HM Treasury

Public service pensions:

Consultation on the discount rate methodology

June 2021

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Contents

Chapter 1	Introduction and scope	2
Chapter 2	Uses of the SCAPE discount rate and the impact of changes	10
Chapter 3	The current SCAPE discount rate methodology	13
Chapter 4	Objectives for the SCAPE discount rate	16
Chapter 5	The SCAPE discount rate methodology	19
Chapter 6	Future changes to the SCAPE discount rate	26
Annex A	Explanation of the SCAPE process for scheme valuations	28
Annex B	Schemes impacted by this consultation	29

Chapter 1

Introduction and scope

Introduction

1.1 Public service pensions continue to be among the very best available. They are generous, with members enjoying Defined Benefit schemes where employer contributions are around 20 per cent of earnings – around double the typical contribution rate for large companies in the private sector.

1.2 Most public service pension schemes are unfunded Defined Benefit (DB) pension schemes, meaning that members' pension benefits are guaranteed by the Government and there is no fund of assets from which pension benefits are paid. In the absence of assets, the Government has developed a process for determining the level of contributions that should be paid into the schemes, called 'Superannuation Contributions Adjusted for Past Experience' (SCAPE). An essential element of SCAPE is the discount rate used to express schemes' future pension payments as a present-day cost, which is known as the SCAPE discount rate.

1.3 The Government previously consulted on the methodology used to set the SCAPE discount rate in December 2010 (the 2010 consultation).[1] Since the response to that consultation in April 2011 (the 2011 consultation response), the SCAPE discount rate methodology has been based on expected long-term GDP growth.[2]

1.4 In the 2011 consultation response, the Government stated its intention to review the SCAPE discount rate methodology every ten years. This consultation meets that intention and seeks views on the methodology that should be used to set the SCAPE discount rate in the future.

1.5 Following this consultation, the Government will carry out a separate exercise to set a new SCAPE discount rate in line with the chosen methodology. The new SCAPE discount rate will be announced at a later date.

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1 *Consultation on the discount rate used to set unfunded public service pension contributions*, HM Treasury, December 2010. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/81610/consult_unfunded_pension_condoc.pdf

2 *Consultation on the discount rate used to set unfunded public service pension contributions: Summary of responses,* HM Treasury, April 2011. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/190119/consult_discount_rate_summary_responses.pdf

1.6 Alongside this consultation, the Government is consulting separately on reforms to the cost control mechanism which forms part of the valuation process for the public service schemes.[3]

The SCAPE discount rate

1.7 In DB pension schemes, contribution levels are set to meet the cost of expected benefits through a process called a scheme valuation.

1.8 In funded DB pension schemes, valuations will typically use a discount rate set with reference to the return expected from the assets held by the scheme in order to determine the appropriate level of contributions into the scheme. These contributions will reflect both the cost of future benefit promises and an adjustment to recognise any surplus or deficit between the assets and the liabilities already built up. The discounted value of future payments then represents the amount of money that needs to be invested today in order to meet those future payments.

1.9 Unfunded public service schemes do not have a fund of assets from which pension benefits are paid; the benefits are funded through employee and employer contributions, with any shortfall in contributions relative to benefits being paid funded through HM Treasury, and any excess contributions relative to benefits being paid returned to HM Treasury. Therefore, a different process is needed to calculate contribution rates for unfunded public service schemes.

1.10 The fact that the Exchequer stands behind public service pensions does not change the importance of setting contributions to the scheme at a level which reflects expected benefits. This is necessary to ensure that employers' workforce decisions reflect the cost of pension promises being made at the point at which they are built up, and a disproportionate share of the costs of providing public service pensions is not passed on to future taxpayers.

1.11 SCAPE is the process followed at scheme valuations to set contribution levels for the unfunded public service schemes (explained in further detail in Annex A). The purpose of SCAPE is to set contribution levels so that:

- The value of benefits being earned today, as well as past over- or under-payments of contributions, is recognised and total contributions reflect this;
- Employers pay a charge that is appropriate for public service pension schemes, just as private sector employers must pay contributions that are appropriate for funded pension schemes; and
- Today's decisions by Government and public service employers about their workforce, such as how many people to employ and their salary, take into account the full future cost of employing people today.

1.12 As part of SCAPE, a discount rate is applied to schemes' expected future pension payments, which extend decades into the future, so that the cost of pension promises being built up can be expressed as a present-day cost. This

[3] *Public service pensions: cost control mechanism consultation,* HM Treasury, June 2021. http://www.gov.uk/government/consultations/public-service-pensions-cost-control-mechanism-consultation

discount rate is called the SCAPE discount rate and is set using a prescribed methodology. Since 2011, the SCAPE discount rate methodology has been based on expected long-term GDP growth.

Box 1.A: Discussion of discount rates

Defined benefit pensions are promises made by employers to their employees to pay them a sum of money at some point in the future. An employee joining a public service pension scheme at age 25 might typically receive pension payments between 40 and 70 years in the future.

To calculate the present-day cost of the pension promises made to that employee, an appropriate discount rate must be applied to their expected pension payments.

How do discount rates work in funded defined benefit pension schemes?

Let us assume that a company promises an individual a pension payment of £100 in 10 years' time. What is the cost of that promise now to the company?

The cost to the company could be considered to be the amount of money needed now in order to pay £100 to this individual in 10 years' time.

Let us assume that the company decides that it will invest in a fund that has an expected return of 4 per cent (nominal) per year. By applying a discount rate of 4% to this promise, the company can calculate how much it must invest now to meet the promise made to the individual:

$$£100 \div 1.04^{10} = £67.56$$

Alternatively, the company may decide to invest in a fund with a higher expected rate of returns. This can reduce the upfront cost of the promise to the company but may also involve greater risk that the returns are not met.

How do discount rates work in unfunded defined benefit pension schemes?

In unfunded defined benefit pension schemes, money is not invested in a fund or other pot of assets based on an expected rate of return. However, a discount rate must still be applied to calculate how much employers should be contributing to their pension schemes to reflect the pension promises being made to employees.

