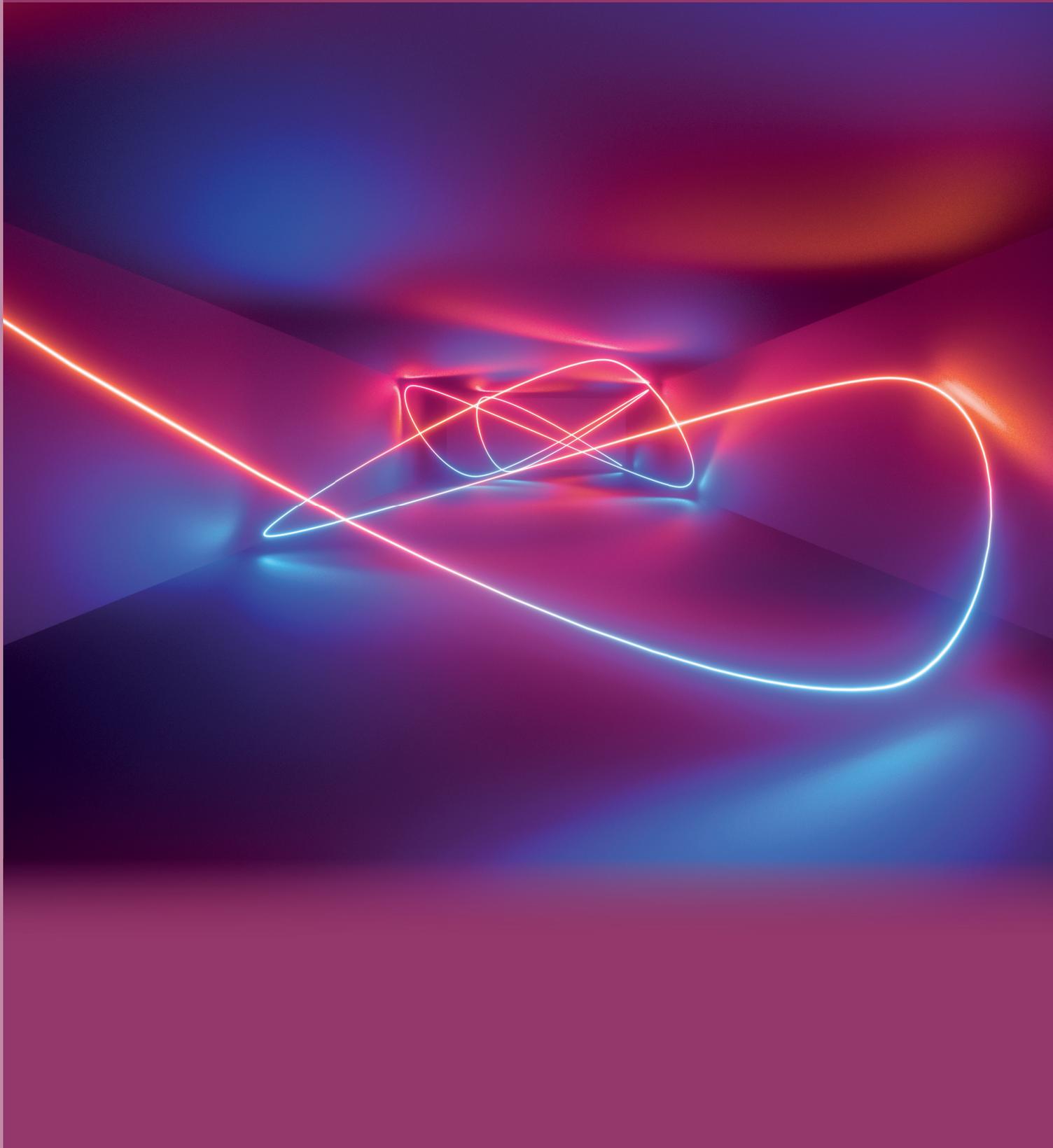


Pension charging structures and beyond;
an outcomes-focused analysis



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The Pensions Policy Institute (PPI)

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

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

The PPI has specific objectives to:

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

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

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

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Executive Summary

The type and level of charges levied on workplace pensions has recently been the focus of attention for policymakers and the wider industry. The introduction of the charge cap brought significant attention to cost, and much work has been done to improve transparency in how pension charges are calculated and levied.

However, low charges don't necessarily guarantee good value. And different charging levels and structures can impact on individuals' potential outcomes. The key questions that this research addresses are:

To what extent do charging structures and levels matter?

What more can be done to aid people to have a retirement income that meets their needs?

Key conclusion:

Charging structures and levels impact on member outcomes in retirement, but they are not necessarily the most important factor

Charging levels and structures have an important role to play in determining member outcomes. However, in order to secure improved outcomes, charges need to be considered alongside other factors such as contribution levels, investment strategies, member communications and experience, the strength of governance oversight and the impact of having multiple pots.

The main findings of this report are:

A low charge does not guarantee good value

People approaching retirement with multiple pension pots are more likely to lose out compared to people who either have a single pot throughout their working lives or who consolidate their pension whenever they change employer. The amount they lose will depend on the nature of the charges they face across their different pension schemes.

Charges do not necessarily reflect costs

The costs incurred in running a pension scheme are many and complex, and not all fall within the remit of the cap. Key among those that are exempt are transaction costs, which may be volatile and can be difficult to predict. This means that the composition and nature of charges is not always obvious, creating a transparency deficit.

Value for money can be hard to define

Value for money will have different meanings for different participants at different times in pension schemes, with a range of factors having a direct impact on stakeholders.¹ While employers may be looking for a scheme that provides them with low administration costs, members (who do not choose their scheme provider themselves) will be looking for a scheme that provides them with their desired retirement outcomes.

Transparency is important, but not necessarily a solution

Greater transparency in terms of default strategies and their costs and charges will allow for greater understanding of the charges levied by providers, but may not always produce data that members or employers can understand or use effectively.

Cross-subsidies exist within pension schemes, but can be difficult to identify

Cross subsidies within automatic enrolment pension schemes are often associated with specific strategies. People who continue to pay ongoing Annual Management Charges (AMC) even when not contributing to their pension effectively subsidise current members, and smaller pots can be loss-making for providers meaning that it can be difficult to reflect underlying cost. Also, where a scheme makes no administrative charge to the employer, the members (employees) could be seen to be subsidising that employer. However, any such cross-subsidies are likely to be very small as far as the majority of individual members are concerned.

Different charging structures will result in different outcomes for savers

Combination charges (where an AMC is combined with either a flat fee or a contribution fee) generally provide better outcomes over time than an AMC-only approach. This is particularly true when an individual has deferred or multiple pots, where the same AMC continues to be levied even when contributions have ceased. However, fixed flat fees can erode deferred savings over time.

Automatic enrolment is likely to see people reaching retirement with multiple pension pots

There is no doubt that automatic enrolment has been successful in increasing numbers of people saving into workplace pensions. However, the fact that automatic enrolment results in people having multiple smaller pots can work against people achieving better results, as they can lose out by paying multiple charges across the accumulation period. Multiple pots can also mean that people are at risk from losing track of their pensions.

There are three main approaches that can tackle the issue of people accumulating multiple pots, though none of these are without their drawbacks:

- A single pot approach, whereby the saver does not change their scheme throughout their working life, and the employer pays into their existing scheme.
- 'Pot follows member' whereby an individual's existing pot is automatically transferred into their new employer's pension scheme.
- Member-borne consolidation / reinvestment, whereby the saver makes an active decision to consolidate their existing pension pot into their new employer's scheme, or asks the new employer to make contributions into their existing scheme.

A single pot approach can provide better retirement outcomes, but this depends on the scheme an individual is first enrolled into

People who are initially enrolled into and remain in a scheme with an AMC-only strategy, or one that maintains a relatively high AMC will still have better outcomes than those who have multiple pots in schemes with a similar charging structure. These people could gain from moving into combination-charge schemes that offer savings for larger pot sizes. Similarly, those enrolled into combination schemes could most likely see their pot size fall if they left it for another scheme with a different approach.

1. Echaliier, M. *et al.* PPI (2016).

Pot follows member can provide better retirement outcomes, but this depends upon the nature and order of the schemes an individual is enrolled into

As with the single pot approach, 'pot-follows-member' can see people increase their retirement income, but only if they are fortunate in their automatic enrolment pathway. Again, the advantage is with those people who are enrolled into and remain in combination schemes with a combination charging strategy either throughout their working lives, or as their pension pot increases. Those who remain in schemes without variation are likely to lose out in comparison.

Member-borne consolidation can result in better retirement outcomes, but will require greater engagement

Both previous options mean that individual scheme members have little control over the default schemes they are enrolled into. When an individual changes employer, they can opt to have their current pension pot consolidated into their new scheme, or can opt for a non-default investment strategy from the same provider, but they cannot choose to remain in their previous scheme without losing the employer contribution, something that would be likely to more than offset any potential gains.

However, even this limited ability to control their pension saving can have some positives, and pensions dashboards could allow for more engagement from members, resulting in better informed decisions about their pensions.

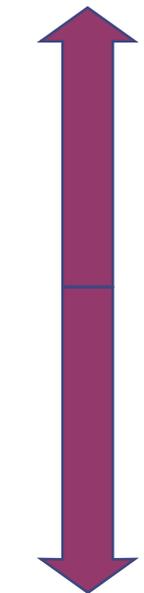
Contribution levels tend to have the most significant impact on pension outcomes

A person contributing an extra 2% of salary on top of their statutory minimum contribution into their workplace pension will achieve a 25% increase in retirement income regardless of the charging structure they are in.

Every automatic enrolment charging structure has advantages and disadvantages for providers, employers and members alike

Table Ex1 provides a summary of how different approaches to charging can affect stakeholders.

Table Ex1. Advantages and disadvantages of charging structure approaches.

Charging structure	Pros	Cons	
AMC Only	<ul style="list-style-type: none"> Easier to understand for employers and members. Provides for easier comparison between schemes. Smaller pots benefit from cross-subsidies. 	<ul style="list-style-type: none"> Can involve considerable cross-subsidies from those with larger pots. Difficult to split out administration and investment costs Requires greater initial capital outlay from providers. 	 <p>Higher cross-subsidy</p> <p>Lower cross-subsidy</p>
AMC plus contribution charge	<ul style="list-style-type: none"> More cost effective at start-up for providers. Deferred members are not penalised when no longer contributing 	<ul style="list-style-type: none"> Difficult to understand the split between costs, such as those related to administration and investment Active members can lose some of the advantage of making additional contributions 	
AMC plus flat fee	<ul style="list-style-type: none"> More cost effective at start-up for providers Easier to split out administration and investment charges. More transparent in aligning costs and charges. Reduces cross-subsidy. 	<ul style="list-style-type: none"> Active members making lower contributions may lose out. Deferred members with multiple small pots could face significant erosion of savings. 	

Introduction

This report is informed by desk research, PPI modelling, and interviews with industry, the Department for Work and Pensions and regulators.

Automatic enrolment into workplace pensions

Automatic enrolment into workplace pensions was introduced in 2012 as part of a raft of measures designed to tackle widespread under-saving for retirement. Over 10 million people having been enrolled, and new approaches to workplace pensions appearing.

Automatic enrolment:

- Made it mandatory for employers to enrol workers into a pension scheme, and make minimum mandatory contributions.
- Employees have a one-month window to opt out of the scheme.
- Employees are automatically re-enrolled at three year intervals unless they again choose to opt out at the time of re-enrolment.

Master Trusts (and the pensions market generally) have evolved to meet the needs of automatic enrolment

The need for employers of all sizes to assume the responsibility of enrolling their staff into workplace pension schemes has seen the expansion of Defined Contribution (DC) master trusts. Although master trusts existed before automatic enrolment, they quickly evolved to become a solution for employers seeking to meet their automatic enrolment obligations. Master trusts provide a single pension scheme to a number of non-aligned employers, and their size (National Employment Savings Trust (NEST), for example, currently has 4.1 million active and 3.8 million inactive members covering over 600,000 employers;² The People's Pension has 1.8 million active and 2 million deferred members covering 81,000 employers)³ allows them to reduce administration costs and provide a relatively low-cost off-the-shelf product.

