Text Book
(Unofficial Translation)
Investment Product Series (P Series)
P 1 – Plain Products: Full Paper
Module 1: Fundamental Knowledge

For

Investment Consultant: Plain Products

Professional Education Department
Capital Market Education Group

Version 4

Note: This version provides the translation of additional content relating to LiVE Exchange, digital asset, ESG (Environmental, Social and Governance), and trading mechanism of the Stock Exchange of Thailand.

The content will be effective for the examination, as prescribed by its learning objectives, since 1 August 2024 onwards)

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The amendment of Text Book (Unofficial Translation)
Investment Product Series (P Series)
P1 – Plain Products (Full Paper)
Module 1: Fundamental Knowledge

Topics	Detail
Module 1: Fundamental Knowledge Chapter 1: The Environment of Investment and Financial Market	• The translation of "LiVE Exchange" is provided for the understanding of a type of financial market (secondary market).
Module 1: Fundamental Knowledge Chapter 2: Financial Instruments and Investment Decision	• The translation of "Digital Assets" is provided for the understanding of another type of financial products.
Module 1: Fundamental Knowledge Chapter 6 : Company Analysis	• The translation of "Sustainable Investment Concepts" is provided for the understanding of ESG (environmental, social and governance) aspects of potential investment.
Module 3: Product Knowledge (Plain Products) **Section 1:** Equities Chapter 4: Trading Mechanism in the Stock Exchange of Thailand	• Revised content of the whole chapter to be more updated.

Module 1: Fundamental Knowledge

Investment Consultant (Plain Product)

Module 1: Fundamental Knowledge

1. The Environment of Investment and Capital Market

Required Readings

1. Fundamental Knowledge of Finance and Investment
    - Chapter 1: The Environment of Investment and Financial Market.

      (Available in Thai only, except the translation of "LiVE Exchange" is provided below for the understanding of a type of financial market (secondary market).

      See learning objectives and suggested readings as a guideline)

Learning Objectives:

1. Explain circulation of income and expenses in economic system.
2. Distinguish the differences of capital movement in financial system in 3 channels: intermediaries, financial market and direct capital movement.
3. Identify roles and duties of financial system, explain the link between financial system and economic system.
4. Explain meaning and importance of financial market.
5. Explain financial market characteristics and distinguish the differences of each type of financial market.

Suggested Readings

- *Money and Capital Markets (Peter S. Rose, Milton H. Marquis, 2008) – Chapter 1: Functions and Roles of the Financial System in the Global Economy*
- *Financial Management: Theory and Practice (Eugene F. Brigham and Michael C. Ehrhardt, 2009) – Chapter 1: An Overview of Financial Management and the Financial Environment*

Note: An unofficial translation of the Thai text book: Fundamental Knowledge of Finance and Investment, Chapter 1 -- The Environment of Investment and Financial Market (only "LiVE Exchange"), Chapter 2 -- Financial Instruments and Investment Decision (only "digital assets"), and Chapter 6 -- Company Analysis (only "Sustainable Investment Concepts"). The translation is intended to facilitate a reader to understand contents of the book but not to be used as a reference. SET is not responsible for the correctness and completeness of the translation. Please refer to the Thai version for accuracy and reference.

LiVE Exchange (LiVEx)

LiVE Exchange (LiVEx) has been established as a trading hub for small and medium-sized enterprises (SMEs) as well as qualified startups wishing to raise funds for business expansion and operation. The trading commenced on March 31, 2022. The criteria for fundraising, listing and trading on LiVEx are different from those of The Stock Exchange of Thailand (SET) & Market for Alternative Investment (mai). The differences include issuer qualifications and duties after being listed, along with the investment format and method catering to differently-experienced investors and financial status at a risk tolerance level as specified by the SEC.

The concept behind the setting up of LiVEx can be divided into 3 points as follows:

1. Light-Touch Supervision: Relaxed (or simplified) qualifications for companies to be listed, while defining duties after being listed to be suitable for SMEs / startups.
2. Investor Protection: Specify types of investors and trading methods in accordance with surveillence and various risks.
3. Information-Based: Focus on the disclosure of the company's important information, and the follow-up or inquiry by investors.

The nature and qualifications of companies wishing to enter the fund-raising process / to be listed on LiVEx must be a public company that meets the definition of a medium-sized enterprise or larger (according to the definition of the Office of Small and Medium Enterprises Promotion or OSMEP), OR a venture capital (VC) or a private equity (PE), according to the Notification of the Capital Market Supervisory Board, that have already been invested in the company, etc. SET has specified a 3-year silent period of which can gradually sell 20% of the shares prohibited from selling after 1 year, and then every 6 months thereafter. Shareholders are prohibited from selling are strategic shareholders having 55% (of shares in silent period) of paid-up capital after IPO.

Companies listed on LiVEx are SMEs and startups in the early stages of business operations are heavily relying on creativity and innovation of young entrepreneurs, or relatively smaller companies, as such investors may be exposed to business and financial risks. In addition, investors may face liquidity risk in not being able to sell the securities of such company within the target period. On top of this, there are also the risks of securities price, innovation & technology, and legal & taxation, etc. Therefore, the regulators have specified the types of qualified investors for LiVEx, which are:

1. Institutional investors, venture capital (VC) firms, private equity (PE) firms.
2. Investors with experience and expertise in investing, such as fund managers, investment analysts, angel investors, etc.
3. Company-related persons, e.g., directors, executives, employees, major shareholders, subsidiaries and associated companies.
4. Ultra-high-net-worth (UHNW) investors, or high-net-worth (HNW) investors who have qualifications in terms of knowledge or experience in investment and financial status.

Knowledge or experience (either one)	**Financial position** (either one)
	Individuals (including spouses)
• Exerience in risky (high rish?) asset invesment • Work experience in financial management and investment • Sufficient knowledge and understanding of invested securities • Investment consultants (ICs), Investment planners (IPs) approved by the SEC • Obtained a course certificate accepted by the SEC	Net assets ≥ THB 30 million • Annual income ≥ THB 3 million • Investment amount ≥ THB 8 million (or ≥ THB 15 million including deposit amount)

LiVEx trading will be executed through SET members by automated order matching (AOM) or trade report methods. The automated order matching occurs once a day between 9.30 a.m. - 11.00 a.m. Clearing, settlement and delivery of securities will be Gross Settlement on the same business day as the trading date (T). Short selling is not allowed. Trading via Direct Market Access (DMA) or Algorithmic Trading is not allowed. No ceiling & floor price setting and no Circuit Breaker will be imposed.

2. Financial Instruments and Investment Decision

Required Readings

1. Fundamental Knowledge of Finance and Investment
    - Chapter 2: Financial Instruments and Investment Decision

      (Available in Thai only, except the translation of "Digital Assets" is provided below for the understanding of another type of financial products.

      See learning objectives and suggested readings as a guideline)

Learning Objectives:

1. Distinguish each type of financial assets in capital, money and derivatives markets.
2. Explain the importance of financial assets to fund raising and investment.
3. Explain investment decision process.
4. Explain the concept of investment diversification to reduce risk arising from financial asset investment.
5. Explain and classify each type of securities analysis.
6. Explain characteristics of efficient market, suitable investment strategies of efficient market.
7. Classify the differences between active and passive portfolio management strategies.
8. Identify roles, duties and responsibilities of investment consultants in giving consultation in financial assets.

Suggested Readings

- *Analysis of investments and management of portfolios (Frank K. Reilly, Keith C. Brown, 2012) – Chapter 2: The Asset Allocation Decision, 3: The Global Market Investment Decision*
- *Portfolio construction, management, and protection (Robert A. Strong, 2009) – Chapter 8: Capital Markets and Market Efficiency*

2.1.5 Digital assets

Digital asset is considered one type of assets that have gained popularity and have been attractive to investors during the past few years as it is believed that it can generate high returns in a short period of time. However, to invest in a newly launched asset, investors should make sure they understand it well before making the investment decision.

Definition and characteristics of digital assets

Initially, many of us understood that digital assets consist of digital currency or cryptocurrency. In fact, digital assets are not only digital currencies but also digital coins (crypto token), including assets that are in the form of other digital products and services. The definition of digital asset as specified in the Royal Decree on Digital Asset Businesses B.E. 2561 (2018) in Thailand covers cryptocurrencies and digital tokens, with details as follows:

Cryptocurrency

Cryptocurrency is an electronic data unit created on an electronic system or network with the objectives to use as a medium of exchange for obtaining goods, services or any other rights, or to use as the exchange for digital assets. In addition, the definition also includes any other electronic data units as specified in the notification of the SEC.

Currently, cryptocurrency is not a currency acceptable as legal tender by any central bank in the world, with the exception of only one country: El Salvador, presently accepting Bitcoin as an official legal tender. The cryptocurrencies that Thai people are familiar with are Bitcoin and Ethereum. The key factors that have made these two types of digital money popular are based on the fact that investors can start by using a small amount of investment, with systematic trading procedures that are easy to understand. In addition, some stores accept these digital currencies when buying their products instead of cash. Moreover, the price movement of these two cryptocurrencies are highly volatile, as such attracting investors who seek high returns over a short period of time.

Digital token

Digital token is an electronic data unit which is created on an electronic system or network with the objectives to

(1) Specify the rights of a person to join the investment in any project or business (investment token).

(2) Specify the rights to acquire goods or services or any other specific rights (utility token) according to the agreement between the issuer and the holder, including other units with specifying rights according to the notification of the SEC.

Digital tokens may be offered via an Initial Coin Offering (ICO) process. An ICO is a form of fund raising that uses blockchain technology. The company will offer and set up token sales that define investor rights or benefits, such as profit sharing from a project, or the rights to acquire specific goods or services, etc. The company will allow investors who wish to participate in the venture to do so by bringing cryptocurrencies or money to exchange for tokens issued by the company. Generally, the rights offering and mandate are regulated by Smart Contract set via blockchain technology. An ICO may neither be a stock nor a debt instrument. Although the name ICO is similar to IPO, they may be very different in terms of essence. Holders of tokens from ICO investments may not own the company like IPO shareholders, and may not be creditors of the company, and may not have rights to the company's assets in the event of dissolution or bankruptcy. The token holders will have the rights as specified in the white paper. (source: the SEC)

The offering of the newly issued digital tokens to the public, or the digital tokens that have already been issued by the issuer with the objectives to be offered for sales to the general public, can be done only for juristic persons (limited company or public company limited) and must obtain prior approval from the SEC. In addition, they have to submit a registration statement for the digital token offering and a draft prospectus containing details as specified by the SEC Board to the SEC Office. The digital token offering that has already been approved by the SEC can only be launched when the digital token offering registration statement and draft prospectus have become effective. The offering must be offered to investors according to the types, and conditions announced by the SEC, and must be offered via a digital token offering portal (ICO portal) that has been approved by the SEC Board only.

Notably, directors, executives or controlling persons of a digital token offering license applicant, and a digital token offering system service provider must meet the qualifications as required and must not possess any prohibited characteristics as specified by the SEC. In addition, the digital token offers or also has duties after the offering period. This person must report the company’s performance and financial position, including any other information that may affect the rights of digital token holders, or the investment decisions, or the changes in the price or value of digital tokens, to the SEC Office for further disclosure to the public and investors.

The trading of digital assets in Thailand

Under the Royal Decree on Digital Business B.E. 2561 (2018), there are 3 channels to invest in digital assets: 1) digital asset trading centres, 2) digital asset brokers, and 3) digital asset dealers.

Trading via digital asset trading centres

A digital asset trading centre means any centre or network set up for trading or exchanging digital assets by matching or finding counterparties, or the managing of a system or facilities for buyers who wish to buy, sell or exchange digital assets so that they can make an agreement or match up with each other, conducting commercial activities as usual. However, this does not include a centre or network with the characteristics as specified by the SEC.

Investors who want to trade digital assets via a digital trading centre can apply for the service directly with that centre. This is different from securities trading where investors have to open a securities trading account with a securities company. Therefore, in order to operate a digital asset business in the category of a digital asset centre, the customer onboarding and KYC system is required to support the process to open a trading account for investors. After the investor has opened a trading account, the investor can transfer assets in both baht and/or digital assets (prepared to be traded) to the trading centre where the assets are kept. The SEC has set the rules & regulations for the management, supervision, and maintenance of the assets in order to govern and control the trading centre to secure the assets. In addition to taking care of the assets, the trading centres are also responsible for the auditing, reconciling, and creating the registration to ensure that the customers' assets are complete and accurate. Significantly, they must clearly and auditably separate the customer's assets, both money and digital assets, from the company's assets.

When investors want to trade digital assets, they can trade via the application of each digital asset trading centre and send buy or sell orders similar to sending securities trading orders. When an investor's buy or sell order can be matched, the digital asset trading centre's duty is to carry out the settlement and delivery of the digital assets for the investor. Investors can check their asset balance via the application or the channel specified by the trading centre.

Trading via a digital asset broker

Digital asset broker means a person who provides services or demonstrates to the general public that he/she is ready to provide services as a broker or agent to buy, sell, or exchange digital assets for others, conducting in the normal course of business, and receives fees or other compensations, but not including being a broker or agent in the manner specified by the SEC.

Investors who want to trade digital assets via a digital asset broker can apply for the service directly with that broker. The digital asset broker has the duty of best execution from numerous local and international trading centres. The digital asset broker must have a customer onboarding and KYC systems to support the demand for opening a trading account for investors. After the investor has opened a trading account, the investor can transfer the assets in both baht and/or digital assets (prepared to be traded) to the broker to be kept. The SEC has set up rules & regulations for the management, supervision, and maintenance of the assets in order to govern and control the broker to secure the assets safely. In addition to taking care of the assets, the brokers also have the duty to audit, reconcile, and handle the registration to ensure that the customers' assets are complete and accurate. Significantly, they must clearly and auditably separate the customer's assets, both money and digital assets, from the brokers.

When investors want to trade digital assets, they can trade via the application of the digital asset broker. Then the investor's buy or sell orders will undergo a matching process with the best buy or sell orders of the trading centre, which may be either a local or foreign digital asset trading centres. Once an investor's buy or sell orders can be matched, the duty of the digital asset broker is to handle the settlement and delivery of digital assets for the investor. Investors can check their asset balance via the application or the channels specified by the trading centre.

Trading via digital asset dealers

A digital asset dealer means a person who provides services or demonstrates to the general public that he/she is ready to provide services to buy, sell, or exchange digital assets by himself/herself on their own behalf as the normal commercial activities, by trading outside the digital asset trading centre. This does not include providing services in the manner according to the SEC's notifications and specifications.

Digital asset dealers' duty is to buy/sell counterparts for investors who want to trade. The trading price is set between the investor and the digital asset dealer. Investors who wish to trade digital assets via a digital asset dealer can apply for the service directly with that digital asset dealer. Digital asset dealers must have a customer onboarding and KYC system to support the demand to open a trading account for investors. Significantly, digital asset dealers are not permitted to keep both the Thai baht and the digital assets[1].

When investors want to trade digital assets, they can trade via the application or the channel specified by the digital asset dealer. The dealer will enter a trade transaction (with the investor) if both parties agree on the price and quantity to be traded. Regarding dealers of digital assets, as they have a duty to buy or sell digital assets according to the investors' requirements, it is necessary for them to have the holding of digital assets for trading. Digital asset dealers may manage the risk occurred from digital asset price volatility.

Business operators who maintain customer assets must keep separate accounts for each customer's assets. In addition, they must separate the assets of the customer from those of the business operator. Notably, the business operator cannot use the customer's assets for anything other than for the benefit of the customers.

The Emergency Decree on Digital Asset Businesses B.E. 2561 has specified that the clients' assets kept in the account of the digital asset business operator shall belong to the clients, and this Act shall protect customers' assets in the event that the business operator becomes a judgment debtor, being ordered by the court to be in receivership, or the business operator being suspended by the authorities or other regulatory bodies, in part or in whole, in similar manners as specified in the Securities and Exchange Act and Derivatives Act, which will result in the case where the business operator has become a judgment debtor, has been ordered by the court to be in receivership, or has been ordered by the authorities to suspend operations. As

1 Referring section 42 of The Notification of the Securities and Exchange Commission No. GorThor. 19/2561 Re: Rules, Conditions and Procedures for Undertaking Digital Asset Businesses, dated 3 July B.E. 2561.

such, customer assets will be protected, will not be considered as assets that are subject to seizure or attachment in civil cases, or as assets that may be divided among creditors of the operator in bankruptcy cases, and will not be considered as being under the prohibition of distribution and transfer of other authorities. This Act specifies that customers have the rights to receive their allocated assets back, and have the rights to request payment for the remaining debt as well.

Benefits that investors expect to receive from investing in digital assets

Digital assets are new investment products that investors are interested in due to the belief that they can benefit from investing in digital assets. The benefits are as follows:

1. High Risk-High Rewards: Digital asset is categorised as a high-risk investment product since the trading price of digital assets is quite volatile, causing investors to expect that if they can catch the right moment in digital asset trading, investing in high-risk digital assets can also bring significant amount of profit.

2. Blockchain technology has high security qualities: In computer science, Blockchain technology -- with employs cryptography and distributed ledger technology -- is recognized as a highly secured technology. It can effectively prevent the loss and forgery of information, so investors do have confidence that the data stored on Blockchain, including the list of transfers of digital assets and the amount of digital assets balance, are stored securely on Blockchain.

3. There is no intermediary in transactions and asset control: Digital assets have been designed to have no intermediary in transactions and control over assets. Therefore, the digital asset holders believe that it can always be traded. Even if the economies of the countries involved have collapsed, or even if the intermediary in trading is closed down, we can still be able to exchange digital assets via other channels.

4. Can be traded 24/7: As digital assets are products that are globally traded, the digital asset trading markets are open 24 hours a day, 7 days a week, without breaks in trading. This makes investors confident that they can trade digital assets at the desired price at all times. In other words, it can be seen with increasing convenience and opportunity for investors to trade digital assets at reasonable prices.

Risks of investing in digital assets

The digital asset is considered a high-risk asset to invest in, with the opportunity to earn high returns. There is a high chance of loss as well. The price volatility of digital assets is still high compared to other traditional assets such as equities, debt instruments, derivatives, etc. Therefore, investors need to fully understand the risks of digital assets before investing.

Risks from investing in digital assets can be divided into 2 main categories: 1) risks arising from internal factors of digital assets, and 2) risks arising from external factors:

Risks arising from internal factors of digital assets can be considered in 2 dimensions as follows:

1. Risk from creators and issuers offering digital assets: Digital asset creators and issuers with operating experience, or a group of individuals with knowledge and expertise in creating digital assets is a key factor that can affect the success of such digital asset. Therefore, investors should study information related to creators and digital asset issuers, to be able to assess how reliable the digital assets being created are, or to assess if there is assets or business projects as collateral, or to fix returns on the creation of digital assets. These will enable investors to assess whether the value of the assets is increasing or decreasing from any factor, or how much that business project will have a chance to succeed, which will affect the price change of the digital assets.

2. Risk from technology of digital assets: The technology that creates digital assets can cause risks, for example, if an investor loses his/her ‘private key,’ it is not possible to create a new one (based on the design of the blockchain technology), as such making the digital assets inaccessible, etc. The design of smart contracts inappropriately can have loopholes, making the smart contract unusable or being exploited to attack the value of the digital coin. Other examples can be seen in the cases of LUNA and UST coins being attacked, causing the collapse of the Terra blockchain, which eventually led to the value loss of both LUNA and UST.

Risks arising from external factors can be considered **in 4 dimensions as follows:**

1. Risk of digital asset price volatility: Learning from past experiences during the recent years, there are various factors that can affect the prices of digital assets, such as the opinions from gurus, social media posts, change of laws & regulations, regulatory measures of various countries, etc. These situations can cause volatility in digital asset prices.

2. **Cyber security risks**: All digital asset investments are on the internet. Therefore, investors should be cautious of potential dangers on the internet, such as cyber theft (hacking), etc., resulting in investors losing all the digital assets.

3. Risk from frauds: being deceived, persuaded to invest in digital assets or in fraudulent or non-existent projects. These are risks that investors need to be extremely careful when making investment decisions, otherwise the result will be the loss of the entire investment.

4. Risk from foreign investment: Investors can use the services of foreign digital asset business operators for their own investment. However, investing abroad will not be protected by Thai laws. Investors should therefore select the business operators carefully before using their services, in terms of reliability of various operating systems, customer experience, etc.

Therefore, we would like to suggest that investors keep updated with the news and informatio, gaining more knowledge related to digital assets. This will be like building immunity against risks that may arise from investing in digital assets. Furthermore, it can also help investors to have the opportunity to be successful in investing according to the set goals. Please find more information from the website of the SEC Office.

3. Risk and Return on Securities Investment

Required Readings

1. Fundamental Knowledge of Finance and Investment
    - Chapter 3: Risk and Return on Securities Investment

    (Available in Thai only. See learning objectives and suggested readings as a guideline)

Learning Objectives:

1. Distinguish meanings and differences of return on cash flow and change in securities prices, calculate rate of period return on single securities.
2. Explain concepts and calculate average rate of return by using arithmetic mean (AM) and geometric mean (GM), compare the differences of calculation of AM and GM.
3. Explain concepts and calculate expected rate of return of single securities investment.
4. Identify determinants of nominal rate of return, real risk-free rate of return, inflation premium and risk premium.
5. Calculate and link the relationship of nominal rate of return real risk-free rate of return, inflation premium and risk premium.
6. Compare taxable and non-taxable investment returns, either the calculation of returns after tax or calculation of taxable equivalent returns.
7. Explain the concept of time value of money, distinguish differences of present and future value of money.
8. Explain the concept of calculation of present and future values, both single cash flow and multiple cash flow.
9. Explain the concept of the calculation of cumulative rate of return and effective rate of return, including compound return rate and real rate of return.
10. Explain the definition of securities investment risk, distinguish types of investment risk, e.g. business risk, financial risk, liquidity risk, interest rate risk and inflation risk.
11. Interpret single investment risk by using variance and standard deviation.
12. Link the relationship between rate of return and investment risk.
13. Compare and prioritize the investment securities as its return and risk.

Suggested Readings

- *Analysis of investments and management of portfolios (Frank K. Reilly, Keith C. Brown, 2012) – Chapter 1: An Overview of the Investment Process*
- *Financial Management : Theory and Practice (Eugene F. Brigham and Michael C. Ehrhardt, 2009) – Chapter 4: Time Value of Money*

4. Risk and Return of Securities Portfolio

Required Readings

1. Fundamental Knowledge of Finance and Investment
    - Chapter 4: Risk and Return on Portfolio Investment

      (Available in Thai only. See learning objectives and suggested readings as a guideline)

Learning Objectives :

1. Explain concept and meaning of portfolio investment.
2. Explain concept and calculate portfolio investment rate of return.
3. Explain concept, meaning and interpret co-variance and correlation.
4. Interpret each type of portfolio risk, e.g. standard deviation and variance.
5. Link the relationship of correlation value to the selection of suitable investment portfolio.
6. Understand the definition and be able to distinguish types of systematic and non-systematic risks.
7. Explain the meaning of beta, apply beta to forecast the change of the rate of return.
8. Explain concept, assumption, limitation and be able to apply the securities valuation model in order to find required rate of return and evaluate reasonable securities price.
9. Identify variables that affect to SML line.
10. Explain concept and identify limitation of portfolio performance by risk adjusted rate of return, compare portfolio performance models by using Sharpe Model, Treynor Model and Jensen Model.

Suggested Readings

- *Analysis of investments and management of portfolios (Frank K. Reilly, Keith C. Brown, 2012) – Chapter 7: An Introduction to Portfolio Management, 8: An Introduction to Asset Pricing Methods, Chapter 25: Evaluation of Portfolio Performance*

5. Economic and Industrial Analysis

Required Readings

1. Fundamental Knowledge of Finance and Investment
   - Chapter 5: Economic and Industrial Analysis

     (Available in Thai only. See learning objectives and suggested readings as a guideline)

Learning Objectives :

1. Explain meaning and significance of economic analysis affecting to securities investment decision and identify main targets of economic management.
2. Distinguish differences of economic policies, i.e. monetary and fiscal policies, be able to link the effects of monetary and fiscal policies to the economy and investment decision.
3. Explain meaning and link the effects of key economic variables to the economic growth and investment situation.
4. Explain characteristics and differences of each economic cycles and link economic cycles with securities returns.
5. Explain meaning of economic indicators, distinguish differences of leading, coincident and lagging economic indicators.
6. Explain meaning and significance of industrial analysis to investment decision.
7. Link the relationship between economic cycles and industries, distinguish industries that grow faster than economy, industries that grow at the same level of the growth of economy, and industries that irrelevant to the growth of economy.
8. Apply the concept of economic and industrial cycle analysis for suitable consultation in each economic cycle.
9. Link the domestic and international effects, e.g. economic, political, social, law and technology to industries.
10. Explain characteristics of industries in each cycle, distinguish differences of each industrial cycle.
11. Apply the industrial cycles to analyze the investment decision.
12. Explain the characteristics of perfectly competitive and imperfectly competitive markets, distinguish differences of each market.

13. Explain concepts of the analysis of industrial competition, competition in the industry, and factors affecting competition in the industry.
14. Link industrial competition effects to securities investment.
15. Identify sources of information for monitoring economic situation.

Suggested Readings

- *Analysis of investments and management of portfolios (Frank K. Reilly, Keith C. Brown, 2012) – Chapter 12: Macroanalysis and Microvaluation of the Stock Market, 13: Industry Analysis*

6. Company Analysis

Required Readings

1. Fundamental Knowledge of Finance and Investment
   - Chapter 6: Company Analysis

     (Available in Thai only, except the translation of "Sustainable Investment Concepts" is provided below for the understanding of ESG (environmental, social and governance) aspects of potential investment.

     See learning objectives and suggested readings as a guideline)

Learning Objectives:

1. Explain meaning and significance of company analysis to investment decision.
2. Explain concepts of qualitative analysis by using SWOT analysis, the analysis of competitive strategies of a company, distinguish differences of cost leadership, differentiation, and niche market strategies.
3. Explain meaning and objectives of each type of financial statement, identify usefulness of financial statement analysis to securities investment decision analysis.
4. Explain concepts of common sized analysis, trend analysis for securities investment decision.
5. Be able to select financial ratios for performance analysis of a company.
6. Interpret and apply financial figures and ratios for securities investment analysis and decision making.
7. Identify the limitations of financial statement analysis, the application of financial ratios to the analysis of securities investment decision.
8. Explain concepts and identify information sources for monitoring a company performance.
9. Explain meaning and significance of sustainable investment to the investment decision.
10. Explain concepts of sustainable investment.

Suggested Readings

- *Analysis of investments and management of portfolios (Frank K. Reilly, Keith C. Brown, 2012) – Chapter 10: Analysis of Financial Statements, 14: Company Analysis and Stock Valuation*
- *Investments (Frank K. Reilly and Edgar A. Norton, 2006) – Appendix 15 of Chapter 15: Information Sources for Company Analysis*
- *Encouraging listed companies to be included in sustainability rankings and indices: https://www.set.or.th/sustainable_dev/en/sr/sd/evaluation_p1.html*
- *Sustainable investment promotion: https://www.set.or.th/sustainable_dev/en/sr/sri/sri_p1.html*
- *About Thailand Sustainability Investment: https://www.set.or.th/sustainable_dev/en/sr/sri/tsi_p1.html*

Topic 6.3 Sustainable Investment Concepts

Sustainable investment (SI) is an investment approach which has become increasingly prominent in the past decade. It shares similarities to a typical investment in which SI focuses on the business operation fundamentals of listed companies. In addition, investors or analysts also need to assess the competitiveness of listed companies, the potential for growth and revenue generation along with the ability to manage expenses. The key difference is for SI is that it takes environmental, social and governance (ESG) aspects of the potential investment into consideration as well as financial performances.

In general business fundamental analyses, the investors or analysts often focus on the financial performance and short-term effects on businesses. The implication is that, the traditional analysis approach may not reflect the whole picture resulting in inaccurate valuation of the current fundamental value.

Take the case of the DCF Valuation Approach for example. The approach is used to analyze current fundamental value and to estimate the free cash flow (FCF) throughout the whole life of the business, present and future. Typically, a business is often assumed to have an infinite life as long as the business can continue to pay debts and generate income. Therefore, investors and analysts tend to divide the free cash flow calculation into two time-frame based variables:

Calculation 1 Total value of discounted free cash flows over the first five years

Calculation 2 The sum of the discounted free cash flows in the remaining years of the business infinitively.

$$Enterprise\ Value = PV[FCF_{1-5}] + PV[FCF_{6-\infty}]$$

The equation above illustrates that most of the present value of an enterprise that can be estimated by investors or analysts is the enterprise value based on the assumption used in Calculation 2. This means that investors or analysts must assess the enterprise's sustainability as accurately as possible to ensure the total discounted free cash flows in Calculation 2 is precise. The sustainability factor of the business relies upon assumptions used in the valuation of the sum of cash flows in Calculation 2 as well.

In addition, evaluating the present value of an enterprise involves specifying assumptions of the anticipated rate of return for investors from the enterprise (also called ‘the cost of capital of the business”). This can be explained using financial theories that changes in the cost of capital of the business arise from the result of the level of risk in the business operation. As such, the management of various risks, including ESG risks that affect the sustainability of an enterprise, is instrumental to the change in the level of cost of capital. Which in turn, it has an effect on the valuation accuracy of the business. The implication is that, the enterprises that manage risks well will see reduction in the cost of capital of the business, and resulting in a higher business valuation.
Therefore, overlooking the ESG risks during the cost of capital analysis will result in inaccuracy in the business valuation.

The example above demonstrates the importance of sustainable investing that takes ESG into account in the enterprise valuation analysis. The contents of this Chapter describe the details of sustainable investment in the following aspects:

1) Definitions and guidelines for the analysis of factors for sustainable investment
2) Sustainable Investment Trends
3) Sustainable Investment Concept
4) An approach to analyzing enterprise value that considers factors that can affect sustainability
5) Data, information sources for sustainable investment analysis

6.3.1 Definitions and guidelines for the analysis of factors of sustainable investment

Sustainable investment is an investment approach in which investors focus on analyzing significant factors that affects the sustainability of the enterprise's business operations. The factors that investors should consider are classified into 3 dimensions:

1) Environmental dimension: policies, measures, and work processes including the corporate performance related to efficient resource management and the reduction of environmental impact caused by the company's operations

2) Social dimension: policies, measures, and work processes including the corporate performance relating to the management of social impact resulting from the company's operations. These include supporting business partners to respect labor rights, caring for the well-being of the community surrounding the factory, etc.

3) Governance dimension: policies, measures, and good corporate governance processes with transparency, having efficient risk management guidelines, anti-fraud and corruption measures, as well as taking care of various stakeholders of the company appropriately, covering the tax payment to the government with integrity and transparency.

Based on this concept, sustainable investing approach is sometimes called ESG Investing. However, it does not necessary mean that investors desired the listed companies to do good things and make sacrifice for the society. It means that investors desired the listed companies to manage their risks and create opportunities for good returns. It means that the listed companies are expected to manage the environment, society and corporate governance appropriately.

Let's look at this case: If an enterprise does not have an adequate procedure for treating waste from the production process and discharges wastewater illegally, this may result in the business being prosecuted, which adds to the company's costs. If the company's products adversely affect the health of consumers, this can result in customers boycotting the products causing lower sales. If the Company lacks a strict internal audit or measures to manage conflicts of interests, it may cause financial damage to the company or the shareholders.

It must be noted that sustainable investment is not an investment approach catered specifically for the environmentally conscious persons who want to do good deeds to the society, but it is an investment approach that requires investors to analyze which ESG risk factors the listed company are exposed to and whether such risks are appropriately translates into company's long-term profitability.

There are various ESG factors that investors should pay attention to, these are depicted in Table 1:

Table 1: Samples of ESG factors that investors should take into consideration

Environmental	Social	Corporate Governance
• Energy Management • Water Management • Garbage and waste management • Reduction of greenhouse gas emissions	• Fair labor practices and with respect for human rights • Employee competency/potential development • Health and safety in the working environment • Participation of stakeholders	• Code of Conduct and anti-corruption • Risk and Crisis Management • Tax operations

Table 1 shows the comprehensive lists of ESG factors that investors should assess. All of which are related to business risks/opportunities and financial performance of the enterprise. They cover intangible asset value, such as the brand value of the business, goodwill, intellectual property, copyrights, etc.

Managing ESG factors which includes maintaining good customer relationship, respecting consumer rights, being an attractive organization to work for with a low turnover rate, and caring for the community and society, can contribute to higher value of intangible assets. All of which will ultimately result in higher corporate value.

Sustainable investing is considered an investment approach that helps investors assess the intangible asset value more accurately and closer to reality.

Figure 1: Sample of Tangible Assets and Intangible Assets

TANGIBLE ASSETS	INTANGIBLE ASSETS	APPLICABLE TO BOTH TANGIBLE AND INTANGIBLE ASSETS
• Land. • Manufacturing plants. • Inventories. • Furniture. • Machinery.	• Goodwill. • Patents. • Copyrights. • Intellectual property and know-how. • Software and innovation assets. • Corporate culture. • Incentives. • Employee productivity. • Other forms of social and relationship assets.	• ESG analysis techniques. • Materiality.

Source: CFA Institute

Notably, investors and analysts should understand that the management of ESG factors is not about the donations or giving back to the society, which is often just an activity when the company allocates a budget to benefit the society through various CSR activities that is not directly concerned with the enterprise's business operations including donations to the needy, the handicapped, or the socially vulnerable groups, etc.

6.3.2 Sustainable Investment Trends

❖ 1972 IMPAX Asset Management

Impax Asset Management launched the world's first socially responsible fund called Pax World Fund.

❖ 1990 KLD

KLD Research & Analytics, Inc. developed the Domini 400 Social Index, one of the world's first indices that selected socially responsible stocks.

❖ 1999 S&P Dow Jones Indices

S&P Dow Jones Indices developed the Dow Jones Sustainability Index comprising a selection of the world's leading stocks with outstanding sustainability performance.

❖ 2006: PRI

Principles for Responsible Investment (PRI) was created to support sustainable investment.

Source: The Stock Exchange of Thailand

Sustainable investment was originated over 50 years ago, starting in 1972 when Impax Asset Management launched the world's first social responsibility-focused Pax World Fund. In 1990, the Domini 400 Social Index was initiated with a selection of stocks of socially responsible enterprises. Later on, the Dow Jones Sustainability Index was created in 1999, which has been well-received by investors from all over the world until now.

In 2006, the United Nations established the United Nations Principles for Responsible Investment (UNPRI) to promote responsible investment, setting up 6 Principles for Responsible Investment.

Figure 2: Principles for Responsible Investment

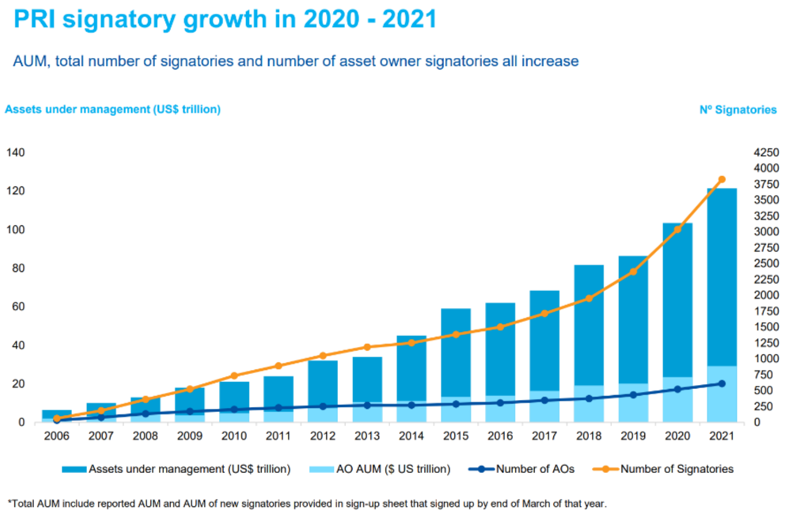
Principle 1: Incorporate the environmental, social, and governance (ESG) issues into investment analysis and decision-making processes.
Principle 2: Be an active shareholder and incorporate ESG issues into ownership policies and practices.
Principle 3: Seek appropriate disclosure on ESG issues by the invested companies.
Principle 4: Promote acceptance and implementation of the Principles within the investment industry.
Principle 5: Work together to enhance our effectiveness in implementing the Principles.

Principle 6: Publish report on activities and progress towards implementing the Principles.

Source: Government Pension Fund

The establishment of UNPRI marked a turning point in sustainable investment as it accepts the express of interests from financial institutions and investment organizations to demonstrate the role and importance of an ESG-focused investment approach. Increasing number of financial institutions and investment organizations have participated in this and expressed their intention to become a PRI Signatory exponentially over the past 10 years, as shown in Figure 3.

Figure 3: Growth of PRI Signatory



Source: UNPRI

The growth of the investment approach that takes sustainability into consideration has resulted in an ever increasing sustainable investment products on offer including equities, mutual funds and debt instruments.

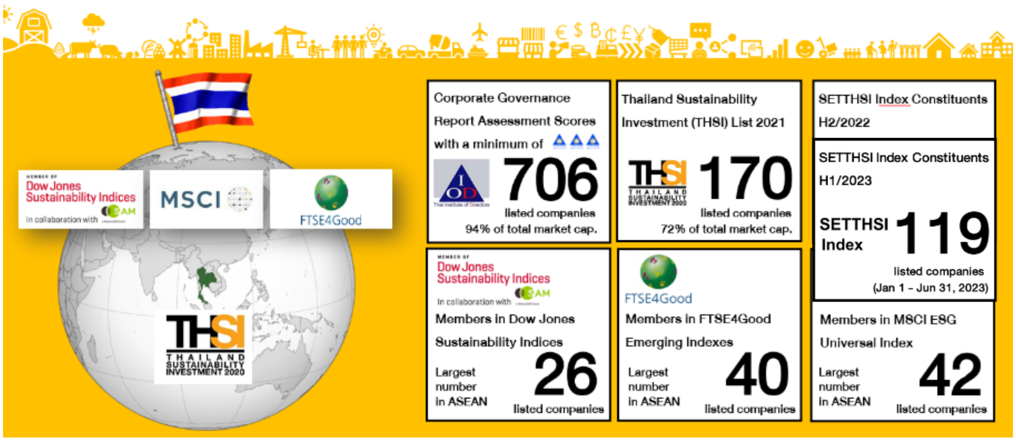
The growth of sustainable investment products in the category of equities

“Equities” or “stocks” are widely popular investment instruments, where the holders of equity instruments are “the owners of the enterprise.” Stocks of listed companies that prioritize ESG coupled with good financial performance are often referred to as “ESG stocks.”

At present, ESG stocks are attractive to investors. Given the attractiveness of ESG stocks for investors, there is a need to identify and differentiate truly ESG-focused stocks from others. Today, there are agencies or organizations that rate and assess listed companies’ sustainability. In addition, there are also Index providers who select stocks of listed companies with outstanding ESG performance to create the "ESG Index" as an alternative for investors’ decision making.

In Thailand, there has been an increasing number of listed companies that have been recognized or passed the sustainability assessment, as shown in Figure 4.

Figure 4: Statistics of Thai listed companies that have passed the sustainability assessments



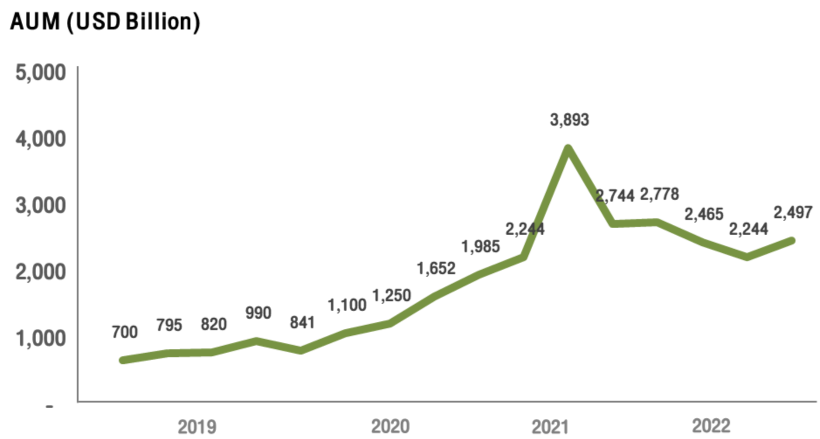
Source: The Stock Exchange of Thailand (data as of December 2022)

The growth of sustainable investment products in the category of mutual funds

In addition to sustainable investment in equities that are very popular among investors, mutual fund is another investment product that attracts a lot of attention from investors as well. Sustainability fund is a type of mutual fund similar to other mutual funds in general, but with investment policies and strategies that focus on investing in companies that prioritize ESG issues while also having good financial performance.

Europe is recognized as the leader in sustainable investment, the European Commission has set Sustainable Finance Disclosures Regulation (SFDR) criteria to define the attributes of sustainability mutual funds, and required mutual fund issuers to disclose comparable sustainability information in order to create transparency for investors. Sustainability funds have grown steadily worldwide, as shown in Figure 5.

Figure 5: The value of global sustainable investing mutual funds



Source: [Morningstar Direct, Manager Research]() (data as of December 2022)

In Thailand, the Sustainable and Responsible Investing Fund (SRI Fund) is a mutual fund focusing on sustainability based on the internationally accepted standards, while disclosing information on sustainable investment management of mutual funds in accordance with the SEC’s criteria.

The growth of sustainable investment products in the category of debt instruments

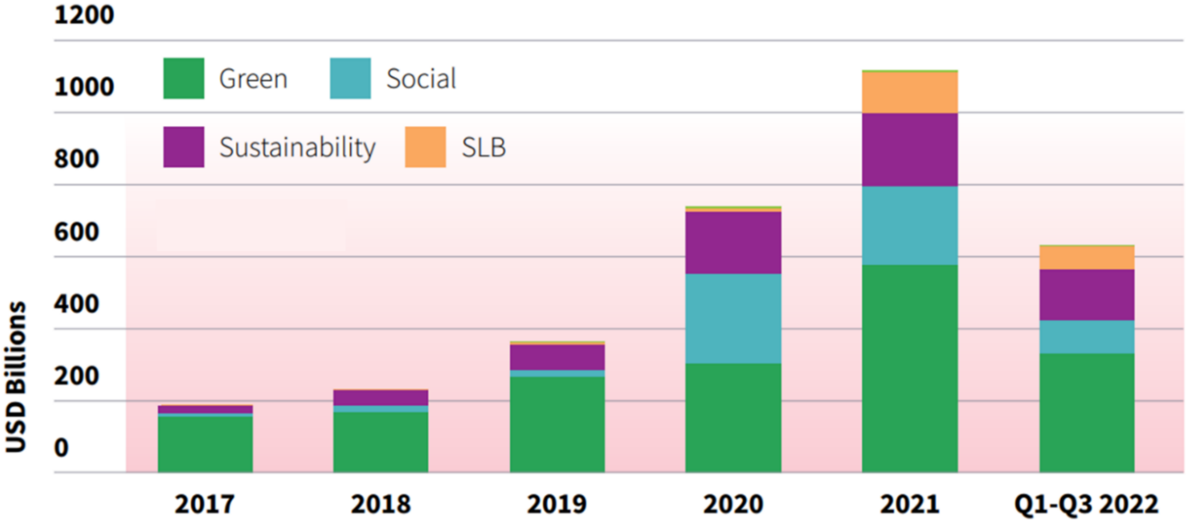
Sustainability debt instruments are the debt instruments that raise funds for projects that benefit the environment and society. Currently, there are 4 types of prominent sustainability debt instruments:

1. Green Bond: a debt instrument that raises funds for projects that are environmentally friendly, such as clean energy projects, green building projects, etc.
2. Social Bond: a debt instrument that raises funds for social development and the betterment of quality of life of community dwellers, such as housing projects for low-income earners, etc.
3. Sustainability Bond: a debt instrument that raises funds to develop and promote sustainability, having the combination of both Green and Social elements, such as a project to develop a mass transit system to reduce pollution and improve the well-being of the community.
4. Sustainability-linked Bond: a bond whose interest rate can be increased or decreased according to the results of the assessment of the specified Sustainability Performance Targets (SPTs), such as debt instruments that raise funds by paying interest rate at 4% if the Company can reduce electricity consumption according to the target (if unable to reduce energy consumption as targeted, the Company must pay higher interest rate).

Investor's confidence in sustainability debt instruments transparent can be ensured through the use of agencies responsible for setting funding criteria and monitoring in order to ensure transparency and provide investors with sufficient information for investment decisions. The examples are the International Capital Market Association (ICMA) and the Climate Bonds Initiative (CBI), among others. The criteria related to issuance of sustainability debt instruments are widely accepted today.

This sustainability debt instrument has attracted a lot of interest and support from investors. As a result, there has been an exponential growth in sustainability debt instruments (especially the Green bonds) over the past 8 years, as shown in Figure 6.

Figure 6: Value of sustainability debt instrument issuance globally



Source: Climate Bonds Initiative

6.3.3 Sustainable investment concept

The concept of sustainable investment focuses on environmental, social and governance (ESG) implementation of the business in making investment decisions so as to generate long-term returns and create positive impact or reduce negative impact on the society and/or the environment.

Table 2: Spectrum of Investment Concept

Conventional Investment	Social, Responsible & Ethical Investment				Philanthropy Investment
	ESG Screening	**ESG Integration**	**ESG Thematic**	**ESG Impact**	
Invest by focusing on financial returns without considering sustainability factors	Screen and choose not to invest in businesses that create negative impact on society and environment, or choose to invest in businesses that have outstanding ESG performance *Sample: Not investing in the arms business, tobacco, alcohol, casino, or choose to invest in businesses with good ESG performance by being ranked or selected to be in the sustainable stock index.*	Consider ESG factors together with other factors in making investment decisions *Sample: Choose to invest by using ESG factors as criteria for investment decisions together with financial results.*	Invest in a business or industry focusing on the themes of sustainability *Sample: Choose to invest in a renewable energy business, electric vehicle (EV) business, etc.*	Invest in creative businesses to better the society and environment *Sample: Choose to invest in a startup that develops modern agricultural technology to solve drought problems, or invest in the SME businesses that support job creation for people in remote communities.*	Donate to support projects/businesses that create positive impact on the society or the environment, by giving gratuitously, not expecting financial return.

Source: The Stock Exchange of Thailand

Sustainable investment approaches can be divided into 4 categories based on financial returns and positive social/environmental impacts: 1) ESG Screening, 2) ESG Integration, 3) ESG Thematic, and 4) ESG Impact.

1) ESG Screening

ESG Screening is the screening of investment securities based on ESG factors. Investors opt not to invest in certain types of business or certain industry groups that have ESG risk issues, such as weapons, tobacco, alcohol, gambling, coal, nuclear power, etc.

ESG Screening can help manage portfolio risks as investors will choose not to invest in the securities of businesses that are in risky industries or industries that are not supported by the government. The government may set regulations or measures that may prevent the business from generating sales or growing, such as issuing regulations in prohibiting purchases of products at a certain time, or social sector's campaigns against certain products, or imposing tariffs on certain products to reduce consumption of products that create negative environmental impact, etc.

Using ESG Screening may seem like a limitation on portfolio diversification because certain stocks are screened out from the universe. In fact, the group of securities that investors can choose to invest are likely to be fewer than 100 securities. Screening out the securities in risky industries is considered as reducing portfolio risks, and preventing damage from serious risks. Therefore, according to Markowitz's portfolio theory, investors still benefit from risk diversification.

The above criterion for securities screening by industry is just one of screening approaches. Investors can use additional investment exclusion criteria (red flag) in order to screen securities that they will not invest further, e.g., the business with fraud and corruption, the business using child labor and slavery, among others.

In addition to screening certain groups of securities out of the investable securities (also called 'negative screening'), investors can also choose to invest in securities or enterprises with excellent ESG risk management in a 'positive screening' manner.

2) ESG Integration

ESG Integration is a methodology by which investors consider an enterprise's ESG performance as part of business valuation. In general, investors use various economic data and industry trends to forecast upcoming sales, expenses and investment values. However, ESG Integration is an additional analysis of how the business manages ESG issues, how their policies, measures and work processes are, and how the enterprise's performance and ESG risk management are. Investors will then use these data & information to adjust the forecast values of the assumptions in the valuation of securities, as shown in Table 3.

Table 3: Sample of assumption adjustment from environmental factors

ESG value driver		**Sales growth**	**Margins**	**WACC**	**Fair value**
Efficient environmental management company	➔	x% increase from base case	x% increase from base case	x% decrease from base case	x% increase from base case

If the company has good environmental management practice, that company will be able to manage risks from the impact of new regulations possibly imposed by the government in the future. This will reduce expenses that will occur later on, and will be used to enhance competitive capabilities through marketing in order to build the company's reputation. In addition, this will also lead to customer acceptance and create opportunities to increase sales. Moreover, investors will be able to better adjust the assumptions for forecasting securities values, making the business valuation higher.

By adjusting the above assumptions, analysts and investors should also be cautious whether the analysed ESG factors reflect the market price of the securities, avoiding redundant assumptions which can lead to securities valuation inaccuracies.

ESG Integration is therefore an investment method that allows investors to invest in enterprises operating in all types of business and in all industries, as long as investors have assessed the negative impact of such factors against the value of the securities, while viewing that the market price of the securities at that time is still lower than the fundamental value of the securities that the investors assess. ESG Integration is therefore an approach for investors who prioritize opportunities to generate financial returns.

3) ESG Thematic Investment

ESG Thematic Investment is an investment approach in which investors focus on investing by selecting enterprises based on the changing direction of the world's mainstream (megatrend), and analyzing investment opportunities from long-term trends in economic and social changes so as to specify investment "themes." For example, the transition to an aging society, the expansion of urbanization, the public health and medicine development, or business growth related to technological advancement, etc. These "themes" are developed as guidelines for managing investment portfolios, which focus on investing in industries that are expected to benefit from such long-term changes.

ESG Thematic Investment can generate reasonable returns for investors because it is often associated with investing in industries that are favored and promoted by society and government, as such themes may enable such enterprise to exponentially generate sales and expand growth.

There are various “themes” of ESG investment, such as the Low Carbon Theme focusing on investments related to reducing greenhouse gas emissions, or investing in enterprises that develop alternative energy innovations (Renewable Energy Theme), or investing in enterprises that focus on solving sustainability problems (Sustainable Development Goals Theme), etc.

4) ESG Impact

ESG Impact is an investment approach in which investors primarily select enterprises that have positive social or environmental impact, in addition to generating financial returns. Investors who prefer this type of investment often choose to invest in enterprises whose products & services help enhance the society and environment.

For example, an investor may choose to invest in an enterprise that focuses on minimizing income inequality in the society by providing financial services that improve the quality of life of low-income groups, enabling them to access to sources of capital and funding so that they can start their business, etc.

6.3.4 An approach to analyzing corporate value that considers sustainability factors

Enterprise valuation is a form of "science" and "art" since the enterprise value assessed presently depends on the potential of the enterprise to generate future cash flow. The expected cash flow depends on various factors, and can be changed over time according to the nature of the information that investors received in each period.

The analysis of enterprise value by considering ESG factors is therefore an analysis that investors must add factors, in addition to the usual analysis, to cover the following four (4) areas:

1) **Future trends of economic growth** such as GDP growth rate, inflation rate, unemployment rate, consumer confidence index, etc.

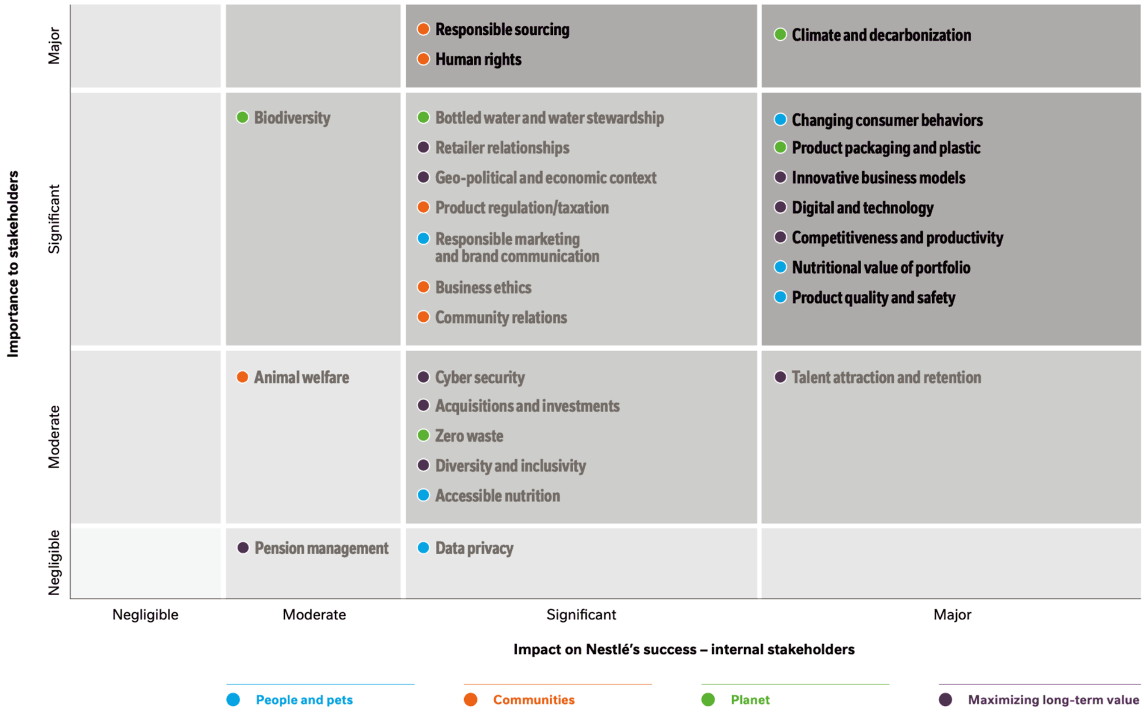
2) **Analysis of the competitiveness** via the analysis of competitors and industry trends
3) **Business operation structure** such as income structure, cost structure, etc.
4) **Analysis of financial performance** via past financial statements and financial ratios

1) **Analysis of future trends of economic growth**: Investors should not only focus on economic numbers alone, but also analyze the trend of future social changes, such as the change in the population structure to become an aging society, the change in consumer behavior that focuses on the use of IT technology in daily life, the change in behavior of the new generation in caring more about the environment, or the change in people's values in society that may not guarantee marketing success in the future.