Reasons for reviewing the SCAPE discount rate methodology

1.13 In the 2011 consultation response, the Government expressed an intention to review the level of the SCAPE discount rate every five years and review the methodology used to set the SCAPE discount rate every ten years.[4] This consultation reviews the SCAPE discount rate methodology that has been in place since 2011.

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[4] See Chapter 5, *Consultation on the discount rate used to set unfunded public service pension contributions: Summary of responses.*

1.14 This consultation considers:

- Whether the objectives of the SCAPE discount rate should be revised based on ten years' experience using the current methodology;
- The advantages and disadvantages of alternative methodologies for setting the SCAPE discount rate with regard to these objectives, including possible modifications which could be made to them; and
- Proposals to align future reviews of the SCAPE discount rate with the regular cycle of valuations of public service pension schemes.

Scope of consultation

1.15 This consultation seeks views on the methodology for setting the SCAPE discount rate.

1.16 The three largest unfunded public service pension schemes are the National Health Service Pension Scheme (England and Wales), Teachers Pension Scheme (England and Wales), and the Civil Service Pension arrangements (Great Britain). A full list of the schemes which use the SCAPE discount rate to complete scheme valuations, including schemes for workforces in Scotland, Wales, and Northern Ireland, is provided in **Annex B**.[5]

1.17 The three Local Government Pension Schemes are funded public service pension schemes and do not use the SCAPE discount rate to set contribution rates at scheme valuations of individual local government pension funds.

1.18 The level of the SCAPE discount rate will not be changed by this consultation; the Government will carry out a separate exercise to set a new SCAPE discount rate in line with the chosen methodology following this consultation.

1.19 The following are also outside the scope of this consultation:

- The design of public service schemes, including benefit levels;
- The outcome and process for conducting scheme valuations, including the wider SCAPE methodology; and
- Scheme-specific issues which are not related to the SCAPE discount rate.

The Cost Control Mechanism

1.20 The Government is consulting separately on proposed changes to the cost control mechanism.[6] This consultation does not seek views on the design of the cost control mechanism; views on the design of the cost control mechanism should be directed to the separate consultation. However, Chapter 2 notes that one of the reforms to the cost control mechanism being considered as part of the separate consultation, the introduction of an 'economic check', could mean that the SCAPE discount rate may become

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[5] Relevant schemes include schemes whose Responsible Authority is a devolved authority, such as the schemes for teachers, police, NHS Scotland employees, and fire and rescue workers in Scotland; civil servants, teachers, police, judges and health and social care workers in Northern Ireland; and fire and rescue workers in Wales.

[6] http://www.gov.uk/government/consultations/public-service-pensions-cost-control-mechanism-consultation

relevant to the outcome of the cost control mechanism in the future.[7] These consultations have been held in parallel to ensure that respondents are fully informed of any potential interactions and to allow them to consider their responses across both areas of the public service pensions framework.

Overview of consultation

1.21 Following this introduction, Chapter 2 sets out what the SCAPE discount rate is used for and the impact of changes to the SCAPE discount rate, including under proposed reforms to the cost control mechanism.

1.22 Chapter 3 describes the current SCAPE discount rate methodology and summarises the experience under this approach.

1.23 Chapter 4 proposes objectives for the SCAPE discount rate and asks respondents to give views on these.

1.24 Chapter 5 sets out the main alternative approaches for the SCAPE discount rate, including possible refinements to the main approaches, and asks respondents to give views on these approaches with reference to the objectives for the SCAPE discount rate.

1.25 Chapter 6 sets out proposals for the timing and frequency of future reviews of the SCAPE discount rate and asks respondents for views on these proposals.

How to respond

1.26 Responses should make clear which questions are being responded to and include all necessary rationale behind their views. Responses should make clear whether they reflect the views of an individual or have been sent on behalf of an organisation.

1.27 This consultation will run for 8 weeks and will close at midnight on 19 August. Responses can be submitted by email to SCAPEDiscountRateConsultation@HMTreasury.gov.uk

1.28 Alternatively, responses can be sent by post to:

Workforce, Pay and Pensions
HM Treasury
2/Red
1 Horse Guards Road
London SW1A 2HQ

Processing of Personal Data

1.29 This notice sets out how HM Treasury will use your personal data for the purposes of **Public service pensions: Consultation on the discount rate methodology** and explains your rights under the General Data Protection Regulation (GDPR) and the Data Protection Act 2018 (DPA).

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[7] In light of the difference in how employer contribution rates are set in the funded Local Government Pension Schemes, the Government has asked for views on the application of any 'economic check' to the Local Government Pension Schemes as part of the cost control mechanism consultation. http://www.gov.uk/government/consultations/public-service-pensions-cost-control-mechanism-consultation

Your data (Data Subject Categories)

1.30 The personal information relates to you as either a member of the public, parliamentarians, and representatives of organisations or companies.

The data we collect (Data Categories)

1.31 Information may include your name, address, email address, job title, and employer of the correspondent, as well as your opinions. It is possible that you will volunteer additional identifying information about yourself or third parties.

Legal basis of processing

1.32 The processing is necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in HM Treasury. For the purpose of this consultation the task is consulting on departmental policies or proposals or obtaining opinion data in order to develop good effective government policies.

Special categories data

1.33 Any of the categories of special category data may be processed if such data is volunteered by the respondent.

Legal basis for processing special category data

1.34 Where special category data is volunteered by you (the data subject), the legal basis relied upon for processing it is: the processing is necessary for reasons of substantial public interest for the exercise of a function of the Crown, a Minister of the Crown, or a government department.

1.35 This function is consulting on departmental policies or proposals, or obtaining opinion data, to develop good effective policies.

Purpose

1.36 The personal information is processed for the purpose of obtaining the opinions of members of the public and representatives of organisations and companies, about departmental policies, proposals, or generally to obtain public opinion data on an issue of public interest.