2. National Employment Savings Trust Corporation Annual report and accounts, 2019

3. The People's Pension Scheme Annual report and financial statements, 2018

In order to ensure that members who did not make an active choice into an automatic enrolment scheme were not burdened by high charges, in 2015 the Government introduced an annual cap equivalent to 0.75% of funds under management for default strategies in automatic enrolment schemes. Members who make an active choice to opt for a strategy other than the default are not covered by the cap; however, currently 99% of members in automatic enrolment master trusts remain with the default strategy.⁴

There are five basic forms of charging structure within master trust default strategies:

- A single Annual Management Charge (AMC) paid annually as a proportion of an individual's funds under management. It is paid every year until retirement, irrespective of whether contributions are still being made.
- A single fund AMC plus a flat-fee charge. This is an AMC with an additional flat-rate levy, irrespective of whether contributions are still being made.
- A single fund AMC plus a percentage contribution charge levied during the periods when contributions are made.
- A variable fund AMC. This is an AMC that varies according to the total amount of funds under management, with a higher percentage levied against smaller pots, reducing as they grow.
- A single fund AMC with a flat fee charge and a floor on the fund amount below which no charges are taken (de minimis).

This report examines the ways in which schemes in the automatic enrolment market levy their charges and the effects this can have on scheme members.

Chapter one examines the importance and history of pension charges since the introduction of Stakeholder Pensions in 2001, the effects of automatic enrolment and the growth of Master Trusts. It also discusses existing charging structures within the context of value for money and transparency.

Chapter two describes how charges are comprised, their relationship to costs, and examines the levels of transparency and existence of cross-subsidies within different charging structures.

Chapter three uses PPI stochastic modelling to examine the effects of different charging structures on a number of hypothetical individuals and show how charging structures, and combinations of charging structures over a working lifetime can affect saver outcomes.

Chapter four examines the implications of charges along with other factors that can influence people's pension outcomes, and how these outcomes may be improved.

4. Silcock, D. PPI (2019).

Chapter One: What is the history of pension charges in the UK?

This chapter examines the evolution of pension charges since the introduction of Stakeholder Pensions in 2001. It examines industry, government and regulatory initiatives to improve transparency and value for money in pensions, within the contexts of expanding pension saving through the introduction of automatic enrolment, and the growth of master trusts. It also discusses the different types of charging structures that are currently used in the market within the context of value for money.

The recent debate around charges in automatic enrolment schemes has been driven by the existence of the charge cap, but charging levels and structures are not the sole determinant of member outcomes. Since the introduction of Stakeholder Pensions in 2001, progress has been made to promote and deliver transparency in pensions charging, and the introduction of disclosure requirements and common reporting is expected to improve transparency and enable cross comparison. However, there is not yet a consensus on how to assess value for money.

Charging structures and levels impact on member outcomes in retirement, but they are not necessarily the most important factor

Charging levels and structures clearly have a role to play in determining member outcomes. However, securing improved outcomes needs to be considered alongside other factors such

as contribution levels, investment strategies, member communications and experience, the strength of governance oversight and the impact of having multiple pots.

Much of the debate around charging strategies has focused on issues of transparency and disclosure rather than the impact on scheme members. However, while charges do affect pension outcomes, other interventions could boost retirement outcomes. For example, previous PPI research showed that for members of pension schemes, participating from an early age and increasing contribution levels are key to improved results, and can have a far greater impact than charges alone.⁵ Through a combination of active choices, such as early enrolment, higher contributions, working longer and making informed decisions at retirement, PPI found that the size of a pension pot could increase by 250%.

5. Adams, J. & Curry, C. PPI (2012).

The introduction of Stakeholder Pensions in 2001 brought a new focus on the levels of charges levied against pension scheme members and introduced a cap on these charges

The 1999 Welfare Reform and Pensions Act legislated for the creation of Stakeholder Pensions, with the Government seeking to increase saving for retirement through the introduction of simpler, more accessible and transparent products. Employers with five or more staff had to offer a Stakeholder Pension, although they were under no obligation to offer contributions. This introduction of Stakeholder Pensions fundamentally changed the way pensions are charged for by coalescing the standard way of charging for pensions around an Annual Management Charge (AMC).

Prior to the advent of Stakeholder Pensions, there was little uniformity or consistency within pensions charging, and the often high level of charges could have a deleterious impact on pot sizes, with significant reductions in yield, particularly for pots with shorter periods of contributions. Charges were also calculated differently by different providers, leading to variations, and a wide range of additional costs were also expected to be borne by members.

The initial Stakeholder Pensions legislation provided for an annual cap on charges of 1% of the fund value. In 2005, this cap was increased to 1.5% for the first ten years of the member's pension savings, and 1% thereafter. This increase was due to lobbying by providers of Stakeholder Pensions, who, at the time, provided strong evidence that the lower level of charge was uneconomic to promote and sustain, particularly for low-income savers and employees of smaller firms.

Automatic enrolment changed the landscape for UK workplace pensions

As part of a raft of measures designed to reduce pressure on future State Pension costs and tackle widespread under-saving for retirement, in 2012 the Government began to automatically enrol people into workplace pension schemes for people if they were aged 22 and over and were earning more than £10,000.

Box 1.1: Automatic enrolment

- Was introduced from October 2012.
- Made it mandatory for employers to enrol their workers into a pension scheme and make mandatory minimum contributions. If an employee does not want to join the scheme, they have to make an active decision to opt out within one month.
- Those who have opted out are automatically re-enrolled within a three year period (and every three years thereafter) unless they again make an active decision to opt out.
- In 2018, the minimum required percentage of band earnings paid by employees and employers into automatic enrolment schemes rose from 3% to 5% of a band of earnings, and this rose further to 8% in April 2019.
- Despite the 2018 contribution raise, the percentage of people remaining in automatic enrolment workplace pension schemes has remained steady at 91% on average.⁶

The creation of NEST as a delivery mechanism for employers to meet their automatic enrolment duties re-opened the debate on charging structures in pensions

In 2008, the Personal Accounts Delivery Authority consulted on the charging structure for the new Personal Accounts Pension Scheme, now called the National Employment Savings Trust (NEST) to help employers meet their automatic enrolment duties. NEST is unique among workplace pension providers, as it has a public service obligation to accept any employer.

The creation of NEST also saw the introduction of a combination charge of an AMC plus a percentage of the contribution made into workplace pensions. This was driven by the economics of setting up such a large pension scheme and that a large capital injection was required to set up NEST, financed by a loan from the Government that had to be repaid over time. The structure brought forward the point at which NEST would reach break-even. The AMC plus contribution charge was designed to be broadly equivalent to a 0.5% AMC, but as explored below, this depends on the experience

6. Department of Work and Pensions (2017b)

of individual members. The introduction of NEST and its combination charging structure paved the way for new entrants into the market to follow suit and offer alternative forms of charges.

Automatic enrolment saw the workplace pension market expand

Following the introduction of automatic enrolment in 2012, the requirement for employers to provide a Stakeholder Pension was repealed. This meant that unless employers were using a Stakeholder Pension to meet their automatic enrolment obligations, workplace pensions were no longer subject to any charge cap, meaning, effectively, that providers faced little regulatory control over what they could charge. At the same time, research published by Department for Work and Pensions (DWP) in 2012⁷ revealed that only one in three employers with workplace pension schemes were aware that members paid charges at all, a cause for concern given that under automatic enrolment employers would be responsible for choosing a pension scheme for their workers.

The effective removal of the stakeholder charge cap on workplace pensions sparked a debate within the pensions industry around value for money and pensions charges

In November 2011, the National Association of Pension Funds (now the Pension and Lifetime Savings Association (PLSA)) reported that there was no clear universal requirement for charges to be disclosed, nor was there any standardised approach to how they were shown.⁸ Following this, in November 2013, a Joint Industry Code of Conduct, endorsed by PLSA and the Association of British Insurers (ABI), in association with the Investment Association and the Society of Pension Consultants was published. The Code was generally welcomed by providers, however some voiced concern that the focus on charges could mean that employers and members might ignore the contribution of other factors, such as investments and governance, to outcomes. Further work by the ABI⁹ and the Investment Association¹⁰ in 2012 and 2013 accelerated the debate around charging.

While these initiatives were generally welcomed by politicians and regulators at the time, a subsequent report from the Office of Fair Trading (OFT)¹¹ examining the workplace pensions market concluded that competition alone could not be relied upon to drive value for money. In particular, it cited the weakness of the buyer side of the market as a risk factor, quoting the lack of expertise and experience on behalf of employers entering schemes, together with the lack of involvement of employees in decision-making as key issues. Furthermore, it highlighted that misalignment of interest between employers and employees (including benefits for employers versus employees and between active and deferred members), levels of employer understanding, and lack of transparency and consistency in charging between providers as factors that could lead to reduced outcomes. It concluded that

“...all costs and charges associated with pension schemes, including those associated with investment management, should be disclosed in a framework that will allow employers to compare a commonly defined single charge.”

The only exception to this would be investment management transaction costs.

The OFT report led to an independent audit of costs and charges in legacy schemes, and also for the DWP to issue a consultation in 2013 looking at measures to mandate disclosure and provide protections (capping) for members in default automatic enrolment schemes. Powers were taken in the Pensions Bill 2013/14 to make regulations to improve transparency and cap charges in workplace pension schemes. It also led to the introduction of mandatory Independent Governance Committees (IGCs), bodies that sit independently of the provider, and serve the interests of scheme members by scrutinising value for money and making recommendations to scheme boards.

7. Wood, A., *et al.* (2012)

8. NAPF, Making Pension Charges Clearer, 2011

9. ABI Agreement on the disclosure of pension charges and costs, 2013

10. Investment Association Statement of Recommended Practice, 2013

11. OFT, Defined contribution workplace pension market study, 2013

Following Government consultation in 2014, a charge cap of 0.75% of funds under management (or equivalent in combination charges) was introduced on automatic enrolment default schemes

Current rules allow for three types of charging structure to be used in the default arrangements of automatic enrolment master trusts. These are subject to different but broadly equivalent charge limits:

- a single percentage charge – capped at 0.75% of funds under management
- a combination of a contribution charge plus a percentage of funds under management equivalent to 0.75%
- a combination of a monthly or annual flat fee plus a percentage of funds under management charge equivalent to 0.75%

From this date, schemes were also required to report annually on their costs and charges, both through a report from the chair of the board of trustees and from the associated IGC.

Schemes are also required to provide increased transparency

The Occupational Pension Schemes (Administration and Disclosure) (Amendment) Regulations 2018, which came into force in April 2018 require DC scheme trustees to publish charge and transaction cost information for all investment options in the Chair's Statement with an illustration of the compounding effect of the costs and charges.

The Financial Conduct Authority (FCA) rules that came into force on 3 January 2018 require investment managers to provide information about transaction costs and charges in response to a request from a relevant pension scheme. These rules now enable trustees to obtain, for the first time, a disclosure of the transaction costs that scheme members incur calculated according to a standardised methodology.¹²

The institutional disclosure working group, established by the FCA to support consistent and standardised disclosure of costs and charges to institutional investors reported in June 2018, recommended a package of measures designed to enable those investors, who are

able, to exert greater competitive pressure on asset managers. These would increase the transparency of costs so that those seeking information can get it, including through more consistent and standardised disclosure of costs and charges to institutional investors.¹³

This, in turn led to the establishment of the Cost Transparency Initiative (CTI) - a partnership initiative between the PLSA, the Investment Association and the Local Government Pension Scheme (LGPS) Advisory Board with the aim of:

- Promoting understanding, raising awareness, and encouraging full transparency and standardisation of costs and charges information for institutional investors.
- Delivering industry standards on cost disclosure.

To meet these aims, the Cost Transparency Initiative¹⁴ has developed templates towards a uniform method for asset managers to report on the many layers of costs and charges incurred during the investment process, including those related to transactions, brokerage, custody, legal services and performance fees. Currently these remain works in progress and voluntary, but they could offer a longer-term solution to the current lack of transparency.

However, greater transparency may not result in greater clarity

The UK Work and Pensions Select Committee's recent enquiry into pension costs and transparency noted "...concerns about the effect of investment management charges, transactions, advisory and other intermediation costs, in eroding the value of individuals' savings. These are part of broader concerns that low levels of customer engagement and understanding, coupled with costly and opaque intermediation, risk leading to poor outcomes for pensioners."¹⁵ The complexity and opacity of charges, where an array of very different costs are bundled together, make them difficult for scheme members and employers to understand, and this may hinder their abilities to make informed choices.

