



## **Subject F104**

### **Retirement and Related Benefits**

### **Principles**

### **Fellowship Principles Syllabus**

For the 2023 Examinations

October 2022



## Aim

The aim of F104, Retirement and related benefits principles, is to instil in successful candidates the ability to apply, in simple situations, the mathematical and economic techniques and the principles of actuarial planning and control needed for the operation on sound financial lines of providers of retirement and related benefits.

## Links to other subjects

The foundation and intermediate technical subjects provide principles and tools that are necessary in the actuarial planning and control of the provision of pension and employee benefits.

Subject A311 — Actuarial Risk Management: covers the general underlying principles affecting all specialisms.

Subject F204 — Retirement and related benefits applications: uses the principles in this subject to solve complex problems, produce coherent advice and recommendations within a specifically South African context.

## Objectives

On completion of this subject the candidate will be able to:

- 1) Describe the stakeholders involved in the provision of pension and employee benefits, and the general economic and commercial environment which the provision of such benefits is subject to.**

Specifically, the candidate will be able to:

- a) Define the principal terms used in the provision of pension and employee benefits.
- b) Identify and discuss the various benefits that can be offered by the state, including:
  - i) Retirement benefits;
  - ii) Unemployment benefits;
  - iii) Disability benefits;
  - iv) Death benefits;
  - v) Child grants;
  - vi) Other grants;



- vii) Housing;
  - viii) Non-monetary benefits such as healthcare and education.
- c) Identify and discuss the various benefits that can be offered by employers, including:
- i) Salaries;
  - ii) Retirement benefits;
  - iii) Retrenchment benefits;
  - iv) Death benefits;
  - v) Disability benefits;
  - vi) Housing loans and subsidies;
  - vii) Leave benefits, including holiday, sick leave, family responsibility and other types of leave;
  - viii) Bonuses and other performance incentives;
  - ix) Non-monetary benefits such as working environment, workplace healthcare, wellness, training and education.
- d) Discuss the demographic influences which affect the demand for and supply of pension and employee benefits, in particular:
- i) The main types of population structures;
  - ii) The implications of different types of population structures on the provision of publicly funded benefits in terms of both asset and liability effects;
  - iii) The causes and trends relating to ageing populations and the impact of ageing populations on global retirement income systems.
- e) Discuss the economic influences which affect the demand for and supply of pension and employee benefits; in particular:
- i) The macroeconomics of state benefit provision in general, and state engagement with retirement systems in particular, including state retirement provision as well as the role of the state in incentivising, encouraging and mandating private retirement arrangements; the effect of retirement savings on economic growth;
  - ii) Economic theory underlying preparation for retirement and actual behaviour relating to retirement and retirement preparation;
  - iii) The needs of people and how benefits can be used to address these needs;
  - iv) The need for retirement income and the general environmental factors that influence this need in individuals;
  - v) The issues that individuals face when making financial decisions around retirement funding and employee benefits, and the key factors that influence these decisions;



- vi) The issues faced by providers of pension and employee benefits (including employers and the state) in making the decision of the quantum and type of benefits and benefit mix to provide, with particular reference to flexible benefits;
  - vii) The main features and risks of the financial environment and how they affect the provision of pension and employee benefits.
- f) Identify and describe the stakeholders in the provision of pension and employee benefits; in particular:
- i) Explain the role, motivations and responsibilities of the following stakeholders in terms of public benefit provision:
    - (1) Taxpayers;
    - (2) The state;
    - (3) The people;
    - (4) The private sector.
  - ii) Explain the role, motivations and responsibilities of the following stakeholders in terms of private benefit provision:
    - (1) The employer;
    - (2) The sponsor;
    - (3) The member;
    - (4) The trustees;
    - (5) The state;
    - (6) The regulator;
    - (7) The actuary;
    - (8) Other service providers, including advisors, administrators, insurers and investment managers; healthcare and training providers, human resource specialists.
- g) Describe the legislative and regulatory framework for pension and employee benefits; in particular:
- i) The role of regulation, tax and governance in the provision of pension and employee benefits;
  - ii) The effect of the regulatory environment on the design of benefits, and how changes in regulation may affect benefit provision;
  - iii) Understand the principles and rationale behind various forms of regulation.
- h) Discuss different types of pension and employee benefits systems used across the world and what can be learnt from those international systems; in particular:
- i) Describe the World Bank Multi-pillar model of pension and benefit provision;



- ii) Compare and contrast different models of pension and employee benefits provision used in various countries, including a comparison of different plan types utilised for retirement benefit provisions in those countries.

