

PENSIONS POLICY INSTITUTE

PPPI

The Future Book:
unravelling workplace
pensions

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The first annual report commissioned by



The Future Book: unravelling workplace pensions

Foreword.....	1
Introduction.....	3
Chapter one: what is the “DC landscape”?.....	4
Chapter two: what does the DC landscape look like?.....	14
Chapter three: how might the DC landscape evolve in the future?.....	35
Chapter four: what are the policy implications for the DC landscape?.....	46
Chapter five: the outlook and challenges for the DC landscape.....	51
Appendix: PPI modelling for The Future Book	63
Acknowledgements and Contact Details	71
References	72

By Daniela Silcock, Tim Pike, Shamil Papat

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Foreword

Economic, demographic and policy shifts are driving fundamental and unprecedented changes to the UK pension landscape. People are living longer, receiving a state pension later and are increasingly responsible for their own retirement provision. Last year's Budget introduced far reaching pension freedoms, moving in one fell swoop from collective passivity to individual responsibility in retirement.

As a global asset manager our role is to invest our customers' hard-earned pension savings to ensure they achieve the best possible financial outcome to and through retirement. As such, we have a responsibility to encourage a better understanding of the UK workplace savings market, so that pension savers, scheme trustees and policy makers can make more informed decisions when it comes to the future of UK pensions.

This is why we commissioned the Pensions Policy Institute (PPI) to conduct research into the UK Defined Contribution (DC) pension market. The Future Book - unravelling workplace pensions is the first of an annual series that paints the most accurate picture yet of the market and makes projections of its future shape.

In 2015 the number of active savers in UK DC schemes for the first time overtook those saving in Defined Benefit (DB) schemes, as a result of DB scheme closures and the introduction of automatic enrolment. While there is a plethora of information on the UK DC market, statistics vary and sometimes contradict each other. In addition, there is a lack of insight into how savings levels and pension scheme and investment product design are likely to develop in the future.

How the market is likely to develop does, of course, depend on many factors but the PPI estimates that, in just 15 years, there could be around 17 million members enrolled in DC workplace schemes (an increase of 55% from 11 million today). Moreover, the average DC pension pot could have grown from £14,100 to £56,000 in 20 years' time.

Unfortunately the risks attached to decisions made in the run-up to and during retirement are also growing. While £56,000 is much more than today's average DC pension pot, it is unlikely to provide sufficient income for a comfortable retirement. Indeed, current savings levels need to increase significantly if people are to achieve a similar standard of living in retirement as that experienced during their working life. The Future Book calculates that even if a median earner contributes 8% of band salary every year from the age of 22 (currently it is closer to 6%), they only have a 50% chance of achieving a similar standard of living in retirement.

As such, it is crucial that individuals engage with pensions early on in their working life to ensure an adequate income in retirement. The decisions people make today will have a profound impact on their standard of living in later life and on their ability to safely navigate the accompanying risks.

And we, as asset managers and investment solution providers, need to make the choices available simpler and more intuitive. More people than ever are at risk of making the wrong decisions in the face of complex investment products and longevity and market risks that are hard to quantify.

Policymakers' and regulators' efforts to improve scheme governance and guidance for savers are still ongoing. Therefore, it is incumbent on our industry to work together with policymakers, regulators, advisers, pension trustees and pension savers, to provide simpler, more intuitive solutions and a frame of reference that can help individuals better assess their choices. Ultimately if good financial outcomes are to be achieved to and through retirement, we need to help people achieve the required asset growth in the run-up to retirement, and provide the necessary downside protection, inflation-linked returns and sustainable income stream during retirement.

I hope that The Future Book provides a first step towards achieving this goal.



Campbell Fleming
CEO, EMEA at Columbia Threadneedle Investments

Introduction

Demographic, policy and market changes mean that in future, retirees will be living longer, entitled to state pension later, more likely to reach retirement with Defined Contribution (DC) savings, and experience flexibility of access to DC savings. Greater numbers of DC savers, coupled with flexibility, will increase the level of risk people with pension savings face at and during retirement.

Given the potential risks involved for those retiring with DC and the rapid expansion of the private sector DC market, it is important that a comprehensive compendium of DC statistics is available to allow observation and reaction to developing trends.

Therefore the Pensions Policy Institute (PPI), commissioned by Columbia Threadneedle Investments, is publishing the first of what is intended to be an annual compendium of DC statistics, “The Future Book”, setting out available data on the DC landscape, projections of the future aggregate value of DC assets, and commentary and analysis of current trends.

Chapter one describes the current framework of the state and private pension system in the UK and briefly outlines main systemic changes, focussing particularly on those affecting the DC pensions market. It also explores relevant international developments.

Chapter two makes use of available data and PPI analysis to paint an overall picture of the current state of play within the DC market, both on an individual and aggregate level.

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 highlights the developing themes from the report and explores how industry and Government could help address problems consumers have with engaging with and understanding pension savings.

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

Chapter one: what is the “DC landscape”?

This chapter describes the current framework of the state and private pension system in the UK and briefly outlines main systemic changes, focussing particularly on those affecting the Defined Contribution (DC) pensions market. It also explores relevant international developments.

There are two main tiers to the state and private pension system

In order to understand changes taking place within the DC market, it is necessary to have a basic understanding of the structure of the state and private pension system.

The UK state and private pension system is made up of two main tiers:

- A compulsory, redistributive state tier; and,
- A voluntary, non-redistributive, private tier.¹

The state pension is compulsory and redistributive

The state pension is a redistributive pension paid to most UK pensioners, though eligibility and level of income depend on contribution records. Contributions to the state pension are compulsory for those earning above **£155 per week in 2015/16**. People who do not earn sufficient amounts to contribute can also earn “credits” to the state pension through a variety of non-paid activities such as caring or being in receipt of disability benefits.

People reaching State Pension Age after **April 2010** but prior to **April 2016** need **30 years** of qualifying contributions or credits for a full Basic State Pension. A full Basic State Pension is **£115.95 per week** for a single pensioner in **2015/16**. Those with fewer than **30 years** of contributions or credits are eligible to receive a proportionate amount of Basic State Pension. The Basic State Pension is currently increased each year by the greater of earnings, prices or **2.5%**.²

Many pensioners also receive income from additional state pensions. Income from these is partially earnings related.

Low pensioner incomes are supplemented through means-tested benefits. The main means-tested benefit for pensioners is Pension Credit, and the main element of this is Guarantee Credit. Guarantee Credit will top up a single pensioner’s income to **£151.20 per week (2015/16)**. Pensioners can qualify for support with housing/council tax costs or receive payments if they provide care or have a disability or health problem (though not all of these benefits are means-tested).

Private pensions are voluntary and non-redistributive

Unlike state pension contributions, private pension contributions are voluntary, though there are some elements of soft compulsion through the new system of

¹ For more detail on the UK pension system, see PPI’s Pensions Primer (2015)

² National Average Earnings, Consumer Prices Index.

automatic enrolment. Benefits from private pension schemes vary, depending on scheme rules and structure.

Private pensions are generally provided through the workplace, though an individual, (for example, someone who is self-employed) can take out a private pension directly with a pension provider. Pensions provided through the employer are called *workplace pensions*. Workplace pensions can be sponsored and managed directly by an employer (occupational pension schemes) or run by a third-party (personal pensions). Workplace pension schemes can be structured as Defined Benefit (DB), Defined Contribution (DC), or hybrid/risk-sharing schemes.

The main risks associated with saving and accessing pensions are:

- **Investment** - the risk that investments don't receive the expected level of return during the accumulation phase, or suffer from market volatility during the retirement phase, which could interrupt the security of a steady income.
- **Inflation** - the risk that one's income does not rise as quickly as price inflation, or does not rise at all, and as a result loses value relative to the price of goods and services.
- **Longevity** - the risk that an individual lives longer than expected which could result in running out of money or needing to pay more than expected to fund retirement.
- **Insolvency** - the risk of the provider or employer becoming bankrupt or insolvent (though this will not always result in loss of funds, it may involve some reduction).³

There are many other risks associated with saving for and accessing savings in retirement such as the risk of high charges, poor rates from a retirement income product or the risk in retirement of needs changing unexpectedly.⁴ However, overwhelmingly, the main pension risk is the risk of having insufficient income in retirement to have an adequate standard of living, as a result of not saving or not saving enough.⁵

Different scheme structures involve different balances of risk

Defined Benefit (DB): Retirement benefits received from DB schemes are based on a formula involving length of service multiplied by a percentage of final or average salary. *In traditional DB pension schemes the employer (or provider) bears investment, inflation and longevity risks.*⁶ This is because the amount of retirement income benefit is pre-determined and therefore if there is a shortfall in the fund due to low growth, inflationary increases, or scheme members living for longer than expected, it falls to the scheme provider to fill the shortfall (though schemes can make adjustments to benefits or cap inflationary increases if they are in difficulty, subject to scheme rules).

³ Blommestein et. al 2008

⁴ Blake, Harrison (2014); PPI (2012b)

⁵ PPI (2013)

⁶ Insolvency risk is partially covered by the Pension Protection Fund

Defined Contribution (DC): DC schemes do not offer a predictable income in retirement. Rather, the individual (and/or their employer) pays a set amount or proportion of salary into the scheme. At retirement the fund can be used by the individual to access a retirement income e.g. through a retirement income product, or through withdrawing lump sums. In some schemes (for example, some occupational DC schemes) the retirement income might be paid directly from the fund to retired scheme members. *In DC schemes, the scheme member bears some or all of the risks* (though some employer-sponsored DC schemes have in-built guarantees). If a DC scheme member's fund does not achieve sufficient growth, or their income does not keep up with inflation, the result is that the member will have to live on a lower income than they might have done had circumstances been more favourable.

Hybrid, risk-sharing: Hybrid or risk-sharing is the name for schemes which are not clearly DC or DB but rather contain elements of both. These are called "risk-sharing" schemes because *risk is shared more evenly between the employer and employee than in traditional DB or DC.*

Collective Defined Contribution or "risk-pooling schemes": The Government has recently introduced legislation (*Pension Schemes Act 2015*) to allow collective benefit schemes. The most common of these schemes are Collective Defined Contribution (CDC) schemes. CDC schemes are DC schemes in which all members' funds are pooled rather than invested individually. *CDC schemes generally involve sharing of risk between scheme members (both active and retired) rather than between employer and employee, though the employer may bear some of the risks, subject to scheme structure.* The supporting regulations to enable collective benefits to operate have not yet been introduced, so there are currently no CDC schemes in the UK.

Demographic, market and policy changes have caused shifts in the UK pensions landscape

The last few decades have seen many changes taking place in the UK pensions landscape. Some of these changes are the result of *demographic shifts*, some are the result of *market changes* and others are the result of *policy and regulation*, though all of these factors inter-connect and correlate.

Demographic shifts

- **Life expectancy:** In the second half of the 20th Century, life expectancy increased by around two years for every decade.⁷ In 2015, a 65 year old man can expect to live on average to *age 86.6*, and a 65 year old woman to *age 89.3*.⁸ By way of contrast, when the contributory state pension was first introduced in 1925, a 65 year old man could expect to live to around 76.⁹
- **Healthy life expectancy:** UK healthy life expectancy is also on the increase. Babies born in 2009/11 are likely to spend *3.5 years* (boys) and *3.7 years*

⁷ Harper, S (2013)

⁸ ONS (2012)

⁹ Salter, T. et al. (2009)

(girls) longer in good health than babies born in 2000/02, (though an increase in longevity means more unhealthy older people in total).¹⁰

- **The old-age dependency ratio:** Increases in longevity have been coupled with decreases in fertility (birth rates), leading to an increase in the old-age dependency ratio. *The dependency ratio represents the number of people of pensionable age divided by the number of people of working-age, in order to illustrate how many people may have to work and pay taxes to support each pensioner through the National Insurance system (which funds the state pension and state benefits).* In the mid-1970s there were around three pensioners for every 10 people of working age, a dependency ratio of 3/10. This grew to 3.1/10 in 2008. If there were no changes to the State Pension Age then the dependency ratio could grow to 4.95/10 by 2051, meaning there would be around 2 people of working age for every pensioner.¹¹

Increases in the dependency ratio affect the ability of tax payers to fund state pensions and pensioner benefits and provide the Government's rationale for increases in State Pension Age.

Market changes

- **Defined Benefit (DB) Pension schemes** historically dominated private sector pension provision, peaking in 1967 with around 8 million active members.¹² Since then there has been a decline in DB provision. In 2014, there were 1.8 million active members in private sector DB schemes and over 85% of DB schemes in the private sector were closed to new members or both new members and new accruals.¹³ Scheme closures can be attributed to several factors:
 - **Increases in life expectancy:** pensioner members are living for longer and requiring, therefore, a greater number of pension payments than may have been accounted for by scheme actuaries.
 - **Economic effects:** poor performance of equities, and other economically sensitive assets, in which DB schemes were mostly invested, coupled with a longer term economic decline.
 - **Changes in policy, regulation and accounting standards:** though the majority of legislative changes have been designed to protect members' rights, or to make the risks of DB pension provision more transparent, the combined impact of these changes has increased the cost and reduced the attractiveness of providing DB pension schemes.¹⁴

There are now a greater number of active savers in private sector DC schemes than in private sector DB schemes

As the DB scheme model became less attractive to private sector employers, the attractiveness of the DC model increased. As a result of both this shift and of the automatic enrolment policy, by 2015 the number of active savers in DC

¹⁰ ONS (2014c)

¹¹ ONS (2010) Figure 2.2

¹² PPI (2012a) p. 13

¹³ PPF, TPR (2014)

¹⁴ PPI (2012a) Pp. 25-29

schemes overtook active DB savers. In *January 2015*, there were *3 million* active members in DC contract-based¹⁵ schemes and *2.6 million* in DC trust-based,¹⁶ (though some of these members are in public sector schemes).¹⁷ There are currently around *1.5 million* active savers in private sector DB schemes.¹⁸ Despite DB schemes currently holding a higher asset value than DC schemes, and providing a high level of income to pensioners, the balance is likely to shift in future as a result of higher levels of DC saving and reducing numbers of DB savers in the private sector.

Policy and regulatory changes

- **New State Pension:** From *April 2016*, the Basic and Additional state pensions will be replaced with the *New State Pension*: a single-tier, flat-rate pension set at a level above the Guarantee Credit element of Pension Credit, (*£151.20 per week* for a single pensioner *2015/16*). Those reaching State Pension Age before *April 2016* will remain subject to the previous two-tier system.
- **Rises to State Pension Age:** The State Pension Age is rising for women from *age 60* in *2010* to *age 65* by *2018* where it will equalise with men's. State Pension Age for both men and women will rise to *age 66* by *2020*, and *age 67* by *2028*. A rise to *age 68* is currently under review.
- **Automatic enrolment:** The UK is currently undergoing the staging-in of "automatic enrolment", which requires employers to enrol qualifying employees (meeting particular age and earnings criteria) into a pension scheme. Employees have a window of opportunity to "opt out" and receive back any contributions already made. The required level of contributions that employers and workers who do not opt out must jointly make into a pension scheme is being phased in from *2012* to reach *8%* minimum total contributions on band earnings (*£5,824 to £42,385 in 2015/16*) by *2018*.
- **Greater flexibility of access "Freedom and Choice":** Since *April 2015*, people with DC savings have had greater flexibility when they come to access their pension savings after the minimum pension age¹⁹ (currently *age 55*). Prior to these changes, people with DC savings above a certain level (who were not able to demonstrate a minimum level of secure income) were required to use a secure retirement income product (an annuity or capped drawdown) to access their DC pension savings.

Regulatory changes are also affecting the way private pension schemes are run and the outcomes for members

- **Charge cap:** In *2001 Stakeholder Pension Schemes* (grouped personal DC pension schemes offered through a workplace) were introduced and with them a cap on the charges these schemes could levy on scheme members. Initially the cap was *1%* of funds under management, then increased to *1.5%* for the first ten years of membership. Development in the DC pensions

¹⁵ Not governed by a board of trustees

¹⁶ Governed by a board of trustees

¹⁷ TPR (2015c)

¹⁸ PPI Aggregate Model

¹⁹ Subject to scheme rules

market and the introduction of automatic enrolment schemes have seen the average charge for new members reduce so that the norm for many DC private sector schemes is closer to **0.5%** than **1.5%**.²⁰ However, some older schemes still charge a relatively higher amount to members. Prior to automatic enrolment, the average charge for a contract-based workplace scheme was **0.95%**.²¹

In **2015** the Government introduced a cap on the charges of default funds used by automatic enrolment qualifying schemes. This cap limits the total annual cost to members whose funds are invested in the default fund to **0.75%** of funds under management. The cap applies to all investment and administration charges. Transaction costs (third-party costs generated when shares are sold and bought on the market) are excluded from the charge cap.²²

- **Independent Governance Committees:** since **April 2015**, pension schemes which are not governed by a board of trustees (otherwise known as contract-based schemes) are required to adopt Independent Governance Committees. These committees are intended to act on behalf of members by assessing the “value for money” of the services offered to members. If schemes do not sufficiently address problems highlighted by these committees, then the committees have the power to escalate concerns to the Financial Conduct Authority.²³
- **New trustee requirements:** since **April 2015**, new minimum governance standards have applied to occupational pension schemes, requiring trustees to ensure that default arrangements are designed in members’ best interests; financial transactions are prompt and accurate; and charges and costs are assessed for “good value” for members.²⁴

Demographic, market and policy changes affect needs and resources in retirement

Each of the above factors affect the needs and risks faced by people at and during retirement. Overall, future retirees will be living longer, taking their state pension later, be more likely to reach retirement with DC savings (and no or low levels of DB entitlement) and have total flexibility in regard to accessing their savings. Greater numbers of DC savers, coupled with flexibility, could increase the level of risk people with DC savings face at and during retirement.