Who we share your responses with

1.37 Information provided in response to a consultation may be published or disclosed in accordance with the access to information regimes. These are primarily the Freedom of Information Act 2000 (FOIA), the Data Protection Act 2018 (DPA) and the Environmental Information Regulations 2004 (EIR).

1.38 If you want the information that you provide to be treated as confidential, please be aware that, under the FOIA, there is a statutory Code of Practice with which public authorities must comply and which deals with, amongst other things, obligations of confidence.

1.39 In view of this it would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information, we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on HM Treasury.

1.40 Where someone submits special category personal data or personal data about themselves or third parties, we will endeavour to delete that data before publication takes place.

1.41 Where information about respondents is not published, it may be shared with officials within other public bodies involved in this consultation process to assist us in developing the policies to which it relates, including the Government Actuary's Department. Examples of these public bodies appear at: https://www.gov.uk/government/organisations

1.42 As the personal information is stored on our IT infrastructure, it will be accessible to our IT contractor, NTT. NTT will only process this data for our purposes and in fulfilment with the contractual obligations they have with us.

How long we will hold your data (Retention)

1.43 Personal information in responses to consultations will generally be published and therefore retained indefinitely as a historic record under the Public Records Act 1958.

1.44 Personal information in responses that is not published will be retained for three calendar years after the consultation has concluded.

Your Rights

- You have the right to request information about how your personal data are processed and to request a copy of that personal data.
- You have the right to request that any inaccuracies in your personal data are rectified without delay.
- You have the right to request that your personal data are erased if there is no longer a justification for them to be processed.
- You have the right, in certain circumstances (for example, where accuracy is contested), to request that the processing of your personal data is restricted.
- You have the right to object to the processing of your personal data where it is processed for direct marketing purposes.
- You have the right to data portability, which allows your data to be copied or transferred from one IT environment to another.

How to submit a Data Subject Access Request (DSAR)

1.45 To request access to personal data that HM Treasury holds about you, contact:

HM Treasury Data Protection Unit
G11 Orange
1 Horse Guards Road
London

SW1A 2HQ
dsar@hmtreasury.gov.uk

Complaints

1.46 If you have any concerns about the use of your personal data, please contact us via this mailbox: privacy@hmtreasury.gov.uk.

1.47 If we are unable to address your concerns to your satisfaction, you can make a complaint to the Information Commissioner, the UK's independent regulator for data protection. The Information Commissioner can be contacted at:

Information Commissioner's Office
Wycliffe House, Water Lane
Wilmslow
Cheshire
SK9 5AF
0303 123 1113
casework@ico.org.uk

1.48 Any complaint to the Information Commissioner is without prejudice to your right to seek redress through the courts.

Contact details

1.49 The data controller for any personal data collected as part of this consultation is HM Treasury, the contact details for which are:

HM Treasury
1 Horse Guards Road London
SW1A 2HQ
London
020 7270 5000
public.enquiries@hmtreasury.gov.uk

1.50 The contact details for HM Treasury's Data Protection Officer (DPO) are:

The Data Protection Officer, Corporate Governance and Risk Assurance Team
2/15
1 Horse Guards Road
SW1A 2HQ
London
privacy@hmtreasury.gov.uk

Chapter 2

Uses of the SCAPE discount rate and the impact of changes

Current uses of the SCAPE discount rate

2.1 The primary use of the SCAPE discount rate is to determine the level of employer contribution rates in unfunded public service pension schemes.

2.2 The employers in unfunded public service pension schemes are:

- Government departments and other public service employers such as the NHS, state schools and police and fire services;
- Independent providers that have a right of access to public service pension schemes, such as General Practitioner businesses and independent schools; or
- Employers of staff who retained access to their public service scheme when they transferred to the provider under the Government's Fair Deal policy, or transferred into the organisation at its inception, as is the case for some social enterprises.

2.3 Public service pension schemes also use discount rates for other purposes, including: individual and bulk transfers[1] into and out of schemes, calculation of the value of pension benefits in divorce proceedings, and the production of various actuarial factors for member options, such as actuarially reduced early retirement benefits and the setting of commutation factors in a minority of schemes. In some cases, the SCAPE discount rate is used as the discount rate for these purposes.

Impact of changes to the SCAPE discount rate

2.4 This consultation seeks views on the methodology used to set the SCAPE discount rate. Following this consultation, the Government will carry out a separate exercise to set a new SCAPE discount rate in line with the chosen methodology. While this consultation does not change the level of the SCAPE discount rate, it may be helpful for respondents to understand the potential impacts of changes to the SCAPE discount rate.

Impact of changes on employers

2.5 In determining contribution levels, scheme valuations generally look at two sorts of cost pressures. Firstly, the cost of future pension benefits being

[1] Individual transfers, also known as Cash Equivalent Transfers (CETVs) are the amount which can be taken to another pension scheme instead of a deferred pension which the member holds within their pension scheme. Bulk transfers occur when a group of scheme members are transferred from one pension scheme to another.

earned by current employees (future service); and secondly whether further contributions are required because past contributions were either insufficient or excessive in order to meet current estimates of the value of promises already made (past service).

2.6 Outcomes of scheme valuations are determined by several factors and assumptions, including the SCAPE discount rate, projections of working patterns, salary growth, and longevity.

2.7 Scheme valuations are particularly sensitive to the SCAPE discount rate. For example, 2016 scheme valuation reports found that a 0.25% change in the SCAPE discount rate could change employer contribution rates by between 4% to 11% of pensionable pay. The effect of changing the discount rate on contributions will vary between different schemes due to the scheme designs and profiles of each workforce.

2.8 Keeping all other assumptions unchanged, a lower discount rate will result in higher employer contribution rates, and a higher discount rate will result in lower employer contribution rates. Changes to employer contribution rates will affect the cost of employing staff for employers in public service schemes, including both public sector employers and private sector employers which participate in public service schemes.

2.9 Employer contribution rates for the unfunded public service schemes are currently set until April 2024, when new rates will be introduced following the outcome of 2020 scheme valuations.[2] As a result, any changes to the Government's approach to the SCAPE discount rate methodology will not impact employer contribution rates until April 2024.

