

6. The role of collective pension schemes and how these could be introduced in the UK

'Well! what are you?', said the Pigeon. 'I can see you're trying to invent something!'

Lewis Carroll (1865) *Alice's Adventures in Wonderland*

Supporters of collective defined contribution (CDC) pension schemes claim that they can produce higher and more stable incomes than individual defined contribution (IDC) pension schemes. Broadly speaking, there are two types of CDC scheme in existence: one that is a form of DB replacement and one that is a form of DC replacement. Because CDC schemes claim to have economies of scale that are not available to IDC schemes, we will examine whether this model for collective schemes can also boost incomes in retirement or at least make such incomes more stable across different cohorts of members. We will investigate how their performance might compare with standard IDC schemes. We will examine overseas examples of collective schemes that pool and share risks and hence make incomes in retirement more predictable (at least in principle). We will also consider what effect the new flexibilities for drawing down the pension pot in retirement have for the feasibility of a CDC pension. Finally, we examine an alternative type of collective scheme that might be more compatible with the new pension freedoms, namely collective individual DC (CIDC) schemes.

6.1 Introduction

An analysis of the risks outlined in Table 1.2 suggests that these might be more effectively managed if they (or at least those that can be) are pooled and shared. Risk pooling within each generation or cohort of members requires scale and, at present in the UK, all DC pension schemes are individual DC (IDC) schemes with each member having their own individual account. While the contributions of scheme members can be invested in a common diversified investment fund, so that all members in the same fund get the same return, there is no pooling or sharing of other risks. Risk sharing between cohorts of members, in order to make the retirement incomes of each cohort more predictable, requires the agreement of all cohorts.

Collective DC (CDC) pension schemes that pool and share risks were not permitted in the UK until the passage of the 2015 Pension Schemes Act which made provisions for new risk-sharing strategies for DC schemes that aim to improve the predictability of the retirement income.⁹¹³ Because collective schemes have economies of scale, we will examine whether this model for collective schemes can also boost incomes in retirement, as well as

⁹¹³ This is enabling legislation only and makes provision for regulations to be made in respect of: setting target benefits, valuations, reporting requirements, and governance.

potentially make them more predictable compared with IDC schemes. In doing this, we will need to identify the sources of cost savings and risk pooling/sharing in CDC schemes. We will examine international examples of collective schemes that pool/share risks and hence make incomes in retirement more predictable (at least in principle). We will also consider an alternative type of collective scheme that might be more realistic in a UK setting following the 2014 Budget pension reforms – the collective individual DC (CIDC) scheme. We will investigate how new options might be introduced into the UK, drawing on the lessons from other countries, but recognising the potential problems that might arise when a model that works in one country, such as the Netherlands, is introduced into another. A previous UK Government looked at the possibility of introducing CDC schemes in 2009, but decided against it.⁹¹⁴

6.2 Collective defined contribution schemes: Features and criticisms

The main benefits claimed for CDC are risk sharing and lower operating costs. It is claimed that as a result of these benefits, CDC pensions can be 30% or more higher than in pure DC schemes.⁹¹⁵

CDC schemes typically have the following features:

- They involve risk pooling between members both within the same generation of members (i.e., intra-generational risk pooling) and risk sharing between different generations of members (i.e., inter-generational risk sharing). However, there is no risk sharing with the employer who pays fixed contributions (in the region of 10-12% of earnings) and provides no guarantees concerning the level of the pension
- They manage both the accumulation and decumulation phases, in contrast with IDC schemes, which just manage the former. Each member has a target pension (typically related to career average revalued earnings⁹¹⁶ (CARE)) which increases the longer they are a member (a typical accrual rate is 1% of earnings for each year of

⁹¹⁴ Department for Work and Pensions (2009a) *Collective Defined Contribution Schemes: An Assessment of Whether and How Collective Defined Contribution Schemes Might Operate in the UK*, December; www.dwp.gov.uk/docs/collective-defined-contribution-schemes-dec09.pdf

⁹¹⁵ See, for example: Department for Work and Pensions (2009b) *Modelling Collective Defined Contribution Schemes: A Summary of The Government Actuary's Department Modelling of Collective Defined Contribution Schemes*, December (www.dwp.gov.uk/docs/modelling-collective-defined-contribution-schemes-dec09.pdf); David Pitt-Watson and Hari Mann (2012) *Collective Pensions in the UK*, RSA, July; David Pitt-Watson (2013) *Collective Pensions in the UK II*, RSA, November; Kevin Wesbroom, David Hardern, Matthew Arends and Andy Harding (2013) *The Case for Collective DC*, Aon Hewitt, November; David Pitt-Watson, Nigel Stanley, and Kevin Wesbroom (2014) *Collective Pension Plans*, RSA, June; and Shamil Popat, Chris Curry, Tim Pike, and Ciaran Ellis (2015) *Modelling Collective Defined Contribution Schemes*, Pensions Policy Institute, November.

⁹¹⁶ This means that a member's earnings for each year over their career are revalued to retirement date by the increase in national average earnings and then averaged.

service).⁹¹⁷ It is possible to have CDC schemes which are not earnings-related. One example is a with-profits scheme. Another is a unit-linked scheme with a dynamic asset allocation strategy that places a cap and a floor on the returns that are credited.⁹¹⁸ It is important to understand that a CDC scheme offers a target pension, not a promised pension^{919,920}

- On a regular basis, the combined value of the target benefits of all members in the scheme is compared against the value of the total funds in the scheme (i.e., the funding status of the scheme). The target benefits will be raised or lowered depending on realised investment performance and the actual longevity experience of retired members. This type of DC asset-liability modelling is not used in the UK at present⁹²¹
- There is a common investment fund for all members. This will be a diversified growth fund (DGF) that pools investment risk over a wide range of assets, including illiquid assets, such as infrastructure. Because of scale, the investment charges in the fund can be much lower than for funds sold to retail customers and to members of small schemes
- CDC schemes, through their management of both the accumulation and decumulation phases, and the asset-liability modelling and management strategies mentioned above, can invest for longer periods in growth assets, such as equities, than IDC schemes, which conventionally only covered the accumulation period. An IDC scheme traditionally invested in a lifecycle or target date fund (TDF),⁹²² which holds growth assets when the member is young, but has a de-risking glide path which usually begins 5 or 10 years before retirement and ends up on the retirement date with a fund that is invested 75% in bonds and 25% in cash (to provide the tax-free lump sum). Until the 2014 Budget changes, the bonds were most frequently used to buy a fixed-income annuity from an insurer, which is a low-risk bond-based investment that lasts for the member's remaining lifetime. This meant that over the

⁹¹⁷ It should be noted that if CDC schemes are in any way earnings-related, include employer contributions, and smooth payments, or involve guaranteed returns, they will qualify as DB schemes according to the new European System of Accounts, ESA2010, introduced by the Office for National Statistics in September 2014.

⁹¹⁸ For an explanation of the latter, see: David Blake, Andrew J.G. Cairns, and Kevin Dowd (2001) PensionMetrics: Stochastic Pension Plan Design and Value-At-Risk During the Accumulation Phase, *Insurance: Mathematics and Economics*, 29, 187–215; David Blake (1998) Pension Schemes as Options on Pension Fund Assets: Implications for Pension Fund Management, *Insurance: Mathematics and Economics*, 23, 263-286.

⁹¹⁹ The contribution rate into the scheme is set so that the target pension is achieved on a 'best expectations' basis.

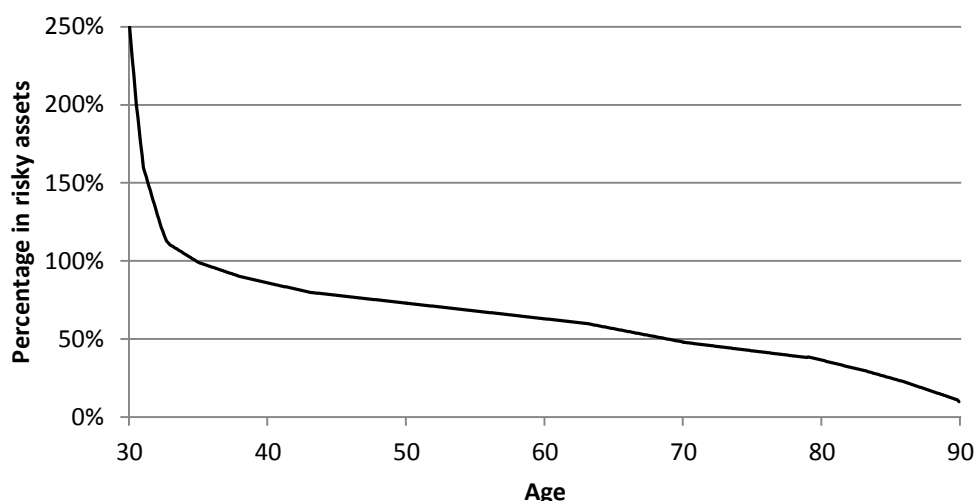
⁹²⁰ CDC schemes do not have to offer earnings-related target pensions. In Denmark, it is more common to offer a zero-rate minimum guaranteed minimum rate of return (i.e., member get back at least their contributions) or a minimum nominal pay-out.

⁹²¹ There have been some recent initiatives considering this, but these are based on individual ALM exercises and therefore are not collective.

⁹²² These are discussed in Chapter 2.

life-cycle as a whole, scheme members were invested in low-risk, low-return assets for significant periods. By investing for longer periods in growth assets, it might be possible to generate higher average investment returns and hence higher pensions in CDC schemes compared with IDC schemes.

Figure 6.1: CDC follows an explicit lifestyle de-risking glidepath



Source: Kees Bouwman (2014), *Collective DC versus Individual DC – Lessons from the Netherlands*, presentation at a Cardano - Pensions Policy Institute round-table seminar, 17 December.

- The extra investment risk that arises from an extended growth phase needs to be shared in an efficient and equitable manner. One way of doing this is through a smoothing fund. When investment returns are very good, the member’s account is allocated only a fraction of the outperformance, the rest of which is held in a reserve fund. When investment returns are very poor, the scheme draws on the reserve fund to mitigate the impact of the negative performance. In other words, peaks and troughs are smoothed out.⁹²³ The smoothing in CDC schemes produces an implicit lifecycle exposure to risk assets, as illustrated in Figure 6.1.⁹²⁴ The rules for smoothing need to be made fully transparent from the start – this means that good communication is very important – and the process subject to considerable expertise and robust independent governance
- Longevity risk is pooled in CDC schemes. One way of doing this is through scheme drawdown. All members keep their accumulated assets (apart from the tax-free lump sum) in the scheme and draw a retirement income. This income, however, is not guaranteed. Depending on the fund’s investment performance, it might rise or it

⁹²³ This, of course, is the same principle as operated in with-profit funds.

⁹²⁴ Note that individual de-risking glidepaths are not permitted in CDC schemes.

might fall. Nevertheless, the cost of buying retail annuities, and hence paying the insurers' profit margin and solvency capital costs, is avoided.

The most important point about CDC schemes is that risks need to be shared fairly between different generations in the scheme and they need to be pooled fairly between members of the same generation.⁹²⁵ A key feature of CDC schemes is that they can smooth shocks over more than one generation of members. Inevitably there will be a mismatch between a CDC scheme's assets and liabilities (i.e., the value of the targeted benefits) as the realised investment performance of the assets and the actual longevity experience of retired members differ from expectations. As Cui et al. (2011, p. 4) describe: 'Surpluses or deficits in the funding process are shared among young, old and future generations by adjusting either contributions, benefit levels, or both, which leads to intergenerational transfers. Ex ante, contributions are set such that in expectation, a new entry generation funds its own pension. Ex post, a given generation may be a net payer who leaves a surplus for future generations, but may also be a net receiver who leaves a deficit for future generations. In this way, unanticipated investment [and longevity] risks are shared among many generations over long periods'.⁹²⁶

One way in which the working members of the scheme can contribute to this risk sharing is through agreeing to make higher contributions or delaying retirement if investment performance has been poor for a sustained period of time. One way in which the older retired generation can contribute to this risk sharing is through 'conditional indexation': pensions in payment are only uprated if investment performance permits. In very poor financial market conditions, pensions might have to be reduced.⁹²⁷ One way in which risks can be pooled fairly within a generation is through the medical underwriting of the retirement income.⁹²⁸ Standard CDC schemes give the same pension to all members (with the same average earnings and length of service) until they die. This is unfair to those members with shortened life expectancies for health reasons. When a young generation of

⁹²⁵ It is important to understand the difference between risk sharing and redistribution. Consider the relationship between different generations of members of a CDC scheme. Intergenerational risk sharing implies that there is no ex ante (i.e., anticipated) transfer between generations, i.e., the expected size of any transfers between generations of members at the start of the scheme is zero. Ex post, depending on realised investment performance, there will be transfers (i.e., redistributions of pension entitlements) between generations – that is how pensions are smoothed across generations. This contrasts with intergenerational redistribution where ex ante there is a planned transfer of wealth between generations.

⁹²⁶ Jijia Cui, Frank de Jong, and Eduard Ponds (2011), Intergenerational Risk Sharing within Funded Pension Schemes, *Journal of Pension Economics and Finance*, 10(1), 1-29.

⁹²⁷ In the Netherlands, where CDC schemes first started, pensions in some schemes have needed to be cut by 20%. Others have had no inflation uprating for 10 years. However, the average cut in pensions during the financial crisis was 2-6%.

