Private Wealth Management

CFA三级培训项目

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- **主编出版：**参与金程CFA项目各类参考书目的编写工作，包括翻译CFA协会官方参考书《企业理财》，《国际财务报告分析》，金程CFA中文Notes等

Topic in CFA Level III

Session	Content
Study Session 1	BEHAVIORAL FINANCE
Study Session 2	CAPITAL MARKET EXPECTATIONS
Study Session 3	ASSET ALLOCATION AND RELATED DECISIONS IN PORTFOLIO MANAGEMENT
Study Session 4	DERIVATIVES AND CURRENCY MANAGEMENT
Study Session 5-6	FIXED-INCOME PORTFOLIO MANAGEMENT (1)&(2)
Study Session 7-8	EQUITY PORTFOLIO MANAGEMENT (1)&(2)
Study Session 9	ALTERNATIVE INVESTMENTS FOR PORTFOLIO MANAGEMENT
Study Session 10-11	**PRIVATE WEALTH MANAGEMENT (1)&(2)**
Study Session 12	PORTFOLIO MANAGEMENT FOR INSTITUTIONAL INVESTORS
Study Session 13	TRADING, PERFORMANCE EVALUATION, AND MANAGER SELECTION
Study Session 14	CASES IN PORTFOLIO MANAGEMENT AND RISK MANAGEMENT
Study Session 15-16	ETHICAL AND PROFESSIONAL STANDARDS (1)&(2)

Framework

Private Wealth Management

- **SS10: Private Wealth Management (1)**
  - R21 Overview of Private Wealth Management
  - R22 Topics in Private Wealth Management
- **SS11: Private Wealth management (2)**
  - R23 Risk Management for Individuals

Reading 21

Overview of Private Wealth Management

Framework

1. Private Clients versus Institutional Clients
2. Understanding Private Clients
3. Investment Planning
4. Investment Policy Statement
5. Portfolio Construction and Monitoring
6. Ethical and Compliance Considerations in Private Wealth Management
7. Private Client Segments

1. Private Clients versus Institutional Clients

- Private clients and institutional clients have different concerns, including the following:
  1. Investment Objectives
  2. Constraints
  3. Other Distinctions

1. Private Clients versus Institutional Clients

1. **Investment Objectives**
   - **Private Clients**
     - ✓ financial security during the client's retirement years;
     - ✓ the ability to provide financial support to family members;
     - ✓ the funding of philanthropic goals;
     - ✓ Private client investment objectives often compete with one another and may change over time;
   - **Institutional Clients**
     - ✓ In contrast to private clients, institutional clients tend to have more clearly defined objectives, which are typically related to a specific liability stream.

1. Private Clients versus Institutional Clients

2. Constraints

- **Time horizon**: In general, individual investors have a shorter time horizon than institutional investors, whose horizon is often theoretically infinite.
- **Scale**: In general, individual investor portfolios tend to be smaller in size (or scale) than those of institutional investors.
- **Taxes**: Taxes are a significant and complex consideration for many individual investors, and they vary by jurisdiction.

1. Private Clients versus Institutional Clients

3. Other Distinctions

- **Investment Governance**
  - ✓ **Institutional investors** typically operate under a formal governance structure.
  - ✓ By contrast, investment governance for **individual investors** tends to be less formal.
- **Investment Sophistication**
  - ✓ **Institutional investors** tend to have a higher degree of investment sophistication than the typical private investor as well as access to more investment resources.
  - ✓ Unlike institutional clients, **private clients** do not normally benefit from the "checks and balances" of a formal investment governance framework. As a result, private clients can be more vulnerable to making "emotional" investment decisions.

1. Private Clients versus Institutional Clients

3. Other Distinctions

- **Regulation**
  - ✓ In most countries, the regulatory environment is different for individual and institutional investors.
  - ✓ In some cases, separate regulators focus on these two investor segments. In other cases, the individual and institutional investor groups share a common regulator but are subject to different regulations.
- **Uniqueness and Complexity**
  - ✓ **Private clients** with similar sets of financial considerations and objectives may nevertheless pursue different investment strategies.
    - ◆ Multiple factors may influence each individual's preferences, needs, and concerns—notably, family background and upbringing, work history, sources of wealth, investment experience, groups of friends, and geographic location.

1. Private Clients versus Institutional Clients

Summary		Private clients	Institutional clients
Investment objectives		diverse investment objectives (may not be clearly defined or quantified)	specific, clearly defined investment objectives
Constraints	**Time horizon**	a shorter time horizon	theoretically infinite
	Scale	smaller (more limitations)	larger
	Taxes	significant and complex	taxable income may be more favored by a tax-exempt institution
Other Distinctions	**Investment Governance**	less formal governance structure	formal governance structure
	Investment Sophistication	emotional	a higher degree (more investment resources)
	Regulation	separate regulators or shared regulatory structure	
	Uniqueness and Complexity	Similar financial and objective, different investment strategies	Similar objective , similar strategies

2. Understanding Private Clients

- **Information Needed in Advising Private Clients**
  - Personal Information
  - Financial Information
  - Private Client Tax Considerations
- **Client Goals**
- **Private Client Risk Tolerance**
- **Technical and Soft Skills for Wealth Managers**

2.1 Information Needed in Advising Private Clients

- **1. Personal Information**
  - the client's family situation, including marital status, the number of children and grandchildren, and the ages of family members;
  - proof of client identification;
  - employment and career information;
  - the sources of a client's wealth;
  - investment background;
    - ✓ return objective; liquidity preferences or a desire to consider environmental, social, and governance (ESG) issues;
  - financial objectives and risk tolerance.

2.1 Information Needed in Advising Private Clients

➢ **2. Financial Information**

Assets	Liabilities
• Cash and deposit accounts • Brokerage accounts • Retirement accounts • Other employee benefits, such as restricted stock or stock options • Ownership interests (stock) in private businesses • Cash-value life insurance • Real property, including residences, rental property, and land • Other personal assets (e.g., automobiles, art, or jewelry)	• Consumer debt, such as credit card balances and loans outstanding • Automobile loans • Student loans • Property-related loans, such as mortgages and home equity loans (or lines of credit) • Margin debt in brokerage accounts

2.1 Information Needed in Advising Private Clients

- **3. Private Client Tax Considerations**
  - **Common Tax Categories**
    - ✓ **Taxes on income**. These include taxes on salaries, interest, dividends, capital gains, and rental income.
    - ✓ **Wealth-based taxes**. These include taxes on the holding of certain types of property (e.g., real estate) and taxes on the transfer of wealth (e.g., taxes on inheritance).
    - ✓ **Taxes on consumption/spending**. These include sales taxes and value-added taxes.

2.1 Information Needed in Advising Private Clients

- **3. Private Client Tax Considerations--Basic Tax Strategies**
  - **Tax avoidance**. (**conform** to both the spirit and the letter of the tax codes of jurisdictions with taxing authority.) vs. **Tax evasion** (circumventing tax obligations by illegal means) .
    - ✓ **Tax-exempt accounts:** permit tax-free earnings and future withdrawals; **wealth transfer techniques.**
  - **Tax reduction**.
    - ✓ tax-exempt bonds; tax-efficient asset classes
  - **Tax deferral**.
    - ✓ By deferring the recognition of certain taxes until a later date, clients can benefit from compounding portfolio returns that are not diminished by periodic tax payments.
    - ✓ Some investors in a progressive tax system may also seek to defer taxes because they anticipate lower future tax rates.
    - ✓ limit portfolio turnover.

Example

- Roseanna Rodriguez meets with her wealth manager, Raj Gupta, CFA, to discuss her investment strategy and financial plan. Gupta mentions the importance of tax strategies in Rodriguez's financial plan and makes three recommendations:
  - Invest in two different account types:
    - An account that permits both earnings and future withdrawals to be tax-free and
    - An account that permits earnings to accumulate tax-free but requires that taxes be paid when assets are withdrawn from the account.
  - Reduce exposure to an asset class with undesirable tax characteristics in favor of an asset class that is more tax-efficient.
  - Delay the sale of shares of a stock position until the year following retirement.
- Identify the basic tax strategy (or strategies)—tax avoidance, tax reduction, or tax deferral—represented in each of the three recommendations.

Example

- **Solution:**
  - The first recommendation represents both tax avoidance and tax deferral. With the account that permits tax-free accumulation and distributions, Rodriguez would be avoiding taxes. With the account that permits tax-free accumulation but results in income taxes upon distribution, Rodriguez would be deferring taxes.
  - The second recommendation is an example of tax reduction because the recommended asset class would incur lower taxes.
  - The third recommendation is an example of tax deferral and may also be an example of tax reduction if Rodriguez's tax rate declines after retirement.

2.1 Information Needed in Advising Private Clients

- **4. Other Relevant Information**
  - Estate plan (in applicable jurisdictions), copies of relevant legal and governing documents, such as wills and trust documents;
  - Life insurance, disability insurance, excess liability coverage, and any other relevant insurance coverage;
  - Wealth managers and clients normally agree on who can approve and/or change investment policies, who can authorize trading activity, and who can authorize money transfers.
  - Wealth managers seek information regarding clients' service needs and expectations.
  - The wealth manager and the client should have a clear understanding of what information should and should not be shared with other service professionals.

2.2 Client Goals

- Financial goals are **not always apparent**, **defined**, or **measurable**: they may be expressed by clients as wishes, desires, or aspirations.
  - **Planned Goals:** Planned goals are those that can be reasonably estimated or quantified within an expected time horizon.
    - ✓ **Retirement**. Maintaining a comfortable lifestyle beyond their working years is a goal for most clients.
    - ✓ **Specific purchases**. Tend to be a function of the level of wealth and/or stage of life.
    - ✓ **Education**. Clients often wish to fund their children's education.
    - ✓ **Family events**.(e.g. weddings)
    - ✓ **Wealth transfer**. When clients have a definite amount of inheritance that they wish to transfer, this goal may need to be prioritized over other goals.
    - ✓ **Philanthropy**. Clients often wish to make charitable donations during or after their lifetime.

2.2 Client Goals

- **Unplanned Goals:** Unplanned goals are those related to unforeseen financial needs.(difficult to estimate the **timing** and the **amount of funding needed**)
  - ✓ **Property repairs**. Although households may be insured against losses or catastrophes, clients may face additional spending needs if insurance does not fully cover such events.
  - ✓ **Medical expenses**. Private client households normally have medical insurance for illness or hospitalization, but health insurance may not cover all medical expenses. A related issue in some locations is the potential cost of elder care for oneself or one's family members.
  - ✓ **Other unforeseen spending**.

➢ When establishing client goals, private wealth managers consider **goal quantification, goal prioritization, and goal changes**.

Example - Client Goals

- Mr. C.Y. Lee is a managing director for the investment firm Acme & Bass, which is located in the Asia-Pacific region. Lee is 43 years old, is married, and has two children, ages 12 and 10. He and his family reside in a home that they own in Singapore. In a conversation with his wealth manager, Lee states that he wishes to fund the undergraduate tuition for his children to study abroad. Lee expects the tuition cost to be approximately £40,000 per year. Lee also wishes to fund his children's weddings at some point in the future. Because the education costs will occur in the next 5–10 years, Mr. Lee states that they are his top priority.
- Lee anticipates working until age 65 and does not know how much he and his wife will need to fund their retirement lifestyle. He mentions his desire to purchase a flat in London and let (rent) it as part of their retirement plan. The flat would cost approximately £1.5 million. Lee is also concerned about the future health care expenses of his wife's parents and to what degree he and his wife may need to support them financially.

Example - Client Goals

1. **Identify Lee's planned goals.**

   Lee's planned goals are (a) funding his children's education; (b) funding his children's weddings; (c) funding his and his wife's retirement; and (d) purchasing and subsequently letting (renting) a flat in London.

2. **Identify Lee's unplanned goals.**

   Lee's unplanned goals relate to the future health care expenses of his wife's parents, as well as possible uninsured property repairs for the Lee's Singapore residence and, if purchased, their London flat.

Example - Client Goals

3. **Discuss the issue of goal quantification for Lee.**

   Lee has quantified the education funding goal and the flat purchase. He and his wealth manager should work to estimate the cost of the weddings for Lee's children and the anticipated retirement lifestyle needs for Lee and his wife.

4. **Discuss the issue of goal prioritization for Lee.**

   Lee states that his first priority is education funding for his children. However, the timing of a need should not be the sole determinant of goal priority. If funding their children's education costs will leave Lee and his wife unprepared for retirement, for example, they may wish to reevaluate their priorities.

2.3 Private Client Risk Tolerance

- **Key terms for a set of risk-related concepts:**
  - **Risk tolerance** refers to the level of risk an individual is **willing** and **able to bear**. Risk tolerance is the inverse of risk aversion.
  - **Risk capacity** is the **ability** to **accept financial risk**. The key difference between risk capacity and risk tolerance is that risk capacity is **more objective in nature**, while risk tolerance relates to **an attitude**.
  - **Risk perception** is an individual's **subjective assessment of the risk** involved in an investment decision's outcome.
    - ✓ How a client perceives the riskiness of an investment decision or the investment climate—depends on the **circumstances** involved.

2.3 Private Client Risk Tolerance

- **Risk tolerance:**
  - Willingness (Risk tolerance)
    - ✓ Investment style
    - ✓ Psychological profile
    - ✓ Self-statement
  - Ability (Risk capacity).
    - ✓ Time horizon
    - ✓ Relative portfolio size (spending needs/portfolio size)

Situation		Risk tolerance
Willingness > Ability		Ability (Education)
Willingness < Ability	Return Objective = Willingness	Willingness (Reevaluation)
	Return Objective = Ability	Ability (Education)

2.3 Private Client Risk Tolerance

- Wealth managers often utilize **questionnaires** to assess clients' risk tolerance.
  - The result of a risk tolerance questionnaire, typically a numerical score, is often used as an input in the investment planning process.
- **Risk Tolerance Conversation** enable the wealth manager to educate a client about investment risk.
- Clients often have **multiple goals or objectives**, their risk tolerance may vary for different goals.
  - a low risk tolerance with respect to near-term goals but a higher risk tolerance when it comes to longer-term goals.

2.4 Technical and Soft Skills for Wealth Managers

➢ Technical Skills

- Technical skills represent the **specialized knowledge and expertise** necessary to provide investment advice to private clients.
  - ✓ Capital markets proficiency.
  - ✓ Portfolio construction ability.
  - ✓ Financial planning knowledge.
  - ✓ Quantitative skills.
  - ✓ Technology skills.
  - ✓ Language fluency.

2.4 Technical and Soft Skills for Wealth Managers

- **Soft Skills (non-technical)**
  - Soft skills typically involve **interpersonal relationships**—that is, the ability to effectively interact with others.
    - ✓ Communication skills.
    - ✓ Social skills.
    - ✓ Education and coaching skills.
    - ✓ Business development and sales skills.

Example

- John Müller, CFA, a private wealth manager, recently received feedback from clients and colleagues as part of his performance review. Clients commented favorably on how Müller coordinates with external tax and legal professionals and on how well he listens to and understands his clients' needs. Colleagues remarked on Müller's broad knowledge of traditional and alternative asset classes and his ability to obtain new client engagements.
- Describe which technical and soft skills Müller demonstrated

Example

- **Solutions:**
  - In his performance review, Müller demonstrated the technical skills of capital markets proficiency and financial planning knowledge.
    - ✓ Müller's capital markets proficiency was shown through his broad knowledge of traditional and alternative asset classes,
    - ✓ while his financial planning knowledge was shown by his successful coordination with tax and legal professionals.
  - Müller demonstrated the soft skills of communication and business development and sales.
    - ✓ Communication skills were shown by his ability to listen well and understand client needs,
    - ✓ while business development and sales skills were shown by his record of obtaining new client engagements.

3. Investment planning

- After developing an understanding of their clients, wealth managers begin **the process of helping clients meet their objectives**.
  - **Capital Sufficiency Analysis (Capital needs analysis)**
    - ✓ The process by which a wealth manager determines whether a client has, or is likely to accumulate, sufficient financial resources to meet his or her objectives.
  - **Retirement Planning**

3.1 Capital Sufficiency Analysis

- **Methods for Evaluating Capital Sufficiency**
  - **Deterministic Forecasting Method**
    - ✓ Portfolio growth occurs in **a straight-line manner**.
    - ✓ Inputs
      - ◆a portfolio return assumption (r);
      - ◆the current value of the portfolio (PV);
      - ◆anticipated future contributions to the portfolio (+CF);
      - ◆cash flows from the portfolio that represent client needs (-CF).
    - ✓ **Simple to understand;**
    - ✓ **Unrealistic** with respect to the variability in potential future outcomes.

3.1 Capital Sufficiency Analysis

- **Monte Carlo simulation**
  - ✓ Generates random outcomes according to assumed **probability distributions** for separate key variables.(not whole portfolio).
  - ✓ Allows a wealth manager to model the uncertainty or variability in the future outcome.

- The table shows the percentage of trials at a given horizon in which the client successfully achieved her objective.

Monte Carlo Simulation Results

Percentile	Year 10 Portfolio Value	Year 15 Portfolio Value	Year 20 Portfolio Value
5th	$3,519,828	$3,651,264	$3,647,328
25th	$1,981,861	$1,698,449	$1,530,372
50th	$1,239,837	$843,820	$569,974
75th	$765,821	$305,126	($249,205)
95th	$197,179	($264,048)	($1,402,608)
Successful Trials	**98%**	**88%**	**69%**

Example

- Based on Exhibits 1 and 2, the probability that Njau will be able to meet her charitable goal is *closest* to:
  A. 25%.
  B. 50%.
  C. 75%.

Exhibit 1 Selected Client Information Items for Njau

Liquidity needs	$500,000 charitable pledge to Udhamini payable in 15 years
Risk tolerance	Moderate
Asset allocation	40% equities and 60% fixed income

Exhibit 2 Monte Carlo Simulation Results for Charitable Pledge (adjusted for inflation)

	Year 10 Portfolio Value ($)	Year 15 Portfolio Value ($)	Year 20 Portfolio Value ($)
25th %	501,288	729,230	1,035,373
50th %	405,927	553,803	767,448
75th %	331,056	422,746	563,039

Example

- **Correct Answer: B.**
  - The Monte Carlo simulation shows that Njau has a 50% probability of having an amount exceeding $553,803 in Year 15. Since Njau's charitable pledge goal to Udhamini is $500,000, she has a slightly greater than 50% probability of meeting or exceeding her charitable pledge goal in Year 15.