Impact of changes on employees

2.10 Employee pension benefits and contribution levels are set out in scheme regulations. They are not directly impacted by changes in the SCAPE discount rate.

2.11 As mentioned above, the SCAPE discount rate may be used for the purpose of setting actuarial factors that impact the value of pension options to members, such as the terms of early or late retirement and the cost of Added Pension. While this practice has been commonly followed, use of the SCAPE discount rate for these purposes is not prescribed;[3] actuarial factors are set by scheme managers in consultation with their scheme actuaries. Schemes which currently use the SCAPE discount rate for setting actuarial factors may choose to consider whether this would remain appropriate under any changes to the SCAPE discount rate.

Additional impacts under proposed reforms to the cost control mechanism

2.12 The cost control mechanism is part of the valuation process for public service pension schemes. It assesses certain aspects of the costs of providing that scheme; if, when the mechanism is tested, those costs have increased or decreased by more than a specified percentage of pensionable pay

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[2] Written Statement UIN HCWS757, 'Public Service Pensions Consultation Response and Update'. February 2021.

[3] For transfer factors the discount rate is set centrally by HM Treasury.

compared to their original level, then member benefits in the relevant scheme are increased or decreased to bring the cost of that scheme back to target.

2.13 In parallel to this consultation, the Government is consulting on proposals to reform the cost control mechanism.[4] The Government's proposals include introducing an 'economic check' into the cost control mechanism. Under this proposal, breaches of the cost control mechanism would only lead to a change in benefits where to do so would be in line with the long-term economic outlook.

2.14 The Government's proposal is that any 'economic check' would be based on the SCAPE discount rate, or an alternative measure such as expected long-term GDP. Further detail on the proposed design of the 'economic check' is set out in the consultation on reforms to the cost control mechanism.

2.15 If an 'economic check' is designed based on the SCAPE discount rate, changes to the SCAPE discount rate could have an impact on employees through the cost control mechanism. It is important to note that under the proposed design, changes in the SCAPE discount rate could not directly cause changes to member benefits but could affect whether, and the extent to which, changes to member benefits occur.

Impact of changes on Government expenditure

2.16 A change to employer contribution rates as a result of changes to the SCAPE discount rate does not have a direct impact on the cost of unfunded public service schemes to the taxpayer.[5]

2.17 However, it can have indirect effects, such as:

- A change to employer contribution rates will impact the cost of employing staff for employers in the scheme, which may affect the size of the public sector workforce over time;
- Where employers in the scheme are private businesses contracted to provide public services, changes to employment costs can be passed back to sponsoring Departments through increased contract costs;
- Where the SCAPE discount rate is used by schemes to carry out other calculations that can have an impact on the cost of some benefits.

2.18 Furthermore, the SCAPE discount rate could have an indirect effect on Government expenditure if it is used as a part of an 'economic check' under the Government's proposals to reform the cost control mechanism. An 'economic check' may change the frequency with which, and the extent of, changes to members' benefits are made at scheme valuations, affecting the level of pensions paid out in the future.[6]

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4 http://www.gov.uk/government/consultations/public-service-pensions-cost-control-mechanism-consultation

5 The cost of public service pensions to the taxpayer is the difference between the amount of pension benefits paid by Government to recipients each year, minus pension contributions received by Government from employees and non-Government funded employers each year.

6 See Chapter 5. http://www.gov.uk/government/consultations/public-service-pensions-cost-control-mechanism-consultation

Chapter 3

The current SCAPE discount rate methodology

3.1 Prior to the 2010 consultation, the SCAPE discount rate was based on the Social Time Preference Rate (STPR). STPR is an estimation of society's preference for consumption sooner rather than later and is used by the Government to appraise the value for money of projects which involve short-term public expenditure to deliver future welfare benefits.

3.2 The 2010 consultation sought views on four methodologies for setting the SCAPE discount rate.[1] The outcome of the 2010 consultation was to adopt a methodology based on expected long-term GDP growth, using the Office for Budget Responsibility's (OBR's) projections of long-term real average GDP growth.

Rationale for 2011 decision

3.3 In the 2010 consultation, five objectives for the SCAPE discount rate were proposed. The consultation recognised that tensions exist between the different objectives and it was unlikely that any one methodology could satisfy all the objectives. The objectives were:

- Fair reflection of costs
- Reflect future risks to Government income
- Support plurality of public service provision of public services
- Transparent and simple
- Stability

3.4 Following consultation, the Government determined that two of these objectives should be prioritised.[2] First, the SCAPE discount rate should represent a 'fair reflection of costs', meaning that contribution levels are set so that employment costs internalise the cost to future generations of meeting pension promises. Second, the discount rate should 'reflect future risks to Government income', meaning that contribution levels should reflect Government's ability to meet future payments.

3.5 The Government concluded that a rate based on expected long-term GDP growth best met this balance of objectives. In particular, the 2011 consultation response noted that as pension liabilities are funded through

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1 *Consultation on the discount rate used to set unfunded public service pension contributions*.

2 See Chapter 2, *Consultation on the discount rate used to set unfunded public service pension contributions: Summary of responses*.

the tax base, contributions in unfunded public service schemes should be set with reference to the future growth of that income stream, for which GDP growth provides a proxy. Using a discount rate based on long-term GDP growth would ensure that contribution levels reflected future affordability constraints.[3]

SCAPE discount rate experience since 2011

3.6 A new SCAPE discount rate was introduced in April 2011 of 3.0% + CPI.[4] Since then, the SCAPE discount rate has been revised on two occasions:

- From 2016, in line with the Government's intention to review the SCAPE discount rate every five years; and
- From 2018, following an 'out-of-cycle' review of the SCAPE discount rate due to significant changes to the OBR's long-term GDP projections.

3.7 Table 2.A. demonstrates the changes in SCAPE discount rates since 2011. The SCAPE discount rate currently in force is 2.4% + CPI.