2) **Analysis of the competitiveness of the enterprise:** SWOT Analysis or Porter's Five Forces Analysis may need to be applied in conjunction with ESG factor analysis, such as brand reputation analysis, the enterprise's ability to manage customer relations, customer data analysis to understand and forecast the modern customers' needs, risk management and cybersecurity, value chain of businesses that require eco-friendly procurement, traceability of raw material procurement in production, transparent management with corporate governance aiming at anti-corruption, etc.

3) **Business operation structure analysis:** Investors should thoroughly assess key ESG issues that affect the enterprise's sustainability, also known as Materiality Analysis. It is an analysis to understand which ESG issues are significant and can affect the competitiveness of the business, in order to assess how well the enterprise can manage such issues, as shown in Figure 7.

Figure 7: Example of Nestle's Materiality Analysis



Source: Nestle

Companies generally disclose key ESG issues and publish company performance in their Annual Report, Sustainability Report, or other media. In addition, ESG data providers, including raters, may also evaluate and summarize the company performance on significant ESG issues. However, investors should study and analyze once again to see how reliable such information is and how it should be utilized in decision making.

In addition, regarding the analysis of the revenue and cost structures of the enterprise, investors should evaluate the extent to which the enterprise has the ability to explore new opportunities to offer new products or services to meet consumer needs, and how it will affect the capital cost, etc. In addition, an enterprise may gain valuable benefits when investing in research and development, and in employee skill development. Moreover, the enterprise may have additional costs from the carbon tax enforced by the government in addition to imposing penalties for the business that pollutes the environment, etc.

4) Analysis of financial performance in conjunction with Materiality Analysis: Investors and analysts should assess how ESG factors are linked to their financial assumptions to be able to use ESG performance data to adjust financial assumptions in securities valuation. Examples are shown in Tables 4 and Table 5.

Table 4: Financial assumption and ESG performance

ESG Factors:	Linkage to Financial Assumptions for Equity Valuation Assessment
ESG 1 Energy efficiency	- COGS as a percentage of sales - Energy cost as a percentage of COGS - Extraordinary CAPEX of fixed assets
ESG 2 GHG emissions	- Sales growth because consumers do not want to support production processes that are harmful to the society and environment - Carbon costs as a percentage of sales - Extraordinary expenses relating to Greenhouse Gas (GHG) emission fines or lawsuits against the surrounding society
ESG 4 Training & qualifications	- Ratio of SG&A of sales - Wages as a percentage of sales - Sales growth from productivity and personnel's ability to generate sales - R&D expenses as a percentage of sales
ESG 7 Litigation risks	- Extraordinary expenses relating to fines or lawsuits against the society

Table 5: An example of ESG factors that affect financial statements and financial assumptions

Example: Company A uses clean energy instead of coal in line with government policies. The company also focuses on developing personnel to deliver work to customers on time.

ESG ESG factors	Key Performance Indicators (KPIs)	Financial variables	Samples of Financial Assumptions
E1 Power Consumption	Electricity consumption/income (kWh/THB million)	• Cost of fuel per revenue • COGS as a percentage of sales) • Capital Expenditure (CAPEX)	Cost of fuel and cost of goods sold decreased by 1% | Capital Expenditure increased by 1%. *Efficient use of fuel results in lower fuel costs, causing cost of sales decreases and CAPEX increases from investing in new machines to increase production efficiency.*
E2 greenhouse gas emissions	GHG Emission/ Revenue (tCO2e/THB million)	• Sales revenue • Other expenses such as the cost of greenhouse gas emissions	5% increase in revenue *Sales increase as consumers want to support businesses that produce more environment-friendly products, and the company can control greenhouse gas emissions resulting in no additional costs from greenhouse gas emissions.*

S1 Personnel Training	Average training hours of employees (hours/person/year)	• Selling, General & Administration (SG&A) / Sales • Other expenses such as research and development (R&D)	Other expenses increased by 1% | SG&A increased by 1%. *SG&A increased from staff training to be able to produce products efficiently, with more costs from R&D, new technologies, enabling production at lower costs and less environmental impact.*
G1 Legal disputes	Expenses related to legal process (THB)	• Other expenses such as fines, compensation, lawsuits, etc.	No legal dispute expenses *The company submitted deliverables to customers on time and in accordance with the specified conditions, including good corporate governance, causing no legal disputes.*

Conclusion: The company invests in the purchase of machinery to increase production efficiency. It also uses clean energy instead of coal, resulting in gradual cost decrease. Although there was an increase in staff training and R&D expenses, the rate of increase in expenses is offset by the decreasing costs ==> resulting in an increase in EBIT by 1%.

Source: The Stock Exchange of Thailand

In summary, sustainable investing tends to get more and more attention continuously. It is necessary for investors and analysts to consider ESG factors that affect business risks and opportunities, competitiveness, including long-term growth potential of the enterprise, and to ensure that the valuation of the enterprise to cover ESG issues, enabling them to manage risks, reduce investment volatility, and generate returns on investment in the long run.

7. Technical Analysis

Required Readings

1. Fundamental Knowledge of Finance and Investment
    - Chapter 7: Technical Analysis

      (Available in Thai only. See learning objectives and suggested readings as a guideline)

Learning Objectives:

1. Explain meaning and principles of technical securities analysis, assumptions of technical analysis.
2. Identify usefulness and limitations of technical securities analysis in order to set market timing.
3. Understand information for technical analysis, distinguish significant characteristics of price chart and each type of price chart.
4. Explain concepts of technical securities analysis by using Dow Theory and its limitation.
5. Distinguish trend and line movement of securities prices, i.e., upward, downward and sideways price movements.
6. Interpret meanings of support and resistance levels, apply analysis of support and resistance for securities investment consult.

Suggested Readings

- *Analysis of investments and management of portfolios (Frank K. Reilly, Keith C. Brown, 2012) – Chapter 16: Technical Analysis*

8. Foreign Securities Investment

Required Readings

1. Fundamental Knowledge of Finance and Investment
   - Chapter 8: Foreign Securities Investment

     (Available in Thai only. See learning objectives and suggested readings as a guideline)

Learning Objectives:

1. Explain and distinguish differences of each channel of foreign securities investment.
2. Explain roles and duties of participants in foreign securities investment.
3. Explain reasons of inclusion of foreign securities in portfolio investment.
4. Explain risks and returns of foreign investment.
5. Explain and distinguish foreign investment risks.
6. Explain foreign exchange risk management.
7. Explain meaning of exchange rate and distinguish factors affecting demand for and supply of foreign exchange.
8. Explain and interpret exchange rate change.
9. Explain principles of the allocation of foreign securities trading.
10. Distinguish foreign securities types defined by the SEC.
11. Explain and distinguish other factors affecting to foreign securities investment.

Suggested Readings

- *Investments (Frank K. Reilly and Edgar A. Norton, 2006) – Chapter 3: Selecting Investments in a Global Market*
- *Portfolio construction, management, and protection (Robert A. Strong, 2009) chapter 7: International Investment and Diversification*

Module 2: Related Rules and Regulations and Suitable Investment Consulting

Module 2

Related Rules and Regulations and Suitable Investment Consulting

(Translation available)

Note: An unofficial translation of the Thai text book: Module 2 -- Related rules and regulations and suitable investment consulting. The translation is intended to facilitate a reader to understand contents of the book but not to be used as a reference. SET is not responsible for the correctness and completeness of the translation. Please refer to the Thai version for accuracy and reference.

Glossary

Mutual Funds under the International Agreement	Foreign Collective Investment Scheme (FCIS) under the international mutual funds agreement, such as ASEAN CIS and ARFP - ASEAN CIS (ASEAN Collective Investment Schemes) Framework is an agreement to facilitate the cross-border sale of mutual funds across all ASEAN countries. - ARFP (Asia Region Funds Passport) is an economic initiative to provide regional management of cross-border mutual funds according to the APEC framework and to facilitate the sale of mutual funds across all member countries.
Seller	A personnel of a business whose duties are to sell and provide advice investment advice of financial products, approved by the Office of the Securities and Exchange Commission (SEC), to be an Investment Planner (IP) and/or an Investment Consultant (IC), as the case may be.
Product	Financial products in capital market, e.g. unit trust, fixed income securities and derivatives of local and foreign countries.
Risky/Complex Product	Products in a capital market with high risks or complexity (1) Unit trusts (a) Unit trusts for institutional investors or ultra-high net worth (UHNW) according to the announcement of the Capital Market Supervisory Board, re: Rules, Regulations and the Establishment of A Mutual Fund for Institutional Investors and UHNW (b) Unit trusts of a fund with high complexity according to the announcement issued by the Office of the Securities and Exchange Commission and its affixed regulations with regard

to mutual fund investing in derivatives or structured notes (by VaR approach).

(c) Unit trusts of complex return fund.

(d) Unit trusts of a fund with net exposure to commodity as an underlying to its derivatives.

(e) Unit trusts of a fund investing in non-investment grade bond over 60% of net asset value (NAV) of the funds

(2) Fixed income securities

(a) Hybrid securities which have an maturity date more than 270 days since after the issuance of fixed income products and have the following features:

1. the Issuer has a right to postpone or withhold coupon payments of the fixed income products.

2. the bond holder is entitled to receive repayment from an issuer in lower right than a creditor, but higher than a shareholder of an issuer.

(b) Structured debentures according to the announcement issued by the Capital Market Supervisory Board with regard to requests for permission and approvals for the issuing and selling of structured debentures or structured notes.

(c) Basel III compliant securities issued by a commercial bank according to the announcement issued by the Capital Market Supervisory Board Corporate Governance for Capital Market Intermediaries with regard to the selling of subordinated bonds as Basel III issued by commercial banks

(d) Fixed income securities in the form of a perpetual bond of a defunct company

(e) Fixed income securities in the form of a non-investmen grade bond or unrated bond

Entrepreneur	Business owners with a license for the following types of securities and derivatives business: 1) Asset management 2) Securities brokerage or underwriter 3) Derivatives brokerage
Vulnerable Investors	Investors, such as investors over 60 years of age, investors with limited financial and investment knowledge, investors with difficulties in communication and decision-making including investors with hearing and visual impairments or health deficiency, shall be provided with exclusive care with respect to communication and services
Product Issuer	Mutual fund companies and/or issuers of fixed income securities or equities
Client	Recipients of services from entrepreneurs, except the following groups or parties: (1) Institutional investors (II). (2) Ultra-high net worth (UHNW) or High net worth (HNW) who is a juristic person disclosing his/her intention in writing that entrepreneurs shall not follow procedures or methods that entrepreneurs have established. (3) Clients as investors or service users of the OTC derivatives market.
Asset Allocation	Advice on allocation and specification of the proportion of investment that an investment planner (IP) specifically customizes investment plan and investment portfolios
Basic Asset Allocation	Advice on basic allocation and specification of the proportion of investment provided with standards by knowledgeable and experienced personnel of business owners who are widely accepted in academia.
Compliance	Supervision of work operations.
Factsheet	A highlighted information in a prospectus of a product.

Fair Dealing	selling products and services to clients with fairness and honesty with a determination to prioritize clients' benefitsไ
High Net Worth (HNW)	High net worth individuals shall hold the following qualifications: - An individual (and spouse) shall possess a net worth of more than 50 million baht; more than 4 million baht annual income; over 10 million baht worth of equities or derivatives; or over 20 million baht worth of derivatives inclusive of deposits and equities. - A juristic person with shareholder equity more than 100 million baht, or over 20 million baht of equities or derivatives, or over 40 million baht worth of derivatives inclusive of deposits. -
Investment Consultant (IC)	Consultant for investment.
Institutional Investor (II)	Investors at institutional levels e.g. commercial banks, securitie companies, and life insurance companies.
Investment Planner (IP)	investment planner
Knowledge Assessment	assessment of knowledge and capability for clients who aim to invest in risky or complex products.
Mis-selling	selling inappropriately or selling wrong types of products to clients.
Mystery Shopping	random inspection of the seller's' services.
Suitability Test	evaluation of appropriateness for investment

1. Guidelines for Selling and Providing Services for Financial Products

Required Readings

1. Related Rules and Regulations and Suitable Investment consulting
   - Chapter 1: Sales Conduct and Product Services

Learning Objectives:

1. Explain 6 objectives of sales and services conduct
2. Explain 8 compositions in fulfilling fair dealing objective
3. Explain how to set up organization structure, roles of board of directors and duties of chief executives.
4. Explain how to select products and client grouping.
5. Explain how to communicate and educate sales persons.
6. Explain preparation process for sales and services, process of sales and services to general investors and vulnerable investors.
7. Apply sales conduct of capital market products to investment consulting for each type of product, sales channel and investor.
8. Explain remuneration determination and claim management.
9. Explain internal control and compliance including operation and business continuity plans.
10. Explain other rules and regulations for, e.g. conflict of interest, insider information, sales persons trading, client assets, compliance unit.
11. Explain risk management scheme for anti-money laundering (AML) and, combating the financing of terrorism (CFT).

Chapter 1

Guidelines for Selling and Providing Services for Financial Products

The Office of the Securities and Exchange Commission, Thailand (SEC) developed guidelines for selling and providing services for financial products to clients in the capital market with fair dealing, giving priority to investors' benefits as well as enhancing their trust. Entrepreneurs should place importance on and hold responsibilities for supporting selling products, providing services and training their sales representatives.

1.1 Guidelines for selling and providing services for unit trusts and fixed income securities

These guidelines are required to fulfill six goals:

- Goal 1: To ensure that clients contact the entrepreneur who deems fair dealing as key to organizational culture
- Goal 2: To select and design appropriate products and services to meet the prospect's demands
- Goal 3: To ensure that clients receive clear and appropriate information from sellers
- Goal 4: To provide clients with quality advice and appropriate offers based on clients' situations
- Goal 5: To offer clients products and services that meet their expectations
- Goal 6: To remove any unnecessary obstacles and inconveniences after purchasing or selling products, including filing complaints and damage claims to entrepreneurs

These goals will help entrepreneurs to reduce risk of clients' mis-selling and property fraudulence; therefore, entrepreneurs have to understand and give precedence to a fair dealing business model and there should be measures for each specific component, which will be mentioned later. These measures can be applied in the business context along with other related rules and regulations.

There are 8 components of a successful fair dealing business model as follows:

- Component 1 Organizational Structure, Roles of the Committee and Duties of Chief Executives
- Component 2 Product Selection and Client Segmentation
- Component 3 Communication and Training Program for Sellers
- Component 4 Sales Process
- Component 5 Remuneration Structure
- Component 6 Complaint Handling
- Component 7 Internal Control and In-house Inspection
- Component 8 Operation and Business Continuity in An Incident

The expectations for each component of the fair dealing business model are as follows:

Component 1 Organizational Structure, Roles of the Committee and Duties of Chief Executives

The entrepreneur's committee and chief executives realize the importance of a fair dealing business model and regard it as the heart of the organizational culture that helps promote sustainable business growth and reduce the risk of clients' mis-selling and property fraudulence.

Component 2 Product Selection and Client Segmentation

The entrepreneur uses a suitable process to carefully evaluate the products before offering them to the clients, while the product selection process is also efficient. The clients are grouped according to their different characteristics to help the entrepreneur select appropriate practices in making offers, giving advice, and monitoring practices carefully and appropriately.

Component 3 Communication and Training Program for Sellers

The entrepreneur has an effective communication protocol and conducts necessary training programs regularly, allowing sellers and related staff to learn about new changes, important practices to remove risk and accurate information about the operation. In addition, the entrepreneur can be certain that sellers and staff possess clear understanding and can put it into practice.

Component 4 Sales Process

The entrepreneur has a sales process that is fair and advantageous to the clients. The entrepreneur must not take advantage of the client's lack of knowledge and experience. It is important to ensure that the clients receive appropriate product offers as well as adequate information and services, so that they can make the right investment decisions.

Component 5 Remuneration Structure

The entrepreneur has a remuneration structure for sellers and related operation staff created based on the benefits that the clients receive and other factors other than sales volume, so that the sellers do not rush to sell or offer inappropriate products to the clients.

Component 6 Complaint Handling

The entrepreneur has a complaint handling system that is independent, fair, effective, and up-to-date. This helps ensure the clients that the entrepreneur listens to them and pays attention to their benefits in a professional and fair manner.

Component 7 Internal Control and In-house Inspection

The entrepreneur has an effective follow-up and effective inspection system that is in line with possible risks and effects on clients and their business. The system is an important tool to reduce risk or damage and inspect abnormalities, so that they can be removed immediately.

Component 8 Operation and Business Continuity in an Incident

The entrepreneur has an operation system and a contingency plan for emergency situations to ensure the clients that their orders or needs will be fully satisfied accurately, completely and timely.

1.1.1 Organizational Structure, Roles of Committee and Duties of Chief Executives

Scope of Duties and Responsibilities of Executives, Departments and Related Personnel

The entrepreneur's operation concerns the following aspects.

1. Establish policies and strategic plans as guidelines for operating the business related to investment in unit trusts and/or fixed income securities with a clear emphasis on building and disseminating fair dealing culture in writing at the level of both company and departments related to unit trust and/or fixed income securities trading. The committee and chief executives are responsible, while the committee approves the policies. The policies will communicate and spread fair dealing culture to all related departments and personnel.

2. Identify fields and units related to trading and services of unit trusts and fixed income securities in the unit and assign duties and responsibilities as well as supervisors. Different units take part in operation crosschecking and balancing power, so that each unit can work independently without conflict of interest.

3. Assign chief executives to monitor sales and services of unit trusts and fixed income securities and set up a follow-up system, so that overall business and risk can be evaluated to seek problems and effective solutions in time.

4. Assign related personnel to be responsible for different operation fields, including policy executives, branch managers as well as compliance executives and managers. The compliance managers have to report duties to the SEC.

5. Possess an adequate number of quality personnel to effectively operate the business according to business scope and quality of work and assign supervisors to monitor and follow up the operation practices as well as conduct personnel development trainings regularly.

6. Communicate with operation personnel and other related people outside the unit about the entrepreneur's profundity to promote fair dealing. In some cases, it may require some changes in the thinking process of operation personnel; therefore, chief executives must demonstrate a firm commitment to achieving profundity, In addition, the compliance unit should examine the development and success of sellers.

7. Assign the committee and chief executives to oversee the overall business operation by following up complaints, surveying client satisfaction and opinions, and studying the results of mystery shopping and compliance reports.

1.1.2 Product Selection and Client Segmentation

The entrepreneur's operation includes the following issues.

- Develop a process to select product issuers for the selection of products for sale by considering client's maximum benefit and products' suitability and quality. The consideration concerns the following issues.
  - The suitability of products to target clients: Find out whether the prospects can understand the selected products.
  - The suitability of products to prospects' risk tolerance: Review investment goals, returns, risks, fees and expenses are suitable for the prospects.
  - Existing sales channels, including investment consultants, investment planners and online platforms
  - Seller's ability to understand product offers and provide information and advice to the prospects
  - Guidelines and plans to disseminate accurate and complete information about products and operation practices to the prospects
  - Sales system and process, including product information access, forms and suitability test, that effectively helps support sales of products and services

- Conduct product due diligence by evaluating the understanding of product characteristics and risks affecting the investment and return on investment stated in fact sheets and additional documents provided by product issuers, and specify which products are suitable to which groups of clients.

  For fixed income securities trading, there must be a system to select suitable fixed income securities issuers and examine the issuer status, so that they understand the business types, future business plans, sources of reserves funds or collaterals for the redemption of fixed income securities, and objectives of using money raised from fundraising (e.g. using short-term fund for long-term investment). In terms of unrated fixed income securities, it requires the analysis of key financial ratio that reflects the issuers' financial risk and the ability to repay.

If the entrepreneur finds that the information is inadequate for product analysis, the entrepreneur may refuse to sell the products.

To do product due diligence, related units, such as legal unit, compliance unit, operation unit and sales unit (that knows the needs and characteristics of clients), must participate in reviewing the complete document and documenting meeting minutes which will be approved by responsible executives.

- Develop a method to categorize products based on risks and other factors and segment clients according to their risk tolerance or other aspects in order to identify sales strategies, personnel development trainings, appropriate and inappropriate clients, and sales monitoring process for different groups of clients.
- Formulate measures to prevent sales practices, such as investment in foreign products requiring offshore funds transfer that are not in line with the measures set by the Bank of Thailand, products or services that do not meet the license requirements, and other business operation related to risk or conflicts of interest against business licenses.
- Create a system to offer mutual funds in Thailand under the international regulations.
    - The system may have examination steps to ensure that the mutual funds are qualified under the international agreements.
    - The system should monitor the information related to mutual funds under the international agreements comparable to home regulators and submit to the office of the SEC in a specified time.

1.1.3 Communication and Training Program for Sellers

The entrepreneur has a system to communicate with and educate sellers by conducting trainings and workshops on selling effectively and regularly, so that the entrepreneur is certain that the sellers have clear understanding about the products and can provide clients with information and advice related to the products, especially high-risk or complex products that are unfamiliar to the sellers.

Communication with Sellers

- Establish a unit responsible for communication and information dissemination. This unit selects topics, contents, formats, channels, assessment procedures, time frame as well as frequency for sellers.
- Use accurate and complete contents to communicate with sellers. For example, the content may include the purpose along with the procedures, so that the sellers understand the importance of following the instruction strictly. In addition, in case of providing information about products in the capital market, the contents must be relevant to the information given by the product issuers.
- Use systems and tools to enhance the efficient communication with sellers, such as computers, the internet and emails, and choose communication channels appropriate to the topics, contents, tools and sellers' media consumption behavior, in order to achieve successful communication.
- Assess the communication and knowledge, such as rechecking examination and mystery shopping, and arrange meetings between communicators and sellers to discuss problems and obstacles for future operation.
- Possess communication mechanism that also includes sales-related personnel who might have the opportunity to directly serve the clients, as there is a possibility that these personnel do not follow the defined steps strictly or act beyond the scope of their responsibilities without knowing the correct procedure, which may result in damages to clients. For example, document staff that is neither investment consultants nor investment planners must know that they are not allowed to sell products or give investment advice to clients.

Trainings for Sellers

- Organize trainings for sellers to strengthen their weaknesses in terms of knowledge or skills required for sellers, especially those who sell or give advice on high-risk or complex products, so that they can offer constructive advice and appropriate products to their clients. The contents should include product information that is relevant to the information provided by product issuers, opinions or remarks on entrepreneur's product selection (for example, mutual funds should not be offered to which groups of clients), knowledge and skills needed for data collection and analysis, operational procedures and ethics.

- Provide sellers with trainings on new products, especially high-risk or complex products. The entrepreneur has to make sure that sellers have attended all trainings, while those who miss the trainings should not be allowed to sell any products. In addition, the entrepreneur needs to ensure that the product issuers provide adequate information and documents. To sell unit trusts, the entrepreneur should ask asset management companies to take part in organizing the trainings for sellers.
- Give sellers the opportunities to practice using the language that is easy for clients to understand. The entrepreneur may produce samples of dialogues concerning explanations of difficult topics, especially the topics on high-risk or complex products. The sellers may be taught to record evidence of investment advice services and product offered to clients.
- Monitor the accuracy, adequacy and appropriateness of contents included in the trainings in case that the entrepreneur uses other trainers for trainings to sellers.
- Conduct training evaluation to ensure that sellers have gained knowledge and understanding on the topics mentioned in the trainings and they can put that knowledge into practice, and improve future trainings.

In case the entrepreneur owns many branch offices, (e.g. commercial banks), the trainings can be accessed online using webinars or video conference. The participants (at all branch offices) can see the trainers (entrepreneurs at the head office, training providers, or product issuers) online as they extensively share knowledge and information during the trainings.

1.1.4 Sales Process

The entrepreneur completes the following process.

Preparation of Sales and Services

Readiness of Sales Operating System

1. Establish clear and complete sales procedure appropriate to each type of products by producing seller’s manuals that help sellers understand their roles and

responsibilities as well as know appropriate information presentation strategies for different groups of clients categorized based on their investment goals and risk tolerance. The manuals can be hard copies and/or soft copies which can be retrieved by the office of the SEC for information examination. The entrepreneur needs to make sure that the information in all manuals is up to date and relevant to current situations.

2. Use systems and tools to facilitate the sales process. Some examples of the systems and tools are internet network devices, system softwares, sales-related forms and documents as well as help desk service systems for sellers. The systems and tools must be tested and improved regularly so that they can work well in current situations.

3. Identify a scope of seller's responsibilities by making them understand what they can and cannot do at the point of sales and service. In the case that the entrepreneur wants to offer clients the service; however, there is no personnel with adequate knowledge and information about the products offered at the point of sales, there should be some supporting systems, such as help desks or call centers, to provide the clients with accurate and complete services.

4. Separate the transaction space from the space used to sell products in the capital market when the entrepreneur, such as commercial banks, also offer deposit service and set up signs for clients to see the space clearly so that they do not get confused or misunderstood that investing in the offered products are similar to depositing money.

Seller Selection

1. Select sellers with knowledge and understanding on the offered products and skills that are in line with the offered product types. The seller selection may consider educational backgrounds, body of knowledge and sales licenses (according to personnel regulations in the capital market).

2. Ensure that the selected sellers possess all qualities required by the office of the SEC and adequate knowledge used to explain to clients about the offered products, especially high-risk or complex products. The selection process may include additional steps as needed. For example, the entrepreneur may assign a particular group of sellers to sell complex products by considering high-risk or complex product sales

experience, specialized knowledge and skills, ability to learn information about high-risk or complex products, communication skills, presentation skills and service mind.

3. Find means to inform clients whether the sellers with whom they are in contact are allowed to sell the products. For example, a name list of qualified sellers can be put up on the board at the point of sales and service or there may be a label on the desk or a name tag on the chest, so that the clients can see clearly, while the sellers need to present themselves to the clients or inform the scope of products they are able to sell and provide related services.

<u>Example</u> The entrepreneur assigns A to be responsible for non complex sales and services. As A is offering products and services, the client is interested in investing in complex products that A is not allowed to sell or provide related services. A should inform the client and the entrepreneur has to find a seller who knows about the complex products well to serve the client instead.

Materials on Product Risks

The entrepreneur has some materials to help sellers explain to clients about risks and complexity of products.

1. Prepare documents, such as fact sheets, and information about product characteristics and risks. In case the entrepreneur produces the documents, such as marketing flyers, the content should be accurate and easy to understand. The stated information should not be different from the information given by product issuers. In addition, the documents and information concerning product characteristics and risks should be clearly highlighted to all clients.

2. Possess images or animations with texts and voices, such as video clips and visualized presentations, for high-risk or complex products, such as Basel III and hedge funds that are difficult to maintain the quality or standard of providing information and advice. These images and animations can help the clients understand and see the investment more clearly.

Sales and Service Process

Sales and service process is appropriate as the entrepreneur chooses the process according to business operation formats and product types. The topics to be considered are as follows:

Client Data Collection and Analysis

Prior to the product presentation, the following can be done.

- <u>Client Segmentation and Know-Your-Client</u>

1. Establish a process to segment clients into groups, such as institutional investors, high net worth individuals, ultra high net worth individuals and retail investors, so that sellers can offer products that are suitable for each type of clients along with remarks on involved risks.

<u>Example</u> *To offer mutual funds to high net worth individuals and ultra high net worth individuals, the entrepreneur can ask clients to self-declare their information, request additional asset documents from clients, such as title deeds, for consideration, and give their best effort to verify the provided documents. For example, if the entrepreneur is a commercial bank with clients' information on deposits and investment portfolios (fixed income securities/mutual funds), this information can also be taken into consideration. In addition, in case that credit bureau information appears to be useful in the consideration, this information can also be included. In this case, an investment portfolio refers to securities or derivatives, including debentures and bonds purchased from commercial banks. The portfolios at other affiliated securities companies are also counted.*

2. Adopt an operation process to ensure that sellers know their clients well, in terms of information about their ultimate beneficial owners and ultimate controlling persons[2] so that they are able to give advice and suggest investment plans accordingly. In addition, this helps prevent them from participating in illegal actions or future arguments.

[2] "Ultimate beneficial owner" refers to the natural person who ultimately owns an account or a transaction conducted.
"Ultimate controlling person" refers to the natural person who ultimately possesses controlling power or decision-making power concerning an account or a translation at the last level.

3. In case the entrepreneur receives inadequate information from clients or find out that the given information is suspicious, making it impossible to identify the true selves of clients or ultimate beneficial owners, the entrepreneur must refuse to provide services.

- Getting to Know Clients and Using Suitability Test[3]

1. Use a system to obtain clients' information and get to know them in order to collect adequate information. For example, sellers may ask their clients about their identity, career, sources of income, financial status, risk tolerance, financial or investment goals, affordable risks and losses, and financial limitations or conditions (for example, the client may need the liquidity of this amount of money in 3 months). Sellers may ask clients to take a standardized suitability test produced by the office of the SEC as a guideline or developed other test formats to obtain adequate information for seeking the clients' risk tolerance and coming up with suggestions on asset allocation and suitable products.

2. Remind sellers not to assume that one product is suitable for all clients in the same group as it is important to pay careful attention to each client's information and additional factors, such as ages, and, as a result, some products might not be suitable for some clients even though they are in the same group and this may lead to inappropriate product offers.

- Investment Knowledge Assessment

1. Conduct additional knowledge assessment in case of offering high-risk or complex products. Sellers can evaluate whether their clients match with the product offers by asking for more information as follows:

(A) Education: What is your education level? What is your field of study? It is related to investment (such as finance and business management)? Do you have any certificates (such as CISA, CFA and CAIA)?

[3] The entrepreneurs can be exempted from the suitability test when the services are provided to the clients according to the regulations on client communication and services. For example, institutional investors (II) or high net worth (HNW) individuals who are juristic persons may disclose the intention to request an exemption from the suitability test for investment or transaction in writing.

(B) Work Experience: Are your previous or current works related to securities or investment in the capital market? How long have you been working?

(C) Investment Experience: Have you invested in high-risk or complex products? What kinds of securities are they? How long was the investment?

2. Conduct knowledge assessment of any kinds as long as it helps sellers evaluate the clients' ability to invest in high-risk or complex products and use an operating system to ensure that sellers are able to use the knowledge assessment results to formulate high-risk or complex product offers for clients.

- Information Collection, Verification, and Storage Systems

1. Use a system to ensure that clients give the information by themselves, while all documents need to be signed by the clients only.

2. Keep the clients' documents safe from being stolen, revised or accessed by unrelated personnel and review and keep the information up to date, such as changing clients' personal information.

3. Has a complete procedure to collect information about people related the clients, especially the case of selling unit trusts in an omnibus account. So it is compliant to the regulation of purchase or hold investment units more than one third of selling unit trusts.

Explanation and Document Distribution

1. Use a system to ensure that sellers provide clients with clear accurate and complete product information, including product characteristics and risks. In case of fixed income securities, unrated bonds, the sellers have to discuss the risks in terms of issuer's credits. The explanation may include key financial ratios. The clients must understand this information before making their investment decision.

2. Set up additional operating process for selling high-risk or complex products. Sellers need to make it clear to their clients that these products cannot be sold if the clients have not received any advice. Additional steps may be added to give sellers the opportunity to explain and emphasize on the product risks or complexity that are more risky compared to other products. The sellers must also mention the information or details about possible losses in case that the investment does not go as planned.

3. Prepare additional information for sellers in case of high-risk or complex products, such as Basel III and hedge funds, that are difficult to explain to clients, so that the sellers can provide some examples of worst-case scenarios that affect the clients' investment, such as possible losses in the worst-case scenarios.

Example: To sell Basel III compliant securities, the entrepreneur has to mention the worst-case scenarios to clients and explain that there is a possibility of investment losses. The clients are also responsible for the losses of banks who issue Basel III compliant securities if one or more trigger events occur:

- *The amount of bank reserves is less than the level specified by the Bank of Thailand.*
- *The banks who issue the Basel III compliant securities encounter financial difficulties and can no longer carry on; therefore, the authority decides to support the financial situation.*

In addition, the entrepreneur should provide sellers with explanation that can be given to clients in case of trigger events, e.g.

- *Write off some reserves as non-performing loans, or*
- *Convert reserves fund to equities.*

4. Possess product information and documents that sellers can use to explain or distribute to their clients. There should at least be some fact sheets, prospectus, and marketing flyers (if any).

Giving Advice on Asset Allocation

1. Offer advice on asset allocation based on clients' suitability test results. After the clients pass the KYC suitability test and knowledge assessment (for investing in high-risk or complex products), sellers give advice and explain to the clients about the suitable investment plan developed based on clients' risk tolerance.

2. Investment consultants and investment planners can give advice on asset allocation as follows:

- In case that a seller serves as an investment consultant, he/she can give advice on products based on client risk tolerance and provide initial suggestions on basic asset allocation prepared by the entrepreneur.
- If a seller serves as an investment planner, he/she has a wider scope of responsibilities. In addition to giving advice like an investment consultant,

he/she can help identify investment strategies and practices by arranging a specific investment portfolio (through the use of in-depth information about client financial status, investment goals and possible risks) so that the client receives the returns as expected and achieve their investment goals.

3. Make sellers realize the importance of informing their clients of product features and risks in detail. In case that clients want to invest in the products with higher risk compared to the clients' risk tolerance level or they do not want to follow the suggested asset allocation, the sellers must spend more time explaining to ensure that the clients clearly understand possible risks that come with the products. There should also be a system that helps keep record of sales and service evidence.

Example: *The entrepreneur may record their explanation or advice given to their clients (in case of telephone call service) or when the clients sign the risk acceptance form (off-site service). In addition, the entrepreneur should have a sales and service monitoring system to ensure that the sellers provide their clients with correct explanation about investment risks, such as giving each client a call back service.*

Announcement of Material Events Affecting Product Offered.

In case of material events affecting the product offered (such as downgraded bond in which a fund invests, or issuer's default or a situation that the country in which the mutual funds mainly invest encounters financial crisis or political unrest), the entrepreneur must keep up with the situation by contacting the product issuers regularly and communicating with sellers so that they can explain the situation to their clients before making investment decision to invest in the products. Especially in negative events that significantly affect fixed income securities, the sellers should be able to give suggestions or advice based on the latest situations.

In addition, in terms of asset allocation or wealth management services, the entrepreneur has to monitor the clients' investment portfolios, such as AUM growth, and if the product offered does not meet the expectation and affect the clients' investment portfolios, the entrepreneur may offer suggestions or options suitable for the clients based on the clients' maximum benefit. For example, clients may invest in feeder funds as the master fund invests in asset class or countries with higher risks.

Risk Acceptance for High-Risk or Complex Products

The entrepreneur assigns sellers to explain the features and risks of high-risk or complex products to clients according to the risk acceptance form or evidence and develops a process to ensure that the clients are informed of the significant information before making their investment decision. The process should be in line with the existing sales and service procedure. The entrepreneur may use the standardized risk acceptance form which can be downloaded from the office of the SEC's website and the form can also be revised based on the product offered; however, the warnings and risks must still be included. If the office of the SEC does not specify the product type, the entrepreneur needs to produce its own risk acceptance form and have it verified by the office case by case.

Effective Application of Guidelines for Sales and Services of Unit Trusts and Fixed Income Securities for Each Product, Distribution Channel and Type of Clients

Minimizing Sales and Service Steps for Returned Investors

To conduct more appropriate sales and service practices, the entrepreneur can skip unnecessary steps for returned investors as follows:

1. For the first time purchase, the entrepreneur complete all specified sales and service steps.

2. In case that clients want to invest in the same products they have invested in before or repeated sell, such as purchasing the same mutual funds or fixed income securities, the entrepreneur may consider skipping the information providing step if the information has not been changed since the first purchase.

- Sellers do not need to explain about product features and risks to the clients in detail again since the clients who have invested in the products have been informed of the information before.

- For high-risk or complex products, the entrepreneur does not need to ask the clients to sign the risk acceptance form or submit any evidence again as the clients acknowledged significant risks when the account was first opened.

However, if there are any changes or updates of the information (such as fact sheets, peer fund performance information, and material events), sellers still need to provide the returned clients with complete information so that the clients are aware of the changes in product information and risks from their last purchase (if any).

Online Sales and Services

Nowadays, clients are increasingly familiar with online trading and transactions (such as websites and mobile applications). In completing online transactions, clients do not have to receive services from sellers directly. However, the entrepreneur can design online trading and service procedures or format that are appropriate for online channel. The platform may include a controlling system as well as a verifying system to ensure that the clients receive accurate and adequate information, advice and services.

Example

- Distribute fact sheets and information on peer fund performance: Put a web link on a website and mobile application or other platforms to distribute fact sheets and peer fund performance information for clients to use in decision making.

- Provide clients with explanation on product features and risks: Produce summaries of product features and risks based on the information stated in fact sheets or marketing flyers and put them up on the website so that clients can access and read the information.

- Have clients signed the risk acceptance form: Create warning pop-ups when clients are about to acknowledge the risk acceptance on the website and mobile application so that they can read the details before clicking the accept button.

For high-risk or complex product offered, such as Basel III and hedge funds, that are difficult to explain to clients on the website and mobile application, the entrepreneur should have additional steps for clients to acknowledge in order to ensure that they are informed of both product features and risks before making their investment decision for the first time. For example, there should be some channels (such as commercial bank branches) in which clients can meet to talk to sellers and receive suggestions and answers directly or there may be other trading channels that clients can contact sellers, such as telephone, Skype and video conference.

Additionally, the entrepreneur may consider providing services via automated teller machines (ATM). For example, clients can purchase the same mutual funds as the system can confirm that the clients conducting the transaction at the ATM have received necessary advices and services before. However, if there are any changes in the fact sheets or peer fund performance information of the same mutual funds that the clients want to purchase again or there are changes in material events, the system has to ensure that the clients are informed of the information or situations and there should be some channels that the clients can access and study additional information or changes (if any) before making investment decision. The entrepreneur must be certain that the clients receive accurate and complete services.

Process of Sales and Services for Vulnerable Investors

Vulnerable investors require more protection. For example, some clients who are over 60 years old who may have a great deal of money, however for one particular client, the money that is about to be used for investment might be the last amount of money he/she has. Therefore, the entrepreneur must have some practices to make the sellers realize this fact and pay careful attention to the communication and product offered. The product presentation should be appropriate to this group of clients as well. The sales process may emphasize on getting to know the clients in order to achieve their investment goals. Adequate information and warnings should be appropriately presented to the clients, while additional steps may be added to make the process more concise.

<u>*Example:*</u> *The entrepreneur might establish additional operating process in case that the products and services are offered to vulnerable investors.*

- Set up a system for branch managers or department heads to reexamine the services provided by sellers whether the transactions of this group of clients are appropriate.

- *Possess a post-sales monitoring system given to all clients in this group a call back.*

However, in the case that the entrepreneur has a process to ensure that the clients are not vulnerable investors, such as an over 60-year-old investor with over 10 year investment experience, the entrepreneur may choose to follow the same procedures used with other general clients.

1.1.5 Remuneration Structure

The entrepreneur has to complete these steps.

- Establish a remuneration structure for sellers and related personnel by considering the clients' benefits as the first priority. The sellers and related personnel should receive the amount of remuneration that is in line with the service quality on the non-sales KPI basis, not only the sales KPI. The entrepreneur must be aware of the product-focused approach which may lead to mis-selling and irresponsible advice and offers for clients.

Example: *Some examples of the operating procedures are as follows:*

The entrepreneur may assign an independent unit to recheck or evaluate the service quality offered by sellers and sales department heads. The evaluation adopts the use of service quality grading system and the results are used to calculate the remuneration for each seller. The independent unit can randomly examine product and sales evidence and documents and ask clients after the sales. These factors help indicate the mistakes in product offers and inappropriate services affecting the clients' benefits. For example, some sellers collect inadequate information from clients, while some provide their clients with inappropriate advice. Some cannot give clear explanation or adequate information about the products and some might not follow the operating procedures in the past.

- Evaluate possible risks from remuneration structure. Some examples of factors to consider are risks from sales acceleration, giving incomplete information or warnings, selling inappropriate products to clients, allowing personnel who are neither investment planners nor investment consultants give advice or offer mutual funds to clients. The entrepreneur must develop some measures or tools to prevent these risks.

1.1.6 Complaint Handling

The entrepreneur may follow these following practices.

Complaint Acceptance and Handling

- Assign units or personnel to receive complaints from clients directly. A system may be used to inform the clients of complaint submission channels and procedures. The complaints can be about business operation or services provided by sellers. The scope of complaints, channels and procedures must be clearly stated, so that the consideration of complaints can be completed for a short period of time, using evidence documents and required information or a complaint follow-up system. In addition, the clients should be informed of the official complaint channel, such as calling 1207 of the office of the SEC.
- Complaint acceptance and handling is the process that meets standards and ensures that business units and personnel assigned for this task are granted independence and are trained to have good practice so that clients obtain useful and sufficient information. Staff usually deals with complaints with fairness. In addition, a copy of transcripts of the interview with the complainer should be provided to the complainer.
- Complaints should be tackled fairly by considering both facts, contexts of each case as well as all factors involved, such as work in practice, sellers' promise, and customer profile.
- There is a complaint follow-up system to ensure that each case is solved and investigated according to guidelines, conditions and time frame.
- Complaints are warning signs of problematic work systems. Repeated complaints, or repeatedly complained about each or group of sellers should seriously be investigated to find root causes of the problem and/or to immediately investigate deeply to stop the damages.

Problem Solving Process

The entrepreneur needs to justify a standard to solve problems and offer compensation to clients, including setting an appropriate time frame for each step, notifying the complainer of the progress, and establishing criteria for fair compensation or restitution in each similar case.

Prevention of Repeated Problems or Complaints

- Assign personnel to be responsible for analyzing the cause of the problem or complaint and use the analysis results to further carrying out. For example, the entrepreneur may examine the operation, evaluate seller performance, improve the operating practices/system, set up additional control and rechecking systems, and communicate with sellers and related personnel.
- Report the complaints to the committee and chief executives in order to evaluate risks and improve related operating steps to avoid the repeated problems. The complete report should also be sent to the office of the SEC.

1.1.7 Internal Control and In-house Inspection

Entrepreneurs should follow these steps.

Internal control and performance review

- There should be work units that are responsible for monitoring and examining work performance with regard to product sales covering all level of operation, such as the three lines of defense as follows:

First Level refers to internal control and daily operation recheck.

Second Level refers to oversight functions to examine whether the operation follows the specified procedures.

Third Level refers to risk management and control to evaluate adequate measures for different operating systems. All levels of operation must agree on risk assignment to achieve mutual operational goals.

- Evaluate sales and service procedures to indicate possible risks, such as risks of clients' being cheated on and risks of clients' being offered inappropriate investment products that may result in losses.

- Set up a system to prevent possible risks, such as makers and checkers or multiple approvals, and install a rechecking system to quickly detect suspicious actions and seek solutions to fix or stop the damages.

<u>Example:</u> *The quality control systems used to monitor sellers' sales and service practices and recheck the operating steps cover the following points.*

1. Review sellers' product presentations whether they are appropriate for clients.

2. Oversee sales practices that require multiple approvals, such as selling products to vulnerable investors and selling high-risk or complex products.

3. Monitor sales practices to ensure that their performance is within the specified scope of responsibilities.

4. Follow up, control and recheck the sales practices to make sure that the operation follows the procedures established by the entrepreneur. When incorrect or incomplete actions are detected, corrective measures must be immediately implemented.

As the entrepreneur sets out a guideline for advertisement based on the specified criteria, there should also be a monitoring system to make sure that sellers do not encourage or rush their clients to make investment decision by any means to purchase products in the capital market. Some examples of inappropriate practices are promotional prizes, gifts and cash back. In case that the entrepreneur contact clients to offer products in the capital market without clients' desire, the entrepreneur needs a system to ensure the clients are not rushed or disturbed and the entrepreneur should keep the do-not-call list for those who do not want to be contacted again.

In addition, the entrepreneur must pay attention to establishing effective follow-up and after-sales systems to monitor sales and provide clients with services as specified by the entrepreneur.

<u>Example:</u> *The entrepreneur should assign internal control and work quality of sellers which cover the following tasks.*

- Randomly examine the services provided by sellers (mystery shopping)

- Give clients call-backs or conduct client surveys on risky transactions, such as offering products to vulnerable investors or clients who receive low scores on the suitability test but wish to invest in products with higher risk levels or to invest the amount larger than suggested in the asset allocation plan, and offering high-risk or complex products, such as Basel III and hedge funds, that are difficult to explain to the clients.

- Randomly listen to recorded sales and service conversations between sellers and clients.

In the case that inappropriate sales practices are detected, the entrepreneur has to discover the cause, find effective solutions and conduct follow-ups, including sales volume, complaints and suggestions. The entrepreneur has to inform the product issuers to make sure that the products are sold to the target clients and the entrepreneur can also give some suggestions for product improvement since the entrepreneur is closer to the clients.

- Develop inspection plans emphasizing on specified risk. The inspection determines whether all operating steps are complete in order as prescribed and detects suspicious actions that are likely to happen.

<u>Example:</u> *In the case that the client opens a mutual fund account and receives the mutual fund pass book without any trading record in the system, it is possible that the client has made payment to purchase mutual funds; however, the seller does not transfer the money into the system. As the client has the mutual fund pass book as evidence, he believes that the transaction is complete. In addition, if the mutual fund gives extremely high remuneration to the sellers and the sales volume is high in one particular branch, there might be some mis-selling.*

The inspection should cover all aspects, including sales strategies for different channels, locations (such as branches and provinces), types of transactions (such as buying, selling, switching and investing in various mutual funds) and appropriate frequency of inspection. There should be various methods that conform to all goals.

The entrepreneur assigned a unit, such as the compliance department and the internal audit department, to conduct the inspection and develop inspection plans in order to ensure that the plan is extensive enough and no redundancy exists. Other units that have their own internal rechecking or inspection procedures can report the results to the compliance department and the internal audit department in order to improve the inspection plans.

· Report the examination results to the committee and chief executives at appropriate time and propose improvement solutions to the committee and chief executives.

Conflict of Interest Prevention and Management and the Prevention of Using Inside Information

- Identify risky activities that might results in conflict of interest and establish new policy, measures and tools that are adequate and effective in order to prevent or manage conflict of interests and disciplinary measure in the case of not complying with the specified measures or operating process.
- Use tools and processes to precisely manage conflict of interests concerning different issues. The sellers must also communicate with their clients and explain to them about the measures used by the company, so that related personnel realize the importance of those measures and follow them efficiently.
- Check the operation against the specified measures and find solutions when the operation does not go as planned. There should be regular risk evaluation and revision of measures used by the entrepreneur as well.
- Set up measures to control and prevent information leakage by separating units using the Chinese wall approach and storing the information on the need to know basis.
- Establish guidelines for supervising and examining sales practices of sellers who deal with inside information and might use the information in an inappropriate way (staff dealing).

1.1.8 Operation and Business Continuity

The entrepreneur may complete the following operation tasks.

Operating System

- Create manuals and checklists for related personnel to use as operation guidelines as well as conduct trainings on manuals in order to make seller understand and see the importance of following the operating steps strictly, so that they do not make mistakes and the entrepreneur can rest assured that the clients receive appropriate services.
- Identify clear and intensive steps of the after-sales operating system and use additional systems to monitor the payment and prevent embezzlement, including that the clients are also informed.

<u>Example</u>: In case of unit trusts, the after-sales operating systems include the transaction ordering, the payment monitoring system for sales and purchase of unit trusts between clients and asset management companies, the evidence document issuing system, the investment follow-up system and the rechecking system. The consideration may focus on risks; for example, risk of being able to produce fake evidence to make clients believe that the orders have been completed to cheat on clients' assets. This is possible because the system allows sellers to print out the documents confirming transaction completion although the money has not yet been transferred into the system or sellers can unlimitedly reprint the documents. The seller can send unit trusts or fixed income securities trading into the system and later cancel it without any evidence confirming that the actions are approved by the clients.

There might be a sign showing that the sellers have received the money from their clients; however, they do not use the money to purchase unit trusts or fixed income securities for their clients. Therefore, the entrepreneur should carefully set up additional systems to prevent and protect this type of risk. For example, the system might include makers and checkers as well as a rechecking system to quickly detect any suspicious actions and stop the damages by issuing a correct or cancel report at the end of the day to find the causes and reasons for correction or cancellation.

- As an information technology system is used in the operation, the following risks are to be considered.

1. System stability: identify operation and significant data collection processes using a computer system as a main tool to look out for any threats and

develop contingency plans for obstructions or intervention and damages to the system.

2. Data security: monitoring the access to and the use of data in order to prevent the data from being retrieved or stolen for inappropriate use.

3. Development of supporting softwares: designs a program that serves needs of accuracy and promptly use. For example, the program may give notifications when clients try to sell some products that do not meet tax benefits. It should include an extensive and complete set of needed information along with accurate data processing. The notifications or reports must be clear and easy for clients to understand.

4. In case the supporting technology does not function or requires maintenance in terms of both hardware and software, the entrepreneur should pay immediate attention to the matter since selling products is as important to the entrepreneur as other issues.

Business Contingency Plan

- Develop business contingency plan in case of an incident. The plan should cover important operation practices to ensure that the business will continue to be operated without any effects on client's transactions or damages to clients. In case that the effects cannot be avoided, there must be a means of communication that helps create understanding with the clients before, during and after the incident.
- Test the developed business contingency plan whether it is feasible and able to control impacts and damages. The operation system recovery must be complete in the specified time, while the plan must be reviewed and revised regularly to effectively respond to current situations.

Additional System for the Use of Omnibus Account for Unit Trust Trading

- Client custody system: The entrepreneur must have an internal control system to prevent damages to client asset. The system may help separate the client asset from the company asset, recheck the client asset, assign responsible units to keep the client asset from other trading units, require approval for client asset transfers from authorities who are not client asset safekeeping and custody.

- Unit trust holder list system: The entrepreneur must use a system to manage the list of unit trust holders and ensure that the list is complete, accurate and up to date. The list must be rechecked, copied and confirmed with the clients regularly.
- Unit trust allocation system: The entrepreneur must have a controlling system to monitor the practices based on the conditions of appropriate unit trust allocation. The practices must be examined according to principles and limitations of unit trust holding (holding no more than one third of a total of sold unit trusts) or in case the process of unit trust holding in not in line with the principles.
- Systems to handle rights and benefits of clients (unit trust holders): The entrepreneur must have the following systems.
    - A system that helps receive information from management companies efficiently and in time.
    - A system that monitors dividend received and dividend payment for unit trust holders within specified time.
    - A system that obtains resolution an approval for revision of mutual fund projects, vote count and submit the complete results to management companies within specified time
- Information delivery system: The entrepreneur must have a delivery system used to receive information from management companies and to create and send out complete information to clients within specified time or at the same time that they directly receive the information from management companies.

Quotation System (Dealer System)

The entrepreneur needs a system to monitor trading prices according to the criteria. The prices should be clearly revealed to clients and there must be personnel who are responsible for revealing the prices at the trading place to ensure that the information is correct based on the same standard.

1.2 Guideline for Equity Instruments and Derivatives Selling and Services

To sell equity instruments and derivatives in the capital market and provide related services, entrepreneurs have to promote fair dealing with clients and focus on client benefit by creating a system that helps improve communication and services, so that the clients are certain that the trading procedures and communication process are established for maximum client benefit. The important principles are as follows:

1. Giving good advice.
2. Offering products and services based on appropriateness and clients' expectation.
3. Providing investment or transaction services for the best execution in current market situation.
4. Operating without exploitation and providing after-sales services.

Equity instruments and derivatives possess different levels of risk. Compared to equity instruments and other main products, derivatives are higher risk or more complex products. The entrepreneurs need to provide communication channels and services, review useful information, follow up sales practices, and assign personnel to offer products and services by considering product risks and complexity to prevent mis-selling. The establishment of sales and service system concerns the following issues.

1.2.1 Sales and Service Process

Sales and Service Preparation Process

1. Select and assign personnel who are knowledgeable about products in the capital market or other services to sell products or provide services to clients.

***Example**: Personnel Preparation*

To send out investment invitation or to provide advice about trading equity instruments or derivatives, the entrepreneur must assign personnel with required qualifications and approval from the office of the Securities and Exchange Commission (SEC) to work as investment consultants on specific products.

In case the entrepreneur will offer investment planning to the clients, the entrepreneur must assign personnel with required qualifications and approval from the office of the Securities and Exchange Commission (SEC) to work as investment planners.