²⁰ OFT (2013) p. 106, para 6.14

²¹ DWP (2012b)

²² The Occupational Pension Schemes (Charges and Governance) Regulations 2015

²³ www.gov.uk/government/uploads/system/uploads/attachment_data/file/298436/better-workplace-pensions-march-2014.pdf; <http://www.legislation.gov.uk/ukpga/2014/19/part/6>

²⁴ www.legislation.gov.uk/ukdsi/2015/9780111128329/pdfs/ukdsiem_9780111128329_en.pdf

People who choose not to purchase a retirement income product (with some or all of their DC saving) which protects against investment and longevity risk will have to make active decisions about how to protect themselves against these risks

Lifetime annuities have built-in safeguards against longevity and investment-risk, and some are inflation protected. Capped Drawdown products also provided protection through a cap on withdrawals and automatic conversion to a lifetime annuity if funds fell below a certain level. Though people are no longer required to purchase either of these products in order to access their DC savings, some people may still choose to purchase a lifetime annuity.

Market and longevity risks are difficult for many people to understand

Market and longevity risks are difficult for many people to understand, partly due to low levels of numeracy, which strongly correlate with the ability to understand pension arrangements.²⁵ Amongst the UK adult population around **4 in 5 adults** have a level of numeracy below GCSE grade C level.²⁶

Behavioural characteristics also act as barriers to good decision-making; for example, a lack of trust in particular organisations, bodies or industries can impede engagement with guidance or advice. Natural tendencies towards inertia can be exacerbated by confusion, particularly in relation to having to make pension decisions, and can lead to inaction. People who are confused are more likely to go along with default options or choose something which appears easy or safe.²⁷ Recently published PPI work explores the use of myths and “rules of thumb” to manage pension savings and access.²⁸

International experience may provide insight into potential UK outcomes

While the direction of the DC market is clear on some level, the way that savers, industry and Government will interact in future is uncertain and depends on many factors. International experience can provide a context for exploring potential UK outcomes, though it is important to remember that different benefit systems, economic conditions and cultural characteristics all serve to reduce the read-across to the UK.

²⁵ IFS (2006)

²⁶ PPI (2014a); www.nationalnumeracy.org.uk – Department for Business Innovation and Skills, 2011 Skills for Life Survey

²⁷ PPI (2014a)

²⁸ PPI (2015b)

Australia

The Australian DC system is similar to the UK's in that it is relatively young and people face total flexibility when they come to access their pension savings. *There are some key differences between Australia and the UK:*

- Australians have had flexible access to DC savings for at least **20 years** unlike in the UK where flexibility has just been introduced.
- DC savings withdrawals are not taxed, which reduces barriers to withdrawing large lump sums.
- The Australian state pension is means-tested, creating an incentive to spend down pension savings.

Relevant outcomes

The Australian annuity market is under-developed, and annuities are an unpopular product; less than **1%** of DC savers purchase an annuity. Around half of DC assets are paid out as lump sums. The other half provide an income stream; mainly through “pension accounts” which operate in a way that is similar to drawdown.

The majority of advice and guidance is delivered by pension schemes and the use of independent advice is low. However there is also a clear gap in people's understanding of longevity, income needs in retirement and how savings can best be used to meet those needs.

There are concerns in Australia about retirees depleting their savings or over-conserving and experiencing a very basic standard of living. As a result, a recent Government review considered reforms, including compulsory annuitisation. While the review did not recommend compulsion, it did recommend that DC savers should be given more advice about retirement needs alongside regular projections of future fund value and the income they could generate in retirement. *The review also recommended that a default option is provided to retirees, involving a combination of products which, together, offer “a regular and stable income stream, longevity risk management and flexibility”.*²⁹

²⁹ Oxera 2014; PPI (2014b)

Ireland

Ireland previously required people to annuitise DC savings, but relaxed these rules in **1999**. People are now allowed to purchase a drawdown product which is capped unless they meet a Minimum Income Requirement of **€12,700 per year**. Those meeting the requirement can withdraw flexibly. This system is similar to the **2011 to 2015** UK system; the key difference being that after age **75**, Irish people are allowed complete flexibility with their DC savings. The state pension in Ireland is contribution based and therefore does not provide a motivation to spend down savings. There are some differences between the UK and Irish systems; in particular, Irish holders of flexible drawdown products are taxed **5%** of their fund value annually which encourages annual withdrawals of at least **5%**. This policy reduces the attractiveness of holding on to savings for bequest.

Relevant outcomes

Around 30% of those retiring with private pension savings currently purchase an annuity (the majority of which are flat-rate, lifetime annuities), though this figure includes individuals with an occupational DC pension who are still effectively obliged to purchase an annuity. Therefore *it is difficult to assess how many people are making an active choice to purchase an annuity in Ireland*.

Those with a choice between an annuity and flexible drawdown generally choose drawdown because of the flexibility and because Irish annuities are perceived as giving poor value. *However, people purchasing a flexible drawdown product and withdrawing from it in the same amounts that they would receive from an equivalent Irish annuity, have a 50%-60% chance of exhausting their fund before they die*.

Where annuities are sold, they are generally marketed towards those with lower levels of pension savings. The Irish annuities market is perceived to be small and underdeveloped due to:

- Poor understanding by consumers;
- The reluctance of consumers to sacrifice capital;
- The lack of flexibility in available products; and
- Poorly designed marketing and distribution.³⁰

³⁰ Oxera 2014; PPI (2015); PPI (2014b); Indecon and Life Strategies (2007); Rusconi, R. (2008)

Conclusion

Economic, demographic and policy effects are causing shifts in state and private pension provision. As a result, more people will save into private Defined Contribution pensions in the future.

In the private sector, the most common form of pension scheme on offer to employees has shifted from Defined Benefit (DB) to Defined Contribution (DC). This shift is accompanied by greater flexibility of access being allowed to DC savers, from *age 55*.

However the risks attached to decision-making about saving in and accessing DC pensions are also growing, particularly as many of the new pension savers are likely to have lower incomes and levels of financial literacy, and less likely to use independent financial advice than previous generations of pension savers. The Government and industry are working to improve scheme governance and provide support and guidance to DC savers, however many of these programmes are in their infancy and have yet to be evaluated.

While the aspects of DC market direction are clear, the way that savers, industry and Government will interact in future is uncertain, depends on many factors and will be instrumental in shaping the market in future.

Chapter two: what does the DC landscape look like?

This chapter makes use of available data and PPI analysis to paint an overall picture of the current state of play within the Defined Contribution (DC) market, both on an individual and aggregate level.

The value of assets in private sector workplace DC schemes is around **£324 billion** in 2015³¹

Automatic enrolment

The UK is currently undergoing the staging-in of automatic enrolment, which requires employers to enrol qualifying employees (meeting particular age and earnings criteria) into a pension scheme. Employees have a window of opportunity to “opt out” and receive back any contributions already made.

Automatic enrolment “stages”:

- From **October 2012**, employers with **250** or more employees began to automatically enrol.
- From **April 2014**, employers with **50** or more employees began to automatically enrol.
- From **June 2015**, employers with fewer than **50** employees began automatically enrolling.
- From **May 2017**, employers who came into existence after October **2012** will begin automatically enrolling.
- Under the current timetable, all complying employers will have automatically enrolled eligible employees by February **2018**.

Employees

By **31 August 2015**, **5.4 million** people had been automatically enrolled.³²

Opt outs

The level of opt out has remained steady at **9%-10%** though there are differences by age, gender and working-pattern. The Government expects opt outs to average **15%** by the end of **2018**. The following are findings from a **2014** study of **46 employers** and **2,600 automatically enrolled workers**:³³

- **Age** - The older a worker is, the more likely they are to opt out. Around **7% of under 30s**, around **9% of those aged 30 to 49**, and around **23% of those aged 50 and over**, opted out.
- **Working pattern** - Those in full-time work are less likely to opt out. **18% of part-time workers** opted out, compared to **10% of full-time workers**.
- **Gender** - Gender impacts decisions to opt out. Of the **2,600** employees with a **12%** overall opt out rate, opt outs by women were around **14%** (Table 1) though this is likely to be related to more women working part-time than men.

³¹ PPI projections based on 2010 assets derived from ONS data

³² TPR (2015b)

³³ Out of 7,200 total workers, DWP (2014a) figure 3.9, 3.10

- **Salary/contribution level** - There was no clear correlation between opt outs, and salaries or contribution level.³⁴

Table 1: Opt outs by characteristics based on 2014 study of 46 employers (2,600 automatically enrolled workers)³⁵

Age	Proportion opting out	Working pattern	Proportion opting out	Gender	Proportion opting out
< 30	7%	Full-time	10%	All	12%
30 - 49	9%	Part-time	18%	Women	14%
≥ 50	23%				

Total ineligible employees

By **31 August 2015**, **5.2 million** workers had been assessed ineligible by employers going through the automatic enrolment process.³⁶

Eligible employees

- **Total employees:** There are currently (in **2015**) around **26.3m** people employed in the UK (this excludes the self-employed).
- **Eligible employees:** Of those employed in the UK, around three quarters (**77%**, **20.1m**) meet the qualifying criteria for automatic enrolment, though a vast number of these people are saving in a pension independent of automatic enrolment.
- **Ineligible employees:** Of those employed in the UK, just under a quarter (**23%**, **6.2m**) do not meet the qualifying criteria for automatic enrolment. Of these, **3.5m** (**57%**) are earning below the **£10,000** earnings threshold; **1.8m** (**29%**) are under the minimum qualifying age of **22**; and, **843,000** (**14%**) are over the maximum qualifying age (State Pension Age).³⁷
- **Ineligible but independently saving in a pension:** Of the **6.2m** who do not meet the qualifying criteria, around a quarter (**1.4 million**) currently save into a workplace pension scheme independent of automatic enrolment; resulting in around **4.8m** employed people who are both ineligible and not saving in a pension scheme, (though not all of these people will have been through the assessment process yet).

Scheme type

Employers have a choice regarding which scheme to enrol their workers into

Prior to automatic enrolment, many employers were already offering membership in a pension scheme. Some employers, particularly public sector employers, offered membership in a Defined Benefit (DB) scheme, while more recently, employers in the private sector have favoured Defined Contribution (DC) schemes. Many employers who arranged pension provision more recently, chose to offer membership in Group Personal or Stakeholder Pension

³⁴ DWP (2014a)

³⁵ DWP (2014a)

³⁶ TPR (2015b)

³⁷ Those outside qualifying age may also have an income below £10,000 but are assessed as being ineligible due to age.

schemes. Master trust (or multi-employer) schemes are also becoming more popular (Table 2).

Table 2: Different categories of workplace pension schemes³⁸

Trust-based pension (DB or DC)	A pension scheme taking the form of a trust arrangement, which means that a board of trustees is set up to govern the scheme. Benefits can be either defined contribution or defined benefit.
Contract-based pension (DC)	A defined contribution pension scheme purchased by an individual, either through their employer or individually, from a pension provider. It is owned entirely by the individual with the contract existing between the individual and the pension provider.
Defined Benefit (DB) scheme	A trust-based pension scheme that provides benefits based on a formula involving how much a person is paid at retirement (or how much a person has been paid on average during their membership of the scheme) and the length of time they have been in the pension scheme.
Defined Contribution (DC) 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 rate at which the final pension fund is annuitised. ³⁹
Hybrid scheme	A private pension scheme which is neither pure defined benefit nor defined contribution arrangement. Typically a hybrid scheme is a defined benefit scheme, which includes elements of defined contribution pension design.
Group Personal Pension (GPP)	An arrangement made for the employees of a particular employer, or for a group of self-employed individuals, to participate in a personal pension (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 per cent. 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. ⁴⁰
Master trust/Multi-employer scheme	A DC pension scheme, governed by a board of trustees, offering the same terms to multiple employers and their employees.

³⁸ All definitions except for master trust/multi-employer, quoted directly from DWP (2014a) glossary

³⁹ Or drawdown rate

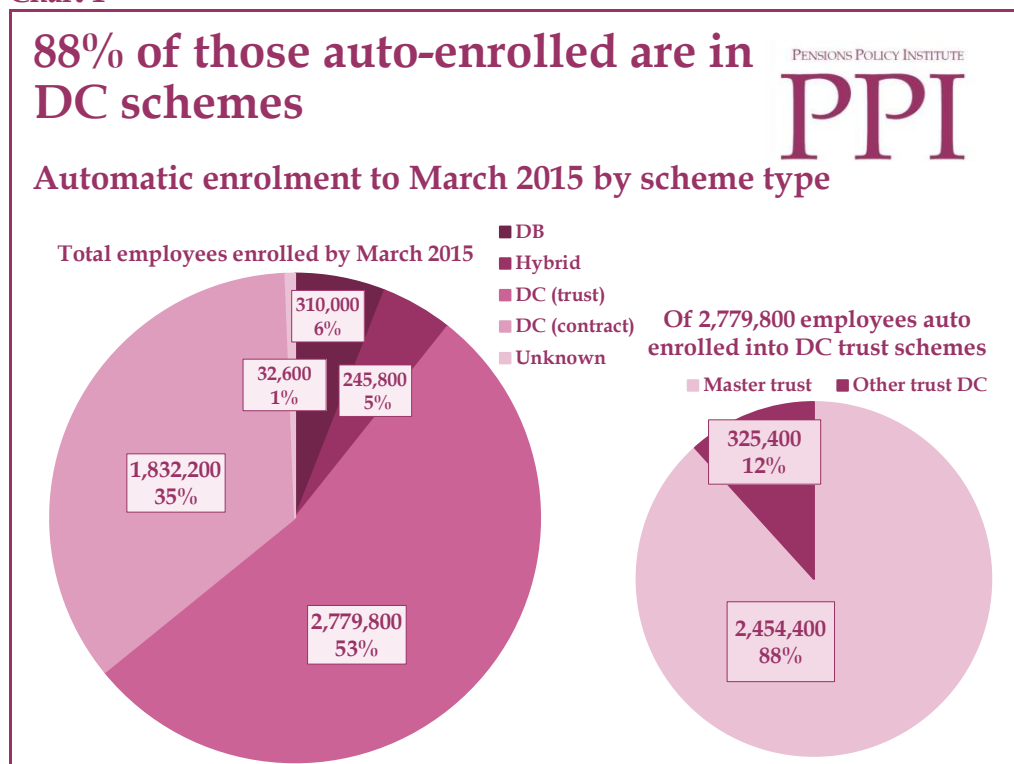
⁴⁰ But were not required to offer contributions

Self Invested Personal Pensions (SIPPs)

People can also be members of *Self Invested Personal Pensions (SIPPs)* or Group SIPPs. SIPPs involve an individual contract between the member & the provider & allow members greater freedom over the type of investments their funds are put in. Group SIPPs might allow a group of employees of one company to share a charging and tax structure for their SIPPs.

Of **5.2 million** workers automatically enrolled by **31 March 2015**, **88% (4.6 million)** workers were enrolled into DC trust or contract-based schemes. Of the **53% (2.8 million)** enrolled into DC trust-based schemes, **88%** of these (**2.5 million**) were enrolled into master trust schemes⁴¹ (Chart 1).

Chart 1⁴²



⁴¹ TPR (2015a) tables 5 and 6

⁴² TPR (2015a) tables 5 and 6, later data unavailable

Employers

The total number of employers who have been through the automatic enrolment process has grown from *four employers* in the first month (*Oct 2012*) to *57,907 employers* by *31 August 2015* (Chart 2 and Table 3). It is estimated that around *1.8 million* employers in total will be required to automatically enrol their employees.