Table 3.A: Changes to the SCAPE discount rate

Year	SCAPE discount rate methodology	SCAPE discount rate in force
Pre-2011	STPR	3.5% + RPI
2011	Expected long-term GDP growth	3.0% + CPI
2016		2.8% + CPI
2018		2.4% + CPI

3.8 Scheme valuations are particularly sensitive to the SCAPE discount rate. Reductions in the SCAPE discount rate since 2011 have contributed towards increased employer contribution rates required to fund pension promises made to members.

3.9 Reductions in the SCAPE discount rate reflect changes that have been made to the OBR's projections for long-term GDP growth in this period. The subsequent increase to employer contribution rates reflects that pension promises made to employees in this period have become more expensive relative to the forecast size of the future tax base (for which expected long-term GDP growth is a proxy), rather than being due to changes to members' pension benefits.

3.10 Employers are required to account for valuations and any subsequent changes in pension costs. However, HM Treasury took exceptional steps to provide departments with £4.7bn in 2019-20 to meet a portion of the costs resulting from the 2018 'out-of-cycle' change to the SCAPE discount rate, in

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3 See Chapter 3, *Consultation on the discount rate used to set unfunded public service pension contributions: Summary of responses*.

4 From 2011, public service pensions were increased in line with CPI rather than RPI. This was reflected in the new SCAPE discount rate implemented from April 2011.

recognition of the fact that these costs were unforeseen and took effect soon after the change was announced.[5]

5 *Budget 2018*, HM Treasury, October 2018.

Chapter 4

Objectives for the SCAPE discount rate

Proposed objectives for the SCAPE discount rate

4.1 In order to evaluate alternative SCAPE discount rate methodologies, it is necessary to evaluate them against a set of objectives for the SCAPE discount rate.

4.2 This consultation proposes the following three objectives for the SCAPE discount rate:

- Fair reflection of costs – The SCAPE discount rate should ensure that contribution levels are set so that:
  - The value of benefits being earned today, as well as past over- or under-payments of contributions, is recognised and total contributions reflect this;
  - Employers pay a charge that is appropriate for public service pension schemes, just as private sector employers must pay contributions that are appropriate for funded pension schemes; and
  - Today's decisions by Government and public service employers about how many people to employ, as opposed to other forms of expenditure, take into account the full cost of employing people today.
- Reflect future risks to Government income – The SCAPE discount rate should reflect that public service pensions are paid from future tax revenues, which may turn out to be different to what is expected. It may be appropriate for the discount rate to reflect this risk.
- Stability – The SCAPE discount rate should support Government and employers to make long-term decisions on workforce expenditure (as compared to other types of expenditure) and minimise large fluctuations in employer contribution levels where these are not caused by changes in expected future expenditure on pensions.

4.3 The Government believes that all three of these objectives are important when considering the best methodology for setting the SCAPE discount rate and should be given equal weighting. The Government notes that tensions may exist between these objectives; methodologies will be considered against these objectives in the round.

The 'stability' objective

4.4 This consultation proposes that 'stability' should be a key objective for the SCAPE discount rate, with equal weighting to the other objectives of 'fair reflection of costs' and 'reflect future risks to Government income.' This proposal reflects the importance of stability when deciding the methodology used to set the SCAPE discount rate.

4.5 Since 2011 the SCAPE discount rate has been reduced on two occasions, including an 'out-of-cycle review' in 2018, by a total of 0.6% net of CPI. As discussed in Chapter 3, this has had a large impact on employer contribution rates.

4.6 Frequent and/or large revisions to the SCAPE discount rate, including uncertainty regarding when those revisions may occur, make it more difficult for employers to forecast the cost of employing staff in coming years. This harms the Government and employer's ability to set long-term budgets for expenditure on both pensions and other Government priorities. It may also make it more difficult for public sector employers to properly internalise pension costs.

4.7 The SCAPE discount rate is just one component of scheme valuations alongside several other factors. While a more stable SCAPE discount rate should reduce some volatility in employer contribution rates, it would not remove the probability that scheme valuations will result in changes to employer contribution levels. Under any SCAPE discount rate methodology, employers should continue to take this probability into account when setting workforce plans and budgets.

Other aims

4.8 The Government has other aims for public service pensions more broadly. These are not being proposed as explicit objectives for the SCAPE discount rate.

4.9 The 2010 consultation included an objective for the SCAPE discount rate to support the plurality of public service provision. The Government supports the plurality of public service provision where appropriate. Where public services may be provided through independent providers, those providers should not be unfairly disadvantaged from competing with public sector providers as a result of pension costs.

4.10 In 2013, the Government published new Fair Deal guidance.[1] Fair Deal is a non-statutory policy setting out how pension issues are to be dealt with when staff are compulsorily transferred from the public sector to independent providers delivering public services. In light of this policy, the Government no longer believes that it is necessary for the SCAPE discount rate to explicitly address this objective.

[1] *Fair Deal for staff pensions: staff transfer from central government*, HM Treasury, October 2013.

Question 1: Do you agree that these are the correct objectives for the SCAPE discount rate? If not, please explain why and specify any alternative objectives that you think should be included.

Chapter 5

The SCAPE discount rate methodology

5.1 There are various ways in which a discount rate can be calculated. However, in view of the purpose of the SCAPE methodology and the Government's proposed objectives for the SCAPE discount rate, it is suggested that the most appropriate methodologies to be considered are:

- a methodology based on expected long-term GDP growth (the current methodology); and
- a methodology based on the Social Time Preference Rate (STPR).

5.2 This consultation invites respondents to provide views on these two methodologies, including possible modifications that could be applied to them, with reference to the SCAPE discount rate objectives.

5.3 This consultation does not propose considering alternative methodologies, such as a methodology based on index-linked gilts or a methodology based on reference to the discount rates used by funded schemes.[1] These methodologies were considered in the 2010 consultation, following which the Government found that these methodologies were not suited for unfunded public service schemes.[2] It is unlikely that they would now be considered more suitable, particularly in light of the proposed objectives in Chapter 4. Notably, index-linked gilt yields and discount rates used in the private sector change frequently, making them unlikely to meet the 'stability' objective.