The entrepreneur should provide sellers with regular trainings to improve skills and knowledge that can be used to explain the product offering to the clients, especially new clients who are not familiar with investment products or high risk investment, such as derivative warrants (DW) and derivatives.

2. Obtain information about products in the capital market or services to be carefully studied and effectively used by the assigned personnel before offering them to the clients.

***Example 1**: Collection of Information on Product Detail*

For sales and services on equity instruments, such as securities traded in the Stock Exchange of Thailand (SET), the information can be obtained from prospectus, company summaries, fundamental analyzes and/or technical analyzes carried out by the entrepreneur.

In case of sales and services on derivatives traded at the derivatives exchange, in this case referring to Thailand Futures Exchange (TFEX), the information can be obtained from rules and regulations included documents related to derivatives contracts, such as the contract specification, rates, procedures and margin deposit conditions set by TFEX, information materials, such as leaflets, articles, brochures, videos and short clips distributed by TFEX, detailed information on demand and supply of referenced products affecting the prices of derivatives and reviews conducted by the entrepreneurs (if any).

The entrepreneur has to pay close attention to the selection of information to obtain accurate, reliable, and up-to-date information.

***Example 2**: Conducting Investment Analysis*

To carry out investment analysis, the entrepreneur needs a system that helps monitor the quality of investment analysis to meet the acceptable academic standards. The sources of information must be reliable and up to date, while the information must not be misleading. The analysts must be able to work freely without concerns about positive and negative effects on all stakeholders. In addition, there must be rules and regulations to monitor the practices of the analysts, so that they do not reveal confidential information to the public or some particular groups of people before the appropriate time in order to take advantage of the information.

***Example 3**: Using the Investment Analysis from the Entrepreneur*

The entrepreneur has a process to ensure that sellers are informed of and clearly understand the information and house opinion stated in the entrepreneur's investment analysis, so that they can effectively use the information in offering advice. In addition, investment consultants can use the opinion and advice from the reviews as a guideline for providing accurate and appropriate advice. The entrepreneur can be certain that the investment consultants do not use the analysis for the advice based on rumors or unverified information.

3. Search for tools or materials that can be used by the personnel to support the explanation about the features and risk of investment products in the capital market or services as needed.

***Example**: Required Documents and Information*

The entrepreneur should offer the clients with documents and information related to products' features and risks. The information should be brief, understandable and accessible.

In case that the document is created by the entrepreneur, the information must be correct. It should not be misleading, and the features and risks must be highlighted in the documents given to the clients.

For the products traded in the SET and TFEX, both SET and TFEX produce their own materials, such as documents, articles, brochures, videos and short clips, to educate investors in general.

- *In terms of securities, some examples of the information are features of securities, investment steps, useful information for beginners and factors affecting stock prices.*
- *For derivative warrants (DW), some examples of the information include characteristics of derivative warrants, similarities and differences between derivative warrants and general warrants, derivative warrant issuers, returns and risks of investment in derivative warrants, factors affecting derivative warrant prices and steps in derivative warrant trading.*
- *Some examples of information related to derivatives are characteristics of derivatives, steps in opening a trading account, margin deposit, open and close positions, factors affecting prices of derivatives, daily profit and loss calculation, risks of derivatives trading with low margin deposit compared to the values of derivatives.*

Sales and Service Process

1. Collect and evaluate clients' information to learn more about them and seek appropriate investments or transactions from them.

<u>Example 1</u>: Getting to know clients (before opening an account and signing a contract)

The entrepreneur must have data collection tools, such as forms and/or a checklist, that sellers can use to obtain complete client information, such as who they are, age, career, and financial status, along with practices to ensure the following:

- *The client is the same person described in the documents provided at the account opening.*

- *The seller knows the true self of the client, the ultimate beneficial owner's information, and the ultimate controlling person's information. If the information is inadequate or suspicious and cannot be used to verify the client or the ultimate beneficial owner, the seller must refuse to offer services. The entrepreneur has to carry out additional processes to re-examine the account owner's identity at the account opening.*
- *The clients can be categorized into different groups, such as institutional investors, ultra high net worth, high net worth, and retail investors, so that the sellers will be able to offer products, information and risk accordingly. In addition, the client information can be used to identify each client's risk level in terms of money laundering and terrorist support as stated in the Anti-Money Laundering and Combating the Financing of Terrorism.*
- *The seller can assess the client' ability and identify the client's sources of income which will be used for specifying settlement and margin deposit for derivatives trading appropriate for each client. The entrepreneur should consider the client's stability and validity of financial status, sources of income, and declared assets, such as cash deposit accounts and listed securities, that should have liquidity and should be free from obligation.*

***Example 2*: Presentation of clients' incomplete documents**

The entrepreneur must examine whether the client's documents are complete and appropriate. For example, the income sources that are unclear or irrelevant to the documents provided, or the client states that he/she possesses some securities in the portfolio without submitting any evidence or documents as proof, or the clients do not have any documents or details about his/her own business. The entrepreneur has to ask the clients to provide clear and complete documents or information before trading.

***Example 3*: Suitability test**

The entrepreneur assesses the investment suitability to seek the products that are in line with the client's risk tolerance level. The entrepreneur may ask the client to take the suitability test set by the Securities and Exchange Commission or the entrepreneur can develop other types of suitability test.

The entrepreneur does not have to assess the investment suitability of some groups of clients prescribed by the office of the Securities and Exchange Commission, such as institutional clients who possess investment knowledge and ability, ultra high net worth, and high net worth who are juristic persons that disclose the intention in writing to request an exemption from the suitability test.

***Example 4**: Additional knowledge assessment for selling derivatives*

Since derivatives are high risk or complex products, an investment consultant has to assess the client's knowledge and ability to see whether the products he/she is about to offer are suitable for the client before meeting the client. The investment consultant may talk to the client about the following topics.

1. *Education: This information helps assess the client's knowledge about investment. The client may be asked about education level, study fields (whether it is related to investment, finance, or business administration), and certificates (such as CISA, CFA and CAIA).*
2. *Work experience: This information shows whether the client's past or current career is related to trading derivatives or investing in the capital market, and this information may also include the length of work period.*
3. *Investment experience: This information reveals whether the client has invested in high risk or complex products, which products the client has invested in, and how long the client has been investing in the products.*

***Example 5**: Review and verification of clients' information*

The entrepreneur has to review and check clients' information regularly or at least according to the period specified by the office of the Securities and Exchange Commission (SEC) and/or the Association of Thai Securities Companies, while additional review and verification of information may be required in some situations, such as transferring money or securities into an account to increase the trading limit *and transferring money or securities into another account of one's own or others' at other companies, which could mean that the clients use the same amount of securities as a guarantee to increase the trading limit at many companies.*

Examples of client information that needs review and verification are documents concerning personal identification, ultimate beneficial owner, career, income sources, and investment objectives.

2. Offering appropriate products in the capital market and services to the clients based on the suitability test results and give advice on asset allocation.

<u>Example</u>: Basic asset allocation

The entrepreneur obtains the clients' suitability test scores and basic information concerning risk tolerance and products that the clients can invest in. Some examples are as follows:

- *When the clients receive a low score (low risk tolerance), they should invest in fixed income securities or a small amount of equity instruments.*
- *When the clients receive a higher score, they should invest in a larger amount of equity instruments.*
- *When the clients receive a high score (high risk tolerance), they should also invest in derivatives.*

If the score suggests that the clients are not ready to make an investment or transaction concerning products in the capital market, the entrepreneur has to inform the clients of the result. In cases where the clients insist on making an investment or transaction, the entrepreneur needs to give additional advice on possible risk and returns of investment or transaction to ensure that the clients truly understand the risk of the products. In addition, there should be a filing system to keep all documents and evidence related to sales and services.

3. Send out documents about products in the capital market and services with contact information to the clients.

Example*: The entrepreneur delivers investment analysis to the clients regularly, so that the clients can use the information along with the advice to make the right investment decisions in time.*

4. Provide adequate information and explanation about risk of products in the capital market and services to the clients, so that they can choose products or services for investment, while the information about material events may also affect products in the capital market and services (if any).

Example 1: Giving information about risk of derivatives (high risk products)

To sell derivatives, the entrepreneur has to provide the clients with the following information.

1. Derivatives trading is a high-risk transaction since it requires a small amount of initial margin compared to the values of an underlying asset (leverage or gearing). Small changes to the price of an underlying asset affect the deposited initial margin, requiring clients to deposit an additional amount of money in higher proportion to the price movement of the underlying asset. This can be either good or bad for the client; however, the client should not be only informed of profitability.

2. A margin and/or initial margin deposit, maintenance margin and additional margin should be clearly presented to the client along with the entrepreneur's conditions and practices. In cases where the client does not comply with the entrepreneur's conditions, such as offsetting of positions.

3. Time and means of settlement should be explained to the client in detail in cases where the client violates the settlement agreement (if any).

The entrepreneur must require the clients to read and sign the risk disclosure statement to ensure that the clients are informed of all important information before making the investment decision.

***Example 2**: Announcement of Material Event Affecting Product Offered*

For negative events that significantly affect the foreign stock prices, such as terrorist attacks and violent events in foreign countries that affect local stock prices that the clients are interested in making an investment, the entrepreneur has to keep up with current situations and communicate with investment consultants. To give the information in the explanation for clients who are about to make investment decisions or have already invested in the products. With adequate information, investment consultants will be able to offer up-to-date advice and explanations on related situations to the investors.

***Example 3**: Attentive Services and Service Offering for Particular Groups of Clients*

The entrepreneur must pay careful attention to the information and advice given to the clients as well as the sales follow-up system or services for particular groups of clients who require additional protection, such as clients of over 60 years of age who have a shorter investment period, clients with limited investment knowledge and experience who have recently started to make an investment, clients with limited communication, indecisive behavior or poor health, since these clients are not yet ready to make an investment.

5. Execute clients' trading orders of securities or derivatives by issuing clear trading orders to ensure that the orders are made by real account owners or authorized person with written consent, verifying the client accounts before trading, and conducting transactions for the clients in sequence, without trading securities through one client's account for another client or using unfair trading practices

***Example**: Unfair Trading Practices*

- *Sellers buy/sell securities or derivatives to themselves before buying/selling them to investors. This practice is called front running.*
- *Sellers urge, encourage, or support the clients in making transactions more often than necessary. This practice is known as churning.*

- *Sellers do not submit the orders in sequence. Instead, they pay special attention to the orders of some particular clients, such as HNW clients and clients that are related to them.*

6. Set up a clear and comprehensive after-sales system and additional arrangements that help monitor the payment, prevent embezzlement, and inform the clients of the operation steps.

Example*: The entrepreneur prescribes the after-sales steps that cover following issues.*

1) Document delivery to clients

- *Sellers must complete and submit the transaction report or performance results to the clients. The report must contain adequate and accurate information and it must be presented at the appropriate time. In case the documents are returned, the entrepreneur keeps a delivery record and identifies the cause of why each important document was returned.*
- *The company should allow the back-office staff to send important documents, such as confirmation notes and statements of account, to clients directly without passing them through investment consultants.*
- *The company should use a system to protect operation staff's important documents from unauthorized access and misuse of information by others.*
- *The company should keep the workspace of investment consultants or authorized staff separate from the workspace of operation staff to prevent the investment consultants from counterfeiting or destroying important documents before delivering them to clients.*

2) Clearing and settlement

- *The company should recommend the automatic transfer system (ATS) to clients for payment to ensure that the clients' money paid to the company is used to acquire securities or derivatives and, in cases where the company has to give the clients some money, the clients will receive the full amount of money.*

3) Other practices

- *In cases where the client wants to conduct any transactions related to the client's asset, such as depositing, withdrawing or transferring securities, or make changes to the client's information, the company should inform the client to contact the operation staff directly and there should be a system that helps check the completeness of the documents and verify the account owner as well as the information. When the company assigns a new investment consultant to manage the client's account, the company should inform the client in writing.*

Follow-ups on Sales and Services

1. Follow up on and examine sales and service practices to ensure that they are in line with the practices prescribed by the entrepreneur.
2. Modify or eradicate sales and service practices that are not in line with the sales and service process.
3. File sales and service documents and evidence for fast and convenient access for the office of the SEC.

<u>Example</u> 1: Internal control system to avoid possible risk

- *The company should keep the front-office tasks separate from the back-office tasks to crosscheck the performance.*
- *The company should use the system to check against one another in each unit, so that there is no one person who is responsible for all important tasks throughout the whole process alone which can easily cause malfeasance and mistakes. For example, trading that exceeds the specified trading limit must obtain hierarchical approval from authority, while the correction of any mistakes in trade documents must receive the approval of the higher authority who has examined and agreed that the correction are needed and appropriate. In addition, clients' stock withdrawals and transfers must be approved by the higher authority*

***Example* 2: Follow-up of sales and services**

Quality control of seller's sales and service performance must cover these following practices.

- *The company should review the appropriateness of products offered to clients by each seller.*
- *The company should monitor the sales practices that require additional approval, such as selling products to clients over 60 years old.*
- *The company should ensure that each seller operates within the scope of permitted practice according to the seller's qualifications or duties.*
- *The company should follow up on sales practices and quality control and examine whether the practices are in line with the practices prescribed by the entrepreneur; however, if the practices are violated, there must be a serious resolution.*

The entrepreneur can randomly listen to the recorded conversations regarding sales and services between the investment consultant and the client or randomly examine the work process.

1.2.2 Complaint Handling

In the case where customers file complaints regarding sales and services, entrepreneur are supposed to implement the following steps:

Receipt and Management of Complaints

1. There should be departments and personnel that can be directly contacted by customers. At the same time, customers are supposed to be informed about the possible channels and methods for lodging complaints, whether they are complaints, business operation, or sales services. Also, customers should be provided with the scope of complaints, possible channels and methods for lodging complaints so they can be immediately dealt with, such as providing necessary documents and information, complaint follow-up methods, and more. It is crucial to also inform customers about the official channels for complaints; namely, the office of the SEC, telephone number 1207.

2. There should be a standard procedure in receipt and management of complaints. At the same time, it is important to ensure that the responsible departments and personnel carry out the task independently, and are properly trained to perform the task. Customers who file complaints should have full opportunity to give information of the complaints. In the process, all evidence, including documents and information, must be taken into consideration in order to be fair. Apart from that, the responsible departments and individuals should maintain a copy of testimony interviews of each complainant, and another copy for the complainant to maintain.

3. The process of complaint management should be based on the grounds of fairness. In order to achieve this, the facts and contexts of each case should be taken into consideration, including all relevant factors, such as genuine operational procedures, sellers' promises, customer profile, and so on.

4. There should be a follow-up of the complaint handling in order to ensure that the complaint management is being carried out according to the appropriate course of action, conditions, and time frame.

The Customer Complaint Resolution

Entrepreneur must, by necessity, possess standard methods for customer complaint resolving, remedy, or compensation, including imposing a time frame for each discrete step to ensure that the customer complaint resolution is appropriately carried out. Also, complainants must be informed about the follow-up from time to time. Entrepreneurs should also establish relevant factors for customer complaint resolution, remedy or compensation, for the sake of fairness and equality for similar cases.

The Prevention of Repeated Complaints

1. Every complaint is a sign of a flawed system. If an entrepreneur receives repeated complaints about the same issue, by a particular seller or group of sellers for a number of times, or about similar issues, the compliance unit is responsible for detecting the causes of the problem, and/or immediately extending the investigation in order to prevent any further damages.

2. A responsible officer should be appointed to analyze the causes of the problems in the complaints, and implement measures following the investigation results, such as additional investigation or sellers' performance assessment, including improving operational procedures/system, for the purpose of controlling and investigating cases. Sellers and relevant officers should be informed about what happened.

3. A report of the procedures concerning complaints should be conveyed to the committee and executives, in order to assess risks and improve the relevant management procedures. This, in turn, prevents the problems from re-occurring. Then, the entrepreneur should provide the reports to the office of the SEC.

1.2.3 Other regulations concerning securities business and derivatives

The Prevention of Conflicts of Interests

Securities and derivatives businesses are like other financial businesses that could feasibly involve conflicts of interests stemming from service providers such as entrepreneurs, intermediaries such as investment consultants, investment analysts, investment planners, etc. Conflicts could derive from management, major stockholders, etc. These individuals share interests of services, which could lead to conflicts of interests of customers and the mentioned service providers, including among customers themselves; thus, investors are taken advantage of and treated unfairly, since the service providers tend to put their own benefits first, rather than their customers' highest interests. For this reason, if the operational system lacks effective management and conflicts of interests are not appropriately dealt with, customers are likely to lose trust in the entrepreneurs.

Therefore, entrepreneurs must do as follows:

1. Entrepreneurs should stay updated about possible transactions under appropriate management of conflicts of interests.

- ***Forbidden Transactions*** *are transactions that could lead to losses, the exploitation to customers and general investors, such as seeking interests, and customers are responsible for the expenses; the use of information or opportunities from service providing or business operations in the form of front run, securities trading for the benefit of oneself or others, making use of the securities analysis composed by themselves before publishing, unnecessary transaction (churning), and so on.*
- ***Restricted Transactions under Conditions*** *such as beneficial transactions for customers at a particular time, and so on. They are required to completely and sufficiently reveal transaction results to customers or legitimate substitutes. In case of proprietary trading, the investment should be carried out carefully for the customers' highest interests before business company interests.*

2. Entrepreneurs should establish effective policies, measures, and tools to prevent and manage conflicts of interests, along with follow-up procedures, and conduct an investigation according to the measures.

Necessary measures, such as the dividing of departments and individuals responsible for dealing with the conflicts of interests, and chains of command. Also, there should be an establishment of departments and appointment of officers to prevent conflicts of interests, the prohibition of transactions of certain time period, or the exposure of interests to customers while giving sales advice, depending on cases.

***Example* 1: The Division of Departments and Individuals with Conflicts of Interests**

Securities companies must necessarily divide the following departments: departments that trade securities for customers, investment banking, financial advisers, departments responsible for the securities analysis, departments that trade securities for the proprietary account, and so on.

Derivatives must necessarily divide departments that trade derivatives for customers from the department of trading derivatives for the company's account.

<u>Example 2</u>: The Prohibition of Transactions of Certain Time Durations

In the case where securities companies are responsible for selling securities for public offering (public offering: PO) and in the period where the companies have to be responsible for providing investment consultations to investors, there are also periods where services to clients are prohibited:

- *5 days before sales offering until sales end, persuasion and suggestion are prohibited.*
- *No distribution of securities analysis on distributed securities from 15 days before sales offering to the end of sales, or until the day that extra securities are completed. However securities analysis for PO securities is to be revealed if the following requirements are met:*
    - *It is a regular securities analysis of a company.*
    - *It is an improvement of the previous securities analysis.*
    - *The focus is not on securities underwriting.*
    - *It reveals interests in the analysis, which is presented clearly with words on the same page as comments on the analysis or in a position where it stands out.*

<u>Example 3</u>: The revelation of interests to customers

In the case where a securities company performs as a securities underwriter for public offering (PO), interests are supposed to be revealed along with the analysis, 30 days from the end of sales. The message should be presented clearly with words on the same page as comments on the analysis or in a position where it stands out.

3. Entrepreneurs should regularly review the appropriateness of measures and their system in order to prevent and deal with conflicts of interests At least, they should immediately review once there is an event that could have impacts on the prevention and management of entrepreneurs' conflicts of interests.

The Prevention of Knowledge and Usage of Inside Information

Securities business operation and securities related business operation, such as securities underwriting, financial advising, etc including derivatives, makes it possible for an entrepreneur to obtain inside information such as issuer information, which has effects on prices of issuer's securities or business that is related to issuers, or significant information which could tremendously affect prices of derivatives, product prices, figures of variables, customer decision-making of purchasing derivatives, and so on. The aforementioned information has not been revealed to the public. If entrepreneurs or personnel make use of the inside information in sales or reveal it to others, it only means that investors are taken advantage of, since the equality to access information is disrupted.

Therefore, in order to prevent the unfair use of inside information by entrepreneurs and personnel, the following measures have to be implemented:

(1) Business units that are prone to gaining knowledge of inside information should be separated from other units and officers of other units. Examples of units in the securities companies that have the tendency to gain knowledge of inside information are those that are responsible for the stock sales, financial consultancy, credential analysis, and so on.

(2) The right to access inside information should be established for those who are authorized. The right should be restricted to only the people who are in charge (need to know basis).

(3) Measures to keep the issue under control should be established. In general, a securities company creates watch lists and restricted lists, according to the following procedures:

- A securities company is going to include securities names in the watch list accounts after the company receives the issuer's inside information. For instance, in the case where the company is in the process of making a contract/agreement in financial services to the issuer and the deal has not been revealed to the public. Securities companies are to reveal the names in the watch list only to related units and officers for the operation. Also, related officers or those who are exposed to the mentioned information are not allowed to trade stocks in the watch list. After the deal has been revealed to the public, the company will move the names from the watch list to the restricted list.

- Even though the deal has already been revealed to the public, a securities company is supposed to operate the restricted list until the end of service or until the operation is no longer necessary in order to maintain the investors' trust and the company's good reputation. Therefore, when the names are moved from the watch list to the restricted list, the company will reveal the names in the restricted list to units and officers. Also, all officers, including the company's investment accounts, are not allowed to trade stocks for their own sake, persuade or give out consult regarding the stock or create a securities analysis. When the deal is terminated and the inside information has not been used, the company will remove the securities names from the restricted list.

- In the case where there is a securities analysis in the capital market for customers, there should be an establishment of measures to prevent the individual who creates a securities analysis to use the important information, which has not been revealed to the public, for his own sake or revealing the information to other people.

The Supervision of Officers' Securities Transactions

Entrepreneurs are supposed to further supervise officers' trading transactions under clear rules and regulations, in order to prevent misuse of inside information and conflicts of interests. In the case of companies that operate as securities brokers and derivatives agencies, entrepreneurs must necessarily require officers to trade in the company they are working with. However, in the case where the companies allow their officers to open trading accounts with other companies, there must be an establishment of supervision to ensure that the system is efficient comparable to the same as opening within the company.

Client Assets Custody

In doing securities and derivatives businesses, in the case where entrepreneurs are necessarily involved with customers' assets, such as the customers' cash or securities deposited with the company, securities subscription, and assets that securities companies require from customers as collateral for payment and collateral for the implementation of derivatives contract, entrepreneurs are supposed to establish a system for the supervision of customers' assets in order to prevent illegal acts or unlawful use of customers' assets. An effective system to supervise customers' assets has to ensure that customers' assets are under supervision and thorough security. At least, there should be an implementation of the following:

(1) Accurate, thorough, and up-to-date records of customers' assets

(2) The separation of customers' assets from the company's assets. In the case where the company deposits customers' assets in other financial institution such as TSD, the company must clearly identify the securities account name or the promissory note to be an account for a customer.

(3) An establishment of comprehensive regulations to supervise customers' assets, especially the withdrawal or transfer of customers' assets such as checking of customers' signatures and authorization by relevant officials, etc.

(4) A regular count or investigation of customers' assets

(5) A regular notification of movements or balances of customers' assets, at least once a month. However, in the case where there is no movement in customers' assets for a continuous period of time, the company is required to periodically notify customers of their balances, at least every 6 months.

(6) A written contract or agreement regarding the custody of customers' assets, identifying responsibilities of both parties and containing necessary particulars as prescribed by the office of the SEC.

Apart from that, departments that are in charge of supervising customers' assets should be specific department or operations departments, but not departments that contact customers to solicit or give advice to customers. The mentioned procedures should be carried out according to segregation of duties, in order to facilitate the operation investigation.

The Requirement for Collateral for Derivatives

In order to control risks from derivatives contracts, including the security maintenance of the clearing and settlement systems, derivatives agents must necessarily have a proper system as follows:

1) <u>The establishment of margin rate or value of collateral and specified time for calling collateral.</u> It covers the plan for initial margin and additional margin in case the company discovers that collateral value of customers is lower than the maintenance margin, after marking to the market. Variations in derivatives prices, financial status, the ability to provide collateral, and customer payment profiles should be taken into consideration, which should not be lower than that required by the SEC.

2) <u>The establishment of measures to control risks in case customers' incapability of placing collateral within a required period of time</u> such as the pause in derivatives trading, derivatives contract position offset until the maintenance margin is not lower than the initial margin.

The Establishment of a Compliance Unit

A compliance unit is a very important unit within a company, whose main responsibilities involve the supervision of the operation of the company and employees, to be according to laws and regulations. Unlike the internal audit unit that is principally in charge of investigating illegal acts or careless activities feasibly leading to damages to the company, a compliance unit is responsible for establishing regulations for employees to prevent violation of laws, the investigation of employees' activities to be compliant to regulations, punish those who violate the regulations, and regularly co-operate with the SEC, SET, TFEX, TCH, in order to be aware of updated regulations which are in use, and impart the updated trend to employees and senior management members for accurate understanding. A compliance unit could operate independently by presenting investigation results and comments to the company's board of directors, without any restriction or distortion. Moreover, the compliance unit should consist of individuals with true understanding of laws and regulations regarding securities business and have been trained regularly, including the head of compliance who can work full time and receive training organized by the SEC at least every 2 years, so that the operation will be fully effective. For this reason, entrepreneurs with an effective compliance unit will reduce risks of violation of the law.

1.2.4 Anti-Money Laundering and Combating the Financing of Terrorism: AML/CFT

Criminal activities have been developed to be increasingly complicated, especially the distortion of financial sources from criminal activities called "money laundering" in order to make unlawful money to be lawful and to use the money as a fund for criminal activities including to give financial support to terrorism.

The mentioned criminal activities can be committed by customers, through a securities company and a derivatives agent. Anti-Money Laundering and Combating the Financing of Terrorism laws, therefore, identifies the securities and derivatives companies as a legal financial institution, to ensure the mechanism to prevent and manage risks of using the companies as money laundering and terrorism support agents.

Hence, apart from the responsibility to manage risks from business operations according to the SEC, a company has the responsibility to manage AML/CFT risks, by establishing policies, measures, and accurate procedures and consistent to laws, regulations, and guidelines under Anti-Money Laundering Office.

Customer identification

In making a transaction with customers, entrepreneurs must necessarily establish a means of identification as prescribed by the AML office for customer identification and customers' actual beneficiaries, and validate the obtained information by investigating other outside sources of information.

Customer investigation

It is a process of assessing risks of customers and managing risks before authorizing customers. The factors used for the assessment include customers' occupations, sources of income, countries/places of residence, etc. The intensity of the mentioned assessment is in accordance with the risks customers pose.

Moreover, the company should regularly investigate customers' transactions to assess the levels of risks, and to see whether there are any unusual or suspicious cases or not.

Report of suspected financial transactions

Entrepreneurs have responsibilities to report suspected financial transactions to the Anti-Money Laundering Office, when discovering any suspicious activities or those against the law, such as large-scale transactions, which are inconsistent with customers' financial status; opening many securities accounts of the same type, which could mean that the customer is not the actual beneficiary; frequent cash transactions of no more than 2 million baht, but higher than debts, in order to avoid cash transaction reports to the Anti-Money Laundering Office, etc.

2. Performance Standards for Investor Coordinators

Required Readings

1. Related Rules and Regulations and Suitable Investment consulting
    - Chapter 2: Practical Conduct for Professionals Contacting to Investors

Learning Objectives:

1. Explain conduct of duties or giving services with honesty.
2. Distinguish behavior that obey/ does not obey the conduct of duties or giving services with honesty.
3. Clarify exploiting investor behavior or taking advantage for his owns or other persons.
4. Distinguish behavior that obey/ does not obey the conduct of exploitation or taking advantage for his owns or other persons.
5. Explain practical conduct with responsibility as professionalism and doing duties for investors with fairness, caring, caution, determination by considering investor's advantage as first priority.
6. Distinguish behavior that obey/ does not obey practical conduct with responsibility as professionalism and doing duties for investors with fairness, caring, caution, determination by considering investor's advantage as first priority.
7. Understand administrative penalty for unsuitable investment consulting.
8. Explain practical conduct according to the SEC Law (5^{th} edition) B.E. 2559, referring to unfair securities trading.
9. Distinguish behavior violating SEC Law (5^{th} edition) B.E. 2559, referring to unfair securities trading.
10. Explain practical conduct of sales and services for capital market products as the case of discretionary account.
11. Apply correctly and suitably the practical conduct.

Chapter 2
Performance Standards for Investor Coordinators

Securities entrepreneurs must hire employees or individuals approved by the Securities and Exchange Commission of Thailand (SEC). Such employees or individuals, including investment analysts, investment consultants, and investment planners, will make contact with, provide service to, and conduct investment and investment planning for clients. They are regarded as a vital mechanism in the capital market because of their direct access to clients. Moreover, their understanding of the duties, responsibilities, and performance standards will enhance the development of the capital market as well as making performances become complete and impressive to clients.

For the clients or investors' benefits in the provision of efficient, fair and non-exploitative services, the SEC has specified the following criteria or performance standards for investment analysts, investment consultants, and investment planners.

2.1 Fulfillment of duties in an honest and integrity manner

2.1.1 Refraining from dishonesty, such as:

(1) Any unlawful act against the assets of investors, such as misappropriation, deception, or fraud, etc.

(2) Any form of forgery, such as opening a securities trading account under the name and signature of another individual and using the account for one's own benefit (using another individual evidences for opening a securities trading account, even though it is actually an account of investment analyst or investment consultant, or investment planner).

(3) Utilizing the assets or information of a securities company or an investor, such as software, or investor information for the benefit of one's own or the benefit of a connected party without the authorization of the company.

Sample cases of dishonest duties or service

Case 1: Unlawful act against the assets of investors

Ms. Wadee looks after a foreign client who trades in stocks for dividends. There is a mismatch in identity: the client is a foreign but holds the stocks as a Thai national. Consequently, the client cannot receive the dividends. In response to the problem, she aids the client by seeking another securities trading account to be the transferee of the stocks to receive the dividends and then to transfer the stock back. She has the client sign the securities transfer form in advance without filling out the information. In the first transaction, the dividends are received to the client and the stocks are transferred back to the client. In the second transaction, she does the same but the dividends are not received. Moreover, the stock is transferred to her own securities trading account and another client, who is her cousin, and the stock is sold. This is considered an unlawful act against the assets of investors and dishonest fulfillment of duties.

In this case, Ms. Wadee should provide complete information regarding the rules and regulations on securities trading in Thailand to her client prior to the opening of the securities trading account. She should also enquire about her client's purpose for opening the securities trading account to be able to give the right advice. In addition, she must not allow the client to sign any form without filling out the information.

Case 2: Unlawful act against the assets of investors

Mr. Chalerm trades stocks and derivatives under the account of a client and produces a fraudulent securities trading report to mislead his client that the securities trading transactions in the report are carried out according to the order of the client. To match the securities trading transactions, he also deceives the client into withdrawing the security money from the derivatives account and transfers the amount to the client's automatic transfer service (ATS) account. He then uses the amount on payment of his own securities trading transaction and as the security money for his own derivatives trading transaction, both under another the name of another client whose accounts Mr. Chalerm has asked to use. This is considered an unlawful act and fulfillment of duties against the assets of investors in a dishonest manner.

In this case, Mr. Chalerm abuses the trust of several clients to whom he has provided service for a long time, committing a well-planned fraudulent act to deceive them for his own benefit.

Case 3: Unlawful act against the assets of investors

Ms. Tip uses the purchase orders that clients have signed without filling out the information for her own benefit from selling funds and transferring the stocks in their accounts to those of her related parties. She also indicates telephone numbers that do not belong to the clients (the transferor) in the securities transfer forms and the fund sale forms in order that the operations officers of her company will confirm transfer transactions and selling transactions of fund for several occasions. Moreover, she forges the signature of the company branch manager to authorize such transactions. This is considered an unlawful act against the assets of investors.

Case 4: Any form of forgery, such as opening a securities trading account by using the name and forging the signature of another individual, for one's own securities trading transactions

Mr. Pong opens a securities trading account under the name of his sister with her knowledge that he is committing such act. Using her documents and forging her signature, he uses the account for his own securities trading transactions and signs the securities trade report (F8) to deceive his company that the transactions have been carried out at the company by his sister. This is considered fulfillment of duties in a dishonest manner (opening an account under other person's name and using that account for one's own).

Case 5: Utilizing the assets that are not general assets of a securities company for one's own benefit

Mr. Chaiwat is in conflict with a marketing team and is planning to change his job. He gives to his friend, an investment consultant working for another securities company, the securities trading application form of a client wishing to open an account during approval process without the consent of the client. He brings with him the application form and related documents without permission of the company. This is considered utilizing the assets of a securities company that are not general assets for one's own benefit.

In this case, the information of the client is an important business asset that needs to be kept confidential. Not only does the company have to invest in marketing campaigns in order to attract the client, but the client also places trust in the company's measures for keeping his information. Therefore, individuals having access to client information, securities companies, securities company staff, and investment consultants must all be aware of and must fully perform their duties and responsibilities regarding the protection of their clients' information.

2.1.2 Refraining from taking advantage of investors for personal benefit or related parties, including:

(1) Use the securities or derivatives trading accounts of an investor for personal or related parties' benefits, with or without the consent of the account holder.

(2) Analyze, persuade, or make recommendations to an investor too often in a manner that would lead to his/her involvement with churning.

(3) Exploit or take advantage of an investor through one's own duties and responsibilities, such as requesting payment of other fees or remuneration than what usually required to be paid to the securities company, or offering to sell an over-the-counter (OTC) stock, or an initial public offering (IPO) stock by charging some fees, or trading a stock before the analysis report is circulated at least 3 days, etc.

(4) Take advantage of an investor through a planned securities/derivatives trading transaction in terms of ordering, unless the investor has otherwise given clear indications of the terms and conditions for such a transaction.

Sample cases of taking advantage of investors for personal or related parties' benefits

Case 1: Use of the securities or derivatives trading account of an investor for personal or related parties' benefits.

Ms. Tongjit requests the inclusion of a transaction in the portfolio account for error trading of the company. Upon a review of the audio recordings of the transaction to verify the error, the company is unable to identify the source of the transaction order. The company then conducts a further investigation of the transaction order directly with the client and discovers that the client has not placed such an order. It happens that Ms. Tongjit is the person who placed such an order upon the request of either her colleague or a third party via her colleague. The audio recordings also reveal that she is the intermediary in the transaction order under the name of the client on behalf of a related party. This case is considered use of the securities or derivatives trading account of an investor for the benefit of related parties.

Case 2: Use of the securities or derivatives trading account of an investor for personal or related parties' benefitไ

Mr. Chai is an investment consultant for a client who is his college classmate. The client is keen to invest in speculative stocks worth less than one baht. Mr. Chai assists his client in purchasing such stocks at a lower price than the closing price after the closing hours of the market and selling them at a slightly higher price the next day. After random inspections of the turnover list securities transactions, however, the company finds that only 30% have been ordered by the client. It also identifies conversations that indicate Mr. Chai has added his personal purchase of stocks to those ordered by the client, such as: "You want three million baht? Let me add one million baht to the amount and make it four million baht." It matches the daily trading amount of the client on that day which equals four million baht. This case is considered use of the securities or derivatives trading account of an investor for personal benefit, not to mention transaction fraud.

Case 3: Use of the derivatives trading account of an investor for personal benefit.

Mr. Wasan, an investment consultant, has been appointed by his sister to trade derivatives using the family money in order to earn extra income, but the trade resulted in a loss rather than a profit. His sister then filed a complaint, leading to disciplinary action against him. However, he still believes that being an investment consultant he has a better opportunity to access information and make securities trading transactions more conveniently than being an investor. He asks Ms. Woramalee, a long-time friend, to open a trading account and carry out transactions under her name. Using her e-mail username and password, he places transaction orders via the internet and makes his own investments. Later on, the company orders an investigation of the IP address in the order sending and finds out the wrongdoing of derivatives trading under Ms. Woramalee name. Mr. Wasan admits that all the transactions are his own. This is considered use of the securities or derivatives trading account of an investor for personal benefit.

Case 4: Use of the securities trading account of an investor to carry out a securities trading transaction for another client, while the new account opening is not complete.

Ms. Sirirat, an investment consultant, agrees to carry out securities trading transactions for Ms. Vijittra, who is waiting for an approval of her account application, via another client. Upon the approval of the application, Ms. Vijittra asks Ms. Sirirat to transfer the stocks to her account, but it turns out that the other client has sold all the stocks. To deal with the situation, Ms. Sirirat requests her friend, a client of another securities company, to purchase stocks and return them to Ms. Vijittra’s account. This is considered use of the securities trading account of an investor to carry out a securities trading transaction for another client.

Case 5: Exploitation of an investor through opportunity at work.

Mr. Prakit has carried out securities trading transactions under the name of a client for over three years. He learns that the client has not monitored his own account. When a loss occurs or payment of securities purchase needs to be made, Mr. Prakit transfers money to the account. Furthermore, he uses his client's account to make securities trading transactions aiming for a commission fee. This incident leads to a total loss of 2-3 million baht. In addition, he asks the client to transfer money to the account, saying that the client is eligible to subscribe to newly issued shares for existing shareholders despite the non-existence of such stock in the account. Mr. Prakit uses that transferred amount for his own transactions. This is considered fulfillment of duties in a dishonest manner, an unlawful act against the assets of investors, including using investor account for his own benefit.

Case 6: Exploitation of an investor through opportunity at work.

Mr. Sontaya looks after the securities trading account of a client using the password given to him to conduct transactions via the internet. However, he also uses this account to make his own transactions and transactions of related parties including obtaining funds for investment from loans. He has carried out trading transactions continually for six months since the opening of this account with the total value over 800 million baht. As a result, he receives a large amount of incentives. This is considered fulfillment of duties in a dishonest manner, an unlawful act against the assets of investors through opportunities at work. It is also considered that Mr. Sontaya uses the investor's account to trade securities for personal and related parties' benefits, while involving in the investor's assets.

Case 7: Exploitation of an investor through opportunity at work.

Ms. Mantita agrees to sell nine securities worth over 900,000 baht in total to make profit for a client during the client's business trip abroad. As for the purchase of more stocks, the client will be the person to make the decision. However, she carries out the trading transactions, buying and selling securities in order to cover the losses resulting from day-trade transactions not authorized by the client that she has made throughout the 25 working days. The total trading value is 109 million baht, as such earning huge amount of sales incentives. Upon the client discovering the disappearance of some securities from the portfolio, Ms. Mantita explained that the money from the sale is used as the collateral for the securities trading account. In this case, Ms. Mantita has been assigned by a client to make decision in trading on her behalf and has used those assets for her personal benefit in an unlawful manner, including seeking benefit from the investor through opportunities to work.

Case 8: Exploitation of an investor through opportunity at work.

Mr. Pana persuades several clients to purchase stocks that he claims they are during IPO and OTC stocks belonging to a public company that he claims will be registered in the stock market, in order to make profit from the sale of such stock. However, such stock does not exist, is not during IPO process, not registered in the stock market as claimed, resulting in losses on the part of those clients.

2.2 Fulfillment of duties in a responsible and prudent manner as professionals and treatment of all investors in a fair and considerate manner, taking into consideration investors' benefit.

1. Not present false information or documents on important issues which have a severe damaging impact on clients, investors, securities companies, and/or the government, such as:

1.1 Not reveal or disseminate false information such as a forged document, conceal an essential fact or piece of information that needs to be presented to investors, shareholders, securities companies, or the government. The example is not to conceal information or submit false information when seeking an approval for being capital market personnel to the office of the SEC.

1.2 Not conceal or present false information to a securities company to aid an investor. For example, must not conceal or dress up financial information to open an account to receive a credit line increase, or must not use a single bank statement for the application of credit lines for multiple investors.

1.3 Not provide incomplete or false information to deceive investors, or must not help any person with wrongdoing acts to clients, investors, or the government.

2. Must indicate the true beneficiary in the Know Your Customer/Customer Due Diligence (KYC/CDD) provision. In case of doubt, he/she must prepare an enhanced version of KYC/CDD, or must provide KYC/CDD suitability test for an investor completely.

3. Must not appoint a related individual (a nominee), to open a securities/derivatives trading account, or must not use the securities/derivatives trading account of an investor for others.

4. Must not aid an investor in a securities/ derivatives trading transaction that exceeds the credit status of such investor, for example:

4.1 Must not support or coordinate with an investor in securities/derivatives trading transaction that exceeds the financial status or creditability of such investor; or any action deemed inappropriate for such investor's investment constraints; such as paying for the securities trading transaction on behalf of the investor.

4.2 Must not be involved in informal money lending for a securities/derivatives trading transaction, including seeking, using, or aiding the use of a money lender/loan shark.

5. Must not produce a false securities/derivatives trading report, such as producing a securities/derivatives trading report (F8) without the investor carrying out the transaction on the trading floor, or acting as an investor to confirm a securities/derivatives trading transaction with or without the consent of the investor.

6. Must not sign a document indicating his/her duties without actually fulfilling such duties, such as signing a securities trading order or a suitability test without actually giving advice to the investor.

7. Must not submit a securities/derivatives trading order in an inappropriate manner.

8. Must impose a restraint on, raise an objection to, or issue a notice to an individual who is likely to be involved in an unlawful securities/derivatives trading transaction.

9. Must provide advice or information, including referable information or documents, to investors in an accurate, complete, timely, unbiased, and independent manner according to professional standards.

9.1 Must reveal his/her name and the securities company that he/she works with or on behalf of to an investor unless such information is already known by the investor.

9.2 Must provide unbiased and independent advice according to accepted professional standards with supporting documents as reference, while specifying whether the advice is based on a fact or just an opinion.

9.3 Must provide suitable information and advice to an investor in a complete, accurate, reasonable, and non-misleading manner. Must also reveal or provide sufficient information that is important and relevant to the investment decision of investors, without concealing essential information which may lead to misunderstanding or distortion of the facts, for example:

(1) Must reveal or provide information regarding the specific risks to or limitations on a securities/derivatives trading transaction, such as information on stock warrant near to maturity date, a warrant for redeeming a debenture before the maturity date, investment units in a fund undergoing a merger, and auto redemption investment units, etc.

(2) Must reveal or provide information regarding the company issuing a stock, such as during capital increase or decrease, change in major shareholders, and merger.

(3) Must reveal or provide information or warnings regarding a matter that may have an impact on the rights of an investor, such as the risk connected with a fund, as well as providing additional advice should an investor wish to invest in a fund with a higher risk than can be tolerated by the investor, etc.

(4) Must provide a prospectus to investors in case of selling a unit trust. Must also give suitable information or advice to the investor based on an updated customer profile, and must offer information or advice to the investor on a continual basis after such investment.

(5) Must provide information and advice regarding investment criteria to an investor in a clear and accurate manner, such as regarding the collateral, the calculation of excess equities, and forced sale of shares, etc.

9.4 Must exercise his/her discretion in providing advice to an investor. Should he/she offer a piece of advice based on an analysis of news influencing investment in securities/derivatives, he/she must inform the investor of the source of the news. Must not be involved in starting or spreading a rumor or an unconfirmed piece of information that may have an impact on the prices of securities/derivatives.

10. Must produce an independent analysis for circulation to investors that meets accepted professional standards with supporting documents to be used as reference. In addition, an investment analyst who offers his/her opinions on the media must disclose information regarding his/her specialization as authorized by the SEC. Must also produce an analysis only under the scope of his/her duties and responsibilities as assigned by the securities company (fundamental or technical analysis) but not out of scope of the approved license.

11. Must decline if an investor assigns him/her to make a securities/derivatives trading transaction on behalf of the investor.

12. Must not make a decision to carry out a securities/derivatives trading transaction in lieu of an investor.

13. Must strictly obey the instruction of the investor.

14. Must provide securities/derivatives trading service to an investor who owns a securities/derivatives trading account according to the instructions of the investor, or an authorized person acting on behalf of the investor.

15. Must not guarantee an investor a return, a benefit, a loss, or a damage that may result from a securities/derivatives trading transaction.

16. Must not urge an investor to make an investment decision in a rush.

17. Must record consultation with an investor, a transaction order, or a negotiation on an investment in a manner that does not comply with the stipulations of the company. This includes the absence of a specific sound recording on a transaction order or the failure to produce a ticket order or not keeping an analysis report for the period of time specified by the specified regulations.

18. Must fulfill his/her duties carefully in order to prevent a conflict of interests, for example:

18.1 Must avoid persuading or recommending an investor to make an investment that may result in a conflict of interests, except the reveal of gain or loss or conflicts of interest to the investor, for example:

(1) A securities company, executives, an investment analyst, an investment consultant, or an investment planner, including the spouse or the underage offspring of such an individual, hold over 5% of the total stocks of the issuing company.

(2) A securities company or a related party is the issuer of the stocks.

(3) An executive of a securities company, an investment analyst, an investment consultant, or an investment planner sits on the board of directors of the issuing company.

(4) A securities company or a related company is in the process of providing investment consultancy in accordance with the SEC Announcement Relating to the Approval of Investment Consultants and Scope of Operations.

(5) An investment consultant and an investment planner receive different rates of incentives from persuading or recommending investor to invest in different mutual funds, etc.

18.2 Must fulfill his/her duties in accordance with the criteria specified in the SEC Announcement relating to the Criteria, Conditions, and Methods for Securities Sale. To illustrate, a conflict of interests arises in the case (1) when an investment analyst, an investment consultant, and an investment planner persuade investors to invest in, or disseminate an article or a research study on the stocks. (2) when a securities company serves as an investment consultant to the issuing company or is during the process of serving as an underwriter. In such cases, if the conflict of interests is not addressed in an appropriate manner, investor confidence will be adversely affected. In response to the issue of conflict of interests, the SEC has specified the following codes of practice.

Cases	Codes of practice	Notes
A securities company serving as an underwriter offering shares to the general public	1. The company is prohibited from persuading or recommending an investor to invest in a stock five business days prior to the offering date until the sales closing date.	Public offering securities
	2. The company is prohibited from disseminating an analysis on a	Exemption: an analysis of PO securities can be disseminated

Cases	Codes of practice	Notes
	stock 15 business days prior to the offering date until the sales closing date/the completion of overallotment. - IPO stocks - PO securities	in the event that all of the following conditions are met: - The analysis is part of normal business operations. - The revision of the previous version of the analysis. - Not focusing on the distribution of securities - The analysis discloses a conflict of interests.*
	3. The company must disclose the conflict of interests after the circulation of an analysis* within 30 days from the sales closing date.	
A securities company serving as a financial adviser	The securities company can disseminate an analysis in the event that all of the following conditions are met: - The dissemination of the analysis is part of normal business operations. - The revision of the previous version of the analysis. - No focusing on the distribution of securities. - The analysis discloses a conflict of interests.*	

*The disclosure of conflict of interests must be made in clear typeface on the same page as the summary of the analysis or in a visible section of the analysis.

18.3 Must inform an investor the fact that the securities company you are working for is the contract party to the securities trading transaction, except where the securities company serves as a market maker or a dealer. In addition, he/she must inform the investor as to what roles of the company in trading transaction with the investor, in the case that the company is a broker and a dealer of the securities.

19. Must protect the confidentiality of an investor; for instance, not disclosing information relating to the personal profile, securities/derivatives trading transaction, and financial status of the investor, except the disclosure as duties.

20. Must not interfere with the assets of an investor, such as not involving in clearing of securities/derivatives, receipt or payment connected with a securities/derivatives transactions, or transfer of securities/derivatives, etc.

Sample cases of the failure to fulfill duties in a responsible and prudent manner as professional standards and to treat all investors in a fair and considerate manner, by taking into account investor's benefits.

Case 1: Presentation of a falsified document to a securities company to aid an investor.

Ms. Panadda processes a credit increase for a client who always trades up to 100% of credit line, by altering the owner's name on the first page of her own savings account to that of the client. She then signs the falsified document to certify her acknowledgement of the client's saving account and submits it to the securities company for a credit increase. Following the credit increase and more securities trading transactions, she enjoys higher incentives. This is considered a wrongdoing in falsifying document to a securities company to aid an investor in applying for a credit increase to make more securities trading transactions.

Case 2: Failure to crosscheck the documents filed to open an account with the originals.

Mrs. Dara is assigned as a new investment consultant of the Sairak Road branch office of a securities company. A client comes into the office and expresses intent to open a securities trading account. After filling out the application form and an agent appointment agreement, the client is requested to enclose supporting documents but he has not brought them along and promises to send to the office by postal mail later. Upon the receipt of the documents, Mrs. Dara certifies the application form, indicating that the client has signed the application form in her presence and she has crosschecked the supporting documents with the originals. She then carries out the credit line approval step by step. The operations department later discovers that for the documents that are sent by mail, Mrs. Dara has not carried out the crosscheck, and the copy of the fixed account filed by the client is actually falsified using the fixed account of another client who recently applied to open a securities trading account with the company. Mrs. Dara is suspected of conspiring with the client to falsify the supporting documents. Her act results from the failure to comply with the criteria relating to knowledge of clients and verification of client information.

Case 3: Acting as a loan intermediary for a client.

Due to the economic downturn and the low liquidity of a client, an investment consultant deems it appropriate to assist the client by acting as a loan intermediary in order to enhance the client's ability to settle securities trading transactions. In this process, the client has to leave the ATS account and a signed withdrawal form with a finance officer of the securities company, who then completes the form and transfers the withdrawn amount to the account of the company. Each investment consultant also monitors the securities trading transactions made by the client and ensures that the client clears the debt required. This case is considered aiding or collaborating with an investor in making a securities/derivatives trading transaction that is beyond the credit status, settlement ability, or investment constraints of the investor.

Case 4: Borrowing money from a client to conduct a securities trading transaction by using the securities trading account of the client.

A whistle blowing indicates that loans from a money lender who is a major client of the Sairak Road branch office of a securities trading company are made in order to carry out securities trading transactions. Consequently, the company conducts an investigation of the branch office and discovers evidence via the computer of the branch manager of loan from a money lender. It is found that Mr. Sampan, an investment consultant to the said client, has traded securities for his own benefit by using the securities trading account of the client. As he has no money to pay, he borrows money from the client and has to pay daily interest with the outstanding balance totaling 20 million baht. He also admits having allowed other investment consultants to make securities trading transactions using the securities trading account of that client. This is considered involvement in taking loans through money lending.

Case 5: Arranging a loan for a client and managing money settlement for the client

A securities company reportedly finds that four clients under Mr. Wararach, investment consultant, settled securities trading worth a total of 9.68 million baht paid in 10 cheques with consecutive check numbers issued by Bank A Plc. Initially, Mr. Wararach claims that most of his clients have brought cheques for payment at the branch or transfer money to the securities company account. Some clients are out of town so they pay by someone on their behalf. In the past, there was no case of a delay of payment or unknown sources of payment. However, after the company gained additional information, Mr. Wararach admits that all of the 10 cheques were issued by Mr. Wararach as he wanted to cover up for those clients who missed some payments or it was inconvenient for them to transfer the money. Mr. Wararach was afraid that his clients would lose their credits. Three of the clients had issued a letter of attorney for him to conduct transactions on their behalf, whereby the clients gave 1,000,005 baht (333,335 baht each) to be under Mr. Wararach’s responsibility, either one of them was obliged to order securities to Mr. Wararach and determined that Mr. Wararach must pay benefits every three months back to them. Mr. Wararach then opened the A Bank Plc. to keep all the funds and issue cheques upon this bank account. The cheques from this account are an evidence for payment from clients. This case is considered the Mr. Wararach supports or cooperates with the clients in securities trading that is not suitable for financial stability, capability to pay debt, and investment limitations.

Case 6: Acknowledging that clients send trading orders for price manipulation but no conclusive arguments.

It is reported by the Stock Exchange of Thailand that Mr. Surachai send trading order for the stock X through Mr. Wuth, an investment consultant. The act is considered inappropriate due to no warning to the client. The examples of trading orders are:

- Buying orders of which price increases by one spread causing a total of 36 orders to have their prices increased from 0.40 baht to 0.49 baht.
- Selling orders of which price falls by one spread for a total of 7 orders.
- Wash sale/matched order 1 order of 255,300 shares at 0.45 baht/share.

Besides, it was found that the below conversation between Mr. Wuth and his client showed price manipulation (try to increase the price).

Client: “The problem is when the share price reaches the ceiling at 0.48 or 0.47, it will stop.”

Mr. Wuth: “You need to put in a high bid. After others follow your bid, you can retract it.”

Mr. Wuth’s malpractice is considered to be inappropriate according to the regulations of the Stock Exchange of Thailand in that an investment consultant shall consider the stock order from the clients prior to placing an official order into the stock market. He shall also take into account whether the order results in any negative consequences toward the overall stock market. He shall oppose and warn the client against any violation or breach of the Stock Exchange regulations.

Case 7: Concealing the name and institution or its representative when in contact with an investment consultant unless the information is known to a client.

Miss Prapa was assigned to be an investment consultant by a securities company to be in charge of Mr. Kamol, a client who just opens an account and needs advice due to a lack of experience in securities investment. However, Miss Prapa has to take care of many clients at a time, her service may not be as effective as it should be. Therefore, the company assigned a trader to do such task for her. Miss Prapa asked the company if she could have business cards made for the trader by using the position of marketing officer of the company. This causes the client to understand that the trader is approved and licensed by the office of the Securities and Exchange Commission (SEC). Subsequently, the trader made transactions without the client's orders and those that did not match the client's demands, causing damages to the client. The client knew from the confirmation report that the person in charge is Miss Prapa; nonetheless, since they never meet her, they file a complaint against the company instead.