3.1 Capital Sufficiency Analysis

➢ Interpreting Monte Carlo Simulation Results

- Wealth managers tend to guide clients toward a **75%–90% probability** of success, although no industry standard range exists.
- When the probability of success falls below an acceptable range, **potential solutions** include the following:
  - ✓ Increasing the amount of contributions toward a goal
  - ✓ Reducing the goal amount
  - ✓ Delaying the timing of a goal (e.g., retiring a few years later than originally planned)
  - ✓ Adopting an investment strategy with higher expected returns, albeit within the client's acceptable risk tolerance and risk capacity

3.2 Retirement Planning

➢ Analyzing Retirement Goals

- Wealth managers may use several different methods to analyze a client's retirement goals.
- Three common methods
  - ✓ **Mortality tables**
  - ✓ **Annuities**
  - ✓ **Monte Carlo simulation**

3.2 Retirement Planning: Mortality Tables

➢ A **mortality table** indicates individual life expectancies at specified ages.

Plan Year	Client Age	Life Expectancy	Survival Probability
0	72	12.0	100%
1	73	11.4	97%
2	74	10.8	93%
3	75	10.2	90%
4	76	9.7	86%
5	77	9.1	82%

- In practice, a wealth manager can use a mortality table to estimate the **present value of a client's retirement spending needs** by assigning associated **probabilities based on life expectancy to annual expected cash outflows**.
- **Drawbacks:**
  - ✓ an individual client's probability of living to a certain age may exceed that of the general population.
  - ✓ Cannot model difference scenarios.

3.2 Retirement Planning: Annuities

- Annuities provide a series of fixed payments, either for **life** or for **a specified period**, in exchange for a lump sum payment.
  - Two basic forms.
    - ✓ With an immediate annuity, an individual (called the "annuitant") pays an initial lump sum, in return for a guarantee of specified future monthly payments—**beginning immediately**—over a specified period of time.
    - ✓ With a deferred annuity, the specified future monthly payments **begin at a later date**.
- A relatively simple way of calculating the present value of a client's desired retirement spending is by pricing an annuity.

3.2 Retirement Planning: Monte Carlo Simulation

- **Advantages** of Monte Carlo Simulation
  - its applicability to the **client's actual asset allocation**.
  - **aggregating the results of many trials of probability-based estimates of key variables**, the overall probability of meeting retirement needs is generated,
  - can **flexibly model different scenarios** and **explore issues that are important to clients**.
- **Limitations** of Monte Carlo Simulation
  - It is only a method of estimation; it **cannot predict the future**.
  - the output from Monte Carlo simulation can **be highly sensitive to small changes in input assumptions.**
  - Monte Carlo output includes the probability of reaching a goal (or goals) **but not necessarily the "shortfall magnitude."**

Example

- **Sili next uses three approaches to analyze his retirement goals:**
  - Approach 1 Sili considers the probability that he will live to a certain age and then predicts his inflation-adjusted retirement spending according to the probability that he will still be living in a given year. This approach allows him to estimate the present value of his retirement spending needs by assigning associated probabilities to annual expected cash outflows.
  - Approach 2 Sili determines that he can specify his level of annual spending during retirement and that he can model that spending as a series of fixed payments. He calculates the present value of that series of payments as of the day of his retirement, resulting in the amount of money that he will need to fund his retirement goals.
  - Approach 3 Sili models the uncertainty of each key variable individually by assigning each one its own probability distribution and then generates a large number of random outcomes for each variable. He aggregates the outcomes to determine an overall probability of reaching his objectives. Sili sees this as a flexible approach that allows him to explore various scenarios, including unforeseen expenses.

Example: Correct Answers

Approach 1	**Identification:**	Mortality Tables
	Explanation:	A mortality table allows for estimating the present value of retirement spending needs by associating each outflow with a probability based on life expectancy. Sili uses a mortality table to determine the probability that he will live to a certain age. This information allows him to predict his anticipated inflation-adjusted retirement spending according to the probability that he will be living in a given year. A mortality table illustrates an individual's life expectancy at any given age. A wealth manager can use a mortality table to estimate the present value of a client's retirement spending needs by assigning associated probabilities to annual expected cash outflows.
Approach 2	**Identification:**	Annuity Method
	Explanation:	The calculated price of an annuity equals the present value of a series of future fixed outflows during retirement. A relatively simple way for Sili to calculate the present value of his desired retirement spending is by pricing an annuity. Annuities provide a series of fixed payments, either for life or for a specified period, in exchange for a lump sum payment.

Example: Correct Answers

Approach 3	**Identification:**	Monte Carlo Simulation
	Explanation:	Monte Carlo simulation yields an overall probability of meeting retirement needs by aggregating the results of many trials of probability-based estimates of key variables, and it is a flexible approach for exploring different retirement scenarios. Monte Carlo simulation can analyze the likelihood of Sili's portfolio meeting his anticipated retirement needs. This simulation models the uncertainty of the key variables and the uncertainty or variability in the future outcome. A Monte Carlo simulation uses assumptions of probability distributions for the key variables and then runs a large number of independent trials that generate many random outcomes. These outcomes are then aggregated to determine the probability of Sili reaching his investment objectives. An advantage of Monte Carlo simulation for retirement planning is its flexibility in modeling and exploring different scenarios. Typically, retirement goals are more complex than a fixed, annual cash flow need. For instance, if Sili wishes to determine the effect of a significant purchase/gift or large unforeseen expenses, he can model these scenarios with a Monte Carlo simulation.

3.3 Behavioral Considerations in Retirement Planning

- **Heightened loss aversion**. Some studies suggest that retirees are much more loss-averse than younger investors.
- **Consumption gaps**. Due to loss aversion and uncertainty about future financial needs, many retirees spend less than economists would predict, resulting in a gap between actual and potential consumption.
- The "**annuity puzzle".** Individuals tend **not** to prefer to invest in annuities.
  - Explanations for the puzzle include investors' reluctance to give up hope of substantial lifestyle improvement, their dislike of losing control over the assets, and, in many cases, the high cost of annuities.
- **Preference for investment income over capital appreciation**. Evidence for this behavior includes the tendency of investors to spend dividend income rather than selling shares of securities and spending the proceeds.
  - One possible explanation is that investors lack self-control with respect to spending. This theory suggests that spending only the income and not the principal is a self-control mechanism.

4. Investment Policy Statement

- The investment policy statement (IPS) is **a written planning document** that describes a client's investment objectives and risk tolerance over a relevant time horizon, along with the constraints that apply to the client's portfolio.
- The IPS is also **an operating manual**, listing key ongoing management responsibilities.
- **Advantages**
  - One advantage is that the IPS **encourages investment discipline** and **reinforces the client's commitment** to follow the strategy.
  - A second advantage is that the **IPS focuses on long-term goals** rather than short-term performance.

4. Investment Policy Statement

- An investment policy statement (IPS) for an individual includes the following parts:
  - Background and Investment Objectives
  - Investment Parameters
  - Portfolio Asset Allocation
  - Portfolio Management
  - Duties and Responsibilities
  - IPS Appendix

4.1 Background and Investment Objectives

- The client's background and investment objectives are **critical parts** of the IPS.
  - Background items commonly include the client's name and age, as well as relevant personal and financial information.
  - Common objectives include funding lifestyle needs during retirement, supporting family members, funding philanthropic activities, and meeting bequest goals.
- Investment objectives should be **detailed and quantified** whenever possible.
- In a situation involving multiple objectives, the wealth manager should note **which of the objectives is primary**.

4.1 Background and Investment Objectives

- The investment objective, when linked to the client's asset allocation and the wealth manager's capital market assumptions, should provide the basic inputs to a **capital sufficiency analysis**.
  - Whenever the capital sufficiency analysis does not support the investment objective, the wealth manager must work with the client to establish **a revised objective** that the manager judges to be achievable.
- The IPS should include the **market value of the portfolio** and of the **accounts** that make up the portfolio。
- The background and investment objectives section should describe
  - **any other investment assets** the client may have outside of the portfolio
  - **any cash flows from external sources.**

Example - Background and Investment Objectives

- Huang Zhuo Wei, age 51, is a private investor in Singapore. Wei is an engineer by trade but has also been successful in real estate development. His portfolio consists of CNY 16.5 million in a liquid securities portfolio, including some common stock positions in which he has large embedded capital gains, and several real estate investments valued at approximately CNY 9 million (combined). He expects to make additional real estate investments in the coming years. He estimates that he can invest approximately CNY 330,000 per year, inflation-adjusted, in real estate until retirement. He has a much higher than average tolerance for volatility, and historically, his liquid portfolio has consisted mostly of large-cap stocks of technology companies. He has stated that his time horizon is 10 years, since he anticipates retiring in approximately 10 years. He estimates that he will need approximately CNY 1 million per year, inflation-adjusted, to support his lifestyle in retirement. He wishes to grow his investment resources and create a significant inheritance for his children.

Example - Background and Investment Objectives

- **Discuss how Wei's wealth manager should create the investment objectives section of Wei's IPS.**

  The purpose of this portfolio is to **support Wei's lifestyle in retirement** and to **provide an inheritance for his children**. Aside from the investment assets in his portfolio, Wei **has private real estate investments valued at approximately CNY 9 million** and is likely to add to this segment of his net worth over the next several years. Wei does not anticipate needing distributions from this portfolio for at least 10 years.

  Wei estimates an annual, inflation-adjusted lifestyle need of approximately CNY 1 million per year beginning at his retirement in 10 years. His cash needs will be satisfied in part through portfolio distributions and in part from his real estate portfolio. The wealth manager will continue to work with Wei to quantify his bequest objective and ensure that his portfolio distribution rate is sustainable throughout his retirement.

4.2 Investment Parameters

- **1. Risk Tolerance**. Wealth managers should consider the client's **ability** and **willingness** to withstand portfolio volatility.
- **2. Investment Time Horizon**. A client's investment horizon is indicated in this section, but often as **a range** rather than a specific number of years.
  - e.g. exceeds 15 years, less than 10 years.

Example - Investment Time Horizon

- In Example - Background and Investment Objectives, Huang Zhuo Wei stated that his investment horizon is 10 years because he expects to retire at that point.
- **Discuss how his wealth manager should reflect Wei's investment horizon in the IPS.**

  Wei's true investment horizon is through retirement, a period that likely will be much longer than 10 years. His wealth manager should describe his **time horizon as exceeding 10 years**.

4.2 Investment Parameters

3. Asset Class Preferences

- The IPS should indicate the asset classes that will comprise a client's portfolio.
- Alternatively, the wealth manager may list the asset classes that the client has not approved.
- Some wealth managers include a **short narrative** about the importance of asset allocation and the process that the wealth manager used to educate the client about asset class risk and return characteristics.
  - ✓ The narrative captures in written form the risk–return trade-off that the client explored with the wealth manager during the information-gathering process.

4.2 Investment Parameters

➢ **4. Other Investment Preferences**

- This section may contain a general comment about or specific criteria about for these **ESG** preferences.
- Other investment preferences described in this section might be a "**legacy**" holding that the client wishes to retain or a non-recommended investment that the client wishes to make.

4.2 Investment Parameters

- **5. Liquidity Preferences**.
  - If the client has liquidity needs that are not established in the background and investment objectives section (e.g. a cash reserve).
  - If the client's liquidity preference constrains asset class selection decisions or implementation decisions.
- **6. Constraints**.
  - investment options in certain accounts (e.g. employer-sponsored defined contribution retirement plan account)
  - large unrealized capital gains
  - ESG-related constraints

4.3 Portfolio Asset Allocation

- This section contains the **target allocation** for **each asset class** in the client's portfolio.
  - Wealth managers who use a **strategic asset allocation** approach typically define a target allocation for each asset class as well as **upper and lower bounds**.
  - Wealth managers who use a **tactical asset allocation** approach may list asset class target "**ranges**" rather than specific target allocation percentages.

4.4 Portfolio Management

- **1. Discretionary Authority**
  - **Full discretion** means that the wealth manager is free to implement rebalancing trades and replace fund managers **without prior client approval**.

4.4 Portfolio Management

2. Rebalancing

- Some wealth managers use a "**time-based**" rebalancing policy, whereby client portfolios are rebalanced at a certain time interval regardless of the difference between current asset class weights and target asset class weights.
- It is more common for wealth managers to use a "**threshold-based**" rebalancing policy, whereby the manager initiates rebalancing trades when asset class weights deviate from their target weights by a pre-specified percentage.
- The rebalancing section also sets expectations for how **frequently** the wealth manager reviews a client's portfolio for possible rebalancing opportunities.

4.4 Portfolio Management

- **3. Tactical Changes**
  - Section indicates
    - ✓ **Whether**
    - ✓ **under what circumstances**
    - ✓ **to what degree**
  - the wealth manager is permitted to go outside those ranges when executing a tactical change.
    - ✓ Note that a wealth manager who uses only a strategic asset allocation approach would likely not include this section in the IPS.

4.4 Portfolio Management

➢ **4. Implementation**

- This section includes information about the **investment vehicles** the wealth manager recommends to clients.
  - ✓ third-party money managers ⇒ due diligence process; frequency; quantitative screens used in the due diligence process; qualitative criteria that influence the manager selection and retention decisions;
  - ✓ proprietary investment;
- This section indicates whether the wealth manager **prefers** to invest in mutual funds, exchange-traded funds (ETFs), or individual securities.
- A general discussion of the incremental cost of using third-party money managers is relevant here.

4.5 Duties and Responsibilities

- **1. Wealth Manager Responsibilities**
  - Developing an appropriate asset allocation
  - Recommending or selecting investment options, such as pooled investment vehicles or individual securities
  - Monitoring the asset allocation and rebalancing
  - Using derivatives, leverage, short sales, and repurchase agreements (repos)
  - Monitoring the costs associated with implementing the investment strategy
  - Monitoring the activities of third-party service providers (e.g., asset managers and/or custodians)
  - Drafting and maintaining the IPS
  - Reporting of performance, including an indication of the base currency
  - Reporting of taxes and financial statements
  - Voting proxies
  - Assisting with the preparation of agreements associated with private fund offerings

4.5 Duties and Responsibilities

2. IPS Review

- The wealth manager sets expectations for how **frequently** the client and wealth manager will review the IPS.
- As part of this review, it is important for the client to affirm that the **investment objectives remain accurate**.
- Likewise, it is important for the wealth manager to confirm that the **strategy remains likely to meet those objectives**.

4.6 IPS Appendix

- **1. Modeled Portfolio Behavior**
  - Modeled portfolio behavior describes **a range of possible performance outcomes** over various holding periods and can provide more value to the client than merely stating the return objective or the "expected compound return."
- **2. Capital Market Expectations**
  - Capital market expectations include the wealth manager's modeled portfolio statistics—that is, the **expected returns** and **standard deviations** of asset classes, as well as modeled **correlations** between asset classes.

5. Portfolio Construction and Monitoring

- **Portfolio Construction**
  - Traditional Approach
  - Goals-Based Investing Approach
- **Portfolio Reporting and Review**
  - Portfolio Reporting
  - Portfolio Review
- **Evaluating the Success of an Investment Program**
  - Goal Achievement
  - Process Consistency
  - Portfolio Performance
  - Definitions of Success

5.1 Portfolio Construction

➢ Traditional Approach

- Constructing portfolios for private clients involves several key steps:
  - ✓ **1) Identify asset classes**. The wealth manager identifies the asset classes that may be appropriate for the client's portfolio.
  - ✓ **2) Develop capital market expectations**. The wealth manager considers the expected returns, standard deviations, and correlations of asset classes in relation to the client's investment horizon.
  - ✓ **3) Determine portfolio allocations**. Wealth managers sometimes use mean–variance optimization to identify possible portfolio allocations that meet the client's return requirement and risk tolerance. (Mean–variance optimization, MVO)

5.1 Portfolio Construction

➢ Traditional Approach

- Constructing portfolios for private clients involves several key steps:
  - ✓ **4) Assess constraints**. As we noted earlier in the reading, private clients often face certain constraints.
  - ✓ **5) Implement the portfolio**. At this stage, the wealth manager faces several decisions. ⇒ active or passive; manager selection; factors(value, Size); individual securities or pooled vehicles; currency hedging;
  - ✓ **6) Determine asset location**. When a client's portfolio comprises **multiple accounts**, the wealth manager must determine **where to allocate** the various asset classes and securities.

5.1 Portfolio Construction

- **Goals-Based Investing Approach**
  - The manager then performs **mean–variance optimization** for **each goal** "portfolio" rather than at the overall portfolio level.
  - Goal portfolios are optimized either to **a stated maximum level of volatility** or to **a specified probability of success**.
  - **An advantage** of the goals-based investing approach is that it may be easier for clients to express their risk tolerance on a goal-specific basis rather than at the overall portfolio level.
  - **A disadvantage** is that the combination of goal portfolio allocations may not lead to optimal mean–variance efficiency for the entire portfolio.
  - The following steps are the same as Traditional Approach：
    - ✓ asset classes, implementing the portfolio, and determining asset.

5.2 Portfolio Reporting and Review

- **Portfolio reporting** involves **periodically** providing clients with information about their **investment portfolio** and **performance**.
  - A portfolio asset allocation report, which may reflect strategic asset allocation targets
  - A performance summary report for the current (often year-to-date) period
  - A detailed performance report, which may include asset class and/or individual security performance
  - A historical performance report covering the period since the inception of the client's investment strategy
  - A contribution and withdrawal report for the current period
  - A purchase and sale report for the current period
  - A currency exposure report detailing the effects of exchange rate fluctuations

5.2 Portfolio Reporting and Review

- Wealth managers often face an **inherent conflict** between the client's investment horizon, which may be decades in length, and the typical performance evaluation horizon, which may be one calendar quarter or one year.
- When goals-based investing is used, portfolio reporting may focus on the **client's progress toward a goal** (or goals) rather than on the (often short-term) performance of asset classes or individual securities.
- **Benchmark reports** are another component of portfolio reporting.

Example - Portfolio Reporting

- Simon Crosby provides investment advice for clients in Canada. Each quarter, he sends his clients only a detailed list of all the investments in their portfolio. The list includes the acquisition cost, the acquisition date, and the current market value for each investment, as well as the percentage gain or loss on each investment relative to its cost.
- **Discuss how Crosby's reporting practice can be more effective.**

  Crosby's reports do not enable his clients to determine their asset allocation or the performance of their overall portfolios. Crosby could address this issue by including a portfolio asset allocation report and a performance report. The current reporting structure also does not provide transaction details, such as portfolio contributions, withdrawals, interest/dividends, and capital appreciation, all of which could be provided by a portfolio summary report. Finally, Crosby's portfolio reporting can be improved by including market commentary, typically in a letter or email.