The extent to which transparency is useful depends upon the ability of the end user of the data to comprehend and analyse it effectively. Producing

12. HM Government (2018)

13. FCA (2018)

14. PLSA (2019)

15. Work and Pensions Select Committee (2018)

large amounts of unused technical and esoteric data may lead to confusion and poorer decision-making as well as actually serving to drive up costs in terms of production and dissemination, leading potentially to higher charges. To this end, thought should be given as to what information would prove most relevant to different users. If transparency is to aid value for money, then it must not only show the links between costs and charges, but between charges and outcomes.

If transparency is to aid value for money, then it must not only show the links between costs and charges, but between charges and outcomes.

Automatic enrolment has seen a huge increase in the number of people with workplace pensions

The introduction of automatic enrolment has seen a significant rise in the numbers of people saving regularly into DC pension schemes, from 4 million to 14 million in seven years,¹⁶ covering almost 1.5 million employers.¹⁷ This number will continue to rise as new members join the labour market, others benefit from automatic re-enrolment and, as expected, the age at which automatic enrolment occurs is reduced to 18 by the mid-2020s.

Box 1.2: There are three basic types of workplace DC pension schemes that are being used for automatic enrolment

Single employer trust-based DC pension schemes take the form of a trust arrangement, typically offered to the employees of one or more connected employers, governed by a board of trustees who owe a fiduciary duty to members.

Contract-based DC pension schemes are run by a third party pension provider (for example, an insurance company). Funds are owned by the individual with a contract existing between the individual and the pension provider, into which an employer can contribute.

Master trusts are governed by a board of trustees, with some offering the same terms to multiple non-aligned employers and their employees.

Automatic enrolment master trusts can provide low costs for both employers and members because:

- They have the potential to achieve significant economies of scale, spreading the fixed costs of providing a pension (such as governance and some aspects of administration) over many members;
- They have a single board of trustees, which is tasked with holding the providers of services to account and acting in the members' best interests;
- They sometimes offer more commoditised products – with very few bespoke offers for employers which can serve to keep costs lower.

Much of the design and subsequent success of automatic enrolment has been the result of a policy of 'harnessing inertia'. The policy design means that people are saving in a default fund unless they make an active decision to opt out or choose their own investment approach. Within automatic enrolment master trusts, 99% of members remain in the default strategy.¹⁸ Those who make an active choice to opt for another investment strategy are not covered by the cap.

The UK's automatic enrolment market is highly competitive both domestically and when considered internationally

Although the charge cap had an immediate effect on the way that automatic enrolment schemes designed and implemented charging structures, the subsequent continuing downward trend is attributable to a highly competitive market, with most providers' charges being well below the cap of 0.75% or equivalent.

PPI research looking at costs and charges in an international context,¹⁹ published in 2018, found that DC fund charges in the UK were generally towards the lower end of the countries compared. They remain competitive with the US and cheaper than Australia. The Dutch and Swedish markets may appear to provide better value, but are more complex with additional charges levied. It is possible that where there are differences in the level of charges, that reflects a wider range of services being offered, such as life insurance and financial advice in

16. The Pensions Regulator (2019)

17. Department for Work and Pensions (2019)

18. Silcock, D. PPI (2019)

19. Hurman, N. PPI (2018).

Australia, or a more sophisticated investment policy, that could potentially result in better outcomes for members.

The charge cap continues to be a topic of debate and changes in investment approaches may provoke further change

In February 2019, the Government published a consultation on the consideration of illiquid assets and the development of scale which seeks to explore how DC schemes can invest in assets with variable fees while still meeting the charge cap. Their suggested model would involve;

- Trustees declaring a fixed rate fee at the beginning of the year, using the prospective method, based on funds under management at the start of the year.
- Trustees then subtracting the amount of the fixed fee charge (for example 0.5%) from the charge cap (0.75%). The remainder (for example 0.25%) would represent the yearly cap which any extra performance fees, administration and investment charges must not exceed.

As a result of the increased resources required to invest in, value and monitor illiquid assets, the fees charged by fund managers, which are eventually passed on to members, are higher than for publicly listed equities and bonds. However, the growing attention on illiquid assets from the investment industry, Government and regulators alike means that DC platform managers may seek to restructure their platforms to include them.

Value for money can be difficult to measure in automatic enrolment providers

As noted previously, transparency and levels of charging are important factors in delivering good member outcomes. However, they represent only one side of the equation when it comes to assessing whether a pension scheme or provider is delivering value for money for members.

The concept of value for money combines analysis of both costs and benefits and allows governing bodies, advisers, employers and members to understand the value provided by the scheme. However, despite efforts within the industry and by regulators, there is no national consensus as to the definition of value, and it may mean different things to different parties.

While at a basic level, value for money can be defined as “the optimal use of resources to achieve the intended outcomes”, as the OFT noted in its study of the workplace pensions market,²⁰ there isn’t necessarily an alignment of interests between employers and employees in what constitutes value for money.

The complexity involved in calculating charges can make it difficult to assess whether they represent value for money for scheme members.

The prime motivation for pension scheme members is to have a comfortable retirement that matches their expectations.^{21,22} Beyond this, there is little evidence of detailed engagement among the vast numbers of people who have been automatically enrolled, though issues such as strong safeguards, the level of employer contributions and flexibility have been cited as important alongside charges.

The common hypothesis is that members make decisions on whether a pension scheme offers value for money based on the following attributes:

- How much it costs the member,
- What benefits and services they believe/feel they will receive, and
- What substitutes are on offer.²³

It can be difficult to disaggregate value for money from value for members.

Value for members is a wider definition, which while considering the value of the product, also examines the employer role in providing pensions, by looking at, for example, contribution levels and the extent of the employer’s contribution to the costs

20. OFT, Defined contribution workplace pension market study, 2013

21. ORC research into member’s views of value for money, for Zurich UK IGC

22. Value for Money Member Research: The Voice of the Member, Sackers, 2017

23. Echaliier, M. *et al.* PPI (2016).

of administration. The Regulator offers the following considerations as to how trustees of schemes should consider value for member:

The Pensions Regulator (tPR) requires trustees to measure value for money for members in terms of:

Trustees have a legal duty to assess value for money. Although there is no set assessment method, tPR defines value for money as being rooted in the relationship between the costs to members of the service provided and the level of services they receive across four key areas;

- scheme management and governance,
- administration,
- investment governance and
- communications.²⁴

Box 1.3: tPR also offers a broader approach to value for money

- Governance – the effectiveness of the trustee board and its interaction with both service providers and the employer.
- Security of assets – whether member benefits are protected.
- The extent of the employer’s contribution to the cost of services.
- The value for money of services paid for by the employer.
- The level of the employer’s contribution to members’ funds.
- Long-term value of scheme design, such as performance target.

However, while this definition generally works well for single employer trust based schemes, it doesn’t fully apply to master trusts or providers since there is generally little a provider can directly do to influence the level of contributions above mandatory levels and the extent of employer support towards the cost of administering a scheme.

Another example of finding a definition of value for money for members illustrates the wide variation of approaches, and the problem of agreeing on an industry-wide definition.

Box 1.4: The following factors have also been suggested as representing value for money for members:²⁵

- A TER in the region of 0.5% per annum.
- A multi-asset default fund with a glide path that is subject to regular modelling scrutiny in relation to the member income replacement ratio and the downside risks.
- Expert independent governance fully aligned with members’ interests.
- Effective member communications that focus on improving the outcome, e.g. paying higher contributions, working longer and/or delaying the annuity purchase date.
- An efficient consolidation system that helps members transfer older DC pots into the new scheme, where these are held in poorly diversified funds with higher charges.
- A decumulation service that is part of the scheme and provided by a specialist retirement-income adviser that adheres to robust service standards.

As the end beneficiaries aren’t the buyers, alignment of interest has the potential to secure improved outcomes

Scheme members, whilst customers, are not buyers of a product. The choice of provider lies with the employer. This is why alignment of interest is so important in determining and assessing value for money, since what constitutes value for an employer might not be good value for the member and vice versa.

Employees have little say in what scheme they are enrolled into, its design and the features offered, though they do have a number of options available to them, as they can choose to;

- Increase their contributions above the mandated minimum,
- Opt to reinvest their existing pot into a new scheme when they change employer,
- Opt out of the default fund and join a different fund provided by the same provider (thereby no longer being subject to the charge cap),

24. The Pensions Regulator (2016)

25. Harrison, D. *et al.* (2014).

- Opt out of automatic enrolment altogether, perhaps to set up a personal workplace pension (thereby losing their employer contribution), or
- Opt in to a workplace pension scheme if they currently fall below the threshold for automatic enrolment.

The best value for the employer and employee might not be aligned

This means that best value for the employer and employee might not be aligned. A scheme that might represent best value to an employer by not charging for services such as automatic enrolment assessment and general administration, might not be as beneficial to members if they are having to subsidise those

services. Likewise a really low member charge, providing better value for a member, might not deliver as good value for employers if they have considerable other charges. Furthermore, employers might prioritise the importance given to services which benefit them rather than members, for example focusing on effective employer administration over member communications and engagement.

This report explores these issues within the context of different charging structures in the subsequent chapters.

Chapter Two: How do charges work and who pays for what?

This chapter describes how charges in automatic enrolment schemes are comprised, their relationship to costs, and issues concerning transparency and cross-subsidies, with a particular focus on master trusts.

There is a wide range of charging structures in auto enrolment default schemes that fall within the charge cap of 0.75% or equivalent. However, the number and variety of costs covered by the charge cap make it difficult to assess how they relate to charges. This has obvious repercussions for transparency and decision-making.

Transparency is an issue in that without it, stakeholders (including employers, members, advisers, trustees and IGCs) may not feel able to make informed and active decisions about the value of pensions. However, transparency as an end in itself may not allow stakeholders access to information that they can utilise effectively, because they may not have the requisite skills or confidence to take advantage of it. Transparency is a necessary but not sufficient condition for value for money.

Cross-subsidies exist within all charging structures, but can be hard to define and measure. In many cases, these may change in nature as pension pot sizes grow and people's contributions and participation changes.

In order to examine the impact of charging structures, it is important to recognise the relationship between charges and costs

There is a wide range of activities associated with the administration of a pension scheme, and each of these activities generates associated

costs. This chapter examines the relationship between costs and charges and the implications in terms of transparency, cross-subsidies and value for money.

The range and level of costs determine to some degree the charges that are borne by scheme members

The relationship between the costs incurred in running a scheme and the charges levied on the members is not straightforward, and not all activities fall within the scope of the charge cap. This, together with the wide range of potential costs makes it difficult to understand how costs relate to the charges paid by scheme members and, similarly, how charges represent costs to the provider. This in turn has the effect of making comparisons within different charging structures extremely difficult to calculate or define. An AMC, as a percentage of funds under management, will by its nature not accurately reflect the costs incurred by a provider on behalf of an individual member. To illustrate this complexity, the Department for Work and Pensions (DWP) has created a lengthy, though not exhaustive, list of eighteen costs linked to activities²⁶ (Appendix A, Box A).

26. Department for Work and Pensions (2014)

The wide range of cost-generating activities that fall within the cap is evidence of the difficulty of breaking charges down, with each activity correlating to a fraction of an individual's pension pot.

There are also costs that currently fall outside the charge cap

Costs not within the charge cap are mostly related to transaction costs - the variable costs associated with buying, selling and borrowing the underlying investment instrument (Appendix A, Box B). One of the reasons that transaction costs are currently excluded from the cap is that they are less easy to predict than other ongoing charges. The number (and therefore the overall cost) of transactions within any given year will depend upon a variety of external factors, particularly the state of the market. Some have even argued that capping these costs could lead to perverse behaviours and outcomes as it could lead to schemes acting sub-optimally. This further complicates the aim of achieving greater transparency for employers and members alike.

Even if every activity undertaken by providers and their agents to deliver a scheme were costed, there would still be opaque areas

One-off or variable transaction costs and cross-subsidies remain difficult to quantify, and their costing, if wrongly interpreted, could prove counter-productive in increasing clarity; what may appear to be savings may actually prove otherwise. For example, full transparency could expose added short-term costs (such as those related to investment) that actually serve to deliver better outcomes for members over a longer period.