In this case, Miss Prapa shall perform her duties for her clients as assigned by the company. She should first introduce herself and get accustomed to the clients before giving them advice. Furthermore, she should prevent the trader from contacting the client directly in all cases.

Case 8: Not providing professionally acceptable advice or citable supplemental documents but disseminating rumors instead.

Mr. Sakarin, an investment consultant, suggests that a client invest in the T securities, claiming that the P Public Co., Ltd. and the T Public Co., Ltd. have merged. This rumor has been around previously yet neither from the stock market nor other news sources, resulting in the higher trading volume of the T securities. Mr. Sakarin does not provide professionally acceptable advice or citable supplemental documents but disseminated rumors instead. The information can affect the share prices as it is not confirmed by any reliable sources or concerned party. Mr. Sakarin should advise according to the company's analysis report (house opinion) so that he can give impartial advice as same as the other consultants. In the case that he has different opinion from the company's analysis report, he should make a clear distinction between facts and his opinion. In the case that his advice comes from news analysis that may affect investment in equities or derivatives, the consultant shall inform the clients of the news source so that they can assess its credibility.

Case 9: Giving advice without any analysis report.

Miss Urai is the investment consultant of her close friend, Mr. Wich, who is a speculative investor. She sees that securities that are rehabilitated and will be back to the trading board can speculate substantial profits. Therefore, she recommends that Mr. Wich invest in the P securities (under rehabilitation and be back to the trading board) for 3 million shares at 1.50 baht per unit. Miss Urai claims that she got news about this from her boss who is familiar with the owner of the P Company. The owner of the company guarantees that its trading price will be 3 baht on the first day. However, Mr. Wich's friend tells him that the trading price at the moment is between 0.9 to 1.00 baht. Mr. Wich then negotiates for a bargain with Miss Urai but she tells him by telephone and MSN that he should make a quick decision, as these shares are popular among other investors. Later Mr. Wich agrees to buy the shares and requests the analysis report of the P securities, yet Miss Urai informs him that the securities has not been traded; no report is issued. She guarantees that these shares would certainly lead to higher selling price. Afterwards, the securities' price drops from the buying price. Mr. Wich asks Miss Urai whether he should sell them before losing any more money. Miss Urai, however, even suggests that he buy more shares to average the cost. Mr. Wich buys 3 million shares at 0.80-1.2 baht per share. In the end, the price drops to 0.60 baht per share, causing Mr. Wich a significant loss. It can be seen that Miss Urai gives advice to her client without providing any analysis report or supporting documents. Besides, she guarantees the price and rushes the investor to make a quick decision.

Case 10: Failure to provide sufficient information or advice that is significant and relevant to the investor's decision.

Mrs. Nantana is the investment consultant of Mr. C, who just opens an account by transferring the E securities as collateral. It is reported in the news that Mr. C is the shareholder of the E Public Co., Ltd. that would provide a tender offer of E securities. The securities company that Mrs. Nantana works for will be the tender agent. After that, Mr. C trades some shares, while Mr. C has done the tender offer, he calls Mrs. Nantana to order the purchase of 2 million shares of E stock. When the call market approaches, Mrs. Nantana places an order to purchase E securities without informing Mr. C that during a period that since the effective day of tender offer until the last day of tender offer, the tender offer agent shall not buy the E securities using channels other than that had previously been specified in the tender offer proposal. Therefore, Mrs. Nantana's malpractice is her failure to provide sufficient information or advice that is significant and relevant to the investor's decision.

Case 11: Giving personal advice without information from prospectus.

Mrs. Siriporn, a bank client, consults via telephone with Mr. Permsak, an investment consultant, who performs his duties at the Thanon Sairak branch that she wants to invest her fixed deposits in a mutual fund that is not risky and brings her higher return of the investment; she did want to invest in securities. Mr. Permsak therefore advises her invest in a trigger open-ended fund 9 and guarantees that such investment would not affect her principal. A few days after Mrs. Siriporn invests 4 million baht and signs documents at the branch. When she receives a letter from the asset management company notifying that the fund invests in securities and the fund will due the next six months. At that time her fund values 3,605,240 baht. She wants to redeem the fund.

Mr. Permsak attempts to explain to Mrs. Siriporn that he, as her investment consultant, is confident that the investment could bring returns as high as in the trigger funds 1-8. After maturity, if the return of the investment is not satisfactory, the asset management company's executives will transfer the fund to other funds so that the client can gain profits; therefore, he confirms that there is no effect on the principal. With respects to documentation, since the client orders funds via telephone, she can visit the branch to read and sign the documents as well as receive the prospectus on the following day.

The fact that Mr. Permsak misinforms the client that investment in the trigger fund 9 would not affect her principal and he does not provide her prospectus prior to investment can be considered that he fails to give suitable information and suitable advice to investors accurately and completely. Moreover, he does not give essential and relevant information to his client for the investment decision.

Case 12: Failure to provide information that is beneficial to clients.

A client of Miss Samita, an investment consultant, claims that he buys derivatives warrant as suggested. However, when maturity approaches, Miss Samita does not remind him or offer any information so that he could consider other options of investment, causing him to lose benefits. Miss Samita admits that she forgets to inform the client about the maturity of the derivatives warrant . However, she has never made such mistake before. Thus, she agrees to pay him damages.

The investment consultant's failure to provide information about specific risks and limitations of securities or derivatives, such as warrants that are about to expire, is considered a lack of professional prudence in performing duties. In this case, the consultant should maintain the frequency and duration of contacting the clients; especially, if the client frequently contacts the consultant, the consultant should not forget to provide such beneficial information to the client.

Case 13: Failure to inform the regulations of securities trading.

Mr. Wichai, an investment consultant, is informed by the securities operation unit that he should contact a client named Mr. Apichai so as to notify him of his payment due at noon for his investment of ten million shares in the Y securities at 0.05 baht per share. The securities company regulates a list of volatile stock, which requires that investors who invests in the securities in the list must have cash balance, and/or have balance of invested securities in the portfolio worth no less than the value of securities that they wanted to invest. Otherwise, they are required to make payment of the difference of the values on the following working day at noon (12.00 p.m.). In this case, the Y securities belongs to the volatile stock list and Mr. Apichai has lower collateral than the the specified value. However, Mr. Wichai fails to inform the client about this rule before the client bought the securities, causing him to make payment much earlier than usual, in order to be forced sales. In this case, Mr. Wichai does not provide the client with complete information or advice as he conceals necessary information, causing the investors some disadvantages.

Case 14: Failure to inform clients about margin and forced sale.

A client claims that on September 30, B.E. 25XX before Thailand Futures Exchange PCL starts trading, the client owns one derivatives contract, of which value at that time drops to maintenance margin, but not yet at the point of forced sale. Mr.Thawach, an investment consultant, gives the client advice several times that he should offset the contract position since Mr. Thawach is afraid that the value of collateral at the market open may plummet to the point of forced sale even though the client is willing to hold the position. After the market opens, the client notifies the consultant that he wants to close his position, causing him a 35,500 baht loss. However, at the end of that day, the securities price goes up, so the client argues that, as the regulation, the securities company could call additional margin from the client within T+1 day and can request the company for compensation. However, the client closes his position by himself, the company does not pay him any restitution. Yet, the company issues a warning note to Mr. Thawach to inform clients about margin and forced sale more clearly and accurately.

Case 15: Being assigned by investors to make a decision on securities trading on their behalf.

A client contacts Miss Mayuree, an investment consultant, and opens a securities account, mentioning that she has experienced losses from investing in securities in another company and wishes to transfer all of her securities to the accounts opened with the company where Miss Mayuree works. Miss Mayuree accepts the request of the client. They have been discussing several ways to solve the problem of the client's loss in the past as well as reporting daily trading. However, it is inconvenient for her client to allow Miss Mayuree contact the client during working hours, so she has to contact her client on mobile phone after working hours and sometimes the client contacts Miss Mayuree after working hours on weekdays or weekends. Her client often asks about her transactions of money in and out of the ATS account. In doing so, the client never shares any benefits with Miss Mayuree. This can be considered that Miss Mayuree action is assigned by an investor to make a decision on securities trading on his/her behalf.

Case 16: Trade Report without sources of clients' orders but the clients accepts the transactions.

The Stock Exchange of Thailand requests a securities company check the wash sale case of a client's account of Mr. Surasich, an investment consultant. After the company investigates and finds no sources of the client's order. Mr. Surasich claims that he receives an order from a representative of his client by line call. The company investigates more on the voice recordings of conversations of this case for three months, no orders are found. However, the company finds that Mr. Surasich talks to the representative as if they were very close friends. In the conversations, Mr. Surasich made securities offers to the representative in terms of types of orders, name of securities, amount and prices. Besides, the offers are agreed by the representative, as can be seen from some examples of conversations, such as "go for it," "yes, sure," "yes," and "done done." At the end of the day, Mr. Surasich reports the securities trading to the representative, as the conversations revealed, such as "you've got the short against port." and "The port is all clear." Furthermore, Mr. Surasich often provides incomplete details of the securities trading to his clients and the representative, yet they never object to or deny Mr. Surasich offers. The action of Mr. Surasich is considered as being assigned by an investor to make decisions for trading securities on his/her behalf.

Case 17: Making an order before asking for the client's opinion.

Mr. Arun is a capital market investment consultant for his aunt. He calls her 2-3 times every day. Most of the phone conversations are information about securities trading confirmation and advice on investment. However, no clearly stated order is discussed, yet the client let Mr. Arun make a decision on her behalf. During the day, Mr. Arun gives trading reports to the client after the securities trading. The client neither make arguments nor pay attention to her account. There appears a case that Mr. Arun has asked for comments after sending the order. Below is an example of a conversation between Mr. Arun and his client.

IC: The ABC securities prices are at 0.83-0.84. The cost price is at 0.81 baht/share for 2 million shares. Previously, we had 0.83. If you don't want that, do you want me to sell them?

Client: Up to you.

IC: I can't make a decision for you. You have to do so by yourself.

Client: Hmm…

IC: All right. If 0.84-0.85 is not OK, let's sell them.

Client: Yes, sure.

Mr. Arun, however, placed an order 20 minutes ago before calling his client.

Case 18: Solving problems of derivatives that got loss.

A client of Miss Sopawadee, an investment consultant, is a construction contractor who has opened a securities account for over two years. Mostly, the client invests in gold futures starting with credit line of four million baht and now has risen to 10 million baht. The client asks for a change in investment consultant, claiming that Miss Sopawadee is not efficient in monitoring the account as the client lost a lot of money. Lately the problem couldn't be solved and the client lost over four million baht. The company investigates this case by listening to the recorded conversation between Miss Sopawadee and her client. It was found that the client had substantially traded gold futures and ordered Miss Sopawadee close 289 gold futures contracts that is getting loss and reaching its maturity in the following week. The client wishes to open a new series of futures, but does not inform the consultant about the number of contracts and specific prices. As gold futures' maturity that is approaching its maturity usually lacks liquidity, Miss Sopawadee attempts to offer options, on which are agreed by her client. Below is an example of conversations between the client and the consultant.

IC:	"If you short against the position, would you like to short about half of it?"
Client:	"Up to you. Go ahead."
IC:	"OK. In the evening, I'll short against the position at 24,010 baht."
Client:	"OK."

Miss Sopawadee's action is being assigned by an investor to make decision in derivatives trading. In the case of closing position of an existing contract that is approaching to the maturity and opening for new contract in order to keep required investment status (roll over), the client usually makes decision on the specific price even though the number of contracts to keep may depend on collaterals. In this case there is no clear order from the client, and the evidence from the recording shows that the client allows the consultant make decision on his/her behalf.

Case 19: Making securities trading under the investors' securities account without their orders.

Miss Jariya is the investment consultant who takes care of two clients, a husband and a wife. The husband authorizes his wife to act on his behalf. Thus, she can trade securities under her husband's account. Normally, the wife orders the trading under each of their accounts. She keeps records of what she invested in. In the past, the investment was little and not quite profitable. Thus, Miss Jariya wants to trade more for making profits for her clients. Miss Jariya trades securities with net settlement for both of them for three consecutive days, hoping that her clients would be delighted. If there is a loss for a small amount, she will credit cash to her clients' accounts. However, there appears the loss about 200,000 baht. The company investigates from the recorded conversation and finds that the client never place an order. The company has to pay restitution for the client. Miss Jariya's action is considered making decision on investors' behalf to gain benefits for them without their orders.

Case 20: Making securities trading under the investors' securities account without their orders.

A client of Miss Manta asks for her advice in a morning in which price range should invest in stock A. Since A Public Co., Ltd. has great performance since the beginning of the year, Miss Manta suggests that according to the analysis report, its current value was at 20 baht, which would be good for investors to invest for short-term profits. The selling price should be when the share price reaches 22 baht or higher. Her client agrees with Miss Manta; however, the price at that moment is 21 baht, so the client holds the order and stop buying because of a limit of money. In that afternoon, the share price drops to 19 baht.

Miss Manta tries to call her client but could not reach him. The consultant then decides to buy the A securities using the client's account. Because the share price is satisfactory to the client and should be sell out for profit as their previous discussion about the securities in the morning. Miss Manta calls her client again before the market closes, but she still could not reach her. To minimize risks of payment, Miss Manta sells stock B, that brings as much profit as her client had to pay for the purchase of stock A. Miss Manta's action is considered that she made a decision for investors by selling their securities for their benefits with no orders from the investors.

Case 21: Making securities trading under the investors' securities account without their orders.

A client claims that the investment consultant, Miss Phannapha, submits a sell order of 49,000 shares at 17.50 baht per share. The client, in fact, would like to sell a total of 50,000 shares at 19 baht per share. Miss Phannapha admits that she sell the securities at that price; however, the selling price is not as high as what her client thinks. Even worse, the price has gone down when Miss Phannapha places an order. In addition, she admits that she trades her client's shares in the past two months without the client's orders because she sees the opportunity for the client to gain some profits. In some cases, the consultant places an order first and then tells the client later. Or the consultant sell shares even though the client does not want to sell. Miss Pannapha's adction is considered making decision to trade securities in client's securities account without client's order.

Case 22: Taking securities orders from a third party who is not the account owner.

Mr. Chalermchai, an investment consultant of a branch office, is in charge of taking care of a group of clients composing a doctor and three nurses working at the same hospital. These nurses are very close to the doctor as the doctor has invested in securities for quite a long time. The nurses informs Mr.Chalermchai that he could accept the securities orders from the doctor on behalf of their accounts. The consultant understands that the nurses already authorizes the doctor in writing to act on one another's behalf. Thus, Mr. Chalermchai does not ask to see the authorized document. When the doctor places a securities order, Mr. Chalermchai asks about the order of the other three accounts and the doctor confirms that the order should be made in those accounts as well. This is the case to be considered that without the authorized document, the investment consultant is not eligible to take securities orders from non-account owners or from an authorized person.

Case 23: Taking securities orders from a third party who is not the account owner and concealing such malpractice.

From the investigation of the price manipulation, it is found that Mr. Sanong places an order under his client's account, but he receives the order from another person who is not the account owner or the authorized person from the account owner. Yet, Mr. Sanong calls that person as his client to make the company misunderstands that the account owner is the person who places the order. He does not even ask the actual account owner to authorize the person to act on his/her behalf despite having regular orders for more than a year. Mr. Sanong's action is considered using clients' account to buy and sell securities for non-account owners' benefits. Such misconduct can severely cause damages to the client.

Case 24: Not use a sound recording system as arranged by the securities company.

A client of Mr. Acha, an investment consultant, claims to the securities company that Mr. Acha sells the stock A at 9.50 baht instead of 10 baht as the client orders him to do so. The client requests that the company revoke the order. After the company investigates to the recorded conversation between the client and Mr. Acha, it is found that the client does not place any order. When being questioned, both Mr. Acha and his client tells that the client places an order via mobile phone. Mr. Acha argues that his client asks him to sell the shares immediately at the price at that time. Because there is no evidence to show at which price the client orders Mr.Acha to sell the stock, the company cannot revoke the trading transaction. According to the company, Mr. Acha should record his clients' buying and selling orders more prudently.

Case 25: Using incomplete customer confirmation and portfolio instead of issuing an order ticket.

From the audit of the office of the SEC, it is found that three out of ten investment consultants who work at the Thanon Sairak branch ask their clients to sign the customer confirmation and portfolio report instead of issuing an order ticket. The report contains no detail about time of ordering, time of purchase and sale, time of cancellation, details of securities that purchased, sale, and cancelled. In addition, there is no statement on the report that the client agrees to be the sender of the securities order. Instead, the consultant should ask the client to sign on the order ticket (F8 form). The company claims that the company trains the investment consultant to acknowledge the fact and follow the good practice. Such misconduct of the three consultants is considered that the consultants do not prepare an evidence of securities order sending prudently.

Case 26: Redeem with higher prices than current value.

A client of Miss Thanya, an investment consultant, claims that Miss Thanya is the daughter of the client's sister. Miss Thanya persuades the client to invest ten million baht in three different foreign funds. Last year, the client invests two million baht for the first fund and receives profit approximately over a hundred thousand baht. The other two funds are initially profitable and the client informs Miss Thanya that he/she wants to sell the funds, yet the consultant advises the client hold on the funds, as the profits are still little. When it comes to the time that the client needs to use money, he/she sends Miss Thanya a fax stating the determination to sell those two funds. Yet, Miss Thanya does not proceed the request. Later, the funds' prices drop, causing nearly a two hundred thousand baht loss. Miss Thanya go to see the client at home and informs the client that she would buy the two funds from the client worth 6.85 million baht, together with an interest and principal totaling 7.0 million baht in December. However, those two funds are not transferred the ownership to Miss Thanya. In December, when the client contacts the consultant to follow up the case, Miss Thanya denies that she had not bought those funds and there was no signed contract of sale and mentioned that the client has to file a lawsuit against the bank. From this case, Miss Thanya's promise to pay an interest together with the principal totaling 7.0 million baht while the funds' value at that time was 6.85 million baht can be considered a guarantee the return of investment.

Case 27: Disclosure of clients' trading information

Mr. Chai receives a phone call from Mrs. Song, who calls to order some securities. Mrs. Song knows that Mrs. Neung has bought the same securities earlier.

After having a conversation with Mrs. Song for a while, Mr. Chai realizes that these two clients are sisters. Therefore, he provides Mrs. Neung's trading information to Mrs. Song. He then comes to know subsequently that these two sisters have been in disputes with each other about heritage. Mrs. Song claims that her sister purchases securities with the heritage money so as to conceal the real amount of heritage value. Mr. Chai's action is considered inappropriate since he disclosed his client's confidential information regarding securities trading.

2.3 Administrative Penalties

There are three levels of administrative penalties.

1. Revealing inappropriate behavior refers to performing regular duties but no repeated misconducts is permitted within one year.
2. Suspending licenses and duties refers to suspension of all assigned duties as personnel in the capital market authorized by the office of the SEC within a range of one month to two years. In order to return to duties, an ethical examination shall be required before performing duties for the rest of license validity.
3. Revoking licenses and duties refers to a termination of assigned duties as personnel in the capital market authorized by the office of the SEC within a range of one to ten years. The return to duties shall require an approval of the office of the SEC and take a full examination as in the case of new registration.

2.4 Violation of the Securities and Exchange Act (No. 5) B.E. 2559 (2016) according to Market Misconduct

1. Concealment of information that causes any damage to investors and capital market.

1.1 There shall not be any notification, dissemination or revelation of false or misleading information.

According to Section 240, no person shall inform, disseminate, or certify any statement or information that is false or materially misleading about financial status, business operation, the market price of securities or any other information related to an issuing company in such a manner that is likely to have an effect on the price of securities or the securities investment decision.

1.2 There shall not be analysis or stipulation about a securities company that can affect securities prices or securities investment decision.

According to Section 241, no person shall analyze or forecast the financial status, the business operation, the price of securities or any other information related to a an issuing company by using information known to be false or incomplete which may mislead materially the making of such analysis or forecast, or omit to consider the accuracy of such information, or by distorting the information used in the making of the analysis or the forecast, and disclosing or giving an opinion on the analysis or the forecast to the public in such a manner that is likely to have an effect on the price of securities or securities investment decision.

2. Using inside information to take advantages of other investors.

2.1 There shall be no securities trading by insider trading.

2.2 There shall be no front running by using clients' securities orders.

According to Section 242, no person who knows or possesses inside information related to an issuing company shall:

(1) purchase or sell securities or enter into a derivatives contract related to securities, either for oneself or other persons, except in the following cases:

(a) action in compliance with the law, the court's order, or the order of an agency with the legal power;

(b) action in accordance with the obligations to a derivatives contract that has been made before one becomes aware of or possesses inside information related to the issuing company;

(c) action not agreed upon or decided by oneself but assigned to an approved or registered person under the law on management of capital or investment to make a securities trading decision or enter into a derivatives contract related to such securities; or

(d) action not having a characteristic of taking an advantage of other persons or any characteristic as specified in the notification of the SEC.

(2) disclose inside information to other persons, either directly or indirectly and by any means, while one knows or ought reasonably to know that the receiver of such information may exploit such information for trading securities or entering into a derivatives contract related to such securities, either for the benefit of oneself or other persons, except when such action does not have the characteristics of taking an advantage of other persons or has the characteristics as specified in the notification of the SEC.

3. The securities trading shall not be an attempt to make a price manipulation.

3.1 The securities trading shall not mislead others about prices and amount of securities trading.

According to Section 244/3, no person shall take any of the following actions:

(1) placing a trading order or trading securities in such a way that misleads other persons regarding the price or volume of the securities trading;

(2) placing a securities trading order on a continued basis with an intent to cause the price or the volume of such securities trading to be inconsistent with the normal market condition.

3.2 ***There shall be no securities trading orders that aim to fluctuate the prices and amount of securities trading from its regular market condition.***

According to Section 244/5, any of the following acts shall be presumed to be an act that has caused other persons to have a misunderstanding of the price or volume of the securities trading under Section 244/3 (1), or an act that has caused the price or volume of such securities trading to be inconsistent with the normal market condition under Section 244/3 (2), as the case may be:

(1) purchasing or selling securities in such a way that beneficial ownership of such securities is on the same person;

(2) placing a securities *purchasing* order while being aware that oneself or an associate has made an order to *sell* the same securities or will do so at a similar amount and a similar price within a similar period of time;

(3) placing a securities *selling* order while being aware that oneself or an associate has made an order to *buy* the same securities or will do so at a similar amount and a similar price within a similar period of time;

(4) placing, modifying, or cancelling a securities trading order during the pre-opening or pre-closing period of the Stock Exchange or the over-the-counter center, as the case may be, with an intent to cause the opening or closing price of such securities to be higher or lower than it should have been;

(5) placing, modifying, or cancelling a securities trading order in such a way that obstructs securities trading of other persons, which causes other persons to place a trading order at a higher or lower price than it should have been.

4. There shall be no use of account name or nominee for unethical securities trading.

According to Section 244/6, it shall be presumed that a person who has committed any of the following acts is the principal for committing the offenses under Section 244/3:

(1) opening a joint bank account for making a payment or receiving a payment related to or because of a securities trading;

(2) allowing any person to seek benefits by using one’s own bank account for making payments or receiving payments related to or because of securities trading;

(3) allowing any person to use one’s own securities trading account;

(4) making a payment or receiving a payment for a securities trading for any person;

(5) placing money or other assets as collateral for securities trading of any person;

(6) allowing any person to receive benefits or oversee payments related to or because of one’s own securities trading; or

(7) transferring or receiving a transfer of securities between each other.

4. No placement of securities orders in the trading system of the Stock Exchange of Thailand that causes delay or discontinuation.

According to Section 244/7, no person shall place, modify or cancel a securities trading order through the securities trading system of the Stock Exchange or the over-the-counter center even though it is known or ought reasonably to be known that such act is likely to cause the price or volume of the securities trading to be inconsistent with the normal market condition and cause the securities trading system to delay or discontinue.

Sample behaviors that violate the Securities and Exchange Act (No. 5) B.E. 2559

Case 1: Being an instigator and being involved in price manipulation.

The Office of the Securities and Exchange Commission (SEC) receives an examination report from the Stock Market and the truth is that Miss Chanida, an investment consultant, and Mr. Somchai are instigators who involves in the price manipulation of stock A. The scheme is that they seek securities accounts of three investors for trading the stock A to Mr. Somchai, who places securities orders in the names of these three investors. The three investors testifies that they permits Miss Chanida to use their securities trading accounts and make payments for them, in which case they sign the withdrawal slips of their ATS accounts and leave the slips with Miss Chanida.

In addition, it is found that other three more investment consultants: Mr. A, Mr. B, and Mr. C. together places securities orders inappropriately using the three names and accounts in which Miss Chanida uses to make price manipulation. Most of the orders aims to increase the price by purchasing at the offer price until the price increases. They also split trading orders into many orders with the same price. Nonetheless, there is no sufficient evidence or witness to implicate them. Instead, they are considered lacing inappropriate orders, causing malpractices.

2.5 The investment consultant shall comply with the guideline for securities trading in the capital market by getting permission from clients to make decisions in securities/derivatives investments on their behalf in their discretionary account.

In the case that investors would like the investment consultant to make decisions in securities/derivatives investments on their behalf, the investment consultant shall comply with the guideline for securities trading in the capital market by getting permission from clients to make decisions in securities/derivatives investments on their behalf in their discretionary account. They must do the following.

1. There shall be an agreement on providing services to clients.

Prior to opening an account for a client, an agreement made by the securities company as the entrepreneur should include the following matters.

1.1 Steps and methods of receiving the client's order in the capital market;

1.2 Scope and conditions of services and the client's rights to services;

1.3 Information on that service is not a private fund;

1.4 Risk disclosure statement;

1.5 Disclosure of conflict of interest (if any);

1.6 Work procedure for losses that are more than stop-loss limit, especially when the client may not be reachable;

1.7 Terms and conditions for the turnover ratio of securities products in the capital market and disclosure of such information; and

1.8 Work procedure in emergency or unexpected cases that services cannot be provided. For example, assigned investment consultants may not be able to perform their duties due to significant changes in some information, in which cases the entrepreneur shall immediately tackle the issue and review as well as improve agreements on the providing of services and information.

2. There shall be clear terms and conditions of receiving and placing orders as well as order handling time

2.1 There are two ways for naming securities/derivatives and credit amount for securities trading

1. Naming securities/derivatives and separate credit amount for each securities. For example, clients shall invest in A securities only at the credit amount of 100,000 baht or 1,000 shares.
2. Total credit amount, The client can name each type of securities/derivatives but no more than 10 securities or contracts.

2.2 There shall be a stop-loss-limit regulation, whereby clients shall identify maximum loss of each securities and total loss of the investment.

2.3 The time frame for services on clients' orders shall be no longer than three months.

3. Providing Suitable Investment Advice

Required Readings

1. Related Rules and Regulations and Suitable Investment consulting
    - Chapter 3: Suitable Investment Consulting

Learning Objectives:

1. Explain meaning, significance and process of suitable investment consulting.
2. Distinguish types and differences of qualitative and quantitative information, understand significant issues of each type of information to investment planning.
3. Explain meaning of acceptable risk level, analyze the composition and distinguish differences of factors used to evaluate the level of willingness to take risk and risk acceptability of consult taker.
4. Explain the objectives of investment in accordance to required return.
5. Distinguish and analyze limitations or conditions of investment aspects of consult taker.
6. Analyze and distinguish characteristics of consult takers according to the acceptable risk level of them from suitability test.
7. Explain concepts, significance of asset allocation process, including factors affecting to asset allocation consideration.
8. Explain meaning of asset class and distinguish securities for asset allocation having the same properties.
9. Explain the strategies to investment asset allocation, both short term and long term.
10. Explain the concepts of portfolio construction and management.
11. Explain how to monitor and evaluate investment, including the concept of portfolio rebalancing to be relevant to changing environment and situations of consult takers.

Chapter 3
Providing Suitable Investment Advice

Investment consultants play a vital role in the securities industry because they help members of the public understand how to invest and how to build wealth. At the same time, the advice that investment consultants give helps drive securities trading. The issuance of debt securities and equity securities are the primary way corporations raise funds in the capital market. The proceeds from the sale of financial securities are often the main source of capital that listed companies use to expand. As corporations grow, they generate more jobs, enabling the government to collect more taxes, thus boosting the economy and strengthening Thailand's capital market.

Every time they give investment advice, an investment consultant must take into consideration each individual client's investment objectives and each client's ability to accept risk. Investment consultants must collect data from their clients and analyze the data in order to provide the most suitable, consistent investment advice.

This chapter will show how to apply several investment concepts in order to propose suitable investment advice to clients. The first section in the chapter is an overview, emphasizing the importance of providing suitable investment advice and the process of providing advice. The second section explains how to collect data from clients, the first step in the process of providing suitable investment advice. Investment consultants need to understand each client's required return, risk tolerance, and investment restrictions. The third topic is a demonstration of how to analyze a client's data in order to evaluate his or her risk tolerance. The last topic is asset allocation. The final section introduces the preliminary concepts of constructing and managing portfolios so as to suit a client's needs. Investment consultants must review regularly the investment advice they give, so that every client receives timely, appropriate advice even as a client's needs change and as the economy changes.

3.1 Providing Suitable Investment Advice: Concepts and Process

The process of offering investment options and investment strategies to a client is called providing suitable investment advice. An investment consultant should recommend the types of securities and investment strategies which match a client's investment objectives, risk tolerance, investment restrictions, and the client's financial status.

Investment consultants need a process by which to collect and analyze client data so that they can give suitable investment advice to each client. Investment consultants must be knowledgeable about a full range of investment options, such as bank deposits, bonds, debentures, convertible debentures, preference shares, mutual funds, common stocks and more.

A client trusts an investment consultant to provide advice and may even entrust the consultant with their investment portfolio. The investment consultant needs to understand the principles underlying the concepts of diversification, asset allocation, and portfolio management. Investment consultants must continually monitor, evaluate, and rebalance the client's portfolio to suit the client's changing needs and to suit the changing investment environment.

3.1.1 The definition and the importance of investment advice

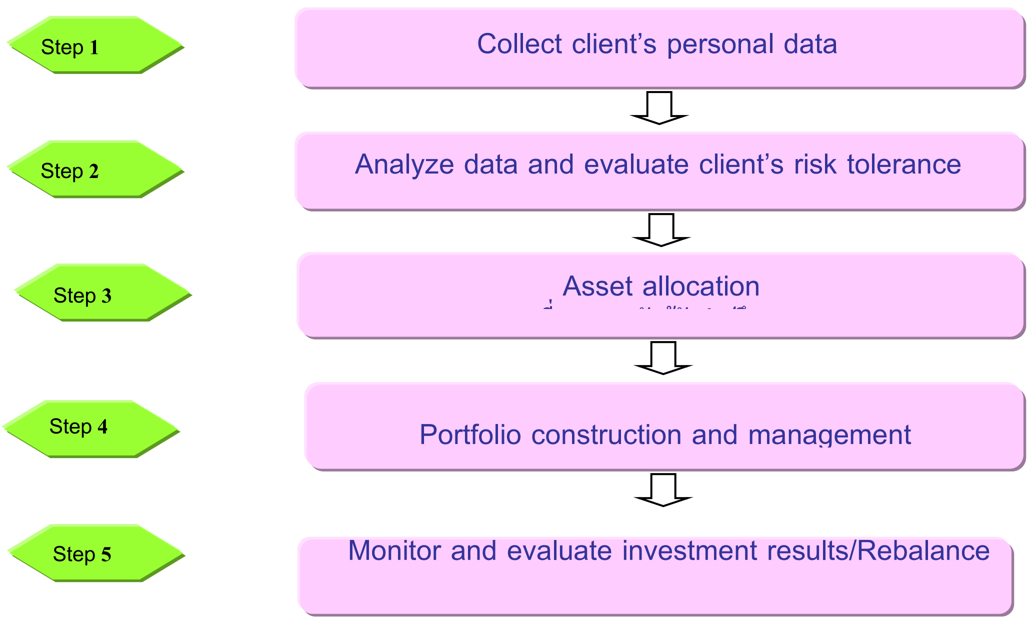
Investing is a process that begins when a client sets aside some funds instead of spending the money. The money set aside may be used to buy financial securities, such as debt securities or equity securities. Investing, more generally, is a process whereby a client aims to receive more cash flow in the future in order to cover the opportunity cost of the funds she or he has set aside. The higher cash flow in the future must offset the decline in the benefits the client receives today because they chose to defer consumption or spending to the future. Clients may suffer a loss of future purchasing power due to unexpected inflation, or clients may face greater risks from their investments in securities or financial instruments throughout their investment horizon. Investors build their wealth in the future by foregoing spending today, in the hope that their wealth will increase so they can spend more in the future.

If a client has the knowledge and understanding to select suitable investments, she will have the opportunity to receive higher returns and make her wealth grow faster. Suitable investments help clients diversify the risks of investing more effectively and thus lower the risk from fluctuations in securities prices. Suitable investments will also give a client the opportunity to achieve his investment goals more quickly.

3.1.2 The process of creating suitable investment advice

The key to providing suitable investment advice is to carefully consider a client’s needs and objectives. An investment consultant must know their clients so that when each client’s personal data are collected and analyzed, the consultant can use the information correctly and provide suitable investment advice. In order to give effective advice on asset allocation and portfolio management, a consultant has to consider the prevailing conditions in the financial markets and the capital market. The process of providing suitable investment advice is never-ending; the process continues until the client achieves his or her goal. Figure 9-1 shows the process of providing suitable investment advice.

Figure 9-1: The process of providing suitable investment advice



Step 1: Collect Client Data

Data collection is an extremely important first step. If the data collected are incomplete or inaccurate, the investment advice will not be suitable for a client's investment objectives. The data can be divided into two categories:

Qualitative Data

Qualitative data include personal details about the client such as her personal profile, age, investment objectives, investment restrictions (if any), and her investment expectations. The qualitative data helps an investment consultant understand a client's knowledge of investments as well as his attitude toward saving and investing. With a client's personal information, an investment consultant can analyze the client's ability and willingness to accept risk.

Quantitative Data

Quantitative data are numerical data such as a client's financial status and current investments. These data show the financial health of a client and the stability of the client's financial position. The quantitative data help an investment consultant identify investment opportunities and assess the client's ability to achieve his investment goals.

Step 2: Data Analysis and Evaluation of Risk Tolerance

Investment consultants must analyze precisely each client's risk tolerance and investment restrictions. A careful analysis will reveal a client's current financial status and the client's expectations regarding future investments. A careful analysis is the necessary first step before determining the investment allocations and the appropriate securities which are consistent with and suitable for a client's risk tolerance level. A client with a high risk tolerance will be able to invest a large portion of her assets in higher-risk securities. On the other hand, a client with a low risk tolerance should invest a smaller portion of his assets in higher-risk securities. The returns from each client's investments may differ significantly because the proportions of high-risk securities are quite different.

In practice, the evaluation of a client's risk tolerance is complex. An investment consultant must evaluate a client's willingness and ability to accept risk. The complex analysis requires an investment consultant to consider many factors which measure a client's risk tolerance level.

Step 3: Asset Allocation

After evaluating the risk tolerance of the client, the next step is to give asset allocation advice suitable for a client's investment objectives, risk tolerance, and investment restrictions. Asset allocation advice can be divided into several dimensions. For example, clients with high risk tolerance levels will be able to invest more in high-risk securities than clients with lower risk tolerance levels. However, clients may have different investment objectives, investment horizons, and investment restrictions.

To start the asset allocation process, the investment consultant has to take into consideration a client's investment restrictions in order to construct a portfolio that is the most suitable for the client.

Step 4: Portfolio Construction and Management

After giving asset allocation advice to clients, investment consultants should advise their clients on the merits of diversification across several asset classes. Also, investment consultants should cover which asset sub-classes are suitable for investment and how to select securities or other assets in each asset sub-class.

Step 5: Monitor and Evaluate Investment Results and Rebalance the Portfolio

After giving investment advice to clients, the investment consultant has to monitor the results. The frequency of monitoring may vary. Monitoring may be needed on a monthly, quarterly or semi-annual basis. At a minimum, the investment consultant and the client should review the portfolio once a year. Investment consultants should monitor each of their client's needs and objectives, as well as current economic forces, financial market forces, and the current political situation. These factors are constantly changing and, as a result, the investment consultant may need to adjust the investment strategies of their clients.

3.2 Collecting client information

The collection of client data is an important step in providing suitable investment advice. Investment consultants use the data for three main purposes: to analyze a client's financial status, to evaluate a client's readiness to invest, and to estimate a client's risk tolerance. Once the investment consultant has completed these three steps, the consultant can take the next step: specifying the asset allocations.

3.2.1 The importance of client information

A set of complete and accurate client data will help an investment consultant know their client. The set of client data is a key factor in the analytical process and is absolutely essential in order for an investment consultant to make accurate analyses. Accurate data, combined with careful analysis, will lead to more accurate and suitable results. In contrast, no matter how good the analytical process, if the data are incorrect, the results will also be incorrect. The availability of clear, accurate data enables an consultant to provide suitable investment advice.

3.2.2 Qualitative Data

Qualitative data consist of a client profile and profiles of the client's dependants, the client's age and age(s) of their dependants, the client's occupation, investment objectives, investment restrictions, and more.

Personal Profile and Dependants

A client's personal profile and the profile(s) of their dependant(s) contain general information related to the client such as his or her name, address, phone number, birthday, marital status, and contact address. The personal profile also includes information on the client's dependants. An investment consultant uses these key data items to analyze the client's ability to accept risk. For example, an unmarried client may have less financial burdens and financial responsibilities than a married client, and a client with children may have more financial burdens and financial responsibilities than a client with no children. Typically, financial burdens and responsibilities are inversely related to a client's ability to accept risk.

Age

A client's age may be a significant, useful gauge of a client's ability to accept risk. A younger client will have opportunities to change his or her portfolio if he or she makes an investment mistake. This is just one example of a younger client's ability to accept more risk than an older client.

Occupation

A client's occupation is more than his or her current job. Information about a client's occupation should also include the type of job, the employer's location, the client's position, salary, bonus, years of service, and the client's expectations for future advancement. The information should also include the possibility that the client may change to a new job. Information about a client's occupation reflects the stability of a client's income stream and the client's ability to accept risk.

Investment Objectives

An investment consultant should have a good understanding of a client's investment objectives and have a good understanding of the size and type of returns the client expects from their investments. For example, a client's investment objectives may run the gamut from capital protection, constant current income, capital appreciation or high total returns. The types of returns that a client expects can reflect a client's willingness to take risk.

Investment Restrictions or Criteria

Each client will have different investment restrictions. Because of this, before providing investment advice, an investment consultant should know a client's investment restrictions, if any. For example, two clients may need different levels of liquidity or may have different investment horizons.

A client's investment restrictions and criteria may affect his or her investment objectives and goals. Some examples of investment restrictions and criteria are:

- Liquidity and marketability – Liquidity is the ability to exchange securities for cash, at suitable prices, without any significant change in the prevailing market prices. Marketability is the speed and the ability to sell securities when funds are needed. Liquidity and marketability are important characteristics of any security. Liquidity and marketability are also important issues to address when giving investment advice, no matter whether a client is making short-term or long-term investments. Often, a client making a long-term investment will invest in assets that have less liquidity but provide higher returns in the long run. However, a client with long-term investments will still need to invest some of their funds in high-liquidity assets in order to cope with any unexpected, near-term expenses.

- Horizon – The investment horizon is the time frame, specified by the client, for his or her investment goals. The investment horizon affects directly the asset allocations, the securities selected for investment, and the rates of return from the investments. The longer the investment horizon, the wider the range of options a client will have in order to achieve his or her investment objectives.
- Taxes – Tax considerations refer to the personal income taxes a client may have to pay based on his or her assessable income in the current fiscal year. Tax considerations also include tax deductions or payments required based on the returns received from each of a client's investments, and tax privileges which may come along with other investment choices. Each client has a different tax burden. By selecting investment options that will provide tax benefits, an investment consultant can boost the returns to his or her clients.
- Laws and regulations – Laws and regulations refer to the legal requirements affecting a client's investments. Every individual client and every institutional client must respect the investment rules and regulations issued by securities market regulators. However, for institutional clients, the rules and regulations may be stricter than for individual clients.
- Unique needs – Each individual client has their own special requirements. The client's unique needs arise from their unique circumstances.

3.2.3 Quantitative Data

Quantitative data is no less important than qualitative data since these data reflect a client's ability to accept risk. The major quantitative data items consists of:

Current Investment Portfolio

The securities currently held in a client's investment portfolio reflect the client's investment behavior, knowledge, and expectations. The contents of a client's portfolio can be incorporated into the analysis of a client's willingness to take risk.

Personal Financial Information

A client's financial information reflects his or her investment readiness, required liquidity level, debt burden, wealth, spending behavior, and the ability to generate income. This information can make the analysis and evaluation of a client's risk tolerance more accurate.

A client's personal financial information consists of assets, liabilities, income, and expenditures.

- Assets refer to the resources, owned by the client, which have economic value. Assets have a cash value or can generate cash flow in the future. An individual's assets can be cash, fixed deposit accounts, securities, life assurance policies, insurance policies, real estate, and more. A client's assets reflect his or her current sources of funds and his or her attitudes toward investments.
- Liabilities refer to obligations that a client has to pay in the future such as outstanding debts, future principal (debt) repayments, and interest. The investment consultant should also note the date that the debt was incurred and the date when future installment payments are due. A client's liabilities will help an investment consultant foresee the chance that the client will lack liquidity in the future.
- Income reflects a client's risk tolerance. The important elements of the income data are the consistency of the client's income, the time needed to generate income, and the stability of the income that the client receives. A person who has only one source of income will have a lower level of income stability than a person with many sources of income.
- Expenditures refer to cash that a client spends in order to buy the goods or services he or she needs. This information will provide an investment consultant with a client's spending behavior and the structure of the client's expenditures. An investment consultant can then evaluate a client's ability to save and invest.

3.3 Analyzing clients' personal profiles and risk profiles

The evaluation of a client's risk tolerance is a very important starting point when an investment consultant wishes to provide suitable investment advice. If client does not have an understanding of risk or know his or her risk tolerance, the outcomes from their investments may not be as expected. Unexpected losses may damage the client's way of life. However, it is quite difficult to assess a client's risk tolerance. The assessment process is quite complex, as there are many factors involved when a client sets his or her personal risk tolerance. These factors may vary due to the personal and psychological preferences of each client. Therefore, investment consultants must have a deep understanding of risk tolerance evaluation methods in order to give investment advice to each client.

An assessment of a client's risk tolerance has to include both the client's willingness to accept risk and the client's ability to accept risk. Each client will have a different level of willingness to accept risk and a different ability to accept risk. A client with a high level of willingness to accept risk and a high ability to accept risk will be able to invest in high-risk securities. In contrast, an investment consultant should recommend stable, low-risk securities for a client with a low level of willingness to accept risk and a low ability to take risk.

3.3.1 Willingness to accept risk

The evaluation of the willingness to accept risk can be assessed from the following factors:

Attitudes toward risk

A client's attitudes toward risk can be inferred from the client's behavior, such as how much the client likes challenges or how much risk the client can take. According to research by the MacGruder Agency, written by Marilyn MacGruder Barnewall, attitudes toward risk can divide clients into two categories:

1. Passive investors: Passive investors usually avoid risk or dare not to take risk. Passive investors take a long time to make decisions and like to mull over any investment decision. This type of investor typically will focus on investments that protect their capital. Members of this group will not act carelessly when they invest. However, this group may lose good opportunities to invest. In general, this type of client

does not like to invest on his or her own but will hire experts to manage their investments. Passive investor clients are commonly:

- People who obtain capital without having to put in any effort to get the capital. Some examples are clients who get rich from an inheritance or from selling an expensive piece of land.
- People with few assets who are afraid of losses.
- High-ranking employees at large corporations such as lawyers, legal consultants, accountants and others.

2. Active investors: Active investors usually have a greater willingness to accept risk than other investors. These clients like challenges; sometimes their investment decisions are made impulsively. A loss of invested capital can be recovered, and the base of invested funds can be rebuilt. This type of client is likely to manage their investments by himself or herself because they have high confidence. Clients who fall into this category are:

- People who got rich by building their own business.
- People with a lot of assets who have little or no fear of losses.
- Self-employed persons.

Types of Required Returns

An investment consultant can provide suitable investment advice by focusing on what types of returns the client wants from the investments. Once an investment consultant knows the desired returns, he or she can allocate a client's assets across investments which may have totally different characteristics, different returns, and different risk levels. The type(s) of returns that a client desires can also be used to gauge a client's willingness to accept risk. The types of required returns that will be used to evaluate a client's willingness to accept risk consists of:

1. **Capital protection:** Capital protection refers to investments for which a client has low or no willingness to accept risk. The funds may be the last amount of capital the client has, or a client may have a short-term need for their capital. Investment consultants should advise this type of client to invest in low risk or very low risk financial instruments which will provide low returns, such as treasury bills or other high-quality, low risk securities.

2. **Current income:** Current income refers to the type of investment that generates regular cash flow to cover a client's living expenses. The investments will be limited to financial instruments that provide regular income such as interest income, or stocks which pay dividends on a regular basis.

3. **Capital appreciation:** Capital appreciation refers to the type of investment that earns a profit through changes in the value of the investment. This type of investment carries higher risk. Clients who prefer this type of investment must be willing to accept losses that may occur during their investment horizon. Examples of this type of investment are shares of common stock of newly established companies and share of stock in companies with good growth potential and the chance for high returns.

4. **Total return**: Total return refers to the type of investment where a client demands some part of their return in the form of capital appreciation and the other part of their return in the form of regular income. A client will still demand capital protection, meaning a client has a moderate level of willingness to take risk. An investment consultant should recommend allocating the client's assets to a combination of securities that provide regular income and securities that provide capital protection. The proportions are based on the client's ability to accept risk.

Past Investment Behavior

Past investment behavior can be used to analyze a client's willingness to take risk. If a significant portion of a client's funds is in a commercial bank savings account, it means that this client has a very low or almost no willingness to take risk. A second client, who has invested in a commercial bank savings account and debt securities, has a higher willingness to accept risk. Now consider a third client that owns a range of investment types, such as equity securities, derivatives, real estate, and other investment options. The third client is willing to take more risk than the first client who invested all of their money in a commercial bank savings account.

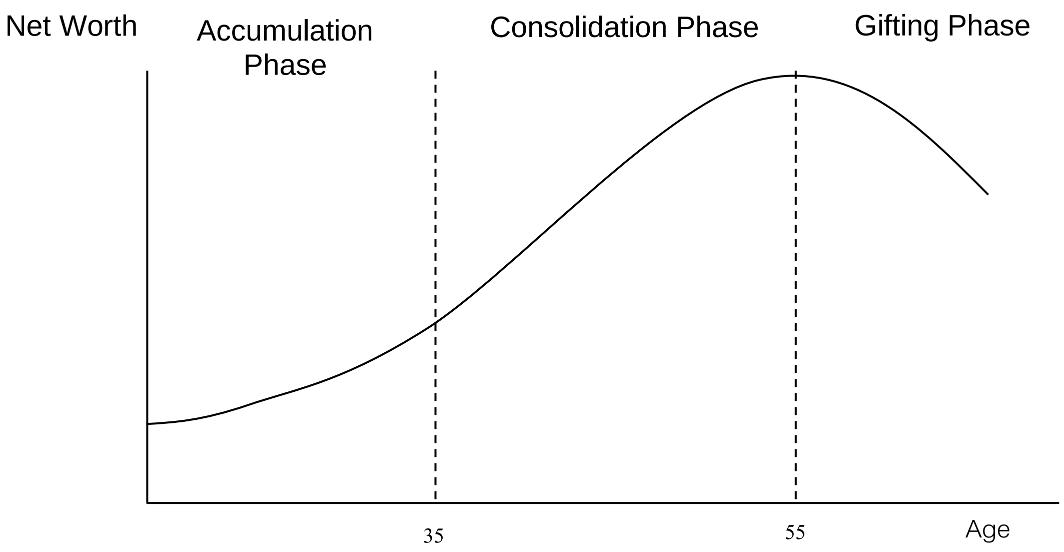
3.3.2 Ability to accept risk

A client's ability to accept risk is the result of the investment consultant analyzing a client's financial status to see their level of risk tolerance. By analyzing a client's financial status, an investment consultant can decide a suitable investment horizon, assess the risk from either investment losses or from investment mistakes, and assess how well the client can accept losses. A client's ability to accept risk is a key factor that investment consultants must measure and understand, so that the consultant can decide what types of securities are suitable for a client. The factors used to evaluate the ability to accept risk are as follows:

Age

A client's age will affect their ability to accept risk. A younger client has a higher ability to accept risk than an older client. Younger clients will have opportunities to make up for losses if they he makes any investment mistakes. The asset allocation will depend on the client's age. Figure 9-1 shows the typical relation between net worth and age.

Figure 3-2 Relation Between Age and Net Worth



1. The accumulation phase begins when a young person starts working, earning a low but regular income, and lasts until middle age. When the client is young, he or she does not have many responsibilities so they will have a high ability to accept risk. In this phase, clients try to accumulate assets for short-term needs such as a car, a home, or for speculative investments. Clients also attempt to accumulate assets for the longer term by investing in retirement mutual funds (RMFs) or making contributions into a provident fund or the government pension fund.

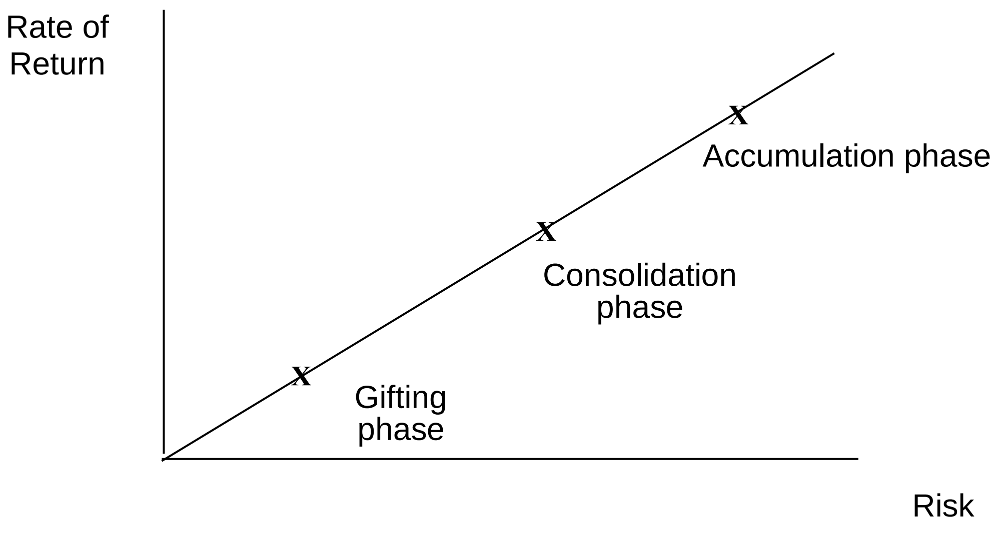
2. The consolidation phase begins when a person reaches middle age. In this phase, the client typically has a higher regular income, in accordance with higher positions at work, and has increasing responsibilities such as family obligations. In this phase, a client's debt burden is lower or a client may be debt-free. As a result, the client will have more money and can make more investments. However, the client's advancing age and increased family responsibilities will lower their ability to accept risk. Clients in this phase may need money for retirement. As a result, the investment advice provided to clients in this phase should focus on long-term investments which have low risk but provide regular and certain returns. An investment consultant may recommend investments aiming for capital protection.

3. The gifting phase starts when the person retires from work, meaning they will have less chances to add more income. Some may work part-time jobs as

consultants or advisors, and some may not work at all. This is the phase where the client starts to spend accumulated assets, such as pensions received from social security, or provident funds, or a government pension fund. Investment advice for people in this age must focus on investment stability, together with protection from inflation because inflation decreases the purchasing power of the client's investments. Any capital remaining after the client pays their living expenses can be given to family members, underprivileged persons, or donated to charities.

Figure 9-2 shows the rates of returns and risks that may occur from the investments at each age interval. The accumulation phase begins when a person is around 35 years old. This is the age interval when a client can invest in high risk securities offering high returns. The client is still young, so the client has a higher ability to accept risk. In contrast, if the client is in the spending and gifting phase, the client will choose to invest in less risky securities because of their lower ability to accept risk.

Figure 3-3 Comparing Rate of Returns and Investment Risk in Each Age Interval



Financial Status

An investment consultant must consider a client's financial status in order to evaluate their risk tolerance. The following factors can be used to make this analysis.

1. Comparison of income and expenses — A client who has more income than expenses will have a higher ability to accept risk. If the investments give unexpected results, the client still has enough income to cover their expenses with little effect on their daily life and lifestyle. The client may still have some surplus for additional investments. If the client has a higher level of income, the client may want to invest in high-risk securities that can provide high returns. Even if the client has high purchasing power, the client may still want to allocate a small portion of their assets to high liquid, low-risk securities.

2. Adequate cash reserves — Cash reserves are funds for use in an emergency that can be immediately withdrawn. The recommended minimum cash reserve is equal to six months of monthly expenses. A client with adequate cash reserves will have a higher risk tolerance. If the client's investments show unexpected results or if an emergency occurs, the client will still have a cash reserve to pay expenses and will not need to sell any securities for cash.

3. Contractual debt burden — If the client does not comply with the terms of a debt contract, he will be declared bankrupt or the assets may be seized. A client with a debt burden may have a lower risk tolerance than a debt-free client. If a client does not have enough income to pay his or her debts or pay any other financial obligations, the client might have to sell his or her investments. If the securities are sold when prices are low, the client is likely to encounter losses.

4. Net worth — Net worth refers to a client's net assets after the deduction of all liabilities. A client with a low net worth may focus on investments that provide certain returns with low risk and high liquidity in order to exchange the investments for cash in an emergency. Investments with low risk and high liquidity are treasury bills, commercial bank saving accounts, and other investments.

3.3.3 Instruments to measure risk tolerance

It is difficult in practice to infer a client's risk tolerance from their willingness to accept risk and their ability to accept risk. As a result, an investment consultant may use questionnaires for the evaluation process.

A questionnaire used to evaluate risk will consist of questions on attitudes toward risk, types of returns the client needs, and previous investment history. The answers to the questions will also provide information regarding a client's ability to accept risk, such as questions on investment objectives, investment horizon, financial status, and age, as well as investment conditions or restrictions. Scores will be given to each answer. The total score will not only help classify a client according to their risk tolerance level but also provide guidelines for asset allocations. Each financial institution may have different classifications of risk tolerance and asset allocations. The following questionnaire was developed by the Securities Exchange Commission. The questionnaire has been used as a standard questionnaire for the preliminary evaluation of a client's risk tolerance, so as to incorporate the client's risk tolerance into the investment consultant's advice.

In order to evaluate a client's risk tolerance, we have to divide clients into three risk tolerance levels as follows:

- Conservative investor: Refers to clients who do not have a strong financial status, or are fearful of risk, or have investment objectives that are quite important. If the investment objectives cannot be accomplished or yield high losses, the outcome will affect the client or the standard of living of the client's family.
- Moderate investor: Refers to clients with financial stability and a moderate attitude toward risk. If the investment objectives cannot be accomplished or yield losses, the client can accept this outcome, up to a certain level. The unfavorable outcome will not impact the client and the standard of living of the client's family.
- Aggressive investor: Refers to clients who can take higher investment risk. The client expects to receive higher returns in the long run, and these returns will offset any losses that may occur. The client also hopes that the losses incurred will be short-term losses which will not have any significant impact on the client and the standard of living of the client's family.

Document title : SD-EXAM-TSI	Paper No. : P1
Date issued : June 2024	Version No. : 4
Related documents : -	

Standard Questionnaire to Evaluate Investment Suitability (Suitability Test)

Questions 1-10 will be used to evaluate your <u>investment suitability</u>.

1. How old are you? Points [ ]

A. More than 55 years old B. 45-55 years old

C. 35-44 years old D. Less than 35 years old

2. Your current financial burden and fixed expenses (such as home mortgage, car lease payment or car loan payments, plus personal and family expenses) are which proportion of your total income? Points [ ]

A. More than 75 percent of total income

B. Around 50-75 percent of total income

C. Around 25-50 percent of total income

D. Less than 25 percent of total income

3. What is your current financial status? Points [ ]

A. I have less assets than debts.

B. My assets and debts are equal.

C. I have more assets than debts.

D. I am confident that I have enough savings or investments for after retirement.

4. Do you have any experience or any knowledge about any of the following asset groups? (can select more than one answer) Points [ ]

A. Bank deposits

B. Government bonds or government bond mutual funds

C. Debentures or fixed income funds

D. Common shares or equity funds or other high-risk assets

5. For the amount of funds you currently have available to invest, for how long do you expect that you will not need to use these funds?

Points

A. Within one year
B. 1-3 years
C. 3-5 years
D. More than 5 years

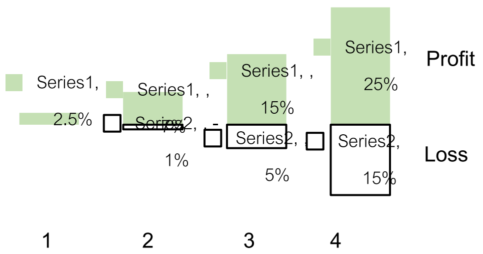
6. Your major investment objectives are:

Points

A. Focus on capital protection and receive a low level of current income
B. Focus on current income with some risk of losing my capital
C. Focus on higher returns with a higher risk of losing my capital
D. Focus on maximizing returns in the long run with a chance to lose most of my capital

7. Look at the chart below showing returns from four investment groups. Which group do you prefer as your single investment choice?

Points



A. Group 1, which provides a return of 2.5% with no chance of loss
B. Group 2, which provides a chance of gaining a 7% return and a chance of a loss of up to 1%
C. Group 3, which provides a chance of gaining a 15% return and a chance of a loss of up to 5%
D. Group 4, which provides a chance of gaining a 25% return and a chance of a loss of up to 15%

8. How do you feel if you must choose to invest in assets that will provide high returns but also have a high chance of losses?

Points

A. I feel anxious, panicky, and I am afraid of losses

B. I feel uncomfortable but I am somewhat aware of the risks

C. I understand and I am able to accept the fluctuations up to a certain level

D. I have no worries about the high possibility of losses because I expect to have higher returns

9. Which level of loss on your investment value would make you feel anxious or disappointed?

Points

A. 5% or less B. More than 5-10%

C. More than 10-20% D. More than 20%

10. Assume you invested 100,000 THB last year. You just found out that the value of your investment decreased to 85,000 THB this year. What will you do?

Points

A. Panic and want to sell the rest of the investment

B. Feel anxious, and I will move some of my investment to lower-risk assets

C. Continue to hold the investment and wait until there is an improvement in returns

D. Still be confident because it is a long-term investment. I will add more money to average my investment cost

Questions 11 and 12 are used as additional information to provide investment advice

Answer the next question only if you have a direct investment in derivatives and/or equity-linked notes.

11. If an investment in derivatives or equity-linked notes succeeds, you will get very high returns. But if the investment fails, you will lose all your capital and may have to invest more to offset the losses. Can you accept this type of investment?

A. No, I cannot. B. I can accept it in part. C. Yes, I can.

Answer the next question only if you are considering overseas investments.

12. Apart from investment risks, how do you rate your ability to take foreign exchange risk?

A. I can take no risk. B. I can take some risk. C. I can take risk.

Total Score for Questions 1 - 10: **Points** ☐

Scoring

Sum up the points from the answers on Questions 1-10. Do not include the scores from Questions 11 and 12.

A = 1 point B = 2 points

C = 3 points D = 4 points

Remarks: 1. For Question 4, if the respondent gives more than one answer, use the score with the highest value.

2. The answers from Question 11 and 12 have no impact on the total score. These responses only provide information about the client's perception of the returns and risks associated with two specific types of investment products. Clients should know the risks and returns before making a decision to invest in these products.

Source: The Securities and Exchange Commission

Levels of Risk Tolerance

Total score	Level	Type of investor	Advice
☐ Less than 15 points	1	Low risk tolerance	You are a person who can accept little or no risk. Your investment objectives are mainly to preserve your capital and maintain high liquidity. You are willing to accept lower returns in order to meet this objective.
☐ 15 – 21 points	2	Low to Moderate risk tolerance	You are a person who can accept low to moderate risk. You aim to preserve your capital and maintain high liquidity. You also expect to earn somewhat higher returns.
☐ 22 – 29 points	3	Moderate to high risk tolerance	You are a person who can accept moderate to high risk. You would like to get higher returns and aim to have your investments grow.
☐ 30 – 36 points	4	High risk tolerance	You are a person who can accept high risk and/or volatility. You hope to get higher returns from your investments and want your investments to grow in value more rapidly.
☐ 37 points or more	5	Very high risk tolerance	You are a person who can accept very high risk and/or volatility. You hope to get higher returns even if higher losses can also occur.

3.4 Asset Allocation

The allocation of assets in a portfolio is the key to diversification because diversification can reduce the overall risk of a portfolio. This section will increase your awareness of the meaning and the importance of asset allocation. Clients can understand the process of diversification and use different types of investments to pursue different diversification strategies. Clients can then understand and implement the asset allocation patterns recommended by an investment consultant.

3.4.1 Asset classes

An asset class is a group of assets or securities that have similar or nearly identical characteristics. Assets or securities of different classes will have different characteristics. There are a few straightforward rules for asset classes:

(1) Assets in the same asset class must have the same characteristics.

(2) Each asset class has to be mutually exclusive.

(3) An asset class must have a distinctive diversification characteristic and should have a low correlation with other asset classes.

The types of asset classes can be sorted according to the above characteristics and sorted based on the expected returns and risks as follows:

- *Near-cash assets* refer to assets with high liquidity, low risk, and low expected returns. Near-cash assets are used to meet daily expenses and serve as a reserve in case of emergencies. Each client will have a different requirement for this class of asset. Examples of this class of asset are bank deposits, certificates of deposit, and bills of exchanges.
- *Debt securities* refer to assets where the holder is a creditor and has the right to receive returns in the form of interest payments, agreed in advance, and receive the redemption value of the asset at maturity. Debt securities issued by a government are called government bonds. Those issued by private companies are called corporate bonds or debentures. Debt securities are a type of asset with moderate liquidity and moderate risk. Debt securities provide higher expected returns than commercial bank deposits, making this type of investment suitable for a client whose investment objective is current income.
- *Equity securities* are assets that are ownership claims on a corporation. The holder has the right to receive a share of profits in the form of dividends. Two examples of this type of asset are preferred shares and common shares. Equity securities are

assets with high liquidity and high risk, so expected returns are also high. This type of investment is suitable for a client whose investment objective is capital appreciation.

- *Derivatives* refer to contracts written such that the holder may receive returns based on another type of asset. Derivatives have higher risk and higher volatility than the other types of assets mentioned above. As a result, clients expect very high returns. This type of asset is suitable only for clients who have a very high ability to accept risk.

The different types of assets clearly provide different expected returns and have different risks. But if we take a closer look, we will find that within one asset class, the risk and returns may differ substantially. For example, common shares provide different expected returns and involve different risks if the shares are issued by different companies.

3.4.2 The importance of asset allocation

Asset allocation refers to dividing a client's investment into different proportions, and investing portions of the portfolio in different asset classes (diversification) to prevent the loss of the entire investment. If a client encounters losses from one asset, they may have gains on the investments they made in other asset classes. The gains may offset the losses.

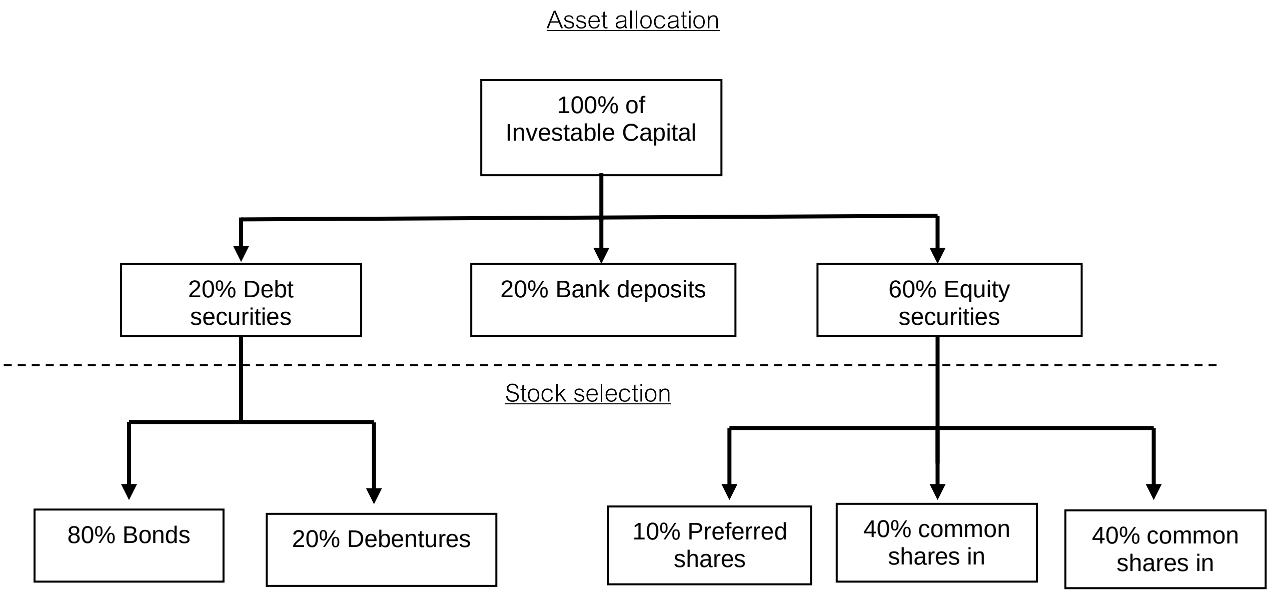
The proper proportions for asset allocation will depend on the expected return the client desires and ability of the client to accept risk. An investment consultant should study and understand the financial market situation in order to know which types of assets are suitable for each client. Done properly, asset allocation spreads the client's investments across different types of assets in order to diversify and reduce risk. The allocation can be adjusted to cope with changing market conditions.

Gary Brinson, Randolph Hood, and Gilbert Beebower published a research paper titled "Determinants of Portfolio Performance" in the Financial Analyst Journal in the July - August 1986 issue. This study evaluated the link between investment strategies and rates of return, as shown in Figure 9.3. The authors evaluated three strategies:

- Asset allocation: Selecting from various types of assets such as commercial bank deposits, debt securities and equity securities.

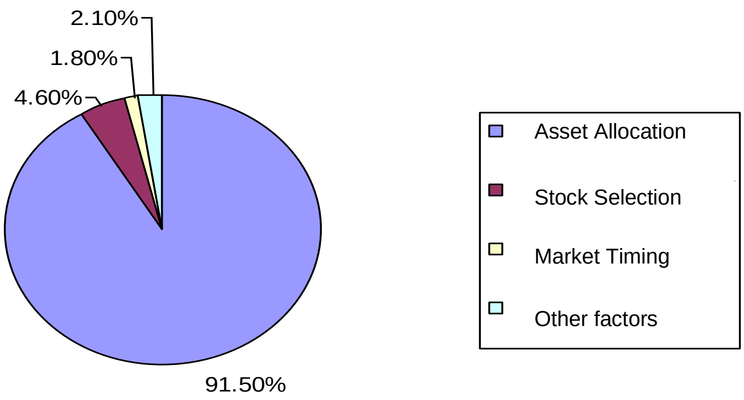
- Stock selection: Using fundamental analysis to pick securities which had market prices below their intrinsic values.
- Market timing: Using technical analysis to understand the movement of the capital market and let clients trade according to market movements.

Figure 3-4 The Relationship Between Asset Allocation and Securities Selection



The authors analyzed data from 91 large provident funds and collected investment statistics for 12 years, from 1973 to 1985. Figure 9-4 shows that 91.5% of the investment returns came from the allocation of assets in the portfolios. The allocation of assets means dividing the investable funds among bank deposits, debt securities, and equity securities. The stock selection and market timing strategies were less effective in determining the investment returns. The stock selection and market timing strategies provided only 4.6% and 1.8% of the total investment returns respectively. In addition, the stock selection and market timing strategies lowered returns because of additional volatility. The researchers concluded that asset allocation is the key factor to lowering investment risks and determining investment returns in the long run.

Figure 3-5: Strategies that Determine Investment Returns



Factors related to asset allocation

The allocation of assets in the portfolio will depend on each client's fundamental factors and the conditions of the financial market at that moment.

- *Client's Basic Information*

1. The required rate of return

   The higher the rate of return the client desires, the higher the proportions of high-risk securities must be in order to get the desired returns.

2. Risk tolerance

   Risk tolerance is determined by two factors:

   2.1. Willingness to accept risk — Each client may have a different willingness to accept risk depending on their attitude toward risk, the types of required return, and past investment experience. To give suitable investment advice, an investment consultant must evaluate a client's willingness to take risk.

   2.2. Ability to accept risk — A client with a stronger financial status will have a higher ability to accept risk and can choose to allocate a larger portion of their portfolio to high-risk securities. As a result, the client will receive a higher expected rate of return. Moreover, clients at different ages will have different abilities to accept risk, as explained in the previous section. If we rank the ability to accept risk according to age, we will find that clients in the accumulation phase will have a higher ability to accept risk than clients in the consolidation phase. Younger clients still have time to make new investments if they incur losses. Clients in the gifting phase definitely have the lowest ability to accept risk.

However, if a client's willingness to accept risk and their ability to accept risk point in opposite directions, the investment consultant should base his or her investment recommendations on the lower of the two risk levels. For example, if the client has a lower level of willingness to accept risk when compared with his or her ability to accept risk, the investment consultant should use the client's willingness to accept risk as the deciding factor to measure her client's risk tolerance.

Risk tolerance levels will affect the asset allocations. For a client with a low risk tolerance, the investment consultant should advise the client to allocate higher proportions of their investment to low-risk securities, and lower proportions to high-risk securities. On the other hand, a client with a high risk tolerance can allocate lower proportions of their investment to low-risk securities and more to high-risk securities, in order to receive higher expected rates of return.

3. Investment restrictions

Investment restrictions affect the asset allocation decision. Some examples of investment conditions or restrictions are:

- Liquidity and marketability — If a client desires high liquidity and marketability, the investment consultant should recommend to the client investment choices that are easily traded. Liquid and marketable investment choices are commercial bank deposits, treasury bills, and money market funds.

- Investment horizon — A client's investment horizon is closely related to liquidity and the ability of a client to accept risk. If a client's investment horizon is short, the investment consultant may advise his client to invest a greater proportion of their portfolio in highly-liquid assets. Highly-liquid assets typically exhibit less changes in asset value over a short investment horizon compared to a long horizon. For example, if a client has an investment horizon of six months, all of the client's investments should be directed to money market assets, such as treasury bills, bank deposits, or bank guaranteed promissory notes. However, these investments may provide low returns. If a client has a long investment horizon, the liquidity of the assets may be less of a concern. The investment consultant can advise the client to invest in securities with higher rates of return and higher risks.

- Taxes — Taxes are another important factor to consider. The effect of taxes can shape the recommendations for investments in real estate or common shares of companies that are not listed on the SET.
- Laws and regulations — Laws and regulations can determine the investment strategy of individual clients and institutional clients. Legal restrictions or requirements may prohibit a client from investing in certain types of assets, or the client may not be able to manage all of their investment risks. For example, only individuals can invest in provident funds. In the case of mutual funds, one regulation specifies that a fund cannot hold more than 45% of its net asset value in near-cash assets in each fiscal year. During a capital market crisis, a fund is prohibited from selling all of its securities or other risky assets and holding only cash and other highly liquid, near-cash instruments. Bills of exchange provide an example of a special requirement. A commercial bank may require an individual to make a minimum purchase of Baht 10 million. As a last example, the use of material, non-public inside information (insider trading) is strictly prohibited by law.
- Unique needs and circumstances will differentiate the investment advice given to each individual client. For example, if a client has limited investment knowledge or has no time to manage his investments, an investment consultant should advise the client to invest in mutual funds. In some cases, an investment consultant may have to avoid recommending some types of securities because of a client's unique needs. For example, a client may prefer not to invest in companies which damage the environment during their production processes. The investment consultant should avoid recommending investments in such companies even if these types of companies may provide high returns. An investment consultant may avoid recommending derivative securities if a client does not want to invest in very high-risk securities.

- <u>Financial Market Situation</u>

The financial market situation is the investment consultant's assessment of the current investment environment, made to help the asset allocation decision-making process. For example, if an investment consultant anticipates an economic expansion and an upcoming rise in the stock market, the consultant may recommend the client allocate more of his or her portfolio to equity securities. A second example would be the launch of a new financial innovation in the capital market such as derivatives. A financial innovation will provide a new investment option, plus an opportunity to increase returns and diversify a client's investments. In this case, a client may decide to allocate some of their investment portfolio to these securities if the risk does not exceed the client's risk tolerance level.

3.4.3 Asset Allocation Strategies

The determination of the investment proportions can be accomplished through two approaches: strategic asset allocation and tactical asset allocation.

Strategic Asset Allocation

Strategic asset allocation can be considered from two viewpoints: a client's life cycle or a client's risk tolerance.

Strategic Asset Allocation by Age

Making a strategic asset allocation by age is an easy way to allocate the assets in a portfolio. As shown in Table 9-2, the proportion invested in higher risk assets will decrease as a client's life cycle changes from the accumulation phase to the consolidation phase and then to the gifting phase.

Table 3-1: Strategic Asset Allocation by Age Interval

Age Interval	Asset Allocation Proportions by Risk Level		
	Low risk securities	Moderate risk securities	High risk securities
Accumulation phase	10%	30%	60%
Consolidation phase	20%	35%	45%
Gifting phase	30%	50%	20%

Strategic Asset Allocation by Risk Tolerance

Strategic asset allocation by risk tolerance means the assets in a client's portfolio are allocated based on the client's risk tolerance. Table 9-3 shows the suitable investment proportions for each type of asset.

Table 3-2: Strategic Asset Allocation by Risk Tolerance

Type of investor	Investment Proportions				
	Savings and short-term debt securities	Government securities maturing in more than one year	Debt securities issued by private companies	Equity securities	Alternative investments*
Low risk	>60%		<20%	<10%	<5%
Low to moderate risk	<20%	<70%		<20%	<10%
Moderate to high risk	<10%	<60%		<30%	<10%
High risk	<10%	<40%		<40%	<20%
Very high risk	<5%	<30%		>60%	<30%

* including commodities and futures contracts
Source: The Securities and Exchange Commission (SEC)

Tactical Asset Allocation

Tactical asset allocation is used to make short-term adjustments to the investment proportions in a portfolio. Tactical asset allocation is used to take advantage of changing market conditions. The portfolio manager can take advantage of changing market conditions to generate higher returns. However, the short-term adjustments should not exceed the specified investment framework established by the client. The outcome of a tactical asset allocation exercise may call for investment proportions different than the proportions determined in a strategic asset allocation exercise. The tactical asset allocation exercise may cause the proportions of each asset in the portfolio to increase or decrease. For example, an investment consultant may specify the equity portion of a client's portfolio at 50% after a strategic asset allocation exercise. However, a tactical asset allocation exercise may increase or decrease the equity proportion by 5 percentage points from the original investment level. If the investment consultant or portfolio manager anticipates a rise in the stock market, he may increase the equity proportion to 55%. In contrast, if the investment consultant or portfolio manager forecasts a sluggish market, she may lower the equity investment proportion to 45%. Tactical asset allocation helps define the portfolio boundaries, making the investment portfolio more flexible and making the portfolio more able to reflect the market situation.

3.5 Constructing and managing portfolios

After completing the asset allocation exercise, the next step is to construct the portfolio, pick the securities that should be included in the portfolio, and manage the portfolio.

3.5.1 Portfolio Construction

Portfolio construction means assembling a portfolio comprised of securities from several asset classes such as money market instruments, debt securities, or equity securities. The portfolio is built according to the framework determined by the asset allocation exercise. The construction of a portfolio consists of selecting stocks and determining the suitable proportion for each security. For instance, an investment consultant may recommend common shares of Company A, B and C in specific proportions. The investment consultant may recommend the client trade the selected securities at a suitable time. An investment consultant may use tools such as technical analysis to help determine the suitable time for the trades.

A client can typically choose from a wide range of securities in each asset class. It is more convenient to divide each asset class into sub-classes and then select the securities for a portfolio. For example, in the common stock or common shares asset class, an investment consultant may create sub-classes such as large and small market capitalization common stocks, or sub-classes such as value stocks and growth stocks. The sub-classes for each asset class are subject to a client's risk tolerance level and investment restrictions.

After setting the sub-classes for each asset class, the next step is to select the securities, such as a large-capitalization common stock, or a value stock. For the common stock asset class, a client may use fundamental analysis to choose stocks. The basis for fundamental analysis is looking at how each company's forecasted profits will affect its future price. A client may use technical analysis study the behavior of other investors to help them make their investment decision. However, a client should diversify their investments across a number of industries and companies to lower the level of non-systematic or idiosyncratic risk in their portfolio.

The selection of suitable securities is one of the important ways to reduce investment risk. The selection process screens out securities that do not comply with an investment consultant's advice and recommendations. Furthermore, careful selection can help clients choose the correct securities to buy, meaning securities that will generate the desired levels of profits and cash flow. Selecting securities by using instinct, hunches, or gut feeling instead of systematic analysis may keep a client from receiving the expected rates of return. A client who foregoes systematic analysis is more likely to make wrong decisions. By using a suitable securities selection process, the client can rely on the discipline that careful investment analysis brings, rather than on blind speculation. Securities selection will also reduce emotion-driven investment decisions and greed.

3.5.2 Portfolio Management

Portfolio management means creating wealth through a client's portfolio. The key to portfolio management is rebalancing the portfolio so it is in line with the current investment environment. For example, suppose an investment consultant has recommended the purchase of debt securities. Later, interest rates are forecast to rise, which will push down the prices of debt securities. In this circumstance, an investment consultant should recommend that the client lower the proportion of debt securities and increase the proportion of equity securities which have attractive prices at that time. As a result, the client may be able to make more profit by rebalancing their portfolio.

There are two portfolio management strategies: active portfolio management and passive portfolio management.

Active portfolio management is the management style whereby a portfolio manager tries to find securities that can create higher rates of return for a given risk level. Active portfolio management relies on the tools of fundamental analysis and / or technical analysis.

Passive portfolio management is the management style where the rate of return on the portfolio is equal to or close to the market's rate of return. This management style is not concerned with selecting any specific securities or groups of securities. Passive portfolio management focuses on the investments that mimic the various indices used as market benchmarks or portfolio performance benchmarks, such as a stock market index, or an industry index. Passive portfolio management focuses on holding securities for the long-term.

Which strategy to choose? The decision hangs on the cost of managing the portfolio. With active portfolio management, the portfolio manager has to try to beat the market. The portfolio manager needs to hunt for and select specific securities to purchase. Active portfolio management often means more trading or turnover in the portfolio, compared with passive management. Thus, the costs of searching for securities and the costs of trading are higher than the searching and trading costs of a passive portfolio management strategy. On the other hand, active portfolio management will more often find opportunities to get higher returns than passive management.

3.6 Measuring performance and making adjustments

An investment consultant should monitor and evaluate the needs and the investment criteria of the client, monitor the economy and the investment climate, plus manage each client's portfolio. By accomplishing these tasks, the investment consultant can find suitable strategies to cope with any changes that may arise.

An investment consultant should monitor the investment results and compare them with the benchmark targets. For example, a mutual fund may measure its performance against the SET Index, which represents the market portfolio. By monitoring the investment results, investment consultants and clients are aware of the performances of their portfolios. If a portfolio does not meet a target, a client can rebalance the portfolio accordingly to increase their chances of achieving their investment goals. Moreover, as time passes, the investment environment will change and each client's status may change as well. The portfolio may need to be rebalanced to reflect the client's changing status or changing needs. There are several reasons to rebalance the portfolio.

3.6.1 Changes in a client's personal status and financial status

As time passes, a client's investment criteria and their status may change. For example, the client may lose his job, his family status may change, he may have children, or he may change his investment objectives. The investment plan may need adjustments to reflect the changes in the client's risk tolerance level. For example, a drop in a client's risk tolerance level would mean the proportion of high-risk securities in the portfolio should be lowered.

3.6.2 Changes in the investment climate

Changes in the investment climate are due to factors beyond our control. When there are changes in the investment climate, the investment consultant will need to adjust their recommended investment strategies according to a client's investment goals. Economic changes can influence changes in the investment climate. For instance, if interest rates are lower than expected, the returns from the investments may be lower. In addition, laws and regulations frequently change. An investment consultant has to inform his client about the changes. The changes may lead to new recommendations or adjustments in the investment consultant's advice based on the changing conditions and circumstances.

3.6.3 Changes in investment vehicles and new financial products

An investment consultant has a responsibility to her clients to monitor whether or not the current set of financial tools or financial instruments can still be used to meet the client's initial investment goals. At the same time, an investment consultant has to evaluate new types of financial tools and instruments. The consultant may use the new tools and instruments to provide new investment advice that can respond effectively to a client's investment goals and requirements.

3.7 Examples of Appropriate Investment Advice

<u>A case study of investment advice suitable for investors who can tolerate low-moderate investment risk</u>

Somporn has a fixed deposit account and she has already received the 20 million baht interest payment. Somporn realizes that the fixed deposit interest rate has been low for a long period of time, so she is interested in investing in other financial products rather than owning a fixed deposit account only. She then asks for some information from an investment consultant at a bank branch. The consultation details are as follows:

Duangjai: Hello, Ms. Somporn. My name is Duangjai and I am an investment consultant at this branch.

Somporn: Hello. I would like some investment advice. Are you the only person I can talk to or can I talk to other regular bank employees at the counter?

Duangjai: Our bank has separated the deposit and withdrawal services from investment consultancy service because depositing money in the bank and an investment are different in many ways, especially regarding risk-related issues. The deposit accounts are protected by the Deposit Protection Agency. The coverage amount is currently up to 15 million baht per depositor per financial institution until August 10, 2018, and, in the following years, the coverage amount will be decreased to ten million baht and five million baht, respectively. After August 11, 2020, the coverage amount will be one million baht according to the documents of the Deposit Protection Agency. To invest in financial products, be aware that different products are of different risk levels. Do you have any interests in an investment or investment goals?

Somporn: Deposit interest rates have been too low for a long time. I want to invest in something for better returns, but I do not want to take high risks. Do you have any advice?

Duangjai: Can I have your identification card to access and check your information in the system? (Client verification)

Duangjai: Thank you. You took the suitability test with us more than two years ago, so I will have to ask you to review the information again. (Duangjai hands the suitability test to Somporn.)

Somporn: I have signed it. (Somporn signed the suitability test paper and returns it to Duangjai.) Please answer my questions. You can access my information on the computer, can't you? I have read the information, but I cannot quite understand it and the text is rather small.

Duangjai: I am so sorry. This suitability test will tell us your investment risk tolerance level which will be taken into consideration in order to suggest suitable investment products. I will read this document to you slowly. It might take quite some time, but this document is very important. To draw up guidelines for selecting appropriate financial products, you have to take the test on your own. (Duangjai explains the questions in the suitability test and Somporn answers all the questions.)

Duangjai: Thank you so much. Please give me a minute to sum up the score. Your tolerance for investment risk is at level 2 or at a lower moderate level, so the investment portfolio appropriate for your risk level is as follows:

Scores	Level	Investor Type	Advice
☐ 15 – 21	2	Lower moderate risk tolerance	You can tolerate lower moderate risk. It means that you attempt to protect the investment principal in order to secure its stability, safety, and liquidity, but you

Type of investor	Appropriate investment portfolio				
	Deposits and short-term fixed income securities	Government bond with maturity less than 1 year	Debentures	Equity	Alternative investments*
Lower moderate risk	<20%	<70%		<20%	<10%

* Including commodities and future contracts

Instead of depositing money in the bank, I would like to show you several types of mutual funds.

Duangjai: Your first option is to invest in a money market fund (Duangjai provides Somporn with a fact sheet for consideration.) This mutual fund invests in deposits, short-term fixed income securities in both private and government sectors, locally and internationally. However, it has full exchange rate risk prevention and average portfolio duration of less than three months. Similarly, the fund manager lends the fund to government and private sectors for a short period of time. The investment risk level of this mutual fund is at level 2 or a lower moderate level, which is in line with your investment risk tolerance level.

Somporn: How about the interest rate?

Duangjai: In the fact sheet, you can find past return rate for 3, 6 months, 1 and 3 years, and the returns since the inception of the fund. This fund will be benchmarked with the past average three-month fixed deposit rates of three specified banks as shown in the fact sheet.

Somporn: Compared to the returns of my deposit during the past 3 months, this mutual fund has given much greater returns. If I invest my money in this fund, can I be certain that the returns will be similar to what I have seen? It is written here that the past performance of the fund is not a guarantee for future performance.

Duangjai: Mutual funds are different from deposits. Investment is not depositing your money in the bank. Mutual funds managers, including me, cannot guarantee returns to investors. This particular mutual fund invests in short-term fixed income securities and the returns are expected to be similar to the short-term interest rates of the market deducted by the mutual fund expenses. This mutual fund is highly secured since it mostly invests in treasury bond, short-term government bonds. In terms of investment in private sector enterprises, it only invests in financially stable companies with investment grade.

Somporn: Is it like I buy the government bonds by myself?

Duangjai: Not exactly. This mutual fund partly invests in private sectors for higher returns and the returns from money market fund reflect the value of each unit trust. There is neither tax nor 15% withholding tax on the returns. This is different from direct investment in bonds or fixed deposits. However, investing in this money market fund also has limitations that are different from deposits. You can withdraw the money from your savings account whenever you want, but if you invest in this money market fund, you have to give a notice before 3.30 p.m. one working day prior to the day you want to withdraw the money or according to the conditions set by the asset management company. For example, if you invest in this money market fund and you want to use the money on Wednesday, you have to submit a redemption request to the bank or the asset management company on Tuesday before 3.30 p.m. The asset management company will then put the money into your account on Wednesday before noon or according to the time specified by the asset management company. Each time, your additional subscription and redemption amounts must be at least 1,000 baht.

Somporn: What else do you have?

Duangjai: The second option is to invest in a fixed income fund, detail as shown in the fact sheet. The policy of this fund is to invest the money in deposits as well as intermediate-term government bond and debentures, either foreign or local investment. Like money market funds, it has full exchange rate risk prevention; however, the average duration of medium-term fixed income securities portfolio is generally 2-3 years. The risk of this mutual fund is rated at level 4 or a lower moderate level which is the same as your risk tolerance level. The risk or fluctuation of returns is higher than money market mutual funds which are rated at risk level 2. It means that there is a possibility that you will receive higher income from this mutual fund when compared to money market funds; however, it is possible that at some point of time the fund can be in deficit.

Somporn: It can be in deficit. Does it mean that the returns can be less than the original investment?

Duangjai: It is possible. If you need the money when the interest rate in the market rises, the fund can be in deficit during that period. I am using these two lines on the graph to illustrate the adaptation of prices of both funds. You can see that the money market fund has gradually risen and, according to its past performance, it has never been in deficit. On the other hand, the fixed income fund has given higher returns in the long run, but at some point of time the price was adjusted lower to achieve higher returns in the long run. The fund's past performance is included in this fact sheet.

Somporn: When I want the money, do I have to submit a redemption request to the bank in advance too?

Duangjai: For this particular fixed income securities, you have to give a notice before 3.30 p.m. two working days in advance. For example, if you want to receive the money on Wednesday, you have to send a notice on Monday before 3.30 p.m. and those three days must not be holidays. Unlike this mutual fund, if you send a request for redemption from the money market fund that I have mentioned earlier before 3.30 p.m. today, the money will be transferred into your account before noon tomorrow and those two days must not be holidays.

Somporn: I seem to understand it now. Is there anything else?

Duangjai: The third option is a closed-end fixed income fund. For example, according to the fact sheet, the investment period is 180 days or six months. This mutual fund invests mainly in local and foreign debentures that are affordable and provide higher returns. The investor's risk tolerance must be at level 4 or a lower moderate level in order to invest in this fund. The fund manager has a list of fixed income securities that he/she plans to invest in and the returns shown in the document are the expected returns which might be different from the actual returns you will receive. It depends on the returns received from the investments that the fund manager makes when the investment period is over. However, unlike the first two funds, this fund lacks liquidity as you cannot request for redemption before the specified date.

Somporn: It is the same as depositing money into a fixed deposit account, isn't it?

Duangjai: They are different in many ways. For example, unlike a fixed deposit account, a mutual fund will invest the money in debentures, so there are credit risks involved when the payment deadline may be missed, but it gives higher returns. In terms of liquidity, if you withdraw the money from your fixed deposit account before the specified date, you will receive the interest at the rate of a savings account. On the other hand, if you invest in a closed-end fixed income fund, you will not be able to receive the redemption payment before the specified date, and when the investment period is over, for this particular fund, you will receive the money two working days later or on the date set by the asset management company as stated in the fact sheet. In addition, depositing money in a bank account can be done every day while you can put in an additional subscription in your fund account for a money market fund or fixed income fund before the specified time on any working days. However, for a closed-end fixed income fund, there is an additional subscription period. For example, the fund that I am showing you now is open for subscription only until tomorrow. If you want to purchase a closed-end fixed income fund next week, you will have to wait and see if the asset management company will have new closed-end fixed income funds, and the policy or time length might be different.

Somporn: How about LTF? I have read from the newspapers that it offers very good returns. What type of mutual fund is it?

Duangjai: LTF or long-term mutual funds invest mainly in stocks, creating more possibilities for higher returns when compared to long-term fixed income securities; however, it is extremely risky. LTF investors will receive personal income tax allowance based on the conditions set by the Revenue Department. According to the given information, you no longer have a monthly salary. Do you still file annual personal income tax?

Somporn: I do not file my personal income tax. My husband is a retired government officer who receives a pension. He still files his personal income tax, but I no longer do so.

Duangjai: LTF is suitable only for people who still file annual personal income tax. If you do not have a monthly income that needs to be filed anymore, I would like to suggest other mutual funds. However, considering your investment risk tolerance, equity funds are too risky for you.

Somporn: Investing in stocks? I think I should wait. I will ask my son to come with me, so that he can talk to you. He has to file his annual personal income tax and he wants to make an investment too. For now, please help me choose what to purchase.

Duangjai: I can give you the information, but you have to make the decision. For example, the money market fund is low-risk investment which will give you lower returns compared to other funds, but it has high liquidity as you can submit a request for redemption before the specified time one working day in advance. For the fixed income fund, there is a possibility to receive higher returns; however, its short-term risk is also higher. For this particular fund, if you want the money, you have to submit a redemption request two working days in advance. In addition, for the closed-end fixed income fund, you have an idea of how much you will later receive, but there is no liquidity after the subscription. You will have to take this information into consideration and make the investment decision based on your risk tolerance and limitations.

Somporn: For this amount of money, no liquidity is needed. I will invest ten million baht in the six-month fixed income fund, three million baht in the fixed income fund, and two million baht in the money market fund. Then I will talk to my son about the five million baht I have left first.

Duangjai: I have prepared for you the fund account opening form, subscription order form and additional documents ensuring that you are not a retail investor for the closed-end fixed income fund investors as it is considered a high risk investment as mentioned earlier. All the documents are ready, so I will submit them to my supervisor or the branch manager for consideration. Please wait a few minutes. Since you are over 60 years old, my supervisor also has to examine the advice.

Investment advice on low-to-medium fixed income securities or mutual funds

Somporn and Sompop (her son) go to the same bank branch to ask for additional investment advice on higher risk investment options from the investment consultant.

Sompop: I would like some investment advice for my mother after her retirement.

Duangjai: Last time, she invested in a fixed income fund and a six-month fixed income fund to earn higher returns than deposits while the liquidity is manageable. So what are your additional investment objectives?

Somporn: I would like to receive higher returns. It can take longer since I do not need to use this amount of money in these four to five years, but I do not want to invest in stocks.

Duangjai: We are currently selling the Ministry of Finance's three-year savings bonds with an interest rate of 2% (data as of December 2016) that pay out interest two times a year in the middle of June and December. The Ministry of Finance will withhold tax at the rate of 15% on the interest paid. The minimum subscription amount is 1,000 baht and the maximum subscription amount is two million baht as stated in this fact sheet.

Sompop: Is there any investment that gives more returns?

Duangjai: If you want to ensure security of principal, you have to invest in longer-term government bonds. Now, we have the Ministry of Finance's seven-year savings bonds with an interest rate of 2.56% (data as of December 2016). It might take slightly longer than you prefer, but it gives higher returns, while the interest payment conditions are the same.

Sompop: Seven years is a bit too long. If my mother needs the money, will she be able to get it before the specified redemption date?

Duangjai: As stated in the fact sheet, the bond holder can sell the bonds before the maturity date, but it has to be after the first interest payment in June 2017. However, the bonds cannot be sold within 30 days before principal payment is due. The bonds can be sold to financial institutions or individuals at the agreed price, so the money received from the bond sales might not be equal to the maturity value.

Somporn: Are there any other options that will give higher returns and do not take so long?

Duangjai: If you want to increase your returns, another option is to invest in private fixed income securities or corporate debentures. We are now selling debentures of ABC Company, a distributor of mobile devices, such as mobile phones and tablets. The debenture will mature three years from the date of issuance and bear interest at a rate of 3.9% per annum payable every three months. The debenture is rated as investment grade at BBB by Tris Rating Company. The minimum subscription amount is 500,000 baht and the debentures are offered to institutional investors or high net worth individuals. You are regarded as a high net worth investor since you have invested over ten million baht in stocks as stated in the offer document and fact sheet. However, investing in private debentures involves higher risk compared to government bonds in terms of principal and interest payment (credit risk). ABC Company's debenture is rated as investment grade (BBB) which is in line with your risk tolerance level.

Sompop: I have heard my friends talking about income funds. Are they interesting?

Duangjai: To invest in income funds, you have to study the investment policies very carefully. Most of them invest in stocks, fixed income securities, high yield fixed income securities and real estate investment trusts (REITs) to generate regular income, so it is suitable for long-term investment. Some income funds invest in risk assets, such as high yield stocks and fixed income securities. However, the income fund that we are offering will invest less than 30% of all investment in stocks and less than 25% of the investment in high yield fixed income securities. The fund is rated at risk level 5 or a moderate level which is slightly higher than your investment risk tolerance level. The returns will be in the form of the redemption of investment units automatically every month. There is no withholding tax on the returns and the returns are not required to be filed with personal income tax as it is regarded as a fund redemption which is different from dividend payment that contains withholding tax specified by the Revenue Department. The details of investment unit redemption and past performance are included in the fact sheet. If your investment objective is to generate long-term income, you can invest in it too. However, you will have to also sign the risk acceptance form.

Somporn: There is a lot of detail. Do you think I should buy it?

Duangjai: I am an investment consultant who is responsible for providing you with information for decision-making. You will have to be the one who makes the decision. The goal of this mutual fund is to generate long-term income. Its risk level is higher than your investment risk tolerance level because the fund can fluctuate at some point of time. If you are interested in it, you might start investing in it with a small amount of money.

Sompop: I think you should first start investing a small amount of money in the income fund.

Somporn: I will invest three million baht in ABC Company's debenture and two million baht in the income fund. Does it sound good?

Duangjai: You have to be the one who makes the decision. I will prepare a debenture application form, accredited investor status certification, an income fund application form and a risk acceptance form for you to sign. Also, I will have to submit the documents to the manager for consideration, like last time.

A case study of investment consultation on appropriate investment in equity instruments

Jaranee, aged 55, is working at the Bank of Thailand. She is in charge of money exchange. She invests in different investment products in order to allocate investment risk. As soon as she sees the advertisement for foreign stock investment, she is interested in investing in another product, so she calls to ask for investment advice.

Jaranee: Good morning, Veeranda. Do you remember me? I am Jaranee.

Veeranda: Good morning. I have not heard from you for a long time. It has been almost a year since the last time we talked.

Jaranee: I have taken a look at the portfolio from time to time. I have been busy with my daughter's wedding, the one you attended. She has moved to England to be with her husband, so I also went there with her to be with my grandchildren.

Veeranda: Which stock are you especially interested in? Would you like me to provide you with some suggestions? First, I will have to review your information since you are retired now. (The investment consultant asks the client for any changes in the client's personal information, such as career, income, and sources of income.) I would like to ask you for a favor. Since you took the suitability test over two years ago, I would like to ask you to do the test again.

Jaranee: Well, for me, it has to be high-risk investment only. I think I do not have to take the suitability test again because you are already familiar with my investment.

Veeranda: I do know that you can tolerate high investment risks; however, I have to inform you that there are new official criteria now. Investment consultants like me have to be very careful to offer appropriate advice and give services. I have to review the information against the criteria regularly and I have to be more careful with clients who are over 60 years old, so I have to ask you to review your risk tolerance information again. Is it convenient for you to do it online, just like last time, or do you want me to read it to you?

Jaranee: I would like to do it on my own, so that I can read it carefully and learn the questions at the same time. When I finish the test, I will call you again.

………………… (The client is taking the suitability test.) …………………

Veeranda: Your score has been calculated. It is 29, which means that your tolerance for investment risk is at level 3 or a high-moderate level. Therefore, the investment portfolio suitable to your risk tolerance level is as follows:

Risk Assessment Report

Group	Score	Types of Investors	Investable Instruments and Options for Investment
3	22 - 29	High-moderate risk investors	You are an investor who can tolerate risk at high-moderate level, in order to receive higher returns and expect that part of investment will increase its value.

*Risk assets refer to equity, unit trusts of foreign mutual funds, alternative assets or other assets.

Investment Advice

Types of Investors	Asset Allocation				
	Deposits and short-term fixed income securities	**Government bond with maturity more than 1 year**	**Debentures**	**Equity instruments**	**Alternative investments***
High-moderate risk investors	<10%	<60%		<30%	<10%

* Including commodities and derivatives

Veeranda: Now, we are going to talk about the investment portfolio that is suitable for you based on your risk tolerance level in detail. The first proportion of the portfolio is invested in deposits and short-term fixed income securities that is government bond with maturity less than 1 year. You have already invested in them before investing in stocks. The second proportion focuses on more investments than the other proportions, most of which are either government bond with maturity more than 1 year and debentures.

Jaranee: What are the composition of those two types of fixed income securities?

Veeranda: Since your investment risk tolerance is at level 3, you can invest in the fixed income securities with investment risks at levels 1-5.

- Risk level 1 : The fixed income securities I had previously mentioned to you.
- Risk level 2 : Government bond with maturity 1-5 years.
  : Fixed income securities with maturity less than 1 year, rated AA- or higher.
- Risk level 3 : Government bond with maturity more than 5 years.
  : Fixed income securities with maturity 1-5 years, rated AA- or more.
  : Fixed income securities with maturity less than 1 year, rated A+, A and A- or higher.

- Risk level 4 : Fixed income securities with maturity more than 5 years, rated AA- or higher.
  : Fixed income securities with maturity more than 1 years, rated A+, A and A- or higher.
  : Fixed income securities, rated BBB+, BBB and BBB-
  : Structured notes or complex bond that have stock/stock index or fixed income securities / prevalent local interest rates with principal guaranteed 100% or more.
- Risk level 5 : Hybrid bond / fixed income securities with call option.

Jaranee: If I would like to read the details about risk levels of fixed income securities or mutual funds, where can I obtain the information?

Veeranda: You can find it from the suitability test with clear explanations. Let us continue with the third proportion.

Investing in equity instruments is your favorite option and, according to your risk tolerance score, you can invest in medium risk equity instruments. I would like to suggest that you invest in dividend stocks or growth stocks. They should be more suitable for you at the moment compared to day-trading stocks and speculative stocks. Although you used to prefer these types of stocks in the past, the local market is now highly fluctuating and investing in these stocks involves high risk. However, dividend stocks also allow investors to speculate profits as this type of stock is an investment method for stockholders to gain dividends from companies or businesses. To invest in such an investment requires a lot of research on insightful information and trends of businesses as their performance will be an indicator of how much dividends investors should receive and the performance of a company is an indicator for stock prices..

Jaranee: You are right. The fluctuation is quite scary. Actually, I used to like speculative stocks, but then I looked at my portfolio that contains both dividend stocks and speculative stocks and found out that I had made more profit from the dividend stocks compared to speculative stocks. However, the dividend stocks needed a bit more time to study. Anyway, how about growth stocks?

Veeranda: Growth stocks have recently gained attention from Thai investors as they emphasize on growing companies (good and high-priced stocks). The outstanding feature of this type of stock is its soaring profit shares. The three characteristics of growth stocks are as follows.

1. Shares with the payout ratio lower than the market averaged in the same group of industry. Companies need to reserve working capitals for their business expansion, contributing to higher ratios of returns of the investment than paying dividend to the investors.
2. Shares with the P/E ratio higher than the market averaged in the same group. The companies with successful performances in terms of profit and profitability, so the investors are willing to pay a higher price, or willing to accept high P/E ratio.
3. Shares with the price-to-book-value (P/BV) ratio higher than the market averaged in the same group. These types of stocks contain a combination of those stated in 2.

Jaranee: This is why analysts often say that growth stocks are shares with high P/E and P/BV ratios but low dividend yield, isn't it?

Veeranda: You are absolutely right. Let us now look at the last proportion, alternative investments. This group of investments is any other type of investment that we have discussed. They can be TFEX, commodities, or offshore trading in which you are interested.

Jaranee: But with my current level, do you think I can invest in offshore trading?

Veeranda: Don't worry. Your risk tolerance score and the appropriate investment portfolio I have mentioned are only basic suggestions offered based on the result obtained from the suitability test. Before you decide in which products you want to invest, I will try my best to explain to you about each product's features, conditions of returns and risk. The suitability test result is a factor that indicates an acceptable level of risks for you prior to investment. It acts as a guideline for investment portfolio according to the test result. Before you make a decision on which product to invest in, it is my responsibility to further explain to you about its features in order that you have a profound understanding about terms and conditions of returns, risks of investing in products, and factors that can have direct and indirect effects on your choice of investment.

Jaranee: Do you have time to explain to me about investing in foreign stocks today? You can explain it to me briefly first.

Veeranda: Yes, I do. Opening an account for foreign stock investment is similar to opening an equity account. There are several additional conditions. First, we have to submit a request for permission from the Bank of Thailand and the Securities and Exchange Commission. The Bank of Thailand will grant the approval for investors to invest in foreign stocks, while the Securities and Exchange Commission will approve the financial amount for foreign stock investment. The offshore trading is done through a cash balance account only. The process begins with cash deposit to the company before the offshore trading can be made. An important term and condition is that money deposited and money in foreign currency, an investor will receive no interest or any other benefits from the investing money. Another major risk in offshore trading is currency exchange risk. Since the settlement of money is in the form of foreign currency, the returns of the investment can be significantly affected by an unexpected fluctuation of the exchange rate. This will occur when foreign currency changes its value comparing with Thai baht, which may occasionally or permanently occur any time. If you are aware of such risk, you can certainly invest in offshore trading. Will you spare your investment money for other necessities or do you wish to put all of it into a two to three year investment?

Jaranee : I have ten million baht ready for investment. It is separated from the money I have saved for my daily expenses and retirement savings.

Veeranda : If that is so, there will be no problem. I will send all the detailed information to you via email. When do you want to see me? I would like to explain to you in detail about investment portfolio that is suitable for your investment risk tolerance level, expected returns and additional needs.

Jaranee: You can send the information to me via email first. I will study it and call to make an appointment with you later.

Veeranda: Thank you for your trust. It is my pleasure to have the opportunity to offer you appropriate advice and services again.

3.8 Scope of responsibilities of investment consultants in giving appropriate investment advice

According to the Securities and Exchange Commission, an investment consultant is defined as a person who provides investors with investment advice, including sending out investment invitation and giving advice on trading and investment in capital market, without offering investment planning and or investment analysis. Besides giving advice in an approved products, investment consultants can offer advice about basic asset allocation in order for them to realize and understand the importance of appropriate asset allocation and transaction.

At the beginning of the investment consultation process, an investor takes a suitability test created by the office of the Securities and Exchange Commission or by financial institutions. After knowing the test result concerning the investor's investment risk tolerance level, an investment consultant has to provide the investor with a guideline for appropriate asset allocation based on the test result, so that the investor can use the given information in the investment decision-making process. It is important to note that the asset allocation advice is given based on the test result only. No addition in-depth data collection from the investor is conducted.

One caution for investment consultants is that offering specific investment planning service by performing in-depth data analysis of client tolerance for investment risk and goals requires additional in-depth data collection from clients in the specific investment planning and advice process; however, investment consultants are not allowed to perform this task since it is under the responsibility of "investment planners" who hold another type of license requiring knowledge and understanding of more advanced financial planning.

However, talking to the clients and asking for more information is very helpful in providing investment advice and it is what investment consultants can do when the scope of the service does not cover specific investment planning. With the understanding of concepts and principles of client data collection and analysis as well as appropriate investment consultation process, investment consultants are able to make practical use of the knowledge in providing investment advice to investors, so that they can invest appropriately according to their investment risk tolerance levels.

Conclusion

Investment consultation has become increasingly important due to Thai people's longer lifespan, less stable labor market, greater wealth of clients, especially in Asia, commercial banks' declining deposit interest rates and more complex investment decision-making resulted from latest financial innovations. Therefore, investment consultants have to possess thorough knowledge and understanding about various investment products, or clients need to know their own needs in order to receive more appropriate advice.

In order to give practical investment advice, the clients must be taken into consideration. Therefore, it is important to get to know the clients to collect and analyze information in order to successfully provide excellent investment advice. In addition, in order to come up with appropriate investment advice, the consultants must pay attention to the environment of related money and capital markets. The obtained information will be useful in determining effective advice about capital asset allocation and portfolio management for the clients. Therefore, the investment consultation process must be strictly followed until the client's goals are achieved.

The investment consultation process consists of 5 steps: data collection, data analysis and assessment of clients' acceptable investment risk level, asset allocation, investment portfolio creation and management, investment follow-up and evaluation, and portfolio adjustment. This is very important for the clients as they will have more opportunity to receive higher returns of investment and their investment risks are well balanced. It increases the possibility of achieving investment goals set by the clients within the specified time, and at the investment risk tolerance levels.

