

The DC Future Book:

In association with
Columbia Threadneedle Investments

2019 Edition



The Pensions Policy Institute (PPI)

The PPI is an educational, independent research organisation with a charitable objective to inform the policy debate on pensions and retirement income provision. The PPI's aim is to improve information and understanding about pensions and retirement provision through research and analysis, discussion and publication. It does not lobby for any particular issue or reform solution but works to make the pensions and retirement policy debate better informed.

Pensions affect everyone. But too few people understand them and what is needed for the provision of an adequate retirement income. The PPI wants to change that. We believe that better information and understanding will lead to a better policy framework and a better provision of retirement income for all. The PPI aims to be an authoritative voice on policy on pensions and the provision of retirement income in the UK.

The PPI has specific objectives to:

- Provide relevant and accessible information on the extent and nature of retirement provision
- Contribute fact-based analysis and commentary to the policy-making process
- Extend and encourage research and debate on policy on pensions and retirement provision
- Be a helpful sounding board for providers, policy makers and opinion formers
- Inform the public debate on policy on pensions and retirement provision.

We believe that the PPI is unique in the study of pensions and retirement provision, as it is:

- Independent, with no political bias or vested interest
- Led by experts focused on pensions and retirement provision
- Considering the whole pension framework: state, private, and the interaction between them
- Pursuing both academically rigorous analysis and practical policy commentary
- Taking a long-term perspective on policy outcomes on pensions and retirement income
- Encouraging dialogue and debate with multiple constituencies

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A Research Report by Daniela Silcock, John Adams and Tim Pike

Published by the Pensions Policy Institute

© September 2019

ISBN 978-1-906284-86-2

www.pensionspolicyinstitute.org.uk

The Future Book: unravelling workplace pensions

The Future Book: unravelling workplace pensions

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Foreword

Columbia Threadneedle Investments is proud to sponsor the Pensions Policy Institute's (PPI) DC Future Book. Now in its fifth year, the publication aims to promote a better understanding of the Defined Contribution (DC) market in the UK. Each edition helps us establish the direction of travel and offers insights into what could be done to ensure society can look forward to a comfortable retirement.

In the past few years, the report explored how to overcome behavioural barriers to retirement saving, how default fund design can affect financial outcomes and how spending needs in retirement are changing. This year, we asked the PPI to take a closer look at ways to increase DC savers' pension pots and pinpoint those that deliver the most value at the point of retirement. Against a backdrop of an ever-increasing number of auto-enrolled DC savers, this research is timely and relevant. According to the PPI, today there are 13 million DC savers compared to 5.5 million in 2012, and the value of assets invested in DC schemes rose from approximately £350bn to around £430bn over the same time period (2019 earnings terms). Whether the current DC pensions system offers the most optimal retirement outcomes is a paramount question, since future retirees will have less Defined Benefit (DB) income to draw on, and they are likely to retire with more debt, live longer and face higher living costs.

The PPI's modelling in Chapter 4 shows that increased contributions and working longer are the two main return drivers for DC pension pots. A median earner saving 8% of total earnings from age 22 to State Pension age (SPa) could grow their pot by an extra 13% if they increased their contributions to 9% of total earnings, and by 5% if they worked for an extra two years after SPa. An extra 6% to 8% could be achieved if smaller DC schemes consolidated and charges dropped due to the associated benefits of scale. Particularly relevant for us as asset managers is the finding that between 2% and 3% of additional growth could be achieved if pension assets were invested in a Diversified Growth Fund (DGF) rather than a lifestyle strategy, and if between 10% - 15% of that fund was invested in assets such as infrastructure or real estate.



We are not surprised that the traditional lifestyle model may no longer be appropriate for DC pension savers. Whilst significant de-risking closer to retirement reduces volatility, it also reduces the opportunity to realise higher returns. This is particularly relevant for those savers who wish to continue to invest throughout retirement by opting for income drawdown. In our opinion, appropriate investment strategies can and should do the heavy lifting. The onus is on our industry to provide DC investment solutions which are more fit-for-purpose, that can deliver robust risk-adjusted returns while at the same time protecting savings against market turbulence and inflation. These products need to be managed dynamically and within a fee structure that offers genuine value for money.

Of course, trustees also have a role to play. DGFs that can invest in assets such as real estate or infrastructure, for example, rarely feature in DC default funds. Yet DB schemes, with their similar long-term investment horizons and member needs, commonly invest in such assets alongside more volatile investments like equities.

The DC Future Book showed us yet again that the only way is up. The number of workers in the UK being auto-enrolled into a workplace pension scheme is rising, and so is the value of assets invested. This is an important and timely opportunity for trustees and asset managers to explore ways to maximise the DC investment returns to and through retirement, so that people can retire comfortably. While the biggest drivers of growth in DC pension pots are increased member contributions and longer working lives, the onus should not be on pension savers alone. We hope you find this year's publication and its findings as insightful as we did.

Andrew Nicoll,
Global Head of Insurance, Columbia Threadneedle Investments

Introduction

Current and future retirees will:

- Live longer on average,
- Receive their State Pension later,
- Be more likely to be dependent on Defined Contribution (DC) savings
- Have no, or low, levels of Defined Benefit (DB) entitlement, and
- Flexibly access their DC savings.

These changes increase the risks borne by pension scheme members and the complexity of decisions people must make at and during retirement. It is important that a comprehensive compendium of DC statistics and data is available to allow observation of, and reaction to, developing trends.

The Pensions Policy Institute (PPI) is publishing the fifth edition of its annual DC compendium, “[The DC Future Book: in association with Columbia Threadneedle Investments](#)”, setting out available data on the DC landscape alongside commentary, analysis and projections of future trends.

Chapter one outlines the state and private pension system in the UK and the main DC landscape changes over the past few years.

Chapter two provides an overall picture of the current DC landscape.

Chapter three uses PPI modelling to explore how the DC landscape might evolve in the future both for individuals and on an aggregate level.

Chapter four explores how changes in governance and investment strategy could increase the size of member pots at retirement.

Chapter five contains reflections on the policy themes highlighted by the report from leading thinkers and commentators in the pensions world.

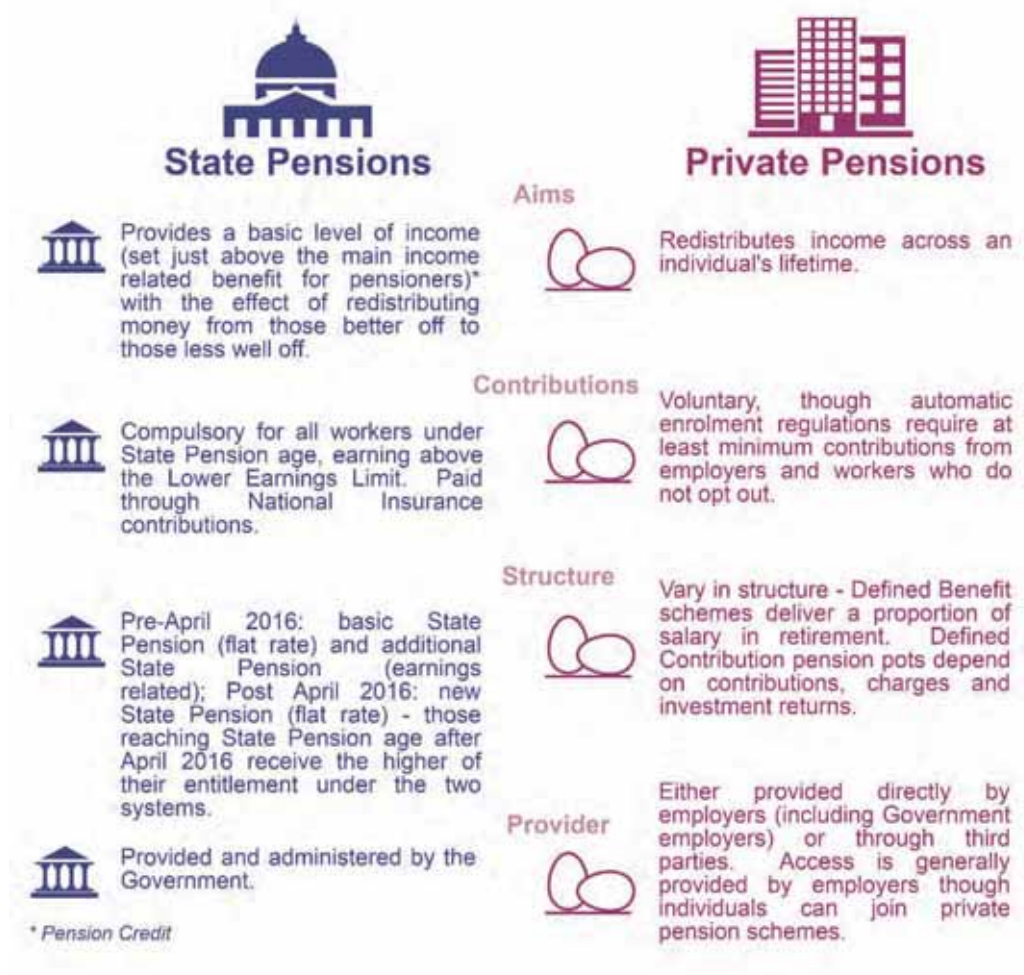
Chapter one: what is the DC landscape?

This chapter outlines the state and private pension system in the UK and the main Defined Contribution (DC) landscape changes over the past few years.

There are two main tiers to the state and private pension system (Box 1.1):

- A compulsory, redistributive state tier; and,
- A voluntary, private tier¹

Box 1.1: the state and private pension system



1. For further detail regarding the UK pension system, see PPI's Pension Primer (2019)

There are benefits associated with saving in private pensions over other types of saving

Private pension savings (along with other savings and assets) are used to top up state pension income and improve people's standards of living in retirement. Private pensions provide benefits over other forms of saving:

- The long-term nature of pension saving allows for compound interest to accrue over time, which can substantially increase fund sizes.

- Eligible employees enrolled in workplace pensions receive employer contributions.
- Pension contributions and investment returns are given tax relief (subject to certain limits).

There are risks associated with saving in and accessing private pensions

The most significant pension-related risk is the risk of not saving enough to achieve an adequate standard of living in retirement.² Other significant risks are (Figure 1.1):

Figure 1.1³



2. Redwood *et. al.* (PPI) (2013)

3. The Pension Protection Fund protects Defined Benefit scheme members whose sponsoring employer becomes insolvent, for members of Defined Contribution schemes, members can be compensated up to 100% of the value of their pot if your pension provider can't pay you and is authorised by the Financial Conduct Authority (FCA).

There are other risks associated with saving in and accessing private pensions including (but not limited to):

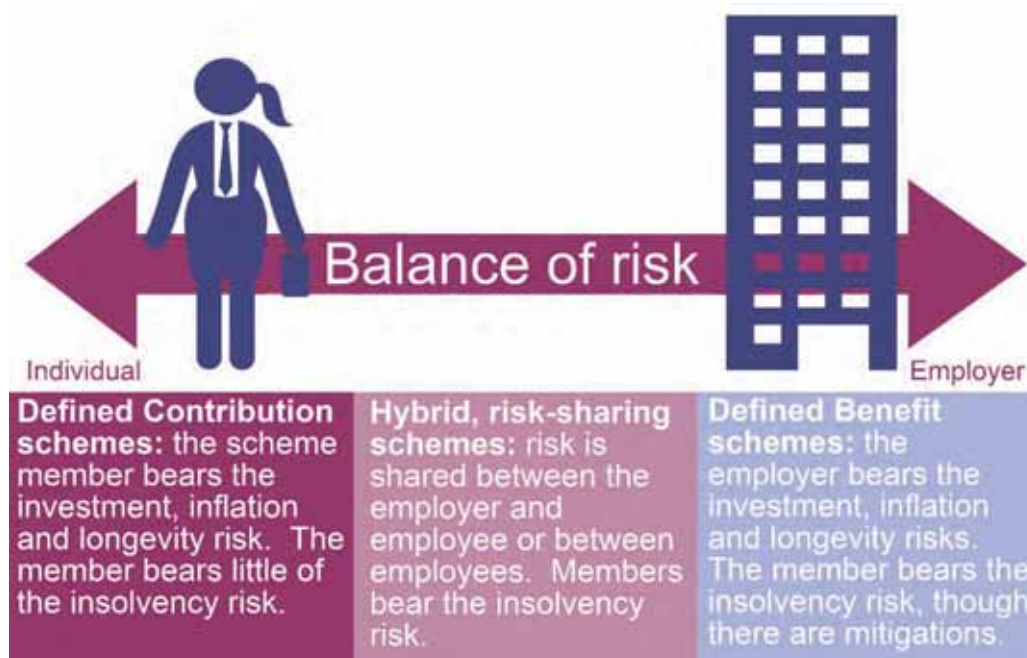
- Making sub-optimal decisions about how to access retirement savings,
- Poor understanding of the income level required for an adequate standard of living,
- Excessive product charges,
- Poor annuity rates,
- Poor investment strategies,

- Market turbulence,
- Becoming a victim of fraudulent schemes, and
- The risk of needs in retirement changing unexpectedly, for example, as a result of developing health and social care needs.⁴

The type of private pension that people save in has implications for the level of risk they face. Members of DC pensions face more individual risk than members of DB pensions (Figure 1.2).

Scheme type has implications for the balance of risk:

Figure 1.2



The risks that people face will be mitigated if they have only a small amount of DC savings and have other, larger, sources of income in retirement from, for example, DB pensions. However, those with very low incomes may experience significant changes to standards of

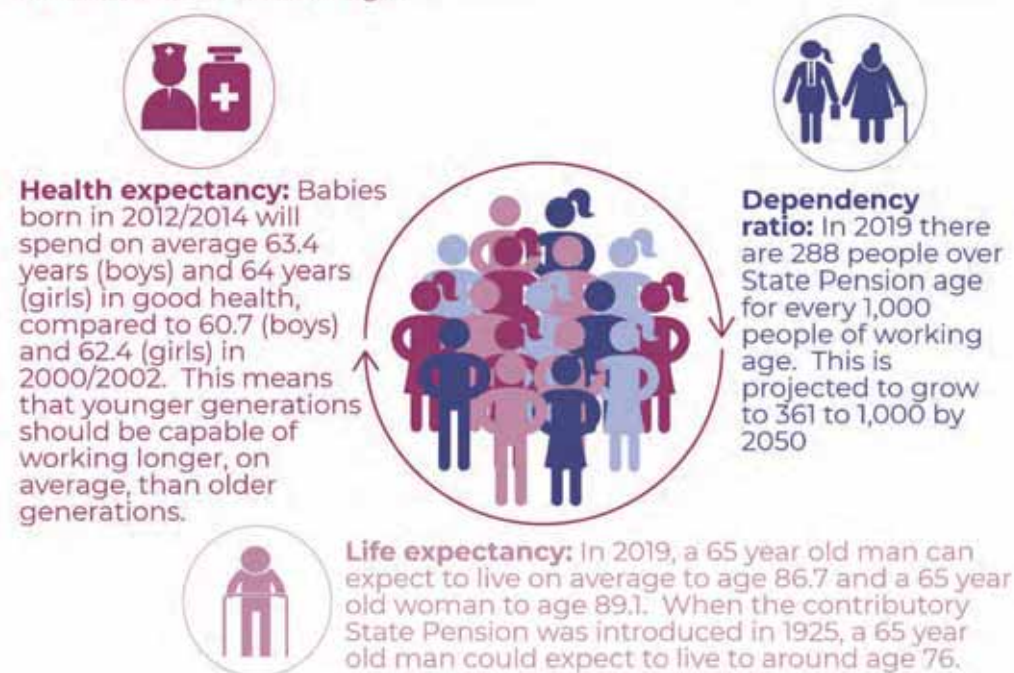
living from small amounts of DC savings if they can use them to supplement a small income or use them up front to pay off mortgages or to make house repairs, which could reduce living costs in later retirement.

4. Blake, Harrison (2014)

The pensions landscape has changed over the last few decades as a result of demographic, market, policy and regulatory shifts (Box 1.2-1.5).

Box 1.2: demographic shifts⁵

Increases in life expectancy and shifts in the old age dependency ratio affect the ability of people to support their own retirements and taxpayers to fund State Pensions and pensioner benefits. Increases in healthy life expectancy affect the length of time people are capable of staying in work before they retire. These shifts provide part of the Government's rationale for rises to State Pension age.



5. Cohort life expectancy: ONS, 2016-based projections; Dependency ratio: ONS, 2016-based, Table A1-1, Principal projection - UK summary; Healthy life expectancy projections: ONS 2016-based projections, Estimates for 2000-02 are simulations based on original survey data.

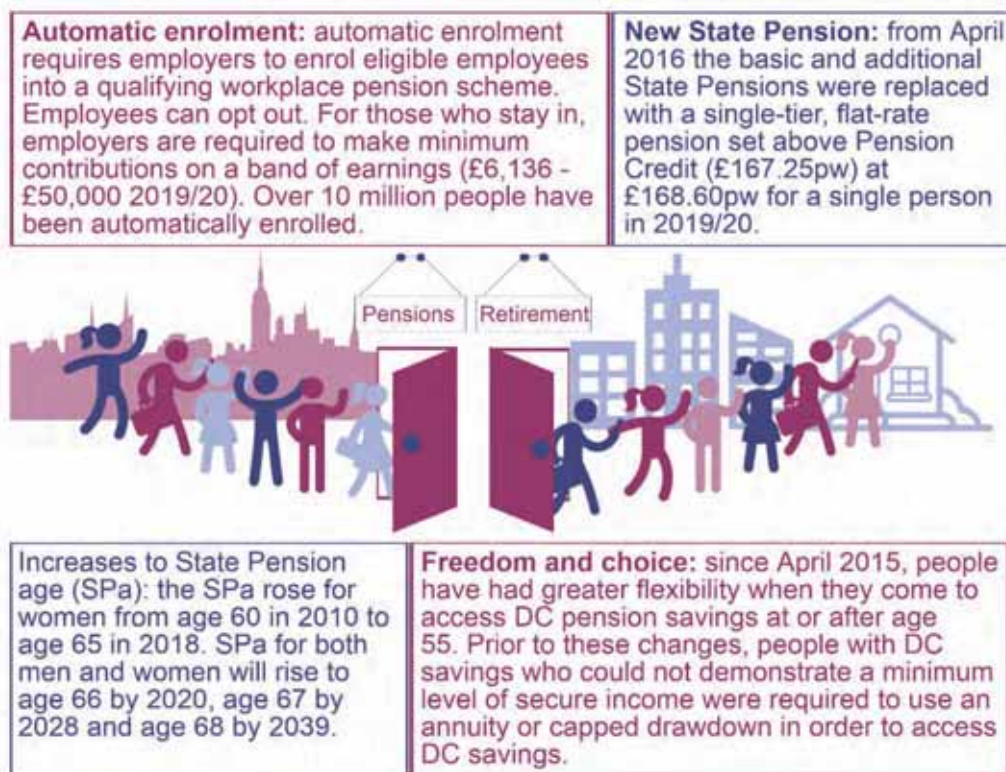
Box 1.3: market changes

Defined Benefit (DB) pension schemes historically dominated private sector pension provision, and continues to be the main source of provision within the public sector. In 1967 there were around **8 million active members** in private sector DB.⁶ DB membership has declined to around **1.1 million active members** by 2019 and **88%** of private sector schemes were closed to new members by 2018, but **44%** are open to new accruals by existing members.⁷ Scheme closures can be attributed to several factors, including:



Labour-market shifts that have led to fewer people spending most of their working life in a single job may have also diluted the rationale for offering private sector Defined Benefit schemes. As DB schemes became more problematic for private sector employers the less risky and less expensive DC model became more attractive. As a result of this, and the introduction of automatic enrolment in 2012, the number of active savers in DC schemes has increased rapidly and has overtaken the number of active DB savers. In 2019 there are around **13.3 million active members** in DC schemes compared to around **6.8 million active members** in DB schemes, including the public sector.⁸

6. Carrera *et.al* (PPI) (2012)
 7. PPF, TPR (2018) p.4
 8. PPI Aggregate model

Box 1.4: policy changes⁹

9. The rationale for setting the new State Pension at a level just above Pension Credit is to ensure that people who save in a private pension do not lose out through eligibility for means-tested benefits as a result. Therefore, the level of the new State Pension is intended to provide an incentive to save in a workplace pension.

Box 1.5: regulatory changes

- **Charge Cap:** In 2015 the Government introduced a charge cap on default strategies in automatic enrolment qualifying schemes of 0.75% of funds under management per year. The cap applies to all investment and administration charges. Transaction costs (third-party costs generated when shares are bought and sold on the market) and costs incurred as a result of holding property, are excluded from the charge cap.¹⁰ The Government is planning to review the charge cap in 2020 and will consider lowering the charge cap and/or bringing transaction costs into the cap.¹¹
- **Master trust regulation:** The 2017 Pension Schemes Act provided for the introduction of an authorisation and supervision regime for master trusts which will apply to new and existing schemes. This regime is now in force and has led to the consolidation of many master trusts.¹²
- **Schemes are required to provide increased transparency:** The Occupational Pension Schemes (Administration and Disclosure) (Amendment) Regulations 2018, which came into force in April 2018 require DC scheme trustees to publish charge and transaction cost information for all investment options along with an illustration of the compounding effect of the costs and charges.¹³
- **Schemes will be required to consider whether the financial impact of Environmental, Social and Governance (ESG) factors might affect their members' pension investments:** The Government has laid regulations which strengthen the obligation on pension scheme trustees to consider ESG factors, amongst other material financial risks, such as climate change, in investment decisions.¹⁴ The FCA is considering responses to its consultation on introducing similar requirements for contract-based schemes.¹⁵ Pension schemes that do not start to integrate consideration of the material financial implications of ESG factors into their investment strategy could face legal difficulties as a result of not complying with regulations, higher administration and legal costs, and potentially reduced returns in the future as a result of not taking financially material risks into account.

Demographic, market and policy changes affect needs and resources in retirement (see Boxes 1.2-1.5)

The above shifts affect the needs and resources of, and the risks faced by, people at and during retirement. Future retirees will:

- Live longer and take their State Pension later,
- Be more likely to reach retirement with DC savings (and no or low levels of DB entitlement), and have near total flexibility in regard to accessing their savings.
- Face more risk and complexity at and during retirement.

10. The Occupational Pension Schemes (Charges and Governance) Regulations 2015

11. Hansard, 16 November 2017, Written Statement, HCWS249

12. services.parliament.uk/bills/2016-17/pensionschemes.html

13. www.legislation.gov.uk/uksi/2018/233/made

14. DWP (2018c)

15. FCA (2019a)

Chapter two: what does the DC landscape look like?

This chapter provides an overall picture of the current Defined Contribution (DC) landscape.

Automatic enrolment

Automatic enrolment requires all employers to enrol eligible employees into a qualifying pension scheme. To be eligible for automatic enrolment an employee must be aged between 22 and State Pension age and be earning £10,000pa or above in at least one job. Those who are self-employed or have several jobs which each pay below the £10,000pa threshold are not eligible.

Employers are required to contribute on behalf of workers while they remain **active members**. The minimum required level of contributions from April 2019 is 8% of band earnings (£6,136 to £50,000) though employers and workers may contribute more:

- Employers must contribute at least 3% of band earnings on behalf of workers, though employers may choose to cover the whole 8%.
- Workers whose employer makes only minimum contributions are required to contribute a minimum of 5% of band earnings (though tax relief is applied to contributions, reducing the impact on take-home pay) unless they opt out.

New and newly eligible employees are automatically enrolled and have a one month window to opt-out and receive back all personal contributions. People who cease contributing after the opt-out period has expired, are not eligible to claim back their contributions. Those who opt out or cease contributing are re-enrolled around every three years.

Employees and automatic enrolment

Employees were automatically enrolled on a staged basis starting with the largest employers in October 2012. By the end of 2018 all existing employers were required to automatically enrol and all new employers also have that obligation.

