

Subject SA4

2025 Study Guide

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1 Introduction

This Study Guide has been created to help you navigate your way through Subject SA4. It contains useful information you will need before starting to study Subject SA4 for the 2025 exams. You may also find it useful to refer to throughout your studies.

Further information on study skills can be found on our website at [ActEd.co.uk](https://www.acted.co.uk).

Please read this Study Guide carefully before reading the Course Notes, even if you have studied for some actuarial exams before.

Before you start

When studying for the Institute and Faculty of Actuaries' exams, you may need:

- a copy of the **Formulae and Tables for Examinations of the Institute and Faculty of Actuaries, 2nd Edition (2002)** – these are referred to simply as the *Tables*
- a **scientific calculator** and/or **software package** to help with calculations.

The *Tables* are available from the Institute and Faculty of Actuaries' eShop. Please visit [actuaries.org.uk](https://www.actuaries.org.uk).

2 Subject SA4 – background and contents

2.1 Links to other subjects

Fellowship Qualification

There are two subjects covering pensions and other benefits: Pensions and other Benefits Specialist Principles (Subject SP4) and Pensions and other Benefits Specialist Advanced (Subject SA4). Each subject develops a specific set of skills and knowledge needed by actuaries working in, or who wish to work in pensions.

Subject SA4 further develops the principles from Subject SP4, providing a more in-depth understanding of pensions and other benefits to enable actuaries to work in more complex scenarios.

2.2 Subject contents

There are six parts to the Subject SA4 course. The parts cover related topics and are broken down into chapters. At the end of each part there is an assignment testing the material from that part.

The following table shows how the parts and chapters relate to each other. The final column shows how the chapters relate to the days of the regular tutorials. This table should help you plan your progress across the study session.

| Part | Chapter | Title | X Assignment | Tutorial – 3 days |
|------|---------|-----------------------------------|--------------|-------------------|
| 1 | 1 | Introduction | X1 | 1 |
| | 2 | Key stakeholders | | |
| | 3 | Taxation | | |
| | 4 | Security | | |
| | 5 | Professional guidance | | |
| 2 | 6 | Benefit provision | X2 | |
| | 7 | Scheme design – general | | |
| | 8 | Scheme design – specific features | | |
| | 9 | Designing options | | |
| 3 | 10 | Risks | X3 | |
| | 11 | Financing benefits | | |
| | 12 | Sponsor covenant | | |
| | 13 | Investment classes | | |
| | 14 | Investment strategy | | |
| 4 | 15 | Valuations | X4 | 2 |
| | 16 | Methods and models | | |
| | 17 | Valuation data | | |
| | 18 | Assumptions | | |
| | 19 | Managing experience | | |
| | 20 | Analysis of experience | | |
| 5 | 21 | Accounting | X5 | |
| | 22 | Corporate activity – general | | |
| | 23 | Corporate activity – calculations | | |
| 6 | 24 | Managing risks | X6 | 3 |
| | 25 | Incentive exercises | | |
| | 26 | Discontinuance | | |
| | 27 | Problem solving and analysis | | |
| | | Glossary | | |

3 Syllabus

The Syllabus for each subject is produced by the Institute and Faculty of Actuaries. It includes information to support the study of this subject. The Syllabus will guide you through what you need to learn, the application of learning, as well as the skills that you need to develop.

Students can use the Syllabus as a guide for learning and development. We recommend that you use the Syllabus as an important part of your study.

3.1 Aim

The aims of Subject SA4 are as follows:

- Apply the main principles relevant to the provision of pensions and other benefits, to the management of benefit arrangements, taking into account the regulatory, legislative and business environment, as well as professional requirements.
- Provide solutions and give appropriate recommendations to business problems relating to benefit arrangements and the management of risk.

3.2 Topics and topic weightings

This subject covers the following topics:

- | | | |
|----|--|-------|
| 1. | Pension and benefit provision and general business environment | (30%) |
| 2. | Regulatory, legislative and taxation environment | (15%) |
| 3. | Design and financing of benefit arrangements | (20%) |
| 4. | Reporting / valuation and management of benefit arrangements | (15%) |
| 5. | General business and risk management | (20%) |

The topic weighting percentage noted alongside the topics is indicative of the volume of content of a topic within the subject and therefore broadly aligned to the volume of marks allocated to this topic in the examinations. For example, if a topic is 20% of the subject then you can expect that approximately 20% of the total marks available in the examination papers, averaged over a number of examination sessions, will be available on that topic.