Module 3: Product Knowledge (Plain Products)

Module 3

Product Knowledge (Plain Products)

Section 1: Equities

1. Introduction to Equities and Common Stocks

Required Readings

1. Product Knowledge
   - Chapter 1: Introduction to Equities and Common Stocks

     (Available in Thai only. See learning objectives and suggested readings as a guideline)

Learning Objectives:

1. Explain significance of equities to a company in fund raising.
2. Explain significant characteristics of equities in fund raising, e.g. common stocks, preferred stocks, warrants.
3. Explain types of risk and return of equities investment.
4. Explain and distinguish each type of risk arising from equities investment.
5. Explain types of equities markets.
6. Explain trading characteristics in equities markets.
7. Explain trading types in equities markets.
8. Explain roles of equities markets participants.
9. Explain usefulness of being listed companies and the qualifications of listed companies in the SET.

Suggested Readings

- *Financial Management : Theory and Practice (Eugene F. Brigham and Michael C. Ehrhardt, 2009) – Chapter 1: An Overview of Financial Management and the Financial Environment, 7: Stocks, Stock Valuation, and Stock Market Equilibrium, 19: Hybrid Financing: Preferred Stock, Warrants, and Convertibles*
- *Portfolio construction, management, and protection (Robert A. Strong, 2009) – Chapter 9: Picking the Equity Players*

- *Capital Markets: a Global Perspective (McInish, T.H., 2000) Chapter 2: Secondary Markets, 6: Equities*
- *Listing on the SET: https://www.set.or.th/en/products/listing2/listing_set_p1.html*

2. Valuation and Investment Strategies in Common Stocks

Required Readings

1. Product Knowledge
    - Chapter 2: Valuation and Investment Strategies in Common Stocks

      (Available in Thai only. See learning objectives and suggested readings as a guideline)

Learning Objectives:

1. Explain meaning of value and link relation between value and price.
2. Explain corporate action that affects value.
3. Explain significance of valuation.
4. Understand factors of common stock valuation.
5. Explain general view of stock valuation by asset evaluation, relative valuation and dividend discount model.
6. Explain suitability and limitations of stock valuation by asset evaluation, relative valuation and dividend discount model.
7. Explain meaning, usefulness and limitations of active and passive investment strategiesใ
8. Explain principles and objectives of each type of investment strategies.

Suggested Readings

- *Analysis of investments and management of portfolios (Frank K. Reilly, Keith C. Brown, 2012) – Chapter 11: Security Valuation Principles, 15: Equity Portfolio Management Strategies*
- *Financial instruments : equities, debt, derivatives, and alternative investments (David M. Weiss, 2009) – Chapter 1: Common Stock*
- *Financial Instruments: https://www.set.or.th/en/products/financial/financial_instruments.html*

3. Equity-Linked Products

Required Readings

1. Product Knowledge
   - Chapter 3: Equity-Linked Products

     (Available in Thai only. See learning objectives and suggested readings as a guideline)

Learning Objectives:

1. Explain significance of equity-linked products.
2. Distinguish types and characteristics of equity-linked products trading in the SET.
3. Explain concepts, composition and analytical methods of warrant valuation by using ratios and be able to apply ratios for investment decision.
4. Explain the relationship of factors affecting to the values of warrants and derivative warrants.
5. Explain risk and return of the investment in derivative warrants.
6. Calculate the value of warrants by analysing the composition of warrant values and premium.
7. Analyse warrant price by using ratios.
8. Explain types of investment strategies in warrants and derivative warrants.
9. Compare differences of warrants and derivative warrants.

~~10. Explain characteristics, significance and reasons of issuing Non-Voting Depository Receipt (NVDR).~~ (deleted)

~~11. Explain characteristics, significance and reasons of issuing Depository Receipt (DR).~~ (deleted)

~~12. Explain characteristics, significance and reasons of issuing Transferable Subscription Rights (TSR).~~ (deleted)

10. Explain characteristics, significance and reasons of issuing Equity-linked Products. (replaced for no. 10, 11, 12)

Suggested Readings

- *Financial instruments : equities, debt, derivatives, and alternative investments (David M. Weiss, 2009) – Chapter 1: Common Stock*
- *Financial Instruments: https://www.set.or.th/en/products/financial/financial_instruments.html*
- *Foundations of financial management (Stanley B. Block, Geoffrey A. Hirt, 2008) – Chapter 19: Convertibles, Warrants, and Derivatives*
- *https://www.set.or.th/en/market/product/drx/introduction*

4. Trading Mechanism in the Stock Exchange of Thailand

Required Readings

1. Product Knowledge
   - Chapter 4: Trading Mechanism in the Stock Exchange of Thailand *(Translation available, new revision in 2024)*

Learning Objectives:

1. Explain trading structure and process in the SET.
2. Explain each step of trading through the trading system.
3. Explain means and regulations in each type of trading.
4. Explain trading time schedule, the calculation of open and close prices.
5. Explain principles of the determination of trading units, spread, ceiling and floor prices of equities.
6. Understand the off-hour trading.
7. Explain and distinguish each type of trading signs.
8. Understand objectives and regulations of temporary trading halt and contingency plan for computer malfunction.
9. Explain significance and regulations of market surveillance.
10. Explain definition of unfair trading, distinguish types of unfair trading.
11. Explain investigation process and penalties.
12. Understand channels of information of securities and listed companies.
13. Explain meaning of each type of price indices.
14. Distinguish SET price indices.
15. Explain significance and how to set up industry group and sectors.
16. Explain the use of each type of price index.
17. Explain selection criteria and the calculation of each type of price indices.
18. Understand significance, characteristics and composition of good securities analysis report.

*Note: An unofficial translation of the Thai text book: **Product Knowledge: Plain Products – Chapter 4**. The translation is intended to facilitate a reader to understand contents of the book but not to be used as a reference. SET is not responsible for the correctness and completeness of the translation. Please refer to the Thai version for accuracy and reference.*

Chapter 4

Trading Mechanism in The Stock Exchange of Thailand

4.1 The Stock Exchange of Thailand (SET)'s Trading System

4.1.1 Development of the Trading System

The Stock Exchange of Thailand (SET) firstly operated on April 30, 1975. The method used was an open auction on a trading floor. On May 31, 1991, SET adopted the automated trading system for the first time via the so-called Automated System for The Stock Exchange of Thailand or ASSET. Then in August 2008, the system was upgraded to a system called Advanced Resilience Matching System or ARMS to support cutting edge transactions and increase risk management efficiency. Moreover, the back-up system has also been provided in case of system crash.

On September 3, 2012, SET collaborated with Cinnober Financial Technology AB, a leading Swedish firm specializing in developing systems for the stock exchange business, to set up a new trading system called SET CONNECT to meet the business expansion of the securities industry in compliance with international standard protocols.

To support the continued growth of the capital market, on May 8, 2023, SET collaborated with Nasdaq, a leading trading platform for the equity and derivatives markets with the objective to develop a new version of the SET CONNECT trading system by using the most advanced technology and innovations at international standards. This new system not only has high efficiency in faster order execution but also the capability to support the increasing amount of transactions in the future, while being ready to support a variety of innovative investment products covering the equity market, the derivatives market, etc. as alternatives for both local and foreign investors.

In addition to changing the new trading system, SET and Thailand Futures Exchange PCL have also upgraded the market data system and market surveillance system simultaneously. The advanced technology and information processing are at international level and in line with the new trading system, enabling the dissemination of trading data to the member systems and other data providers efficiently, while enhancing the monitoring tools and programs capabilities for faster and more accurate analysis of trading irregularities respectively.

4.1.2 SET CONNECT Securities trading system

The new trading platform, called SET CONNECT, is a trading platform developed by The Stock Exchange of Thailand (SET) in collaboration with National Association of Securities Dealers Automated Quotations, or Nasdaq, a leading trading system for equity and derivatives markets, several distinguished features have been included as follows:

• World-class connectivity standards, both ITCH/OUCH Protocol and FIX Standard Protocol, used in globally leading capital market and derivatives market, as such enabling an easier access to foreign markets.

• The new flexible and universally standard trading system structure enables the stock exchange and the futures market to add a variety of products being traded in other leading international markets by developing the system faster.

• The increased resolution of the dissemination of Bid/Offer price level of the securities information in SET and mai markets from 5 price level to 10 price level, enabling investors to make better trading decisions.

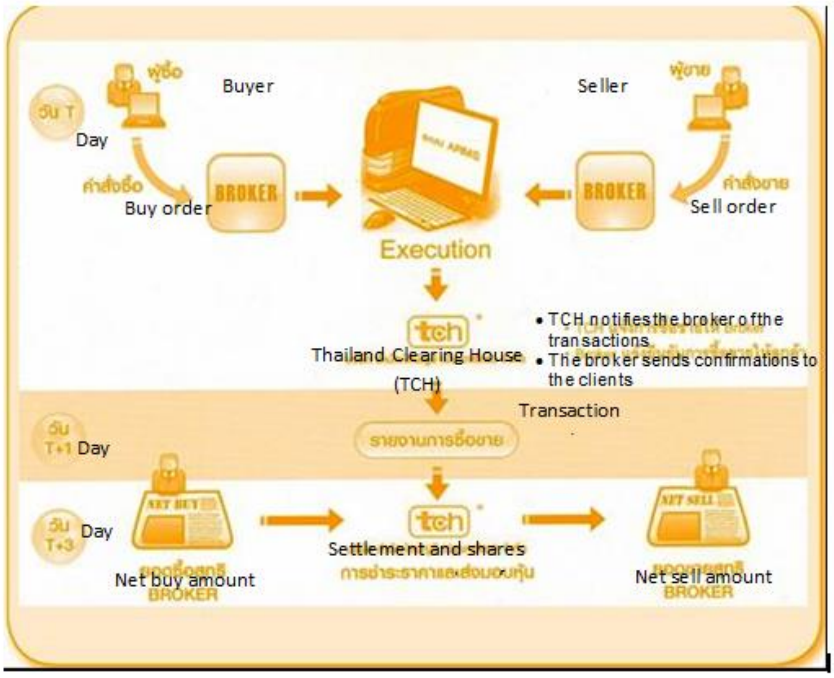
• The increased timestamp resolution of buying & selling orders and the matching at nano-second level comparable to leading international markets.

• More functions to make it convenient for member companies such as self-match prevention to prevent self-matching of orders from the same client/group, and pre-trade risk management as an additional alternative for member companies regarding risk management.

4.2 Equity Trading in The Stock Exchange of Thailand

4.2.1 Trading Structure and Process

Figure 4-1 Trading Structure in The Stock Exchange of Thailand



Equity trading must be processed through the SET's members. The SET will issue an ID number for the member. All members and traders of the member firms must be authorized and licensed by the SET.

Figure 4-1 indicates the big picture of the whole trading process in the SET. When a buyer sends a buy order to the broker, a member of the SET, the broker will send the order into the SET trading system. A seller sends a sell order to the broker who will, in turn, send the order into the system. When these buying and selling orders execute in the system, the buyer's broker is in charge of collecting money the customer and paying the money to Thailand Clearing House (TCH)[4] which acts as a clearinghouse for clearing and settlement. The seller's broker is in charge of ensuring that the customer delivers the securities (in case that the customer does not have such securities with the securities company) or transfer the securities to TCH for settlement with the buyer's broker. Then, the buyer's broker will deposit the securities in the customer's account.

4.2.2 Types and Criteria of Securities Trading in The Stock Exchange of Thailand

- ***Types of Trading***

There are 2 types of trading on SET which are

1. *Automatic Order Matching: AOM*

Buyers and sellers will send buying and selling orders via computer into the SET trading system. The system will automatically arrange the order and match buying and selling orders.

Order Arrangement: When trading orders get through the system, they will be kept until the end of the trading day and arranged by price then time priority. The principles of order matching are:

(1) A buy order with the highest bid price is ranked first. If there is higher bid price in the system, this new order will be ranked higher. If the bid price of the new order is equal to the previous ones, the earlier one will be ranked higher. The orders with equal bid price are ranked in chronological order.

(2) A Sell order with the lowest offer price will be ranked first. If there is lower offer price in the system, this new order will be ranked higher. If the offer price of the new order is equal to the previous ones, the earlier one will be ranked higher. The orders with equal offer price are ranked in chronological order.

Matching: When a trading order gets through the system, the system will immediately check whether it can be matched with the existing order. If so, the system will match the orders immediately, or else the order will be ranked by price then time priority as explained earlier to wait for matching order later.

2. *Trade Report*

[4] Since March 2nd 2018, TCH will alter the clearing and settlement period to two working days after the trading day. (T+2))

Trade report or formerly called Put-Through (PT) is the type of trading that a buyer deals with a seller and report the transaction into the system. The SET's members can advertise their buying or selling through the system. Trade report can be categorized into 2 types:

(1) Two-firm trade report: when a buyer and a seller agree to trade, both members must register the order into the system for matching.

(2) One-firm trade report: when a buyer and a seller agree to trade, a member must register the transaction with the SET.

Both types of trade report can be classified as follows:

- <u>trade report – big lot</u>:
  - Trading more than 1 million shares or more than THB 3 million
  - Trading during trading session, pre-close, off-hour
- <u>trade report – foreign</u>:
  - Trading foreign securities such as securities symbols with the tag –F or –Q, etc.
  - Less than 1 million shares and less than THB 3 million
  - Trading during trading session, pre-close, off-hour.
- <u>trade report – off-hour</u>:
  - Less than 1 million shares and less than THB 3 million
  - Amount must be in a board lot.
  - Trading at the closing price or at the average price
  - Trading during off-hour
- <u>trade report – buy-in</u>
  - Trading price must be in a tick size.
  - Amount must be in a board lot.
  - Trading during trading session I
  - Buyer and seller must be customers of the same securities company (one firm trade report)

SET requires members to trade only through the SET trading system. Members are not allowed to trade securities that are not registered with SET. They are not allowed to trade as a broker or trade for themselves except the followings:

1. The buying or selling of securities authorized by The Stock Exchange of Thailand (SET) under Section 185 of the Securities and Exchange Act, B.E. 2535.
2. Large trades authorized by SET before every trading.
3. The buying or selling of listed securities in public auction for the purpose of forced pledge or forced collateral.
4. The buying or redemption of investment units of the Thai Trust Fund Company to securities companies with license to operate securities business in the category of such mutual fund management.

The buying or selling according to numbers 1, 2 and 3, members must report to SET within the period and in the format specified by SET.

- ***Channels of Trading Order***

There are channels to send trading orders as follows:

1. Handing in an order by yourselves at the trading floor: An investor has to fill out the buy order form or sell order form and hand it in at the trading floor of a securities company.
2. Sending an order via telephone via an investment consultant (IC) of the securities company: The company must record the call.
3. Sending an order online: an investor can send an order via internet using the securities company's system with user ID and password generated by the investor. He/she must generate PIN no. by themselves to use in sending trading orders.
4. Sending an order through direct market access (DMA): DMA can be done electronically from an investor's trading system to the member's system and in turn to the SET system. This channel does not require an investment consultant of the member securities company. Type of trading must be automated order matching (AOM). Investors who are allowed to use DMA are:

1) Institutional investors according to the announcement of the Securities and Exchange Commission (SEC).

2) Ultra-high-net-worth investors (ultra-HNWI) or institutional investors who are individuals according to the Notification of the SEC.

5. Algorithmic trading means a computer instruction set for the buying & selling trading offers that can automatically generate and record trade orders. Such computerized program must have a pre-trade risk management (PTRM) system in compliance with the standards set by SET. Members must obtain permission from SET before utilizing and must utilize it via the channels as specified by SET.

• Trading hours

The SET daily trading system is open according to the regulations, methods and period of time as shown in Table 4-1 below, except the trading of securities with foreign underlying assets.

Table 4-1 The SET securities trading hours

Trading Periods	Trading Hours	Trading Methods	Trading Types
Pre-open session I to calculate the opening price	9.30 a.m. to T1	• Automated order matching (AOM) trading with a single order matching at the opening of the auction	• Board lot trading
Trading session I	T1 - 12.30 p.m.	• Automated order matching (AOM)	• Board lot trading • Odd lot trading
		• Trading via trade report	• Trade report – big lot • Trade report – foreigners as securities holders

Trading Periods	Trading Hours	Trading Methods	Trading Types
			• Trade report – buy-in to deliver defaulted securities • Trade report - member buy-in to deliver defaulted securities
(intermission)			
Pre-open session II to calculate the opening price	1.30 p.m. - T2	• Automated order matching (AOM) trading with a single order matching at the opening of the auction	• Board lot trading
Trading session II	T2 - 4.30 p.m.	• Automated order matching (AOM)	• Board lot trading • Odd lot trading
		• Trading via trade report	• Trade report – big lot • Trade report – foreigners as securities holders
Pre-close session to calculate the closing price	4.30 p.m. - T3	• Automated order matching (AOM) trading with a single order matching at the opening of the auction	• Board lot trading
		• Trading via trade report	• Trade report – big lot • Trade report – foreigners as securities holders
Off-hour session	T3 - 5.00 p.m.	• Trading via trade report	• Trade report – big lot • Trade report – foreigners as securities holders • Trade report – off-hour
Trading closes	5.00 p.m.		

For trading securities with foreign underlying assets, the SET trading system is open daily according to the regulations, methods and period of time as shown in Table 4-2 below.

Table 4-2 Trading hours of securities with foreign underlying assets

Trading Periods	Trading Hours	Trading Methods	Trading Types
Pre-open session to calculate the opening price	9.30 a.m. - T1	• Automated order matching (AOM) trading with a single order matching at the opening of the auction	• Board lot trading

Trading Periods	Trading Hours	Trading Methods	Trading Types
Trading session	T1 - 4.30 p.m.	• Automated order matching (AOM)	• Board lot trading • Odd lot trading
		• Trading via trade report	• Trade report – big lot • Trade report – buy-in to deliver defaulted securities* • Trade report - member buy-in to deliver defaulted securities*
Pre-close session to calculate the closing price	4.30 p.m. - T3	• Automated order matching (AOM) trading with a single order matching at the opening of the auction	• Board lot trading
		• Trading via trade report	• Trade report – big lot
Off-hour session	T3 - 5.00 p.m.	• Trading via trade report	• Trade report – big lot • Trade report – off-hour
Trading closes	5.00 p.m.		

* "Trade report - buy-in" to deliver defaulted securities, and "Trade report – member buy-in" to deliver defaulted securities must be made within the period specified by TCH.

Note
T1 is the opening time when the trading system randomly chooses any time between 9.55 a.m. and 10.00 a.m.
T2 is the opening time when the trading system randomly chooses any time between 1.55 p.m. and 2.00 p.m.
T3 is the closing time, when the trading system randomly chooses any time between 4.35 p.m. and 4.40 p.m.

Off-hour trading

The off-hour trading provides an opportunity for investors and members to trade further after SET is closed as such facilitating investors to manage and adjust their investment portfolios more appropriately. In addition, it also enables investors to correct erroneous trading transactions to cover trading transactions made during the day. The trading regulations are as follows:

• Trading period: from closing time - 5:00 p.m.
• Trading method: Trading via Trade report method only by recording trading transactions according to specific trading regulations.

- ***The calculation of Opening and Closing Prices***

Members can send limit orders or ATO (At the Open) orders during pre-opening or send ATC (At the Close) orders during pre-close into the SET system. The system will arrange all orders based on price then time priority to calculate opening or closing prices by using the following criteria:

1. Prices that make maximum executable volume.

2. If there is more than one price from 1., choose the price that has minimum imbalance as explained in Sample 4-1.

Sample 4-1: Maximum Executable Volume & Minimum Imbalance

Bid		Offer	
Volume	Price	Price	Volume
200	ATO	ATO	100
100	10.90	10.50	100
200	10.80	10.70	100
100	10.70	10.90	100

Last sale = 10.70

	Price	Bid	Accumulated Bid	Offer	Accumulated Offer	Matched Vol.	Imbalance
	11.00	ATO =200	200		400	200	-200
Auction price	10.90	100	300	100	400	300	-100
	10.80	200	500		300	300	200
	10.70	100	600	100	300	300	300
	10.60		600		200	200	400
	10.50		600	100	200	200	400
	10.40		600	ATO = 100	100	100	500
	10.30		600		0	0	600

ATO ด้านซื้อ = ราคาที่สูงกว่าระหว่าง Bid สูงสุด + 1 Tick หรือ Offer สูงสุด + 1 Tick = 10.90 + 0.10 = 11.00

ATO ด้านขาย = ราคาที่ต่ำกว่าระหว่าง Bid ต่ำสุด - 1 Tick หรือ Offer ต่ำสุด - 1 Tick = 10.50 - 0.10 = 10.40

3. In case that there is more than one price in 2., use the following price:
   3.1 If accumulated bid is more than accumulated offer (or positive imbalance) at every tick price, use the highest price in 2., as shown in Sample 4-2.

Sample 4-2: Buy Pressure (imbalance value is +), using the highest price

Bid		Offer	
Volume	Price	Price	Volume
100	ATO	ATO	100
200	11.00	10.30	100
5,000	10.70	10.40	100
500	10.30	10.50	100
		10.90	100

Last sale = 10.70 — Positive imbalance

	Price	Bid	Accumulated Bid	Offer	Accumulated Offer	Matched Vol.	Imbalance
	11.10	ATO =100	100		500	100	-400
	11.00	200	300		500	300	-200
	10.90		300	100	500	300	-200
	10.80		300		400	300	-100
Auction price	10.70	5000	5,300		400	400	4,900
	10.60		5,300		400	400	4,900
	10.50		5,300	100	400	400	4,900
	10.40		5,300	100	300	300	5,000
	10.30	500	5,800	100	200	200	5,600
	10.20		5,800	ATO = 100	100	100	5,700
	10.10		5,800		0	0	5,800

ATO ด้านซื้อ = ราคาที่สูงกว่าระหว่าง Bid สูงสุด + 1 Tick หรือ Offer สูงสุด + 1 Tick = 11.00 + 0.10 = 11.10

ATO ด้านขาย = ราคาที่ต่ำกว่าระหว่าง Bid ต่ำสุด - 1 Tick หรือ Offer ต่ำสุด - 1 Tick = 10.30 - 0.10 = 10.20

3.2 If there is a negative imbalance in the total bid amount at all price levels, use the lowest price in 2., as shown in Sample 4-3.

Example 4-3: Sell Pressure (imbalance value is -), using the lowest price

Bid		Offer	
Volume	Price	Price	Volume
100	ATO	ATO	300
100	11.00	10.20	100
100	10.90	10.40	100
200	10.80	10.60	100
200	10.50	10.90	100
200	10.30	11.00	100

	Last sale = 10.70					Negative imbalance	
	Price	Bid	Accumulated Bid	Offer	Accumulated Offer	Matched Vol.	Imbalance
	11.10	ATO =100	100		800	100	-700
	11.00	100	200	100	800	200	-600
	10.90	100	300	100	700	300	-400
	10.80	200	500		600	500	-100
	10.70		500		600	500	-100
Auction price	10.60		500	100	600	500	-100
	10.50	200	700		500	500	200
	10.40		700	100	500	500	200
	10.30	200	900		400	400	500
	10.20		900	100	400	400	500
	10.10		900	ATO = 300	300	300	600

ATO ด้านซื้อ = ราคาที่สูงกว่าระหว่าง Bid สูงสุด + 1 Tick หรือ Offer สูงสุด + 1 Tick = 11.00 + 0.10 = 11.10

ATO ด้านขาย = ราคาที่ต่ำกว่าระหว่าง Bid ต่ำสุด - 1 Tick หรือ Offer ต่ำสุด - 1 Tick = 10.20 - 0.10 = 10.10

3.3 If the total bid amount is equal to the total offer amount at all price levels, use the price close to the last sale price, or close to the IPO price, or use the lowest price, respectively, as shown in Sample 4-4.

Sample 4-4: Market Pressure (**imbalance**) = 0, using the price close to last sale

Bid		Offer	
Volume	Price	Price	Volume
100	ATO	ATO	200
100	10.90	10.40	100
100	10.80	10.80	100
100	10.20		
100	10.10		

	Last sale = 10.70						
	Price	Bid	Accumulated Bid	Offer	Accumulated Offer	Matched Vol.	Imbalance
	11.00	ATO =100	100		400	100	-300
	10.90	100	200		400	200	-200
	10.80	100	300	100	400	300	-100
Auction price	10.70		300		300	300	0
	10.60		300		300	300	0
	10.50		300		300	300	0
	10.40		300	100	300	300	0
	10.30		300		200	200	100
	10.20	100	400		200	200	200
	10.10	100	500		200	200	300
	10.00		500	ATO = 200	200	200	300

ATO ด้านซื้อ = ราคาที่สูงกว่าระหว่าง Bid สูงสุด + 1 Tick หรือ Offer สูงสุด + 1 Tick = 10.90 + 0.10 = 11.00

ATO ด้านขาย = ราคาที่ต่ำกว่าระหว่าง Bid ต่ำสุด - 1 Tick หรือ Offer ต่ำสุด - 1 Tick = 10.10 - 0.10 = 10.00

The trading system will provide ATO / ATC orders with prices as follows:

- In the case of a buy-side ATO / ATC: The ATO / ATC price will be set equal to the higher price: between the highest bid plus 1 tick or the highest ask price plus 1 tick, that is, equal to the Max (highest bid+1 tick, highest ask+1 tick).

- In the case of a sell-side ATO / ATC: The ATO / ATC price will be set equal to the lower price between the lowest ask price minus 1 tick or the lowest bid minus 1 tick, or in other words, equal to the Min (lowest ask-1 tick, lowest bid-1 tick).

Therefore, in managing ATO / ATC orders in the trading system, the opening price and closing price may be beyond the Ceiling & Floor price range, but not more than ±1 price range (tick).

Trading unit, price range (tick), highest-lowest prices

Trading unit

In order to trade securities, the number of securities must be specified in unit or board lot. Generally, SET specifies that one trading unit is equal to 100 securities (shares). For example, buying 10 trading units of XYZ stock means 10 units x 100 shares, which equals 1,000 shares. The exception is for trading derivatives warrants (DW) and depositary receipts (DR) where 1 trading unit equals 1 security (share).

In the case that the security has a closing price of THB 500 or more for a period of 6 consecutive months, SET will change the size of the trading unit by specifying that 1 trading unit of such security is equal to 50 securities (shares). SET will announce in advance prior to the adjustment of trading units. However, the trading unit size may be changed from 50 securities back to 100 securities in the event that such security has a closing price lower than THB 500 for 6 consecutive months, or there is an event which may cause the trading price of such security to be lower than THB 500 on the first day of such an event. As for the bid/offer with less than 1 trading unit, it is advisable that members do trade securities in odd-lots.

Spread

Spread means minimum movement of the security price for AOM trading. Spread depends on the price level as shown in Table 4-2.

Table 4-2 Price Level and Spread of Securities

Price Level	Spread
Less than 2 baht	0.01 baht
2 baht to less than 5 baht	0.02 baht
5 baht to less than 10 baht	0.05 baht
10 baht to less than 25 baht	0.10 baht
25 baht to less than 100 baht	0.25 baht
100 baht to less than 200 baht	0.50 baht
200 baht to less than 400 baht	1.00 baht
400 baht and more	2.00 baht

However, the information in Table 4-2 does not apply to mutual funds and ETF. Spread is 0.01 baht for every price level.

Ceiling and Floor Limits

The price of securities can increase/decrease no more than 30% of the previous closing price except for securities that ceiling – floor is less than +1 spread. In such a case, the ceiling – floor is +1 spread of the previous closing price.

For example, to calculate ceiling-floor of a security

Stock A's previous closing price is 150 baht
Ceiling & floor = 30% of previous closing price = 150 x 0.30 = 45 baht
ceiling = 150 + 45 = 195 baht
floor = 150 - 45 = 105 baht

An example of calculating the highest-lowest price in other cases can be shown as follows:

1. Securities on the 1st Day of trading on SET

- Ordinary shares, preferred shares, DRs, mutual funds and ETFs: Ceiling & Floor shall be not more than 3 times of the IPO price with floor not lower than THB 0.01.

- Warrants, transferable subscription rights, and derivative warrants: The trading price shall change from the initial public offering price (IPO price) by no more than 1 time of the closing price of the underlying asset on the previous trading day multiplied by the conversion rate, but not less than THB 0.01.

(2) Warrants, transferable subscription rights, and derivative warrants can change to the maximum increase or decrease to not over 30 percent of the ordinary share price, multiplied by the rights to purchase shares that will be received from the exercise of 1 warrant right.

(3) Derivative warrants with foreign underlying assets shall have Ceiling & Floor not exceeding 20 times of the IPO price or the closing price of the previous day, with the floor not lower than THB 0.01.

Sample 4-6 Previous closing price of ABC stock is 15 baht and previous closing price of ABC-W is 5 baht. Right to buy the common shares is 1 warrant : 1.2 shares

30% of underlying stock x right of warrant = (15 x 0.30) x 1.2 = 5.4
previous closing price of ABC-W = 5 baht
Ceiling price of warrant = 5 + 5.4 = 10.40 baht
Floor price of warrant = 5 - 5.4 = -0.40, therefore floor will be 0.01 baht

(4) common share in case of XD

Stock A's previous closing price is 150 baht and dividend was announced at 2 baht per share
so XD price = previous closing price - dividend = 150 - 2 = 148 baht
Range 30% = 148 x 0.30 = 44.40
Ceiling price = 148 + 44.40 = 192.40 when adjusted to fit the spread, ceiling price = 192 baht
Floor price = 148 - 44.40 = 103.60 when adjusted to fit the spread, floor price = 104 baht

(5) In the case that such security has no trading activities for more than 15 consecutive business days or more

In the case that SET has posted a suspension (SP) sign for more than 15 consecutive business days, SET may not specify the Ceiling & Floor of the security on the first day that SET opens for trading of such security, depending on the case.

• *Algorithmic Trading*

Algorithmic Trading is a set of computer instructions for trading bid/offer that can automatically generate and record trading orders. Currently, there are two types of Algorithmic Trading permitted by SET for member companies or their customers to send trading orders, as follows:

1. Algorithmic Trading with pre-trade risk management system (PTRM) that can support many strategies: Once a member company has been permitted by SET, the member company can add or change the strategy as far as such PTRM can support such added or changed strategies. Notably, SET may ask member companies to submit detailed information of the strategy. As for the member companies that have obtained the permission before this criteria document was effective, if there is an addition or amendment of strategy, parameters, working principles, or risk management system, the member companies must be granted permission by SET before using such added, amended, and changed version.

2. Algorithmic Trading with pre-trade risk management (PTRM) system that can support each single strategy: After a member company has been permitted by SET, the member company can use such strategy.

• Halting trading temporarily in case of extreme volatility in trading conditions (circuit breaker)

Should there be cases of extreme volatility in trading conditions and the overall price of securities has changed and decreased considerably, in order for investors to have time to fully examine the information that can affect investment, SET will stop trading automatically on a temporary basis, according to the following criteria:

• Level 1: When SET Index changes/**drops to 8%** of the previous day index close. SET will suspend trading of all securities for 30 minutes, and

• Level 2: When SET Index changes/**drops to 15%** of the previous day index close. SET will suspend trading of all securities for 30 minutes.

• Level 3: When SET Index changes/**drops to 20%** of the previous day index close. SET will suspend trading of all securities for 1 hour.

After Level 3 of the circuit breaker, SET will be open for further trading until normal closing time without further trading breaks. In the case that the duration of the trading cycle in which the circuit breaker is active is less than 30 minutes or 1 hour, the trading will break only for the remaining time of the trading round, then will open for securities trading as usual in the next trading round.

There are periods that the securities with foreign underlying assets (cross-border products) may not be open for trading at the same time as other securities due to non- intermission.

- ***Meaning of signs posted on a stock***

To enhance accuracy and efficiency of security trading, the SET posts special signs to supervise trading and inform investors about the situation and/or condition which may impact securities of the listed companies.

Special signs

In securities trading, each of the various symbols placed next to the securities' names have specific meanings to keep investors well-informed, as follows:

1. XD (excluding dividend) means the buyer of securities is not entitled to receive dividends.
2. XR (excluding right) means the buyer of securities does not have the right to subscribe for newly issued shares of the existing type of securities and the shareholding ratio of the issuer (right offering).
3. XW (excluding warrants, means the buyer of securities is not entitled to receive warrants.
4. XT (excluding transferable subscription rights) means the buyer of securities does not have the right to receive transferable subscription rights.
5. XN (excluding capital return) means the buyer of securities has no right to receive capital return.
6. XB (excluding other benefits) means the buyer of securities does not have the rights

(a) in the subscription for newly issued securities, other than those specified in 2., or
(b) in the subscription for existing securities, for example:
- The right to subscribe for preferred shares allocated to existing ordinary shareholders of the Company
- The right to subscribe for ordinary shares allocated to existing preferred shareholders of the Company
- The right to subscribe for debentures allocated to the existing ordinary shareholders of the Company
- The right to subscribe for securities offered to the general public (public offering) by allocating to the existing shareholders of the Company
- The right to subscribe for securities of affiliated companies (pre-emptive right)
- The right to subscribe for existing ordinary shares allocated to the existing shareholders of the Company, such as in the case of an

offering for the selling of repurchased shares to the existing shareholders, etc.

7. XA (excluding all) means the buyer of securities does not have all the rights specified in 1. to 6., in the case that more than one benefit is granted.
8. XE (excluding exercise) means the closing of the share register book, in order to give shareholders the right to exercise their rights into underlying stocks.
9. XM (excluding meetings) means the buyer of securities has no right to attend the shareholders' meeting.

SET will post such X-signs 2 business days to the book closing date, or 2 business days prior to the record date, depending on each case.

Warning Signs

Notice Pending (NP)

NP indicates that the company has news or information that must be reported to the SET. The SET will post the NP sign when the company does not submit financial statements or reports to the SET within the required period. It may be the period that the SET is expecting additional reports from the company, or it may be that reports or news submitted may not be clear or sufficient.

Notice Received (NR)

NR indicates that the Company has already submitted required information to the SET and the information is in turn published to investors. The NR sign will be posted on the stock instead of NP for 1 day.

Non Compliance (NC)

NC indicates that the stock may be delisted from the market.

Caution (C)

The C sign shows (for investors) that the securities are subject to action measures in case of events that may affect the financial position and business operations.

Trading Halt (H)

H is posted when the SET temporarily stops trading on a stock for less than a trading session. The criteria are as follows:

(1) There is unreported crucial information that may impact rights and benefits of shareholders or investment decision or change in the stock price. The SET is investigating and waiting for the clarification. The SET believes that the company can immediately clarify.

(2) It is suspicious that a group of investors may have important information or news. The SET is investigating the situation. It is believed that the company can immediately clarify the situation.

(3) The company requests that SET temporarily stops trading to release important information and the SET believes that the company can immediately clarify the situation.

(4) Other causes with high impact on a stock's trading.

Trading Suspension (SP)

SP signals that the SET temporarily stop trading on a stock for longer than a trading session. The criteria of posting the sign are as follows:

(1) The criteria are the same as (1) – (3) for stock carrying "H" and the company cannot immediately clarify the issues.

(2) A company ignores the SEC law, rules, regulations, orders, resolution of the board, including any agreement, or the SET's circulars.

(3) A company does not submit financial statements to the SET within the required period.

(4) A stock is being withdrawn or is solving problems to avoid being withdrawn.

(5) The listed securities are due for redemption, conversion, or exercise of rights or there are other events which may seriously affect the trading of listed securities.

Pause (P)

The P sign is used with securities that SET specifies to be under the surveillance measures due to irregular trading conditions.

Stabilization (ST)

ST signals investors that a listed company's shares are in the process of being purchased for delivery to exercise an overallotment option.

- ***Contingency Plan for Computer Malfunction***

Regarding SECTION 187 of Securities and Exchange Act B.E.2535 (1992), the SET President is authorized to announce trading prohibition to temporarily stop trading all stocks in the market in case of the computer system malfunction preventing regular trading. In such a case, SET has a protocol to pause trading and backup plan to ensure that the exchange system can operate continuously.

To cope with changing context of the industry, SET has amended the protocol for the computer malfunction as follows:

Trading Prohibition

Trading Prohibition from the SET Trading System Malfunction

SET temporarily stops the whole market trading when these 3 situations concurrently occur:

1) More than one-third of the SET members[5] cannot send orders from their main platform into the SET system.
2) The computer malfunction happens longer than 15 minutes.
3) The mulfunction caused by the SET system or the public infrastructure which impacts the SET system such as communication system, electricity, etc.

Trading Prohibition from Members' Main Platform Malfunction

The SET temporarily stops trading of the whole market when these 3 situations concurrently occur.

1) More than one-third of the SET members cannot send orders from their main platform into the SET system or cannot use the back-up system provided by the SET
2) The computer malfunction happens longer than 15 minutes.
3) The malfunction caused by the member system or the public infrastructure which impacts the members' main platform such as communication system, electricity, etc.

Trading Prohibition from Crisis with Widespread Impacts

SET may propose to the SET's Board of Governors to consider stop trading temporarily regarding the Regulations of The Stock Exchange of Thailand Re: Order of Prohibition on Trading all Listed Securities in the Stock Exchange in case of Necessity and Urgency, B.E. 2546 (2003) when both of these situations occur.

1) There are crises with impact on most people such as riot[6], terrorist attack[7], natural disaster, etc.
2) Such crises have widespread impact on members' activities as follows:
   2.1) More than 1/3 of members cannot send trading orders from their main platforms to the SET trading system or cannot use the backup system provided by the SET, or
   2.2) More than half of members cannot send trading orders from their main platforms to the SET trading system.

In addition, the SET trading orders may be cancelled in the event of system failures such as Trading System Malfunction, System Failure or Communication Failure, etc. SET has prepared the following guidelines:

• In the event of a system failure that may affect trading extensively, if SET continues trading further, this may result in damage or unfairness among

[5] For example, if the total member is 33, 1/3 of them is 11, then there must be 12 members or more that cannot send orders into the SET system to fulfill this criteria.

[6] For example, the Department of Disaster Prevention and Mitigation, Ministry of Interior, defines "riot" as unpeaceful situation similar to civil war which involves a large group of people doing activities aiming to control or change. The group may not be controlled and in turn lead to riot and damage, which will lead to riot control by police, military, or other security forces.

[7] For example, the Department of Disaster Prevention and Mitigation, Ministry of Interior, defines "terrorism" as any activity that causes unpeacefulness to create fear to civilians or intimidate the government or international organizations to do or not to do any activity that can damage lives or assets.

investors. SET may suspend trading of individual securities or the entire market temporarily.

• If necessary, SET may consider cancelling orders that have not yet been matched in any individual securities or orders of all member companies in the whole market, before opening for trading again. SET will notify member companies in advance, and will notify investors as well via the SET communication channels.

• SET will arrange to send details of the cancelled orders to the relevant member companies for verification purposes, on top of sending information as usual on a daily basis.

Trading Prohibition Announcement

When the SET announces trading prohibition, the members will be informed. The SET will inform members the amended trading period through the SET communication system such as admin message of the trading system, informal dissemination system, telephone, or SMS, etc.

The practice of reopening trading after having stopped trading

SET will open for trading again after the temporary closing, by considering the remaining normal trading hours as appropriate.

The backup system prepared by SET

In the event that a member's trading system has malfunctions, the member can request to use the backup system available. SET will allocate the usage as appropriate for each case.

4.2.3 Trading Account Opening

- ***Criteria***

The securities company is responsible for the account opening and approval process and written agreement with customers. The procedure must be able to verify the document of identity which can be at least one or a combination of the followings:

1. Account opening request form and agreement to assign the company as a security trading agent must be signed in front of the responsible officer.
2. Re-check with the customer or reference person as indicated in the account opening form to check the customer identity.
3. Appoint reliable entity to verify authenticity of the document and the customer identity.
4. If the company requires customers to submit the identification document, the company must verify the authenticity of the document. In the case that the customer submits bank account document, the company must verify the document with the bank.
5. Any other sufficient procedures used to open all kinds of trading accounts such as cash balance, margin account, internet trading, etc.: the documents must be kept for verification.

The account opening form must require sufficient information and documents to identify:

- Investment objectives.
- Level of knowledge and experience in securities investment.
- Creditworthiness and ability to repay by verifying the customer's account status before trading.

In the agreement between the company and the customer, there must be statements (shown in emphasized fonts) to acknowledge the customer about:

1. Risks from changing in security value or collateral which may cause loss or require additional collaterals.
2. Consequences of not clearing or settling the transaction or not provide collateral as required:
   - Forced Collateral
   - Forced sale or buy in
   - The company offsets customer's credit and debit balances
   - Termination of the agreement: an agreement between a security company and a customer must not allow the company to deny loss/damage from intentional or unintentional actions of the company or the company's employees.

3. Procedure of trading must be in order of priority and trading conditions, and trade amendments procedures must be made clear and provided in writing for customers.

- ***Types of trading account***

Cash Account

A cash account is for customers who want to trade securities in cash with full payment. The limit of cash account will be approved by the securities company (as an agent) regarding the customer's creditworthiness and ability to repay. The company will not lend money to the customer. Cash account customers must make payment for securities to the agent immediately or within 2 working days from the trading day. The agent will pay the customer on the third day after the day of selling securities. There are 2 types of cash account:

– Normal cash: The limit will be considered using information such as employment, regular income, profile, financial status and relevant financial documents, etc. Customers must make payment for securities to the agent within 2 working days from the trading day[8]. The agent will pay the customer on the second day after the day of selling securities. Customers can request higher account limit regarding to the agent's account limit policy.

[8] Since TCH will adjust clearing and settlement period to 2 days after the trading day (T+2) from March 2nd 2018 onwards, the use of X sign will be adjusted to 2 days as well.

- Cash balance: The limit varies by the balance in the account, less value of securities bought that has not been paid.

Margin Account

The SET applies credit balance system for the customer who wants to borrow money from the securities company to buy stocks or borrow stocks for short-selling. Margin account increases investment capacity for investors while managing appropriate risk level.

Credit balance system allows customers to borrow to buy securities by considering the customer status and their portfolio rather than cost of each security. The company requires collateral - cash or other assets – valued at least equal to initial margin as indicated by the SET (value of security bought or short-selling x initial margin rate). If cash collateral is more than the borrowed amount, it is called credit balance. The customer will recieve interests from the security company. On the contrary, if the borrowed amount is higher than cash collateral, it is called debit balance. The customer must pay interests to the security company.

Additionally, credit balance account will be marked to market everyday to reflect the changing market price which affects purchasing power of the customer accordingly. If the price of securities in the customer's portfolio is higher, purchasing power will be higher accordingly, and vice versa.

Margin balance is complicated. Customers must be aware that their credit line can be very volatile according to the price of their securities in their margin balance portfolio. Investment consultants of the security company must be aware of the rules and regulations. For example, when the market price of the security decreases less than the collateral value, additional collateral will be required. Forced sale may occur which causes loss for the customer.

4.3 Securities Trading Governance

The SET emphasizes trading governance, fairness, and transparency, including investors protection and relevant parties in security trading to strengthen confidence in the capital market.

4.3.1 The importance of trading governance

One of the SET's mission is to create investors confidence because the securities are traded through the SET system. Sellers and buyers are unknown to each other as well as their trading objectives. Therefore, the SET must ensure fairness, transparency, reliability and correctness to protect investors and all relevant parties. If anomalies persist in the stock market causing unreliability or unfairness in trading, the SET will investigate and consider the responsible parties accordingly.

Trading governance is important to stakeholders including members (brokers), listed companies and the economy of the country as follows:

Importance to members (brokers)

Effective and reliable trading governance attracts more trading transactions and in turn higher value and fees for brokers. Brokers can offer more services and issue more good quality securities analyst reports for their customers.

Importance to listed companies

Good trading governance attracts more companies to be listed on the stock market. Fair and transparent trading will increase confidence in the company that its stock price will truly and effectively reflect its performance and benefit its shareholders.

Importance to investors

Capital market is one of the investment alternatives for people who have extra savings. It can provide return as investors expected. Fair trading and reliable system are important to investor confidence in potential securities trading. This can lead to higher growth and development of the stock market in the long run.

Importance to capital market and the economy of the country

Effective trading governance can strengthen investors confidence in the country's capital market. Savers will be more interested in securities investment or mutual funds (which invest in securities). This will increase wealth of people in the country and in turn lead to economic stability.

Moreover, trading governance plays important role for the country's image of good governance in terms of reliable financial system. This will attract foreign parties to have more business transactions for the country.

4.3.2 Unfair Securities Trading Characteristics

Unfair securities trading characteristics that may lead to breach of rules and regulations can be categorized into 2 parts:

1. Breach of the rules of trading of the SET
2. Breach of law, the Securities and Exchange Act B.E. 2535 (1992)

Actions that violate the SET regulations related to trading

According to the regulations of The Stock Exchange of Thailand (SET) on trading, clearing & settlement, and delivery of securities in the stock market B.E. 2555 dated July 16, 2012, there are criteria relating to **improper trading orders or false market**, which is the nature of the offer to buy or sell securities or the buying or selling of securities that may affect or have affect change or no change on the price/the trading volume of securities, not in line with the normal market conditions. Such actions or characteristics include the trading in the following aspects:

- The buying or selling of securities that causes the opening price or closing price of that security or the SET Index to increase or decrease differently from the normal market conditions.
- The buying and selling of securities where the buyer and seller of that transaction are the same person, or buying and selling securities at the same time or on the same day causing the buying value of the securities of the buyer and the selling value of the seller who is related to the buyer to be the same or nearly the same (wash sales).
- The buying and selling of securities with conspiracy for mutual benefit or benefit from the change or non-change of securities price (pool). Importantly, the conspiracy is to be considered from securities trading behaviour or business relationship or trade relations.

- The buying and selling of securities in a continuous manner, either by the same person or by several persons. The price of securities that change or do not change is advantageous to the investment account status of any person or all persons related in one way or the other (series of transaction). Importantly, such relationship shall be considered from the securities trading behaviour of those persons.
- The buying of securities aiming to prevent other persons from delivering securities in accordance with their obligations arising from such other persons selling securities on SET, or according to the obligations that such other persons have under other lawful agreements (cornering).
- The buying and selling of securities by any person or crime partner spreading the news about any fact which may cause other persons to understand which securities will have a higher or lower price, while such fact has not yet been notified to SET by the person who is obligated to notify (false dissemination). Importantly, such conspiracy shall be considered from the securities trading behavior of those persons, business relationship, or trade relations.

Surveillance and auditing of improper order delivery (false market) that violates the SET regulations, if SET finds out that any action falls into the aforementioned manner, SET will examine and further process the administrative penalties in accordance with the SET regulations.

Actions considered violations of the law (Securities and Exchange Act)

The Securities and Exchange Act B.E. 2535, Chapter 8: Unfair Practices in Securities Trading and the Acquisition of Securities for Business Takeovers in Part 1: Prevention of Unfair Securities Trading Practices states the nature of unfair actions in securities trading, which can be divided into 4 characteristics:

1. The dissemination of news or false statements which may cause misunderstanding likely to affect the price or decision to trade securities in the stock market (misstatement) under Section 240 states that
   "No person shall declare, disseminate or certify false statements or statements that may cause material misunderstandings regarding financial status, performance, stock trading price, or any other information relating to the securities issuers in a way that is likely to affect the price of the securities or the decision to invest in securities."

2. Prohibiting persons who know or possess inside information such as directors, executives, or persons with control over the business, employees or workers, persons in the positions to know inside information from performing his duties, including parents, siblings, spouses, who have unusual trading behaviors, etc., using inside information to buy or sell securities, or entering into futures contracts related to securities (insider trading), or disclose inside information to other persons (inside information), (details are specified in Sections 242-244).

3. Forbidding persons who possess information about the buying or selling orders of any customer of a company to take advantage to use the information to buy or sell before the customer's order, or to disclose information about customer

orders to other persons (front run). According to Sections 244/1 and 244/2, a securities company that operates a securities brokerage business or fund management including the employees or workers of such securities company who know or possess information about the buying or selling orders of securities or futures contracts of any customer of such securities company, all these are prohibited from sending, modifying, or cancelling the order by taking the opportunity to implement before he/she has completed the order for that customer.

4. Creating securities prices or manipulating stocks (market manipulation): According to Sections 244/3, 244/5, 244/6, 244/7, there are regulations prohibiting securities trading in disguise purposely making others to misunderstand about the price or volume of securities trading with the intention to mislead others about the increase or decrease in the price and trading volume of such security, and expecting benefits from the above actions.

4.3.3 Principle and Channels of Supervision

Principle of Securities Trading Supervision

The SET's supervision principle is fair trading for investors and stakeholders. The SET's principle of supervision is different from finding fault. Fault finding is done through monitoring and enforcing the protocol for unusual trading behaviors. However, the SET's supervision is a process of identifying the scope of unusual trading behavior, setting preventive measures and investigating when there are actual unusual trades.

Securities Trading Supervision Channels

Regarding the principle, SET has 2 supervision channels which are

1. Unfair trading prevention
2. Trading investigation

- *Prevention actions*

To ensure transparent and fair trading, the SET has set up preventive measures for breaches of SET's rules and regulations or the law as follows:

1. Measure for inappropriate trading orders

The SET informs and educates member brokers, licensed traders, investment consultants, compliance units, and relevant stakeholders about the good practice and the inappropriate practice that may be characterized as false market. However, if the SET finds inappropriate orders, it will enforce rules and regulations accordingly.

2. Measures to supervise the trading focusing on <u>securities</u>

To prevent risks for investors and the overall securities trading system by supervising the trading of securities where trading conditions have changed without supporting fundamentals, while investors can still trade those securities on certain additional conditions, divided into 3 levels of measures from soft to strong as follows:

Level 1 measures:
• Prohibiting the use of the specified securities to calculate the trading limit, and
• To buy the specified securities by depositing cash in full before buying (or purchase with cash balance account).

Level 2 measures:
• Prohibiting to offset the buying and selling values of the same securities on the same day (no net settlement), and
• Prohibiting the use of specified securities to calculate the trading limit, and
• To buy the specified securities by depositing cash in full before buying (or purchase with cash balance account).

Level 3 measures:

• Temporarily prohibiting trading for 1 business day (only on the first day), when trading is allowed, to continue using the following measures:
Prohibiting to offset the buying and selling values of the same securities on the same day (no net settlement), and
• Prohibiting the use of specified securities to calculate the trading limit, and
• To buy the specified securities by depositing cash in full before buying (or purchase with cash balance account).

3. Measures to supervise trading focusing on <u>individuals</u>

When SET has found the facts and/or evidenced documents which can be believed that any person or group of persons has/have trading behaviour that causes the price and/or the volume of securities trading to change drastically, or having a significant number of trading characteristics concentrated in any particular securities. SET will coordinate with the securities company for the securities company to follow up and add measures to supervise the trading of individuals or such group of persons, for example, considering reducing the credit limit that the securities company sets for the client, prohibiting internet trading but allowing them to send orders via authorized personnel instead, processing for the clients to temporarily purchase securities with a cash balance account, or stopping lending for customers to purchase securities, or any other appropriate measures, etc.

Additionally, the SET has preventive measures on the listed company information. Any of the information having significant impact on trading price and/or volume, for example, rumor of merger and acquisition, company financial performance which is not reported to the SET. The SET requires the company to officially and promptly clarify the information to ensure that investors have complete information and to prevent insider trading.

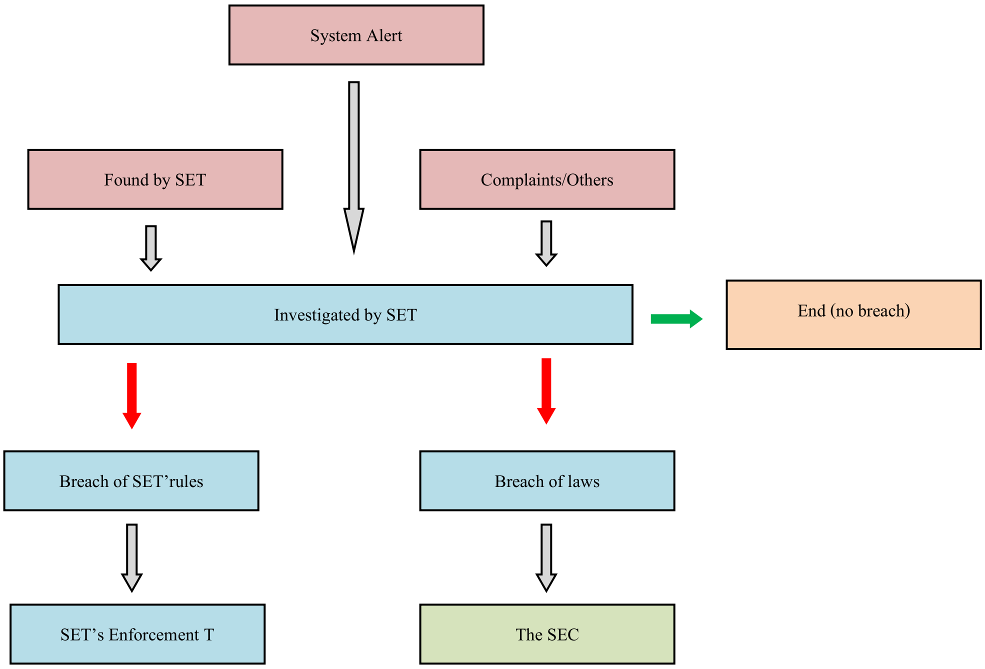
SET's measures regarding correct and prompt information increases efficiency, reliability, transparency and fairness of the stock market in the long run.

- *Trading investigation*

Trading audit is another important approach to supervise trading. If it is found out that any securities company or authorized officer frequently have overall actions that are considered to be improper trading of stocks by the entire company, SET will investigate and submit the matter to the offence consideration and disciplinary action punishment process in the next steps.