There are several basic member charging structures among default automatic enrolment schemes.²⁷ These include;

- A single fund AMC, paid annually as a proportion of an individual's funds under management. It is paid every year until retirement, irrespective of whether contributions are still being made.
- A single fund AMC plus a flat-fee charge. This is an AMC, but with a flat rate levy that continues irrespective of whether contributions are still being made.
- A single fund AMC plus a percentage contribution charge levied during those periods when contributions are being made.
- A variable fund AMC. This is an AMC that varies according to the total amount of funds under management, with a higher percentage levied against smaller pots, reducing as they grow.
- A single fund AMC with a flat rate fee that is not levied on pots below a defined level.

Where there is a combination of an AMC and a contribution charge or flat fee, the total combination charge as a percentage of funds under management must remain within the current charge cap equivalent of 0.75% as assessed via DWP published equivalency tables.

These five illustrative structures will form the basis of much of the modelling work undertaken in Chapter Three, where a range of outcomes for hypothetical scheme members are explored in detail.

The factors that inform the charging strategy developed by scheme providers include:

- Profitability and projected returns over time;
- Sustainability and the availability of capital at start-up (AMC-only approaches will require greater capital than those levying additional fees);
- The levels of cross-subsidy required to balance fairness and profitability;
- Ease of comprehension and use by employers and members; and
- The level of employer-borne fees necessary to make the scheme competitive.

The competitive nature of the UK market outlined in chapter 1, coupled with the fact that the automatic enrolment market is still evolving, means that charging structures and levels are under constant review.

The complexity of the relationship between costs and charges means that it can be difficult to understand what services members are paying for, and where cross-subsidies occur

In order to understand exactly how cross-subsidies work in providers, more transparency will be needed to allow for sophisticated modelling to take place. Also, as the market matures, patterns of cross-subsidy are likely to be more easily observed.

27. Employers can also face charges in some schemes.

The traditional understanding of cross-subsidies in pension schemes is the mortality cross subsidy in Defined Benefit (DB) schemes. This is where the funds belonging to those who die earlier subsidise the pension payments for those who live longer than expected. In DC schemes, the mortality subsidy does not apply in the same way. In DB, pension payments come from the pooled total of the fund, whereas in DC, each pot is self-contained and separate within the scheme as a whole. Since the introduction of pension flexibilities in 2015, it has not been mandatory to purchase an annuity and the number of annuities purchased has fallen to 12 per cent of newly-accessed DC pension pots.²⁸

Cross subsidies occur differently within the various charging structures

A cross-subsidy can be defined as a scheme member paying more in charges than the costs incurred on their behalf, while at the same time a different member pays less in charges than the costs they incur. There have always been cross subsidies in pensions, and they can only truly be removed by individual member pricing. However, there is a value question about what is an acceptable level of cross subsidy between members.

Despite increasing transparency, costs incurred by providers are not generally identifiable at a member level. Furthermore, different providers will incur differing costs making direct comparison more complex.²⁹

Costs tend to be made up of variable and fixed amounts to the member and other costs incurred at a scheme level. Fixed costs are the same for each member regardless of further circumstances, whereas variable costs may be linked to features such as fund value.

For some costs there may be no direct link between the individual member and incurring the cost. Some key examples are:

- **Variable.** Investment management fees tend to be linked to the fund amount. This may not be perfectly linked to the manner in which costs are incurred by the investment manager, but it is generally how investment managers pass on their costs to pension schemes.
- **Fixed.** Annual statements that cost the same to issue to all members.
- **Other.** Head office costs that need to be split amongst the members.

Box 2.1: PPI modelling explores how different charging structures create different cross subsidies.³⁰

PPI modelling compared three illustrative charging structures to determine where cross-subsidies occur. Assuming that the different structures aligned to a similar overall levy of 0.5%;

- A charging structure based on an AMC of 0.5% alone will see members with larger pots subsidising new members and those with smaller pots because larger pots incur higher charges.
- A charging structure combining an AMC of 0.3% with a flat fee of £1.50 per month will see a similar cross-subsidy, although this will be lower, as the flat fee is neutral except in cases where a member is still charged even if they are no longer contributing. In these cases, deferred members will be subsidising active members.
- A charging structure combining an AMC of 0.3% with a 1.8% contribution fee will see members with a higher contribution rate subsidising those with lower rates and deferred members because higher contributions incur higher charges.

Fixed charges may disadvantage scheme members with small inactive pots

Where there are fixed costs that are incurred by scheme members these can be passed on directly by means of fixed charges. However the presence of a fixed charge can disproportionately impact particular groups of members. When a member makes a small

contribution and leaves an inactive pot this becomes heavily eroded over time by the effect of a fixed charge. A single year of contributions made at age 20 could lose over 40% of their potential pension value by age 65 to fees where there is a fixed component. This could be considered disproportionate and could result in an inactive pot being eroded significantly.

28. FCA data bulletin, September 2018.

29. Different charging structures may also incur different costs – those with a combination approach are less likely to have to meet the costs of servicing short-term losses than those relying on an AMC only-approach.

30. A detailed description of the PPI modelling used in this report is contained in the Technical Appendix.

Employers may benefit from cross-subsidies

Another area that may be considered as representing a cross-subsidy in DC auto enrolment schemes is that of services undertaken by the pension provider for employers. In many cases, the provider will offer a charging structure that places no levy on the employer, even though they will incur costs as a result of administration. When charges are placed fully on scheme members, this serves as a cross subsidy from scheme member to employer.

Given that the employer is the customer, the promise of them not being liable for administration costs associated with running the pension scheme can play an important part of the marketing message for providers. This was prevalent in the early days of auto enrolment, and still is now.

Given the size and complexity of automatic enrolment schemes, some degree of cross-subsidy is inevitable

In a complex system of investment and payment across a number of stakeholders with differing investment levels and histories of participation, cross subsidies are inevitable. One advantage of cross-subsidies is that they can allow for more flexibility in terms of investment capital and in so doing can ensure better outcomes for

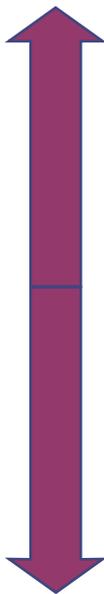
members, employers and providers. It is also the case that for the individual member, the level of cross-subsidy is likely to be very small, and that as pots mature or are consolidated, those who have subsidised others will in turn be subsidised.

It is also the case that for the individual member, the level of cross-subsidy is likely to be very small in the majority of cases, and that as pots mature or are consolidated, those who have subsidised others will in turn be subsidised.

DC pension schemes inevitably contain a mix of pot sizes and, under the current system, a mix of deferred and active members. As schemes must meet ongoing running and investment costs from all pots, a degree of cross-subsidy becomes inevitable. It would also be administratively onerous for schemes to attempt to calculate individual fees for each member based on a proportion of the services they receive. In fact, the cost of doing so may itself result in higher charges.

Every automatic enrolment scheme will have advantages and disadvantages for providers, employers and members alike. Table 2.1 provides a summary of how different approaches to charging can affect stakeholders.

Table 2.1: Advantages and disadvantages of charging structure approaches.

Charging structure	Pros	Cons	
AMC Only	<ul style="list-style-type: none"> • Easier to understand for employers and members. • Provides for easier comparison between schemes. • Smaller pots benefit from cross-subsidies. 	<ul style="list-style-type: none"> • Can involve considerable cross-subsidies from those with larger pots. • Difficult to split out administration and investment costs • Requires greater initial capital outlay from providers. 	Higher cross-subsidy  Lower cross-subsidy
JHAMC plus contribution charge	<ul style="list-style-type: none"> • More cost effective at start-up for providers. • Deferred members are not penalised when no longer contributing 	<ul style="list-style-type: none"> • Difficult to understand the split between costs, such as those related to administration and investment • Active members can lose some of the advantage of making additional contributions 	
AMC plus flat fee	<ul style="list-style-type: none"> • More cost effective at start-up for providers • Easier to split out administration and investment charges. • More transparent in aligning costs and charges. • Reduces cross-subsidy. 	<ul style="list-style-type: none"> • Active members making lower contributions may lose out. • Deferred members with multiple small pots face significant erosion of savings. 	

Chapter Three: How do charges impact outcomes?

This chapter looks at how different charging structures impact upon individual scheme members and at how outcomes might be improved.

There is no doubt that the charge cap has led to a culture where charging structures in default strategies have a relatively small effect on individual member outcomes. Charges must be understood alongside the other factors that affect outcomes; investment performance, contribution levels and consolidation of pots.

The most likely way to ensure better outcomes is for people to make additional contributions to their workplace pensions, but this will require a change in the way that people interact with their pensions.

Investment performance will also have an impact on member outcomes, but remains beyond the influence of members or employers where they remain in default schemes.

PPI modelling shows that individual charging structures do not create significant differences in outcomes for individuals in most lifetime scenarios. However, different structures do provide better value for scheme members at different stages of accumulation.

Consolidation of pots can provide for better outcomes for scheme members, but not in every case. Consolidation will also ensure that smaller pension pots are not lost.

The automatic enrolment market in the UK is still developing, and will require ongoing monitoring to understand trends and behaviours.

PPI modelling takes a more refined approach to understanding how charges affect individual members

Much of the existing modelling of the effects of charging structures on scheme members has been based on the notion that people will remain in the same scheme for the entirety of their working life. This is unrealistic, people may have on average 11 different employers during their working lives,³¹ meaning that many people are likely to reach retirement with a number of different pension pots under a variety of different charging structures. Also, much of the modelling that was undertaken around the time that automatic enrolment was being developed as a policy was based on schemes having higher AMCs, providing for a greater differential between member outcomes.

PPI modelling provides a more refined approach to understanding the implications of people saving into a number of schemes with different charging structures and provides evidence for the analysis of the policy implications arising.

31. Department of Work and Pensions (2011)

Box 3.1: PPI modelling

The PPI modelling illustrates the effects of stylised scenarios on a set of hypothetical individuals. In order to disaggregate the effects of variations in charging structures, this analysis simulates the hypothetical individuals' experiences in each of several charging structures and across multiple structures over their working lives. These illustrations are intended to show comparative outcomes of a range of options and are not intended to serve as projections of individual outcomes. The modelling doesn't seek to account for all of the potential factors which affect outcomes. In order to provide realistic projections the modelling would need to account for significant variations in investment performance, the economy, individual behaviour (including increased contributions), employer behaviour and policy changes.

The analysis uses hypothetical charging structures alongside a selection of current charging structures derived from those used by various Master Trusts. Current charging structures are likely to change with time, both as the market develops and as legislation provides for changes in the level or structure of the charge cap. The results should therefore be treated as indicative and not as predictions of individual outcomes. The financial outcomes presented in the modelling are all presented in 2019 earnings terms.

Box 3.2: Assumptions used in PPI modelling

PPI modelling provides an illustration of what can happen in hypothetical situations using the following simplifying assumptions. Further details are contained in the Technical Appendix.

Individuals

- Are assumed to work full time
- Three earnings profiles based upon male, age dependent earnings (derived from Labour Force Survey data):
 - low earning (25th percentile of full-time earnings)
 - typical earning (median of full-time earnings)
 - high earning (75th percentile of full-time earnings)

Private pension contributions

- Assumed to contribute at either 8% or 10% of gross earnings (from employer and employee)
- Contributions are either:
 - throughout working life (from age 22 to State Pension age)
 - for 40 years from age 25
 - for 10 years from age 25
 - for 1 year at age 25

Result metrics

- Pension fund value through working ages
- Accumulated pension fund value (at either 65 or State Pension age)
- Incurred charges

Modelling

- Stochastic economic conditions, covering:
 - Earnings
 - Inflation
 - Investment returns
- Median investment returns are inflation (CPI) + 3.8%
- All results are presented in current earnings terms

For this section, PPI examined five charging structures. The modelling is illustrative and does not replicate actual scheme charging structures. Nor does it include elements that

do not form part of the charge cap, such as transaction costs, as well as variations in investment strategies and de-risking in later years.

Box 3.3: The following charging structures were used in the modelling.