5.2 Portfolio Reporting and Review

- **Portfolio reviews** provide an opportunity for the wealth manager to revisit the client's **investment plan** and reinforce the **appropriateness of the strategy**.
  - As part of the portfolio review, the wealth manager typically inquires about **any changes** in the client's **objectives, risk tolerance, or time horizon**.
  - Another common aspect of a portfolio review is a comparison of the client's **asset allocation** to **the target allocation**.
  - The key difference between portfolio reporting and portfolio review is that the wealth manager is **more actively engaged in a review**.

5.3 Evaluating the Success of an Investment Program

1. Goal Achievement

- A successful investment program for a private client is one that achieves the client's goals/objectives **with an acceptable amount of risk**.
- The client should remain likely to **meet his or her long-term objectives** without meaningful adjustments to the plan.

5.3 Evaluating the Success of an Investment Program

- **2. Process Consistency.** The following are some points that wealth managers may consider in evaluating success:
  - If the wealth manager selects third-party fund managers to implement the client's portfolio, how have the managers performed relative to their own benchmarks? When the wealth manager has recommended fund manager changes, have those changes improved or detracted from subsequent portfolio performance?
  - Has the wealth manager followed the prescribed process for rebalancing the client's portfolio?
  - Has the wealth manager taken steps to reduce costs in the client's portfolio? Is the wealth manager overlooking any opportunities to reduce fees and expenses?

5.3 Evaluating the Success of an Investment Program

- **2. Process Consistency.** The following are some points that wealth managers may consider in evaluating success:
  - Has the wealth manager considered taxation issues in the client's portfolio?
  - For clients with ESG preferences, has the wealth manager implemented the client's portfolio strategy accordingly?
  - If the wealth manager uses tactical asset allocation, how has tactical positioning impacted the portfolio's performance?
  - Is the wealth manager maintaining an ongoing dialogue with the client to assess potential changes in the client's goals, time horizon, risk tolerance, and other relevant factors?
  - Where applicable, has the wealth manager coordinated the investment strategy with the client's estate plan and philanthropic objectives?

5.3 Evaluating the Success of an Investment Program

➢ **3. Portfolio Performance**

- Performance evaluation of a private client's portfolio can be expressed in either **absolute** or **relative** terms.
- An absolute performance benchmark might be inflation plus a fixed percentage or simply a fixed percentage return that relates to a client's capital sufficiency analysis.
- To measure relative returns, a wealth manager compares the client's investment portfolio results to those of an appropriately weighted benchmark.
- It is also important to evaluate whether the portfolio's **actual downside risk** is consistent with the client's risk tolerance.

5.3 Evaluating the Success of an Investment Program

4. Definitions of Success

- When the wealth manager and the client have different definitions of success for the client's investment program, the potential for client disappointment can increase.
- It is good practice for **both parties to agree on the definition of success** in the early stages of the relationship.

Example

- Discuss how successful Smith's investment program has been under Wellesley's management.
  - Oliver Wellesley, CFA, a wealth manager, is preparing to meet with a longtime client, Eva Smith, age 83. Wellesley and Smith began working together when Smith was 64 and preparing for her retirement.
  - She has earned a 6.5% compound annual return with Wellesley as her wealth manager. This return is close to the annual return that Wellesley modeled in his capital sufficiency analysis of Smith's portfolio many years ago.
  - Distributions from Smith's portfolio have adequately met her need for retirement income, which has always been her highest-priority goal.
  - According to Wellesley's most recent capital sufficiency analysis, Smith's portfolio is very likely to meet her retirement income and estate bequest objectives in the future.
  - However, Smith's investment return has trailed the weighted benchmark return by 0.40% since the portfolio's inception and has exhibited slightly more volatility than the benchmark. Smith recently reviewed her IPS and concluded that Wellesley has consistently followed the process outlined in the IPS.

Example

- **Solution:**
  - From the perspective of meeting goals/objectives, Smith's investment program has been successful.
    - ✓ The strategy has met her retirement income needs, and Wellesley's capital sufficiency analysis suggests that she has a high probability of achieving future objectives (including ongoing retirement lifestyle goals and an estate bequest goal).
    - ✓ Also, Wellesley has followed a consistent process, which is an indication of a successful investment program.
    - ✓ However, if Smith and Wellesley agreed that outperforming a weighted benchmark was an important goal for her investment strategy, then the investment program has failed.

6. Ethical and Compliance Considerations

- **Fiduciary Duty and Suitability**
  - **Fiduciary duty** is the obligation to deliver a high standard of care when acting for the benefit of another party.
  - **Suitability**: when judging the suitability of a potential investment, the wealth manager should review many aspects of the client's knowledge, investing experience, and financial situation.
- **Know Your Customer (KYC)**
  - KYC requires wealth managers and their firms to obtain essential facts about every client for whom they open and maintain an account.

6. Ethical and Compliance Considerations

- **Confidentiality**
  - Preserving client confidentiality is critical to maintaining trust in the relationship.
  - This issue can be a particular challenge when a wealth manager advises multiple family members or advises clients who may know one or more of the wealth manager's other clients.
- **Conflicts of Interest**
  - The structure of wealth managers' revenue creates the potential for conflicts of interest.
    - ✓ e.g. recommend only products that generate commissions (and perhaps those with the highest commissions).

6. Ethical and Compliance Considerations

- Several **global regulations** have relevance for private wealth managers.
  - Markets in Financial Instruments Directive (MiFID II, European Union, 2018)
  - Common Reporting Standard (OECD Council/G20, 2014)
  - The Foreign Account Tax Compliance Act (FATCA, United States, 2010)

7. Private Client Segments

- **Mass Affluent Segment**
  - The mass affluent segment is generally focused on **building their investment portfolio** and may have **financial planning needs** (e.g., education funding, cash flow or budget management, and risk management).
  - In servicing the mass affluent segment, wealth managers do **not** typically **customize** their investment management approach for each client.
    - ✓ financial planning needs; insurance; retirement planning.
    - ✓ discretionary portfolio or non-discretionary portfolio.

7. Private Client Segments

- **High-Net-Worth Segment**
  - Wealth managers of high-net-worth clients tend to focus on **customized investment management**, **tax planning**, and **wealth transfer issues** (i.e., estate planning).
- **Ultra-High-Net-Worth Segment**
  - The ultra-high-net-worth segment tends to have multi-generational time horizons, highly complex tax and estate-planning considerations, and **a wider range of service needs**.
    - ✓ bill payment services, concierge services, travel planning, and advice on acquiring assets such as artwork or aircraft; family office.

7. Private Client Segments

- **Robo-advisors (part of the mass affluent client segment).** Robo-advisors have emerged in the mass affluent client segment. These advisors have a primarily digital client interface.
  - Robo-advisor service providers generally charge **lower fees** than traditional wealth management firms.
  - Scalability of technology has enabled robo-advisors to service investors with relatively **small portfolios**.
  - Robo-advisors gather information—such as risk tolerance, time horizon, goals/objectives, assets, and liabilities—directly from the client via web-based **questionnaires**.
  - Using **mean–variance optimization** or other techniques, the robo-advisor recommends a suitable asset allocation for the client and typically implements the investment strategy using **exchange-traded funds** or **mutual funds**.

7. Private Client Segments

➢ **Summary**

Segments	Asset Level	service personnel	Characteristics
Robo-advisors	less $250,000	Robo-advisors	low-cost; small portfolio; MVO; ETF; mutual fund;
Mass Affluent	$250,000 to $1 million	professional wealth manager	build their portfolio; financial planning needs; non-customized;
High-Net-Worth	$1 million to $50 million	specialized advisers	more customized strategies; tax planning; wealth transfer issues;
Ultra-High-Net-Worth	over $50 million	a wider range of service needs	complex tax situations, estate planning, bill payment, concierge services, travel planning, and advice on acquiring high-end assets; family office.

Reading 22

Topics in Private Wealth Management

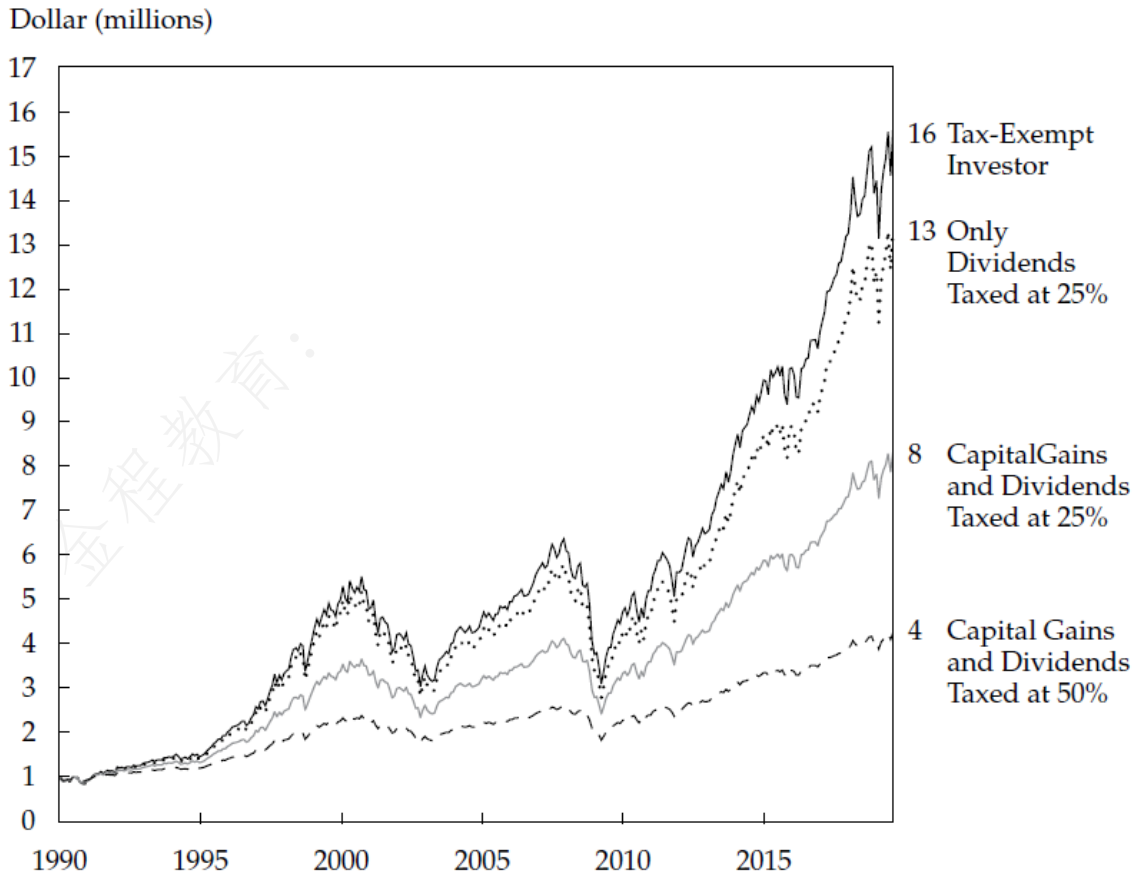
Framework

1. General Principles of Taxation
2. Tax Jurisdiction
3. Tax Efficiency of investments
4. Capital Accumulation and Decumulation
5. Tax Management Strategies
6. Managing Concentrated Positions
7. Wealth Transfer planning

1. Taxation of the Components of Return

- Taxes are an important determinant of the taxable investor's final returns. While fees and trading costs have received a lot of attention in the press and academic spheres, **the erosion of returns due to taxes can be much more significant.**

Exhibit 1 Growth of $1 million in the S&P 500 Index



1. Taxation of the Components of Return

- **General categories of taxes**
  - **1) Income Tax**. Income tax is calculated as a percentage of taxable income, often with different rates applied to various levels of income.
    - ✓ Wages, rents, dividends, and interest earned are commonly treated as taxable income.
  - **2) Gains Tax**. Capital gains are the profits based on price appreciation that result from the sale of an asset, including financial assets.
  - **3) Wealth or Property Tax**. A wealth or property tax most often refers to the taxation of real property (real estate) but may also apply to financial and other assets. Such taxes are generally assessed annually.
  - **4) Stamp Duties**. A number of countries impose a tax on the purchase price of shares or real estate.
    - ✓ Foreign investors may be subject to **higher** rates than domestic investors.
  - **5) Wealth Transfer Tax**. A wealth transfer tax is assessed as assets are transferred from one owner to another using some mechanism other than an outright sale/ purchase transaction.
    - ✓ For examples: estate or inheritance

1. Taxation of the Components of Return

- **Interest, Dividends, and Withholding Taxes**
  - **Double taxation** is a term used to describe situations in which income is taxed **twice**.
  - In the United States, dividends from most domestic companies and qualifying foreign companies are taxed at a **lower tax rate** if you hold the common stock for **at least 60 days** (preferred stock for at least 90 days).
    - ✓ **Qualified dividends** are generally dividends from shares in domestic corporations and certain qualified foreign corporations which have been held for at least a specified minimum period of time. The position must be **unhedged**.
  - Tax ramifications of **cross-border** investments
    - ✓ **Withholding taxes** are often imposed in the country in which the investment is made, most frequently on payments of interest, dividends and royalties.

1. Taxation of the Components of Return

- **Capital Gains Taxes**
  - The **tax basis** is the amount that was paid to acquire an asset, or its **cost basis**.
    - ✓ In the case of equities, this would be the share price multiplied by the number of shares plus commissions and other trading costs.
  - **Step-up on death**, meaning that someone who inherits an asset would have a tax basis **equal to** the fair market value of the asset on the date of death.
  - Capital gains may also be **short-term** or **long-term** capital gains.
- **Real Estate Taxes**
  - Generally, jurisdictions tax the **net income** from a real estate investment, allowing such expenses as maintenance, interest, and depreciation to be deducted from gross income prior to calculating the tax liability.

2. Tax Jurisdiction

- **Main types of tax systems**
  - **1) Tax haven**: no or very low tax rates for foreign investors.
  - **2) Territorial tax systems**: only locally-sourced income is taxed.
  - **3) Worldwide tax systems**: tax all income regardless of its source.
    - ✓ Because countries operating under a worldwide tax system generally impose those taxes only on individuals considered to be residents of that country, residence rules become very important.
      - ◆**Residence rules** specify how much time a person can spend in a country without becoming a taxable resident.
    - ✓ If an individual spends time in more than one country, tax treaties can play an important role in determining tax residence.
      - ◆Most **tax treaties** contain **tie-breaker rules** that prevent an individual from being considered a resident of more than one country at the same time.

Use of Tax Treaties to Enhance the After-tax Return

- Your client is a resident of Hong Kong SAR and is interested in adding "safe haven" assets to a portfolio. The client asked that you consider adding Swiss equites and bonds to the portfolio. (Switzerland has long been considered a "safe haven" for investors; it is at the center of Europe, has a stable political climate, and is economically integrated with most of the world.) After research, you have identified Swiss equities and bonds that you believe will fit with the client's investment profile.
- You contemplate adding to the portfolio the following equities and bonds, with the following estimated returns:
- Swiss equities: CHF200,000, producing annual dividends of CHF5,000 and projected annual appreciation of 5% (CHF10,000)
- Swiss bonds: CHF200,000, producing annual interest payments of 3% (CHF6,000)

Use of Tax Treaties to Enhance the After-tax Return

- In your projections, you assume that the appreciation in the equities will be realized through a sale of the shares at year end. So, for your client the total return on the CHF400,000 portfolio will be:
  - Dividends: CHF5,000
  - Capital gains: CHF10,000
  - Interest income: CHF6,000
  - Total gross income, pre-tax: CHF21,000
  - Projected return: 5.25%
- 1 What questions do you need to ask your client in relation to tax matters, and what information regarding Hong Kong SAR and Swiss taxation do you need in order to determine the after-tax return?
- 2 How can returns on the portfolio be enhanced by focusing on tax treaties?

Use of Tax Treaties to Enhance the After-tax Return

- **Solution to 1:**
- You need to confirm that the client is not a citizen or permanent resident of a jurisdiction that operates under a worldwide tax regime. (For example, US citizens and permanent residents are taxable in the United States even if not currently residing there.) You also need to confirm the Hong Kong SAR tax treatment of the Swiss portfolio. Here, your client confirms that under Hong Kong SAR tax law there is no Hong Kong SAR taxation on interest, dividends, or capital gains earned in relation to the contemplated Swiss investments.
- You also need to understand the Swiss tax position. On review, you confirm with Swiss advisers that Swiss inheritance taxes would not apply to a non-Swiss investor (except on real estate) and that capital gains are tax-free. However, you also learn that Switzerland applies a 35% withholding tax on interest and dividends to foreign investors.
  - Thus, the after-tax return for your client is estimated as follows:
  - Total gross income, pre-tax: CHF21,000
  - 35% Swiss withholding tax on CHF11,000 (dividends and interest): CHF3,850
  - After-tax income: CHF17,150
  - Projected after-tax return: 4.29% (CHF17,150/CHF400,000).

Use of Tax Treaties to Enhance the After-tax Return

- **Solution to 2:**
- You check on whether a tax treaty exists between Hong Kong SAR, the place of residence of your client, and Switzerland, and you find that there is one. Under the treaty, a qualifying resident of Hong Kong SAR is entitled to a reduction in Swiss withholding taxes on both dividends and interest. In the case of dividends, the withholding rate is reduced from 35% to 10%; in the case of interest, the withholding rate is reduced from 35% to 0%.
  - Your calculation of the after-tax return is revised as follows:
  - Total gross income pre-tax: CHF21,000
  - 10% Swiss withholding tax on CHF5,000 (dividends): CHF500
  - 0% Swiss withholding tax on CHF6,000 (interest): CHF0
  - After-tax income: CHF20,500
  - Projected after-tax return: 5.13%
- In order to recover the Swiss withholding tax, your client, with your help, would apply online to the Hong Kong SAR Inland Revenue Department for a Certificate of Resident Status and then submit it online to the Swiss Federal Tax Administration with details on the withholding tax imposed for the processing of the refund.

3.1 Tax Efficiency of investments

- **A tax-efficient strategy** is one that gives up very little of its return to the friction of taxes.
- **Equity portfolios are often more tax efficient.**
  - Dividends on stocks often receive preferential tax treatment.
  - Capital gains are taxed less heavily than ordinary income in many jurisdictions.
  - The flexibility to manage the timing of the sell decisions gives asset managers an additional measure of control over the tax burden.

