

Exploring Pension Policy on Auto-Pilot

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Agenda

- 3** What are Collective Defined Contribution Plans (“CDC”) and how are they different?
- 4** Actuarial Perspective on Design
- 7** Impact on Retirement Income
- 9** Pros and Cons
- 10** Case Study
- 14** What changes are needed to allow CDCs in the US?



What are CDC plans and how are they different?

Fixed contribution rates

Benefits paid
as annuities

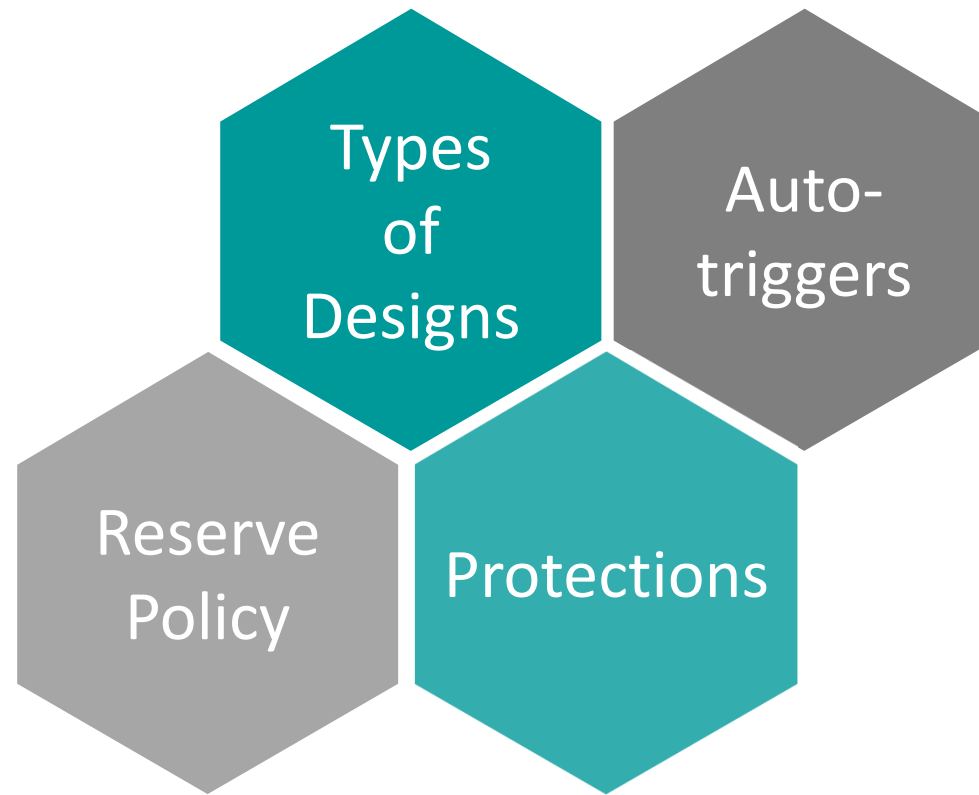


Pooled Investment
and Longevity Risk

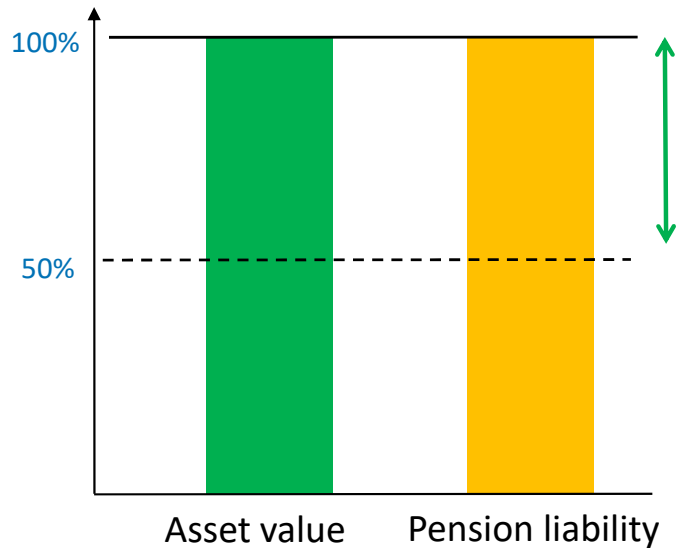
Board oversees assets,
service providers and
administration