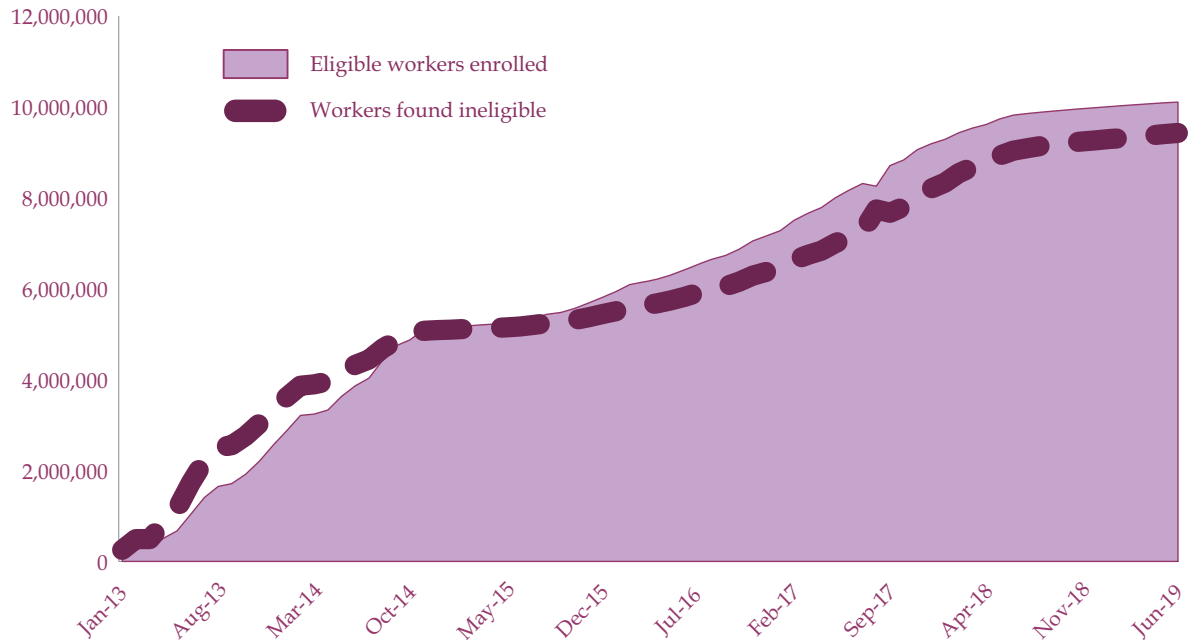
Over 10 million people were automatically enrolled by June 2019

By June 2019, 10.1 million employees were automatically enrolled. However, a further 9.4 million were found ineligible due to age or earnings (Chart 2.1).

Chart 2.1¹⁶

10.1 million workers were automatically enrolled by June 2019, a further 9.4 million were found ineligible

Cumulative numbers of workers automatically enrolled and cumulative number of workers found ineligible (since January 2013) by month

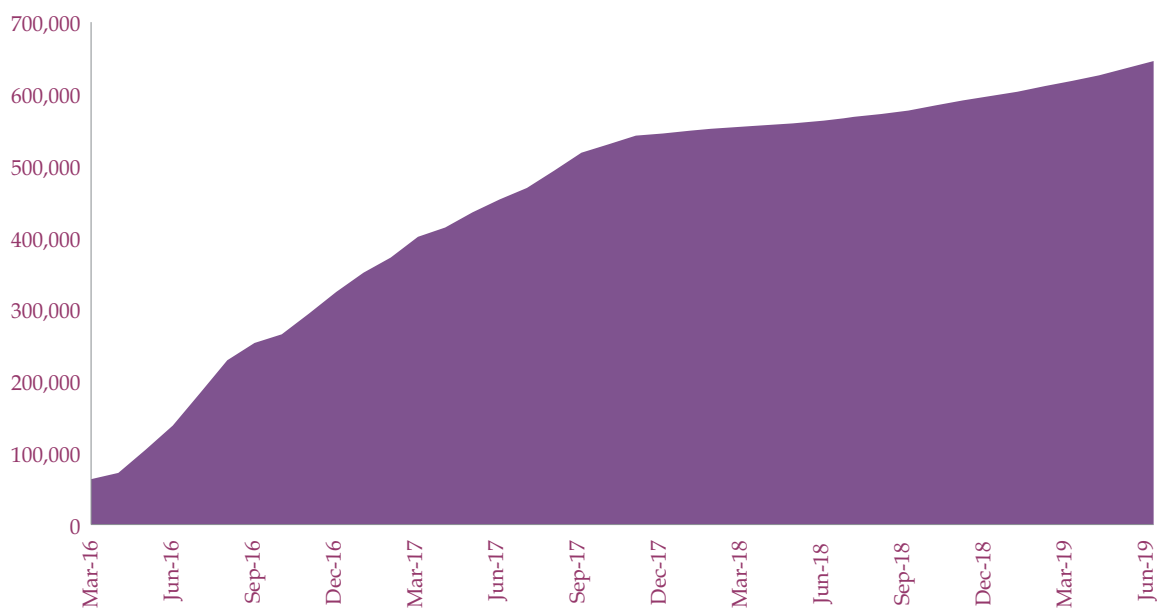


Employers are required to automatically re-enrol all eligible workers around three years after the date they opt-out the first time. By June 2019, 646,000 employees had been automatically re-enrolled (Chart 2.2).

Chart 2.2¹⁷

646,000 workers were automatically re-enrolled by June 2019

Cumulative numbers of eligible jobholders automatically re-enrolled (since March 2016) by month



16. TPR (2019b)

17. TPR (2019b)

The most recently recorded automatic enrolment opt-out rate is 9% (2016/17)

People have the opportunity to opt-out and have their contributions returned to them within one calendar month of being automatically enrolled. Opt-out levels have remained low at around 9% despite fears that opt outs might increase once smaller employers started reaching their staging dates. For their long-term modelling the Government assumes the proportion of automatically enrolled people who opt out, plus those who voluntarily stop contributing after the opt-out period, to average 15% per year.¹⁸

Opt-in rates vary by scheme size

Ineligible employees may opt-in to their employer's automatic enrolment scheme. Those earning above £6,136 are eligible for employer contributions, if they opt in, and those earning below are not, though employers may choose to contribute anyway. Some employers automatically enrol all of their employees, including those ineligible.

6% of non-eligible workers were enrolled into a pension scheme in 2016/17 as a result of either opting-in, or a blanket automatic enrolment policy by their employer.¹⁹ In 63% of schemes

where at least some non-eligible employees had been enrolled, the employees had actively asked to join, whereas in 29% of these schemes, it was company policy to enrol every worker. In 9% of these schemes, non-eligible employees joined for another, unstated reason.²⁰

72% of eligible employees saved in a pension for at least three of the last four years

Some people cease contributing to their scheme after their one month opt-out period has expired. This could be because they:

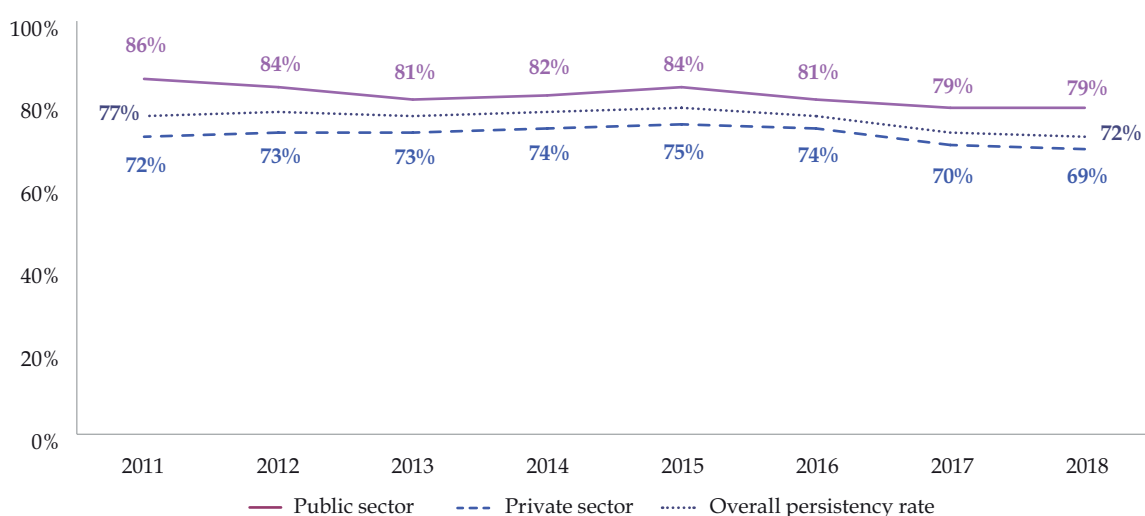
- Leave their current job (they may be automatically enrolled via their next job),
- Fall below the eligible earnings band lower limit, or
- Do not wish to continue contributing into their automatic enrolment pension scheme.

Therefore it is useful to look at the “persistence rate”: the proportion of people automatically enrolled who contribute regularly into their pension. In order to measure persistency among the eligible population, the Department for Work and Pensions (DWP) tests the proportion of eligible employees contributing into a workplace pension for at least three out of a period of four years (Chart 2.3).

Chart 2.3²¹

Persistency rates have decreased, mainly in the private sector

Percentage of eligible employees saving persistently 2010-2018 by sector



18. DWP (2018a)

19. DWP (2018a) Table 5.1

20. DWP (2018a) Table 5.2

21. DWP (2019c) Table 2.1

Persistency in pension saving has fallen since 2016, from 77% to 72%. Persistency in the public sector declined from 84% to 79% between 2010 and 2018 and from 72% to 69% in the private sector. Lower levels of persistency in the private sector may be a function of more frequent job changes. There is a greater decline in persistency in the public sector than in the private sector. The DWP reports a degree of uncertainty regarding the evidence on those in the non-persistent group which could distort the figures.²²

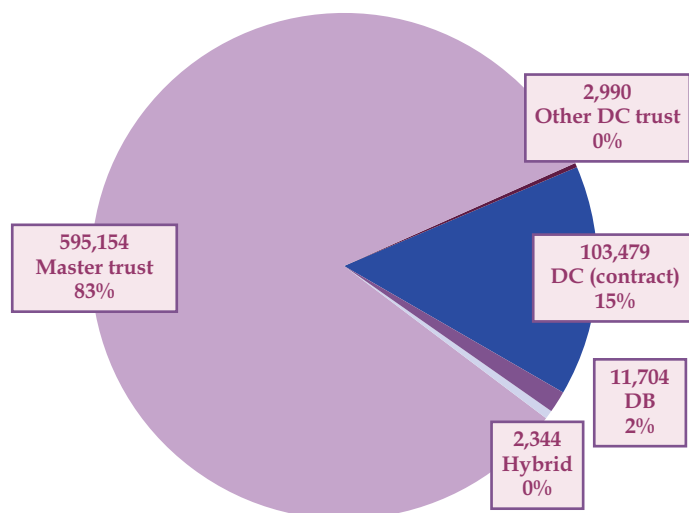
Scheme type: More than 4 in 5 employers have automatically enrolled their employees into master trust schemes

Employers have a choice into which scheme they enrol their employees. The provision of Defined Benefit (DB) schemes has dwindled in the private sector, and private sector employers are more likely to automatically enrol employees into Defined Contribution (DC) schemes. The use of DC schemes, specifically master trusts, has risen dramatically with automatic enrolment (Chart 2.4).

Chart 2.4²³

98% of employers have automatically enrolled their employees into DC schemes

Automatic enrolment to March 2018 by scheme type



98% of employers have chosen to automatically enrol their employees in DC schemes, up from 97% in 2017. 83% of employers have automatically enrolled their employees in master trust schemes.

Employers and automatic enrolment

Automatic enrolment has now fully staged and all existing employers should have been through the automatic enrolment process. The number of employers automatically enrolling

grew exponentially as smaller employers began to stage in 2014. By the end of automatic enrolment staging, 1.1 million employers had been through the process. By June 2019, this had risen to 1.5 million, as a result of new employers joining the market (Chart 2.5).²⁴

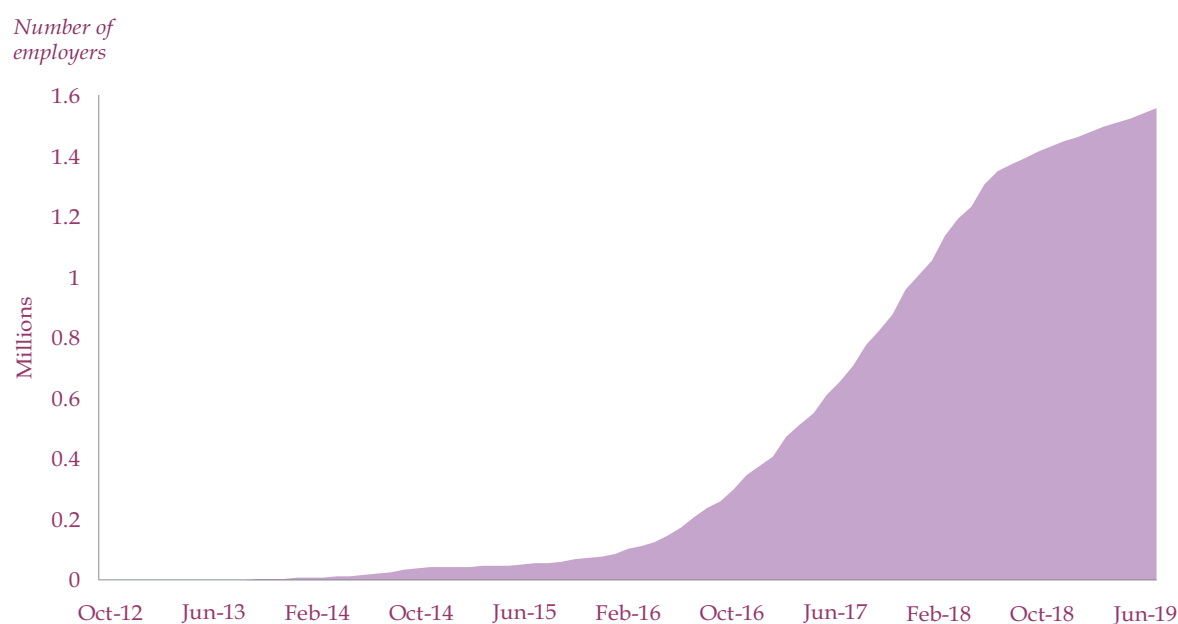
22. DWP (2019c) p. 13 “The proportion of eligible savers not saving persistently remained at one per cent in 2018, and for the remaining 27 per cent there is an indeterminate amount of evidence in the ASHE dataset to judge either way. The ‘evidence indeterminate group’ has been increasing in recent years. The reasons for this are not clear, although there has been a small decrease in the ASHE response rate since 2014. The growth in this evidence indeterminate group appears to be the driver of the decrease in those identified as persistent savers.”

23. TPR (2018a)

24. TPR (2018b)

Chart 2.5²⁵**1.5 million employers automatically enrolled by June 2019**

Employers who completed automatic enrolment declarations of compliance by June 2019 (cumulative)



The number of employers going through the automatic enrolment process has increased and therefore you would expect the number of compliance and penalty notices to increase. The number of penalty notices issued by The Pensions Regulator has increased, from 1,493 in

2014, 3% of employers staged, to 283,730 by the end of March 2019, 19% of employers who have automatically enrolled, though some employers will have received more than one of these notices (Table 2.1).

Table 2.1: Cumulative number of compliance, contribution and penalty notices issued by The Pensions Regulator (TPR) by time period²⁶

	Total notices	Employers who have automatic enrolled	Proportion of notices to employers
By end 2014	1,493	43,538	3%
By end 2015	6,667	78,789	8%
By end 2016	44,095	370,432	12%
By March 2017	58,817	503,178	12%
By March 2018	157,386	1,166,156	13%
By March 2019	283,730	1,489,815	19%

25. TPR (2019b)

26. TPR – compliance and enforcement quarterly bulletins for the relevant periods

Awareness of ongoing automatic enrolment duties is increasing among employers but only 55% of small and 46% of micro employers are aware of automatic re-enrolment

The increase in notices suggests that smaller employers have found compliance more difficult than large employers. This is unsurprising as small employers are less likely to have pre-existing in-house pension administration systems and are less likely to be aware of their ongoing duties in relation to automatic enrolment.

In 2017, 87% of micro employers, 88% of small and 92% of medium employers were aware of their ongoing duties.²⁷ However as automatic enrolment has progressed, awareness has also increased: In 2018, 88% of micro employers, 89% of small and 98% of medium-sized employers were aware of their ongoing duties.²⁸

There is lower awareness among small employers of their re-enrolment duties, with awareness of re-enrolment at 46% among micro employers and 55% among small employers in 2018. Awareness among larger employers should be 100% as a result of these employers having already reached their first re-enrolment date, though data on this is not available.²⁹

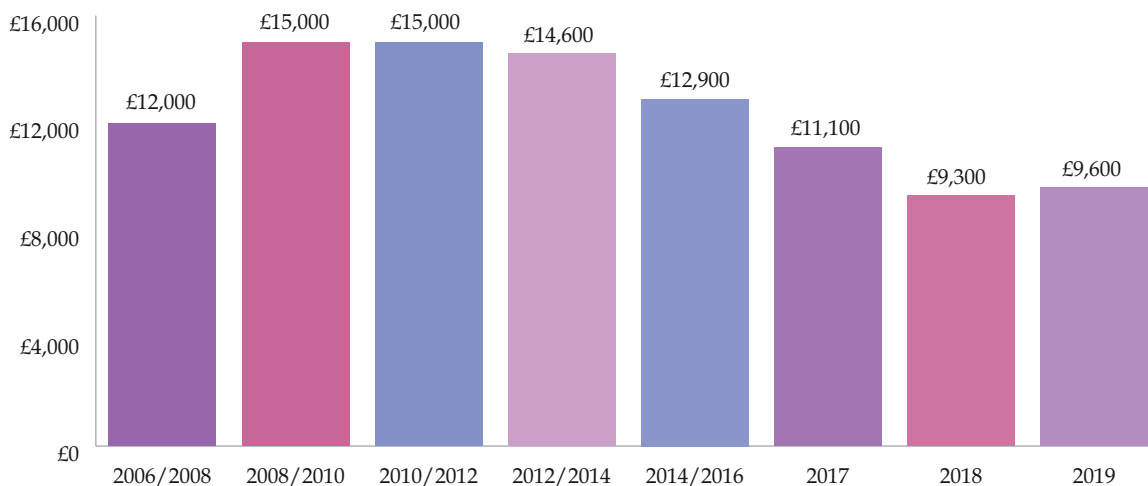
DC saving levels

Between 2008/10 and 2018, the median DC pot size decreased from £15,000 to £9,300 as a result of people being automatically enrolled and accruing initially small pension pots. However, as a result of the increase in minimum contributions, all employers having staged and pots having some time to increase in value, median pot sizes have increased by £300 since 2018 to £9,600. (Chart 2.6).

Chart 2.6³⁰

Median DC pension savings have started increasing now that automatic enrolment has finished staging

Median DC savings between 2006 and 2019 in Great Britain for people aged 16 and over (includes both deferred and active savers)



27. OMB, TPR (2017), OMB, TPR (2018)

28. OMB, TPR (2019)

29. OMB, TPR (2019)

30. PPI analysis of Wealth and Assets Survey data, 2017 and 2018 data projected using PPI models

DC asset allocation

The next section explores how assets are allocated within pension schemes.

Box 2.1: investment strategies

Many asset mixes are labelled as “funds” but consist of several different asset classes which might vary over time. Therefore, it is more accurate to describe asset mixes as “strategies” rather than “funds”, for example high-risk, low-risk or lifestyle strategies (risk level refers to investment risk, which comprises short-term volatility and the risk of suffering severe losses).

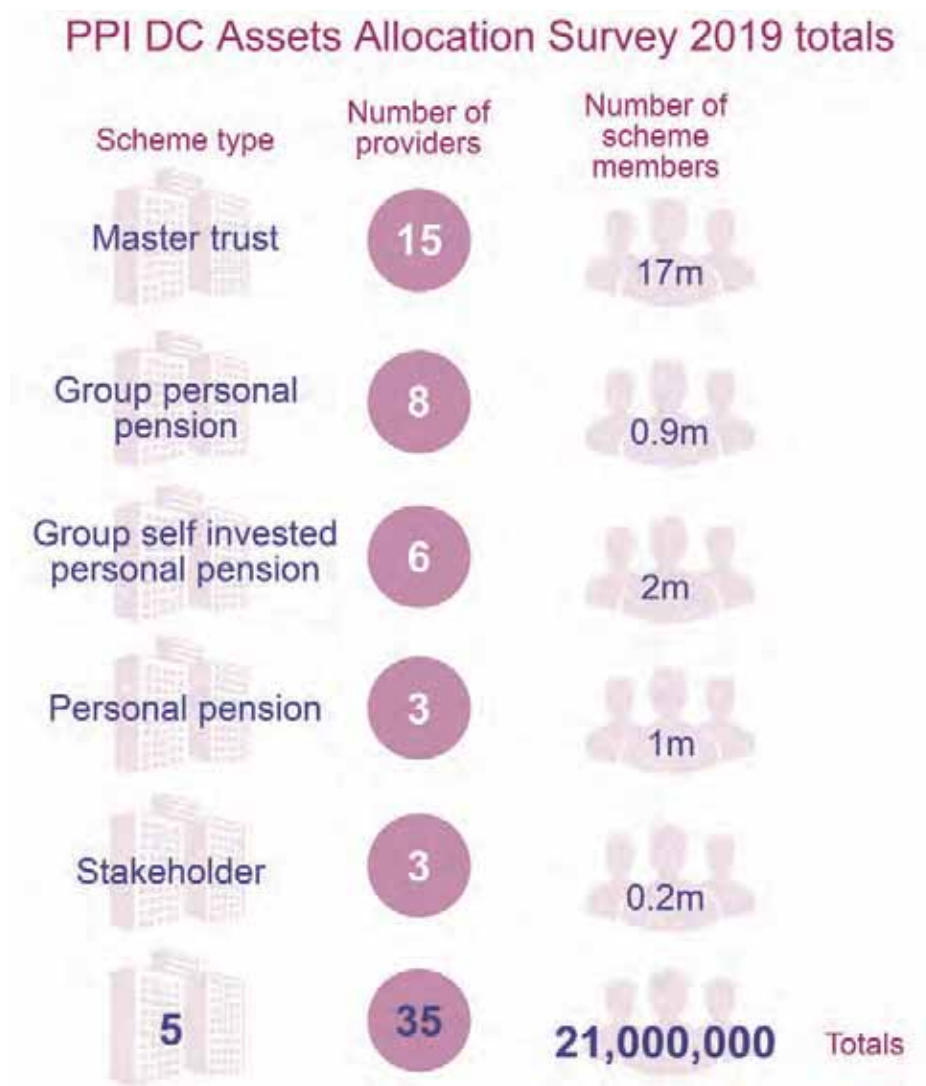
Asset mixes might be labelled as, for example, “high-risk”, “low-risk”, “lifestyle”, “with-profits” or “retirement-date” strategies, though the structure of each will vary depending on the scheme that is offering it. Most schemes will offer a variety of strategies alongside the default strategy.

Default strategy: membership and value

The following data is based on the results of the PPI DC Assets Allocation Survey 2019. The participating schemes collectively manage more

than 21 million DC pots, representing a large proportion of the membership of DC workplace pension schemes. Some members covered will hold multiple pots from several different schemes (Figure 2.1).

Figure 2.1³¹



31. PPI DC Assets Allocation Survey 2019

Members of master trust/multi-employer schemes are more likely to be invested in the default strategy

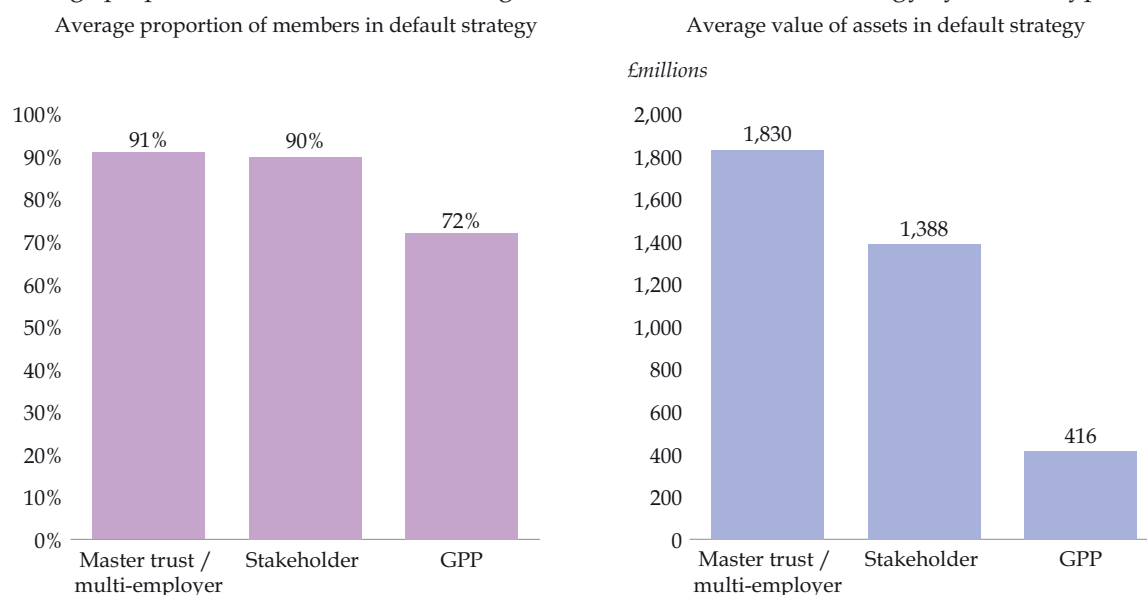
In 2018 master trust schemes had the highest proportion of total members invested in the default strategy at 99% on average. In the 2019 survey, which covered more master trust schemes, the average was 91%. Smaller and newer master trust schemes tend to have fewer members in the default strategy, than older schemes, perhaps as a result of aiming at

different parts of the market from traditional mass-market master trusts. Master trusts default strategies had the highest value of aggregate assets at £1.8bn on average followed by Stakeholder schemes, with £1.4bn on average. Fewer providers are now running open Stakeholder schemes, but there is high residual asset value in Stakeholder schemes, as they were widely used as workplace schemes prior to the introduction of automatic enrolment and the charge cap (Chart 2.7).