Tax efficiency	Tax inefficiency
Equity	Alternatives, Derivatives
Lower-yield	Higher-yield
Lower-turnover	Higher-turnover
	"style box" approach

3.2 Measuring Tax Efficiency

- **1) After-tax holding period return**: Returns are adjusted for the tax liability generated in the period.
  - After-tax holding period returns can be **geometrically linked** and **annualized** in the normal way.

$$R = \frac{(Value - Value_0) + income}{Value_0}$$

✓ R = pre-tax holding period return

$$R' = \frac{(Value - Value_0) + income - tax}{Value_0}$$

✓ R′ = after-tax holding period return

$$R' = R - \frac{tax}{Value_0}$$

$$tax = \sum_{i=1}^{n} transaction_i \times t_i$$

  - After-tax returns are **calculated monthly**

$$R'_G = [(1 + R'_1)(1 + R'_2) \ldots (1 + R'_n)]^{1/n} - 1$$

✓ R'_G =cumulative after-tax return

  - It assumes that when capital losses are realized, sufficient capital gains from other investments exist so that the investor may deduct the losses in full.
  - If there are no gains, the deductibility of investment losses can result in an after-tax return that is higher than the pre-tax return.

3.2 Measuring Tax Efficiency

- In many organizations, pre-tax holding period returns are automatically calculated by the firm's accounting systems on a daily basis, while after-tax returns are only calculated monthly. If you want an intra-month after-tax return that accounts for any cash flows during the period, this can be done using the modified Dietz method. We show the calculation of after-tax returns using the modified Dietz method: If, for example,
  - the initial value of the portfolio on 1 January is $500,000,
  - a $3,500 dividend is received on 10 January,
  - the dividend tax rate is 20%, and
  - the monthly pre-tax
  - total return for the portfolio is 2.50%,

then the after-tax return can be approximated as

$$2.50\% - \frac{0.20(3{,}500)}{500{,}000 + \frac{3{,}500(31-10)}{31}} = 2.36\%.$$

3.2 Measuring Tax Efficiency

- **2) After-tax post-liquidation return**: Post-liquidation returns assume that the portfolio is liquidated at the end of a hypothetical investment horizon (usually 1, 3, 5, and 10 years) and the taxes are paid on those gains.
  - The post-liquidation measure allows an investor to consider the impact of the embedded tax liabilities (i.e., the unrealized capital gains) on ending wealth.
  - This is especially useful in the evaluation of commingled funds, such as mutual funds.

$$R_{PL} = [(1 + R'_1)(1 + R'_2) \ldots (1 + R'_n) - \frac{\text{liquidation tax}}{\text{final value}}]^{1/n} - 1$$

$$\text{liquidation tax} = (\text{final value} - \text{tax basis}) \times \text{capital gains tax rate}$$

Calculating the Post-liquidation Return

- A portfolio posts the following pre-tax and after-tax annual returns:

	Pre-Tax Return	After-Tax Return
Year 1	3.0%	2.5%
Year 2	10.0%	9.0%
Year 3	5.0%	4.2%
Year 4	-2.0%	-1.5%
Year 5	5.0%	4.4%
Cumulative Return	22.41%	19.72%
Annualized Return	4.13%	3.66%

- Assume the portfolio has embedded gains equal to 10% of the ending value and must pay capital gains taxes at a 20% rate.
- What is the annualized post-liquidation return over the 5-year period?

Calculating the Post-liquidation Return

- **Solution:**
  - To calculate the post-liquidation return, we must first calculate the ending portfolio value. Given the five annualized after-tax returns shown, the final after-tax portfolio value is calculated as follows:

    $$(1+0.025)(1+0.09)(1+0.042)(1-0.015)(1+0.044) = 1.197$$

  - The after-tax returns compounded in this way account for the tax on distributions and realized capital gains but do not account for any unrealized gains. The assumed tax liability from unrealized capital gains at liquidation is 2% of the final value (10% embedded gain times a 20% tax rate).
  - Therefore, the portfolio value net of the tax liability is 1.177:

    $$1.197 - 0.02 = 1.177,$$

  - and the annualized post-liquidation return is 3.32%:

    $$1.177^{(1/5)} - 1 = 3.32\%.$$

  - This compares to an annualized return for the non-taxable investor of 4.13%.

3.2 Measuring Tax Efficiency

- **3) After-tax excess returns**: Similar to regular returns, after-tax returns can be compared against a benchmark, helping an investor understand whether the **tax drag** is eroding the return benefits of a strategy.

  x = pre-tax excess return = R − B

  x′ = after-tax excess return = R′ − B′

  - ✓ R and B = portfolio and benchmark pre-tax return, respectively
  - ✓ R′ and B′ = after-tax returns for the portfolio and benchmark, respectively

  - The **tax alpha** isolates the benefit of tax management by subtracting the pre-tax excess return from the after-tax excess return:

$$\alpha_{\text{tax}} = \text{tax alpha} = x' - x$$

3.2 Measuring Tax Efficiency

- **4) Tax-efficiency ratio**: This ratio is the after-tax annualized total return divided by the pre-tax annualized total return.

$$TER = \frac{R'}{R}$$

  - **Note** that the tax-efficiency ratio is **not** as useful when **returns are negative**.
    - ✓ For example, if a portfolio had a −10% pre-tax return and −12% after-tax return, the ratio would be 120% (−0.12/−0.10).

Example

EXAMPLE 5 TAX AND THE CITY

Cary Broadshawl lives in New York City and holds a portfolio of stocks, bonds, and funds in a taxable brokerage account. The following table lists the federal and state tax rates that apply to her various investments. The marginal tax rate is the combined income tax rate—federal, state, and local—that applies to an incremental dollar of investment income that the investor earns. In this case, the highest marginal rate adds up to well over 50%, which is a difficult environment for an investor attempting to compound wealth over time.

Income Tax Rates by Jurisdiction	
US Federal income tax rate	37.00%
NY State income tax rate	8.82%
NY City income tax rate	3.88%
Federal net investment income (NII) tax rate	3.80%
Total tax rate on ordinary investment income	53.50%

Example

Some asset classes qualify for preferential income tax rates.

Income Tax Rates by Asset	Tax Rate	Requirement
NY State municipal bond interest income	0.00%	For NY state residents
Out-of-state municipal bond interest income	12.70%	
Capital gains	36.50%	If held longer than 1 year
Qualified dividend income from stocks	36.50%	If held longer than 61 days
US Treasury interest income	40.80%	
Dividend income from REITs	43.50%	
Other fixed-income instruments	53.50%	
Non-qualified dividend income from stocks	53.50%	

Example

Cary's adviser, Mr. Bigg, has constructed a diversified portfolio using mutual funds and exchange-traded funds. The following table highlights some characteristics of those funds, obtained from Mr. Bigg's data service provider.

	Annualized 5-Year Pre-Tax Return	5-Year Return after Taxes on Distributions	5-Year Post-Liquidation Return
Passive Equity ETF	10.85%	10.19%	8.71%
Active Equity Mutual Fund	12.05%	10.21%	9.05%
High-Yield Bond ETF	4.28%	1.72%	1.36%

Note: These returns are net of fund expenses and management fees.

- Calculate the tax-efficiency ratio for each of the funds in the table. Which of the funds is most tax efficient?
  - The tax-efficiency ratios for each of the funds are as follows:
  - Passive Equity ETF: 10.19/10.85 = 94%
  - Active Equity Mutual Fund: 10.21/12.05 = 85%
  - High-Yield Bond ETF: 1.72/4.28 = 40%

Example

- Cary bought 1,000 shares of Microsoft (MSFT) in her brokerage account for $130 per share at the beginning of the month and sold all 1,000 shares at the end of the month for $155 per share. She also received a dividend on MSFT of $0.50 per share during the month. Ignoring any transaction costs, what taxes are due?
  - Cary will realize a $25,000 capital gain on her sale of MSFT (1,000 shares× $25 gain per share). She will owe $13,375 in capital gains tax ($25,000 × 53.50% tax rate). Cary does not qualify for the long-term capital gains tax rate because she did not hold the stock for longer than a year.
  - The $500 MSFT dividend received (1,000 shares × $0.50 per share) creates a $267.50 tax liability ($500 × 53.50% tax rate). Cary must pay the full tax rate because she did not hold the position for longer than 61 days to qualify for the preferential dividend tax rate.
  - Her pre-tax return is 19.62%: (25,000 + 500) /130,000.
  - Her after-tax return is 9.21%: [(25,000 + 500) − (500 × 0.535) − (25,000 × 0.535)]/130,000.

Example

- **Discuss the tax efficiency of Cary's MSFT investment. How could the tax efficiency have been improved?**
  - This transaction was not very tax efficient, with a tax-efficiency ratio of 46% (9.12/19.62).
  - The trading horizon of one month meant that Cary did not qualify for the lower tax rate on dividends and long-term capital gains.
  - If Cary had held the stock for a year, then her transaction would have been much more tax efficient. Assuming she was still able to sell the stock for the same $155 per share after one year (and that she did not receive any further dividends), then her after-tax return would be 12.46%: [(25,000 + 500) − (500 × 0.365) − (25,000 × 0.365)]/130,000. The tax-efficiency ratio would be improved to 64% (12.46/19.62).

Example

- **Discuss the tax efficiency of this same trade assuming a sale price of $120 per share.**
  - If MSFT had fallen to $120 per share, then Cary's pre-tax return would be −7.31%: (−10,000 + 500)/130,000. She would realize a short-term capital loss of $10,000. This loss can be used to offset short-term gains that Cary realized at other times during the same tax year. The potential tax savings is $5,350 ($10,000 × 53.50%).
  - Her after-tax return is −2.99% [(−10,000 + 500 − 500 × 0.535 + 10,000 × 0.535) / 130,000]. Yes, the after-tax return is higher than her pre-tax return.
  - In estimating after-tax returns, we are most concerned with the portfolio impact. In this example, the transaction creates an economic benefit; the loss becomes smaller due to the potential tax savings, increasing the after-tax return.

Example

- **Cary's portfolio also holds several NY State tax-exempt municipal bonds. She plans to hold the bond to maturity. During the month, interest rates declined and the value of the bonds increased by 1%. While Cary didn't buy or sell during the month, she did receive 0.5% of the value of the bonds in interest payments. What are the pre-tax and after-tax returns of her NY state municipal bond portfolio?**
  - The pre-tax return of the municipal bond portfolio is 1.5% (1.0% gain + 0.5% interest).
  - The after-tax return of the portfolio is 1.5%, the same as the pre-tax return. The capital gains are unrealized gains, and the interest income on New York municipal bonds is exempt from federal and state taxes.
  - This is a very tax-efficient portfolio, with a tax-efficiency ratio of 100%. Cary plans to hold the bonds to maturity, so there are unlikely to be any capital gains realized from a sale prior to maturity. If she does sell the bonds prior to maturity, capital gains will likely qualify for the long-term capital gains tax rate. Also, the interest income is exempt from federal and state taxes.

4. Tax-Aware Approaches to Planning

- **Examples of Tax-Aware Approaches to Planning**

Strategic Decisions	Common Tax-Indifferent Approach	Tax-Aware Approach
Financial planning	Use pre-tax growth assumptions	Use after-tax growth assumptions for taxable accounts
Asset allocation	Use pre-tax return and volatility expectations	Use after-tax return and volatility expectations
Asset location	A single allocation across taxable and tax-deferred accounts	Tax-advantaged assets favored in the taxable account
Retirement income planning	Withdraw from retirement accounts first	Optimize withdrawals from taxable and tax-advantaged accounts
Charitable giving	Gift cash	Gift highly appreciated stock

4.1 Impact of taxes on capital accumulation

- **Three principal types of accounts**
  - **1) Taxable account:** the normal tax rules of the jurisdiction apply.
  - **2) Tax-deferred account**: investment and contributions may be made on a pre-tax basis and investment returns accumulate on a tax-deferred basis until funds are withdrawn, at which time they are taxed at ordinary income tax rates(withdrawing tax).
    - ✓ The retirement accounts of individuals are usually tax-deferred.
  - **3) Tax-exempt account**: no taxes are assessed during the investment, contribution, or withdrawal phase, nor are they assessed on investment returns.
    - ✓ Pension funds, endowment funds, and foundations are generally tax-exempt.

4.1 Impact of taxes on capital accumulation

- Value of a **tax-exempt account**
  - $FV = (1 + R)^{n}$
    - ✓ R = pre-tax annual return

- Value of a **taxable account**
  - $FV = (1 + R')^{n}$
    - ✓ R' = after-tax annual returns

- Value of a **tax-deferred account**
  - $FV = (1 + R)^{n}(1 - t)$
  - Pays tax only when assets are **withdrawn** from the account.
    - ✓ Withdrawals are taxed at the applicable income tax rates.

Comparing Accumulations in Different Account Types

- Chen Li lives in a tax jurisdiction with a flat tax rate of 20%, which applies to all types of income and capital gains. Assume that Li has the following account types:
  - Account 1: ¥1,000,000 invested in a taxable account earning 10%, taxed annually.
  - Account 2: ¥1,000,000 invested in a tax-deferred account earning 10%.
  - Account 3: ¥1,000,000 invested in a tax-exempt account earning 10%.
  - Compute the after-tax wealth for each account at the end of 20 years assuming the accounts are liquidated at the end of the horizon.

Comparing Accumulations in Different Account Types

➢ **Solution:**

Future value of taxable, tax-deferred, and tax-exempt accounts	
Account 1	FV = ¥1,000,000 $[1+0.10(1-0.20)]^{20}$ =¥4,660,957
Account 2	FV = ¥1,000,000 $[(1+0.10)^{20}(1-0.20)]$=¥5,382,000
Account 3	FV = ¥1,000,000 $(1+0.10)^{20}$ = ¥6,727,500

4.2 Asset Location

- **Asset location**: the process for determining whether the assets will be held in a taxable, tax-deferred, or tax-exempt account.
- **Rule of thumb:**
  - Tax-efficient assets in the taxable account;
  - Tax-inefficient assets in the tax-exempt or tax-deferred account.
- **For example:**
  - Taxable **bonds** should be held in a **tax-exempt account** and that **equities** (given the preferential tax rate applied to capital gains) should be held in the **taxable account**.
  - Investors with a **long investment horizon** or that have **higher turnover equity strategies** may find that putting equities in the **tax-exempt account** results in better after-tax returns.
- An asset location strategy **cannot** be rigidly employed.
  - The client may have a different goal and time horizon for each account type and may have multiple goals for the assets held within a single account.

4.2 Asset Location

- While it suggests that taxable bonds should be held in a tax-exempt account and that equities (given the preferential tax rate applied to capital gains) should be held in the taxable account,;
- Investors with a long investment horizon or that have higher turnover equity strategies may find that putting equities in the tax-exempt account results in better after-tax returns.

Example

- **The Lees' adviser has warned them that while the average angel investor realizes 2.5x per dollar invested, more than half of all angel investments lead to a loss. Which account would you recommend that the Lees use to fund their angel investments? Justify your response.**
  - Charles' inheritance, which would be invested via the taxable brokerage account, should be used to make the angel investments. Held in the taxable account, the Lees can use any losses generated to offset gains elsewhere in the account.
  - Over the long term, the Lees expect to realize significant capital gains on these investments. Held in the taxable account, these gains will be taxed at the 20% capital gains rate. If held in the tax-deferred retirement, the gains would be taxed at the 50% income tax rate as they are withdrawn.

4.3 Decumulation Strategies for a Retirement Account

- Since **retirement accounts** are tax-exempt or tax-deferred, they compound at a **higher rate** than taxable accounts.
  - A common **rule of thumb** suggests that it is better to make withdrawals from the **taxable account first** and allow the retirement account to continue to compound.
  - Under **progressive tax regimes** (jurisdictions where tax rates rise as the level of income rises), a more tax-efficient strategy may be to withdraw from the retirement account until the lowest tax brackets have been fully utilized.
    - ✓ Any additional withdrawals would then be taken from the taxable account.

Decumulation Strategies for a Retirement Account

- We show a simplified example of a tax-aware decumulation strategy using a taxable and a tax-exempt account. Each account has a beginning balance of $1,000,000. We assume a pre-tax rate of return of 10% for both accounts and a 25% effective tax rate on earnings in the taxable account, which equates to an after-tax rate of return of 7.5%. At the end of each year, the investor withdraws $200,000.
- **Tax aware:**
  - The withdrawals are taken from the taxable account first, allowing the tax-exempt account to continue to compound at the higher effective rate. Once the taxable account is depleted, withdrawals are taken from the tax-exempt account. At the end of 10 years, the client has **$1.80 million** remaining.
- **Tax indifferent**
  - If the withdrawals are taken from the tax-exempt account first, as shown in Exhibit 2, the client will have **only $1.48 million** remaining at the end of 10 years.

Decumulation Strategies for a Retirement Account

Exhibit 1 Withdraw from Taxable Account First (Tax Aware)				
Year	Withdrawal from Taxable Account	Withdrawal from Tax-Exempt Account	Year-End Taxable Account Balance	Year-End Tax-Exempt Account Balance
0			$1,000,000	$1,000,000
1	$200,000		$875,000	$1,100,000
2	$200,000		$740,625	$1,210,000
3	$200,000		$596,172	$1,331,000
4	$200,000		$440,885	$1,464,100
5	$200,000		$273,951	$1,610,510
6	$200,000		$94,497	$1,771,561
7	$101,585	$98,415		$1,850,302
8		$200,000		$1,835,332
9		$200,000		$1,818,866
10		$200,000		**$1,800,752**

Decumulation Strategies for a Retirement Account

Exhibit 2 Withdraw from Tax-Exempt Account First (Tax-Indifferent)				
Year	Withdrawal from Taxable Account	Withdrawal from Tax-Exempt Account	Year-End Taxable Account Balance	Year-End Tax-Exempt Account Balance
0			$1,000,000	$1,000,000
1		$200,000	$1,075,000	900,000
2		$200,000	$1,155,625	790,000
3		$200,000	$1,242,297	669,000
4		$200,000	$1,335,469	535,900
5		$200,000	$1,435,629	389,490
6		$200,000	$1,543,302	228,439
7		$200,000	$1,659,049	51,283
8	$143,589	$56,411	$1,639,889	
9	$200,000		$1,562,880	
10	$200,000		**$1,480,097**	

4.4 Identifying Assets for Charitable Giving

- When the client's overall financial plan includes **charitable giving**, the source of the assets to be gifted should be approached strategically.
  - Appreciated securities can be gifted to a qualified charity **without triggering the capital gain**.
    - ✓ Gifting **low-cost- basis assets** from taxable accounts is preferred.
    - ✓ The investor may receive a tax benefit (a tax deduction, reducing the overall tax liability) from the gift while simultaneously removing a future tax liability on the unrealized gain from the portfolio.