Benefits adjustable

Actuarial Perspective on Design



Actuarial Perspective on Design: Reserve



“Reserve” funding for pension increases

- absorbs most asset / liability valuation movements

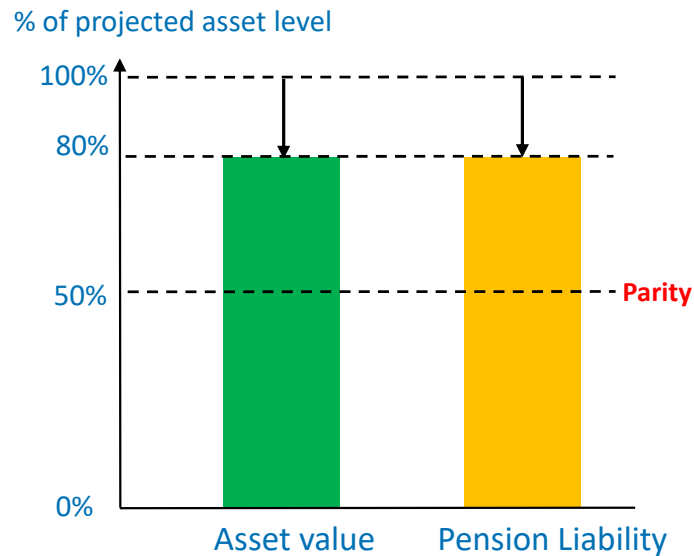
“Parity” or “Base Benefit” - amount of funding required for existing level of pensions with no further increases.

- If assets fall below parity, pensions must be reduced over a short timeframe to restore parity.

- Best estimate basis
- **Based on sustainable level of increases funded by the assets – so funding level is always 100%**

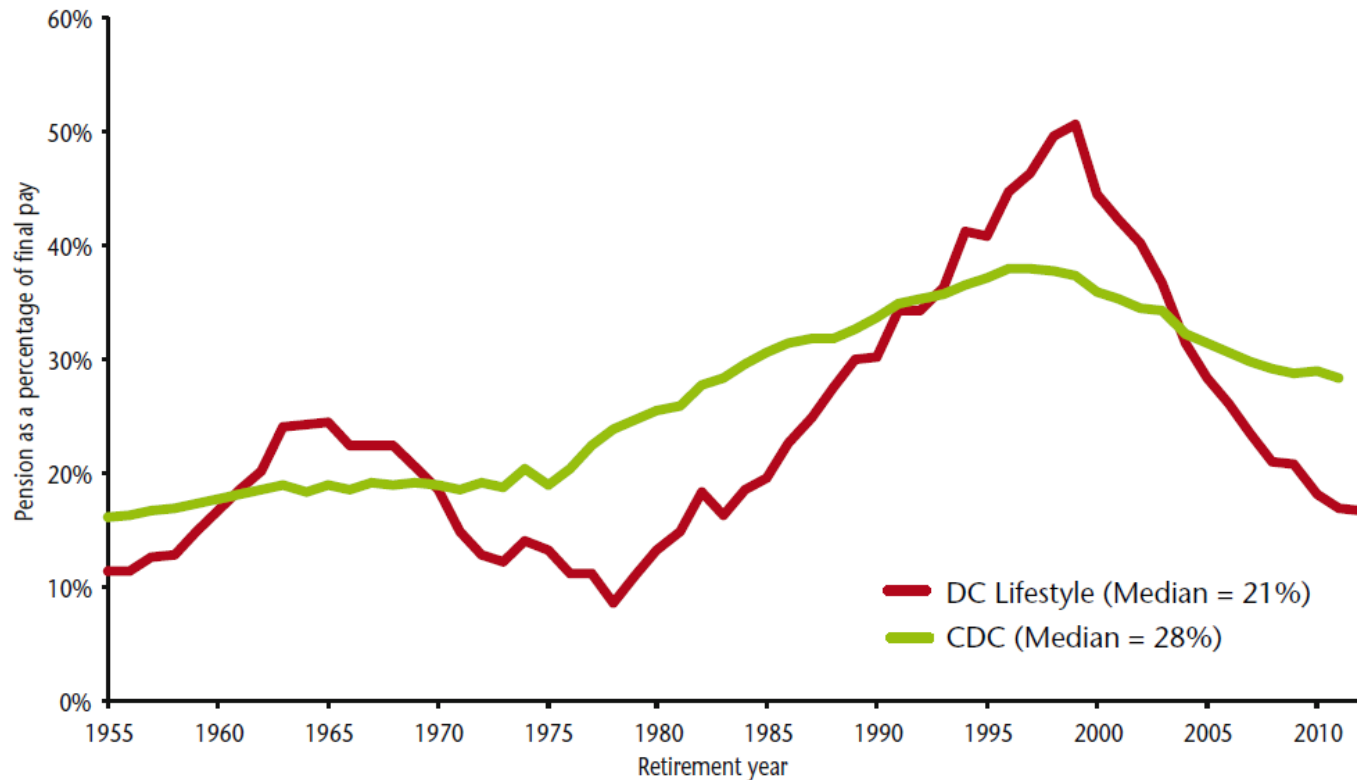
Actuarial Perspective on Design: Auto-Triggers