Chart 2.7³²

The average proportion of members in master trust default strategies has reduced as newer schemes join the market

Average proportion of members and average value of assets in default strategy by scheme type, 2019



Investment strategies

The majority of master trust schemes invest 60% or more of assets under management into equities 20 years prior to a member’s retirement date:

- 39% of master trusts invest between 80% to 100% in equities and,
- 23% invest between 60% and 79%.

By a member’s retirement date, no master trusts in the survey invested more than 60% in equities.

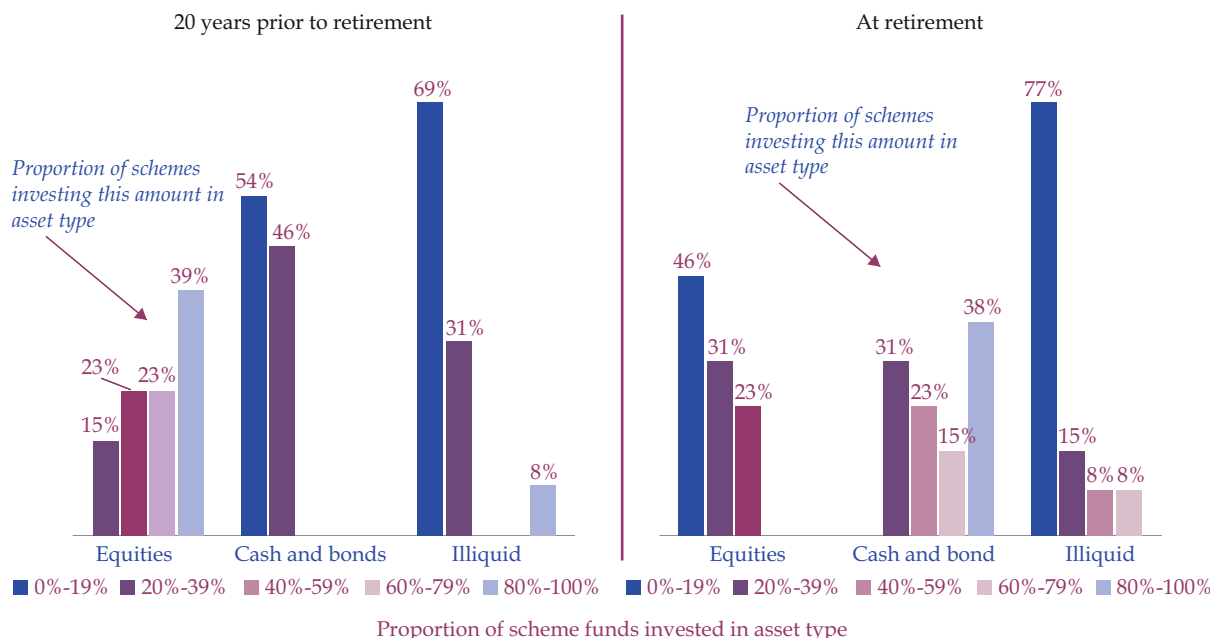
The use of illiquids and alternative assets is growing, though a significant proportion of this investment is likely to be invested via listed alternatives, such as multi-asset funds, or indices, which are relatively liquid and unlikely to capture the illiquidity premium in full. In the 20 years leading to retirement, 31% of schemes invested 20% or more of assets into illiquids and alternatives and by a member’s retirement, 15% of schemes invested 20% or more (Chart 2.8).

32. PPI DC Assets Allocation Survey 2019

Chart 2.8³³

By a member’s retirement date, no master trusts in the survey invested more than 60% in equities

Proportion of master trust funds invested in different asset types by 20 years to and at retirement



A higher proportion of funds are being invested in alternatives than previously. 20 years prior to retirement, 25% of stakeholder and group personal pension schemes invest between 20% and 39% of funds into illiquid and alternative assets. 13% of these schemes have between 20% and 39% of a member’s funds invested in illiquid and alternative assets at their retirement date.

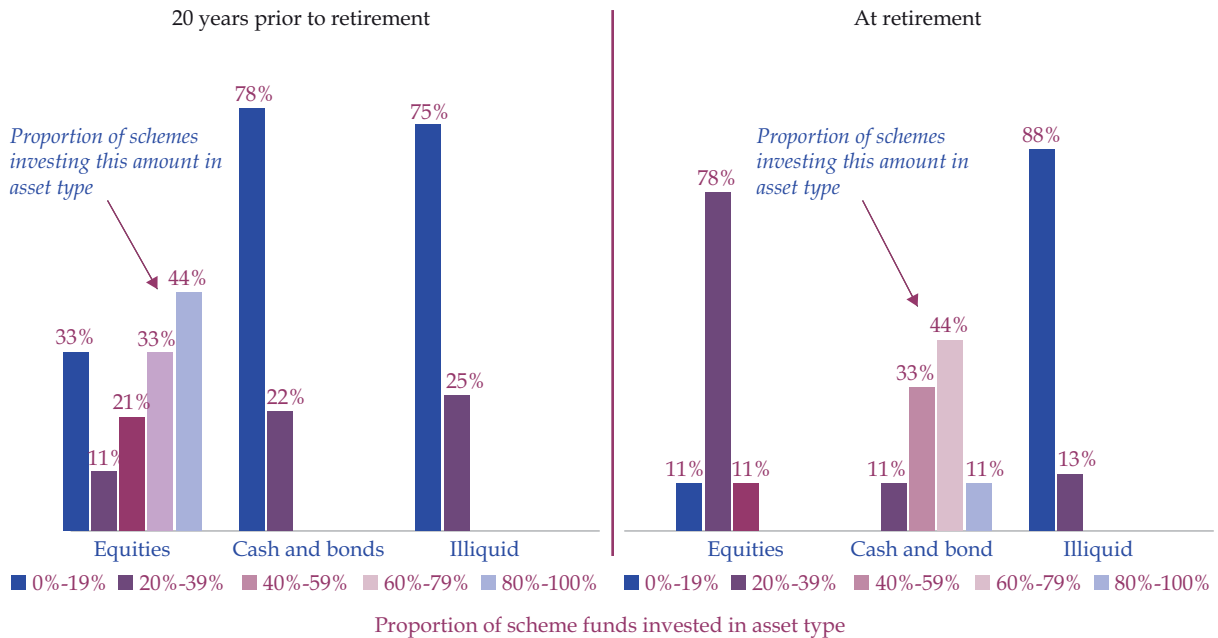
However, equities are still widely used during the early stages of saving, 44% of stakeholder and group personal pension schemes invest between 80% to 100% of funds in equities, and 33% of these schemes invest between 60% and 79% of funds in equities (Chart 2.9).

33. PPI DC Assets Allocation Survey 2019, numbers may not sum to 100% as respondent’s are selecting a range rather than an absolute figure

Chart 2.9³⁴

20 years prior to retirement, 25% of stakeholder and group personal pension schemes invest between 20% and 39% of funds into illiquid and alternative assets

Proportion of stakeholder and gpp funds invested in different asset types by 20 years to and at retirement



Total Expense Ratios (TERs) were lower in master trust schemes than other DC workplace pensions, due to master trust schemes being designed with economies of scale in mind and some other DC schemes containing older legacy scheme charges or higher charges on non-default strategies. In master trusts, stakeholders and group personal pensions, medium risk strategies tended to have the highest TERs, potentially through greater use

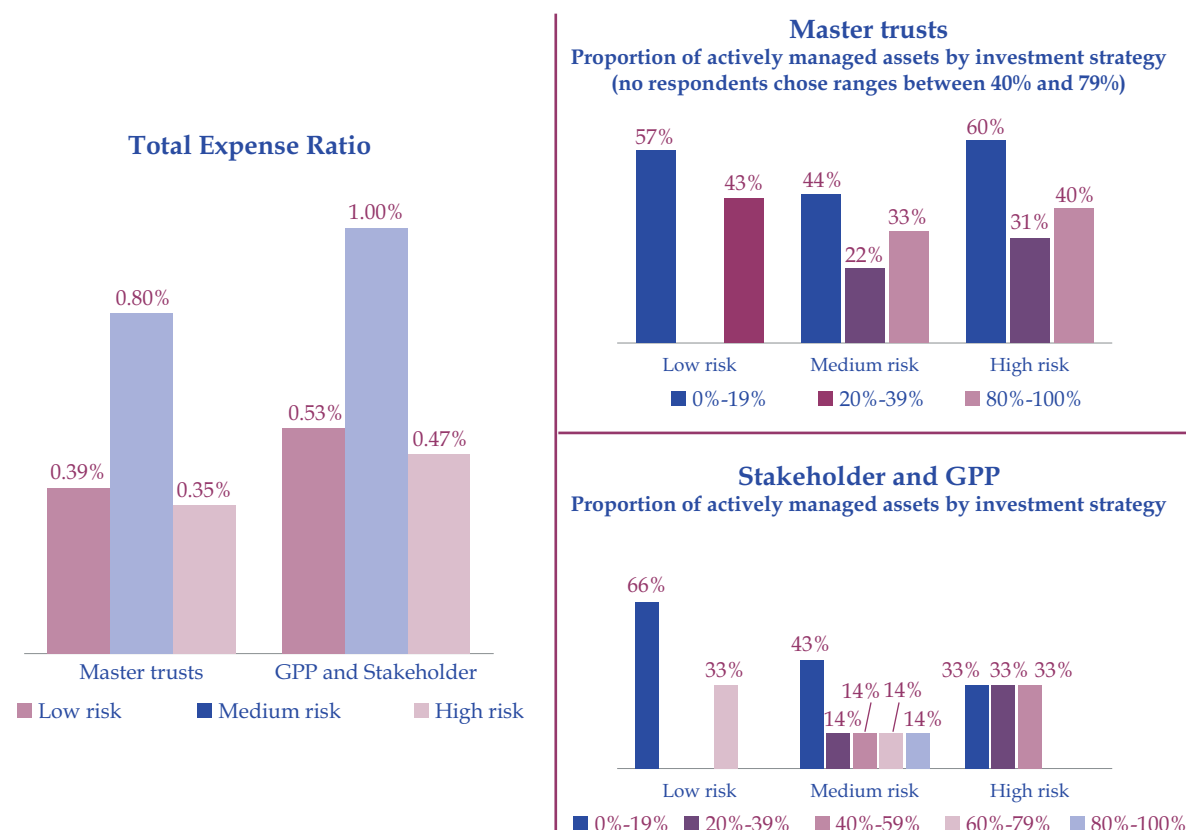
of multi-asset funds and non-default strategy funds, though medium risk strategies did not have higher proportions of actively managed assets than other strategies (Chart 2.10) (no respondents selected ranges of active management between 40% and 79%, so these ranges are not included on the chart). There is low correlation within the survey data between charges and proportion of actively managed assets.

34. PPI DC Assets Allocation Survey 2019, numbers may not sum to 100% as respondents are selecting a range rather than an absolute figure

Chart 2.10³⁵

Master trust strategies generally have lower charges but tend not to use lower levels of active management

Average Total Expense Ratio (TER) and proportion of actively managed assets by scheme and strategy type, 2019



Contributions

The required level of contributions that employers and workers (who do not opt-out) must jointly make into a pension scheme under automatic enrolment legislation is currently 8% of band earnings (£6,136 to £50,000 in 2019/20).

What is a sufficient level of contribution?

8% of band earnings may not be a sufficient contribution level to allow people to achieve an adequate standard of living in retirement from

State and private pensions alone. A median earner contributing 8% of band earnings into a pension scheme every year from age 22 until State Pension age (SPa) would only have a 50% chance of achieving the same standard of living in retirement that they experienced in working life (from private and State Pension income).³⁶ In many cases, people will not contribute steadily for their entire working life and would require a higher percentage of contribution to achieve a 50% likelihood of replicating working life living standards.³⁷

35. PPI DC Assets Allocation Survey 2019, numbers may not sum to 100% as respondents are selecting a range rather than an absolute figure
 36. Assuming State Pension is uprated in line with triple lock and that people purchase an annuity with their private pension savings
 37. Redwood *et. al.* (2013), assumes median earnings at every stage of working, based on Pension Commission replacement rates.

A median earner might need to contribute between 11% and 14% of band earnings to have a two-thirds chance of replicating working life living standards if contributing between age 22 and SPa. For people who begin contributing later or who take career breaks, the contribution levels that may be necessary to allow people a chance of replicating working life living standards in retirement will be far higher.

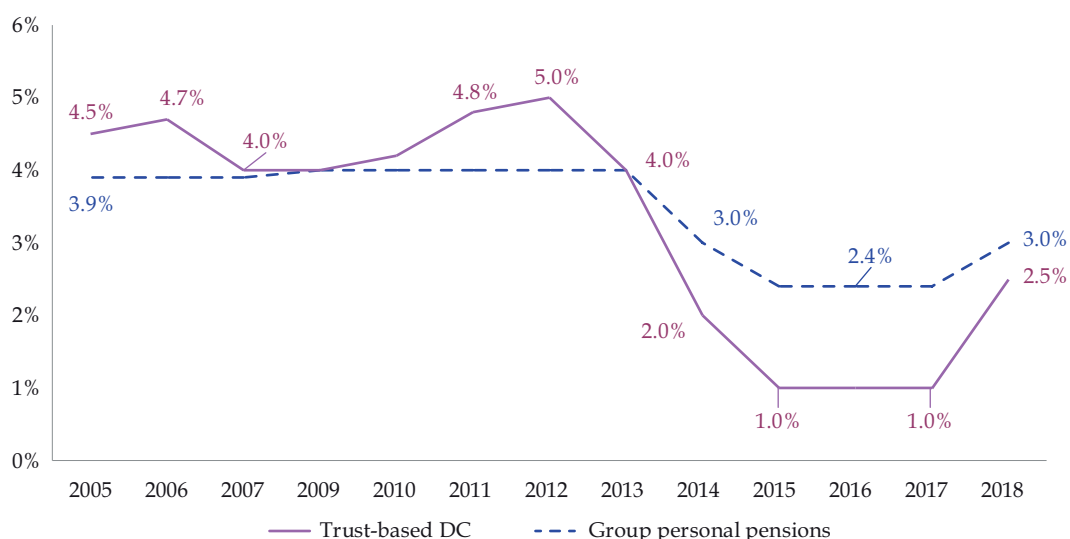
Median employee contribution rates initially fell as a result of more employees joining pension schemes for the first time and paying minimum contributions alongside their employers (Chart 2.11). However, this does not mean that pre-automatic enrolment savers are paying

less. As minimum contributions increase, median levels should rise to above 8%. Between 2012 and 2016 mean contribution rates rose by 1.05% (0.45% from employees and 0.6% from employers) as a result of more people saving in pension schemes.³⁸ The automatic enrolment review in 2017 recommended lowering the lower earnings band for contributions to £0, so people would pay contributions on their first pound of earnings up to the higher rate of the earnings band. The DWP’s ambition is to implement this policy in the mid-2020s. If enacted, this change would increase the level of contributions made by those whose employers are contributing at the minimum required level.³⁹

Chart 2.11⁴⁰

Median employee contribution rates in DC schemes have started increasing

Median active member contribution rates to DC pensions by year (DC trust includes master trusts)



Employee contributions dropped after 2013 as a result of people being automatically enrolled into pension schemes and paying minimum contributions. However, as a result of minimum required contribution levels rising to 3% for employees in 2018, employee contributions have increased to 2.5% (trust-based DC) and 3% (contract-based DC). Some employee contributions will be lower than 3% of total earnings as the minimum required contributions can be applied to a band of earnings (£6,136 to £50,000). In

2019, contribution levels should rise again as minimum employee contributions increased to 5% of band earnings in April 2019 (though tax relief is applied to contributions, reducing the impact on take-home pay). Employee contributions may continue to rise in the future if, for example, policies designed to encourage members to contribute more are implemented, or if the lower earnings band is reduced to £0 in the 2020s. 2019 contribution levels will be available in next year’s DC Future Book.

38. IFS (2016)

39. DWP (2017)

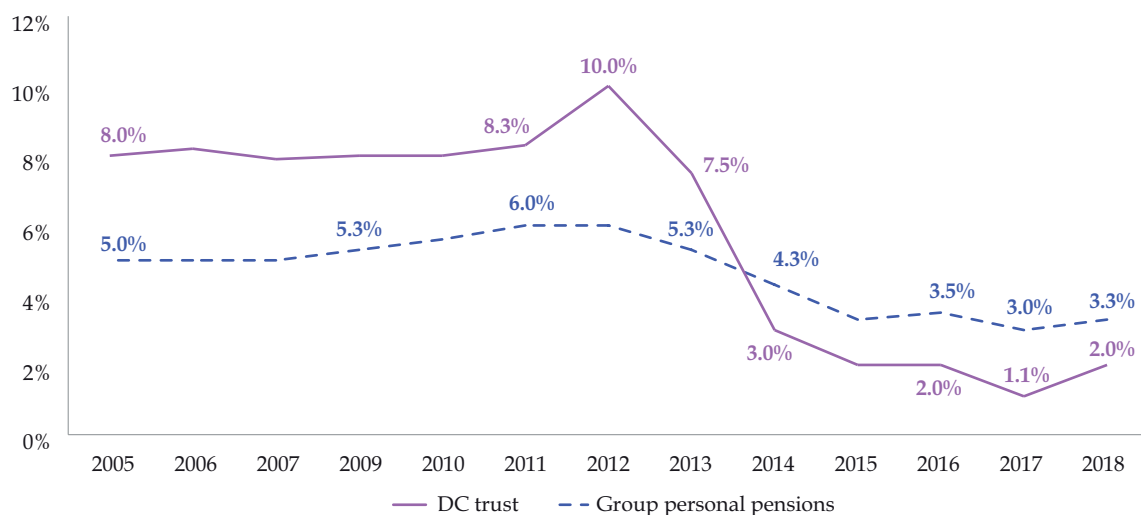
40. This work was produced using statistical data from ONS. The use of the ONS statistical data in this work does not imply the endorsement of the ONS in relation to the interpretation or analysis of the statistical data. This work uses research datasets which may not exactly reproduce National Statistics aggregates.

Median employer contribution rates have also started to increase as a result of the rise in minimum contributions (Chart 2.12).

Chart 2.12⁴¹

Median employer contribution rates in DC schemes have started increasing

Median employer contributions for active members to DC pensions by year (DC trust includes master trusts)



Median employer contribution rates have increased as a result of the rise in minimum required contributions in 2018. Employer contributions should rise again in 2019 and potentially continue to rise subsequently, especially if the lower earnings band is reduced to £0 in the 2020s.

Levelling down

Automatic enrolment represents a cost to employers⁴² because of the administrative burden of ensuring scheme compliance and employee eligibility and the cost of employer contributions. Employers respond in different ways to increased costs, for example by:

- Raising the price of their products, if possible,
- Reducing wage increases,
- Building the costs into their budget without reducing costs elsewhere,
- “Levelling down” their pension offering, either by reducing the percentage they contribute towards existing pension scheme members to match those who are being automatically enrolled or by changing contribution or scheme terms for new members.⁴³

Between 2012 and 2017 the proportion of eligible private sector employees who were in schemes that were being levelled down grew from 12% to 15%, around 1.6 million people. This does not mean that all of these people had their contributions reduced, some of the people will work for employers who reduced the contribution offer for new, automatically enrolled, members.⁴⁴

Accessing DC savings in retirement

Annuities

Prior to the introduction of the new pension flexibilities **Freedom and Choice**, the majority of people used their DC savings to purchase an annuity. In 2012 over 90% of DC assets being accessed were used to purchase annuities. Overall sales of annuities peaked in 2009 at around 466,000. However, since then, they have been declining.⁴⁵

41. This work was produced using statistical data from ONS. The use of the ONS statistical data in this work does not imply the endorsement of the ONS in relation to the interpretation or analysis of the statistical data. This work uses research datasets which may not exactly reproduce National Statistics aggregates

42. Whether they already offered a pension scheme or not

43. DWP (2018e)

44. DWP (2018e) p. 86. figure 4.28, based on longitudinal survey of employers

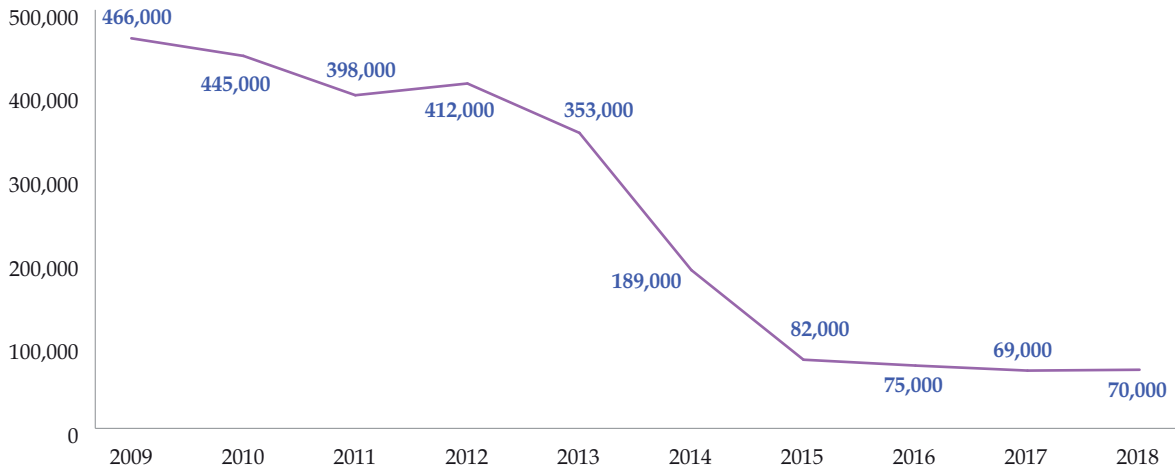
45. ABI (2015a)

When the **pension freedoms** were introduced, annuity sales declined more rapidly, and have averaged around **70,000** per year throughout 2016 to 2018 (Chart 2.13).

Chart 2.13⁴⁶

Annuity sales averaged around 70,000 per year during 2016 to 2018

Number of annuities sold by ABI members by year



Income drawdown

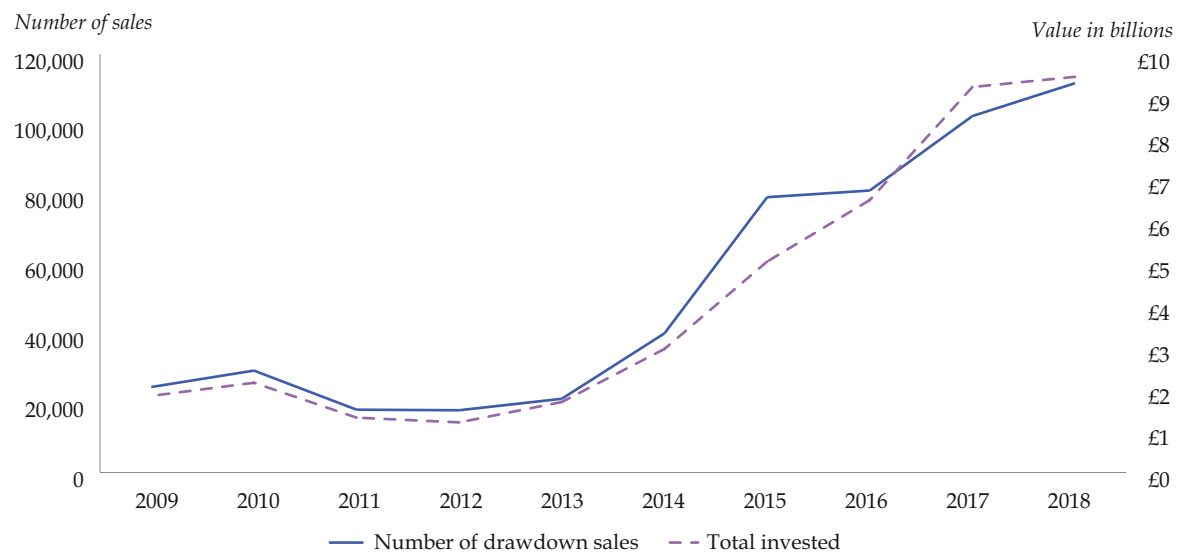
The use of income drawdown was fairly consistent between 2010 and 2014, with around **20,000** new contracts each year. In 2014, after the announcement of **Freedom and Choice**,

the number of sales doubled to almost **40,000** new contracts. Since then it has been steadily increasing, growing to around **110,000** new contracts being sold in 2018, to a total value of around **£9.5bn** (Chart 2.14).