Identifying Assets for Charitable Giving

- Charles and Ivy Lee wish to give $750,000 to a local art museum. Ivy Lee has a concentrated holding of $15 million in appreciated company stock (with a tax basis of $4 million and $11 million in unrealized capital gains) that they would like to diversify over time. They also have a diversified portfolio of securities and a retirement account, as shown in Example 7. Their tax rate is 50% on income and 20% on realized capital gains. How should the Lees fund this charitable gift?
- **Solution:**
  - The Lees should gift shares of the concentrated asset position. The museum, as a tax-exempt entity, can sell the shares without incurring a tax liability, and the Lees will reduce their exposure to the concentrated position. In many jurisdictions, the Lees will receive an income tax deduction, reducing their income tax liability by up to $375,000. Alternatively, the Lees might consider gifting appreciated assets from their brokerage account. However, the unrealized gains on the assets in this account are comparatively small and a larger financial advantage can be achieved by gifting part of the concentrated stock position.

5. Tax Management Strategies

- **Tax avoidance** is the **legal**. vs. **Tax evasion** is the **illegal**.
- Basic portfolio tax management strategies fall into **two categories**:
  - **1) Reduce the amount of tax owed**. Examples include:
    - ✓ holding assets in a **tax-exempt account** versus a taxable account;
    - ✓ investing in **tax-exempt bonds** instead of taxable bonds;
    - ✓ holding assets **long enough** to qualify for long-term capital gains treatment;
    - ✓ holding **dividend-paying stocks long enough** to pay the more favorable tax rate.
  - **2)** Examples of **tax deferral strategies** include:
    - ✓ In a progressive tax system, investors may also benefit from deferring taxes to a future date if they anticipate their tax rate will be **lower** in retirement.
    - ✓ **Limiting portfolio turnover** and the consequent realization of capital gains.
    - ✓ Selling securities at a loss to **offset** a realized capital gain (i.e., **tax loss harvesting**).

5. Tax Management Strategies

- The manager of a private wealth portfolio is tasked with the additional complexity of minimizing the tax drag on returns.
  - **selection of the investment vehicle** (i.e., whether the assets are held in a partnership, fund, or separate account),
  - **tax lot accounting**,
  - **tax loss harvesting**,
  - **tax deferral**,
  - **quantitative tax management**.

5.1 Selection of the investment vehicle

- **Tax Characteristics of Investment Vehicles**
  - **1) Partnership:** Tax liabilities are passed through to partners.
  - **2) Mutual fund**: Tax liabilities are influenced by co-investors.
    - ✓ When new shareholders buy into the fund, they are also buying a share of the unrealized capital gains accrued in prior periods.
    - ✓ For example, a redemption by one shareholder can trigger a capital gains tax liability for all shareholders.
    - ✓ **Potential Capital Gain Exposure (PCGE)** is an estimate of the percentage of a fund's assets that represents gains and measures how much the fund's assets have appreciated.

$$\text{PCGE} = \frac{\text{net gains losses}}{\text{total net assets}} = \frac{\text{gains} - \text{distributions} - \text{losses}}{\text{starting assets} + (\text{gains} - \text{distributions} - \text{losses})}$$

  - **3) Exchange-traded fund (ETF):** Tax liabilities can be reduced or eliminated through the creation and redemption process.
    - ✓ basket of stock； in-kind transactions
  - **4) Separate account:** Losses that are realized within the SMA portfolio can be used to offset gains on assets held outside the SMA. In contrast, any losses within a mutual fund can only be used to offset gains realized within the fund and cannot be distributed to the shareholders.

5.1 Selection of the investment vehicle

- **At the end of the year, the fund will issue a statement detailing the long- and short-term gains realized during the year. Investors must pay their proportionate share of the tax liability.**

Year-end distributions of Capital gains

			Per-share amounts	
Fund	Record date	Payment date	Long-term	Short-term†
AMCAP Fund®	12/16	12/17	$0.859	-
American Balanced Fund®	12/15	12/16	$0.767	-
American Funds Corporate Bond Fund®	12/31	1/4/21	$0.0998	$0.216
American Funds Developing World Growth and Income Fund℠	12/21	12/22	-	-
American Funds Emerging Markets Bond Fund®	12/31	1/4/21	-	-

5.1 Selection of the investment vehicle

- **Exhibit 10 summarizes the tax characteristics of partnerships, mutual funds, ETFs, and separately-managed accounts.**

Exhibit 10 Tax Characteristics of Investment Vehicles

Vehicle	Tax Characteristics
Partnership	Tax liabilities are passed through to partners.
Mutual fund	Tax liabilities are influenced by co-investors. For example, a redemption by one shareholder can trigger a capital gains tax liability for all shareholders.
Exchange-traded fund (ETF)	Tax liabilities can be reduced or eliminated through the creation and redemption process.
Separate account	Realized losses and gains can be aggregated across all of the client's accounts.

Estimating the Future Tax Efficiency of Mutual Funds

- Consider two mutual funds:
  - Fund A started with $2 million in assets, experienced capital appreciation of $500,000, and distributed $100,000 of realized capital gains to shareholders.
  - Fund B started with $2 million in assets, experienced capital appreciation of $100,000, and subsequently suffered a capital loss of $500,000.
- **Q1** What is the PCGE for each fund?
- **Q2** What are the implications for a taxable investor?

Estimating the Future Tax Efficiency of Mutual Funds

- **Solution 1:**
  - Fund A has a PCGE of 16.7% (= the $400,000 gain remaining in the fund divided by total net assets of $2,400,000).
  - Fund B has a PCGE of −25% (= the net −$400,000 loss divided by total net assets of $1,600,000).

- **Solution 2:**
  - Fund A has net gains embedded in the portfolio. Managers can continue to hold the appreciated securities or sell them. If they sell a security at a gain, the fund must distribute the gains to shareholders that year. A high PCGE indicates the potential for capital gain distributions in the future.
  - Fund B is more likely to be tax efficient going forward since it can use the losses in the portfolio to offset future realized gains.

5.2 Tax lot accounting

- **Tax lot accounting:** Keeping track of how much you paid for an investment and when you bought it—is crucial for understanding how much tax you might owe.
- **The tax lot method** is the rule for prioritizing the realization of losses and gains.
  - **FIFO:** first in, first out (default, least tax efficient)
  - **LIFO:** last in, first out
  - **HIFO:** highest in, first out
  - The **specified-lot method** (in which the portfolio manager identifies specifically which tax lot is to be traded) provides the **most flexibility** for ensuring a trade is tax efficient.

Tax Lot Selection

- Consider the shares of Vodafone stock depicted in Exhibit 1. The investor owns 400 shares, which have been acquired over time. There are four tax lots of 100 shares each. The investor wants to sell 100 shares.
- Q1 What would be the tax liability associated with each of the tax lot accounting rules: FIFO, LIFO, and HIFO?
- Q2 Which tax lot is the most tax efficient to sell?

Exhibit 1	**Tax Lots for Stock with Price of $40, Assuming Current Date Is 1 July 20X9**				
Tax Lot Purchase Date	**Shares**	**Acquisition Price**	**Gain (Loss)**	**Holding Period**	**Tax if Sold**
A) 1 January 20X8	100	$30.00	$1,000	Long-term	$250
B) 1 June 20X8	100	$50.00	($1,000)	Long-term	($250)
C) 1 January 20X9	100	$48.00	($800)	Short-term	($400)
D) 1 June 20X9	100	$45.00	($500)	Short-term	($250)
Note: Assumes that the tax rate on long-term capital gains is 25% and short-term gains 50%.					

Tax Lot Selection

- **Solution to 1:**
  - FIFO would select tax lot A, the earliest acquisition date. This results in a capital gain of $1,000 and a capital gains tax of $250.
  - LIFO would choose tax lot D, the most recent acquisition date. This results in a capital loss of $500 and a $250 tax benefit, which could be used to offset short-term gain tax liabilities (or long-term gains) elsewhere in the client's portfolio.
  - HIFO would choose tax lot B, the highest acquisition price. This results in a long-term loss of $1,000 and a $250 tax benefit, which could be used to offset short-term gain tax liabilities.
- **Solution to 2:**
  - In our example, the selection of **tax lot C** creates the most tax benefit—the largest short-term loss. HIFO is usually the most tax-efficient accounting methodology since selecting the tax lot with the highest acquisition price will usually produce the least capital gain or the deepest loss. In this case, however, tax lot B is a long-term lot and the tax benefit of a long-term loss is generally less than that of a short-term loss. None of the standard accounting methods would select tax lot C; the portfolio manager would need to specify the tax lot to be sold at the time of trading.

5.3 Tax Loss Harvesting

- **Tax Loss Harvesting:** Sell securities that are below their acquisition price in order to realize a loss that can be used to offset gains or other income.
  - To avoid the **wash sale rule** in the United States, you must hold cash or some other security for 31 days. There are **two issues**:
    - ✓ Cash drag.
    - ✓ Selling the placeholder and switching back to the original security after 31 days can create its own tax burden if a short-term capital gain is realized when the placeholder is sold.
  - Although a tax loss harvesting trade generates a loss to be used in the current tax year, recall that tax loss harvesting is a **tax-deferral strategy**.

5.4 Quantitative methods

- A quantitative approach to tax management can be used to **minimize tax-drag** and **investment risk**.
  - **Tracking error** can be used to measure risks.
- **Optimization algorithm should:**
  - ✓ minimizes tracking error risk versus the index or model portfolio;
  - ✓ maximizes realized losses;
  - ✓ minimizes realized gains;
  - ✓ minimizes trading costs; and
  - ✓ satisfies any constraints, such as limits on security, industry, sector, and country weights as well as wash sale restrictions, turnover, and cash limits.

5.4 Quantitative methods

- **Different types of quantitative methods**
  - **1) Transitions**: For an account funded with securities rather than cash, the portfolio manager must find a **good trade-off** between the tax cost of transitioning to the new portfolio and the risk of underperforming the new mandate if some of the appreciated securities continue to be held at an overweight in the portfolio.
    - ✓ The goal of the quantitative model is to avoid realizing taxes at the time of inception by holding some of the existing securities but doing so in a risk-controlled way.
  - **2) Tax-optimized loss harvesting**: Instead of tax loss harvesting once a year, a portfolio manager can look for losses **throughout** the year.
  - **3) Gain-loss matching optimization**: Portfolio managers can use a gain-loss matching optimization algorithm to balance the desire to avoid the realization of capital gains tax against the need to manage portfolio risk.

5.4 Quantitative methods

- Consider the following tax loss harvesting example. A $2 million portfolio has $365,000 in unrealized gains; $120,000 are short-term and $245,000 are long-term. There are also $48,000 of unrealized short-term losses. To determine the optimal trading strategy (i.e., how much gains and losses to realize), the portfolio manager will use the firm's algorithm and provide the inputs required by the framework just presented. Exhibit 12 shows the tax benefit generated for this portfolio trade.

Exhibit 12 Example of a Loss Harvesting Trade

	Pre-Trade Unrealized Gains and Losses	Post-Trade Unrealized Gains and Losses	Realized Gains and Losses
Short-Term Gains	$120,000	$120,000	$0
Long-Term Gains	$245,000	$242,000	$3,000
Short-Term Losses	($48,000)	($6,000)	($42,000)
Long-Term Losses	$0	$0	$0
Net Gain (Loss)			($39,000)
Tax Benefit			**$19,500**

Note: Assumes a 50% tax on short-term gains and a 25% tax on long-term gains.

5.4 Quantitative methods

- **Solution**
  - The portfolio manager realized $42,000 of the $48,000 of short-term losses; there are $6,000 of unrealized short-term losses remaining. The portfolio manager also realized $3,000 of the $242,000 in long-term gains. The net realized loss from these trades is $39,000.
  - This is a short-term loss (any loss remaining after netting retains its short-term or long-term character.) The loss can be used to offset $39,000 in gains elsewhere in the portfolio. Of course, it would be most advantageous to use the short-term loss to offset short-term gains, as these are taxed at a higher rate. The resulting tax savings would be $19,500 ($39,000 × 50% short-term gains tax rate).
  - In a $2 million portfolio, this is equivalent to a nearly 100-basis point improvement in after-tax returns (19,500/2,000,000 = 0.975%).

6. Managing Concentrated Positions

- **Three major types** of concentrated positions commonly encountered in managing private client assets are:
  - publicly traded stocks
  - a privately-owned business
  - commercial or investment real estate
- **Concentrated position** is used to describe a holding that due to its **low tax basis** or personal association with the client inhibits the development of an efficient, diversified portfolio.
- **Four risk and tax-related considerations** relevant to concentrated single-asset positions:
  - The **company-specific risk** inherent in the concentrated.
  - The reduction in portfolio efficiency resulting from the **lack of diversification**.
  - The **liquidity risk** inherent in a privately-held or outsized publicly-held security.
  - The risk of incurring an **outsized tax bill** that diminishes return if one were to sell part of the concentrated position in an attempt to reduce the other risks.

6. Managing Concentrated Positions

- The **key factors** to consider when selecting a diversify strategy:
  - **1) Degree of concentration**: The more concerned an investor should be about the risks and the more urgent the need to address those risks.
  - **2) Volatility and downside risk of the position**: The higher the risk associated with the position, the greater the benefit of diversification.
  - **3) Tax basis**: The lower the tax basis, the higher the tax liability.
  - **4) Liquidity**: The lower the liquidity, the more costly it will be to achieve the risk-reduction goal.
  - **5) Tax rate of the investor**: The higher the tax rate, the higher the tax liability.
  - **6) Time horizon of the investor**: A longer investment horizon gives the portfolio a better chance to offset any tax impact of a sale.
  - **7) Restrictions on the investor**: If the investor is restricted from selling the asset through an employment or acquisition agreement, then a strategy other than an outright sale must be developed.
  - **8) Emotional attachment and other non-financial considerations**: Often the concentrated position is the original source of wealth for the individual and/or family, so there is an emotional attachment that makes them reluctant to sell. Alternatively, an owner might wish to maintain voting control of the company or retain shares to signal a continued association with the company.

6. Managing Concentrated Positions

- **Several approaches** can be used to **mitigate the risks** of a concentrated position. Each has different **tax consequences**:
- **Taxable**
  - **1) Sell and diversify**: The simplest (and often best) approach is to sell the concentrated position, **pay the capital gains taxes**, and re-invest the proceeds into a diversified portfolio.
  - **2) Staged diversification**: Selling in multiple tranches **can at least partially mitigate the risk** of inconvenient timing.

6. Managing Concentrated Positions

- **Tax efficient:**
  - **3) Hedging and monetization strategies**: Several strategies using derivatives can be used to hedge the risk of a concentrated position.
    - ✓ **provides owners with funds;**
    - ✓ **without triggering a taxable event.**
  - **4) Tax-free exchanges**: In some jurisdictions, an investor may be able to exchange assets, replacing an illiquid private company position with publicly traded stock, **without creating a taxable event.**
    - ✓ In the United States, a 1031 exchange allows you to sell a real estate asset and transfer the tax basis to another property purchased within a few months of the sale.
    - ✓ Some exchange funds allow investors to pool their public stock positions with others to achieve diversification without triggering a tax event.

6. Managing Concentrated Positions

- **5) Charitable giving strategies**: Charitable trusts, private foundations, and donor-advised funds (an investment account established for the sole purpose of supporting the donor's charitable giving) allow the asset to be transferred to a **tax-exempt account** in which it can be sold **without incurring capital gains taxes.**
- **6) Tax-avoidance and tax-deferral strategies**: In some jurisdictions, holding the position until death allows heirs to receive a **step-up in basis** (a new tax basis based on the value at the date of death) that will allow them to diversify the position and **avoid capital gains taxes.**

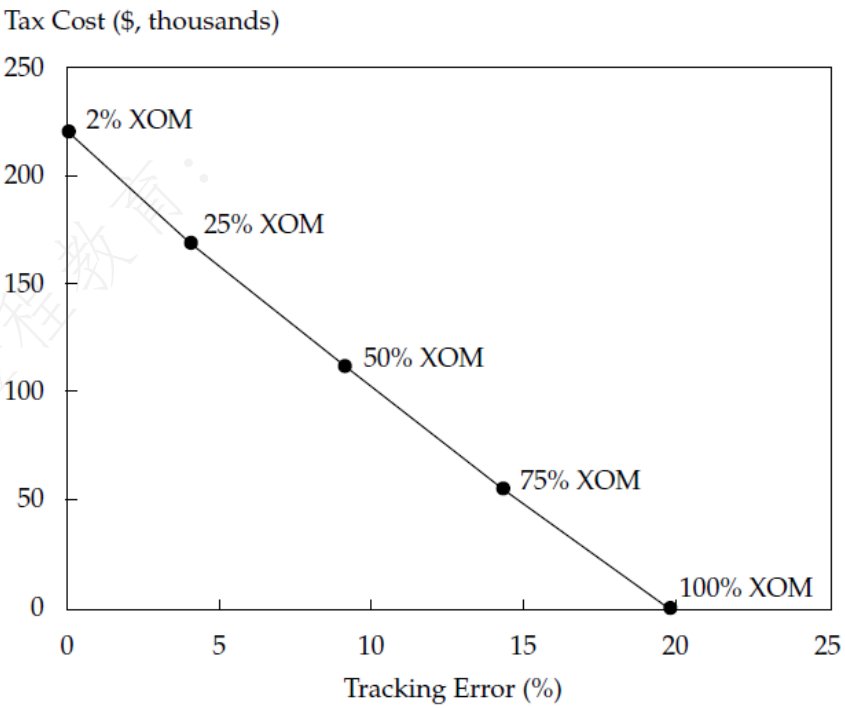
6.1 Managing Concentrated Positions in Public Equities

- **1) Staged Diversification and Completion Portfolios**
  - Sell and diversify
  - Staged diversification
  - **Completion portfolio**: A completion portfolio is **an index-based portfolio** that when added to the concentrated position creates an overall portfolio with exposures similar to the investor's benchmark.
    - ✓ The completion portfolio can also be tax optimized on an ongoing basis. The index-tracking completion portfolio is funded with the partial sale of the concentrated position. On an ongoing basis, the portfolio is rebalanced using a quantitative model. The model minimizes active risk versus the benchmark and maximizes the after-tax return of the portfolio—primarily by realizing more capital losses than gains.
    - ✓ The losses realized in the diversified portfolio can be used to offset some of the gains realized by the sale of the concentrated stock. The process is designed to track a broad-based index on a pre-tax basis and outperform it on an after-tax basis.