⁹²⁸ That is, determining the level of pension to each member after all members have filled in a medical questionnaire about their health status and lifestyle. Those with reduced life expectancies will receive a higher pension.

members first joins the pension scheme, it will not be known which of them will have below average life expectancies and which will have above average life expectancies at the point they retire. Agreeing to medically underwrite incomes at the point of retirement is therefore ex ante fair, since it means that those with below-average life expectancies would not unfairly cross-subsidise those with above-average life expectancies.⁹²⁹

A number of criticisms have been made of CDC, in particular, that the higher and/or less volatile potential pension comes at the expense of some severe restrictions on choice flexibility and that the schemes are complex to manage:

- CDC schemes appear to work as intended only if people stay in for life and draw an income from the scheme, rather than take the accumulated pension fund out at retirement. The 2014 Budget introduced greater ‘pension freedoms’ from April 2015 which would allow DC savers to take their pension fund in cash from age 55 (subject to income tax after the tax-free cash is withdrawn). By keeping their assets in the scheme, some would claim that members would be ‘losing’ their pension freedoms. If sufficient savers exercised these new freedoms, it would make CDC schemes unfeasible.⁹³⁰ The CDC schemes in the Netherlands, for example, do not permit this flexibility
- CDC schemes have little flexibility over the age of retirement. The CDC schemes in the Netherlands have a fixed retirement age and the investment strategy in the accumulation phase is designed with this retirement age in mind
- Members of a CDC scheme have no identifiable pension pot, so the valuation of each member’s claim in a CDC scheme is as challenging as it is in a DB scheme. Members who transfer out of a CDC scheme when they change jobs might experience a reduced transfer value via a market value adjustment (MVA) if the scheme has an

⁹²⁹ The Dutch, however, measure ex ante fairness at the point when someone joins a pension scheme, rather than at the point of retirement. All members of the same age get the same annuity rate when they retire, irrespective of their health status, on the grounds that when they first joined the pension scheme, it will not be known which of them will have below average life expectancies and which will have above average life expectancies at the point they retire.

⁹³⁰ To illustrate this potential problem, in response to the 2014 Budget changes, NOW: Pensions, the multi-employer trust-based IDC scheme, has changed its investment strategy in anticipation that most of its members will take their pension pot as cash at retirement. Members begin in the diversified growth fund (DGF) and when they are 10 years from retirement they will be switched into a ‘retirement countdown fund’ which is most suited for those who are going to take cash. The previous de-risking strategy was to switch 75% of the DGF into a ‘retirement protection fund’ and 25% into a ‘cash protection fund’. The first fund hedges the interest risk from buying annuities, while the second fund is invested to maximise the size of the tax-free lump sum. The ‘retirement countdown fund’ has the same investment strategy as the ‘cash protection fund’: it invests in a mixture of cash deposits, money market funds, short-dated bonds with low credit risk and interest rate derivatives. It is also possible to opt for a five- or 15-year de-risking strategy as an alternative to the 10-year default (reported in Professional Pensions, 24 July 2014).

implicit deficit.⁹³¹ The large CDC schemes in the Netherlands are industry-wide schemes and most people when they change employers move to different employers in the same industry and so stay in the same pension scheme. This suggests that CDC schemes should ideally be established on an industry-wide basis⁹³² or that we move away from workplace pension schemes sponsored by an employer to a small number of very large nation-wide multi-employer pension schemes with employees choosing to join one of these when they first enter the labour market and then stay with it for the remainder of their career⁹³³

- If the risk sharing in a CDC scheme is not fair between generations, it could turn into a Ponzi (or pyramid investment) scheme, with older members taking out more than their fair share at the expense of younger members.⁹³⁴ Ponzi schemes come to a sudden stop when new investors refuse to join. There is, of course, the opposite problem that the first generation in the scheme receive less than their fair share due to the trustees being overly cautious. Trustees therefore need to be aware of – and put mechanisms in place – to avoid both possibilities. CDC schemes also face the demographic risk that the working population is too small to pay the pensions of a large and growing retired population.⁹³⁵ Supporters of CDC schemes need to answer the question why younger workers would join a scheme that was in deficit (which would happen if older workers were regularly drawing a pension based on the targeted performance of the investment fund which was higher than the realised performance)
- Related to this is the criticism that CDC schemes cannot work without an ‘estate’ or initial reserve that can be used for smoothing returns. Supporters of CDC schemes might argue that, with good governance, it is not necessary to have an estate. Alternatively, it might be possible to start a CDC scheme without an estate, but to require an estate to be built up by the first group of members. In other words, this group takes out less than is justified by the fund’s investment performance in order to build a smoothing fund. This would help to establish the scheme’s credibility

⁹³¹ This is what happens in the case of with-profit schemes. An implicit deficit occurs when the sum of the promised benefits across all members exceeds the assets in the fund.

⁹³² The People’s Pension, for example, started as an industry-wide scheme in the building and construction industry.

⁹³³ This is typical in Australian superannuation schemes. Debbie Harrison, David Blake and Kevin Dowd (2014), *VfM: Assessing value for money in defined contribution default funds* predict that as a result of consolidation amongst providers five or six trust-based multi-employer schemes would dominate the market by 2020; <http://www.pensions-institute.org/reports/ValueForMoney.pdf>.

⁹³⁴ John Ralfe (2012), CDC could lead to Ponzi schemes, *Financial Times*, 15 April; www.ft.com/cms/s/0/633891dc-848e-11e1-b6f5-00144feab49a.html?siteedition=uk#ixzz33BLFoJOW.

⁹³⁵ The same problem faces the state pension scheme or, indeed, many other financial products, such as bank deposits, if the early depositors get high returns taken in part from the deposits of later depositors: for example, the Icelandic banking system became a big Ponzi scheme until it collapsed in 2008.

- The risk-sharing rules lack transparency. This is especially true in CDC schemes that operate on a similar basis to with-profit schemes. While it is claimed that there is greater transparency in CDC schemes that operate on a unit-linked basis, nevertheless, risk sharing usually involves actuarial discretion. It could be argued that discretion is the enemy of transparency. Some, however, have argued that some degree of opacity is necessary for such schemes to work at all
- While under current Government proposals, CDC schemes fix employer contributions, future Governments or EU directives might change this. This could happen if the target pension was turned into a guaranteed pension which resulted in a deficit being created in the scheme which the employer was required to fill. Supporters of CDC schemes argue that the way to protect against this is to have a clause in the scheme rules which automatically triggers a switch in the CDC scheme to an IDC scheme should this happen
- Some CDC schemes in Denmark have introduced a zero-rate minimum guarantee (i.e., the saver gets at least the accumulated value of their savings back) or a guaranteed minimum pay-out in nominal terms (equivalent to the purchase of a deferred annuity). This begins to introduce a defined benefit element to a defined contribution pension scheme (i.e., makes the scheme a hybrid scheme). From a regulatory point of view, hybrid schemes are very complicated to run in the UK, especially if such guarantees require levies to be paid to the Pension Protection Fund
- Some employers might be attracted to CDC in preference to IDC if they could convert their defined benefit (DB) pension schemes into CDC schemes. This would allow DB promises to be converted into non-guaranteed targets in the CDC scheme. This would require retroactive changes to accrued DB benefit entitlements. While this is permissible in Holland, for example, the Government has so far refused to allow this in the UK. The overarching Government objective is to make pure DC stronger rather than make pure DB weaker
- A question mark has been raised over whether the proposed 0.75% charge cap would apply to CDC schemes
- The difficulty of imposing effective regulation as the following extract from an article published in the Financial Times notes:⁹³⁶

Regulation is especially important because, unlike DC pots, individual CDC members have no clearly defined property rights. And unlike DB pensions, there is no sponsoring employer standing behind it, so target pensions can only be paid from a CDC's own assets. For members to judge the likelihood of their target pensions actually being paid, it is crucial that they can understand the scheme's overall funding position easily.

⁹³⁶ John Ralfe (2014) CDC pensions will work only if strictly regulated, Financial Times, 16 November; <http://www.ft.com/cms/s/0/d34f4288-69b8-11e4-8f4f-00144feabdc0.html?siteedition=uk#axzz3JEGVI3Nk>

The current Bill [now the 2015 Pension Schemes Act], however, says nothing specific about CDC regulation. In particular, CDC trustees, advised by actuaries, are left to decide for themselves how target pensions for all members should be valued, so overall funding can be measured against the market value of assets.

This “DIY” approach means there is no objective and consistent benchmark for CDC members to judge the likelihood of their target pensions being paid. “Trust me, I’m an actuary” is not good enough as the basis for a wholly new and untested type of pension.

It is worth noting that some of the above criticisms have been highlighted in particular by service providers whose underlying fear is that they would be excluded from providing their services to these schemes. This is because CDC schemes manage the investment and drawdown strategies internally and might decide not to make use of external service providers, such as fund managers and annuity providers.

Another criticism relates to timing. The Queen’s Speech on 4 June 2014 announced the Government’s intention of introducing CDC schemes. This was met with hostility from some commentators which can be summed up in the exclamation: ‘oh no, not another policy initiative!’. There have been so many policy changes and proposals in recent years – auto-enrolment, ending compulsory annuitisation, ending contracting out, possible solvency capital for pension funds, ‘freedom and choice’, charge capping, ending the restrictions on NEST, abolishing the 55% ‘death tax’, etc – that there might be no appetite for yet another new type of pension scheme, even if it would otherwise be regarded as sensible. In particular, we are only half way through the implementation of auto-enrolment, which is almost entirely IDC and which began with the largest employers in the private sector in October 2012. The implementation process will not end until the smallest employers have reached their staging dates in 2017 and newly established companies have staged in 2018.

6.3 A comparison between collective defined contribution schemes and individual defined contribution schemes

If the claim that CDC schemes are able to generate outcomes that are 30% or more higher than outcomes from IDC schemes were true, it would be quite a remarkable achievement that one particular DC structure could outperform another to such an extent. We therefore need to carefully analyse this claim.

The IDC scheme behind the claim typically has the following structure:

- An initially high weighting in growth (i.e., equity-type) assets: an asset allocation that is invested 60% in equities and 40% in bonds is typical
- A de-risking glide path in the period (typically 10 years) leading up to retirement (typically at age 65) which switches the pension fund into bonds (75%) and cash (25%)

- The purchase at retirement of an annuity with the 75% of the pension fund that is invested in bonds.

The CDC scheme behind the claim typically has the following structure:

- It maintains the investment in growth assets for the whole of the accumulation phase
- There is no de-risking glide-path
- An annuity is not purchased at retirement, instead the fund remains invested in growth assets and an income is withdrawn from the fund
- A variation on the last point is that an annuity is purchased at some point (e.g., 75), while an income is withdrawn from the fund between 65 and 75.

We have done some calculations using the PensionMetrics simulation model⁹³⁷ and have generated the following additional returns from the CDC scheme compared with the IDC scheme:

- A 0.5% additional annual return from avoiding the de-risking glide path, totalling 5% over 10 years
- A 1.5% additional annual return from maintaining an investment in growth assets between 65 and 75 and drawing an income rather than buying an annuity which is bond investment: this totals 15% over 10 years⁹³⁸
- A large CDC scheme could use its market power to negotiate a better-valued annuity from age 75 (or set up its own annuity business and pass its profits onto members) and this could lead to higher returns of 5-10%.

So it is fairly straightforward to see how a CDC scheme can generate a pension that is 30% higher than that in an IDC scheme. However, this is not at all a fair comparison, since the two schemes are following completely different investment strategies. It is clear that if the IDC scheme followed the same investment and withdrawal strategies as the CDC scheme – which is now permissible following the 2014 Budget – and had the same cost structure as the CDC scheme – which large multi-employer trust-based IDC schemes like NEST, NOW: Pensions and The People’s Pension have – then they would have precisely the same average outcomes.

Another important point is that the two schemes have different risk exposures. The CDC scheme is exposed to equity risk for much longer than the IDC scheme. It should therefore not be surprising that it generates higher ‘average’ returns. But it also has higher risks and

⁹³⁷ www.pensionmetrics.net

⁹³⁸ Even without any additional return, a large CDC scheme might be able to run a drawdown scheme at an annual cost of 0.5% p.a. (i.e., NEST’s annual charges) compared with a 2% p.a. annual charge that might be extracted from a retail drawdown product, again a saving of 15% over 10 years.

hence the outcomes will be more volatile. Supporters of CDC⁹³⁹ concede that the risks will be higher if the more aggressive investment strategies of CDC schemes are followed by IDC schemes, but they argue that these higher risks can be more effectively smoothed in CDC schemes than IDC schemes.

We therefore need to identify precisely the sources of both cost savings and risk pooling in CDC schemes that might give them an advantage over large multi-employer trust-based IDC schemes.

6.4 Sources of cost savings and risk pooling in CDC schemes

The principal costs in a pension scheme are:

- Administration costs, covering items such as record-keeping, communications, governance, etc
- Investment management costs
- Costs of decumulation products such as income withdrawal and annuities.

The principal risks in a pension scheme are:

- Investment risk
- Interest rate risk
- Inflation risk
- Longevity risk.

6.4.1 Accumulation phase issues

In the simulation exercise that follows, we will make the assumption that administration costs are the same in CDC and large IDC schemes. Similarly, there is no reason to suppose that the investment management costs for the default fund of a large IDC scheme will be any higher than those in a CDC scheme. They could actually be lower, especially if the CDC scheme is offering guaranteed returns which are expensive to provide over long investment horizons.