Students should ensure that they are well prepared across the entire syllabus and have an understanding of the principal terms used in the provision of benefits in various jurisdictions.

Students will be expected to be able to apply knowledge and skills from across the syllabus topics to scenarios and questions proposed by the examiners and produce coherent solutions and actions, including:

- analysing complex problems in terms of actuarial, economic and financial factors to a level where appropriate analytical techniques may be used
- assessing the implications and relevance of such factors, integrating the results into a coherent whole
- evaluating the results critically in a wider context, drawing appropriate conclusions
- proposing solutions and actions, or a range of possible solutions and actions, based on this evaluation.

3.3 Objectives

The detailed syllabus objectives for Subject SA4 are given below. To the right of each objective are the chapter numbers in which the objective is covered in the ActEd course. The relevant individual syllabus objectives are also included at the start of each course chapter.

1 Pension and benefit provision and general business environment (30%)

In-depth understanding of current and emerging types of benefit provision, key stakeholders and their roles and responsibilities, the comparison between State and employer pensions for individuals, and the environments in which the benefits are provided.

- 1.1 Understand the roles and responsibilities of stakeholders, in the current and emerging types of benefit provisions: (Chapter 2)
- the State
 - any other central body within the jurisdiction
 - employers
 - individuals
 - trustees
 - actuaries
 - investment advisers
 - other advisers.
- 1.2 Understand the factors that influence the provision of benefits by the State, employers in the public and private sectors and individuals. (Chapter 6)
- 1.3 Understand the main saving alternatives to pension savings available to individuals. (Chapter 6)
- 1.4 Understand the relevance, and impact, of sponsor covenants: (Chapter 12)
- what is meant by sponsor covenant
 - when / how it may be measured
 - integration of sponsor covenant with funding and investment.

2 Regulatory, legislative and taxation environment (15%)

Explore how regulation, legislation and taxation impact on the design, attractiveness, maintenance and affordability of benefit arrangements.

- 2.1 Understand the impact of relevant legislation on the provision of non-State benefits in terms of the following objectives: (Chapters 3, 4 and 11)
- encouraging appropriate non-State provision
 - ensuring security for non-State provision.
- 2.2 Identify the impact of the environment in which benefits are provided on stakeholders: (Chapters 5 and 21)
- benefits policy
 - regulation
 - tax and national insurance regime
 - accounting standards
 - Actuarial Standards in relation to actuaries practising or giving advice in relation to pension arrangements.
- 2.3 Identify and compare regulatory, legislative and taxation environments between different jurisdictions. (Chapters 2, 3, 4 and 5)

3 Design and financing of benefit arrangements (20%)

In depth theoretical factors, and practical implications, to consider when designing and financing pensions and other benefit arrangements.

- 3.1 Understand the different ways in which providers are able to finance the benefits to be provided, including: (Chapters 11 and 13)
- timing of contributions (relative to when the benefits are due to be paid)
 - forms and characteristics of investment that are available
 - financial instruments and contingent funding arrangements that may be used to back benefit promises
 - insurance products including annuity and protection policies.

- 3.2 Discuss the factors to consider in determining a suitable design for a pension scheme, or other benefits such as social security benefits, including: (Chapters 7, 8 and 13)
- type of pension scheme (*eg* defined benefit, defined contribution, risk-sharing)
 - governance requirements
 - level and form of benefits and/or contributions
 - method of financing the benefits
 - how risk is shared between parties
 - choice of assets (when benefits are to be funded)
- and describe how membership and other data analysis can be used to provide insight into individuals' current and future behaviour and therefore inform benefit design.

4 Reporting, valuation and management of benefit arrangements (15%)

Understand how benefit arrangements are managed in relation to financing, placing values on assets, benefits and contributions, monitoring experience, reporting requirements, and managing significant events, and the impacts on stakeholders.