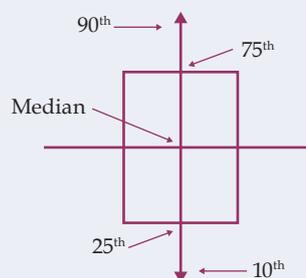
Structure	AMC	Contribution charge	Flat fee
1 - AMC Only	0.5%	n/a	n/a
2 - AMC + contribution charge	0.3%	1.8%	n/a
3 - AMC + flat fee	0.3%	n/a	£1.50pcm
4 - Tiered AMC	0.2% -0.5% Banded	n/a	n/a
5 - AMC + floored flat fee	0.25%	n/a	£1.25pcm with £500 de minimis ³²

There is relatively little difference in outcomes between the different charging structures modelled

The difference in outcomes between combination charges (structures 2 - 5) amount to around 3.5% of accumulated pot size, or £9,000 over a 46 year contribution period (Chart 3.1). The inclusion of an AMC—only approach sees this gap widen to 7.3%, or £18,000. These differences occur only at the high extreme of outcomes (which would represent an exceptional investment return). That there are small differences is not surprising given the limited amount of flexibility afforded by the charge cap and a highly competitive market.

Box 3.4: box plots

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

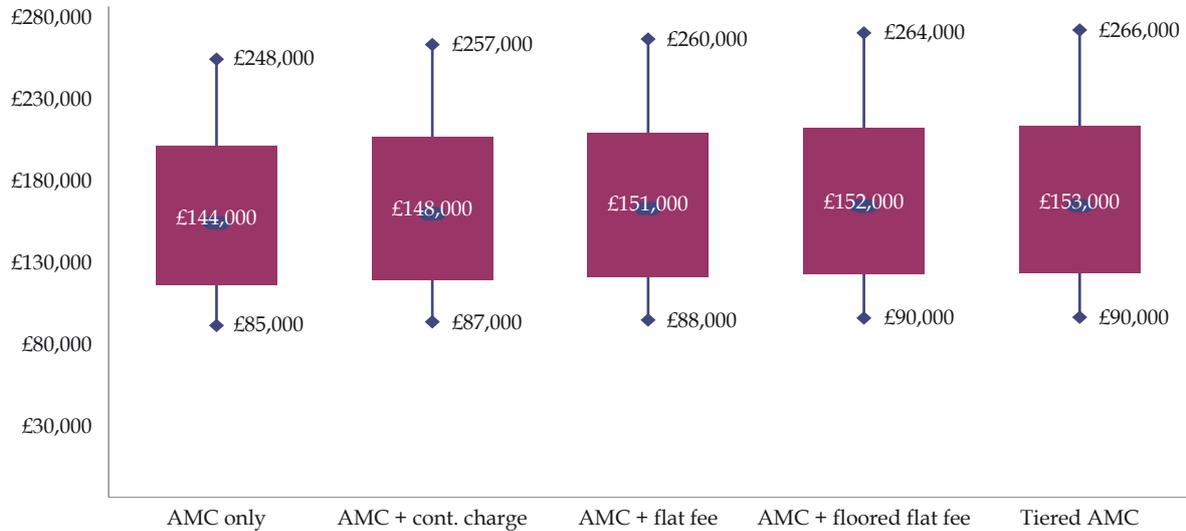


32. A de minimis is a floor on the fund below which no charges are taken.

Chart 3.1:³³

Fund value at retirement under different charging structures

Distribution of stochastic outcomes of pot values at retirement (age 68) in current earnings terms. Male, median earner, aged 20, 8% contributions from 22 to SPa. Figures in white represent median outcomes.



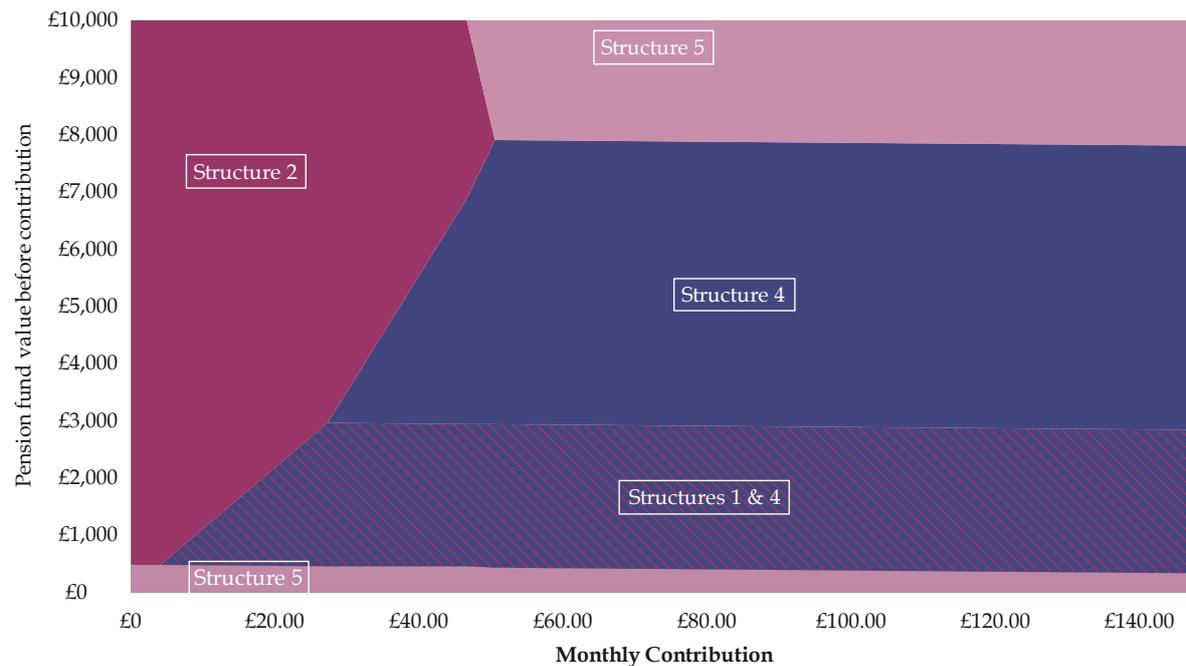
Different charging structures provide better outcomes for people at different stages of their accumulation

Each charging structure is represented by a different coloured bloc, and the points at which a combination of monthly payment and increasing pot size make for better value from different structures can be seen clearly.

Chart 3.2³⁴

For those making low levels of contribution a 0.30% AMC + 1.8% contribution will lose the lowest proportion of their pot in charges

Charging structures that result in the lowest proportion of pot size lost to charges by contribution amount and pot size



33. PPI Modelling

34. PPI modelling

For those making low levels of contributions, an AMC with a contribution charge (Structure 2) will result in the lowest loss as a proportion of their pot in charges

The amount of monthly contribution made has implications for which charging structure provides better outcomes, as does the size of pot as it matures (Chart 3.2). For pots above £8,000, those with monthly contributions of £45 and above will find that a floored flat fee (Structure 5) will provide best value.

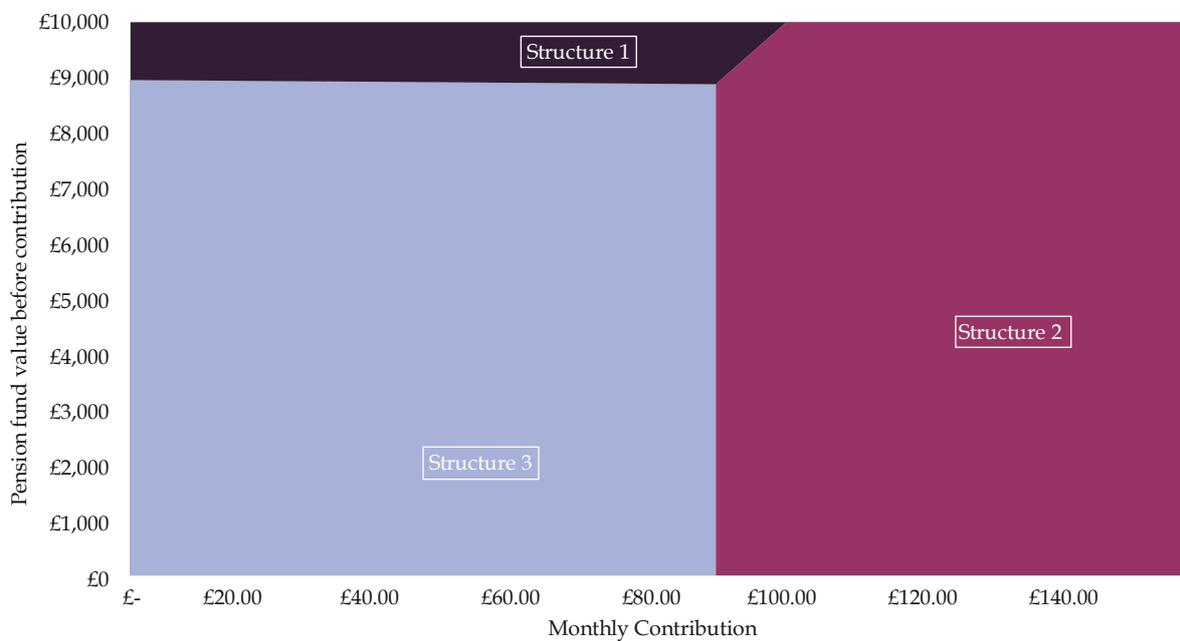
£3,000 and £5,000 are pot size inflection points between the charging structures modelled in this report

The tiered charging structure (Structure 4) modelled in this report reduces AMC once pot sizes reach £3,000. At this point Structure 4 becomes better value than an AMC only strategy (Structure 1) on all pot sizes. The point at which tiers change charges may vary under different structures and therefore tiered structures will not always become better value at £3,000.

Chart 3.3³⁵

For people making low levels of contributions, a fixed annual charge provides poorer value

Charging structures that result in the greatest proportion of pot size lost to charges by contribution amount and pot size



For people making low levels of contributions, a fixed annual charge provides poorer value

Until pots reach £9,000 or contributions rise above £80 per month, an AMC plus a flat fee (Structure 3) will see the greatest proportion of pot lost to charges among the structures modelled (Chart 3.3).

Those contributing above £80 will lose more under an AMC with a contribution charge (Structure 2), while people with contributions below £80 per month (Structure 3) is least valuable until pot size reaches £9000. For those

contributing more than £80 per month, an AMC with a contribution charge (Structure 2) represents poorest value until pot size reaches £9000, at which point an AMC only strategy (Structure 1) will provide poorer value depending upon both contribution level and pot size. Of the structures modelled, two (a variable AMC and a floored flat fee (Structures 4 and 5) never provide poorest value for members compared to the other structures modelled in this analysis.

35. PPI modelling

Significant differences in pot size occur after long-term accumulation under a single charging structure, but no one structure provides consistently better outcomes for savers with different characteristics.

Standard industry modelling shows that there can be quite significant differences in pot size at State Pensions age (SPa), but that these only materialise once an individual has been saving into the same scheme for a considerable time.

For the next section, PPI modelling created three illustrative charging structures to explore the growth of pot size and of charges over different lengths of accumulation using different generic approaches. The intention is not to examine charges as relating to specific regimes or charge levels, but to examine the effects of structure, all else being equal.

The three structures modelled were designed to be at the higher end of the current charge cap, being the maximum charge that can be levied under each approach **in order to better differentiate the effects of the different structures.**

A -An AMC of funds under management of 0.75%

B - A combination of an AMC of funds under management of 0.50% plus a contribution fee of 2%

C -A combination of an AMC of funds under management of 0.50% plus a fixed fee of £20 per annum

Charts 3.4-3.9 show how funds and charges increase under the three structures for:

- People making a contribution for one year only (Charts 3.4, 3.5 & 3.9)
- People making a contribution for ten years (Chart 3.6)
- People contributing to the same scheme for 40 years uninterrupted (Charts 3.7 & 3.8)

The charts show clearly that there is no one single charging structure that provides consistently better outcomes across all of the differing saving profiles.

