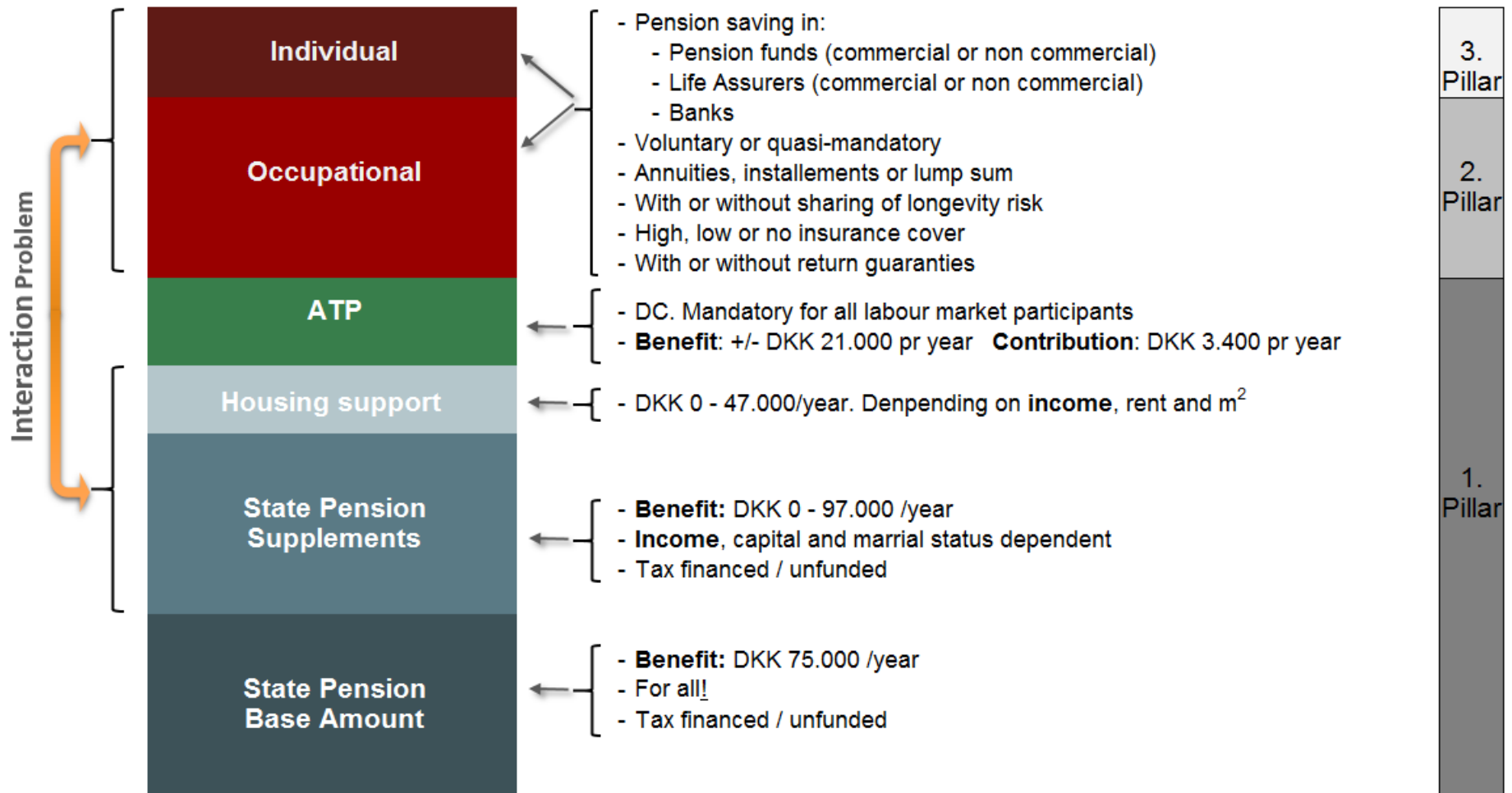
Mercer is testing for:



Source: Mercer

.....but still with a few challenges

# The Danish pension system – building blocks

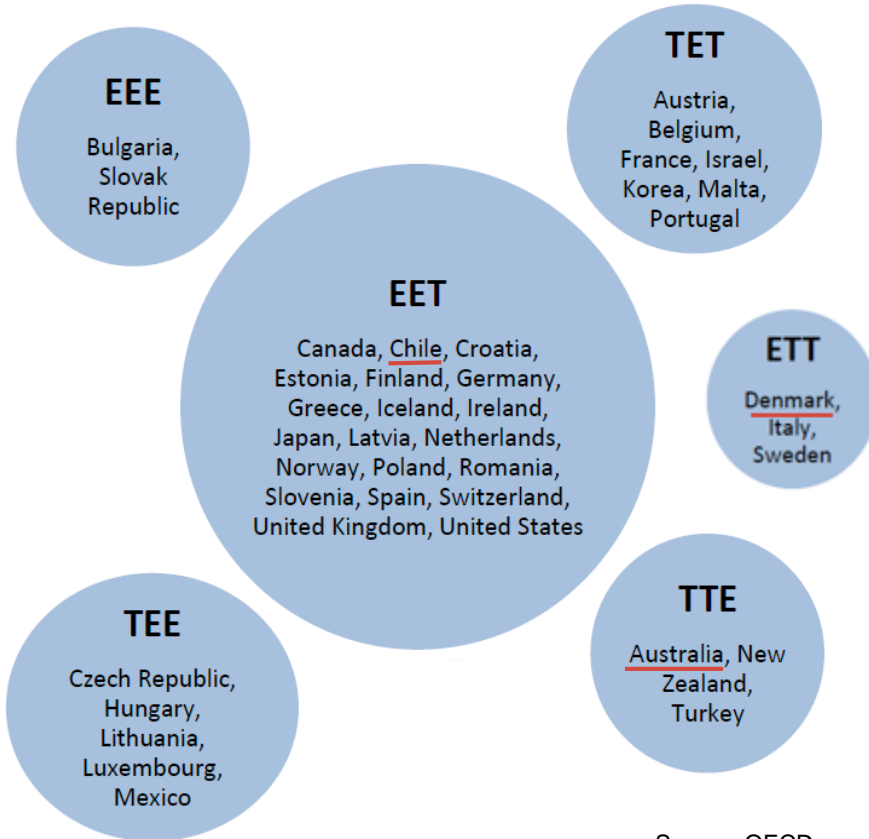


Source: DanAge, ATP & Borger.dk

1 DKK = 100 CLP

Interaction problem solved ? →

## Pension Taxation – Handling the interaction problem with a XL “E”



	Saving	Return	Pension
EET	<u>Ex</u> empt	<u>Ex</u> empt	<u>T</u> axed
<b>E</b> TT	<u>Ex</u> empt	<u>T</u> axed	<u>T</u> axed

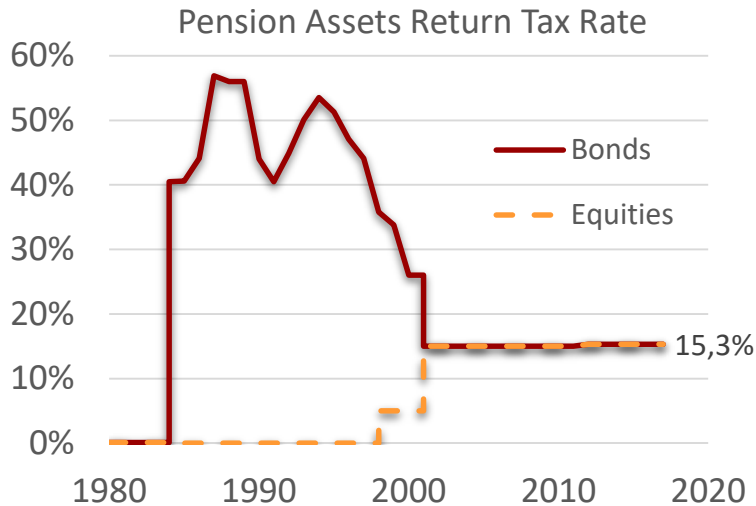
### Tax agreement February 2018:

- **108,2 %** exemption\* for saving done < 15 years before retirement
- **103,1%** exemption\* for saving done > 15 years before retirement

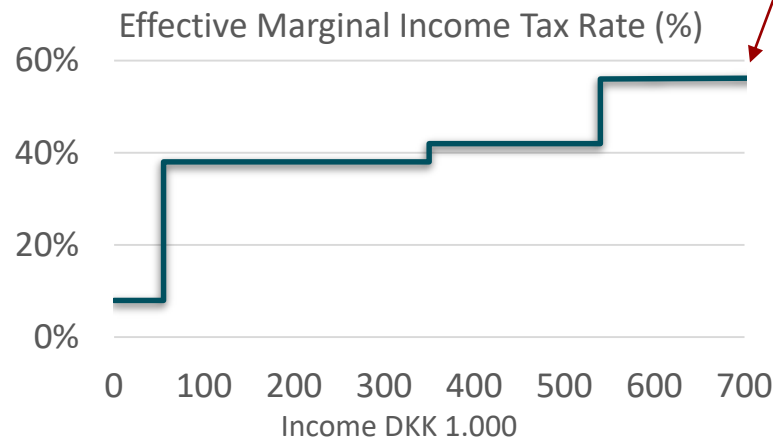
Source: OECD

\*) up to DKK 70.000/year

# Danish Pension – ETT - Taxation of investment return



Source: SKAT



Source: SKAT and own calculations (Marginal tax cur is calculated as per December 2018. New Smaller adjustments is coming during 2018. The calculation is done for a person with labour income only (No interest rate income an no social benefit income)

- Return taxation of 15,3%
- A relatively flat marginal tax curve

Is pension saving still attractive?