In addition, if such activity breaches the SEC's rules and regulations such as the Securities and Exchange Act B.E. 2535 (1992), the Derivatives Act B.E. 2546 (2003), etc., the SEC will be informed and will enforce accordingly.

Figure 4-3 Process of Trading Investigation



Trading investigation can be done through 2 channels:

1. Computerized system
2. Trading transaction analyst

- *Trading investigation through a computer system*

The SET regularly develops and improves the trading investigation computer system to ensure fair trade.

The **W**arning **A**bnormal **T**rading & **C**atching **H**ostile **S**ystem, so called WATCHs, is the investigation system that allows real-time monitoring and past transaction tracing. Its main functions are:

- Display the overall market information (Index) and individual stock such as real-time change in price and volume, etc.
- Detect and alert when price and volume of a stock have unusual movement compared to its historical movement or specific benchmark.
- Search for real-time and historical unusual transactions.

The WATCHs real-time function allows preventive actions to prevent unfair trading. It is efficient and has been used in many countries around the world.

- *Inspection and tracking of trading transactions by using staff to analyse transaction data*

In addition to the information obtained from computerized trading tracking, SET staff may also examine and find out additional unusual actions based on continuous internal monitoring, as well as considering the information obtained from incoming information and/or investors' complaints via SET's whistleblowing channels. After SET has conducted an initial screening and found that the information and/or such securities trading transactions have reasonable grounds to believe that there will be unfair actions in securities trading.

SET shall examine and search for groups of individuals and trading order behaviours at unusual times for such securities to establish facts, such as interpersonal relationships, the securities companies where trading orders are sent from, any other information possible as motive for committing an offense, including any other facts that will be useful and related to auditing, etc. Then, if SET has considered and found out that there was evidence of sufficient weight with motivation to believe in such an offense under the law, the matter will be sent to the Office of the SEC for further in-depth investigation and punishment.

i. Penalties for unfair trading

Penalties for unfair trading which affects other people can be categorized into 2 types: disciplinary actions and legal punishment.

1. Disciplinary actions for breaching the SET's rules and regulations
2. Penalties for breaching the Securities and Exchange Act

Disciplinary actions for breaching the SET's rules and regulations

If breaching of the SET's rules and regulations is found, evidence will be collected and investigated by an appointed committee to proceed with relevant disciplinary actions. The SET mostly proceeds disciplinary actions for member brokers and traders.

The SET is not authorized by law to discipline investors or other people that are not under its supervision. Therefore, disciplinary actions are considered by the appointed committee which could be probation, penalization, and suspension.

Penalties for breaching the Securities and Exchange Act

In the case that the investigation is referred to the Securities Exchange Commission (SEC), and there is sufficient evidence and fact collected to enforce the law against the offender, the SEC Office has 2 means of enforcing the law: civil sanction and criminal proceeding, depending on the severity of the violation, impact on the capital market, evidence and worthiness of proceeding.

If criminal proceeding is appropriate, the SEC will report to an inquiry officer, while civil sanctions will be reported to the civil sanction committee to consider civil penalties. If the committee does not agree, the SEC will report the case to an inquiry officer for criminal proceeding instead. If the committee agrees to proceed civil penalty, the SEC will file a civil suit. The 5 civil penalty measures are as follows:

(1) Civil adjustment.
(2) Payment of fines equal to the benefits received or to be received from committing the offense.
(3) Not being allowed to trade securities or derivatives for up to 5 years.

(4) Not being a director or an executive of a listed company or a securities company for up to 10 years.
(5) Paying the audit fee to the SEC.

In the case where the offender agrees to comply with the civil penalty measures prescribed by the Criminal Code, the offender must agree to make a record of the consent ("Consent Record") with the Office of the SEC. When the penalty is fully paid, the criminal proceedings against the perpetrator will be terminated (learn more about civil penalty measures at www.sec.or.th).

With collaboration of the SET and relevant parties such as securities companies and the SEC, including other organizations in the capital market business, trading investigation is becoming increasingly efficient to ensure transparency, fairness and enhance investor protection which leads to investor confidence in the capital market.

4.4 Relevant Information for Capital Market Securities Investment

4.4.1 Listed company's information disclosure

To provide sufficient information for investors' investment decisions, the SET and the SEC agree to help ensure information disclosed by listed companies are standardized and sufficient (Bor.Jor./Por. 01-00).

Important information includes information that could have a significant impact on a company's securities and the market price, investment decisions, or the interest of shareholders. Information disclosure of listed companies can be divided into 2 types:

1. Financial statements and performance reports for every accounting period (periodic reports)
2. Important information in the case of important events (non-periodic reports)

Financial statements and performance reports for every accounting period (periodic reports)

Listed companies must submit financial and performance reports every accounting period to provide investors with important information for their investment decisions which is also critical information that might affect the stock price. Listed companies must submit financial statements and reports on the company performance to the SEC and the SET within a specific period as follows:

1. Audited quarterly financial statements must be submitted within 45 days from the end of each quarter.
2. Audited and commented financial statements of the accounting period must be submitted within 3 months from the end of the accounting period (if submitting by quarter 4). The company may submit audited annual financial statements within 60 days, instead of filing the quarter 4 financial statements. A firm wishing to do this must give prior notice to the SET within 30 days of the end of the accounting period.

3. One copy of the annual report form (Form 56-1, One report), to be submitted within 3 months counting from the end of the accounting period, containing

information on important developments of listed companies in the past year, such as the structure and operation of the group of companies, risk management, driving business toward sustainability, management discussion and analysis (MD&A), corporate governance policy, including financial statements. In addition, the listed companies shall disseminate this annual report via SET's electronic information dissemination system.

Required documents attached with financial statements:

(1) Complete financial statements
(2) Summary of company performance (F45)
(3) Interim analysis and explanations of the management (Interim MD&A) in case the company has income or net profit different from the same period of the previous year, more than 20%

Important information by event (non-periodic reports)

Important event information is divided into 3 types according to the urgency & importance of the information that affect the price of securities:

• Information or data subject to immediate disclosure

consists of information that meets one of the following criteria:

- **Significantly affect the buying or selling price of the Company's securities**
- **When such information is considered important to investors who use the results of information analysis of analysts or experts to make investment decisions**
- ***When such information has effect on or will affect the rights & benefits of the shareholders***

In this regard, the information or data must be reported without delay when the following events occur (According to the regulations Bor Jor/Por 11-00), for example:

- To schedule the date of the shareholders' meeting
- The date for specifying the names of shareholders for any rights (record date) / book closing date (to notify 14 days in advance before the record date / book closing date)
- Acquisition/disposition of assets, connected items
- Capital increase/reduction, issuance of new securities
- Share repurchase/selling of repurchased shares
- Paying/not paying dividends
- Major commercial acquisition or loss
- Providing financial assistance to other persons or juristic persons
- Default of financial institution debt, or default on payment, or not able to comply with legal obligations regarding the issuance of debt instruments

- Resignation of Managing Director / Board of Directors or Audit Committee, as a group altogether
- Change of manager or equivalent position under different names, or change of directors more than half of the total number of directors
- Being placed under receivership order by the court, or any other reasons with similar nature
- Applying for business rehabilitation to the Bankruptcy Court, and when having any action or progress related to the business rehabilitation petition

• *Information to be delivered within 3 working days*

SET specifies that listed companies disclose information by reporting to SET within 3 business days counting from the date on which the following events occur, for example:

- Head office relocation
- Change of director/auditor
- Highest responsible person in accounting and finance/accounting supervisor
- The listed company having changed the securities registrar, or the office location of the securities registrar

• *Information that must be submitted to be kept as evidence*

SET specifies that the listed company deliver the information for keeping as evidence within 7 working days, for example:

- Submission of directors' profiles
- Submission of profiles of the Audit Committee (F24-2)

The information to be kept as reference within 14 working days, for example:

- Minutes of the shareholders' General Meeting or Extraordinary General Meeting
- Shareholding distribution report

Table 4-4 Types of Information and Schedule of Disclosure Period

Type of information	Disclosure period (from the date of the event)	Example
1. Information about the operation of the company or information that affects the trading price of the company's securities on investment decisions or on shareholders' benefits.	**Immediately** (within the day of the event. The report must be ready at least 1 hour before each securities trading round. In the case that the listed	- Schedule the date of the shareholders' meeting - The date for specifying the names of shareholders for any right - Acquisition/disposition of assets, connected items - Capital increase/reduction, issuance of new securities

	company is unable to disclose information within such period, the listed company shall disclose information at least 1 hour before the 1st securities trading round on the next business day)	- Share repurchase/selling of repurchased shares - Paying/not paying dividends - Major commercial acquisition or loss
2. Information that does not directly affect but should be disseminated to keep investors informed	within 3 working days	- Head office relocation - Change/Replacement of directors/auditor
3. Information that SET must compile as evidence for further reference	within 7 days	- Submission of profiles of directors - Submission of profiles of audit committee members (F24-2)
	within 14 days	- Minutes of the shareholders' General Meeting or Extraordinary General Meeting - Shareholding distribution report

4.4.2 Stock Index disseminated by The Stock Exchange of Thailand (SET)

Significance and Types of Stock Index

The stock price index is a statistical value developed for use as an indicator that reflects the overall movement of the stock buying and selling price levels, showing the current price levels compared to the past levels, the ups and downs, on the date the price index was calculated (the base date) or other previous dates. It can also be used as a benchmark to measure the performance of mutual funds, and as reference factors in issuing derivatives or various financial instruments.

Each stock exchange in countries around the world has stock index for both retail and institutional investors to use as reference for making investment decisions. Such price index of the listed securities may be prepared by the stock exchange or other related organizations. The stock price indices therefore have a variety of specific names according to the name of the index's creator or according to the criteria used in the indexing. Each stock exchange may have only one stock index as a reference, or may have more than one underlying index, depending on the composition and development of each stock exchange, including the needs of investors in such stock market.

The calculation of the stock price index can be carried out in many ways. Each method has different assumptions and calculation criteria. In general, the calculation of stock price index can be categorized into 4 methods[9]:

1. Price-weighted index

Index calculation is to divide the total price of all securities by the total number of securities.

$$\text{Stock price index} = \sum_{t=1}^{n} \mathrm{P}_{it} / \mathrm{D}_{adj}$$

The index's denominator (D_{adj}) may need to be adjusted when any security has the adjustment of the number of shares due to some corporate actions. In some cases, such as a stock split or stock dividend, the denominator of the index must be adjusted.

For this price index, the securities with the highest price will have the greatest influence on the value of the price index. This is a limitation of this index type since it gives priority to high-priced stocks over lower-priced stocks. Examples of this type of price index are the Japanese Nikkei 225 and the US Dow Jones Industrial Average (DJIA).

2. Equally weighted index

The equally weighted price index considers that all securities are equally weighted regardless of their price or market value. The total market value of each stock does not matter, due to the assumption of creating the index that the amount invested in buying each stock is equal at the beginning of the period.

The change in index value is calculated by taking an arithmetic mean (average) or geometric mean of the percentage change in a share's price or share value (or stock returns) included in that index. Here are some examples for better understanding:

If there are 3 securities: A priced at THB 18, B priced at THB 35, and C priced at THB 50, on the initial calculation date, specifying that the Index = 100.

If the price of all 3 stocks changed to A priced at THB 19, B priced at THB 40, C priced at THB 56, the arithmetic average percentage change of all 3 stocks will be as follows:

{[(19 - 18) / 18] + [(40 - 35) / 35] + [(56 - 50) / 50]} / 3 = 10.61%. The arithmetic average percentage change will be multiplied by the initial index, and the next day's index will be 100 + (100 x 10.61%) = 110.61.

9 Study the calculation of stock price indices from Chartered Financial Analyst Institute (CFA), Equity and Fixed Income, CFA Program Curriculum 2018, Level 1, Volume 5, Wiley, pp. 83-91.

By using a percentage change in price, it enables the difference between high-priced stocks and low-priced stocks or difference in market caps not significant since each percentage change has the same weight.

Examples of such indices: Value Line Index and Financial Times Ordinary Share Index Composite of the United States, using the geometric mean of the percentage change in stock prices (or stock returns) in calculating the change in the index.

The limitation of using this type of index is that it treats each stock in the index as equally important, which means giving more weight unproportionately to securities of small businesses which generally create less investment opportunities than large businesses.

3. Market capitalisation-weighted index

The principle of calculating the market capitalisation-weighted price index is to calculate the total market value of the stocks currently in the index, compared to the total market value in the past day. The rate of change in the market value reflects the change in the value of the index. The equation used in the calculation is as follows:

$$\text{Stock price index} = \frac{\sum P_t Q_t}{\sum P_b Q_b} \times \text{initial index value}$$

by which,
P_t = closing price of the stock on that day
Q_t = total number of shares on that day
P_b = closing price of the stock at the base date
Q_b = total number of shares at the base date

The advantage of using a market capitalisation-weighted price index is that it is not necessary to adjust any value affected the impact on the stock price in the event of a stock split since the market value will be adjusted automatically by the increase in the number of shares. However, the limitation of using the market capitalisation-weighted value is that a change in the market value of large company stocks will have a greater impact on the index's change compared to a change in the market value of smaller company stocks based on the same percentage.

Examples of this types of price index are Thailand's SET Index, Hong Kong's Hang Seng Index, Singapore's Straits Times Index, and USA's NYSE Index, etc.

4. Fundamentally weighted index

Fundamentally weighted stock price index is the use of various fundamental factors of securities, such as book value, cash flow, income, profit, dividend, number of employees, or free float, to add as constituents to calculate the index. This makes today's stock price index more diverse and complex, while minimizing the disadvantages of the influence of the market capitalization of large companies on the market capitalisation-weighted price index.

In addition, the index is also calculated in the form of a total return index, which reflects all types of returns on securities investments, inclusive of returns resulting from changes in the value of securities (capital gain/loss), the rights to subscribe shares, and dividends.

SET's Indices

The SET Indices (SET Index series) consist of indices that are established by itself and those established by collaboration of the SET and its partners (partner indices). SET index series consist of price index, reflecting price of stocks included in the index calculation, and total return index, reflecting all kinds of return from stock investment - capital gain/loss, rights, and dividends.

SET Index series consist of

- *SET Index*

SET Index is a market capitalization-weighted index used to reflect overall SET market movement (composite index). It was established on April 30, 1975 with an initial value at 100 points. The base value is adjusted when situations occur such as new listings, delistings, capital increases or decreases, stocks moving between markets, stocks included in or excluded from the calculation.

- *Industry group index and sector index*

Industry group index and sector index are market capitalization-weighted indices. They include stocks in specific industry groups or sectors and exclude stocks that are on suspension (carry the SP sign) for more than 1 year. The base value of each industry group index and sector index is 100 points. The base value is adjusted when situations occur, similar to that of the SET Index, and when a stock is moved to a different industry group or sector.

To facilitate investors in comparing stocks within the SET and with other stock exchanges to make investment decisions, the SET has categorized stocks into sectors since 1991 and included similar sectors into industry groups on January 1, 2004. At present, the SET has 8 industry groups and 28 sectors.

Table 4-4 The SET Industry Structure (8 industries) and Sectors (28 Sectors)

Industry	Sector Name (English)	Abbrev. Index
Agro & Food Industry [AGRO]	Agribusiness	AGRI
	Food & Beverage	FOOD
Consumer Products [CONSUMP]	Fashion	FASHION
	Home & Office Products	HOME
	Personal Products & Pharmaceuticals	PERSON

Industry	Sector Name (English)	Abbrev. Index
Financials [FINCIAL]	Banking	BANK
	Finance & Securities	FIN
	Insurance	INSUR
Industrials [INDUS]	Automotive	AUTO
	Industrial Materials & Machinery	IMM
	Packaging	PKG
	Paper & Printing Materials	PAPER
	Petrochemicals & Chemicals	PETRO
	Steel	STEEL
Property & Construction [PROPCON]	Construction Materials	CONMAT
	Construction Services	CONS
	Property Development	PROP
	Property Fund & REITs	PF&REITs
Resources [RESOURC]	Energy & Utilities	ENERG
	Mining	MINE
Services [SERVICE]	Commerce	COMM
	Media & Publishing	MEDIA
	Health Care Services	HELTH
	Tourism & Leisure	TOURISM
	Professional Services	PROF
	Transportation & Logistics	TRANS
Technology [TECH]	Electronic Components	ETRON
	Information & Communication Technology	ICT

- *Indices for stocks with specific selection criteria*

SET50 Index

The SET50 Index is a market capitalization-weighted index. It is calculated from the value of 50 stocks with the highest market capitalization which must also have consistently high liquidity and high trading value. The list is reviewed every 6 months in June and December of each year.

The SET50 Index was established and assigned a base value of 1000 points on August 17, 1995. It is re-calculated when certain situations occur, similar to the SET Index calculation. A stock on suspension (carrying the SP sign) for 20 consecutive trading days or more may be excluded from the SET50 Index.

SET100 Index

The SET100 Index is a market capitalization-weighted index, calculated from the value of 100 stocks with the highest market capitalization, which must also have consistently high liquidity and high trading value. The first 50 stocks are the same stocks used in the SET50 index calculation. The SET100 index list is reviewed at the same time as the SET50 Index.

The SET100 Index was established on May 3, 2005 with a base value of 1,000 points and, similar to the SET Index, re-calculated when certain situations occur. Moreover, stocks on suspension (carrying the SP sign) for 20 consecutive trading days may be removed from the SET100 Index.

SETHD (SET High Dividend 30 Index)

SETHD is a fundamentally weighted index, consisting of 30 common stocks with high market capitalization, liquidity and dividends. Stocks to be included in the list are reviewed at the same time as those of the SET50 Index and the SET100 Index. SETHD includes stocks in the SET100 Index with no more than 85% dividend payout ratio for the last 3 years consecutively. Forty stocks will be arranged by dividend yield and the first 20 stocks with the highest dividend yield will be included in the SETHD. Then, stocks ranked 21^{st} - 40^{th} which were included in the previous SETHD would be included. Finally, the rest will be considered until there are 30 stocks in total.

SETHD was established on July 4, 2011 with a base value of 1,000 points and, similar to the SET Index, is re-calculated when certain situations occur.

sSET Index

The sSET Index is the new index of the SET. It reflects the movement of common shares that are not included in the SET50 Index and the SET100 Index. This group of shares has stable liquidity and complies with requirements regarding the distribution of shares to minor shareholders. The sSET Index was established in January 2017.

mai Index

mai Index is a market capitalization-weighted index reflecting mai market movement (composite index) established on September 3, 2002 with a base value of 100 points. It is re-calculated when certain situations occur, similar to those of the SET Index.

Total Return Index

The total return indices established by the SET reflect all types of stock market returns including capital gain/loss, rights, and dividends (assuming that those dividends are reinvested in the stock). The total return indices are SET TRI, SET50 TRI, SET 100 TRI, SETHD TRI, mai TRI, and Industry TRI.

SETESG Index

Currently, the long-term investment approach in the more advanced markets has increasingly focused on investing in companies operating towards sustainability by taking into consideration the environmental, social and governance (ESG) factors. Investors will include this in their investment decisions while analysing the company's financial data.

In line with this approach and to respond to investors' needs, SET has therefore prepared a list of sustainable stocks called SETESG Ratings as an alternative for investors who want to invest in stocks of listed companies with outstanding ESG aspects. In addition, SET also aims to support listed companies with sustainable business operations, embracing the stakeholders in both social and environmental aspects, with management process to create sustainability for the organisation, such as risk management, supply chain management and innovations development.

Significantly, the SETESG Index has been created to reflect the price movement of securities of companies with business operations in a sustainable manner, with the size and liquidity that meet the specified criteria.

- The eligible stocks must be in the latest SET ESG Ratings.
- The eligible stocks must have the minimum average daily market capitalization at 5,000 million Baht for the past 3 months. For the stocks selected according to Criteria for Changing of Constituent between the Periodic Review and traded for less than 3 months, the average daily market capitalization from the first trading day will be considered.
- The eligible stocks must maintain their free-float of no less than 20% of the listed company's paid-up capital, by considering the latest data in the index review period.
- The eligible stocks must have a monthly turnover ratio of at least 0.5% of its total listed shares for at least 9 out of the 12 months, or at least three-fourths of the trading period but not less than 6 months for stocks traded less than 12 months. However, the turnover ratio will exclude the months that such security was included in the Market Surveillance measure list.

All stocks that have passed the above criteria will become SETESG Index constituents. The maximum weighted capped per securities is 5% and the index has an initial value of 1,000 points.

SET Well-Being Index (SETWB Index)

SETWB Index is an index that reflects the movement of a group of 30 securities in 7 sectors, consisting of: Agribusiness, Commerce, Fashion, Food & Beverage, Health Care Services, Tourism & Leisure, and Transportation & Logistics, which are business sectors that Thailand has the potential and competitive capabilities, and attractive to foreign investors. The growth of these businesses boosts the expansion of Gross Domestic Product (GDP), resulting in income generation for people in the country, while uplifting the Thai people's quality of life.

The securities that are constituents of SETWB Index must be profitable in at least 2 of the last 3 years when considering consolidated financial statements, with ratio of minority securities holders (free-float) not less than 20% of the paid-up capital, having the number of shares traded of not less than 0.5 percent of the company's registered shares for at least 9 out of 12 months, as well as having the highest market capitalization in the top 30. SETWB Index was launched on April 1, 2019 with an initial index value of 1,000 points.

SETCLMV Price Index (SET CLMV Exposure Index)

SET CLMV Exposure Index is an index that reflects the price movement of securities of companies earning income from CLMV countries (Cambodia, Laos, Myanmar, and Vietnam). The income from CLMV countries is considered based on the latest information disclosed by listed companies and provided to SET. This includes details of sources of income that listed companies disclosed in their annual financial statements, annual report (Form 56-1), and information that SET has received from a survey of listed companies' information.

The securities that are constituents of the SET CLMV Exposure Index must have income from CLMV countries (Cambodia, Laos, Myanmar, and Vietnam) at least 10% of the company's total income, or having a value of not less than THB 100 million. The securities shall have a market capitalisation of not less than THB 5 billion, with free-float ratio of not less than 20% of the company's paid-up capital. The number of shares traded is not less than 0.5 percent of the company's registered shares for at least 9 out of 12 months. There is no limit on the number of constituents in this Index.

FTSE SET Index Series

Moreover, the SET has collaborated with FTSE Group, which has experience and expertise specializing in establishing and managing indices and relevant information, to develop and establish FTSE SET (FTSE SET Index Series) which will help raise Thai capital market indices to an international level and to serve investors both locally and internationally.

Indices in the FTSE SET Index Series are free-float adjusted market capitalization indices. Stocks included must pass liquidity and free-float screening. The list is reviewed every 6 months, similar to the SET50 Index.

FTSE Group has calculated and set the base value at 1,000 points and launched the Index on February 29, 2008. Stocks on suspension (carrying the SP sign) for 20 consecutive trading days may be excluded from the calculation.

Table 4-5 Details of the FTSE SET Index Series

Index Name	Detail
FTSE SET Large Cap Index	The first 30 stocks of the SET main board that meet the criteria
FTSE SET Mid Cap Index	The first 90% of stocks on the SET main board that meet the criteria and are not included in FTSE SET Large Cap Index
FTSE SET Small Cap Index	The first 98% of stocks on the SET main board and are not included in FTSE SET Large Cap Index, or FTSE SET Mid Cap Index
FTSE SET All- Share Index	All stocks in the FTSE SET Large Cap Index, FTSE SET Mid Cap Index, and FTSE SET Small Cap Index
FTSE SET Mid/Small Cap Index	All stocks in the FTSE SET Mid Cap Index, and FTSE SET Small Cap Index
FTSE SET Fledgling Index	Stocks on the main board that are too small to be included in the FTSE SET All-Share Index
FTSE SET All-Share Industry Indices	This is a classification of securities according to Industry Classification Benchmark (ICB), consisting of 10 industry group indices, 19 super sector indices, and 39 sector indices.
FTSE SET Shariah Index	Stocks included in the FTSE SET All-Share Index are selected by Yasaar Limited (Islamic financial advisor company with expertise in investment in accordance with Islamic Law and has a Shariah Board) which will ensure the stocks meet Shariah criteria and do not breach the Islamic Law through business activity screening and financial ratio screening. Business activity screening Companies with the following businesses will be excluded: 1) Non-Islamic financial and insurance institutions 2) Businesses related to alcoholic drinks 3) Products related to pigs/pork 4) Entertainment business: casino, gambling, cinema, music, pornography and hotels 5) Businesses related to tobacco 6) Businesses related to weapon production or trading financial ratios screening 1) Must have debt ratio less than 33%. 2) Ratio of cash and interests to total assets must be less than 33%. 3) Ratio of account receivable and cash to total assets must be less than 50%. 4) Ratio of total interests and other revenues that do not meet Shariah principle to total assets must be less than 5%.

FTSE ASEAN Price Index (FTSE ASEAN Index Series)

FTSE ASEAN Index Series is an index inaugurated under the first-ever cooperation program of seven ASEAN stock exchanges, consisting of the Malaysian Stock Exchange (Bursa Malaysia), Indonesia Stock Exchange, The Philippines Stock Exchange (PSE), Ho Chi Minh Stock Exchange, Hanoi Stock Exchange, Singapore Stock Exchange (SGX) and The Stock Exchange of Thailand (SET). The objective is to create products under the brand "ASEAN" to stand out as an attractive market for investment.

The index series are calculated in both Price Return and Total Return and show results in real-time (only FTSE/ASEAN 40) and end-of-day prices. FTSE ASEAN Index Series consist of:

• FTSE ASEAN All-Share is an index to measure investment performance of large, medium and small-sized companies of all 7 ASEAN stock exchanges.

• FTSE ASEAN All-Share Shariah is an index that reflects listed companies operating in accordance with Islamic principles, screened & chosen by Yasaar. Securities are selected from the FTSE ASEAN All-Share Index.

• FTSE ASEAN Sector is an index calculated from FTSE ASEAN All-Share Index classified by industry according to the definition of Industry Classification Benchmark.

• FTSE/ASEAN 40 is an index calculated from the prices of 40 securities with the highest market capitalisation in ASEAN.

• FTSE ASEAN Stars is an index consisting of 30 large-sized companies (except for Vietnam: 15 from the Ho Chi Minh Stock Exchange, and 15 from the Hanoi Stock Exchange), selected by the stock exchange of each country, on the basis of market capitalisation criteria, for a total of 180 companies to use as a reference for measuring investment results.

4.4.3 Trading statistics

The SET information services provide real-time and historical market statistics (SET/mai/BEX/TFEX) and information of listed companies including news, financial statements, major shareholders list, boards, committees, shareholder benefits, etc. The SET provides information services to member brokers, local and international data vendors, newspapers, educational institutions, funds, government, and investors for commercial, non-commercial, and investment purposes.

Data is processed and developed by the SET to ensure reliable, correct, up-to-date, and user-friendly information delivered through various services to meet customer needs. The SET's services help customers save time and costs in collecting and processing data.

Types of Published Data

Published data can be categorized into 2 types based on how the data is used.

- *Raw data (data feed)*

Intraday trading information and news (real time / delayed)

This is an intraday service regarding trading information and news delivered directly from the trading system, consisting of data on trading prices of individual securities in the stock market and derivatives market, and the SET Index, in real-time and 15-minute delayed formats.

Closing prices of securities and indices at end-of-day, including historical data

This is a service regarding information on closing prices of stocks and stock indices at the end of the working day, including historical data of SET and Thailand Futures Exchange PCL (TFEX), consisting of:

- **Equity market information**

- Closing price of the day, and key statistics for each security, securities indices, and market overview separated by types of investors
- Information on the volatility of changes in securities prices compared to securities indices in The Stock Exchange of Thailand (Beta)
- Daily trading overview of each member company
- Overview of foreign stock holdings
- Information on major shareholders and the percentage of minority shareholders (% of free float)
- Information on voting stocks and treasury stocks
- SET's database of information since the market first opened (1975): trading prices, news, financial statements, and listed companies
- Information and basic details of each listed company, such as corporate action, name change, and shareholders' information, etc. dated back since the stock market was opened for operation.

- **Derivatives market information**

- Closing price information at the end of the working day of Thailand Futures Exchange PCL (TFEX), consisting of closing price information at the end of the day, important statistics by series, and market overview separated by investor types
- TFEX's trading price database, dated back since the market opened for operation (2006)

SMART Marketplace

This is an online SET and TFEX data service that provides access to data via application programming interface (API) for system developers to access and use data more conveniently, consisting of:

- Intraday trading data in SET and derivatives market in file format
- Detailed information of securities or derivatives that will be traded on the next business day
- Annual report data (One report) in the form of structured data, consisting of information on business operations and performance, corporate governance, and financial statement
- Sustainability information of listed companies, consisting of sustainability information in environmental, social and corporate governance (ESG) dimensions
- Corporate Action information of listed companies

• Group of information with systems developed by SET for further applications

This service is named "SETSMART" (SET Market Analysis and Reporting Tool), consisting of 3 types:

SETSMART for Investor

A website for investors that displays data in real-time form and 5-year historical data, consisting of stock trading prices, derivatives, and securities indices. In addition, the information on the website also contains information about mutual funds, listed companies, financial statements, important statistical data, and various postings of signs related to listed companies.

SETSMART for Corporate

A website for organisations or institutions that displays data in real-time data and historical data, consisting of trading prices of securities, derivatives, and securities indices. In addition, the information on the website also contains information about mutual funds, listed companies, financial statements, important statistical data, and various postings of signs related to listed companies. The data are divided into 3 types: Professional, Advance and Multi-market, with details as follows:

	SETSMART-Professional	SETSMART-Advance	SETSMART-Multi Market
Received data	• SET data • Mutual Fund data	• SET data • Mutual Fund data	• SET data • Futures market data • Mutual Fund data
Historical data	• SET data in the past 5 years • Mutual Fund data in the past 5 years	• SET data dating back since 1975 • Mutual Fund data during the past 10 years	• SET data dating back since 1975 • Historical TFEX data since 2006 • Mutual Fund data during the past 10 years

SETSMART Enterprise

It is a database system with SETSMART program for installation at the service recipient's location, with historical data, consisting of trading prices of securities, derivatives, and securities indices. In addition, the information on the website also contains financial statements, important statistical data, and various postings of signs related to listed companies. The data are divided into 2 types: SETSMART Enterprise and SETSMART Enterprise Multi-Market, with details as follows:

	SETSMART Enterprise	SETSMART Enterprise Multi-Market
Received data	SET data	• SET data • Futures market data
Historical data	SET data since 1975	• SET data since 1975 • Futures market data since 2006

4.4.4 Analyst Reports

Analyst report elements

Tables and data

First page

- Summary table of historical financial performance (at least 2 years) and forecast (at least 3 years), such as revenue, EBIT, net profit, net profit margin, number of shares, EPS, EPS growth (%), DPS, dividend payout (%), net debt/equity, EBIT/I, DSCR, FCFF, free cash flow/share, EBITDA, EV/EBITDA, P/E, P/BV.
- Important information of the stock and the company such as recommendation, price target, market capitalization, average daily turnover, 52-week high/low or whatever available, Beta, 5-10 major shareholders, CG score, etc. Users should concentrate on the consistency

of information and the logic of the analysis. For example, if the price target is lower than the market price, the recommendation should NOT be "buy".

- Investment recommendation: buy, sell, or hold, and supporting reasons. A good analyst report should provide logical analysis, and be able point out both opportunities and risks of the business in the medium term (3 years) and long term (5 years).

<u>In the report</u>

- Historical financial statements (at least 3 years) and pro-forma financial statements (at least 2 years)
- 3 Important financial statements
  - Income statement should include important ratios such as gross margin, net margin, ROE, etc.
  - Balance sheet should include important ratios such as current ratio, D/E ratio, etc.
  - Statement of cash flows should include important ratios such as operating cash flow/dividends, operating cash flow/CAPEX, etc.
  - There should be a brief summary of the financial ratios reflecting liquidity, profitability, ability to repay, and growth rate.
  - Financial information can be presented quarterly to reflect the company's performance year-on-year and in each quarter compared to the same quarter of the previous year.
- Important statistical information of the core business of the company should be explained and illustrated to show trends, for example
  - Retail business: same store sales growth, number of branches
  - Coal business: average market price, sale quantity, average costs
  - Healthcare: average medical fee, number of Thai and international patients, number of beds, etc.

<u>Content</u>

Most analysts' reports are written to point out important situations as such the financial statements, adjustments in assumptions such as oil price and interest rates, and new information retrieved from company visits. This part of the report should:

- explain the situation and assess how it may impact the company.
- adjust forecasted numbers such as revenues and EPS which may be affected by the situation (In the case that there are new factors affecting the forecast, analysts should refer to the previous recommendation or previous target price). A good analyst report should always consider the investment theme (idea).
- provide clear and sensible assumptions for the adjusted price target such as GDP, interest rates, USD/THB, raw materials' prices, etc. Analysts should apply assumptions consistently. If assumptions are altered, there should be valid explanations as frequent adjustments may lead investors to question the standpoint of the analyst, along with the analyst's knowledge, and standard of the report (Analysts must also present potential risks that may affect the target price).

- date the target price (such as indicate that the price is for the end of this year or having already adjusted the target for the next year). In cases of rapid business change such as dramatic growth, analysts may also adjust the target price to reflect the status or business value.
  - Analysts should explain how they calculate the target price such as using the P/E ratio, DCF, DDM, etc., and should include assumptions and sources of data used such as beta, median P/E ratio, WACC, etc.

In the case of an in-depth analysis such as the first coverage report for a stock (coverage initiation), the following information should be summarized within the first page of the report:

- Earnings or key drivers of the company such as product margin, oil price, increase of backlog, raw material costs in the case of petrochemical businesses, etc. Note: Initial coverage or coverage for an IPO company should include details of the industry, the company's business, shareholding structure, the analysis of factors affecting the company such as using the five forces analysis in the medium term and long term.
- Industry outlook and sufficient peers comparison within local and international markets which allow a more precise earnings outlook
- All analyses must be based on sensible and logical assumptions which will lead to more precise target price. Risk factors affecting the target price in the future should also be considered.
- Sensitivity analysis: The target price should be presented in best, base, and worst-case scenarios along with the probability of each scenario. This includes causes and assumptions used in forecasting revenue and risks associated with each scenario (optional but better if provided to increase reliability of the report).
- All of the information will lead to logical and reliable recommendations.

An in-depth analyst report must also provide tables and information as explained earlier.

4.4.5 Capital Market Investment Tax

Tax is an economic activity that is involved in our daily lives both directly and indirectly such as paying VAT when buying products and services, and paying the annual automobile tax, etc. Like other activities, investors have to pay tax to the government if the investment yields income, except for income that is tax exempted. Information on tax related to investment can be categorized into 2 cases: investors who are ordinary persons and investors who are juristic persons. Each case has details as follows:

Table 4-6 Tax for Thai Investors and Foreign Investors working in Thailand

Type of investment income from the stock market	Tax Rate

Capital gain	
• Ordinary person • Juristic person	• Tax exempted • No withholding tax but must be included as revenue to calculate corporate income tax at the relevant tax rate
Dividend	
• Ordinary person	• 10% withholding tax (dividends from listed or limited companies) • 10% withholding tax or included as revenue for income tax calculation (dividends from mutual funds) • Tax exempted (dividends from the companies with BOI promotion)
• Juristic person	• 10% withholding tax if the taxpayer is not a listed company • Tax exempted if the tax payer is a listed company and holds the stock for no less than 3 months before dividend payment and 3 months after that from Thai companies or mutual funds • Tax exempted if the taxpayer holds at least 25% of shares of the company paying dividend for 3 months before dividend payment and 3 months after that and the company is not a shareholder of the taxpayer company • Tax exempted (dividends from the companies with BOI promotion)

Table 4-7 Tax for Foreign Investors not working in Thailand

Type of investment income from the stock market	Tax Rate
Capital gain	
• Ordinary person • Juristic person	• Tax exempted • 15% withholding tax
Dividend	
• Ordinary person • Juristic person	• 10% withholding tax • 10% withholding tax

Summary

The SET trades securities through the trading system called SET CONNECT with the capacity to handle large amount of transactions. The system meets international standards and allows High Frequency Trading. Trading must be only executed through SET members by their authorized officers who are licensed by the SET.

The two trading methods are automatic order matching: AOM and trade report. AOM manages trading orders on the basis of price then time priority. Trade report allows buyers and sellers to negotiate the deal and record the transaction in the system.

The SET has criteria about price, types of order, trading hours, as well as signs carried by a stock regarding shareholders' benefits, conditions and situations that may impact the listed companies. These criteria help increase investors confidence in the correctness and effectiveness of the trading system.

In addition, in the situation of severe market volatility, there is circuit breaker to allow investors to thoroughly investigate information that impact their investment decisions. In case of computer malfunctions which prevent normal trading, the SET has protocols and backup plans to maintain continuity of market trading.

As security trading is done through the SET system, buyers and sellers are unknown to each other. Therefore, the SET supervises and governs to ensure fairness, transparency, reliability, and correctness by adopting 2 channels which are

1. Prevention of unfair trading
2. Trading investigation

Unfair trading behaviors lead to 2 types of violations which are breaching of the SET's rules and regulations which penalties can be probation, penalization, and suspension; and breaching of the law, the Securities and Exchange Act B.E. 2535 (1992), in which the offender may face criminal proceedings and civil sanctions depending on the consideration of the appointed committee of the SEC about the severity of the violation, impact on capital market, evidence and worthiness of the proceeding measures.

It is very important for investors to have information to make investment decisions. Relevant information include:

1. Operating information of the listed company or information affecting the stock price, investment decision or shareholders' interests.
2. Price information and past trading statistics.
3. Stock price index to reflect price movement to be a benchmark for assessing mutual fund performance and as an underlying asset of derivatives or other financial products.

4. Listed company analyst report

Marketing officers of a securities company must know sources of these information, period of information release, and their quality to inform investors.

Chapter 4 Appendix

The sample of the analyst report is contributed by Mr.Surachai Pramuancharoenkit, Maybank Kim Eng (Thailand)

(Not available in English)

Section 2: Fixed Income

5. Fundamental Knowledge of Fixed Income

Required Readings

1. Product Knowledge
    - Chapter 5: Fundamental Knowledge of Fixed Income

      (Available in Thai only. See learning objectives and suggested readings as a guideline)

Learning Objectives:

1. Explain concept and significance of fund raising from fixed income.
2. Explain roles and usefulness of fixed income market.
3. Explain meaning, significance and usefulness of fixed income investment.
4. Explain meaning and significance of fixed income.
5. Compare the differences of fixed income and equities.
6. Explain characteristics and composition of fixed income.
7. Explain and distinguish types of fixed income.

Suggested Readings

- *Financial instruments : equities, debt, derivatives, and alternative investments (David M. Weiss, 2009) – Chapter 5: Debt Markets*
- *Capital Markets: a Global Perspective (McInish, T.H., 2000) Chapter 2: Secondary Markets, 7: Debt Securities*
- *Analysis of investments and management of portfolios (Frank K. Reilly, Keith C. Brown, 2012) – Chapter 17: Bond Fundamentals*

6. Valuation and Returns

Required Readings

1. Product Knowledge
    - Chapter 6: Valuation and Returns

      (Available in Thai only. See learning objectives and suggested readings as a guideline)

Learning Objectives:

1. Link the relationship between value and price of fixed income.
2. Explain concepts of value valuation of fixed income.
3. Explain relationship between rate of return and prices of fixed income.
4. Calculate value of coupon bond.
5. Calculate value of zero coupon bond.
6. Explain concepts and be able to calculate rate of return of fixed income investment.
7. Explain effects from factors affecting to prices of fixed income.
8. Link relationship between various factors affecting investment return in fixed income.
9. Explain meaning and usefulness of yield curve.
10. Distinguish characteristics of each type of yield curve.
11. Apply yield curve to investment decision.

Suggested Readings

- *Analysis of investments and management of portfolios (Frank K. Reilly, Keith C. Brown, 2012) – Chapter 18: The Analysis and Valuation of Bonds*

8. Risks of investment in fixed income

Required Readings

1. Product Knowledge
    - Chapter 7: Risks of Investment in Fixed Income

      (Available in Thai only. See learning objectives and suggested readings as a guideline)

Learning Objectives:

1. Explain meaning and be able to distinguish types of risks relating to investment in fixed income.
2. Explain concepts and usefulness of risk evaluation of fixed income.
3. Explain concepts and distinguish fixed income credit ratings by reliable credit rating agencies.
4. Explain meaning of credit ratings of fixed income.
5. Explain meaning, characteristics, and limitation of duration.
6. Explain relationship of factors affecting duration.
7. Apply the use of duration in fixed income investment.
8. Explain characteristics and risks of bill of exchange (B/E).
9. Identify differences between bill of exchange and bond.
10. Explain usefulness of fixed income to portfolio risk diversification.

Suggested Readings

- *Portfolio construction, management, and protection (Robert A. Strong, 2009) – Chapter 12: Bond Pricing and Selection*

8. Trading Fixed Income in Thailand

1. **Required Readings:**
   1. Product Knowledge
      - Chapter 8: Trading Fixed Income in Thailand

        (Translation available)

Learning Objectives :

1. Explain issuing process and selling of government bond.
2. Explain issuing and offering process of debentures.
3. Explain characteristics, process and mechanisms of trading fixed income in the over-the-counter (OTC) markets.
4. ~~Explain mechanisms of trading fixed income in authorized exchange (Thailand Bond Exchange: TBX).~~ (deleted)
4. Explain characteristics and mechanisms of repurchase market.
5. Distinguish types of participants in fixed income market.
6. Explain characteristics and usefulness of bond index**.**
7. Compare differences of each type of bond index.
8. Explain characteristics and usefulness of bond index.
9. Explain the use of prospectus.
10. Identify sources of information of fixed income**.**
12. Apply the information of fixed income investment for investment consulting.
13. Explain types of taxable investment income of fixed income.
14. Calculate tax burden from fixed income investment.
15. Distinguish differences between tax burden of domestic and foreign investment.

*Note: An unofficial translation of the Thai text book: Product Knowledge: **Plain Products – Chapter 8**. The translation is intended to facilitate a reader to understand contents of the book but not to be used as a reference. TSI is not responsible for the correctness and completeness of the translation. Please refer to the Thai version for accuracy and reference.*

Chapter 8
Trading Fixed Income in Thailand

8.1 Primary Market for Debt Instruments

The primary market for debt instruments takes place when the debt issuer wants to raise capital, and sells the debt instrument to investors for the first time. The issuing process for debt instruments can be classified into processes for government bonds, for state owned enterprise bonds, and for corporate bonds as follows.

8.1.1 Issuing and Offering Process of Public Sector Debt Instruments

Procedures and Regulations for Bond Issuance

- *Government Bonds and Bank of Thailand Bonds* - Agencies responsible for issuing such bonds are the Ministry of Finance and the Bank of Thailand. The Bank of Thailand is in charge of the auction for both government bonds and Bank of Thailand bonds. The Bank of Thailand will announce and release the monthly auction schedule at end of each month and investors can access the information on the Bank of Thailand's website and the Ministry of Finance's website. After that, the issuer will submit the announcement and auction schedule to the Thai Bond Market Association to assign bond symbols and bond types for each issuance so that referencing during the auction will be easier in both primary and secondary markets.

- *State Owned Enterprise Bonds* - The Public Debt Management Office (PDMO) is in charge of the auction for both state owned enterprise bonds that have and do not have guarantee from the Ministry of Finance. The PDMO will announce and release the auction schedule on behalf of the issuer and investors can access the information directly from the PDMO's website. However, since each organization may issue the bond at varying times, the timing of the announcement and auction schedule cannot be fixed. After the announcement, the Thai Bond Market Association will gather information of the bond being auctioned to assign bond symbols which is the same as the process for government bonds and Bank of Thailand bonds.

As for the issuing and offering of state owned enterprise bond, including public sector bond, with no guarantee from the Ministry of Finance will be supervised by the Securities and Exchange Commission (SEC) which uses the same issuing and offering process as the private sector debt instruments but specific risks, for example, the principal and interest of the debt instrument is not guaranteed by the Ministry of Finance, will be disclosed.

Bond Offering

- *Government Bonds and Bank of Thailand Bonds*

▪ <u>Auction of Government Bonds and Bank of Thailand Bonds</u> Bond offering, including treasury notes and Bank of Thailand's bills in the primary market can be divided into 2 methods; auction and placement through dealers. Most public sector bonds are offered via auction with the Bank of Thailand being responsible for the auctioning. There are 2 types of auctioning system, which are;

1. **Competitive Bidding:** The Bank of Thailand uses a "multiple price / American auction" which is to allocate bonds to the bidder with the lowest yield offer first and then to the next bidder with higher yield offer until the orders are completely filled. This system will result in multiple bond yields (and prices). The bond issuer will specify a list of eligible bidders which will mostly include various financial institutions and institutions with deposits at the Bank of Thailand.

2. **Non-competitive Bidding:** This is an auction system allows non-profit organizations to invest such as foundations, co-ops, and charitable organizations who intend to invest in the primary market but lack the capability to compete in the competitive bidding.

In a non-competitive bidding investors or potential investors must submit its intention to the financial institutions who are appointed as the Ministry of Finance outright primary dealer. Allocation of bonds for non-competitive bidding investors will not exceed 20% of bond value offered at each auction. The investors' average yield will be equal to the average yield of the same bond type in a competitive bidding.

▪ <u>Subscription of Government Bonds and Bank of Thailand Bonds</u>

1. **Institutional Investors:** Institutional investors with intention to invest in government bonds and Bank of Thailand bonds in the primary market but are

not eligible to do so, can contact any auction-eligible financial institution to bid on its behalf or engage in proxy bidding.

2. **Individual Investors:** As in the case of institutional investors, individual investors can contact any auction-eligible financial institution to bid on its behalf. However, this is rarely the case since financial institutions set a very high minimum order for proxy bidding and the bidding price may be higher than institutional investors' bidding price.

Regardless, individual investors can invest in bonds that are allocated to general public directly. These bonds are saving bonds issued by the Ministry of Finance and the Bank of Thailand. Saving bonds are issued to promote savings. Investors who are eligible are Thai citizens or resident of Thailand and non-profit organizations. For each round, the bond issuer will assign a commercial bank and/or Government Savings Bank to be its dealer.

State Owned Enterprise Bond

- Auction for State Owned Enterprise Bond: The Public Debt Management Office is in charge of State Owned Enterprise Bond auctions based on full commitment and use a "common price / Dutch auction" resulting in a single price of each auction. All bonds will be allocated to a single bidder who offers the lowest yield. Thus, the yield of that corresponding State Owned Enterprise Bond will be determined by the winning bidder.
- Subscription of State Owned Enterprise Bond: State Owned Enterprise Bonds are sold via appointed dealers such as Export and Import Bank of Thailand and/or Secondary Mortgage Corporation.

8.1.2 Issuing and Offering Process of Private Sector Debt Instruments

According to the Securities and Exchange Act, issuing and offering of private securities must be authorized by the Securities and Exchange Commission of Thailand (SEC) where the authorized securities must meet the requirements set by the SEC. According to the Securities and Exchange Act B.E. 2535, the term "securities" includes the following 10 items as follow;

1) treasury bills

2) bonds
3) bills as specified by the SEC
4) shares
5) debentures
6) investment units which are instruments or evidence representing the rights to the property of a mutual fund
7) warrants to purchase shares
8) warrants to purchase debentures
9) warrants to purchase investment units
10) any other instruments as specified by the SEC, which are debentures and securities bills with the following definitions

According to the Securities and Exchange Act, “debenture” refers to any debt instrument of whatever name excluding bills, divided into units, each with equal value and a predetermined rate of return, issued by any company to a lender or purchaser, representing the right of the holder of such instrument to receive money or other benefits.

“Bills” means bills of exchange or promissory notes used by private companies or public companies or registered legal entities issued to raise funds from the public, or bills that are issued by corporations to raise capital. Such bills exclude those issued to pay for merchandise, those issued to financial institutions to borrow funds with a non-transferable message, or those that have Ministry of Finance’s aval for the lender, the issuer or as the unconditional guarantor in full for both the principal and interest.

Procedures and Regulations for Issuing Private Sector Debt Instruments

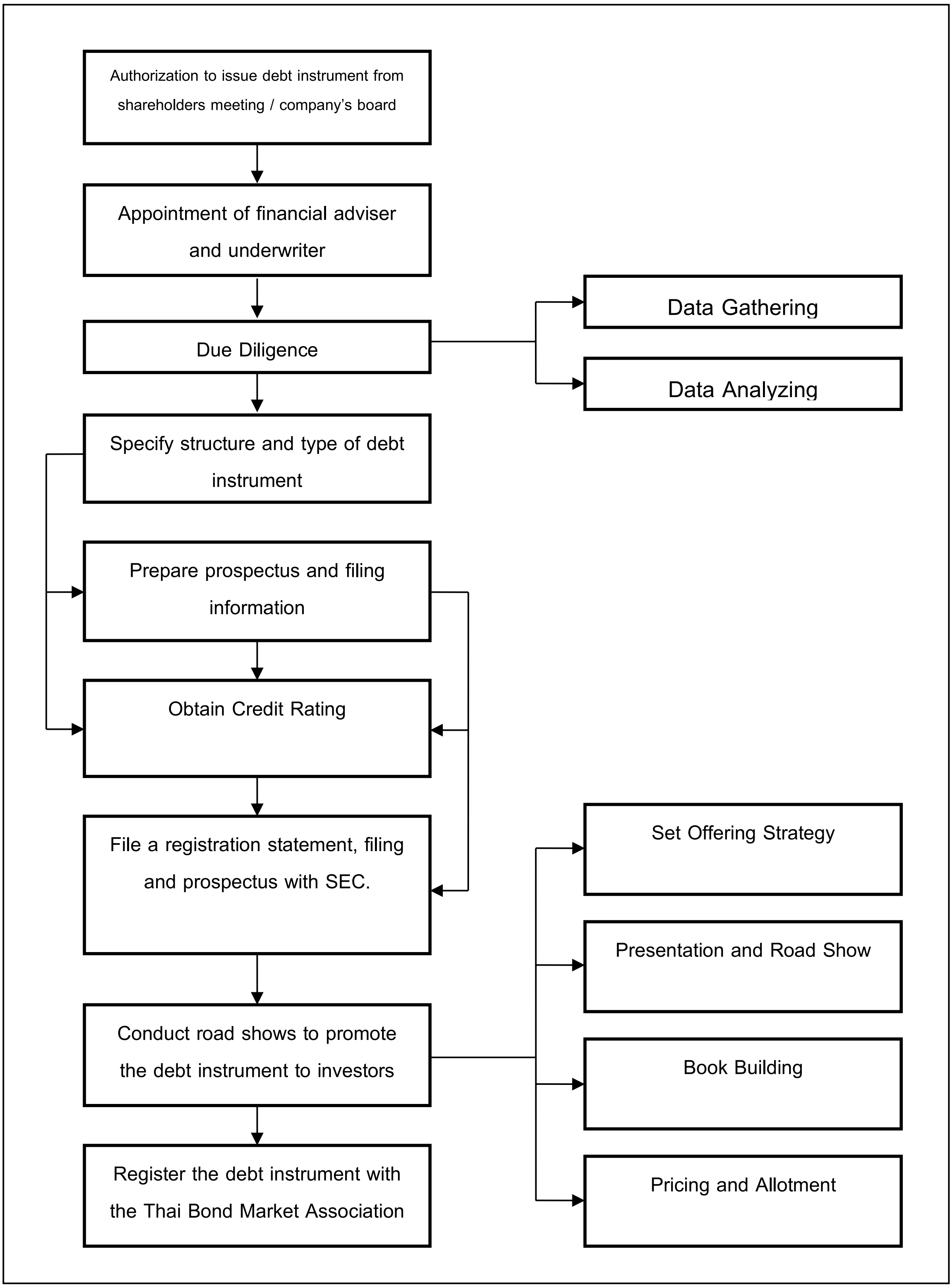
Procedures for issuing private sector debt instruments can be summarized into 9 steps as follows:

1. Authorization to issue debt instrument from the shareholders meeting (for debentures) or company’s board (for bills)
2. Appointment of financial adviser and underwriter
3. Conduct due diligence
4. Specify structure and type of debt instrument
5. Prepare prospectus and filing information

6. Obtain credit rating
7. File a registration statement, filing and prospectus with the SEC
8. Conduct road shows to promote the debt instrument to investors
9. Register the debt instrument with the Thai Bond Market Association

For better understanding, procedures of issuing private sector debt instruments outlined above can be summarized in a diagram with detail in figure 8-1

Figure 8-1 Procedure of issuing private sector debt instruments



Types of Bond Offering for Private Sector Debt Instruments

The SEC has two types of bond offering for private sector debt instruments; Public Offerings (PO) and Private Placement (PP).

- *Public Offering: PO* is an offering of debt instruments to individual investors whereby the issuer must have the bond rated and file a registration statement and investor prospectus with the SEC in order for the debt offering to be authorized. This process is to protect individual investors and ensure that they have adequate information to make informed investment decision.
- *Private Placement: PP* can be further divided into two categories, which are, placement to institutional investors (II) and placement to high net worth investors (HNW)

As for private placement where the offer is made to less than 10 investors (PP10), debt issuers are not required to have the bond rated, and neither is required to disclose filing information and investor prospectus. Hence, the offering of this type of debt instrument is subject to higher risk and may lack adequate information to analyze. As a result, this type of offering is suitable for investors with good knowledge of the debt issuer, good understanding of securities analysis, and able to handle the risk.

