



3º SEMINÁRIO INTERNACIONAL DE PREVIDÊNCIA COMPLEMENTAR

Collective Defined Contribution (CDC) Plans in the UK

Realização:



Patrocínio:



Apoio:



Collective Defined Contribution (CDC) Plans in the UK



CDC in the UK

- Legislation in the UK has recently been enacted and regulations drafted to make Collective Defined Contribution (CDC) possible for single-employer schemes
- Royal Mail is in the process of launching CDC for its workers
- How does CDC compare to more familiar individual DC (IDC) plans?



Individual Defined Contribution (IDC)

- Given the high cost of annuities on account of low bond yields,
 - people are increasingly choosing to draw down their pension pots (retirement savings accounts) in retirement
- Income drawdown:
 - 'Pension income' via withdrawals from continually invested pot until money runs out
 - Longevity risk:
 - If you knew exactly how long you would live in retirement, you could budget to cover precisely that number of years.
 - But one typically does not know the date of one's death....

Longevity risk of drawdown

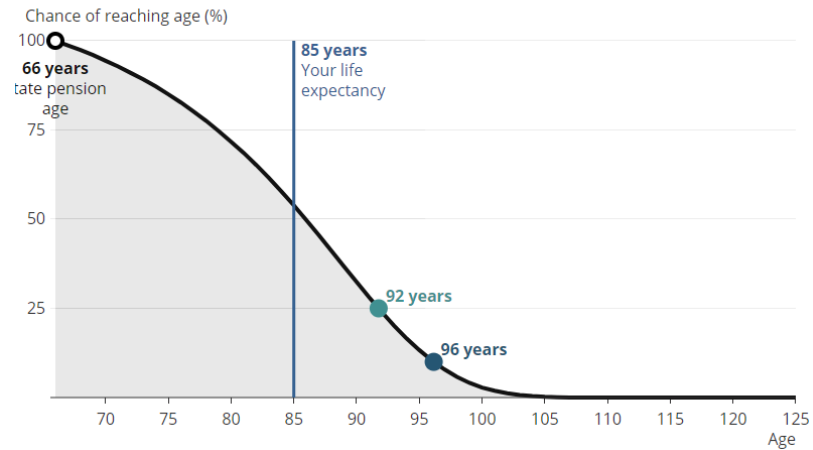
Age: - 66 + Sex: Male Female

Calculate your life expectancy

Your average life expectancy is **85 years**

However there's a chance you might live longer...

- **92 years**
1 in 4 chance
- **96 years**
1 in 10 chance
- **100 years**
2.8% chance



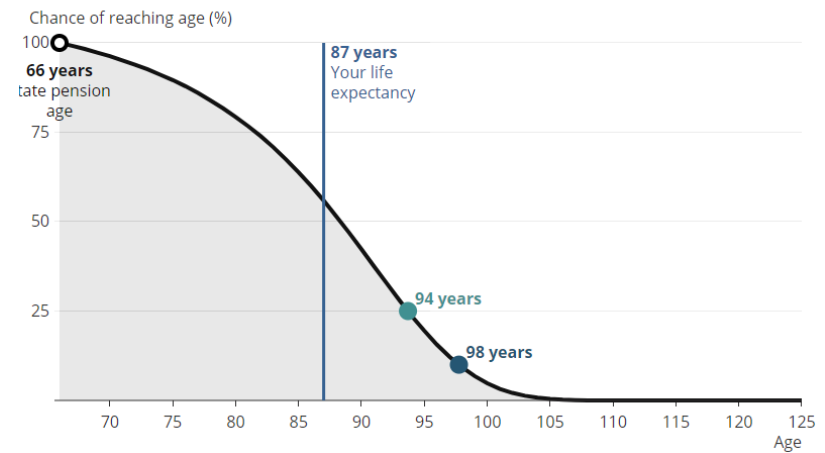
Age: - 66 + Sex: Male Female

Calculate your life expectancy

Your average life expectancy is **87 years**

However there's a chance you might live longer...