Chart 2⁴³

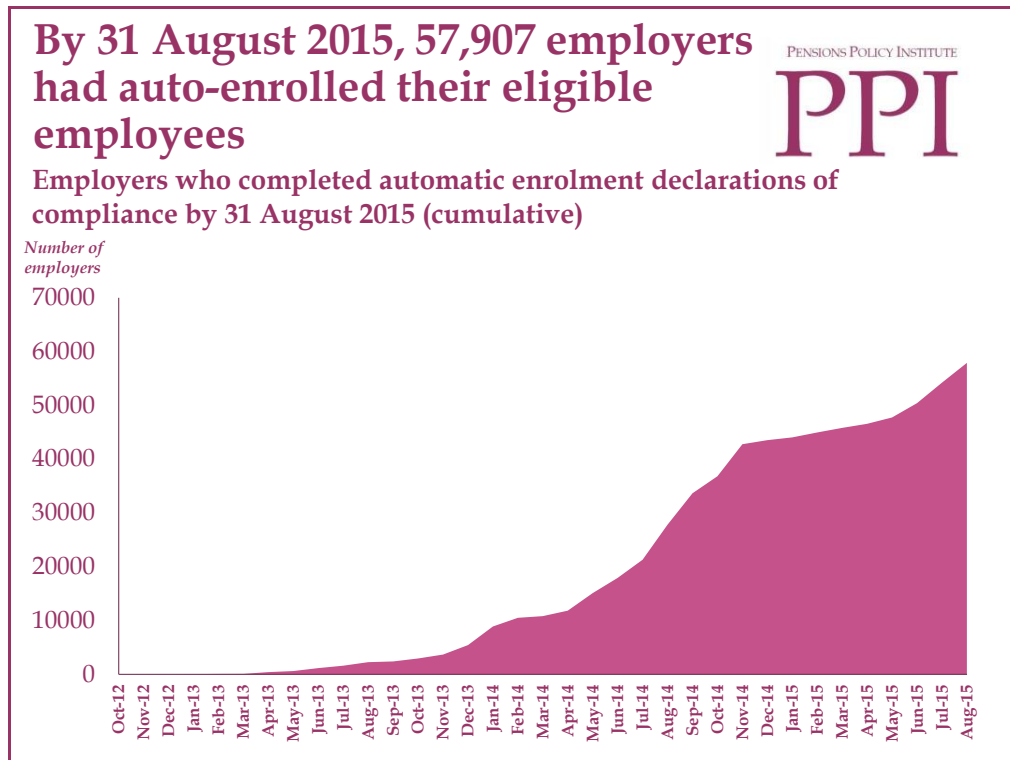


Table 3: Number of employers (cumulative) who have been through the automatic enrolment process measured by number of completed declarations of compliance⁴⁴

Month	Employers	Month	Employers	Month	Employers
Oct 12	4	Oct 13	2,943	Oct 14	36,823
Nov 12	16	Nov 13	3,670	Nov 14	42,785
Dec 12	16	Dec 13	5,431	Dec 14	43,538
Jan 13	33	Jan 14	8,893	Jan 15	44,053
Feb 13	72	Feb 14	10,503	Feb 15	44,969
Mar 13	83	Mar 14	10,817	Mar 15	45,820
Apr 13	406	Apr 14	11,834	Apr 15	46,578
May 13	603	May 14	15,099	May 15	47,757
June 13	1,153	June 14	17,925	June 15	50,419
July 13	1,600	July 14	21,303	July 15	54,244
Aug 13	2,256	Aug 14	27,818	Aug 15	57,907
Sep 13	2,392	Sep 14	33,660		

⁴³ TPR (2015b); TPR (2014) figure 5; TPR (2013) figure 7

⁴⁴ TPR (2015b); TPR (2014) figure 5; TPR (2013) figure 7

The workplace DC market

DC savings: Active savers

In 2010-2012 around 16% of people aged over 16 in Great Britain were actively contributing into a DC pension scheme. This is a reduction from 21% in 2008 and 20% in 2010, though automatic enrolment will mean that many more people will be contributing now than were contributing in 2012. The median pot size of those actively contributing in 2012 was around £14,500. The median pot size for actively contributing men in 2012 was £18,000 and for women it was £9,100. The median level of DC pension wealth for those actively contributing also varies by age group. For those aged between 25-34, the median level of pot size is £7,500. For those aged 55-64, the median level is £25,000⁴⁵ (Table 4).

Table 4: Percentage of people in Great Britain actively contributing to DC pensions and median pot size by age and gender, 2010/2012⁴⁶

Age group	Men – percentage contributing	Men – median pot size	Women – percentage contributing	Women – median pot size	All – median pot size
16-24	4%	£3,500	3%	£3,000	£3,500
25-34	20%	£9,000	15%	£6,000	£7,500
35-44	35%	£17,000	20%	£8,000	£13,100
45-54	36%	£24,000	19%	£12,500	£18,500
55-64	25%	£31,500	11%	£14,600	£25,000
65+	1%	£56,300	<1%	£16,000	£38,000

People in partnerships (married or cohabiting) and under State Pension Age, are more likely to be active members of a pension scheme than single occupant or lone parent households. While actively contributing single occupant and married households without children had the same median pension pot sizes, £15,000, lone parent households had almost two-thirds lower median pot sizes than married/cohabiting households with children (Table 5).

Table 5: Percentage of people in Great Britain (under State Pension Age) actively contributing to DC pensions and median pot size by household type, 2010/2012⁴⁷

Household type	Percentage contributing	Median pot size
<i>Lone parent, dependent children</i>	9%	£6,300
<i>Married Cohabiting, dependent children</i>	23%	£15,000
<i>Single household, no children</i>	23%	£15,000
<i>Married/cohabiting, no children</i>	28%	£15,000

⁴⁵ ONS Published ad hoc data and analysis: Economy, requests during July 2015, www.ons.gov.uk/ons/about-ons/business-transparency/freedom-of-information/what-can-i-request/published-ad-hoc-data/econ/july-2015/index.html

⁴⁶ ONS Published ad hoc data and analysis: Economy, requests during July 2015, www.ons.gov.uk/ons/about-ons/business-transparency/freedom-of-information/what-can-i-request/published-ad-hoc-data/econ/july-2015/index.html

⁴⁷ ONS Published ad hoc data and analysis: Economy, requests during July 2015, www.ons.gov.uk/ons/about-ons/business-transparency/freedom-of-information/what-can-i-request/published-ad-hoc-data/econ/july-2015/index.html

Deferred DC savings

If people cease contributing to a pension scheme, but leave their savings or entitlement with that scheme's provider then their savings are considered to be "deferred". A deferred DC pension pot will no longer benefit from contributions by the employer or employee, though it can increase or decrease in value through investment growth. These pots can be accessed at the minimum age (currently 55) or transferred into another pension scheme. Those with deferred pension savings (or entitlement) might be active members of another scheme.

In 2010-2012, around 9% of people aged over 16 in Great Britain held some deferred DC entitlement.⁴⁸ The median overall pot size for those with deferred DC savings was around £10,500 (£13,400 for men and £7,800 for women).⁴⁹

Any DC savings

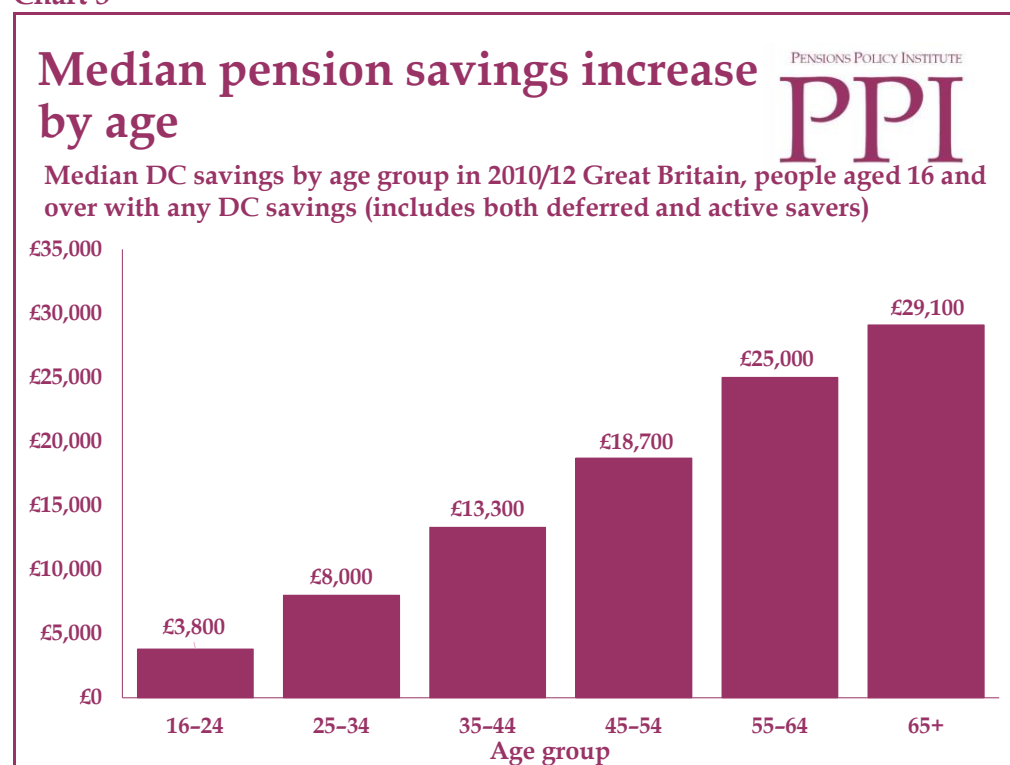
This next section looks at *all* those with DC savings, which includes active savers, those with deferred DC savings and people who fall into both categories.

In 2010-2012, around 23% of people aged over 16 in Great Britain held some DC entitlement including both those deferred and those actively contributing. The median pot size was around £15,000.⁵⁰ The median level of DC pension wealth varies by age group (*Chart 3*).

⁴⁸ This figure will include some people actively saving in other pension schemes

⁴⁹ ONS Published ad hoc data and analysis: Economy, requests during July 2015, www.ons.gov.uk/ons/about-ons/business-transparency/freedom-of-information/what-can-i-request/published-ad-hoc-data/econ/july-2015/index.html

⁵⁰ ONS (2014a) table 6.8

Chart 3⁵¹

DC Fund allocation

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

Funds versus strategies

It is worth noting that many asset mixes labelled as “funds” consist of several different asset allocation strategies which can change during the lifecycle of the member. **The use of the word “fund” is best viewed as common parlance which allows providers to communicate about investment strategies to scheme members.** It is more accurate to describe asset allocations as “strategies” rather than “funds”, for example high-risk, low-risk or lifestyle strategies. Most scheme members will be invested in more than one fund at a time.

However, for the purposes of this analysis the term “fund” is used to describe different investment strategies in order to maintain consistency with scheme literature and make comparison between schemes easier.

⁵¹ ONS (2014a) table 6.8

Fund labelling

Fund labelling is not consistent: The meaning of fund labels is not consistent between schemes. Different providers and schemes will offer funds labelled as “high-risk”, “low-risk”, “lifestyle” or “retirement-date” funds, though the structure (such as the proportion of assets invested in equities vs. bonds) of each will vary widely depending on the scheme that is offering it. Most schemes will offer a variety of funds alongside the default fund. Descriptions of the main types are given below.

Default funds: The default fund is the fund that members will automatically have their contributions invested in, unless they make an active choice to invest in a different fund. (Charge Cap regulations define default funds more specifically).⁵²

Life styling, target-date or retirement-date funds: These funds usually involve life-cycle investment strategies which make greater use of riskier, equity-based investments when members are further from retirement age, and increasing use of “safer” cash-based investments as members reach a pre-determined retirement date (or period). Some of these funds use lower risk investments in earlier stages of accumulation in order to accommodate members’ lower risk appetites.

High-risk, medium-risk vs. low-risk funds: These funds may be used as part of other investment strategies or might be stand-alone. High-risk funds involve greater use of equities, and other economically sensitive assets, which are more volatile and offer greater opportunity for investment return alongside greater risk of loss. Low-risk funds are mainly bond and/or cash-based. Medium-risk funds offer a balance between the two.

Data in the next section is drawn from a survey of four providers

Four providers (offering two master trust schemes and several other grouped and individual personal pension schemes) and representing over four million pension scheme members provided data on scheme fund and asset allocation for the latest quarter of 2015.

⁵² www.gov.uk/government/uploads/system/uploads/attachment_data/file/420215/charge-cap-guidance-apr-2015.pdf

Member fund choice

Members of master trust schemes are more likely to be in the *default fund* than those of other workplace DC pension schemes. Of these schemes, a mean average of around **91%** of members are in the default fund. Broken down further, over **99% of master trust members are in the default fund compared to an average of around 85% of members of other workplace DC schemes.**

Life styling, target-date and retirement-date funds

The use of life styling, target-date and retirement-date funds is not consistent between schemes, and these funds might lose relevance as a result of the pension freedoms. Over **99%** of members of master trust scheme members are in the default fund, therefore a master trust scheme which offers a lifestyle fund as the default will have the majority of scheme members in that fund. Of other workplace DC schemes (not including master trusts) where a lifestyle fund is on offer, around **85%** of members on average are in lifestyle funds.

High and low risk funds

Fewer than **1%** of master trust members choose the high-risk fund option. Use of high-risk funds is low in other workplace DC schemes. One provider had around **7%** of members in the highest-risk funds and around **8%** in the lowest risk funds.

Passive vs. active funds

The use of passive and active funds vary between providers and schemes. Some schemes might have a mix of both actively managed and passively managed assets within the same “fund” or within all of their funds. One scheme surveyed had a mix of passively and actively managed assets present in **100%** of their funds, while another *only* offered passively managed funds. The proportion of members invested in funds with actively managed assets ranged between **27%** and **63%** for some of the workplace DC providers (not including master trusts).⁵³ Actively invested assets make up around **33%** of all DC assets (2014).⁵⁴

Fund charges

The way charges are applied differs between schemes and can vary by length of membership. Master trusts tend to have lower annual charges (ranging between **0.3%** and **0.5%**, though some have other charges on, for example, contributions) than other workplace DC schemes which can charge up to **1%**, (non-default funds are not subject to the **0.75%** charge cap), though many charge closer to master trust levels.

A minority of policies have charges over the **0.75%** cap. One scheme reported around **8%** of policies, **4%** of funds under management, were charged over the cap, though these will be non-default funds. It can be difficult to determine the charges applied to particular funds, as most funds will involve several strategies and a mix of passively and actively managed assets.

⁵³ Where information was available

⁵⁴ Spence Johnson (2014)

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 being phased in to reach **8%** minimum total contributions on band earnings (**£5,824 to £42,385 in 2015/16**) by **2018**. Current employee/employer contributions are below this on average.

What is a sufficient level of contribution?

8% minimum is not necessarily sufficient to achieve an acceptable standard of living in retirement. Even if a median earner contributes **8%** of band earnings into a pension scheme every year from age **22** until State Pension Age, they only have **50%** chance of achieving the same standard of living in retirement that they experienced in working life (using private and state pension income) assuming that the state pension is uprated in line with the triple-lock.⁵⁵ 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.⁵⁶

PPI modelling indicates that a median earner might need to contribute between **11%** and **14%** of band earnings to have a **2/3** chance of replicating working life living standards if contributing between **age 22 and State Pension Age**. For people who begin contributing later or who take career breaks, contribution levels needed to have a **2/3** chance of replicating working life living standards could be as high as **27%**.⁵⁷

Employer contributions are below 4% on average

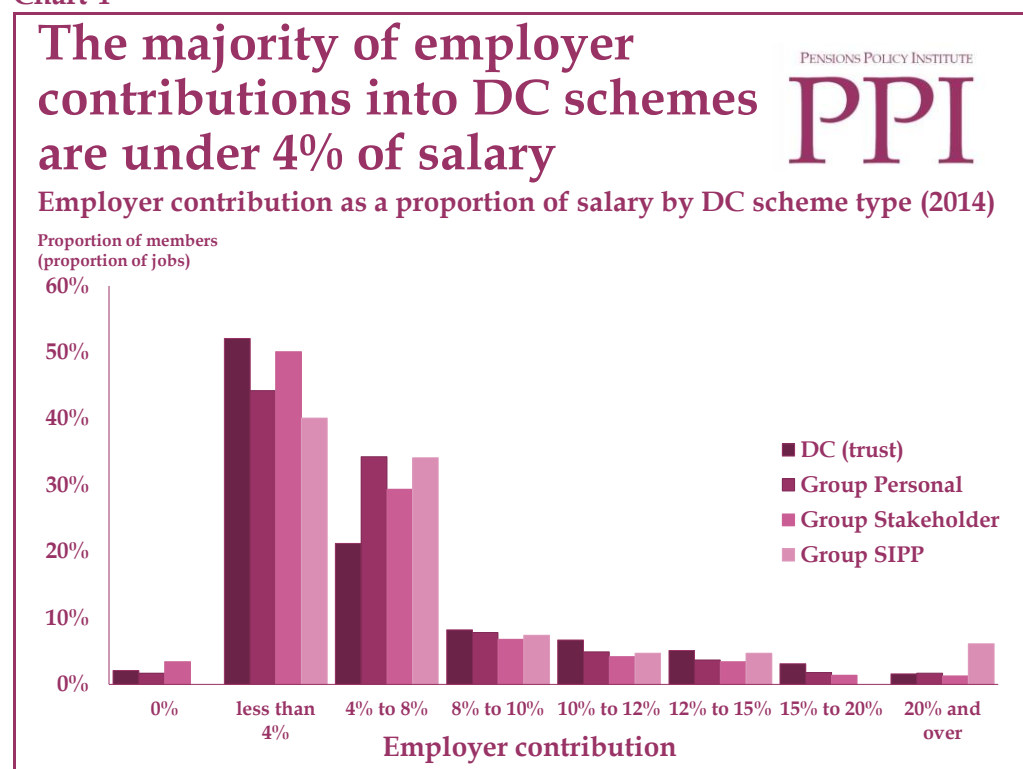
Overall, the average employer contribution into a DC pension scheme (trust and contract-based) is below **4%** of salary (**2014**). Though it is more common for employers to pay over **4%** into Group Personal Pension and Group Self-Invested Personal pension schemes than it is for employers using DC trust or Stakeholder schemes (**Chart 4 and Table 6**).⁵⁸

⁵⁵ Uprated by the greater of earnings, CPI or 2.5% each year

⁵⁶ PPI (2013)

⁵⁷ PPI (2013)

⁵⁸ ONS, Annual Survey of Hours and Earnings - Table P11.1 Employer Contributions - For all employee jobs: United Kingdom, 2014

Chart 4⁵⁹Table 6: Proportion of scheme members receiving employer contributions in different percentages of salary (2014)⁶⁰

Contribution level	0%	less than 4%	4% to 8%	8% to 10%	10% to 12%	12% to 15%	15% to 20%	20% and over
DC (trust)	2.1%	52.1%	21.2%	8.2%	6.7%	5.1%	3.1%	1.6%
Group Personal	1.7%	44.2%	34.3%	7.8%	4.9%	3.7%	1.8%	1.7%
Group Stakeholder	3.4%	50.1%	29.4%	6.8%	4.2%	3.4%	1.4%	1.3%
Group SIPP	n/a	40.1%	34.1%	7.4%	4.7%	4.7%	n/a	6.1%

⁵⁹ ONS, Annual Survey of Hours and Earnings - Table P11.1 Employer Contributions - For all employee jobs: United Kingdom, 2014

⁶⁰ ONS, Annual Survey of Hours and Earnings - Table P11.1 Employer Contributions - For all employee jobs: United Kingdom, 2014 - where a member has more than one job, they may be counted more than once

Employee contributions are below 2% on average

Overall, the average employee contribution into a DC pension scheme (trust and contract-based) is below 2% of salary. Those in Group Personal Pension, Stakeholder and Self Invested Personal Pensions (SIPP) schemes are more likely to contribute between 2% and 5% than those in DC trust schemes, 46% of whom contribute less than 2% (Chart 5, Table 7).