What happens if assets lose 20% in one year?



- *Asset loss of 20% would be made good by a 1% a year reduction in increases over the remaining life of the plan*
- *Plan is now fully funded with planned increases of 2% a year*

Retirement Income Comparison



Source: Aon "The Case for Collective DC" www.aonhewitt.co.uk/collectivedc
See Appendices A and B of "The Case for Collective DC" for detailed assumptions and methods



Amount of Annuity Purchased with \$100K

Indicative amount of annuity purchased with \$100,000 in the UK annuity market for Male Aged 65 in year of purchase

Year of purchase	Single life level annuity
2000	£9,100
2004	£7,200
2008	£7,600
2012	£5,700
2016	£4,700
6. 2019 (as at 1 st March)	£5,500

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Pros vs Cons

Pros

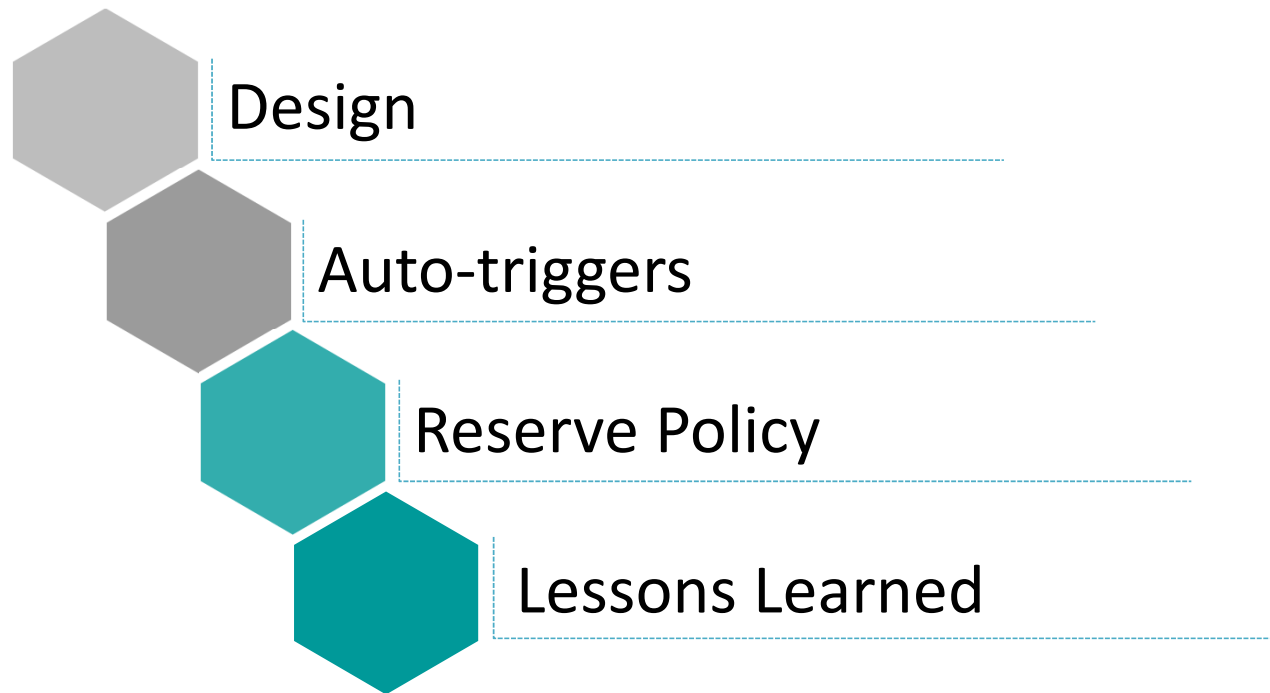
- Pooled Risk
- Higher retirement income than DC and some Hybrid plans