Chart 2.14⁴⁷

In 2018, around 110,000 drawdown contracts were purchased, for a total value of £9.5 billion in new premiums

Number of new sales of drawdown contracts and value of sales by year, among ABI members



46. ABI statistics, Quarterly Pension Annuities by Age and Size of Fund

47. ABI stats – Pensions Overview tables, 2019; ABI (2017); ABI (2016a); ABI (2016b); ABI (2015a); ABI (2015b)

Lump sums

Since April 2015, those aged 55 and over can withdraw cash lump sums from their DC savings, taxed at their highest marginal rate of income tax, with 25% tax-free.⁴⁸ The number of full (total pot) lump sum withdrawals was initially high at 300,000 in financial year 2015/16 due to pent up demand, but has decreased to

around 219,000 in 2017/18. ABI data on the past two years show that partial withdrawals were far more popular in 2016/17, probably due to pent up demand as it took some time after the freedoms were rolled out for schemes to be able to offer products which allowed partial withdrawals. In 2017/18, there were 176,000 partial withdrawals (Chart 2.15).

Chart 2.15⁴⁹

There were around 219,000 full withdrawals in 2017/18

Number of full and partial cash lump sum withdrawals made from ABI members by financial year



There is still a reasonable amount of variability in the number of withdrawals taken each year and so it is not yet clear what the overall trend might be.

DC savings access trends

More people are taking full cash lump sum withdrawals than buying annuities or drawdown products. In 2018, around 219,000 people took full cash lump sum withdrawals, compared to 110,000 drawdown purchases and

70,000 annuity purchases (Chart 2.16). Current access trends may change as more people start to reach retirement with lower levels of DB entitlement to fall back on. The data on access to savings in this report uses information provided by ABI members and does not cover the full drawdown market.⁵⁰

48. Prior to April 2015, only those with DC pots under £15,000, (£18,000 in 2015) could withdraw their entire fund as a lump sum without incurring a tax penalty.

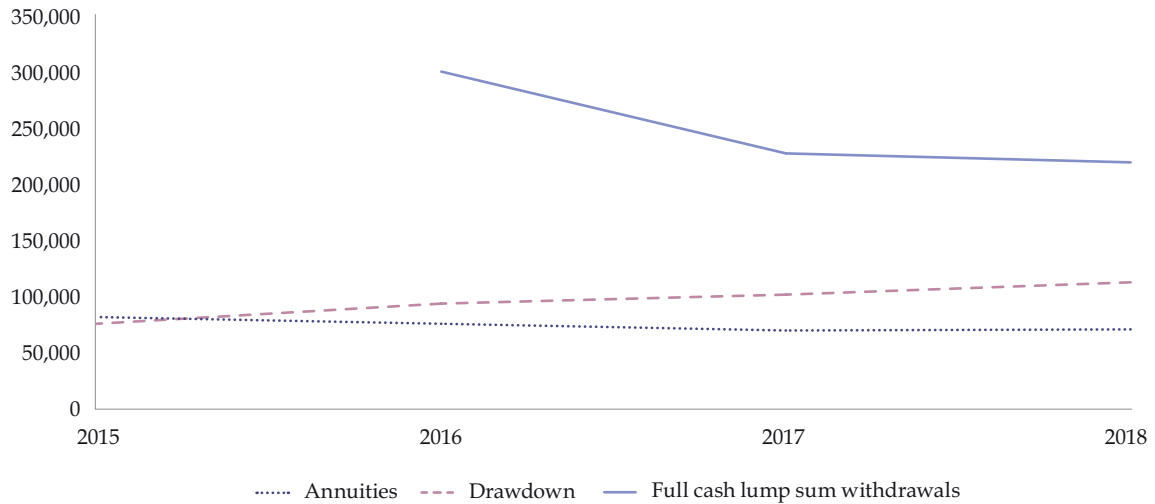
49. ABI stats, Retirement Income Data: Apr 2018 to Sep 2018

50. A few large providers have recently left ABI membership, thereby reducing market coverage

Chart 2.16⁵¹

More people withdraw money through cash lump sums than through drawdown or annuity products

Numbers of drawdown and annuity purchases and full cash lump sum withdrawals by year, ABI members



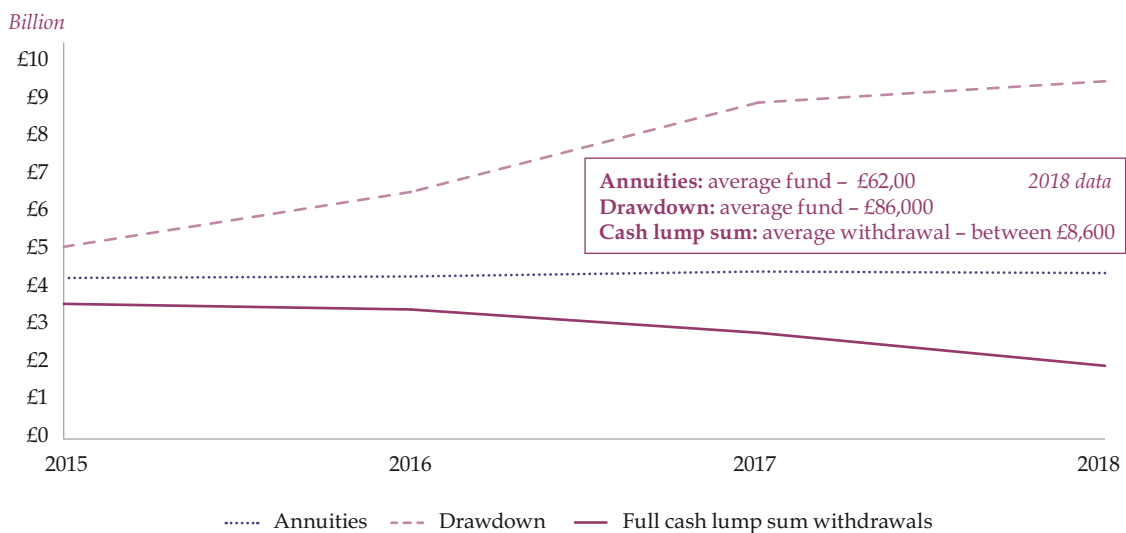
However, those taking out annuity or drawdown contracts tend to do so using larger funds than those taking lump sum withdrawals. In 2018, the average fund size

used to enter drawdown was **£86,000**,⁵² the average fund used to purchase an annuity was **£62,000** and the average full lump sum withdrawal was around **£8,600** (Chart 2.17).

Chart 2.17⁵³

People are spending more money on drawdown products than on annuities or in making lump sum withdrawals

Value of retirement income products and full cash lump sum withdrawals by quarter (billions), ABI members



51. Data on withdrawals for 2016-2018 applies to end of financial year rather than calendar year. ABI statistics, Retirement Income Data: Apr 2018 to Sep 2018, Quarterly New Business: Pensions, ABI statistics, Quarterly Pension Annuities by Age and Size of Fund; ABI (2016a)

52. Many people purchase drawdown products as a way of accessing their 25% tax-free lump sum

53. ABI statistics - Retirement Income Data: Apr 2018 to Sep 2018, Quarterly New Business: Pensions, ABI statistics, Quarterly Pension Annuities by Age and Size of Fund.

DB transfers

Increased flexibility, falls in interest rates, increased Cash Equivalent Transfer Values and bad press associated with some DB schemes⁵⁴ have incentivised some people to transfer their DB entitlement into a DC scheme, in order to be able to access their pension savings flexibly. While transferring may benefit some people, there are two main risks associated with transfers from DB to DC:

- **Individual risk:** if people transfer out of a DB scheme when it is not in their best financial interest to transfer.
- **Scheme risk:** substantial transfers from DB schemes could cause schemes to change or review their investment strategies. However, in some cases, transfers out could help scheme funding through reduction of liabilities.

The proportion of DB members transferring is increasing

Over 6 million people are eligible to transfer deferred benefits from a DB scheme and the average amount transferred in 2019 is around £350,000.⁵⁵ Those transferring a DB

entitlement worth £30,000 or more are required to take regulated advice before doing so. The proportion transferring is continuing to rise: by January 2018, the number of transfers had risen to 13 times those in 2013/14, and the value of assets, around £20.8bn⁵⁶ transferred, was 19 times the amount in 2013/14.⁵⁷

Between April 2015 and September 2018, around 171,600 who had sought advice, transferred their DB pension. Some of those who were advised not to transfer chose to still transfer as “insistent clients”:

- Around 235,000 people sought advice regarding whether to transfer,
- 69% (162,000) of those seeking advice were advised to do so,
- Of the 31% (72,900) advised not to transfer, 13% (9,500) still transferred as “insistent clients”.⁵⁸

The Financial Conduct Authority (FCA) is concerned that transferring may not be appropriate for all those being advised to do so, though around 59,100 people were triaged out of the process after an initial pre-advice discussion. The FCA intends to continue work on ensuring that the transfer advice people receive is appropriate to their circumstances.⁵⁹

Advice and Guidance

Box 2.2: what is the difference between advice and guidance?

Advice and guidance are subject to different regulatory requirements. The following definitions are provided by the FCA.⁶⁰

Independent advice: “An adviser or firm that provides independent advice is able to consider and recommend all types of retail investment products [...] Independent advisers will also consider products from all firms across the market, and have to give unbiased and unrestricted advice. An independent adviser may also be called an ‘Independent Financial Adviser’ or ‘IFA.’”

Restricted advice: “A restricted adviser or firm can only recommend certain products, product providers, or both. The adviser or firm has to clearly explain the nature of the restriction. [...] Restricted advisers and firms cannot describe the advice they offer as ‘independent.’”

Guidance or information: “If you are only given general information about one or more investment products, or have products or related terms explained to you, you may have received ‘guidance’ rather than ‘advice’. This is sometimes also called an ‘information only’ or ‘non-advice’ service. The main difference between guidance and advice is that you decide which product to buy without having one or more recommended to you.”

54. www.xpsgroup.com/media/1311/xps-pensions-group_member-outcomes-report_2019.pdf

55. FCA (2018a), FCA (2019b)

56. XPS Pensions Group (2018)

57. Willis Towers Watson (2018)

58. FCA (2019b)

59. FCA (2019b)

60. www.fca.org.uk/consumers/financial-services-products/investments/financial-advice/independent-and-restricted-advisers, accessed 07.08.2015

A greater cost is generally attached to the provision of independent (or restricted) advice, in return for the adviser or firm taking on some of the responsibility for the outcome of acting on the advice offered. The use of guidance puts responsibility for the final decision making on the consumer, who also bears the risks of making a bad decision. Some financial transactions (such as purchasing **drawdown** products or transferring DB entitlement into a DC scheme) will particularly benefit from the use of independent financial advice.

The use of advice and guidance is currently undergoing transitions for a variety of reasons:

- The market has changed over the last few years as a result of the Retail Distribution Review, which in 2013 created greater delineation between Independent and Restricted Advice, as well as clarifying and restructuring charging so that more consumers bear total costs upfront. This policy may restrict access to consumers who find the new charging structure difficult to manage.
- The introduction of the **pension freedoms** in April 2015 means that some people who previously would have bought an annuity will choose to access pension savings through other means. Some of these people may use advisers at and during retirement to help manage more flexible access methods.
- DC pension scheme members are now eligible for **£500** of tax-free employer arranged advice (if their employer chooses to provide this) and may take **£500** from their pension pots up to three times, to use for advice, though not all employers offer this.⁶¹
- Some organisations offer web-based “robo-advice”, which is aimed at people who would benefit from advice but may not have access because they cannot afford (or believe they cannot afford) regulated financial advice. Robo-advice uses algorithms to help answer money-based questions and should allow companies to offer advice more quickly and cheaply.
- The introduction of the new **pension freedoms** was accompanied by a new, national, guidance service known as “**Pension Wise**”. Pension Wise offers free, tailored and independent guidance (online, by telephone or face-to-face), to those **aged 50 or above** with DC savings (Box 2.3). Pension Wise has joined with two other guidance providers, The Pensions Advisory Service and the Money Advice Service, to form a single guidance body, the Money and Pensions Service which provides guidance on pensions and other financial issues.

Box 2.3: Figures for Pension Wise⁶²

- In 2017 **20%** of those accessing DC savings had a Pension Wise appointment.
- During the 2017/18 financial year:
- The Pension Wise website received over **2 million** visits,
 - The service handled almost **172,000** booking calls,
 - **63,000** face-to-face appointments were arranged (up **31%** from 2016/17), and,
 - There were over **24,000** telephone appointments (up **37%** from 2016/17).

Fewer people are using regulated advice when purchasing retirement income products in general, though the use of advice when purchasing drawdown has increased during the last two years

The use of regulated advice for those purchasing drawdown has decreased since 2014, but increased by **4%** in 2017:

- In 2018, **54%** of those purchasing drawdown products from ABI members used independent advice, a drop from **81%** in 2014 but a rise from **51%** in 2016.
- While the proportion of those using independent advice while purchasing drawdown has fallen since 2014, the proportion using restricted advice has risen every year since 2014, when it was **10%**, to **23%** in 2018.
- The proportion of non-advised drawdown sales has reduced from **32%** in 2016 to **26%** in 2017 and, again, to **23%** in 2018.

61. HMT, FCA (2016)

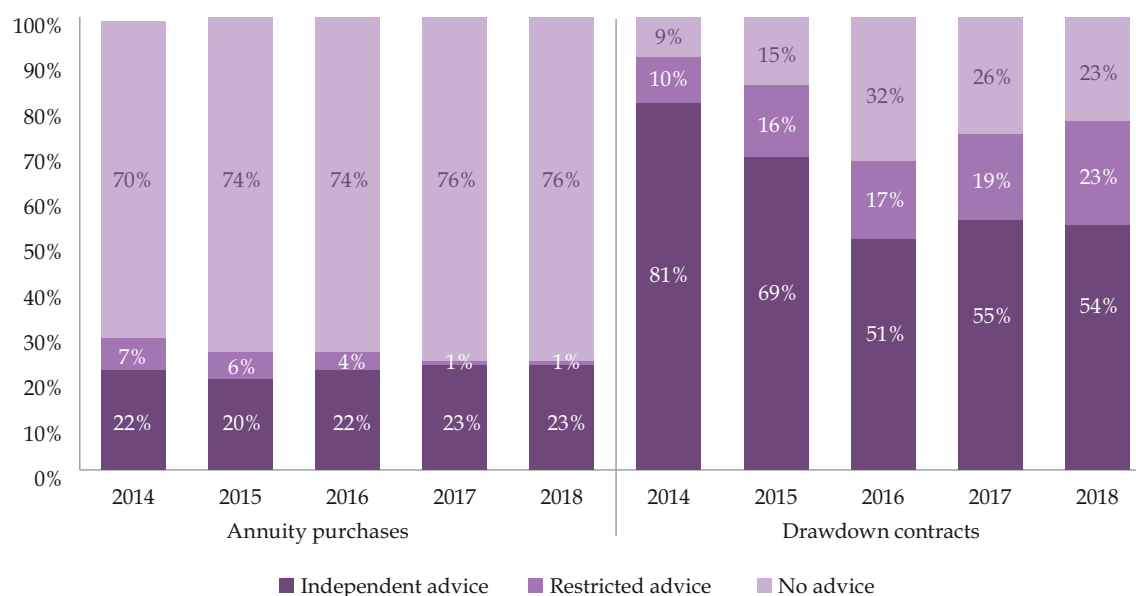
62. DWP, GSR (2018); FCA (2018b)

- The use of independent advice for annuity purchases remained fairly constant over the past three years at between 20% and 23%, though:
- The use of restricted advice during annuity purchases has dropped from 7% to 1% since 2014, and
- The proportion of people buying annuities unadvised has grown from 70% to 76% (Chart 2.18).

Chart 2.18⁶³

The proportion of advised drawdown purchases has increased over the last two years

New annuity and drawdown contracts sold, by level of advice used, 2014-2018, ABI members



Purchasing retirement-income products without the use of advice or guidance increases the risk that individuals will not make optimal decisions for meeting their income needs in retirement. For example, the average withdrawal rate from drawdown or Uncrystallised Fund Pension Lump Sums, was around 5.9% in 2017/18.⁶⁴ However, pension withdrawals may need to be a maximum of 3.5%, rising with CPI for people to have a good chance of sustaining their pot throughout retirement, assuming average life expectancy and a pot invested 60% in equities and 40% in bonds.⁶⁵

In 2018, the FCA found that around a third of those who have used non-advised drawdown were invested in wholly cash strategies rather

than strategies with the potential for higher returns. The FCA estimates that around half of these people are likely to lose out as a result of their investment choice. A pot used for an income stream over a 20 year period could pay out an increase in annual income of 37% if it was invested in a mix of assets rather than solely in cash.⁶⁶ The FCA has introduced a requirement for drawdown providers to offer “investment pathways” to consumers, who will need to make decisions on how they wish to draw their income and then be given an appropriate underlying investment portfolio on that basis. This process will prevent new drawdown customers being defaulted into all-cash investments.⁶⁷

63. ABI Statistics – New business full product breakdown by quarters – numbers may not total due to rounding

64. FCA (2018e) p. 13

65. PPI Modelling

66. FCA (2018b)

67. FCA (2019c)

Chapter three: how might the DC landscape evolve in the future?

This chapter uses PPI modelling to explore how the Defined Contribution (DC) landscape might evolve in the future both for individuals and on an aggregate level.

The evolution of the DC market depends on many factors

Previous chapters have set out the current state of the DC market and outlined the factors which are likely to lead to changes in the future,

including: automatic enrolment, the private sector move from DB to DC schemes, the use of pension freedoms and changes to the way that advice and guidance are used and delivered.

The way that the DC market evolves in the future will also depend on how individuals respond to policies such as automatic enrolment and pension freedoms, as well as external factors such as employer behaviour and the performance of the overall economy.

Box 3.1: modelling

This report uses the PPI suite of models and data from the Office for National Statistics' (ONS) Wealth and Assets Survey (WAVE 5) to explore how DC assets may change and grow in the future under the assumption that current trends continue. The chapter also sets out the potential distribution of DC assets, under a range of possible future economic scenarios (based on historical data).

The future value of DC assets depends on many variables:

- Employee behaviour - participation and contribution levels.
- Employer behaviour - contribution levels, scheme choice, remuneration decisions.
- Industry behaviour - charges, investment strategies, default offerings, new scheme development (e.g. Collective Defined Contribution schemes).
- Economic, demographic and financial market effects - market performance, inflation, age and size of the working population.
- Policy changes - which affect pension saving such as taxation, changes to minimum pension age, introduction of new scheme-types, or a policy of auto-escalation of contributions under automatic enrolment.

The model outputs should be viewed as an illustration of a range of potential scenarios arising from current trends, and not a prediction of the future.

The following analysis explores how a continuation of current trends in DC saving could affect the membership numbers and the aggregate value of DC scheme assets in the future.

How might scheme membership develop in the future?

Under automatic enrolment, employers could choose to use their existing workplace pension provision as long as it qualified under

regulations. Those without existing provision, or who wished to change their offering for new or existing members, had the choice to set up and run a DB, DC or Hybrid/risk-sharing scheme themselves or to offer membership in a DC scheme run by a third-party. Some employers offer a combination of these.

Box 3.2: assumptions

The following analysis is based on the assumptions that:

- All eligible workers are automatically enrolled and 15% opt-out, or cease contributing after the opt out period has expired, before accruing meaningful amounts of assets.
- Of newly enrolled workers:
 - 80% are enrolled into a master trust scheme.
 - 20% are enrolled into a non-master trust, automatic enrolment DC scheme.⁶⁸

The displacement of members, leaving one type of scheme and entering another (as a result of movements in and out of the labour market or between jobs) results in roughly the same proportions of the workforce in different types of schemes. New members of DC schemes, who may be leaving DB schemes or be newly automatically enrolled, are split between automatic enrolment and workplace DC schemes which pre-dated automatic enrolment in the proportions outlined above.

By 2039 there could be around 10 million people actively saving in master trust schemes

In 2019, there are around 13.3 million active members in DC workplace pension schemes.⁶⁹ Around 8.1 million of these are in master trusts, around 3.1 million are in DC schemes which existed prior to automatic enrolment, and around 2 million are in new schemes created subsequent to automatic enrolment DC schemes (but which are not master trusts).

Assuming current trends in scheme allocation continue, by 2039 there could be around 14.2 million active members in DC workplace pension schemes, with around:

- 10 million in master trust schemes,
- 1.7 million in DC schemes which pre-dated automatic enrolment, and
- 2.5 million active members in other automatic enrolment DC schemes (Chart 3.1).

68. Based on information about scheme allocation from The Pensions Regulator – does not account for opt-ins or ineligible workers who are automatically enrolled.

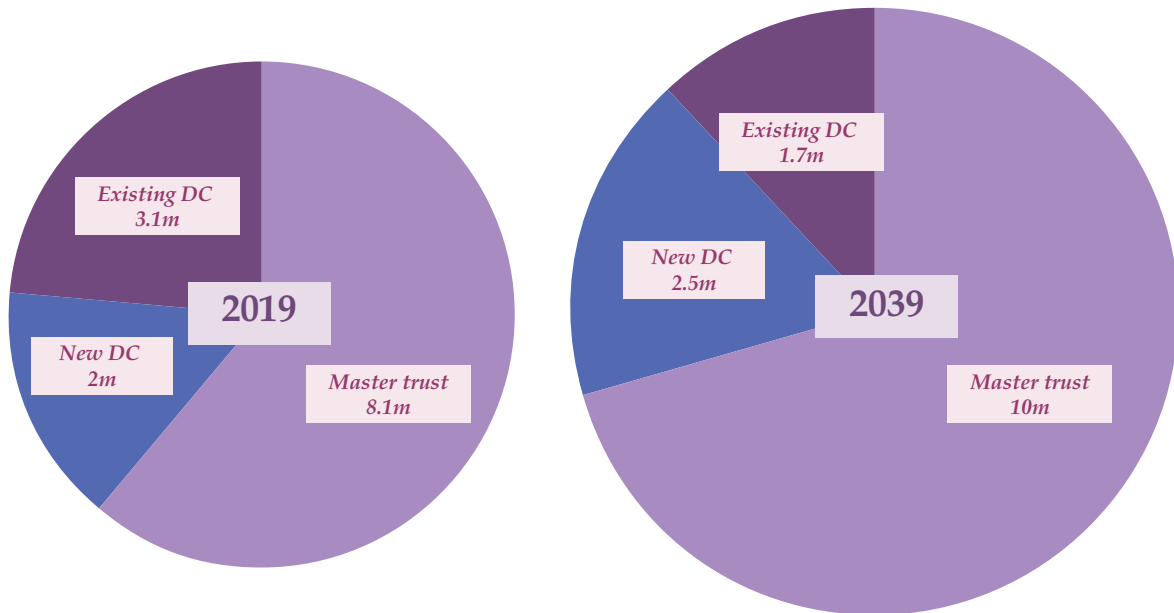
69. PPI Aggregate Model

The number of active members in private sector DB schemes could shrink from 1.3 million in 2019 to 0.5 million by 2039.⁷⁰

Chart 3.1⁷¹

In 20 years there could be around 10 million active members in master trust schemes

Active workplace DC by scheme members in 2019 and 2039



How might DC assets evolve for individuals?