Chart 5⁶¹

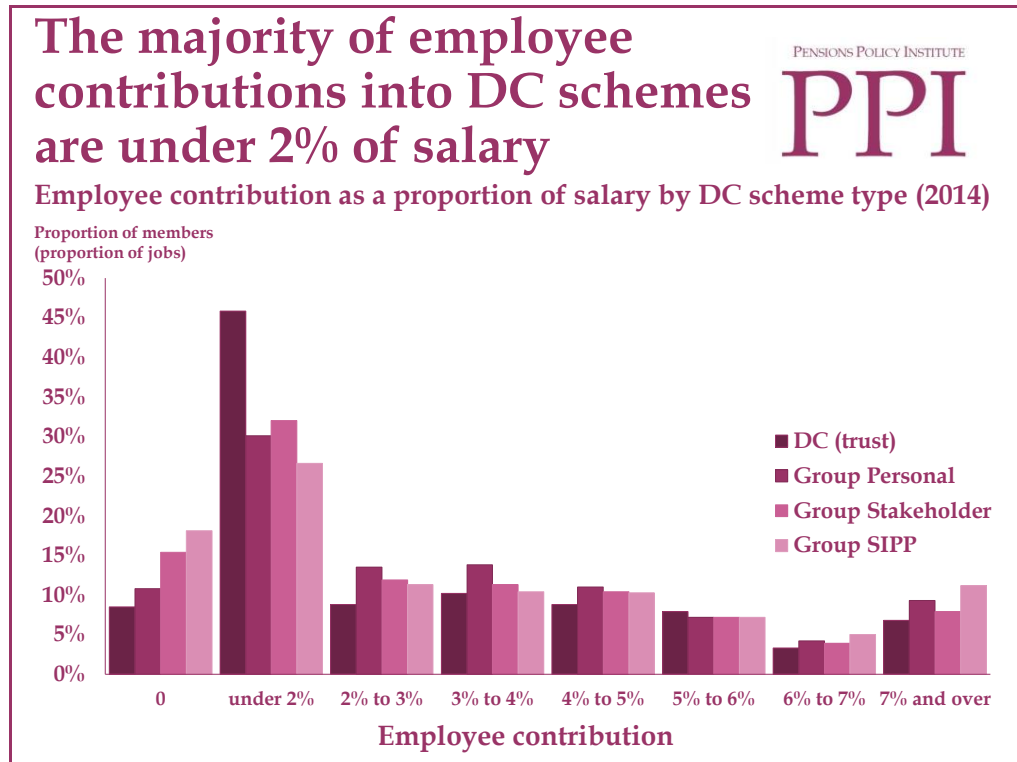


Table 7: Proportion of scheme members contributing in different percentages of salary⁶²

Contribution level	0	Less than 2%	2% to 3%	3% to 4%	4% to 5%	5% to 6%	6% to 7%	7% and over
DC (trust)	8.5%	45.8%	8.8%	10.2%	8.8%	7.9%	3.3%	6.8%
Group Personal	10.8%	30.1%	13.5%	13.8%	11.0%	7.2%	4.2%	9.3%
Group Stakeholder	15.4%	32.0%	11.9%	11.3%	10.4%	7.2%	3.9%	7.9%
Group SIPP	18.1%	26.6%	11.3%	10.4%	10.3%	7.2%	5.0%	11.2%

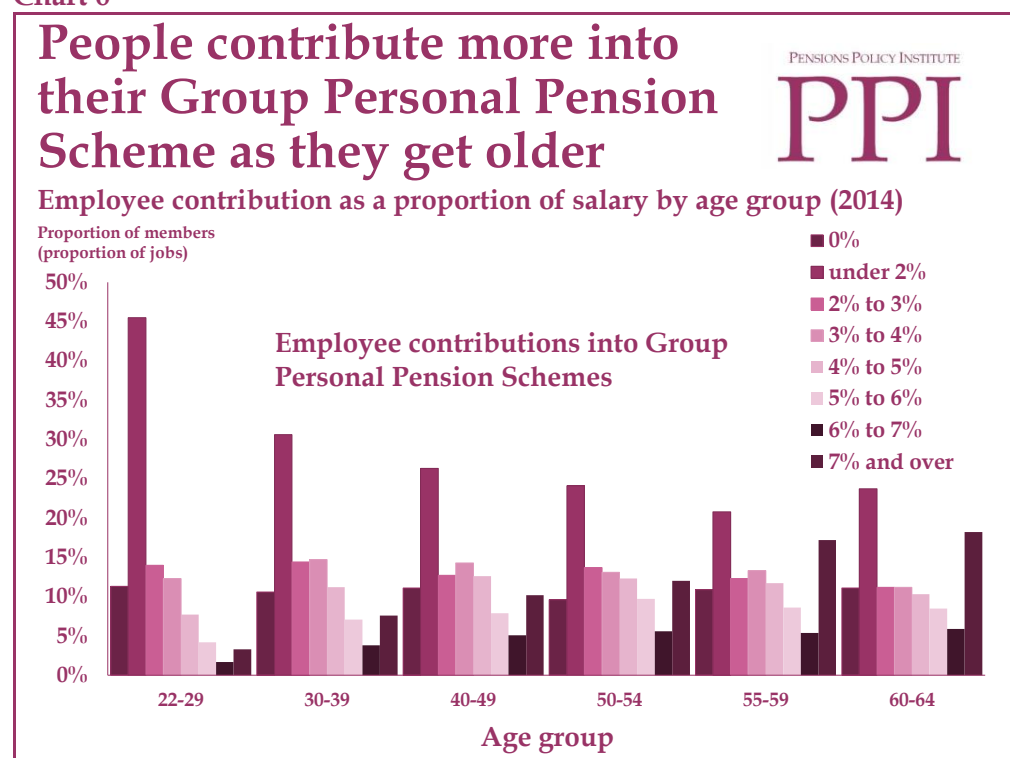
⁶¹ ONS, Annual Survey of Hours and Earnings - Table P5.1 Employer Contributions - For all employee jobs: United Kingdom, 2014

⁶² ONS, Annual Survey of Hours and Earnings - Table P5.1 Employer Contributions - For all employee jobs: United Kingdom, 2014

People are likely to contribute in higher proportions as they age

People in older age groups contribute higher percentages of salary to their Group Personal Pension Schemes than those in lower age groups. This is true also for those in Group Stakeholder schemes. *Chart 6* shows age trends in Group Personal pension contribution as an illustration.

Chart 6⁶³



International contribution rates

By way of comparison, the following table shows some average contribution rates from around the world (*Table 8*).

Table 8: Average international Contribution rates

	USA ⁶⁴	New Zealand	Australia ⁶⁵	Ireland ⁶⁶
Employer	Matching contributions	n/a (mandatory 3% minimum)	9.5%	5.7%
Employee	5%-7%	3% ⁶⁷	2.9%	5.4%

⁶³ ONS, Annual Survey of Hours and Earnings - Table P5.1 Employer Contributions - For all employee jobs: United Kingdom, 2014

⁶⁴ For 401(k)s. EBRI (2013) - employee 6.7% (2012), WorldatWork and the American Benefits Institute (2013) - 5%-7% (2013)

⁶⁵ Mean averages; figures provided by an Australian investment management firm

⁶⁶ www.iapf.ie/newspress/iapfpresreleases/2014/default.aspx?iid=527, accessed: 17.08.15

⁶⁷ Median, NZ Inland Revenue (2015)

DB transfers

The recently increased flexibility of access to DC pensions may encourage some people to transfer their DB entitlement into a DC scheme, in order to be able to take advantage of the new flexibilities. There are two main risks associated with transfers from DB to DC:

- *The risk to the individual*, if people transfer out of a DB scheme when it is not in their best financial interest to do so.
- *The risk to DB schemes* if a substantial level of transfers from DB to DC take place, and this destabilises scheme funding.

It is not yet known how many people might choose to transfer their DB entitlement into a DC scheme. Currently around **120,000** private sector DB scheme members take their pension each year and **20,000** members choose to transfer their pension entitlement into a DC scheme. The Government estimates that a further **9,000** people might choose to transfer yearly as a result of the increased flexibilities,⁶⁸ and of these:

- Around **1,700** are estimated to be part of a transfer exercise.
- Around **2,700** are estimated to be transfers to a DC scheme operated by the same employer
- Around **4,600** are estimated to be transfers to a third party scheme⁶⁹

⁶⁸ HMT (2014)

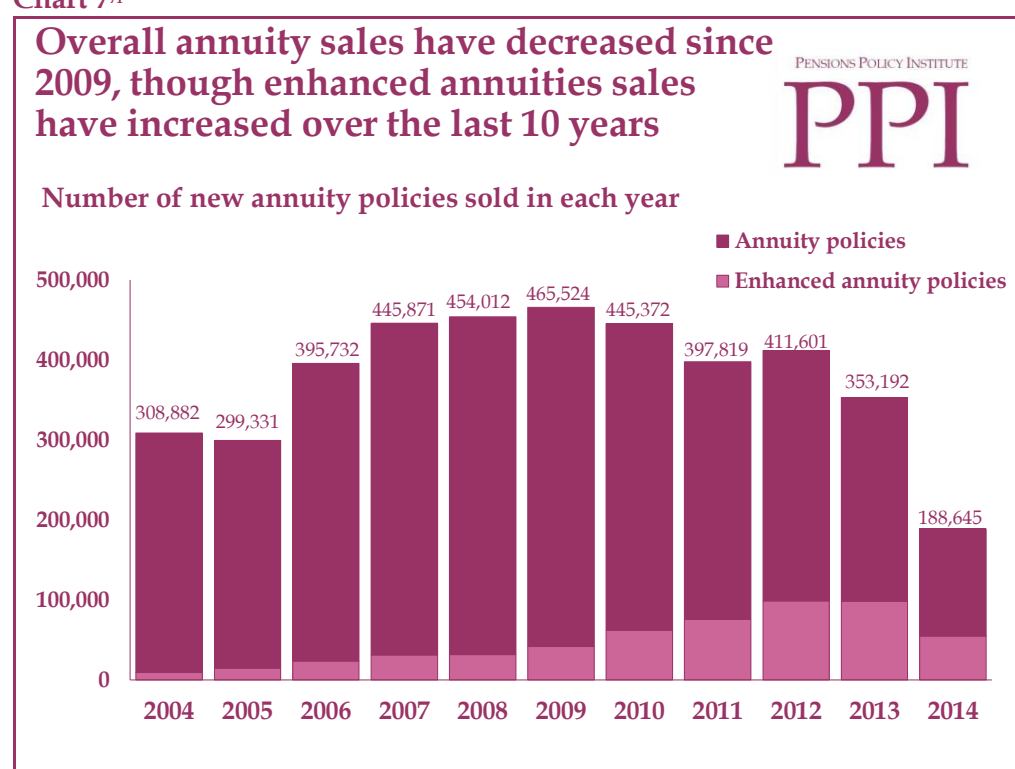
⁶⁹ HMT (2014)

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.⁷⁰ Overall sales of annuities peaked in **2009** at around **466,000**. However sales of enhanced or impaired-life annuities (which pay out at a higher rate to people who have a reduced life expectancy due to health problems or lifestyle factors) had been steadily increasing over the last **10** years, prior to a dip in **2014** (*Chart 7*).

Chart 7⁷¹



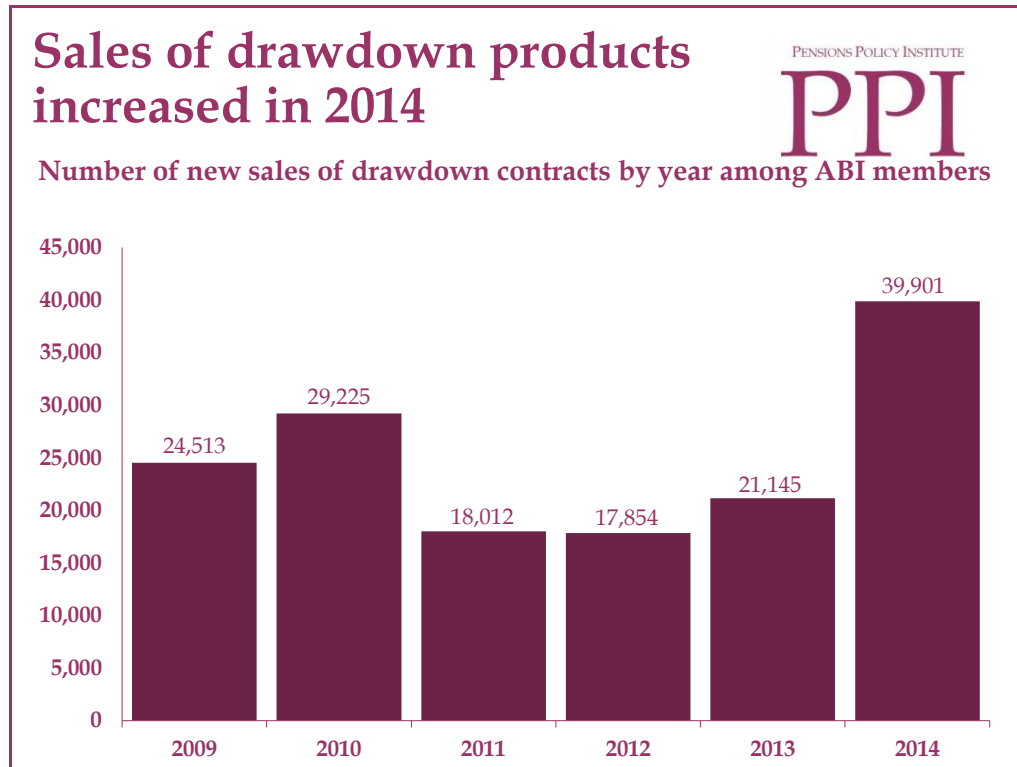
⁷⁰ ABI (2015a)

⁷¹ ABI Stats - Q1 2015 Quarterly Pension Annuities by Age of Annuitant and Fund Size; ABI (2013)

Income drawdown

The use of income drawdown has been relatively consistent over the past 5 years, with around 20,000 new sales in each year. However, in 2014 the number of sales doubled to almost 40,000 new contracts (Chart 8). This might be as a consequence of the announcement of the new pension flexibilities. As a result of the new flexibilities, drawdown products are likely to continue to grow in popularity.

Chart 8⁷²



Lump sums

Until April 2015, only those with very small DC pots (under a limit which rose from £15,000 to £18,000 by 2015) could access their entire fund as a lump sum without paying a tax penalty.⁷³ Since April 2015 (and the introduction of the new pension flexibilities) all those with DC savings have free access to their DC savings at/or after age 55, with withdrawals taxed at their marginal income-tax rate (with 25% tax-free). Though long-term patterns and trends will take time to develop, there is some data on DC saver behaviour since the introduction of the policy.

⁷² ABI Stats – Full product breakdown by quarters 2009-2014

⁷³ Under trivial commutation rules

*From April to June 2015:*⁷⁴

- Over **65,000** DC savers withdrew lump sum payments from their savings (it is not clear how many of these people may have withdrawn lump sums prior to April 2015 under “trivial commutation” rules)
- The total value of lump sums withdrawn was **£1.3 billion**
- The value of the average lump sum withdrawal was **£15,000**

During *April-June 2015*, DC savers also purchased **17,800** annuities and **19,600** drawdown contracts.⁷⁵

Advice/guidance

The use of advice and guidance is likely to change in the future 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 also restrict access to advice to some consumers who might find the new charging structure more difficult to manage.
- The introduction of the new pension flexibilities means that people who previously would have bought an annuity might choose to access pension savings through other means and some of these people may use advisers at and during retirement to help manage more flexible access methods.
- The introduction of the new pension flexibilities was also accompanied by a new, national, guidance and information scheme, “Pension Wise”, which offers free, tailored and independent guidance and information (online, by telephone or face-to-face; but limited to a one-off **45 minute** session at present), rather than advice to those with DC savings approaching minimum pension age or above. This service is a new player within the guidance and advice market and may have an effect on the use of other services.

⁷⁴ ABI (2015a), ABI (2015b)

⁷⁵ ABI (2015a), ABI (2015b)

What is the difference between advice and guidance?

Advice and guidance are different services and are subject to different regulatory requirements. The following definitions are provided by the Financial Conduct Authority:⁷⁶

Independent advice: “An adviser or firm that provides independent advice is able to consider and recommend all types of retail investment products that could meet your needs and objectives. 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. If you are not sure you should ask for further information, but some examples of restricted advice are where:

- The adviser works with one product provider and only considers products that company offers.
- The adviser considers products from several – but not all – product providers.
- The adviser can recommend one or some types of products, but not all retail investment products.
- The adviser has chosen to focus on a particular market, such as pensions, and considers products from all providers within that market.