- Fixed contribution rates
- Little, if any, decision making required by employees



Cons

- “Soft” guarantee
- Robust Modeling/Testing
- Complex Governance
- Difficulty communicating and complete understanding
- Legal requirements

Case Study

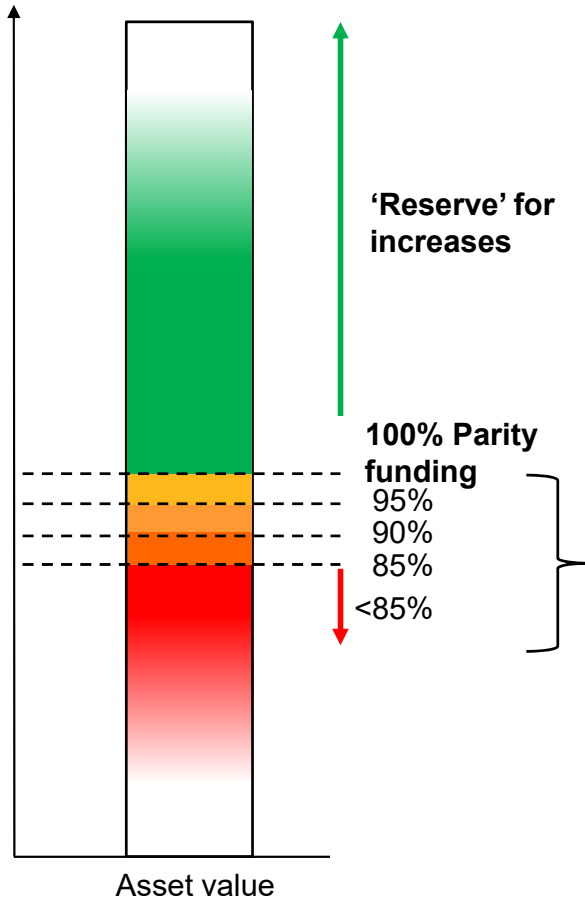


Overview of Design

Eligibility	12 months' service
Pensionable pay	Basic pay (actual) plus pensionable allowances and bonuses
Contributions	6% and 13.6% of pensionable pay for Employees/Employer
Benefit	1.25% of pensionable pay, plus increases (minus any cuts) <u>plus</u> Lump sum of 3.75% of pensionable pay annually
Cost-of-Living-Adjustment:	CPI + 1% per annum
Normal Retirement Age	67
Lump sum on death in service	4 x pensionable pay
Dependants pension	50% of member's CDC pension, plus increases (minus any cuts)



Auto-triggers



The “parity” funding level is the value of the pensions with no further increases.