Question 2: Do you agree that these are the most appropriate methodologies that should be considered? If not, please specify any alternative methodologies that should be considered and how they would fit with the Government's proposed objectives.

A methodology based on expected long-term GDP growth

5.4 The SCAPE discount rate could continue to be set in line with expected long-term GDP growth. This is the approach to setting the SCAPE discount rate that the Government has followed since 2011.

[1] Funded defined benefit pension schemes use a discount rate calculated based on the scheme's expected returns on its assets and the employer's covenant rating.

[2] See Chapter 3, *Consultation on the discount rate used to set unfunded public service pension contributions: Summary of responses*.

5.5 The rationale behind setting the SCAPE discount rate in line with expected long-term GDP growth is that pension benefits from unfunded public service pension schemes are paid for out of future tax revenue; the discount rate should therefore be equal to the forecast growth of the tax base, for which GDP growth is a proxy.

5.6 Under this methodology, if the size of the future tax base is forecast to shrink, the cost to schemes of pension promises being built up will increase, and employer contribution rates will increase if other assumptions remain unchanged. By using a discount rate based on expected GDP growth, present day employer contributions as a share of present GDP are equivalent to the expected future cost of associated pensions as a share of expected future GDP.[3]

5.7 Projections of expected GDP growth are reliant upon complex assumptions projected decades into the future and so inherently contain a high degree of uncertainty and volatility. The OBR's long-term GDP projections are revised regularly, and the timing of revisions may not align with planned reviews of the SCAPE discount rate or valuation cycles.

5.8 If, following this consultation, the SCAPE discount rate continues to be set based on expected long-term GDP growth, any 'economic check' introduced into the cost control mechanism could be designed to use the SCAPE discount rate. This would create a consistent approach to setting employer contribution rates and assessing whether breaches of the cost cap should result in changes to member benefits based on the long-term economic outlook.

Box 5.A: Changes in the OBR's long-term GDP projections

The current SCAPE discount rate (2.4% + CPI) was implemented in October 2018 and is based on the OBR's long-term GDP projections published in July 2018.

The OBR has since published revised long-term GDP projections, most recently updated in March 2020.[4] These projections forecast a reduction in expected long-term GDP growth relative to the projections published in July 2018.

If the SCAPE discount rate was calculated using the most recent projections, it would result in a rate of 1.8% + CPI. However, the SCAPE discount rate has not been changed to reflect the most recent OBR projections; the SCAPE discount rate of 2.4% + CPI remains in force.

Following this consultation, the Government will carry out a separate exercise to review the level of the SCAPE discount rate in line with the chosen methodology and announce any new SCAPE discount rate at a later date.

3 In practice, actual future benefit expenditure and GDP growth may differ from forecasts.

4 Economic and fiscal outlook – March 2020, Office for Budget Responsibility.

Possible modifications to a methodology based on expected long-term GDP growth

5.9 Further modifications could be made to a methodology based on expected long-term GDP growth. Possible modifications are set out below. Respondents are invited to suggest whether any of these modifications should be made to how a methodology based on expected long-term GDP growth is applied.

Allowing for term-dependent GDP growth

5.10 Under the current SCAPE discount rate methodology, the OBR's average long-term estimate of GDP growth is used as the SCAPE discount rate; at scheme valuations, this rate is applied to expected pension payments in each future year to express them as a cost in present-day terms.

5.11 Estimates of average long-term GDP growth can differ significantly from expected GDP growth for any given year. Using term-dependent GDP projections (expected GDP growth in each year) at scheme valuations, rather than a single average long-term projection across all years, could therefore result in employer contribution rates which more accurately reflect the expected size of the future tax base.

5.12 If allowing for term-dependent GDP growth is considered appropriate, a different SCAPE discount rate could be used at scheme valuations to calculate the present-day cost of expected future pensions for each year in the future, using the OBR's short-term GDP forecasts.

5.13 Short-term GDP forecasts are frequently revised and are likely to include both years with expected GDP higher and lower than the average long-term estimates. The impact of this modification on employer contributions, relative to the use of average long-term estimates, will depend on the precise short-term GDP forecasts applied, relative to the average long-term estimate of GDP growth.

Allowing for actual GDP experience

5.14 As set out in Chapter 1, one of the purposes of the SCAPE process for conducting scheme valuations is to set contribution rates in a way that recognises past over- or under-payments of contributions.

5.15 SCAPE (explained in detail in Annex A) does not account for actual changes in the past size of the tax base when determining whether over- or under-payments have occurred. Instead, schemes are assumed to hold a 'notional fund' of assets, the size of which is determined at each valuation by rolling forward the notional fund at the last valuation and assuming it has grown by the same rate as the SCAPE discount rate in force in each interceding year. This notional fund is then compared against the pension promises the scheme has made in this period to determine whether the scheme has over-paid (a 'notional surplus') or under-paid (a 'notional deficit') contributions. If an over- or under-payment has occurred, employer contribution levels are adjusted to reflect this.

5.16 Instead of using the SCAPE discount rate to determine the size of a scheme's 'notional fund', actual GDP could be used. Under this modification, the size of a scheme's 'notional fund' at a scheme valuation would be determined by assuming it has grown by the rate of GDP growth recorded in each year since the previous valuation. This would ensure that past over- or under-payments are determined with reference to the actual performance of the income stream from which pension benefits are paid out.

5.17 Actual GDP experience may be higher or lower than the SCAPE discount rate in force in any given period, so the impact on the likelihood of past over- or under-payments being identified, and so employer contribution rates, is uncertain. However, GDP experience since 2011 has routinely been lower than the SCAPE discount rate in force. If this trend continued, this modification would increase the probability of under-payments being identified, resulting in increases to employer contribution rates relative to no allowance for actual GDP experience.

Question 3: What are the advantages and disadvantages of a SCAPE discount rate methodology based on expected long-term GDP? If this methodology is adopted, should any of the modifications (allowing for short-term GDP projections, allowing for actual experience) be considered?