- **94 years**
1 in 4 chance
- **98 years**
1 in 10 chance
- **100 years**
4.8% chance



Investment risk remains even if you know exactly how long you'll live

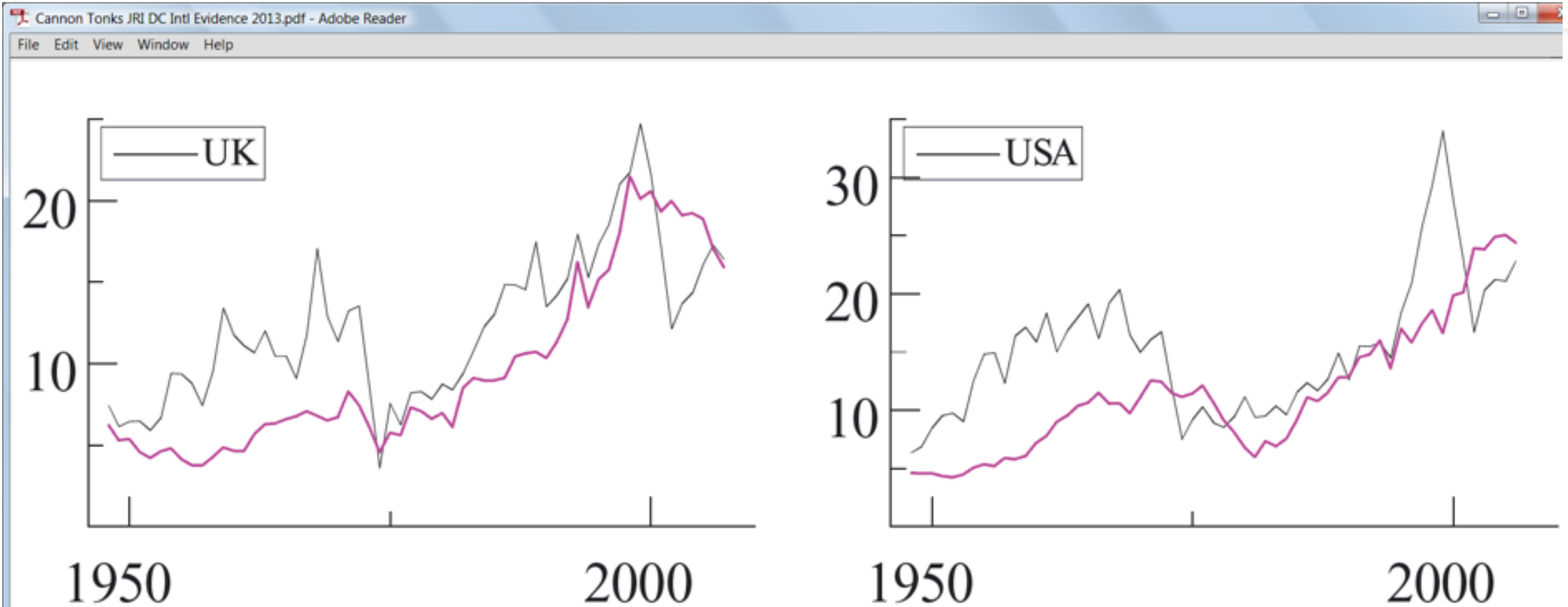
- Investments with high expected return
 - carry risk: unpredictable variability of outcome.
- Therefore, unless you invest conservatively,
 - it will remain impossible to know how much to withdraw each year, to ensure that you receive roughly equal income in real terms throughout the rest of your life,
 - even if you know exactly how long you'll live.
- **Drawdown** is the '**nastiest, hardest problem in finance**' (William Sharp)
- Is **CDC** (collective defined contribution) **the solution** to this problem?

IDC life-cycle de-risking

- Investments shifted from equities (stocks & shares) to less volatile assets (e.g., bonds) as one nears retirement
 - Rationales:
 - protection against great fall in asset value, from which it's difficult to recover, close to the point when needs to transform these assets into an annuity
 - bonds hedge against an increase in the price of an annuity, which is determined by the price of bonds in which annuity providers invest
 - But, historically, life-cycle de-risking would have often been a costly and ineffective form of protection against downturns in the stock market.

