People's Partnership

Resolution Foundation

Perfectly adequate?

Revisiting pensions adequacy 20 years after the Pensions Commission

Molly Broome & Ian Mulheirn

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Foreword

We are delighted to sponsor this interesting and timely research. With the Government confirming that phase two of its pensions policy review will focus on adequacy, the timing could not be better for the Resolution Foundation to contribute further to this debate.

I take two key points from this report. First, setting clear objectives for the pension system is critical to the future success of policy. It's impossible to sensibly address questions about the appropriateness of statutory minimum contribution rates without consensus on what a reasonable end goal is for individuals.

This is particularly important to us, as almost all of The People's Pension's 6.7 million savers are on, or have been on, statutory minimum contributions. For them, the minimum savings rate is the default, and in many cases, the only savings rate. Their retirement outcomes will depend on the combination of the State Pension and a workplace pension built on these statutory minimums. Therefore, what pensions policy targets – whether by accident or design – will determine their quality of life when they reach retirement. So, it is crucial that policy consciously aims for a sensible target.

Second, there's a growing consensus, echoed in this report, that much higher minimum contributions may not be right for everyone. Some of the commonly discussed higher figures for statutory minimum contributions could be too much for low to moderate earners. If implemented for all, a 12 per cent rate would default some people into over-saving.

We should acknowledge this and work to tailor automatic enrolment to better reflect personal circumstances. This must be done fairly. If higher earners benefit through increased legal minimum contributions, then lower earners must also see gains. The next phase of the pensions review should explore this further.

Automatic enrolment has brought millions more people into pension saving, resulting in £43 billion of additional annual saving. While reforms are needed to ensure it reaches its full potential, reports like this help clarify the path forward.

Tim Gosling

Head of Pensions Policy at People's Partnership

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Executive Summary

At the beginning of the 21st century, the outlook for people's living standards in retirement was a cause of mounting concern for policy makers. The prospect of a rapidly aging population, falling employer engagement in pension provision, a meagre State Pension and growing reliance on means-tested support motivated the establishment of the Pensions Commission in 2002. Its remit was to secure the long-term sustainability and adequacy of pensions for future generations.

Twenty years on from the Pensions Commission's landmark first report, the auto-enrolment pension regime it proposed has finally come to fruition, revolutionising pension coverage in the UK. But alongside the rollout of this pioneering policy, the world has changed since the Commission made its recommendations. The tax system and State Pension have undergone significant reform, there have been huge swings in the economic and financial environment and the outlook for wage growth is much weaker. These changes have crucial implications for whether pensions policy can provide an adequate retirement income.

So the time is ripe to revisit pensions policy. Recognising this, the new Government has already announced a fresh review of the pensions system and the outcomes people can expect from it. This paper explores what we've learned since the Pensions Commission and consider what the changes of the past 20 years mean for pension adequacy. In doing so, we seek to frame some

of the critical questions the new pensions review should address as it charts a course for the next decade of pensions policy.

Judging adequacy against relative benchmarks remains the right approach to guide pension savings policy

Defining pensions adequacy is not straightforward. The Pensions Commission established a set of relative measures, designed to help people smooth their living standards across working life and retirement. These were known as 'target replacement rates' (or TRRs): the proportion of working-age gross earnings that someone should aim for in retirement in order to maintain their standard of living. TRRs varied by earnings level, ranging from 80 per cent of gross earnings for the lowest earners, to 67 per cent for median earners, and 50 per cent for top earners.

Target replacement rates are an important guide to calibrating pension-saving policy. As relative benchmarks, they are rooted in the concept of consumption smoothing, aiming to ensure that people can maintain their lifestyle as they move between working life and retirement. However, many people have pointed out that relative income benchmarks are not sufficient as a guide to the adequacy of pensions policy overall. A low-paid individual might achieve a target replacement rate but nevertheless find themselves with a low standard of living in retirement. In response, absolute adequacy benchmarks like the Pension and Lifetime Savings Association's (PLSA) Retirement Living Standards and the Living Wage Foundation's (LWF) Living Pension have been developed to act as an additional guide for policy. These measures are a complementary lens through which to view pension adequacy, helping policymakers gauge the risk of pensioners living in poverty and individuals to understand how much money they will need in retirement to achieve any given standard of living.

However, for the purposes of setting pension saving policy, and auto-enrolment in particular, relative benchmarks are more appropriate because such interventions are based on the principle of consumption smoothing. It would violate the

principle of consumption smoothing to have people save so much that their living standards during working life were below what they would achieve in retirement. If smoothing living standards still leaves lower-income people falling short of absolute minimum income levels, then it is then the role of state transfers to ensure they are achieved.

Importantly, the Commission distinguished between the role of TRRs in guiding individuals' plans, and how far policy should go in ensuring people achieve them. It argued that variation in people's preferences and circumstances meant that policy should aim to ensure a "minimum base load" of pension provision which would be a replacement rate of 45 per cent, compared to a TRR of 67 per cent. In other words, the Commission did not feel it was appropriate for policy to ensure that people fully smoothed living standards into retirement.

Tax changes over the past 20 years mean target replacement rates should be higher today...

Although the Commission did not detail the steps behind its target replacement rates, the steps in the calculation are clear. Retirees are assumed to need a lower gross income to maintain their standard of living (once retirement has arrived people no longer need to save for it, costs tend to be lower as mortgages are paid off and work-related costs disappear) and there are interactions with the tax system.

For a median full-time earner on £21,250 in 2003-04, the different tax regimes applying to working-age adults and those over the State Pension paid a large role in explaining why the required replacement rate was below 100 per cent. Above State Pension age, people no longer pay National Insurance, and in the mid-2000s they enjoyed a substantially higher income tax personal allowance than their counterparts of working age. But there have been significant shifts in the personal tax system over the past 20 years – the elimination of age-related personal allowances for over-65s and changes to the National Insurance primary threshold and tax rates. As a result, under today's tax regime a median full-time earner on £37,000 in 2024-25 sees their

take-home pay reduced by 17 per cent due to Income Tax and National Insurance, compared to 23 per cent in 2002-03. At the same time, the tax paid in retirement has slightly increased. The net effect of these reforms, based on the same assumptions on saving and consumption in retirement, is that a median earner needs a target replacement rate of 72 per cent today to achieve what a TRR of 67 per cent would have achieved twenty years ago.

...and wider economic and financial changes have affected the saving rate required to achieve target replacement rates

As noted above, the Pensions Commission was clear that it was not the responsibility of policy to ensure that all workers hit their TRRs. Instead, it projected that the State Pension would replace about 31 per cent of median earnings, with auto-enrolment at an 8 per cent contribution rate covering an additional 15 to 18 per cent, leaving policy doing slightly more than the 45 per cent minimum envisioned.

But, just as with the tax system, there have been significant changes to policy and the economy since then. For example, the more generous flat-rate new State Pension (nSP) has simplified and improved State Pension coverage. The State Pension was worth around 30 per cent of median full-time earnings in 2023-24 and it is reasonable (and arguably conservative) to assume that it will remain around that level for the foreseeable future. And if, rather than define 'final' earnings as earnings at the point of retirement, we instead use the average income between age 50 and State Pension age, then this increases the State Pension's replacement rate to around 34 per cent (this way of defining 'final' earnings aligns with the Department for Work and Pensions' method for modelling pension adequacy).

Turning to private savings, the Commission estimated that auto-enrolment would contribute 15 to 18 per cent replacement of median earnings with a default contribution rate of 8 per cent of gross salary above the National Insurance Primary Threshold. This calculation assumed that saving began at age 30, with a real rate of return of 3.2 per cent, retirement at age 67, and an RPI-

indexed annuity rate of 5.2 per cent. However, many elements of this calculation have changed in the intervening years. Auto-enrolment contributions today start at earnings above £6,240, a significantly lower threshold than the one proposed by the Commission, which would be £8,754 today had it increased in line with earnings. This has boosted the anticipated replacement rate from auto-enrolment by one percentage point. Lower expected earnings growth – projected by the Office for Budget Responsibility to be 1.5 per cent in the medium term compared to the 2 per cent expectation of the Commission – has the effect of boosting the expected replacement rate by a further 1 percentage point. On the other hand, real rates of return, today estimated to be around 0.5 per cent lower than at the time of the Commission, have reduced replacement rates by nearly two percentage points. Driven by similar underlying trends, today's lower annuity rates also reduce it by two percentage points. Combining these effects, we estimate that the current auto-enrolment scheme therefore achieves a replacement rate two percentage points lower than envisioned by the Commission.

On our definition of 'final' earnings, the state and private elements of the current regime together look likely to provide a median earner with gross earnings replacement of around 51 per cent. This is above the Commission's minimum base load goal of 45 per cent, but still a long way short of the updated target replacement rate of 72 per cent. Applying this analysis to earners on either side of the median we find that auto-enrolment in its current from is already set to achieve target replacement rates for low earners, but remains well short of them for higher earners.

But target replacement rates may not be a good definition of pension 'adequacy' and policy should leave space for individual preferences and circumstances

So, despite numerous changes in policy and the economy over the past 20 years, the combination of auto-enrolment and the State Pension is set to fall well short of target replacement rates for all but the lowest earners. Moreover, the Pensions Commission's expectation that individuals would make

additional contributions beyond the default rate has not materialised. For this reason, some have argued that policy should do more to boost pension saving – particularly for middle- and high-earners – by raising the default contribution rate above its current level of 8 per cent of earnings. Indeed, in previous work, we have supported gradually raising this rate both to ensure adequate retirement savings and to boost the UK's overall savings rate, so as to promote higher business investment.

We estimate that contributions rates would need to rise above 14 per cent to put median earners on track to achieve the updated target replacement rates through formal pension saving. But such a change would push low earners well above their target replacement rate. This highlights the unavoidable limitation of a one-size-fits-all auto-enrolment regime in combination with a flat-rate State Pension: we have to trade-off the risk of some earners who can least afford it saving too much, against the risk of others – especially middle- and higher-earners – not saving enough.

But even when considering outcomes for typical earners, there are three further reasons why it may not be appropriate for policy makers to raise default contribution rates in pursuit of target replacement rates based on final earnings.

First, survey data shows that in recent decades, middle and higher earners have typically achieved replacement rates some 10 to 20 percentage points below the Pensions Commission's TRRs. This underlines that TRRs are ambitious as a guide to policy and should not be considered a measure of what people expect to achieve in retirement. Indeed, observed replacement rates have been fairly stable over the past 30 years for middle and higher earners; they have risen strongly for low earners, but that is in a large part because of a more generous State Pension, not from higher personal saving. Consequently, while the Pensions Commission feared a decline in pension adequacy from the mid-2020s, this does not yet appear to be emerging.

Second, targeting replacement rates calculated relative to some measure of a person's final earnings risks violating the principle

that savings policy should help people to smooth their living standards across their adult lives. Earnings tend to grow as productivity grows, meaning that wages rise over time. This is compounded by the fact that younger workers usually see their wages rise relative to the average as they become more experienced. And adults in their 30s and 40s tend to face the heaviest costs, particularly due to child-rearing and mortgage repayments. For all these reasons, it makes little sense on consumption-smoothing grounds to make people save heavily at times of life when disposable income is already tight in order to have a higher standard of living in the long-distant future.

The third reason for caution in raising default contribution rates relates to people's other financial resources beyond formal pension saving, which could be drawn upon to support consumption in retirement. For median earners aged 55-59, net financial and non-owner-occupied housing wealth typically amounts to only about £10,000, which translates to just 1 per cent of median earnings when annuitised at today's rates. But there is considerable variation: the wealthiest quarter of middle earners nearing retirement have at least £59,000 in net financial and non-owner-occupied housing wealth, enough to replace more than 8 per cent of final earnings at retirement.

Inheritances are also likely to play a role in bolstering retirement living standards for many. While the timing and value of future inheritances are inherently uncertain, their value is set to increase for those retiring over the next 30 years. Simulations undertaken by the Institute for Fiscal Studies suggest that middle-income households currently around the age of 60, for example, will typically inherit around £152,000, while those around the age of 40 today will typically receive around £286,000. These sums suggest that the typical person is likely to receive a significant and growing amount of inherited wealth in the coming years that could help them sustain their living standards in retirement.

It is very difficult to get a comprehensive picture of the resources people are likely to have in retirement, but we can gauge whether individuals are on track to meet TRRs by

estimating the saving rate necessary to achieve it and converting that into a measure of total target wealth at different ages. Based on Wealth and Assets Survey data, we estimate that middle-earning people currently in their late 50s typically surpass the wealth level required for them to be on track. But it is important to recognise the huge variation in wealth holdings among people with similar earnings. In their late 50s, more than a quarter of middle earners already have more than half a million pounds of wealth, excluding owner-occupied housing and physical wealth, to sustain them in retirement. This is more than twice our target wealth level (£200,000) for middle earners in this age group. At the same time, almost a quarter of the same group have less that £81,000 by their late 50s – less than a half of the target level.

These findings highlight the significant role that non-pension financial resources play in retirement, but also reveal the vast disparities in wealth among individuals with similar earnings. Assessing pension adequacy must go beyond formal pension savings to consider the full spectrum of financial resources that people can draw upon in retirement. This comprehensive approach was taken by the Pensions Commission and should continue to guide future adequacy reviews.

A broader vision of savings adequacy is needed

The primary goal of pensions policy is to smooth living standards over a person's lifetime, but the principle of consumption smoothing applies just as much to saving during working life for precautionary purposes. An important savings policy objective should, therefore, be to help individuals maintain their living standards during their working lives when faced with unexpected financial shocks – whether minor, like replacing a washing machine; or major, like a prolonged period of unemployment. But many families in Britain lack sufficient precautionary savings to manage unexpected expenses and financial shocks. For example, in 2018-20, 1-in-3 (30 per cent) of working-age adults lived in families with savings of less than £1,000, leaving them financially vulnerable to economic shocks.

There are many reasons for this lack of financial resilience, but the UK's inflexible system for saving into a pension clearly does not help. At present, people must choose between consuming today, saving for precautionary purposes and saving for retirement. Research shows that when auto-enrolment contribution rates increased from 2 per cent to 8 per cent between 2018 and 2019, employees reduced their consumption by only 34p for every £1 less in take-home pay, with the rest coming from reduced savings or increased debt. This poses a challenge for policymakers: how to boost pension savings without worsening the shortfall in liquid savings?

In previous work, we have argued that policy makers can navigate this tension by establishing a more cohesive savings system. We proposed that the default contribution should be increased beyond 8 per cent and be accompanied by two reforms that enhance the flexibility of pension savings. One change should be the introduction of an automatic payroll-savings scheme to help people accumulate liquid savings and manage cashflow volatility and small financial shocks. Specifically, we propose that 2 percentage points of a higher default pension contribution rate should initially flow into a highly-liquid 'sidecar' savings account with no restrictions on its use. Any balance above £1,000 would roll over into the employee's pension, attracting tax relief at that point. A second, and more radical, reform could help people manage through larger shocks that can have serious consequences for living standards. This would involve allowing savers to borrow the lesser of £15,000 or 20 per cent of their pension pot value, on condition of mandatory earnings-contingent repayment to their own retirement fund, with interest to reflect the forgone growth. This would allow people to build and access larger amounts of precautionary savings to weather major and infrequent shocks like unemployment and family breakdown. Together, these reforms could increase retirement savings while also improving the financial resilience of British families in the short term.

The forthcoming pensions review must grapple with four key issues

For some groups, increasing pension savings through policy is necessary to prevent a sharp decline in living standards during retirement. However, for others, more pension saving could lead to over-saving or worsen issues like inadequate precautionary savings. This means that for all the strengths of an auto-enrolment system with a single contribution rate, a simple regime will never be optimal for most people. This report also highlights the challenges of retirement planning, where determining the appropriate saving rate depends on a range of factors that are often in flux, such as the tax system, rates of return on pension savings, annuity rates, and life expectancy. Policy makers must navigate these complexities while also accounting for individual preferences and circumstances. In this context, we believe the Government's upcoming review of pension outcomes should address four key questions.

First, it should clarify what auto-enrolment is seeking to achieve. In doing so it would be helpful to clear up a conceptual confusion in the terms used to discuss pension outcomes. The Pensions Commission defined a set of 'target' replacement rates that would smooth living standards, but it did not see these as being the same as what policy should aim to achieve. So it would help to move away from talking about 'target' replacement rates and instead distinguish between 'optimal' replacement rates that smooth living standards (equivalent to the Commission's 67 per cent for middle earners) and 'adequate' replacement rates that imply a decent level of earnings replacement. To develop this distinction more fully, the new Government's pensions review might consider articulating a full range of 'adequate' replacement rates for different income bands that policy could target to sit alongside the higher 'optimal' replacement rates represented by the TRRs, which could be left to individuals to pursue.

Second, the review should consider whether it is more appropriate for policy to benchmark against people's average, rather than final, earnings when defining replacement rates.

People in the first half of their working lives tend to face higher costs – notably relating to student loan repayments, child-related costs and mortgages – and lower earnings, as earnings tend to grow with age and with the wider economy. Benchmarking retirement living standards against final earnings may therefore violate the aim of smoothing living standards by making people save too hard at the start of their career to secure a much higher standard of living benchmarked against their final earnings. Furthermore, when assessing whether workers are on track to achieve an adequate pension, the Government should clarify how it expects retired people's incomes to change during their retirement.

Third, it is time to view pensions as part of a broader savings strategy designed to balance the twin objectives of retirement and precautionary saving rather than pitting them against one another. Despite the evidence that millions of households have very limited financial resilience against income or expenditure shocks, today's pension regime enforces a strict distinction between saving for lifecycle and precautionary purposes. Consequently, higher pension saving may not be optimal for large numbers of people, especially those on low earnings. This suggests a need to move away from a rigid one-size-fits-all auto-enrolment regime and a highly illiquid pension system. A better system can allow constrained flexibility for people to tailor contribution rates to need and greater liquidity for savings to be used for precautionary purposes.

Finally, the review should grapple with the question of risk. Our assessment of pensions adequacy is inevitably based on assumptions about things like life expectancy, earnings growth and the shape of the tax and benefit system over the course of a working life. But in a world where defined contribution pensions are now the dominant model, two key assumptions are particularly uncertain: the rate of return on investments in working age and the annuity rates that might prevail at the time of a person's retirement. Despite recent improvements in financial prospects for defined contribution savers, the past decade of low interest rates highlighted the significant risks placed on them by this system. It is crucial to reassess

how policy can address, or better help people to manage, these risks either through a higher State Pension, by adapting the auto-enrolment system to respond to changes in the economic outlook, or by fostering a more radical shift towards some form of collective defined contribution provision. The pensions review should articulate a vision for the state's role in managing these risks.

Auto-enrolment has been hugely successful in increasing pension saving participation and establishing a strong foundation for addressing pension adequacy. With this solid system in place, the Government should now explore ways to build on its success. This report highlights some key issues that the new Government should consider as it embarks upon reviewing pension outcomes and setting savings policy for the next decade. Inevitably, designing policy to achieve retirement income adequacy in a defined contribution system is a complex task. To ensure that pensions policy remains appropriate, it is therefore essential periodically to reassess the underlying assumptions on which the system is designed to check that it remains on track to achieve its objectives. The review would do well to enshrine that reassessment in a formal process for the future.

Section 1

Introduction

In 2002, the Labour government established the Pensions Commission to review the UK's private pensions system and make recommendations for reform. Twenty years ago, the Commission's first report warned of a growing threat to pension adequacy due to an aging population, longer life expectancy, increasingly meagre State Pension provision, and the decline of defined benefit schemes in the private sector.[1] The Commission noted that the challenge of inadequate pension provision was not an immediate one, but a growing concern for those who were, at the time, in the middle of their working lives. It cautioned that "within 25 years these trends will produce a severe problem of pension adequacy." Now, two decades later, we find ourselves at the brink of that predicted crisis, with concerns about pension adequacy still very much alive.

The Commission's final report in 2005 proposed auto-enrolling employees in defined contributions pensions, an ambitious initiative that was gradually implemented between 2012 and 2019. One of the most significant social policy interventions of the past generation, auto-enrolment has radically increased the share of workers who are saving in a pension from 47 per cent in 2012 to 80 per cent in 2023.[2] However, the default pension contribution rates reached the intended 8 per cent of gross income only in 2019, so it is fair to say that the scheme is still in its early stages and has had limited time to improve pension outcomes for those now approaching retirement.

Many other factors relevant to thinking about the pensions policy have also changed in the two decades since the Commission. The tax system and the State Pension have undergone significant reform, and financial conditions and the economic outlook have changed markedly. Together, these changes have important consequences for the extent to which the auto-enrolment regime can be expected to provide people with an adequate income in retirement.

Partly as a result, the new Government has decided that this is an important moment to take stock of pensions policy.[3] The pensions review announced in July 2024 will proceed in two phases. The first stage will explore how pension savings might be used to boost

1 Pensions Commission, Pensions: Challenges and Choices; The First Report of the Pensions Commission, 2004.
2 Department for Work and Pensions, Workplace pension participation and savings trends: 2009 to 2023, July 2024.
3 HM Treasury, 'Chancellor vows 'big bang on growth' to boost investment and savings', July 2024.

productive investment and enhance UK economic growth, something the Resolution Foundation has explored in previous work.[4] The second phase, beginning towards the end of this year, will focus on improving pension outcomes and the adequacy of the incomes people can expect in retirement.

This report focuses on issues tackled by the second phase of the review: pension adequacy. It sets out to explore what we've learned over the past 20 years, how the world has changed since the Commission advanced its proposals, and what that means for pensions adequacy in the future. In doing so we frame some of the critical policy questions that the forthcoming pensions review should seek to address as it sets a new course for the next decade of pensions policy.[5] But in order to assess the effectiveness of pensions policy, it is first important to ground the discussion in what it is, or should be, trying to achieve.

Consumption smoothing is the underlying principle of pensions policy

'Pensions policy' includes all the possible levers of the state that can influence people's standards of living in retirement, most obviously the State Pension, other benefits for retirees like Housing Benefit, Pension Credit and winter fuel payments, and policy towards private pension saving during working life. This report focuses on policy towards private pensions and the auto-enrolment regime in particular, taking other elements of pensions policy largely as given.

From an economic perspective, the purpose of pension savings policy is to help people smooth living standards between working life and retirement. Doing so allows people to achieve a higher level of wellbeing than if they were to consume all of their income in the period it is received, resulting in volatile living standards and poverty in retirement. Failure to smooth consumption can also impose costs on others in society, especially if it leads to a sense that tax-funded benefit support needs to be more generous as a result.

A libertarian perspective would view mandatory saving as justifiable only to the degree that it helps avoid or limit pensioner poverty and its consequences (such as demands for more generous tax-funded pensioner benefits). To a large extent, this function is played by the State Pension and means-tested benefits. Beyond that private pension saving should, on this perspective, be purely voluntary.

4 P Brandily et al., Beyond Boosterism: Realigning the policy ecosystem to unleash private investment for sustainable growth, Resolution Foundation, June 2023.

5 Since the Government announced that the second phase of the pensions review will focus on improving retirement outcomes, there has been considerable discussion around pension adequacy. Notably, the Institute for Fiscal Studies conducted a substantial study on this topic, which was undertaken at the same time as this report. For more information see: J Cribb, L O'Brien & D Sturrock, Adequacy of future retirement incomes: new evidence for private sector employees, Institute for Fiscal Studies, September 2024.

On the other hand, recognition of the sheer complexity of the decisions involved and the risk and uncertainty around retirement planning suggests that more directional policy can help people achieve substantially better outcomes than if left to their own devices; for many, this is a strong justification for a more interventionist approach. This has been complemented by the increasing recognition from behavioural science of the biases that tend to get in the way of people making choices that are in their best long-term interests. In particular, myopia or present bias leads people to under-provide for their own retirement, and this thinking has propelled a move towards 'soft paternalism', taking the form of the 'opt-out' system of payroll contributions that the Pensions Commission ultimately proposed.