A methodology based on the Social Time Preference Rate

5.18 The Social Time Preference Rate (STPR) is a discount rate used in government to conduct investment appraisals of projects that involve spending money in the short term to deliver future welfare benefit. STPR's function is to account for 'social time preference' - the principle that people prefer to consume goods now rather than in the future - to identify the 'present value' of public spending over different time spans. This function is achieved by discounting the expected future costs and benefits of spending by the STPR.

5.19 The use of the STPR in the appraisal of all Government policies, programmes and projects is prescribed by HM Treasury guidance.[5] It is currently set at 3.5% in real terms. If a SCAPE discount rate methodology based on STPR were adopted, the prescribed STPR, plus CPI, would provide the SCAPE discount rate, subject to any further modifications adopted.

5.20 The rationale behind basing SCAPE on the STPR is that, as pension promises are made to current employees but will be paid out from the Government's future income stream, pensions reflect a transfer of resources from the public sector in the future to the public sector in the present day. Public service pensions are therefore a form of investment and should be discounted in a consistent way with other public sector investments of this kind. This would facilitate employers to make direct comparisons between different uses of public expenditure.

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5 *The Green Book: Central Government Guidance on Appraisal and Evaluation*, HM Treasury, 2020. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/938046/The_Green_Book_2020.pdf

5.21 In 2011, the Government changed the SCAPE methodology from being based on STPR to expected long-term GDP growth. This reflected an assessment of the alternative methodologies in the context of the objectives for the SCAPE discount rate at the time. STPR may now more closely match the objectives currently being proposed – in particular, the 'stability' objective. The level of the STPR is periodically reviewed by the Treasury, most recently in 2020, but the current level has been unchanged since 2003. Stability in the STPR level allows for consistency in planning and comparing long-term investments.

5.22 A SCAPE discount rate based on STPR could be higher or lower than expected long-term GDP growth, and would not be directly linked to the Government's future income stream or Government's expected ability to pay out associated pension benefits in the future.

5.23 The Government Actuary has suggested that if, following this consultation, the SCAPE discount rate methodology is changed, then the SCAPE discount rate may no longer be an appropriate measure of economic performance for any 'economic check' introduced into the cost control mechanism.[6] In these circumstances, an alternative discount rate to the SCAPE discount rate would be applied to the cost of schemes for the purpose of an 'economic check.' This may be considered appropriate if, for example, it is found that STPR best meets the balance of objectives for the SCAPE discount rate.

Possible modifications to a methodology based on the Social Time Preference Rate

5.24 If the STPR was used as a basis for setting the SCAPE discount rate, there are modifications that could be made to the STPR before applying it to set the SCAPE discount rate to make it more appropriate for the public service pensions context. Possible modifications are indicated below. Respondents are invited to suggest whether any modifications should be considered if a methodology based on the STPR is adopted.

Allowing for the public service pension context

5.25 The STPR is made up of two component parts – 'time preference' and a 'wealth effect' - which reflect its primary function of allowing comparison of costs and benefits with different time spans.[7]

5.26 It may be considered inappropriate to apply the 'catastrophic risk' element of the 'time preference' component of the STPR in the public service pensions context. The rationale behind the 'catastrophic risk' element in the STPR is to account for the risk that the returns from a project may be altered due to unforeseeable events. However, this rationale may not apply to discounting public service pension promises.

5.27 If 'catastrophic risk' is considered inappropriate for the public service pensions context, it could be removed when using STPR to set a SCAPE

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6 Chapter 4, *Cost control mechanism – Government Actuary's review – Final report*, Government Actuary's Department, June 2021. https://www.gov.uk/government/publications/cost-control-mechanism-government-actuarys-review-final-report

7 See Annex 6, The Green Book.

discount rate. 'Catastrophic risk' currently makes up 1% of the STPR of 3.5%. Removing it for the purposes of a SCAPE discount rate would therefore result in a SCAPE discount rate of 2.5% plus CPI, based on the current STPR. This would result in higher employer contribution rates relative to if the SCAPE discount rate was based on STPR with no modification.

Allowing for long-term uncertainty

5.28 HM Treasury guidance explains that when using the STPR for investment appraisal, the standard rate should decline over time due to uncertainty about the future value of its components.[8] It states that the current headline rate of 3.5% in real terms should be used for discounting cashflows within the next 30 years, cashflows occurring between 30 and 75 years into the future should be discounted by 3.0% in real terms, and cashflows occurring more than 75 years in the future should be discounted by 2.5% per year in real terms.

5.29 Under a SCAPE discount rate methodology based on STPR, these reduced rates (or reductions of the same scale, if allowing for the pensions context) could be used at scheme valuations to discount expected pension promises in any years over 30 years into the future. This would allow for long-term uncertainty and ensure consistency with how discounting is applied to appraisals of other public sector investments. As this modification would involve the application of a reduced SCAPE discount rate to pension payments in some future years, it would result in higher employer contribution rates relative to if the SCAPE discount rate was based on STPR with no modification.

> Question 4: What are the advantages and disadvantages of a SCAPE discount rate methodology based on the STPR? If this methodology was adopted, should any modifications (allowing for the public service pension context or allowing for long-term uncertainties) be considered?

> Question 5: Which SCAPE discount rate methodology do you recommend, and why?

Equalities impact

5.30 The Government has considered the equalities impact of any changes to the SCAPE discount rate methodology. The Government does not believe that any change to the methodology would have a differential impact on groups with protected characteristics. The impact of the introduction of an 'economic check' to the cost control mechanism and its design will be assessed as part of the parallel consultation, and the impact of changes to the SCAPE discount rate will be assessed as part of a separate exercise to review the level of the rate. However, the Government is seeking views as

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8 See 'Long term discounting', Annex 6, *The Green Book*.

part of this consultation on whether there are equality concerns that it should be aware of.

Question 6: Are there any equalities impacts of changes to the SCAPE discount rate methodology that the Government should consider?