Grey = 100% equities

Pink = life cycle de-risking



IDC pension pot = 1-person pension scheme

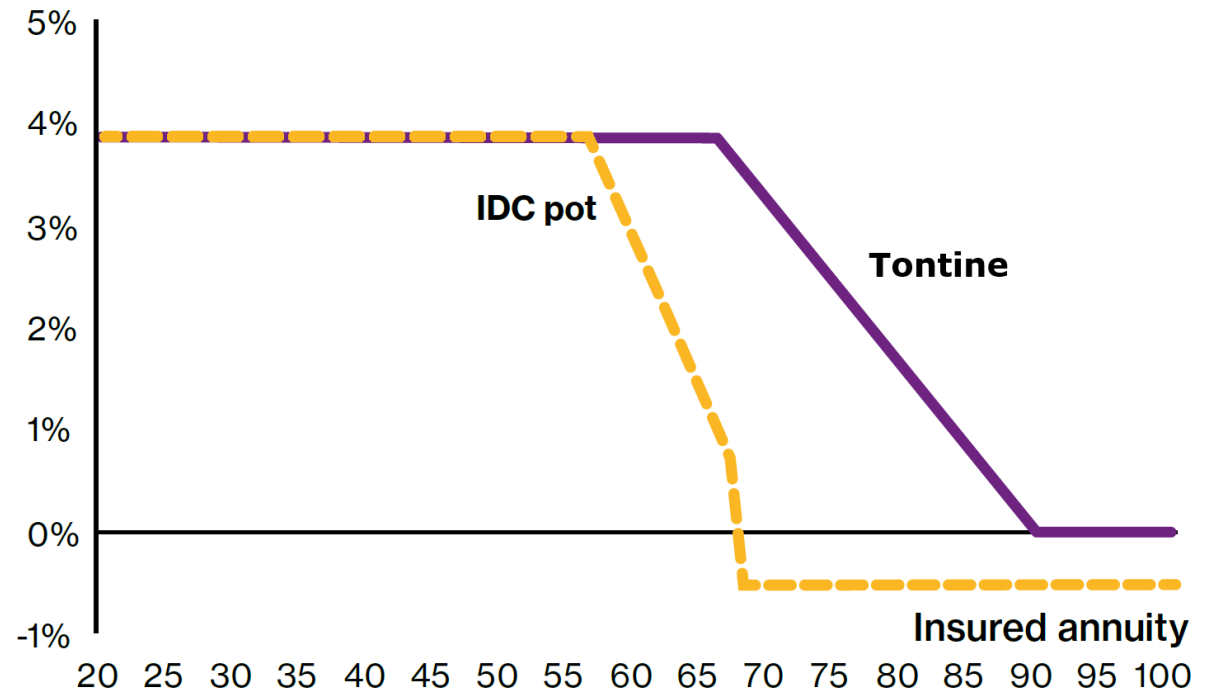
- When he retires, an individual's one-person pension fund will stop receiving any further contributions into it,
 - along lines of the DB fund of a sponsoring employer who ceases trading.
- If he would like a guaranteed pension income for life,
 - he will need to arrange for the assets of his pension scheme to be 'bought out' by an insurance company that provides a bond-backed annuity in exchange
- This individual would be better off joining together with other individuals
 - into a mutual association for mutual advantage

Tontine variant on IDC as a collective solution

- Individuals keep their pensions pots continually invested in growth assets during their working lives,
 - rather than de-risking in the years up to retirement
- Individuals draw their pension pots down during retirement, but with the following vital twist:
 - Those who retire at the same time enter into the following agreement with each other:
 - Pots are similarly invested during retirement and drawn down at the same rate
 - Whenever someone dies, the assets in his or her pension pot are redistributed to the surviving members