One of the largest cost savings claimed for CDC schemes comes from not having to buy annuities in the retail market. Instead, the CDC scheme provides the retirement income, while keeping the fund invested in growth assets. However, a large IDC scheme using scheme drawdown could equally well provide a retirement income, while also keeping the fund invested in growth assets, and without having to buy retail annuities. Overall, we

⁹³⁹ For example, Kevin Wesbroom, David Hardern, Matthew Arends and Andy Harding (2013) *The Case for Collective DC*, Aon Hewitt, November; David Pitt-Watson and Hari Mann (2012) *Collective Pensions in the UK*, RSA, July.

should not expect significant cost differences between a large IDC scheme and a CDC scheme.

Let us turn to an examination of the risks, beginning with investment risk. Investment risk – the risk associated with volatile investment returns – can be reduced through diversification. Large schemes, whether CDC or IDC, have the scale to diversify into a larger range of assets. This includes assets that are illiquid, such as infrastructure, which might have higher and more stable long-run returns. A CDC scheme has a single investment strategy, just like a DB scheme. An IDC scheme will offer a number of investment strategies, but 90% of members will typically choose the default fund, which, in a large IDC scheme, can be as well diversified as that in any CDC scheme. So in terms of investment risk pooling within a given cohort of members, those members of the default fund in a large IDC scheme can achieve the same degree of risk pooling as members of a large CDC scheme.⁹⁴⁰ Further, increasing the number of members in the same cohort cannot increase the degree of diversification in either type of scheme, since every member of the cohort has the same investments.

So any additional benefits in terms of investment diversification that a CDC scheme has over an IDC scheme can only come from diversification across generations, i.e., risk sharing between different cohorts of members in the CDC scheme.

How does risk sharing between cohorts work? We will take the simplest possible example of a CDC scheme.⁹⁴¹ Suppose 100 people join a new CDC scheme at the beginning of the year and each member contributes one unit. Suppose they will retire at the end of the year and will take their pension pot in full. Suppose the CDC scheme has a target return of 9.651% on the investments in the fund. Suppose further that the investment fund used by the CDC scheme generates a return that alternates between 5% one year and 15% the next year and this pattern then repeats indefinitely.

Assume in the first year the investments happen to generate a return of 5% and so the pension fund is worth 105 units, which is 4.651 units short of the target. In an equivalent IDC scheme, the retirees will take out 105 units, since they have not been offered a target pension. But in a CDC scheme, the retirees will get the target pension of 109.651 units. The 4.651 unit shortfall will come from the contributions of the next cohort of 100 members who join the scheme on the same day that the previous cohort retires. However, the scheme has a deficit of 4.651 units at the beginning of year 2, with assets of 95.349 units and ‘liabilities’ (i.e., contributions) of 100 units from the second cohort of members.

⁹⁴⁰ This is confirmed by Jurre de Haan, Zina Lekniute, and Eduard Ponds (2015, p.9) *Pension Contracts and Risk Sharing: A Level Playing Field Comparison*, APG, Netherlands, February: ‘the CDC plan with no [inter-generational] smoothing provides the same median replacement rate as the individual plan with an indexed annuity in the decumulation phase’.

⁹⁴¹ Namely, a with-profit scheme.

Suppose that in the second year, the investments generate a return of 15% and so the pension fund is worth 109.651 (= 95.349 x 1.15) units. In the equivalent IDC scheme, the pension fund is worth 115 (= 100 x 1.15) units and members will take the full 115 units in pension. But in a CDC scheme, the members will take out the target pension of 109.651 units. The CDC pension fund is effectively fully funded at the beginning of year 3 when 100 new members join, with assets and 'liabilities' of 100 units (i.e., contributions of 100 units from the third cohort of members). The IDC scheme has an identical balance sheet on this date.

It should be clear that, given the repeating pattern of returns, the CDC scheme is fully sustainable: it can continue to pay the same pensions of 109.651 units to each new cohort of 100 members indefinitely.⁹⁴² This contrasts with the IDC scheme which gives the 'lucky' cohort of members 115 units and the 'unlucky' cohort of members 105 units. However, the average pension in the IDC scheme at 110 units is higher than the stable pension of 109.651 units in the CDC scheme. This is an inevitable consequence of smoothing: the smoothed return of 9.651% in the CDC scheme is lower than the average return of 10% in the IDC scheme. This might well be a price that members would be willing to pay, since in the real world, they will not know before they retire whether they will be a member of a 'lucky' or an 'unlucky' generation.

The volatility of the return in the IDC scheme (as measured by the standard deviation of the return⁹⁴³) is 5%, precisely the same as the standard deviation of the return on the underlying investments. The standard deviation of the return in the CDC scheme is zero, since in this stylised example each cohort gets the same pension.

The regularly repeating pattern of returns in this example is, of course, unrealistic. We can make the returns more realistic by making them completely random. Suppose we assume that there is a 50% chance of a 5% return each year and a 50% chance of a 15% return. In this case, it will no longer be possible to design a CDC scheme in which the return is constant over time at 9.651%. Instead the return will have to be set each year to ensure that the funding ratio neither systematically increases nor systematically decreases. Suppose we establish the rule that the return in the scheme will be set at 9.651% if the funding ratio⁹⁴⁴

⁹⁴² That is why the rather precise target return of 9.651% was chosen. This particular CDC scheme has what is called a knife-edge equilibrium. If the target return is just slightly below 9.651% and is always met precisely, the surplus will grow without bounds. If the target return is just slightly above 9.651% and is always met precisely, the scheme will eventually become insolvent.

⁹⁴³ Standard deviation is a measure of the volatility of returns and can be explained using the following rule of thumb. We would expect actual returns to lie within one standard deviation of the average return in two years out of every three; we would expect actual returns to lie within two standard deviations of the average return in 19 years out of every 20.

⁹⁴⁴ Defined as the value of the assets in the scheme at the beginning of the year divided by the liabilities, which in this simple example is equal to the 100 units of contributions paid by the new cohort of members.

lies between 90% and 110% (these are typical limits in CDC schemes before adjustments to the pension are made). Suppose, further, that if the scheme has a funding ratio above 110%, then the return is increased by 1 percentage point to 10.651%. If, on the other hand, the funding ratio is below 90%, then the return is set to equal the product of the funding ratio and the target return (e.g., if the funding ratio is 80%, then the return will be set at $0.8 \times 9.651\% = 7.7208\%$). We again used the PensionMetrics model to generate twenty 50-year histories of returns. The average return in the CDC scheme was 9.3977%, while the average standard deviation was 0.7619%. This compares with the IDC scheme in which the average return is 10% and the standard deviation is 5%. The coefficient of variation⁹⁴⁵ in the IDC scheme is 0.5 (i.e., $5\%/10\%$), whereas the coefficient of variation in the CDC scheme is just 0.08 (i.e., $0.7619\%/9.3977\%$): the volatility per unit of return in the CDC scheme is just 16% of that in the IDC scheme.

While the example here is very stylised, it is nevertheless useful for demonstrating that CDC schemes can potentially generate more stable incomes across generations than IDC schemes can. Further, we have precisely the relationship we would anticipate between the two schemes: the CDC scheme with the lower risks has a lower average return, while the IDC scheme with the higher risks has the higher average return. Those supporters of CDC schemes who claim that a CDC scheme can generate both higher average returns and lower risks than an otherwise identical IDC scheme have found a CDC scheme that violates the laws of finance!

Jurre de Haan et al. (2015)⁹⁴⁶ report similar results using the following simulation exercise involving a smoothing fund. A 25-year old joins either an IDC or a CDC pension scheme, makes a contribution rate of 18%, and retires at 67. The asset allocation is fixed at 23% in equities and 77% in bonds. Equities have an expected return of 7.7% and bonds have an expected return of 3.5%. Wage growth is 2.4% and the average nominal interest rate term structure rises to 2.9%. The target replacement ratio is 70%. Both the IDC scheme and the CDC scheme buy investment-linked annuities, but the CDC scheme has a 10-year smoothing of returns, so that if the funding ratio is 95% in a given year, the CDC scheme will reduce the pension by 0.5% p.a., whereas, in the case the IDC scheme, the pension is reduced by 5%. On the basis of 5,000 simulations, the distributions of replacement ratios for the two schemes are shown in Table 6.1.

⁹⁴⁵ Defined as the ratio of the standard deviation to the average return: it measures the volatility per unit of return generated.

⁹⁴⁶ Jurre de Haan, Zina Lekniute, and Eduard Ponds (2015) *Pension Contracts and Risk Sharing – A Level Playing Field Comparison*, APG, Netherlands, February.

Quantiles of the distribution of replacement ratios:	Replacement ratios:	
	IDC scheme	CDC scheme
99%	173%	145%
95%	136%	121%
Median	79%	82%
5%	42%	53%
1%	33%	43%

Source: Jurre de Haan, Zina Lekniute, and Eduard Ponds (2015) *Pension Contracts and Risk Sharing – A Level Playing Field Comparison*, APG, Netherlands, February

While the median replacement ratios are not statistically different from each other at around 80%, the CDC scheme has less volatile (i.e., smoother) replacement ratios, ranging between 53-121% in 90% of simulation trials, compared with 42-136% in the case of the IDC scheme. The benefits of using a smoothing fund – in this case across 10 years or cohorts – are clear.

6.4.2 Decumulation phase issues

Investment risk is the dominant risk in the accumulation phase of a DC pension scheme. We now turn to the key risks in the decumulation phase: interest rate risk, inflation risk and longevity risk.

Interest rate risk is a risk associated with the purchase of annuities. When interest rates are low – as they are currently – annuity rates will also be low. This is because when an insurance company sells an annuity, it uses the premium received to buy bonds and the cash flows on these bonds are used to make the annuity payments. When interest rates are low, bond prices are high⁹⁴⁷ and fewer bonds can be purchased for a given sized pension fund, which, in turn, means that the pension that can be paid will be low. It is therefore desirable to avoid the purchase of an annuity when interest rates are low if this is at all possible. One way of smoothing out interest rate risk is to purchase the annuities in stages over time.⁹⁴⁸ Another is to avoid the purchase of retail annuities altogether and pay the pension from the fund using scheme drawdown. This is what CDC schemes would do.

An inflation rate of 3% p.a. will reduce purchasing power by 50% in 23 years which is the average length of retirement in the UK. Inflation risk is the risk faced by income streams that

⁹⁴⁷ This negative relationship between interest rates and bond prices can be illustrated using the simple example of a perpetual bond paying £5 p.a. indefinitely. When market interest rates are 5%, the bond will be priced at £100. But if market interest rates fall to 2.5%, the bond's price will rise to £200.

⁹⁴⁸ This strategy is sometimes called staggered vesting.

are not indexed to inflation. It is possible to fully hedge against inflation by purchasing an index-linked annuity. However, the initial payment on an index-linked annuity is only 60% of that on a level annuity.⁹⁴⁹ With a 3% inflation rate, it would take 18 years for the payments on the index-linked annuity to equal those on the level annuity and 34 years before the total payments on the index-linked annuity to equal those on the level annuity. Only 5% of the annuities sold are index-linked annuities. Those who do not buy an index-linked annuity are exposed to the risk that inflation in future will be much higher than 3%. CDC schemes typically do not use index-linked annuities to provide inflation protection. Instead, they pay pensions with conditional indexation, that is, pensions paid from the fund using scheme drawdown with any uprating of the pensions in payment dependent on the funding situation of the scheme. Hence CDC schemes offer the conditional hedging of inflation risk.

Longevity risk is the risk of the pension scheme member running down their pension fund before they die. This can happen with drawdown schemes but not with an annuity.⁹⁵⁰ CDC schemes use drawdown to pay the pension and the pension is adjusted – either by foregoing inflation uprating or in extreme cases by cutting the pension – to ensure that the scheme remains solvent, i.e., does not run out of money before members die.

However, every member of a CDC scheme who retires will get the same pension as every other member who retires with the same average salary, irrespective of their health status and life expectancy. But is this fair to members who have poor health or below average life expectancy? Low-skilled workers on low final salaries tend to have lower life expectancies than high flyers on high final salaries. Final salary DB schemes therefore involve a significant cross subsidy from those on low salaries to those on high salaries. Average salary schemes – and CDC schemes target an average salary pension – are designed to reduce this cross subsidy, but they do not remove it altogether. In contrast, a large IDC scheme, by maintaining individual accounts, might be able to get a better deal for members in poor health or who have below average life expectancies, either by allowing such members to take enhanced withdrawals from the fund, arranging for them to buy enhanced annuities or letting them take a lump sum in extreme cases.⁹⁵¹

⁹⁴⁹ Personal Pension and Annuity Trends, *Moneyfacts Treasury Reports*, July 2014.

⁹⁵⁰ Most people in Australia take their retirement pot as a lump sum. In July 2014, the interim report of the Australian government's Financial System Inquiry (FSI) found that a quarter of people with a superannuation balance at age 55 had depleted their balance by age 70 (reported in Jonathan Stapleton (2014) 'Will Brits follow the Aussies in blowing retirement cash?', *Professional Pensions*, 22 July). The FSI is discussed in depth in Chapter 3.

⁹⁵¹ Following the 2014 Budget changes, any member of a funded pension scheme can take a lump sum from 55, but this is not the intention of a CDC scheme which is to provide a lifetime pension.

