Insurance Intermediaries Quality Assurance Scheme

Pension Fund Examination

Study Notes

Version 2021

PREFACE

This Study Notes is prepared in correspondence with the syllabus of the Pension Fund Examination. The questions of the examination will be based on this Study Notes.

We appreciate Social Security Fund, the Macau Insurers' Association, the Macau Association of Banks and ICBC (Macau) Pension Fund Management Company Limited for their valuable advice and assistance in the preparation of this Study Notes.

We hope that the Study Notes can serve as a reliable reference material for candidates preparing the Examination. While every care has been taken in the preparation of this Study Notes, errors or omissions may still be inevitable. You may therefore wish to consult the relevant legislation or seek professional advice if necessary. As further editions will be published from time to time with updates and improvement on the contents of this Study Notes, your feedback will be appreciated, and will be taken into consideration when we prepare the next edition of this Study Notes.

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NOTE

If you are taking this subject in the Insurance Intermediaries Qualifying Examination, you will also be required, unless exempted, to take the subjects "Principles and Practice of Insurance" and "Life Insurance". Whilst the examination regulations do not require you to take those two subjects first, it obviously makes sense to do so. Those subjects lay a foundation for further studies and many of concepts found in those subjects will be assumed knowledge with this subject.

BACKGROUND

Aging population is a common problem that many countries and regions across the world are facing. One of its effects throughout the world is the increasing public budget on retirement protection. In some countries and regions, governments have lowered retirement benefits or extended the statutory retirement age in response to the insufficient public budget on retirement protection. The former may lead to inadequate protection while the latter implies a longer service years and a relatively shorter period of retirement protection.

Retirement protection is a major social and fiscal issue, and the systems vary in different countries and regions. To provide a universal standard for measuring retirement protection, the World Bank initiates the Five Pillar Framework, which consists of the following:

- Pillar 0: Non-contributory minimal assistance to poor senior citizens, supported by government finance;
- Pillar 1: Mandatory retirement protection to provide part of the retirement income through fixed contributions, with fixed benefits managed and distributed by the government;
- Pillar 2: Income-related mandatory occupational or individual pension plans;
- Pillar 3: Voluntary occupational pension plans or individual savings plans;
- Pillar 4: Non-financial support such as family support, housing support and medical support;

According to the Statistics and Census Service[1], Macao became an aging society[2] in the mid-1990s. In recent years, with the improvements of medical level, the average life expectancy of Macao residents has been getting longer and longer. In the local population projection, Macao is expected to become a super-aging society in 2031 while the elderly dependency ratio is also expected to rise from 16.4 in 2016 to 42.6 in 2036 for every 100 adults, i.e. about 1 senior citizen for every 2.5 adults.

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1 Source: Macao's Statistics and Census Service - Population Projection 2016-2036

2 According to the United Nations, an aging society is defined as one in which 65-year-olds or above account for 7-14% of the population. If they account for 14-20%, it is termed an 'aged society'; if more than 20%, it is termed a 'super aged society'.

Looking to the welfare of senior citizens, the Government of the Macao Special Administrative Region (hereinafter referred to as the MSAR Government) grants a one-off subsidy for senior citizens over the age of 65 each year, and this is implemented by the Social Welfare Bureau of MSAR Government (abbreviated to SWB). In addition, the MSAR Government has built a two-tier social security system looked after by the Social Security Fund of MSAR Government (abbreviated to FSS). The first tier, Law No. 4/2010 (Social Security System), operates on the principle of social insurance, including a mandatory and an arbitrary system. It aims to provide basic social security, especially old-age security, for Macao residents so as to improve their quality of life. At the earliest age of 60, eligible Macao residents can apply for early old-age pensions, which is accumulated by monthly contributions. The second tier, Law No. 7/2017 (Non-Mandatory Central Provident Fund System), aims to strengthen the social elderly protection for Macao residents and supplement the existing social protection system through the joint contributions of employers and employees or individual contributions. Under normal circumstances, eligible Macao residents can apply to withdraw funds when they reach the age of 65. The Non-Mandatory Central Provident Fund System sets rules for provident fund schemes such as standard contribution rate and vesting scale, which has laid a solid foundation for the implementation of the mandatory central provident fund system in Macao.

Private pension funds have seen a thriving development over time. In the early days, some employers in Macao had set up various pension plans for their employees. The contribution system was similar to that of the current private pension framework. The management and distribution of the funds were usually handled by employers. The funds were invested in low-risk fixed income products from banks, or at the discretion of the financial department of the enterprise. These pension plans had certain operational risks as the investment might not be executed by qualified professional managers, and there was neither clear segregation of duty nor independent monitoring in the management and custody of pension funds.

As early as 1988, the MSAR Government established a basic legal framework for private pension funds through Decree-Law No. 44/88/M of June 13 and Decree-Law No. 55/88/M of July 4. Later in 1999, the Private Pension Framework was improved by the promulgation of Decree-Law No. 6/99/M of February 8 – the Legal Framework for Private Pension

Funds (hereinafter referred to as the Private Pension Framework). It regulates the types, constitution and joining of private pension funds as well as private pension plans and it is under the supervision of the Monetary Authority of Macao (AMCM). Private pension plans covered by the framework are safe, because the investment of the pension funds by employers is professionally managed and the assets of the pension funds are held in independent and qualified custodian. Tax incentives have also increased the willingness of employers to set up private pension plans for their employees. Since the implementation of the Private Pension Framework, the participation of enterprises in Macao has continued to increase, with an increasing number of employees covered by the framework.

Considering that the Private Pension Framework has been operating for years, a relatively mature legal framework for private pension funds has been established and a significant number of employers have set up pension plans for their employees under the framework, open pension funds under the private pension framework are adopted to be the investment instruments under the Non-Mandatory Central Provident Fund System[3], and the interface between corporate plans under the Private Pension Framework and the Joint Provident Fund Schemes under the Non-Mandatory Central Provident Fund System is also being promoted.

The content of the Study Notes is as follows: Part 1 introduces various important elements of the Private Pension Framework, including the roles of service providers, pension plans, pension funds, etc. Part 2 focuses on the Non-Mandatory Central Provident Fund System, which includes eligibility of participants, individual accounts, the allocation system, the contributory system, and the interface between Joint Provident Fund Schemes and Private Pension Plans. Part 3 discusses the Investment Funds. The Last Part is the Glossary.

[3] Fund management entities may apply to the FSS to add their open funds authorised by the AMCM to the Non-mandatory Central Provident Fund System as investment instruments.

1. Private Pension Framework

Decree-Law No. 6/99/M of February 8[4] is the main legal norm of the Private Pension Framework. It mainly covers:

- Pension plans, including types, obligation to finance, acquired rights, methods of paying benefits, etc.;
- Pension funds, including types, constitution, joining and leaving, duration, closure, liquidation and rules governing assets;
- Management and custody of pension funds.

According to current legislation, the AMCM is in charge of the supervision of private pension funds and can issue notices, circulars and guidelines etc. relating to private pensions. Relevant information, can be found on AMCM's website (https://www.amcm.gov.mo/).

1.1. Private Pension Fund Service Providers

1.1.1. Management Entities

(a) Eligibility of Management Entities

Insurers authorised to underwrite life insurance in Macao and companies set up specifically to manage pension funds are eligible to become pension fund management entities. The constitution, establishment and operation of fund management entities shall be subject to the provisions relating to life insurance companies under the Macau Insurance Ordinance.

Any life insurance company or pension fund management company intending to carry on pension fund management activity shall apply to the AMCM for setting up pension funds according to the law. To achieve the objectives of the pension plan, employer or individual may appoint a fund management entity to manage the pension plan by entering a participating

[4] The Legal Framework for Private Pension Funds was subsequently amended by Law No. 10/2001.

agreement and allocate contributions.

(b) Main Responsibilities of Management Entities

Appointed fund management entities shall engage in all acts on behalf of members of pension plans, including associates, participants, contributors and beneficiaries, and act as the manager and representative of the funds to negotiate on any securities investment or real estate, to make bank deposits in the name of the funds and to exercise all rights which are directly or indirectly related to the funds.

Fund management entities shall be responsible for all acts and operations that are required or appropriate for the good administration and management of pension funds, namely:

(i) To represent, regardless of any mandate, the associates, participants, contributors and beneficiaries of the funds in exercising all the rights arising from the respective shares;

(ii) To select the assets constituting the funds in accordance with the respective investment policies;

(iii) To receive the fixed contributions and guarantee the payments due to beneficiaries;

(iv) To maintain in good order their records and those of the funds;

(v) To register with real estate registries, in the name of the funds, the immovable properties forming part of their assets.

(c) Other Responsibilities of Management Entities

Fund management entities are also responsible for providing information or giving notices to participants on the following matters:

(i) Provisions of the deed of constitution or management regulations, and subsequent amendments thereto;

(ii) Contribution balance of individual accounts;

(iii) Value of the participating units held in the funds;

(iv) All necessary information upon request so that one can clearly understand the content of the agreement.

1.1.2. Custodians

(a) Eligibility of Custodians

Securities and other documents representing the assets of the pension fund shall be held in custody with credit institutions under the supervision of the AMCM. However, where such securities and documents are located overseas, the same may be held in custody with institutions duly authorised and supervised by competent authorities of the country or territory where such institutions are domiciled, provided that such institutions hold a credit rating equal to or higher than the minimum credit rating of at least one credit rating agency according to the Notice from the AMCM.

(b) Responsibilities of Custodians

Responsibilities of custodians include:

(i) To receive on deposit or enter in the register the securities and documents pertaining to the funds;

(ii) To maintain up-to-date chronological records of all the transactions carried out and to prepare every quarter a detailed inventory of the assets of the funds.

(c) Other Responsibilities of Custodians

Custodians may also be responsible for:

(i) Buy and sell securities and exercise the rights of subscription and option;

(ii) Collect the income derived from the assets of the funds and collaborate with the fund management entity to carry out operations on the same;

(iii) Pay beneficiaries the pecuniary payments stated in the pension plans according to the instructions of the fund management entity.

1.2. Pension Plans

1.2.1. Types

(a) Classified by Founder

(i) Individual Plans: wherein individuals set up retirement arrangements for themselves;

(ii) Corporate Plans: wherein employers set up retirement arrangements for their employees.

(b) Classified by Type of Guarantees Provided

(i) Defined Benefit Plans: wherein the pecuniary payments payable to the beneficiaries are predefined and the contributions to be made are calculated so as to guarantee the respective payments;

(ii) Defined Contribution Plans: wherein the contributions to be made are predefined and the pecuniary payments payable to the beneficiaries are the sum of such contributions and accumulated profits;

(iii) Mixed Plans: which have features of the two plans mentioned above.

(c) Classified by Form of Financing

(i) Contributory Plans: contributions are made jointly by employers and employees;

(ii) Non-Contributory Plans: contributions are made exclusively by employers.

1.2.2. Main Features

Private pension plans are dominated by corporate plans and are generally contributory defined contribution plans. In particular, when preconditions are met, employees will receive pecuniary payments upon employment termination. Generally speaking, pension plans stipulate the eligibility of participants, contribution amount, contribution rate, calculation of years of service, vested benefits, etc. Employees should fully understand the plan rules before joining.

The rules of pension plans includes:

1.2.2.1. Eligibility of Participants

The Private Pension Framework has no restrictions on the eligibility of participants. In corporate plans, the eligibility of participants is at the discretion of employers (for example, as to whether non-local and part-time employees are eligible to participate and whether employees are allowed to participate during their probation periods). Despite all that, it is generally non-mandatory for employees to participate.

1.2.2.2. Contributions

The Private Pension Framework does not fix the contribution amount or rate. In corporate plans, it is common for employers and employees to make monthly contributions jointly based on certain percentages of employees' remuneration. However, there are a few plans with fixed monthly contribution amount. Plus, in the same corporate plan, the rules of contributions may vary according to employee rank or seniority. In individual plans, rules of contributions are generally determined by participants.

No upper or lower limit is set for any type of contributions in the Private Pension Framework. However, employers or individuals should consider whether the objectives of retirement protection can be achieved when setting the rules of contributions.

1.2.2.3. Vested Benefits

(a) Definition

In defined contribution plans, vested benefits generally mean the pecuniary payment, derived from accumulation of contributions and returns from investment, paid to the employee according to the vesting rule specified in the pension plan when they leave the company. The vesting rule applies only to employers' contribution balance. If employees contribute to the pension plans, their contribution balance is, in any event, fully vested to themselves.

(b) The Relationship between Vested Benefits and Years of Service

The vesting scale is generally determined by year and accumulated as years of service increase. There may be two methods of calculating years of service. One is counting from the employees' date of employment and the other is counting from the employees' date of joining the pension plan. The two different methods might have a significant impact on employees' vested amount on the employers' contribution balance. Employers should consider the pros and cons of different methods when drawing up pension plans.

In fact, no standard of vesting scale is set in the Private Pension Framework. However, employers should, in any case, follow the basic principles of moderation and equality when setting the vesting rules.

(c) Offset Clause

It is worth mentioning that some employers may specifically state in the vesting rule that the employer's contribution balance could be offset the labor compensation in accordance with Law No. 7/2008 (Labor Relations Law) (commonly known as offset clause). It means that if the employment termination, in accordance with the Labor Relations Law, is subject to a labor compensation, the compensation could offset the employers' contribution balance attributable to the employees. The employees' benefits from employer's contribution would be the higher of the amount of labor compensation and the vested amount from employer's balance. Employers should consider carefully whether to include the offset clause, while employees should also be aware of the clause before joining the plan.

1.2.2.4. Acquirement of Pecuniary Payments

Under the Private Pension Framework, employees who have contributed to the open pension funds through corporate plans usually receive pecuniary payments according to the conditions stated in the plans. These conditions are early retirement, old age retirement, permanent incapacity for work, death, serious illness, long-term unemployment, final departure from the territory of Macao[5] and termination of employment. In corporate plans, when employees receive pecuniary payments under the condition of death or permanent incapacity for work, the employers' contribution balance will generally be paid in full, regardless of years of service.

A pension plan with appropriate rules can strengthen the retirement protection of employees, and also enhance the competitiveness of companies in the labor market.

1.3. Participating Agreement of Pension Funds

After an employer or individual sets up a pension plan, he/she may appoints a fund management entity to manage the plan. The Private Pension Framework defines two types of participation - collective membership and individual membership.

1.3.1. Collective Membership

The employer appoints a fund management entity to manage the pension plan through a collective participating agreement and contributes to the open pension funds. The essential elements of the agreement are regulated by legislation, of which the main content of the pension plan (or the plan rules/regulation annexed to the agreement) and a statement of acceptance of the management regulations of open funds (the management regulations are usually annexed to the agreement) shall be included. Collective membership is the majority type of participation in open pension funds under the Private Pension Framework.

[5] For the definition of the conditions which give rise to the right to vested benefits, please refer to Article 11 of the Legal Framework for Private Pension Funds.

1.3.2. Individual Membership

The individual appoints a fund management entity to manage his/her own pension plan through an individual participating agreement and contributes to the open pension funds for the purpose of financing the pension plan. It should be noted that some participants in the individual plan are employees of the original corporate plan. Upon termination of their employment relationship with the employer, they choose to rollover the accrued benefits from the corporate plan, by the form of individual membership, in order to retain their investment in the pension fund.

1.4. Pension Funds

Private pension funds under the Private Pension Framework can be defined as open pension funds or closed pension funds. The investment principles of open pension funds are similar to those of investment funds in the market (please refer to the third part of the study notes). This section focuses on the characteristics of private pension funds.

1.4.1. Forms

(a) Closed Pension Funds

A pension fund is defined as closed pension fund when the respective plan concerns only one employer or, if there are several employers, there exists a link in terms of business, association, profession or of a social nature between them and their consent is necessary for new employers to join the fund. Closed pension funds are established at the initiative of a company or groups of companies, social or professional associations, or by agreement between employer and employee associations.

(b) Open Pension Funds

A pension fund is defined as open pension fund when there is no requirement for any link between the various members of the respective plan, and joining such a fund depends only on acceptance by the fund management entity. Open pension funds are established at the initiative of fund management entity, and employer can choose to participate freely. The total net asset value is divided into participation units represented by certificates.

1.4.2. Authorisation for Constitution

(a) The AMCM is competent to authorise the constitution of pension funds;

(b) Authorisation to constitute closed pension funds shall be granted based on the joint petition from the fund management entity and the employer. The petition shall be submitted together with the deed of constitution and the respective financing plan. In the case of defined benefit plans or mixed plans, an actuarial valuation of the liabilities to be guaranteed by the fund is also required;

(c) Authorisation to constitute open pension funds shall be granted based on the petition from the fund management entity duly accompanied by management regulations;

(d) Upon obtaining relevant approval, the deed of constitution of closed pension funds or the management regulations of open pension funds, including any amendment thereto, shall be published in the Official Gazette of the Macao SAR.

The open pension funds approved by the AMCM can apply to the FSS to become investment choices under the Non-Mandatory Central Provident Fund System.

1.4.3. Constitutional Documents

1.4.3.1. Deed of Constitution of Closed Pension Funds

The deed of constitution is the document to establish closed funds, which is jointly set up by employers and management entities. The deed of constitution shall contain the following information required by legislation:

(a) Name of the fund;
(b) Name, share capital and head office of the fund management entity or entities;
(c) Name and address of the founder members;
(d) Indication of the persons who can be participants, contributors and beneficiaries of the fund;
(e) Initial value of the fund's assets, with a detailed breakdown of such assets;
(f) Objective of the fund and the respective pension plan or plans to be guaranteed;
(g) Rules of management of the fund and representation of the founder members;
(h) In the case of funds that finance contributory plans, the form of representation of the participants, which cannot be delegated to the associate;
(i) Conditions for the transference of fund management to another management entity and the deposit of securities and other assets of the fund to another custodian;
(j) Rights of the participants when they are no longer covered by the fund and the rights of the participants and beneficiaries when the fund is liquidated or when any of the associates is wound up or withdraws from the fund, without prejudice to the provisions of acquired rights;
(k) Conditions under which the management entities and the founder members reserve the right to modify the terms of the contract;
(l) Conditions for winding up the fund, without prejudice to the provisions regulating this matter in the present law.

1.4.3.2.Management Regulation of Open Pension Funds

The management regulation is the constitutional document of open pension funds, and also forms a part of the participating agreement. The management regulation shall contain the following information required by legislation:

(a) Name of the fund;

(b) Name, share capital and address of the fund management entity or entities;

(c) Name and address of the custodians;

(d) Unit value of participation on the date of commencement of the fund;

(e) Method used for calculating the unit value of participation;

(f) The days of the month fixed for calculating the unit value of participation;

(g) Investment policy of the fund;

(h) Maximum remuneration of the management entity or entities;

(i) Maximum and minimum limits of commission on subscription and redemption of fund units, detailing clearly the method of application;

(j) Maximum remuneration of the custodian or custodians;

(k) Conditions for the transference of fund management to other management entity or entities and the custody of securities and other assets of the fund to another custodian;

(l) The establishment of a minimum guaranteed income and the duration of this guarantee, explaining how the investment policy will meet this objective. in case the management entity or entities assume the risk of investment;

(m) The conditions under which the management entity or entities reserve the right to modify the provisions of the management regulation;

(n) Conditions for winding up the fund;

(o) Procedure for winding up the fund;

(p) Rights, obligations and functions of the management entity or entities under the terms of the legal and regulatory norms;

(q) Indication of the existence of any investment management contracts;

(r) Conditions for arbitration and the relevant jurisdiction.

1.4.4. Rules Governing Assets

In the Private Pension Framework, pension funds are autonomous assets solely for the purpose of financing one or more pension plans. The assets shall only be utilised for the execution of pension plans in respect of their beneficiaries. Income and expenses of the fund are subject to strict rules.

(a) Income of Pension Fund

(i) Contributions in cash, securities or real estate, made by contributors;
(ii) Income from investments which form part of the fund's assets;
(iii) Income from the sale and refund of investments of the fund's assets;
(iv) Shares in the profits of the insurance contracts issued on behalf of the fund;
(v) The sums insured under insurance contracts entered into by the fund to guarantee the cover for death or permanent incapacity as provided for in the pension plan;
(vi) Other income.

(b) Expenses of Pension Fund

(i) Payments made to the beneficiaries;
(ii) Insurance premiums paid by the fund;
(iii) Remuneration in respect of management and custody;
(iv) Amounts spent in purchasing investments for the fund;
(v) The excess of fund assets returned to associates under the terms provided for in the present law;
(vi) Other expenses related to the fund as provided for in the respective management contract of closed pension funds.

1.4.5. Types of Funds

Similar to investment funds, open pension funds under the Private Pension Framework offer various types of funds with different investment strategies, asset classes and investment risks. The investment of pension funds is subject to specific regulations which ensures the safety, profitability, liquidity, and diversification of relevant investments. Therefore, when comparing the private pension funds to the same type of investment funds (see 3.5.3.), one can find that the investment instruments could be very different. For instance, investment funds may invest in non-investment grade bonds for higher yield, at the expense of taking higher risk exposure. On the other hand, pension funds may invest in the bonds that meet certain credit rating standards. In general, private pension funds would not be established as very high risk fund type, such as warrant funds.

1.4.6. Rules of Investment

The investments of pension funds differ according to the investment strategies pursued by the funds, but they must comply with the regulations of Notice No. 006/2013-AMCM and Notice No. 006/2014-AMCM (and amendments thereafter). Notice No. 006/2013-AMCM regulates the composition and valuation of assets constituting the patrimony of pension funds. It includes general principles, the types of assets that are allowed to invest and their relevant restrictions. To make it easier to study the rules of investment of pension funds, some important ones are as follows:

1.4.6.1. General Principles

(a) Adequate diversification of pension funds' investments should be ensured so as to guarantee safety, profitability and liquidity.

(b) Leverage of the assets of the pension funds are prohibited.

(c) Securities investments shall be made on recognised stock exchanges, a list of which is set out in the annex to the notice.

(d) Derivatives can only be used to reduce the overall risk of the investment, which is generally known as "hedging". It is not allowed to use derivatives for the purpose of leveraging investments of the pension funds.

1.4.6.2. Investment Composition and Restrictions

Pension funds are permitted to hold the following investments and must comply with their respective maximum limits:

(a) Debt securities issued or guaranteed by governments, central banks (or equivalent), multilateral international agencies or companies whose entire shares are beneficially owned by the HKSAR Government;
(b) Debt securities issued or guaranteed by other entities;
(c) Shares;
(d) Convertible bonds;

(e) Warrants, futures, swaps, options and other derivatives;
(f) Bank deposits;
(g) Real estate;
(h) Participation units in securities investment funds (unit trusts, mutual funds and pooled investment portfolios) and in real estate investment funds.

The debt security, issuing entity or guarantor of the debt securities referred to (a) (b) (d) shall meet certain level of credit ratings. The bank deposits referred to (f) shall be placed in authorised credit institutions in Macao or in credit institutions outside of Macao duly authorised by the respective supervisory authority, provided that they meet certain level of credit ratings. In addition, (e) is specifically regulated by Notice No. 006/2014-AMCM, and in principle can only be used to reduce the risk exposure of the portfolio of investments and allow for efficient portfolio management. No derivatives shall be used to leverage pension fund investments. Moreover, investment in (h) shall take into consideration the underlying assets of such investment funds. The assets held directly by the pension fund and the assets held indirectly through participation units of investment funds are subject to the respective restriction for each class (a) to (g).

1.4.7. Types of Expenses

As with investment funds, expenses are essential to the operation of the fund but their nature and amount vary from one and other, but private pension funds are subject to the regulations of fund expenses (see 1.4.4.).

1.4.7.1. Expenses Borne by Fund Assets

(a) Management fee: refers to the annual management fee charged by the professional fund manager for the investment and advisory services provided. Management fee is generally calculated on the basis of a percentage of the Net Asset Value of the fund.

(b) Custodian fee: refers to fees charged by an independent custodian for providing custodian services of securities constituting the fund's assets. Custodian fee is generally calculated on the basis of a percentage of the Net Asset Value of the fund.

(c) Investment related expense: refers to fees involving the investment activities of the fund, such as brokerage commissions, taxes, etc.

Since the above expenses are directly deducted or disbursed from the Net Asset Value of the fund, employers and participants may not be aware of such deductions or disbursements and therefore overlooked. Expenses are one of the factors that affect the returns of the pension funds. Along a long investment period of sometimes, over decades, the amounts of the expenses will have a significant impact on the accumulation of fund assets.

1.4.7.2. Expenses Not Borne by Fund Assets

Some expenses are directly borne by employers and participants (that is, not paid by the fund assets). These expenses are usually generated from buying and selling of participation units and are usually one-off deductions, such as subscription fee, redemption fee, fund switching fee, etc. Such fees do not necessarily exist in each pension fund. When employers and participants make contributions, redemptions or execute fund switching, a specified amount or percentage will be deducted. The fund management entity may waive such fees for certain employers and participants.

To summarise, the management regulations of open pension funds should disclose fees and detail their upper limits, while fund management entities should disclose the actual fees charged in the participating agreement. As for the expenses of closed pension funds, these are mainly determined by the agreement between the fund management entity and the corporation, thus it will not be discussed in the study notes.

1.4.8. Expenses Ratios of Sub-Funds

If the assets of open pension funds are allocated in investment funds (i.e. 1.4.6.2.(h)), these investment funds are considered as sub-funds. Each sub-fund has its inherent expenses, which are fully reflected in the unit price of the sub-fund. However, in order to enable the public to understand and compare the total expenses ratios of different pension funds (also known as see-through fund expenses ratios), fund management entities will calculate the expenses ratios of sub-funds which will be taken into account in deriving the total expenses ratios. The calculation method of the expenses ratios of sub-funds will not be discussed in the study notes.

Representative Examination Questions

Multiple-Choice Questions

1. In Private Pension Framework, which of the following entities are eligible to become the pension fund management entities?

a. Retail Bank
b. Pension Fund Management Company
c. Investment Bank
d. All the above

2. Fund management entities shall engage in all acts on behalf of which of the followings?

   i. Associates and participants
   ii. Contributors
   iii. Beneficiaries
   iv. Custodians

a. i, ii & iii
b. ii, iii & iv
c. i, ii & iv
d. i, ii, iii & iv

3. Without considering other factors, if the holding of an open pension fund is worth $10,000 at the beginning of the year, the management fee and custodian fee of the fund are 1.5% and 0.5% p.a. respectively, and the performance of the fund is 10% p.a. according to the information provided by the management company. Calculate the value of the holding at the end of the year.

a. $10,800
b. $10,850
c. $10,950
d. $11,000

[If still required, the answers may be found at the end of the Study Notes.]

2. Non-Mandatory Central Provident Fund System

2.1. Overview of the Non-Mandatory Central Provident Fund System

2.1.1. Purposes

Law No. 7/2017 (Non-Mandatory Central Provident Fund System, hereinafter referred to as the "non-mandatory CPF system") and Administrative Regulation No. 33/2017 (Supplementary Provisions Relating to the Non-Mandatory Central Provident Fund System) entered into effect on January 1 2018, and are the second tier of the two-tier social security system of the MSAR Government, aiming to strengthen the social protection for Macao residents in their old age and to complement the existing social security system.

2.1.2. Overview of Operation

The non-mandatory CPF system is composed of the allocation system and the contributory system. As an incentive system managed by the FSS, the allocation system is reflected in the transfer of funds from public money to Macao residents and subject to the annual financial budget implementation of the MSAR Government, in the form of incentive basic funds and special allocation from budget surplus. The contributory system is the core of the non-mandatory CPF system, reflected in the voluntary participation in the form of joint contributions by employers and employees or individual contributions by residents, and managed by eligible fund management entities.

The contributory plans of the non-mandatory CPF system are composed of joint provident fund schemes and individual provident fund schemes. Generally speaking, Macao SAR permanent residents or non-permanent residents aged 18 or above are eligible to participate in the schemes. The joint provident fund schemes are voluntarily set up by employers and voluntarily participated in by employees, and both parties make contributions together. As for the individual provident fund schemes, they are voluntarily participated in by Macao SAR residents who make contributions by themselves.

When a resident is eligible to become an individual account owner of the non-mandatory CPF system (hereinafter referred to as the "account owner") (see 2.3.1. for details), the FSS will open an individual account of the non-mandatory CPF system (hereinafter referred to as the "individual account") for him/her. An individual account is composed of government-managed sub-account, contribution sub-account and preserved sub-account. An account owner can transfer funds flexibly between sub-accounts (see "2.5. Transfer of Funds Between Sub-Accounts"). In addition, individual accounts have a portability feature. Under normal circumstances, an account owner shall reach 65 years old before he/she can withdraw funds from the account.

2.2. Relationship Between the Non-Mandatory CPF System and the Private Pension Framework

2.2.1. Fund Management Entities and Pension Funds

Fund management entities that have been approved by the AMCM to operate within the private pension framework may apply to the FSS to register their open funds authorised by the AMCM to the non-mandatory CPF system as investment instruments. Therefore, open funds managed by the same fund management entity may operate within the private pension framework and the non-mandatory CPF system simultaneously.

2.2.2. Supervision of the Non-Mandatory CPF System

2.2.2.1.Responsibilities of FSS

(a) To review and approve provident fund schemes and the introduction of investment instruments in the non-mandatory CPF system;

(b) To supervise the implementation of provident fund schemes and follow up on contributions;

(c) To manage government-managed sub-accounts;

(d) To process withdrawal requests from the non-mandatory CPF system;

(e) To protect the right to information of interested parties.

2.2.2.2.Responsibilities of AMCM

(a) To review and approve the establishment and operation of fund management entities;

(b) To review and approve the establishment of private pension funds;

(c) To supervise the compliance of portfolios of private pension funds;

(d) To supervise the compliance of private pension plans;

(e) To supervise intermediaries with pension fund licenses.

For (a) to (d), see Part 1 of these study notes; and for (e), please refer to Decree-Law No. 38/89/M of June 5 (Insurance Agents & Brokers Ordinance) and its related notices and guidelines.

2.2.3. Comparison of Joint Provident Fund Schemes and Corporate Plans Under the Private Pension Framework

	Joint Provident Fund Schemes	Corporate Plans Under the Private Pension Framework
Objects Covered	Local employees	Employees of Macao companies
Terms	A joint provident fund scheme has basic standards such as the minimum contribution rate and vesting scale, and the employer's contributions cannot offset labor compensation[6].	The terms are at the employer's discretion.
Withdrawal Requirements and Portability	The non-mandatory CPF system has a portability feature. Despite termination of employment, the employee does not need to settle the units or withdraw the balance immediately. The balance will be accumulated or transferred to a sub-account for investment (see "2.5.2. Transfer of Funds Between	Under normal circumstances, upon termination of employment, the employee may ask to settle the units in his/her account and withdraw the balance.

[6] According to Articles 70 and 71 of Law No. 7/2008 (Labor Relations Law), when a labor contract is terminated by an employer on unreasonable grounds or by an employee on reasonable grounds, the employer shall pay the employee labor compensation based on the employee's service years.

	Joint Provident Fund Schemes	Corporate Plans Under the Private Pension Framework
	Sub-Accounts in the Case of Termination of Employment”). Under normal circumstances, the account owner may withdraw the balance at the age of 65 or in advance in accordance with the provisions of Law No. 7/2017 (see “2.6. Withdrawal of Funds” for details).	

2.3. Content of the System

2.3.1. Eligibility

A person who has attained 18 years of age or who is under 18 years of age but has already enrolled in the social security system can become an account owner and participate in the non-mandatory CPF system on a voluntary basis.

2.3.2. Opening Individual Accounts

The individual account, which includes three types of sub-accounts, will be opened automatically by the FSS for account owners.

Individual Account	Functions
Government-managed sub-account	To be managed by the FSS, primarily for recording and managing the funds allocated by the MSAR Government and the balance transferred from other sub-accounts.
Contribution sub-account	To be managed by the fund management entity, primarily for recording and managing the contributions towards the contributory plan and the balance transferred from other sub-accounts.

Individual Account	Functions
Preserved sub-account	To be managed by the fund management entity, primarily for recording and managing the balance transferred from the contribution sub-account due to termination of employment and the balance transferred from other sub-accounts.

2.3.3. Allocation System

2.3.3.1. Requirements and Amounts

Subject to the annual financial budget implementation in the calendar year of the MSAR Government, an account owner who meets the following requirements will be entitled to special allocation from budget surplus that will be paid into his/her government-managed sub-account. The amount of special allocation is subject to the Chief Executive's approval. Residents who are eligible for the first time can also receive a one-off incentive basic fund of MOP10,000.

Requirements	1) He/she is a permanent resident of the Macao SAR and attained 22 years of age in the previous calendar year. 2) He/she is still alive on January 1 of the calendar year. 3) He/she stayed in the Macao SAR for at least 183 days in the previous calendar year.

2.3.3.2. Objection Statement

An account owner who fails to stay in Macao for 183 days and who is not included in the name list of fund allocation may file an objection statement to the FSS.

2.3.4. Contributory System

The contributory system of the non-mandatory CPF system involves joint provident fund schemes and individual provident fund schemes. Joint provident fund schemes are voluntarily set up by employers and voluntarily participated in by employees, and both parties make contributions together. As for individual provident fund schemes, they are voluntarily participated in by Macao SAR residents who make contributions by themselves. Employees who have participated in joint provident fund schemes can also participate in individual provident fund schemes.

2.3.4.1. Joint Provident Fund Schemes

Employers shall first choose a fund management entity, and then choose the appropriate method to set up a joint provident fund scheme according to the following circumstances:

- An employer who has already set up a private pension plan shall set up a joint provident fund scheme only by interfacing with the private pension plan. An employee who has already joined a private pension plan can decide either to participate in a joint provident fund scheme or to remain in the private pension plan on the basis of "old system for senior employees, new system for new employees" (please refer to 2.4. "Interface Between Joint Provident Fund Schemes and Private Pension Plans" for details);
- An employer who hasn't participated in any private pension plan shall join the non-mandatory CPF system by setting up a new joint provident fund scheme. Employees may voluntarily decide to join the non-mandatory CPF system.

(a) Formulation of Terms

Joint provident fund schemes have basic standards for the contribution rate and vesting scale. Employers may adopt these basic standards or more favorable ones for their employees when drafting terms.

Basic Standards of Joint Provident Fund Schemes and Examples of Employers Adopting More Favorable Standards

<table>
<tr><th>Terms of the Schemes</th><th>Basic Standards</th><th>Examples of Employers Adopting More Favorable Standards</th></tr>
<tr><td>Base of contributions</td><td>Basic wage</td><td>In addition to the basic wage of the current month, other items (such as allowances, commissions, etc.) will be added as the base of contributions.</td></tr>
<tr><td>Contribution rate</td><td>5%</td><td>Higher than 5%</td></tr>
<tr><td>The lower limit for the base of contributions[7]</td><td>There is a lower limit for the base of contributions for the employee, and none for the employer.
(If the base of contributions is lower than the “minimum wage” after deducting contributions, the employee does not need to contribute while the employer still has to contribute.)</td><td>(NA)</td></tr>
<tr><td>The upper limit for the base of contributions</td><td>There is an upper limit for the base of contributions for both the employer and the employee.
(If the base of contributions is 5 times higher than the “minimum wage”, neither the employer nor the employee shall make contributions for the exceeded part.)</td><td>No upper limit for the base of contributions for the employer</td></tr>
<tr><td>Investment instruments and investment allocation</td><td>The employer and the employee make their own choices respectively.</td><td>At the employee’s full discretion</td></tr>
<tr><td>Contribution time</td><td>The contribution time of joint provident fund schemes includes:
-Time of joint contribution by the employer and the employee
-Time of the employer’s unilateral contribution
-Time period when one of the parties suspends contributions</td><td>To be calculated according to the employee’s service years</td></tr>
<tr><td>Vested benefits (to calculate the</td><td><table><tr><th>Contribution Time</th><th>Vesting Scale</th></tr><tr><td>Less than 3 years</td><td>0%</td></tr></table></td><td>1. The employee can start to receive the employer’s</td></tr>
</table>

[7] The upper and lower limits for the base of contributions are linked to the Minimum Wage for Employees (abbreviated to the “minimum wage”). If this amount is adjusted, the amounts for the upper and lower limits for the base of contributions will also be automatically adjusted.

Terms of the Schemes	Basic Standards		Examples of Employers Adopting More Favorable Standards
percentage at which the employee will receive the employer's contributions upon termination of employment on the basis of contribution time)	3 years to less than 4 years	30%	contributions in less than 3 years of contribution. 2. The employee can receive all the employer's contributions in less than 10 years of contribution. 3. The employee who suffers from serious injury or death or leaves the job after reaching the retirement age specified by the company can get 100% of the employer's contributions regardless of the contribution time.
	4 years to less than 5 years	40%	
	5 years to less than 6 years	50%	
	6 years to less than 7 years	60%	
	7 years to less than 8 years	70%	
	8 years to less than 9 years	80%	
	9 years to less than 10 years	90%	
	10 years or above	100%	

(b) Selection of Fund Management Entities and Investment Allocation

Joint provident fund schemes are managed by fund management entities selected by employers. The employer and employee choose suitable pension fund(s) and investment allocation for their respective contributions, but the investment allocation rate shall be at least 5% or an integer multiple thereof. When the employee's contribution time fulfills the requirement for obtaining all of the employer's contributions (10 years under normal circumstances), the employee will be entitled to determine the investment allocation and its rate. The fund management entity shall notify the employee to exercise the right at least 60 days before the employee acquires the right.

(c) Principles for Employers to Modify Contributory Plans

An employer can apply to the FSS to modify a joint provident fund scheme through the fund management entity. If the modified terms are more favorable than the original ones, they shall apply to all employees; if inferior to the original ones, whether they are equal to or superior to the basic standards stipulated by the law relating to the non-mandatory CPF system, the relevant modifications are only effective for employees who participate in the scheme after approval of relevant modifications.

(d) Contributions

(i) Calculation of Contribution Amounts (Basic Standards)

Employee's Basic Wage	Employer's Contributions	Employee's Contributions
Lower than the lower limit for the base of contributions	Basic wage × 5%	No need to contribute
Between the lower limit for the base of contributions and the upper limit for the base of contributions	Basic wage × 5%	Basic wage × 5%
Higher than the upper limit for the base of contributions	The upper limit for the base of contributions × 5%	The upper limit for the base of contributions × 5%

(ii) Adjustment of Contribution Amounts

Employers can adjust contribution amounts by changing the base of contributions, the contribution rate or the upper/lower limit for the base of contributions, and apply to the FSS through the fund management entity by modifying the joint provident fund scheme (subject to the Principles for Employers to Modify Contributory Plans).

Employees cannot change the base of contributions, but they can adjust their contribution rate or the upper/lower limit for the base of contributions. Employees shall submit relevant applications to the fund management entity through their employers, but only once a year. However, the contribution rate or the upper/lower limit may be adjusted at the same time.

Items To Be Adjusted	**Employers** ***(Note 1)***	**Employees**
Base of contributions	Adjustable	Not adjustable
Contribution rate	Adjustable but not less than 5%	Adjustable but not less than 5%
The upper limit for the base of contributions	"With upper limit" can be adjusted to "no upper limit" and vice versa.	"With upper limit" can be adjusted to "no upper limit" and vice versa.
The lower limit for the base of contributions	(NA)	"With lower limit" can be adjusted to "no lower limit" and vice versa.

(Note 1): Subject to the Principles for Employers to Modify Contributory Plans.

(iii) Handling the Final Contribution and Vested Benefits in the Case of Employment Termination

The employer and employee contributions end in the month following termination of employment.

The employer shall notify the fund management entity of the name list of employees who are leaving the company, providing relevant information by submitting a special form designated by the fund management entity. They must also make the final contribution no later than the month following termination of employment.

Upon termination of employment, employees are entitled to the balance calculated on the basis of the contribution time and the vesting scale as follows:

Employee's Contributions	In full
Employer's Contributions	The employees are entitled to the employer's contributions in full or in part calculated on the basis of the contribution time and the vesting scale.

The balance of the employer's contributions, to which the employees are not entitled, is owned by the employer, and the employer may leave the balance with the fund management entity for payment of contributions for other employees or apply for withdrawal to the FSS.

(iv) Continuity of Contributions

After an employee participates in a joint provident fund scheme, both the employer and the employee shall make contributions continuously during employment without prejudice to the withdrawal of the accrued contributions by the serving employee who has reached the age of 65 or who meets the withdrawal conditions.

(e) Responsibilities of Employers

(i) To notify employees on time that they can choose to participate in the CPF system;

(ii) To make contributions on time and provide required information to the fund management entity for verification;

(iii) To submit to the fund management entity a name list of employees who are leaving the company upon termination of employment;

(iv) The employee is entitled to adjust his/her contribution amount once per calendar year. In this case, the employer shall notify the fund management entity and make a corresponding adjustment in the monthly deduction.

(f) Procedures for Employers to Set Up Joint Provident Fund Schemes

Employer	• To enter into a joint provident fund scheme contract with the fund management entity after deciding to participate in the non-mandatory CPF system.
Fund Management Entity	• To forward the joint provident fund scheme contract, the special application form for employers and related documents to the FSS, within 10 working days from the date of receipt of all required documents.
FSS	• To approve the application within 60 days from the date of receipt of all required documents and to issue notice of approval to the employer.
Employer	• To notify the employee that he/she may choose to participate in the joint provident fund scheme within 10 working days from the date of receipt of the notice about the scheme's coming into effect. • Thereafter, when a new employee is hired, the employer shall also notify him/her of such notice within 10 working days from the date of establishing the labor relationship.
Employee	• To submit a participation consent form and related documents to the employer within 3 months from the month following the day when he/she is notified. • Employees who will not participate shall submit a statement of non-participation. If the employee has participated in a private pension plan, the contributions will be maintained.
Employer	• To forward the participation consent form and related documents to the fund management entity within the month following the date of receipt of such form and documents.
Employer and Employee	• The contribution commences in the month (commencement month) following the date on which the employee agrees to participate in the scheme in writing (subject to the signature date).
Employer and Employee	• The employer deducts the contribution amount from the employee's monthly wage and pays the contribution of the previous month to the fund management entity within the month following the commencement month (contribution month).

(g) Procedures for Employees to Participate in Joint Provident Fund Schemes

Employer

To notify the serving employees that they may choose to participate in the joint provident fund scheme within 10 working days from the date of receipt of the notice about the scheme's coming into effect. Thereafter, when a new employee is hired, the employer shall also notify him/her of such notice within 10 working days from the date of establishing the labor relationship.

↓

Employee

To complete the participation consent form, select pension funds and investment allocation on the form, and submit the form with related documents to the employer within 3 months from the date of receipt of the employer's notice.

↓

Employer

To forward the participation consent form and related documents submitted by the employee to the fund management entity in the month following the date of receipt of the said documents.

↓

Employer and Employee

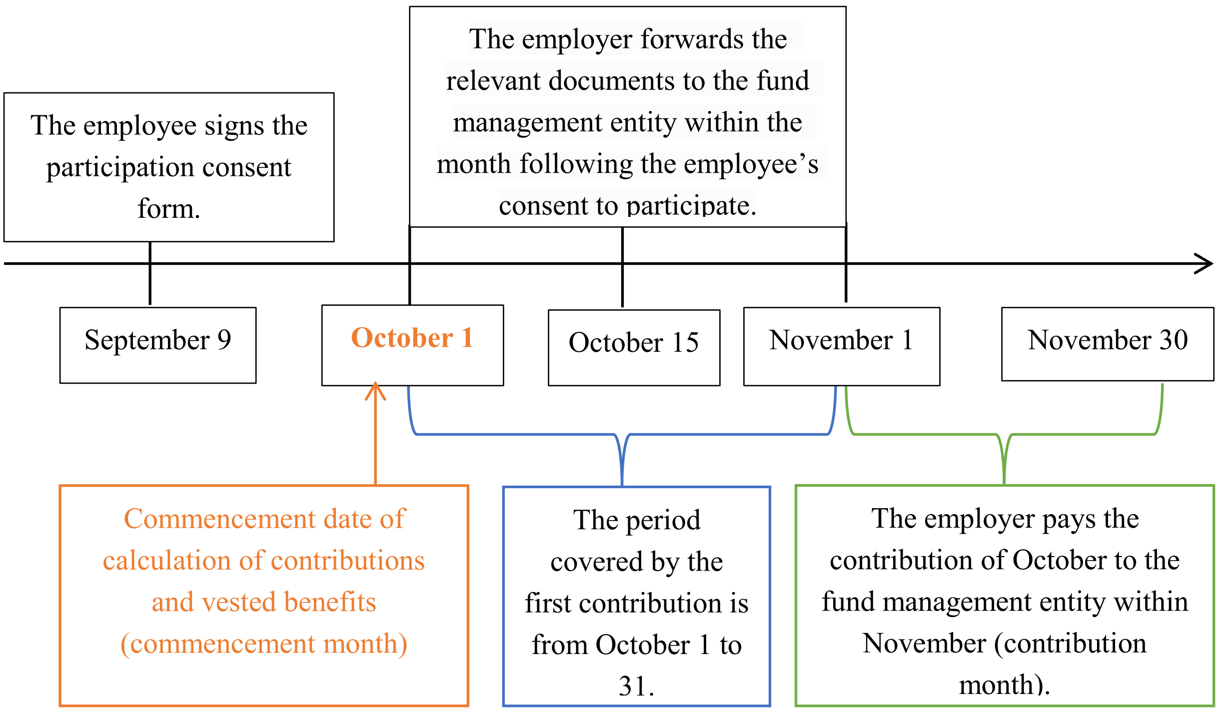
The contribution commences in the month (commencement month) following the date on which the employee agrees to participate in the scheme in writing (subject to the signature date).

↓

Employer and Employee

The employer deducts the contribution amount from the employee's monthly wage and pays the contribution of the previous month to the fund management entity within the month following the commencement month (contribution month).

(i) Commencement of Contribution Time (Example)



2.3.4.2. Individual Provident Fund Schemes

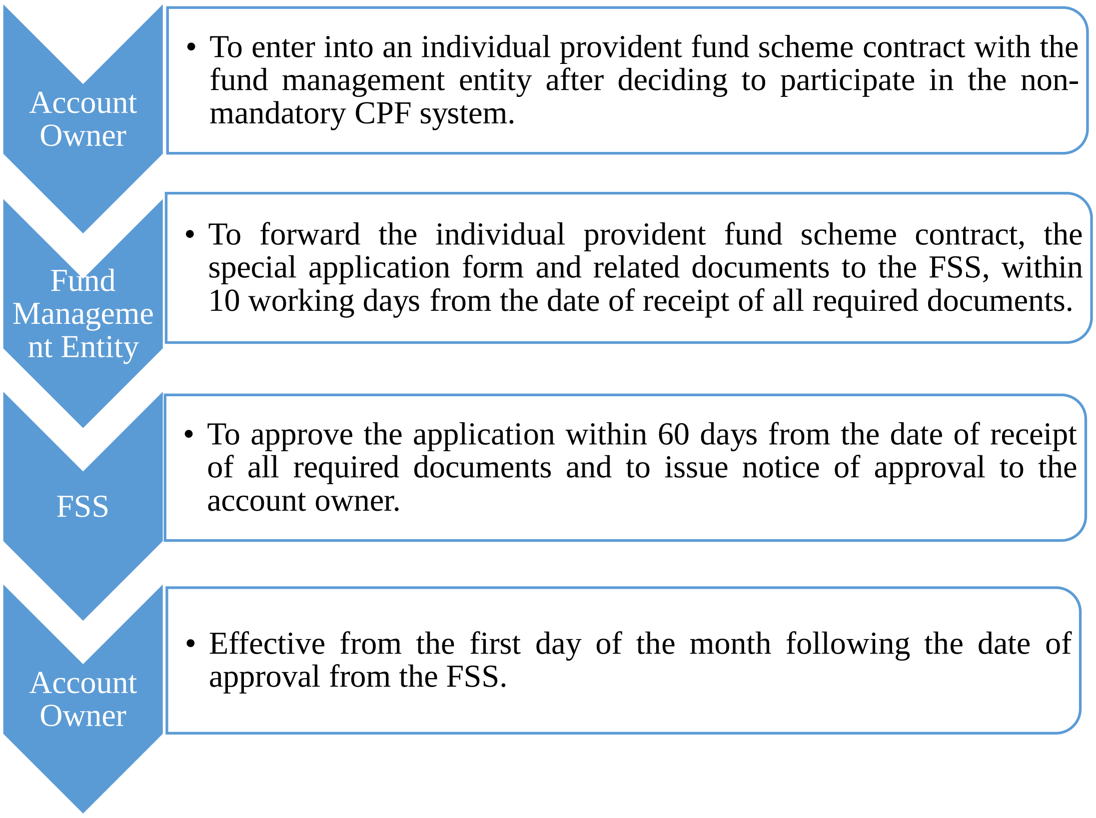
(a) Participation

- Account owners who have participated in joint provident fund schemes can participate in individual provident fund schemes at the same time;
- Each account owner may set up a maximum of one individual provident fund scheme in each fund management entity.

(b) Selection of Fund Management Entities and Investment Allocation

The fund management entity, pension funds and investment allocation are at the sole discretion of the account owner.

(c) Procedures of Setting Up an Individual Provident Fund Scheme



(d) Contributions

- Contributions shall be made monthly with a minimum amount of MOP500 and maximum amount of 10%[8] of the upper limit for the base of contributions of the joint provident fund scheme. Contributions can be adjusted in units of MOP100.
- The contribution commences from the month when the individual provident fund scheme enters into effect, and the contribution of the previous month shall be paid to the fund management entity before the last day of each month.

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[8] If the amount calculated is not an integer multiple of MOP100, it shall be reduced to the nearest integer multiple of MOP100.

- An account owner can notify the fund management entity in writing to adjust the contribution amount, which will take effect in the month following such notice.
- An account owner shall make contributions continuously.

2.4. Interface Between Joint Provident Fund Schemes and Private Pension Plans

An employer who has already set up a private pension plan shall set up a joint provident fund scheme by interfacing with the private pension plan[9]. Employees will be treated on the basis of "old system for senior employees, new system for new employees".

Senior Employees	● The serving employees who had already joined the company's private pension plan before the employer participated in the non-mandatory CPF system ● They can choose whether to interface the private pension plan with the non-mandatory CPF system or to remain in the private pension plan.
New Employees	● Including the following two types of employees: 1. The employees who had joined the company but hadn't joined the company's private pension plan before the employer participated in the non-mandatory CPF system 2. The employees who join the company after the employer participated in the non-mandatory CPF system ● They cannot participate in private pension plans; instead, they can only choose whether to participate in the non-mandatory CPF system.

The terms in the original private pension plan that are inferior to the basic standards of the non-mandatory CPF system shall be modified or upgraded to the basic standards by the employer. The terms in the original private pension plan that are more favorable to employees shall continue to be applied to senior employees. As for new employees, the employer may either use more favorable terms or adopt the basic standards of the non-mandatory CPF system.

2.4.1. Old System for Senior Employees, New System for New Employees

[9] Where a joint provident fund scheme is established under Law No. 7/2017, as stipulated by Decree-Law No. 6/99/M of February 8, if a private pension plan is funded by pension funds registered with the AMCM and belongs to a defined contribution plan, the relevant joint provident fund scheme can be interfaced with the private pension plan.

<table>
<tr><td rowspan="2"></td><th colspan="3">Old System for Senior Employees</th><th>New System for New Employees
(Note 1)</th></tr>
<tr><td colspan="2">Choose to interface with the non-mandatory CPF system</td><td>Choose not to interface with the non-mandatory CPF system and remain in the private pension plan</td><td>Free to choose to participate in the non-mandatory CPF system</td></tr>
<tr><td>Fund Management Entity</td><td colspan="2">To be chosen by the employer</td><td rowspan="10">To be set by the employer according to the terms of the private pension plan</td><td>To be chosen by the employer</td></tr>
<tr><td>Pension Funds</td><td colspan="2">The employer and the employee make their own choices respectively (Note 2).</td><td>The employer and the employee make their own choices respectively (Note 2).</td></tr>
<tr><td>Contribution Rate</td><td colspan="2" rowspan="5">To be set according to the basic standards of the non-mandatory CPF system. However, the terms in the original private pension plan that are more favorable to the employee must continue to apply.</td><td>5%</td></tr>
<tr><td>Base of Contributions</td><td>Basic wage</td></tr>
<tr><td>The Lower Limit for the Base of Contributions</td><td>The employee is free to choose (Note 3).</td></tr>
<tr><td>The Upper Limit for the Base of Contributions</td><td>The employer and the employee make their own choices respectively (Note 3).</td></tr>
<tr><td>Vesting Scale</td><td>Standard vesting scale</td></tr>
<tr><td>Contribution Time</td><td colspan="2">The contribution time before and after the interface must be consolidated</td><td>Contribution time under the non-mandatory CPF system</td></tr>
<tr><td rowspan="2">Offset of Labor Compensation</td><td>Accrued contribution balance before the interface</td><td>Labor compensation can be offset if the private pension plan has relevant regulations.</td><td rowspan="2">Labor compensation cannot be offset.</td></tr>
<tr><td>Accrued contribution balance after the interface</td><td>Labor compensation cannot be offset.</td></tr>
</table>

<table>
<tr><td rowspan="2">Withdrawal of Funds</td><td>Accrued contribution balance before the interface</td><td>1. To withdraw funds according to the conditions of the private pension plan; or
2. To transfer their vested benefits in the private pension plan to the non-mandatory CPF system upon termination of employment</td><td rowspan="2"></td><td rowspan="2">The employee shall apply to withdraw funds according to the provisions of the non-mandatory CPF system. (In general, the employee shall reach the age of 65.)</td></tr>
<tr><td>Accrued contribution balance after the interface</td><td>To apply to withdraw funds according to the provisions of the non-mandatory CPF system. (In general, the employee shall reach the age of 65.)</td></tr>
</table>

Note 1: These are the basic standards. Employers can set more favorable terms for their employees.

Note 2: When the employee's contribution time fulfills the requirement for obtaining all of the employer's contribution benefits, the employee will be entitled to determine the investment allocation and its rate.

Note 3: The upper and lower limits for the base of contributions are linked to the "minimum wage". If this amount is adjusted, the amounts for the upper and lower limits for the base of contributions will also be automatically adjusted.

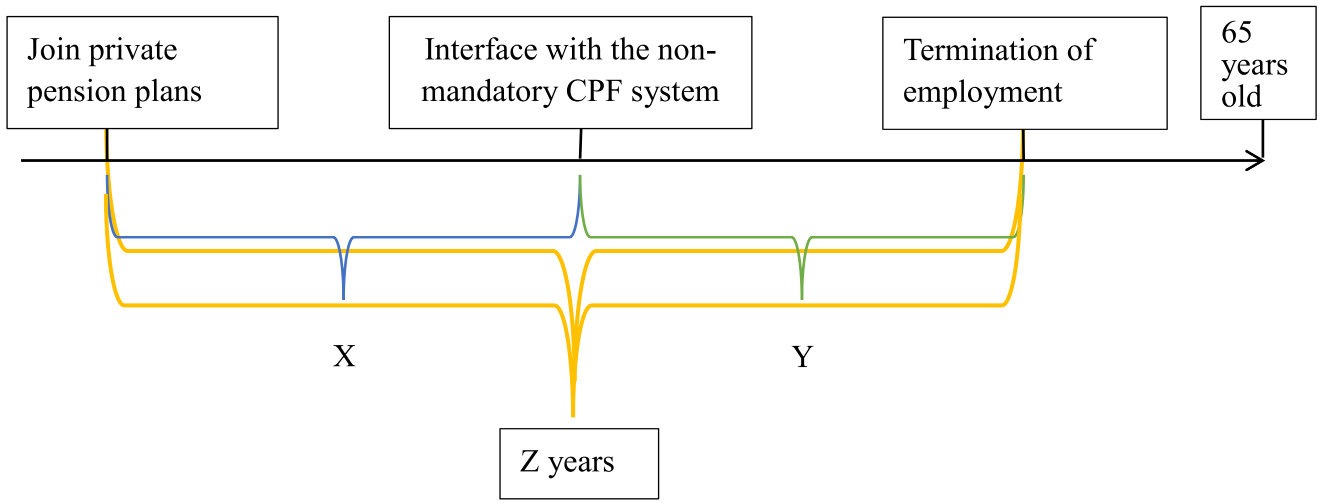
Note 4: If a labor contract is terminated by the employer on unreasonable grounds, or by the employee on reasonable grounds, the employee will be entitled to labor compensation. For details, please see Articles 70 and 71 of Law No. 7/2008 (Labor Relations Law).

2.4.2. Handling Contributions of the Non-Mandatory CPF System and Contributions of Private Pension Plans

After employees choose to interface:

(a) Employers and employees will terminate contributions to private pension plans, and the original units will continue to roll over until the employees leave the companies; while the new contributions will be put into the joint provident fund schemes;

(b) The contribution time of private pension plans and the non-mandatory CPF system will be consolidated.



(i) When calculating the vested benefits upon termination of employment, the contribution time before and after the interface shall be consolidated, that is, X+Y=Z years;

(ii) For the vested benefits of the private pension plan, the employer's contributions, to which the employee is entitled, shall be calculated based on the vesting scale corresponding to Z years, which shall be handled according to the original private pension plan (available for withdrawal under normal circumstances);

(iii) For the vested benefits of the non-mandatory CPF system, the employer's contributions, to which the employee is entitled in the contribution sub-account, shall be calculated based on the vesting scale corresponding to Z years and transferred to the preserved sub-account of the original fund management entity or other sub-accounts at the employee's discretion (see "2.5.2. Transfer of Funds Between Sub-Accounts in the Case of Termination of Employment"). Under normal circumstances, the employee shall reach the age of 65 before withdrawing the funds.

2.5. Transfer of Funds Between Sub-Accounts

2.5.1. Principles

The funds in the three sub-accounts of an individual account can be transferred to each other, subject to the following conditions:

(a) The entire balance of a sub-account shall be transferred as a whole;

(b) The funds in a government-managed sub-account can be transferred in and out, only once a year respectively, subject to approval by the FSS;

(c) No limit is imposed on the number of transfers between contribution sub-account and preserved sub-account as long as such transfers are communicated to the fund management entity to which the funds are to be transferred;

(d) Only when the labor relationship or contributions to the individual provident fund scheme are terminated, can the funds in the contribution sub-account be transferred to the preserved sub-account or the government-managed sub-account.

2.5.2. Transfer of Funds Between Sub-Accounts in the Case of Termination of Employment

In the case of employment termination, within a three-month period starting from the following month of the termination, the employee may apply to transfer the funds in his/her contribution sub-account to other sub-accounts. If no application is made within the above period, the funds will be transferred automatically to the preserved sub-account of the original fund management entity. The specific options are as follows:

Option	<u>**Handling Funds Acquired by Employees in the Case of Termination of Employment**</u>
1	To keep the funds in the preserved sub-account opened by the original fund management entity and continue to roll them over; or
2	To transfer the funds to the government-managed sub-account; or
3	To transfer the funds to another contribution sub-account, if any; or
4	To transfer the funds to a preserved sub-account opened in another fund management entity within the non-mandatory CPF system for integration.

2.6. Withdrawal of Funds

2.6.1. Principles

Account owners with the following qualifications can apply for withdrawal of funds. The upper limit of the withdrawal amount varies according to different reasons.

Reasons for making withdrawals	All or part of the balance in the individual account	The upper limit is the amount accumulated under the allocation system. ***(Note 3)***
He/she has attained age 65 ***(Note 1)***.	√	
He/she is under 65 but in the following situations:		
There is a need to bear huge medical expenses due to serious injury or illness of his/her own.	√	
He/she has attained age 60 and is not engaged in any paid activities ***(Note 2)***.	√	

Reasons for making withdrawals	All or part of the balance in the individual account	The upper limit is the amount accumulated under the allocation system. *(Note 3)*
He/she has humanitarian or other properly explained reasons.	√	
There is a need to bear huge medical expenses due to serious injury or illness of his/her spouse, or a person of any degree of lineal consanguinity or affinity.		√
He/she has been receiving a disability pension from the FSS for more than one year.		√
He/she is currently receiving a special disability subsidy from the SWB.		√

(Note 1) Account owners who have attained 65 years of age and who are currently receiving an old-age or disability pension from the FSS can apply for Registration for Automatic Withdrawal of Funds.

(Note 2) Once the application has been approved, the account owner cannot withdraw funds for the same reason again.

(Note 3) The upper limit is the sum of the incentive basic funds and the special allocation from budget surplus injected into the accounts by the MSAR Government in the calendar year minus the accumulated amount of withdrawals.

2.6.2. Points to Note

(a) An employer's contribution balance in the contribution sub-account can only be withdrawn by application upon termination of employment;

(b) All or part of the funds in an individual account can be withdrawn only once per year.

2.7. Death of an Account Owner

- An individual account shall be cancelled only when the account owner dies and the account has no balance;
- The final balance of the individual account shall be included in the deceased account owner's estate. The administrator of his/her waiting-to-be-divided property or his/her legitimate heir(s) can apply to withdraw funds from his/her individual account;
- After the FSS is aware of the account owner's death for a period of over five years, if the heir does not claim the final balance of the related individual account, the FSS shall inform the fund management entity to cancel the contribution sub-account and preserved sub-account of the related account owner, and the relevant funds shall be transferred to the respective government-managed sub-account.

2.8. Information Enquiry on the Non-Mandatory CPF System

For details and up-to-date information on the non-mandatory CPF system, please visit the FSS's web page at (https://www.fss.gov.mo) or visit the non-mandatory CPF system's information platform (https://eservice.fss.gov.mo/main) to check the information on registered pension funds, including unit fund prices, cumulative performance, annual performance and fees, and the balance of individual accounts.

Representative Examination Questions

Multiple-Choice Questions

1. Which of the following descriptions of the non-mandatory central provident fund system is NOT correct?
a. All investments of the non-mandatory central provident fund system are open pension funds established with the approval of the Monetary Authority of Macao
b. An open pension fund can operate only under the non-mandatory central provident fund system
c. The allocation system is of an incentive nature, and the contributory system is the core part of the non-mandatory central provident fund system
d. All of the above

2. Which of the following descriptions of the joint provident fund scheme and the corporate plan of the private pension system are correct?
   i. If the employer has already set up a joint provident fund scheme, local employees are mandatory to participate in the scheme
   ii. If an employee participates in a joint provident fund scheme and a corporate plan of the private pension system at the same time, he or she can request at the end of labour relationship to settle the fund units of the two plans and withdraw the funds
   iii. The corporate plan of the private pension system can cover local and non-resident workers
a. i & ii
b. i & iii
c. iii
d. None of these is correct

3. Mr. Chan opened preserved sub-accounts in both fund management entities A and B. If Mr. Chan wants to transfer the funds of the preserved sub-account of fund management entity A to the preserved sub-account of fund management entity B, which institution should Mr. Chan apply to?
a. Fund management entity A
b. Fund management entity B
c. Social Security Fund
d. Former Employer

[If still required, the answers may be found at the end of the Study Notes.]

3. Investment Funds

3.1. Investment Risk

What drives a person to invest his/her money instead of spending it right away? The most common answer is to accumulate wealth and save it for a rainy day. In order to increase wealth, some work needs to be done on savings to let them grow. Any effort made by any person to increase his/her savings over a period of time is called investment. Thus, investment means the act of allocating money over a period of time with the goal of getting more profit in the days to come. Investment is defined as the sacrifice of present value for future value.

When it comes to investment, people usually focus on how much money they can make without making a detailed analysis or knowing the risks involved. Investment advisers must fully understand the definition of risk and help investors understand the risk exposure before carrying out investment activities or providing investment advice. So firstly let's discuss risk in detail.

3.1.1. Definition of Risk

Risk is the possibility that loss or damage occurs. In investment terms, risk refers to an uncertainty that may affect the final value of an investment. However, investors are more concerned about the downside risk which indicates that the original investment amount may be lost or reduced (collectively called financial risk). For the investment industry, the existence of financial risk means that investors may lose money, and there is no absolute guarantee that the capital will grow.

Many people think that financial risk has increased in recent years. Investors recall the stock market crash of 1987, the British pound's exit from the European Exchange Rate Mechanism in 1992, the bond market debacle of 1994, the Asian financial crisis of 1997–1998, the September 11 attacks of 2001, the SARS outbreak of 2003, the financial crisis of 2007–2008 and the US-China Trade War that began in 2018. Demand for risk management services has increased dramatically as investors perceive that financial risk is increasing, and that there are multiple techniques and products for risk management.

3.1.2. Types of Risk

Investors sometimes mistakenly think that keeping assets in a bank account can avoid all types of risk, but actually there are still two types of risk in doing so:

- The bank in which the investment was made fails, resulting in default risk; and
- Rising prices in the future reduce the purchasing power of savings, thus creating inflation risk.

For ordinary investors, the risk factors affecting their investment can be countless. Only the general and significant risks are listed below:

(a) **Market risk** - The basic supply and demand situation in the market will affect the price of investment instruments. If an investor has to sell assets at a price lower than the original purchase price, he/she will suffer a loss.

(b) **Company risk** - Some negative developments, such as loss of market share or failure to launch new products, will have an adverse effect on the company's financial condition and its share price.

(c) **Economic risk** - The possible impact due to the reversal of the overall economic situation.

(d) **Inflation risk** - Purchasing power weakens as investment returns fail to keep pace with the inflation rate.

(e) **Default (credit) risk** - The person issuing a debt instrument may not be able to pay interest and repay the principal.

(f) **Interest rate (price) risk** - Due to interest rate changes in current market, certain fixed-rate investments are subject to price fluctuations before maturity.

(g) **Liquidity risk** - An investment cannot be realised (sold), or high fees are required for it to be realised.

(h) **Reinvestment-rate risk** - Temporary liquid cash funds or matured investments cannot be reinvested at the same or higher rate of return.

(i) **Exchange (currency) risk** - Due to fluctuations in the exchange rate, foreign financial investments may be converted into the domestic currency at a less favorable exchange rate at maturity.

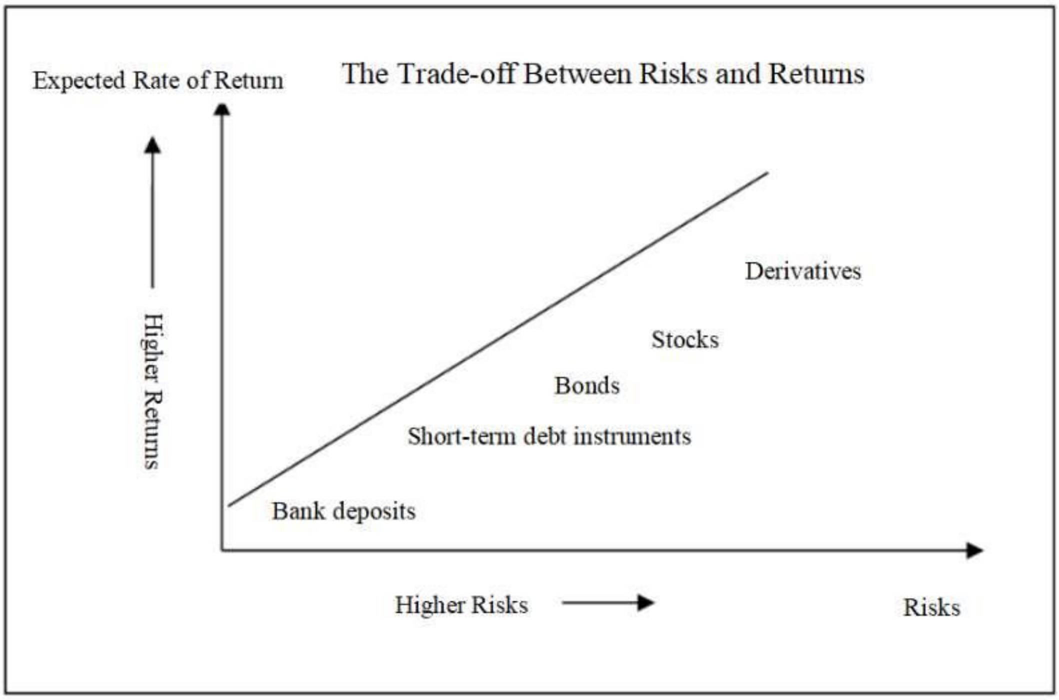
(j) **Sovereign or political risk** - Political instability has led a government to take actions which damage the financial interests of financial investment instruments in the country.

(k) **Operational risk** - The risks faced by financial institutions in processing transactions, such as lack of information systems, poor internal management and monitoring systems, or human error.

3.1.3. The Trade-off Between Risks and Returns

Investment will naturally involve risks. Every investment requires a trade-off between risks and expected returns. As a general rule, investors must be prepared to accept higher risks in order to achieve higher returns. A higher return is to compensate for the higher risk involved in the investment. At the same time, investors should note that when making investment decisions, different classes of assets have different risks and returns.

The chart below shows the relationship between the risk and the return for a variety of investment assets. Please note that the chart is not in proportion and only shows the relative position of the risk level and expected return of each asset class.



3.1.4. Techniques to Reduce Risks

Various techniques have been proven to reduce risks involved in investment including diversification, dollar cost averaging, and time as a risk moderator.

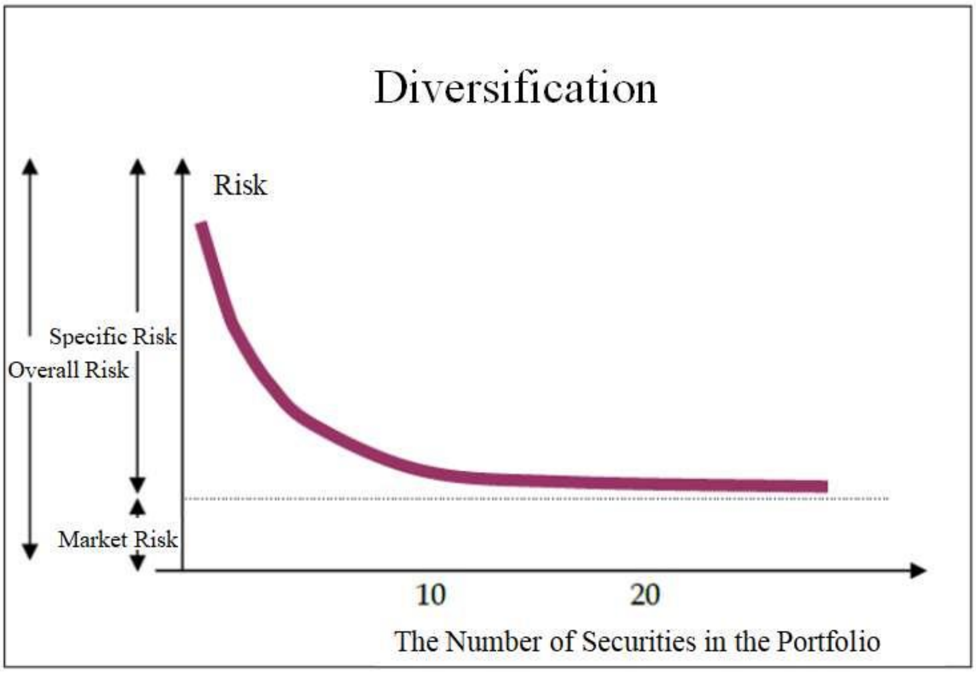
(a) Diversification

Diversification refers to owning assets of different classes, of the same class with different issuing periods, or investing in different markets, regions or countries, in an investment portfolio. Diversification is a usual practice of investment managers, which can reduce risks without drastically reducing returns. Placing assets with low correlation in the same portfolio can substantially reduce the overall risks without excessively reducing the portfolio's returns.

Why does diversification reduce the risk? That is because the trends of various markets are usually not the same, and some financial instruments react differently to market fluctuations. That is to say, under the same market conditions/economic fluctuations, a certain investment instrument may decline in value while the value of another one may rise. For example, an economic downturn usually causes the stock market to fall (economic risk), but it also pushes up the bond market (lower interest rates and higher bond prices). In another example, rising oil prices are not good for companies that rely on energy such as airlines and manufacturing companies, but are good for energy production companies such as oil companies. Therefore, assuming that you have shares of these two types of company in your portfolio, the adverse impact of rising oil prices on airlines may be offset by the positive impact on oil companies.

"Balanced portfolio" — The return on investment from multiple investment assets is more stable than that from a single asset, because the risks are actually diversified. In terms of investment, no one should put all their eggs in one basket. This is also the basic idea of investment funds.

The following chart shows that the total risk of a portfolio decreases as the number of asset classes increases in the portfolio.



(b) Dollar Cost Averaging

Every investor wants to enter the market at the low point of the market. However, nobody knows when the low point appears. On the contrary, we often see many people trapped at the high point of the market. Investors want to buy low and sell high, but the result is buying high and selling low.

With the technique of dollar cost averaging, investors can avoid putting all their money into the market at the wrong time. Investors may invest a fixed amount of money at regular intervals. For example, an investor wants to invest HK$150,000 in Share A, but he/she is not sure whether it is the right time to enter the market. He/she decides to divide the capital into 5 equal parts, each of which is HK$30,000, and then purchases Share A worth HK$30,000 in the middle of each month. The following is his/her transaction record.

Date	Market Price	Number of Shares Purchased
January 15	HK$50	600
February 15	HK$60	500
March 15	HK$40	750
April 15	HK$25	1,200
May 15	HK$50	600
Total Number of Shares Purchased		3,650
Average Price Per Share		HK$41.10

It can be seen from the above table that although the price of Share A has returned to the original price of HK$50 after a period of fluctuation, which is the same as the price when the investor started investing. However, the investor has built an investment portfolio at a price of HK$41.10.The reason for this is that the investor uses a fixed amount of money to buy more shares when the price is low, and fewer shares when the stock price is high, thus lowering the average cost.

(c) Time as a Risk Moderator

Time not only has the power of compound interest to benefit investors, but also helps reducing the investment risks. The following chart of Hang Seng Indexes shows that the basic trend of the stock market is upward, with only a few temporary fluctuations. For example, an investor unfortunately entered the market at the peak in April 2015. If he/she could persist until 2017, he/she would not only retake the "lost ground", but also make a small gain. However, if he/she were a short-term investor and sold his/her shares in 2016, the result would be completely different.

It should be noted that if investors stay in the market long enough, most stocks will recover and surpass their previous highs, but the length of the wait varies. Japan's Nikkei 225, for example, has yet to return to its all-time high of 38,957 in December 1989 after hitting a high of approximately 24,000 in 2019, which also shows the importance of diversification.

3.2. Investment Objectives and Risk Tolerance

Setting investment objectives should be the first step in investment. When investors are asked about their investment objectives, most will say making money. So how much money do they want to make? The typical answer is the more the better. But that doesn't make much sense.

Investment objectives must be specific, realistic, and take into account the individual needs, risk tolerance and investment restrictions of the investor. A person's return on investment (ROI) goals can be expressed as an absolute or relative percentage. For example, an investment objective may be an average annual return of 15% within the next decade, or a return of 1% above the inflation rate. It may also be a general one, such as capital appreciation, break-even or stable income.

Risk tolerance is a very important consideration when setting investment objectives. As we have said when discussing the trade-off between risks and returns, the pursuit of high returns entails a high degree of risk. To set realistic investment objectives, you need to know your risk tolerance.

Risk tolerance is the maximum level of risk that investors are willing to take in order to achieve a certain amount of expected return growth. Some people say that every investor has a risk tolerance indicator, that is, how much he/she is willing to risk losing the investment in exchange for an opportunity for increased returns. When there are two investments (assuming that they generate the same expected return) and one is less risky than the other, investors choosing the less risky one are called 'risk-averse' investors. Investors are generally classified into three types according to their risk tolerance.

(a) Conservative: such investors pay more attention to break-even than high returns. They are also risk-averse investors, not gamblers.

(b) Aggressive: such investors are more willing to take risks and hope to obtain higher returns. Returns are bound to fluctuate and losses may occur in the short term.

(c) Moderate: such investors take the golden mean. They can take moderate risks while break-even is still important.

In general, people at different stages of life have different risk tolerance levels. As investors age, investment strategies will be adjusted to meet new objectives and circumstances. On the other hand, how much risk a person is able to take also affects his/her risk tolerance. Roughly speaking, investors with more net assets can take more risks than those with fewer.

There are a number of guidelines to help investors assess their risk tolerance. Investors should use such guidelines to understand their risk tolerance before investing.

3.3. Other Investment Restrictions

Both investment objectives and risk tolerance limit the risk of investment and determine the ROI goals. In addition, there are other factors that affect investors, which need to be considered before investing. These factors include:

3.3.1. Liquidity

Liquidity is the ability of an investor to sell an asset quickly without having to make significant price concessions.

For example, antiques are assets that cannot be realised immediately. If an art investor who owns an item of Tang Dynasty porcelain wants to sell it within an hour, the price may be relatively low. If the sale can be postponed until a public auction, with no doubt the price will be much higher.

However, if an investor holding HSBC common stock worth HK$1,000,000 wants to sell the shares within one hour, the price may be similar to that of HSBC shares just sold by other sellers.

The liquidity need of investors must be taken into account when making investment plans. For a young investor with a long-term investment objective, the liquidity need may be low. A pensioner, however, needs a steady stream of cash, so a portion of his/her portfolio should be liquid securities such as money market instruments.

3.3.2. Investment Time Horizon

This is the period for which an investor intends to continue investing. It usually depends on the investor's investment objectives, age and current financial situation. Most investment instruments can generally be classified according to the following investment time horizon:

- Short-term: less than one year
- Medium-term: one to five years
- Long-term: more than five years

As mentioned earlier, time is a factor that offsets risks. An effective strategy for managing risk is to ignore short-term price fluctuations (not be too nervous or concerned) and only focus on long-term returns. History shows that the longer investors hold their investments, the less chance there is of negative returns.

Investors who intends to make only short-term investments should avoid risky investments, because assets may need to be realised at an inappropriate time. Long-term investors usually have higher risk tolerance, because short-term losses may recover from the returns in subsequent years.

3.4. Investment Consultation

3.4.1. Small Amount Investment Consultation

Investment consultation refers to the process of providing investment advice to clients. There is a subtle difference between investment consultation and financial planning. The latter refers to the process in which financial planners evaluate clients' financial needs (such as insurance, retirement, investment, etc.) in order to meet their overall financial objectives. Investment consultation focuses on clients' investment objectives and needs, mainly providing investment products, investment strategies and other investment advice.

3.4.2. Investment Advisers

The job of an investment adviser is a challenging one. Due to the significant differences in the nature, characteristics and risks of investment products, and the different personal financial conditions of clients, investment advisers must consider a number of factors so as to provide relevant and appropriate investment advice:

(a) Understanding clients: Investment advisers must collect information about a client's financial status, investment experience and investment objectives, including their investment knowledge, investment time horizon, risk tolerance, etc. It is best to archive all the collected information and keep it updated in order to discover any changes in the client's situation.

(b) Understanding investment products: Investment advisers should have a thorough understanding of investment products, including product structure, risk level, fees and charges, relative performance, liquidity, etc.

(c) Making reasonable suggestions: Investment advisers must ensure that the risk-return level of the investment product is consistent with the client's personal situation.

Investment advisers should also provide the client with all relevant information so that the client can make decisions after obtaining sufficient information. The reasons for a suggestion should be properly recorded for future reference.

Due to the complex nature of the work, investment advisers must not only be proficient in financial market strategies, but also have a comprehensive understanding of economics, law, asset management, and risk management. In addition to the professional skills mentioned above, investment advisers should also possess excellent communication skills and sensitivity to the psychological feelings of clients. For example, investment advisers should be able to avoid causing offence when asking clients private questions and to convey bad news when the market deteriorates.

Most importantly, investment advisers must abide by professional ethics and win the trust of clients. Each regulatory agency or industry association has its own set of codes of ethics. These basic ethical principles generally include integrity, honesty, due diligence, avoidance of conflicts of interest, and confidentiality.

3.5. Types of Investment Funds

An investment fund is a collective investment that pools the funds of investors with similar investment objectives. The investment company then diversifies the risk by investment portfolios composed of various financial instruments (such as stocks and bonds), and the investors can indirectly own the assets purchased by the investment company and share the profits of the investment company.

There are many types of funds to meet the different needs of investors. Investment funds can be classified according to the types of assets invested in, such as stock funds, bond funds, money market funds, and venture capital funds. According to the investment objectives, funds can also be classified as aggressive growth funds, growth funds, income funds, balanced funds, etc. Some funds are set up to invest in specific industries (such as technology funds), and some are set up based on geographic scope, such as global funds, American funds, European funds, Far East funds, Chinese funds, Hong Kong funds, etc.

3.5.1. Mutual Fund and Unit Trust

Various investment funds are distinctive in so many ways that it is difficult to categorise them. Though they have different names in different jurisdictions, investment funds are generally called mutual funds or unit trusts.

(a) Mutual Fund

This is the simplest and most common situation. The purpose of establishing an investment company is to raise funds to invest in other companies' shares, and there is only one type of investor in the investment company, namely the shareholders on whose behalf the investments are made. These shareholders directly own the investment company and thus indirectly own the financial assets owned by the company.