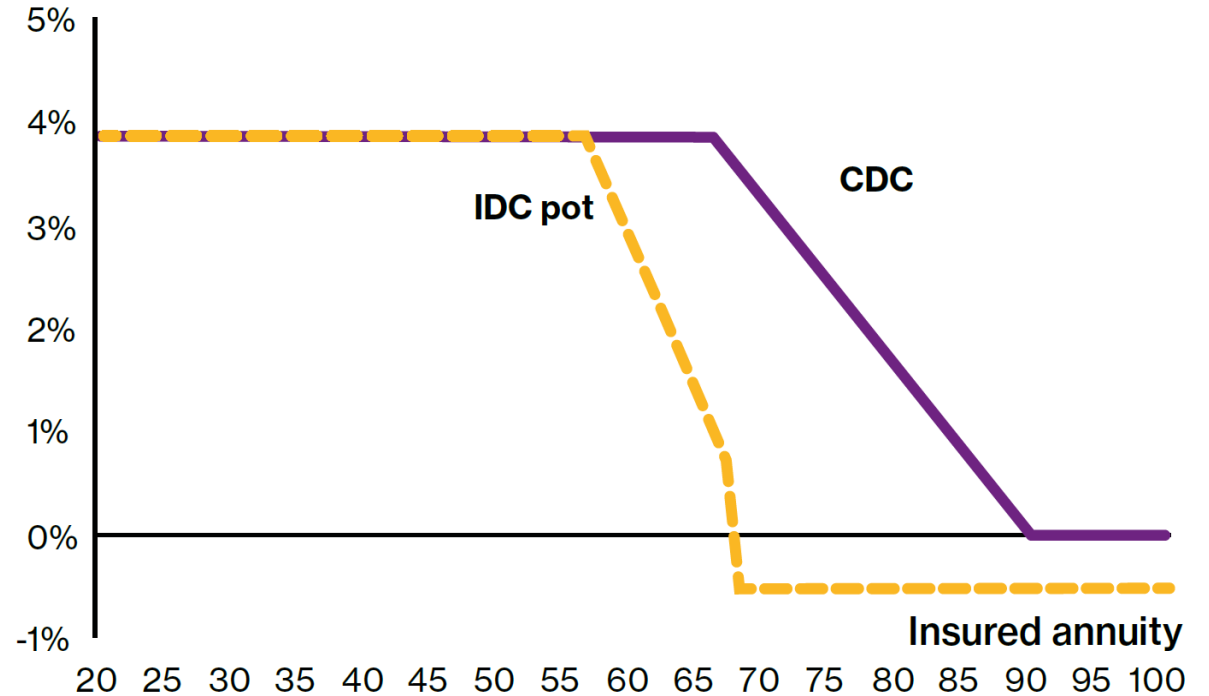
Tontine de-risking

- **Purple line** = de-risking of **tontine** pension pots from retirement age 67 to age 90, to manage investment risk
- **Gold line** = Standard life cycle de-risking during decade leading up to retirement, followed by **annuity** purchase at retirement
- **Tontine** generates 70% higher **expected** pensions income than guaranteed income from an annuity
- *X-axis = age of members*
- *Y-axis = expected investment returns relative to 'risk free' rate of govt bond yields*
- *(Modification of WTW graph)*