6.4.3 Academic studies

Finally in this Section, we should note a number of academic studies which have shown the benefits of CDC schemes.⁹⁵² These studies use an overlapping generations model in which a number of generations of workers of different ages are members of a CDC scheme at the same time. The benefit (or welfare) from being a member of a CDC scheme is measured across all generations. The studies show that CDC schemes are potentially welfare improving compared with IDC schemes. This is because they smooth pensions over time and individuals do not know ex ante whether they will be a member of a lucky or unlucky generation, and so, if they are rational, they will agree to participate in the CDC scheme. Nevertheless, the CDC scheme involves substantial transfers between generations. One of the studies finds that it is optimal to transfer up to one third of any underfunding to future generations.⁹⁵³

6.5 International examples of collective schemes

6.5.1 The Netherlands

The Netherlands is the home of the second-pillar workplace CDC scheme.⁹⁵⁴ The CDC structure being promoted in the UK – targeting a career-average revalued earnings (CARE) pension with conditional indexation – is based on the traditional Dutch CDC model.⁹⁵⁵ One key feature of a Dutch CDC scheme is a high fixed contribution rate of around 20%: the Dutch work one day a week for their retirement.⁹⁵⁶ The main policy lever to keep the scheme solvent is conditional indexation. The scheme distinguishes between the real ‘liability’ and the nominal ‘liability’. The real ‘liability’ (L_R) is the value of the accrued target

⁹⁵² Christian Gollier (2008) Intergenerational Risk Sharing and Risk Taking of a Pension Fund, *Journal of Public Economics*, 92(1), 1463-1485; Jiajia Cui, Frank de Jong, and Eduard Ponds (2011) Intergenerational Risk Sharing within Funded Pension Schemes, *Journal of Pension Economics and Finance*, 10(1), 1-29; Dennis Bams, Peter Schotman, and Mukul Tyagi (2013) Optimal Risk Sharing in a Collective Defined Contribution Pension System, Maastricht University Discussion Paper, January. See also Samuel Sender (2012) *Shifting Towards Hybrid Pension Systems: A European Perspective*, EDHEC-Risk Institute, March. More generally, Ole Peters and Alexander Adamou (2015) The Evolutionary Advantage of Co-operation, arXiv:1506.03414v1, show that in a large number of biological and economic systems, the pooling and sharing of resources can reduce fluctuations and increase the returns for each co-operator (we are grateful to Dr Con Keating for pointing us to this reference).

⁹⁵³ One has to question how many British workers would accept that?

⁹⁵⁴ They started formally around 10 years ago, although it can be argued that the defined benefit schemes that preceded them, were in effect CDC schemes, since the benefits were, unlike their UK equivalents, not guaranteed, but instead were conditional on the performance of scheme investments and could be cut if necessary.

⁹⁵⁵ Kevin Wesbroom, David Hardern, Matthew Arends and Andy Harding (2013) *The Case for Collective DC*, Aon Hewitt, November; Eduard Ponds and Bart van Riel (2009) Sharing Risk: The Netherlands New Approach to Pensions, *Journal of Pension Economics and Finance*, 8(1), 91-105.

⁹⁵⁶ One has to question how many British workers would accept that?

pension payments when full indexation equal to the growth in average earnings is awarded: this is found by discounting the pension payments using the real government yield curve net of real wage growth. The nominal 'liability' (L_N) is the value of the accrued target pension payments with no indexation: this is found by discounting the pension payments using the nominal government yield curve.⁹⁵⁷ The scheme is fully funded when assets equal real 'liabilities' ($A = L_R$). The difference between real and nominal 'liabilities' ($L_R - L_N$) is the required indexation reserve needed to cover the target indexation. The actual indexation reserve is the difference between the value of the assets and the nominal 'liabilities' ($A - L_N$). This might be positive or negative. When the actual indexation reserve is negative ($A < L_N$), there is no uprating of pensions and, in extreme cases, pensions might be cut. When the value of the assets lies between the nominal and real 'liabilities' ($L_N < A < L_R$), pensions will be uprated on a pro rata basis. When the value of the assets exceeds real 'liabilities' ($A > L_R$), pensions will be uprated fully in line with average earnings plus any catch-up arising from previous indexation shortfalls. Dutch schemes typically use a 10-year smoothing window, whereby any reduction in the pension paid is spread over a 10-year period.⁹⁵⁸

This adjustment mechanism has been described as a 'solidarity mechanism' by Frank Husken, managing partner at AF Advisors in the Netherlands who has written a report for the Dutch Government on CDC schemes. He argues that the way the 'solidarity mechanism' works – the way peaks and troughs in returns are smoothed out – must be made clear from the start. A failure to do this properly in the Netherlands has led young people to complain that they are subsidising older members of CDC schemes. Husken explains that 'Young people in universities are coming up with the research and the youth wings of political parties are using it to criticise CDCs. They are right. The measures taken to reduce payouts are too little too late, what is needed is for the solidarity mechanism to be set out in detail, in advance'. Husken points out two further problems with CDC in the Netherlands:

First of all there is a lack of transparency. In DB, an individual knows what pension he can expect, in DC, they know the value of the assets they are entitled to.

In CDC neither of the two is the case. The pension a member will receive is directly related to how the investment proceeds are distributed over generations.

Secondly, the financial crisis taught us that the distribution over generations is a difficult exercise.

The investments suffered, which led to a debate in the Netherlands about how much loss on investments can be absorbed by intergenerational risk

⁹⁵⁷ A real funding ratio of 100% implies a nominal funding ratio of around 140%.

⁹⁵⁸ Kees Bouwman of Cardano has shown that it is possible to replicate the outcome from a Dutch CDC scheme with 10-year return smoothing using a very specific investment lifecycle strategy in a IDC scheme: see Figure 6.1.

sharing and how much of the loss should be absorbed by the current pensioners through lower pensions.

This debate became political and in some cases the appropriate measures were not taken.

In my opinion, the only way CDC and the corresponding intergenerational solidarity could work is by defining in advance how intergenerational solidarity works in practice.⁹⁵⁹

The criticism that CDC schemes are not fair to young workers or indeed low-skilled workers has led the Dutch to search for alternatives that while maintaining the collective benefits of CDC schemes – in particular the collective sharing of the risks that are too large for individuals to bear themselves – nevertheless protect individual rights where possible.

One such alternative is the ‘collective individual defined contribution’ (CIDC) scheme.⁹⁶⁰ In a CIDC scheme, the collective features that promote economies of scale and lower costs are maintained, e.g., automatic enrolment and the pooling of investment and longevity risks.

However, there are also key features that are specific to each individual member and which make the scheme easy to understand:

- The CIDC scheme maintains individual accounts for all members in the accumulation phase, so it is easy to value each individual’s pension pot
- The contribution rate is set to be actuarially fair to each member, implying that there is a direct relationship between the contributions that an individual pays into the scheme and the pension they eventually receive. This contrasts with CDC schemes in which contributions are averaged on a collective basis to meet a target average salary pension
- Each individual has their own de-risking investment strategy in the lead up to retirement.⁹⁶¹

Despite criticisms of CDC and increased support for CIDC in Holland, large numbers of Dutch people still trust the Dutch system of solidarity and collective risk sharing, according to Bernard Walshots, the chief investment officer of Rabobank’s pension fund. Nevertheless, he predicted that the pension reform debate currently taking place in Holland would lead to

⁹⁵⁹ Reported in Steve Tolley (2014), Going Dutch: Will Steve Webb’s collective DC plans lead to better pension returns for savers?, Money Marketing, 4 June; <http://www.moneymarketing.co.uk/news-and-analysis/pensions/going-dutch-will-steve-webbs-collective-dc-plans-lead-to-better-pension-returns-for-savers/2010866.article>.

⁹⁶⁰ Georgina Beechinor and Corine Hoekstra (2014), CDC Focus: Has CDC already had its day?, UK Plan Sponsor, 25 July; www.ukplansponsor.co.uk/OpinionsArticle.aspx?id=6442495532.

⁹⁶¹ The Dutch CIDC scheme is designed to fund an annuity at retirement.

a move away from collectivity.⁹⁶² This view is shared by Gijs van Dijk of the FNV union federation. He argues: ‘FNV members are strongly in favour of a collective system. They also value risk-sharing. [In addition], costs are lower and you get better returns, and thus a better pension in the end for members. But there are limits to their sense of collectivity and solidarity. We heard from all sides that members want to be able to see how much money they have saved up. Pension funds have to plainly show them how much money is reserved for them in the pension pot’. Another topic that keeps coming up is having more say in the investment policy: ‘Time and again, our members say that they want to know what’s happening with their money’.⁹⁶³

6.5.2 Denmark

Denmark’s ATP (Arbejdmarkedets Tillaegs Pension or Labour Market Supplementary Pension) scheme, which was established in 1964, can be interpreted as a CIDC scheme.⁹⁶⁴ This is a mandatory funded first-pillar scheme⁹⁶⁵ for all Danish employees serviced by a semi-official financial institution called ATP.⁹⁶⁶ As a result of mandatory participation, operating costs are very low.

Contributions which are approximately 1% of salary (with one third paid by the employee and two-thirds paid by the employer) are divided into two parts: the guaranteed contribution (80% of the total contribution) and the bonus contribution (20%). The member receives an individual guaranteed nominal pension based on the guaranteed contribution (effectively a deferred nominal annuity).⁹⁶⁷ The pension guarantees are fully hedged using long-dated derivatives such as interest-rate swaps. The bonus contribution goes into a collective reserve which is used to provide future indexation of both pensions in payment and accrued pension entitlements on a conditional basis if the funding ratio (total assets divided by guaranteed benefits) exceeds 120%. The collective reserve is invested in return-seeking assets. Given the long-term nature of the scheme, ATP can invest in long-term

⁹⁶² Reported in Jonathan Williams (2015) Dutch still support pensions solidarity despite criticism, Investments and Pensions Europe, 19 March.

⁹⁶³ Reported in Netspar Magazine (2015) Pension system must change, but still be collective, Spring.

⁹⁶⁴ Jan Bonenkamp, Lex Meijam, Eduard Ponds, and Ed Westerhout (2014) *Reinventing Intergenerational Risk Sharing*, Netspar Panel Paper 40, April (section 4.4).

⁹⁶⁵ It is a first-pillar scheme (like the basic state pension scheme in the UK). The second-pillar schemes in Denmark are generally industry-wide IDC schemes.

⁹⁶⁶ NOW: Pensions in the UK is a subsidiary of ATP.

⁹⁶⁷ In August 2014, it was announced that the nominal deferred life annuity guarantee would be updated every 15 years. A 20-year old worker would have a deferred annuity rate that was guaranteed until age 35. At age 35, the worker would receive a new deferred annuity rate that was guaranteed until age 50. When the worker reached age 50, they would be told the actual level of the deferred annuity they would receive when they retired at age 65, using the yield curve and best-estimate longevity projections at the time. This is to allow for revisions to both inflation and longevity during the 15-year periods and also because it is easier to hedge 15-year return guarantees in the financial markets than 45-year guarantees.

illiquid assets offering higher expected returns, such as infrastructure. The collective reserve is invested on behalf of all scheme participants and individual members have no explicit property rights in respect of this fund.

6.5.3 Canada

The Canada Pension Plan (CPP) is partly funded and partly unfunded (pay-as-you-go, PAYG).⁹⁶⁸ It is therefore a combination of a CDC scheme and a non-financial (or notional) DC scheme.⁹⁶⁹ It is a nation-wide first-pillar scheme which covers all Canadian provinces except Quebec (which operates the Quebec Pension Plan (QPP) on a similar basis).

CPP is a first-pillar scheme which was established in 1997 following a Canadian Government Actuary's report in 1995 showing that the current PAYG scheme would require a gradual increase in the contribution rate from 5.6% to 14.2% between 1995 and 2075 to keep it solvent in the face of rapid population ageing, where solvency is defined as having a ratio of total contributions received to total benefits paid of 100%. The Government responded by introducing CPP and increasing the contribution rate immediately to 9.9%. At this rate, contributions will exceed pension payouts until 2020. The surplus is invested in return-seeking assets with the aim of building up a partial fund to pay future pensions. The funding ratio is anticipated to reach 31% by 2075 at which time the ratio of contributions to benefits is projected to be 87%. The CPP is an example of intergenerational risk sharing as investment shocks can be smoothed out over a number of generations.

The CPP is also an example of what is known as either a 'pooled target-benefit (TB) pension plan'⁹⁷⁰ or a 'shared-risk pension plan' (SRPP).⁹⁷¹ This has been characterised as follows:

A TB pension plan has fixed contributions, a target defined benefit formula and a benefits/funding policy that prescribes the methods for varying benefits based on affordability, with pre-set reserve levels and a pre-determined order of benefit adjustments. We distinguish TB from other sustainable approaches, the key difference being that TB pension plan contributions are set first, at a fixed level, and benefits are derived from

⁹⁶⁸ Jan Bonenkamp, Lex Meijam, Eduard Ponds, and Ed Westerhout (2014) *Reinventing Intergenerational Risk Sharing*, Netspar Panel Paper 40, April (section 4.3).

⁹⁶⁹ Robert Holzmann, Edward Palmer and David Robalino (2012) *Non-financial Defined Contribution Schemes in a Changing Pension World*, World Bank, Washington DC.

⁹⁷⁰ Robert L. Brown and Tyler Meredith (2012) Pooled Target-Benefit Pension Plans, *IRPP Study*, No. 27, March; *Target Benefit Plans: The Future of Sustainable Retirement Programs*, Aon Hewitt Canada, June 2012; *Unpacking the Target Benefit Plan: Finding the Right Benefit/Funding Balance*, Aon Hewitt Canada, September 2012; *Delivering on the Target Benefit Plan: Governance and Risk Alignment*, Aon Hewitt Canada, December 2013.

⁹⁷¹ Pensions Policy Institute (2014) *Risk Sharing Pension Plans: The Canadian Experience*, Briefing Note 69, October.

*what can be afforded by that contribution level, with the ability to adjust benefits as experience develops.*⁹⁷²

Target benefits are separated into two types:

- Base benefits – typically based on a career-average formula
- Ancillary benefits – such as cost-of-living adjustments (COLA) and early retirement benefits.

A TB plan satisfies five principles:⁹⁷³

1. Overall economic risk (variance) must be shared in a manner that is appropriate to the participant (e.g., a worker should not be expected to be an investment expert or to understand life-course investing).
2. Size matters. Plans must endeavour to take full advantage of the significant opportunities and efficiencies that come with large scale.
3. Consistent with principles 1 and 2, there should be a collective approach to risk sharing. That is, the ‘law of large numbers’ should be used to statistically minimise risk (variance) whenever and wherever possible.
4. Fairness is critical for both employers and employees. In the transition from today’s DB and DC pension landscape, whenever participants are expected to cede a right or privilege, plans should attempt to replace the lost attribute with new entitlements. Participants should not see a significant diminution of their future expectations.
5. Any new plan design should be cognisant of market realities and the costs experienced by members and employers. Cost minimisation is critical to extending pension coverage. Proposals that cannot accomplish these goals in a cost-efficient manner should not be considered.

A key feature of a TB plan is sustainability which is defined as ‘one that can consistently deliver, through both favourable and adverse circumstances, an appropriate range of benefits within an acceptable range of costs over the long-term. A sustainable approach to providing pensions is based on a solid understanding by all stakeholders of the risk factors involved. This, in turn, would work toward the key objective to avoid severe corrections to both contributions and benefits’.⁹⁷⁴ Some TB plans allow for risk sharing between the employer and employees, with an increase in contributions from both parties under some extreme circumstances.

A particularly interesting example of a TB or shared risk plan is that from the province of New Brunswick. This plan will be discussed in more detail in Section 6.6 below.

⁹⁷² Aon Hewitt Canada (2012, p.3) *Target Benefit Plans: The Future of Sustainable Retirement Programs*, June.

⁹⁷³ Robert L. Brown and Tyler Meredith (op. cit., p.21).

⁹⁷⁴ Aon Hewitt Canada (2012, p.3) *Target Benefit Plans: The Future of Sustainable Retirement Programs*, June.

6.5.4 USA

While not the most obvious country for promoting collective schemes, the Centre for American Progress based in the USA has designed SAFE (Secure, Accessible, Flexible, and Efficient) Retirement Plans.⁹⁷⁵ These are hybrid schemes which combine features of a DB pension—including regular lifetime payments in retirement, professional management, and pooled investing—with features of a DC pension—predictable costs for employers and portability for workers. By operating on a large scale, the supporters of SAFE plans claim they are superior to individual DC schemes since they (a) eliminate inefficiencies in individual schemes, such as high charges and the failure of members to diversify their investments properly, and (b) share risks among workers and retirees.

SAFE plans are designed to work around the behavioural and other barriers that prevent individuals making optimal decisions about their pension scheme. The key issues covered are:

- Reluctance to start pension saving – employees have a set portion of their pay automatically deducted and contributed to the SAFE Retirement Plan they have chosen
- Reluctance to increase pension saving – this is overcome through auto-escalation, the automatic increase in the contribution rate over a number of years
- Changing jobs: the member stays in the same scheme when they change jobs, i.e., the scheme follows the member which avoids the issues associated with the pot following the member
- Costs: costs are lower than in individual schemes because they are spread across a large number of plan members
- Investment strategy – investments are managed by professional investment managers
- Risk of market losses – ‘A SAFE Retirement Plan would reduce the risk of market losses by smoothing out the investment returns from years when returns are particularly high or low. This would be done by creating what is known as a ‘collar’, which would function as follows. In most years, participant accounts would be credited with market returns, but in particularly good or bad years, the full market return would not immediately be credited. Rather, years of higher returns would be saved away and returned over time in weaker-performing years’.⁹⁷⁶ A new SAFE scheme would need to build up a reserve cushion before bonuses could be awarded

⁹⁷⁵ Rowland Davis and David Madland (2013) *American Retirement Savings Could Be Much Better*, Centre for American Progress, August; <http://cdn.americanprogress.org/wp-content/uploads/2013/08/SAFEreport.pdf>.

⁹⁷⁶ Rowland Davis and David Madland (op cit., p. 9). This is very similar to what happens in a with-profit scheme.

- Risk of outliving pension savings or annuitising when interest rates are low – ‘A SAFE Retirement Plan would minimise these risks by providing an annuitised stream of payments that increases in value over time and cannot be outlived. The SAFE Retirement Plan does this by providing payments out of an annuity fund for retirees that is conservatively invested—primarily in bonds with some stocks to enable payments to keep up with inflation over time—and by spreading out the impact of years of very high and very low returns in a similar manner as is done during the accumulation phase’⁹⁷⁷
- Inflation: the annuity fund would provide cost-of-living increases.

In October 2015, the 300 Club released a report by David Villa, chief investment officer of the State of Wisconsin Investment Board, entitled *The Third Way: A Hybrid Model for Pensions*. The report argues that hybrid schemes can lead to much better governance and investment outcomes than either pure DC or pure DB. In such schemes, risk is shared equally between employer and employees.

The report's findings are based on the hybrid structure that has existed in Wisconsin for the past 30 years. A minimum level of benefit is guaranteed by the sponsor and any extra money in the pot at the point of retirement is split between the sponsor and employee, effectively aligning their interests. According to Mr Villa: ‘The risk sharing aspects of this design have profound implications for the governance of the system. Interests are not aligned in DB or DC structures. In the hybrid structure, risk is shared and the alignment of interest that results, contributes to a virtuous cycle of governance’. The hybrid structure gives more stable incomes than DC, but is also superior to DB ‘because it creates a more balanced governance structure less susceptible to large shocks that can destabilise the [DB] pension plan’.

The Wisconsin model works as follows. The beneficiary population is divided into two groups. The first group consists of the active employees and the second group consists of the retired employees.

The active employees will accumulate two account balances while they are working. One account balance is calculated using a formula that grants credit for each year of service – at Wisconsin the credit factor is 1.6%. The result is then multiplied by the average of the three highest years’ earnings. This level of benefit is guaranteed by the employer once the member reaches retirement. The target return for the guaranteed benefit based on the combined employee and employer contribution is approximately equal to wage growth plus 4%. In order to compensate the employer for taking the risk of the formula benefit guarantee, part of any value created in excess of the guaranteed benefit can be retained by the employer. The second account balance is the employee’s contributions compounded by

⁹⁷⁷ Rowland Davis and David Madland (op cit., p. 11).

the actual performance of the trust. At retirement, the higher of the two account balances is annuitised at a discount rate of 5% and is established as the base benefit.

Each year, performance of the retiree pool is computed for the previous five years. If the pool earns more than 5% in the five-year period, the monthly benefits are increased. This creates an adjustment reserve that is added to the liability of the system. This reserve represents the growth of the liability above the original base benefit computed at retirement. If the performance of the retiree pool is less than 5%, the monthly benefits can be decreased by reducing the retiree pool adjustment reserve. However, the liability cannot be reduced below the base benefit that was calculated at retirement. Thus, the retirees receive a guaranteed base benefit determined by the 5% discount rate plus a contingent annuity adjustment based on performance above the 5% discount rate. The goal of the contingent annuity adjustment is to compensate for the erosion of the real value of the benefit caused by inflation.

Mr Villa claims that the hybrid scheme is attractive to employers because employees are willing to trade-off greater retirement income security for lower wages. According to a study by the Center for Retirement Research at Boston College, wages are 9.5% lower for state and local workers in the US, after controlling for education, demographic and other factors.⁹⁷⁸ After modifications for pension contributions and additional health benefits, public-sector compensation including wages and benefits is about 4% less than that in the private sector. This implies that wages are 5.5% lower to adjust for the value of the pension benefit.

6.5.5 Sweden

The Swedish mandatory first-pillar collective non-financial (or notional) defined contribution (NDC) pension scheme was launched in 1999.⁹⁷⁹ The contribution rate is 16% of earnings. There is also a mandatory first-pillar IDC scheme which has a contribution rates of 2.5% of earnings. The NDC scheme was introduced explicitly to deal with intergenerational inequities that were perceived to be present in the previous defined benefit system. In short, the scheme has explicitly removed intergenerational risk sharing. Instead, risks are shared within each cohort. The NDC scheme delivers what is called an ‘income pension’, while the IDC scheme delivers what is called a ‘premium pension’.

During the accumulation phase, each scheme member in the NDC scheme has a ‘notional’ fund which grows with new contributions at a rate of return which equals the average wage growth rate in the economy plus an adjustment arising from an automatic balancing

⁹⁷⁸ Alicia H. Munnell, Jean-Pierre Aubry, Josh Hurwitz and Laura Quinby (2011) *Comparing Compensation: State-Local versus Private Sector Workers*, Center for Retirement Research at Boston College, September.

⁹⁷⁹ Edward Palmer (2000) *The Swedish Pension Reform: Framework and Issues*, *World Bank Pension Primer*, Washington D.C.

mechanism (ABM). Defining A/L as the ratio of assets to liabilities in the scheme, the adjustment will be negative if $A/L < 1.00$. It will be positive if, following a negative adjustment, $A/L > 1.10$ and this adjustment will be maintained until the system has returned to the same path of indexation that would have been followed had the negative adjustment not occurred. There is no positive adjustment in other circumstances, however, so, in principle, the system could build up a surplus that is never distributed.

In the NDC decumulation phase, the life annuity at retirement that each scheme member receives will equal the individual's accumulated account value divided by an annuity factor that depends on cohort life expectancy at retirement. The initial real growth rate in the annuity was set at 1.6% p.a., with this adjusted (upwards or downwards) to maintain system financial balance. The annuity can be claimed in part or whole from age 61. The worker does not need to leave the labour force to claim it and, as long as he or she continues to work, contributions will be paid on earnings. Also, there is no maximum age at which the pension must be drawn. The Swedish first-pillar scheme has a minimum pension called a 'guarantee pension', financed through general tax revenues, allowing an element of redistribution in favour of poorer retirees. Additional redistribution occurs through non-contributory rights, such as child care rights granted during the first four years after a child is born, also paid through external contributions from the general budget.

NDC schemes have a number of advantages:

- They are compulsory, so the scheme designer can choose and enforce the parameters of the system. For example, the designer can choose an appropriately high contribution rate, one intended to achieve a desirable replacement ratio in retirement. As another example, the designer can specify the minimum guaranteed pension level
- They involve risk sharing within each generation, thereby avoiding the intergenerational inequities of other systems – including the previous Swedish system – that pass deficits down to the next generation. Given demographic changes – increasing life expectancy and declining fertility – these deficit transfers were seen as unaffordable going forward
- They overcome the intragenerational inequities of DB pensions which leave companies bearing longevity risk and are unfair to early leavers – who experience portability losses when they change jobs – and to low flyers – who do not gain from the backloading of benefits in DB schemes
- In addition, the Swedish IDC scheme, which supplements the NDC scheme, with a free choice of investment portfolios from a set of registered funds, has the following characteristics. Its cost of operation is low. Economies of scale are maximised since the state (via the tax authorities) collects contributions and there is a central clearing

house (via the PPM, the Premium Pension Authority).⁹⁸⁰ The long-run target charge of around 0.20 % of PPM assets – comprising around 0.04% for PPM overhead costs, 0.15% for fund management fees of FDC assets and 0.01% for contribution collection – is very low compared with typical IDC charges

- There is good access to information. The clearing house provides information on returns, costs, and risk measures for all funds (in the IDC component).

NDC schemes have a number of disadvantages:

- They require the whole country to participate. This, in turn, implies that a high degree of social solidarity is required to make these schemes work
- The assets are very poorly diversified internationally. In effect, the Swedish NDC scheme invests in a single stock called ‘Sweden’. This means that Swedish pensions – in the NDC component at least – are wholly dependent on Swedish economic growth rates and Swedish demographic trends
- They cannot deal well with international labour mobility
- The pension assets are not portable in a way that the assets in IDC schemes are.
- The state is a monopoly supplier of services and products (e.g., annuities) and so the scheme is subject to political risk
- Because the annuity factor depends on cohort life expectancy at retirement, the NDC pension is unfair to people with impaired lives.

In short, a NDC pension scheme delivers PAYG pensions, but with a greater degree of built-in intergenerational fairness. The Swedish pension system probably has little to offer the UK except for the following three observations. First, it is possible to have high contribution rates – and hence adequate pensions in retirement – but probably only if the high contribution rates are mandatory. We should bear that in mind when the UK Government comes to review the 8% contribution rate for auto-enrolment in 2018. Second, it is possible to build intergenerational equity into national pension systems, but again probably only if they are mandatory. Third, the Swedish Government is the monopoly provider of annuities in Sweden – and does so without violating EU competition rules.

6.5.6 Australia

A number of large superannuation funds in Australia are considering moving to CDC.⁹⁸¹

The A\$17.5 billion Telstra Super fund sees this as a way of smoothing investment outcomes and, in particular, avoiding sequence-of-returns risk for its members. The catalyst is the Financial System Inquiry’s recommendation to create the Comprehensive Income Product

⁹⁸⁰ In 2011, the PPM became part of the Swedish Pension Agency which administers the entire public pension system.

⁹⁸¹ Reported in Amanda White (2015), Australian funds look to collective DC, Top1000funds.com, 26 June.

for Retirement. Chris Davies, chief executive, says: ‘If you’ve got the core competency around defined benefit and you have a core of members who have been through defined benefit, then you have the culture, you have the ingredients to do something like a collective defined contribution arrangement’. Davis is also committed to offering a sophisticated level of advice, communication and products for its members. Another fund looking at CDC is UniSuper.

An interesting feature of the Australian system is that members tend to join a scheme when first employed and stay with it until they retire. This implies that the scheme follows the member when the member changes job, neatly avoiding the issues associated with the pot following the member.

6.6 How new collective schemes might be introduced into the UK

In this Section, we investigate how new collective schemes might be introduced into the UK and the potential issues that arise when a model that works in one country is introduced into a market characterised by a very different culture, history of labour relations and legal framework.

6.6.1 Current UK proposals

CDC is one example of the recently proposed ‘defined ambition’ (DA) workplace pension schemes that combine some of the risk pooling/sharing benefits of DB, but which impose zero or limited liabilities on the sponsoring employer.⁹⁸² The aims are to provide more predictability for members than a typical DC scheme, but at the same time to ensure less cost volatility for sponsors of DB schemes than is the case with the traditional model.

The DA proposals for DB schemes (‘DB-lite’) for future accrual involve replacing the statutory indexation of pensions in payment with conditional indexation (which will depend on the scheme’s funding position), change the scheme’s normal pension age in line with changes in longevity assumptions, and automatically convert benefits to a DC pension when a member leaves the scheme, with the choice between a cash equivalent transfer value and full buy-out.

The DA proposals for DC schemes (‘DC-heavy’) for future accrual include (none of these options involves any risk to the employer):

⁹⁸² Department for Work and Pensions (2013) *Reshaping Workplace Pensions for Future Generations: Public Consultation*, Cm 8710, November (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/255541/reshaping-workplace-pensions-for-future-generations.pdf); Department for Work and Pensions (2014) *Reshaping Workplace Pensions for Future Generations: Government Response to the Consultation*, CM 8883, June (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/322647/reshaping-workplace-pensions-for-future-generations-response.pdf).

- Money-back guarantee (MBG) which ensures members receive the same amount that they paid in (i.e., they get at least their money back)
- Capital and investment return guarantees (CIRG) which ensure that members receive back their contributions plus a minimum investment return
- Retirement income insurance (RII) which uses part of the member's fund to purchase insurance that guarantees a minimum level of income which is expected to grow every year as further insurance is purchased. At retirement, the insurance is triggered if the member lives long enough to exhaust their fund.
- Pension income builder (PIB) which uses part of contributions to purchase a deferred annuity which provides a minimum pension in respect of that year. The rest of the contribution goes to a common pooled fund that is invested in riskier assets and is used to generate growth and pay conditional indexation. The deferred annuity can be bought from an insurer or provided from within the fund
- Collective defined contribution schemes (CDC).

The PIB is the strategy used in the Danish ATP pension scheme. Part of each contribution into the scheme is used to buy a deferred annuity which is payable from retirement. The level of income secured depends on the level of interest rates at the time and so will fluctuate from year to year. The rest of the contribution is invested in growth assets which allows for the possibility of pension increases and also provides a buffer against increases in life expectancy. The fund accrued with these remaining contributions could be used for drawdown during the initial phase of retirement, thereby enhancing the income from the deferred annuities (once they start paying). Part of the fund could also be used to buy advanced life deferred annuities (ALDAs) which would add to the income in late retirement.

The PIB is an interesting strategy which fully integrates the accumulation and decumulation stages. It has the advantage of expressing the benefit in terms of a future income – which members are more likely to understand – rather than a pot size – which most members find very difficult to convert into an income equivalent. There are, however, some disadvantages. First, deferred annuities typically have a specific date on which they start to make payments. This suggests that individuals would need to have a fairly clear idea about the date on which they are planning to retire when they start to purchase deferred annuities in, say, their early 20s. Standard deferred annuities give little flexibility to change this date. A very large fund like ATP might be able to accommodate a certain amount of flexibility, but a small scheme might not be able to do this. Second, deferred annuities purchased through insurance companies can be expensive on account of regulatory capital requirements. This is because of the potentially large changes in life expectancy that might occur over the 40 or so years of accumulation. Again a pension scheme the size of ATP might be able to offer these annuities internally, but if it does underestimate increases in life expectancy, the next generation of members will be cross-subsidising the retired generation.

6.6.2 Lessons from abroad

If CDC (or one of its 'DC-heavy' alternatives) is introduced in the UK, then it is useful to take into account lessons from other countries. Of particular relevance are the Netherlands and New Brunswick.

CDC works in the Netherlands because the Dutch are willing to cooperate to make the system work. Large-scale industry-wide schemes are built on employer and union agreements. Employers and unions meet as 'social partners' in works councils in a spirit of 'social solidarity'. This type of collaboration is far less common in the UK, given its history of labour relations. Nevertheless, supporters of CDC schemes in the UK include the National Association of Pension Funds (NAPF) and the Trades Union Congress (TUC).⁹⁸³ So in principle, there is support for some form of collective DC scheme amongst some of the UK's 'social partners'. Further, it is claimed⁹⁸⁴ that there is a group of employers who might be interested in setting up CDC schemes and that is those employers planning to close down their defined benefits scheme and wish to offer their employees something more reliable than individual DC schemes (even if they cannot change accrued benefits).⁹⁸⁵

Scale and cost are important issues to deal with. The Dutch CDC schemes were not set up from scratch but were converted from DB schemes in which the benefits were not guaranteed, but instead were conditional on the performance of scheme investments and could be cut if necessary. By contrast, the accrued benefits in UK DB schemes are guaranteed and cannot be changed (in solvent companies). This means that UK DB schemes cannot be converted into CDC schemes. Companies with DB schemes would have to set up new CDC schemes which would be a costly exercise. Further, the companies would have to be large ones with a large number of potential members in order to generate scale. It would, however, be possible for large companies with IDC schemes to switch to CDC at reasonably low cost should they wish to do so. However, it would be even cheaper for such companies to convert their IDC schemes to CIDC schemes.

Another important lesson from the Netherlands is that the CDC schemes are run by not-for-profit organisations that are largely trusted by all generations of scheme members. This trust is very important when risks are shared across generations. It is likely that a for-profit organisation would rapidly lose trust if it were awarding dividend payments to its

⁹⁸³ The Association of British Insurers (ABI) has come out against CDC. It argues that the benefits are exaggerated and there are 'issues about intergenerational subsidy and transparency which could prove challenging in today's society' (reported in Pauline Skypala (2014) Dutch-style pensions for UK face tough credibility test, Financial Times, 10 June).

⁹⁸⁴ See David Pitt-Watson and Hari Mann (2012) *Collective Pensions in the UK*, RSA, July

⁹⁸⁵ The HM Treasury report *Freedom and Choice in Pensions: Government Response to the Consultation* (Cm 8901, July 2014, <https://www.gov.uk/government/consultations/freedom-and-choice-in-pensions>) would appear to offer a way around this. Companies could use an enhanced transfer value process to move workers out of a DB scheme into a CDC scheme and in the process reduce if not eliminate any scheme deficit.

shareholders at the same time as cutting pensions in payment which will inevitably happen at some stage in a CDC scheme – even if, as supporters of CDC schemes claim, this will happen rarely. This, in turn, would seem to suggest that a CDC scheme should operate in a trust-based framework where the trustees are professionally qualified and independent of the sponsor.

The New Brunswick SRPPs provide an interesting case study on how a collective scheme might be introduced.⁹⁸⁶ The New Brunswick SRPPs began in January 2014. The enabling legislation for the SRPPs was introduced in 2012 and the provincial Government worked with both the employers and the unions from 2010 to recognise the need for reform of the existing DB framework which was believed no longer to be sustainable or affordable. A taskforce was established to work with the provincial Government, employers and unions to establish the principles underlying a new pension model. Table 6.2 lists 10 principles around which a consensus might be built, with the three key principles being sustainability, stability and affordability. All existing DB plans in New Brunswick were assessed against the key principles and failed the test of long-term sustainability. The taskforce then worked with the unions of those plans in greatest deficit and developed the ‘shared risk pension model’. This combined the pension design features of the Dutch CDC schemes with the rigorous risk management procedures developed for Canadian banks and insurance companies.

Different SRPPs were proposed with different benefit features. The performance of each plan was simulated using stochastic modelling under 1,000 different economic scenarios over a 20-year time horizon. The aim was to select the investment strategy and contribution rate needed to satisfy the stress tests set out in Table 6.3 and which met the taskforce’s three key principles. Once a particular SRPP passes the stress test, it becomes a candidate for adoption by employers and employees in New Brunswick. The Public Service SRPP has total contributions of 19.5% of pensionable earnings, with employees paying 8.25% and employers 11.25%. It also has a relatively cautious investment strategy: 41% equities, 39% bonds, 5% hedge funds, and 10% real estate and infrastructure.

Once adopted, the SRPP is subject to annual reviews, the aim of which is to identify any potential adjustments to benefits or investment strategy well in advance, and, hence, minimise the size of any adjustment that needs to occur. If a cost of living adjustment is to be paid in a given year, the primary risk management requirement (concerning base benefits not being reduced – see Table 6.3) must first be met. A permanent benefit change can only be met if both the primary and secondary risk management requirements (the latter concerning ancillary benefits being paid – see Table 6.3) are met. An adopted SRPP is subject to an annual actuarial funding valuation. In case the SRPP is underfunded in any year, there needs to be a recovery plan that specifies how contributions, investment

⁹⁸⁶ Pensions Policy Institute (2014) *Risk Sharing Pension Plans: The Canadian Experience*, Briefing Note 69, October.

strategy, and base and ancillary benefits are adjusted, with the reduction in base benefits being the last measure taken. In the case of overfunding, a funding excess utilisation plan will specify how contributions, investment strategy, and base and ancillary benefits are adjusted, with the restoration of previously reduced base benefits being the first priority.

<i>Table 6.2: Principles for the reformed New Brunswick Pension Plans</i>
1. Pension plans must be subject to robust risk management, and be checked annually, including stress tests, to ensure that the plan complies with that task.
2. A pension plan must provide benefit security. This means: <ul style="list-style-type: none"> • Risk management targets are focused on delivering a high degree of pension security for members and retirees; and • The Plan must be governed by an independent trustee(s) who can force employers and employees to increase (or decrease) contributions when appropriate, subject to realistic and manageable limits.
3. A pension plan should be able to demonstrate that it will be sustainable over the long term.
4. A pension plan must be affordable, which means that contributions must be stable and affordable for both employer and employees.
5. The Plan must be equitably designed – no single age cohort should unduly subsidise another, and no one should be able to ‘game’ the system.
6. The Plan must be transparent. The pension goals and risks must be clearly stated up-front; who shares the risks and rewards and by how much must be clear and pre-established.
7. Benefit changes as a result of conversion will apply only in the future; everyone keeps the amount that has already been credited.
8. There should be no sudden shocks to members and retirees’ retirement plans.
9. All groups of employees should be treated consistently, including part-time employees.
10. At inception, the actuarial assumptions must be closely related to market benchmarks, such as International Accounting Standards 19.
Source: Chart 3 in ‘Risk Sharing Pension Plans: The Canadian Experience’, Briefing Note 69, Pensions Policy Institute, October 2014.

Table 6.3: Risk Management Requirements in the New Brunswick Shared Risk Pension Plan

New Brunswick SRPPs are required to undergo annual stress testing using asset-liability modelling. At the outset of the plan, the contribution levels are set such that the plan can satisfy the legislated risk management requirements.

The specific requirements that must be met when the plan is first set up are that:

- there is a 97.5% certainty that base benefits will not be reduced over a 20-year period (the primary risk management goal); and
- there is a 75% certainty that certain ancillary benefits will be paid over a 20-year period (the secondary risk management goal).

Source: Chart 4 in 'Risk Sharing Pension Plans: The Canadian Experience', Briefing Note 69, Pensions Policy Institute, October 2014.

A particular aspect of the New Brunswick legislation is that it allows for existing DB plans to be converted to SRPPs and existing DB benefits can be converted to 'base benefits' and it is even possible for accrued or vested 'base benefits' to be reduced. These possibilities have not been legislated for in the SRPPs of other Canadian provinces and are not currently permitted in the UK. It is also interesting to note that smaller employers have joined multi-employer SRPPs. Members can leave a SSRP by taking a 'termination value'. This is calculated as the larger of (a) the member's own contributions plus the scheme's investment return on these contributions and (b) the value of the member's accrued benefits multiplied by the funding level of the plan (similar to a cash equivalent transfer value from a DB scheme in the UK).

The New Brunswick SRPPs must have independent governance through a trustee board or a not-for-profit organisation. Typically, the trustee boards have equal numbers of employer and union representatives. They are responsible for establishing the investment and funding policies, the annual actuarial valuations and stochastic modelling, and administering the plan.

Given this international experience, how could collective schemes be introduced in the UK? David Pitt-Watson (2013, pp.13-14)⁹⁸⁷ has recommended that the following areas are addressed if collective pensions are to be safely introduced:

*The first concerns **governance**. Pension provision is notoriously open to conflicts of interest. And these are exacerbated by the fact that individuals have little knowledge of what their pension provider is doing and little leverage over their actions. We would therefore strongly recommend that:*

⁹⁸⁷ David Pitt-Watson (2013, pp.13-14) *Collective Pensions in the UK II*, RSA, November.

1. CDC pensions, like DB pensions should only be introduced under trustee management; that is where the governance of the fund owes loyalty only to its beneficiaries.
2. That the primary duty of the trustees is to represent the interest of the members. The trustee body should have amongst its members adequate expertise to manage the investment and benefit issues they will confront.
3. The trustees should make public their investment and benefit policy, and their proposed response to known risks. These should be made available to all beneficiaries.
4. There should be clear rules as to the decisions which can be made by the trustees and those which need the authorisation of the regulator.