If we accept that pensions policy is justified in helping people achieve retirement living standards above subsistence level through private saving out of earnings during working life, then consumption smoothing is the underlying principle that legitimises such interventions.[6] In this report, we use this lens to consider the adequacy of private pension provision and the auto-enrolment regime in particular. As a result, the majority of the analysis is about employees only. The rest of this report is organised as follows:

- In Section 2 we begin by comparing the various benchmarks that are typically used in discussion of pensions adequacy, considering the pros and cons of each and the insights they offer. We argue that different benchmarks are valuable for different purposes, but that policy relating to auto-enrolment should be guided by the aim of smoothing living standards between working life and retirement.
- Section 3 adopts the Pensions Commission's framework of 'target' gross earnings replacement rates which are widely used today, and examines how changes to the tax system over the past 20 years require us to update them for today.
- Section 4 presents the results of a simulation exercise, taking account of how the world has changed since auto-enrolment was first proposed and what that means for the expected adequacy of today's regime under today's economic, financial and demographic outlook. It shows that at most earnings levels, pension outcomes from auto-enrolment combined with the State Pension tend to fall short of target replacement rates.
- Section 5 explores how auto-enrolment contribution rates would need to rise to put people on track to achieve target replacement rates, but highlights three important reasons why that may be excessive as a goal for policy. Consequently, the

6 In this report we refer to 'consumption smoothing' and 'living standards smoothing' interchangeably although in practice they are different objectives. Smoothing living standards – the primary objective – does not necessarily require consumption smoothing, since people typically face larger costs during working life in respect of children, mortgages and work-related costs. This means consumption during working life generally needs to be higher than in retirement to achieve the same living standards.

section concludes that target replacement rates are a better definition of pension 'optimality' than of 'adequacy'.

- Section 6 sets pensions adequacy in the wider frame of savings adequacy, arguing that the principle of consumption smoothing requires us to rethink the current pensions system, which creates a tension between saving for precautionary versus retirement purposes.
- Section 7 concludes by discussing four major insights from this analysis that the ongoing pensions review should grapple with in order to reshape policy over the coming decade.

Section 2

Judging adequacy against relative benchmarks remains the right approach to pension saving policy

In its first report, the Pensions Commission established a set of relative pension adequacy measures known as 'target replacement rates', which range from 80 per cent of gross earnings for the lowest earners, 67 per cent for median earners, and 50 per cent for top earners. In principle, these target replacement rates are an important guide to calibrating pension-saving policy. As relative benchmarks, they are rooted in the concept of consumption smoothing, aiming to ensure that people can broadly maintain their lifestyles as they move between working life and retirement. At the same time, the Commission argued that policy should aim to ensure a "minimum base load" of savings to provide a replacement rate of at least 45 per cent, leaving individuals to decide whether to save more or rely on other assets. This reflects an important distinction to be drawn between a pension income that smooths living standards into retirement and the minimum that the Commission felt it was appropriate for policy to provide.

Some argue that relative benchmarks may not accurately reflect what people want or need in retirement. For example, a low-paid individual might achieve a target replacement rate but nevertheless find themselves with an unacceptably low standard of living in retirement. To address these concerns, various researchers have developed absolute adequacy benchmarks to help policymakers gauge the risk of pensioners living in poverty, and individuals (and their employers) to understand how much money they will need in retirement to achieve any given standard of living. These absolute adequacy benchmarks are particularly valuable for assessing what pensions policy overall is likely to achieve. They enable us to see whether the combination of state support and private saving through auto-enrolment generate a sufficiently generous retirement income at the lower end of the earnings distribution, where a key concern is ensuring a minimum standard of living. However, for the purposes of setting pension saving policy, and auto-enrolment in particular, relative benchmarks are more appropriate because consumption smoothing is the principle on which such policies are based.

The Pensions Commission grappled with the question of pension adequacy in a variety of ways. Its approach was to calculate an appropriate gross income 'replacement rate' that would ensure that people could maintain their living standards into retirement (a replacement rate is simply the level of income in retirement expressed as a percentage of some level of earnings in working life).[7]

Importantly, there are good reasons to think that certain costs are lower in retirement than in working life: for example, people no longer need to save for a pension once they are retired, they no longer have to pay National Insurance contributions, and retirees typically have lower outgoings than in the later phases of their life once mortgages have been paid off, children have become financially independent, and work-related expenditures fall away. This means a person's gross income in retirement can typically be less than their working-life earnings while delivering the same standard of living. By making empirically grounded calculations about the scale of these changes for people with different levels of earnings in working life, it is possible to estimate the level of income they would need in retirement to maintain their living standards.

In making these calculations, the Commission also took account of people's stated expectations and empirical evidence on the gross income replacement rates recent retirees have actually achieved. From this evidence base, it developed a series of relative income benchmarks, referred to as 'target replacement rates' (TRRs). These ranged from 80 per cent of gross earnings for the lowest earners, 67 per cent for median earners and 50 per cent for top earners (see Table 1).[8]

7 The definition of pre-retirement earnings plays an important role in evaluating pension adequacy. It can be based on earnings at the point of retirement or averaged over a specific period. We discuss this distinction further in Section 5.

8 The Commission concluded that it was reasonable to use actual replacement rates as a benchmark when assessing pensions adequacy. It observed that replacement rates were higher for those with low earnings. This resulted in five target replacement rates that vary by earnings. For more information see: Pensions Commission, Pensions: Challenges and Choices; The First Report of the Pensions Commission, 2004.

TABLE 1: **The Pensions Commission recommended that median earners should aim to replace two-thirds of their pre-retirement income to smooth their living standards**

Benchmark target replacement rates as a percentage of 2004 gross earnings from Pensions Commission modelling

Gross earnings band 2004-05	Gross earnings band 2023-24	Gross earnings band 2024-25	Target replacement rate
Less than £9,500	Less than £16,800	Less than £17,700	80%
£9,500 to £17,500	£16,800 to £30,999	£17,700 to £32,599	70%
£17,500 to £25,000	£31,000 to £44,299	£32,600 to £46,599	67%
£25,000 to £40,000	£43,000 to £70,799	£46,600 to £74,599	60%
Over £40,000	Over £70,800	Over £74,600	50%

NOTES: Gross earnings band thresholds have been uprated by earnings growth since 2004.
SOURCE: Pensions Commission, Pensions: Challenges and Choices.

The Pensions Commission advocated for auto-enrolment to aim short of target replacement rates

It is important to understand what target replacement rates represent and what they do not. They can be thought of as the retirement income that someone might aim for if they wanted to smooth their living standards between working life and retirement (i.e. if someone wanted to avoid a large fall in living standards on retirement). This is not the same as the concept of an 'adequate' retirement income, nor a benchmark that policy should necessarily aim for. For example, well-paid people could receive a pension income significantly below their target replacement rate but which might still be adequate for them.

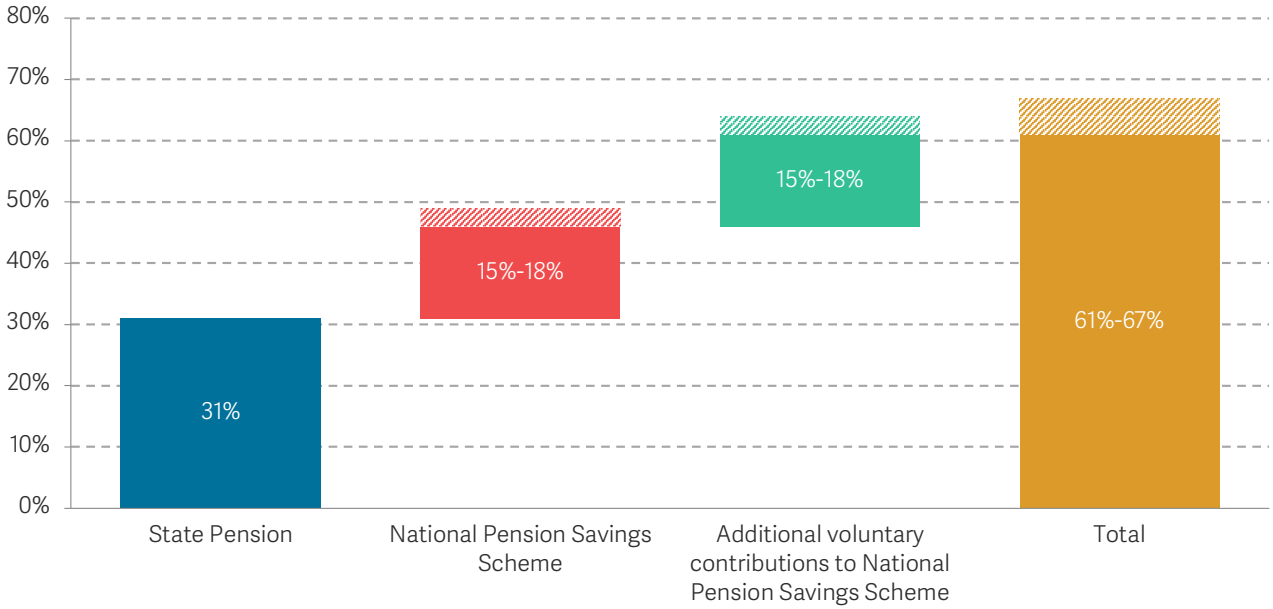
Indeed, the Pensions Commission made an explicit distinction between the 'target' replacement rates that might anchor individuals' decisions and what policy should seek to achieve. Contributions to an individual's retirement income can come from sources including the State Pension, quasi-mandatory pension saving via auto-enrolment, and additional voluntary saving (see Figure 1). For a median earner, the Commission anticipated the State Pension providing around 31 per cent of full-time earnings at the point of retirement, on top of which auto-enrolment would "strongly encourage" a base load rate of saving sufficient to contribute a further 15 to 18 per cent of gross income replacement.[9] The combination of State Pension and auto-enrolment savings would

9 This was thought to be achievable from auto-enrolment default contributions of 8 per cent of gross salary above the National Insurance Primary Threshold (which stood at £4,888 in 2005). The Commission's calculations assumed that a person would begin saving at the age of 30, achieve a real rate of return of 3.2 per cent per year after management charges, retire at the age of 67 and convert the resulting pension pot into an RPI-indexed annuity at a rate of 5.2 per cent.

therefore be expected to replace between 46 and 49 per cent of median earnings, intentionally some way short of the 67 per cent TRR. The Commission argued that it was "a reasonable aim of public policy to ensure that the median earner achieves an income replacement rate of at least 45 per cent." Saving more to achieve a replacement rate closer to the target was something to be left to individual and employer choice, since compelling people to do so would "fail to allow for diversity in individual preferences and circumstances".[10]

FIGURE 1: **The Pensions Commission envisioned the State Pension and auto-enrolment would provide a median earner with a 46 to 49 per cent income replacement rate**

Target pension income as a percentage of earnings for the median earner at the point of retirement, as envisioned by the Pensions Commission



SOURCE: Figure 6.33 in Pensions Commission, A New Pension Settlement for the Twenty-First Century.

Absolute adequacy benchmarks have been designed to help savers understand how much money they'll need in retirement

In principle, target replacement rates are an important guide to calibrating pension-saving policy. As relative benchmarks, they are rooted in the concept of consumption smoothing, aiming to ensure that people can maintain their lifestyle as they move between working life and retirement. However, while consumption smoothing is an important guideline for private pension saving and policy towards it, it is insufficient as a concept to guide pensions policy overall.

10 Pensions Commission, A New Pension Settlement for the Twenty-First Century: The Second Report of the Pensions Commission, November 2005.

One argument against replacement rates is that they do not accurately reflect what people want or need in retirement. For example, people might achieve a given TRR yet fail to attain the standard of living they had envisioned during retirement. Another argument is that target replacement rates assume a consistent spending profile throughout retirement whereas, in reality, expenditure tends to decline in older age.[11] Most importantly, relative income benchmarks will inevitably be insufficient if we believe that all pensioners should have dignity in retirement and be able to provide the basics of life, regardless of their working-age income.

In light of this, various researchers have developed absolute adequacy benchmarks to help people understand how much money they will need in retirement to achieve a basic standard of living. These include the Pension and Lifetime Savings Association's (PLSA's) Retirement Living Standards (RLS)[12] and the Living Wage Foundation's (LWF's) Living Pension.[13] These absolute benchmarks are described in detail in Box 1.

BOX 1: **Description of absolute pension adequacy benchmarks**

The Retirement Living Standards set out budgets detailing the expenditure needed for single and partnered retirees to reach three different levels of living standard. The RLS built on the Minimum Income Standard (MIS) which is produced by the Centre for Research in Social Policy (CRSP) at Loughborough University and funded by the Joseph Rowntree Foundation (JRF).[14] But, while the MIS establishes the expenditure required to achieve a minimally acceptable standard of living in retirement, many future pensioners will aspire to have living standards above this minimum level. The Retirement Living Standards therefore established a public consensus on the goods and services, and associated expenditure, needed to achieve a minimum standard of living in retirement, but also a moderate and comfortable standard of living.

As with the MIS, the 'moderate' and 'comfortable' Retirement Living Standards are arrived at through a sequence of focus groups with members of the public who have detailed discussions of what baskets of goods, services and activities is needed for each standard of living.[15] The lists of goods and services identified are then priced to create costed budgets, which are then used as the basis

11 Pensions and Lifetime Savings Association, Retirement income adequacy: generation by generation, November 2016.
12 https://www.retirementlivingstandards.org.uk/
13 https://www.livingwage.org.uk/living-pension
14 M Padley & J Stone, A Minimum Income Standard for the United Kingdom in 2023, Joseph Rowntree Foundation, September 2023.
15 M Padley, Retirement living standards in the UK in 2023, Centre for Research in Social Policy, January 2024.

for calculating the expenditure that individuals and couples would need.

The Living Pension is a voluntary target for employers who wish to help their workers build a pension pot sufficient to meet basic everyday needs in retirement. The standard sets out the minimum total annual contribution rates required throughout working life to reach the level of savings required to achieve a minimum standard of living in retirement.[16] The Living Pension is underpinned by the MIS, but it also takes into account differences in housing tenure, family circumstances, life expectancies, and the fact that pensioners will likely pay tax on some of their income. The average annual net income required across all these family types was calculated to be £19,300 in 2023-24, and this is what the Living Pension contribution target is based upon.[17]

For employers to become Living Pension accredited, pension contributions must meet the minimum 12 per cent contribution (with at least 7 per cent coming from the employer), or a minimum cash amount of £2,800 (with £1,630 coming from the employer). The Living Pension must apply to all employees over the age of 18 regardless of earnings, and contributions must apply to all earnings up to £50,270.[18]

How do the relative and absolute approaches to defining pension adequacy measure up in practice? Figure 2 compares the absolute pension adequacy benchmarks with the Pensions Commission's TRR for a full-time median earner in 2023. Here we present net income measures to ensure comparability between the different benchmarks.[19] A single person needs an annual expenditure of £14,400 to meet a socially acceptable minimum standard of living in retirement according to the MIS. This increases to £31,300 to achieve the PLSA's 'moderate' standard of living. The Living Pension benchmark suggests that the average net income required for a socially acceptable minimum standard of living in retirement is around £19,300, which is higher than the PLSA's minimum RLS mainly due to the inclusion of housing costs for retirees. By comparison, a median earner achieving the Pensions Commission's target replacement rate of 67 per cent would have a net income of around £21,000. This would be comfortably above the PLSA's minimum benchmark and about 10 per cent above than the Living Pension standard. However, it falls short of the PLSA's 'moderate' standard of living benchmark.

We can also compare these adequacy benchmarks to retirees' actual living standards today, as well as median expenditure according to the Living Costs and Food Survey (see Figure 2). Typical expenditure by today's retirees lies in between the PLSA's minimum

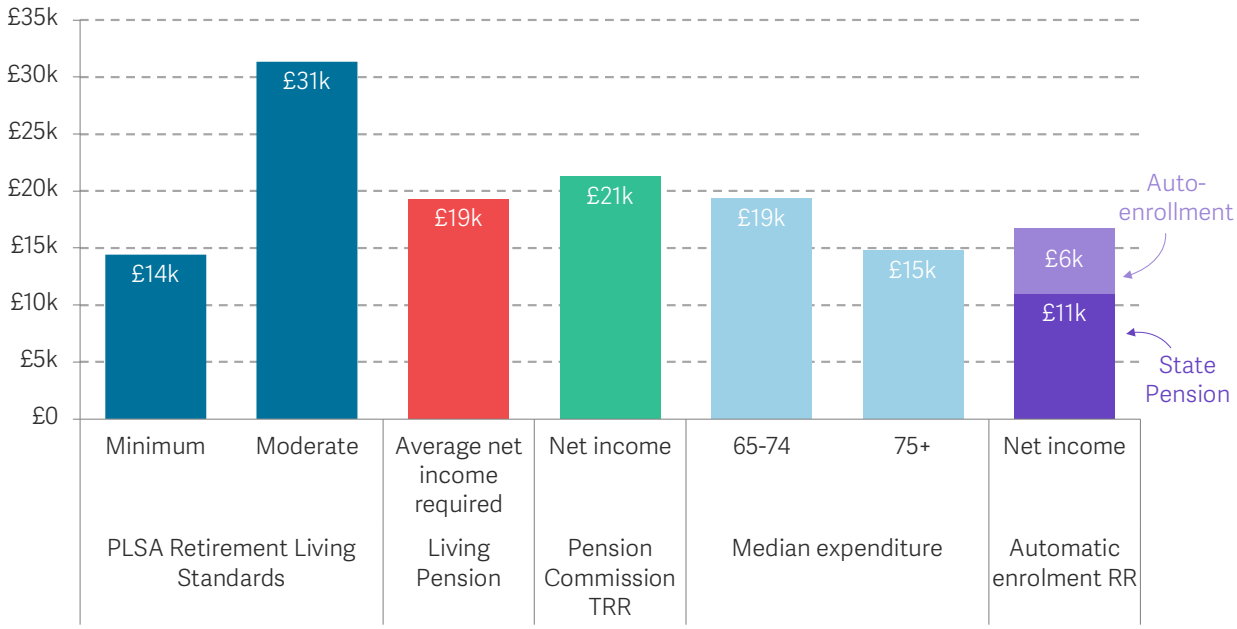
16 https://www.livingwage.org.uk/living-pension
17 M Broome, Calculating a Living Pension: the 2024 update, Resolution Foundation, September 2024.
18 https://www.livingwage.org.uk/living-pension
19 For these purposes, 'net income' is considered to be equal to 'expenditure', i.e. that retirees do not need to save.

standard and the Pensions Commission's TRR for a median earner. This suggests that achieving the TRR would provide a middle earner with a significantly higher standard of living in retirement than is typical today.[20]

Finally, Figure 2 illustrates the likely outcome for a median earner from the auto-enrolment regime as it stands today. On our modelling assumptions (detailed further in Section 4), had today's auto-enrolment regime been in place in the past, then it would provide a median earner with a net retirement income of around £17,000 – above the PLSA's minimum standard, and around median retiree expenditure today.

FIGURE 2: **A median earner achieving a 67 per cent replacement rate would have an income comfortably above minimum standard of living benchmarks**

Pension adequacy benchmarks for a median earner and typical equivalised expenditure by age group: UK, 2023



NOTES: Our model uses £34,960 for full-time median gross earnings in 2023 from ASHE. Median expenditure is based on the 2019-20 Living Costs and Food Survey where prices have been uprated to April 2023 using the CPIH index. To calculate Pensions Commission TRR net income we multiply median earnings in 2023 by 67 per cent and account for income tax paid. Similarly, to calculated the auto-enrolment RR net income we multiply median earnings in 2023 by 51 per cent and account for income tax paid. Median expenditure has been equivalised to represent a single person.
SOURCE: Pension and Lifetime Savings Association, Retirement Living Standards; Living Wage Foundation, Living Pension; Pensions Commission, Pensions: Challenges and Choices; ONS, Living Costs and Food Survey; ONS, Annual Survey of Hours and Earnings.

20 Today's retirees will of course have finished working some years ago, so their net income would tend to be lower than for someone with a retirement income equal to the target replacement rate of today's median earnings.

Absolute benchmarks are more appropriate to use than relative benchmarks if the aim is to ensure a minimum standard of living in retirement

Relative benchmarks are a helpful guide for middle and higher earners, but it is entirely possible for a low earner to save throughout their working life and achieve their TRR, but still have an income below that deemed to be an appropriate absolute minimum. To put it directly: if someone's net income in working life is below £19,300, then the principle of consumption smoothing will never get them up to the Living Pension benchmark in retirement.

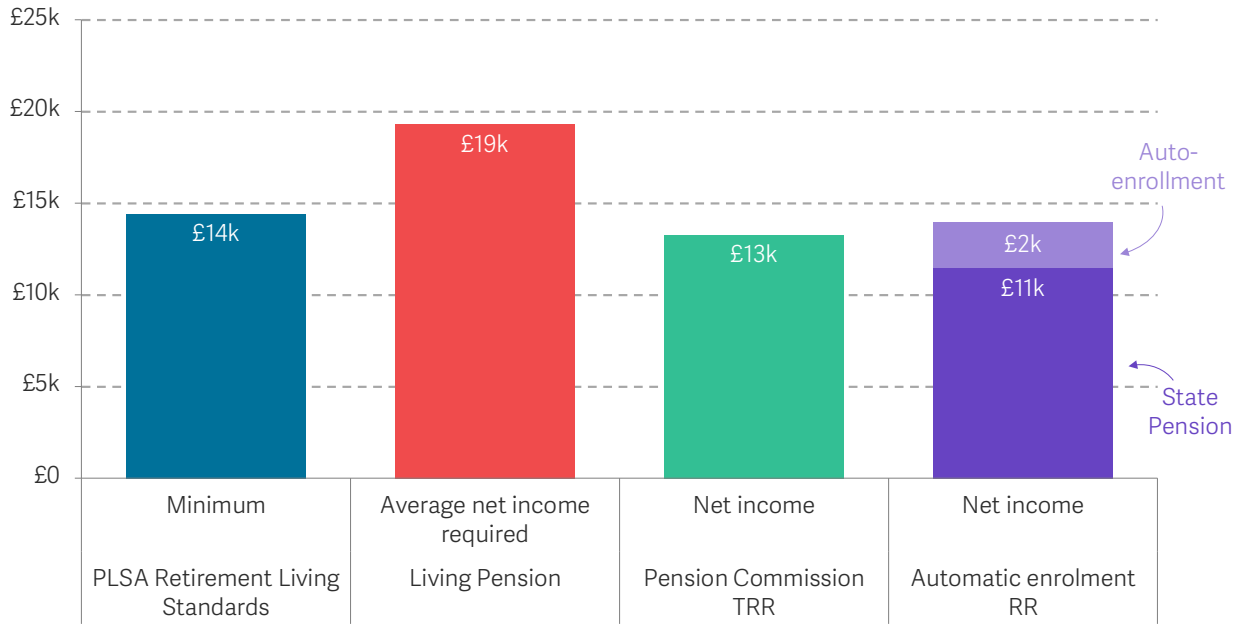
This is not a shortcoming of relative income benchmarks. If a low-earner is on track to achieve their target replacement rate and is still deemed to have an inadequate income in retirement, the solution cannot be to require them to save more at the expense of a minimum standard of living during their working life in order to achieve it only in retirement.[21] Instead, in these situations it has to be up to the state to use tools other than private saving to help people achieve what it sees as an acceptable minimum living standard in retirement.

The Commission recognised this issue, and recommended reforms to the State Pension and Pension Credit to prevent pensioners from falling into poverty (as well as to remove disincentives to save). Figure 3 shows how the minimum absolute benchmarks compare to the Commission's TRR for low earners together with the notional outcome from the current State Pension and auto-enrolment regime. It suggests that low earners' retirement incomes would be only slightly short of the PLSA's minimum but well below the Living Pension standard.

21 Nest Insight research concludes that if someone's disposable income during working life falls below a minimum retirement benchmark, their best strategy is unlikely to be saving more into a pension. See: M Blakstad & A Ghazaryan, How much is enough? A contextual view of retirement savings, Nest Insight, September 2024.