**2) Analyse the problems that occur in the provision of pension and employee benefits, develop suitable solutions to these problems and demonstrate how these solutions can be monitored over time.**

Specifically, the candidate will be able to:

- a) Describe the risks that affect the provision of pension and employee benefits; in particular:
  - i) Identify and describe the risks affecting stakeholders in different retirement plan designs, including:
    - (1) Longevity and mortality risk
    - (2) Investment risk
    - (3) Inflation risk
    - (4) Expense risk
    - (5) Funding risk
    - (6) Incorrect allocation of investment returns
    - (7) Counter-party risk
    - (8) Regulatory risk
    - (9) Risks relating to member choices
    - (10) Data integrity risk
    - (11) Mismatching in a defined contribution fund risk
    - (12) Other operational risks
    - (13) Overall security of benefits
  - ii) Describe how the above risks can be managed, with particular reference to:
    - (1) Investments
    - (2) Derivatives
    - (3) Buy-outs
    - (4) Reinsurance
    - (5) Risk-sharing
    - (6) Governance
    - (7) Valuation and data management
    - (8) Member education and communication



- (9) Behavioural economics
  - (10) Contingency reserves
  - iii) Identify and describe the risks affecting the stakeholders in employee benefit design in general, including:
    - (1) Ill health and disability
    - (2) Absenteeism
    - (3) Staff turnover
    - (4) Lack of employee productivity
  - iv) Explain the concepts of equity, solidarity, mutuality and risk sharing in retirement funds
- b) Discuss the various options available in the design of pension and employee benefit funds; in particular:
- i) Defined benefit and defined contribution retirement fund structures;
  - ii) Member and employer contribution rates and setting a contribution rate in a defined contribution fund;
  - iii) For defined contribution funds, the use of individual member investment choice and life-staging portfolios;
  - iv) Additional benefits provided within the retirement fund such as death and disability benefits, funeral benefits; and the funding options available for such benefits;
  - v) Other benefits offered outside of the retirement fund, including those listed in 1(c);
  - vi) Flexible remuneration models and their advantages and disadvantages in meeting stakeholder needs.
- c) Discuss the financial and accounting position of a retirement fund, by
- i) analysing the financial statements of the fund;
  - ii) analysing the actuarial valuation of the fund.
- d) Discuss the options available for the financing and funding of retirement benefits, and evaluate the solvency of a retirement fund; in particular:
- i) Identify and describe the financing options available to the State, employer, member and sponsor and identify the risks inherent in each;
  - ii) Describe and apply the main funding methods which can be used by a defined benefit fund;
  - iii) Describe how defined contribution funds can ensure that they have sufficient funds to meet the expenses of the fund and other unforeseen cash flows.



- iv) Outline the various reasons for valuing liabilities and the implications for the valuation basis.
- e) Describe how an investment strategy for a retirement fund can be developed and implemented; in particular:
  - i) Describe how an Asset/Liability Model (ALM) can be constructed, and how such a model can be used to determine an appropriate strategy for a defined benefit fund;
  - ii) Describe the options available to defined contribution funds in developing an appropriate investment strategy, considering funds with and without member investment choice;
  - iii) Analyse the relationship of plan investments with plan design and valuations;
  - iv) Discuss the considerations that a member in a defined contribution retirement fund would need to take into account when developing an individual investment strategy.
- f) Design suitable benefit plans to meet the needs of various stakeholders, and assess the design outcome and suitability of various benefit designs; in particular:
  - i) Identify the needs of various stakeholders and propose benefit solutions that meet those needs;
  - ii) Assess designs in terms of their risk transfer and management and hence their expected outcomes for various stakeholders;
  - iii) Assess the risk outcomes of performance against policy levers, for example contributions, tax, fees and charges.
  - iv) Analyse and calculate the cost of employment related benefits which form part of the remuneration package.
- g) Monitor and assess the actual experience of retirement funds; in particular
  - i) Describe the purposes of carrying out an experience analysis of the following:
    - (1) Participation rates
    - (2) Withdrawal rates
    - (3) Mortality
    - (4) Morbidity
    - (5) Expenses
    - (6) Investment performance
    - (7) Salary inflation



- ii) Describe how the financial significance of deviations from expectations should be monitored and assessed, in terms of:
- (1) The reasons for monitoring
  - (2) The data required
  - (3) The process of analysis of the various factors affecting the experience

**End of Syllabus**