The second area concerns the **management** of the enterprise. ...[T]here need to be guidelines as to:

5. The appropriate investment policy and the charges a pension fund can make. These should not be onerous, but they should stop abuse.
6. The actuarial assumptions upon which payments are to be made; that these are not unduly optimistic or pessimistic.
7. Proper custody arrangements being in place.
8. Members being fully informed over time of the likely level of their benefits, and of the nature of the promise being made. This latter point is of particular importance.
9. Members' rights being clearly defined. So there needs to be transparency on how decisions will be reached. Members should also understand their rights with respect to withdrawing from one pension plan and placing their savings in another.
10. It may also be sensible to suggest that any CDC pension plan has an adequate number of members to make it worthwhile. The fundamental question here is whether the pension fund is able to generate scale and thus exploit economies of scale, as well as to share risk effectively.

The third area is how this can be made **attractive to sponsors**. First and foremost must be an absolute assurance that there will be no attempt to ask the sponsor to underwrite promises which they had not signed up to. One reason that employers are unwilling to sponsor pension schemes is that they feel in the past to have been victims of "legislation-creep", with the law forcing them into ever greater responsibilities. Therefore the legislation should:

11. Clarify that this is a defined contribution framework and that the sponsor will not be responsible for any liability beyond their annual

contribution to the plan and therefore no liability under Section 75 of the Pensions Act 1995.

12. A ‘Henry VIII’ protection would act as a safety valve. That would be a protection which ensured that should any liabilities be imposed through changing legislation to the employer, they would have the ability to revert out of the scheme.

*The further consideration is to try and trigger the development of a pension system which has **other positive characteristics**, such as low costs, easy pension transfers and so on. To achieve this, we might suggest that:*

13. All CDC plans should be licensed on the basis of their having an appropriate cost structure and adequate flexibility.

14. NEST be allowed to offer collective pensions.

15. Various social partners (NAPF, CBI, TUC, perhaps even the RSA or others) be asked to establish one or more fiduciary bodies which can be entrepreneurs for the establishment of multiemployer collective pensions.

Finally, a regulatory body, possibly part of the Pension Regulator, should be charged with overseeing the new CDC regime, and licensing those undertakings which provide collective pensions.

So with appropriate governance and management, it might be possible to introduce some form of collective scheme in the UK. A large single employer might find it attractive to do this. However, it is more likely that a multi-employer trust-based scheme (like NEST) would find it easier to do this if there were sufficient appetite amongst scheme members.

6.7 Feedback from our interviews and responses to the consultation paper

6.7.1 Feedback from our interviews

While a number of the risks listed in Table 1.2 can be most effectively hedged by pooling and sharing them, suggesting that there are potential benefits from looking at collective solutions, there appears to be very little appetite amongst employers for exploring this option at the present time. This is likely to be due to a combination of reform exhaustion and the previously made point about employers losing interest in occupational pension provision per se. According to our interviews with employers’ representatives, employers are ‘absolutely not interested’ in CDC. They also said that everything the Government has done recently – in particular the 2014 Budget – works against the collective principles of CDC.

By contrast, there was general support for some form of collective scheme from trade unions:

- ‘CDC can be more efficient than individual DC’
- ‘Many arguments against CDC are about the role of the trades unions. CDC is essentially saying there needs to be trust-based schemes with good governance. The advantage of CDC is about risk sharing and longevity pooling’.
- ‘You need capital to set it up’.
- ‘NEST required capital to get going’.

6.7.2 Responses to the consultation paper

We summarise the responses to Questions 47-75 in the consultation paper here.

47. *What should ‘collective’ mean in the UK context (e.g., collective in terms of scale and governance, and collective in terms of risk-sharing)?*

The vast majority of responses suggested that risk sharing of some form or another was the defining feature of a collective DC scheme. However, there was disagreement about which groups should be pooling risk.

48. *What are the main benefits of CDC schemes over individual DC schemes?*

There were a variety of responses and there was no dominant view on the main benefits of collective versus individual DC schemes. Twenty-one per cent of responses either did not think that collective DC schemes were better than individual DC schemes or did not think that they could work. Among those responses that were more positive, economies of scale were mentioned by 26 per cent of responses and risk sharing by another 26 per cent. On the investment side, it was mentioned that CDC – in contrast to an individual DC scheme – had the ability to invest in a wider range of illiquid long-term investments to obtain a liquidity premium as well as the ability to avoid the separation between the accumulation and decumulation phases.

49. *What are the main disadvantages of CDC schemes over individual DC schemes?*

Sixty-four per cent of respondents thought that the main disadvantage of CDC over individual DC schemes was how to share risks between individual savers, particularly in a contracting CDC scheme. Some thought that this made the long-term sustainability of CDC doubtful. Many raised the issue of explaining risk sharing to members who might struggle to understand it, especially the notion that the actual pension might be lower than the target pension. Twenty-nine per cent pointed to the reduced flexibility for members compared to individual DC.

50. *CDC schemes may be able to generate incomes that are higher than individual DC schemes as the latter are currently operated. (a) Are there reasons why an individual DC scheme could not follow the same investment or decumulation strategy as a CDC scheme? (b) Would trustees of an individual CDC scheme be willing to accommodate the greater*

investment risk, given the need to enable members to transfer out and to take their pension pot with them?

Half of the respondents thought that CDC could out-perform individual DC, due to economies of scale, risk sharing (within or between) generations – enabling investment in higher-risk, higher-return assets – and the avoidance of a de-risking glidepath which moves towards less risky products as a member approaches retirement. However, 30 per cent of respondents thought that CDC could not generate higher returns than individual DC and that the claims that they could were misleading. In terms of trustee attitudes, most respondents thought that trustees would be unwilling to take on greater investment risk due to the issues of transfers out of the scheme (such transfers were seen as problematic).

51. *(a) Would a CDC scheme have any additional risk-sharing advantages over a large master trust DC scheme which followed the same investment and decumulation strategies where possible? (b) Can the benefits from any additional sources of risk sharing available to CDC schemes be quantified?*

Forty per cent of responses thought that CDC would not have any additional risk sharing advantages over a large master trust DC scheme, although other responses noted that the two types of scheme would follow different investment strategies. The small number of respondents who answered the second part of the question about quantifying the additional benefits thought that it was possible to do so through appropriate modelling.

52. *(a) What is your preferred design for a CDC scheme, in terms of targeted benefits? (e.g., a CDC scheme that is intended to replace a DB scheme and hence would be earnings-related (specify accrual rate, earnings measure, pre-retirement indexation rule, post-retirement indexation rule); or a CDC scheme that is intended to replace an individual DC scheme and hence would be with-profit and a target return, unit-linked and a target return, etc.). (b) Explain why.*

There was considerable variety in the responses about the appropriate design of a CDC scheme and many respondents were agnostic or unsure themselves, suggesting that there is no consensus view on the target benefits. The most common response (by forty-four per cent of respondents) was that there should be some form of a target pension (essentially a DB-minus view of pensions). The main differences between the proposals were the differences in the acceptable degree of risk sharing across generations. Some said there should be little inter-generational risk sharing, with one suggesting that it would be easier to have inter-generational risk sharing if some of the contributions were explicitly from the employer. One response suggested that the DB-minus view of pensions was closer to what DB pensions used to look like before protections were added. Nevertheless, two respondents preferred DC-plus on the grounds that it was cheaper than DB-minus and hence likely to be more widely provided.

53. *(a) What is the best estimate contribution rate to achieve the target benefit? (b) How should the contribution rate be shared between employer and member?*

Respondents did not provide numerical figures on the best estimate of the contribution rate because of the variety of factors needed to be taken into account. A number of respondents noted that the higher the share of the contribution from the employer the greater the scope for inter-generational risk sharing.

54. *(a) Can a CDC scheme work with a planned contribution rate that is fixed independent of a member's age or is an age-dependent member contribution rate required? (b) If the latter, is a change to equality legislation required?*

Most respondents suggested that either the contribution rate or the target benefit had to be fixed but not both. However, it was recognised that, while it was possible to fix both, this would involve cross-generational subsidies, which really required (possibly variable) contributions from employers to be feasible. In the case where a scheme wishes to operate with age-related contributions, one respondent said that there should be an express exemption from equality legislation.

55. *What investment strategy would be appropriate for CDC schemes: (a) in accumulation and (b) near retirement and (c) in decumulation?*

Respondents suggested that the investment strategy would not be constrained by its liabilities, but would probably look like a DB scheme without costly asset-liability management – consistent with the target pension view of what CDC was trying to achieve – although the optimal strategy would depend on the composition of scheme membership.

56. *What are the main benefits of a CDC scheme in terms of intra-generational risk pooling?*

Respondents suggested that the main intra-generational benefit of a CDC scheme would be sharing of longevity risk within the pool. One response made the caveat that transfers in or out should be medically underwritten to preserve the risk sharing.

57. *What are the main benefits of a CDC scheme in terms of inter-generational risk sharing?*

Most respondents suggested that the main inter-generational benefit of a CDC scheme would be smoothing of investment returns. One respondent also suggested that this risk pooling increased the ability to invest in higher-risk assets and obtain a higher expected return. Only one respondent referred explicitly to inflation risk and longevity risk.

58. *(a) Over how many generations should risk be shared? (b) Explain why this is optimal.*

There were relatively few responses to the issue of how many generations should share the risk in a CDC scheme, but, of those who did respond, there were widely divergent answers, ranging from risk-sharing between all generations (including those not even in the workforce) to risk sharing over a 10-year period (as in the Netherlands).

59. *How should the risk-sharing rules in a CDC scheme be defined?*

All respondents suggested that the most important issue was that the risk-sharing rules be clear and transparent.

60. *How much discretion should a CDC scheme's managers have when it comes to smoothing or adjusting benefits to target benefits, or should the rules be fully transparent?*

With a relatively small number of responses to this question, there was an almost equal split between respondents arguing for CDC scheme managers having no discretion to them having very wide discretion. One respondent thought that there would always be need for discretion, while another respondent suggested that the rules should be set by the regulator.

61. *(a) If the actual pension is above the target pension, when should adjustments be made? (b) How and in what order should the adjustments be made (consider adjustments to pension indexation, pension amount in payment, investment strategy, active member contribution rate, active member retirement age)?*

62. *(a) If the actual pension is below the target pension, when should adjustments be made? (b) How and in what order should the adjustments be made (consider adjustments to pension indexation, pension amount in payment, investment strategy, active member contribution rate, active member retirement age)?*

Among the relatively small number of responses to Questions 61 and 62, most thought that adjustments should be made annually and they agreed that adjustments should be made first to indexation and second to the level of the pension. One respondent was explicit in saying that contributions and investment strategies should not be altered.

63. *What mechanisms are needed to ensure that no CDC scheme becomes insolvent? For example, a CDC scheme might try to use a high target return to attract more customers.*

Forty-three per cent of respondents noted that CDC schemes could not technically be insolvent, but that they could over-promise (and hence under-deliver) to their members. Mechanisms needed to be put in place to deal with this and suggestions included actuarial reviews, regulation, transparent rules and good trusteeship.

64. *Is it necessary for a CDC scheme to start with or build up a reserve fund to give it credibility?*

Seventy-eight per cent of respondents thought that there was no need for a reserve fund, while the rest said that there was such a need. However, many responses thought that a reserve fund might be helpful, especially initially, to cover set-up costs and provide scale and credibility.

65. *CDC schemes in other countries (e.g., Holland) have virtually no flexibility with respect to member choice (e.g. contribution rate, investment strategy, retirement date, form of decumulation (i.e., pension). Do the freedoms and flexibilities introduced by the 2014 Budget render CDC schemes unfeasible or more risky in the UK? Explain why not or, alternatively, how freedom and flexibility would need to be tailored in the context of CDC schemes?*

Responses were fairly equally divided on whether member choice was compatible with CDC schemes, some believing it was possible if not desirable, while most thought that too much flexibility would make it hard to run a CDC scheme, or that such flexibility was inappropriate and not really wanted anyway (since pensioners who wanted more flexibility had other options).

66. *One of the biggest growth areas prior to the 2014 Budget was the medical underwriting of annuities and the growth of enhanced annuities. But in a standard CDC scheme, everyone gets the same pension irrespective of health status. (a) Would it be feasible in a CDC scheme to medically underwrite the pension in retirement? (b) Would it be desirable to do this?*

Sixty-three per cent of responses suggested that medical underwriting of the pension in retirement was feasible for a CDC scheme, although some noted that such underwriting was not really feasible before the age of 50.

67. *How should a CDC scheme best be organised: (a) on a company-wide basis, (b) an industry-wide basis, or (c) a nation-wide basis?*

Seventy-one per cent of responses thought that a CDC scheme could be operated on any of the three bases suggested, while a minority thought that it should be done on the largest scale possible.

68. *What is the minimum number of members in a CDC scheme to make it viable? Explain this figure.*

There was no consensus answer to this question. The small number of responses gave widely differing views on the minimum number of members in a CDC scheme, ranging from forty (one per generation) to 10,000.

69. *Effective regulation, governance and quality standards will be crucial, given the absence of member property rights (which apply in standard DC schemes) and also the absence of a sponsoring employer that guarantees benefits (which applies in DB). (a) What*

regulation is required to protect members' benefits? (b) What governance mechanisms and quality standards are needed in CDC schemes, especially to ensure inter-generational equity?

