

## **Collective Defined Contribution Schemes**

An assessment of whether and how  
collective defined contribution schemes  
might operate in the UK

# Contents

1	Introduction.....	3
2	What is a collective defined contribution (CDC) scheme? .....	4
3	Assessment of collective defined contribution schemes for the UK context .....	6
3.1	Methodology .....	6
3.2	Criterion 1: Level of returns for members under CDC schemes .....	6
3.3	Criterion 2: Predictability of income in retirement in CDC schemes.....	7
3.4	Criterion 3: Intergenerational transfers in CDC schemes.....	7
3.5	Criterion 4: Stability of CDC schemes.....	8
3.6	Criterion 5: Legal implications.....	8
3.6.1	CDC schemes as money purchase schemes .....	9
3.6.2	CDC schemes as regulatory own funds (ROFs) .....	10
3.7	Criterion 6: Demand for CDC schemes .....	11
4	Conclusion.....	12

# 1 Introduction

In 2006 the Government announced a rolling deregulatory review of private pension legislation in the White Paper 'Security in retirement: towards a new pensions system'<sup>1</sup>. Part of the deregulatory review comprised a pension scheme "risk sharing" consultation<sup>2</sup>, launched in June 2008, looking at a range of ways in which risks could be shared in schemes.

In its response to the consultation in December 2008<sup>3</sup>, the Government committed to undertake further work on whether and how a potential new approach, collective defined contribution (CDC) schemes, might operate in the UK. The Department for Work and Pensions therefore undertook several strands of work, including further discussions with stakeholders, international comparisons, modelling of CDC designs and outcomes and research of employer attitudes.

As a result of this further work, the Department has concluded that the Government should take no further action on CDC schemes.

---

<sup>1</sup> Available at: <http://www.dwp.gov.uk/policy/pensions-reform/security-in-retirement/white-paper>.

<sup>2</sup> Available at: <http://www.dwp.gov.uk/consultations/2008/risk-sharing.shtml>.

<sup>3</sup> Available at: <http://www.dwp.gov.uk/consultations/2008/risk-sharing.shtml>.

## 2 What is a collective defined contribution (CDC) scheme?

The proposed CDC schemes in the UK would try to bring together some of the most desirable characteristics of both defined benefit (DB) and defined contribution (DC) schemes<sup>4</sup>.

This potential new type of scheme is proposed in a context of long-term decline of DB schemes where employers are less willing to underwrite the pension risk. Investment and longevity risks are increasingly borne by scheme members. The proposed CDC schemes could provide opportunities for risk sharing between members (not between employer and employee). The employer is intended to be free of all risk, providing no guarantees towards any level of pension, with certainty about the level of contributions.

For the employee, however, the risks associated with a pure DC scheme could be somewhat mitigated as contributions are paid into a collective fund instead of individual savings accounts, thus allowing investment risk to be shared amongst individuals. Depending on how the scheme was structured, it could in theory provide options for increasing certainty for members about the rate of return they could expect, notably for those approaching retirement.

More specifically, when fluctuations in the financial markets result in the collective pension pot being worth more or less than previously anticipated, projected pensions would be adjusted to balance the books. These adjustment decisions could be taken in a number of ways, creating risk sharing or risk smoothing potential between members. Options include varying degrees of Trustee discretion or automaticity of adjustments.

Risk sharing could for example take place by allowing those approaching retirement to be less heavily impacted by low returns than younger members, as the value of assets might, in time, increase so that the more substantially reduced projected pensions could be increased again.

In addition to the various means of structuring the accumulation phase of a CDC scheme, two options exist for decumulation. Firstly, pensions could be bought as an annuity when the member retires. This could involve a flat-rate annuity, but with provision for the scheme to make additional payments to the pensioner on top of the annuity, for example by subsequently buying out additional pension increases. This

---

<sup>4</sup> We would like to thank in particular Tony Hewitt, David Turner, Philip Bennett, Hamish Wilson and Ian Gault for sharing their ideas on CDC schemes with us.

## **Collective Defined Contribution Schemes**

would take the form of varying indexation of pensions in payment reflecting the investment performance of the remaining funds. Alternatively, pensions could be paid out of the scheme's own funds ("self-annuitisation"). The funds would remain in the scheme, retaining the potential for high returns (albeit with increased risk).

# 3 Assessment of collective defined contribution schemes for the UK context

## 3.1 Methodology

A number of criteria were defined by which to judge whether the introduction of CDC schemes in the UK context would be appropriate. These included the performance of CDC schemes, the protection of member benefits, the likely uptake by employers and how CDC schemes could be embedded into the legal framework. Specifically, the criteria were:

- 1) Level of returns for members
- 2) Predictability of income in retirement
- 3) Nature of the intergenerational transfers within such schemes
- 4) Stability of CDC schemes
- 5) Legal implications of CDC schemes operating in the UK
- 6) Potential demand for CDC schemes

In order to apply these criteria, several strands of work were undertaken.

- Modelling work was commissioned from the Government Actuary's Department (GAD) to investigate the viability of different types of CDC schemes under different scenarios, and to test the assertion that CDC schemes can offer better and more certain outcomes for members.
- Analysis of the functioning and context of CDC schemes in the Netherlands was undertaken and lessons drawn for the UK.
- The legal implications of CDC schemes operating in the UK were considered.
- Small-scale qualitative research was commissioned to explore the extent of employer interest in adopting CDC schemes if they existed.

## 3.2 Criterion 1: Level of returns for members under CDC schemes

The GAD modelling considers the whole range of pension investment outcomes and shows that in the median case<sup>5</sup> CDC schemes produce higher pensions than standard DC schemes. This is mostly due to the fact that CDC schemes can remain invested in equities throughout the entire accumulation period, whereas typical DC

---

<sup>5</sup> When all the pension outcomes are ranked from lowest to highest, the median outcome is the one exactly halfway along the list of outcomes.

schemes tend to move into safer, but lower-returning assets as the member approaches retirement, a strategy known as lifestyling.

However, focusing on median outcomes obscures the risk that things can go wrong. In practice there is a wide range of possible outcomes for retirement incomes under both CDC schemes and standard DC schemes. Even when the toughest membership conditions are imposed on CDC schemes, the median outcome is still better than for standard DC. However, the risk of adverse investment conditions means that more extreme outcomes are possible for certain members under CDC schemes than standard DC schemes, precisely because less extreme outcomes will be generated for other members.

### 3.3 Criterion 2: Predictability of income in retirement in CDC schemes

The GAD results show that in a CDC scheme an individual's starting pension is less dependent on the particular scenario experienced, i.e. is less dependent on whether the individual happens to retire in a downturn or in a boom. The standard deviation of pension outcomes across the scenarios modelled is lower in CDC schemes than in DC schemes: the range of outcomes is therefore narrower. This reflects the fact that there is relatively less volatility in outcomes under CDC schemes. Nonetheless there is still a large degree of variability in benefits, especially for the younger members.

In the modelled CDC schemes, increases of pensions in payment ("indexation") are only granted when investment outcomes permit them. There is no clear relationship between these increases and the rate of inflation: uncertainty with regard to indexation thus lasts into retirement.

### 3.4 Criterion 3: Intergenerational transfers in CDC schemes

Cross-subsidies arising from the smoothing mechanism are inherent in the modelled CDC scheme. They have considerable implications for intergenerational equity. If these cross-subsidies become unfair, it might be difficult, in the absence of compulsion, to maintain high levels of active membership.

Inherent intergenerational transfers are not a problem as such. However, the problem of such transfers occurring in CDC schemes is that members' benefits are not guaranteed. This makes the transfers potentially more obvious to members. Furthermore, the transfers could lead to some people receiving a lower than expected pension whereas previous generations had seen their expectations fulfilled.

A cross-subsidy exists between earlier and later cohorts of retirees. The mechanisms used to respond to volatility are likely (as in the scheme design modelled) to introduce an asymmetry in outcomes that on average favours the older members who are being cushioned from the full effects of the volatility. This is due to the fact that early positive investment returns are “locked in” for the projected pensions of older members about to retire. Older members would particularly be favoured if pensions in payment cannot be cut to reflect an unanticipated worsening of investment performance. However, if too prudent assumptions about investment performance are chosen at the start, early generations are likely to do relatively worse compared to later ones and this cannot be remedied after the fact.

### 3.5 Criterion 4: Stability of CDC schemes

Scheme failures (i.e. the equivalent of the scheme running out of assets and not being able to provide pensions for future retirees) only occur in the model where there are no new members from the second year of existence of the scheme. However, even in these cases, scheme failures do not occur until after the majority of members have left service and are already receiving pensions. Since in the scheme modelled these pensions have been bought out with a third party insurer a scheme failure will not result in a pensioner losing their pension. They will, however, no longer receive any new pension increases.