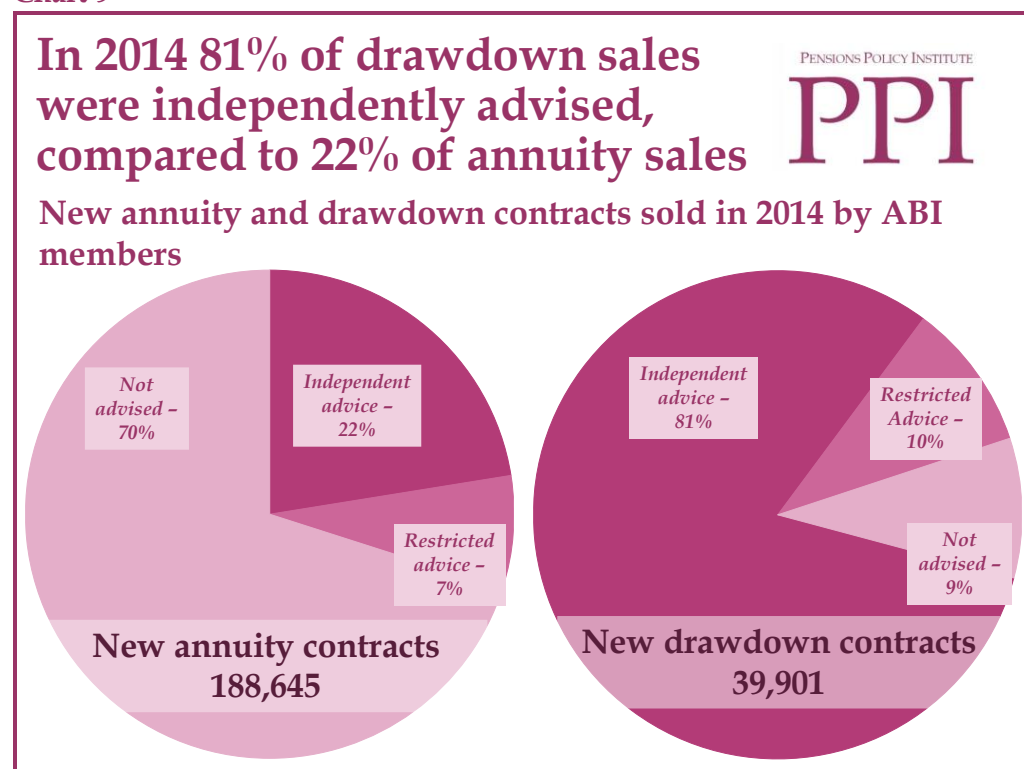
Restricted advisers and firms cannot describe the advice they offer as 'independent.’”

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.”

A greater cost is generally attached to the provision of independent (or restricted) advice, in return for which the adviser or firm take on some of the responsibility for the effect of the advice offered, and will advise their client on the path most suited to their individual circumstances. The provision of guidance leaves more responsibility for the final decision making on the client, who also bears more of the risks of making a bad decision. Some financial transactions (such as purchasing some drawdown products or transferring DB entitlement into a DC scheme) may require the use of independent financial advice.

⁷⁶ www.fca.org.uk/consumers/financial-services-products/investments/financial-advice/independent-and-restricted-advisers, accessed 07.08.2015

The use of advice or guidance varies depending on the type of product used. In **2014**, **81%** of those purchasing drawdown products used independent advice, compared to only **22%** of those purchasing annuities. The vast majority of people purchasing annuities in **2014** did so unadvised, compared to only **9%** of those purchasing drawdown products (*Chart 9*).

Chart 9⁷⁷

Conclusion

This chapter has set out high level statistics on the DC market. In summary, the headline stats show that:

Automatic enrolment

- By **31 August 2015**, **5.4m** people had been automatically enrolled.
- The level of opt out has remained steady at **9%-10%**.
- By **31 August 2015**, **5.2 million** workers had been assessed ineligible by employers going through the automatic enrolment process.

Workplace DC

- In **2012**, around **23%** of people aged over **16** in Great Britain held some DC entitlement including both those deferred and those actively contributing. The median pot size was around **£15,000**.
- Over **99%** of master trust members are in the default fund compared to an average of around **85%** of members of other workplace DC schemes.

⁷⁷ ABI Stats – Full product breakdown by quarters, 2014

- The average employer contribution in to DC pension schemes is currently below **4%** of salary.
- The average employee contribution in to DC pension schemes is below **2%** of salary.

From April to June 2015

- Over **65,000** DC savers withdrew lump sum payments from their savings.
- Savers purchased **17,800** annuities and **19,600** drawdown contracts.

The use of advice or guidance currently varies depending on the type of product used. In **2014**, **81%** of those purchasing drawdown products used independent advice, compared to only **22%** of those purchasing annuities

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

The previous chapters have set out the current state of the DC market and outlined the factors which are likely to lead to changes in future, including: automatic enrolment, the private sector switch-over from Defined Benefit (DB) schemes to DC schemes, and the introduction of the new pension flexibilities.

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

This chapter explores how the DC market may change and grow in future

This chapter uses the PPI suite of models and data from the ONS's Wealth and Assets survey (Wave 3) to explore how DC assets may change and grow in future under assumptions that current trends continue and with assumptions about variation in employee behaviour. The chapter also sets out the potential range of distribution of DC assets in future, under a range of possible future economic fluctuations (based on historical data).

The distribution and value of DC assets in the future depends on many factors:

- **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 effects** - market performance, inflation
- **Policy changes** - 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

All of the possible effects of the above factors cannot be taken account of in the modelling. Therefore, 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 analysis is intended to provide insight about the impact that certain behaviours and trends could have on the level of DC assets, rather than providing a firm prediction.

How might DC assets change and grow in the future?

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

How might scheme membership develop?

Under automatic enrolment, employers can choose to use their existing workplace pension provision as long as it qualifies under automatic enrolment legislation. Those without existing provision, or who wish to change their offering for new or existing members, have the choice to set up and run a Defined Benefit (DB), Defined Contribution (DC) or Hybrid/risk-sharing scheme themselves or to offer their workers membership in a DC scheme run by a third-party such as an insurance company. Some employers may choose to offer a combination of these, offering different options to different categories of workers.

In order to support automatic enrolment, the Government set up the National Employment Savings Trust (NEST); a low cost, workplace, DC pension “master trust”⁷⁸ scheme that can be used by any employer as a qualifying automatic enrolment scheme. NEST, which went live in 2012, is open to any employer to use for automatic enrolment, and is run by an independent board of trustees. There is an annual contribution limit for people enrolled in NEST of £4,600 (2014/15) though the Government has pledged to lift the contribution limit from 2017.⁷⁹

In response to the introduction of automatic enrolment the industry set up or expanded several other, similar, master trust/multi-employer schemes, designed to accommodate workers on lower incomes such as, The People’s Pension, NOW: Pensions and Legal & General’s WorkSave range.

⁷⁸ Multi-employer, trust based, DC, pension scheme

⁷⁹ DWP Press Release, 9 July 2013 “Government publishes ‘Supporting automatic enrolment’ paper”

Assumptions

The following analysis is based on the assumptions that:

- All eligible workers are automatically enrolled and 15% opt out⁸⁰
 - 57% of newly enrolled are enrolled into a master trust scheme.
 - 43% are enrolled into another, non-master trust, automatic enrolment DC scheme (in reality some of these schemes will be existing pension provision).
- No non-eligible workers or self-employed people are assumed to opt in
- Of employees already saving in existing DC schemes:
 - 80% remain saving in their current scheme.
 - 20% are moved into another automatic enrolment DC scheme or a master trust.
- DB schemes close at a constant rate, resulting in 80% of private sector DB scheme members' schemes closing to new members and new accruals between 2010 and 2030.
- The proportion of workers who would have joined the closed DB schemes join private sector DC workplace schemes.
- Where a member changes jobs and enters a workplace with an existing DC scheme, 80% are assumed to join the new automatic enrolment scheme and 20% are assumed to join the existing DC scheme.
- 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, apart from new members of DC schemes who are split between automatic enrolment schemes and existing workplace DC schemes in the proportions outlined above.

By 2030 there could be around 6.6 million people saving in master trust schemes

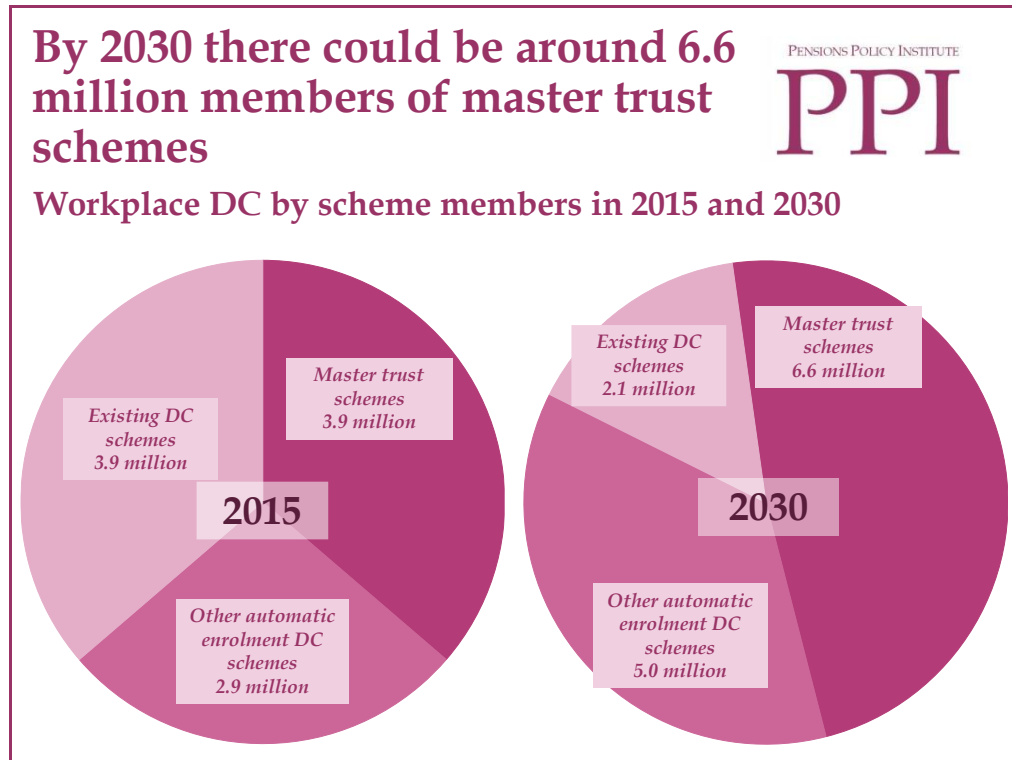
In **2015**, there are around **10.7 million** active members in DC workplace pension schemes. Around **3.9 million** of these are in master trusts, around **3.9 million** are in DC schemes which existed prior to automatic enrolment and around **2.9 million** are in new automatic enrolment DC schemes (not master trusts).

Assuming current trends in scheme allocation continue, by **2030** there could be around **6.6 million** people saving in master trust schemes, around **2.1 million** in pre-existing DC schemes and around **5 million** people in other automatic enrolment DC schemes (*Chart 10*). The number of people in private sector DB schemes could shrink from **1.5 million in 2015 to 436,000 in 2030**.⁸¹

⁸⁰ Based on information about scheme allocation from The Pensions Regulator

⁸¹ PPI Aggregate Model

Chart 10⁸²



How might DC assets evolve for individuals?

The current median DC pot for those aged 16 and over in Great Britain is around **£15,000**.⁸³ Automatic enrolment and the shift from DB to DC, is resulting in more people saving in DC pension schemes than previously. These trends, coupled with mandatory employer contributions (under automatic enrolment regulations) means that over time individual levels of DC saving will grow.

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.
- Those who are not currently saving, but are eligible, are automatically enrolled and do not opt out.
- Automatic enrolment minimum contributions rise in line with phasing of contributions as set out in automatic enrolment legislation.
- Funds yield a nominal average 5.7% investment return (annually).⁸⁴
- Earnings increase by 4.4% per year (on average).
- AMCs range between 0.5% and 0.75% depending on scheme type.⁸⁵

⁸² PPI Aggregate Model

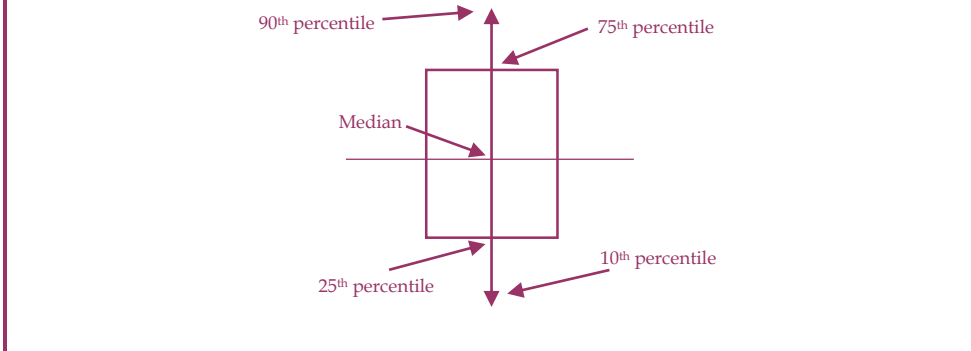
⁸³ ONS (2014a) table 6.8

⁸⁴ A blend of OBR returns based on an asset mix to represent typical pension portfolios

⁸⁵ See the appendix for further detail on assumptions

Box plots

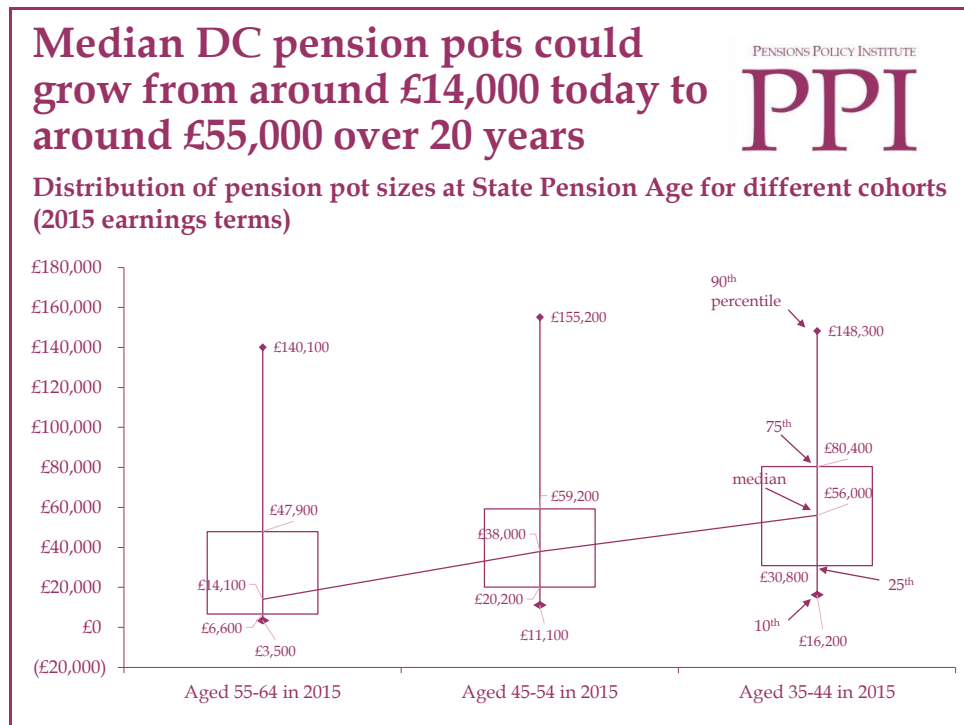
The next chart is a **box plot**. Box plots allow graphic representation of a distribution of outcomes. The rectangle represents the 25th to 75th percentiles of the distribution while the end of the vertical line represent the 10th and 90th percentiles. The horizontal line through the box represents the median.



Median DC pension pots could grow around £14,100 to around £56,000 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 could grow from around **£14,100**, (for those aged **55 to 64** in **2015**) to around **£56,000** (**2015** earnings terms) (for those aged **35 to 44** in **2015**). This represents an increase of around **290% over 20 years** (Chart 11).

Chart 11⁸⁶



⁸⁶ PPI Wealth and Assets Survey Projection Model

While **£56,000** is significantly higher than **£14,100**, it is unlikely on its own to provide sufficient income to support an individual's retirement. People are likely to need between **50%** and **80%** of working life income in retirement in order to achieve a living standard that is similar to the one experienced in working life. Those with higher-working life incomes tend to have lower replacement rates in retirement.⁸⁷

Someone on median earnings of **£27,000** might need around **67%** of working-life income, around **£18,000** per year. If this person received the full rate of New State Pension, which will be at least **£7,865 per year (£151.25 per week⁸⁸)**, they would still need around **£10,000** per year to achieve **£18,000**. In lump sum withdrawals of this amount, **£56,000** might last around five and a half years.

A level annuity bought with this fund by a single man at age **65** with no dependents or health problems could yield around **£3,200** per year.⁸⁹ While this income would remain constant (in nominal terms) during retirement, it would also result in a shortfall every year of at least **£7,000**. If individuals are unable to plug the gap with other savings, such as DB income, or income from savings/investments/housing, then they will be in danger of living a lower standard of living in retirement than they may find comfortable.