6.1 Managing Concentrated Positions in Public Equities

- Our optimization objectives areminimize the tax liability from selling Exxon and to minimize the tracking error to the S&P 100. to These are competing objectives; fewer shares sold minimizes the tax liability but increases the tracking error. We use a fundamental risk model to estimate our risk versus the benchmark, in this case the S&P100 Index. The predicted tracking error for Exxon relative to this benchmark is 19.8%.

Exhibit 13 Tax Liability vs. Tracking Error with Varying Levels of ExxonMobil (XOM) Exposure



6.1 Managing Concentrated Positions in Public Equities

- The final 2% of Michael's Exxon stock could be retained without negatively impacting tracking error because Exxon has a 2% weight in the index.
- Michael will need to assess the expected trade-off between tax and risk to determine how much Exxon to sell. He might also stage the diversification over multiple tax years.
- Using individual stocks to build out a completion portfolio has an advantage in that we can optimize the total portfolio to achieve desired factor exposures and tracking error targets. Whereas a broad-market ETF or mutual fund mirrors the entirety of the index (and likely includes Exxon), our completion portfolio can exclude Exxon or other stocks with a high correlation to the energy sector. The risk model considers Exxon to be 88% in the oil and gas industry and 12% in the chemicals industry. Thus, the completion portfolio should underweight oil, gas, and chemical companies relative to the index.

6.1 Managing Concentrated Positions in Public Equities

- **2) Tax-Optimized Equity Strategies**
  - **Equity monetization** refers to a group of strategies that allows investors to receive cash for their stock positions without an outright sale.
    - ✓ Monetization is a **two-step process**:
      - ◆The first step is for the investor to hedge a large portion of the risk inherent in the concentrated position. Hedging strategies include:
        - ◻ Sell the security short, sell a forward contract, enter into a total return equity swap, zero-cost (cashless) collar.
      - ◆The second step is for the investor to borrow against the hedged position. (a high loan-to- value ratio)
    - ✓ This strategy is **attractive** when considering the following factors:
      - ◆avoid triggering the capital gains tax,
      - ◆be subject to restrictions from the sale of the stock,
      - ◆not want to cede control of the voting rights,
      - ◆want to keep the position but create short-term liquidity.

6.1 Managing Concentrated Positions in Public Equities

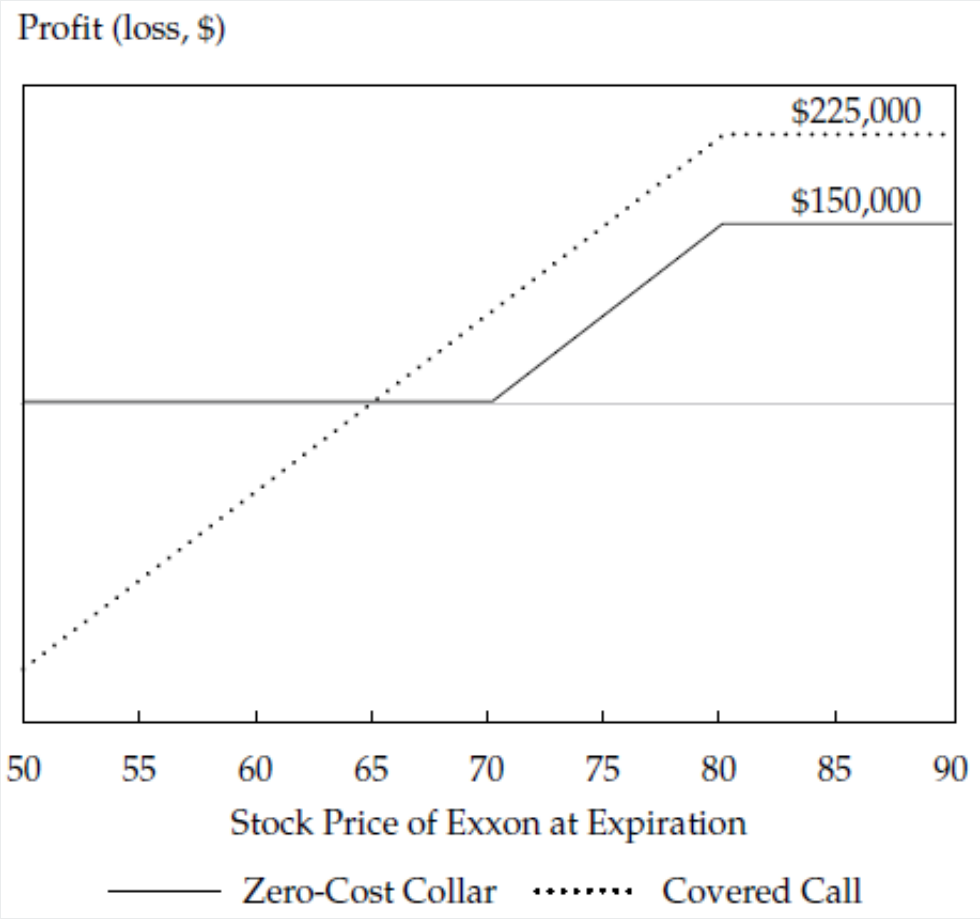
- **2) Tax-Optimized Equity Strategies**
  - **Collar**
    - ✓ Pros and cons of a collar
      - ◆Pros: The collar protects **against downside risk**
      - ◆Cons: The collar has a **limited potential**
    - ✓ Hedging the risk of the position could trigger a **taxable event**.
      - ◆If you no longer bear the risk of the investment, you have essentially sold the position.
      - ◆If the collar is constructed so that there is still some risk of loss, then the taxable event can be avoided.
  - **Covered call writing** is often viewed as attractive if the owner believes the stock will trade in a range for the foreseeable future.

Example

- Michael Stark is holding 15,000 shares of Exxon stock, which is currently trading at $70 per share. Assume that Michael is unwilling to sell any portion of his position at less than $80 per share but wants to protect his shares over the next year should the stock price crash. With the help of his adviser, Michael looks at two strategies: a covered call and a zero-cost collar:
  - Covered call: Sell one-year call options with a strike price of $80 for a $5 per share premium.
  - Zero-cost collar: Sell the same calls as in the covered call and use the proceeds to buy one-year put options with a $70 strike price.
- Questions:
  - 1 What is the maximum profit for the zero-cost collar? How much can Michael lose over the next year?
  - 2 What are the pros and cons of a collar versus a covered call? What is the maximum profit for a covered call?
  - 3 What are the tax consequences of opening the option positions?
  - 4 What are the tax consequences at expiration?

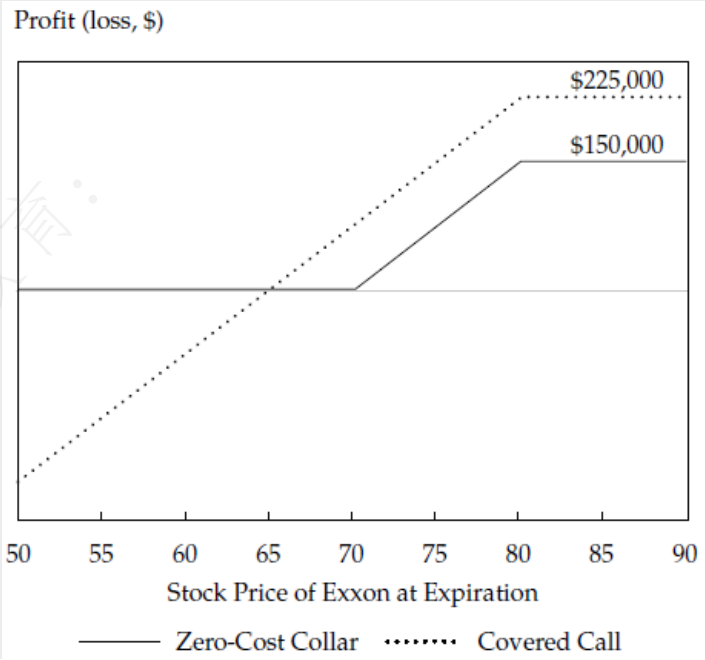
Example

- **Solution to 1:**
  - Michael's maximum profit is capped at $150,000, and his losses are limited to zero.



Example

- **Solution to 2:**
  - Both strategies forfeit any profits above the $80 price.
  - The collar protects against downside risk and allows for monetization of the position through borrowing.
  - The covered call has a maximum profit of $225,000. If Michael sells only a covered call, he would keep the $75,000 in call premiums.



Example

- **Solution to 3:**
  - The premiums received on the short call are classified as a capital gain. The gain is not realized until the option expires or is bought back with an offset order. The holding period for the position is always considered to be short term since you "sell to open" and "buy to close" the position. However, this is a very tax inefficient trade since an outright sell of the stock would qualify for the long-term tax rate of 25% but the call premium would be taxed at the much higher short-term gain rate.
  - It is possible to bundle the collar into a single transaction to avoid tax on the call premiums. In this case, the tax would be zero because the net premium is zero.
  - The call options could affect the taxation of the stock dividends.
  - Perhaps most importantly, hedging the risk of the position could trigger a taxable event. If you no longer bear the risk of the investment, you have essentially sold the position. If the collar is constructed so that there is still some risk of loss, then the taxable event can be avoided.

Example

- **Solution to 4:**
  - Profits from the sale of the Exxon stock, including those shares called away by exercise of the call options, are treated as capital gains.
  - If the stock was held for longer than a year, it qualifies for Michael's 25% long-term capital gain rate.

6.1 Managing Concentrated Positions in Public Equities

- **3) Tax-Free Exchanges**
  - **Exchange fund:**
    - ✓ a **partnership** in which each of the partners have each contributed low cost-basis stock to the fund.
    - ✓ The partners then own a pro rata interest in the fund that holds a diversified pool of low-basis securities.
    - ✓ Participating in the exchange fund is not considered a taxable event.
  - Exchange funds have some **limitations**.
    - ✓ First, the portfolio manager has **discretion** on whether to accept the shares and on the composition of the basket of shares distributed to partners when they withdraw.
    - ✓ In addition, 20% of the portfolio must be "**qualified assets**," usually real estate investment trusts (REITs).
    - ✓ The portfolio is often **less diversified** than a typical portfolio,
    - ✓ **Redemption fees** may be required for early withdrawal.

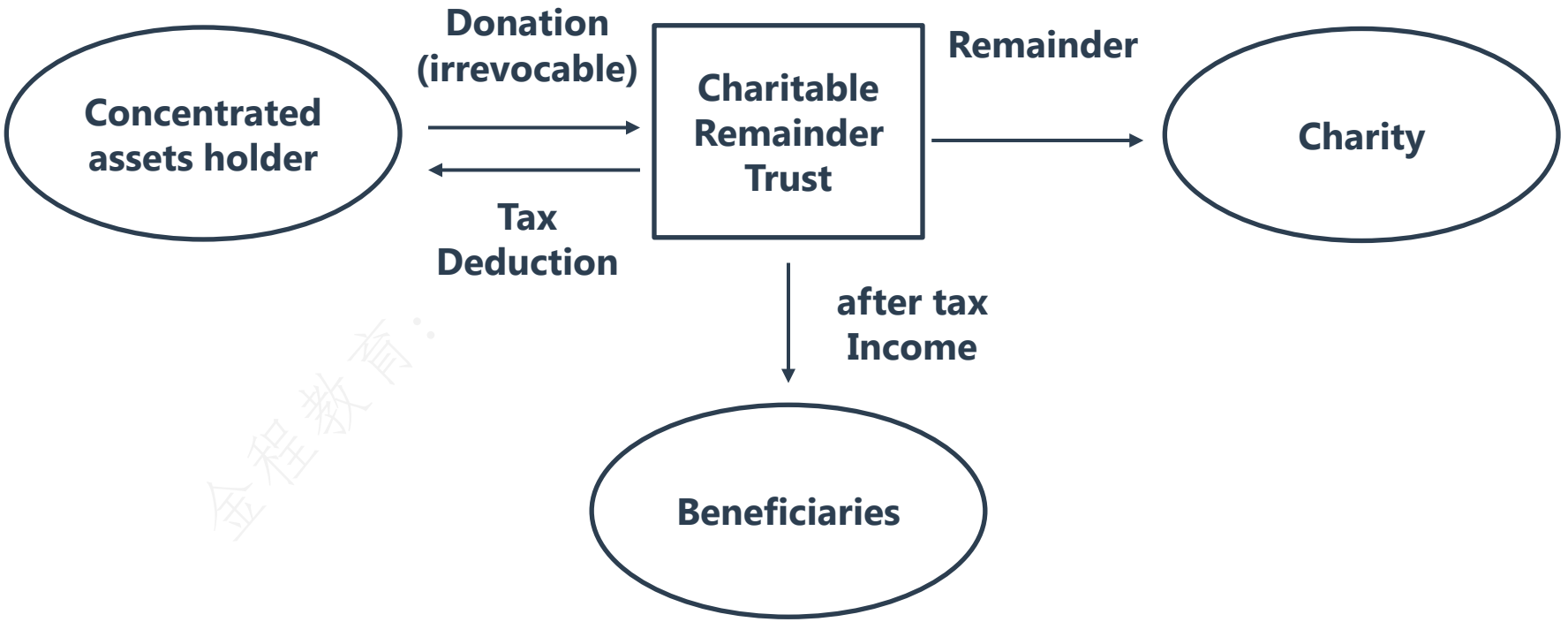
6.1 Managing Concentrated Positions in Public Equities

➢ **4) Charitable Remainder Trust**

- In this structure, concentrated assets holder would make an **irrevocable donation** of concentrated shares to a trust and receive a **tax deduction** for the gift.
- The asset holder would no longer have ownership of the assets.
  - ✓ Within the trust, the shares could be sold and reinvested in a diversified portfolio **without incurring a capital gain tax**—since the charitable trust is exempt from taxes.
  - ✓ The trust would provide income for the life of the named beneficiaries. (The beneficiaries would **owe income tax** on this income.)
  - ✓ When the last-named beneficiary dies, any assets remaining in the trust would be distributed to the charity named in the trust.

6.1 Managing Concentrated Positions in Public Equities

➢ **4) Charitable Remainder Trust**



Example & Summary

- **Michael Stark is reluctant to sell his shares of Exxon, primarily due to the large tax bill associated with a sale. What approaches to diversification would you discuss with Michael that do not involve the taxes from an outright sale of his stock?**
- **Solution:**
  - Covered Call Writing: Out-of-the-money call options could be sold that would generate option premiums. While not an explicit diversification strategy, the cash generated by the options would somewhat reduce Michael's risk over time. If one of the options was exercised, Michael could buy shares on the open market to cover the option instead of delivering his company shares.
  - Equity Monetization: Michael could construct a zero-cost collar or similar hedging strategy to reduce risk. A loan could then provide liquidity without realizing a taxable gain and without selling shares.
  - Exchange Fund: Michael could deliver shares of stock to an exchange fund to get diversification without an outright sale.
  - Charitable Remainder Trust: Michael could consult an estate planning attorney and devise a strategy for gifting shares to a charitable remainder trust.

6.2 Managing Concentrated Positions in Private Equities

- **Strategies** for business owners to **generate full or partial liquidity** include the following:
  - Initial public offering (IPO)
  - Sale to a third-party investor
  - Sale to an insider
  - Divestiture of non-core assets
  - Personal line of credit against company shares Recapitalization
  - Employee stock ownership plan

6.2 Managing Concentrated Positions in Private Equities

➢ **1) Personal Line of Credit Secured by Company Shares**

- Assets owners might consider arranging a personal loan secured by their shares in the private company.
- The transaction usually contains a **"put" arrangement** whereby the borrower can "put" the loan to the company as a source of repayment.
- This would likely be considered a **taxable event** to the business owner.
- The company can support this put obligation either through its existing **credit arrangement** or with a standby **letter of credit** issued for this specific purpose.
- While this effectively leverages the client's portfolio and the debt will eventually need to be repaid, until then owners have access to cash to diversify their concentration risk, avoid triggering a taxable event, and maintain ownership and control of the company.

6.2 Managing Concentrated Positions in Private Equities

- **2) Leveraged Recapitalization**
  - A leveraged recapitalization is a strategy that is especially attractive to **middle-market business owners** who would like to **reduce the** risk of their wealth concentration and **generate liquidity to diversify** but who are **not yet ready to exit entirely** and have the desire to **continue to grow their businesses**.
  - The owner receives cash for a portion of her stock and retains a **minority ownership interest** in the freshly capitalized entity.
  - The after-tax cash proceeds the owner receives could be deployed into other asset classes to help build a **diversified portfolio**.

6.2 Managing Concentrated Positions in Private Equities

- **3) Employee Stock Ownership Plan**
  - In some countries, legislation allows business owners to **sell some or all of their company shares** to certain types of pension plans.
  - **Leveraged ESOP**: If the company has borrowing capacity the ESOP borrows funds (typically from a bank) to finance the purchase of the owner's shares.
  - Depending on the legal form of company structure, it may be possible to **defer any capital gains tax** on the shares sold to the ESOP.
    - ✓ Using an ESOP, owners can partially diversify their holdings and overall portfolios while **retaining control** of the company and **maintaining upside potential** in the retained shares.

6.3 Managing Concentrated Positions in Real Estate

- **Property-specific risk** is the **non-systematic risk** associated with owning a particular piece of real estate.
- Real estate owners can use to monetize their properties include:
  - **Mortgage financing** (recourse and non-recourse, fixed rate, or floating rate) ,
  - **Charitable trust** or **donor-advised fund(DAF)**.

6.3 Managing Concentrated Positions in Real Estate

- **1) Mortgage Financing**
  - Besides an outright sale, which is the most common strategy, the use of mortgage financing is the next most common technique investors use to **lower concentration** in a particular property and **generate liquidity** to diversify asset portfolios **without triggering a taxable event**.

6.3 Managing Concentrated Positions in Real Estate

- **2) Real Estate Monetization for the Charitably Inclined (Asset location strategy)**
  - **Example**: Jules Menendez wants to endow a named professorship at the university from which he graduated several years ago. The amount needed to fund the professorship is $3 million. He owns a rental property that is worth $2 million. The growth prospects for the property are less compelling than those of some other asset classes (e.g., publicly traded securities). He can contribute the property directly to a DAF and receive an immediate $2 million charitable contribution deduction. The property is then sold by the DAF and the proceeds invested in those more promising investments. No capital gains tax is due when the property is sold. (Nor are the accumulated depreciation deductions taken by the investor ever "recaptured.") The full $2 million is available to invest and manage. The assets grow tax free until grants are made. When the target of $3 million is reached, the DAF could then fund the professorship at Menendez's alma mater.