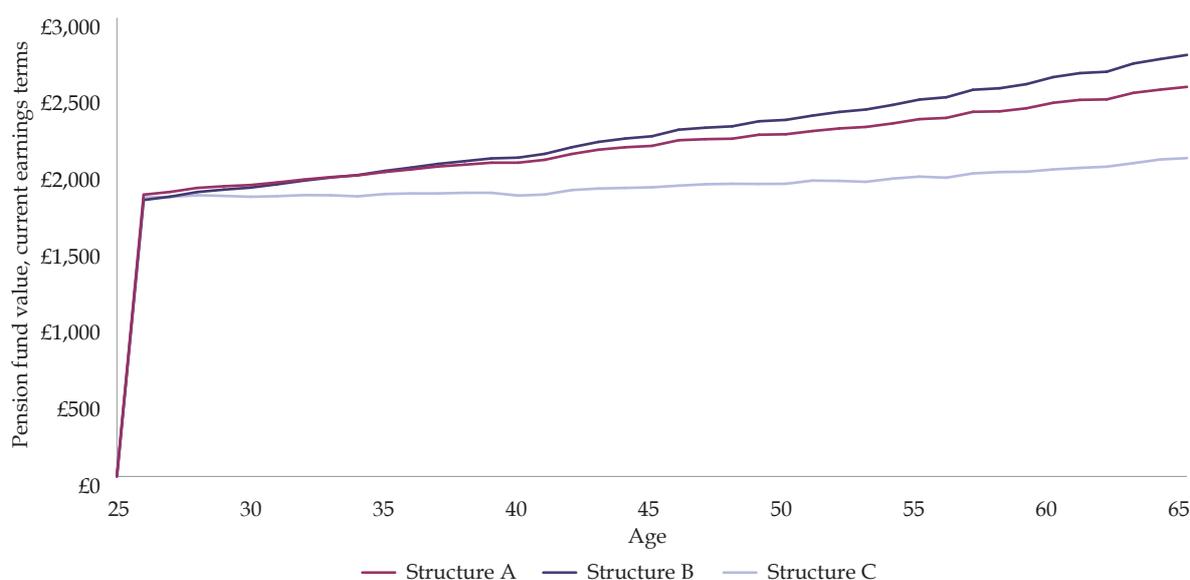
For median earners saving at age 25 for one year only, an AMC with a contribution charge (Structure B) provides best value

Median earners with one year of contribution only at age 25 will achieve a pot size at age 65 of £2,750, compared to £2,550 with an AMC only approach and £2,100 with an AMC plus flat fee structure (Chart 3.4).

Chart 3.4³⁶

For median earners with one year of contributions, an AMC plus a fixed-rate fee (Structure C) will provide worse outcomes

Median of stochastic outcomes of pot values during accumulation in current earnings terms. Male, median earner, 8% contribution at age 25.



36. PPI modelling.

Savers with one year of contributions will build up significant charges over time if their pot remains dormant

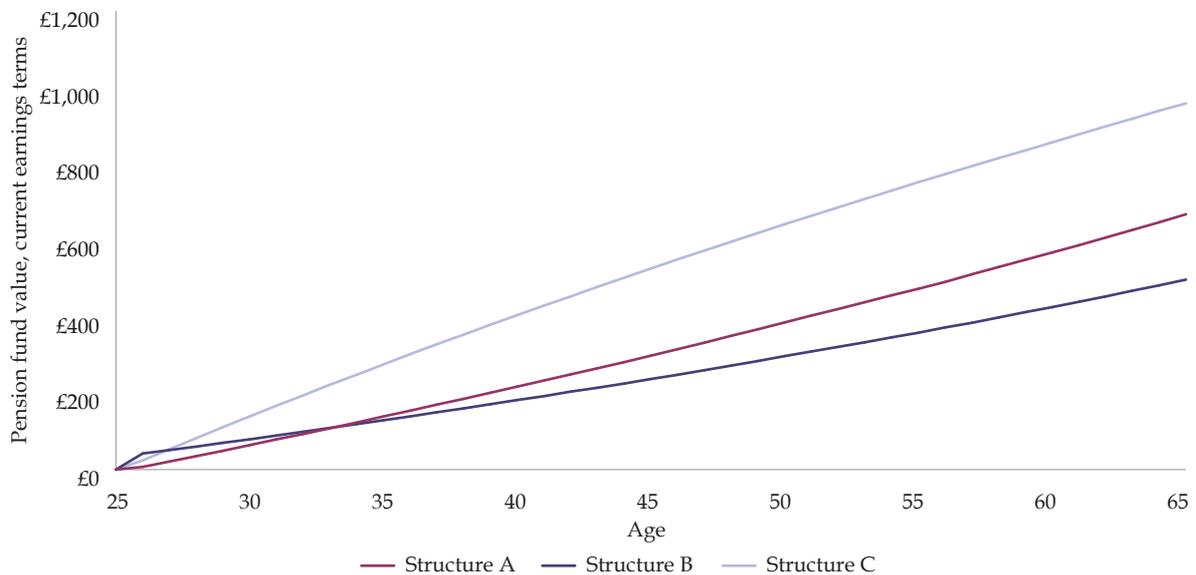
A median earner with one year of contribution only at age 25 will have accrued around £950 in charges by age 65 for those in a scheme with an AMC plus flat fee structure (Structure C). In comparison, those with their fund in Structure B (AMC plus contribution fee) would have only accrued £500 in charges (Chart 3.5).

In order to understand how larger dormant pension pots are affected by charges, modelling was undertaken to show what happens when a median earning individual contributes to a pension pot for ten years from age 25. In all cases, the pot value continues to rise after contribution ceases, but there are greater gains of around £2000 for savers in combination charge structures as opposed to AMC only.

Chart 3.5³⁷

There is considerable variation in accumulated charges for median earners with one year of contribution

Median of stochastic outcomes of charges to date during accumulation in current earnings terms. Male, median, 8% contribution at age 25.



A flat rate AMC provides poorer outcomes for people with ten years of saving

For a pension that has contributions for 10 years, an AMC plus contribution charge (Structure B) again provides best outcomes, although the differences are smaller, with a pot size of £31,500, compared to £31,400 (AMC plus flat fee, Structure C) and £29,450 (AMC only, Structure A) (Chart 3.6).

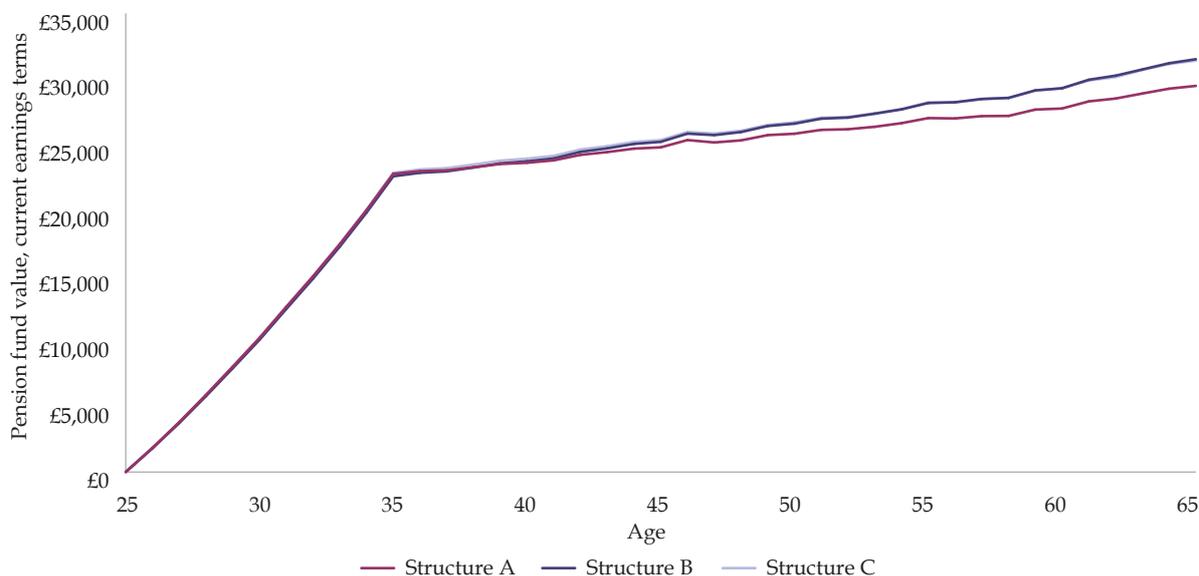
By the time the individual has reached the age of 65, they will have paid out around £5,100 in charges under both combination structures, with final annual charges of around £165. In the AMC only scheme, the total charges paid could have reached £6,800, and annual charges will have risen more steeply to around £225.

37. PPI modelling.

Chart 3.6³⁸

A flat rate AMC (Structure A) provides poorer outcomes for a savers with ten years contributions

Median of stochastic outcomes of pot values during accumulation in current earnings terms. Male, median earner, 8% contributions from age 25 to 35.



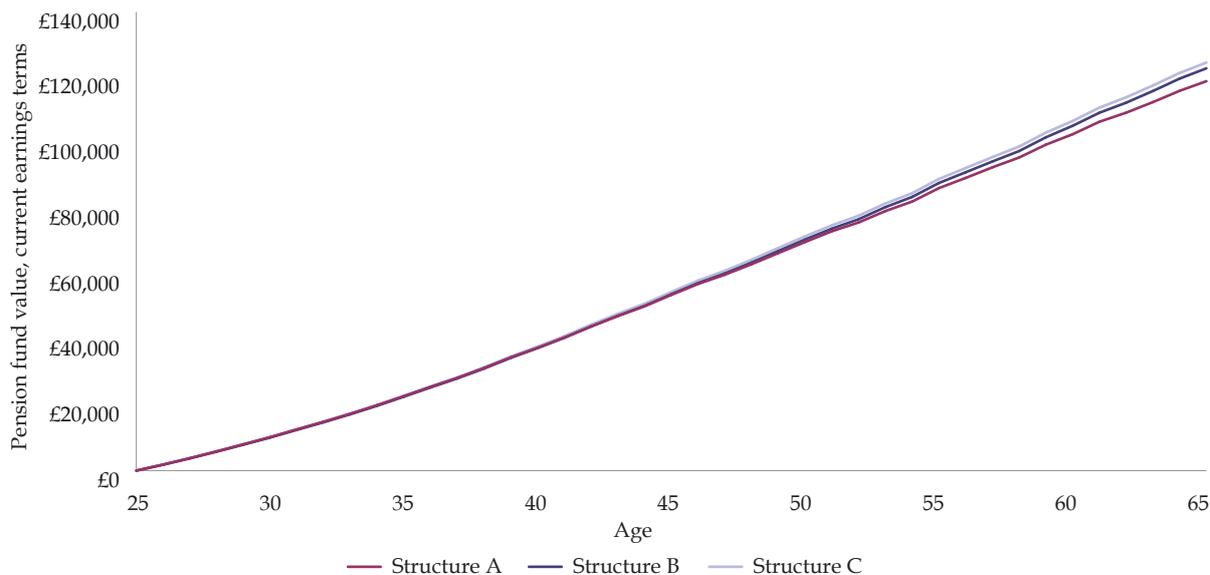
Longer term savers will benefit more from a combination of a lower AMC with an annual fixed fee

For median earners with 40 years of active accumulation, an AMC with a flat fee (Structure C) provides greater benefit, with a pot size of £124,500, compared to £122,800 (Structure B) and £118,850 (Structure A) (Chart 3.7).

Chart 3.7³⁹

An AMC plus fixed fee (Structure B) provides better outcomes for long-term savers

Median of stochastic outcomes of pot values during accumulation in current earnings terms. Male, median earner, 8% contributions throughout.



38. PPI modelling

39. PPI modelling

A fixed percentage AMC will see savers paying considerably more in charges as pot size grows

A median earning male in a fixed-rate scheme could be paying around £250 per annum more than a similar individual in a combination charge scheme after 40 years of contribution. Structure A (AMC only) becomes more

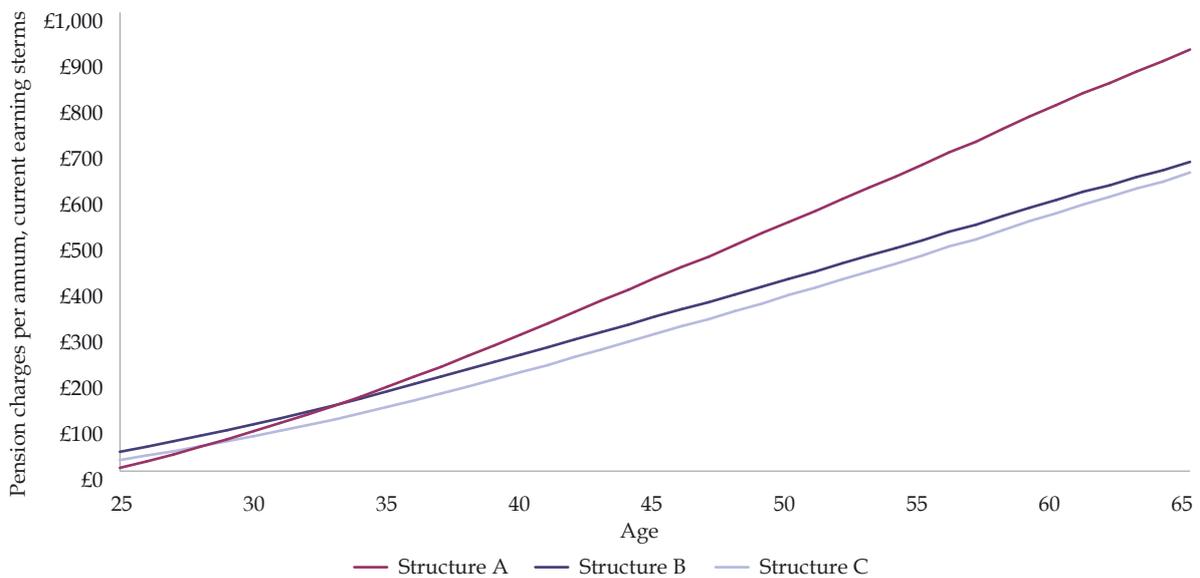
expensive after only 9 years of contributions, and after that point the disparity continues to widen (Chart 3.8).