People with DC savings are less likely to have DB entitlement in future, and may face higher levels of risk

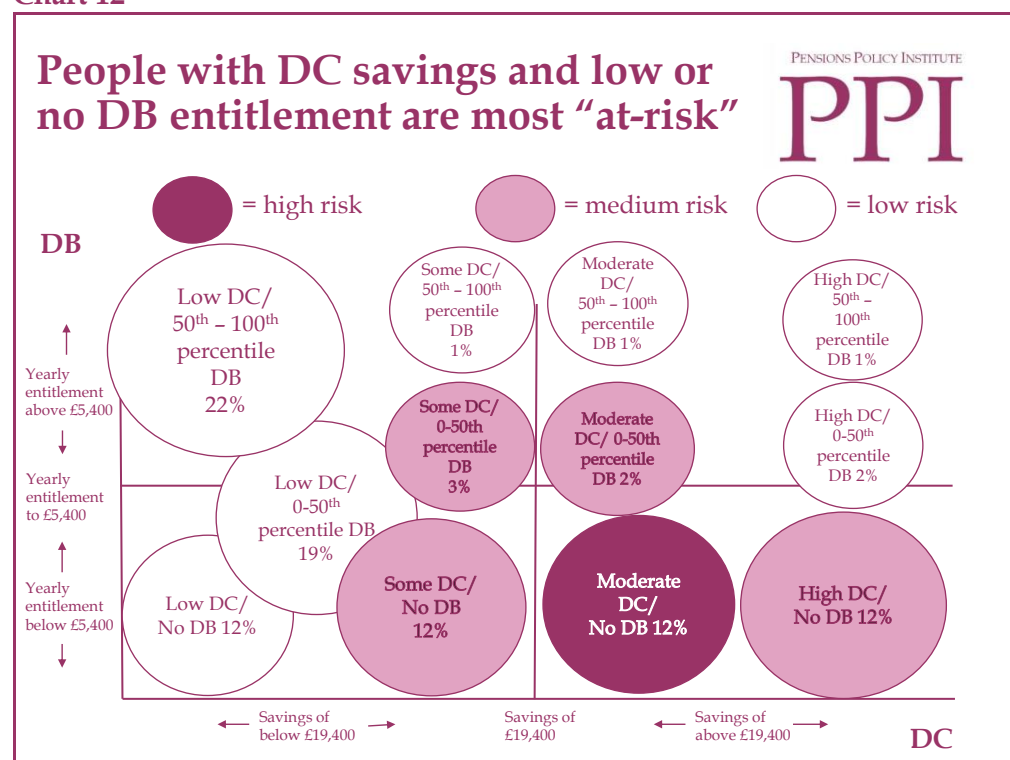
DB provision is declining rapidly in the private sector and as a result, future generations of DC savers are far less likely to reach retirement with DB entitlement than older cohorts. Those without DB entitlement, and median to higher levels of DC savings may face higher retirement income risks, as they will be relatively more dependent on the income from their DC savings in retirement to supplement their state pension, especially if they have little other savings and assets to fall back on. Previous PPI analysis found that around **12%** of people reaching retirement over the next **10-15 years** will be at "high-risk" of making poor decisions when they reach State Pension Age if they are not offered support through either guidance and advice or suitable defaults. These are groups with between **£19,400 and £51,300** in DC savings and little or no additional DB pension to fall back on. These people have particularly low levels of financial skill and engagement, and are less likely to already use a financial adviser or be actively targeted by financial advisers in the current market given the size of their pension pots.

The following chart explores the population approaching retirement over the next **15 years** and categorises them for risk, based on their level of dependence on DC, levels of supplementary savings and assets (and DB entitlement) and levels of financial skill and engagement (*Chart 12*).

⁸⁷ Pensions Commission (2004)

⁸⁸ www.gov.uk/new-state-pension/overview

⁸⁹ Money Advice Service annuity comparison tool, accessed 12.08.15

Chart 12⁹⁰

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. It also explores how the value of assets in private sector DC schemes may be affected by different scenarios of employee and employer behaviour and under a range of potential future economic performance scenarios.

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 (baseline scenario, DWP opt out assumption by end 2018).
- Employee/employer contributions vary by scheme type: (baseline scenario).
 - 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).
- Median investment return is assumed to be 5.7%.⁹¹

⁹⁰ PPI analysis of English Longitudinal Study of Ageing (ELSA), Wave 5

⁹¹ A blend of OBR returns based on an asset mix to represent typical pension portfolios

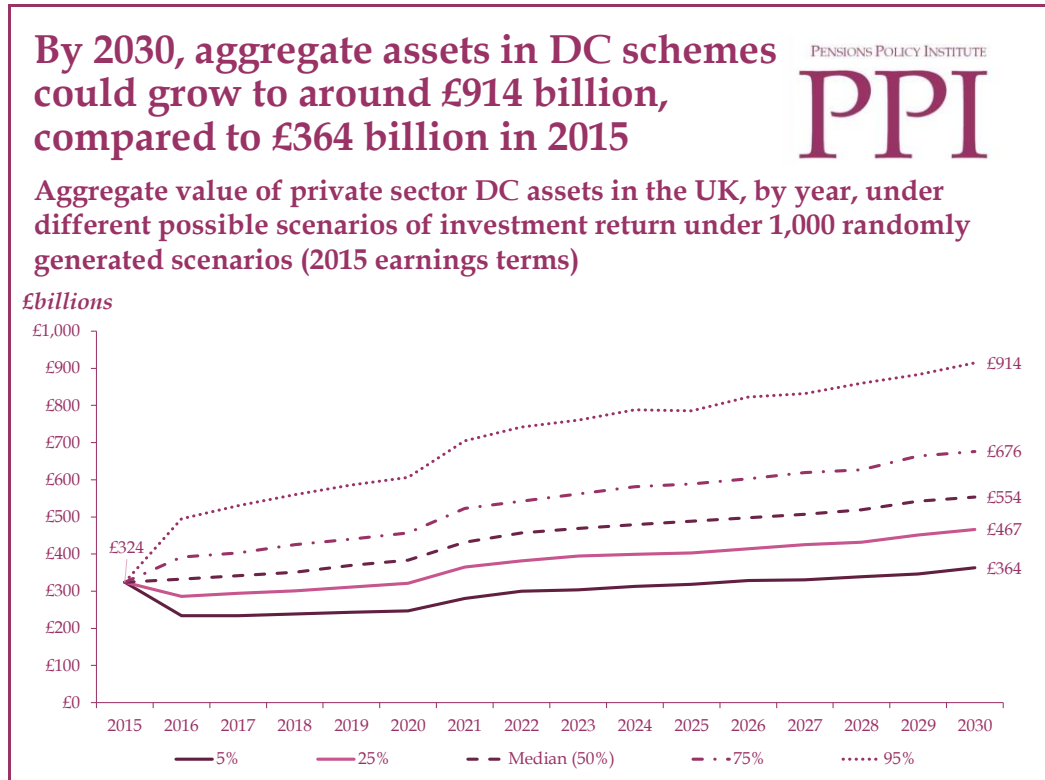
By 2030, aggregate assets in DC schemes could grow to around £554 billion

Assuming that current trends continue, the aggregate value of private sector workplace DC assets could grow from around **£324 billion** in **2015** to around **£554 billion** in **2030**. However, the aggregate value of assets will be sensitive to economic performance. Using Bloomberg data, the PPI has created an economic scenario generator, which allows exploration of DC asset performance under a potential range of economic scenarios.⁹²

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. 5% represents a 5% probability of poor performance. 95% represents a 5% possibility of very good performance. The 25% and 75% points both represent a 25% probability of relatively poor or relatively good performance respectively. 50% (median) recommends the most probable outcome, based on past performance.

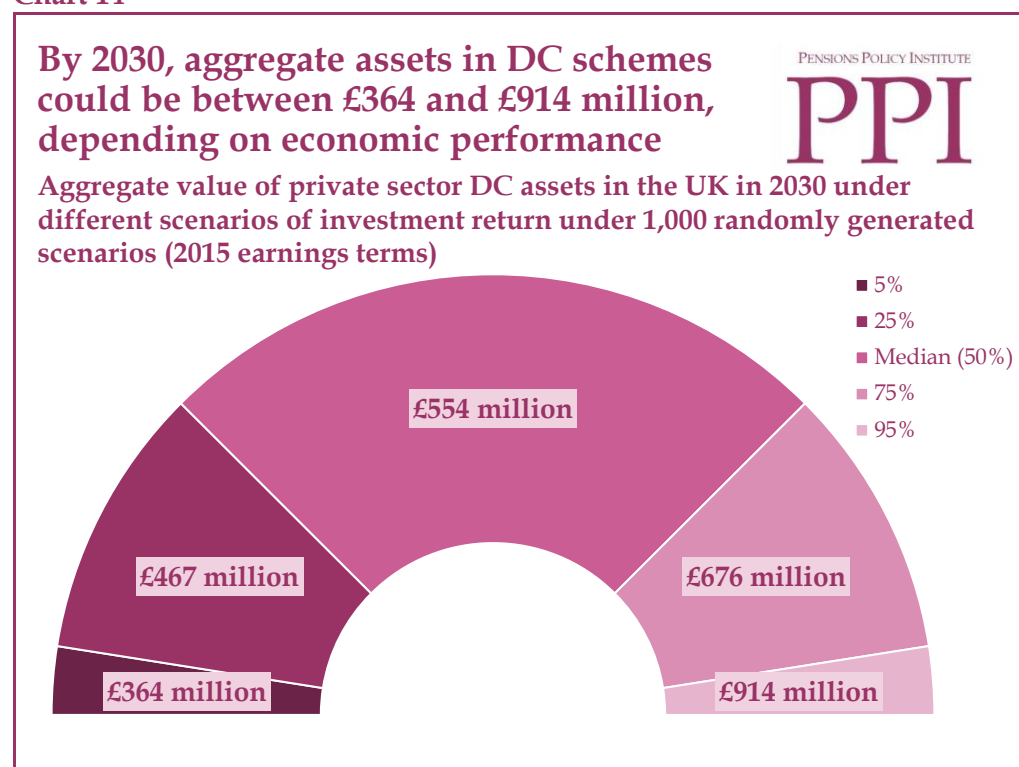
In **2030**, the aggregate value of DC assets in the private sector could vary between **£364 billion and £914 billion**, depending on economic performance (*Chart 13 and 14*).

Chart 13⁹³



⁹² PPI Aggregate Model

⁹³ PPI Aggregate Model

Chart 14⁹⁴

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

The aggregate value of private sector workplace DC schemes will vary not just as a result of economic fluctuation, 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 DC assets. The following analysis uses three potential scenarios merely to illustrate the possible effect that trends in behaviour or policy may have on the future value of DC assets.

The scenarios explored are:

- The baseline scenario, described in the assumptions box above
- An Optimistic Scenario assumption that opt out rates at current rate of 9% between now and 2030
- A Pessimistic Scenario assumption that opt out rates grow to 25%, as a reaction to increases in the minimum contribution level, and remain at this level until 2030
- An assumption that minimum contributions for those automatically enrolled grow to 9% (this illustrates also the impact of employers and/or employees choosing to contribute at higher than minimum levels)

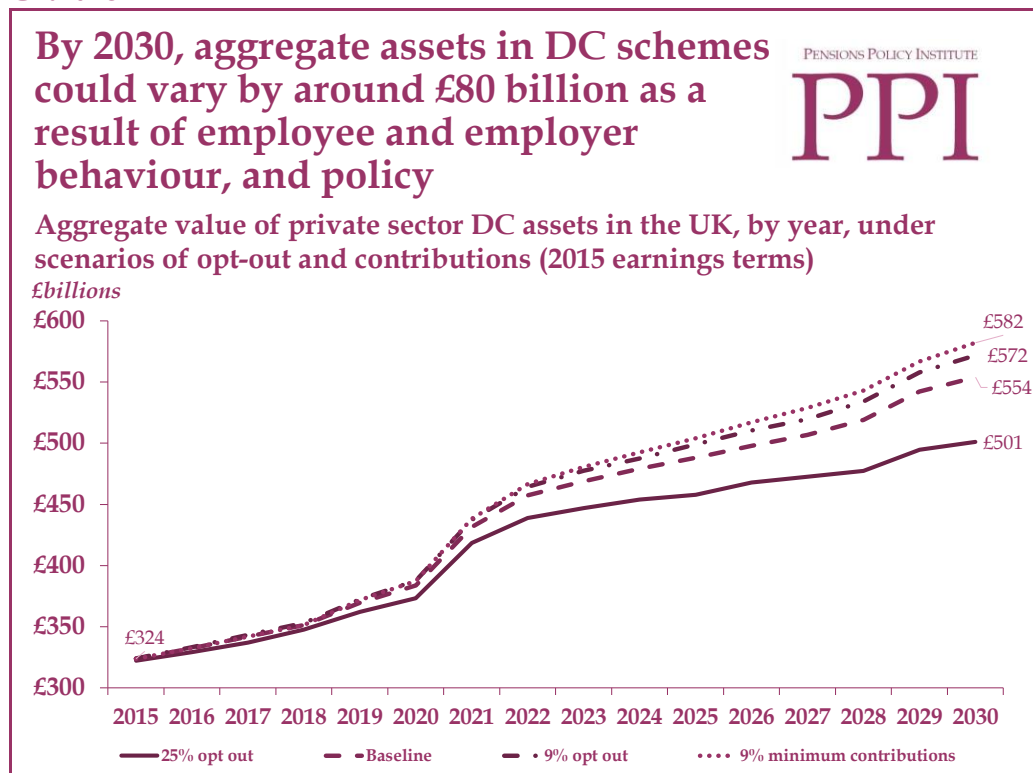
⁹⁴ PPI Aggregate Model

Different behaviour by employers and employees or changes in policy could account for a difference in the aggregate value of DC assets of around £80 billion by 2030

- If it is assumed that opt out rates grow to **15%** (the current DWP estimation) then the aggregate value of DC assets could grow to **£501 billion**.
- If, in a pessimistic scenario, opt out rates grow to **25% by 2030**, then the aggregate value of DC assets could grow to **£554 billion by 2030**.
- If opt out rates remain at the current level of **9%**, then the aggregate value of DC assets could reach around **£572 billion by 2030**.
- If opt outs grow to **15%**, and minimum contribution levels for those automatically enrolled also rise to **9%**, then aggregate DC assets could reach **£582 billion by 2030 (Chart 15)**.

Though this chart illustrates the impact of only a few scenarios out of the many possible, the difference between the “worst” and “best” scenario reaches around **£80 billion by 2030**, indicating that, alongside economic performance, the behaviour of key agents can have a substantial impact on the aggregate value of DC assets in the future.

Chart 15⁹⁵



⁹⁵ PPI Aggregate Model

Conclusion

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

Assuming current trends continue:

- By **2030** there could be around **6.6 million** people saving in master trust schemes, around **2.1 million** in pre-existing DC schemes and around **5 million** people in other automatic enrolment DC schemes. The number of people in private sector DB schemes could shrink from **1.5 million** in **2015** to **436,000** in 2030.
- The median DC pension pot size at State Pension Age could grow from **£14,100**, (for those aged **55 to 64** in **2015**) to around **£56,000** (**2015** earnings terms) (for those aged **35 to 44** in **2015**). This represents an increase of around **290% over 20 years**.
- The aggregate value of private sector workplace DC assets could grow from around **£324 billion** in **2015** to around **£554 billion** in 2030.

If current trends do not continue:

- In **2030**, the aggregate value of DC assets in the private sector could vary between **£364 billion** and **£914 billion**, depending on economic performance
- If opt out rates remain at the current level of **9%**, then the aggregate value of DC assets could reach around **£572 billion** by **2030**. If it is assumed that opt out rates grow to **15%** (the current DWP estimation) or **25%** by **2030**, then the aggregate value of DC assets could grow to between **£501 and £554 billion** by **2030**. However, if opt outs grow to **15%**, and minimum contribution levels for those automatically enrolled also rise to **9%**, then aggregate DC assets could reach **£582 billion** by **2030**. The difference between the “worst” and “best” scenario reaches around **£80 billion** by **2030**, indicating that, alongside economic performance, the behaviour of key agents can have a substantial impact on the aggregate value of DC assets in the future.

Chapter four: what are the policy implications for the DC landscape?

This chapter highlights the developing themes from the report and explores how industry and Government could help address problems consumers have with engaging with and understanding pension savings.

Several messages emerge from this data:

- Many changes have recently taken place within the DC landscape
- The future of the DC landscape is uncertain and depends on many factors
- Market risks and longevity risks are difficult for many people to understand
- People aren't saving enough into pensions to replicate working-life living standards in retirement, and current private pension saving policies are, at present, unlikely to bring contributions up to a sufficient level
- There has been some movement towards labelling of pension products
- In other industries the use of labelling to warn or encourage consumers is more prolific and has been found to be effective

Many changes have recently taken place within the DC landscape

The last few decades have seen many changes taking place in the UK pensions landscape. Some of these changes are the result of *demographic shifts*, some are the result of *market changes* and others are the result of *policy and regulation*, though all of these factors inter-connect and correlate.

- **Demographic shifts** - People are living longer, remaining healthy for longer and fertility rates have dropped. The end result is that the number of working-age people for every pensioner is decreasing (the dependency ratio), calling the sustainability of the current state pension and benefits system into account, as well as creating implications for the long-term care needs of the population. Increases in the dependency ratio provide the motivation for increases in State Pension Age which are currently underway.
- **Market changes** - a combination of DB scheme closures and automatic enrolment has resulted in the predominance of DC schemes in the private sector workplace pensions market.
- **Policy and regulatory changes** - Policy changes to state and private pensions are affecting the way people save, what they can expect as pension income, and how they access pension savings.