FIGURE 3: **TRRs for low earners do not provide a sufficient income to meet absolute minimum standard of living benchmarks**

Pension adequacy benchmarks for a low earner: UK, 2023



NOTES: Our model uses £16,800 for a low earner, representing the lower earnings band from the Pensions Commission's first report, uprated to April 2023 using earnings growth. To calculate Pensions Commission TRR net income we multiply earnings in 2023 by 80 per cent and account for income tax paid. Similarly, to calculate the auto-enrolment RR net income we multiply median earnings in 2023 by 85.3 per cent and account for income tax paid.
SOURCE: Pension and Lifetime Savings Association, Retirement Living Standards; Living Wage Foundation, Living Pension; Pensions Commission, Pensions: Challenges and Choices; ONS, Annual Survey of Hours and Earnings.

Whether absolute or relative measures of pension adequacy are more appropriate depends on the policy question at hand. Absolute adequacy benchmarks are particularly useful for thinking about the combined effect of state and private pensions and whether they are sufficient to deliver an acceptable minimum living standard. On the other hand, when setting auto-enrolment policy to encourage people to save for retirement out of their earnings, the aim should be to lean against present bias in order to help people smooth living standards into retirement. The aim should not be to achieve any given absolute minimum retirement income because doing so would violate the principle of consumption smoothing – in some cases forcing low-income people to have a much lower standard of living in working life than in retirement. Consequently, relative income benchmarks are the appropriate guide for auto-enrolment policy.

Section 3

Tax changes over the past 20 years mean target replacement rates should be higher

In 2004, the first report of the Pensions Commission established a set of gross income replacement rates that it deemed sufficient to smooth living standards between working life and retirement. However there have been significant shifts in the personal tax system since then, such as the phasing out of age-related personal allowances for over 65s, changes to the Income Tax Personal Allowance and National Insurance primary threshold, and changes in the rates at which both taxes are levied. These changes have significantly narrowed the gap between the Income Tax and National Insurance paid during working life and in retirement for low-to-middle earners. For example, a median full-time earner in 2024-25 sees their take-home pay reduced by 17 per cent due to Income Tax and National Insurance, compared to 23 per cent in 2002-03. At the same time, the tax paid in retirement has slightly increased. As a result, a median full-time earner today would need to aim for a gross replacement rate of 72 per cent instead of the 67 per cent recommended by the Commission to maintain the same standard of living, with similar changes applying to earners across the distribution.

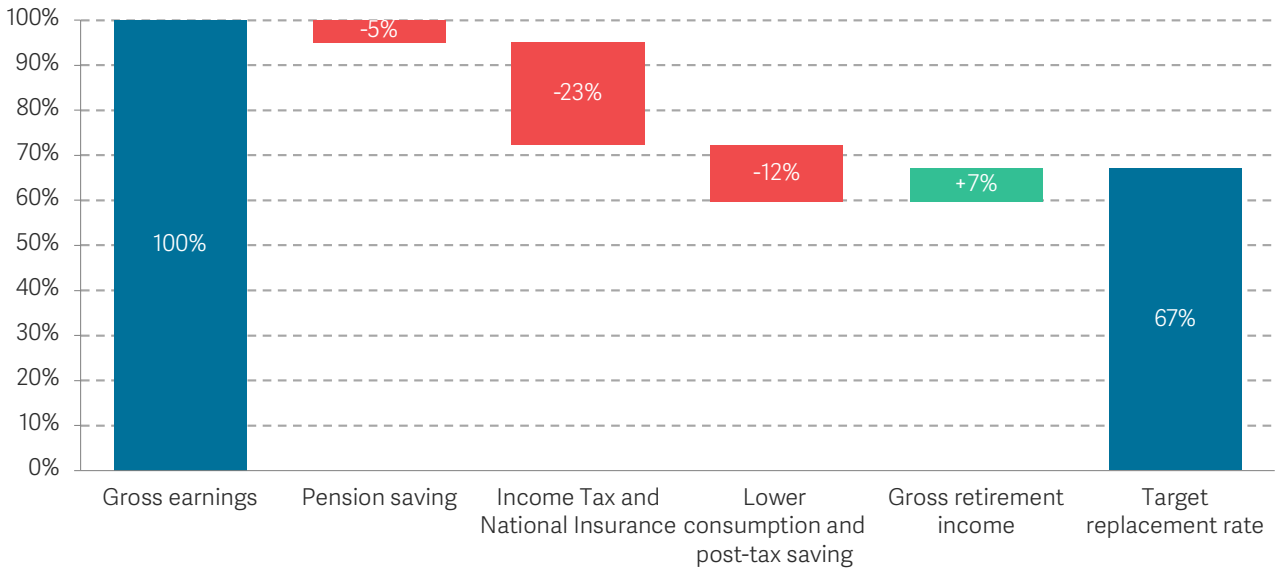
Having argued that target replacement rates are an appropriate benchmark to guide pension saving policy (if not its direct goal), we now go on to revisit the Pensions Commission's target replacement rates and the rate of saving required to achieve them. In the next two sections, we look first at how changes since the mid-2000s to the tax system and then the economic and policy environment have altered the Commission's calculations.

The steps involved in the Pensions Commission's calculation of a 67 per cent TRR for a median earner are not explicit in its first report, largely because it represented a judgement based on a wide range of evidence. However, a notionally similar calculation is set out in Figure 4. The most uncertain element of the calculation is how much household expenditure and non-pension saving should fall after the transition to

retirement to maintain living standards, as expenditures related to employment and dependent children fall away and mortgages are paid off.[22] But one way to rationalise the 67 per cent TRR is if the Commission assumed that people would reduce their combined spending and saving in retirement by an amount equivalent to 12 per cent of their gross earnings in working life. As we show in Figure 4, this assumption allows us to arrive at a 67 per cent replacement rate.[23]

FIGURE 4: **The Pensions Commission established that a median earner should target a replacement rate of 67 per cent of pre-retirement gross earnings**

Possible derivation of the Pensions Commission's target replacement rate for a median earner: 2002-03



NOTES: Our modelling uses £21,250 for median earners in 2002-03.
SOURCE: RF analysis of Pensions Commission, Pensions: Challenges and Choices: The First Report of the Pensions Commission; ONS, Annual Survey of Hours and Earnings.

For a median full-time earner, the largest factor reducing the required replacement rate relative to pre-retirement earnings was the difference in Income Tax and National Insurance contributions before and after retirement, with Income Tax and National Insurance contributions on employees lowering the replacement rate by 23 percentage points and tax on pension income only increasing it by around 7 percentage points. But there have been significant shifts in the tax system since 2002-03, which mean that, all else equal, the appropriate gross replacement rate has changed. Most notably, age-related

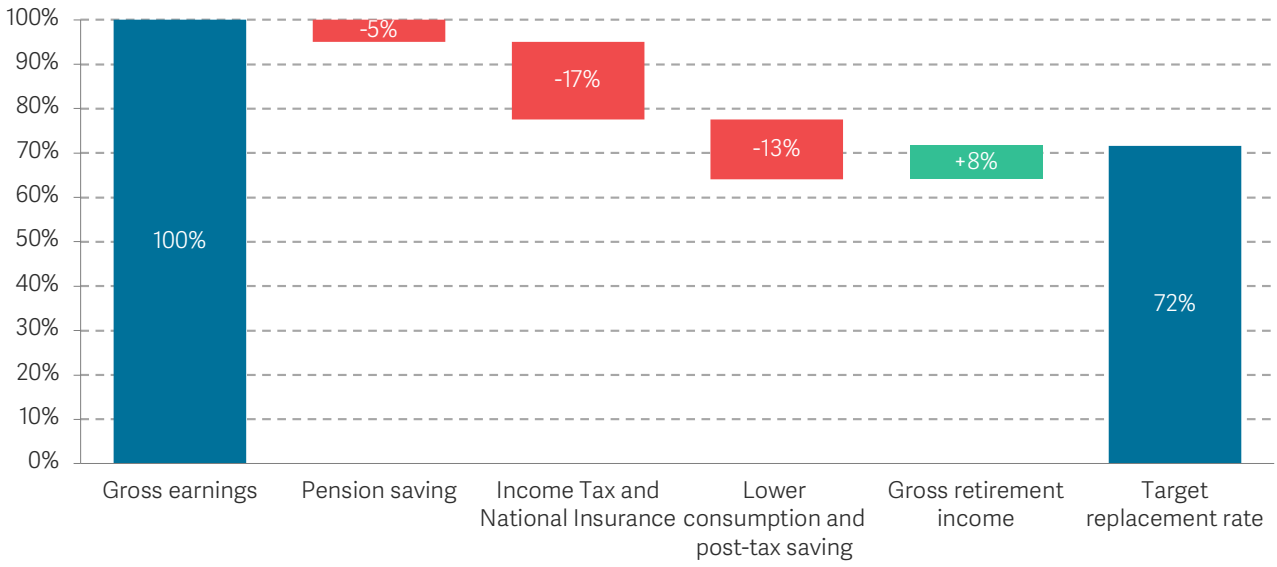
22 Pensions Commission, Pensions: Challenges and Choices: The First Report of the Pensions Commission, 2004.
23 We assume 2003 median full-time gross earnings of £21,250, an employee pension contribution of 5 per cent of gross earnings and the 2002-03 Income Tax and National Insurance (NI) contributions regime.

Income Tax Personal Allowances for over 65s were phased out from April 2013.[24] Income Tax rates have changed from 10 per cent and 22 per cent to 20 per cent, and National Insurance contributions are now levied at 8 per cent, rather than 10 per cent in 2002-03.

Applying today's tax regime to someone on median full-time earnings today – assumed to be £36,990 in 2024 – therefore implies a different gross replacement rate to the one calculated by the Commission.[25] As shown in Figure 5, the Income Tax and National Insurance contributions levied on a median full-time earner reduce their take-home pay by just 17 per cent today compared to 23 per cent in 2002-03; meanwhile, the tax paid by same person in retirement is slightly higher. The net effect is that someone on median full-time earnings today would need to target a gross replacement rate of 72 per cent rather than 67 per cent in order to smooth their living standards to the same degree as proposed by the Commission (i.e. assuming the same proportionate reduction in saving and expenditure on entering retirement as before).

FIGURE 5: **A median earner today would need to target a higher replacement rate due to changes in the personal tax regime**

The Pensions Commission's target replacement rate for a median earner in 2024-25



NOTES: Our modelling uses £36,985 for median earners in 2024, based on April 2023 earnings adjusted to April 2024 levels using earnings growth.
SOURCE: RF analysis of ONS, Annual Survey of Hours and Earnings.

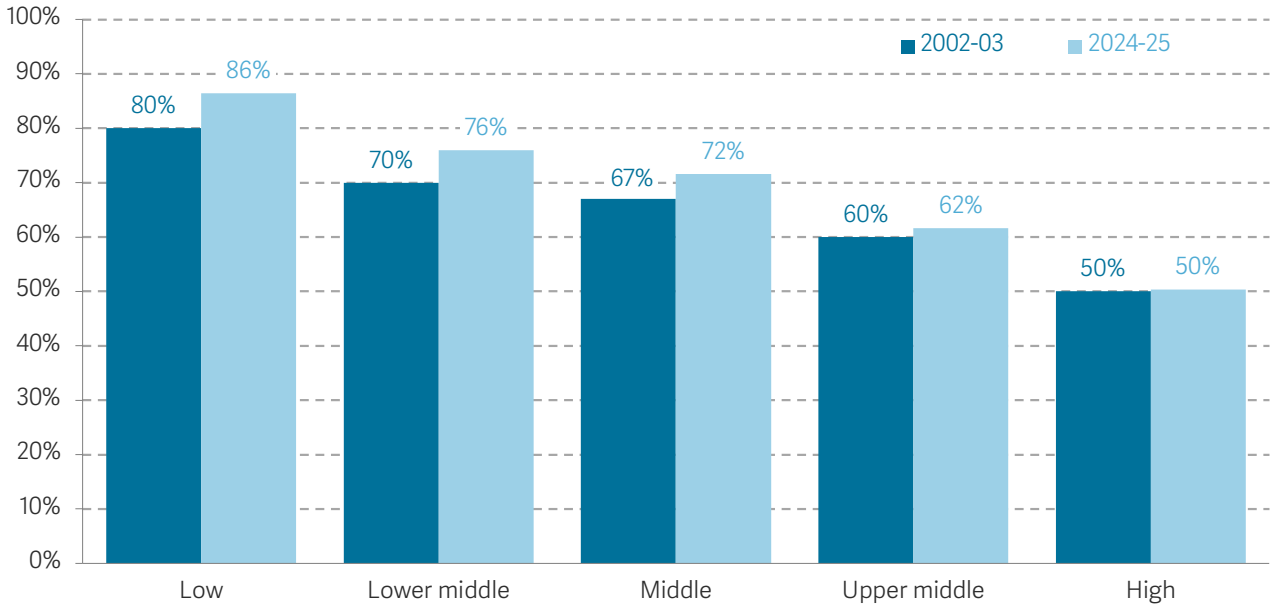
24 Over-65s enjoyed a personal allowance of £6,100 (and over-75s a slightly higher figure) in 2002-03, compared to just £4,615 for under-65s at the time. Today there is no age-related personal allowance and, whether employed or retired, everyone has the same £12,570 per year. A Seely & M Keep, Age-related personal allowance, House of Commons Library, September 2019.
25 The estimate of median full-time earnings in April 2024 has been calculated by uprating the figure for April 2023 by earnings growth.

Beyond the median earner, complex shifts in the tax system have changed today's equivalent replacement rates in unpredictable ways. In particular, the higher level of the personal allowance relative to earnings for working-age people, together with the abolition of higher age-related personal allowances from age 65, mean that the difference between the Income Tax and National Insurance contributions paid during working life and in retirement has reduced substantially for lower earners. This in turn means that lower earners need to target a higher gross income replacement rate to smooth their living standards than was the case 20 years ago.

Figure 6 repeats the exercise shown above for people on different levels of earnings, showing that the target replacement rate for a lower-middle earner on £25,150 today has increased from 70 per cent to around 76 per cent. Meanwhile for a low earner on £17,700, today's equivalent target replacement rate is around 86 per cent of pre-retirement gross income, up from the 80 per cent proposed by the Commission 20 years ago. The impact on target replacement rates for those earning above the median has been smaller; for example, an upper-middle earner with an income of £60,600 today would need to aim for a replacement rate of 62 per cent, just two percentage points higher than the 60 per cent recommended by the Pensions Commission.

FIGURE 6: **Tax changes mean that lower earners need to target a higher gross income replacement rate in retirement to smooth their living standards than was the case 20 years ago**

The Pensions Commission's target replacement rates in 2002-03 and their equivalent in 2024-25, by earnings band



NOTES: Our modelling uses £17,700 for low earners, £25,150 for lower-middle earners, £36,985 for median earners, £60,600 for upper-middle earners and £74,600 for high earners. These represent the earnings bands from the Pensions Commission's first report, uprated to April 2024 using earnings growth.
SOURCE: Resolution Foundation analysis.

Estimating the gross earnings replacement rates that allow individuals to smooth their living standards between working life and retirement is inevitably an uncertain exercise and the appropriate rates vary between people for any number of reasons beyond the level of their earnings alone. Nevertheless, the analysis of this section makes it clear that, the replacement rates deemed appropriate for low and middle-income people 20 years ago need to be increased given changes in the personal tax system since then.

Saving enough to achieve such an income in retirement depends on many factors that have also changed in the 20 years since the Commission's first report. The next section explores what today's financial environment and economic outlook mean for people saving at the default rate of auto-enrolment, and how close it might take them to achieving these updated target replacement rates.

Section 4

Economic changes have altered the saving rate required to achieve target replacement rates

The Pensions Commission anticipated that the State Pension would replace about 31 per cent of median earnings at retirement, while auto-enrolment at an 8 per cent contribution rate would provide an additional 15 to 18 per cent replacement of median earnings. In combination this would replace between 46 and 49 per cent of median earnings – slightly above the 45 per cent "minimum base load" aim that the Commission articulated for policy.

However, significant changes since then – slower earnings growth, lower rates of return on pension savings, reduced annuity rates, and a lower qualifying earnings threshold for pension contributions – have slightly reduced the relative retirement income that someone might receive from a given rate of saving. On the other hand, the State Pension today may replace a slightly higher proportion of earnings than the Commission envisaged.

As a result, the combination of the State Pension and auto-enrolment savings is now projected to leave a median earner who saves from the age of 30 to 67 with a total gross earnings replacement rate of around 51 per cent, above the Commission's minimum goal of 45 per cent, but a long way short of the updated target replacement rate of 72 per cent.

A 2017 review of automatic enrolment proposed additional reforms, such as abolishing the lower earnings limit and lowering the age at which someone is automatically enrolled to the age of 18. Modelling suggests that implementing these changes would raise the median earner's overall replacement rate to around 55 per cent. Applying this analysis to earners on either side of the median shows that auto-enrolment in its current from is sufficient to achieve the updated target replacement rate for low earners who save from the age of 30, but current policy will not achieve target replacement rates for middle and higher earners.

Having updated the Pensions Commission's target replacement rates to reflect changes in the tax system since the mid-2000s, we now explore how the wider policy and economic landscape has shifted since auto-enrolment was first introduced and what these changes mean for the adequacy of the current pension system.

The new State Pension is likely to provide around 34 per cent of median 'final earnings'

In the early 2000s, the combination of the basic State Pension (bSP) and the earnings-related state schemes such as the State Earnings-Related Pension Scheme (SERPS) and the State Second Pension (S2P) meant that a median earner with a full contribution record could expect to receive around 35 per cent of their pre-retirement earnings from the state. But the generosity of that provision was expected to decline over time, with a median earner expected to receive around 27 per cent of median earnings in State Pension provision by the mid-2020s.[26]

Following the Pensions Commission's recommendations, there has been rapid progress towards a simpler system, with the introduction of the more generous flat-rate new State Pension and the abolition of earnings-related entitlements for those retiring from 2016 onward. The new State Pension is much more generous in its coverage than past provision, with time spent out of work for reasons of disability, caring or unemployment all counting towards the 35 years of contributions required to qualify for the full amount. The Department for Work and Pensions (DWP) estimates that from later in this decade some 80 to 90 per cent of retirees can expect to receive the full rate of the new State Pension.[27] As a result, means-tested entitlements are set to become a very marginal part of the system, achieving the Pensions Commission's vision of providing people with a stable base of state provision on which to plan their own financial affairs without facing strong financial disincentives to save.

Modelling by the Institute for Fiscal Studies suggests that the new State Pension under the current triple lock indexation policy can be expected to rise to around 31 per cent of median earnings over the next decade, up from 30 per cent in 2023-24.[28] This is in line with the Pensions Commission's expectations (see Figure 1). With mounting demographic pressures playing into an already difficult fiscal outlook, it would be risky for people to plan on the basis that the State Pension will continue to rise above the rate of earnings growth indefinitely. The future is inevitably uncertain, but a more conservative assumption is that the value of the State Pension will stand at around 30 per cent of contemporary median full-time earnings.

26 Pensions Commission, A New Pension Settlement for the Twenty-First Century: The Second Report of the Pensions Commission, November 2005.
27 Department for Work and Pensions, Impact of New State Pension (nSP) on an Individual's Pension Entitlement – Longer Term Effects of nSP, January 2016.
28 J Cribb et al., The Future of the State Pension, Institute for Fiscal Studies, December 2023.

As noted in Section 2, how we define 'pre-retirement' or 'final' earnings is crucial for assessing pension adequacy. Some use earnings literally at the point of retirement, but an alternative is average earnings over several years leading up to the end of a person's career. While it appears the Pensions Commission defined final salary as earnings at retirement, our analysis follows the methodology of the DWP in its Analysis of Future Pension Incomes report, which calculates replacement rates based on average earnings from age 50 to State Pension age or retirement, whichever occurs first.[29] As a result, on the Office for Budget Responsibility's assumption of 1.5 per cent real wage growth, a State Pension of 30 per cent of contemporary median full-time earnings will equate to around 34 per cent of 'final earnings', as defined in the DWP's methodology.[30]

Auto-enrolment default contributions are likely to replace around 18 per cent of median final earnings

Many factors affect how any given rate of saving translates into a person's replacement rate in retirement, including their income during working life and how quickly it grows, the age at which they start saving and choose to retire, and the growth rate of their savings and the rate of return they can get on their pension pot in retirement. The world has changed significantly since the Commission reported, in ways that make a material difference to likely replacement rates from auto-enrolment and the way we think about whether someone is on track to receive an adequate income in retirement. The four main changes are as follows.

1. The lower qualifying earnings threshold has fallen. The Pensions Commission proposed a lower limit to the qualifying earnings band that aligned with the Primary Threshold for National Insurance contributions. Employees would only make default contributions on annual income above this level, which in 2005 stood at £4,888. Had it increased in line with earnings, this threshold would be worth £8,754 today. But in 2024-25 the qualifying earnings band for contributions is £6,240. As a result, pension contributions are running at a higher rate under today's system than would have been the case under the initial proposal, boosting replacement rates for a given auto-enrolment contribution rate.

2. Rates of return are lower. Rates of return determine how rapidly people's pension pots grow. Based on current market prices and updating the Financial Conduct Authority's (FCA's) required rates of return (used to guide the pension industry's illustrations of how savings might grow), we can see that, on reasonable assumptions about the portfolio of assets

29 Department for Work and Pensions, Analysis of Future Pension Incomes, March 2023.
30 Real earnings are forecast to grow by 1.53 per cent in 2029-30; see: Office for Budget Responsibility, Economic and fiscal outlook: Long-term economic determinants, March 2024.

pension savers typically invest in, likely rates of growth have fallen slightly compared to 2005.[31] We estimate that real rates of return are likely to be around 0.5 per cent lower than the 3.2 per cent they were expected to be in 2005.[32] This means savings will grow somewhat slower than previously anticipated, reducing replacement rates for a given amount of saving.

3. Earnings growth expectations are lower. In the Commission's 2005 final report, earnings were expected to grow at a healthy 2 per cent per year in real terms for the foreseeable future. A world with strong earnings growth is one where a person's income at the point of retirement is likely to be well above average over their working life, meaning a higher saving rate is required to achieve any given replacement rate of final earnings. However, real earnings have barely grown at all since the financial crisis.[33] In its most recent forecasts, the Office for Budget Responsibility foresees earnings growth running at around 1 per cent per year in the short term, rising to around 1.5 per cent per year in the long run. This increases replacement rates for a given amount of saving.[34]

4. Annuity rates are lower. At the time of the Commission's final report, pension rules made it compulsory for people to use their pot to buy an annuity (with all apart from the tax-free lump sum) at the point of retirement. Consequently, it was appropriate to use prevailing annuity rates to convert anticipated savings into a likely income stream.[35] In the wake of the 2014 decision by Chancellor George Osborne to remove mandatory annuitisation in favour of the 'pension freedoms', allowing retirees to draw down pension savings flexibly, the number of annuities purchased each year has dropped dramatically.[36] This may have implications for the comparability of annuity rates over time, but it seems appropriate to continue to use prevailing annuity rates to convert likely pension savings into an income equivalent since they capture the impact of changing longevity on the rate at which people can sustainably draw down their pension savings. Recent data indicates that inflation-protected annuity rates for a 65-year-old are currently around 4.4 per cent, down from the 5.2 per cent assumed by the Pensions Commission, while rates for a 67-year-old are at 4.7 per cent.[37] This is

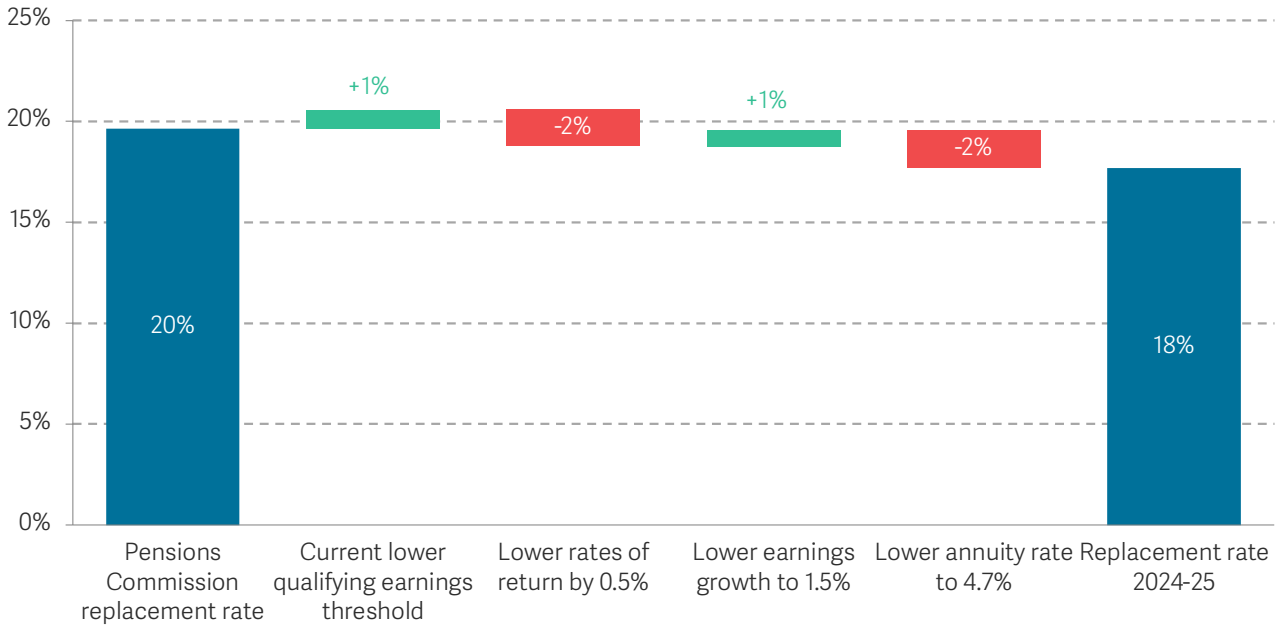
31 Financial Conduct Authority, Rates of return for FCA prescribed projections, September 2017.
32 Following the FCA's approach in its prescribed projections, we calculate real risk-free rates in two ways. First, we take the 10-year nominal gilt rate and subtract 2.5 per cent, which is the FCA's assumption for GDP deflator inflation. Second, we take the 10-year real gilt rate and add 0.75 per cent, which is the FCA's assumption for the wedge between RPI and GDP deflator inflation. Averaging these two measures gives a 1 per cent 10-year real risk-free rate in June 2024, and were around this level over the preceding year. On the same basis, the 10-year real risk-free rate averaged 1.5 per cent between January 2002 and December 2004, which we take as a reasonable proxy for the rate environment studied by the Pensions Commission. Note that this method doesn't account for the impact of RPI reform in 2030 on real gilt yields, but at this stage the impact of RPI reform is likely to be small.
33 N Cominetti & H Slaughter, Job done?: Assessing the labour market since 2010, Resolution Foundation, June 2024.
34 Real earnings are forecast to grow by 1.53 per cent in 2029-30. For more information see: Office for Budget Responsibility, Economic and fiscal outlook: Long-term economic determinants, March 2024.
35 The Commission's calculations were based on an observed RPI-linked annuity rate for a 65-year-old man of 5.2 per cent.
36 Work and Pensions Committee, Protecting pension savers—five years on from the Pension Freedoms: Accessing pension savings, January 2022.
37 RF analysis of The Annuity Project from William Burrows.

a significant drop which reduces the income people can expect from any given size of pension pot. This reduces replacement rates for a given amount of saving.

Combining these effects, we calculate that that today's auto-enrolment regime can be expected to replace around 18 per cent of gross earnings for a median earner under current economic and financial conditions, around two percentage points lower than the Pensions Commission's initial expectation.[38] Changes in some factors since 2005 have tended to increase the likely replacement rate from auto-enrolment, but falling rates of return and annuity rates have more than offset them, resulting in a less generous pension for any given rate of saving.

FIGURE 7: **Lower returns and annuity rates have been offset by slower earnings growth and reduced automatic enrolment earnings thresholds**

Estimated replacement rate from automatic enrolment in 2024-25 for a median earner versus assumptions in the Pensions Commission's report



NOTES: Our modelling uses £36,985 for median earners. Modelling assumes that all pension savings are used to purchase an RPI-linked annuity at the age of 67. The model assumes that pension contributions are made from the age of 30 to 67 (State Pension age). For the Pensions Commission replacement rate the following assumptions are made: income growth at 2 per cent, rate of return on pension savings at 3.2 per cent, Lower Earnings Limit at £8,754 and annuity rates at 5.2 per cent. For the replacement rate in 2024-25 the following assumptions are made: income growth at 1.5 per cent, rate of return on pension savings at 2.7 per cent, Lower Earnings Limit at £6,240 and annuity rates at 4.7 per cent. The Pensions Commission's replacement rate is higher than 18 per cent due to our model using DWP's approach to base 'final earnings' on average earnings over the years of employment from the age of 50 to State Pension age.
SOURCE: RF analysis of Bank of England, Yield curves; The Annuity Project from William Burrows; The Pensions Commission, A New Pension Settlement for the Twenty-First Century: The Second Report of the Pensions Commission; ONS, Annual Survey of Hours and Earnings; OBR, Economic and fiscal outlook – March 2024.

38 The replacement rate achieved depends upon the definition of 'final earnings'. On final earnings defined by earnings at the point of retirement, the replacement rate expected for a median earner under the Commission's proposals is 18 per cent. On the definition used in this report – average earnings between the age of 50 and retirement – the equivalent figure is 20 per cent.

Combining the median-earner replacement rate provided by the State Pension with the anticipated income from today's auto-enrolment regime, we find that the current pension system is on track to replace a total of 51 per cent of median earnings. This is above the Commission's minimum goal for policy of 45 per cent, but a long way short of the updated target replacement rate of 72 per cent.

BOX 2: **Sources of uncertainty in pension income simulations**

Simulations of the likely income a person can expect in retirement from any given rate of saving are based on a range of assumptions that are highly uncertain. The assumptions adopted for this exercise are designed to be conservative. Context for some of the key judgements, including discussion of why they may be conservative, is outlined below.

Saving from the age of 30. In its modelling, the Pensions Commission recognised that many people will take time out of the labour market during working life for reasons of childcare, illness, unemployment or choice. Consequently, the projections made the simplifying assumption that people contribute to their auto-enrolment pension from the age of 30. Today, employers are required to make pension contributions on behalf of employees receiving maternity or paternity pay, increasing the effective years of contribution. This may mean that assuming people begin saving only at the age of 30 is too pessimistic.

Planning for retirement as a single person. Auto-enrolment and the concept of TRRs are based on individual earnings replacement. However, the majority of people live with a partner at the point of retirement.[39] Two people living together with the same income will have a higher equivalised income than either person would have if they lived alone. As a result, assessments based on single-earner replacement rates tend to understate the adequacy of retirement incomes. Nevertheless, it is appropriate and practical for a policy that encourages people to do payroll saving from their early 20s to be calibrated on individual earnings.

Choosing an RPI-linked annuity. In line with the approach taken by the Pensions Commission, we calculate replacement rates on the assumption that people use all of their pension saving to purchase an RPI-linked annuity that will retain its value in real terms throughout retirement. In practice, around 94 per cent of annuities purchased are flat rate.[40] Since flat-rate annuities tend to be at

39 ONS, Household projections for England.
40 Department for Work and Pensions, Analysis of Future Pension Incomes, March 2023.

least two percentage points higher than RPI-linked ones, modelling replacement rates on that basis would substantially increase replacement rates at the point of retirement, although the replacement rate would then fall over time with inflation. Similarly, assuming individuals purchase an RPI-linked annuity suggests that pensioner incomes will begin to fall behind those of working-age individuals over time. Although the annuity maintains its real value by keeping pace with inflation, long-term earnings growth is expected to outpace inflation. This distinction is important for assessing how living standards may change throughout retirement.

Changing expenditure through retirement. Related to the choice of annuity profile is the evolution of consumption needs in retirement. As Figure 2 shows, in common with many other studies, expenditure tends to decline as people move further into retirement for a variety of reasons, such as reduced mobility. If a more sophisticated modelling exercise were to profile decumulation more tightly to existing patterns, then it would imply that people could achieve a somewhat higher replacement rate at the point of retirement than our projections imply. But this would mean pensioners falling ever-further behind typical incomes as they aged.

Investment returns. Investment returns are hard to calculate accurately on historical data given variation in people's investment portfolios, but also because of the inherent uncertainty around how they might change in future. However, on some estimates at least, it appears that pension returns in recent years have outperformed our assumptions.[41]

The auto-enrolment reforms recommended by the 2017 review would boost replacement rates

A review of automatic enrolment in 2017 recommended reducing the age at which people are automatically enrolled, from 22 to 18 years old, and removing the lower limit of the 'qualifying earnings band,' so that contributions are paid from the first pound earned.[42] How would these changes affect our simulated replacement rates?

Removing the lower earnings threshold would mean that people earning more than £10,000 would contribute to their pension on the first £6,240 of their annual income that is currently ignored. This would add around 2 percentage points to the median earner's replacement rate for someone working a full career under the new rules.

Plans to lower the age of auto-enrolment make it more likely that people will spend more years of their working life contributing to a pension. In concrete terms, it suggests the assumption that people begin to save at 30 (or equivalently, start at the age of 22

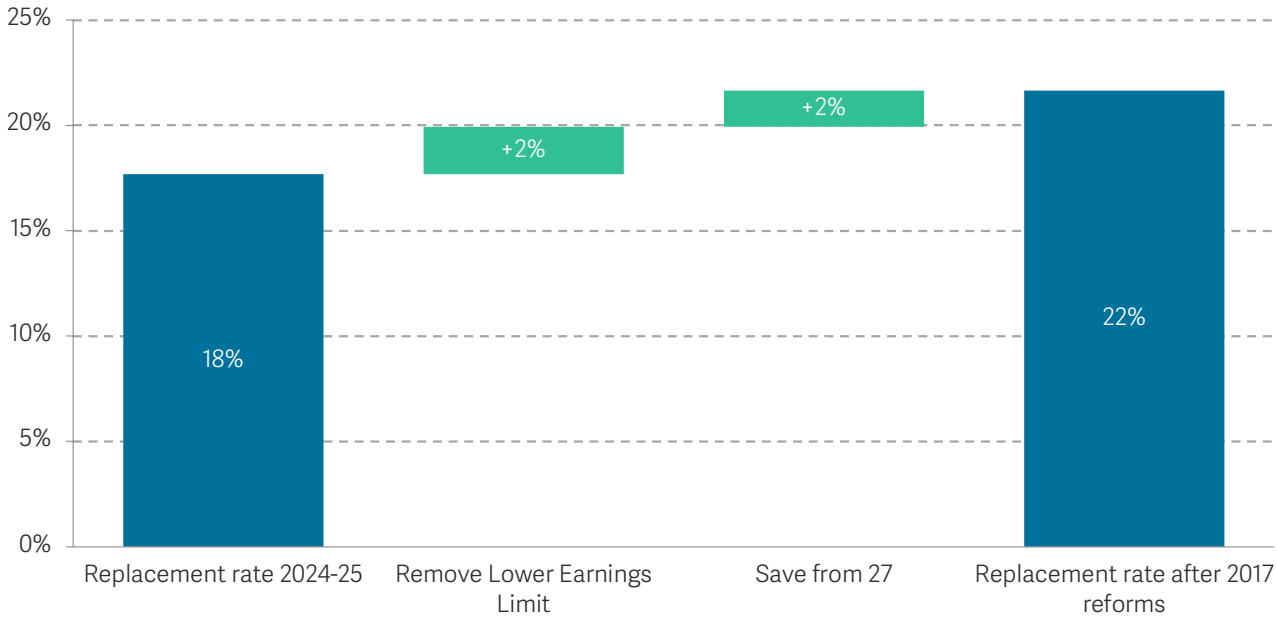
41 See, for example, Capa data for the 30 biggest workplace pension providers, available at: capa-data.com.
42 Department for Work and Pensions, Automatic Enrolment Review 2017: Maintaining the momentum, December 2017.

but subsequently take some time out of the labour market for reasons of health, care, learning or unemployment) is conservative. Under the lower proposed age threshold, a more reasonable assumption might be that people begin saving from the age of 27, giving them 40 years of contributions before retirement at 67.

Applying these two changes to the simulation raises the median earner's replacement rate from auto-enrolment from 18 per cent to just under 22 per cent of their final earnings, with each change contributing about 2 percentage points. Together with a State Pension of 34 per cent of final earnings, this takes the projected total pension replacement rate for a median earner to around 55 per cent. This would be comfortably above the 'policy minimum' articulated by the Commission, but still well short of the revised 72 per cent target replacement rate that represents smoothed living standards.

FIGURE 8: **The previous Government's planned reforms would boost replacement rates by four percentage points for median earners**

Impact of reforms proposed in the 2017 review of automatic enrolment on a median earner's replacement rate: 2024-25



NOTES: Real earnings growth is projected at 1.5 per cent based on Office for Budget Responsibility estimates, with a real rate of return on pension savings of 2.7 per cent and an annuity rate of 4.7 per cent. Modelling assumes that all pension savings are used to purchase an RPI-linked annuity at the age of 67. Contributions are calculated at 8 per cent of gross earnings, above the lower earnings limit of £6,240, without applying an upper earnings limit. Proposed changes assume savings start at age 27 and contributions are made on the first pound of earnings, eliminating the lower earnings limit. As per Department for Work and Pensions methodology, we base final salary estimates on average earnings from 50 to 66. Our modelling uses £36,985 for median earners.
SOURCE: RF analysis of Bank of England, Yield curves; The Annuity Project from William Burrows; The Pensions Commission, A New Pension Settlement for the Twenty-First Century: The Second Report of the Pensions Commission; ONS, Annual Survey of Hours and Earnings; OBR, Economic and fiscal outlook – March 2024.

We can apply the same analysis to earners on either side of the median. Under the

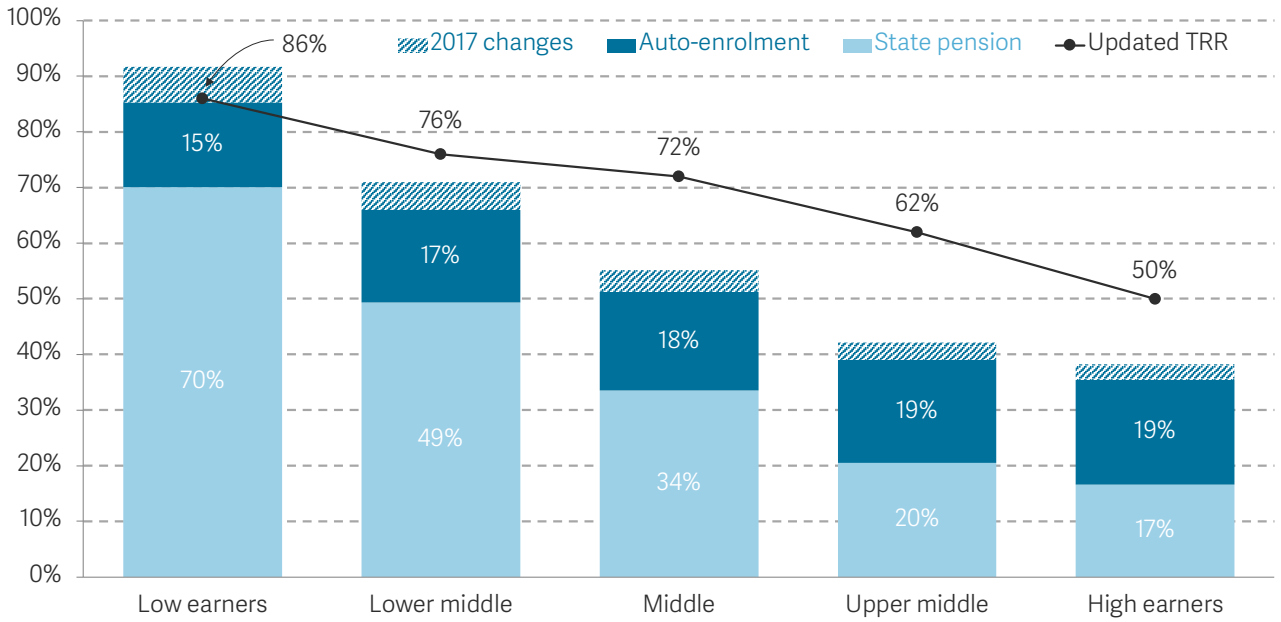
current system, low earners on around £17,700 with a full National Insurance contribution record can expect to achieve a replacement rate of around 85 per cent, and lower-middle earners on around £25,000 can expect to achieve a replacement rate of approximately 66 per cent. As Figure 9 shows, these replacement rates are not far off our updated TRRs, although the system leaves higher-earning people well short of their targets.

Previously planned changes to the auto-enrolment system, particularly the removal of the lower threshold for qualifying earnings, has a disproportionately large impact on the replacement rate of low earners. This is because low earners would start paying contributions on the first £6,240 of their earnings, a bigger proportion of their total earnings than is the case for high earners. For example, removing the lower earnings limit for qualifying earnings means additional employee contributions of £312 per year (including tax relief) assuming people contribute at the auto-enrolment default of 5 per cent. This additional contribution is equivalent to 1.8 per cent of gross earnings for a low earner on £17,700, but only 0.8 per cent of gross earnings for a median earner on £37,000.

Combined with the fact that the State Pension also offers a substantial replacement rate for low earners, the planned changes together mean that, under current conditions, low earners on £17,700 can be expected to replace around 92 per cent of pre-retirement earnings – well above our updated target replacement rate estimate of 86 per cent. This raises the question of whether such a person would be over-saving for retirement. Importantly, this is not to say that such a person's living standards in retirement would then be 'too high' – even at a 92 per cent replacement rate they might still fail to achieve absolute adequacy benchmarks – but that the individual's contribution to achieving it through saving might be excessive. The planned reforms take lower-middle earners on £25,150 to a replacement rate of 71 per cent, just short of their new 76 per cent target.

FIGURE 9: **Reforms proposed in the 2017 review of automatic enrolment would push low earners above their target replacement rate**

Gross income replacement rates from the State Pension, auto-enrolment and 2017 proposed reforms versus updated target replacement rates, by earnings band: 2024-25



NOTES: The model assumes that under the current auto-enrolment system, individuals start saving at age 30 and retire at 67. Real earnings growth is projected at 1.5 per cent based on Office for Budget Responsibility estimates, with a real rate of return on pension savings of 2.7 per cent and an annuity rate of 4.7 per cent. Modelling assumes that all pension savings are used to purchase an RPI-linked annuity at the age of 67. Contributions are calculated at 8 per cent of gross earnings, above the lower earnings limit of £6,240, without applying an upper earnings limit. Proposed changes assume savings start at age 27, the retirement age remains 67, and contributions are made on the first pound of earnings, eliminating the lower earnings limit. As per Department for Work and Pensions methodology, we base final salary estimates on average earnings from 50 to 66. Our modelling uses £17,700 for low earners, £25,150 for lower-middle earners, £36,985 for median earners, £60,600 for upper-middle earners and £74,600 for high earners.
SOURCE: RF analysis of Bank of England, Yield curves; The Annuity Project from William Burrows; The Pensions Commission, A New Pension Settlement for the Twenty-First Century: The Second Report of the Pensions Commission; ONS, Annual Survey of Hours and Earnings; OBR, Economic and fiscal outlook – March 2024.

This analysis suggests that, even with the higher gross earnings replacement rates required today due to changes in the tax regime, low earners can expect to save enough under the current auto-enrolment regime to smooth their living standards into retirement. Middle and higher earners, however, remain some way short of their target replacement rate if they relied on default pension contributions alone to fund their retirement. The next section examines what it would take for policy to close that gap, but also highlights reasons why that may not be an appropriate goal.

Section 5

The Pensions Commission's target replacement rates may not be a good definition of pension adequacy

Based on our assessment, the combination of the State Pension and auto-enrolment is unlikely to provide sufficient income for most individuals to meet the Pensions Commission's target replacement rates. Although the Pensions Commission intended this outcome, the fact that many people are not making the additional voluntary contributions envisioned by the Commission has led some to argue that there is a case for policy to aim higher. Our analysis indicates that achieving the updated target replacement rate (TRR) for a median earner would require increasing default contribution rates to more than 14 per cent. However, there are three reasons why it may not be appropriate for policy to aim to deliver TRRs based on career-end earnings.

First, survey data suggests that in recent decades, middle and higher earners have typically achieved replacement rates that are well short of target replacement rates. This suggests that the Commission's target replacement rates are ambitious, and should not be considered a measure of what people expect to or want to achieve during retirement. Second, targeting a replacement rate defined in terms of a measure of a person's 'final earnings' risks violating the principle that savings policy should help people to smooth their living standards across their adult lives. Earnings tend to grow as productivity grows, meaning that wages rise over time. This is compounded by the fact that younger workers see their wages rise relative to the average as they become more experienced. And adults in their 30s and 40s tend to face the heaviest costs, particularly due to child-rearing and mortgage repayments. For all these reasons it makes little sense on consumption-smoothing grounds to make people save heavily at times of life when disposable income is already tight in order to have a higher standard of living in the long-distant future. Third, as the Pensions Commission noted, many people have significant other financial resources to draw upon in retirement. By their late 50s, around a third of adults have sufficient disposable wealth to significantly boost their retirement income. Many

others will inherit wealth in the final decade before retirement. These sources of variation in individual circumstances and preferences are the central reason why the Commission argued that policy alone should not be set to achieve TRRs.

So far, we have shown that changes in policy and the economic and financial context have shifted both the target replacement rates that the Pensions Commission identified and the contribution to those targets that people can expect if they save at the current auto-enrolment default rates. Nevertheless, for all but the lowest earners, these changes still leave likely outcomes for income in retirement well short of the updated target replacement rates.

In this section we first explore what would need to happen to the default contribution rate to put people on track to meet those targets. We then go on to examine three reasons why this may not be desirable, concluding that target replacement rates (TRRs) based on final earnings are not a good definition of pension 'adequacy'.

Large increases in the default contribution rate would be required for auto-enrolment to achieve target replacement rates for middle and high earners

As we showed in the previous section, our assessment is that the combination of State Pension and auto-enrolment is unlikely to be sufficient to achieve the TRRs for most people. This has led some to argue that there is a case for raising the default contribution rate above its current level of 8 per cent of earnings.[43] In previous work, we have also advocated for increasing the default contribution rate over time to not only ensure adequate retirement saving, but also to enable greater business investment through higher domestic saving.[44]

Figure 10 shows the impact of varying the default auto-enrolment contribution rate on expected outcomes for someone at the start of their working life on the gap between their retirement income and their updated target replacement rate. At today's 8 per cent contribution, low earners are expected to end up around target without any other resources, while lower-middle earners can expect to be short of target. High earners would require a contribution rate of almost 14 per cent of gross earnings to achieve their target, while middle earners would have to save more than 16 per cent if they had

43 For example, the PLSA has advocated for employer and employee contributions to rise to 6 per cent in the early 2030s. Similarly, the Work and Pensions Committee also supported the goal of reaching a 12 per cent default contribution rate. See: Pensions and Lifetime Savings Association, PLSA calls for levelling up of workplace pensions, February 2022; and: House of Commons Work and Pensions Committee, Protecting pension savers – five years on from the pension freedoms: Saving for later life, September 2022.

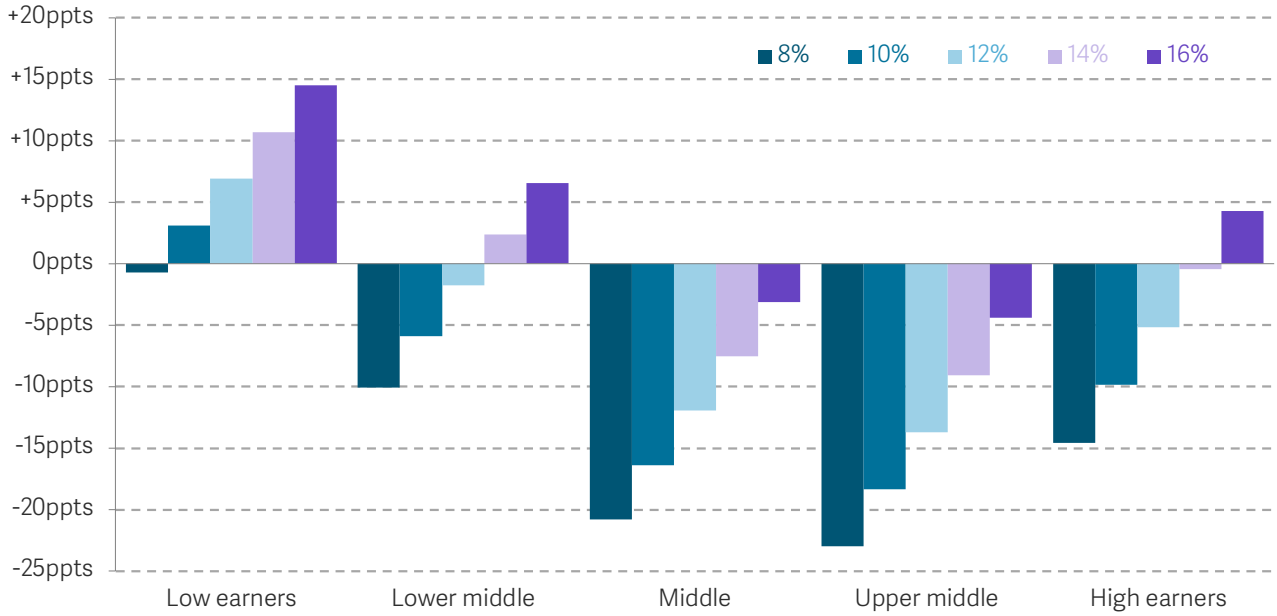
44 Resolution Foundation & Centre for Economic Performance, LSE, Ending Stagnation: A New Economic Strategy for Britain, Resolution Foundation, December 2023.

no other wealth to rely upon. Under current financial conditions, the contribution rate required to hit the Commission's TRRs varies from around 8 per cent to more than 16 per cent, depending on income. If the abolition of the lower earnings threshold goes ahead then the required saving rates would fall slightly, particularly for low earners.

This highlights the challenges of raising the default contribution rate: even at today's 8 per cent contribution rate there is a risk of putting too great a burden on lower earners to save enough for an adequate retirement income. Meanwhile, unless they have significant other resources, middle and higher earners are likely to be under saving at the current default rate. Under a single contribution rate therefore, improving adequacy for middle and higher earners would come at the expense of excessive saving for the people who can least afford it. The price of a simple auto-enrolment system and a flat-rate State Pension is that this trade-off is unavoidable.

FIGURE 10: **Increasing auto-enrolment default contribution rates would push low earners above target replacement rates**

Percentage points above or below updated target replacement rates at different auto-enrolment default contribution rates, by earnings band: 2024-25



NOTES: The model assumes that under the current auto-enrolment system, individuals start saving at age 30 and retire at 67. Real earnings growth is projected at 1.5 per cent based on Office for Budget Responsibility estimates, with a real rate of return on pension savings of 2.7 per cent and an annuity rate of 4.7 per cent. Contributions are calculated at 8 per cent of gross earnings, above the lower earnings limit of £6,240, without applying an upper earnings limit. Our modelling uses less than £17,700 for low earners, £17,700 to £32,599 for lower-middle earners, £32,600 to £46,599 for median earners, £46,600 to £74,599 for upper-middle earners and over £74,600 for high earners.
SOURCE: RF analysis of Bank of England, Yield curves; The Annuity Project from William Burrows; The Pensions Commission, A New Pension Settlement for the Twenty-First Century: The Second Report of the Pensions Commission; ONS, Annual Survey of Hours and Earnings; OBR, Economic and fiscal outlook – March 2024.

However, there are three other important reasons why it may not be appropriate to view final earnings target replacement rates as the appropriate definition of adequacy and seek to achieve them by raising the default contribution rate. First, such rates of gross income replacement appear to be substantially higher than what people have typically achieved in recent decades, and there is little evidence that actual replacement rates have declined in recent decades as the Pensions Commission feared. Second, seeking to replace final earnings, rather than some measure of career average earnings, risks contradicting the principle of consumption smoothing. Third, it is increasingly common for people to have other disposable non-pension wealth to support them in retirement which obviates the need for them to rely entirely on formal pension saving. We explore each in turn below.

In recent decades, retirees have tended to have incomes well below target replacement rates

In its first report, the Pensions Commission drew upon empirical evidence of current actual replacement rates when assessing the adequacy of pension saving. However, longitudinal survey data suggests that the majority of individuals that retired in the 10 years after the Commission's first report, and before the introduction of 'pension freedoms', had incomes significantly below the Commission's TRRs. Figure 11 compares the annual gross labour income of full-time employees before retirement with their annual income after retirement in the years from 2005 to 2015 (after which the introduction of pension freedoms may make such a comparison less reliable).[45] We restrict our analysis to full-time employees to avoid the increasing prevalence of part-time work in the year approaching retirement distorting the picture.[46]

It shows that nearly 7-in-10 (68 per cent) of retirees had replacement rates below the target recommended by the Commission given their working-age earnings. This shortfall is observed across all income groups other than the lowest earners. More than half (61 per cent) of people in the second-lowest income group before retirement (labour income of £17,700 to £32,599 in 2024 terms) had post-retirement incomes below the Commission's recommended TRR. Similarly, 8-in-10 people in the middle-income group (labour income of £32,600 to £46,599) and the second highest income group (labour income of £46,600 to £74,599) had incomes below the Commission's TRRs. In contrast, only 4-in-10 (39 per cent) of individuals in the lowest income group before retirement had incomes below the Commission's TRR of 80 per cent. Also evident from this analysis is the huge variation in

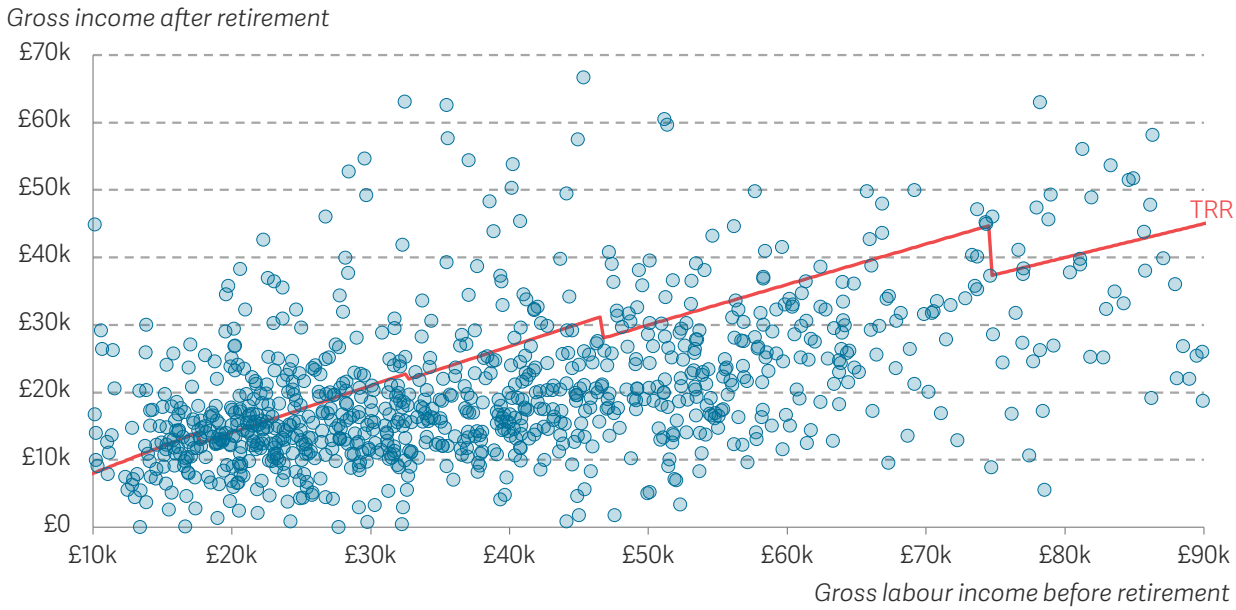
45 Income after retirement includes labour income, miscellaneous income, private benefit income, investment income, pension income and social benefit income. For more information see: ISER, Understanding Society Main Survey User Guide: Individual income variables.

46 The gross income replacement rates in this analysis are calculated against each survey respondent's earnings in the final two or three years of their full-time employment. This is a slightly different basis than the DWP definition we use elsewhere in the report which averages earnings over a longer period.

replacement rates achieved across all income levels, with some people seeing far higher incomes in retirement than working life and others surviving on much less.

FIGURE 11: **The majority of retirees had replacement rates less than the target replacement rates outlined by the Pensions Commission**

Gross annual labour income of full-time employees before retirement versus gross annual income after retirement: UK, September 2005 to June 2015



NOTES: Financial values adjusted to April 2024 prices using CPIH index. Gross annual income data variables are the average of two or three years of data depending on availability. Labour income for those that are full-time employees in the year before retirement. The 10-year period after the Pensions Commission is based on BHPS wave 15 to Understanding Society wave 5.
SOURCE: RF analysis of ISER, British Household Panel Survey and Understanding Society; ONS, CPIH Index.

The Commission's primary concern about adequacy was the prospect of pension generosity falling over time with the decline of defined benefit pension schemes, the erosion of state earnings-related provision and growing life expectancy. They anticipated that these trends would become "more serious in 20-25 years than in the next 10".[47]

20 years later, there is little evidence yet that typical replacement rates have declined. Figure 12 extends the above analysis to cover the last thirty years, showing median gross earnings replacement rates by income group in the decade before the Pensions Commission's final report, the decade after it, and the period after the introduction of pension freedoms in 2015.[48]

It shows that observed replacement rates have generally been fairly stable over the period. There is little sign of a material decline even in the 'pension freedoms' era, which can be expected to have reduced pensioners' incomes as more people relied on flexibly

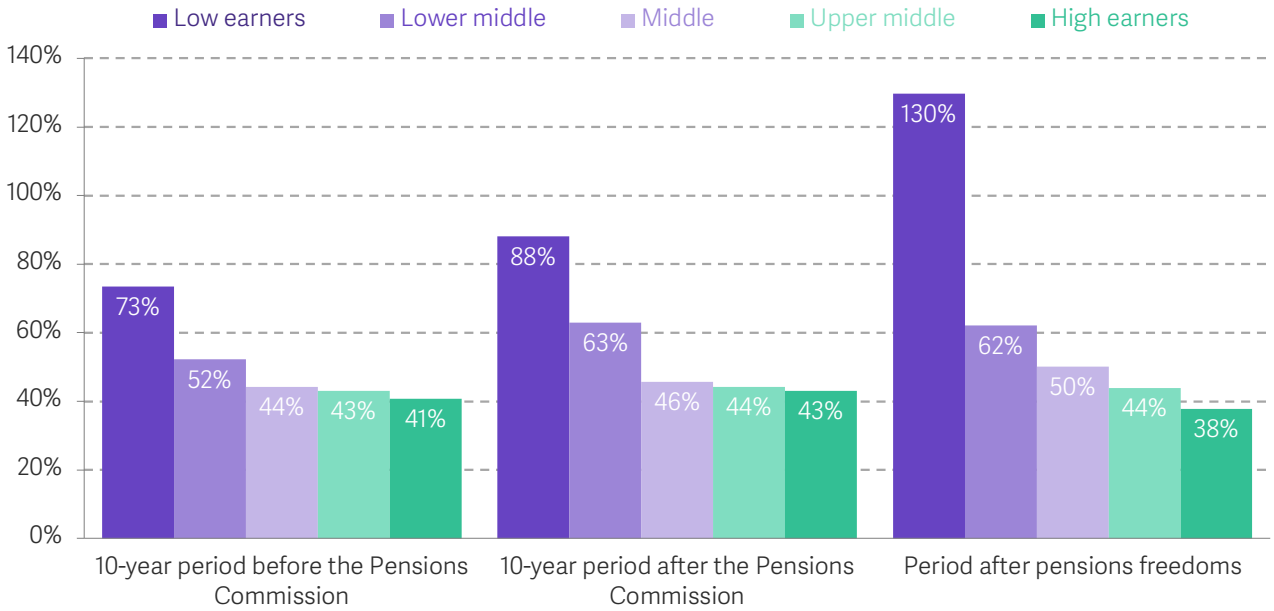
47 Pensions Commission, Pensions: Challenges and Choices; The First Report of the Pensions Commission, 2004.
48 The period after pensions freedoms is based on Understanding Society waves 6 to 13. Wave 6 was fielded between January 2014 and May 2016.

drawing down their pension savings instead of buying an annuity. Indeed, for all income groups apart from the highest, typical replacement rates today appear to be higher than they were around the turn of the century. For the lowest-earning group in particular, a more generous State Pension has led to significantly higher replacement rates, such that the actual achieved replacement rate in the latest period considered is well above the Commission's TRR.

The second conclusion suggested by this analysis is that replacement rates outside the lowest-income group have consistently fallen short of TRRs in each of these three decades. Since this analysis looks only at pensioners' incomes, it may be that some have significant savings that they are able to draw on to support their living standard – something that is more likely to be an issue in the final period of the three. Nevertheless, these relatively low replacement rates seem consistent with typical levels of pensioner expenditure shown in Figure 2.

FIGURE 12: **Replacement rates vary significantly between and within income groups**

Median replacement rates achieved two to three years after retirement, by pre-retirement labour income group: UK



NOTES: Compares gross labour income two and three years before retirement with gross income two and three years after retirement. Labour income for those that are full-time employees in the year before retirement. 10-year period before the Pensions Commission is based on BHPS waves 4 to 14 (1994 to 2004), 10-year period after the Pensions Commission is based on BHPS wave 15 to Understanding Society wave 5 (2005 to 2015), and period after pensions freedoms is based on Understanding Society waves 6 to 13 (2014 to 2023). Our modelling uses less than £17,700 for low earners, £17,700 to £32,599 for lower-middle earners, £32,600 to £46,599 for middle earners, £46,600 to £74,599 for upper-middle earners and over £74,600 for high earners.
SOURCE: RF analysis of ISER, British Household Panel Survey and Understanding Society; ONS, CPIH Index.

The persistent shortfall of observed replacement rates from the Commission's TRRs suggests that those benchmarks are ambitious, particularly as a guide to policy, and should be seen as providing much more than what would be considered merely 'adequate'. Moreover, if the Commission's TRRs were hit in the decades ahead, then it would represent a substantial shift in the balance of living standards from working life to retirement.

Targeting final earnings rather than average earnings replacement is not consistent with smoothing living standards

As described in Section 2, the animating principle of pension savings policy should be to help people smooth their living standards across their adult lives, not simply between the final years of work and the first years of retirement. Seen in this light, it is possible that, instead of thinking about replacement rates as a function of someone's end-of-career earnings, we should instead use career-average earnings.

This is because, if real income growth occurs as workers age, then targeting a replacement rate defined on end-of-career earnings might deliver higher living standards in retirement than those achieved during almost all of working life, arguably violating the principle of smoothing living standards.[49] In particular, since median earnings (usually) grow in real terms over time, young adults tend to have lower wages and middle-aged adults tend to bear the brunt of the costs of child-rearing and stretching mortgage repayments. As such, targeting income replacement at the point of retirement requires saving much more heavily during these earlier periods of life (when disposable income is significantly lower than later in life) than would be the case if the goal was to smooth living standards across adulthood as a whole. It makes little sense to save heavily at times of life when disposable income is tight in order to have a higher standard of living in the long-distant future.

Calculating replacement rates against one's average earnings over the course of working life would help mitigate this problem.[50] We can simulate the likely outcome from current pensions policy in terms of replacement of average career earnings to see how much difference this makes. On reasonable assumptions about the outlook for rates of return and wage growth, the auto-enrolment regime and the State Pension look set to provide a replacement rate of around 63 per cent of average gross earnings for the median earner, only 9 percentage points below the updated target replacement rate of 72 per cent.

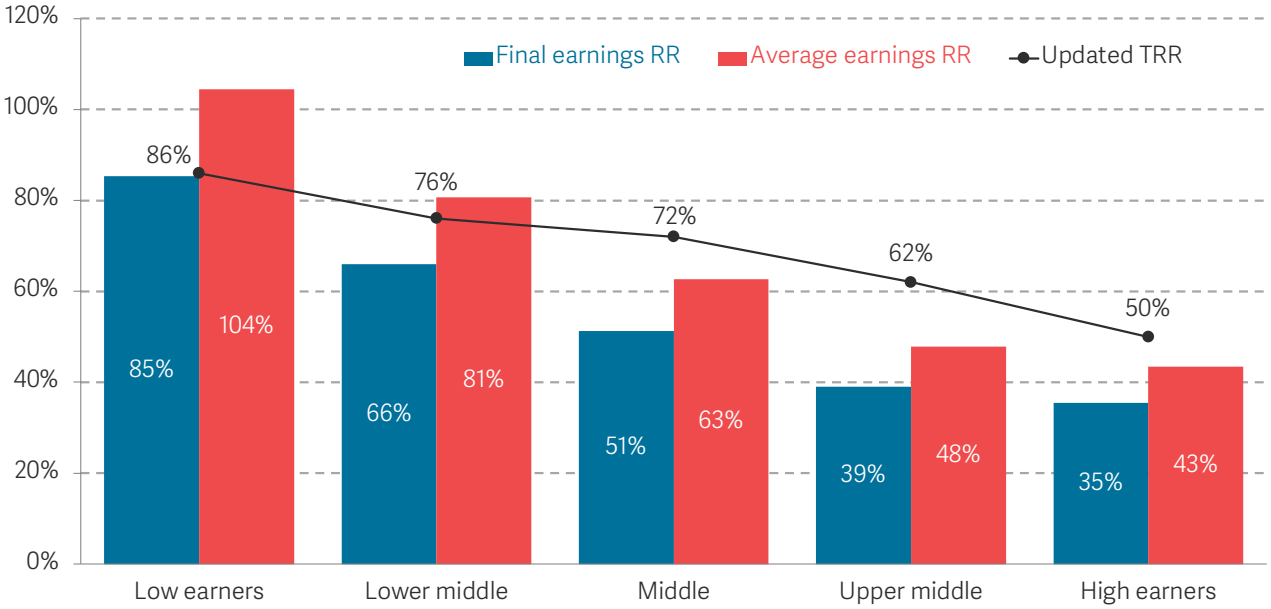
49 For example, Resolution Foundation nowcasting indicates that median equivalised household income after housing costs for those aged 30-50 will be around £32,910 in 2024, while median equivalised household income after housing costs for those aged 51-65 will be around £1,000 higher at £33,860. See: A Clegg & A Corlett, The Living Standards Outlook 2024: , Resolution Foundation, August 2024.

50 Targeting an average replacement rate would still not take account of the higher expenditure of young and middle-aged workers; in Section 7, we discuss the case for contribution rates that vary with age or with income level.

Similarly, for higher earners, on a career average basis, default contributions can be expected to take an individual significantly closer to what the Pensions Commission set as a TRR. For lower earners, expected replacement rates compared to average career earnings rise even further above the Commission's target replacement rates.

FIGURE 13: **Targeting career-average earnings would take middle and higher earners much closer to updated target replacement rates**

Final salary and average salary replacement rate under today's auto-enrolment system, by earnings group: 2024-25



NOTES: The model assumes that under the current auto-enrolment system, individuals start saving at age 30 and retire at 67. Real earnings growth is projected at 1.5 per cent based on Office for Budget Responsibility estimates, with a real rate of return on pension savings of 2.7 per cent and an annuity rate of 4.7 per cent. Contributions are calculated at 8 per cent of gross earnings, above the lower earnings limit of £6,240, without applying an upper earnings limit. As per Department for Work and Pensions methodology, we base final salary estimates on average earnings from 50 to 66. Our modelling uses £17,700 for low earners, £25,150 for lower-middle earners, £36,985 for median earners, £60,600 for upper-middle earners and £74,600 for high earners.
SOURCE: RF analysis of Bank of England, Yield curves; The Annuity Project from William Burrows; The Pensions Commission, A New Pension Settlement for the Twenty-First Century: The Second Report of the Pensions Commission; ONS, Annual Survey of Hours and Earnings; OBR, Economic and fiscal outlook – March 2024.

Many people have other financial resources to fund retirement

Households approaching retirement often have other financial resources (aside from their main residences) that could be used to support consumption after leaving the workforce, or might expect to receive an inheritance. Many people may therefore be able to achieve target replacement rates – or at least an adequate standard of living – even if their pension savings are insufficient to provide it on their own.

In its first report, the Pensions Commission identified several other sources of wealth that households might use to sustain their living standards in retirement: financial wealth held outside pensions, housing wealth, inherited wealth, and business assets. The Commission recognised that individual circumstances vary greatly, which is one reason why it concluded that public policy should not be set to ensure that everyone achieves their target replacement rate through auto-enrolment. But how significant are these broader forms of household wealth today, and how has their role changed since the Commission's report?

Households' wider resources are often significant

Net financial wealth is a significant part of household wealth, worth around £1.9 trillion in 2018-20.[51] At an individual level, the Pensions Commission drew on research that suggested that, in the years before retirement (i.e. people aged 55 to 59), middle earners held median net financial wealth of over £33,000, or around 150 per cent of annual gross earnings. If annuitised to provide an income stream in retirement, this amount of wealth would have added approximately 8 percentage points to the gross final earnings replacement rate.[52] This represents a substantial contribution, standing at about half of the final earnings replacement rate the Commission envisaged for auto-enrolment itself.

Housing wealth represents the biggest category of household wealth outside pensions, with net property wealth in 2018-20 worth some £5.5 trillion.[53] This can most helpfully be thought of in two distinct categories: households' main residences and other housing wealth. The Commission noted that a household's main residence is used by retirees for the most part to 'pay for' their own housing services (i.e. to avoid having to rent) and so is unavailable to support wider consumption in retirement. There are two ways it might be accessed to generate additional resources to support living standards in retirement – via trading down to a smaller property, or buying an equity release product – but the Commission concluded that these are only likely to be viable option for a small proportion of retirees. On the other hand, if home owners remain owners in retirement (so as to provide them with secure housing), then a large proportion of this wealth is likely to be passed on as an inheritance. The Pensions Commission concluded that "over the long term, the inheritance of housing equity may play a significant role in funding retirement for many people", although it noted both the variability of expected inheritances and their uncertainty; we discuss inheritances again later in this Section.[54]

51 ONS, Household total wealth in Great Britain: April 2018 to March 2020, January 2022.
52 J Banks, C Emmerson & Z Oldfield, Prepared for Retirement? The pension arrangements and retirement expectations of older workers in England, Institute for Fiscal Studies, July 2005.
53 ONS, Household total wealth in Great Britain: April 2018 to March 2020, January 2022.
54 Pensions Commission, Pensions: Challenges and Choices; The First Report of the Pensions Commission, 2004.