Example

- Emma Gagnon has built a successful chain of groceries stores of which she is majority owner. While she has accumulated some retirement assets via the company's various retirement and savings plans, 90% of her C$25,000,000 net worth is tied up in shares of the company she owns and unleveraged real estate that she leases to the stores. While she is only 50 years old and plans to continue growing the business, she is concerned that her eventual retirement is completely dependent upon the continued success of the business. Recommend two strategies that Emma might use to address this problem. Justify your response.
- **Solution:**
  - Emma might consider a personal line of credit against a portion of her shares in the company. She can use the proceeds to build a diversified portfolio of assets that complements her exposure to the grocery business while maintaining her ownership position.
  - To free up capital tied up in the real estate she has leased to the stores, she could mortgage the properties. If the loans were non-recourse, they would effectively provide Emma with downside protection. The capital could be invested in a diversified portfolio unrelated to the grocery business.

7. Wealth transfer planning

- **1) Estate planning** is the process of preparing for the disposition of one's estate upon death and during one's lifetime.
- **2)** A **will** (or **testament**) outlines the rights others will have over one's property after death.
- **3)** A **testator** is the person who authored the will and whose property is disposed of according to the will.
- **4) Probate** is the **legal process** to confirm the validity of the will so that executors, heirs, and other interested parties can rely on its authenticity.
- Decedents without a valid will or with a will that does not dispose of their property are considered to have died **intestate**.
  - In that case, a court will often decide on the disposition of assets under the intestacy laws of the applicable jurisdiction(s).
- **5)** A **trust** is a vehicle through which an individual (called a settlor) entrusts certain assets to a trustee (or trustees) who manages the assets for the benefit of assigned beneficiaries.

7. Wealth transfer planning

- **7) Lifetime gifts** are sometimes referred to as lifetime gratuitous transfers, and they are made during the lifetime of the donor.
- **8) Bequest:** Bequeathing assets or transferring assets in some other way upon one's death is referred to as a **testamentary bequest** or a **testamentary gratuitous transfer**.
  - **Forced heirship** is a requirement that a certain proportion of assets must pass to specified family members, such as a spouse and children.
  - **Charitable gratuitous transfers.** Most jurisdictions provide two forms of tax relief for wealth transfers to not-for- profit or charitable organizations.
    - ✓ First, most charitable donations are not subject to a gift tax.
    - ✓ Second, most jurisdictions permit income tax deductions for charitable donations.

Forced Heirship Regime

- Philippe and Helena Berelli and their two children live in a country with forced heirship laws that entitle a spouse to one-third of the total estate and the children to split one-third of the total estate. Suppose Philippe passes away today with a total estate of €800,000 and wishes to leave €300,000 to his surviving mother.
- 1) What is the minimum that Helena should receive?
- **Solution to 1:**
  - Under forced heirship rules, Helena is entitled to one-third of the total estate, or (1/3)(€800,000) = €266,667.
- 2) What is the minimum amount the children should receive under forced heirship rules?
- **Solution to 2:**
  - The children are collectively entitled to receive one-third of the total estate equal to €266,667, or €133,333 for each child.
- 3) May Philippe bequeath €300,000 to his mother?
- **Solution to 3:**
  - Philippe is able to freely dispose of the remainder, which is €800,000 – €266,667 – €266,667 = €266,666. Therefore, Philippe is unable to bequeath €300,000 to his mother, but he may bequeath the remainder of €266,666.

7.1 Objectives of Wealth Transfer planning

- Effective **gift** and **estate planning** should consider **several objectives**:
  - **1) Maintaining sufficient income and liquidity** to achieve desired lifestyle of the donors and beneficiaries as well as to pay any estate taxes due.
  - **2) Deciding on control over the assets.**
  - **3) Asset protection**. Certain estate planning vehicles, such as trusts, may **protect assets from creditors** by separating the settlor (the creator of the trust) and beneficiaries from the legal ownership of the assets.
  - **4) Transferring assets in a tax-aware manner.**
    - ✓ Gift tax, Estate tax or Inheritance tax , Generation-skipping tax.
      - ◆An estate tax is **levied on the total value** of a deceased person's assets and paid out of the estate **before** any distributions to beneficiaries.
      - ◆An inheritance tax is **paid by each individual beneficiary**.

7.1 Objectives of Wealth Transfer planning

- Effective **gift** and **estate planning** should consider **several objectives**:
  - **5) Preservation of family wealth**. Setting up a **family governance system** alongside the estate planning process **mitigates potential disputes** among the family members, ensuring that they work together toward achieving jointly agreed upon investment and charitable goals.
  - **6) Business succession**. Gift and estate planning helps the founder (or current generation of ownership) to **pass control and beneficial ownership** of the family business to the next generation.
  - **7) Achieving charitable goals**. Charitable giving to qualified charities or private foundations in most jurisdictions qualifies for gift tax or estate tax deduction or exemption, which leaves more capital to be deployed on charitable causes.

7.2 Estate tax

- **Estate taxes** on wealth transfer may be applied to the **transferor or the recipient.**
- These estate(or inheritance) taxes may be applied at a **flat rate** or based on a **progressive tax rate** schedule, where the tax rate increases as the amount of wealth transferred increases.
- Often the tax is applied **after the deduction of a statutory allowance.**

UK Inheritance Tax

- Paul Dasani, a widower, passed away in May 2019. Dasani was a resident and domiciliary of the United Kingdom at the time of his death and had a total estate valued at £700,000. His children are the beneficiaries of the estate. The United Kingdom imposes an inheritance tax threshold on estates valued above £325,000 in 2019. The tax is payable by the trustee of the estate out of estate assets at a rate of 40% on the amount over the statutory allowance of £325,000.
- What is the amount of inheritance tax payable?
- **Solution:**

The inheritance tax is computed as:	
Estate value	£700,000
Less threshold	(£325,000)
Excess	£375,000
Rate on excess	40%
Inheritance tax	£150,000

Progressive Estate Tax

- Ya-wen Chao passed away in a jurisdiction with progressive estate tax rates as provided in the following table.

Taxable Estate (€)	Tax Rate (%)
Up to 600,000	2
600,001–1,500,000	4
1,500,001–3,000,000	7
3,000,001–4,500,000	11
4,500,001–6,000,000	15
6,000,001–10,000,000	20
10,000,001–15,000,000	26
15,000,001–40,000,000	33
40,000,001–100,000,000	41
Over 100,000,000	50

- After all applicable exemptions, Chao had a taxable estate of €2,000,000.
- What is Chao's estate tax?

Progressive Estate Tax

- **Solution:**
  - The estate tax is computed as:

The estate tax is computed as:	
Tax on first 600,000 (2%) =	€12,000
Tax on next 900,000 (4%) =	36,000
Tax on remaining 500,000 (7%) =	35,000
Total estate tax =	€83,000

7.3 Gift vs Bequest

- **1) Tax-free Gift**

$$\mathrm{RV}_{Tax\ Free\ Gift} = \frac{\mathrm{FV}_{Gift}}{\mathrm{FV}_{Bequest}} = \frac{[1 + r_g(1 - t_g)]^n}{[1 + r_e(1 - t_e)]^n(1 - T_e)}$$

  - r_g: the expected pre-tax returns to the beneficiary
  - t_g: the effective tax rate on gift returns
  - n: the expected time until the donor's death
  - r_e: the expected pre-tax returns to the estate
  - t_e: the effective tax rate on estate returns
  - T_e: the estate tax rate

- If the pre-tax return and effective tax rates are **equal** for both the recipient and donor, the relative value of the tax-free gift:

$$\mathrm{RV}_{Tax\ Free\ Gift} = \frac{\mathrm{FV}_{Gift}}{\mathrm{FV}_{Bequest}} = \frac{1}{(1 - T_e)}$$

7.3 Gift vs Bequest

- **2) Taxable Gift (gift tax is paid by the recipient)**

$$\mathrm{RV}_{Taxable\ Gift} = \frac{\mathrm{FV}_{Gift}}{\mathrm{FV}_{Bequest}} = \frac{[1 + r_g(1 - t_g)]^n(1 - T_g)}{[1 + r_e(1 - t_e)]^n(1 - T_e)}$$

  - T_g: the gift tax rate

- If the pre-tax return and effective tax rates are **equal** for both the recipient and donor, the relative value of the taxable gift:

$$\mathrm{RV}_{Taxable\ Gift} = \frac{\mathrm{FV}_{Gift}}{\mathrm{FV}_{Bequest}} = \frac{(1 - T_g)}{(1 - T_e)}$$

Example

- For example, consider a family residing in Country A is contemplating a 30 million lifetime gratuitous transfer. In Country A, 18 million can be transferred free of tax, but the remaining 12 million transfer is subject to a 50% tax rate. The same 50% rate applies if the gift is delayed and transferred as a bequest, so no ta advantage related to differences between gift and estate tax rates exists. However, if the recipient of the 12 million gift had a lower marginal tax rate on investment returns (perhaps due to a progressive income tax schedule) of, say, 20% compared to the estate's marginal tax rate of, say, 50%, the gift can still create a tax advantage. Over a 10-year horizon, the advantage for locating an asset with an 8% pre-tax return with the donee rather than the donor would be equal to:

$$RV_{\text{Taxable Gift}} = \frac{\left[1 + 0.08(1 - 0.20)\right]^{10}(1 - 0.50)}{\left[1 + 0.08(1 - 0.50)\right]^{10}(1 - 0.50)} = \frac{0.9298}{0.7401} = 1.256.$$

7.4 Estate Planning Tools

- **1) Trusts**. A trust is an arrangement created by a settlor (sometimes called a grantor).
  - The **grantor** transfers assets to the trust, naming a trustee.
  - The **trustee** holds and manages the assets for the benefit of the **beneficiaries**.
  - In a **revocable trust** arrangement, the **settlor** (the person whose assets are used to create the trust) **retains the right** to rescind the trust relationship and regain title to the trust assets.
    - ✓ The **settlor is responsible for** tax payments and reporting on the trust's investment returns.
    - ✓ The **settlor's revocation power** makes the trust assets vulnerable to the reach of creditors having **claims** against the settlor.
  - In a **irrevocable trust** arrangement, the **settlor has no ability to revoke** the trust relationship.
    - ✓ The **trustees may be responsible for** tax payments and reporting in their capacity as owners of the trust assets for tax purposes.
    - ✓ An irrevocable trust structure generally provides **greater asset protection from claims** against a settlor than a revocable trust.

7.4 Estate Planning Tools

- **1) Trusts**. A trust is an arrangement created by a settlor (sometimes called a grantor).
  - **Fixed trust**: Distributions to beneficiaries of a fixed trust are specified in the trust document to occur at certain times or in **certain amounts**.
  - **Discretionary trust**: If the trust document enables the **trustee to determine** whether and how much to distribute based on a beneficiary's general welfare, the trust would be called a discretionary trust.
    - ✓ The **beneficiaries have no legal right** to income generated by the trust or to the assets in the trust itself.
    - ✓ The **creditors of the beneficiaries cannot** as easily reach the trust assets.

7.4 Estate Planning Tools

- **1) Trusts**. A trust is an arrangement created by a settlor (sometimes called a grantor).
  - Several **main objectives** for using a trust structure:
    - ✓ **1) Control**. A common motivation for using a trust structure is to make resources available to beneficiaries without yielding complete control of those resources to them.
    - ✓ **2) Asset protection**. In general, creditors are unable to reach assets that an individual does not own.
      - ◆Irrevocable trust, Discretionary trust
      - ◆Ownership of a family business does not get diluted as a result of community property laws
      - ◆Trusts can also be used to avoid probate.
    - ✓ **3) Tax-related considerations**. Trusts can also be used for tax management purposes.
      - ◆That individual might transfer assets to a trust where the income may be taxed at lower rates or where the income is paid to a beneficiary who is taxed at lower rates.

7.4 Estate Planning Tools

- **2) Foundations**. Foundations are typically set up to hold assets for a specific charitable purpose.
  - When set up and funded by an individual or family and managed by its own directors, it is called a **private foundation**.
  - The term **family foundation** usually refers to a private foundation where donors or members of the donors' family are actively involved.
  - A foundation **allows the donor to retain control** over the administration and decision making of the foundation.
  - Private foundations may be required to make certain **minimum annual distributions**.
  - The **benefits** of foundations
    - ✓ a current income tax deduction for the value of assets transferred to the foundation,
    - ✓ favorable tax treatment of investment returns,
    - ✓ protection of assets from estate tax.

7.4 Estate Planning Tools

- **3) Life insurance**. The policyholder transfers assets (called a premium) to an insurer who, in turn, has a **contractual obligation** to pay death benefit proceeds to the beneficiary named in the policy.
  - Death benefit proceeds paid to life insurance beneficiaries are **tax exempt** in many jurisdictions, and in some cases, **no tax-reporting consequences arise**.
  - Life insurance can also be paired with trust structures to transfer assets to the beneficiaries **outside** of the probate process.

7.4 Estate Planning Tools

- **4) Companies**. A **controlled foreign corporation (CFC)** is a company located outside a taxpayer's home country in which the taxpayer has a controlling interest as defined under the home country law.
  - The taxes on income from assets in a CFC can be **deferred** until the earnings are distributed to shareholders or until the company is sold or shares otherwise disposed.
  - Many countries have CFC rules designed to ensure that tax is ultimately paid **in the home country** of the beneficial owner.

7.5 Managing Wealth Across Multiple Generations

- **1) General Principles of Family Governance**
  - **Family governance** is defined as a process for a family's collective communication and decision making designed to serve current and future generations.
  - Family governance serves **several purposes**, such as:
    - ✓ Establishing principles for collaboration among family members,
    - ✓ Preserving and growing a family's wealth,
    - ✓ Increasing human and financial capital across the generations,
    - ✓ The family governance framework consists of formal legal documents, non-binding family agreements, and the list of goals and values defined collectively and agreed upon by the members of the family during the meetings.

7.5 Managing Wealth Across Multiple Generations

- **2) Family Conflict Resolution**
  - For many wealth- and business-owning families, the starting point of conflict resolution procedures is the **family constitution**, typically a non-binding document that sets forth an agreed-upon set of rights, values, and responsibilities of the family members and other stakeholders.
    - ✓ The approach to conflict resolution provided for in the family constitution can then become **legally binding** by being included in shareholder agreements, trust documentation, and in relation to family assets.

7.5 Managing Wealth Across Multiple Generations

- **3) Family Dynamics in the Context of Business Exit**
  - **1) Transition of the business to the new generation**. Founders may allocate shares in the business to the new generation during their **lifetime** or **after their death**.
    - ✓ The shares may be transferred **directly** or **via trust**.
    - ✓ A founder may choose to **keep voting shares** in order to retain power and operating control—transferring **only non-voting shares** to children in trust by gift or other methods.
    - ✓ Alternatively, a founder may decide to **pass voting shares** to family members who are **actively** involved in the business and **non-voting shares** to family members who are **not actively** involved in the business.

7.5 Managing Wealth Across Multiple Generations

- **3) Family Dynamics in the Context of Business Exit**
  - **2) Sale of the business**. When selling the business, the founder(s) may exhibit an **endowment bias**, overestimating the value of the business and refusing to accept the fact that it has weaknesses.
    - ✓ **Other** consideration:
      - ◆Considerations related to timing of business sale,
      - ◆Selection of trustees,
      - ◆Post-sale considerations.

Reading 23

Risk Management for Individuals

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Framework

1. Human Capital and Financial Capital
2. The Financial Stages of Life for an Individual
3. The Individual Balance Sheet
4. The Risk Management Strategy for Individuals
5. Individual Risk Exposures
6. Life Insurance
7. Annuities
8. Implementation of Risk Management (Individual)

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1. Human capital and financial capital

- **Human capital.** future wages or earnings can be thought of as analogous (in a rough sense) to future interest or dividend payments that flow from an individual's work-related skills, knowledge, experience, and other productive attributes that can be converted into wage income.
- **Financial capital** can be subdivided into various components besides tangible and intangible, such as **current assets, personal assets and investment assets.**

1.1 Human capital

- we can estimate human capital by **discounting** the expected future cash flows generated from wages or other income sources.

$$\mathrm{HC}_0 = \sum_{t=1}^{N} \frac{w_t}{(1+r)^t}$$

Where,

- HC_0, estimate the value of an individual's human capital today, at Time 0;
- w_t, the income from employment in year t;
- r, the appropriate discount rate;
- N, the length of working life in years.

1.1 Human capital

- **The income from different professions can vary significantly.** The risk adjustment should consider the inherent stability of the income stream as well as the possibility that the income stream will be interrupted by job loss, disability, or death that may be completely unrelated to the type of employment. Additionally, we **incorporate mortality**.

$$\mathrm{HC}_0 = \sum_{t=1}^{N} \frac{p(S_t) w_{t-1}(1+g_t)}{(1+r_f+y)^t}$$

Where,

- $w_{t-1}(1+g_t)$, where we define the wage in time period t as a product of the wage in period t – 1 and the sum $(1+g_t)$;
- $1+r_f+y$, modify the discount rate to be the sum of the nominal risk-free rate r_f and a risk adjustment y based on occupational income volatility;
- $p(S_t)$, where $p(S_t)$ is the probability of surviving to a given year (or age).

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1.2 Financial capital

- **An individual's assets can be described as "personal" assets or "investment" assets.**
  - **Personal assets** are consumed. Automobile, clothes, furniture and even a personal residence. Real estate and collectibles could be considered a **"mixed"** asset.
  - **Investment assets** are held for their potential to increase in value and fund future consumption.
    - ✓ Marketable
      - Publicly traded marketable assets;
      - Non-publicly traded marketable assets: real estate, some types of annuities, cash-value life insurance, business assets, and collectibles.
    - ✓ Non-marketable assets
      - Employer pension plans (vested);
      - Government pensions.

2. Financial stages of life for an individual

- **1）Education phase：**
  - The education phase occurs while an individual is **investing in knowledge (or human capital)** through either formal education or skill development.
    - ✓ An individual in the education phase may be **largely financially dependent on his or her parents or guardians** and have little, if any, accumulated financial capital.
    - ✓ Generally **little focus on savings or risk management**.
    - ✓ Some individuals in this phase may already have families and could benefit from products, such as life insurance, that hedge against the risk of losing human capital.

2. Financial stages of life for an individual

- **2）Early career：**
  - The early career phase normally begins when an individual has **completed his or her education and enters the workforce**.
    - ✓ The individual often marries, perhaps has young children, may purchase a home, and usually begins to save for their children's college expenses.
    - ✓ Significant family and housing expenses may **not allow for much retirement savings**.
    - ✓ **Insurance may be especially valuable** during this phase because human capital represents such a large proportion of total wealth and family members are highly dependent on the human capital of one or two individuals to fund expected future consumption.