The above changes mean that future retirees will be: living longer; taking state pension later; more likely to reach retirement with DC savings; and, experience flexibility of access to DC savings. Greater numbers of DC savers, coupled with flexibility, will increase the level of risk people with pension savings face at and during retirement.

The future of the DC landscape is uncertain and depends on many factors

The evolution of the DC market will depend on many different factors, which are all unpredictable on some level:

- **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 effects** - market performance, inflation.
- **Policy changes** - policy changes which affect pension saving such as changes to pensions taxation, changes to minimum pension age, introduction of new scheme-types.

This uncertainty is another factor which can make planning and decision-making more difficult for individuals, especially in light of the long-term nature of pension savings.

People who choose not to purchase a retirement income product (with some or all of their DC saving) which protects against investment and longevity risk will have to make active decisions about how to protect themselves against these risks.

Market and longevity risks are difficult for many people to understand

Market and longevity risks are difficult for many people to understand, partly due to low levels of numeracy, which strongly correlate with the ability to understand pension arrangements.⁹⁶ Amongst the UK adult population around **4 in 5 adults** have a level of numeracy below GCSE grade C level.⁹⁷

Behavioural characteristics also act as barriers to good decision-making. For example, a lack of trust in particular organisations, bodies or industries can impede engagement with guidance or advice. Natural tendencies towards inertia can be exacerbated by confusion, particularly in relation to having to make pension decisions, and can lead to inaction. People who are confused are more likely to go along with the “default” option or choose the option that might appear easy or safe.⁹⁸

People aren't saving enough into pensions to replicate working life living standards in retirement

There is limited understanding of the appropriate level of contributions. Many people may be unaware that they are not contributing sufficient amounts to achieve a desirable standard of living in retirement. Currently, the average employer contribution is below **4%** and the average employee contribution is below **2%**.

⁹⁶ IFS (2006)

⁹⁷ PPI (2014a); www.nationalnumeracy.org.uk – Department for Business Innovation and Skills, 2011 Skills for Life Survey

⁹⁸ PPI (2014a)

While automatic enrolment legislation guarantees that, from **2018**, the majority of workplace pension savers will be contributing (with their employers) a minimum of **8%** of band earnings into their pension scheme. Some savers might feel that **8%** is the maximum amount needed as it is tacitly sanctioned as the minimum required amount in automatic enrolment. PPI analysis has found that people might need to contribute anywhere between **11% and 27%** of band earnings in order to achieve an acceptable standard of living in retirement (depending on length of time spent contributing, investment strategy, investment returns, charges, and the level of state pension and its indexation).

Median DC pot sizes could grow to around £56,000 over the next 20 years

PPI modelling indicates that median pot sizes for those reaching State Pension Age could grow from around **£14,100**, (for those aged **55 to 64** in **2015**) to around **£56,000** (**2015** earnings terms) (for those aged **35 to 44** in **2015**).

While **£56,000** is significantly higher than **£14,100**, it is unlikely on its own to provide sufficient income to support an individual's retirement. Someone on median earnings of **£27,000** might need around **67%** of working-life income, around **£18,000** per year. If this person received the full rate of New State Pension, which will be at least **£7,865 per year (£151.25 per week⁹⁹)**, they'd still need around **£10,000** per year to achieve **£18,000**. In lump sum withdrawals of this amount, **£56,000** might last around five and a half years.

A level annuity bought with this fund by a single man at age **65** with no dependents or health problems could yield around **£3,200** per year.¹⁰⁰ While this income would remain constant (in nominal terms) during retirement, it would also result in a shortfall every year of at least **£7,000**. If individuals are unable to plug the gap with other savings, such as DB income, or income from savings/investments/housing, then they will be in danger of experiencing a lower standard of living in retirement than they may find comfortable.

However, tendencies towards inertia imply that people will generally contribute at minimum required levels unless prompted to contribute at higher levels by employers (through, for example, matching incentives).

Options for encouraging future contribution increases have been discussed and include auto-escalation whereby contribution levels rise for employees on a trigger (such as a certain time in service or pay rises). But no firm policy decisions have been made as of yet.

It is clear that individuals will need to save more and for longer if they want to replicate working-life living standards in retirement. It is also clear that when DC savers reach retirement, they will have a lot of complex decisions to make which will have a substantial impact on income in retirement. Policy makers and industry will be interested in exploring ways to assist consumers in making

⁹⁹ www.gov.uk/new-state-pension/overview

¹⁰⁰ Money Advice Service annuity comparison tool, accessed 12.08.15

informed decisions about pension saving and to determine which arrangements are most suitable for their individual circumstances.

The rest of this chapter explores ways in which the pensions industry and other industries have used, or explored using, labelling as a way of communicating with consumers about the potential implications of their decisions, and to influence behaviour.

There has been some movement towards labelling of pension products

There has been some discussion of possible moves towards the use of labelling for pension products:

- **Traffic lights:** In a 2009 White Paper the Government proposed a traffic light system for financial products (including pension products) which would indicate levels of risk and potential costs attached to different financial products. The system has not been taken forward as of yet.¹⁰¹

In other industries the use of labelling to warn or encourage consumers is more prolific and has been found to be effective

Other industries have reported that risk labelling can be an effective way to engage with consumers, enhance understanding of risks and influence purchasing decisions.

- **Food traffic lights labelling:** Many food products are marked with a label which provides information on the level of calories, fat, saturated fat, sugar and salt contained in the food. The labels provide the level of these in numeric form and also use a green, amber, red “traffic lights” system to denote whether the product is a good nutritional choice in each nutritional area or a poor one. Traffic light labels are voluntary, but food producers are strongly encouraged to use them and the majority do. Around **60% to 70%** of consumers report understanding the information that the labels are communicating and labels are found to have an effect on purchasing decisions.¹⁰²
- **Energy labelling:** Since the early 1990s UK (and EU) law has required that certain domestic appliances bear energy labels so that consumers can compare products by factors such as energy consumption, performance, capacity and noise. Appliances are rated A-G in each area. Consumers report finding the labelling easy to understand, relevant and trustworthy. Energy labelling has some influence on the majority of purchasing decisions for relevant products.¹⁰³

¹⁰¹ HMT (2009)

¹⁰² Malam et. al. (2009)

¹⁰³ ECOFYS (2014)

The pensions industry might want to explore whether there are lessons about labelling for pensions and retirement income products

Because of automatic enrolment and other DC landscape changes, the pensions industry is facing a future influx of DC savers with different characteristics than those that came before. In future, a much greater proportion of people in the UK will reach retirement with DC savings, though the average education and income level of these people is likely to be lower than it was for DC savers pre-automatic enrolment.

Coupled with this, median DC pension pot sizes will grow (to around **£56,000** over the next **20 years**) so that many future DC savers are likely to reach retirement with a DC savings pot substantial enough to mean that the decisions they make about access could have a serious impact on their standard of living in retirement, while also being too low to provide sufficient income to fully support an entire retirement.

These savers are also less likely to have DB savings to fall back on in the case of running out of DC savings. Therefore, DC savers in future will be in a critical position because the decisions that they make are likely to have a major impact on their standard of living in retirement. It is a key time for government, industry and other stakeholders to look at ways of making sure that the pension system is easy to navigate for those less financially literate DC savers, and that appropriate and accessible advice and guidance is offered.

Chapter five: the outlook and challenges for the DC landscape

The following thought pieces are intended to contextualise the research findings and provide food for thought and discussion going forward. We asked prominent external commentators in the pensions world to contribute their thoughts on the Future Book findings.

The following external thought pieces are the opinions of the author and do not reflect or represent the views or position of the Pensions Policy Institute

"Are employers still committed to pensions?"



Steve Bee
Founder & CEO
Jargonfree Benefits

One of the big pension stories in the papers these days is the one about the closure of our private sector final salary pension schemes. Final salary pension schemes are employer-based workplace pension schemes where employees build up a pension benefit related to a percentage of their earnings at or near retirement calculated with reference to their time in the pension scheme. Employees in such a pension scheme have the security of knowing what pension they are going to get relative to their future earnings near their retirement, but employers have no certainty as to the eventual cost of providing the

promised pension benefits for their employees. Because final salary schemes provide employees with a benefit that is defined in advance they are usually referred to as defined benefit schemes these days.

As this latest report from the PPI highlights many of the private sector defined benefits schemes in the UK are in the process of closing down with the majority already closed to future entrants. Employers are doing this partly because of the uncertainties over future costs and they are switching instead to money purchase schemes for their employees.

Money purchase schemes are workplace pension schemes where the employers and employees agree to a certain fixed level of pension contribution and the contributions paid are invested in a fund.

When employees reach retirement age they use the accumulated fund to provide themselves with an income in retirement; this can be in the form of drawing income directly from the fund itself or through purchasing an annuity.

With a money purchase pension scheme employers have the certainty of knowing what their pension costs are, but the employees do not have any certainty over the level or amount of pension benefit they will get when they retire. As it is the contributions that are defined in advance in these schemes rather than the pension benefits they are usually referred to these days as defined contribution schemes.

The pensions industry, of course, likes to shorten terms wherever possible so defined benefit schemes are called DB schemes and defined contribution schemes are called DC schemes. The stories in the papers about DB schemes and DC schemes often go something like this: "DB schemes are good; DC schemes are inferior".

That's a simplification, of course, many articles in the newspapers are longer than that, but in essence that's an article I've read many times in the past and I expect I'll get to read it many times more as it's a perennial favourite. Different words and sentences are used to say it, but my short sentence there is essentially what is said.

I don't go along with the demonisation of DC schemes; both types of scheme have their merits. What is more important than the type of pension scheme to me is the amount of money that employers and employees pay into them. A DB scheme and a DC scheme with identical contributions paid over the years would provide a different form of pension benefits, of course, but the value of the benefits would be identical.

This, for me, is the central issue highlighted by this latest report. In the past employers were prepared to take all of the risks associated with providing workplace DB pension schemes for their employees and also pay generous levels of contributions to fund those schemes. While the switch from DB to DC is understandable in terms of the transference of the twin risks of investment and longevity from employers to employees, the real risk for employees seems, to me at least, to be the dramatic reduction in contribution levels employers appear to be prepared to make in future compared to the levels they made in the past.

DC workplace pensions reinvented - addressing the challenges that lie ahead



Chris Wagstaff
Head of Pensions and
Investment Education
Columbia Threadneedle Investments

Chris considers the challenges that lie ahead for investors in Defined Contribution workplace pension schemes and the key ingredients for a good financial outcome to and through retirement.

With the recently introduced pension freedoms, the focus is now very much on achieving good financial outcomes, however defined, not only to but also through retirement.

In giving people more responsibility for their own financial futures, the asset management industry - indeed the pensions community more widely - needs to ensure the right framework is in place to support end-investors in their decision making. Indeed, due to an apparent lack of adequate advice, knowledge and planning, and the inherent difficulty in estimating longevity, the two biggest concerns are that the newly retired either outlive their savings and wealth, or live too

frugally, fearing the consequences of the former scenario.

Moreover, the aspiration for achieving a good financial outcome in retirement typically fails to meet the reality, given that at 33%, the UK's current replacement ratio for the average earner continues to trail the OECD average of 54%. In other words, the average person only receives roughly a third of their gross pre-retirement income in retirement. Not that quantifying income and spending needs in retirement is a one-off "set and forget" calculation. Retirement is increasingly a gradual process throughout which spending needs continually change.

The risks investors face in retirement

However, as a nation of DIY investors, either unable or unwilling to pay for good independent financial advice, most people simply do not know what is feasible and realistic at and in retirement. While the free Pension Wise guidance is a welcome development, such one-off generic support is unlikely to be sufficient, as it won't, and isn't intended to, plug the advice gap for end-investors. Ultimately, what investors need are relatively simple tools and solutions that help them identify, manage, or mitigate, the risks they face in retirement. Indeed, volatility, drawdown, inflation and longevity risks all threaten the preservation of investors' capital and its ability to generate a sustained income stream over time. If not managed well, these risks can add up to an uncomfortable retirement or, worst case, lead to the retiree outliving their savings.

For instance, if an investor had invested £100,000 in a relatively undiversified FTSE 100 index fund at the start of 2000 and had then withdrawn £6,500 per annum – increasing these withdrawals by 2% each year to approximate the effect of price inflation – this £100,000 pot would have almost ran dry by the end of 2014. However, if the same investment had been made in an actively managed and well-diversified global multi asset income fund, and the same withdrawals had been made each year, then around half of the investor’s capital would have remained intact. This is illustrated in Figure 1. If, however, instead of a £6,500 annual withdrawal, a £4,000 annual withdrawal, again escalating at 2% per annum, had been made over the same time horizon, then the FTSE 100 fund would have been worth about £69,000 at the end of 2014, while the global multi asset income fund pot would have more than retained its original nominal value at around £116,000. This is illustrated in Figure 2.

These simple examples illustrate two key points: the dangers of, firstly, investing in an undiversified manner (exacerbated by a passive approach that cannot position the portfolio for prevailing or expected market conditions) and, secondly, taking a somewhat unsustainable level of income withdrawals, against the backdrop of historically low annuity rates and the prospect of more modest long-run investment returns going forward. Both threaten the early depletion of the investor’s capital.

Managing in retirement risks through fit-for-purpose tools and investment solutions

Given the flexibilities most people will require at and through retirement, we are likely to see highly individualised asset allocations comprising bank-style accounts; flexible annuities that permit fluctuating income levels; deferred annuities (notably for those without any Defined Benefit provision) for possible long-term care needs later in life; and income drawdown funds, which are expected to prove the most attractive in retirement investment option. These income drawdown funds are, in turn, likely to comprise highly individualised asset allocations of actively managed and well-diversified funds, such as:

- Multi-strategy absolute return funds with a cash-plus return objective,
- Multi asset diversified growth funds with specific CPI-plus return targets, and
- High yielding multi asset income funds with specific income yield targets.

All arguably provide implicit long-term downside protection, courtesy of a well-diversified and actively managed asset mix, in addition to offering the prospect of real capital preservation, real investment returns and a real long-term income stream, respectively. These drawdown solutions naturally play into the hands of active asset managers. As such, active managers are ideally placed to help the DC investor, and/or their adviser, formulate tailored, flexible income drawdown solutions. Indeed, by providing access to both a suite of

user-friendly (principally web-based) tools and appropriate investment solutions, the retiree can stipulate the relative importance they place on real capital preservation, real investment returns and sustainable income provision and invest accordingly. Moreover, doing so on an ongoing basis means asset allocation can be adapted to investors' changing priorities over time. Additionally, these tools should help determine likely longevity in retirement and, using stochastic modelling, determine whether the prospective time horizon over which the pension pot will be invested will likely be sufficient to fund planned spending (and a possible legacy on death).

Achieving a comfortable retirement

It goes without saying that there is a lot to think about if investors are to meet their financial goals in retirement.

However, it's not just the post-retirement stage that counts but, just as crucially, investors' actions in the run up to it. Quite simply, the more people can save during their working life, and the earlier they start saving, the better their retirement income will be.

However, this can only be achieved by the pensions community engaging with investors at a sufficiently early stage. Indeed, only by providing people with the right decision-making framework and delivering the right solutions, structures, advice and regulations, will the industry and the government be able to ensure that

people end up enjoying what they ultimately crave - a good financial outcome and a comfortable retirement.

Figure 1: Taking 6.5% annual withdrawals, indexed at 2% per annum, from a FTSE 100 index fund and an actively managed global multi asset income fund

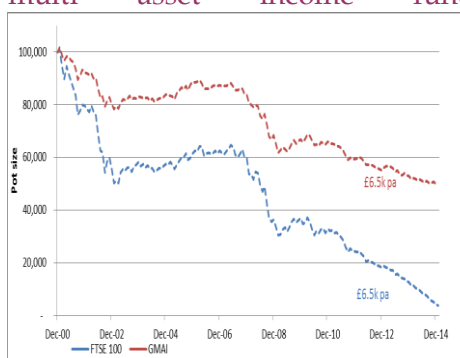
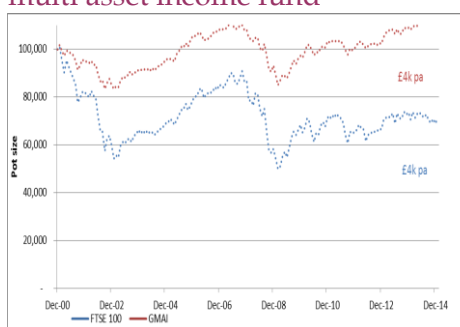


Figure 2: Taking 4% annual withdrawals, indexed at 2% per annum, from a FTSE 100 index fund and an actively managed global multi asset income fund



The importance of focussing on outcomes in DC pensions



*Adrian Boulding
Principal Consultant
Dunstan Thomas*

It was employers that drove the switch from DB to DC. Whilst DB pensions were safe and predictable for members, employers discovered that the costs were anything but predictable, and as increases in longevity and reduced investment returns pushed up the costs to eye-watering levels employers bailed out in favour of DC.

Employers love the fixed costs of DC. Indeed, the contributions are the most visible and tangible part of the scheme and will form the crux of the employer's offering to their staff. But we mustn't let the members blindly follow the same focus on inputs. Instead they need to think about outcomes.

"8% is not enough!" is a mantra you may often hear as pension people discuss auto-enrolment. But without context, it's actually a pretty meaningless declaration. Not enough for whom? For what standard of living in retirement? For what age of retirement?