For high earners, as could be expected, the differences are even more marked – with long-term savers accruing a pot worth £8000 more under Structure C than under Structure A.

Chart 3.8⁴⁰

A fixed-rate AMC will see higher charges per annum over the course of a lengthy contribution period

Median of stochastic outcomes of charges per annum during accumulation in current earnings terms. Male, median earner, 8% contributions throughout.



Low-earning individuals saving for one year at age 25 will see greater benefits from charging structures without a flat fee

Chart 9 shows what happens to a pension pot where a low-earning individual has only contributed for one year at age 25 under each of the three structures. While Structures A (AMC only) and B (AMC plus contribution

charge) continue to show growth, Structure C (AMC plus flat fee) remains flat, with no further benefit accrued.

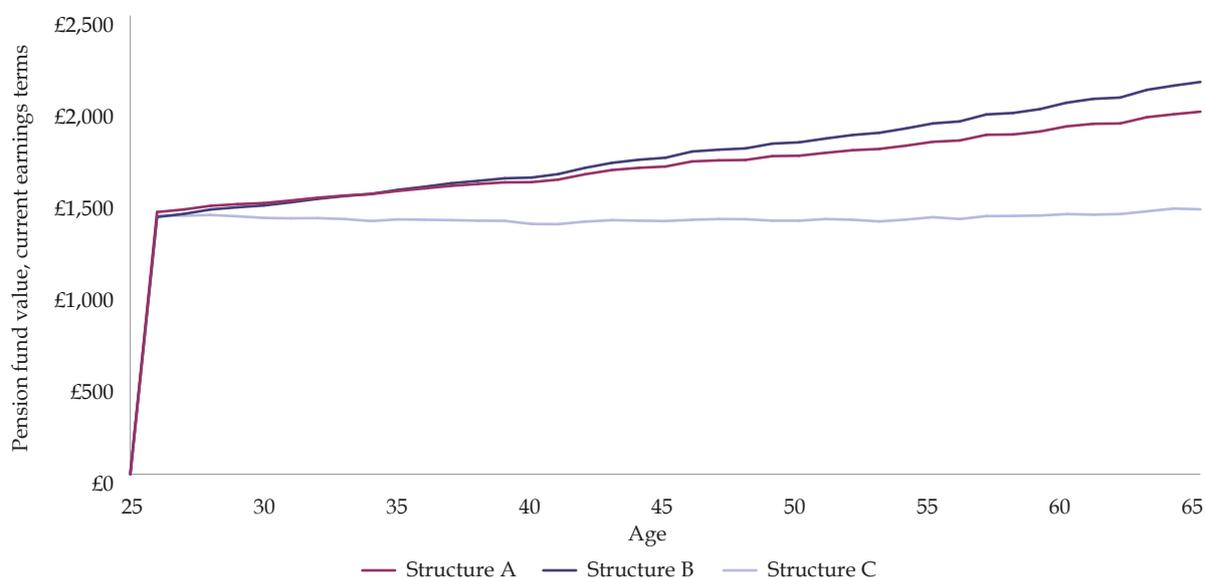
By the time the saver in Structure C reaches 65, they will be paying £17 per year in charges and have accumulated total charges in the region of £850.

40. PPI modelling.

Chart 3.9⁴¹

For low earners with one year of contributions, an AMC plus a fixed-rate fee (Structure C) will provide significantly worse outcomes

Median of stochastic outcomes of pot values during accumulation in current earnings terms. Male, low earner (25th percentile), 8% contribution at age 25.



Charging structures make a difference to outcomes, but other factors are important

Charging structures do make some difference to people's pension outcomes, both in terms of which structure(s) they are enrolled into and when. However, investment returns will also have an effect upon pot size at retirement (Table 3.1), as will members paying in for longer, and increasing contributions.

An increase of 2% from 8% to 10% in individual contributions to a workplace pension scheme will see an approximate 25% increase in pot size at retirement

41. PPI modelling

Table 3.1: Comparison of median pot value at retirement (age 68) in current earnings terms for a male median earner contributing from age 22 at 8% and at 10%⁴²

	Median pot value contributing at 8%	Median pot value contributing at 10%
Structure 1	£144,000	£180,000
Structure 2	£148,000	£186,000
Structure 3	£151,000	£188,000
Structure 4	£153,000	£192,000
Structure 5	£152,000	£191,000

An increase of 2% from 8% to 10% in individual contributions to a workplace pension scheme will see an approximate 25% increase in pot size at retirement across the five indicative structures examine earlier in the chapter (Box 3.3).⁴³ However, this will require people to engage more with their pensions, have a clear understanding of what the relationship is between current contributions and future financial outcomes and be prepared to make a financial sacrifice from their current income.

Behavioural change is difficult to measure, but this will improve with time

There is currently little evidence concerning the effect on people’s behaviour as a result of charges, and it could also prove problematic to disambiguate any effect from charges from those arising from other sources. Predicting behavioural response is difficult for a number of reasons. Financial literacy⁴⁴ and member

engagement with pensions remain low among the general public, and people lack the ability or confidence to make complex financial decisions.

The automatic enrolment and DC master trust markets are immature, and will continue to evolve over time. For example, the recent changes to contribution levels have yet to be understood in terms of any effect on opt-out and cessation rates.

It will be the work of future research to identify and predict behavioural patterns of members, providers and employers as the market matures. The first lifelong savers who had been automatically enrolled in workplace pensions will not reach the age at which they can take drawdown until 2045, and will probably not retire until 2057, and it will be some time before recognisable patterns of behaviour emerge.

42. PPI modelling

43. Any additional 1% contribution by savers will result in a 12.5% increase in pension pot at retirement

44. OECD Skills Outlook 2013, p.85

Chapter Four: What are the implications for scheme members?

Chapter four examines the implications of charges along with other factors that can influence people's pension outcomes, and how these outcomes may be improved.

An average person may have 11 employers in a lifetime, and this could mean 11 separate pension pots, some of which are likely to be quite small

To better understand the potential impact of multiple pots on scheme members PPI modelled indicative outcomes for individuals with multiple pots over their accumulation period. Modelling was undertaken on the assumption of an individual having contributed to four pension schemes for ten years each. The intention is to understand the implications of three different pension pathways:

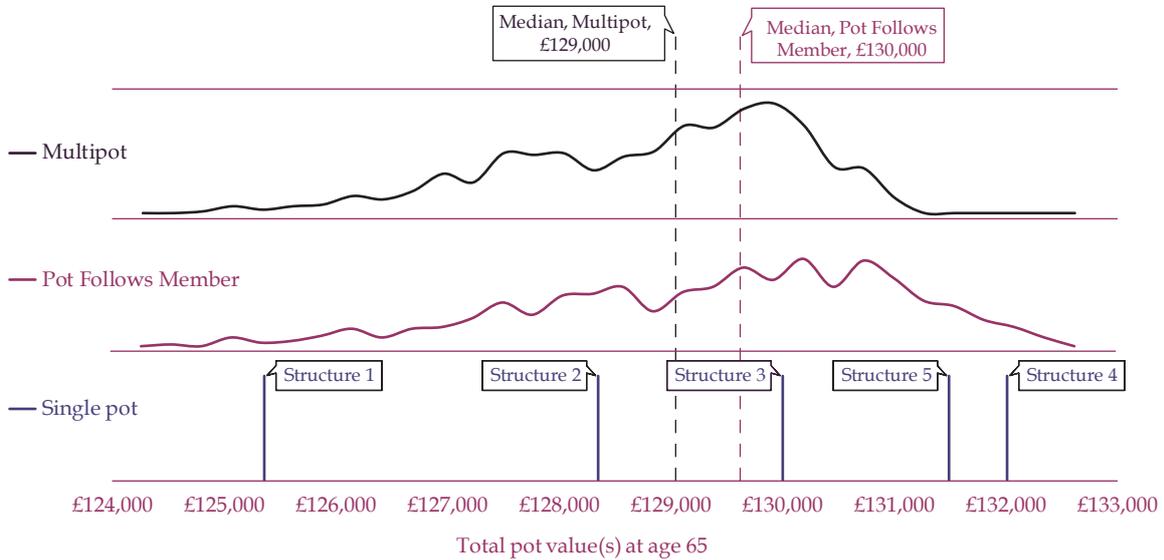
- The current system whereby an individual accrues multiple pots during their working life.
- A system whereby an individual retains the same scheme throughout their working life, with each of their employers contributing to it (the 'single pot' approach).
- A system whereby an individual's pot is automatically transferred to a new employer's scheme when they change jobs (pot-follows-member).

When the modelled outcomes for people moving through different combinations are compared, it is clear that savers can lose out if they are automatically enrolled into a scheme with a specific charging structure. This is through no fault of their own, as they currently have little say in which pension scheme they join.

Chart 4.1⁴⁵

The distribution of member outcomes (4 x 10 years)

Median of stochastic outcomes of pot values at age 65. 8% contributions of median earnings from 25, changes at ages 35, 45 and 55.



A pot-follows-member approach results in a small improved median outcome of less than 1 per cent (under £1,000) for savers over a forty year period. The differences are generally small across the range of modelled outcomes.

In many cases, the losses incurred by moving between schemes were greater than if an individual had remained in the same scheme throughout a 40 year contribution period. For example, someone with multiple pots at retirement would be more likely to lose out if one or more of their pots is in a scheme with a relatively high AMC, as this would continue to be charged after the individual ceased paying in.

As a result of automatic enrolment, and the likelihood of people changing employer several times during their working lives, they are likely to accrue multiple pots without benefiting from the advantages of consolidation, unless they actively choose to do so. This can lead to lower retirement outcomes and a greater chance that people could lose track of their pensions.

A lack of consolidation may eventually cause administrative difficulties for providers who may end up managing a large number of pots, many of which will be less profitable.

However, for employers, automatic enrolment means that they generally have to deal with one pension provider only, reducing time and expenditure. It also allows for pensions providers to offer bespoke deals that could provide better value for employers and members alike.

A single pot approach can result in better outcomes for savers

If members and employers contribute into the same scheme throughout the forty year period, so that their new employer will make payments into their existing pot in many cases the outcomes can be better for savers than moving between schemes (Table 4.1). However, this will depend on the scheme that an individual is enrolled into.

45. PPI modelling.

Table 4.1 – The final pot size for a median earner under the five charging systems. 40 years contribution from age 25 into a single pot⁴⁶

Charging structure	Amount after 40 years contribution
1 – AMC only	£125,300
2 – AMC + contribution charge	£128,300
3 – AMC + flat fee	£130,000
4 – Tiered AMC	£131,900
5 – AMC + floored flat fee	£132,100

Two of the modelled charging structures (1 and 2) generally provide poorer pension outcomes across a forty year saving period when compared to multiple pots and pot-follows member. Structures 4 and 5 generally provide better outcomes.

It is generally better for individuals with larger pots to be saving into a scheme with a combination charge, so those who start out in a scheme with a fixed AMC could usually improve their outcomes by switching. Those whose first pension is one with a combination charging structure could lose if they moved to another structure.

People moving between the different variable component combination charging schemes, will see variations, but they do not exceed a difference of greater than £400 over 40 years.