Royal Mail CDC

Figure 1: Comparison of returns under CDC with an IDC annuity

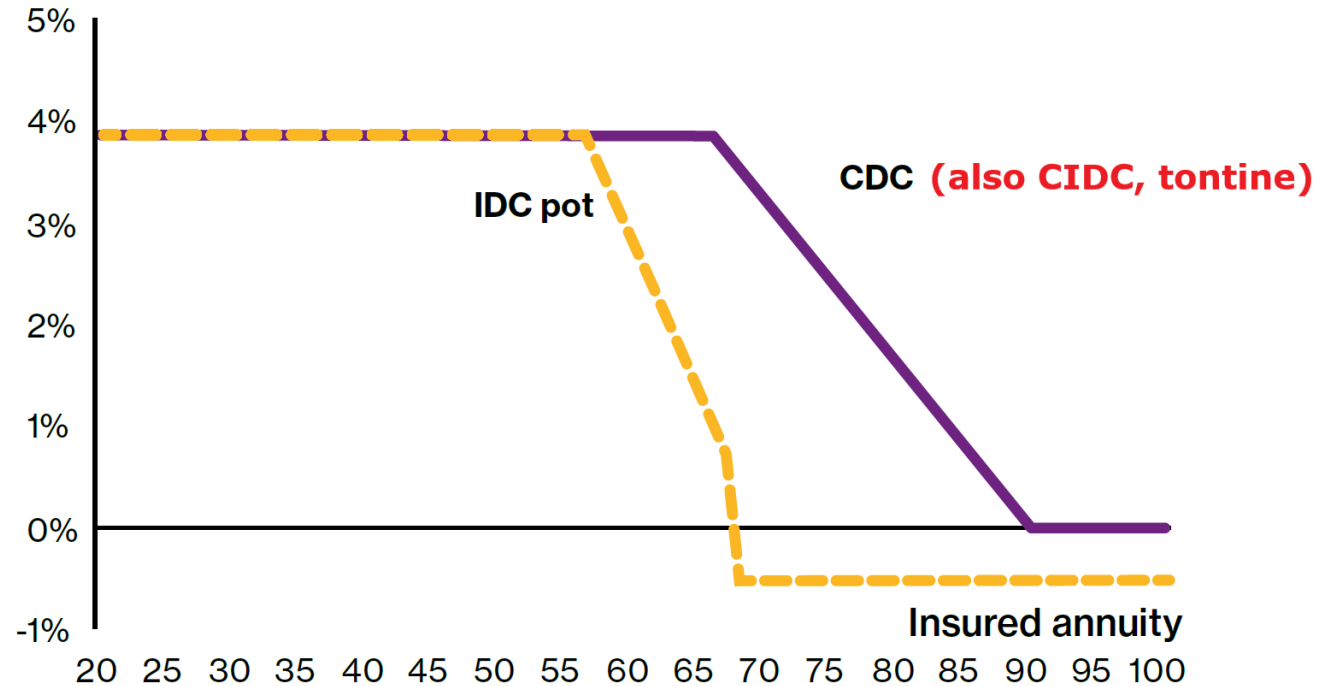


- *X-axis = age of members*
- *Y-axis = expected investment returns relative to 'risk free' rate of govt bond yields*
- *(Willis Towers Watson graph)*

Royal Mail CDC

- **CDC** = tontine plus smoothing between different cohorts now in the scheme that retire at different times
- Since tontine involves collectivization within a cohort but not between cohorts, it's called **CIDC** (collective individual defined contribution)
- *X-axis = age of members*
- *Y-axis = expected investment returns relative to 'risk free' rate of govt bond yields*
- *(Modification of WTW graph)*

Figure 1: Comparison of returns under CDC with an IDC annuity



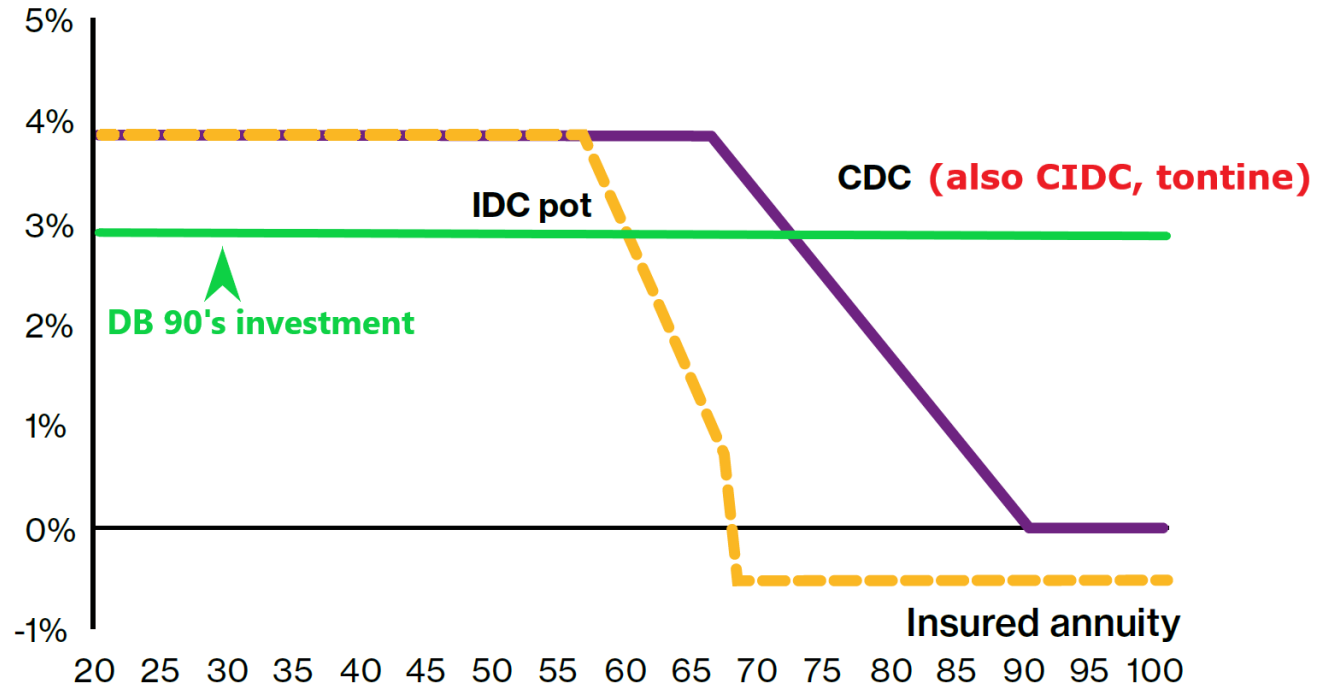
Is CDC intergenerationally unfair?