In the modelling case with no new entrants, just under 40 per cent of all scenarios result in the scheme failing at some stage over the 100 year projection period. It should be noted that this is an extreme case showing the impact of no new members from year 2.

However, the results do suggest that CDC schemes appear to require a continuing stream of member contributions to ensure 100% sustainability over time and to allow risk sharing to operate between members. Otherwise there is the risk of instability in the sense of substantial benefit fluctuations (most likely cuts) being required for some members in order to maintain assets equal to liabilities.

### 3.6 Criterion 5: Legal implications

It was necessary to consider how CDC schemes could operate within the parameters of the “IORP directive” (EC Directive 2003/41/EC<sup>6</sup>). One of the directive’s aims is to ensure that occupational pension schemes in Europe provide a high degree of security for future pensioners through prudential rules and stringent supervisory standards. It notably states that:

---

<sup>6</sup> Available at:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:235:0010:0021:EN:PDF>.



## Collective Defined Contribution Schemes

- Liabilities are to be calculated according to financial commitments made.
- Where promises regarding investment performance or benefit levels are made, or the scheme covers biometric risks (linked to death, disability and longevity), these must be treated as commitments.
- At all times there must be sufficient assets to cover the promises made.
- If no employer stands behind the pension scheme, the scheme must hold additional assets to reflect the risk taken by the scheme (e.g. biometric, investment performance, guarantee of a level of benefits).

### 3.6.1 CDC schemes as money purchase schemes

We considered whether CDC schemes could fit into the definition of money purchase schemes and thus be compliant with European legislation in a similar way to DC schemes where assets always meet liabilities.

The existing UK definition of a money purchase scheme does not allow for calculations of pensions to be made by any factor other than the size of the individual pot. Given that CDC schemes would provide the potential to adjust benefits according to actuarial adjustment factors and/or trustee discretion, this would mean that CDC schemes would not fall into the current money purchase definition in the UK. This definition would therefore have to be amended to accommodate CDC schemes which use best endeavours, but will offer no guarantee of benefits at any particular level or accept any liability if projections are not met.

However, even if CDC schemes operated as money purchase schemes in the UK, there is a potential risk that this classification would be breaching the requirements of articles 15 and 16 and/or 17 of the IORP Directive.

For one, there is a risk that members might misunderstand the way the scheme functions and always expect their projected pensions to be met. Second, the distinguishing feature of a CDC scheme is its ability to reassign funds between different members. If such schemes operated as money purchase schemes, there is a risk of breaching the IORP Directive as it could be argued that the re-engineering of funds is not necessary if no level of benefit is guaranteed in the first place. It is difficult to describe projected pensions as no more than aspirational once the scheme itself is putting significant effort into meeting the previously projected pension for those near retirement.

There thus seems to be a significant risk that CDC schemes operating as money purchase schemes would be in breach of the European IORP directive.

Alternatively, we investigated whether such schemes could fit into the DB framework, specifically into Regulatory Own Funds regulation (SI2-5/2280) and “target” a fixed level of pension (similar to how CDC schemes function in the Netherlands).

### 3.6.2 CDC schemes as regulatory own funds (ROFs)

Regulatory own funds (ROFs) refer to DB schemes where the scheme itself underwrites the biometric risks or provides guarantees and/or no employer stands behind the scheme. Article 17 of the IORP directive requires that the scheme itself must hold additional assets to reflect the risk taken on by the scheme. If CDC schemes operated as ROFs in the UK, it would need to be ensured that they fulfil these requirements.

A complexity with this lies in the practicality of assessing the financial commitments of a scheme which could reduce its liabilities if assets fall in value. It is not clear how the extent of such liabilities could be assessed and how to determine funding requirements.

It was noted that “collective DC” schemes function as ROFs in the Netherlands (where they are required to have a 130% level of funding). Their liabilities, and thus their corresponding funding requirements, are calculated on the basis that they target career average pensions with conditional indexation. However, as these schemes are relatively recent and have not yet seen any need to reduce their flat pension, they have in practice functioned in the same way as career average DB schemes and have not been tested on how to fit reductions in “accrued rights” into ROF funding requirements, or indeed whether such reductions could be legally challenged. Furthermore, the CDC schemes in the Netherlands are of a different type to those proposed in the UK, notably have even higher contribution rates than Dutch DB schemes, are effectively operated as DB schemes and do not have risk smoothing mechanisms.