15,3% return tax is still attractive compared to taxation of non-pension savings:

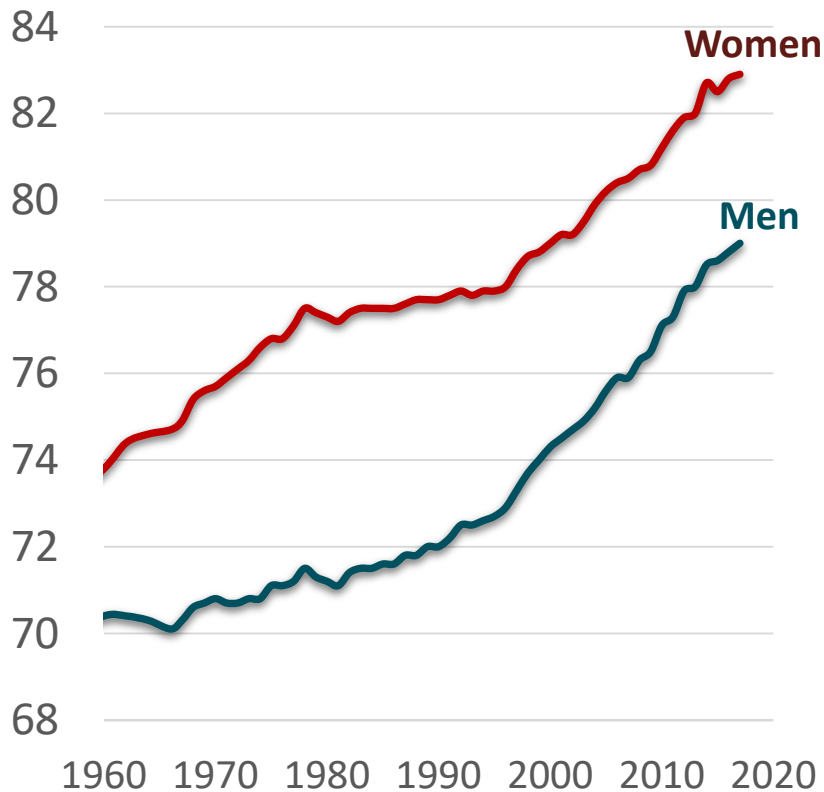
- Equities 17/27/42%
- Bonds 28-42 ....

.....and 15,3% is low compared to history

1 DKK = 100 CLP

## Danes are getting older

Denmark - life expectancy\*

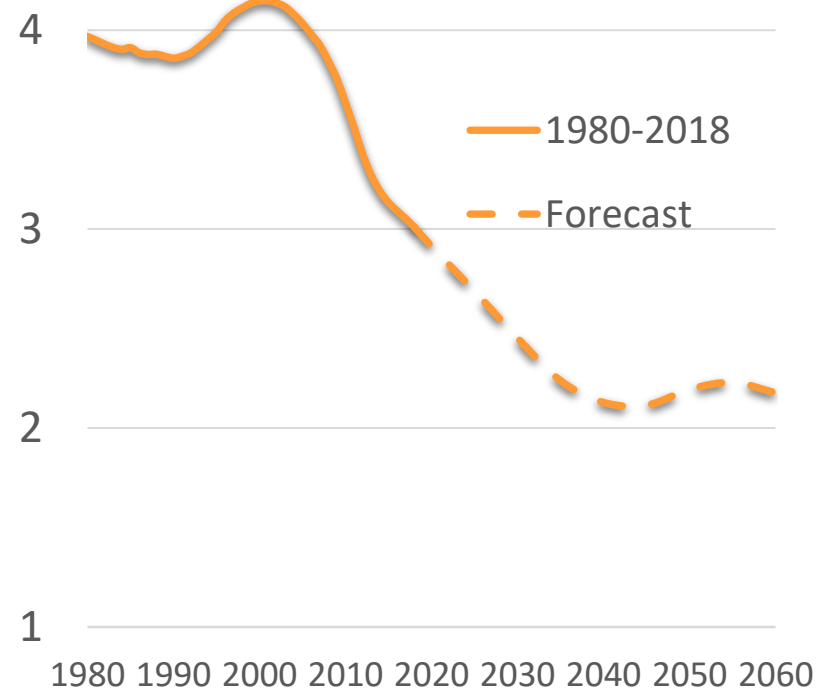


\*) Historical

Source: Statistics Denmark

Dependency ratio (inverse)

Age 20-64 / Age 65 or older

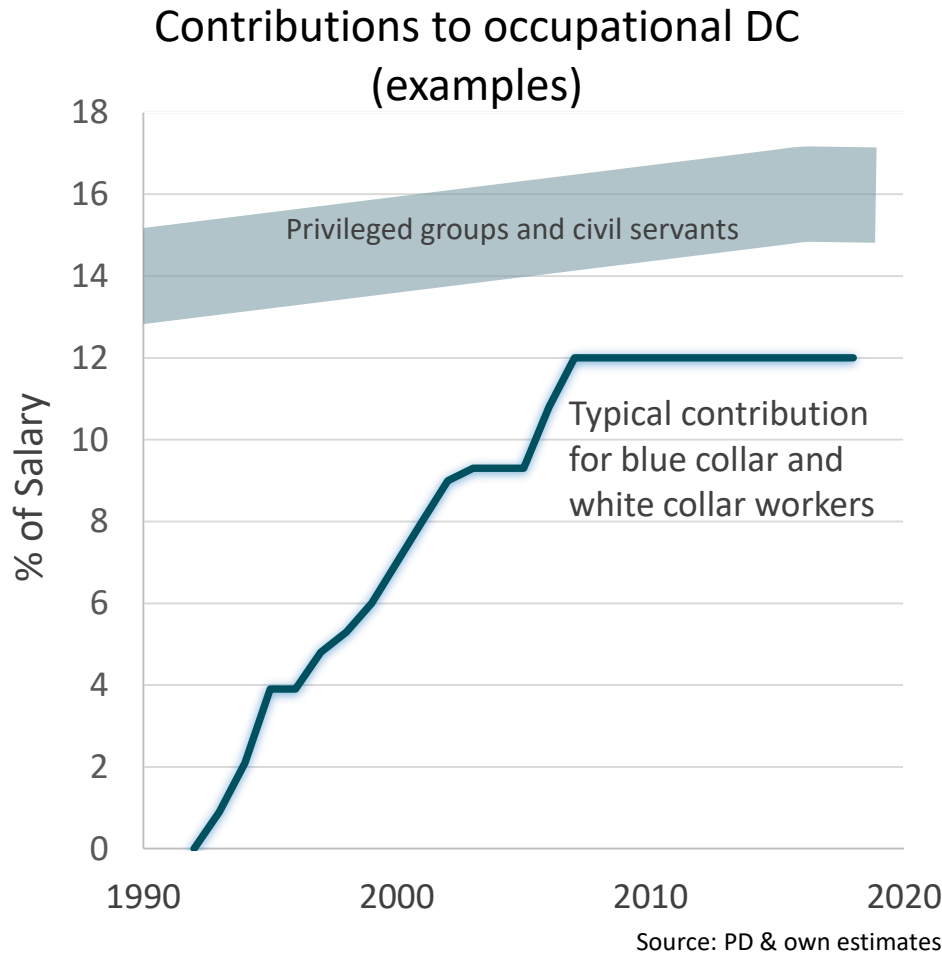


Source: Statistics Denmark

Heading towards 2 providers per 1 dependent => action required



## Pension saving needed to be increased



Late 80'ties and early 90'ties  
mutual agreement between...

- Politicians
- Employers' organizations
- Trade unions

.....to gradually implement more  
pension saving for more people

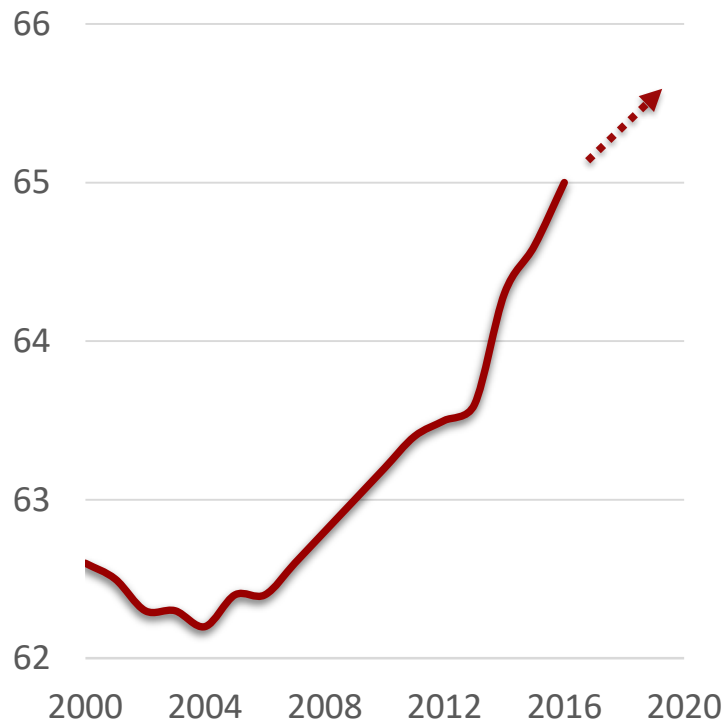
Evolution:



More saving and later retirement →

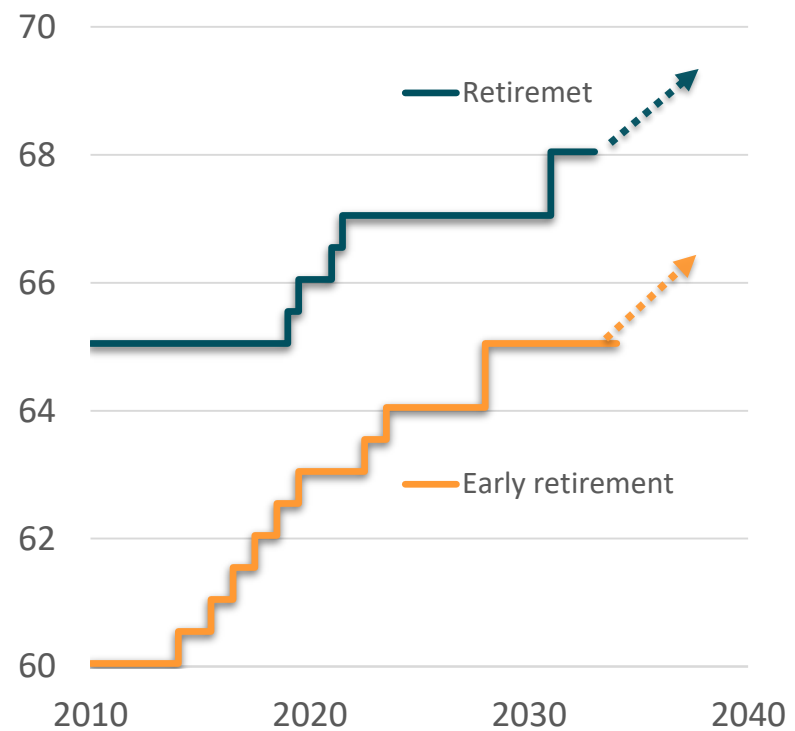
## Working longer.....

**Labour market - actual exit age**  
(average)



Source: F&P and Statistics Denmark

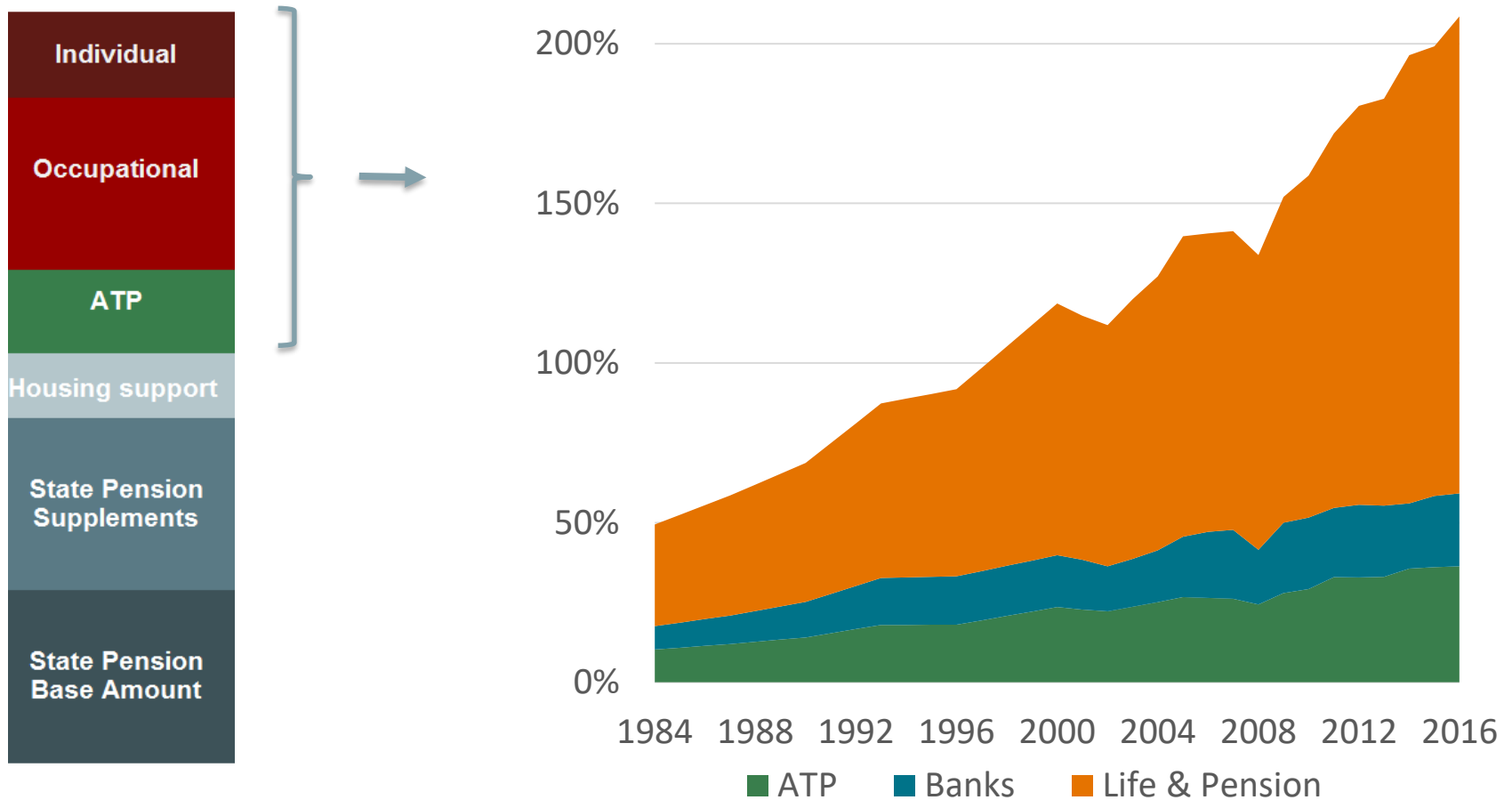
**Retirement ages**  
State pension & Early ret. support