- **Does 1st CDC generation receive a free ride? No.**
 - 50% chance fund in surplus when they retire; 50% chance of deficit
 - If in deficit, contributions of younger workers will subsidize pensions of elders
 - But if in surplus, this will cover shortfalls to future generations
 - The smoothing favours the unlucky over the lucky, irrespective of their age or the generation to which they belong.
- **With CIDC, by contrast,**
 - No smoothing between cohorts
 - Hence, the unfairness of the differential investment luck of different cohorts is not mitigated

UK DB investment in the 90s

- **Green horizontal line** = UK DB historical 1990s constant investment in 80% equities profile, with **smoothing across current & future members** of the scheme
- No de-risking on assumption that scheme remains youthful
- *X-axis = age of members*
- *Y-axis = expected investment returns relative to 'risk free' rate of govt bond yields*
- *(Modification of WTW graph)*

Figure 1: Comparison of returns under CDC with an IDC annuity



CDC is a type of DC (defined contribution)

- **All risk placed on workers** rather than employers
 - **Employer** has **no obligation beyond** payment of a **fixed** level of **contribution** in a given year
 - In this respect like **IDC**
- **Risks pooled collectively** among workers
 - In this respect, CDC is unlike IDC
 - *(CIDC also involves pooling of risks among workers, but to a lesser extent)*
- Pension is a **target**, not a promise.
 - If the investment return target is missed, future or current pension income of workers is adjusted downward
 - Might be restored if later returns on investments exceed expectations

No hard DB promise in the UK in the 90s

- No requirement to make good underfunding of an ongoing scheme with extra deficit recovery contributions
- Moreover, before 1997,
 - 'it was possible for an employer with a final salary scheme to freeze his liabilities by deciding to wind up his pension scheme, so long as the scheme rules permitted this. If the assets in the scheme were insufficient to meet accrued liabilities, the benefits could be reduced under the *order of priorities* set out in the scheme rules.' (David Blake 2003)

Hard DB promise in the UK today

- **Solvent employers who wind up their DB scheme** must secure member pensions liabilities
 - by paying a sum of money sufficient to cover the cost of purchase of equivalent **bond-funded** annuities with an insurance company
- Pension Protection Fund (**PPF**)
 - protects scheme members from employers who wind up their pension schemes on account of insolvency
 - PPF financed by insurance premiums levied on all schemes, which are invested in a portfolio weighted towards **bonds**

Can't have one's cake and eat it too

- **Cake:**

- **low contributions**

+

- **reliance on high expected returns on growth assets**

- **Eating it too:**

- **bond-underpinned legal protection** of our pensions promises

Conclusion

- The 1960s to the 1990s were the heyday of extensive and generous DB pension provision in the UK. Those who would like to return to those days should seek to transform today's DB into CDC, which is likely to provide, from high returns on low contributions – but does not and cannot guarantee – the generous pensions that people received, but were not guaranteed, back then. The heyday of defined benefit pension provision in the UK was, in essence even if not in name, an age of collective defined contribution.



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Thanks!

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Realização:



Patrocínio:



Apoio:

