

Innovation in sustaining the pension fund model

– inspiration from Holland

The Dutch “DB” model

- A DB solution that morphed into DC
- All risk sits with the members
- One asset allocation mix
- 10 year smoothing of investment returns
- Same indexation rate for everyone
- Pay-as-you-go element in a funded scheme



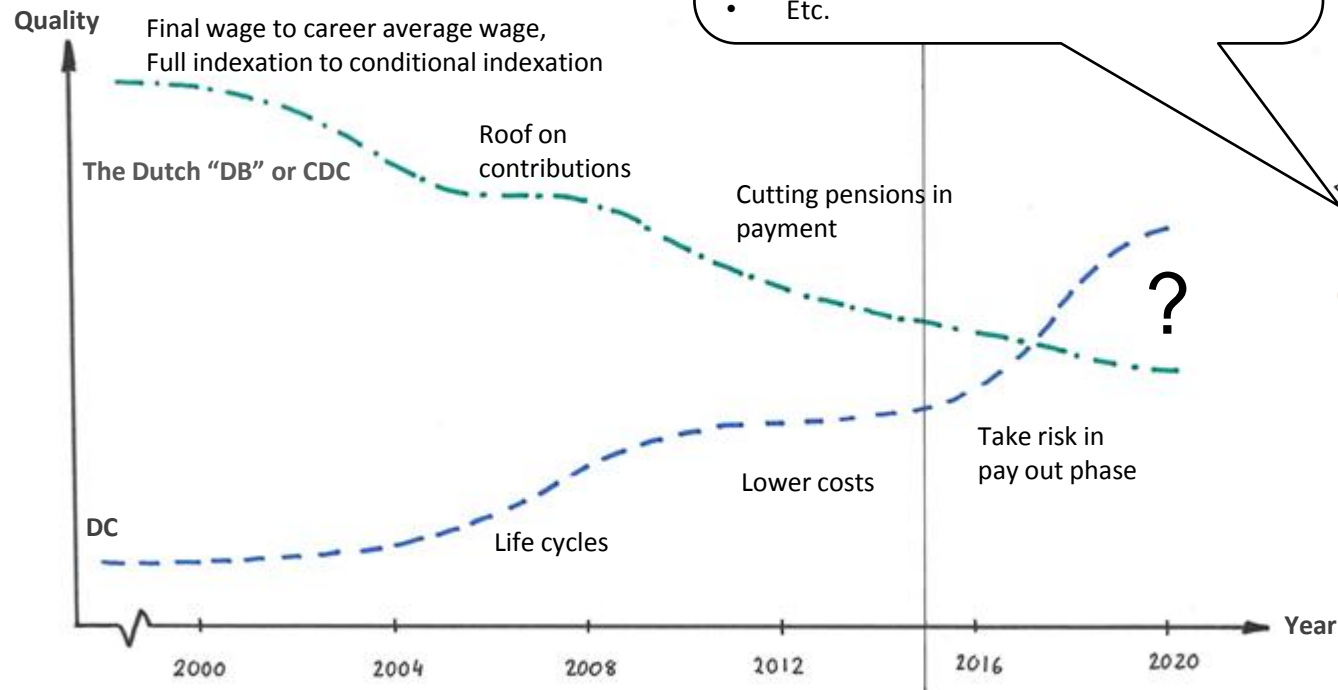
Did Escher design this pension scheme?



The Dutch Disease

Dutch "DB" pension funds have:

- Unclear property rights
- Intergenerational transfers
- In-transparent
- DB accounting in collective DC
- Etc.