When funding is >100% of parity:

- Increases determined as the long-term sustainable rate (as margin above / below CPI) funded by the assets.
- This rate is applied to the latest CPI to determine the increase.

When funding is < 100% parity, pension levels are cut:

Parity funding	Initial Parity cuts		
	Yr 1	Yr 2	Yr 3
> 100%	n/a (increases applicable)		
95% - 100%	≤5%	-	-
90% - 95%	5%	≤5%	-
85% - 90%	5%	5%	≤5%
< 85%	>5%	>5%	>5%

Cuts of more than 5% would be spread over a period of up to 3 years



Summary of Stochastic Modeling Results

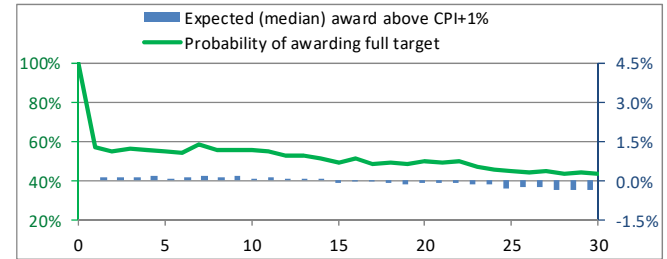
Benefit targeting

Inflationary increases (relative to target: CPI + 1%)

Over the 30 yr period...

Average increases above CPI + 1% target	0.0%	Probability of receiving at least CPI + 1% target	44%
Volatility of inflation adjustment over the whole period	38%	Average expected annual volatility of inflation adjustment	8%

'Serious reduction' = 5% reduction in pension

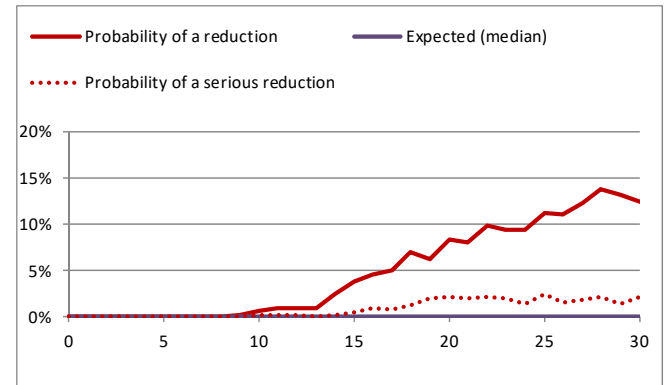


Bad outcomes

Pension cutbacks

Over the 30 yr period...

Probability of ever triggering a serious reduction (>5%)	10%	Probability of ever triggering more than one serious reduction (>5%) in any 5-year period	7%
Probability of ever triggering a pension cutback	32%		



What Changes are Needed to Allow CDC's in US?

Classify Legal
Structure

Define Fiduciary
Responsibility
and Exposure

Revise Internal
Revenue Code

Biography



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Eric J. Atwater is a Partner and leader of Aon's Public Sector Retirement practice. In his role as practice leader, he is responsible for client servicing, development of innovative solutions, thought leadership and adherence to professional and overall quality assurance standards.

Eric serves, or has served, as consulting actuary and/or account executive to a variety of public entities and specializes in viewing public Pension and Other Post Employment Benefit (OPEB) plans holistically and has lead a number of projects focused on non-traditional solutions.

Mr. Atwater graduated with honors from Georgia State University in 1998, where he received a BBA with a concentration in Actuarial Science. He is a Fellow of the Society of Actuaries, a Fellow of the Conference of Consulting Actuaries, a Member of the American Academy of Actuaries and an Enrolled Actuary. He has also passed the first two levels of the Chartered Financial Analyst (CFA) exam and is in the process of becoming a charter holder to solidify his understanding of Pension and OPEB plan assets.