A mutual fund company has a board of directors, which is elected by its shareholders. The board of directors usually hires a professional investment manager, namely a management company, to manage the assets of the investment company. These management companies may be recognised financial institutions, registered companies or insurance companies. Management companies are often commercial entities that create and promote mutual funds. A management company can enter into contracts to manage multiple mutual funds, and each mutual fund is an independent organisation with its own board of directors.

(b) Unit Trust

A trust is a long-standing concept in British common law. This concept is recognised in common law countries and jurisdictions such as the United Kingdom, Australia, Canada, and Singapore. Hong Kong also adopts this concept. However, in civil law countries such as Taiwan, Japan, France, and Luxembourg, trusts are not recognised, so they use mutual funds instead.

A unit trust is an investment instrument established under a trust. To set up a unit trust, an investment company shall purchase a specific combination of securities, and then transfer the securities to a trustee for deposit. Investors with similar investment objectives pool their funds and invest in such assets.

These units, called redeemable trust certificates, will be sold to the public. Those who own these certificates may obtain the rights and interests of securities previously deposited with the trustee in proportion to the units they own. All proceeds received by the trustee on these securities will be paid to the holders of the trust certificates, and the principal will also be repaid to the holders.

Investors who buy any unit trust do not need to hold these units for the entire duration of the trust. In fact, the units may usually be sold back to the trust, and the selling price is calculated based on the purchase price of the relevant assets in the investment portfolio (i.e. the market value of the securities in the investment portfolio), which is also known as 'net asset value per unit'.

The net asset value per unit is calculated as follows:

$$\text{Unit Price} = \frac{\text{(Total Assets-Total Liabilities)}}{\text{Number of Issued Units}}$$

Once the price of each unit is determined, the trustee may sell one or more securities to obtain the cash needed to buy back the units from investors.

3.5.2. Open-end Funds and Closed-end Funds

Investment funds sell shares to investors and use the proceeds to purchase assets and securities according to their investment objectives. However, there are different modes of operation after funds are launched, according to which funds can be classified into open-end funds and closed-end funds.

(a) Open-end Funds

An open-end fund has variable capital and investors can purchase existing shares/units at any time based on the net asset value of the relevant investment or at a price close to the net asset value. On the other hand, the fund can continuously issue new shares to investors, and the price is also based on the net asset value. Due to its open nature, the more investors there are, the larger the size of the fund and the number of shares will be. On the contrary, if investors redeem their investments, the fund will be reduced in size and the shares will be written off. The price of shares/units depends on the value of the assets invested in by the investment company.

(b) Closed-end Funds

A closed-end fund is an investment company whose business is to invest in other financial assets or companies. The fund will issue a fixed number of shares in the initial stage, which means the size of the fund is fixed. After the initial offering, new shares will rarely be issued and shares will rarely be repurchased; no matter how many investors there are, the number of shares remains the same. Investors who want to buy or sell shares in closed-end funds must go through a secondary market. Such funds are generally traded in large-scale stock markets such as the New York Stock Exchange, American Stock Exchange, and Hong Kong Stock Exchange.

Although the fund price of a closed-end fund reflects the value of the assets in the fund, it is different from an open-end fund in that the price is generally not equal to the net asset value of the fund. If there are more sellers than buyers, the fund price will fall and may be lower than the net asset value – that is, a discount occurs. If there are more buyers than sellers, the fund price will rise and may be higher than the net asset value – that is, a premium occurs. Both discounts and premiums can show significant changes, depending on market sentiment and market conditions.

Many closed-end funds are designed to invest in markets with limited liquidity, such as property markets or stock markets in emerging economic regions. Because of the closed nature of these funds, fund companies do not need to sell assets (at unreasonable prices) when market conditions suddenly change in order to cope with redemption of shares.

3.5.3. Unitised Funds

Most funds in the capital market are unitised funds, which are separately managed funds with specific objectives. These funds can be managed by insurance companies or by independent fund managers. The following outlines some common types of investment funds:

(a) Deposit Fund

A deposit fund is an interest-bearing fund whose unit selling price is normally set at HK$1,000. The interest income is used to buy new units at the unit selling price and credited into the account.

In this way, small investors can invest in money market instruments, so this type of fund is also called a money market fund or money fund.

Main Objective:	To invest in short-term money market instruments in order to provide a stable return with the lowest capital risk.
Features:	Open-end;
	A fixed unit selling price (for example, HK$1,000);
	Interest is credited to the account in the form of purchased units; and

	Investing in short-term investment instruments.
Advantages:	Safe and most stable;
	Higher returns than bank deposits; and
	High liquidity.
Disadvantages:	Interest rates may fluctuate; and
	A relatively low rate of return.

(b) Bond Fund

Main Objective:	To provide a stable return with the lowest capital risk.
Features:	Investing in the bond market;
	Equivalent to a diversified bond portfolio;
	Investing in debt securities issued by governments and/or large companies; and
	Some can be invested in high-yield bonds (i.e. Junk bonds).
Advantages:	A higher rate of return than money market funds;
	Fund managers can sell or purchase bond funds when interest rates change; and
	Usually can offset inflation.
Disadvantages:	A risk of rising interest rates; and
	Issuer credit risk.

(c) Equity Fund

Main Objective:	To achieve relatively high and long-term capital appreciation.
Features:	Investing in the stock market;

	More suitable for long-term investment; and
	Equivalent to a diversified stock portfolio.
Advantages:	A relatively high rate of return;
	A good inflation hedge; and
	Making full use of the expertise of fund managers.
Disadvantages:	Relatively high management fees may be charged;
	Higher risk than bond funds; and
	A risk of company failure.

(d) Index Fund

Main Objective:	To reflect the performance of a specific index.
Features:	Passive management;
	Automatic generation of investment decisions;
	A limited number of transactions; and
	Can be linked to non-stock indexes.
Advantages:	Easy to understand;
	Relatively low management fees;
	Lower risk than index futures; and
	A hedge fund.
Disadvantages:	Cannot profit from market changes;
	Can only track the performance of leading markets;
	Cannot outperform markets; and
	Unpopular during a bear market.

(e) Warrant Fund

Main Objective:	To achieve exceptionally high returns.
Features:	Mainly investing in warrants; and
	Using warrants for leveraged investing.
Advantage:	High returns are possible.
Disadvantage:	Extremely risky.

(f) Global Fund

Main Objective:	To invest in stocks or bonds around the world.
Feature:	International investment.
Advantages:	Diversification; and
	Grasping overseas investment opportunities.
Disadvantages:	Currency and political risks;
	Complex custody arrangements;
	Differences in accounting treatments from country to country; and
	A relatively lack of information disclosure.

(g) Regional / Country Fund

Main Objective:	To invest in a specific region or country.
Feature:	Generally closed-end funds, with lesser amounts of open-end funds.
Advantages:	Possible high growth; and
	Access to the opportunities in a region.
Disadvantages:	High risk;
	Low liquidity; and

Insufficient diversification.

(h) Specialty Fund

Main Objectives:	To invest in a specific industry/category and to grasp the return potential.
Features:	Concentrated in a specific industry; and
	High risk and high return.
Advantages:	Possible high growth;
	Making full use of fund managers' knowledge of a specific industry; and
	Grasping opportunities in a certain industry.
Disadvantage:	Relatively high potential risk;
	Insufficient diversification; and
	Low liquidity.

(i) Income Fund

Main Objective:	To earn recurring income rather than achieving capital growth.
Features:	Earning preference dividends; and
	Bond coupons.
Advantages:	periodic income;
	Moderate risk; and
	High liquidity.
Disadvantages:	Relatively low capital appreciation;
	Some income funds have more aggressive objectives than others.

(j) Balanced Fund

Main Objectives:	To achieve income and capital appreciation at the same time and to avoid taking excessive risks.
Features:	Investing in a stock and bond portfolio;
	Focusing on the growth potential of stocks;
	Relatively stable bond yields; and
	Between bond funds and growth funds.
Advantages:	Balanced risks and returns; and
	Diversification.
Disadvantages:	Moderate return; and
	Cannot fully grasp the opportunities in a bull market.

(k) Growth Fund

Main Objective:	To maximise capital appreciation rather than earning stable dividends.
Features:	Investing in growth stocks; and
	Investing in lesser-known small companies outside the mainstream market that are believed by investment managers to have growth potential.
Advantages:	A relatively high growth rate; and
	Making full use of the expertise of fund managers.
Disadvantages:	Some fund managers may adopt highly aggressive/speculative strategies;
	Extremely risky; and

No stable sources of income/dividends.

(l) Guaranteed Fund

Main Objectives:	To have a neutral response to adverse market performance and to guarantee principal/return.
Feature:	The guaranteed amount will be paid on the due date.
Advantage:	No principal risk.
Disadvantages:	High guarantee fee; With a minimum investment time horizon; Special conditions may apply; and A relatively low rate of return.

3.6. Fees and Expenses of Investment Funds

Investing in a fund involves at least two types of expenses. The first type is sales fee/load, which is paid as expenses for fund operation and distribution, while the second type is annual management fee, which is paid to the management company for the services provided.

(a) No Load

When a fund company sells units/shares directly without a sales agency, the funds usually do not charge initial sales fees and are collectively referred to as no-load funds. Therefore, the units/shares are sold at a price equal to their net asset value. However, if investors sell units/shares back to the fund company within a certain period of time, a back-end load or penalty fee will be charged. Some fund companies also charge an annual distribution fee.

(b) Sales Fee/Load

If a fund is sold by a salesperson, the fund company must pay a commission for the units/shares sold, which is called a sales fee/load. Common types of sales fees/loads include:

(i) Front-end Load

The fund company usually charges investors an initial subscription fee when selling units/shares. This fee is only paid once and is calculated based on a percentage of the initial purchase price. These funds are usually referred to as Class A units/shares and are an attractive option for long-term investors.

(ii) Back-end Load

This is paid by investors when the units/shares are sold back (not purchased) to the fund company. When investors sell their units/shares back to the fund company, they have to pay a contingent deferred sales charge. It is usually calculated based on the net asset value during the first few years of the units/shares held by the investors, and it will decrease year by year until no payment is required. The back-end load can be calculated based on a predetermined percentage of the net asset value of the units/shares or the period of time the investors hold the units/shares. In addition, investors must pay a distribution fee of no more than 1% each year. These shares are usually referred to as Class B units/shares and are an attractive option for medium-term investors who intend to hold for at least 5 years. Moreover, some Class B units/shares can be converted to Class A after a few years, so no annual distribution fees are required afterwards.

(iii) Level Load

Investors must pay a small amount initial subscription fee to the fund company when purchasing units/shares, and may also have to pay a small amount back-end load if they are sold within one year. In addition, the fund company will also charge a distribution fee to cover ongoing expenses of fund sales. These shares are usually referred to as Class C units/shares and are an attractive option for short-term investors. Level loads are not common in Hong Kong.

(c) Management Fees

Except for sales fees, all funds will charge annual management fees for investment and advisory services provided by professional fund managers. Management fees are equivalent to a certain percentage of the average net asset value of the fund, such as an annual rate of 0.5% to 1%.

According to the Hong Kong's Code on Unit Trusts and Mutual Funds, the level/criteria of calculation of all costs and charges payable from the assets of a scheme must be clearly stated, and the percentage must be expressed in an annual rate. The total fees for investment management or advisory functions should also be disclosed.

If a performance fee (calculated based on the actual income achieved) is applicable, the following conditions must be met:

(i) The payment must not exceed once a year; and

(ii) The net asset value per unit/share must exceed the net asset value per unit/share when the performance fee was last received.

(d) Other Fees

Other fees may be charged by the investment company. These include (but are not limited to):

(i) Administrative expenses to cover the cost of providing information records and customer services for investors;

(ii) Guarantee fees (applicable to guarantee funds);

(iii) Trustee fees; and

(iv) Custody fees, etc.

3.7. Advantages and Disadvantages of Investment Funds

3.7.1. Advantages of Investment Funds

The advantages of investment funds can be summarised by the following sentence: "Most investors, due to lack of time, investment skills or financial resources, are not able to afford the high fees to achieve returns comparable to those of professional investors, which investment funds can complement by providing professional advice and returns. Funds generally involve less risk than holding securities directly, and they also offer economic benefits."

(a) Diversification

Investment funds provide diversified investment options that offer growth, income, or both, as well as opportunities to invest in both international and local markets. Fund managers usually set up investment portfolios of 50 to 200 or more securities.

In fact, these managers put investors' money in multiple baskets instead of one. Traditionally, only large institutions and individual investors with a "high net asset value" can make diversified investments. Now with investment funds, investors from general public can also diversify their investments.

(b) Professional Management

Investment funds are managed by professional, specialised full-time investment managers who make buying and selling decisions based on extensive and continuous economic research. After analysing the macroeconomic situation, stock market conditions, interest rates, inflation and the financial performance of individual companies, they select the investment that best matches the fund's objectives. In the past, only large institutions and individual investors with a "high net asset value" could obtain such services from professional investment managers, but now ordinary investors can also enjoy the benefits of professional management through investment funds.

(c) Growth Potential

The long-term returns from investment funds may be higher than those of traditional savings. In fact, one of the reasons for the rapid growth of investment funds is that funds do have an impressive record of performance compared with the returns on individual investments made by investors. With no doubt, each fund varies in performance, but on average, long-term trend shows that the growth of equity funds can mostly catch up with economic growth. In addition, bonds and money market funds can also reflect the long-term trends of their respective markets.

(d) Convenience

Investors can purchase most types of investment funds through professional licensed representatives of investment companies who can assist investors in analysing their financial needs and objectives and recommend appropriate funds. Today, most commercial banks sell their own investment funds, and some also sell funds of investment companies.