Finally, if operated as regulatory own funds in the UK, the need for additional assets to be held in the scheme is likely to substantially reduce the appeal of CDC schemes in the UK. The requirement for additional funds to be held by the scheme would mean that in practice not all assets could be used to pay pensions and members would receive less for the same level of contributions.

We also considered whether a product similar to a CDC scheme could operate outside the IORP Directive. In such a case, the product would be subject to the financial services directive and, as insurance companies, would be required to hold capital margins in excess of those held by occupational pension schemes. There appears to be no scope for financial products such as CDC schemes to be offered outside the protection conferred either by the financial services directive or the IORP directive.

### 3.7 Criterion 6: Demand for CDC schemes

In the small-scale qualitative research investigating employer attitudes to CDC schemes<sup>7</sup>, it transpired that employers were sceptical of the potential for higher returns (due to administration costs and scepticism about the performance of financial markets) and of the greater predictability of CDC scheme pension outcomes (as pensions are not guaranteed). However, even with evidence that CDC schemes would perform well on average, demand for CDC schemes will probably remain low.

Whilst the fixed contribution rates of CDC schemes were welcomed, employers were concerned that the liability could still be transferred back to them regardless of what they were being told now. Furthermore, given the complexity of CDC schemes, employers were sceptical that trustees would have sufficient experience to make investment decisions and that recruitment of trustees would be difficult.

The aim of CDC schemes to deliver greater security of retirement income was seen as a benefit but as there are no guarantees of retirement income, it was felt that this was somewhat misleading. While employees were seen to be able to appreciate that CDC schemes were designed to deliver greater security, they probably would not understand how indexation and revaluation would work. It was thought that some employees would be unable to accept that their fund might be reduced in order to maintain the level of older workers' pensions. Without a pension guarantee, employers felt employees might not consider the scheme to be more valuable than a DC scheme.

Different types of pension schemes had different overall reactions:

- Sponsors with open DB schemes considering closure and employers that had already moved to a DC scheme would not consider switching to a CDC scheme as they did not think that the additional costs of a CDC scheme compared to a DC scheme were justifiable.
- Employers with trust-based DC schemes were reluctant to add to the duties of trustees as trustee recruitment would become more difficult.
- Employers with contract-based DC schemes who would like to deliver a better pension to their employees might consider CDC schemes, especially if CDC schemes became the expected norm in their industry.

---

<sup>7</sup> Available at: <http://research.dwp.gov.uk/asd/asd5/rports2009-2010/rrep623.pdf>.

## 4 Conclusion

The modelling results support the claims of enhanced performance on average from CDC schemes (criterion 1) and of some increased predictability of outcomes compared to DC schemes (criterion 2). However, there is significant doubt on the ability of such a scheme to manage risk successfully in a way which is fair to different generations of scheme members (criterion 3) and doubt remains on the extent to which the stability of CDC schemes is dependent on a continuing stream of member contributions (criterion 4). This issue could be partly addressed by the introduction of automatic enrolment as long as opt-out levels are low and members have confidence in CDC schemes (if however, as per criterion 3, CDC schemes are perceived to be unfair to younger generations, younger members may decide to opt-out).

The legal implications of operating CDC schemes in the UK raise significant doubt on the potential for CDC schemes, as proposed, to exist in the UK given existing European legislation (criterion 5).

Finally, demand for CDC schemes from employers (criterion 6) is likely to be limited, but could involve some DC schemes opting for a potentially better pension outcome for their employees if CDC schemes existed, and especially if other employers in the industry also offered CDC schemes. However, employers (including DB scheme sponsors considering closing their schemes) seem to be reluctant to subscribe to a new type of pension scheme which their employees may not fully understand and remain sceptical of their potential liability if investment performance is poor.

CDC schemes could thus provide better and more predictable outcomes for individuals. In practice, however, there is still a wide range of possible outcomes for retirement incomes under CDC schemes, and the risk of unacceptable generational unfairness and the difficulties involved in operating CDC schemes given European legislation undermine the positive outcomes of criteria 1 and 2. In addition, our attitudes research concluded that employer demand is likely to be limited.

In light of this assessment of the six criteria, the Department has concluded that the Government should take no further action on CDC schemes.