2. Financial stages of life for an individual

- **3）Career development：**
  - The career development phase normally occurs during the **35–50 age range** and is often a time of specific skill development within a given field, upward career mobility, and income growth.
    - ✓ This phase often **includes accumulation for the children's college educations as well as expenditures for college**.
    - ✓ Concern intensifies about retirement income planning and financial independence.
    - ✓ Higher earners will begin building wealth beyond education and retirement objectives and may make large purchases.
    - ✓ **Retirement saving tends to increase at a more rapid pace** during this phase compared with the early career phase.

2. Financial stages of life for an individual

- **4）Peak accumulation：**
  - In the peak accumulation phase, most people either have **reached or are moving toward maximum earnings** and have the greatest opportunity for wealth accumulation. Generally during the ages of 51–60.
    - ✓ This phase may include accumulating funds for other goals and objectives. (continuation of retirement income planning, coordination of employee benefits with investment and retirement strategies, and travel）
    - ✓ Investors following a life-cycle portfolio strategy will begin to **reduce investment risk** to emphasize income production for retirement and become increasingly **concerned about minimizing taxes, given higher levels of wealth and income**.
    - ✓ There is also potentially **more career risk** in this phase because if an individual were to lose his or her job, it might be relatively difficult for that individual to find another job with similar pay.

2. Financial stages of life for an individual

- **5）Pre-retirement：**
  - The pre-retirement phase consists of the few years preceding the planned retirement age, and it typically represents an individual's **maximum career income**.
    - ✓ Many people in this phase continue to **restructure their portfolios to reduce risk and may consider investments that are less volatile**.
    - ✓ There is further emphasis on **tax planning**, including the ramifications of retirement plan distribution options.

2. Financial stages of life for an individual

- **6）Early retirement：**
  - The early retirement phase in the cycle is generally defined as the **first 10 years of retirement** and, for successful investors, often represents a period of comfortable income and sufficient assets to meet expenses.
    - ✓ This is generally the most active period of retirement and is when an individual is **less likely to suffer from cognitive or mobility limitations**.
    - ✓ The primary objective of the retiree is to use resources to produce activities that provide enjoyment.
    - ✓ It is important to note that upon entering retirement, the need for asset growth does not disappear.
    - ✓ For many households, the length of retirement could exceed two decades; given this potential horizon, it is important to continue **taking an appropriate level of investment risk** in retirees' portfolios.

2. Financial stages of life for an individual

- **7）Late retirement：**
  - The late retirement phase is especially unpredictable because the exact length of retirement is unknown. This uncertainty about longevity for a specific individual is known as **longevity risk**, which is the risk that retirement could be very short or very long.
    - ✓ Although many individuals live comfortably and are in good health until their final days, others experience a long series of physical problems that can deplete financial asset reserves.
    - ✓ Cognitive decline can **present a risk of financial mistakes**, which may be hedged through the participation of a **trusted financial adviser or through the use of annuities**.

2. Financial stages of life for an individual

- **Two additional concerns may be appropriate to any financial stage.**
  - First, depending on the family situation, the need to provide for long-term health care may become apparent.
  - Second, some people may need to devote resources to care for parents or a disabled child for an extended period of time.

2. Financial stages of life for an individual

Stages	Age	Features
Education	<18	• largely financially dependent on his or her parents or guardians • little financial capital • little focus on savings or risk management
Early career	18-35	• usually begins to save for their children's college expenses • significant family and housing expenses may not allow for much retirement savings • insurance may be especially valuable
Career development	35-50	• accumulation for the children's college educations • concern intensifies about retirement income planning and financial independence • retirement saving tends to increase at a more rapid pace

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2. Financial stages of life for an individual

Stages	Age	Features
Peak accumulation	51-60	• investors following a life-cycle portfolio strategy will begin to reduce investment risk • concerned about minimizing taxes, given higher levels of wealth and income • potentially more career risk
Pre-retirement	few years before retirement age	• restructure their portfolios to reduce risk • tax planning
Early retirement	first 10 years of retirement	• need for asset growth does not disappear • taking an appropriate level of investment risk in retirees' portfolios
Late retirement	before death	• longevity risk • cognitive decline can present a risk of financial mistakes

3. Net worth

- An individual's **net worth** consists of the difference between traditional assets and liabilities that are reasonably simple to measure, such as investment assets, real estate, and mortgages.
- **Net wealth** extends *net worth* to include claims to future assets that can be used for consumption, such as human capital and the present value of pension benefits.

3. Individual balance sheet

- **Traditional balance sheet** includes A/L that are easy to quantify.

Assets		**Liabilities**	
Liquid Assets		Short-Term Liabilities	
Checking account	€ 35,000	Credit card debt	€ 25,000
Certificates of deposit	€ 100,000	Total short-term liabilities	€ 25,000
Total liquid assets	€ 135,000		
Investment Assets		Long-Term Liabilities	
Taxable account	€ 750,000	Car loan*	€ 25,000
Retirement plan	€ 600,000	Home mortgage	€ 500,000
Cash value of life insurance	€ 25,000	Home equity loan	€ 90,000
Total investment assets	€ 1,375,000	Total long-term liabilities	€ 615,000
Personal Property			
House	€ 2,200,000		
Cars	€ 160,000		
House contents	€ 150,000		
Total personal property	€ 2,510,000		
Total Assets	€ 4,020,000	Liability	€ 640,000
		Net worth	€ 3,380,000

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3. Individual balance sheet

- **Economic (holistic) balance sheet** allows an individual to anticipate how available resources can be used to fund consumption over the remaining lifetime. discuss risks (earnings, premature death, longevity, property, liability, and health risks) in relation to human and financial capital.

Assets		**Liabilities**	
Financial capital	€ 4,020,000	Debts	€ 640,000
Liquid assets		Credit card debt	
Investment assets		Car loan	
Personal property		Home mortgage	
		Home equity loan	
Human capital	€ 1,400,000	Lifetime consumption needs (present value)	€ 4,200,000
Pension value	€ 500,000		
		Bequests	€ 400,000
Total Assets	€ 5,920,000	Total Liabilities	€ 5,240,000
		Net Wealth	€ 680,000

4. Risk management strategy for individuals

- **Risk management for individuals** is the process of identifying threats to the value of household assets and developing an appropriate strategy for dealing with these risks.
- **There are typically four key steps in the risk management process**
  - Specify the objective.
  - Identify risks.
  - Evaluate risks and select appropriate methods to manage the risks.
    - ✓ Risk avoidance;
    - ✓ Risk reduction;
    - ✓ Risk transfer (insurance);
    - ✓ Risk retention (self-insurance).
  - Monitor outcomes and risk exposures and make appropriate adjustments in methods.

4. Risk management strategy for individuals

- **For individual**
  - The decision to retain risk or to manage risk through insurance or annuities is determined by a household's risk tolerance.
  - Optimal risk management strategies are as follows.

Risk Management Techniques		
Loss characteristics	High frequency	Low frequency
High severity	Risk avoidance	Risk transfer
Low severity	Risk reduction	Risk retention

5. Individual risk exposures

- **Risk exposures**
  - **Earnings risk (insure with disability insurance)**: the risks associated with the earning potential of an individual—that is, events that could negatively affect the individual's human and financial capital.
  - **Premature death risk (insure with life insurance)**: the risk of the death of an individual earlier than anticipated whose future earnings, or human capital, were expected to help pay for financial needs and aspirations of the individual's family.
  - **Longevity risk (insure with annuities)**: the uncertainty surrounding how long retirement will last and specifically the risks associated with living to an advanced age in retirement (e.g., age 100).
  - **Property risk (insure with property insurance)**: the possibility that a person's property may be damaged, destroyed, stolen, or lost.
  - **Liability risk (insure with liability insurance)**: the possibility that an individual or household may be held legally liable for the financial costs associated with property damage or physical injury.
  - **Health risk (insure with health insurance)**: the risk and implications associated with illness or injury.

6. Life insurance

- **Life insurance** protects against the loss of human capital for those who depend on an individual's future earnings.
- **Use of life insurance**
  - A hedge against the risk of the premature death of an earner;
  - An important estate-planning tool;
  - A tax-sheltered savings instrument.
- **Types of life insurance**
  - **Temporary life insurance** provides insurance for a certain period of time specified at purchase (term life insurance);
  - **Permanent life insurance** provides lifetime coverage, assuming the premiums are paid over the entire period.
    - ✓ **Whole life insurance** remains in force for an insured's entire life;
    - ✓ **Universal life insurance** is constructed to provide more flexibility than whole life insurance.

6. Life insurance

- **Whole life insurance** remains in force for an insured's entire life and requires regular, ongoing fixed premiums.
  - Can be divided into two subgroups
    - ✓ **Participating life insurance policies** allow potential growth at a higher rate than the guaranteed value, based on the profits of the insurance company.
    - ✓ **A non-participating policy** is one with fixed values: The benefits will not change based on the profits and experience of the insurance company.
- **Universal life insurance** is constructed to provide more flexibility than whole life insurance.
  - The policy owner, generally the insured, has the ability to pay higher or lower premium payments and often has more options for investing the cash value. The insurance will stay in force as long as the premiums paid or the cash value is enough to cover the policy expenses of the provider.

6. Life insurance

- **The basic elements of a life insurance policy**
  - The **term** and type of the policy (e.g., A 20-year temporary insurance policy);
  - The amount of benefits (e.g., £100,000);
  - Limitations under which the death benefit could be withheld (e.g., If death is by suicide within two years of issuance);
  - The **contestability period** (the period during which the insurance company can investigate and deny claims);
  - The identity (name, age, gender) of the **insured**;
  - The policy **owner** (generally needs to have an insurable interest in the life of the insured);
  - The **beneficiary** or beneficiaries;
  - The premium schedule (the amount and frequency of premiums due);
  - Modifications to **coverage** (保额) in any **riders** to the policy.

6. Life insurance

- **The basic elements of a life insurance policy**
  - **Elimination/waiting** period
  - **Non-forfeiture** clause: 不丧失现金价值
  - **Guaranteed insurability**

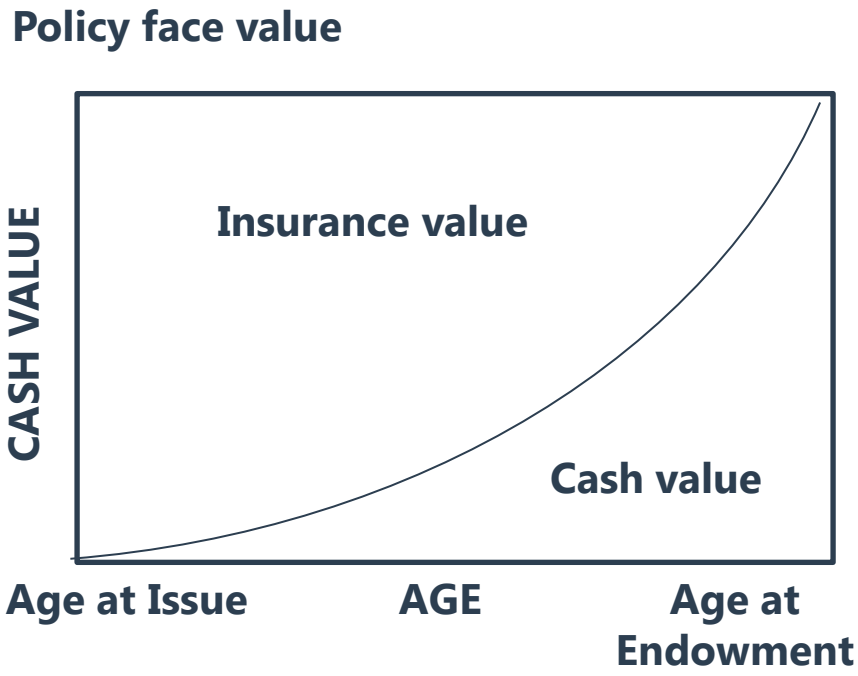
6. Life insurance

- **Three key considerations in the pricing of life insurance**
  - **Mortality expectations:** Actuaries at insurance companies estimate mortality based on both historical data and future mortality expectations. Generally speaking, life expectancies in most regions of the world have been increasing. Certain attributes, such as age and gender, are obvious factors in evaluating life expectancy. To avoid adverse selection and undercharging for the risk assumed.
  - The **net premium** of a life insurance policy represents the discounted value of the future death benefit.
    - ✓ A probability of 0.15% of dying within the year, death benefit $100,000, discount rate 5.5%. Net premium = (0.15%*$100,000 + 99.85% * $0)/1.055= $142.18
  - The **gross premium** adds a load to the net premium, allowing for expenses and a projected profit for the insurance company.

6. Cash value and policy reserves

- Although initial premiums are higher, whole life policies offer the advantage of level premiums and an accumulation of cash value within the policy that
  - Can be withdrawn by the policy owner when the policy endows (or matures) or when he or she terminates the policy;
  - Can be borrowed as a loan while keeping the policy in force.
- These cash values build up very slowly in the early years, during which the company is making up for its expenses.

Build-up of cash value in a whole life insurance policy



6. Life Insurance Costs

- **Net premium cost index (per $1000 of face value, per year)**

FV of premium
-FV of dividend
= FV of net payment
↓
CPT PMT
↓

$$\text{Net premium cost index} = \frac{\text{PMT}}{\text{coverage}/1000}$$

- **Surrender cost index (per $1000 of face value, per year)**

FV of premium
-FV of dividend
-cash value
= FV of net payment
↓
CPT PMT
↓

$$\text{Surrender cost index} = \frac{\text{PMT}}{\text{coverage}/1000}$$

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7. Annuities

- **Deferred variable annuities**: In its most basic form, a deferred variable annuity is similar to a mutual fund, although it is structured as an insurance contract and typically sold by someone licensed to sell insurance products.
- **Deferred fixed annuities:** Deferred fixed annuities provide an annuity payout that begins at some future date.

7. Annuities

- **Immediate variable annuities:** With an immediate variable annuity, the individual permanently exchanges a lump sum for an annuity contract that promises to pay the annuitant an income for life.
- **Immediate fixed annuities:** The most common and the most utilized type of annuity, an individual trades a sum of money today for a promised income benefit for as long as he or she is alive.
- **Advanced life deferred annuities:** The final type of annuity that we discuss is a hybrid of a deferred fixed annuity and an immediate fixed annuity. An ALDA's payments begin later in life, for example, when the individual turns 80 or 85. pure longevity insurance.

7. Annuities

- **Relative advantages and disadvantages of fixed and variable annuities**
  - **Volatility of benefit amount:** Fixed annuities provide a constant income stream that is guaranteed not to change, whereas the income from a variable annuity could change considerably depending on the terms of the annuity payout.
  - **Flexibility: The flexibility of an annuity varies materially** with the type of annuity and its individual features.
  - **Future market expectations:** A fixed annuity locks the annuitant into a portfolio of bond-like assets at whatever rate of return exists at the time of purchase. This scenario creates some interest rate risk because the value of these underlying securities will fall if interest rates rise.
    - ✓ **Mortality credits**: Some individuals will die before, and some after, their expected lifespan. Annuitants who die earlier collect fewer payouts, effectively subsidizing those who die later. That is why insurance is called risk sharing or transfer.

7. Annuities

- **Relative advantages and disadvantages of fixed and variable annuities**
  - **Inflation concerns:** Inflation can have a significant negative impact on the real income received from a fixed annuity. For example, if annual inflation averages 3%, after approximately 24 years, the income would be worth approximately half as much as it was worth when the annuity began.
  - **Payout methods:** The payout methods available from an annuity are similar regardless of whether the annuity is fixed or variable, including joint life, period-certain annuity, life annuity with period certain (确保最少年份数), and life annuity with refund.
  - **Annuity benefit taxation:** In some locations, annuities can offer attractive tax benefits, such as tax-deferred growth.
  - **Appropriateness of annuities:** The individual can choose either to receive periodic withdrawals from an investment portfolio (i.e., not annuitize) or to purchase an annuity (i.e., annuitize).
  - **Fees:** The fees associated with variable annuities tend to be higher than those for fixed annuities (the costs of hedging market risk, administrative expenses, and reduced price competition).

7. Other types of insurance

- **Disability income insurance** is designed to mitigate earnings risk as a result of a disability, which refers to the risk that an individual becomes less than fully employed because of a physical injury, disease, or other impairment.
  - Waiver of premium：投保人免缴保险费
- **Property insurance** is used by individuals to manage property risk . The primary areas to cover are the home/ residence and the automobile.
- **Health/Medical** Insurance is highly dependent on the country of residence. In certain countries, health care is governmentally funded and there is no private health insurance. In others, there is a two-tiered system, with governmental coverage for everyone and upgraded coverage for additional payments.
- **Liability insurance** is used to manage liability risk.

8. Implementation of risk management

- **For individual**
  - The effect of human capital on asset allocation policy
    - ✓ For **equity-like** human capitals: less aggressive portfolio;
    - ✓ For **bond-like** human capitals: more aggressive portfolio;
    - ✓ For **younger**: more equities;
    - ✓ For **older**: more bonds.
  - The risk faced with the individuals can be classified as
    - ✓ **Idiosyncratic risks** include the risks of a specific occupation, the risk of living a very long life or experiencing a long-term illness, and the risk of premature death or loss of property;
    - ✓ **Systematic risks** affect all households. For example, a diversified investment portfolio of risky assets will be exposed to the systematic risk that the overall market will fall in value.

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It’s not the end but just beginning.

By training your thoughts to concentrate on the bright side of things, you are more likely to have the incentive to follow through on your goals. You are less likely to be held back by negative ideas that might limit your performance.

试着训练自己的思想朝好的一面看，这样你就会汲取实现目标的动力，而不会因为消极沉沦停滞不前。

问题反馈

- 如果您认为金程**课程讲义/题库/视频**或其他资料中**存在错误，欢迎您告诉我们**，所有提交的内容我们会在最快时间内核查并给与答复。
- **如何告诉我们？**
  - 将您发现的问题通过电子邮件告知我们，具体的内容包含：
    - ✓ 您的姓名或网校账号
    - ✓ 所在班级（eg.2111CFA三级长线无忧班）
    - ✓ 问题所在科目（若未知科目，请提供章节、知识点）和页码
    - ✓ 您对问题的详细描述和您的见解
  - 请发送电子邮件至：academic.support@gfedu.net
- **非常感谢您对金程教育的支持，您的每一次反馈都是我们成长的动力**。后续我们也将开通其他问题反馈渠道（如微信等）。