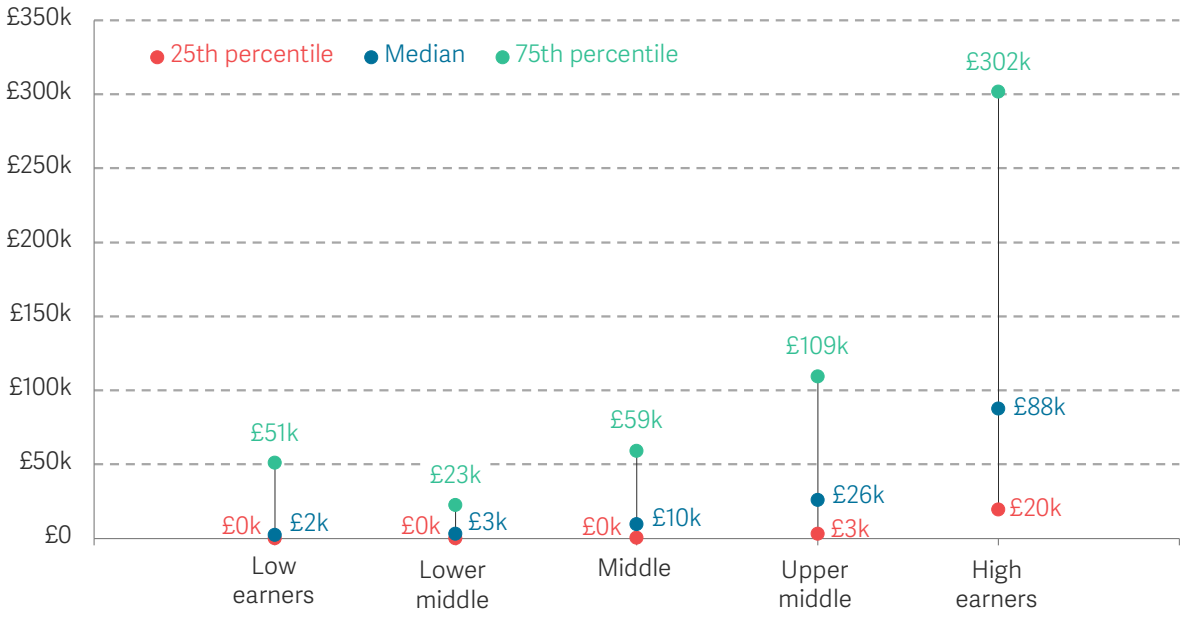
Beyond people's main residences, there is significant wealth tied up in other types of property such as second homes and buy-to-let properties.[55] This type of wealth has become a substantially more common repository of household wealth over the past 20 years, particularly buy-to-let property wealth, with the number of privately rented dwellings in Great Britain up from 2.9 million in 2004 to 5.4 million in 2022.[56] Net other property wealth amounted to £860 billion in 2018-20, with buy-to-let property wealth accounting for almost half (48 per cent) of this. This wealth appears to be a significant source of potential resources for recent retirees or those approaching retirement. For example, in 2018-20, a fifth (20 per cent) of other property wealth was held by households headed by someone aged 65-74 and more than a quarter (26 per cent) held by households headed by someone aged 55-64.

We can get a sense of how significant holdings of financial and non-owner-occupied ('other') housing wealth are among people in the decade before retirement from the Wealth and Assets Survey.[57] People aged 55-59 with earnings around the median typically have only around £10,000 of financial and other housing wealth (see Figure 14). At today's annuitisation rate of 4.7 per cent, this represents an income stream equivalent to around just 1 per cent of median earnings. Furthermore, the majority of people below median full-time earnings have essentially no financial or other property wealth available to support them in retirement. However, there is substantial variation in wealth holdings, and a large minority of people have significant other resources at this age: the wealthiest quarter of middle earners in their late 50s have sufficient wealth to replace at least 8 per cent of their final earnings at the point of retirement.

55 According to the Commission's analysis, households with business assets of a large enough scale to provide significant resources in retirement tend to be rare even among the self-employed. Business assets are not likely to contribute to the typical employee's resources in retirement.
56 ONS, Dwelling stock by tenure, UK, April 2024.
57 We exclude households' physical wealth, mostly their home contents, which is often significant on paper but not necessarily liquid.

FIGURE 14: **There is substantial variation in 'disposable' non-pension wealth holdings within earnings bands**

Net financial and other property wealth of full-time employees aged 55-59, by gross earnings band: GB, 2018-20

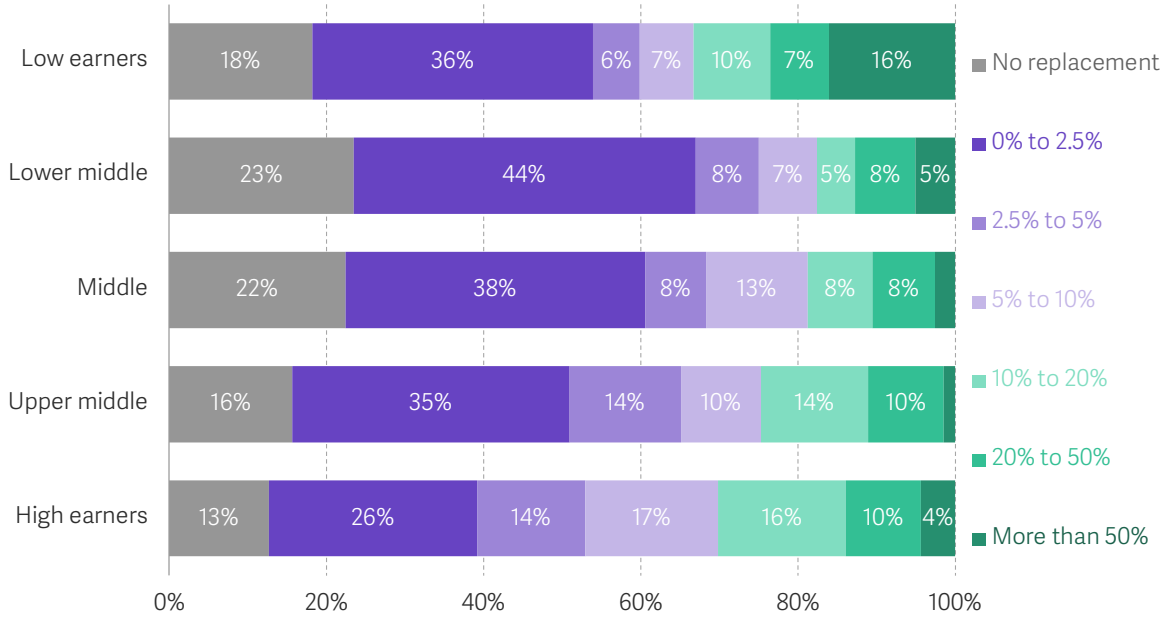


NOTES: Financial values have been adjusted to April 2024 prices using the CPIH index. Earnings are based on gross employment income from main employee job and gross bonuses. Our modelling uses less than £17,700 for low earners, £17,700 to £32,599 for lower-middle earners, £32,600 to £46,599 for median earners, £46,600 to £74,599 for upper-middle earners and over £74,600 for high earners. 'Other property wealth' excludes a household's main residence.
SOURCE: RF analysis of ONS, Wealth and Assets Survey.

Figure 15 illustrates that 87 per cent of higher earners nearing retirement have some wealth outside of pension savings that could reasonably support their consumption in retirement. Notably, one-in-twenty five (4 per cent) of these higher earners possess enough wealth to replace 50 per cent or more of their current earnings (at today's annuitisation rate of 4.7 per cent). At the other end of the earnings distribution, one-in-six (16 per cent) of low earners aged 55-59 would be able to replace 50 per cent or more of their earnings from their financial and other property wealth holdings. In general, though, lower-to-middle earners are more likely to face low replacement rates from their net financial and property wealth than high earners. For example, more than a fifth (23 per cent) of those nearing retirement with median earnings would be unable to rely on other wealth to support their retirement consumption, and an additional 44 per cent would have minimal replacement rates (between 0 and 2.5 per cent) from wealth.

FIGURE 15: **Lower-middle income earners are the least likely to have 'disposable' non-pension wealth to draw down in retirement**

Proportion of full-time employees aged 55-59 achieving various replacement rates from net financial and other property wealth holdings, by gross earnings band: GB, 2018-20



NOTES: Financial values have been adjusted to April 2024 prices using the CPIH index. Earnings are based on gross employment income from main employee job and gross bonuses. Our modelling uses less than £17,700 for low earners, £17,700 to £32,599 for lower-middle earners, £32,600 to £46,599 for median earners, £46,600 to £74,599 for upper-middle earners and over £74,600 for high earners.
SOURCE: RF analysis of ONS, Wealth and Assets Survey.

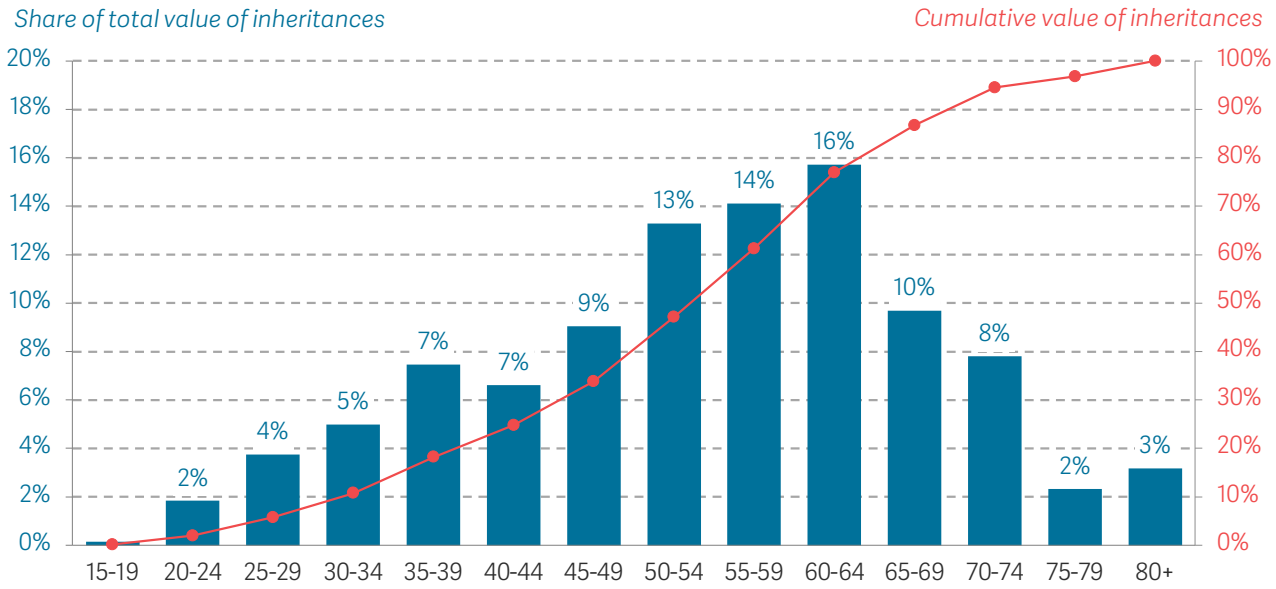
Many people are likely to receive substantial inheritances that could also support their retirement living standards

Any snapshot of an individual's wealth, such as the exercise above, will include an inheritance they have received in the past but omit the value of any inheritance they expect to receive in the future (and, indeed, the anticipation of receiving an inheritance may have suppressed people's saving rate up to that point). This makes it hard to use data collected a decade before people leave the workforce to assess definitively what financial resources people may have available in retirement. So it is worth thinking more about the timing and scale of expected inheritances.

Figure 16 shows how the beneficiaries of inheritances in a given period are spread across the age distribution. In any given two-year period, over half (53 per cent) of the total value of inheritances is received by people aged 55 or above. This suggests that the amount of other housing and financial wealth would grow before the cohort looked at in the analysis above – who were aged-55-to-59 – reached the State Pension age.

FIGURE 16: **Over half of the value of inheritances are received after the age of 55**

Share of total value of inheritances received in the last two years (left axis) and total cumulative value of inheritances received in the last two years (right axis), by age group: GB, 2018-20



SOURCE: RF analysis of ONS, Wealth and Assets Survey.

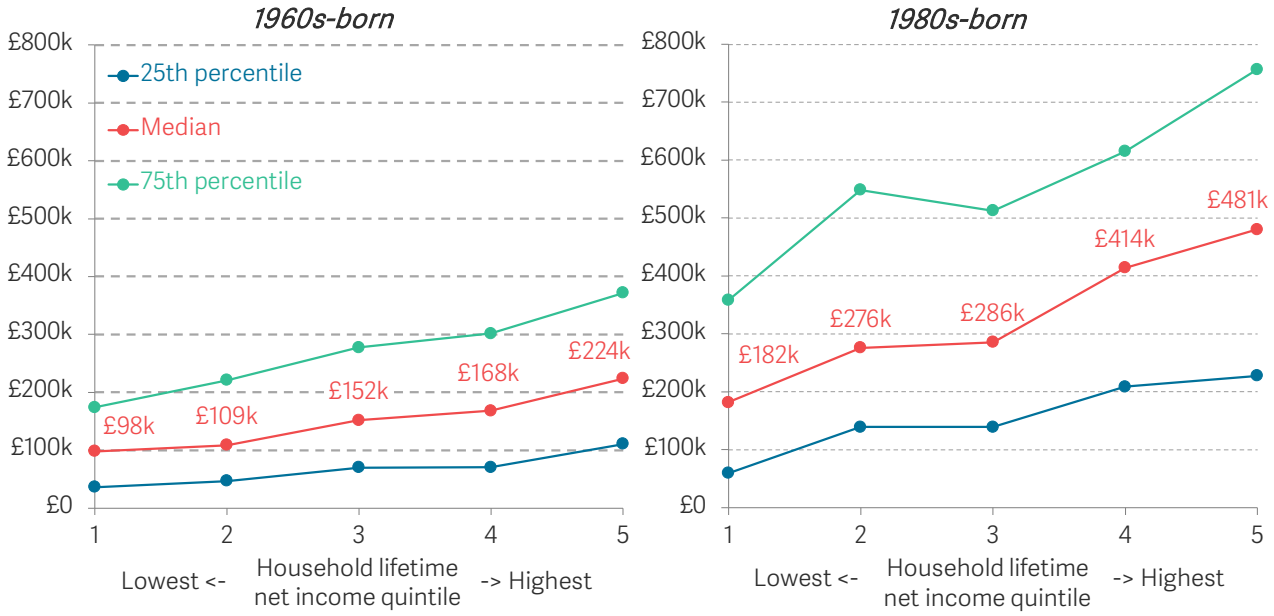
And the total the value of inheritances is set to grow over the next 30 years. Figure 17 shows simulations by the IFS that suggest that, for people born in the 1960s – now on the cusp of retirement – the typical middle-income household can expect to inherit around £152,000 (in April 2024 prices) over their lifetime.[58] Meanwhile, the typical household in the middle-income cohort born two decades later, and now in their late 30s or early 40s, looks set to inherit around £286,000. Although these sums are on a household basis, the simulations suggest that the typical person at all points on the income distribution is likely to receive a significant and growing amount of inherited wealth in the coming years that could help them sustain their living standards in retirement.[59]

58 P Bourquin, R Joyce & D Sturrock, Inheritances and inequality over the life cycle: what will they mean for younger generations?, Institute for Fiscal Studies, April 2021.

59 It could be argued that inheritances should be excluded from the calculation of resources available to support living standards in retirement on the grounds that, once consumed, they will not be available for subsequent generations. However, to the extent that owner-occupied housing wealth comprises the bulk of inheritance it is appropriate to include it, since we also assume that people do not sell or downsize in retirement, which means their own housing wealth is likely to be passed on to the next generation in turn.

FIGURE 17: **The total value of inheritances is expected to grow over the next 30 years**

Distribution of household lifetime inheritances for 1960s-born cohort (left panel) and 1980s-born cohort (right panel), by household lifetime net income quintile (excluding inheritances) and decade of birth: GB, 2018-20



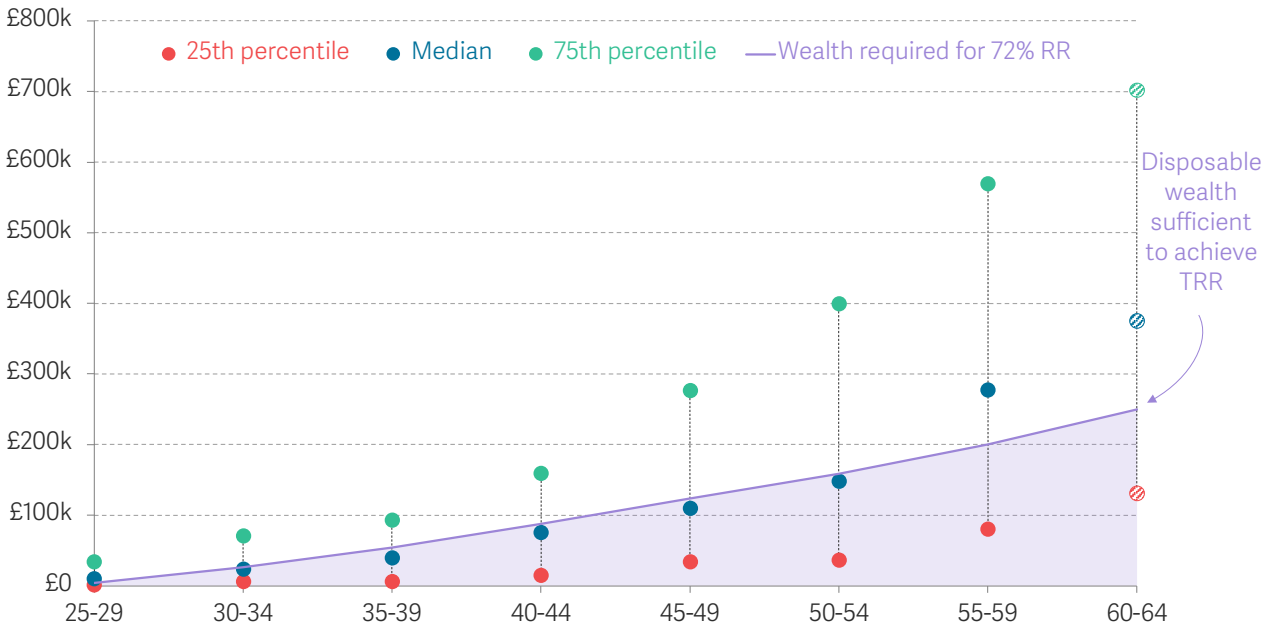
NOTES: Financial values have been adjusted to April 2024 prices using the CPIH index.
SOURCE: P Bourquin, R Joyce & D Sturrock, Inheritances and inequality over the life cycle: what will they mean for younger generations?, Institute for Fiscal Studies, April 2021.

Taking a broader perspective on wealth suggests people are closer to retirement adequacy than pension saving alone would imply

Although it's hard to characterise accurately the scale and timing of prospective inheritances, it is clear that, for at least some, people's financial resources outside of a pension are set to make a significant contribution to their living standards in retirement. When assessing the adequacy of pension provision for today's workers, we must make sure we value all the resources available to support consumption in retirement. In Figure 18, we do this by quantifying the value of pension and other disposable wealth (as defined above) for middle earners of different ages. Having done this, then we can estimate the rate of saving required for an individual to build up sufficient wealth to reach their target replacement rate by the age of 67. That in turn allows us to estimate the amount of non-owner-occupied housing wealth a person needs at different ages in order to be 'on track' to hit their target. The result is shown in Figure 18: it estimates the level of disposable wealth that would be needed for middle earners at different ages to achieve the updated target replacement rate of 72 per cent.

FIGURE 18: **The typical middle earner in their late 50s has more than enough wealth to achieve a replacement rate of 72 per cent in retirement**

Disposable wealth of full-time employees on median earnings versus modelled target wealth to be on track for a 72 per cent target replacement rate, by age group: GB, 2018-20



NOTES: Financial values adjusted to April 2024 prices using the CPIH index. Median earnings are approximated by taking the range of £32,600 to £46,599. Disposable wealth includes net financial wealth, other property wealth and pension wealth. As per Department for Work and Pensions methodology, we base final salary estimates on average earnings from 50 to 66. Disposable wealth holdings for full-time employees aged 60-64 has been interpolated by increasing wealth in line with the change for the whole population. This is to avoid compositional changes across the distribution caused by people leaving the workforce before State Pension age.
SOURCE: RF analysis of ONS, Wealth and Assets Survey.

Three things stand out from this analysis. First, typical middle earners currently in the middle of their working lives are slightly below their target wealth level if they are to achieve final salary target replacement rates. For example, the median wealth of middle earners in their early 40s is around £76,000, compared to a target of £87,000 on a final earnings basis. In that sense this group – who typically entered the workforce too late to benefit from generous defined benefit pension schemes but have often also failed to save in a defined contribution scheme – could be said to be under-saving, subject to the caveat that, as we showed earlier in Figure 12, very few retirees hit the Pensions Commission's TRRs.

Second, across the wealth distribution, total wealth accelerates sharply for people currently in the last third of working life, such that the typical middle earner in their late 50s has disposable wealth above their target wealth level.[60] This might reflect that people

60 This is in line with the results of DWP's analysis of future pension incomes, which suggests that the median person in the middle-earning group is on track to achieve a final earnings replacement rate of around 77 per cent. DWP's analysis suggests that around 40 per cent of middle earners are under-saving while the other 60 per cent are at or above target. For more information see: Department for Work and Pensions, Analysis of future pension incomes, March 2023.

in this phase of life tend to have financially independent children, may have paid off their mortgage, and are increasingly likely to receive an inheritance (as shown in Figure 16). It is not possible to conclude from this cross-sectional snapshot whether those early-middle-aged under-savers are likely to see the same jump in wealth by the time they reach their 50s and 60s, but it seems reasonable to expect similar forces to play out. Indeed, as already discussed, IFS research suggests that the value of inheritances is set to double for people approaching retirement over the next 30 years.

Third, there is very large variation in wealth holdings among people with broadly similar earnings. In their late 50s, more than a quarter of middle earners already have more than half a million pounds of wealth – excluding owner-occupied housing and physical wealth – to sustain them in retirement. This is more than twice the wealth level consistent with achieving the updated target replacement rate (£200,000) for middle earners in this age group. At the same time, almost a quarter of the same group have less than a half of the target wealth level (£81,000).[61]

So, although it is difficult to get a comprehensive picture of the resources people are likely to have in retirement due to the role of inheritances that people may not have yet received, the analysis presented here suggests that a large minority of people approaching retirement have significant amounts of wealth other than their pension and the house in which they live, and the proportion of people in this situation is likely to rise as people inherit growing amounts of wealth. At the same time, there is a substantial minority of people across the income spectrum who have little or no other wealth beyond their pension. As a result of the wide variation in circumstances, raising the default rate of contributions under auto-enrolment is unlikely to be appropriate for everyone.

Final earnings replacement rates are not a good target for pensions policy

This Section has shown that significant increases in default contribution rates would be required for auto-enrolment to provide most people with a pension that achieves the updated final earnings target replacement rates. But there are at least three reasons why it may not be appropriate for pensions policy to aim to achieve such targets: TRRs are substantially higher than retirees have tended to achieve in the past; basing TRRs on

61 Since this analysis is based on a snapshot of survey respondents' earnings, it may overstate the variance in wealth holdings. For example, it may be that some people with low savings are only experiencing temporarily high earnings, or people with high savings from past high earnings have taken a lower-paying job. Additionally, as the IFS has found, those expecting significant inheritances often save less and spend more, further amplifying wealth variance during working life but reducing it in retirement. Nevertheless, the variation in resources for people of similar incomes is very large. For more information of findings from the IFS research see: P Bourquin, R Joyce and D Sturrock, Inheritances and inequality over the life cycle: what will they mean for younger generations?, Institute for Fiscal Studies, April 2021.

final earnings may be artificially high if the goal is to help people smooth living standards across their lives; and many people have wider resources that mean they are not reliant only on their formal pension savings.

These sources of variation in individual circumstances and preferences are the central reason why the Pensions Commission argued that it would be a reasonable goal of public policy to aim to ensure a median-earner a replacement rate of 'at least 45 per cent', rather than going all the way to achieving the target replacement rate of 67 per cent. [62] More broadly, what this analysis suggests is that, while target replacement rates are important relative benchmarks for pension saving, they probably exceed what most people would describe as 'adequate'. Instead they should perhaps be thought of as a measure of an 'optimal' pension income.

62 Pensions Commission, A New Pension Settlement for the Twenty-First Century: The Second Report of the Pensions Commission, November 2005.

Section 6

A broader definition of savings adequacy is needed

Effective pension savings policy is underpinned by the goal of smoothing consumption over the lifecycle. But this goal also applies more broadly to saving for precautionary purposes. A crucial policy objective, therefore, is to help people to maintain their living standards during working life when faced with unexpected income and expenditure shocks – whether minor, like replacing a washing machine, or major, like a prolonged period of unemployment.

Under the UK's inflexible pension system, people must choose between consuming today, saving for precautionary purposes and saving for retirement. Despite the foregoing analysis it may be necessary to increase pension saving by raising the default contribution rate under auto-enrolment. But evidence suggests that, without real income growth, this could reduce precautionary savings or, in some cases, increase debt, thereby compromising financial resilience and living standards during working life.

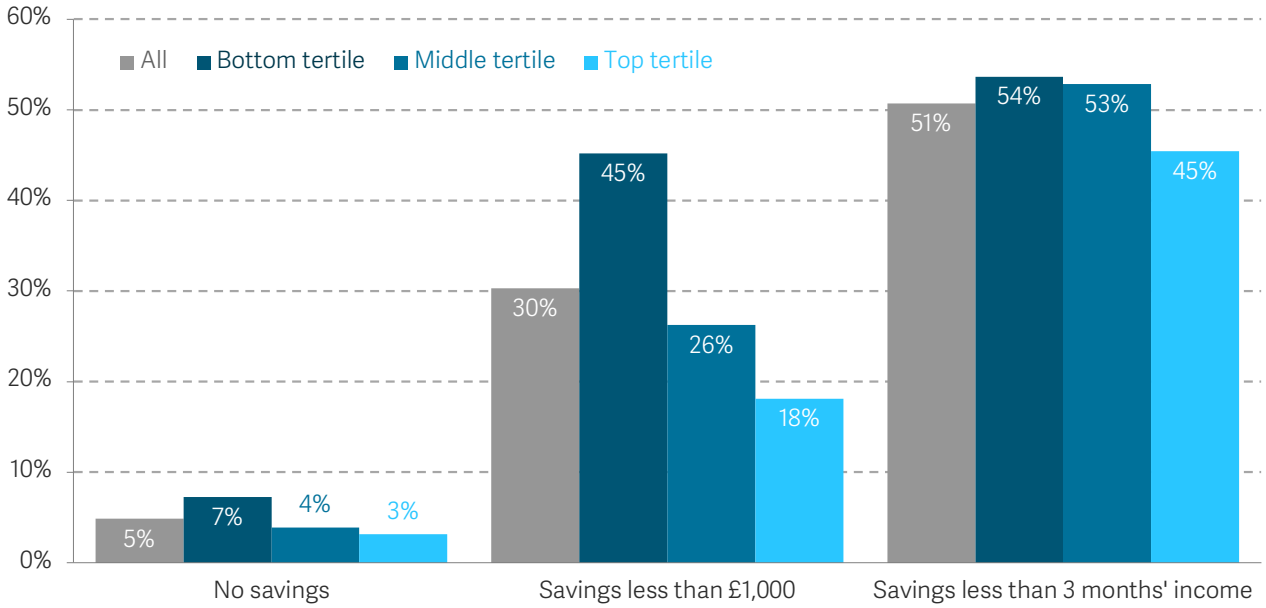
Previous Resolution Foundation research has outlined how the UK's savings policy architecture can be transformed to address both the problem of low precautionary saving and under-saving for retirement. This solution involves increasing the default auto-enrolment contribution rate of 8 per cent while introducing greater liquidity through a sidecar savings scheme. This would help people build up rainy-day savings pots that can be used to manage small cashflow shocks. A more ambitious reform would introduce a loan facility enabling people to borrow the lesser of £15,000 or 20 per cent of their pension pot, to cushion against larger, less frequent financial shocks such as unemployment. Together, these reforms would help boost retirement saving while also making British families more financially resilient in the short term.

Too many people in Britain live in families with low levels of precautionary savings

So far, this paper has focussed on whether pension saving is sufficient to provide an adequate standard of living in retirement. But previous research has found that many families in Britain don't have enough precautionary savings to navigate unforeseen expenses and financial shocks throughout working age.[63] Figure 19 shows that almost 1-in-3 (30 per cent) of working-age adults lived in families with savings of less than £1,000, and over half (51 per cent) had less than three months' income in savings in 2018-20. Astonishingly, around 5 per cent of working-age adults in Britain, approximately 1.8 million individuals, lived in families with no savings at all. Less surprisingly, low-income families are disproportionately prone to having inadequate financial resilience. For example, 45 per cent of those in the bottom third of the income distribution had savings below £1,000, compared to just 18 per cent of those in the top third of the income distribution.

FIGURE 19: **Millions of families in Britain don't have enough precautionary savings**

Proportion of the working-age population living in families with savings below a given threshold, by income tertile: GB, 2018-20



NOTES: Savings and income measured at the benefit unit level. Savings defined as current accounts in credit, value of savings account, value of ISAs and value of National Savings products. Savings thresholds are cumulative, for example, 'savings less than 3 months' income' also includes those with savings of less than £100.
SOURCE: Analysis of ONS, Wealth and Assets Survey.

Historically, policy has tended to treat precautionary saving and pension saving as two separate policy domains. The result is a system that pits short- and long-term savings

63 M Broome, I Mulheirn & S Pittaway, Precautionary tales: Tackling the problem of low saving among UK households, Resolution Foundation, February 2024.

against one another and currently fails to apply behavioural policy innovations – namely, the opt out approach of auto-enrolment – beyond the realm of pensions.

Taking a piecemeal approach to savings policy risks worsening the precautionary savings problem

Despite the caution suggested by the analysis of the previous section, increasing pension saving remains important for millions of people if they are to achieve an adequate retirement. But, as we have argued in previous research, seeking to do so in isolation risks creating new problems.[64] This is because, in the absence of real-terms income growth, an additional pound saved into a pension has to be funded either from reduced consumption or lower precautionary saving (or higher debt).

Recent research reveals that when the default contribution rates for auto-enrolment increased from 2 per cent to 8 per cent between March 2018 and April 2019, employees only reduced their consumption by 34p for every £1 reduction in take-home pay due to higher pension contributions. The remainder of the contribution to their pension was in effect funded through either lower liquid saving or higher debt.[65] Other research supports this, showing that while individuals' pension balances grew following the introduction of automatic enrolment, that trend was also accompanied by significant increases in debt within the first 41 months after enrolment.[66]

This evidence highlights the tension between saving for precautionary purposes and saving for retirement. Policy makers therefore face a dilemma: how should they increase pension saving without exacerbating the precautionary savings problem further? The Resolution Foundation has previously argued that policy makers can eliminate this tension by establishing a more cohesive savings system which combines greater flexibility and liquidity. Specifically, we proposed that the default pension contribution should be increased beyond 8 per cent, but complemented with radical reforms to increase the flexibility of pension saving.

An integrated 'sidecar' savings scheme would help more employees build up rainy day savings

One such reform would be the establishment of an automatic payroll savings scheme to help people accumulate liquid savings to better enable them to manage cashflow volatility and small financial shocks. This scheme should utilise successful behavioural

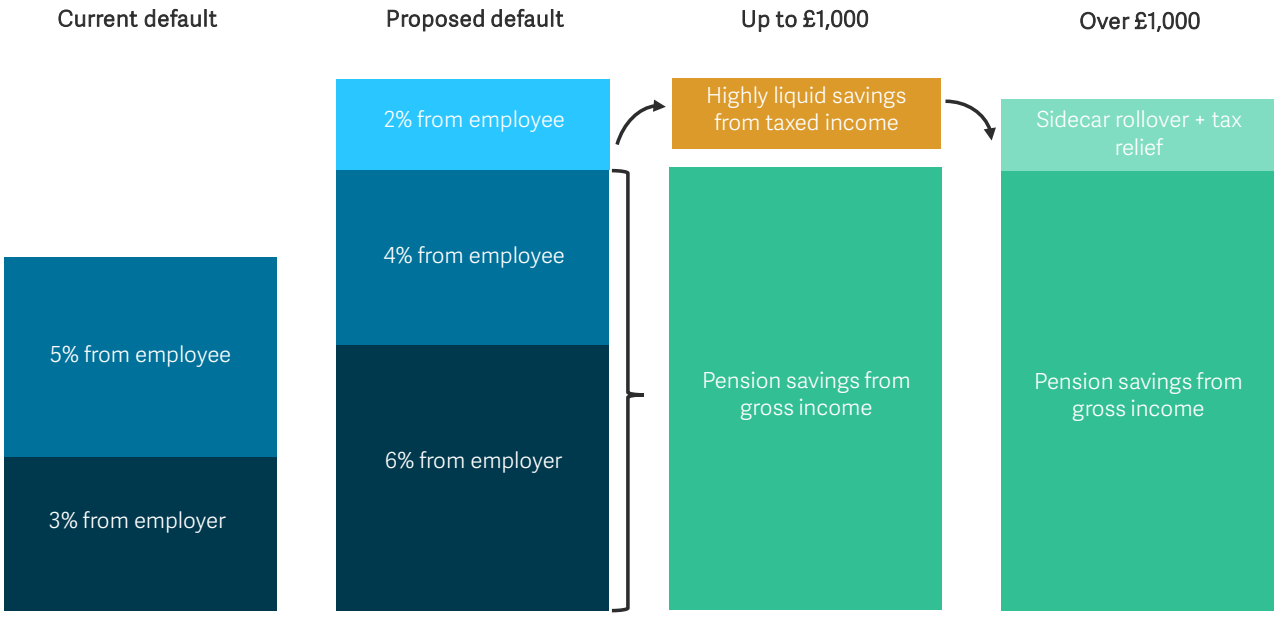
64 M Broome, I Mulheirn & S Pittaway, Precautionary tales: Tackling the problem of low saving among UK households, Resolution Foundation, February 2024.
65 T Choukhmane & C Palmer, How do consumers finance increased retirement savings?, March 2024.
66 J Neshears et al., Does Pension Automatic Enrollment Increase Debt? Evidence from a Large-Scale Natural Experiment, January 2024.

policies to increase saving by being integrated into the wider auto-enrolment pension framework, with one system to make contributions into both the employee's pension and a liquid savings pot.

We propose that out of the higher default pension contribution, two percentage points of the employee's contribution should initially move into a highly-liquid sidecar savings account. These contributions would initially occur without attracting tax relief, which would then be added to the pension pot as and when balances rolled over into the employee's pension. Figure 20 shows how the pension and sidecar contributions would interact under the scheme.

FIGURE 20: **A pool of liquid savings could be built up in a highly liquid sidecar savings account**

The operation of a sidecar savings scheme using the auto-enrolment infrastructure



SOURCE: M Broome, I Mulheirn & S Pittaway, Precautionary tales: Tackling the problem of low saving among UK households, Resolution Foundation, February 2024.

Under this arrangement, there would be scope for people to tailor the use of the new account to their particular needs. If the higher auto-enrolment default pension contribution puts too much pressure on current consumption – which as we have highlighted above is already a significant risk for lower earners - then the sidecar scheme would effectively allow them to reduce their pension contributions without opting out entirely. Meanwhile, for the other groups, additional pension contributions will be made if the individual doesn't encounter a shock and the money rolls over into their pension pot. The sidecar offer can, therefore, succeed in raising pension saving for those on middle

and higher incomes who are at greatest risk of undersaving for their retirement, while allowing flexibility for those who cannot afford to do so.

Allowing loans from pension savings would provide protection against larger financial shocks

Drawing on international examples – in particular, the US 401(k) system – the second radical reform to the UK's pension saving architecture should be to allow people to borrow from their own pension pots. This would allow people to build and access larger amounts of precautionary savings to weather large and infrequent shocks like unemployment and family breakdown.

We propose people should be able to access the lesser of £15,000 (roughly six months' income for someone on median earnings) or 20 per cent of their pension pot value.[67] Fund managers would be required to liquidate some of their assets to make the loan disbursement, and the money would be taxed on withdrawal at the individual's marginal rate.

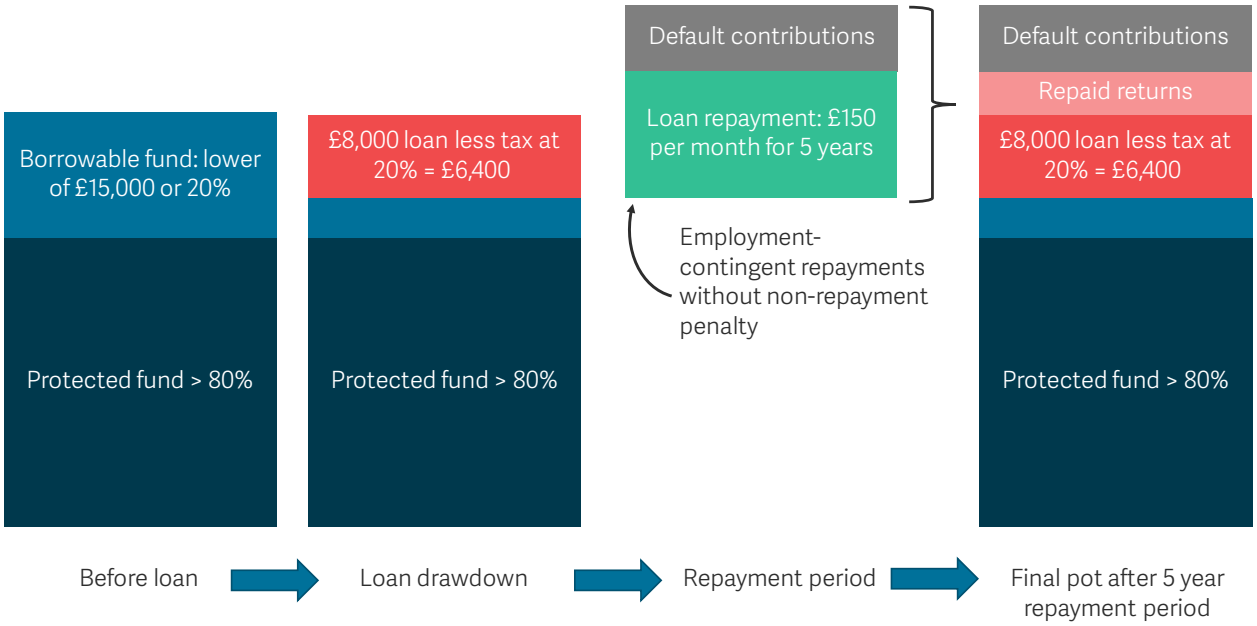
To avoid the depletion of their pension savings in the long term, anyone taking a loan from their pension would be required to agree to mandatory, but earnings-contingent, repayments of the loan, with interest, over a pre-agreed period. Borrowers would take on a repayment schedule of fixed monthly repayments when earning above the income trigger for auto-enrolment. The interest charged on the loan should reflect the foregone returns savers would have otherwise accumulated had they not taken money out of their pension. Therefore, the interest rate should be set in line with the Financial Conduct Authority's prescribed rates of return that govern the projections financial institutions can make when telling retail customers how they can expect their savings to grow.[68] Figure 21 shows how a loan facility could work in practice.

67 While an individual would be able to take multiple loans, the total outstanding principal would be limited to the 20 per cent or £15,000 maximum for any given pension pot. As in the US, pension providers would be entitled to charge an administrative fee for the service.

68 Currently, these suggest a central case of 5 per cent annual nominal return for a pension pot with a conventional asset allocation. See: Financial Conduct Authority, Rates of return for FCA prescribed projections, September 2017.

FIGURE 21: **Allowing people to borrow from their pension savings would enable them to smooth consumption through larger financial shocks**

The operation of pension-scheme loans under the auto-enrolment infrastructure



SOURCE: M Broome, I Mulheirn & S Pittaway, Precautionary tales: Tackling the problem of low saving among UK households, Resolution Foundation, February 2024.

A loan facility of this nature could prevent people having to turn to higher-cost commercial lenders to access credit or loans, which could support long-term financial security. In addition to this, enabling people to access larger amounts of precautionary savings could have macroeconomic benefits. For example, the Resolution Foundation and others have previously argued that relieving credit constraints on people seeking employment can lead to better job matches, allowing them the time to look for a role that better matches their skills and experience.[69] At the same time, allowing people access to significant financial support during unemployment has the potential to add to the state's own 'automatic stabilisers' in the form of the tax and benefits system. Bolstering private spending power during unemployment would therefore help to stabilise the economy in a downturn without putting a further burden on fiscal and monetary policy.

Clearly raising default contribution rates and introducing the flexibilities we propose here would be a significant set of changes. But the evidence in this chapter shows that it is time to take a holistic view of savings policy rather than considering the pension system in isolation from its effects on household resilience.

69 M Brewer & L Murphy, From safety net to springboard: Designing an unemployment insurance scheme to protect living standards and boost economic dynamism, Resolution Foundation, September 2023.

Section 7

Our pensions system must adapt to the changing economic environment

This report highlights the challenges of retirement planning, where determining the appropriate saving rate depends on a range of factors that are often in flux, such as the tax system, rates of return on pension savings, annuity rates, and life expectancy. Policy makers must navigate these complexities while also allowing for variation in individual preferences and circumstances to create an effective savings system. This means that a simple auto-enrolment system with a single contribution rate will never be optimal for most people.

Moreover, the complexity of the assessment means that policy makers must rely on heuristics, like focusing on the impact of policies on a typical earner or assuming that current financial conditions will continue indefinitely. However, it's crucial to revisit these assumptions periodically to ensure pension saving policy remains appropriate.

We believe the Government's forthcoming review of pension outcomes should focus on four key issues. First, it should clarify the purpose of auto-enrolment: is it meant to provide a baseline of savings, as the Pensions Commission proposed, or is it aiming to fully achieve target replacement rates? Second, while gross income target replacement rates are a useful benchmark for the auto-enrolment system, the review should assess whether basing these on final earnings rather than average earnings runs contrary to the goal of smoothing living standards across a person's life, to the particular disadvantaging of younger and lower-paid workers. Third, the review should consider whether the time has come for pensions policy to be designed to help balance the twin objectives of retirement and precautionary saving rather than pitting them against one another. Lastly, despite recent improvements in financial prospects for defined contribution savers, the shift towards a defined contribution world combined with the experience of the past decade of low interest rates highlighted the significant risks placed on individuals by the current system. It is crucial to reassess whether and how policy can help to better manage or mitigate these risks.

In this concluding section of the report, we explore four key questions that emerge from our analysis that the government's review of pension outcomes should consider.

1. The forthcoming pensions review should distinguish between 'optimal' and 'adequate' replacement rates, and clarify which policy seeks to ensure

The analysis in this report, similar to estimates made by other organisations, suggests that the State Pension and auto-enrolment on its current rates and thresholds will not to be enough on their own for middle- and higher-income people to achieve the Pensions Commission's target replacement rates.

On the other hand, we have shown that typical observed replacement rates have consistently fallen short of these targets in recent decades, suggesting that the Pensions Commission's TRRs are ambitious. Moreover, simulations that incorporate people's actual pension savings and likely other financial resources, such as the exercise in Section 5 or the DWP's Analysis of Future Pension Incomes, tend to show that, in practice, a significant proportion of middle- and higher-earners, as well as a large majority of lower-earners, have the resources available to them that would allow them, if they wish, to achieve target replacement rates.[70]

This highlights the question of what auto-enrolment should seek to achieve. If its aim is to ensure people achieve a decent retirement income that keeps them clear of reliance on means-tested benefits, while leaving decisions about the additional saving required for optimal consumption smoothing to individual circumstances and preferences, then the current system may already be on track to deliver this, at least for employees who do not opt out. Indeed, this was the vision of the original Pensions Commission when auto-enrolment was proposed. By arguing that it would be a reasonable goal of policy to ensure a minimum replacement rate of 45 per cent, the Commission thought that policy should aim well below their target replacement rates in order to allow space for individuals' preferences and circumstances.

But if policy makers see the system's purpose as achieving target replacement rates as far as possible, then the current system falls short for middle- and higher-earners. Perhaps views and preferences on this question have evolved over the 20 years since the Commission reported. If so, then the new pensions review should articulate a clear vision for today.

A conceptual distinction that may help guide thinking here is to move away from talking about 'target' replacement rates and instead distinguish between 'optimal' and

70 Department for Work and Pensions, Analysis of future pension incomes, March 2023 and J Cribb, L O'Brien & D Sturrock, Adequacy of future retirement incomes: new evidence for private sector employees, Institute for Fiscal Studies, September 2024.

'adequate' replacement rates. Fully smoothing living standards into retirement might be considered the 'optimal' replacement rate (requiring approximately 72 per cent for a median earner), while an 'adequate' or 'acceptable' rate would imply a decent level of earnings replacement of the scale proposed by the Commission (perhaps equivalent to the Commission's 45 per cent figure for median earners). To develop this distinction more fully, the Government's pensions review might consider articulating a full range of 'adequate' replacement rates for different income bands that policy might target to go alongside the higher 'optimal' replacement rates represented by the TRRs which could be left to individuals to pursue.

But if the Government sees it as appropriate for policy now to aim for the higher 'optimal' replacement rates, then its task is to find ways of achieving them fairly that avoid exacerbating the risk of over-saving that already exists for many low-paid workers. Either way, before making decisions about whether and how auto-enrolment might be reformed, policy makers need to be clear on the purpose of the scheme as it matures.

2. The review should consider defining replacement rates against career average rather than final earnings, and come to a view on how incomes should change during retirement

Ever since the Pensions Commission's analysis, target replacement rates have been expressed as a proportion of an individual's final gross earnings. The precise definition of 'final' earnings is not always clear, but if we adopt the definition used in DWP's analysis, then it can be taken to refer to an individual's average full-time earnings between the age of 50 and State Pension age. However, the pensions review should consider whether this definition is appropriate for two reasons.

First, since earnings typically grow over time as the economy grows, and earnings tend to have an age profile to them[71], then seeking to replace final earnings implies people spending their retirement with (some proportion of) the standard of living they had at the peak of the working lives, not the average.

Second, if it is considered desirable for retirees to benchmark their living standards against the end of the working lives and for auto-enrolment policy to help facilitate this, people would need to save more at the start of their career when they have considerably lower real earnings – and when they tend to face higher costs, such as student loan repayments, child-related costs and mortgages – than they would enjoy several decades hence.

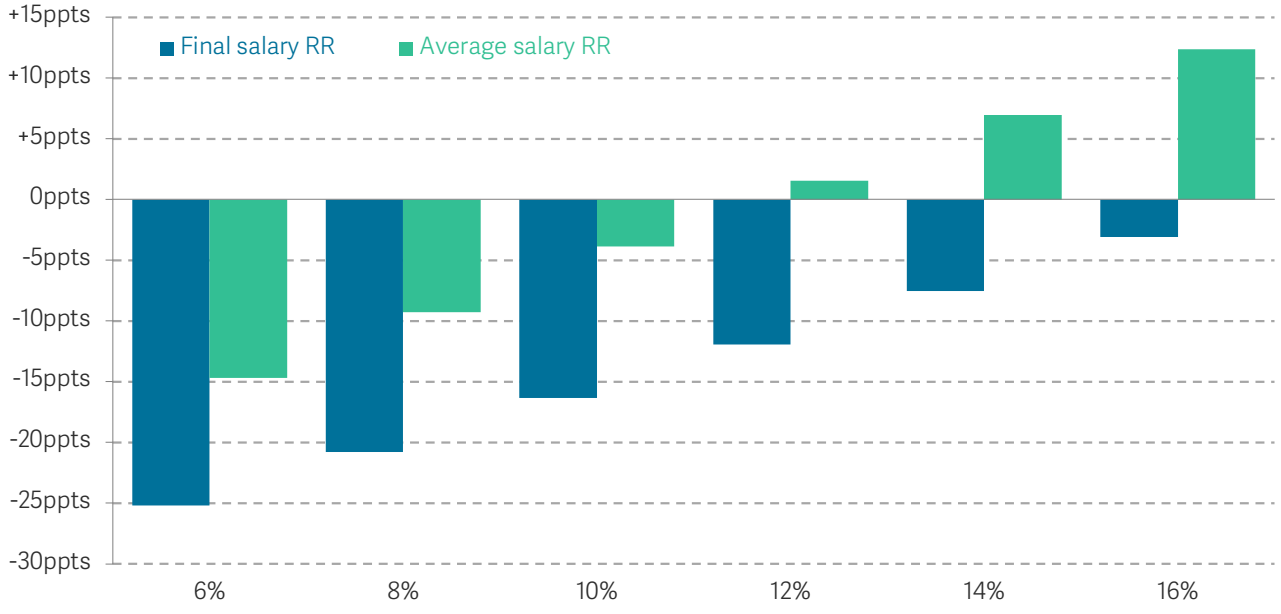
71 Median full-time employees aged 22 to 29 earn 9 per cent less than the overall median, while those aged 50 to 59 typically earn 5 per cent more: ONS, Employee earnings in the UK: 2023, November 2023.

Both of these points suggest that calculating target replacement rates from final earnings risks contradicting a central principle of savings policy: to help people smooth living standards across their lives. Final earnings replacement rates, rather like the absolute pensions adequacy benchmarks, have value in helping people close to retirement understand how their transition to retirement might feel, but that does not mean that they are appropriate to use when setting policy intended to help smooth living standards across adulthood.

The ongoing pensions review should therefore consider moving to an average income basis in defining replacement rates. As Figure 22 shows for median earners, the basis on which replacement rates are calculated makes a substantial difference to the implied saving rate. Of course, this does not fully address the problems highlighted above, but it is an intuitive approach that goes some way to anchoring pensions policy in its real purpose.

FIGURE 22: **The basis on which replacement rates are calculated makes a substantial difference to adequacy assessments**

Percentage points above or below updated target replacement rates at different auto-enrolment default contribution rates on an average and final earnings basis for median earners: UK, 2024-25



NOTES: The model assumes that under the current auto-enrolment system, individuals start saving at age 30 and retire at 67. Real earnings growth is projected at 1.5 per cent based on Office for Budget Responsibility estimates, with a real rate of return on pension savings of 2.7 per cent and an annuity rate of 4.7 per cent. Contributions are calculated at 8 per cent of gross earnings, above the lower earnings limit of £6,240, without applying an upper earnings limit. Our modelling uses £36,985 for median earners.
SOURCE: RF analysis of Bank of England, Yield curves; The Annuity Project from William Burrows; The Pensions Commission, A New Pension Settlement for the Twenty-First Century: The Second Report of the Pensions Commission; ONS, Annual Survey of Hours and Earnings, OBR, Economic and fiscal outlook – March 2024.

The forthcoming review should also be clear on its view of the appropriate way for retired people's incomes to change as they age. In particular, some parts of our pension system operate assuming that people need incomes that are unchanged in real terms when they retire (that is how most Defined Benefit pensions are arranged, for example, and the Pensions Commission assumed people would buy annuities providing a fixed real sum). But the State Pension is, of course, currently rising considerably faster than inflation, and the approach taken by the Living Wage Foundation when designing the Living Pension was that retirees needed sufficient funds to support an income in retirement that grew broadly in line with economy-wide average earnings; the researchers argued this was essential to prevent retirees from falling behind working-age population in relative terms as they progressed through retirement.[72]

This decision does not affect how one should think about the adequacy of a given replacement rate, but it does affect an assessment of whether workers are on track to achieve an adequate pension: workers would need to save more to provide a given income in retirement that subsequently tracked growth in average earnings than they would if they were aiming for it only to track inflation.

There are important interactions between these two points, and the first issue we outlined above. For example, if the Government were to argue that policy should do enough to ensure that pensioners' incomes kept pace with economy-wide growth in earnings, then it might be more acceptable to target a replacement rate defined on career-average, not the end of working life. And if one accepts that average career earnings are a more appropriate basis for defining target replacement rates, then it may be more reasonable for policy to set people on a path towards achieving career-average replacement rates. However, the reality of the variation in people's preferences and circumstances suggests the Pensions Commission's argument that policy should aim short of such a 'target' replacement rate remains persuasive.

3. The review should explore introducing more flexibility in default contribution rates and the accessibility of pension saving for precautionary needs

One clear finding from our analysis is that there is wide variation in the financial circumstances of people of the same age and earnings. As a consequence, efforts to increase default contributions may struggle to make progress on the number of people under saving without also exacerbating over saving for others. At the same time, aiming to achieve higher replacement rates will inevitably put more financial pressure on lower-earning younger people and families with child-related costs and mortgage

72 D Finch & C Pacitti, Building a Living Pension: Closing the pension savings gap for low-to-middle income families, Resolution Foundation, January 2021.

repayments. On top of these issues, today's pension regime, which enforces a strict distinction between saving for lifecycle and precautionary purposes, means that higher pension saving may not be optimal for the large numbers of people with very little by way of rainy-day savings.

All of this suggests a need to move away from a rigid one-size-fits-all pension system, and towards a system that does a better job of tailoring contribution rates and offering flexible access for precautionary purposes.[73]

There are numerous ideas for how this could be achieved without losing the simplicity that has been crucial to the successful introduction of auto-enrolment. When it comes to contributions, if the Government concludes that increased contributions are needed, there is a strong case for not going ahead with the planned abolition of the lower qualifying earnings threshold and instead raising the default contribution rate. This would mitigate the threat to the living standards of lower-paid workers who are already at risk of over saving, while raising the contributions of middle- and higher-paid people who tend to be less likely to be on course to achieve their target replacement rates.

Some have proposed that employer contributions could become mandatory regardless of whether the employee contributes, or be paid on a wider range of earnings than employee contributions, in order to relieve the pressure on low-paid workers' living standards.[74] If the case for doing so is to avoid reducing the disposable income of this already-stretched group, then the wisdom of this solution depends upon on the economic incidence of the costs of increased employer contributions. If higher employer contributions for lower-paid workers are ultimately funded by lower profits or reduced compensation for better-paid workers, then the living standards of lower-paid working people under such a policy would be unaffected. But if these costs are ultimately defrayed by slower wage growth for lower-paid people then low-paid living standards would fall.

Evidence on the economic incidence of payroll taxes suggests that it is ultimately on employees, which suggests that adding the legal burden on to employers may not solve this challenge, although distributional dynamics within firms and the backstop of the minimum wage may mitigate that conclusion.[75] How employers with might respond in reality is a complex empirical question and could vary from one sector to another.

73 Nest Insight modelling highlights that any one-size fits all approach will diverge from the needs of some workers and household. See: M Blakstad & A Ghazaryan, How much is enough? A contextual view of retirement savings, Nest Insight, September 2024.
74 See: J Cribb, L O'Brien & D Sturrock, Adequacy of future retirement incomes: new evidence for private sector employees, Institute for Fiscal Studies, September 2024; and: M Blakstad & A Ghazaryan, How much is enough? A contextual view of retirement savings, Nest Insight, September 2024.
75 See: J Deslauriers et al., Estimating the Impacts of Payroll Taxes: Evidence from Canadian Employer-Employee Tax Data, Canadian Journal of Economics, June 2018; and: Tax Foundation, Payroll Tax.

There may also be a case for introducing an age-related step up in contributions to reflect that people typically have higher equivalised incomes in the second half of their careers, due to rising wages and declining costs. In reality, the appropriate age to contribute more will vary from one person to another, but introducing a tiered set of contribution rates seems less likely to lead to over saving than having a single default rate for all ages. Similarly, since the flat-rate State Pension represents a significantly higher replacement rate for low-paid people, an earnings-related step up in auto-enrolment contributions, or a higher default contribution rate on a higher band of earnings, would directly address the problem that it is better-paid workers who are the most likely to be under saving at present.[76]

A more permissive approach would be to offer a range of contribution rates, as happens in New Zealand under the KiwiSaver, where individuals can pick a contribution rate of 3, 4, 6, 8 or 10 per cent of gross earnings. Unsurprisingly, a majority of KiwiSaver participants (64 per cent), contribute at the default rate of 3 per cent.[77] But there is no reason why the default rate needs to be the lowest contribution option. In that spirit, if the UK is to move to a higher default contribution rate, this could be accompanied by the option for people to remain at 8 per cent.

Finally, given the inadequacy of precautionary savings across much of the working-age population and the huge variation in saving needs for retirement, there are substantial advantages to allowing people the flexibility of a sidecar saving scheme either to effectively 'opt down' or to create a rainy-day fund. Complementing that with limited access to taking a loan from one's own pension fund, as we have outlined in detail in previous work, would further increase the incentives for and acceptability of saving at a higher default contribution rate.[78]

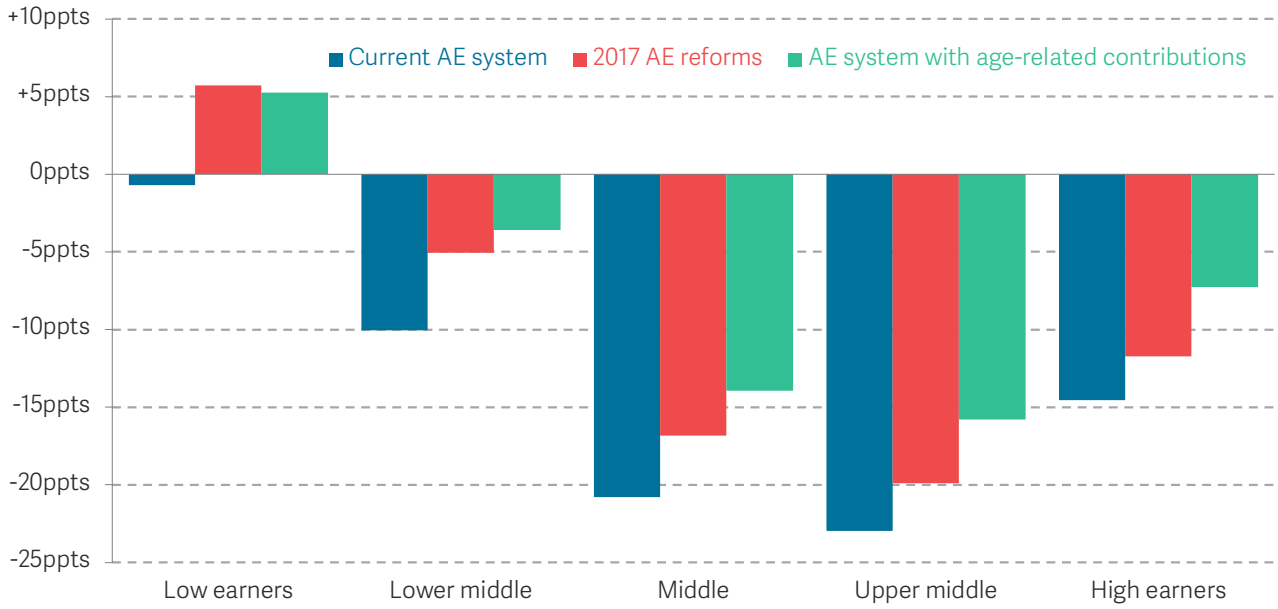
As an example, Figure 23 illustrates the effect of introducing an age-related step up in the default contribution rate compared to abolishing the lower qualifying earnings threshold as recommended in the 2017 review of automatic enrolment. For this scenario we have assumed that the lower earnings limit is retained at £6,240; default contribution rates are increased to 10 per cent for under-45s, but with the option to continue to contribute at 8 per cent; and that default contributions are increased to 12 per cent from the age of 45 with options to remain at 10 per cent or 8 per cent. Although not explicitly shown in Figure 23, such an approach could be accompanied by sidecar savings for the last 2 per cent of employee contributions for those contributing at 10 per cent or more and allowing savers to borrow up to 20 per cent of their pension pot value, as outlined in Section 6. This

76 Reforms of this nature have also been proposed by the Institute for Fiscal Studies in: J Cribb, L O'Brien & D Sturrock, Adequacy of future retirement incomes: new evidence for private sector employees, Institute for Fiscal Studies, September 2024.
77 New Zealand Inland Revenue, Statistics on payments to scheme providers.
78 M Broome, I Mulheirn & S Pittaway, Precautionary tales: Tackling the problem of low saving among UK households, Resolution Foundation, February 2024.

alternative proposal would help middle and higher earners get closer to achieving their updated target replacement rates compared to the 2017 reforms, all while putting less pressure on low earners who could also use their sidecar savings to effectively 'opt down'.

FIGURE 23: **A more flexible auto-enrolment systems could encourage middle and higher earners to save more without putting additional pressure on low earners**

Percentage points above or below updated target replacement rates under different auto-enrolment systems, by earnings band: 2024-25



NOTES: The model assumes that under the current and alternative auto-enrolment system, individuals start saving at age 30 and retire at 67. Under the 2017 reforms scenario, individuals are assumed to start saving at 27. Real earnings growth is projected at 1.5 per cent based on Office for Budget Responsibility estimates, with a real rate of return on pension savings of 2.7 per cent and an annuity rate of 4.7 per cent. Under the current auto-enrolment system, contributions are calculated at 8 per cent of gross earnings, above the lower earnings limit of £6,240, without applying an upper earnings limit. Under the 2017 reforms scenario, contributions are calculated at 8 per cent of gross earnings (i.e. removing the lower earnings limit). Under the alternative auto-enrolment contributions are calculated at 10 per cent of gross earnings between the ages of 30 to 44, stepping up to 12 per cent between the ages of 45 to 67, above the lower earnings limit of £6,240. Our modelling uses £17,700 for low earners, £25,150 for lower-middle earners, £36,985 for median earners, £60,600 for upper-middle earners and £74,600 for high earners.
SOURCE: RF analysis of Bank of England, Yield curves; The Annuity Project from William Burrows; The Pensions Commission, A New Pension Settlement for the Twenty-First Century: The Second Report of the Pensions Commission; ONS, Annual Survey of Hours and Earnings; OBR, Economic and fiscal outlook – March 2024.

4. The review should articulate the state's role in helping households manage risk and uncertainty in pensions

Our simulations of what different rates of pension saving might deliver in retirement are based on assumptions about life expectancy, earnings growth and the shape of the tax and benefit system, among others, over the course of a working life. These parameters

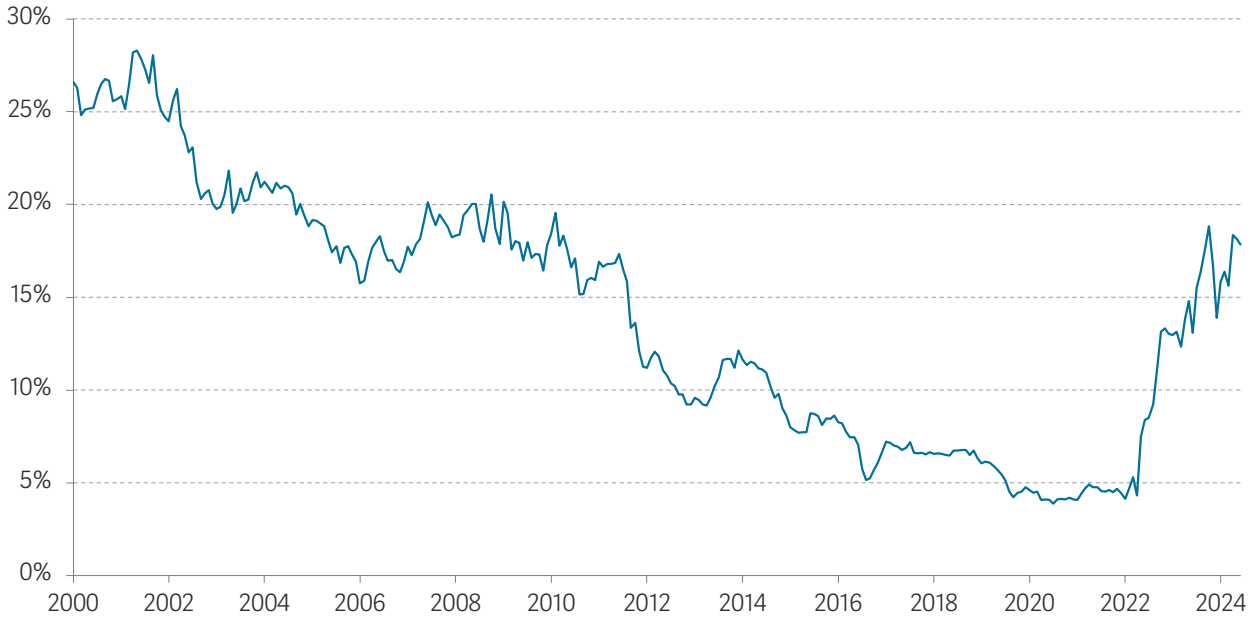
are liable to shift in unexpected ways. But two key assumptions are particularly uncertain: the rate of return on investments in working age, and the annuity rates that might prevail at the time of a person's retirement.

Pension provision by employers has moved away from defined benefit schemes towards the defined contribution model that is now dominant thanks to auto-enrolment. But that shift had entailed a significant transfer of financial risk from employers to employees. The extent of that risk has been thrown into stark relief in the years since the Pensions Commission made its proposals.

Today, with long-term real interest rates having risen sharply since 2021, rates of return and annuity rates are only slightly lower than they were at the time of the Pensions Commission's analysis, and so the default pension contribution under auto-enrolment is projected to deliver a respectable replacement rate for a median earner. But for some of the past 20 years, the (at times) much lower interest rates would have suggested that people were on track to receive a considerably smaller replacement rate in retirement, with the default contributions consequently falling well short of what would be needed to ensure adequacy, let alone optimality. Figure 24 illustrates what prevailing rates over the past 20 years would have meant for the expected replacement rate of a median earner making default contributions, holding all other factors in the projection constant. Although many people may be under saving for their retirement today, the outlook is substantially better than it was just three years ago. The vulnerability of defined contribution pensions to swings in unpredictable interest rates is just one way that people face increased uncertainty in planning for their retirement.

FIGURE 24: **Expected private pension replacement rates have varied significantly over the past 20 years**

Illustrative private pension replacement rate for median full-time earner based on historic prevailing rates of return and annuity rates: UK



NOTES: The illustrative replacement rates shown are the results of varying the real rates of return and annuity rates in our main modelling exercise with a range of interest rates, holding all other parameters and assumptions constant. Real rates of return are based on prevailing 10-year gilt rates, with a constant adjustment applied to reflect the spread between gilt rates and the real rate of return on a weighted portfolio of equities and bonds, net of implicit and explicit investment costs. This spread is taken from the Pensions Commission's final report. Annuity rates are for a 67-year-old, purchasing a £100,000 single life policy with inflation protection and no guarantee period.
SOURCE: RF analysis of Bank of England, Yield curves; The Annuity Project from William Burrows; The Pensions Commission, A New Pension Settlement for the Twenty-First Century: The Second Report of the Pensions Commission; ONS, Annual Survey of Hours and Earnings; OBR, Economic and fiscal outlook – March 2024.

In a defined contribution system, households bear a huge amount of risk in providing for their own retirement – risk which they cannot easily mitigate or even fully understand.[79] And the risk of interest rates falling as far as they did in the 2010s was not considered remotely likely at the time the Pensions Commission was writing. Financial risk should no longer be assumed away by policy makers. The new pensions review should therefore consider the state's role in sharing or helping people to manage these investment risks.

Broadly speaking there are three approaches to addressing financial risk and uncertainty. First, a higher State Pension – through which risk is shared across generations – can insulate households against too much reliance on private provision. The triple lock, by pushing up the value of the State Pension relative to earnings, is moving the state system gradually in this direction of providing more intergenerational insurance. However, there are obvious limits to the affordability of an increasingly generous State Pension,

79 M Broome, I Mulheirn & S Pittaway, Peaked interest?: What higher interest rates mean for the size and distribution of Britain's household wealth, Resolution Foundation, July 2023.

especially given other pressures on the public finances, and the current approach, which seems to push up the State Pension age in order to make a higher State Pension 'affordable' to the state, has very stark distributional consequences.[80]

A second approach is to adapt the auto-enrolment system in response to changes in the financial outlook. This could involve changing default contribution rates periodically in response to a formal assessment of likely rates of return. Indeed, the Financial Conduct Authority has typically reviewed the rates of return that pension providers use to make projections every five years.[81] A possible extension of this would be to produce projections for the likely generosity of pensions built up over a lifetime of default contributions, giving the government the opportunity to adjust contribution rates gradually or to encourage individuals to adjust their plans voluntarily. This could be housed within a formal periodic review of the auto-enrolment regime to ensure that the public is kept informed about the consequences of developments in financial conditions and the economic outlook for their retirement plans. Such an approach would also make it easier for politicians to propose changes to contribution rates or thresholds that help to ensure auto-enrolment outcomes meet expectations.

A third option is for government to foster a more radical shift towards some form of Collective Defined Contribution provision which allows investment risk to be shared between cohorts to some degree.[82] The last Government took steps towards enabling the creation of some CDC provision, but with no schemes yet operating in the UK and numerous barriers remaining, it would require a sustained policy effort to reshape the pensions landscape in that direction.[83]

The alternative to helping people manage the risk and uncertainty around private pension provision is to leave it up to them to navigate these issues. This seems less than appropriate. But whatever the outcome of the forthcoming review, it would be helpful for it explicitly to consider the role of the state in managing the risk and uncertainty around private pension provision.

Conclusion

Planning for retirement in a defined contribution system is a complex and challenging task. The relationship between one's saving rate during working life and their living standards in retirement is dependent on the tax system, the rate of return on pension savings, annuity rates, life expectancy and many other factors. Over the past 20 years,

80 J Cribb, H Karjalainen & L O'Brien, Pensions: five key decisions for the next government, Institute for Fiscal Studies, June 2024.
81 Financial Conduct Authority, Rates of return for FCA prescribed projections, September 2017.
82 Pensions Policy Institute, The role of Collective Defined Contribution in decumulation, December 2023.
83 J Mirza-Davies, Pensions: Collective Defined Contribution (CDC) schemes, House of Commons Library research briefing, April 2024.

many of these factors have been anything but stable. As well as making it even more difficult for individuals to save appropriately for retirement (assuming they are aware of the consequences of that volatility), it also makes it important to revisit policy conclusions arrived at in what was a different economic environment.

Pensions policy makers are also required to navigate the diverse circumstances and preferences of individuals. Given these complexities, they inevitably rely on simplifications, such as focusing on the impact of policies on a typical earner or assuming that current financial conditions will persist into the future. But an excessive focus on the 'typical earner' means that the system will potentially be suboptimal for millions of people. Meanwhile, the complexity of the challenge often drives debate to focus too narrowly on the two most obvious policy levers: the level of the State Pension and the appropriate default contribution rate under auto-enrolment.

This report has highlighted some key issues that the new Government should address as it embarks upon reviewing pension outcomes and shaping the direction of savings policy for the next generation. More fundamentally, to ensure pension saving policies remain effective, it is crucial to reassess these underlying assumptions periodically, and take a more granular look at how the system affects different types of people. This includes revisiting the economic foundations of pensions policy and examining how today's tax system and financial conditions have altered the outlook for people with different levels of income and wealth. The Government's forthcoming review would do well to enshrine such a reassessment in a formal process for the future.

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The Resolution Foundation is an independent research and policy organisation. Our goal is to improve the lives of people with low to middle incomes by delivering change in areas where they are currently disadvantaged.

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For more information on this report, contact:

Molly Broome
Economist
Molly.Broome@resolutionfoundation.org

Resolution Foundation

2 Queen Anne's Gate
London SW1H 9AA

Charity Number: 1114839

@resfoundation
resolutionfoundation.org/publications