The 2019 median DC pot value for those aged 16 and over in Great Britain is around £9,600.⁷² Automatic enrolment and the shift from DB to DC has resulted in more people saving in DC pension schemes and accruing initially

small pots during the first few years of saving, bringing the median down from £12,000 in 2006/08. However, median pot sizes have begun to grow again, with the rise in levels of contributions and the increase in the length of time that those automatically enrolled have spent contributing to their pots.

70. PPI Aggregate Model
 71. PPI Aggregate Model
 72. PPI Aggregate Model

Box 3.3: assumptions

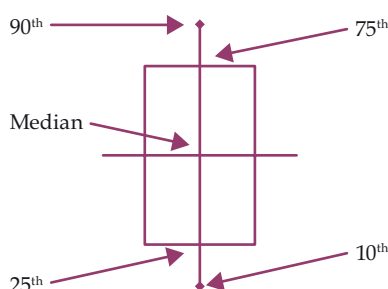
The following analysis is based on the assumptions that:

- Those currently saving in a workplace DC pension (trust or contract based) continue saving at their current level and continue contributing, with their employer, in the same proportions.
- Automatic enrolment minimum contributions rise in line with the phasing of contributions as set out in automatic enrolment legislation.⁷³
- Those who are not currently saving, but are eligible, are automatically enrolled and do not opt-out⁷⁴.
- Before charges, investments yield a nominal average 6% investment return (annually).⁷⁵
- Earnings increase by 3.9% per year over the course of the projection (on average).⁷⁶
- Annual Management Charges (AMCs) range between 0.5% and 0.75% depending on scheme type.⁷⁷

Economic assumptions are based on Office for Budget Responsibility projections appropriate to the projection period.

Box 3.4: box plots

Box plots allow graphic representation of a distribution of outcomes. The rectangle represents the 25th to 75th percentiles of the distribution while the ends of the vertical line represent the 10th and 90th percentiles. The horizontal line through the middle of the box represents the median.



73. Contribution phasing was completed in 2019, however the Wealth and Assets WAVE 5 data which forms the starting point for these figures is from 2014-16. In projecting pension savings from the data there is a period during which contributions were being phased to the long-term minimum contribution level of 8% of band salary.
74. It is generally thought that a number of people will opt out of automatic enrolment, their reasons for doing so are specific to each person and difficult to predict. While the aggregate modelling approach allows us to make a blanket assumption across the population, the modelling presented in this section is based on analysis of individuals making it difficult to accurately predict who would and who would not opt out. The modelling instead presents the potential savings under the current automatic enrolment system.
75. A blend of Office for Budget Responsibility (OBR) returns based on an asset mix to represent typical pension portfolios. The long-term economic assumptions are based on the OBR Fiscal Sustainability Report (January 2017)
76. Based on OBR projections from Fiscal Sustainability Report
77. See the appendix for further detail on assumptions

Median DC pension pots could grow from around £30,000 to around £67,000 over 20 years

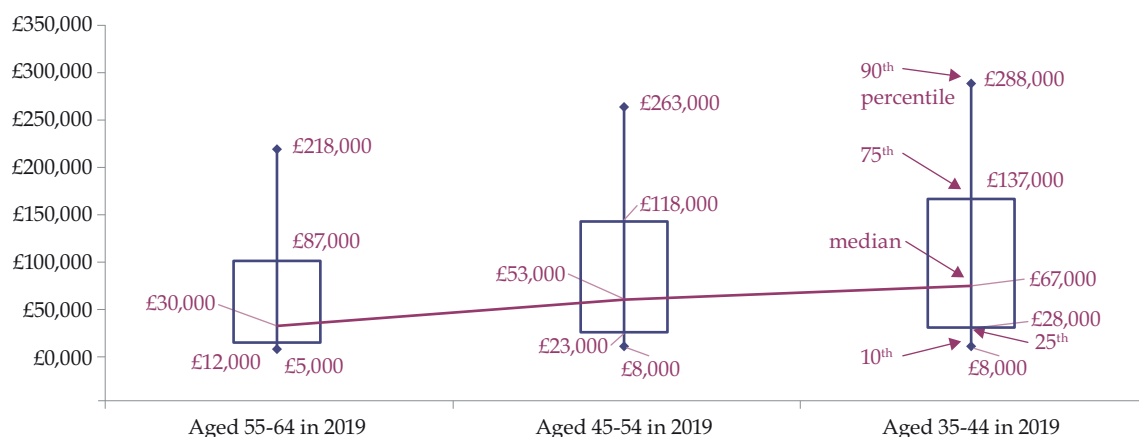
Assuming that those currently contributing to a pension fund with their employer continue to do so, the median DC pension pot size at State Pension age (SPa) could grow over the next 20 years from around £30,000, (for those

aged 55 to 64 in 2019) to around £67,000 (for those aged 35 to 44 in 2019) all in 2019 earnings terms (Chart 3.2). These actual and projected median DC pot sizes have grown from £27,000 and £59,000 in 2018 and 2038 respectively, as shown in last year’s edition of The DC Future Book: in association with Columbia Threadneedle Investments.

Chart 3.2⁷⁸

Median DC pension pots at State Pension age could grow from around £30,000 today to around £67,000 over 20 years

Distribution of pension pot sizes at State Pension age for different cohorts (2019 earnings terms)



A pot of £67,000 could yield an annual income of around £3,500 from an annuity.⁷⁹ On top of a full individual new State Pension income of around £8,800 per year, this could yield an annual retirement income of around £12,300. This level of income may not allow an individual to achieve an income that focus groups have found necessary to achieve a minimally acceptable standard of living.⁸⁰

The low average levels of DC pension savings that people will accrue over the next few decades means that many will be mainly dependent in retirement on income from State Pension, state benefits and any other DB pension or non-pension savings they have.

How might the aggregate value of private sector DC assets grow in the future?

The following section explores how the aggregate value of DC assets might grow based on certain assumptions about employee and employer behaviour and under a range of potential future economic performance scenarios.

78. PPI Aggregate Model

79. 65 year old man, level single-life annuity, Money Advice Service comparison tool

80. PLSA (2017), JRF Minimum Income Standard

Box 3.5: assumptions

The following analysis is based on the assumptions that:

- All eligible employees are automatically enrolled and existing savers remain saving.
- 15% of automatically enrolled savers opt out or cease contributing, before accruing any meaningful assets,
- Employee/employer contributions vary by scheme type:
 - Those in master trust and other automatic enrolment DC schemes make contributions with their employers on band earnings
 - Existing savers continue contributing at the same rates, on total earnings (if applicable).
- Investment scenarios are a product of the PPI's Economic Scenario Generator (which uses data from Bloomberg). Long-term median rates are taken from OBR Fiscal Sustainability Report.
- Median investment return is dependent on pension scheme and varies between 5.5% and 6%.⁸¹
- AMCs vary by scheme.

Economic assumptions are based on long-term OBR projections appropriate to the projection period.

By 2039, aggregate assets in DC schemes could grow to around £805 billion

Assuming that current trends continue, the aggregate value of private sector workplace DC assets could grow from around £430 billion in 2019 to around £805 billion in 2039. The

aggregate value of assets is sensitive to economic performance. If the market performs very poorly, DC assets could stagnate, reaching around £544 billion by 2039. In a very positive market performance scenario, DC assets could grow to around £1,509 billion by 2030 (Chart 3.3).

Box 3.6: percentiles

The following charts illustrate how a range of economic scenarios could affect the value of DC assets. The values are shown in terms of the likelihood that they will occur:

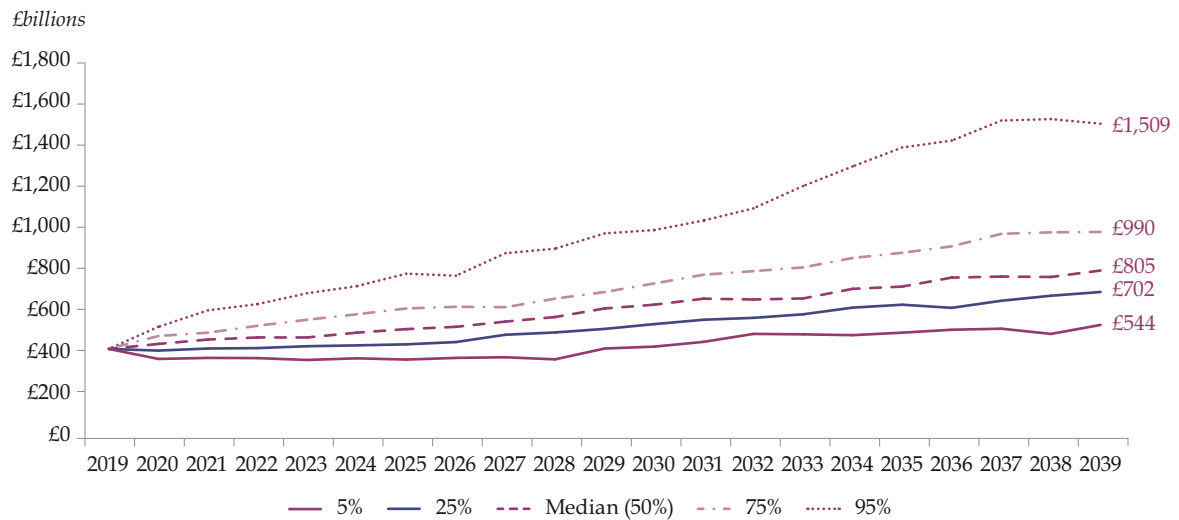
- The 5% line represents the very poor performance end; in the modelling only 5% of outcomes were worse than presented by this line.
- The 95% line represents the very good performance end; in the modelling only 5% of outcomes were better than presented by this line.
- The 25% and 75% points represent a 25% probability of relatively poor or relatively good performance respectively.
- 50% (median) is the central projected outcome, based on past performance.

81. A blend of Office for Budget Responsibility (OBR) returns based on an asset mix to represent typical pension portfolios. The long-term economic assumptions are based on the OBR Fiscal Sustainability Report (January 2017).

Chart 3.3⁸²

By 2039, aggregate assets in DC schemes could grow to around £805 billion (median outcome), compared to £430 billion in 2019

Aggregate value of private sector DC assets in the UK, by year, under 1,000 randomly generated economic scenarios (2019 earnings terms)



Employee and employer behaviour, and government policy, will all affect the aggregate value of DC pension schemes in the future

The aggregate value of private sector workplace DC schemes will vary not just as a result of economic fluctuations, but also as a result

of employee and employer behaviour and government policy. There are an unlimited variety of possible ways that these agents could behave in future, and each would have a different effect on the aggregate value of DC assets and the value of a member’s pot at retirement.

82. PPI Aggregate Model: refer to the Technical Appendix for more details on the methodology

Chapter four: how could governance improvements increase DC pot sizes at retirement?

This chapter explores the different areas of DC scheme governance that are being reviewed and estimates the potential increases in pot size for a median earner, Sam, which could be associated with pursuing strategies in each area.

The introduction of automatic enrolment has brought about a revolution in UK pension saving:

- The number of active Defined Contribution (DC) savers has grown from around 5.5 million to over 13 million over a space of 7 years (2012-2019),
- The value of assets under management in DC schemes has also increased from around £350 billion to around £430 billion over this time (2019 earnings terms).
- The profile of savers has also changed: today's DC saver is likely, on average, to have a lower income, lower financial capability

and less access to other (non-DC) private savings and assets during their working life, than yesterday's DC saver.

While this influx of new savers is undoubtedly a positive development, the structure of the current DC marketplace may not necessarily ensure that all scheme members achieve optimal outcomes.

The mismatch between some savers' needs and the current system are not necessarily the fault of industry, the regulator or Government, but are rather the result of a change in the number and needs of savers, the number and size of schemes, plus economic and policy developments.

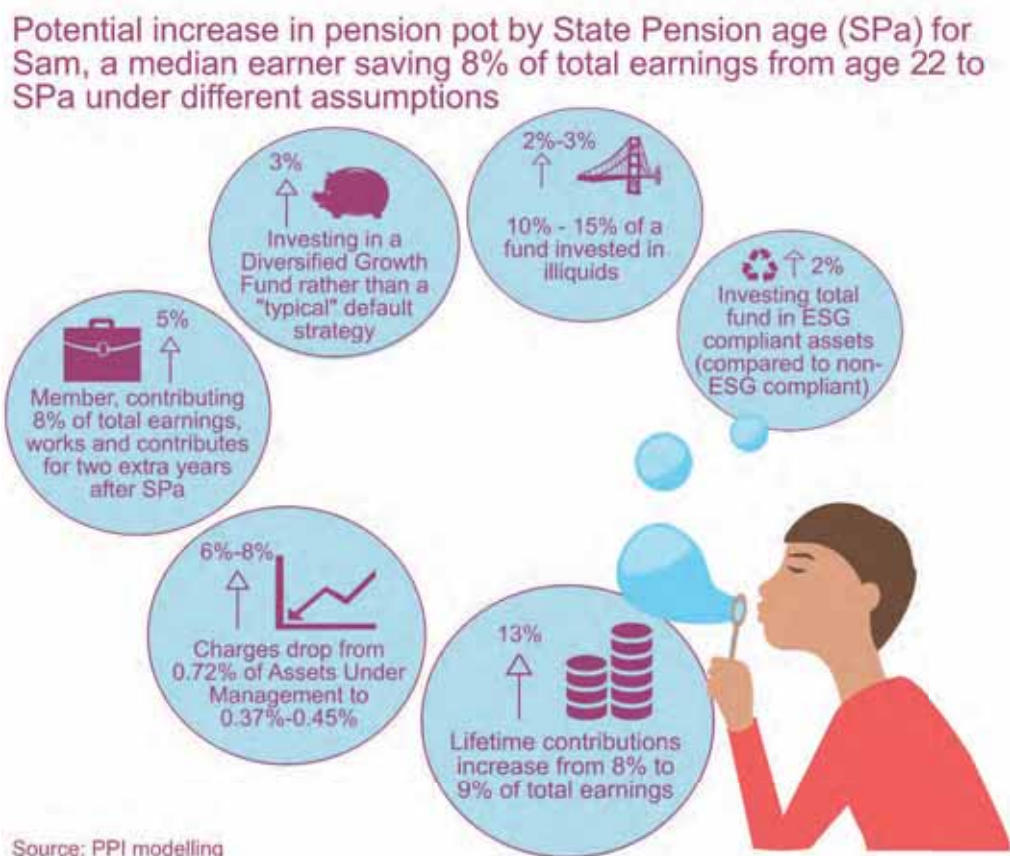
Industry, Government and the regulators are all working to ensure that the private pension system is appropriate to optimise the outcomes of today's DC pension savers.

This chapter explores:

- Whether current de-risking models are still appropriate for default investment strategies in DC schemes
- What changes in risk management, sustainability and taking a long-term view could mean for Sam's pension pot growth
- How behavioural interventions could be used to support more positive outcomes from pension saving, associated with the above governance changes
- How the current move towards consolidation/closure of small schemes could affect pension saving
- How behavioural interventions could be used to support more positive outcomes from pension saving, associated with the above governance changes
- How a more holistic view of value for money could help savers

Figure 4.1 illustrates how current assumptions regarding the benefits of the above governance trends could affect the value of Sam’s DC pension savings. There are potential overlaps between the increased return drivers detailed below, for example, Diversified Growth Funds (DGF) may contain some form of illiquid assets; therefore the increased return derived from investment in illiquid investments may arise from the use of a DGF and vice versa.

Figure 4.1



Sam could increase his pension pot size by around 3% at retirement, by investing his contributions in a diversified strategy, with lower levels of de-risking, rather than a bond/equity strategy with higher levels of de-risking

The traditional lifestyle model may no longer be the most appropriate default investment strategy

Significant de-risking in the run up to retirement with the aim of facilitating an annuity purchase at retirement is no longer the most suitable strategy for most DC savers because:

- Fewer people are buying annuities
- The timing and method of accessing DC savings is changing

Many people are investing their DC savings after access

Until recently, the majority of those with DC savings purchased a lifetime annuity at retirement.⁸³ As a result, most default strategies deployed a lifestyle approach which reduces volatility as members age by gradually shifting funds from equities to lower volatility assets such as cash and bonds. Lifestyleing is intended to protect members’ savings in the years just prior to retirement, when there may not be sufficient time to make up significant losses from market turbulence, which could lead to members realising less income than planned from annuities.

However, from April 2015, as a result of the introduction of “Freedom & Choice”, no one is required to purchase a secure retirement income product in order to access their DC savings. Consequently, sales of annuities have

83. After taking 25% of their pot as a tax-free lump sum

decreased: from a peak of around 466,000 per year in 2009 to around 70,000 per year in 2018. Many savers are choosing instead to reinvest their savings through income drawdown and other products. 110,000 income drawdown products were purchased in 2018.⁸⁴

DC pension savers who wish to continue investing their savings, are likely to benefit from increased volatility to optimise the opportunities for funds to realise higher returns.

People may not wish to access all of their DC savings at one time and may access later than expected

As a result of people living for longer, SPA increases and the fast pace of technological change, people are working for longer and job opportunities are fluctuating more rapidly. People are more likely to transition into retirement through part-time work and/or leave and rejoin the labour market at several times during later life (in order to retrain or switch between job types), and can now, as a result of

Freedom and Choice, leave some or all of their savings in their pension fund for longer than expected as they work beyond SPA.⁸⁵

There are inconsistencies between the practice of significant de-risking prior to a member's pre-selected retirement date and actual member behaviour. Some members may stay in work for longer than expected and others may leave early as a result of health problems or the need to provide care to others. Members who withdraw their savings before de-risking has occurred may permanently lose a portion of funds which could have been protected through investments in less volatile assets, if they withdraw during market downturn. Members who have their funds de-risked a long time before they access them could forgo some growth opportunity. Due to the unpredictability of labour market and saving behaviour, a move away from significant or linear de-risking to a more tailored de-risking approach and greater asset diversification may help some future pensioners to achieve better outcomes from DC pension saving.

Due to the unpredictability of labour market and saving behaviour, a move away from significant or linear de-risking to a more tailored de-risking approach and greater asset diversification may help some future pensioners to achieve better outcomes from DC pension saving.

Increased diversification can minimise the need for significant de-risking in the run up to retirement

One potential way to avoid some of the potential drawbacks associated with significant de-risking, while continuing to enjoy some of the benefits, is to invest more of a default strategy's funds into alternative assets such as infrastructure and property, which typically grow in value over time as they are linked to the construction and development of longer-term projects, many of which are closely correlated to economic growth. Alternative assets can be accessed by DC schemes through Diversified Growth Funds (DGF) and multi-asset funds, among others. DGF's and similar funds will require less de-risking that can begin at a later stage, in order to protect capital.

Over the long-term, alternative assets have the potential to deliver a higher level of income and capital growth than bonds, but can be less obviously vulnerable to losses than equities, which are more visibly sensitive to day-to-day market fluctuations. Alternative assets can therefore provide some of the security sought during the de-risking process and some of the gain associated with equities, though they may not always yield the same returns as equity performance. Most DC savers will benefit from a degree of de-risking during their later years of pension saving. Those planning to purchase an annuity may benefit from more significant de-risking.

84. ABI statistics, Quarterly Pension Annuities by Age and Size of Fund; Quarterly New Business: Pensions

85. Khambhaita (PPI) (2018)

Alternative assets can provide some of the security sought during the de-risking process and some of the gain associated with equities, though they may not always yield the same returns as equity performance. Most DC savers will benefit from a degree of de-risking during their later years of pension saving.

The following example compares the median internal rate of return over the lifetime of a pension saver in a lifestyle strategy and a DGF which is de-risked at a later time, and to a lesser degree, during the approach to retirement.

Figure 4.2



Alternative assets could cost more to invest in

Due to the relative illiquidity of some alternative assets and the increased costs associated with purchase and ongoing management, these types of assets tend to be more administratively complex to manage and may incur a higher member fee.

Sam could increase his pension pot size by around 3% through investing 15% of funds in illiquids and could increase his pension pot size by 2% by investing only in assets with good ESG credentials

material risks and opportunities such as climate change, and broaden the range of asset classes. As a result, UK schemes, and the Government, are thinking seriously about the benefits of integrating illiquid assets, and consideration of the financial impact of Environmental, Social and Governance (ESG) factors into DC scheme investment strategies. The next section of the chapter explores the potential benefits and drawbacks associated with illiquids and taking into account the potential impact of ESG factors in investment decisions.

Pension schemes are increasingly focussed on sustainability

There is an increasing awareness within the pensions industry of investment strategies which take account of broader financially

Figure 4.3



Investing 15% of funds in illiquids could increase Sam's pension pot size at SPa by around 3%

There is growing appreciation among investors of the potential advantages attached to increased investment in illiquid and alternative assets

Illiquid assets are those for which access to funds is restricted after the initial investment is made, for example, some property, infrastructure, or venture capital. There are also potential benefits attached to investment into other types of, liquid, non-traditional assets, known as alternative assets, which are not as easy to access as standard, publicly listed equities or bonds.

Direct investment into alternative and illiquid assets is very low among DC schemes, particularly smaller schemes, though many

schemes invest indirectly in illiquids through other closed-ended investment companies, for example, real estate investment trusts (REITs) and some large schemes allocate to property funds with a daily value, within their default fund strategies. Increased investment in illiquid and alternative assets could potentially yield benefits to pension scheme members as they:

- Could generate a return above those realised by more liquid assets,
- May not generally be subject to the same market forces as public equities and may not suffer the same potential losses as equities in the event of a market downturn,
- Have the potential to deliver secure, inflation-linked returns over the long-term, which may be well matched to the needs of DC pension scheme members,
- Allow for a more diversified portfolio, accessing return from less well-accessed areas of the economy including non-listed companies.

Illiquid assets could generate a return above those realised by more liquid assets

Potentially higher returns arise because the capital in illiquid assets can be targeted at the long-term growth of a company or project without the need to ensure that funds are available to be withdrawn at short notice. Whilst views vary, and some experts are sceptical, estimates of the increased return associated with illiquids range from 1% to 7% over what could have been earned, from another comparable, liquid asset, or a lower risk asset, such as cash, over the long-term.⁸⁶

Illiquid and alternative assets are not generally subject to the same market forces as public equities and may not suffer the same losses as equities

Illiquid and alternative assets are not always correlated to publicly listed equities because they are not generally subject to the same accounting standards or volatility drivers. When an event causes a loss in the value of publicly listed equities, illiquid and alternative assets are unlikely to experience a similar loss in value, and may in fact experience gains. A portfolio with lowly correlated asset returns can offset the losses sustained from some assets with the gains on others, though to an extent this can be an artefact of the difference in the availability of pricing information between asset classes, and historic asset return and historic asset return correlations have at times broken down during times of market stress.

Some illiquid assets have the potential to deliver secure, inflation-linked returns over the long-term, which may match the needs of DC pension scheme members

Unlike most saving products, pensions are designed specifically for long-term savings, with the expectation that people won't access

their savings for up to 40 years and beyond. Many illiquid and alternative assets⁸⁷ yield stable, predictable, long-term income streams above inflation. An investment which has the potential to provide high, inflation-linked, stable returns over the long-term, could form an important part of a DC scheme investment portfolio alongside more volatile assets with higher growth potential.

Extending investment to non-listed companies widens the range of potential investments

There are a growing number of companies choosing not to publicly list their shares:

- In the US, the number of publicly listed companies has fallen by almost half since the late 1990s.
- In the UK, the number of publicly listed companies has fallen by around a third since 2008.⁸⁸

Investing in private equity increases the opportunity to diversify portfolios and benefit from the potentially higher returns associated with non-listed companies. However, if larger numbers of investors began investing in private, unlisted companies, there may be a scarcity of supply of appropriate assets for all of those wishing to invest causing yields to fall.

Investing in illiquids could result in a loss if assets need to be sold on the secondary market or when companies fail

While there are potential financial benefits associated with investment in illiquids, these assets also carry risks:

- The risk of needing access to illiquid funds before maturity
- The risk of new companies or ventures failing, particularly relevant to venture capital
- The risk that the high costs of illiquid and alternative assets may not be compensated for by increased returns

86 Swift *et. al.* (2018); ROBECO (2015); Ilmanen (2011); These “illiquidity premia” can be calculated by measuring the illiquidity risk adjusted return of the asset risk-adjusted return: the calculation of an asset’s investment return which takes account of how much risk is involved in the investment, (the level of risk can be expressed as a number or rating)

87. Infrastructure and property in particular

88. Investment Association (2018) pp. 26-27

Some investors may need access to illiquid funds before maturity and be forced to sell at a loss

While most investors calculate the proportion of funds which they can safely allocate to illiquid assets, economic events can sometimes cause investors to require access to a portion of illiquid funds before they are contractually able to withdraw them. In these cases, investors may need to sell these assets on a secondary market, if one exists, often at great loss. For example, in June 2009, in the immediate aftermath of the Global Financial Crisis, the Harvard Endowment reported a 31.6% loss in its private equity portfolio after having to sell a significant proportion of illiquid assets.⁸⁹

Within private equity and venture capital, the risk of companies failing is relatively high

In the US, around a third of small businesses fail within the first two years and around 50% are closed within five years.⁹⁰ In the UK around 60% of small businesses stop trading within the first five years.⁹¹ While less risky, other assets such as infrastructure and housing projects can also fail, generally due to funding shortages.⁹² Business or project failure is a risk attached to investing in illiquid and alternative assets though it can be mitigated by spreading investments across a range of assets which are not likely to be highly correlated.