- 4.1 Understand the issues that arise from the transfer / amendment of benefit rights (for example following significant corporate activity such as an acquisition or scheme merger): (Chapters 22 and 23)
- interests and responsibilities of the parties involved
 - terms set out in the legal documentation
 - financial aspects, such as the calculation of the bulk transfer value (if relevant) and benefits provided.
- 4.2 Determine an appropriate funding method, together with suitable financial and demographic assumptions, that can be used to value benefits and contributions in specific scenarios. (Chapters 16 and 18)
- 4.3 Determine values for assets, past and future benefits and future contributions, and perform calculations to demonstrate an understanding of the main methods used: (Chapters 15 and 17)
- data requirements
 - reasons why assumptions and methods used may differ in different circumstances
 - extent to which values should reflect investment / risk management strategy
 - valuing guarantees and options
 - sensitivity analysis and reasonableness checking.

- 4.4 Understand the factors that need to be considered, and produce relevant financial and non-financial information to meet accounting standards: (Chapter 21)
- pension scheme or benefit objectives
 - disclosure requirements, including those for directors' remuneration
 - calculations of cost of benefit provision.
- 4.5 Discuss the issues concerning surplus / deficit including: (Chapters 19 and 20)
- identifying the sources
 - factors that affect the treatment of a surplus / deficit
- and describe how the financial significance of deviations from expectations should be monitored and assessed, including:
- data required
 - methods used
 - quantification of key items of experience
 - use of the results to help identify issues and develop solutions.

5 General business and risk management (20%)

Understand the detail behind potential risks affecting benefit arrangements, as well as how these are managed and reported.

- 5.1 Understand the main risks and propose appropriate risk mitigation strategies in respect of: (Chapters 7, 10, 24 and 25)
- the level and incidence of benefits
 - the level and incidence of contributions
 - the level and incidence of return on assets
 - the extent to which assets are exhausted during a member's lifetime
 - the overall security of benefits
- including risks which can, and cannot, be mitigated through the use of insurance products.
- 5.2 Analyse the existing investment strategy, or propose an appropriate investment strategy, for a provider of benefits, taking into account: (Chapters 14 and 16)
- any asset-liability matching requirements
 - the trade-off between risk and reward
 - an awareness of adding value to the shareholders of the business
- and describe how projection models may be used to develop strategies.
- 5.3 Discuss the benefit options typically available to individuals: (Chapter 9)
- before retirement
 - at retirement
 - after retirement
- and discuss how to set appropriate terms and consent requirements for these options (where appropriate), taking into account the risk and reward for all relevant parties.

- 5.4 Discuss the issues arising from the discontinuance of benefit provision, including:
(Chapter 26)
- rights and expectations of beneficiaries
 - availability and selection of a method of provision of discontinuance benefits
 - level of available assets.

4 Core Reading

This section explains the role of the Core Reading and how it links to the Syllabus, supplementary ActEd text and the examination.

4.1 Core Reading

The Core Reading has been produced by the Institute and Faculty of Actuaries. It supports students in their learning and development of this subject by providing information and explanation of the topics and objectives in the Syllabus.

The Core Reading is updated annually to reflect any changes to the Syllabus and current practice, as well as for continuous improvement.

The current version of the Core Reading is up-to-date as of 31 May 2024. It references the version of any legislation, standards, professional guidance, *etc* as of this date. Any known upcoming changes to the references are noted where relevant in the Core Reading.

The United Kingdom left the European Union on 1 January 2021 without an EU-wide arrangement for the operation and regulation of financial services and this continues to be the situation. This version of the Core Reading reflects the situation as of 31 May 2024.

Accreditation

The Institute and Faculty of Actuaries would like to thank the numerous people who have helped in the development of the material contained in the Core Reading.

Further reading

A list of additional resources to support candidate learning and development for this subject can be found on the Module pages on the IFoA website:

actuaries.org.uk/curriculum/

All resources are hyperlinked to their source publication or the IFoA Library. Where a resource is available through the IFoA Library, members, students and affiliates can 'request' from the IFoA Library Service, subject to availability.

4.2 Links to the Syllabus

The Core Reading supports coverage of the Syllabus in helping to ensure that both depth and breadth are re-enforced.