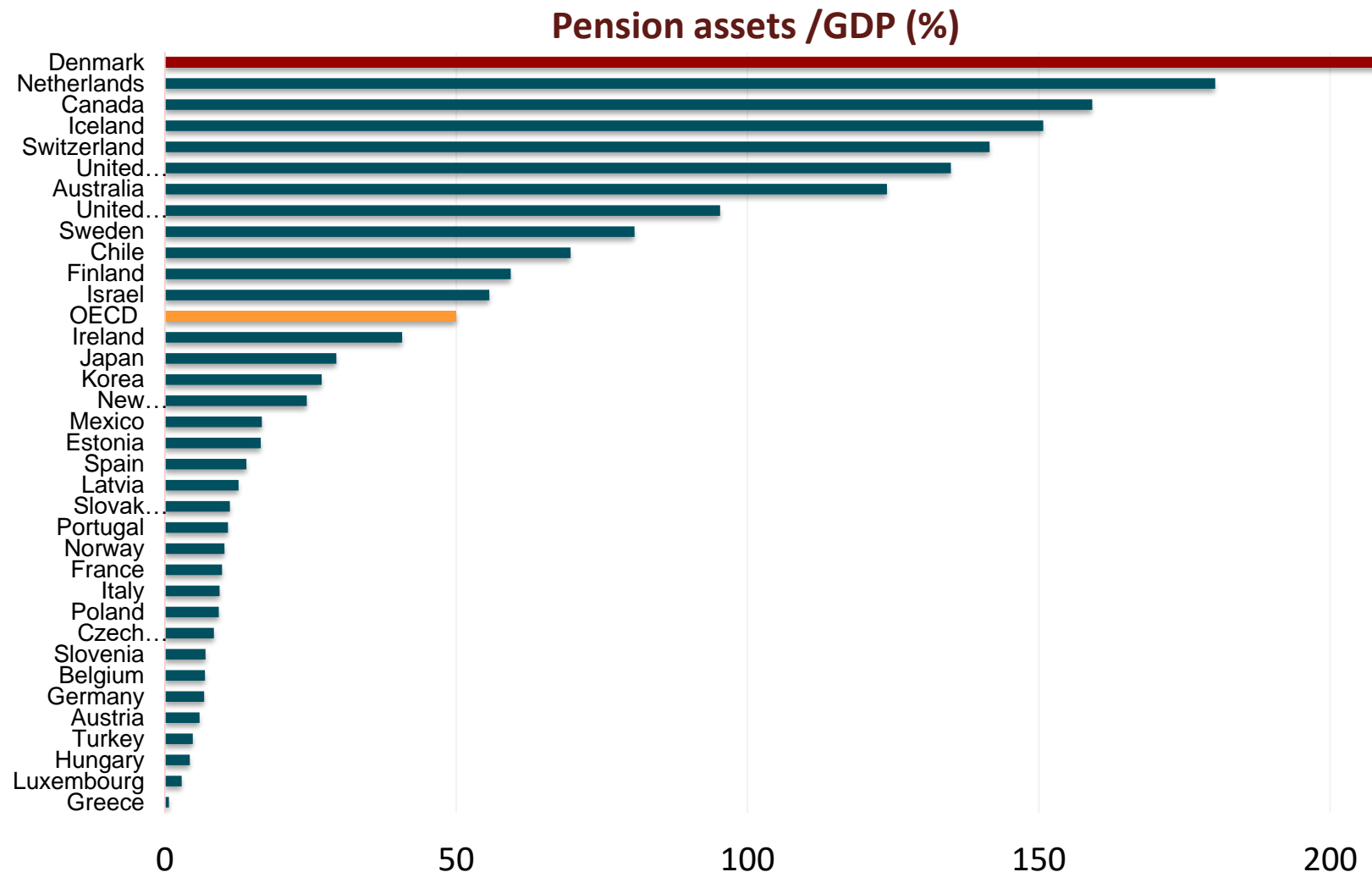
Source: DSA and borger.dk

....and more to come

## Denmark – much more sustainable now



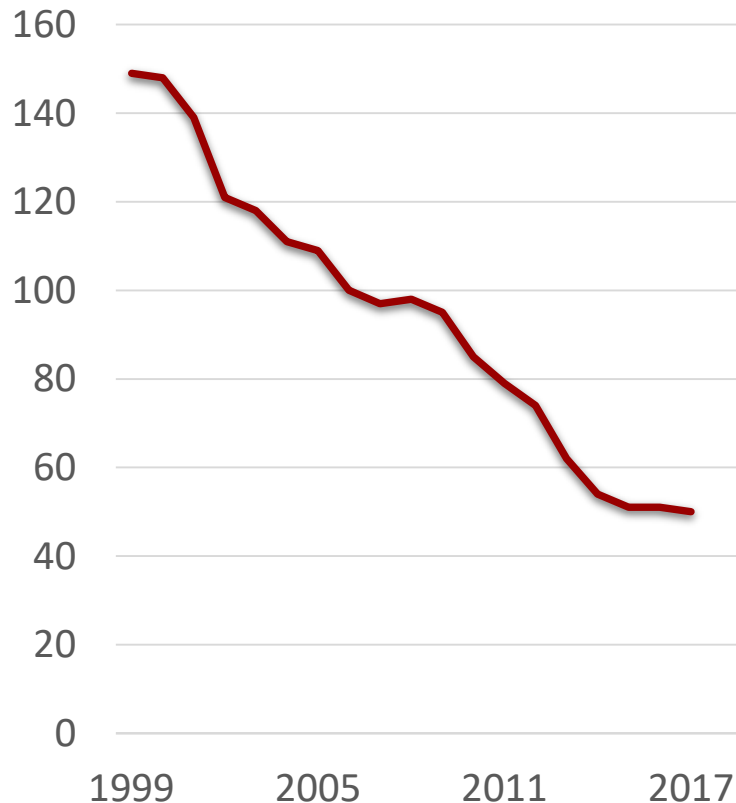
## Pension Assets / GDP



Source: OECD

## Consolidation – 15 largest pension providers are holding 96% of assets

Number of pension providers\*



\*) Legal entities.

Banks, ATP & LD not included

Source F&P and FSA

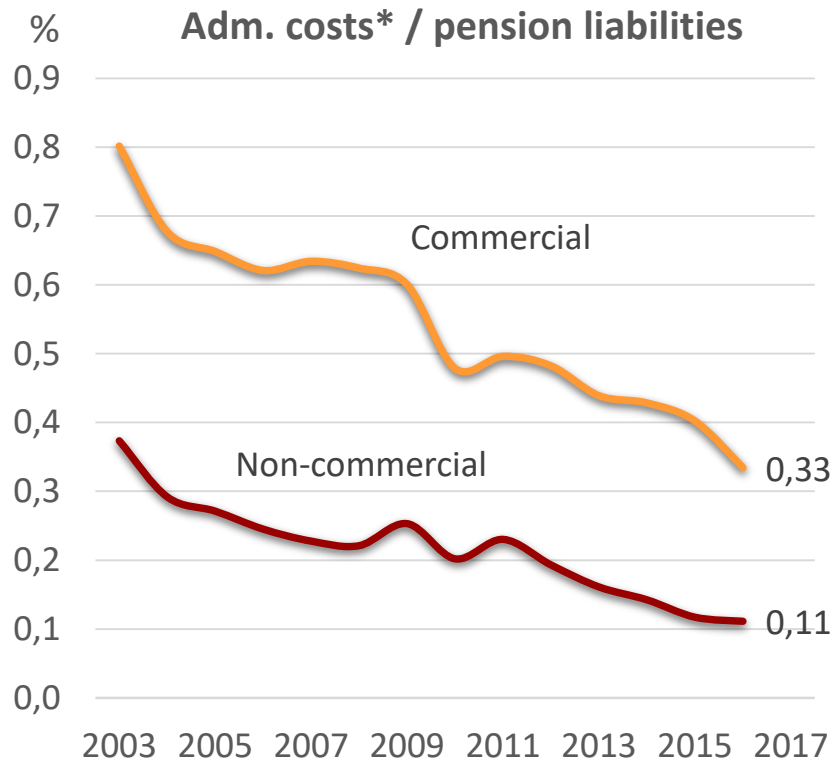
Largest pension providers:

Pension Provider	Assets	
	BDKK	Type
PFA	514	Commercial
Danica + SEB	489	Commercial
PKA + Farma	261	Non-commercial
Sampension + PJD+AK	290	Non-commercial
Nordea L& P	227	Commercial
PensionDenmark	222	Non-commercial
Industriens Pension	157	Non-commercial
PenSam	133	Non-commercial
MP Pension	107	Non-commercial
AP + ISP	123	Com. / Non-Com.
JØP + DIP	111	Non-commercial
Teachers	93	Non-commercial
Medical Doctors	84	Non-commercial
PBU	63	Non-commercial
Topdanmark	54	Commercial

Source : F&P and Danish FSA

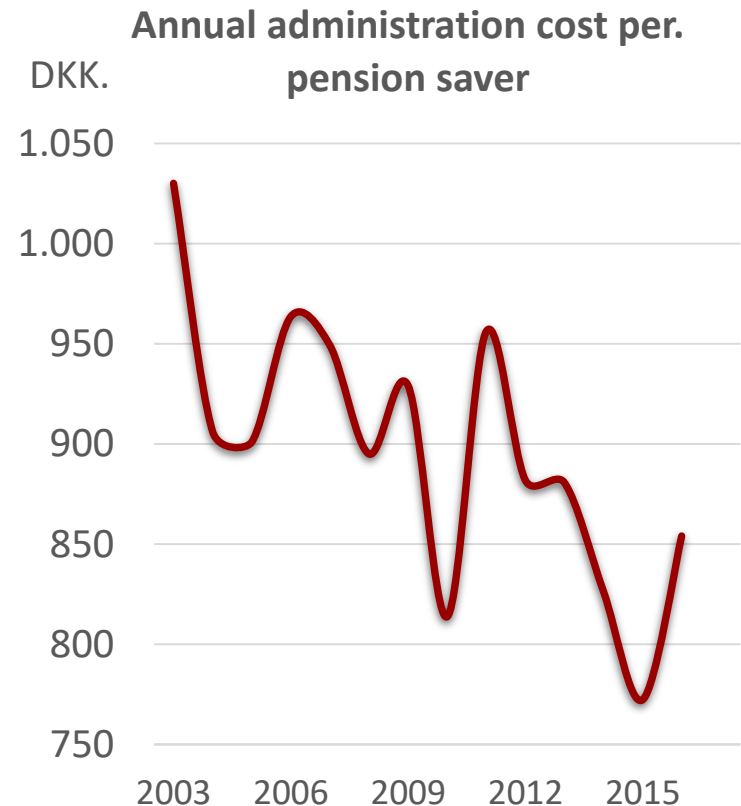
1 BDKK = 100 BCLP

# Consolidation = cost efficient pension products, and.....



Source: Pension providers' reporting to Danish FSA

\*) investment costs not included



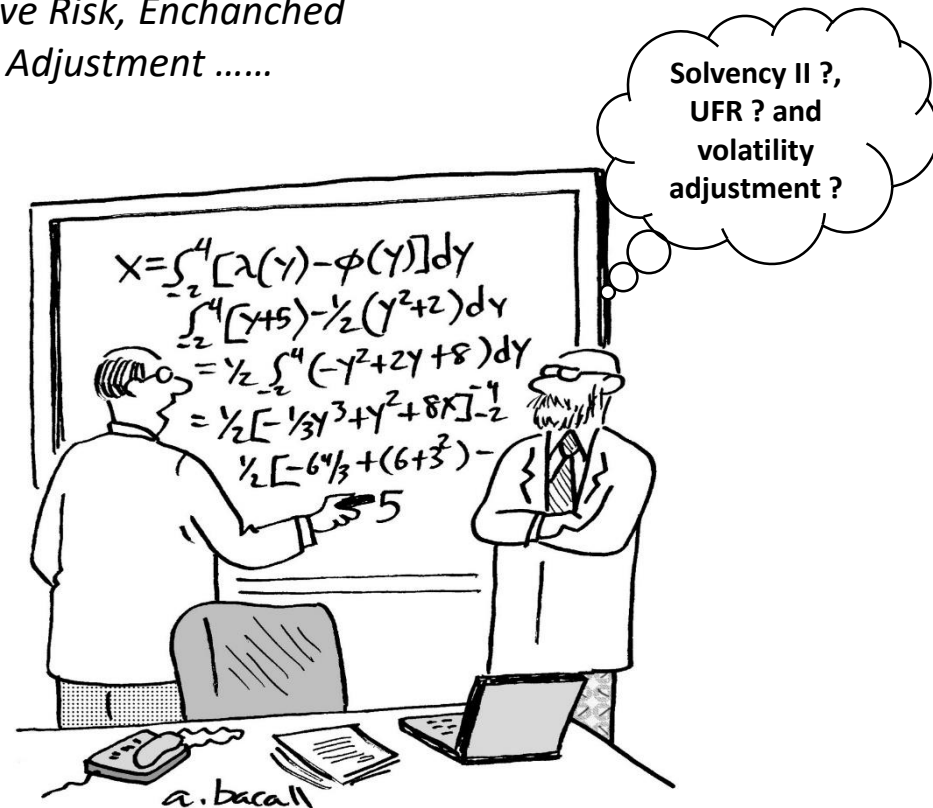
Source: Pension providers' reporting to Danish FSA

## Consolidation gives better scale to run high level expert organizations

*Risk Management, Risk Assessment, Due Diligence, Portfolio Optimization, Actuarial Assumptions, Benchmarking, Vega, Curve Risk, Enchanted indexing, Ultimate Forward Rate (UFR) , Volatility Adjustment .....*



"Well he certainly does a very thorough risk analysis"

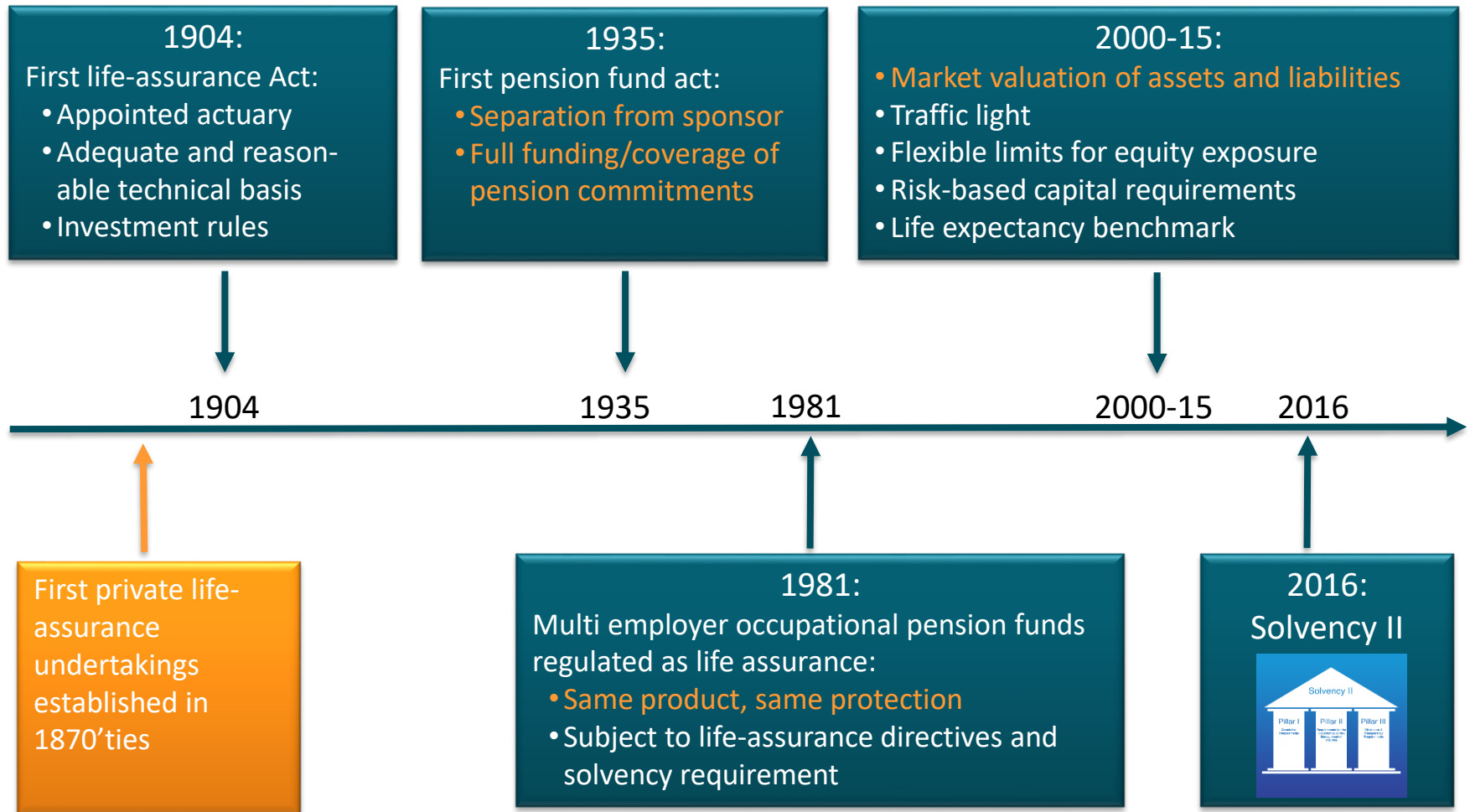


"Yes, - US dollar will go up and we are solvent => we can actually pay out pensions!"

Source: Cartoon Stock + own text modification

...much to do!

# The history of Danish life assurance & pension fund regulation

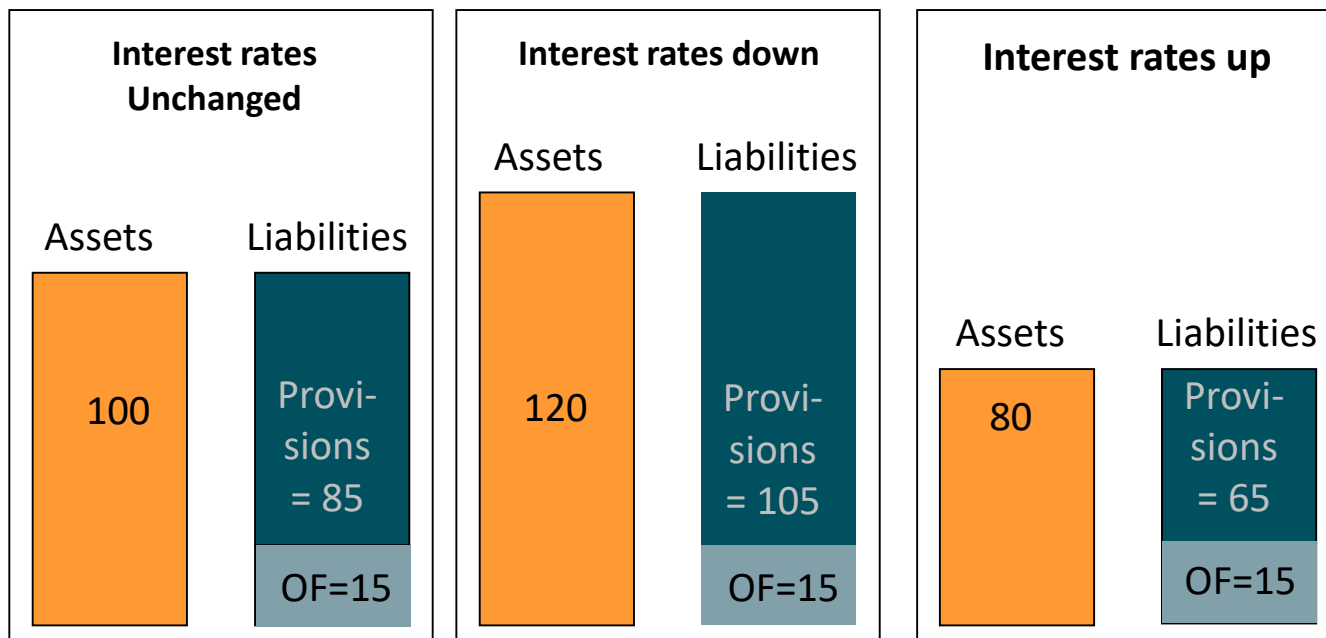




## Market Valuation of both Assets and Liabilities

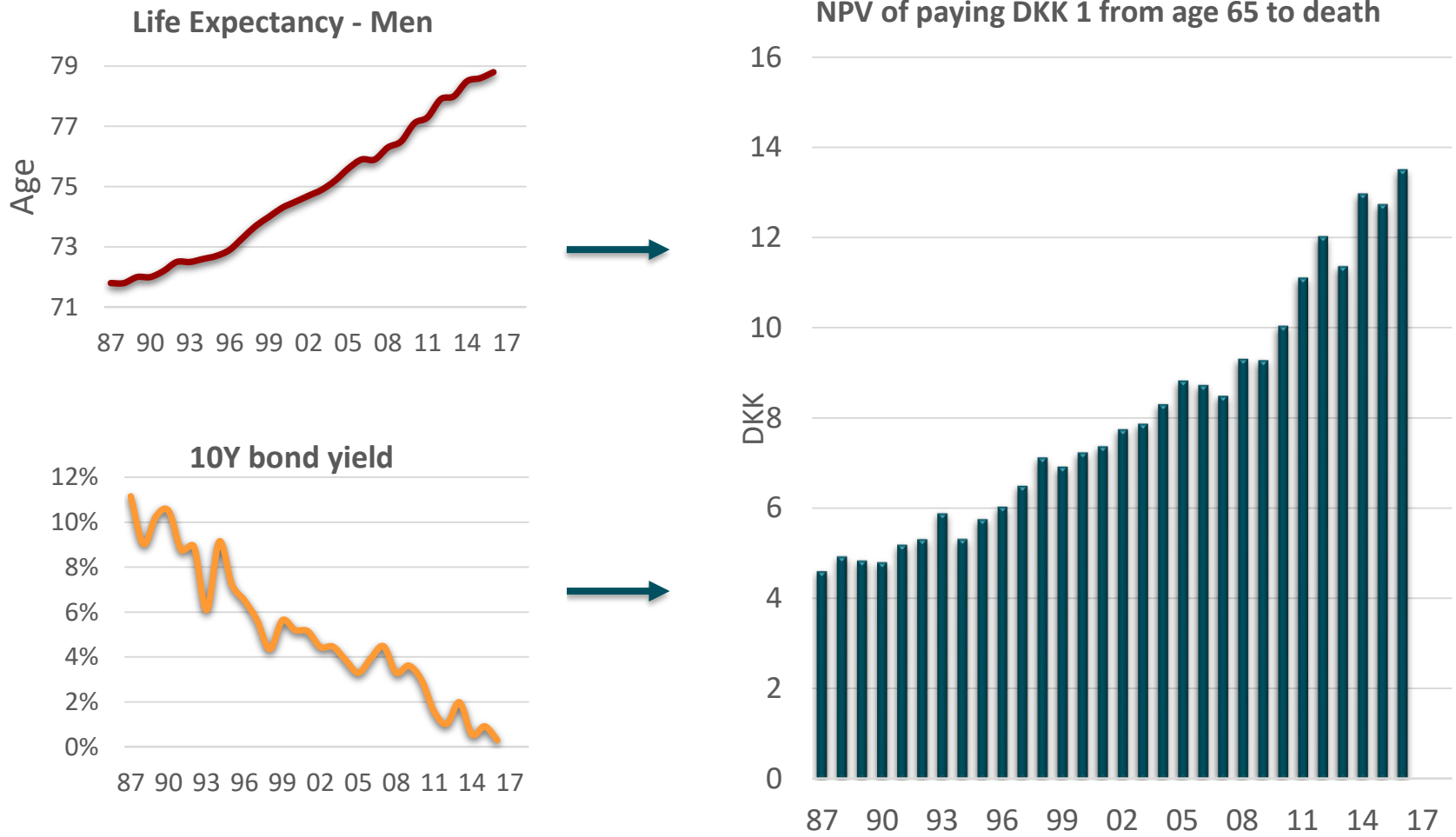
Pension Provision = NPV of future guaranteed pensions => i up = Provisions down  
Assets = Market value of investment portfolio (bonds) => i up = Assets down

**The perfect hedge:**



The perfect hedge is harder to get... →

## Living longer + interest rates down & below guaranty level.....

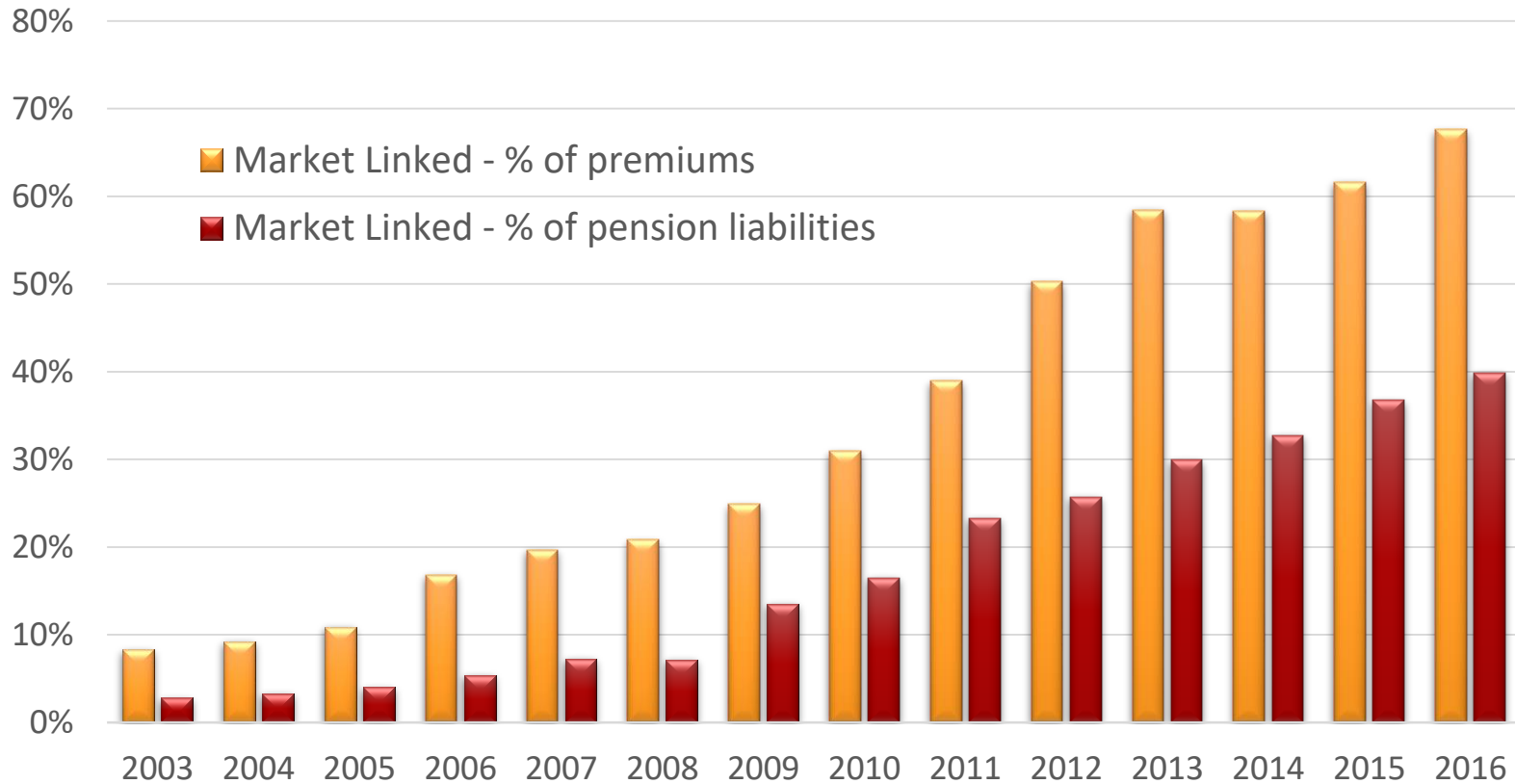


Sources: Statistics Denmark & Danish FSA

.....makes guaranteed pensions products hard to handle

## Guarantees are disappearing

### Development in market-linked products\*



Source: Danish FSA

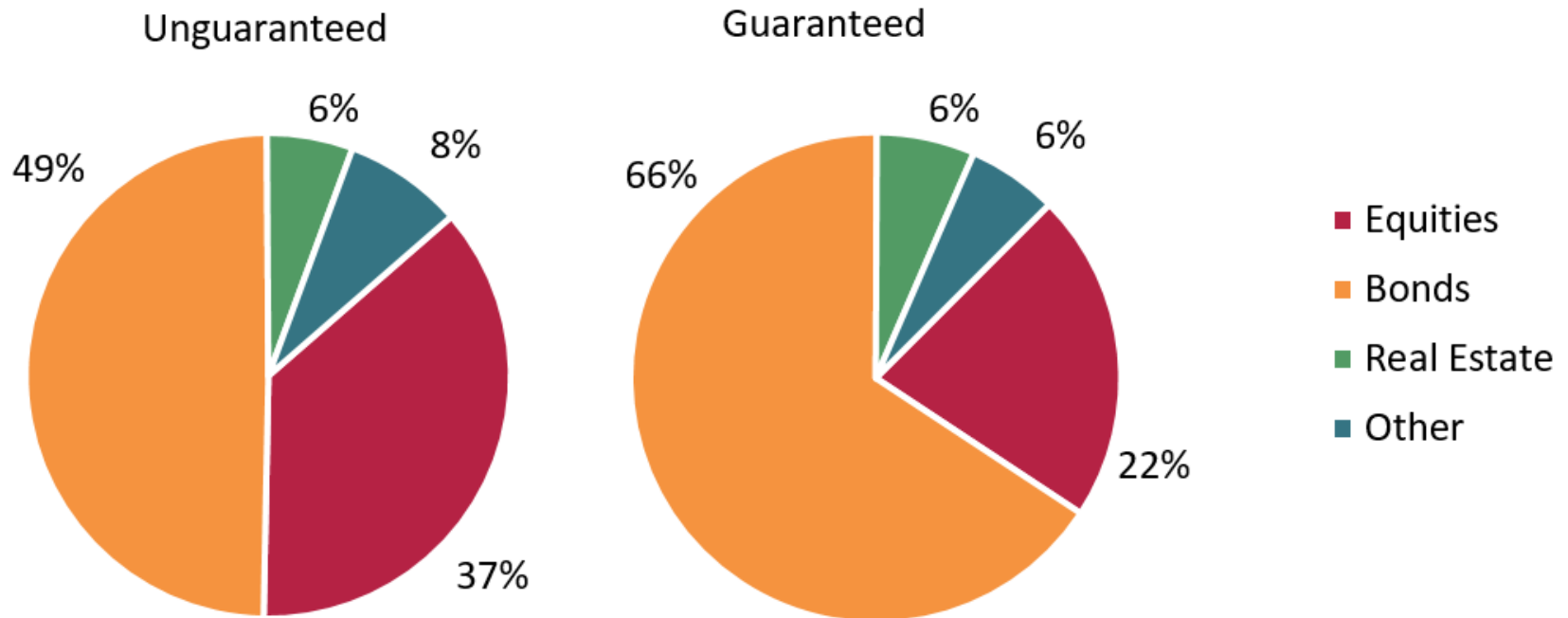
\*) ATP & LD not included

## More risk taking in unguaranteed pension products



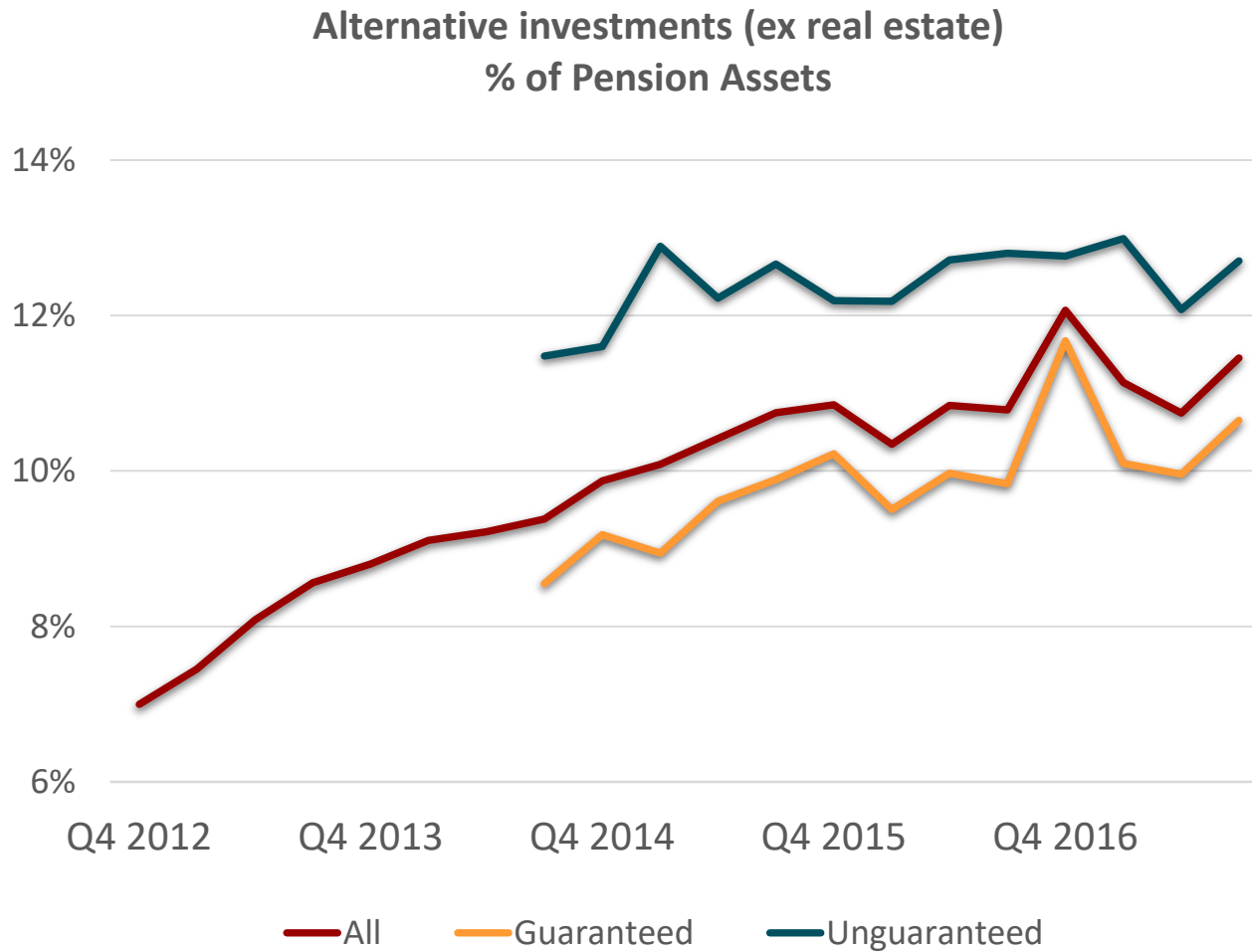
Source: Jeff Parker + own text

## More risk taking in unguaranteed pension products (2) – Asset allocation



Source: Danish FSA

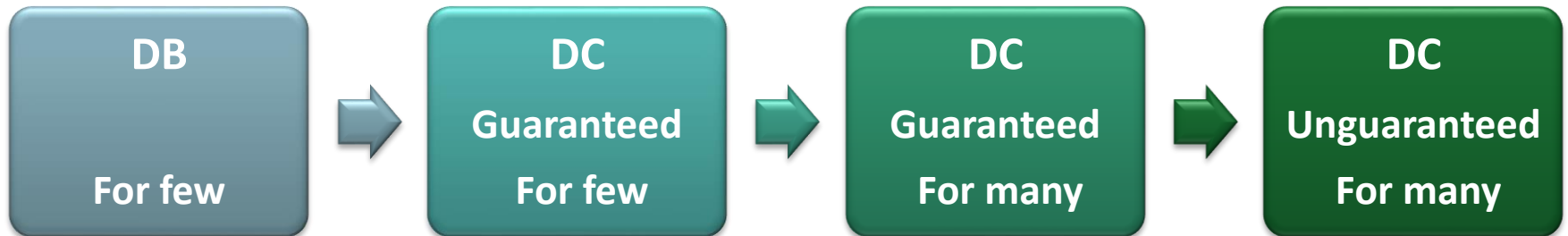
## More risk taking in unguaranteed pension products (3) - Alternatives



Source: Danish FSA based on reporting from pension providers

## Evolution goes on.....

---



# SII “Prudent Person Principle” - Goodbye to quantitative investment limits

The Prudent Person Principle contains among other things:

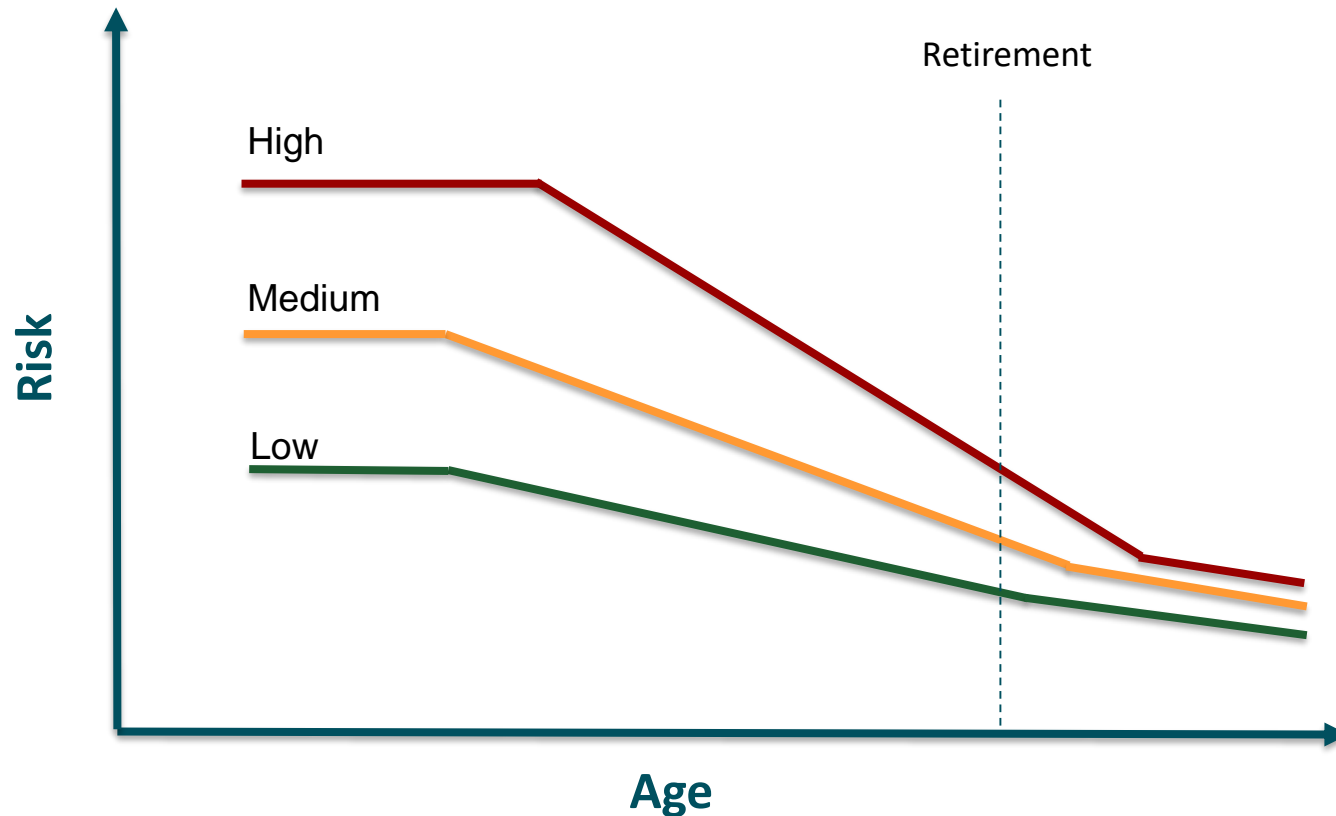
- The interests of the policy holders is first priority
- Investment can be done only in products where the undertaking can perform proper risk measurement and risk management
- Assets must be invested in such a manner that security, quality, liquidity and profitability can be assured
- The pension provider has to consider the link between investment assets and the expected pensions



Important that the pension saver understand the risk in the pension product!



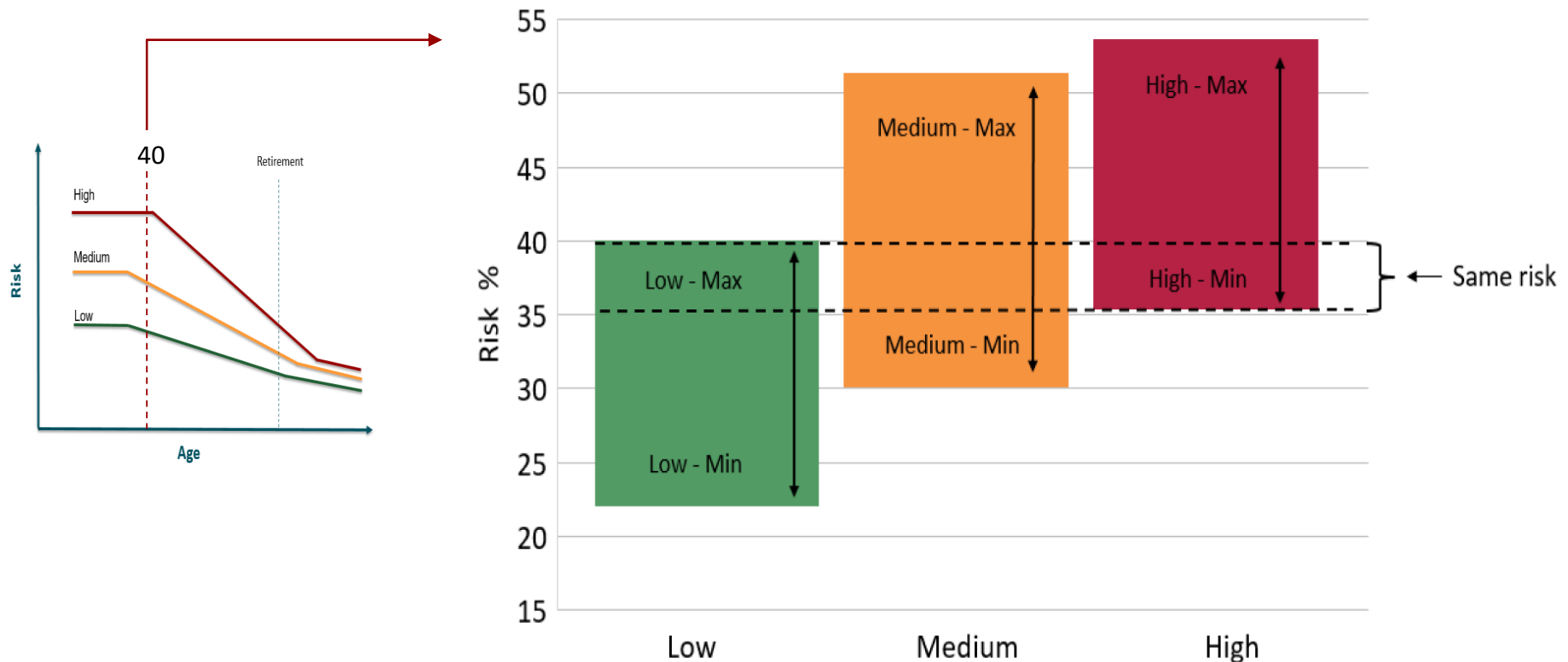
## Pension - Life cycle products



Each pension provider has its own product style and own risk definition

## Life cycle products – not easy to compare for the pension savers

Difference in risk for a 40-years-old pension saver across pension providers

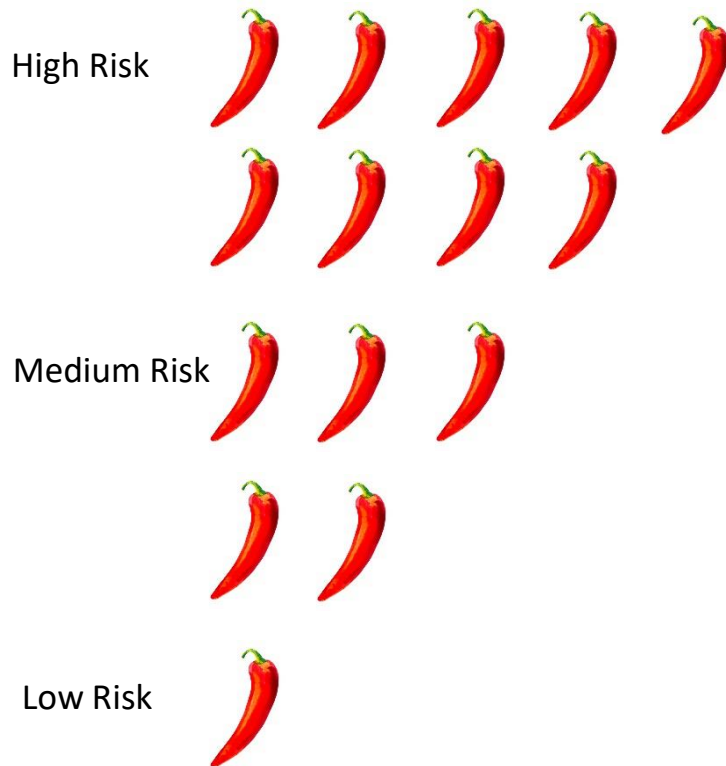


Source: Danish FSA based on Pension providers' risk calculations reported to Danish FSA

**Risk information must be improved!**

## Ongoing work: Harmonized risk declaration

---



Should be:

- Linked to investment portfolio
- Based on same methodology for all pension providers
- Based on advanced forward looking risk models

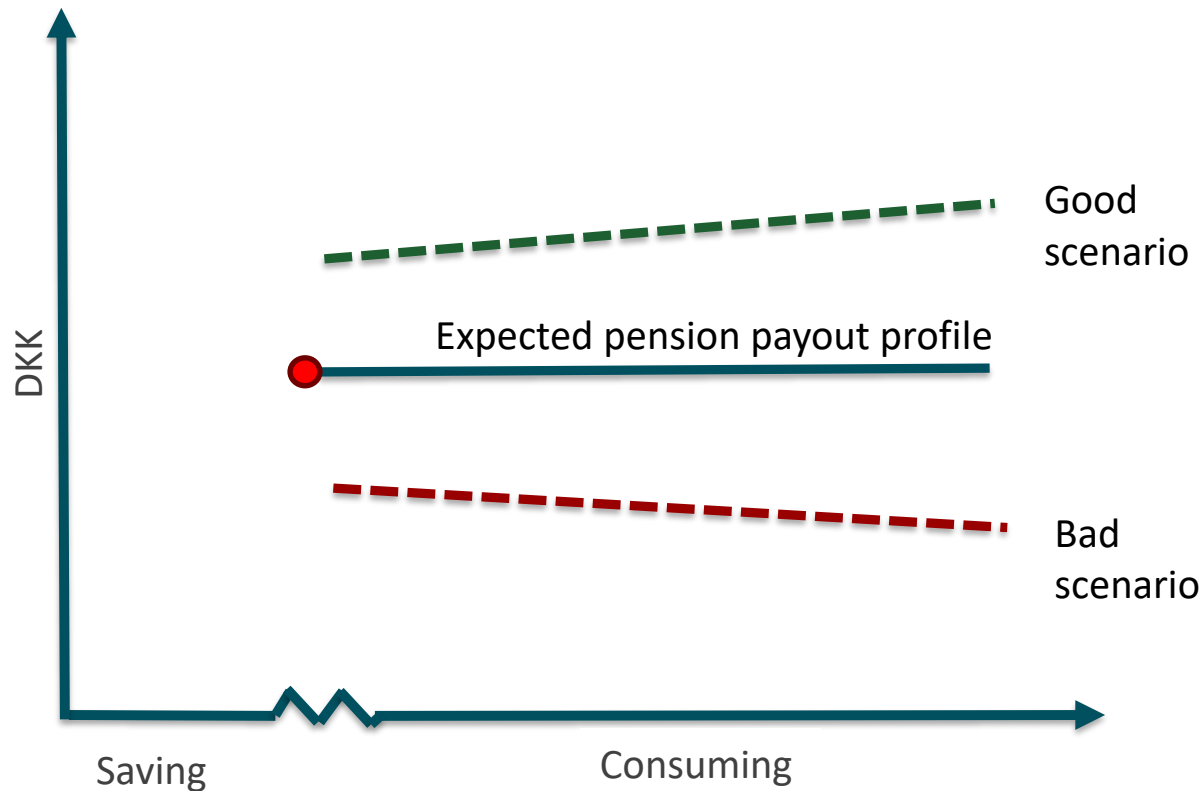
.....but at the same time be communicated to and understood by all



---

Understandable information keeps up motivation for saving!

## Ongoing work: Pension forecasts linked to investment risk



From “one point” to pay-out profiles with uncertainty 28

## Takeaways

---

- Creating a sustainable pension system takes time and is best supported by unity among and support from all stakeholders
- Pension saving can be mandatory or voluntary. For voluntary savings systems you need to keep up pension saving motivation for the individual pension saver by ensuring that:
  - Tax incentives are consistent and easy to understand
  - Pension saving systems and risk are understandable for the savers
- Competition is nice, but scale is necessary to run cost efficient and professional pension providers
- For **DB** and **DC-Guaranteed** regulation Solvency II limits the risk taking (in Denmark) but lower risk also implies lower expected return
- **DC-Unguaranteed** gives wider investment opportunities and higher expected return, but also requires much better information to the pension saver

# Thank you!

[hsh@ftnet.dk](mailto:hsh@ftnet.dk)

Ph: +45 41 93 35 45

[www.linkedin.com/in/henningskovmosehansen](https://www.linkedin.com/in/henningskovmosehansen)

---