Before you can ascertain what the contribution rate should be for a DC pension, you first need to establish the desired outcome (income replacement rate and retirement age) and also think about the route towards that outcome, in terms of the type of investment funds to be used and their risk/return characteristics. Then we can begin to make sensible projections to show what contributions will generate the desired outcome. But a purely deterministic projection may be of little value if the goal is twenty or thirty years away. Customers who purchased endowment mortgages in the 80's and 90's found this out. The early customers were pleasantly surprised when the endowment paid off their mortgage and presented them with a much larger than expected lump sum of spare cash at maturity. And the later customers were somewhat irate when the endowment didn't even get close to repaying the mortgage!

Most consumers today are receiving the statutory money purchase illustration stipulated in regulation and this has the further disadvantage that it assumes an annuity purchase based on gilt yields. Since "Freedom and Choice" was ushered in by George Osborne annuity sales have been taking a back seat compared to income drawdown, and even where annuities are purchased it's more likely that the insurer will be making corporate bond investments than gilts.

Maybe we should take a more American approach, and assume that members will choose drawdown over annuities and that

they will choose to draw at the rate of 4% a year, which is widely regarded as the yardstick in USA. Whilst nothing is certain in drawdown, setting the rate of consumption at 4% of pot size probably leaves some scope for future pension increases to offset the impact of price inflation.

A stochastic projection will help to convey the uncertainty of long term pension planning. It won't tell you what contribution to pay in, but it can instil one of the important disciplines of savings, namely that you must watch your pot throughout the journey and adjust course as necessary. As you get progressively closer to the outcome, the funnel of uncertainty narrows down.

Those of us in the pensions industry have to accept that, realistically, the propensity of members to want to watch the pot will be low at young ages and only increase as retirement gets close. Eighteenth Century Generals used to say "don't shoot until you can see the whites of their eyes" and maybe we should expect the greatest use of pension tools to be by those nearest to retirement.

For those still in work but closing in on retirement, at this point a projection tool can help the member to decide for how many more years they need to work, or perhaps whether a period of part-time work will be necessary before a full retirement can be achieved.

And if the early years of decumulation from a DC pot is income drawdown as many are now suggesting, then again a projection

tool that focuses on outcomes – in this case the need to sustain a real income over perhaps twenty five years of retirement – can again help members make sensible choices over where to invest and how much to drawdown.

How can consultants [and advisers] assist employers and employees to navigate pensions and retirement decisions in the light of emerging trends within the DC market? How can [advisers] and consultants help the end consumer/investor make better decisions?



*Nico Aspinall, FIA
Senior Investment Consultant*

The pace of change in the Defined Contribution (DC) pensions industry has never been faster. With just over twelve months' warning from the UK government, April 2015 saw the introduction of a cap on default fund fees and saw the old compulsion to buy an annuity at retirement swept away. We are expecting news imminently on a system to enable individuals to free themselves from existing annuity policies, creating a secondary market for DC pensioners to be able to reshape or redeem their retirement income in whichever ways they want. Everyone should be able to take their pension from DC in a way which suits them. This is indeed a brave new world. But we already know how difficult it is to get employees to do anything about their DC pensions themselves. We

are developing a DC system which enables individuals to take pension payments in a uniquely personalised way, but placing it in an environment where we have struggled to get the attention of individuals before they retire. We used to be comfortable about low engagement given the near certainty of annuities as the retirement destination. This meant the design of defaults in the approach to retirement could focus on improving the certainty of income members would get from an annuity. Now we don't know whether disengaged members might take lump sums, purchase annuities or go into drawdown at retirement, so how can employers and schemes provide both a default and a range of choices which improve certainty of outcomes?

We have been working with a number of schemes to help them review their investment line-up to face the new environment. This has meant analysing membership characteristics to predict the range of retirement choices they're likely to need; helping schemes to decide how to prioritise between these needs for the default and other choices; and working on the design and implementation of these solutions, within the fee limits imposed by the charge cap.

In our analysis we commonly see that members coming to retirement in the next few years have small pot sizes and we expect them to take their pension as a single lump sum, attractive to do as the member is unlikely to pay much tax. As pot sizes grow, the tax on taking this route increases, so our expectation is

that fewer members with larger pots will take them all in one go. This is true for relatively modest pots where individuals want to plan their tax and take their benefits over three or four years, right through to people hitting the Lifetime Allowance (LTA). The decision between routes of annuity purchase and drawdown for these individuals, then, is best understood in terms of the attitude to risk in retirement income they have. Those who are most reliant on a regular income from their DC pots are most likely to purchase an annuity. Others are likely to use drawdown vehicles in some way.

So far so good, but in practice every scheme has a mixture of members likely to go down each route, and of course each member can combine their choices of product in any permutation. This raises many questions: Should the default fund aim to improve the certainty around one particular retirement choice? Should it reflect the retirement destination the majority of members are likely to use or one reflecting the views of the scheme designers?

In truth, there are no final answers to these questions, this industry is still developing its practice and it is not clear that any single approach is right for the industry as a whole. We help scheme designers to work through their priorities to try to find a solution which works for them. We use the membership analysis to discuss how the default and other investment options should be designed to support the needs and levels of engagement members have. This means choosing the benefit type, or types, the default

should now focus on; and introducing options through self-select or as lifecycles to cater for those taking other benefit types at retirement. We can summarise three main approaches to reviewing the aim of the default at retirement, routinely combined with providing investment options for other decisions:

- Retaining the current annuity-focus of the default. These schemes expect to review the default again as experience of the reaction of members to their new freedoms and the shape of the wider industry builds up. They may also have a view that annuities remain the best way for members to secure the retirement income the scheme is designed to deliver.
- Re-focussing the default onto another benefit type, most often lump sums. These schemes have focussed on the fact that most pots will be small in the short to medium term and it makes sense that the default reflects this. They expect to make changes to the default as the pot sizes build.
- De-focussing the default from any particular benefit type. This approach reduces some worst case scenarios of a member with very different benefit choices than the majority of members, but reduces the level of certainty over retirement proceeds other members have. These schemes may be hoping to get a higher level of engagement with members about their retirement choices to improve the certainty members will get.

We are also seeing employers and trustees increasing their efforts in educating members about their retirement choices, though this doesn't often extend to providing financial advice. Increasingly education is aimed at making members more confident in making decisions, and reflects the sense that the best way for schemes to deliver is to get members to tell the scheme how they'll retire. As members do become more engaged, this suggests they'll need greater access to budget planning tools before and after retirement, and schemes will need ways to translate these decisions into members' investments. This is one area where we can see there being a greater focus on technological development rather than investment design in future. We'll see software which enables every member to make budget planning decisions in retirement and feed these into changes in an underlying portfolio comprised of building blocks reflecting the timing of payments and risk around those payments. We're already seeing trends in robo-advice and aggregation of financial data in the US and can expect it to arrive here soon. Despite any regulatory concerns around advice, automated guidance through tools will become the norm over time.

Only time will tell whether the brave new world of pensions reforms creates a utopia or a dystopia for DC members. Good consultants and advisors can help focus the decisions of schemes onto the most important issues and populations, and to be pragmatic over the amount that can be achieved at each point of review.

While DC remains, in the main, small scale, we believe our sector has a vital role to play and we look forward to carrying that out.

The future of DC pensions



Chris Curry
Director
Pensions Policy Institute

This report highlights how quickly automatic enrolment is increasing the number of people who are saving in a DC scheme, and how much further membership will continue to grow. This has a number of implications. DC pension schemes are now a mass market operation, and both schemes and the policy environment will have to change over time to cope with this.

There are still some DC specific issues. The interaction between the way schemes are run and outcomes for individuals could be made clearer. More work could be done to assess the different outcomes that could arise from different regulatory structures, or how to assess value for money.

There is a strong policy focus on cost, value, simplicity, and defaults. Legislation and regulation will have to develop to keep pace with changes in the market.

More recently, with the advent of Freedom and Choice, focus has

turned to how funds built up within DC pensions are used in retirement. Most likely, there will be further policy developments when it becomes clearer both what individuals want from their DC saving, and what the market is able and willing to offer.

But it is very important to place the evolution of the DC pension landscape in context of what is happening in the wider pensions world, where it seems that nearly every other aspect of pension provision is also changing.

Next year will see the introduction of the New State Pension for new pensioners, a by-product of which will be the ending of contracting-out for Defined Benefit schemes. There are also likely to be further increases in State Pension Age announced as a result of the first independent review due to be carried out in 2017.

Tax relief is currently undergoing detailed scrutiny, and changes in the types and levels of incentives offered to both employers and employees through the tax system could change. Automatic enrolment is entering a new phase, covering smaller employers, while larger employers are starting to re-enrol those who initially opted-out.

And as highlighted in this report, just saving at the minimum level required by automatic enrolment will not in itself be enough for many people to achieve what they might consider a comfortable retirement. Other assets – such as housing – and other types of income – such as earnings from working longer – might well be important. All of these

changes will have implications for DC in one way or another.

Given that there has been so much policy change, and that so much of that change is still in the process of being implemented, it is very important that we take a step back and look at the pensions landscape as a whole, both as it is now and how it might look when the current reforms have bedded in. How does it all fit together? Which groups are likely to do well from the reformed system, and which groups not so well? Are there any gaps in the system that might require further reform?

This is not only important for policymakers and those providers involved in the DC marketplace. It is also important for individuals – real people who are already, whether by accident or design, making decisions that will determine how well they fare in retirement.

If there is one overriding conclusion from this report, it is that we need to do much better in helping individuals understand what they can do to make best use of DC pensions, and how to do it – or make sure that it happens on their behalf.

Appendix: PPI modelling for The Future Book

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 2012-based figures published by the ONS.

Current distributions of individuals across pension scheme types are taken from the Lifetime Labour Market Database (LLMDB)¹⁰⁴ 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.¹⁰⁵ 73.2% of those in DB schemes are assumed to work within the public sector,¹⁰⁶ 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.¹⁰⁷ It was assumed that the stocks of DC assets in 2010 were £275 billion.¹⁰⁸

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.

¹⁰⁴ Data from LLMDB 2010-11

¹⁰⁵ ONS (2013a)

¹⁰⁶ Average proportion of males and females employed in public sector COSR schemes according to LLMDB 2010-11

¹⁰⁷ TPR (2012) The Purple Book Chapter 4 Table 4.1 Assets discounted to the base year.

¹⁰⁸ Workplace DC assets taken from ONS (2012) Table 3, adjusted for decumulated assets.

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 57% 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%).

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%¹⁰⁹ 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 earning band is taken to be £5,772 to £41,865 with an earnings trigger of £10,000 (all in 2014/15 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 2018 in accordance with existing regulations) unless otherwise stated.

¹⁰⁹ Average annual workforce churn. DWP (2010) p49

General assumptions

Investment returns are modelled stochastically with curves generated by the PPIs 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: 4.4%
- Equity return: 7%
- Bond Return: 4%
- Cash Return: 4%

The asset distribution is assumed to be 56.7% invested in equities, 33.3% invested in bonds and 10% in cash such that the median return is 5.7%. 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,¹¹⁰ and 0.5% for Other DC/master trust schemes set up for automatic enrolment.¹¹¹

Long-term earnings growth is assumed to be 4.4%, in line with Office of Budget Responsibility (OBR) assumptions¹¹². The earnings band for automatic enrolment contributions and minimum salary assumption are assumed to grow with average earnings.

¹¹⁰ Average charges for trust-based schemes are 0.71% and for contract-based schemes 0.95%, DWP (2012b), and a 0.75% charge cap will be introduced for any DC default funds being used for automatic enrolment from April 2015 onwards.

¹¹¹ Equivalent Annual Management Charge for multi-employer/Master trust schemes such as Legal and General's Worksave, NEST and The People's Pension.

¹¹² OBR (2013)

Economic scenarios

This section provides a description of the model used to generate the economic scenarios for this project.

The model is based upon a combination of PPI economic assumptions and analysis of historical data. Table A1 summarises: the risk factors that were modelled; the sources of historical data used and; the PPI's long-term economic assumptions.

Table A1: Model risk factors

Abbreviation	Description
	Source of historical data
	Long term assumptions
G	Nominal GDP. ONS quarterly data from 30/06/1955 to present. ¹¹³ Annual GDP growth of 4.0%
P	CPI. ONS monthly data from 29/02/1988 to present. ¹¹⁴ Data from 31/01/1950 to 31/01/1989 derived from ONS RPI data using the methodology described by O'Neill and Ralph ¹¹⁵ . Annual CPI growth of 2.0%
W	Average Weekly Earnings ONS monthly data from 31/01/2000 to present. ¹¹⁶ Rescaled valued from ONS Average Earnings Index from 31/01/1963 to 31/12/1999 ¹¹⁷ . Annual average earnings growth of 4.4%
Y ¹	Long term yields. End of month FTSE Actuaries 15 Year Gilts Index from 30/11/1998 to present. ¹¹⁸ Low coupon 15 year gilts yields from 31/12/1975 to 31/10/1998. ¹¹⁹ Nominal return on gilts of 4%
S	Stock returns. End of month FTSE All share total return index from 31/12/1985 to present. ¹²⁰ Nominal return on equities of 7%

¹¹³ Source Bloomberg L.P

¹¹⁴ Source Bloomberg L.P

¹¹⁵ Robert O'Neill and Jeff Ralph, Office for National Statistics (2013)

¹¹⁶ Source Bloomberg L.P

¹¹⁷ Source Bloomberg L.P

¹¹⁸ Source Bloomberg L.P

¹¹⁹ Data from the Heriot-Watt/Institute and Faculty of Actuaries Gilt Database

¹²⁰ Source Bloomberg L.P

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 values of A and a and the volatilities and correlation of the ε_t are given in Table A2. 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. More sophisticated transformations of the CPI that allow for arbitrarily negative deflation could be considered instead, but seem unnecessary for the purposes of this paper.

Table A2: Model parameters

	G	P	W	Y ^l	Y ^s	S	
The matrix A	G	0.0000	0.0026	0.0000	0.0010	-0.0006	0.0000
	P	0.0000	0.0383	0.3936	0.0000	0.0000	0.0000
	W	0.1028	0.0000	0.3759	-0.0010	0.0020	0.0000
	Y ^l	0.0000	0.0000	0.0000	-0.0055	0.0000	0.0000
	Y ^s	6.4361	0.0000	0.0000	0.0000	-0.0348	0.0000
	S	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		G	P	W	Y ^l	Y ^s	S
The vector a'		-0.0101	-	0.0085	0.0220	-0.1190	0.0058
			0.1406				
Annual volatility of ε_t	G	0.41	0.09	1.20	1.34	1.25	0.73
	P						
Correlation matrix of ε_t	G	1.00	-0.01	0.11	0.07	0.10	0.13
	P	-0.01	1.00	0.02	0.06	0.04	-0.04
	W	0.11	0.02	1.00	0.15	0.07	-0.02
	Y ^l	0.07	0.06	0.15	1.00	0.30	-0.12
	Y ^s	0.10	0.04	0.07	0.30	1.00	-0.12
	S	0.13	-0.04	-0.02	-0.12	-0.12	1.00

Monthly log-returns on bond and money market investments are given by

$$R_t^j = Y^j/12 - D^j \Delta Y_t^j \quad j = l, s$$

Where D is the duration of the investment class, $D^l = 12.25$ and $D^s = 0.125$.

For a general reference on multivariate time series analysis see Lütkepohl¹²¹. Other applications of the modelling approach presented here can be found, for example, in Koivu, Pennanen and Ranne¹²² and Aro and Pennanen (2005)¹²³.

¹²¹ Lütkepohl (2006)

¹²² M. Koivu, T. Pennanen and A. Ranne (2005)

¹²³ H. Aro and T. Pennanen (forthcoming)

PPI Modelled Projection of Wealth and Assets Survey Data

The projection of pension wealth at retirement has been calculated by age cohorts based upon current pension wealth and level of saving.

Base Data

These projections are based upon wave 3 data from the Wealth and Assets Survey (WAS).

The WAS is a longitudinal survey that interviewed across Great Britain; England, Wales and Scotland (excluding North of the Caledonian Canal and the Isles of Scilly). Wave three achieved approximately 21,000 household interviews in the period July 2010 to June 2012.

Personal data:

- Age band, used to assess cohort
- Sex, used to assess retirement age
- Income, used to assess automatic enrolment eligibility

Scheme data:

- Pension scheme wealth
- Scheme type
- Contribution style
- Contribution level for employee and employer

Individuals have been rolled forward to 2015, subject to earnings growth, pension wealth growth and automatic enrolment.

Model assumptions

Assumptions used are consistent with the aggregate model unless stated otherwise, economic modelling is deterministic using the central economic returns.

Behaviours are unchanged over the accumulation period, contribution levels remain constant.

To assess potential retirement outcomes it is assumed that an individual will not opt out of automatic enrolment.

Imputed values in WAS are assumed to be appropriate.

All results are stated in 2015 earnings terms.

Projection of current pension wealth

Current pension wealth is expected to grow in line with the PPI's economic basis subject to fund management charges.

Projection of current pension contributions

The current level of regular employee and employer contributions to occupational DC schemes are projected assuming that the individual remains in work and is subject to earnings increases. Tax relief is applied to the contributions where appropriate based upon current rules.

Projection of future automatic enrolment pension wealth

Individuals have been assumed to commence automatic enrolment contributions subject to them meeting the qualifying criteria and not already making regular contributions to a pension scheme.

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.

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Contact:	Pensions Policy Institute
Chris Curry, Director	Kings College,
Telephone: 020 7848 3744	1st Floor, Virginia Woolf Building,
Email: info@pensionspolicyinstitute.org.uk	22 Kingsway, London, WC2B 6LE

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