The liquidity of investment funds is strong so investors can easily redeem their investments. Investors can redeem all or part of their investments on any business day and receive the market value of such investments (which of course may be higher or lower than the original purchase value). Under normal circumstances, investors can withdraw the redeemed funds within a few business days.

(e) Access to Global Markets

Some markets are not open for foreign investors. However, international investment companies can set up local companies and invest in the local market, which increases the investment opportunities for investors; otherwise investors will not be able to obtain the benefits of these investment opportunities.

(f) Flexibility

Each investment fund has its own characteristics, allowing investors to develop their own investment strategies. Investors can choose the most suitable type of investment to match their investment objectives and risk tolerance.

(g) Liquidity

Most investment funds can be sold at a price equal to the net asset value at any time, so investors can easily realise their investment without making a large discount on the price.

(h) Affordability

Investors with limited resources who want to invest in the stock market can only buy fractions of shares, but the brokerage commission will be higher and they will not obtain the benefits of diversification. However, due to the economic benefits of investment funds, ordinary investors can also make such investments through them.

Investment funds can also be bought and sold in small amounts, making them affordable for ordinary investors. Investors only need to invest HK$10,000 (or less) at the start and subsequent and monthly fixed investments can be as low as HK$1,000.

(i) Cost Efficiency

Investors sometimes find that investment funds are expensive because investors have to pay a commission of up to 5%. However, with this sum, they can obtain professional services from world-class experts to make investment decisions for them. In addition, investment companies often use advanced computer equipment that individual investors generally cannot afford.

Investors pool their funds to take advantage of bulk purchases, thus greatly reducing transaction and administrative expenses.

(j) Administration

Investors do not have to deal with administrative work related to the management of investment portfolios, such as handling payment for share trading, share register, collection of dividends, and application for rights issues.

(k) Protection

The assets of investment funds are generally kept by trustees or custodians who are responsible for protecting the rights and interests of investors and holding such investments on their behalf. Trustees are also responsible for ensuring that the investments made are in line with investment objectives, and custodians are responsible for keeping the assets properly.

The business of investment funds is highly regulated. In Hong Kong, investment funds must by law be approved by the

Securities and Futures Commission (SFC) before they can be sold to the public. Although the approval of the SFC is not a guarantee for investment products, the SFC stipulates that products must comply with specific regulations to be approved. In Macao, the business of investment funds is regulated by relevant laws, thus the assets of investment funds are safeguarded.

(l) Up-to-date Investment Position

Every day most investment funds publish buying and selling prices and their net asset value in newspapers. With the development of technology, such information may be released online.

(m) Automatic Reinvestment of Gains

Most investment funds allow investors to reinvest their dividends and capital gains automatically in additional fund shares at no additional cost. After a period of time, the effect of compound interest will greatly increase investors' assets value.

(n) Switch Privilege

Within a group of funds, investors can usually convert all or part of their investments in one fund into other funds with different objectives, according to the changes of their financial conditions and investment strategies.

3.7.2. Disadvantages of Investment Funds

(a) Management Fees

Professional investment managers operating investment funds will collect fees directly from investment funds which can be avoided if investors manage their own investments.

(b) Lack of Choice

Although the investor can choose the type of fund he/she intends to invest in, he or she has no control over which individual shares or bonds should be included in the fund.

(c) Lack of Owner's Rights

If an investor directly holds shares in a company, he/she has the right to attend the company's annual general meeting and vote on important matters. However, investors in an investment fund are not entitled to such rights with respect to individual investments in the fund.

Representative Examination Questions

Multiple-Choice Questions

1. Relatively speaking, which one of the following investment type has the highest liquidity risk?
a. Real Estate
b. Unit Trust Fund
c. Cash
d. Stock

2. Independent of other factors, if the initial amount of an investment fund is $10,000, and the front-end load is 3%, how much is the total fee if the investment fund is sold after 3 years?
a. $300
b. $600
c. $900
d. $1,200

3. Which of the following statements regarding investment funds is NOT correct?
   i. Investment fund is a collective investment that pools the funds of investors with similar investment objectives which managed by investment company
   ii. In general, the investment return of deposit fund is higher than other types of investment funds
   iii. Investors are fully in charge of the investment items and decide what to buy and sell in the investment fund
   iv. Investors can indirectly own the assets purchased by the investment fund and benefit from the investment return
a. i & ii
b. ii & iii
c. iii & iv
d. ii & iv

[If still required, the answers may be found at the end of the Study Notes.]

Glossary

Associate or Sponsor: An enterprise that sets up a pension plan and has it funded by a pension fund.

Balanced Fund: An investment fund with a portfolio of stocks and bonds, aiming to achieve growth in income and capital while avoiding excessive risks.

Base of Contributions: The joint provident fund scheme uses the employee's monthly basic wage as the base of contributions, without prejudice to the practice of adding other items as the base of contributions in addition to the monthly basic wage by an employer.

Beneficiary: A person who is entitled to receive payment from a pension plan regardless of whether he/she is a participant.

Bond Fund: An investment fund that invests in the bond market and aims to provide a stable return with the lowest capital risk.

Bonds: Bonds are debt instruments issued by enterprises, municipal governments, national and supranational institutions.

Closed Pension Fund: A pension fund in which only one employer is involved.

Company Risk: Certain negative developments, such as loss of market share, failure to launch new products, etc., will have an adverse effect on the company's financial condition and even its share price.

Contribution Time: The period during which contributions are made to a joint provident fund scheme, including the time period when contributions are made only by the employer or when either the employer or the employee suspends contributions.

Contributor: An enterprise or individual who contributes to a pension fund.

Contributory Plan: A pension plan in which the employer (associate or sponsor) and the employee (participant) make contributions jointly.

Coupon Rate: The interest rate that bond issuers promise to pay to investors.

Custodian or Depository: An entity whose main responsibilities include updating the chronological records of pension fund transactions and safekeeping or recording securities and certificates of the fund.

Custodian Fee: The fee charged by a custodian for the fund management services provided, usually calculated based on a percentage of the net asset value of the fund.

Default (Credit) Risk: The debt issuer may not have the ability to pay the interest and repay the principal.

Defined Benefit Plan: A pension plan in which the benefits received by the beneficiary have been predetermined, and the calculated contribution amount must be guaranteed to meet the future payments.

Defined Contribution Plan: A pension plan in which the amount of contributions has been predetermined, and the benefits received by the beneficiary is the sum of contributions and their accumulated profits.

Deposit Fund: A fund that carries nominal interest and invests primarily in short-term money market instruments, providing a stable return with the lowest capital risk.

Diversification: The act of reducing the overall risk of an investment portfolio by owning assets of different classes, of the same class with different issuing periods, or by investing in different markets, regions or countries.

Dollar Cost Averaging: Investors buy a fixed amount of assets at regular intervals to avoid putting all their money into the market at the wrong time.

Economic Risk: The possible impact of a slowdown in overall economic growth.

Exchange (Currency) Risk: Foreign financial investments denominated in foreign currencies, due to fluctuations in the exchange rate, may have to be converted into the domestic currency at a more unfavorable exchange rate.

Expenses Ratio of Sub-fund: The expense of indirect investment by a pension fund through an investment fund. This ratio shows the expense of the investment fund invested in by the fund as a percentage of the net asset value of the pension fund.

Financial Risk: The possibility of losing all or part of the investment amount.

Fund Management Entity: A fund management company that conducts all activities in the name of fund members including associates, participants, contributors and beneficiaries.

Global Fund: An investment fund that invests in stocks or bonds around the world.

Guaranteed Fund: An investment fund that guarantees principal. Some even guarantee a minimum return.

Hedging: Used to eliminate the impact of changes in market prices on the value of an asset or portfolio.

Special Allocation from Budget Surplus: Subject to the annual financial budget implementation in the calendar year of the MSAR Government, account owners who meet the allocation requirements of Article 40(1) of Law No. 7/2017 can receive special allocation from budget surplus.

Income Fund: An investment fund whose goal is to generate regular income rather than achieving capital growth.

Index Fund: An investment fund whose goal is to reflect the performance of a particular index.

Inflation Risk: The rate of return on investment is lower than the rate of inflation, resulting in weaker purchasing power.

Interest Rate (Price) Risk: Due to changes of interest rates in the current market, certain fixed-rate investments will experience price fluctuations before the maturity date.

Investment Funds: A collective investment in which the funds of investors with similar investment objectives are pooled for investment.

Investment Instruments: Fund management entities that have been approved by the Monetary Authority of Macao to operate within the private pension framework may apply to the Social Security Fund to add their open funds authorised by the Monetary Authority of Macao to the non-mandatory central provident fund system as investment instruments.

Investment Management Fee: The fee charged by a fund management entity for fund management services provided. The fee is generally calculated on the basis of a percentage of the fund's net asset value.

Investment Related Expenses: The expenses involved in the investment activities of the fund managed by a fund management entity. This amount is the expenses actually paid.

Investment Risk: Uncertain factors that may affect the final value of the investment. In particular, the original investment amount may be lost or reduced.

Investment Time Horizon: The time period for which an investor intends to invest.

Liquidity Risk: An investment cannot be realised (sold), or high fees are required for it to be realised.

Market Risk: The basic supply and demand situation in the market will affect the price of investment instruments. If an investor sells his/her assets at a price lower than the original purchase price, he/she will suffer a loss.

Mixed Plan: A pension plan with features of a defined benefit plan and a defined contribution plan.

Money Market Instruments: Short-term debt instruments with high liquidity and low risk issued by governments, banks and large non-financial companies.

Mutual Fund: An investment fund established for the purpose of investing in the shares of other companies.

Net Asset Value: The value of the assets constituting a fund that are estimated in accordance with generally accepted accounting standards and applicable laws, especially including receivable income minus due and unpaid debts.

Non-Contributory Plan: A pension plan in which all direct payments are borne by the employer (associate) while the employee (participant) is not required to make any payments.

Open Pension Fund: A pension fund that does not require any connection between the members of the plan, and it is all up to the fund manager whether one can join the fund.

Other Expenses: Under the private pension framework, the expenses are only applicable to closed-end funds and refer to all expenses other than investment management fees, custody fees and investment-related expenses charged by management entities.

Participant: An individual who is secured by a pension plan regardless of whether he/she contributes to the fund or not.

Participating Agreement: A contract signed by the employer or the individual with the fund management entity to join a pension fund.

Participation Unit: Participation unit is also known as “fund unit”. It means the net asset value of a fund is divided into several equal shares, each of which is a participation unit.

Pension Fund: A fund for the implementation of one or more pension plans. The fund can invest in different financial securities and directly held assets, but it cannot be used to assume the debts of employers (associates), employees (participants), contributors, fund managers or asset custodians. Unless otherwise the study notes interpreted, Pension Fund has the same meaning with Private Pension Fund.

Pension Plan: A retirement plan that provides the conditions under which pension rights are to be received. Unless otherwise the study notes interpreted, Pension Plan has the same meaning with Private Pension Plan.

Redemption Fee: The fee charged by a fund management entity for fund redemption. It is generally calculated based on deducting a percentage of the redemption amount.

Regional/Country Fund: An investment fund that invests in a specific region or country.

Risk Tolerance: The maximum level of risk that investors are willing to take in order to achieve a certain amount of expected return growth.

Risk-averse Investor: If there are two investments with the same expected return, and one of them is less risky than the other, or there are two investments with the same level of expected risk, and the expected return of one is higher than that of the other, investors choosing the investment with lower risk or higher expected return are risk-averse investors.

See-through Fund Expenses Ratio: The sum of the total expenses ratio of a pension fund and the expenses ratio of the sub-fund.

Sovereign (Political) Risk: Political instability causes a government to take actions which damage the financial interests of financial investment instruments in the country.

Incentive Basic Funds: Account owners who are still alive on January 1 of the year when the special allocation from budget surplus is granted and met the requirements of Article 39(1) of Law No. 7/2017 in the previous calendar year are entitled to a one-off incentive basic fund of MOP10,000.

Specialty Fund: An investment fund that invests in a specific industry or category and aims to unlock the return potential.

Subscription Fee: The fee charged by a fund management entity to the pension plan before the subscription of fund units, generally calculated based on deducting a certain percentage from the contributions.

The Individual Provident Fund Schemes: A pension plan in which residents voluntarily participate and contribute under the non-mandatory central provident fund system.

The Joint Provident Fund Schemes: Pension plans voluntarily set up by employers in which employees voluntarily participate and both parties contribute jointly under the non-mandatory central provident fund system.

The Lower Limit for the Base of Contributions: Under the joint provident fund schemes, if the base of contributions is lower than the Minimum Wage for Cleaning and Security Employees in the Property Management Services after deducting contributions, the employee is not required to make contributions while the employer still needs to contribute.

The Upper Limit for the Base of Contributions: Under the joint provident fund schemes, if the base of contributions is 5 times higher than the Minimum Wage for Cleaning and Security Employees in the Property Management Services, neither the employer nor the employee shall contribute for the exceeded part.

Unit Fund Price: The value of each fund unit shall be calculated after the trading day determined by the fund management entity. The calculation method is to divide the fund's net asset value by the number of fund units in circulation.

Unit Trust: An investment instrument established under a trust.

Unitised Funds: Funds with specific objectives that are separately managed and can be managed by insurance companies or by independent fund managers.

Vested Benefit: Benefits are generated through the accumulation and investment of contributions. When an employee leaves his/her company, he/she will receive the pecuniary payments according to the specified conditions in the pension plan.

Warrant Fund: An investment fund that mainly invests in warrants and aims to achieve exceptionally high returns.

Representative Examination Questions

Answer

	Chapter		
Questions	1	2	3
1	b	b	a
2	a	c	a
3	d	b	b

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