Chapter 6

Future changes to the SCAPE discount rate

Timing of SCAPE discount rate reviews

6.1 In the 2011 consultation response, the Government proposed to review the level of the SCAPE discount rate every five years. In addition, it retained the option of conducting an out-of-cycle review of the SCAPE rate in the event of a significant change in circumstances.

6.2 Since 2012, all the main unfunded public service schemes have adopted a shared four-year scheme valuation cycle. The Government is therefore proposing that in the future, reviews of the SCAPE discount rate level should be aligned with the valuation cycle, with an aim of conducting one review of the rate per valuation cycle.

6.3 This proposal is supported by the following considerations:

- Under the current approach of reviewing the SCAPE discount rate level every five years, there may be some four-year valuation cycles in which no scheduled review takes place. This proposal would ensure that at least one review of the SCAPE discount rate level takes place before new scheme valuations are completed.
- Under the current approach, reviews of the SCAPE discount rate level may be scheduled for the beginning of a valuation cycle. This increases the risk that an 'out-of-cycle' review is needed so that valuations reflect the most up-to-date circumstances. Reviewing the level once per valuation cycle would minimise the risk that an 'out-of-cycle' review is needed and supports the stability objective.
- By retaining a degree of flexibility over when in a valuation cycle the SCAPE discount rate level is reviewed, reviews can be held at the most appropriate point of the valuation cycle, with reference to considerations such as the administrative requirements for schemes, the publication of assumptions, and the fiscal cycle.

6.4 This proposal is intended to reduce the likelihood that multiple reviews of the SCAPE discount rate level are required within a valuation cycle. However, the Government would retain the ability to conduct additional reviews of the SCAPE discount rate in the event of a significant change in circumstances.

6.5 Under this proposal, the Government would intend to continue to review the methodology used to set the SCAPE discount rate at appropriate intervals.

Question 7: Do you agree with the proposal for reviews of the SCAPE discount rate to be aligned with the scheme valuation cycle?

Timing of the next SCAPE discount rate review

6.6 Following this consultation, the Government will carry out a separate exercise to review the level of the SCAPE discount rate in line with the chosen methodology. The new SCAPE discount rate will be announced at a later date.

6.7 In line with the Government's proposals in this Chapter, any new SCAPE discount rate would be announced at the most appropriate point based on the expected publication date of any relevant assumptions and the timetable for implementing new employer contribution rates in April 2024.

Setting a SCAPE discount rate

6.8 The SCAPE discount rate is set by HM Treasury, with any changes typically announced at fiscal events and subsequently codified in official Directions for the purposes of valuations. It is determined in consultation with the Government Actuary, who advises on the appropriateness of the proposed level of the SCAPE discount rate based on the prescribed methodology.

6.9 HM Treasury will continue to consult with the Government Actuary prior to making any changes to the level of the SCAPE discount rate. This will include consideration of the most appropriate assumptions to be used and any detailed aspects of the methodology, such as rounding. The proposal to align reviews of the SCAPE discount rate level with the valuation cycle should provide greater transparency to schemes by reducing the likelihood of out-of-cycle reviews.

Annex A

Explanation of the SCAPE process for scheme valuations

A.1 This Annex explains the 'Superannuation Contributions Adjusted for Past Experience' (SCAPE) process and how it is followed at scheme valuations to set contribution rates for unfunded public service pension schemes.

A.2 Regular scheme valuations of the unfunded public service schemes are carried out in order to set contribution levels. The process differs from that for private sector funded schemes because the unfunded public service schemes do not actually hold a fund of assets. An alternative approach to setting contribution levels must therefore be found. The methodology is called SCAPE and was introduced scheme-by-scheme, with it being applied to the first scheme in 2001.

A.3 In the absence of an actual fund of assets, the SCAPE methodology creates the concept of a notional fund – the 'SCAPE fund' – in which the scheme is assumed to hold a pot of notional assets from which pension benefits are paid out.

A.4 When SCAPE was first introduced, each unfunded public service pension scheme was assumed to hold a SCAPE fund that exactly matched the scheme's liabilities. At subsequent valuations, a scheme's SCAPE fund is assumed to have:

- increased in line with the nominal amount of contributions made since the last valuation;
- increased with notional returns since the last valuation, in line with the SCAPE discount rate in effect in each year; and
- decreased when pension benefit payments are paid.

A.5 The resulting SCAPE fund is then compared with the scheme's liabilities - the present value of all the pension promises that have been made by the scheme.

A.6 Contributions are then set so that:

- They reflect the cost of the pension promises expected to be made between the time of the current scheme valuation and the next valuation; plus
- If any shortfall has emerged between the value of a scheme's SCAPE fund and its scheme liabilities, the shortfall is removed over several years. (Similarly, if the calculations show that overpayments have been made in the past, contributions will be reduced.)

Annex B

Schemes impacted by this consultation

B.1 The primary use of the SCAPE discount rate is in actuarial valuations for setting contribution rates under SCAPE methodology for the unfunded public service pension schemes.

B.2 The SCAPE discount rate is used in actuarial valuations of the following unfunded public service pension schemes:

- For civil servants:
  - The Civil Service Pension (Great Britain) Schemes
  - The Civil Service Pension (Northern Ireland) Schemes
- Armed Forces Pension Schemes
- For NHS employees:
  - NHS Pension Schemes
  - NHS Superannuation Schemes (Scotland)
  - Health and Personal Social Services Northern Ireland Superannuation Schemes
- For teachers:
  - Teachers' Pension Schemes (England and Wales)
  - Scottish Teachers' Superannuation Schemes
  - Northern Ireland Teachers' Superannuation Schemes
- Police Pension Schemes (administered locally)
- Firefighters' Pension Schemes (administered locally)
- United Kingdom Atomic Energy Authority Pension Schemes
- For judges:
  - Judicial Pension Schemes
  - Northern Ireland Judicial Pension Scheme
- Research Councils' Pension Schemes

B.3 In addition to the schemes mentioned above, there are a number of smaller schemes and many established to cover only one senior appointment which do not specifically need to form part of the review, but which will be required to act on the recommendations.

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This document can be downloaded from www.gov.uk

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