No clear conclusion emerged from the varied responses to the first part of the question concerning what regulation is needed to protect members' benefits: 38 per cent noted that CDCs did create property rights (which might be based on contributions or with actuarially set surrender values), some stressed that all member types (pensioners, actives, deferreds) should be treated equally, while some said that regulation should be under trust law resulting in strong trustees. The vast majority of responses to part (b) agreed that valuation should be on a best-valuation basis for CDC schemes to ensure inter-generational equity.

70. *Could CDC schemes operate both on a trust basis and a contract basis? Explain.*

Eighty-six per cent of responses preferred a trust-based scheme, although many thought that either a trust or contract basis would be possible.

71. *Could a 'for profit' organisation run a CDC scheme? Explain.*

Responses were divided as to whether or not a CDC scheme could be run 'for profit': 43 per cent said "yes" so long as it was appropriately capitalised, 28 per cent thought a trust-based scheme would be better than a 'for profit' scheme, and one response was unambiguous that 'for profit' CDC schemes would be inappropriate.

72. *What communication strategy would be appropriate for CDC schemes (a) in accumulation and (b) near retirement and (c) in decumulation?*

Eighty per cent of responses thought the appropriate communication strategy for a CDC scheme would be an annual report.

73. *What measures should the Government take to make CDC attractive to: (a) potential sponsors, and (b) potential members?*

The small number of responses emphasised that sponsors need appropriate regulation. Government involvement via NEST might also help things get started.

74. *How should transfer values be treated in CDC schemes, both in and out?*

Most respondents suggested that transfers in or out of CDC schemes had to be for bona fide reasons to avoid gaming.

75. *Is it possible for a CDC scheme to work within a charge cap of 0.75%?*

All respondents thought that a 0.75 per cent charge cap was feasible, although not all thought that it was necessarily desirable.

6.8 Analysis and recommendation

6.8.1 Analysis

The evidence that we have examined indicates that CDC schemes could generate smoother pensions across different cohorts of members than IDC schemes. This evidence comes from both theoretical models of intergenerational risk sharing using an overlapping generations framework and stochastic simulation models using CDC designs that are typical of those in use in the Netherlands, such as career average revalued pensions with conditional indexation.

The theoretical models also suggest that CDC schemes are only likely to be sustainable in the long run if (a) everyone joins (i.e., participation is mandatory) and (b) everyone remains in the scheme for life. These two conditions potentially break down in the UK context.

Participation in second-pillar workplace pension schemes in the UK is based on the principle of auto-enrolment, namely that employees are automatically enrolled onto a workplace pension scheme when they start a job, but can opt out. Auto-enrolment began in the UK in October 2012 and will not be completed until 2018. The early evidence shows that around 90% of auto-enrolled employees have remained in their pension scheme. However, these were employees in very large companies where the company was very supportive of the pension scheme. We have yet to see what the participation rates are like with small and micro employers, where the support from the employer might not be so strong. Nevertheless, if participation rates remain high, it might be possible to argue that the first condition is more or less satisfied. Notwithstanding this, CDC schemes need to be credible to survive and they will not be if they are perceived to be unfair to future generations of members. To avoid such a misperception, it might be desirable for CDC schemes to build an estate or reserve fund immediately after starting. This would help to establish long-term credibility.

CDC schemes are designed so that the member joins and stays in for life, for both the accumulation and decumulation phases. This means that they are designed to provide an income during retirement, rather than a lump sum at the point of retirement. This is, of course, precisely what pension schemes are supposed to do, since their primary purpose is to provide an income in retirement for however long the scheme member lives. The problem is that the 2014 Budget reforms allow members to exercise their new pension freedoms and take their accumulated fund from age 55 from April 2015. However much they try to put a brave face on this, supporters of CDC cannot get around the fact that the Budget changes, which emphasise the rights of the individual over the shared benefits of the collective, greatly weaken the case for CDC schemes in the UK, however desirable that case is in principle.

The case for CDC schemes is further weakened in the UK context by the problem of transfers. As mentioned above, the theoretical evidence suggests that for CDC schemes to work best, everyone should stay in the same scheme for life. Transfers between schemes are, of course, possible, but this is in theory much easier with IDC schemes – where every member has their own account – than with CDC schemes – where members will simply know their target pension and could be subject to a market value adjustment if they transfer. Transfers are much more complicated in practice than in theory, at least in the UK.

In a CDC context, it would be much more efficient if the ‘scheme followed the member’ when the member changed jobs and hence transfers could be avoided. This, in turn, requires that there are only a few large CDC schemes in existence, all fully exploiting scale economies. A worker joins one when they first start work and stays with that scheme for life. This is only likely to be feasible if the CDC schemes are organised, not on a company basis, but on an industry-wide or national basis.

The claim that CDC schemes could generate outcomes that are 30% or more higher than standard DC schemes is based on an unfair comparison. A large CIDC scheme with the same cost structure as a CDC scheme and following the same accumulation and decumulation strategies would generate broadly the same outcome. The biggest cost saving in a CDC scheme comes from not having to buy individual annuities in the retail market, while one of CDC’s biggest advantages is the pooling of longevity risk.⁹⁸⁸

However, a large CIDC scheme using scheme drawdown could also avoid the costs of retail annuities, yet still pool longevity risk. It could also allow the individual underwriting of longevity risk in a way that CDC schemes cannot. In other words, CIDC could be used as an institutional alternative to the purchase of deferred annuities.

It is true that a CIDC scheme is, unlike a CDC scheme, unable to engage in intergenerational risk sharing and hence smooth pension incomes across a number of generations. But the question needs to be asked in a country like the UK – where both intragenerational and intergenerational solidarity are typically less strong than in, say, the Netherlands – is whether a CDC scheme is more likely to be perceived as a vehicle for intergenerational redistribution than a vehicle for intergenerational risk sharing. By contrast, a CIDC scheme avoids the intergenerational and other cross subsidies that CDC schemes involve, while maximising the benefits of economies of scale. It is also consistent with the new flexibilities following the 2014 Budget and personal de-risking investment strategies could be designed to enable members to take their pension as a lump sum from age 55.⁹⁸⁹ Such flexibility is not consistent with a CDC scheme. There could also be a default decumulation strategy using scheme drawdown which could be designed to give higher pensions to those with reduced

⁹⁸⁸ Colin Richardson (2014), *Collective DC 2016 Proposal – Is it an effective tool to pool longevity risk?*, PTL, June; ptluk.com/files/2014/06/BLOG-Collective-DC-2016-proposal-@-02-June-2014.pdf.

⁹⁸⁹ As NOW: Pensions is doing.

life expectancies and maintain the benefits of economies of scale in the decumulation phase.

We also need to make a realistic assessment about the likelihood that CDC will be introduced in the near future.

Steve Webb was one of the strongest supporters of CDC when he was Pensions Minister and his support remains undiminished since he lost his seat in the May 2015 general election. He believes CDC is a 'slow burner' and that work on preparing for it could continue in his absence: 'It may not be the first priority – there are more pressing ones, but departments can do things in parallel. It was always for the long term, and that work will continue. The detailed work on producing regulations and consulting on them was always going to take a couple of years. It was not just an academic exercise or Government putting out rules and regulations and then no one doing anything with it. There are professional people in the industry, trade unions and others, who want to see something less volatile than individual DC, particularly in sectors DB-dominated'.⁹⁹⁰

Lord David Willetts, another pensions expert who also left Parliament in May 2015, also supports CDC: 'I do think that pure DC ends up with too much risk being borne by the individual. In fact ... one of my regrets is that Lord Adair [Turner], between his first and his second report, pretty much gave up on any form of DB. I accept that conventional old-style final salary is on the way out. But Career Average Revalue Earnings, collective DC in various forms, hybrid schemes... I personally think that that's the best way of having some pooling of risk. So I do think we need to be imaginative in promoting these types of instruments'.⁹⁹¹

Tim Sharp, pensions policy officer at the Trades Union Congress is another strong supporter of CDC – as is the Labour Party. He draws encouragement from NEST's Retirement Income Blueprint, published in June 2015:⁹⁹²

It was easy to assume in the aftermath of the General Election that CDC pensions had been packed off to the West Country with outgoing Pensions Minister Steve Webb, never to return.

But the publication by Government-backed pension scheme NEST of its blueprint for retirement income in the era of pensions freedom not only brings desperately-needed rigour and analysis to the subject. It also places

⁹⁹⁰ Reported in Taha Lokhandwala (2015) Defined ambition not just an 'academic exercise' – Steve Webb, Investments & Pensions Europe, 8 June.

⁹⁹¹ Reported in Louise Farrand (2015) David Willetts: 'Pure DC ends up with too much risk being borne by the individual', Pensions Insight, 16 March.

⁹⁹² NEST (2015) *The Future of Retirement: A Retirement Income Blueprint for NEST's Members*, June; <https://www.nestpensions.org.uk/schemeweb/NestWeb/includes/public/docs/The-future-of-retirement.pdf.pdf>

CDC in the mainstream as at least part of the potential solution to the nation's retirement quandaries.

...In this model, incomes are supported by a collective pool of assets. Because capital requirements are less, this could operate with lower costs. Longevity risk is pooled. Incomes, however, are not fully guaranteed and underwritten – but the collective aspect means they should be more predictable than in the earlier phase of drawdown.

...NEST's interest is significant because the principal criticisms of introducing CDC to the UK rarely concern its feasibility. They focus on demand for such a product and whether anyone will risk setting up the first scheme.

...[T]here is a strong argument that pensions policy is best when it doesn't excite passions. And CDC really is merely a common sense solution to the dramatic shift in the pensions landscape that could leave the individual bearing unacceptable risks in both the accumulation and decumulation phases.

A number of barriers remain to the introduction of CDC in the UK.

NEST will need to persuade policymakers at home and in Brussels to give it permission to offer retirement income products.

There may also have to be an acceleration in the Department of Work and Pensions' work on developing CDC regulations, which have slipped down the department's lengthy to-do list.

But what the NEST blueprint tells us is that CDC... is a practical answer to a pressing issue of public policy that is rightfully attracting serious consideration.⁹⁹³

It is clear that the loss of strong parliamentary supporters like Steve Webb and David Willetts will slow progress on the introduction of CDC. Even before the election, in March 2015, the DWP Select Committee called for a halt on the diversion of Government resources to the introduction of CDC until auto-enrolment is complete and the DC market operating effectively.⁹⁹⁴ Further, Baroness Ros Altmann, who replaced Steve Webb as Pensions Minister, has been publicly advised against pursuing CDC. For example, Fidelity Worldwide Investment has advised the new minister to 'Prioritise resources which would mean that we stop the defined ambition legislation'.⁹⁹⁵ Similarly, Nigel Waterson, the former Tory shadow Pensions Minister, hoped the new minister will resist the temptation of trying to do too

⁹⁹³ Tim Sharp (2015) Collective DC is far from dead, Pensions Insight, 2 July. We would argue that the NEST blueprint is more akin to a CIDC scheme than a CDC scheme, but is no less good for that and, indeed, has a more realistic chance of being implemented in the current climate.

⁹⁹⁴ <http://www.publications.parliament.uk/pa/cm201415/cmselect/cmworpen/668/668.pdf>

⁹⁹⁵ Fidelity Worldwide Investment (2015) *A Ten-Point Plan for the New Pensions Minister*, May.

much: 'That means leaving on the back burner ideas like collective defined contribution and defined ambition'.⁹⁹⁶

The Pensions Minister has clearly heeded this advice. In October 2015, she announced that plans to move forward with both collective defined contribution and defined ambition had been put on hold. She said: 'The market needs time and space to adjust to the other reforms underway and these areas will be revisited once there has been an opportunity for that to happen'. She added: 'We have to protect DB and develop DC and I am of course interested in a middle way between the two but this is a future reform as I think we are either a bit too early or too late. If this shift had happened ten years ago then we might have seen interest but even if we were to work full pelt on CDC then we wouldn't even have regulation in place by 2018'. While she believed there is still a place for risk sharing, it is not a current priority, 'but we will come back to this at a later point'.⁹⁹⁷

6.8.2 Recommendation

The best time to have introduced CDC was in 2009 when the Government of the day first looked at the possibility of introducing it, but turned it down. This might have helped stem the flow of private-sector DB schemes switching straight to IDC. That flow has since become a flood and the end of private-sector DB is now unstoppable in the UK. So CDC had a past. It might also have a future if employees use their new freedoms unwisely and deplete their pension pots to an extent that they cannot afford to retire: recall that pension schemes in the private sector were initially set up by enlightened employers to manage the exit of their employees from the workforce when they were no longer capable of productive work. But we do not believe that CDC has a present: the new pension freedoms are completely incompatible with CDC's requirement that members stay for life and draw a pension in retirement, rather than use the pension pot as a bank account.

However, since we recognise the benefits of risk pooling, we believe that collective individual defined contribution (CIDC) schemes might be the only form of collective scheme that is feasible in the short term following the introduction of 'freedom and choice'. Because they maintain individual accounts, they are better able to deal with sudden cash withdrawals than CDC schemes, yet are still able to exploit economies of scale to the full. For this reason, we make the following recommendation.

⁹⁹⁶ Nigel Waterson (2015), A time for consolidation – why Altmann must avoid 'initiative-itis', Professional Pensions, 27 May.

⁹⁹⁷ Reported in Helen Morrissey (2015) Altmann: CDC is not abolished, Professional Pensions, 16 October

Recommendation 6.1: Collective individual defined contribution schemes

We recommend that the Government looks at the feasibility of establishing collective individual defined contribution (CIDC) schemes – for both the accumulation and decumulation phases. Such schemes would be compatible not only with the defined ambition agenda, they would also be compatible with the new pension flexibilities following the 2014 Budget, while, at the same time, exploiting economies of scale to the full and allowing a high degree of risk pooling.