A single pot approach could potentially improve stability, resulting in better outcomes for providers

A single pot approach, where the member has one pension pot throughout their working life into which each of their employers pay does provide better outcomes for some, while still harnessing inertia and mitigating against lost pensions. There is also an advantage for providers in that they will also have greater stability, higher amount of large pension pots and greater possibilities for investment in illiquid and alternative assets as members will not be transferring their funds early. This then has a potential knock-on advantage for savers, as returns from these investments are likely to be higher in the longer term.

A single pot approach may have cost implications for employers

A single pot approach could result in significant and potentially costly administrative complications for employers, especially SMEs where there may be no integrated payroll function and organisations with high staff turnover. Employers could have to make payments into multiple schemes as opposed to common practice of making one bulk payment monthly. There are likely to be different payment systems in place for different providers as well, which could increase costs of administering payroll and HR functions, costs that would likely be borne by employees in the form of lower wages or frozen wage increases.

A single pot approach could only be a viable option if costs could be mitigated against by providers working together to create greater uniformity in organising payment and integrated pensions/payroll systems that might allow for automated bulk payments. A single pot approach could also mean that providers could have less opportunity to offer bespoke schemes to employers, as employees would be able to take that scheme with them to all future jobs. The outcomes are the same as if the individual had remained with the same employer and in the same scheme throughout their working life.

Experience from other countries suggests that this is not insurmountable. The Australian ‘SuperStream’ system provides a single payment gateway for employers based on the increased use of technology, uniform data standards, use of the tax file number as a key identifier and the straight-through processing of superannuation transactions. The introduction of pensions dashboards is likely to see increased systems and data alignment that could form the basis of a uniform approach to payment.

46. PPI Modelling

Pot-follows-member can provide for better pension outcomes than a multiple pot approach, but not in every circumstance

This section examines what happens when individuals take the value of their pot with them when they start a new job, and that money is invested into their new employer's scheme (pot-follows-member).

'Pot-follows-member' gained traction in policy debates around automatic enrolment in the early 2010s, with the government of the day seeming keen to introduce such a scheme to prevent savers from losing out in terms of dormant or lost pensions throughout their working lives. However, despite initial enthusiasm, this proposal was shelved in 2015, and in 2018 the government stated that there were no plans to restart work on automatic transfers.⁴⁷

There is an advantage for members in moving away from a fixed AMC and towards a combination charge, especially in the latter stages of accumulation, as they provide clear benefits to mature pots.

Pot-follows-member maintains inertia while also serving to provide better outcomes for savers than if they had multiple pots. It could also make for easier understanding of pension value and mitigate against lost pensions. Pot-follows member would not have any effect on employers, and would still allow providers to create bespoke schemes. It would also mean that providers would have access to larger pension pots for investment purposes.

However, people with smaller pension pots who move from a variable combination charge to a combination charge containing a fixed charge could lose out, while those who enter into a variable combination charge with a relatively large pension pot could make considerable gains.⁴⁸ Early withdrawal could still be an issue, creating a degree of instability. There is also a risk that the larger a pot becomes, the greater the risk of consumer detriment if the transfer is made to a less advantageous scheme. In such cases, it would be important for savers to have the ability to opt out of a transfer, although some degree of guidance would be necessary in order to ensure that people did not make decisions that disadvantaged them.

Transfer costs were a feature of earlier pension schemes, and were cited as reasons not to pursue policies that required individuals to move their savings between providers. However, as the market has matured, the main providers no longer make charges for transfers either in or out of their schemes, however, costs may be incurred from ceding schemes needing to sell and receiving schemes needing to buy investments. It may, however, remain the case that transfer charges will apply when moving between an automatic enrolment default scheme and a different type of workplace pension.⁴⁹

Another solution to the problem of small pension pots being eroded by charges being levied without ongoing accumulation was the 'aggregator scheme'

The idea of an aggregator scheme is that when an individual leaves an employer and their pension pot is under a certain size, then that pot would transfer by default to an aggregator scheme, which would consolidate small pots into one.

An aggregator scheme would need to be willing to accept even the very smallest pots, and to this end, low charges will also be key. It was thought that NEST would have been a suitable vehicle for such a scheme. This, however, was before the expansion of the master trust market and the unexpected growth of providers willing to accept smaller pension pots.

It is clear that there are potential advantages in members either remaining in the same pension pot, or consolidating pension pots whenever a member changes employer

The benefits, however, differ as to the nature and order of the charging structures an individual is enrolled into, with some combination charges offering better outcomes as pot size grows.

In many cases, the actual differences are relatively small and the benefits of consolidation or remaining in the same pot may not be clear, particularly when transaction costs are taken into account. Seeking independent financial advice might allow people to make more informed decisions, but the cost of doing so may well exceed the monetary value of the gains.

47. Written answer to Parliamentary Question 135025, 16,04.2018

48. PPI modelling.

49. This may not be the case in future, as the FCA is currently proposing to ban or cap exit fees from investment platforms. FCA (2019)

This is an area where pensions dashboards may give savers a clearer picture of the size of their pension pots and the benefits and disadvantages of consolidation or remaining in the same strategy.

In policy terms, pensions dashboards are in the process of being designed with the aim of allowing people to make more informed decisions about the pensions they have

Dashboards could effectively replace pot-follows-member as the means of addressing the problem of multiple small pots. However, in terms of whether they can actually deliver, it remains perhaps the least likely path, as they require increased levels of engagement from savers, and need to be able to provide both clarity and comprehension to end users. If dashboards are to be of use in enabling individuals to make better choices about their retirement income, then they should be seen as part of a wider policy package aimed at increasing member engagement with pension saving. For pensions dashboards to be able to display information about costs and charges, agreed standards for measuring and reporting costs and charges will be required.

Investment performance will make a significant difference

While master trust default strategies are taking a range of investment approaches, the scale of the disparities is not yet clear over a market cycle.⁵⁰ However, market fluctuations could still mean that any advantage of belonging to a particular scheme could be reduced. It is also worth reiterating however, that schemes that have greater stability and larger funds available for long-term investment could take advantage of alternative markets that may result in better outcomes for savers.

The automatic enrolment market is immature in the UK

With automatic enrolment into workplace pensions having only been in place for seven years, and with further expansion to include people over the age of 18 and removing the lower earnings limit (currently £10,000) expected,⁵¹ the market is still developing, and the first people to have been automatically enrolled for their entire working life will not

reach the age at which they can draw down on their pension until 2046. As patterns of saving and decumulation emerge, schemes will evolve to meet new challenges and opportunities.

Australia introduced its compulsory superannuation scheme in 1992, and the system has been refined as it has matured. Since 2005, many Australian workers have been able to choose the fund that they and their employer pay into through the use of an online portal which provides a straightforward comparison between different funds. The level of engagement necessary for this to work is far greater than is currently the case in the UK, but it did take more than twenty years for the Australian system to reach the point at which self-management was deemed workable. This may well prove to be the case as the workplace pension market grows in the UK.

Summary of chapter four conclusions

- Individuals at different stages of their workplace pension will benefit from different charging structures.
- A single pot approach will provide better outcomes for many, and may create greater stability for providers, but may also increase costs for employers.
- A pot-follows member approach will provide better outcomes for some savers, but could penalise people with larger pots moving into an AMC-only scheme, as well as those who move between employers more frequently.
- Conversely, pot-follows-member could see savers with smaller pots benefiting from a move to schemes with fixed charges.
- Pensions dashboards may have a role in allowing people to understand and take control of their retirement outcomes.
- Investment performance will still have a significant role to play in saver outcomes.
- Increasing contributions during accumulation will improve outcomes at retirement.
- The automatic enrolment market is still evolving and will continue to do so as patterns of saving and decumulation emerge.
- There are potential advantages to people taking informed control over their workplace pensions, as the accumulation of multiple small pension pots is likely to prove detrimental to their retirement outcomes.

50. Figures showing the short-term variation in returns achieved by different default funds used for automatic enrolment are available, but, the investment performance of different default strategies should be judged over the long term, and ideally, over a full economic cycle

51. Department of Work and Pensions (2017b)

Appendix A⁵²

Box A1: Costs falling within the default fund charge cap include:

- Scheme set-up fees,
- Scheme level entry fees (on entry and transferring existing pots into the scheme),
- Scheme level exit charges,
- Fees for non-member initiated switching of funds,
- Fees paid to trustees,
- Governance charges and expenses (such as trustee insurance),
- Fund or investment management fees, including payments to investment consultants and administrators,
- Ongoing charges for underlying costs in investment portfolios,
- Ongoing costs for running the scheme, such as IT, office and staffing costs, data management and record keeping,
- Registration and regulatory costs and fees,
- Payments to providers of professional services and other third party fees, relating to administrators, advisers, actuaries, lawyers, auditors, legal fees, accounting fees and valuation services,
- Depositary fees and fees to the custody bank,
- Banking fees,
- Costs of member communication services (statement costs, website management, printing and posting accounts),
- Costs of capital requirements,
- Unrecoverable VAT,
- Payments to shareholder service providers, and
- Platform fees.

Box A2: Variable costs lying outside the charge cap

- Brokerage commission and fees,
- Soft commission services included in brokerage fees, such as research costs,
- Spreads, such as the bid-offer spread on bonds, foreign exchange conversion costs and associated commission,
- Transaction taxes, such as stamp duty and non-reclaimable withholding taxes on dividends,
- Other charges embedded within the transaction price, and
- Deductions of expenses or fees from profits that are not shared equally with members.

52. Tables directly quoted from “Better workplace pensions: Putting savers’ interests first”, DWP, 2014.

Technical Appendix

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

Charging structures

A number of charging structures have been analysed. These are informed by charging structures both currently used and proposed in the automatic enrolment environment. The features of each charging structure are:

Annual Management charge (AMC)

This is converted to an equivalent monthly rate and applied at the end of each month to the pension fund.

Tiered marginal AMCs are applied by using the initial rate on funds up to the first threshold, the second rate to any funds above the first threshold and below the second threshold etc. The thresholds are assumed to increase each year in line with prices (CPI).

Contribution charge

This is expressed as a proportion of each contribution to a pension fund. It is not applied to transfers in when considering pot follows member.

Fixed charge

This is converted to a monthly amount and taken at the end of each month. It is assumed to be increase each year in line with prices (CPI).

De minimis

This is a floor on the fund amount below which no charges are taken. It is assumed to be increase each year in line with prices (CPI).

Economic assumptions

Future economic assumptions used in projection are taken from the Office for Budget Responsibility's (OBR) Economic and Fiscal Outlook (EFO)⁵³ (for short-term assumptions) and Fiscal Sustainability Report (FSR)⁵⁴ (for long-term assumptions).

Monte Carlo simulation, using the PPI's Economic Scenario Generator, is used to project the distribution of inflation and returns under uncertain future economic conditions.

Median long-term earnings growth is assumed to be 4.2%, and other economic assumptions (e.g. inflation) are taken in line with OBR assumptions.

Asset allocation

Investment returns are modelled stochastically with curves generated by the PPI's Economic Scenario Generator (ESG). 3,000 scenarios were produced providing values for equity returns, bond returns, cash returns, CPI and earnings increases each year for each scenario. The median returns were aligned to the long term determinants used by the OBR.

The individuals modelled

The pension accrual of a number of individuals has been calculated. They are assumed to make contributions at 8% or 10% of gross earnings.

53. Office for Budget Responsibility (2019) *Economic and Fiscal Outlook*

54. Office for Budget Responsibility (2018) *Fiscal Sustainability Report*

Earnings are age and gender specific and are derived from Labour Force Survey data.⁵⁵

The lifecourses have been informed by historical data analysed in the WHERL project.⁵⁶

The Economic Scenario Generator

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

Key results

The model generates projected future inflation rates, and earnings growth:

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

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

Application of output

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

Key data sources

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

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

Summary of modelling approach

The six identified risk factors modelled are:

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

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

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

Where t denotes time in months.

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

$$\Delta x_t = Ax_{(t-1)} + a + \epsilon_t$$

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

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

The first component and third components of x_t give the annual growth rates of GDP and wages, respectively. The fourth and fifth components are transformed yields. The transformation applied ensures that the yields are always positive in simulations. Similarly the second component gives a transformed growth rate of CPI. In this case, the transformation applied ensures that inflation never drops below -2% in the simulations. This figure was selected to be twice the maximum rate of deflation ever found in the historical data.

55. Office for National Statistics (2019) *Quarterly Labour Force Survey*

56. Glaser et al. (2017) *The Wellbeing, Health, Retirement and the Lifecourse project*

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

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



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



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