The overall hoped-for return generated from illiquid and alternatives could, over time, make up for initial, and ongoing, high costs. However, some smaller pension schemes may not have a sufficient investment budget to cover the initial amount required in order to invest in some illiquid assets.

The overall hoped-for return generated from illiquid and alternatives could, over time, make up for initial, and ongoing, high costs. However, some smaller pension schemes may not be able to commit to the initial amount required to invest in some illiquid assets.

Alongside the above risks, there are some structural and regulatory barriers to investing in illiquid assets. However, the government is currently working with industry to make illiquid investment more accessible to DC schemes.⁹³

Illiquid and alternative assets are generally more expensive to purchase and maintain than publicly listed bonds and equities

The purchase and holding costs of illiquid and alternative assets are higher than those for publicly listed equities and bonds, gilts and cash, for the following reasons:

- Transaction costs are higher for illiquid and alternative assets because there are extra costs and charges involved in buying and selling these types of assets.
- Investments in illiquid and alternatives assets, particularly property and infrastructure, often require a large outlay of initial capital in order that project managers can continue to meet capital needs for funding the project. In some cases there are ongoing costs, for example, property investments may involve development costs over time, while venture capital investors are often required to be fully involved in the control of the company's operation.
- Illiquid investments are complex and information, including pricing information, may not be readily available or transparent. Investment managers may expend extra resources in order to value and monitor these assets, which will generally result in a higher management fee.

89. www.forbes.com/2009/10/24/harvard-university-endowment-business-wall-street-harvard.html#79bac19e6c4a

90. US SBA (2012)

91. ONS (2018) section 6

92. Statista (2019)

93. DWP (2019a); Wagstaff, C. (2019)

Investing in assets with good ESG credentials could increase Sam's pension pot size at SPa by around 2%

There is a legal requirement from the Government for schemes to consider the Environmental, Social and Governance (ESG) implications on investment strategies

The potential future economic consequences of global trends such as climate change, social movements which hold companies to account, and increased regulation are becoming clearer to many investors. However, there is a lack of consensus regarding the financial implications of these factors for investors.

The Government has laid regulations which strengthen the obligation on pension scheme trustees to consider the potential financial impact of Environmental, Social and Governance (ESG) factors on investment decisions.⁹⁴ The FCA is considering responses to its consultation on introducing similar requirements for contract-based schemes.⁹⁵ Pension schemes that do not start to integrate consideration of the material financial implications of ESG factors into their investment strategy could face legal difficulties as a result of not complying with regulations, higher administration and legal costs, and potentially reduced returns in the future as a result of not taking financially material risks into account.

As the increased benefits associated with consideration of ESG factors include reduced risk (of, for example, the risks of a business closing due to reputational damage or running out of necessary resources) and more enduring business models, they are difficult to quantify into single increased return figures. However there are some short-term estimates of increased return, ranging from 0.08% to 3%.⁹⁶

Estimates are time dependent and may not account for future changes, for example, an increase in investment in stocks and bonds with good ESG credentials could raise the price of these assets, eroding the extra return.

Some of the expected benefits are unlikely to be apparent until some point in the future when, for example, companies who are reducing their use of finite resources are likely to perform better than companies who do not. Pension funds who do not consider ESG factors as part of their investment strategies and stewardship may see reduced returns in the future. Greater consideration of ESG factors may also align more with members' views, and could help promote member engagement with pension saving.

A lack of accessibility, trustee understanding, and behavioural factors are barriers to ESG integration

There are barriers to ESG integration. Smaller schemes in particular may not have the resources to bring control of their detailed investment strategy in-house and are generally dependent on platform availability, master trusts integrating ESG factors into their funds, or products used by larger schemes. However, some investment managers have developed, or are developing, off the shelf products which could be used by small schemes. If consideration of ESG factors was built into DC platform benchmarking, there may be more motivation to consider these. If more products that involve ESG consideration were available to small schemes, they would find it easier to invest in companies with better ESG credentials. However, funds which require asset managers to actively engage with companies may cost more than funds which passively track indices without engagement.

There is a lack of consensus regarding the definition of ESG, and the assessment and integration of ESG factors in investing and stewardship is not straightforward. The Pensions Regulator and the Pensions and Lifetime Savings Association have provided guidance on integrating ESG consideration into investment strategy design.⁹⁷ Smaller schemes may need more support around consolidation of assets and/or investment administration, in order to make consideration of ESG factors easier.⁹⁸

94 DWP (2018d)

95 FCA (2019a)

96 www.unpri.org/; Dimson, E. *et al.* (2017); Barclays (2016); Kellogg School of Management at Northwest University (2018)

97 <https://www.plsa.co.uk/Portals/0/Documents/Policy-Documents/2019/ESG-and-Stewardship-A-practical-guide-to-trustee-duties-2019-v2.pdf>; <https://www.thepensionsregulator.gov.uk/en/trustees/managing-dc-benefits/investment-guide-for-dc-pension-schemes->

98 Silcock, D (PPI) (2018a)

Smaller schemes may also need more support around consolidation of assets and/or investment administration, in order to make consideration of ESG factors easier

Reducing charges from 0.72% to 0.45% or 0.37% could increase Sam's pot size at State Pension age by around 6% to 8%

There are many small DC schemes in the UK

In 2018 there were around 3,690 DC workplace pension schemes in the UK (excluding small, self-administered pensions and executive schemes), of which around 1,700 had fewer than 12 members. There were around 1,840 DC schemes with more than 12 members (covering 99.9% of pension pots) and around 150 of these schemes with more than 5,000 members comprising of 95% of pension pots.⁹⁹ These figures are lower than other publicly available estimations of the number of DC schemes in the UK because they exclude small, self-administered

pensions and executive schemes. However, they are a good representation of the number of DC workplace pension schemes open to employees in the private sector.¹⁰⁰

Larger schemes generally charge members less

Larger schemes can generally charge members less as a result of:

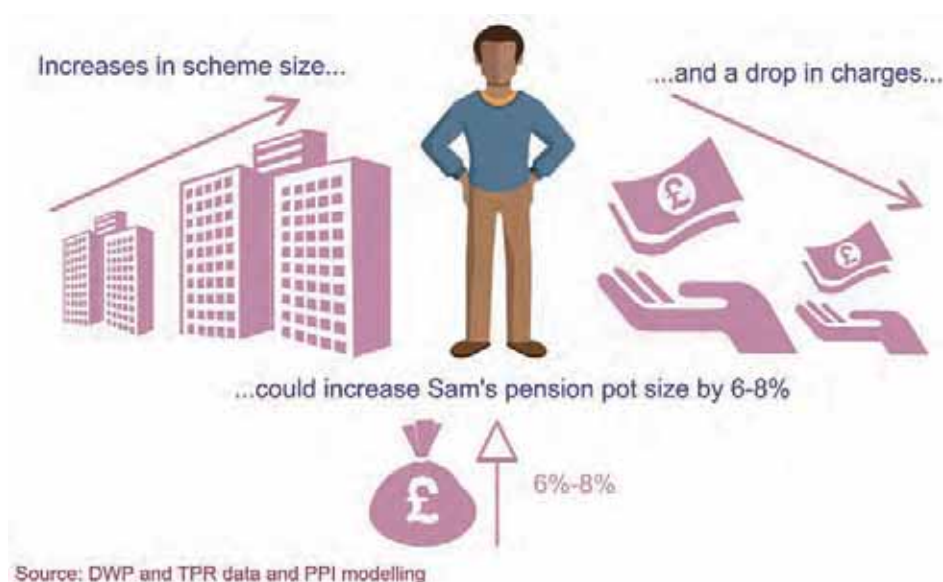
- Efficiency savings,
- Sharing administration costs across larger membership bases, and
- Negotiating more competitive deals with external managers and platform providers.

Increases in scale have been shown to have an effect on annual member charges:

- In 2016, the average ongoing charge to members in a contract or trust-based DC scheme with five members or less was 0.72% of AUM.
- In schemes with a thousand or more members, the average ongoing charge was 0.45% in contract-based DC schemes and 0.37% in trust-based DC schemes (Figure 4.4).¹⁰¹

Figure 4.4

Reducing charges from 0.72% to 0.45% or 0.37% could increase Sam's pot size at State Pension age by around 6% to 8%



99 DWP & TPR stats, includes pension “products” available as DC schemes and trust-based pure DC schemes

100 Including small, self-administered pensions and executive schemes brings the figure higher, to c. 32,000, - DC trust: presentation of scheme return data 2018 – 2019. The Pensions Regulator. Data at 31 December 2018

101 DWP and TPR data

While there are many small to medium sized DC schemes in the market at the moment, over the next few decades, individuals who have been automatically enrolled will start to accrue larger pots and the aggregate value of private sector workplace DC assets could grow from around £430 billion in 2019 to around £805 billion in 2039.¹⁰² Therefore, some schemes will organically grow to a size where they can benefit from scale.

Small schemes are being encouraged to consolidate or close, in order to ensure most DC schemes can benefit from the cost reductions associated with scale

However, very small schemes are unlikely to organically increase sufficiently in size to benefit from the cost reductions associated with scale. Consolidation of small schemes is an alternative way of increasing scheme size. Smaller schemes are being encouraged by the Government to consolidate through the introduction of measures which have simplified DC bulk asset transfers, in 2018.¹⁰³

These measures should make it easier for small schemes to join together or to join larger schemes. Some master trusts are already absorbing smaller single employer schemes and this trend may well gather pace. The Government is also consulting on whether or not to require DC trust schemes with assets below £10m or memberships of fewer than 1,000 members (approximately 2,800 schemes), or who can be identified on other grounds,¹⁰⁴ to publish an assessment (as part of the value for money assessment included in the Chair's Statement) of whether it might be in the scheme members' interests to be transferred into another scheme, such as an authorised master trust. The Government hopes that this measure will accelerate the pace of consolidation among small schemes.

The master trust authorisation scheme has led to the closure of many small master trusts

The master trust authorisation regime has resulted in fewer small master trust schemes. From October 2018, a new authorisation regime for master trusts was introduced which required schemes to apply for authorisation by March 2019, or to wind up and transfer members to another scheme. This change has led to many small master trust schemes, who found it hard to meet the new required criteria, transferring their members into larger schemes. Of the 90 master trusts identified as operating in the market by The Pensions Regulator, as of April 2019:

- **Nine** master trust schemes had exited the market,
- **35** had triggered their exit from the market,
- **Five** schemes had applied for an extension,
- **29** schemes had applied for authorisation,
- **Five** schemes had become authorised.¹⁰⁵

Changes in behaviour could increase pension pot sizes, for example increasing contributions from 8% to 9% could increase Sam's pot size by 13%, and working for two extra years could increase his pot size by 5%

Interventions which are deployed when people are most receptive to learning and action could help people to make better decisions

Behavioural interventions can be an effective policy lever for helping to support people to achieve better outcomes. For example, automatic enrolment has brought over **ten million** people into workplace pension schemes.¹⁰⁶ Following on from the success of automatic enrolment, there is a role for behavioural interventions going forward to help complement improvements in governance and investment. The effects of

102 PPI Modelling

103 The Occupational Pension Schemes (Preservation of Benefit and Charges and Governance) (Amendment) Regulations 2018

104 DWP (2019a) p. 24

105 TPR (2019a)

106 However, it is important to recognise that behavioural interventions cannot on their own overcome all of the barriers to people achieving good outcomes in retirement. Other policy levers: compulsion, defaults, safety nets, consumer protection, and freedoms, will also play a role in helping people to achieve better pension outcomes. Outcomes are also dependent on the effects of wider pensions policy and changes in the economy and labour market.

these interventions on pension pot sizes are not easily quantifiable, but could assist the success of other policy interventions aimed at supporting people to achieve positive outcomes. In particular, an increase in lifelong financial education and a focus on interventions which are deployed when people are most receptive to learning and action could help people to make better long-term savings decisions.

Financial education in school and work is associated with an increase in financial capability and positive financial behaviours

Financial education courses in schools can increase young people's financial interest and knowledge, and can:

- Improve their ability to determine product risk,
- Modify the tendency to value short-term gains over higher, long-term gains (hyperbolic discounting), and
- Reduce lack of self-control, as observed through reductions in impulse buying.¹⁰⁷

Increases in financial capability generally impact future behaviour positively,¹⁰⁸ and school based interventions are an effective way of targeting a cross section of the population. Many young adults feel that they didn't receive the practical financial education they required at school to help them make decisions in adult life.¹⁰⁹ However, there are moves towards more school-based financial education. For example, a group of 20 savings and investment firms in the UK have set up a financial education project called KickStart Money which aims to provide financial education to over 18,000 primary schools in the UK with the hopes to catalyse "a movement to build a savings culture for the future."

Workplace education could help to raise financial capability and change behaviour among young adults

Young adults are well positioned to benefit from workplace-provided financial education due to low levels of financial capability/confidence coupled with less entrenched behavioural barriers and biases than are often found in older adults. Financial education courses among adults improve financial capability by around 27% on average, and increase financial activity by around 9%, on average. The most significant impact is on budgeting/planning behaviours (21%) and saving/asset accumulation behaviours (including pension saving) (10%).¹¹⁰ The positive effects improve when courses are longer¹¹¹ and voluntary.¹¹² However, only 15% of workplaces offered financial education to their workforce in 2016.¹¹³

There are organisations which offer financial education in the workplace

The market for providers of financial education in the workplace is growing. For example, WEALTH at work provides education, guidance and regulated financial advice to individuals, employers, pension scheme members and pension scheme trustees. Other specialist providers include Planned Future and SecondSight, and many employee benefit consultants also offer courses, advice and guidance.

Behavioural interventions are most effective when they are applied during teachable moments

To some extent, the timing of an intervention is as, if not more, critical than the nature of the intervention. Interventions conducted when people are incapable of absorbing and acting on information (due to behavioural or structural factors) may be extremely ineffective. It is important to engage with people at a "teachable moment" when they are willing and able to take decisive action.¹¹⁴

107 Lührmann *et al* (2014) pp 161 & 172; Lührmann *et al* (2015)

108 Lührmann *et al* (2014); Lührmann *et al* (2015)

109 Harrison *et. al.* (2016) page 27

110 Kaiser and Menkhoff (2016) pages 9-11; Page 40, figure 6 – averages derived from 115 evaluations of financial education programmes.

111 Actual hours taught and/or duration of course.

112 Kaiser and Menkhoff (2016) pages 15 & 20, financial education offered voluntarily in the workplace is more effective than mandatory courses at work or in schools.

113 Thomsons (2016)

114 Silcock and Adams (PPI) (2017); Service *et. al.* (2015)

For a moment to be “teachable”, it must be a time when the intervention is relevant to people’s current circumstances, relates specifically to their goals and allows people to follow on with simple, practical actions. Teachable moments vary between people by age and circumstances but generally occur during key transitions, such as moving house, getting a job or starting a family, or during other times when people are making financial decisions such as buying other financial products. For example, when an individual receives a pay rise, they may be more open to messages about increasing their saving levels than they would be if they had not received a boost to their income.

Behavioural interventions could help motivate people to increase their pension contribution levels

Members tend to contribute at the minimum level required by regulation or suggested by their employer. This behaviour can be linked to two behavioural biases, though other factors such as financial capability and income level also play a role:

- **Present bias** - a preference for consumption today over deferring consumption, by saving, until tomorrow.
- **Anchoring** - a mental process during which members “anchor” pension contributions to the minimum contribution level applied by their workplace pension scheme, often believing that this level has been chosen as the appropriate amount to secure a comfortable retirement.

There are currently some suggested behavioural nudges for increasing contribution levels, for example:

- Auto-escalation, whereby contributions increase with a member’s pay or length of time spent contributing, could nudge contribution increases over time.
- Digital representations of an individual’s future self can help people associate more closely with their older selves and could help overcome present bias.

- Displaying an individual’s potential future pension income on their monthly payslip as a means of comparing current with future income could help engage people more with saving by making it seem more “real” and “present”.
- Reframing employer contributions as “free money” and tax relief as “a saver’s bonus” could also help overcome some trust issues people may have with pension saving and could help highlight the benefits associated with saving.¹¹⁵

Technology could play a role in behavioural interventions

The importance of technology in providing support is increasing. Many pension scheme members are now able to communicate with their schemes via websites or phone apps and there is a growing market in the provision of online “robo-advice”, guidance and information, some of which is provided free of charge to the customer (for example, the Money and Pensions Service). There is work being done in the field of health, to develop responsive and adaptive personal technology which can tailor interventions to people’s needs as they fluctuate. These Just-in-Time Adaptive Interventions (JTAs) involve the use of a small electronic device (potentially integrated into a smart phone) which can monitor an individual’s stress levels and prompt the individual to respond in a certain way. These types of interventions are used to help those attempting to make healthy lifestyle changes, such as quitting smoking, changing diet or engaging in increased exercise.¹¹⁶

There is scope for work to be done on developing similar, adaptive interventions for saving more and other financial behaviour that could, for example, be prompted by spending or receiving income, some versions of which are already on the market.¹¹⁷ As technological capability advances, the realm of possibility for technology to play a key role in delivering personalised interventions will expand. DC schemes could provide key pensions-relevant interventions, alongside workplaces and other financial institutions, as part of an overall, technology-driven campaign for improved financial wellness.

115 Wagstaff, C. (2016)

116 Nahum-Shani, I. (2016)

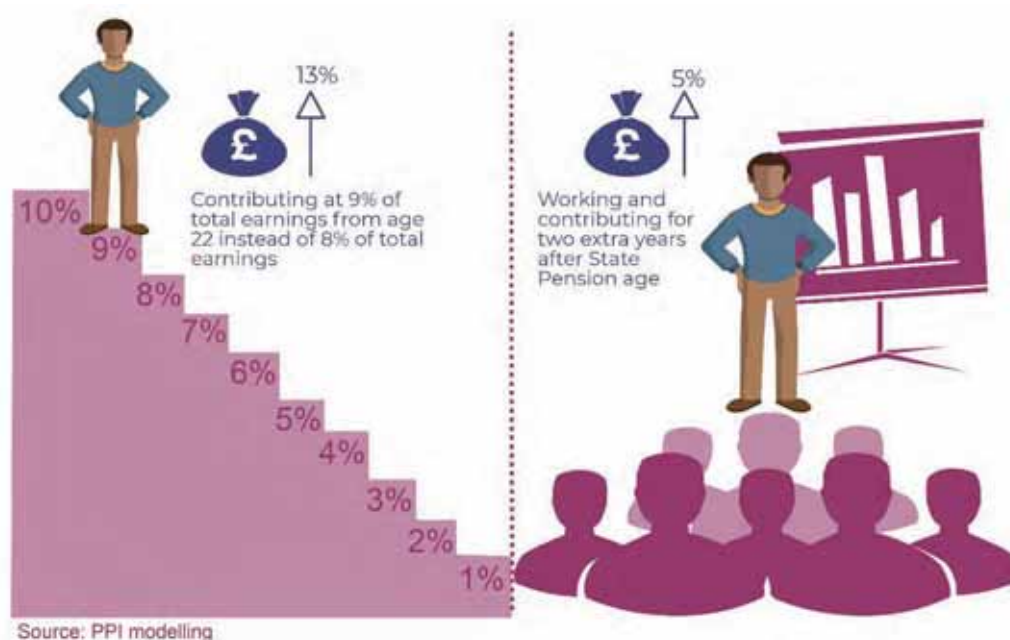
117 For example: Acorns, which saves the change from purchases into a separate account; PocketGuad, which suggests budgeting tips based on an individual’s behaviour

Changes in behaviour could increase pension pot sizes at retirement, for example:

- A contribution increase from 8% to 9% of earnings from age 22 could increase Sam's pot size at SPa by around 13% from a combination of increased contributions and compound interest on a larger pot.¹¹⁸
- Retiring two years after SPa can increase Sam's pot size by around 5% from a combination of two years extra contributions and compounded investment returns within his pot (Figure 4.5).¹¹⁹

Figure 4.5

Increasing contributions from 8% to 9% could increase Sam's pot size by 13%, and working for two extra years could increase his pot size by 5%



A more holistic approach to Value for Money could increase the size of a pension member's pot at retirement

Value for money is often seen in terms of short-term cost

There is a lack of consensus regarding how to define and assess Value for Money (VFM) in DC pension schemes, particularly as some factors are not easily quantifiable. However, there are several metrics commonly associated with VFM:

- Costs and charges,
- Returns,
- Design of investment strategy,
- Administration of scheme,

- Communication with members,
- Quality of governance.¹²⁰

Trustees and Independent Governance Committees (IGCs) are responsible for assessing VFM in DC pension schemes. However, some of these bodies do not agree on a definition of VFM and others may feel that there is not yet sufficient clarity regarding the definition and assessment options for VFM. As a result, price is often used as a proxy value for VFM.¹²¹ Alongside VFM assessments, there is pressure for DC schemes to keep costs low arising from:

- The 0.75% charge cap on annual charges (excluding transaction costs) in the default strategies of automatic enrolment qualifying schemes.

118 PPI Modelling

119 PPI Modelling

120 Echalié *et. al.* (PPI) 2016

121 FCA (2018d) p.12

- The potential for the current charge cap to be lowered, or transaction costs to be brought within the remit of the cap after the 2020 charge cap review.¹²²
- The relatively low level of member charges among schemes used for automatic enrolment, in particular master trusts, which could make charges above 0.5% of a member's fund value appear uncompetitive (though, in some cases, low costs will have an impact on the amount schemes can spend on investment, which could also reduce the appearance of competitiveness).

Other elements of VFM can sometimes be overlooked by DC pension providers. In particular:

- Some schemes are focused more on meeting short-term return targets than on nurturing longer-term sustainable returns, from investment in, more expensive, illiquid and alternative assets.¹²³
- Default investment strategy objectives are often made without reference as to members' needs and are sometimes presented as target charge and investment return objectives. A lack of clear objectives can make it difficult for external bodies to assess VFM as there is no clear objective to measure performance against.¹²⁴
- There is little recognition of the financial impact of good administration, communication and governance factors, partly because it is often tricky to disaggregate costs and charges from

payment chains and bundled services. It can be difficult to understand how much is being paid to any particular entity, what services the payments cover, and whether they are worth the cost.¹²⁵

The FCA intends to develop *common principles and standards for VFM and the enforcement of those standards*.¹²⁶ Common principles could lead to other aspects of VFM being taken into account and recognition that a more holistic approach could increase the size of a pension member's pot at retirement.

A long-term focus, improvements in transparency and more effective communication could lead to increases in pot size

A more holistic approach to value for money could lead to increases in pension pot size, for example:

- Changes to investment strategy which focus on sustainable, long-term returns could increase the size of pension pots, even if they result in higher member charges,
- Greater transparency on administration charges could allow trustees and IGCs to assess where there may be unnecessary spending and cut member costs,
- Improvements in communication which encourage greater engagement by members could result in increased contributions or longer working, for example.

122 Hansard, 16 November 2017, Written Statement, HCWS249

123 Silcock, D. (PPI) (2018b); 30 January 2019, Sandra Wolf, *How big an issue is short-termism in pensions?* Mallowstreet

124 Silcock, D. (PPI) (2018b)

125 Silcock, D. (PPI) (2018b)

126 FCA (2018d) p.12

Chapter five: reflections on policy

Chapter five contains reflections on the policy themes highlighted by the report from leading thinkers and commentators in the pensions world.

Writers include:

- Andrew Brown, Institutional Business Group Director, Columbia Threadneedle Investments
- David Fairs, Executive Director of Regulatory Policy, Analysis and Advice at The Pensions Regulator
- Imran Ravzi, Senior Policy Adviser, Pensions & Institutional Market, the Investment Association
- Nico Aspinall, Chief Investment Officer, B&CE
- Richard Morgan,



Andrew Brown
Institutional Business Group Director
Columbia Threadneedle Investments

Investing in real estate: an underutilised source of return and diversification in DC default funds

There is a general view that UK Defined Contribution (DC) default funds lack sophistication, certainly relative to their Defined Benefit (DB) counterparts and the more mature DC markets across the globe. A mix of perceived and real commercial, structural and regulatory barriers in DC play into this view.