The relevant Syllabus objectives are included at the start of each chapter for reference.

4.3 Links to the examination

Examiners can set questions based on any area of the Syllabus within any examination sitting and will consider and draw from the Core Reading when setting examinations questions.

Students will be expected to apply the Core Reading to scenarios and questions proposed by the examiners.

The exams in April and September 2025 will be based on the Syllabus and Core Reading as at 31 May 2024. We recommend that you always use the up-to-date Core Reading to prepare for the exams.

Past papers indicate to students how the examiners apply the Core Reading. The Examiners' Reports provide further insight as to how students answered the questions and how marks were awarded.

Candidates should not rely on past papers alone and should ensure they have covered the entire Syllabus as part of their learning and development of this subject.

4.4 ActEd text

The Core Reading deals with each syllabus objective and covers what is needed to pass the exam, and the Subject SA4 Course Notes include the Core Reading in full, integrated throughout the course.

However, the tuition material that has been written by ActEd enhances it by giving examples and further explanation of key points. Here is an excerpt from some ActEd Course Notes to show you how to identify Core Reading and the ActEd material. **Core Reading is shown in this bold font.**

In the example given above, the index *will* fall if the actual share price goes below the theoretical ex-rights share price. Again, this is consistent with what would happen to an underlying portfolio.

After allowing for chain-linking, the formula for the investment index then becomes:

$$I(t) = \frac{\sum_i N_{i,t} P_{i,t}}{B(t)}$$

where $N_{i,t}$ is the number of shares issued for the i th constituent at time t ;

$B(t)$ is the base value, or divisor, at time t .

This is ActEd text

This is Core Reading

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These conditions remain in force after you have finished using the course.

5 Skills and assessment

5.1 Exam skills

In each examination, students will be expected to demonstrate, through their answers, that they have knowledge of, can apply and use higher order skills in this subject:

- Knowledge will be demonstrated through answering questions that assess understanding of that knowledge as well as through questions that ask for the application of relevant knowledge to scenarios.
- Application will be demonstrated through answering questions that assess the ability to identify and apply relevant concepts and skills to solve problems (both numerical and non-numerical).
- Higher order skills will be demonstrated through questions that will assess the ability to use relevant knowledge, concepts and skills to solve problems, draw appropriate conclusions, and make meaningful and appropriate comments on those conclusions.

In Subject SA4, the approximate split of assessment across the three skill types is:

- Knowledge – 15%
- Application – 55%
- Higher Order skills – 30%.

The Institute and Faculty of Actuaries use command verbs (such as 'Define', 'Discuss' and 'Explain') to help students to identify what the question requires. The examination can be composed of questions drawing from any part of the Syllabus within any examination sitting and using any command verb. This includes knowledge, techniques, principles, theories, and concepts as specified.

The Institute and Faculty of Actuaries has produced guidance on 'Command verbs used in the Associate and Fellowship examinations', to help students to understand what each command verb is asking them to do.

You can find the relevant document on the Institute and Faculty of Actuaries' website at:

actuaries.org.uk/qualify/prepare-for-your-exams

5.2 Assessment

Assessment will consist of one 3 hour 20 minute timed, online examination. This time includes reading time, as well as the time taken for students to download and/or print the question paper.

Students can expect to answer a number of questions of varying marks, using Microsoft Word to construct and type their answers.

5.3 Further information

The Institute and Faculty of Actuaries has produced a number of documents, which it advises students to read and understand. In particular, the:

- Qualification Handbook, which contains information on studying and preparing for exams, as well as available support and resources
- Examinations Handbook, which contains practical assistance on how to sit an Institute and Faculty of Actuaries' examination
- Assessment Regulations document, which includes rules on eligibility, entry and conduct during an online assessment.

The Qualification Handbook can be found at:

actuaries.org.uk/qualify/student-and-associate-exam-news/qualification-handbook

The Examinations Handbook and Assessment Regulations document can be found at:

actuaries.org.uk/qualify/my-exams/ifo-exams

IMPORTANT NOTE: These documents may be updated and re-published in the weeks leading up to each exam session. It is important that you keep up-to-date with any changes and developments.

