



Institute
and Faculty
of Actuaries

Taking an evidence-based approach



Exploring alternatives
for the UK pension saver

Taking an evidence-based approach: exploring alternatives for the UK pension saver

Introduction/setting the scene.

Since the UK passed the Pension Schemes Act 2021, there is now a new way to help people save for retirement. In Collective Defined Contribution (CDC) pension schemes, both employers and employees contribute to a collective fund. They represent a third option for pension savers alongside traditional defined benefit (DB) and defined contribution (DC) arrangements.

The IFoA has been investigating CDCs as a potential solution for UK pension savers. Part of this exploration includes the IFoA-commissioned **Optimising Future Pension Plans** research programme. The project team is headed up by Professor Catherine Donnelly of Heriot-Watt University. The research:

- aimed to address many of the questions around longevity risk-sharing in the retirement space, including within CDC schemes.
- deepened the understanding of the inter-generational cross-subsidies occurring in CDC schemes.
- will help to create and share practicable worked examples of how to structure these products for the wider pensions industry.

Why is innovation needed?

The IFoA remains concerned that most people are not saving enough for retirement. On one hand, the UK has had great success with automatic enrolment into pensions, which began in 2012. According to the ONS, in 2021 there were 22.6 million (79%) workers saving into a workplace pension. However, a quarter (25%) of private sector workers have no pension at all, while most of the remainder (68%) have some kind of DC scheme. Very few (7%) of private sector workers are in DB schemes. Disappointingly, workers in DC schemes tend to have a smaller amount of savings than those in DB schemes. The stark reality is that current minimum contribution rates of 8% (3% from employers, and 5% from employees) are unlikely to be sufficient for many individuals to secure a standard of living that they may want or expect.

22.6 million workers saving into a workplace pension



Private sector workers with no pension



Private sector workers in some kind of DC scheme



Private sector workers in DB schemes



The IFoA remains concerned that most people are not saving enough for retirement.

The problem becomes more complex when we consider challenges around DC pensions and the onus placed on the individual to 'manage their own pot'. This is particularly apparent when retirees wish to convert their DC pension savings into an income. Unlike retirees from DB schemes, DC pension savers must make an active choice of how to do this. The IFoA 'Great Risk Transfer' shares more details on the potential pitfalls for the UK pension saver when managing their own risk and mortality.

Last year IFoA carried out some research into pensions freedoms (more flexible access to DC pensions). It was found that:

- Many people retire without either taking guidance or seeking advice.
- There is evidence that women and those from lower socio-economic groups are less likely to access advice.
- Many people have only a limited understanding of the factors that impinge on retirement savings decisions.

In the above context, CDC schemes become a potentially attractive option. CDC schemes aim to reduce personal risk by sharing investment risk and longevity risk among savers. By doing so, the hope is that people can get more certainty about their pension - how much they will get and that it will last for their lifetime - compared to using income drawdown.

There are many kinds of CDC schemes. They may be 'whole life' where workers contribute to the scheme while working and are then paid a pension from it in retirement. A CDC scheme may be 'decumulation'/post-retirement only, where workers join at the start of their retirement with their pension pot savings. They are then paid a pension in retirement.

You can read more on IFoA pension policy, the 'Great Risk Transfer' campaign, and our wider research [here](#).

Taking an evidence-based approach to CDC schemes

The Institute and Faculty of Actuaries (IFoA) sponsored research at Heriot-Watt University, led by Professor Catherine Donnelly, to investigate pensions schemes based on collective risk-sharing. The main objective was to investigate how well such schemes can pay a stable, lifelong income to all members, while understanding better the complex inter-generational risk-sharing occurring in them.



Key findings

In the UK CDC scheme model, a member's retirement pension is expressed as an accrued pension amount which will grow in line with future annual pension increases. Risk-sharing is done through regular changes to the pension increase rate. The two main types of risk shared in the UK CDC scheme are longevity risk and investment risk.

Longevity risk findings

Longevity risk can be divided into an idiosyncratic component - which can be diversified away by pooling - and a systematic component - which is undiversifiable. The ability to eliminate idiosyncratic longevity risk through pooling large numbers of members is the foundation stone for providing a lifelong retirement income. But how many is large enough? The research findings around this question are as follows.

- A CDC scheme should aim for a steady-state membership of around 3,000 to 5,000 members. At that size, idiosyncratic longevity risk is virtually eliminated by pooling. As heterogeneity increases - in terms of members having different fund sizes and mortality distributions - more members are needed ([paper here](#)).
- However, thousands of members are not needed immediately. A new scheme can begin with 150 to 200 joiners every year and build up to the required steady-state membership size. In line with this, schemes should be open to new members to maximise longevity pooling ([paper here](#)).

With a large enough membership, only the systematic aspect of longevity risk remains. In the studied mortality model, systematic longevity risk was a relatively small component of the volatility in pension income ([paper here](#)).

Inter-generational cross-subsidies

In the UK CDC scheme model, investment risk and the residual longevity risk are shared among current and future generations of members. The risk-sharing mechanism introduces a number of inter-generational cross-subsidies ([paper here](#)). For example,

- A risk transfer to tomorrow's membership, as recognition of most of the gains and losses is deferred to the future. This risk transfer results in excellent pension smoothing for many generations, in contrast to schemes which recognise gains and losses immediately.
- A risk transfer from the older members to the younger members, at each point in time. This leverages the risk profile of the younger members, and deleverages that of the older members.

A clear message is that there is no free lunch: non-diversifiable risk, like investment risk, does not go away through inter-generational risk transfers. It calls for an adequate risk management framework, appropriate to the considered CDC pension scheme and which looks across outcomes for current and future scheme members.

Scheme closure is a critical phase

An important phase for a CDC scheme is the time after it closes to new members. In the absence of adequate risk management or appropriate scheme design, the volatility of members' pension income increases, and potentially dramatically so for schemes which share investment risk. The increased volatility comes from (i) insufficient longevity pooling as the number of scheme members declines; and (ii) an acceleration of the crystallisation of the cumulative gains and losses in the scheme, as its future lifetime shortens ([paper here](#)).

There is no perfect way to solve this puzzle, and so the task is to identify the least imperfect approach.

What have we learned?

Good pension provision represents a puzzle about how to provide an income which cost-effectively meets an individual's needs in retirement, when those needs and the individual's lifespan are unknown in advance. There is no perfect way to solve this puzzle, and so the task is to identify the least imperfect approach. Further, the answer to this is different for different groups of individuals in the UK, depending on matters such as their other sources of income, the type of expenditures that will make up their income needs, and their appetite for managing their own retirement savings. While some groups' needs might be well met by existing pension provision options, we are of the view that better options could be made available for some groups.

One of the options that we support is the provision of pensions through CDC pension schemes. These give individuals an income for life in retirement, at a fixed cost for employers – these come with no guarantee of benefit levels but are invested to give an expectation of cost-effective pensions. We see this as only the beginning – the IFoA, is seeking further Government action to show employers that CDC is an attractive alternative to DC schemes, address concerns employers may have, such as regulatory burdens and costs, and to support the introduction of multi-employer and master trust CDC schemes to provide employees of smaller organisations with access to CDC.





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