A thought experiment

**WHAT IF THE DESIGNERS OF THE
OLD DB WOULD JOIN US TODAY?**

Objective

Building a stable retirement income,
with individual flexibility and choice



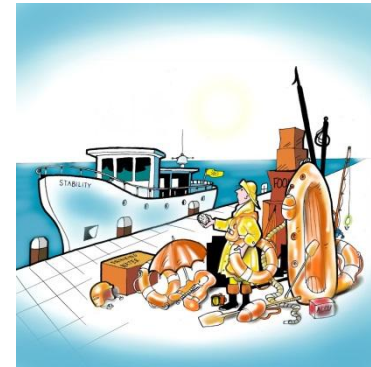
- If you don't know what you are saving for, any pension scheme will get you there!

Principles of Pension Design

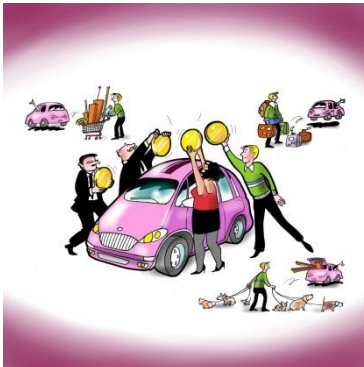
BEHAVIOURAL



STABILITY



RISK-SHARING



The governance challenge...



Market imperfections



Agency issues

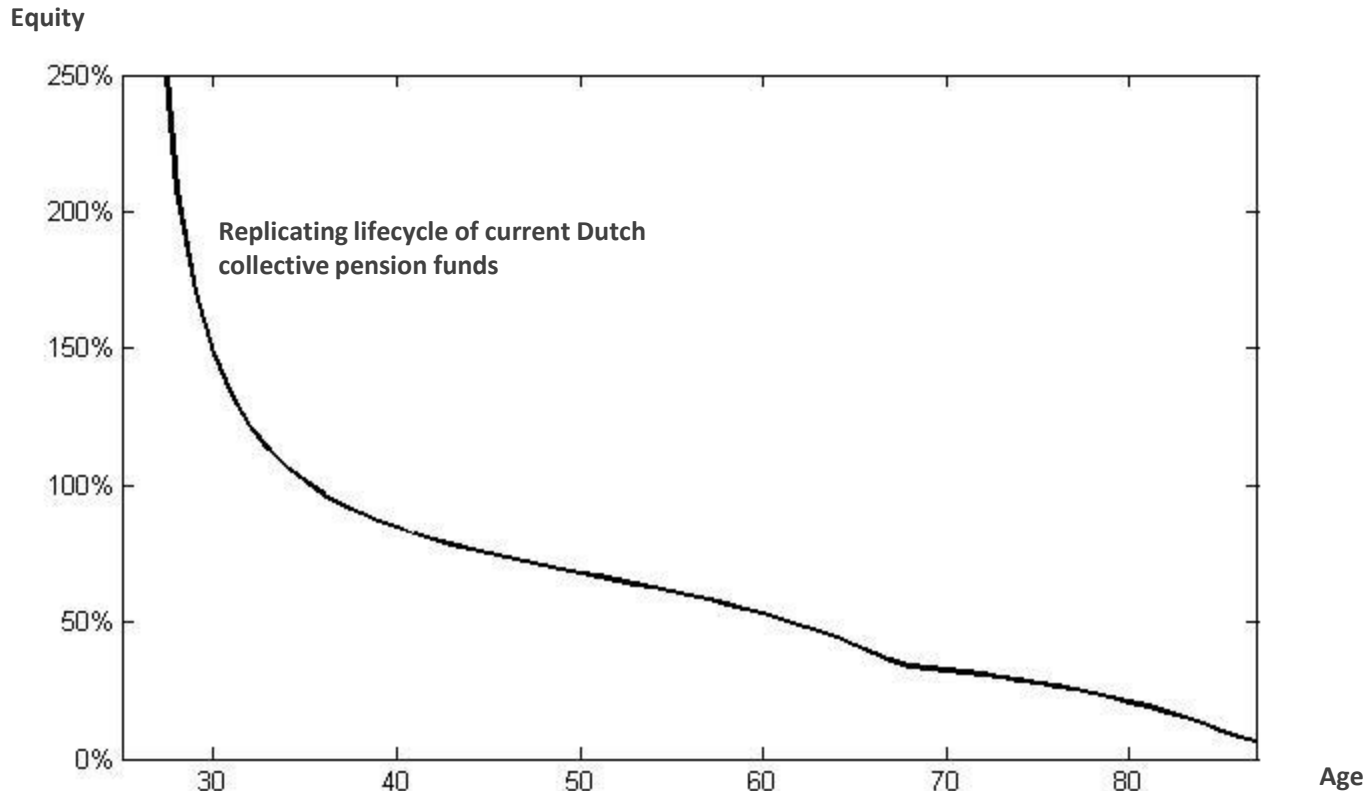


Behavioural biases

In theory

**CAN AN INDIVIDUAL LIFE CYCLE BE
AS GOOD AS THE DUTCH MODEL?**

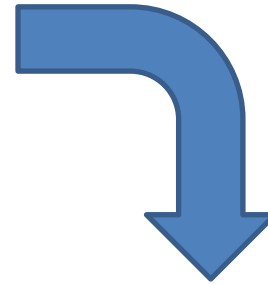
Amazing insight (1)



Wow – an Dutch collective scheme can be replicated by a DC solution with a very specific individual life cycle!

Source: Ortec, Cardano, CPB etc.

Current Dutch Pension Funds



Aha, we can unbundle the risks in current Pension Fund contacts



Make customised packages

This package is made for a 'young' employee (up to age 55)

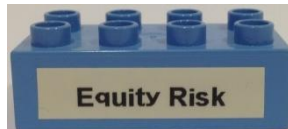


The individual

Can bear exposure to interest rate sensitivity

The collective

No interest rate hedge



Desire exposure to equity risk premium

Risk is not hedged (and should not be pooled)



Family protection in case of disability

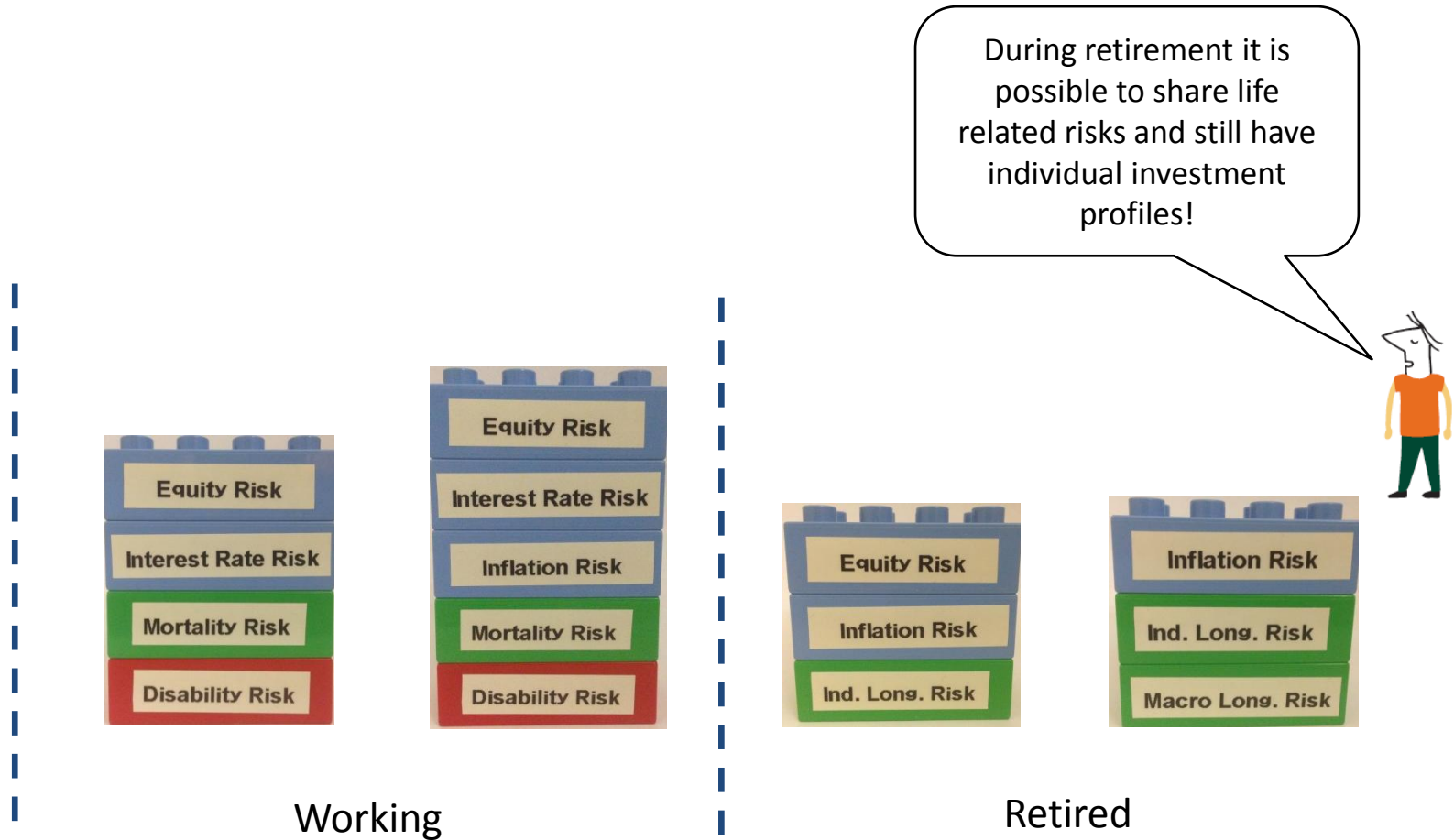
Risk is pooled, charge premium



Family protection in case of death

Risk is pooled, charge premium

Different packages during life

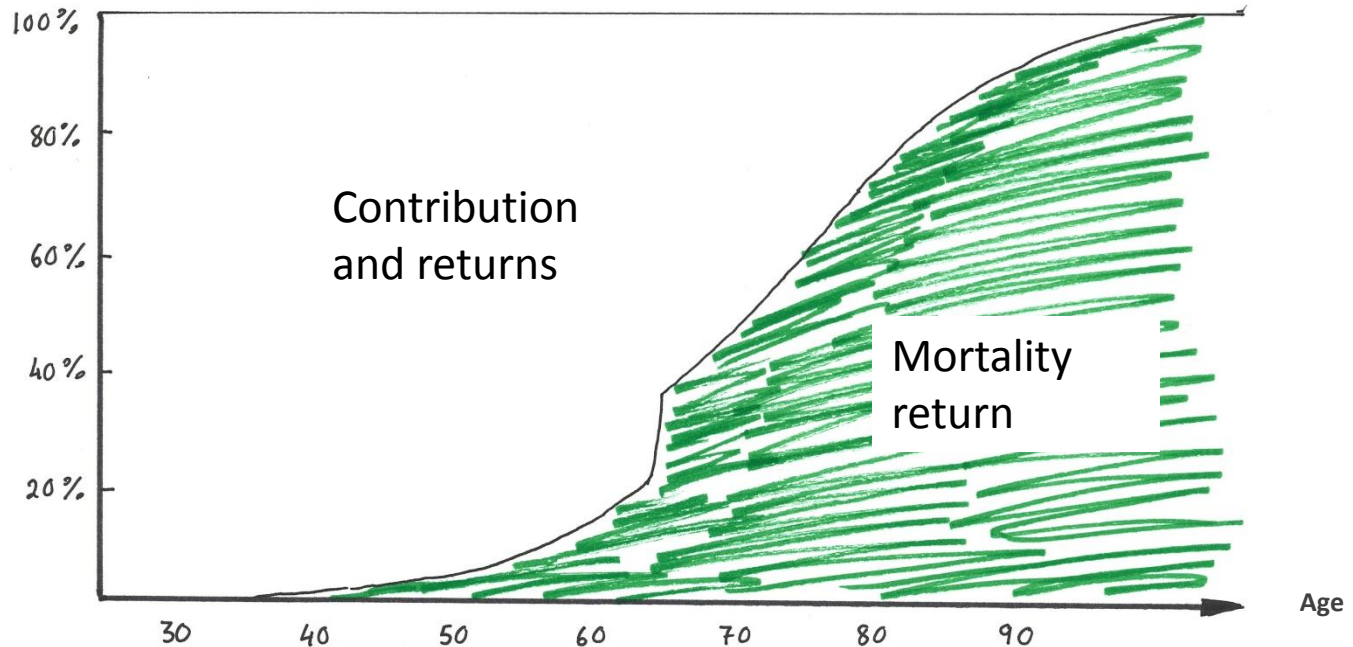


Amazing insight (2)

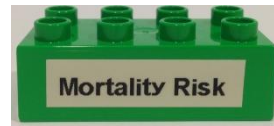
Mortality return is more important than the asset return at older ages. This is why pooling individual longevity is welfare increasing...



Percentage of pension savings



Amazing insight (3)

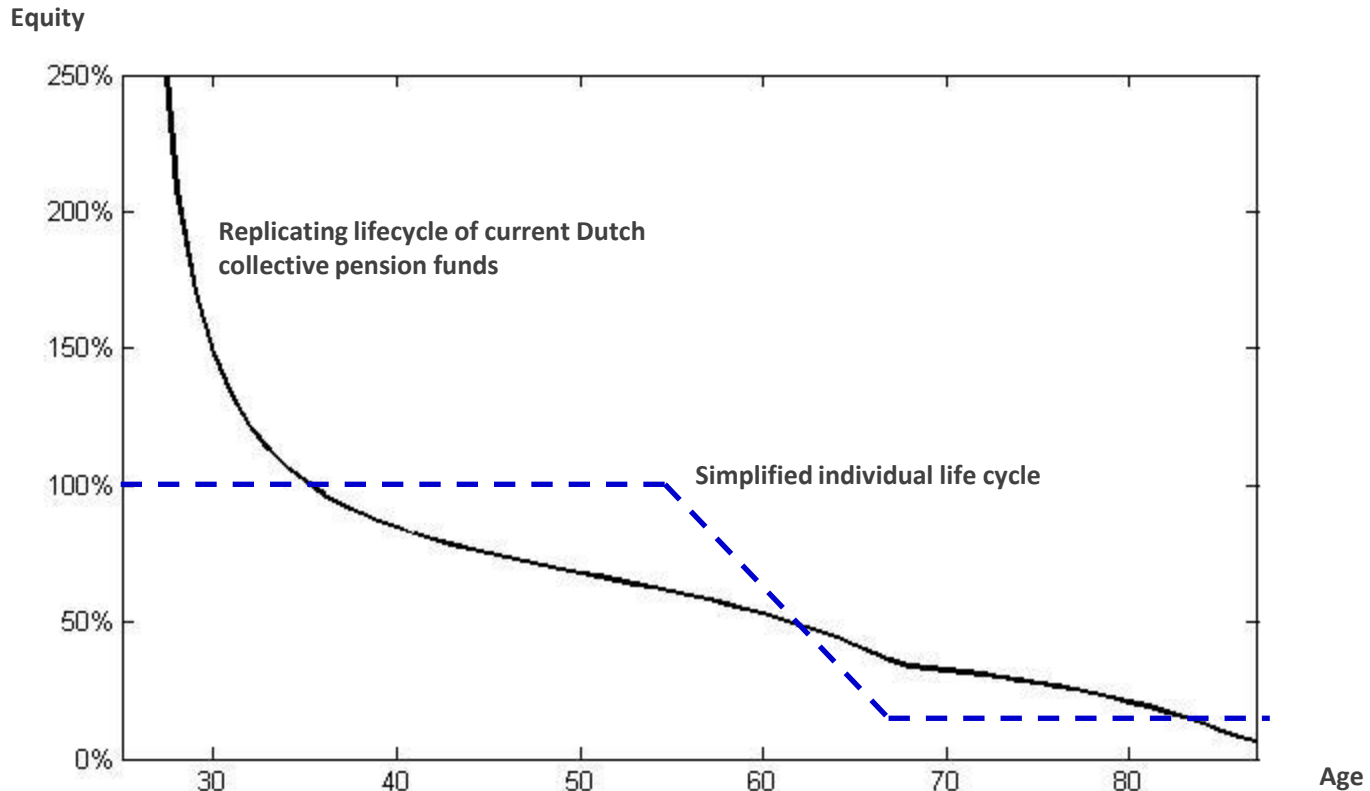


We can separate biometric return from financial return

Let's get practical

HOW TO DESIGN A GOOD SOLUTION FOR THE FUTURE?

Step 1: Replicate current contract



If we are satisfied with the current solution then we use it to anchor the new design!

Step 2: Define specific building blocks

Current

- Stocks
- Bonds
- Overlay

Two building blocks makes it possible to offer individual design possibilities without making the implementation very complex



Proposed

- Growth assets
 - Targeting real + 3%
 - Can be dynamic over time
 - All members has units in this type of portfolio



Nominal income

- Targeting stable cash flows
- Members in each vintage has the same portfolio



Step 3: A simple and good default

Age group	Exposure
Working (Up to 55)	Exposure to growth assets targeting real returns.
Transition (55 to 67)	A gradual shift towards income assets. At the retirement the member has 20% in growth assets.
Retired (67 and more)	Move into the sustainable pay-out solution with a 20% individual buffer (growth assets)

This is the default choice, determined by the board. Experience shows that around 90% of the members will stay with the default.

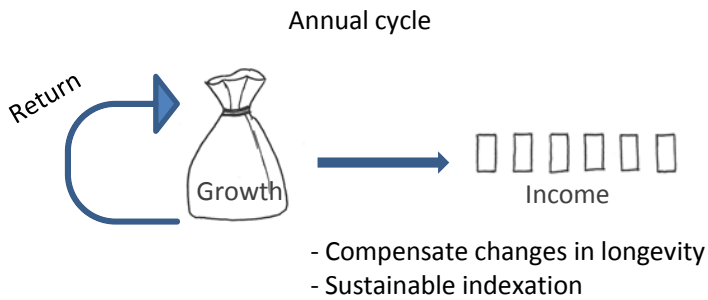


Intermezzo: pay-out phase



The Growth portfolio serves as an individual buffer:

- i) Retirement income is 'protected' against unexpected increases in systematic longevity
- ii) Some compensation for purchasing power via sustainable indexation



At the end of each year, the changes in systemic longevity is captured by the growth portfolio. The remainder of the growth portfolio will be used to grant a sustainable indexation percentage for next year.



Step 4: Add choice

Age group	Alternatives A	Alternatives B
Working (Up to 55)	Static and passive investment approach (low cost)	Dynamic investment approach
Transition (55 to 67)	Transition begins earlier than 55	Transition begins later than 55
Retired (67 and more)	Fixed nominal annuity	Variable annuity



The possible choices for the members are determined by the board. Approximately 10% of the members make choices.

KEY TAKE AWAY

Yes, it is possible!

- A flexible solution for today's labor market
- Built in the spirit of the designers that made the original DB scheme...
- ...using modern tools and technology.
- Collective implementation in a mutual.



This is really far from the 401(k) products sold in the US...