However, we are now seeing a drive to explore investment opportunities in less traditional asset classes outside of equities and fixed income. And for good reason: scheme members and their pension pots stand to benefit from the illiquidity premium that comes with investing in assets such as infrastructure, real estate or privately listed equities. Hence the Department for Work and Pensions, the Financial Conduct Authority and HM Treasury have all recently consulted on the benefits of including such asset classes in workplace pensions.

At present, meaningful exposure to direct real estate within default funds is seemingly the preserve of large DC pension schemes and accounts for just 1.8%^a of overall DC workplace assets. Scale is a pivotal factor because real estate investment is perceived as relatively complex. Larger schemes have the governance resource, complimented by consultant expertise, to implement and monitor investments accordingly. Scale also plays a role in determining overall costs, particularly the charge borne by the member, which is usually a combination of administration and investment

fees. Both elements decrease where there are economies of scale. Furthermore, larger schemes can generate greater cashflows, which can be an advantage when it comes to investing in an asset class with liquidity constraints.

This serves to highlight a gap in the quality of pension provision experienced by members of large and small DC schemes – a challenge that could potentially be overcome through the emergence of Master Trusts and the pooling of assets. However, in the current environment where cost continues to be a primary driver for provider selection, and whilst Master Trusts are still building scale, a sub-optimal investment budget is an obstacle to meaningful allocations to a wider range of asset classes.

The investment case remains compelling

Nevertheless, the investment case for direct real estate funds is compelling: the All Balanced Property Fund Index has produced annualised returns of 8.7%^b over the past ten years, net of fees. In addition, the benefits of diversification and a reduction in overall portfolio volatility are strengthened by an allocation to real estate, where total returns come from capital and rental income, which operate within a somewhat different economic cycle to equities. And arguably, asset classes such as real estate, infrastructure and private equity are better suited to long-term investors such as DC savers who invest over their working lives.

It is not just the accumulation (or growth) phase that benefits from an allocation to real estate. Yield that results from rental income can play a meaningful role in drawdown portfolios,

a. IPF 'Real Estate Investment in UK Defined Contribution Pension Schemes' report, May 2018

b. MSCI/AREF UK Quarterly Property Fund Index, based on NAV to NAV net of fees, all balanced property funds index, weighted average return, as at June 2019

particularly for those people looking to fund their retirement through income. In fact, rental income can be more predictable, comes with greater certainty than dividends and is often linked to inflation – a key risk for retirees.

Another non-financial factor relates to the tangibility of real estate assets. Most scheme members, perhaps understandably, have little or no engagement with their investment holdings. It is highly likely, however, that a stake in a local commercial building or renovation will be of far greater interest than passively tracking global stock markets. Real estate is an asset class that members, trustees and governance bodies alike can relate to, which can only have a positive impact in an industry that fails to capture the imagination of its beneficiaries.

Property has a role in managing investments responsibility

Responsible investing and Environmental, Social and Governance risk factors are particularly topical at the moment, partly due to regulatory requirements, but also because they are important to both governance bodies and members. Real estate fund managers contribute meaningfully and positively in this regard.

Properties consume around 40% of the world's energy and contribute up to 30% of its annual Greenhouse Gas (GHG) emissions^c. The UK has committed to cut carbon emissions to almost zero by 2050^d, thus enhancing the quality and value of real estate assets will play an important role in achieving this target. Environmental and social benefits go hand-in-hand: sustainably managed buildings provide benefits to occupiers through lower energy and operational costs, and better work environments can help reduce absenteeism and stress, increase productivity and improve wellbeing.

Selecting an appropriate strategy

Governance bodies should consider several factors when selecting a suitable real estate investment strategy for DC default funds. In a market where rental income forms the

core component of total returns over the long-term (68% since 2000^e), a preference for higher-yielding investments aligns with the time horizon of DC scheme members. Diversification across assets and tenants avoids concentration, whilst the use of debt and any speculative development are further considerations of risk. Good stock picking within an active strategy is key and a fund manager's track record across market cycles can be a helpful guide.

At a practical level, particularly in the growth stage, real estate funds should reinvest income, provide daily dealing and operate compatibly through providers' platforms. Liquidity is a primary consideration; a fund should be able to meet cashflow requirements of the scheme and ultimately seek to avoid suspensions or gating that make DC plans difficult to administer. This is not always possible, though it is a lesser evil than forced selling in a distressed market. Research is key as some managers will manage liquidity more prudently than others.

In summary, only a small percentage of overall DC workplace assets are invested in real estate, mostly in larger schemes, and this includes exposure through multi-asset funds. In contrast, meaningful allocations to real estate are commonplace in most pension systems across the globe and within diversified portfolios generally. The rationale is compelling and the obstacles are not insurmountable. Auto-enrolment has coincided with the longest bull market in history, where the dominance of passive equities has provided strong returns. The question is how long this will last. Looking ahead, an awareness of risk and the need for uncorrelated sources of return should lead to an increase in demand for alternative and complimentary asset classes. Real estate could play a significant role.

c. Sustainable real estate investment: Implementing the Paris Climate agreement - an action framework, PRI, 2016 <https://www.unpri.org/property/sustainable-real-estate-investment-implementing-the-paris-climate-agreement/138.article>, as at 30 June 2019

d. Government news story: <https://www.gov.uk/government/news/uk-becomes-first-major-economy-to-pass-net-zero-emissions-law>

e. MSCI UK Monthly Index, as at 30 June 2019



David Fairs
Executive Director of Regulatory Policy, Analysis
and Advice
The Pensions Regulator

Our vision for the future of occupational pensions is one where all savers are in schemes that have excellent standards of governance that deliver good value. We expect trustees of well-governed defined contribution (DC) schemes to be cognisant of and act upon many of the issues that are outlined in Chapter 4 of this report to ensure that the value of savers' pension pots are maximised.

When they are conducting their annual Value for Members assessment, we expect trustees to have charges and investment returns at the forefront of their thinking, in part to ensure that savers are getting the best possible returns for their pension savings. In terms of governance, maximising the growth of a pension pot whilst keeping charges low will have the biggest impact on its ultimate size. We recognise the difficulty in assessing the impact of services such as administration, governance and communication and, as part of our joint strategy with the FCA, our plans to develop common principles and standards will help trustees to assess the value these services bring to savers in their schemes.

Along similar lines, integrating environmental, social and governance (ESG) considerations into the investment process is something that we would expect of a well-governed pension scheme. This is an issue which rightly continues to rise in importance, but the results of our recently published DC survey showed that only 20% of DC schemes took these issues into account when considering their investment approach. These numbers will need to significantly improve as from October 2019, when a Statement of Investment Principles is prepared or revised it will have to include the trustees' policies on how they consider ESG factors, including climate change, in their investment strategy.

Other hallmarks of a healthy and well-governed pension scheme include offering different investment strategies, providing savers with the information and tools to make informed decisions about which accumulation and decumulation strategies are right for them and their circumstances, and the impact that increasing contributions should have on their savings.

We know that trustees of many DC schemes are doing all of these things and more. But we also know that trustees of a number of schemes are not meeting even the basic governance standards. We suspect that in many cases they will never have the necessary capacity to either, particularly at the smaller end of the market.

That is why we ran our 21st Century Trusteeship communications campaign, why we carried out a thematic review of Value for Members assessments, and why we have consulted on the Future of Trusteeship and Governance to look at how trustees can ensure they have the necessary skills and knowledge to carry out their role and schemes have the necessary governance structures in place for effective decision making.

We also want to see an acceleration in the consolidation of underperforming small and micro DC pension schemes. We continue to see a strong correlation between scheme size and governance standards and behaviours, with smaller schemes often associated with lower quality of governance and administration. We are concerned that the poor performance of some smaller DC schemes leads to a disparity in saver outcomes. Just because someone is saving into a small scheme they shouldn't miss out on the opportunity to maximise the growth of their savings.

To tackle underperformance, we have also changed the way we interact with schemes, introducing supervision for a number of schemes and developing regulatory initiatives to tackle particular risks which we have identified and prioritised. This approach will involve proactive contact with more schemes through calls, emails and letters. As a result, all schemes can expect a higher level of contact with us.

Over the next two years we expect to proactively drive up compliance with a range of governance and administration standards through a variety of regulatory initiatives, including around investment governance,

record-keeping and prompt and accurate financial transactions. We will follow this with further initiatives on costs and charges, trustee knowledge and understanding, and public service scheme administration. If they do not improve, trustees and managers of those schemes that are unable to meet the standards of trusteeship and governance that we expect will face enforcement action and be actively encouraged to consider consolidation.

As ever the pensions world will continue to evolve, and as a regulator we intend to evolve with it and ensure savers get the best outcomes possible.



Imran Razvi
Senior Policy Adviser, Pensions & Institutional Market,
the Investment Association

How can good investment governance improve member outcomes?

Investment is the beating heart of all pension schemes and critical to the wider economy. As savers increasingly look towards investment managers to help fund their retirements, there is a greater emphasis on making members' investments work harder.

Ensuring investment strategies deliver for members is a clear priority, taking into account that DC member outcomes are determined by a combination of factors including: contribution levels, net investment returns and how the member chooses to access their pot in retirement.

These facts reinforce the importance of a strong focus on investment governance in DC schemes by those responsible for default strategy design. But what does this mean in practice?

Emphasising member-focused objectives

Effective DC investment governance rests on a set of well-established criteria that are relevant to scheme decision-makers. DWP, TPR and the IA have all approached this with a similar starting point: the need for a clearly identified member-focused objective for any default arrangement.

This objective should answer the question: "what are you trying to achieve for the members?" For some, this may be related specifically to an ambition to grow accumulated savings in excess of inflation, preserving purchasing power. For others, it may be more general, relating to maximising return while controlling risk. Retirement-focused objectives may be more income-oriented in nature.

The key point is that the objective is distinct from the investment strategy designed to deliver it. While the objective will need to be clear and understandable to all members, the

investment strategy may be more complex, depending on the views of key decision-makers for a given default arrangement.

With a clear member objective as a starting point, the foundation is laid for a robust delivery process.

Delivering objectives: investment strategy design

Building the investment strategy to deliver the specified objective for members is the next step in the process. In doing so schemes will rely on their investment beliefs and principles.

In a DC default world the charge cap is also an important budget constraint that affects scheme behaviour. Schemes must ask themselves how they can best use the budget available for investment to construct the strategies they believe are most likely to deliver for members.

The basic framework of the DC investment process is well established. Asset allocation is an important part of this and asset classes such as listed equities and bonds have been at the heart of DC.

The recent additions of private markets and sustainable and responsible investment to the DC investment toolkit have the potential to boost returns and reduce portfolio risk. Incorporating these approaches into DC default strategies may therefore lead to better member outcomes.

The role of private markets

Recent years have seen a decline in the number of corporates listing on public markets, with increasing amounts of economic activity taking place on private markets. This is most evident in the US but can also be seen in the UK. Coinciding with this shift has been increased interest amongst DC schemes seeking more diversified returns and income, achieved through exposure to alternative strategies and asset classes, including private markets.

Private markets cover a number of distinct asset classes, including: infrastructure, real estate, private equity/debt and venture capital. These asset classes may perform different functions as components in a DC default portfolio, but their unifying characteristic is illiquidity. There are a number of well documented challenges for DC schemes in accessing illiquid assets, but, if these can be overcome they offer the potential for enhanced returns through an 'illiquidity premium' and greater levels of diversification.

At the Investment Association (IA) we have been focusing on one particular aspect of the DC illiquids debate: whether current pooled fund structures for accessing illiquid assets best meet DC investors' needs. Our conclusion is that investors would benefit from an addition to the existing suite of fund structures, and in setting out our proposals for a new 'Long Term Asset Fund' we have specifically taken into account the needs of DC schemes seeking to gain illiquid exposures.

As DC schemes increasingly consider the role of illiquid assets in their default portfolios, the IA will work with our members and regulators to ensure that the regulatory environment effectively facilitates access to illiquid asset classes for those schemes wishing to make such an allocation.

Investing sustainably and responsibly

An enhanced focus on governance will have a benefit in other areas of the investment process, particularly sustainable and responsible investment, where reducing portfolio risk is a key driver of the growing emphasis amongst DC schemes on the material impact of sustainability issues on financial returns.

This emphasis stems both from regulation and changing societal norms, with DC schemes increasingly being driven towards taking greater account of ESG-related risks, such as climate change and poor corporate governance, in particular where these can have an impact on the current and future value of an investment portfolio.

By reducing such risks to member portfolios, ESG integration could have a significant effect in future on the amount of money available to DC members in retirement.

The investment management industry is responding to shifting client preferences and an evolving regulatory environment by adapting its product sets and investment processes

accordingly. Through a near-term focus on definitions, labelling and disclosure in relation to sustainable and responsible investment, the industry is working effectively with government, regulators and other stakeholders to provide clients with clearer products and services in this space.

A greater focus by DC schemes on responsible investment could also serve to enhance member engagement and better connect people with their pensions. Evidence suggests that this could be borne out in practice, albeit from a relatively low base:

- Research on wider consumer attitudes carried out by IPSOS MORI on behalf of Aviva found that 31% of respondents said it was important to them that their pension savings are invested in projects that will help build a better future.
- Recent research by Ignition House confirms that UK DC scheme members share some of these attitudes, with a significant interest on their part in responsible investment issues, which increases when they discover that they actually own assets through their pension fund.

This may in turn lead to better member outcomes by driving engagement in areas such as contribution rates and choices in retirement.

Assessing delivery and value for money

With an investment strategy in place, it is important that there is an ongoing review process to assess delivery over the appropriate time frame, with action taken to address any sustained underperformance against the objective.

Cost obviously matters here, especially over the long term. There needs to be a highly competitive market in which costs are strongly scrutinised in the context of the value of the service delivered. We therefore support transparency of all investment costs, including transaction costs, and have developed new mechanisms to make this information more accessible for DC schemes.

Investment performance should also be judged net only of the cost of its delivery, and not net of the additional services that form part of a bundled pension product – administration, communication and governance. For this reason, an additional step may be necessary in the transparency process: the ability of

employers and pension schemes using bundled arrangements to be able to see the cost of the investment component of a pension product. Considering the cost of investment separately from other costs in a pension product would allow for a better assessment of 'value for money' of investment, as well as whether the investment budget is satisfactory within the total cost of the scheme.

Investment governance is good for member wealth

The nature of a DC pension means outcomes for members depend directly on the markets and cannot be guaranteed. However, that

doesn't mean that the chances of success can't be increased through good investment governance. And while there are no universal 'right' answers on investment strategy, there are actions that can be taken to boost the chances of members achieving good retirement outcomes. That's why it is important that conversations in DC investment today shift towards the kinds of topics discussed above – evidence that the importance of investment in member outcomes is being fully grasped.



Nico Aspinall
Chief Investment Officer
The People's Pension

Governance in defined contribution (DC)

Outcomes from defined contribution pensions are uncertain because investment returns, the length of the contribution period, and the length of the payment phase are uncertain. Furthermore, DC savers carry these uncertainties individually, since they do not pool their risks, and are offered a lesser or greater degree of choice in tailoring investment strategy, contributions, and the payment phase.

The core governance function in pensions is to form sensible investment plans and reacting proportionately to events. With DC these are investment plans for members, made either on their behalf (a default) or as an option they can choose. Good DC governance must lavish attention on the default fund, since it's where the vast majority of members will invest, but it must also weigh up the costs and benefits of offering greater or lesser choice and how the choices are communicated. DC governance demands a clearly articulated view of scheme objectives; robust monitoring of the strategy to deliver on the objectives; and the authority to make changes if practice is not in line with the theory.

The Master Trust framework offers the opportunity for good DC governance to flourish. In a Master Trust pension scheme, it is the trustees that apply for authorisation to The Pensions Regulator and it is the trustees who are empowered and legally obliged to put members' interests first. Those acting as trustees are required to demonstrate their knowledge and understanding and the requirements on trustees to avoid conflicts of interest are strict.

This is not the case for the UK's contract-based retail providers. The 2013 report of the Office of Fair Trading (OFT) into UK DC pensions

identified the problem of conflicted interests and poor governance in retail pensions leading to poor outcomes. The OFT recommendations eventually resulted in the establishment of Independent Governance Committees ("IGCs")^a. But IGCs do not have the same legal powers as trustees. They have an advisory rather than an executive role and while they could complain to the FCA if their views are ignored, this power is far weaker than that of trustees. Even concepts of 'treating customers fairly' (TCF) are ambiguous and not justiciable by courts on behalf of consumers but is enforced by the FCA. Again, this is unsatisfactory compared to trust *law*.

Choice architecture in DC

In the old days many DC schemes simply looked like long lists of investment funds and members had to choose to join up and which fund to save in. The choice architecture forced them to make investment decisions for which they neither had the time nor felt they had the expertise. As a result, many prospective members refused to join and many of those who did made poor investment choices.

Auto-enrolment aimed to address this by making participation a leaving and not a joining decision; and to do this schemes had to offer defaults.

The defaults introduced by AE requires a scheme to think about the desired outcomes baked into the default. This means deciding on two main variables:

- The amount of returns that are to be sought (or risk taken) over the period they have the pension; and
- Picking between lump sum, annuity and drawdown retirement products or mixtures of them.

a. OFT (2013) "Defined contribution workplace pension market study, p.167.

We think these are also reasonable topics to put to members in the form of the choices they have. At the same time good governance would not be to put too many choices in front of members. Firstly, as before there is more scope for members to misunderstand the choices they are making. Secondly, administering complex choices is costly and this increases the costs for everyone. Thirdly, governance of a greater range of options dilutes an unscalable part of our business model – governance time. We want to offer choices that can be constructed, governed and used appropriately by members where cost is not a factor in member decisions. This limits how many we can offer.

We recognise a third type of choice members may wish to make, expressing their values. Members may disagree with the values we have expressed in our default so we offer ethical and shariah funds.

In total we offer three lifestyle profiles with different levels of investment risk with the expectation members will take their pension as a lump sum; and seven self-select funds enabling members to pick different retirement products and express different values.

Investment strategy

Setting the plan for achieving a desired outcome takes two stages:

- Setting the objectives for the investments; and
- Designing portfolios to meet those objectives.

With a lifestyle approach we can split the objectives further, setting one for a member's returns far from retirement and one closer to retirement, reflecting the benefits intended by the option. For instance, with our default fund we seek returns before charges of around 4% pa above inflation (CPI) far from retirement and around 1% pa above inflation at retirement. We transition between the two funds over 15 years. Without their engagement we don't know when members are going to retire so still pursue some returns for them at the point of retirement ensuring members don't lose out in real terms if they delay taking their savings.

Thinking about the asset allocation of the growth fund we can see that this investment has a very long time horizon. Members will hold this fund for most of their time with The People's Pension so we can reasonably see this as needing to produce returns over a decade or so.

We see the job of asset allocation firstly as being between different asset classes. This means picking the proportion of the fund invested in equities, bonds and alternatives. Studies show that around 80% of returns are explained by asset allocation, so it is the most important part to get right. As a second step then we can pick between different regions, ways of weighting portfolios and potentially styles of active management. The long time horizon means we need to understand what markets might value over the long-term to deliver the best risk-adjusted returns to our members. This means that we do not want to take short-term actions to deliver short-term returns. This approach takes a lot of risk and is very difficult if not impossible to succeed with. Instead, sensible long-term allocations to the major asset classes are appropriate.

As such, after asset allocation, selecting ways to weight the securities within those asset classes receives much of our attention. While market capitalisation weightings (ie passive) are the market norm and form a majority of our current portfolio, we also believe that alternative approaches can add diversity and outperform passive investment over the long-term. We have about 20% of our equities invested in factors which take active management styles and turn them into an automated weighting process. We also use ESG data to reduce exposures to fossil fuel reserves and are currently researching ways to use this data to identify positive opportunities in the climate change space. The intent of this is both to diversify away from just passive holdings but also to create a better risk-adjusted return for members by being more conscious in our portfolios of the trends the economy is likely to follow over the next decade or so. This is the insight we believe ESG can give us.

Investment monitoring

The long time horizon sets us a difficult challenge. If we are to monitor the performance of a new investment intended to improve returns over the next decade or so then we need to be patient but not complacent. Markets are 'noisy' with asset prices constantly moving for little reason except their own movement, and this can mislead long-term investors to giving up on something which is worthwhile overall if it has a bad period of returns. The factors mentioned above are an example of this. We invest in five of them (value, size,

momentum, low-volatility and growth) and each is expected to underperform passive investing for reasonable periods of time but outperform in the long-term. We need to make sure our monitoring regime incorporates this expectation.

At the same time we should be conscious that a long period of underperformance might also be a signal that the idea behind a weighting was bad. We shouldn't be too patient and forgiving when watching ideas which appear to be failing to produce the returns we expect. To do this requires us to be able to understand the hypothesis we had when seeking the returns,

and to be able to test whether this still holds, meaning we should be patient, or whether something structural has changed in the market which means we should abandon it.

All together then, a sensible governance process builds strategies based on pension objectives and portfolios based on testable ideas of how markets reward different types of approach. When this is delivered in a trust-based environment it is placed into a monitoring regime which is empowered to make changes if those approaches are not living up to the theory. We believe this is the best way to deliver pensions in DC.



Richard Morgan
Principal Strategic Consultant
Aon

From attitudes to outcomes – the engagement challenge

It's not easy is it?! How do you get people to make the right decisions over something they a) don't really understand b) want to put in the 'tomorrow's problem' mental pile and c) think they can't afford anyway? Let's face it, a pension is not as exciting as buying a new phone, going on holiday or even just having a good night out. It seems many people do not even want to give up a cup of coffee a day to help increase their pension savings.

The reality gap

Maybe people are kidding themselves a bit over their retirement savings. Maybe they do not think that there is a problem to fix. Aon's *DC and Financial Wellbeing Member Survey 2018* showed that there is a considerable reality gap between how people feel about their pension saving and the reality. For example, 54% of people believe that their overall financial situation is good or very good. People in the earlier years of their working lives are even more optimistic – 63%. As far as saving for retirement is concerned, the data tells a different story, with only four in ten saving enough for their long-term needs.

Perhaps it is that myopic vision problem with money – or 'present bias'; we tend to focus on just the short term. The 2018 survey shows that younger people's main savings goals are buying a home, holidays and emergency funds, which is understandable. The focus gradually shifts to saving for retirement as we get closer to thinking about putting our feet up. Many people are probably resigned to the concept of having to work well beyond State Pension Age. Let's face it, there is a lot to think about when it comes to money matters. Just getting by is the reality for many people. Then there is the almost perfect storm of record low savings rates, record high

debt, eye-watering house prices, living longer, inheriting later. Not to mention a lingering distrust of the financial services industry.

The power of compounding returns means those early pension contributions are most impactful. So how can we get people to engage – and take positive action – over something that is not on their radar and feels like a shot in the dark?

Attitudinal segmentation

Of course, there is not a nice easy answer, because we all make decisions differently. People are complicated. They have different needs and priorities and do not necessarily make rational, properly informed decisions. The way we make (or don't make) those decisions varies according to the sort of person we are. Aon has identified six key 'personas' to help create a communications strategy that recognises these differences. For some of these personas, the expectation may be that we take the decision for them, i.e. they are highly unlikely to engage and take action for themselves, such as in the two examples below:

1. **Not right now**
 - Focus is on dealing with other life challenges before pension savings
 - May evolve into one of the other persona types over time

How can we support this persona?

- Do not assume that they have engaged with pension communications
- Provide a rule of thumb pension target and default retirement age
- Consider 'opt-out' rather than 'opt-in' scheme design features, such as automatic escalation of contributions, target dated investment or default retirement ages based on State Pension Age

2. Show me the way

- Very little focus on pension savings
- Wants to do the right thing, but needs some help to get there

How can we support this persona?

- Short targeted communications aiming to deliver small chunks of information
- Provide examples of pension targets for 'people like me' to help them identify which may be most appropriate
- Simple 'one click' options with potential actions identified to bring them into line with their identified example, e.g. *the typical member retiring at age 67 with a fund of £x from their workplace pension would be saving £y per month. Would you like to make this change?*
- Simplified annual benefit statements with the projected outcome clearly highlighted, trigger communications at specific milestones to encourage changes or congratulate on progress

Essentially, this boils down to what, how and when we access, process and take action on information.