6 ActEd study support

An overview of ActEd's products and services, and guidance on how to choose the best ones for you, can be found on our website at [ActEd.co.uk/productguide](https://www.acted.co.uk/productguide).

6.1 Summary of ActEd products and services

Detailed descriptions of all ActEd's products and services can be found on our website at [ActEd.co.uk](https://www.acted.co.uk). However, the specific products and services available for Subject SA4 include:

- Course Notes
- X Assignments – six 100-mark tests (you are allowed 3¼ hours to complete these)
- Series X Marking
- Flashcards
- ASET (2020-23 papers) – four years of exam papers, *ie* eight sittings, covering the period April 2020 to September 2023
- Mini ASET – covering the April 2024 exam paper
- Mock Exam – one 100-mark test
- Additional Mock Pack (AMP) – two additional 100-mark tests
- Mock Exam Marking
- Marking Vouchers.

Products are generally available in both paper and eBook format. Visit [ActEd.co.uk](https://www.acted.co.uk) for full details about available eBooks, software requirements and restrictions.

6.2 Tuition

The following tutorials are typically available for Subject SA4:

- Regular Tutorials (three full days / six half days)
- Block Tutorials (three days).

Tutorials are typically available both face-to-face and live online.

Full details are set out in our *Tuition Bulletin*, which is available on our website at [ActEd.co.uk](https://www.acted.co.uk).

6.3 Questions and queries

From time to time you may come across something in the study material that is unclear to you.

Our online discussion forum at **ActEd.co.uk/forums** (or use the link from our home page at **ActEd.co.uk**) is dedicated to actuarial students so that you can get help from fellow students on any aspect of your studies from technical issues to study advice. ActEd tutors visit the site regularly to ensure that you are not being led astray and we also post other frequently asked questions from students on the forum as they arise.

If you are still stuck, then you can send queries by email to the Subject SA4 email address **SA4@bpp.com**, but we recommend that you try the forum first. We will endeavour to contact you as soon as possible after receiving your query but you should be aware that it may take some time to reply to queries, particularly when tutors are running tutorials. At the busiest teaching times of year, it may take us more than a week to get back to you.

If you have many queries on the course material, you should raise them at a tutorial or book a personal tuition session with an ActEd tutor. Please email **ActEd@bpp.com** for more details.

6.4 Feedback

If you find an error in the course, please check the corrections page of our website (**ActEd.co.uk/paper_corrections.html**) to see if the correction has already been dealt with. Otherwise, please send the details via email to the Subject SA4 email address **SA4@bpp.com**. Our tutors work hard to ensure that the courses are as clear as possible and free from errors.

ActEd also works with the Institute and Faculty of Actuaries to suggest developments and improvements to the Syllabus and Core Reading. If you have any comments or concerns about the Syllabus or Core Reading, these can be passed on via ActEd. Alternatively, you can send them directly to the Institute and Faculty of Actuaries' Examination Team by email to **memberservices@actuaries.org.uk**.

7 General information and support

7.1 Safeguarding

We want you to feel comfortable within our learning environment and safe in the knowledge that if you ever needed support, you know where to go.

If you need support, please contact BPP's Safeguarding team at safeguarding@bpp.com or for urgent concerns call 07464 542 636.

Additional information can be found at ActEd.co.uk/learningsupport.

7.2 BPP learning support

BPP's Learning Support team offers a wide range of support for all students who disclose a learning difficulty or disability. This support is accessible to all ActEd students free of charge.

Please contact BPP's Learning Support team at LearningSupport@bpp.com for more information.

Additional information can be found at ActEd.co.uk/learningsupport.

7.3 The Prevent Duty

The Prevent Duty is to protect people from radicalisation and being drawn into extremist views and terrorism. As a Government-regulated training provider, ActEd has a duty to ensure that our learners are well informed and stay safe, and to empower our students to know what to look for and when to report concerns.

Please report any concerns to a tutor or email safeguarding@bpp.com or for urgent concerns call 07464 542 636.

More information is available at:

- ActEd.co.uk/learningsupport
- officeforstudents.org.uk/advice-and-guidance/student-wellbeing-and-protection/counter-terrorism-the-prevent-duty/

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These conditions remain in force after you have finished using the course.