The 'what'

In my professional role I often draw on comparisons with what happens in real life and basic human behaviour - such as when I'm buying something. If I do not understand what is in front of me I will switch off almost immediately. If there is too much choice - like a huge menu in a restaurant - I struggle to make any choice at all. In fact, worse than that, I will skim the menu, make a quick choice based on what leaps off the page and then get food envy when the food arrives at the table. Imagine if I made important decisions about my pension that way...

So even as somebody with a pretty good grasp of pensions, when I start reading about de-risking, alternative assets, illiquid assets and ESG credentials, my brain quickly decides to change the subject. The lucky few need and thrive on that detail and can make a well-informed choice - and they are probably already well on the way to doing the right things in saving for their retirement. The rest of us mere mortals, at the very least, need things to be kept simple to get us on the right track.

Understanding the right level of information to give to each type of attitudinal persona is therefore the first challenge towards engagement. The more we understand about

a customer, the more chance we have of segmenting the information for them. As a default, we can present it in a way that allows the customer to self-select their preferences. Ideally, it should also be personal rather than generic and conceptual - which we can do if we have sufficient data.

What we are trying to achieve in educating people about pensions is to help them save more and to invest it effectively. In fact, let's keep this really simple and not over-complicate the issue: if we could get people to save more and save earlier, we will have made a great start. So, we need to tailor the 'what' to recognise the needs of each persona, but we also need to keep it as simple as possible and focus on solving one problem at a time.

The 'how'

In effect, we're trying to sell to people. It helps if we think about this as a huge marketing exercise and look at how successful marketing works in the real world. One thing is certain; in the real world, sellers do not set out to confuse their customers. They also tend to have a deep understanding of their customers and tailor their marketing strategy to reach each customer segment.

The way we access information today is light years away from even a decade ago. Yet a great deal of pensions and employee benefits communication has failed to keep up with the times. That's a problem because if something does not meet our expectations we are much more likely to ignore it. Imagine if you had to read through a technical booklet about your shiny new phone - instead of just switching it on and finding that - miraculously - it works just like you expected and that for new features you get clever little hints and tips to get you up to speed. Most of us are also pretty lazy, or at least like things to be made easy for us. We would much rather watch a short video than read something. Using mobile phone applications - apps - will be a real game changer because we can learn more about people in order to tailor information to suit them - both from a behavioural perspective as well as the more traditional quantitative information (age, salary, contribution levels etc). But again, we are all different. Some people will still want a hard copy to read. Others will want to watch a video on their train journey to work. Sometimes you just can't beat good old face to face communication.

We therefore need the 'how' to be a range of solutions that allows people to access information in the way that works best for them. It then needs to be really easy to take action. It is no good having a great message and then making it difficult to do something about it - like taking more than two clicks!

The 'when'

Timing is everything. Closely followed by frequency. We are not always 'tuned in' to all of the information coming our way. Most of the time we will notice something if it is aligned with an immediate need or interest. We cannot rely on everyone we are trying to target reading, or even noticing, our perfectly crafted pensions communication. There are even certain times of the day when we are more likely to read and respond to messages (emails, SMS etc).

Again, we can learn a great deal from consumer marketing. A sustained and varied campaign aims to land its message at one of our tuned in moments. There are a few commonly used moments, such as the start of a month or season, birthdays (especially significant ones) and anniversaries, significant life events and national/global campaigns. In the workplace, employers can also use other data triggers such as pay increases, bonus payments, work anniversaries etc to prompt employees to review their retirement provision. The trick is to choose the correct point on the 'nudge continuum' - the gentle tap of good sense rather than the feather of statistical insignificance or the bat of paternalistic overreach!

It isn't easy. But it is important. By focusing on what will make the biggest difference, keeping things as simple as we dare and learning from consumerism, we can help people get to a better place in their retirement.

Glossary

Active members: Pension scheme members making current contributions.

Active Management:¹²⁷ The management of assets (for example, equities, gilts) in which the skill of the fund manager is used to select particular stocks at particular times, with the aim of achieving higher than average returns for the assets in question.

Annuity: A financial product that pays an income for a pre-determined period of time, generally from the date of purchase until the date of the annuitant's death.

Automatic enrolment: A policy requiring employers to enrol eligible employees into a workplace pension scheme. Employees have the right to opt out of the scheme. Employers (and usually employees) must pay at least a minimum level of contributions, on a band of earnings, into the scheme if the employee does not opt out.

Bonds:¹²⁸ Loans made to an issuer (often the government or a company) which undertakes to repay the loan at an agreed later date.

Charge Cap: The Occupational Pension Schemes (Charges and Governance) Regulations 2015 introduced a cap on the charges of default

strategies used for automatic enrolment of 0.75% of funds under management. The cap applies to all scheme and investment administration charges. Transaction costs (third-party costs generated when investments are sold and bought on the market) are excluded from the charge cap.

Compound interest: Interest is paid on the total fund, including the initial investment and the interest that has accumulated.

Contract-based scheme: A pension scheme accessed either through an employer or individually, offered and run by a third party pension provider (for example, an insurance company). Funds are owned by the individual with a contract existing between the individual and the pension provider.

Contributions: Money, often a percentage of salary, that is put into a pension scheme by members and/or their employer.

Default Strategy: The investment strategy in which members will automatically have their contributions invested in if they do not make a choice.

127. <http://www.thepensionsregulator.gov.uk/glossary.aspx>

128. <http://www.thepensionsregulator.gov.uk/glossary.aspx>

Defined Benefit (DB): an employee sponsored pension in which benefits are calculated based on years of contributions and salary (generally average or final salary).

Defined Contribution (DC) Pension Scheme: A trust-based or contract-based pension scheme that provides pension scheme benefits based on the contributions invested, the returns received on that investment (minus any charges incurred) and the way the savings are accessed.

Department for Work and Pensions (DWP): The DWP is the government department responsible for welfare and social security, including pensions, working age benefits, and disability services.

Dependency ratio: A measure showing the number of dependants (the very young, and those over State Pension age) relative to the working age population.

De-Risking: Reducing exposure to high-volatility assets in favour of assets with lower volatility but reduced opportunity for high returns.

Drawdown: A retirement income product which allows people to continue to invest their pension savings and receive investment returns while also drawing down an income.

Enhanced Annuity: An annuity that offers a higher rate for individuals who have a shortened life expectancy due to health or lifestyle factors for example, smoking, cancer, or heart disease.

Equity:¹²⁹ Shares in a company which are bought and sold on a stock exchange. Owning shares makes shareholders part owners of the company in question and usually entitles them to a share of the profits.

Equity Release: A product which allows people aged 55 and over to release lump sums or income from housing equity, to be paid out of their estate on death.

Financial Conduct Authority (FCA): The organisation which regulates firms and individuals (including financial advisers) that promote, arrange or provide contract-based pension schemes.

Freedom and Choice/pension freedoms: Prior to April 2015, those with DC savings of a certain level were required to purchase a secure retirement income product in order to access their DC savings. The new pension flexibilities “Freedom and Choice” loosened restrictions so that those aged 55 and over may withdraw DC savings in any amount they like, taxed at their marginal rate, with 25% tax free.

Gilts:¹³⁰ Bonds issued by the UK Government, which have a fixed interest rate. If they are index-linked, the value of the gilts increases each year with inflation, alongside the value of interest paid.

Group Personal Pension (GPP): An arrangement made for the employees of a particular employer to participate in a contract-based DC scheme on a grouped basis.

Group Stakeholder Pension (GSHP): A personal pension (DC) that was required to meet certain legislative conditions including an Annual Management Charge (AMC) of no more than 1.5%, though these schemes are now subject to the 0.75% charge cap. Prior to the workplace pension reforms, employers with five or more employees who did not already offer a pension scheme were required to offer a GSHP.¹³¹

Healthy Life Expectancy (HLE): An estimate of how many years an individual is expected to live without illness.

Income Drawdown: See Drawdown.

Independent Financial Advisor (IFA): IFAs provide tailored advice and recommendations that take into account individuals’ circumstances.

Independent Governance Committee (IGC): Since April 2015, providers of contract-based pension schemes have been legally required to set up and maintain an IGC. IGCs are responsible for overseeing the governance of contract-based pension schemes and ensuring value for money.

Inflation: A measure of the change in the general level of prices of goods and services.

Master trust: A DC pension scheme, governed by a board of trustees, offering the same terms to multiple employers and their employees.

129. <http://www.thepensionsregulator.gov.uk/glossary.aspx#s21610>

130. <http://www.thepensionsregulator.gov.uk/glossary.aspx#s21610>

131. But were not required to offer contributions

Member: A general term for an individual who has built up entitlement in a pension scheme.

Office for Budget Responsibility (OBR):

The OBR was created in 2010 to provide independent and authoritative analysis of the UK's public finances. It is one of a growing number of official independent fiscal watchdogs around the world.

Office for National Statistics (ONS): The UK's largest independent producer of official statistics and the recognised statistical institute of the UK.

Passive fund management:¹³² The management of assets, eg equities, gilts, that replicate the performance of a given index, eg FTSE100, FTSE Actuaries UK Gilts Indices, with the result that the assets in question move almost exactly in line with the chosen index.

Pension Pot: A general term for the amount of money accumulated for retirement.

Personal Pension: Individual pension arrangements organised directly between an individual and a pension provider.

Robo-Advice: An online service that provides automated algorithm-based financial advice, typically without the use of a human financial planner.¹³³

State Pension: The public pension provided by the UK Government to people from State pension age with sufficient years of National Insurance entitlement.

State Pension age (SPa): The age when people can claim their State Pension. SPa is increasing and depends on an individual's birthdate.

The Pensions Regulator (tPR): The organisation which regulates trust-based pension schemes and the administration of work-based personal pension schemes.

Transaction Costs: Third-party costs generated when investments are sold and bought on the market.

Triple lock: Inflationary measure by which the value of the State Pension is increased each year by the greater of the increase in earnings, Consumer Prices Index or 2.5%.

Trust Based Pension Scheme: A Defined Contribution or Defined Benefit pension scheme taking the form of a trust arrangement, governed by a board of trustees who owe a fiduciary duty to members.

Uncrystallised fund: A pension pot which is still in its original scheme and has not been withdrawn to purchase another product, such as an annuity or drawdown.

Uncrystallised fund pension lump sum (UFPLS): Withdrawals taken from a pension pot which is still in its original scheme.

Volatility: Volatility describes the range of gains and losses that a particular fund has experienced or is likely to experience. A fund which has potential to experience high losses and gains has a high volatility and a fund with potential for low losses and gains has low volatility. In many cases volatility and returns are viewed as a trade-off, with funds incorporating higher levels of volatility in order to achieve higher returns. However, a high level of volatility exposes funds to the risk of high losses.

132. www.thepensionsregulator.gov.uk/glossary.aspx#H

133. www.investopedia.com/terms/r/roboadvisor-roboadvisor.asp

Technical Appendix:

The modelling for this report considers the projection of an individual using the PPI's Suite of Pension Models, using a stochastic approach of economic assumptions. The economic scenarios are generated using the PPI's Economic Scenario Generator. The models used are detailed below. Results are presented in 2019 earnings terms.

The pensions system

The pension system modelled is as currently legislated. The triple lock is assumed to be maintained. Individuals are assumed to be members of a Defined Contribution (DC) occupational pension scheme.

General assumptions

Investment returns are modelled stochastically with curves generated by the PPI's Economic Scenario Generator (ESG). 1,000 scenarios were produced providing values for equity returns, bond returns, cash returns, CPI and earnings increases each year for each scenario. The assumed median values for each of these values are listed below:

CPI: 2.0%
 Earnings: 3.9%
 Equity return: 7.8%
 Bond Return: 2.8%
 Risk-free Return: 0.8%

Other economic assumptions

Other economic assumptions are taken from the Office for Budget Responsibility's Economic and Fiscal Outlook (for short-term assumptions) and Fiscal Sustainability Report (for long-term assumptions).

Asset allocation

Unless otherwise specified, asset distributions are assumed to be 56.7% invested in equities, 33.3% invested in bonds and 10% in cash such that the median return is 5.6%. These assumptions are consistent with those used across the PPI modelling suite and are the result of consultation with the PPI's Modelling Review Board, which consists of a number of experts in the field of financial modelling.

Fund charges are assumed to be 0.75% for existing workplace DC schemes,¹³⁴ and 0.5% for other DC/master trust schemes set up for automatic enrolment.¹³⁵

Earnings growth and other economic assumptions are taken in line with Office of Budget Responsibility (OBR) assumptions,¹³⁶ derived from their 2019 Long-term economic determinants. The earnings band for automatic enrolment contributions and minimum salary assumption are assumed to grow with average earnings.

134. Average charges for trust-based schemes are 0.71% and for contract-based schemes 0.95%, DWP (2012), and a 0.75% charge cap will be introduced for any DC default funds being used for automatic enrolment from April 2015 onwards.

135. Equivalent Annual Management Charge for multi-employer/Master trust schemes such as Legal and General's Worksave, NEST and The People's Pension.

The Economic Scenario Generator

The PPI's Economic Scenario Generator (ESG) is used to produce randomly generated future economic scenarios based upon historical returns and an assumption of the median long-term rates of return. It was developed by the financial mathematics department at King's College London. It is used to test how the distribution of outcomes is influenced by the uncertainty of future economic assumptions.

Key results

The model generates projected future inflation rates, and earnings growth

- Inflation rates
 - Future CPI increases and earnings inflation rates
- Investment returns
 - Returns are produced for the major asset classes of equity, cash and gilts

This produces nominal returns which can be combined to produce investment returns for a more complex portfolio.

Application of output

The output of the ESG is a number of economic scenarios which are employed by the PPI's other models to analyse the distribution of impacts on a stochastic economic basis.

Key data sources

The specification of the model is based upon historical information to determine a base volatility and future assumptions to determine a median future return:

- **Historical returns:** Historical yields and returns as well as inflation measures are used to determine the key attributes for the projected rates.
- **Future returns:** Future returns are generally taken from the Office for Budget Responsibility (OBR) Economic and Fiscal Outlook (EFO) to ensure consistency with other assumptions used in the model for which the economic scenarios are being generated. Volatility can also be scaled against historical levels.

Summary of modelling approach

The six identified risk factors modelled are:

G	Nominal GDP
P	CPI
W	Average weekly earnings
Y ^l	Long-term yields
Y ^s	Money market yields
S	Stock returns

Using these variables, a six dimensional process, x_t is defined.

$$x_t = \begin{bmatrix} \ln G_t - \ln G_{t-12} \\ \ln(P_t - \ln P_{t-12} + 0.02) \\ \ln W_t - \ln W_{t-12} \\ \ln(e^{Y_t^l} - 1) \\ \ln(e^{Y_t^s} - 1) \\ \ln S_t \end{bmatrix}$$

Where t denotes time in months.

The development of the vector x_t is modelled by the first order stochastic difference equation:

$$\Delta x_t = Ax_{t-1} + a + \varepsilon_t$$

Where A is a 6 by 6 matrix, a is a six dimensional vector and ε_t are independent multivariate Gaussian random variables with zero mean. The matrix A and the covariance matrix of the ε_t were determined by calibrating against the historical data. The coefficients of a were then selected to match the long-term economic assumptions.

It follows that the values of x_t will have a multivariate normal distribution. Simulated investment returns will, however, be non-Gaussian partly because of the nonlinear transformations above. Moreover, the yields are nonlinearly related to bond investments.

The first component and third components of x_t give the annual growth rates of GDP and wages, respectively. The fourth and fifth components are transformed yields. The transformation applied ensures that the yields are always positive in simulations. Similarly the second component gives a transformed growth rate of

CPI. In this case, the transformation applied ensures that inflation never drops below **-2%** in the simulations. This figure was selected to be twice the maximum rate of deflation ever found in the historical data.

PPI Aggregate Model

Overview of Aggregate Modelling of Private Pensions

The PPI Aggregate Model links changes in the UK population, the labour market and economic assumptions to project forward private (and state) pension savings. Population projections are taken from 2016-based figures published by the ONS.

Current distributions of individuals across pension scheme types are taken from the Lifetime Labour Market Database (LLMDB)¹³⁷ a panel dataset of **1%** of UK National Insurance records. The workforce data includes numbers of individuals and average earnings split by age, gender and earnings band. The data are further split between public and private sector contracted-out schemes and those who are contracted-in to the State Second Pension (S2P).

Initial Conditions

In the base year of projection (2010), individuals with private sector pension arrangements are split between public and private Defined Benefit (DB) schemes and workplace Defined Contribution (DC) schemes. **17.5%** of working individuals are assumed to be members of DC workplace pensions and **32.1%** of individuals are assumed to be members of DB workplace schemes.¹³⁸ **73.2%** of those in DB schemes are assumed to work within the public sector,¹³⁹ leaving **8.6%** of the workforce in private sector workplace DB schemes.

The workforce not initially enrolled in public sector DB, private sector DB or private sector workplace DC, are considered as the eligible population for automatic enrolment. This includes individuals not in workplace pension schemes who contribute to personal pensions.

Stocks of existing assets for DB schemes and workplace DC schemes are split across cohorts by contribution levels. Initial stocks of workplace DB assets were assumed to be **£890 billion** in the base year.¹⁴⁰ It was assumed that the stocks of DC assets in 2010 were **£275 billion**.¹⁴¹

Movement of individuals between schemes due to decline in DB schemes

The proportion of individuals in each scheme is not stable over time: the proportion of the total workforce who are enrolled in a private sector DB scheme is assumed to decline by **80%** between 2010 and 2030 and these individuals are moved into the existing DC workplace schemes.

Movement of individuals between schemes post automatic enrolment

From 2012, employees in the private sector without workplace DC provision are placed in a scheme to represent automatic enrolment, which is split further into master trust schemes and other DC schemes, assuming **80%** are automatically enrolled into master trusts and the remaining into other DC schemes. Individuals are enrolled in proportion to the likely number of employees becoming eligible each year due to staging of their employers. Similarly, during the staging period, employees in existing DC schemes who become eligible for automatic enrolment either remain in the existing scheme or are moved to a new automatic enrolment workplace DC scheme (again split into master trusts and other DC schemes in the same proportions as mentioned above). It is assumed that **80%** of existing members remain in their current scheme, and **20%** are expected to move to the new automatic enrolment scheme. New members to DC schemes who have an employer with an existing scheme either join the new automatic enrolment scheme (**80%**) or join an existing DC scheme (**20%**).

137. Data from LLMDB 2010-11

138. ONS (2013)

139. Average proportion of males and females employed in public sector COSR schemes according to LLMDB 2010-11

140. TPR (2012) The Purple Book Chapter 4 Table 4.1 Assets discounted to the base year.

141. Workplace DC assets taken from ONS (2012) Table 3, adjusted for decumulated assets.

Overall, after 2012 the private sector workforce is assumed to contribute to either private sector DB pension schemes, DC schemes which were existing prior to automatic enrolment, DC which were set up for automatic enrolment, or schemes set up for those that are eligible for automatic enrolment that did not contribute before the implementation of automatic enrolment. It is assumed that 14%¹⁴² of the workforce change jobs from year to year, which causes individuals to shift from existing DC schemes into new DC automatic enrolment schemes over time.

Contributions

Contributions are taken as a percentage of total earnings for employer provided schemes (both existing schemes and those set up after automatic enrolment) and are taken across band earnings for individuals automatically enrolled who previously were not saving. The earnings band is taken to be £6,136 to £50,000 with an earnings trigger of £10,000 (all in 2019/20 terms).

When automatically enrolled, individuals and their employers are assumed to contribute at the minimum levels required under automatic enrolment legislation (phased in from a combined contribution of 2% of band earnings in 2012, rising to 8% of band earnings in 2019 in accordance with existing regulations) unless otherwise stated.

The results for the impact of governance improvements on DC pot sizes at retirement

The results for chapter 4 is based upon the pension pot of a male, median earner. Earnings are age and gender specific and are derived from Labour Force Survey data.¹⁴³

They are assumed to make contributions at 8% of gross earnings from age 25 to age 65. The value of the pot at age 65 is reported in current (2019) earnings terms.

Sensitivities modelled

A number of sensitivities have been modelled to understand indicative impacts in changing investment return and charges. These sensitivities are applied throughout the entire accumulation period.

Charge variations

The level of AMC has been varied to reflect the potential impact of actions, such as fund consolidation, driving down investment charges based upon a literature review. The AMC has been modelled at the following levels:

- 0.75% p.a.
- 0.72% p.a.
- 0.50% p.a.
- 0.45% p.a.
- 0.37% p.a.

Investment return variations

The level of investment return has been varied to reflect the potential impact of changes to an investment strategy based upon a literature review. The investment return has been uplifted net of charges by the following levels across the economic scenarios:

- 0.10% p.a.
- 0.15% p.a.
- 0.80% p.a.
- 1.00% p.a.
- 3.00% p.a.

Investment volatility has not been adjusted, as this is assumed to be managed within the portfolio.

Limitations of analysis

Care should be taken when interpreting the modelling results used in this report. In particular, individuals are not considered to change their behaviour in response to investment performance. For example, if investments are performing poorly, an individual may choose to decrease their withdrawal rate and vice versa.

Monte Carlo simulation can be a powerful tool when trying to gain an understanding of the distribution of possible future outcomes. However, in common with other projection techniques, it is highly dependent on the assumptions made about the future. In this case, the choice of distribution and parameters of the underlying variables, the investment returns of equities, gilts and cash are important to the results.

142. Average annual workforce churn. DWP (2010) p49

143. ONS (2019)

Acknowledgements and Contact Details

The Pensions Policy Institute is grateful for input from many people in support of this paper, including:

Danielle Baker	Chris Curry	Maritha Lightbourne
Andrew brown	Andrew Evans	Sarah Luheshi
Lawrence Churchill	Janine Harrison	Chris Wagstaff

Editing decisions remained with the author who takes responsibility for any remaining errors or omissions.

The Wealth and Assets Survey is sponsored by the Department for Work and Pensions; Department for Business, Innovation and Skills; HM Revenue and Customs; Department for Communities and Local Government; Scottish Government; Financial Services Authority. All data sets were provided by the UK Data Archive, University of Essex. The UK Data Archive and the funders of the survey bear no responsibility for further analysis and interpretation.

The Pensions Policy Institute is an educational charity promoting the study of retirement income provision through research, analysis, discussion and publication. The PPI takes an independent view across the entire pensions system.

The PPI is funded by donations, grants and benefits-in-kind from a range of organisations, as well as being commissioned for research projects. To learn more about the PPI, see: www.pensionspolicyinstitute.org.uk

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Our history and why we exist

The Pension Provision Group, chaired by **Tom Ross OBE**, was asked in 1997 by the then Secretary of State to assess the likely trends in pensions provisions. They concluded that there was a need for “An organisation, independent of government, to have lead responsibility for accumulating, analysing and publishing information about current and future pension provision and its implication for pension policy.”

Following these recommendations in 2001 the PPI was founded by the members of the Pensions Provision Group, so that a permanent expert organisation would undertake rigorous research from an independent, long-term perspective. This is helping all those interested to achieve a better, wider understanding of retirement provision issues. We achieve this in a number of ways.



Research reports

Describe, analyse and model all areas of pensions policy in depth to produce fact-based reports. Our reports are almost always sponsored by at least one organisation.



Briefing Notes

Provide short summaries and clarify topical pension policy issues. Briefing Notes are included in **core work**, though some are sponsored.



Modelling

PPI have developed a suite of economic models that allow modelling of the hypothetical individuals, aggregate costs and distributional implications or various pension policies.



The Pensions Primer

Contains a detailed description of the UK pensions system and is an invaluable reference tool. The Primer is part of the PPI's **core work**.



Pension Facts

Brings together the most up to date information and statistics on pensions and demographic data. Pension Facts is part of the PPI's **core work**.



Consultation responses

Respond to consultations and calls for evidence within the pensions and retirement area, and provide oral evidence when requested. Responses are part of the PPI's **core work**.



Knowledge Sharing Seminars

Training seminars held by the PPI to provide a basic overview of the pensions system and pensions policy.



Events

Our events include research launch events, roundtables, exhibitor stands at trade conferences, the annual House of Lords Dinner, Party Conference fringe events and members events.



Supporting Members

As a charity, the PPI rely on annual donations from Members to fund the **core work**. Without Supporting Members, the PPI would not exist.



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The PPI produce press releases for research, write articles for trade press and appear on TV and radio to discuss pensions policy.



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Published by
PENSIONS POLICY INSTITUTE

PPI

www.pensionspolicyinstitute.org.uk

ISBN 978-1-906284-86-2