8.2 Secondary Market for Debt Instruments

The secondary market for debt instruments is a market where buyers and sellers can trade debt securities after they have been traded in the primary market. In Thailand, the secondary market for debt instruments can be categorized into 2 types as follows:

8.2.1 Over-the-Counter Market: OTC

Trading Debt Instruments in the Over-the-Counter Market

As noted above, debt instruments in the secondary market are mostly traded through Over-the-Counter Market: OTC which can be further classified into 2 main types.

- *Dealer to dealer* - debt instruments are bought and sold among the dealers which are financial institutions with debt securities trading licenses. They are, for example, commercial banks and securities companies. There are 2 types of transactions; directly with debt securities dealers or through an interdealer broker: IDB.
- *Dealer to client* - debt instruments are traded between dealers and institutional clients such as financial institutions with no debt securities trading license, mutual fund companies, insurance companies, government pension fund office, and social securities fund office.

Trading Procedures in the Over-the-Counter Market

Trading procedures in the Over-the-Counter market begins when a trader makes the bid and offer. The price of debt instruments in Thailand is mainly based on the yield to maturity. To make a bid or offer, the buyers can directly submit the required yield directly to the dealer or investor via various channels such as by telephone or computer programs. In general, each transaction will be negotiated to obtain the best possible price where the price will depend on many factors such as size of the transaction and liquidity of the corresponding debt type.

In the event that the traders do not wish to reveal themselves, the traders may use the service of the interdealer broker who will serve as the intermediary gathering the bid and offer price of its clients and announce them via a voice box, a communication device that an interdealer broker installed for its subscribing members. Buyers and sellers' identities will not be disclosed in trading through interdealer brokers until the transaction is finalized. Once the transaction is finalized, the interdealer broker will notify the buyer and seller to proceed with payment and delivery.

At present, the Thai Bond Market Association is in charge of gathering data of transactions made in the secondary market. There are 3 types of transaction as follows;

1. **Outright transaction** is a transaction with no recourse. In general, payment and delivery will be made within 2 days (T+2). However, the buyer and seller may set an alternative payment and delivery date.

2. **Financing transaction** is a transaction with intention to buy back by using debt securities as a collateral for the fund obtained.
3. **Other transaction** is a transaction not classified as either outright transaction or financing transaction. For example, a transaction to fulfill forward or option contracts, or a transaction to be paid and delivered later than 4 days (T+4).

Payment and Delivery in the Over-the-Counter Market

Once a trade has been agreed in the secondary market, payment and delivery will be made according to the agreed date. There are two types of payment and delivery; one for public sector bond and one for private sector bond.

1. Government bond and public sector bond: The Bank of Thailand serves as the registrar for all debt instruments in this group. The instruments include treasury bills, government bonds, Bank of Thailand bonds, government owned enterprise bond guaranteed by the Ministry of Finance (exclude those not guaranteed by the Ministry of Finance). After a transaction has been agreed in the OTC market, all payments and deliveries are now handled by the Thailand Securities Depository: TSD.

2. Private sector debentures: Currently, there is no one-stop payment and delivery clearing house for debentures but most payment and delivery for scripless debentures are done through Thailand Securities Depository (TSD), the same as the public sector debt instruments. Script debentures will be endorsed and sent to the registrar of the corresponding debentures.

However, newly issued debentures nowadays are all scripless due to their convenience, swiftness, and lower storage and distribution cost, as well as higher efficiency in payment and delivery, and that it also enhances securities' liquidity.

Trading Debt Instruments through Marketing Representatives

Like institutional investors, individual investors can buy and sell debt instruments in the OTC market by making the transaction through a representative at any financial institutions with bond trading licenses, which can be either commercial banks or securities companies. In addition to these channels, the Thai Bond Market Association has developed a website called Bond Mart to facilitate licensed financial

institutions in posting bid prices and offer prices to individual investors. Interested investors can access bid price and offer price information at
www.thaibond.com/bondmart
Unfortunately, compared to institutional investors, investors buying and selling through these channels may have price disadvantage since individual investors have less negotiating power and smaller volume than institutional investors.

8.2.2 Repo Market of Debt Securities

The Importance of Repo Market

The repo market of debt securities is fundamental to the development and efficiency of the debt market in a country. The objective of the repurchase transaction is to manage low rate short-term loans. This is because the repo rate in general is lower than the money market rate since it is a loan with collateral and allows the lender to reap rewards from excess liquidity. Repurchase transaction is a tool to promote liquidity in debt markets which will help create an equilibrium in the financial system and ensure that the financial system and its economic development does not out grow one another.

Moreover, the repurchase transaction is one of the key mechanisms used by the Bank of Thailand to conduct its monetary policy in order to manage liquidity and maintain stability of the short-term money market rate.

Nature and Types of Repurchase Transaction

A repurchase transaction, also known as repo, is an agreement between the securities seller and buyer where the “securities sellers” agree to sell the securities to the “securities buyers” with a contract to buy back the underlying securities on a pre-determined date and price. This transaction is equivalent to a short-term loan with the securities being used as collateral where securities sellers are the “borrowers” while securities buyers are the “lenders”, and the traded securities is the collateral. As for the predetermined repurchase price, it is the price that the securities seller sold to the buyer plus the borrowing rate (repo rate), or basically, the principal plus the borrowing rate. In general, securities commonly used in repurchase transactions are low risk debt securities such as government bonds, Bank of Thailand bonds, and state owned enterprise bonds with Ministry of Finance guarantee.

8.3 Participants in the Debt Market in Thailand

8.3.1 Debt Issuers

The Ministry of Finance

The Ministry of Finance is an organization responsible for public finance, taxation, and others related to the country's revenue-generation including effectively monitoring monetary and fiscal policy. At the same time, the Ministry of Finance is a primary bond issuer in which its bond (such as treasury bill and government bond) has the most outstanding value in the debt securities market. The Ministry of Finance issues treasury bills or bonds through The Public Debt Management Office which is a sub-organization under the Ministry of Finance.

Bank of Thailand

Bank of Thailand manages the country's monetary policy, monitor the financial market and financial institutions, and acts as the financial representative of the government. The Bank of Thailand also issues bonds such as the Short and Long-Term Bank of Thailand bond in order to carry out its operation in the financial market.

State Owned Enterprise

State Owned Enterprises are government organizations responsible for issuing state enterprise bonds in order to raise funds to facilitate State Owned Enterprise projects. State owned enterprise bonds may or may not be guaranteed by the Ministry of Finance.

Corporations

Private companies are corporations who issue corporate bonds in order to raise capital from investors and the general public to use in business expansion.

8.3.2 Debt Traders

Debt Traders are financial institutions that have debt securities trading licenses. These financial institutions must have qualifications as required by the Securities and Exchange Commission (SEC) and can be commercial banks or securities companies. For debt trading, the SEC stipulated that financial institutions that have trading licenses must appoint a responsible person who must have debt trader license and is registered with the Thai Bond Market Association (Thai BMA).

8.3.3 Debt Brokers

Debt Brokers are brokerage companies licensed by the SEC to facilitate the buying and selling of debt securities to investors.

8.3.4 Underwriters and Financial advisors

Underwriters

Underwriters means companies who have securities underwriting licenses from the SEC and is responsible for administrating the debt issuance and facilitating the distribution of the debt to investors. The underwriter will buy the newly issued debt securities from the corporation and totally or partly resell them to the public. In addition, the underwriter may join the debt auction and distribute them later. Being the distribution channel to investors, the underwriter receives trading fees or other type of commissions. Three different types of debt trading agreement can be summarized as follows

1. **Firm commitment**: The underwriter will guarantee to purchase all of the debt securities being offered for sale by the issuer regardless of whether or not they can sell them to investors. In general, the distribution of debt securities in Thailand is conducted by this type of agreement.
2. **Best effort**: The underwriter will put the best effort to sell all of the debt securities. However, the underwriter does not need to purchase all debt securities that cannot be sold to investors. In general, the underwriter will have this type of agreement when it is uncertain that all securities will be sold.

3. **Standby commitment:** The debt issuer might have an agreement with the underwriter to purchase the remaining debt securities in case there is no right holder to resell them.

Financial advisors

Financial advisors refer to financial institutions approved by the SEC to provide consulting services, give opinions and prepare documents and information related to debenture public offering, listing on the SET, business rehabilitation plan, to present to the SEC, the SET, debt holders and the public. The list of companies approved by the SEC and more details on financial advisors can be found in the SEC's website.

8.3.5Debt Investors

Debt investors refer to persons who buy and sell debt securities in the secondary market, consisting of retail investors (or called individual investors) and institutional investors. The main objective of trading is for long- term investment. However, investors might change their investments if there are changes in the expectation of future interest rates. Debt investors can be classified into two groups as following.

Retail investors

In general, retail investors refer to individual investors who buy and sell securities by themselves. However, for certain types of retail investors who have the capability and readiness to take higher risks than general investors, the SEC has grouped them into two groups to allow those with investment knowledge, strong financial status and have capability to take investment risks, to invest in more complex products with an acceptable risk level and with appropriate protection such as unrated bonds, mutual funds for non-retail investors, etc. This group of investors are classified in two groups as follows.

1. High net-worth investors:

- An individual who has net assets of at least 50 million baht or annual revenue of at least 4 million baht or investment portfolio of at least 10 million baht (a portfolio of at least 20 million baht if deposits are included). This can be considered jointly with the spouse.
- A corporation that has at least 100 million baht in shareholder's equity according to the latest audited financial statements, or an investment portfolio of at least 20 million baht (a portfolio of at least 40 million baht if deposits are included)

2. Ultra high net-worth investors:

- An individual who has net assets of at least 70 million baht or annual revenue of at least 10 million baht or investment portfolio of at least 25 million baht (a portfolio of at least 50 million baht if deposits are included). This can be considered jointly with the spouse.
- A corporation that has at least 200 million baht in shareholder's equity according to the latest audited financial statements, or an investment portfolio of at least 40 million baht (a portfolio of at least 80 million baht if deposits are included).

Institutional investors

Institutional investors are major investors in the debt market, both in the primary and secondary market. Institutional investors as defined by the SEC are as follows:

1. Bank of Thailand
2. Commercial Banks
3. Specialized Financial Institutions
4. Finance Companies
5. Credit Foncier Companies
6. Securities Companies
7. Non-Life Insurance Companies
8. Life Insurance Companies
9. Mutual Funds

10. Private fund for special major investors, major investors or institutional investors
11. Provident Fundห
12. Government Pension Funds
13. Social Security Funds
14. National Savings Funds
15. The Financial Institutions Development Fund (FIDF)
16. Future Exchange Business according to future exchange regulation
17. Agriculture Futures Exchange Business according to agriculture future exchange regulation
18. International Financial Institutions
19. Deposit Protection Agency
20. The Stock Exchange of Thailand
21. Corporations
22. Corporations that investors no. 1-21 above hold more than 75% of total voting shares
23. Foreign investors with the same qualifications as investors in no.1-22
24. An individual who is registered as a fund manager or a futures exchange investment manager.
25. Other investors as the securities exchange commission prescribes

8.3.6 Regulatory authorities and supervisory agencies

The Securities and Exchange Commission

The Securities and Exchange Commission or SEC is responsible for supervising and developing the capital market for both primary and secondary market in Thailand. This includes controlling debt securities trading to ensure transparency and fairness, setting the policies, rules and regulations, provide supervision, promotion and development in areas as summarized below:

1. **Supervision on securities business:** The SEC is responsible for supervising securities businesses such as securities brokerage, securities

trading, investment consulting, underwriting, mutual fund management and private fund management, etc.

2. **Securities issuance and public offering:** The SEC is responsible for verifying and approving securities issuance and public offering to ensure accuracy, completeness and adequacy of the issuer's disclosed information to protect the interest of investors. In addition, the SEC is also responsible for setting rules and regulations to supervise securities trading and to govern related supporting entities such as debenture holders' representatives, registrar, and credit rating agency, etc.
3. **The Stock Exchange of Thailand, Thailand Securities Depository, and related securities business entities:** The SEC has a role to set main policies and approve major regulations for entities related to the debt market such as The Stock Exchange of Thailand and Thai Bond Market Association, etc.
4. **Prevention of Unfair Securities Trading Practices**: The SEC is empowered to verify complaints, investigate the offense, and proceed legally by impose fines or accusations.

The Ministry of Finance

The Ministry of Finance (MOF) is responsible for public finance management and being a debt securities issuer as stated earlier. In addition, the MOF also has a responsibility to appoint financial institutions as major traders for the MOF or the Ministry of Finance Outright Primary Dealer (MOF Outright PD). The purpose of the primary dealers is to create liquidity in the debt market and to be an intermediary to communicate with investors to expand the base of both local and international investors. Meanwhile, the MOF also has its own unit, which is directly responsible for the debt market, called Public Debt Management Office (PDMO). The PDMO is responsible for proposing policies and strategies for managing public debt, which should be consistent with the goals and guidelines prescribed in the National Economic and Social Development Plan, government policies, fiscal position, and commitment to the public debt in the country and abroad.

In addition, the PDMO is also responsible for efficiently managing public debt, developing public debt database, analyzing debt structure, and forecasting the government's financial need. This is to help formulating policies, preparing for loan disbursement and debt repayment, developing and improving the commitment and the public debt management, and developing the debt market in Thailand. Besides, the PDMO also participates in formulating policies and guidelines about the government's debt securities issuance.

Bank of Thailand

The Bank of Thailand not only issues debt securities, but is also responsible for supervising and controlling the money market, financial institutions and being the financial representative of the government. The BOT also has an important role in contributing to the development of financial instruments and the financial markets with relevant authorities. The BOT will provide advice for debt management, and issuance of government's debt securities in the primary market, and act as the representative for the sale of government bonds and the government's debt securities registrar. Furthermore, the BOT has a committee, who formulates direction and monitors the implementation of monetary policy, called the Monetary Policy Committee (MPC).

The Monetary Policy Committee comprises of seven members, which include three BOT's executives and four external members. The BOT Governor will act as Chairman. The MPC's scope of responsibilities is clearly identified in the BOT Act, as follows:

1. Formulating a goal for the country's monetary policy by taking into account the government's policies and the country's economic and financial environment.
2. Formulating policy for exchange rate management under the exchange rate system specified under the authority of the Currency Act.
3. Formulating necessary measures to achieve the goals and policies as set out in (1.) and (2.).
4. Monitoring the BOT's implementation measures as set out in (3.) to ensure the accuracy and efficiency of these measures.

Thai Bond Market Association (ThaiBMA)

Thai Bond Market Association is mandated as the sole information center to facilitate debt trading both in the primary and secondary market. It also collects and disseminates pricing information and trading volume of registered debt securities. Thai BMA also gathers opinions from all participants in the debt market. The role and responsibilities of the ThaiBMA can be summarized as follows;

1. Be the Self Regulatory Organization (SRO) that supervises and oversees the conduct of debt securities traders, who are registered with ThaiBMA as its member, in order to ensure that the rules and code of conduct are followed, and the debt trading is fair.
2. Be the center to disseminate information about the debt securities market in Thailand such as registered debt securities, trading data in the secondary market, and other reference data about debt securities investment, etc.
3. Formulate and publish the fair value of debt securities. This published fair value will be used as the reference price of debt securities in the debt market and used to calculate institutional investors' net asset value for debt securities such as mutual funds and provident funds.
4. Formulate trading standards and guidelines in the secondary market such as the standard for symbols, standard formula for calculating value of debt securities, and guidelines for trading on holidays.
5. Develop the debt securities market and disseminate knowledge on debt securities. ThaiBMA takes part in enhancing market development by being a developer of investment analysis tools related to debt securities investment such as yield curves, government bonds, bond indices, bond pricing calculation tools. Meanwhile, ThaiBMA also disseminates knowledge on debt securities through training and seminars.

8.3.7 Organization and Other related parties

Credit Rating Agency

The Credit Rating Agency is responsible for the quality and risk rating of both the debt securities and debt securities issuer. The rating will be evaluated by considering the issuer's ability to repay principal and interest based on the set time and conditions. The establishment of credit rating agencies in Thailand must be approved by the SEC. At the present, there are two agencies in Thailand; Thai Rating and Information Services Co., LTD (TRIS), the first domestic credit rating agency in Thailand, and Fitch Ratings (Thailand), an international credit rating agency who expanded its business to Thailand.

In general, credit ratings will be shown as an English letter, starting with the highest rating AAA to the lowest rating D. The credit rating is an important factor for investors to consider before they decide to invest in any debt securities, especially private debentures.

Thailand Securities Depository and Clearing House

Thailand Securities Depository and Clearing House acts as a securities depository and withdrawal center, which includes debt securities. The TSD is also responsible for maintaining members' accounts and providing related services from clearing, settlement, securities transfer to securities borrowing or lending. In Thailand, there is a securities depository called Thailand Securities Depository, which provides full services including settlement services for debt securities trading in the OTC market.

Registrars

Registrars, such as the Bank of Thailand, financial institutions, or Thailand Securities Depository, are responsible for preparing and keeping record of the Register Book that contains details of securities and securities holders to ensure the information is accurate, complete, and up-to-date. The registration services include securities transfer, securities pledge, delisting of securities, seizing of securities, changes in securities registrations, new securities certificates issuance, closing of the registration book, dividends (in case of equity securities) or interest payment to the securities holders as of the book closing date, other related services and facilitating securities holders to verify their securities registrations or requests for copies of the registration.

In case of debt securities, which the registrar is depends on who the debt securities issuer is. For all types of government bonds, the Bank of Thailand is the registrar. For private debentures, the issuers are responsible for registration services or they can also appoint the securities depository or financial institutions to be the registrar.

Bondholder's Representative or Trustee

For debt securities offering, bondholder's representatives must be appointed to be responsible for investors' general benefits. Bondholder's representatives must be stable financial institutions with no conflict of interests. The role and responsibilities of bondholder's representative can be summarized as follows:

1. For secured debentures, bondholder's representative must ensure that the debenture issuer does not take any actions that cause assets used as collateral to have less value than what is specified in the debenture issuance or take any actions on collateral property which results in loss for debenture holders.
2. When the debentures default, which means the issuers fail to pay back the principle or interest, or fail to meet conditions of capital for redemption (if any), the bondholder's representative must hold a debenture holder's meeting to request for a resolution to perform any action specified in the terms of use and the appointment contract of bondholder's representative.
3. In case that the debenture issuer does not comply with other terms of use, which are not related to the default of debentures explained in No. 2, and loss occurs, the bondholder's representative will be responsible for claiming loss.
4. In case that the debenture issuer does not comply with the terms of use, the bondholder's representative must inform the debenture holders about his or her actions and the results of actions.
5. When loss is claimed, collateral is forced, or repayment is forced, the bondholder's representative must collect and distribute the property

accurately and completely to the debenture holders according to their proportion. Therefore, the bondholder's representative must prepare lists and details of all properties, expenses and property distribution.

Custodian

The custodian is responsible for safeguarding securities and other assets and monitoring and tracking benefits from these assets such as dividends, interests, and other rights. The custodian must be approved by the SEC and could be a financial institution, finance company, securities company, insurance company, or a specialized financial institution.

8.4 BOND INDEX

8.4.1 Types and Benefits of Bond Indices

Bond index is a tool for investors to track overall changes in the bond market or groups of classified bonds. There are many types of bond indices depending on their tracking objectives or type of returns intended to measure from that class of bond. Benefits of a bond index can be summarized as follow;

1. A tool to track changes in the bond market since the index is computed from various bond prices in the market where price movement is an indication of changes in market interest rates.

2. Can be used as a comparison tool or a benchmark to measure the outcome from bond investment by comparing returns from the bond index with returns from the portfolio. However, to use the bond index as an investment benchmark, the type of bond index must match the nature of the investment. For example, for a portfolio that invests only in government bonds with maturity of less than 3 years, the appropriate bond index is the 1-3 Year Government bond index.

3. A tool to compare movement and return among different financial markets or asset classes, for example, the stock market, bond market, money market and commodities market. Additional comparisons can be made with other market information such as risk and volatility within the money market.

4. An important tool for the development of newly developed transactions or financial products such as bond index futures and bond index options.

8.4.2 Types of Bond Indices

There are many types of bond indices. Investors using bond indices to benchmark their investment returns or track changes in bond prices should have a good understanding of index's characteristics, compositions and methodology first in order to pick an index that is most suitable for the investor's needs.

Bond indices can be classified using various criteria, but in general, they are classified into three main categories;

Classified by Purpose of Use

- *broad-based bond index* is a bond index used to track overall changes in bond prices by using all classes of bond in the market to compute the index. However, some specialized bonds such as option-embedded bonds or convertible bonds may be excluded.
- *specialized bond index* is a bond index used to track changes in prices of a particular group of bond in order to consider investment return on some types or a particular type of bond, for example, a bond index consisting of only the top ten government bonds with highest liquidity, or a bond index of on-the-run bonds, or a bond index of investment grade private sector bonds.
- *customized bond index* is a bond index specially developed to serve a particular purpose or objective, or bond investment policy of an investor or groups of investor in order to support decision making or evaluate investment outcome from that particular group of bonds.

Classified by Calculation Method

- *clean price index* is a bond index that does not include accrued interest of bonds in the calculation, therefore, the changes in this particular index come only from changes in price and remaining maturity of the bonds.
- *gross price index* is a bond index that includes accrued interest to the bond price when calculating the index, therefore, the changes in this index comes from three factors; changes in price, changes in maturity, and changes in accrued interest. This

index is used to measure investment return that reflects changes in bond's price and accrued interest.

- *total return index* is a bond index that includes accrued interest and coupon payments in the index calculation. This index is most suitable for long-term investors or investors who intend to reinvest the coupon payments.

Classified by Other Criteria

Bond index classification based on bond selection can be divided into 3 types, as below.

- *all- bond index* is an index that uses all bonds in the market in the calculation, with exception of some bond types such as callable bonds, convertible bonds, or bonds paying floating interest rate.
- *tracker index* is an index that uses a group of bonds to represent the market based on some selection criteria, such as market value, turnover, bid-ask spread, liquidity, and credit rating, to create a basket of bonds for index calculation.
- *bellwether index* is an index that covers only highly liquid bonds and therefore may be suitable for some groups of investors such as foreign investors who prefer to invest in highly liquid bonds. Bonds that make up this basket for index calculation may not be based solely on turnover, but also on the number of market makers as well as bid-ask spread and market value.

8.4.3 **Bond Indices Produced and Published by Thai Bond Market Association**

Thai Bond Market Association or ThaiBMA has produced various types of bond indices to be used as benchmarks for different bond submarkets according to a wide range of investors portfolio styles. ThaiBMA has developed all-bond indices based on the standards of the European of Financial Analysts Societies (EFFAS). Currently, ThaiBMA has developed and published a total of 7 bond indices as follows;

Composite Bond Index

Thai Composite Bond Index is an index that tracks investment returns of all bond types in the Thai bond market. The purpose of this bond index is to track movement of bond investments in the entire Thai bond market. The index is computed from government bond index, state owned enterprises (guaranteed and without guarantee by the Ministry of Finance) bond index, and investment grade corporate bond index.

ThaiBMA Government Bond Index

Government Bond Index is an index that tracks movement of all government bonds. In addition to an all-classes government bond index, ThaiBMA has developed five additional sub-class government bond indices based on remaining maturity:

1) With maturity from 1-3 years
2) With maturity from 3-7 years
3) With maturity from 7-10 years
4) With maturity longer than 10 years
5) With maturity less than or equal to 10 years

Since most bond investment portfolios are maturity-based, a maturity-based bond index will provide investors with a more detailed and better tracking and benchmarking tool for different investment policies.

Zero Rate Return Index (ZRR index)

Zero Rate Return (ZRR index) is an index tracking return of portfolio with bonds of constant maturity. For example, a ZRR 3 Index is intended to track a portfolio of bonds with constant maturity equal to or approximately 3 years. Therefore, this type of index is best suited as a benchmark for portfolios with bonds of constant maturity.

State Owned Enterprise Index

State Owned Enterprise Index is an index tracking investment return in state owned enterprise bonds where the bonds used in the index calculation included those with and without guarantee from the Ministry of Finance. Like the government bond index, ThaiBMA also developed five additional sub-class state owned enterprise bond indices based on remaining maturity.

Investment Grade Corporate Bond Index

Investment Grade Corporate Bond Indices can be divided into two groups; corporate bonds with at least BBB ratings and corporate bonds with at least BBB+ ratings, in order to provide a more detail performance tracking of corporate bonds. In addition to these two groups, ThaiBMA has developed three additional sub-class corporate bond indices based on the following maturities;

1) With 1-3 years maturity
2) With 3-7 years maturity
3) With 7-10 years maturity

Short-Term Government Bond Index

Short-Term Government Bond Index is an index tracking investment returns of risk-free short-term debt securities by creating a basket with short-term bills of Bank of Thailand and treasury bills for index calculation. This index is intended for investors to use as a return benchmark for investment in risk-free short-term government bonds.

Commercial Paper Index

Commercial Paper Index is an index developed to track return short-term corporate debt securities (no longer than 270 days). The index is computed using commercial papers with at least BBB- rating. Moreover, two additional commercial paper indices were developed, commercial paper with at least AA- rating and commercial paper with at least A- rating.

8.5 <u>Information regarding to Bond Investing</u>

8.5.1 Importance and Advantages of the Prospectus

The prospectus is an important document in which the bond issuer must create and publish for investors to have access to or distribute to the bond’s investor (up on request) every time there is a bond public offering. The prospectus is one of the several ways to disclose the information to the investors for transparency regarding how the issuer intends to use the money raised. The information contained in the prospectus is important in the sense that the investors will use this information to make a decision on whether or not they should invest in this investment. The information in the prospectus will give the investors enough information to make decisions. Therefore, \ investors need to read the prospectus thoroughly before making the decision.

How to Read and utilize information in the prospectus

The prospectus is a document that the issuer publishes in order to disclose the company's information and bond's public offering in detail. The draft prospectus needs to be reviewed by the SEC before distributing. The prospectus provides a summary for investors in which they can use as a foundation for their decision making. The required format of the prospectus is as below;

- *Part 1: Factsheet*

  In this part, the important information of the bond is summarized including its special characteristics and risk.

- *Part 2: Executive Summary*

  In this part, important information of the issuer is summarized in short including the purpose of raising funds, so that investors can understand the whole picture of the issuer's operation and they can use this information to help make investing decisions.

- *Part 3: The bond issuer;*

  3.1 Business operations

  - 3.1.1 Policies and overall operations
  - 3.1.2 Type of business
  - 3.1.3 Risk factors
  - 3.1.4 Assets used in operating
  - 3.1.5 Any legal disputes
  - 3.1.6 Other general and important information

  3.2 The company's management

  - 3.2.1 Information about the security and shareholders
  - 3.2.2 Management structure
  - 3.2.3 Corporate governance
  - 3.2.4 Social Responsibility
  - 3.2.5 Internal control and risk management
  - 3.2.6 Related transactions

3.3 The company's financial situations and performance

3.3.1 Important financial information

3.3.2 Management's discussion and analysis

- *Part 4: Information regarding the Bond's Public Offering*
- *Part 5: Information Authentication*
- *Enclosed Documents*

Figure 8-3: Sample of the Prospectus Displayed on Securities and Exchange Commission’s Webpage

หนังสือชี้ชวนตราสารหนี้

รายละเอียดตราสาร

ผู้ออกหลักทรัพย์	: บริษัท พีทีที โกลบอล เคมิคอล จำกัด (มหาชน)
ผู้ออกหลักทรัพย์อ้างอิง	: -
วันที่แก้ไข Filing ครั้งล่าสุด	: -
วันที่ Filing มีผลบังคับใช้	: -
วันที่เริ่มต้นการเสนอขาย	: 21/08/2560
วันที่สิ้นสุดการเสนอขาย	: 30/08/2560
ประเภทหลักทรัพย์	: หุ้นกู้ (Debenture)
ประเภทการเสนอขาย	: เสนอขายต่อประชาชนทั่วไป (PO)
ที่ปรึกษาทางการเงิน/ผู้ควบคุม	: -

หนังสือชี้ชวน

หัวข้อ	Filing Version แรก
	ดาวน์โหลดเอกสารทั้งหมด
หน้าปก	25 กรกฎาคม 2560
ส่วนที่ 1 สรุปข้อมูลสำคัญของตราสาร (fact sheet)	25 กรกฎาคม 2560
ส่วนที่ 2 ข้อมูลสรุป (executive summary)	25 กรกฎาคม 2560
ส่วนที่ 3 ผู้ออกตราสารหนี้	
3.1 การประกอบธุรกิจ	
1 นโยบายและภาพรวมการประกอบธุรกิจ	25 กรกฎาคม 2560
2 ลักษณะการประกอบธุรกิจ	25 กรกฎาคม 2560
3 ปัจจัยความเสี่ยง	25 กรกฎาคม 2560
4 ทรัพย์สินที่ใช้ในการประกอบธุรกิจ	25 กรกฎาคม 2560
5 ข้อพิพาททางกฎหมาย	25 กรกฎาคม 2560
6 ข้อมูลทั่วไปและข้อมูลสำคัญอื่น	25 กรกฎาคม 2560
3.2 การจัดการและการกำกับดูแลกิจการ	
7 ข้อมูลหลักทรัพย์และผู้ถือหุ้น	25 กรกฎาคม 2560
8 โครงสร้างการจัดการ	25 กรกฎาคม 2560
9 การกำกับดูแลกิจการ	25 กรกฎาคม 2560
10 ความรับผิดชอบต่อสังคม	25 กรกฎาคม 2560
11 การควบคุมภายในและการบริหารจัดการความเสี่ยง	25 กรกฎาคม 2560
12 รายการระหว่างกัน	25 กรกฎาคม 2560
3.3 ฐานะการเงินและผลการดำเนินงาน	
13 ข้อมูลทางการเงินที่สำคัญ	25 กรกฎาคม 2560
14 การวิเคราะห์และคำอธิบายของฝ่ายจัดการ	25 กรกฎาคม 2560
ส่วนที่ 4 ข้อมูลเกี่ยวกับการเสนอขายตราสารหนี้	25 กรกฎาคม 2560
ส่วนที่ 5 การรับรองความถูกต้องของข้อมูล	25 กรกฎาคม 2560
เอกสารแนบ 1 ร่างข้อกำหนดสิทธิ	25 กรกฎาคม 2560
เอกสารแนบ 2 ร่างสัญญาแต่งตั้งผู้แทนผู้ถือหุ้นกู้	25 กรกฎาคม 2560
เอกสารแนบ 3 รายละเอียดเกี่ยวกับกรรมการ ผู้บริหารและผู้มีอำนาจควบคุมของบริษัท	25 กรกฎาคม 2560
เอกสารแนบ 4 รายละเอียดเกี่ยวกับกรรมการของบริษัทย่อย	25 กรกฎาคม 2560
เอกสารแนบ 5 งบการเงินประจำงวดปีบัญชีล่าสุด และงบการเงินงวดไตรมาสล่าสุด	
เอกสารแนบ งบการเงิน งบการเงินไตรมาส 1 ปี 2560	25 กรกฎาคม 2560
เอกสารแนบ งบการเงิน งบการเงิน ปี 2559	25 กรกฎาคม 2560
เอกสารแนบ งบการเงิน	
เอกสารแนบ งบการเงิน	
เอกสารแนบ 6 อันดับความน่าเชื่อถือ	25 กรกฎาคม 2560
เอกสารแนบ 7 ข้อมูลผู้ค้ำประกัน/ สัญญาหลักประกัน	
เอกสารแนบ 8 อื่น ๆ	
เอกสารแนบ อื่น ๆ สรุปความแตกต่างข้อกาหนดสิทธิของบริษัทกับข้อกาหนดสิทธิมาตรฐานของสานักงาน ก.ล.ต.	25 กรกฎาคม 2560

Reading of bond prospectus should start from Part 1 and Part 2, a summary of the issuer including key information about the securities, special features, key risks and general risks, nature of business, financial purpose, financial summary, and credit history of the issuer, and contact information of relevant parties are useful for investors.

The third part of the prospectus consists of details that investors can study more regarding the operations of the issuer, risk factors occurring from the company's operation, financial structure, financial status, and performance.

Moreover, information contained in the fourth part of the prospectus comprises of details of the bond, the limitations on the transfer of the bond, subscriptions, distribution and allocation of the bond. And in part 5, the disclosed information is authenticated by the authorized director of the company according to Securities and Exchange Act, which requires that directors and management of the company need to share the responsibility for the person trading company's securities in any damage due to the disclosure of the company's information to the shareholders and general public.

8.5.2 Pricing Information, Rate of Return, and Risk of Debt Securities and Debt Securities Market

Data Source for Economic Condition Effecting Debt Securities' Price

Economic data both domestic and international is considered as macro-economic data indicating the whole picture of economic conditions of the country, region, and world. These data are such as the gross domestic products' level and rate of growth, national income, and inflation. These factors have a definite effect on the debt securities' price movement. These data can be found from;

- Bank of Thailand (www.bot.or.th) is an information source on both domestic and international economic conditions, financial markets, monetary policies, including other economic statistics, research and financial market publications.
- Ministry of Finance (www.mof.go.th) is a source of the economic and fiscal information.

- Office of the National Economic and Social Development Board (www.nesdb.go.th) is a source for Economic and Social Development plans including studies and analyses of economic conditions.
- International Economic Information Center, Ministry of Foreign Affairs (www.mfa.go.th) is a source for macro-economic data.
- Ministry of Commerce (www.moc.go.th) is a source for economic and trade information.

Data Source for Debt Securities Market

- Bank of Thailand (www.bot.or.th) is a data source for the financial market, debt securities market, debt securities, debt securities auctions, issuance and distribution of debt securities to the public, including debt securities services.
- The Public Debt Management Office (www.pdmo.go.th) is a source for the public debt management plans detailing debt securities market, debt securities auction, and debt securities' news announcements.
- Stock Exchange of Thailand (www.set.or.th) is a source for equity securities and debt securities information
- Thai Bond Market Association (www.thaibma.or.th and www.thaibond.com) supervises members on transparency and fair process of debt securities transactions and to build the investors' confidence. They provide full coverage of debt securities data services ranging from basic information of the primary market to trading information of the secondary market and other reference prices.

Data Source for Debt Securities' Price

- Bank of Thailand (www.bot.or.th) is a source to check the government bond auction results, Bank of Thailand Bonds, and treasury bills.
- Thai Bond Market Association (www.thaibma.or.th and www.thaibond.com) is a data source for debt securities market, which is the debt securities trading center of unofficial transactions in the

secondary market or OTC. The association's members need to submit all the transaction information in the secondary market to the association so that investment advisors can use it as a source of reference price as well as use debt securities market's related news ranging from basic information of the primary market, trading information of secondary market, and other reference prices to calculate debt securities' price.

- Stock Exchange of Thailand (www.settrade.com) is a data source for the equity and debt securities market.
- The Public Debt Management Office (www.pdmo.go.th) is a data source for the debt auction schedule, the government bond auction results, and the auction results of state enterprise bonds.

Data Source for Debt Securities' Issuer and Ranking of the Debt Securities' Rating

To issue and offer debt securities to the public, the issuer needs to ask permission from the Securities and Exchange Commission and may need to have credit ratings for the debentures. Data sources for bond issuers are as below;

- The Securities and Exchange Commission (www.sec.or.th) is a source for information on the issuing and offering of debt securities including the prospectus.
- Thai Bond Market Association (www.thaibma.or.th) is a source for information on bond issuers who have already issued bonds.
- Tris Rating Co., Ltd (www.trisrating.com) is a company which provides credit analysis and rating evaluation services of bonds under Baht currency.
- Fitch Ratings (Thailand) Co., Ltd (www.fitchratings.com) is a company which provides credit analysis and credit evaluation of the company.

Samples of the reading of debt securities information report

- *Over-The-Counter Debt Securities Market (OTC)*

Thai Bond Market Association or ThaiBMA will distribute information for general investors via www.thaibma.or.th which consists of information as below;

1. Summary of total trading categorized by outright trading and financing groups under different types of customers such as Asset Management (Asset Mgn.), Insurance (INS), Domestic Co. (DCO), Non-Dealer License Financial Institutions (NDL), Foreign Co. (FCO), Non-Resident (IND), and others as in Figure 8-5
2. Latest price traded shown both clean price and yield as in Figure 8-6
3. Important element of debt securities such as par value, coupon rate, payment period, credit rating, and maturity date as shown in Figure 8-7
4. Government bond yield curve at the end of everyday by showing the change in interest rates as in Figure 8-8

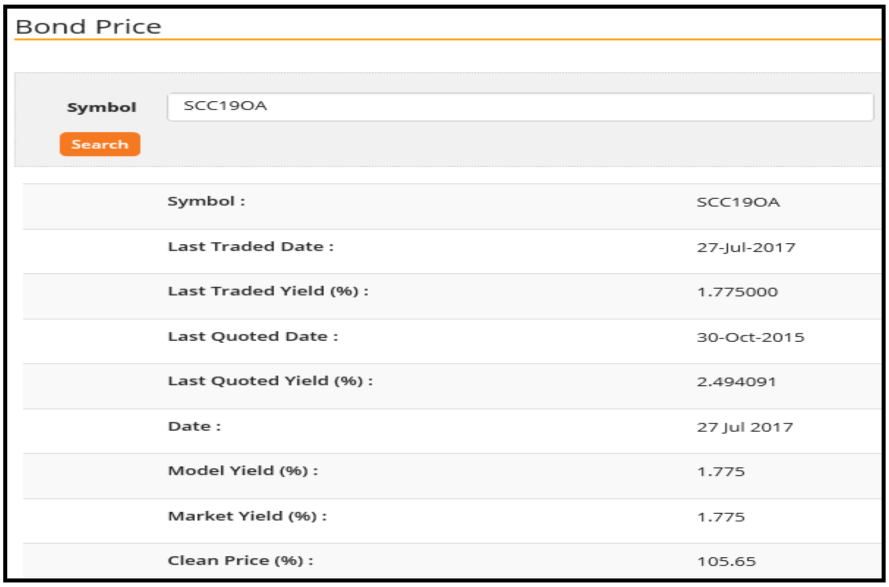
Figure 8-4 Sample of Summary of Debt Securities Trading

Home > **Daily Report** > Market Participant Historical >> 27/07/2017 Go (dd/mm/yyyy)

Market Participant by Trading Value (THB mln.)

	Outright	Financing	Others
Dealer-Dealer	19,525.99	141,900.00	0.00
Dealer-Client	102,063.65	1,113,626.01	0.00
Asset Mgn.[1]	73,755.78	0.00	0.00
INS	2,124.22	4,700.00	0.00
DCO	5,203.03	0.00	0.00
NDL	574.85	92,625.00	0.00
FCO	16,598.36	0.00	0.00
IND	98.84	1.01	0.00
Others	3,708.56	1,016,300.00	0.00
Total	**121,589.64**	**1,255,526.01**	**0.00**

Figure 8-5 Sample of Debt Securities Trading



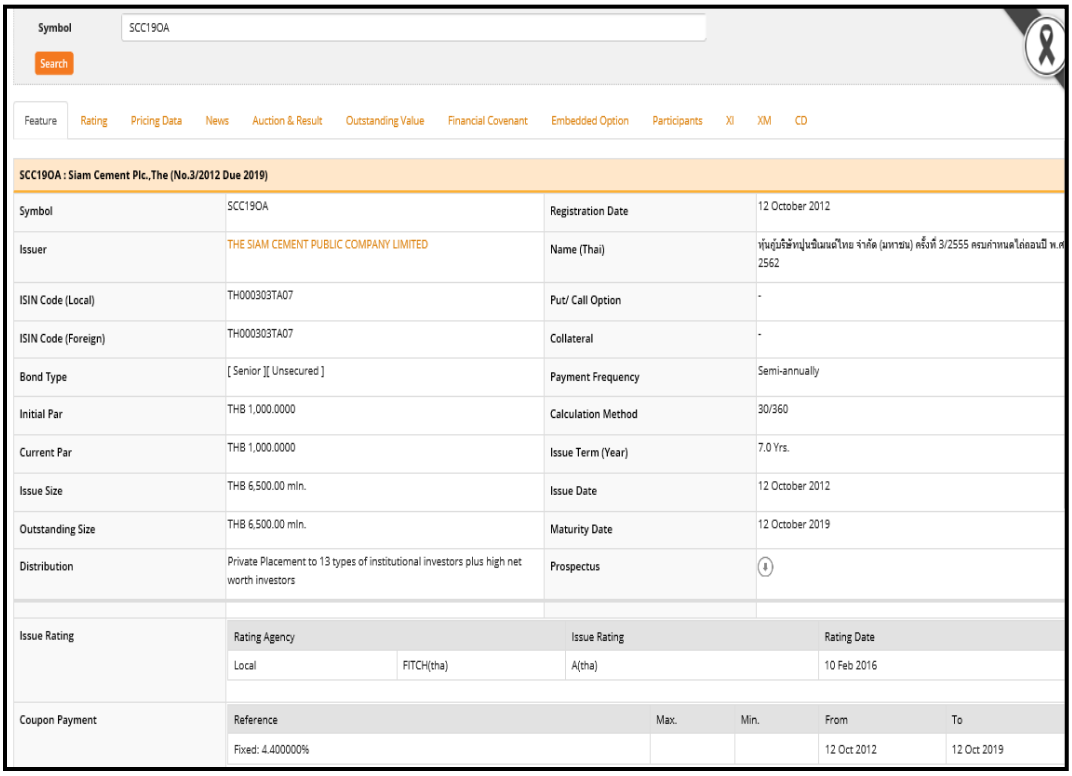
Bond Price

Symbol: SCC19OA

Search

Symbol :	SCC19OA
Last Traded Date :	27-Jul-2017
Last Traded Yield (%) :	1.775000
Last Quoted Date :	30-Oct-2015
Last Quoted Yield (%) :	2.494091
Date :	27 Jul 2017
Model Yield (%) :	1.775
Market Yield (%) :	1.775
Clean Price (%) :	105.65

Figure 8-6 Sample of important element of debt securities



Symbol: SCC19OA

Search

Feature | Rating | Pricing Data | News | Auction & Result | Outstanding Value | Financial Covenant | Embedded Option | Participants | XI | XM | CD

SCC19OA : Siam Cement Plc.,The (No.3/2012 Due 2019)

Symbol	SCC19OA	Registration Date	12 October 2012
Issuer	THE SIAM CEMENT PUBLIC COMPANY LIMITED	Name (Thai)	หุ้นกู้บริษัทปูนซิเมนต์ไทย จำกัด (มหาชน) ครั้งที่ 3/2555 ครบกำหนดไถ่ถอนปี พ.ศ 2562
ISIN Code (Local)	TH000303TA07	Put/ Call Option	-
ISIN Code (Foreign)	TH000303TA07	Collateral	-
Bond Type	[Senior][Unsecured]	Payment Frequency	Semi-annually
Initial Par	THB 1,000.0000	Calculation Method	30/360
Current Par	THB 1,000.0000	Issue Term (Year)	7.0 Yrs.
Issue Size	THB 6,500.00 mln.	Issue Date	12 October 2012
Outstanding Size	THB 6,500.00 mln.	Maturity Date	12 October 2019
Distribution	Private Placement to 13 types of institutional investors plus high net worth investors	Prospectus	

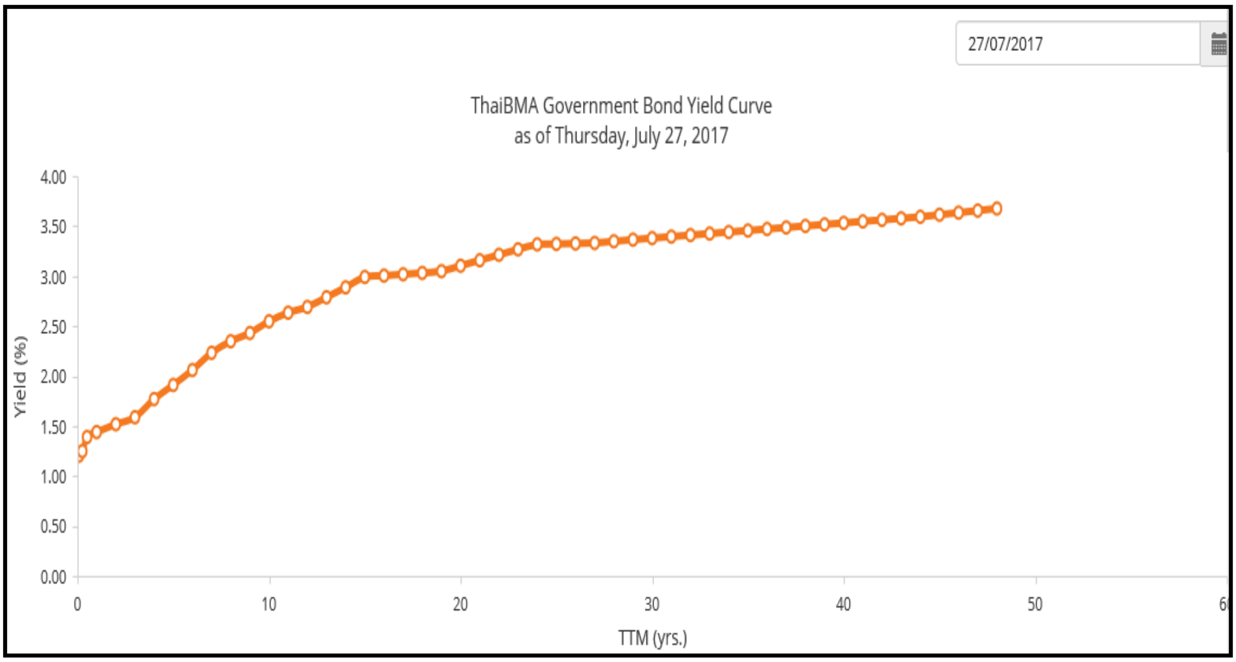
Issue Rating

Rating Agency		Issue Rating	Rating Date
Local	FITCH(tha)	A(tha)	10 Feb 2016

Coupon Payment

Reference	Max.	Min.	From	To
Fixed: 4.400000%			12 Oct 2012	12 Oct 2019

Figure 8-7 Sample of Government Bond Yield Curve



8.5.3 Tax on Returns from Investing in Debt Securities

Types of Income received from Investing in Debt Securities that need to be taxed

For direct investment in debt securities, the investor needs to pay tax on the income received as below;

1) Capital gain

2) Interest income

3) Money received from discount on debt securities purchases or the spread between redemption price and selling price for the investors investing in the mutual fund, the investor will be responsible only for the withholding tax at the rate of 10% on dividend received and the investor may or may not include this in the year-end tax.

Tax on Debt Securities Investing

The investor investing in debt securities whether individual or corporate investors, need to pay tax on all types of investment mentioned above and some types of income can deduct withholding tax. The rate of this withholding tax depends on the status of the investor and, in the case of financial institutions, may be required to pay additional tax.

Tax Liability of Both Domestic and International Investor

Tax liability of individuals and domestic and international corporate investors can be summarized in table 8-1 below:

Table 8-1 Summary of the Income Tax on Investing in Debt Securities

Type of Investor	Type of Income		
	Coupon	**Discount/Spread of Redemption and Selling Price First Owner**	**Capital Gain or Any Gain received from the Transfer**
1. Domestic Investor - Individual	- Subject to 15% withholding tax and may or may not include it in the year-end tax	- Subject to 15% withholding tax only for the original owner and may or may not include it in the year-end tax	- Subject to 15% withholding tax except for non-coupon bond and may or may not include it in the year-end tax
- Corporate [1/]	- Subject to 1% withholding tax * - Subject to 10% withholding tax in the case of foundation or association - Tax Exemption for mutual funds - Need to be included in the year-end tax	- Subject to 1% withholding tax ** - Subject to 10% withholding tax in the case of foundation or association - Tax Exemption for mutual funds - Need to be included in the year-end tax	- No withholding tax - Tax Exemption for mutual funds - Need to be included in the year-end tax

2. International Investor			
- Individual [2/]	- Subject to 15% withholding tax	- Subject to 15% withholding tax only to original owner	- Subject to 15% withholding tax
- Corporate [2/]	- Subject to 15% withholding tax except for government bonds, or bonds of other government organizations	- Subject to 15% withholding tax	- Subject to 15% withholding tax

Information gathered by: Thai Bond Market Association

* Banks or companies under the Act on the Undertaking of Finance Business, Securities Business and Credit Foncier Business and Asset Management Companies will be subject to 1% withholding tax for interest earned from bonds and debentures of companies and any juristic person operating in Thailand

** Not including banks or companies under the Act on the Undertaking of Finance Business, Securities Business and Credit Foncier Business and Asset Management Companies

[1/] In the case of financial institution, there will be specific business tax rate at 0.01% of coupon received

[2/] Need to consider tax treaties that may cause the investor other tax rate

Details of tax related to the investor investing in debt securities may change from time to time. The updated information can be found at www.rd.go.th under Revenue Code, Tax Discussion, Judgment of the Supreme Court, and New Law.

8.6 Conclusion

The debt market is crucial to the country's economy since it is a primary source of capital for both the public and private sector. Debt markets not only help minimize overall risk on economic growth, particularly when the commercial banking sector is facing problems and unable to fulfill its capital market role to the private sector, but also reduces reliance on source of capital from foreign countries. Moreover, as the debt market continues to develop and grow, it will broaden investment options, as provide long-term and intermediate-term savings options for both institutional and individual investors, in addition to making deposits with commercial banks or other financial institutions.

Therefore, it is important to develop the debt market in Thailand to efficiently accommodate growing capital and investment demand since an efficient domestic debt market can reduce reliance on foreign capital market for domestic borrowers and investors which will be beneficial to the country and its currency's stability.

Trading or investing of debt securities, either public or private sector debt, can be made in the primary or secondary market. In the primary market, individual investors can invest directly in government saving bonds or private sector debentures through public offerings (PO). Alternatively, they can trade in the secondary market via over-the-counter which investors buy and sell debt securities through a financial advisor of a financial institution with bond trading license.

Section 3: Mutual Fund

(Translation available)

Note: An unofficial translation of the Thai text book: Product Knowledge: ***Plain Products – Chapters 9, 10, 11****. The translation is intended to facilitate a reader to understand contents of the book but not to be used as a reference. TSI is not responsible for the correctness and completeness of the translation. Please refer to the Thai version for accuracy and reference.*

9. Fundamental Knowledge for Investing in Mutual Funds

Required Readings:

1. Product Knowledge
    - Chapter 9: Fundamental Knowledge of Mutual Fund

Learning Objectives:

1. Explain meaning of net asset value (NAV).
2. Explain significance and usefulness of mutual fund to economic system, financial market and investors.
3. Compare usefulness and limitations of mutual fund investment.
4. Explain the process of mutual fund establishment, working process, the initial public offerings and subsequent public offerings.
5. Explain significance of the making of prospectus and be able to distinguish compositions of prospectus.
6. Explain and distinguish mutual fund active and passive management.
7. Explain meaning and differences of open-ended and close-ended fund.
8. Explain and distinguish characteristics, risk and return of each type of mutual fund, as prescribed by investment policy and investing assets.
9. Explain and distinguish characteristics, risk and return of specific mutual fund.
10. Explain meaning and distinguish differences of property funds (freehold and leasehold).
11. Distinguish between property fund, real estate investment trusts, and infrastructure fund.
12. Distinguish differences between SSF and RMF. (adjusted)
13. Explain characteristics, risk and return of foreign investment fund.
14. Introduce suitable mutual fund to a certain type of investor.
15. Distinguish dividend and non-dividend funds, advantages and disadvantages of selecting dividend and non-dividend funds.

Chapter 9
Fundamental Knowledge for Investing in Mutual Funds

In today's financial market, there is a wide range and variety of financial instruments to meet investors' need. But the fact that there are a wide range of selections available and some instruments are complex, investors must spend time to study and understand the information before making investment decisions. Mutual fund is one investment option that can help investors who are unable to thoroughly review and track investment information to invest in a mutual fund that has the right investment policy for the investors by buying "unit trusts" of the mutual fund which is a security issued by mutual fund companies to raise money for the established mutual fund in order invest in securities or assets specified in the mutual fund project. The investor who purchase the unit trusts of the fund is consider a shareholder of assets owned by the mutual fund, which is comparable to an investor buying a common share of a company.

Mutual funds describe in this book are mainly mutual funds for individual investors.

9.1 Characteristic of Mutual Fund

9.1.1 Definition of Mutual Funds

Investment in mutual fund is an investment where investors investment money together through a fund manager who then invests the money in securities or assets in the money market or capital market based on the investment policy outlined in the mutual fund. Once the fund receives return on investment, the returns will be retained in the mutual fund. An investor may capitalize on the returns by selling the unit trusts to realize the capital gain or by receiving dividends if that mutual fund has a policy to pay dividend. Each investor will receive returns from the fund proportionally based on the number of unit trusts invested in the mutual fund.

Alternatively, investment in a mutual fund is a way of investing in securities or assets by hiring an investment expert to manage the portfolio based on portfolio management principles. It is considered as an indirect way to invest in the money market and capital market (through an intermediary).

However, it is often misconstrued that there is no risk, or basically no loss, when investing using this method since a mutual fund has a fund manager who manages the fund. In reality, investing in a mutual fund still possess investment risk but the risk may be lower because the investment is diversified and managed by a fund manager who has experience and relevant investment information to make investment decisions. As a result, investment mistakes are significantly reduced.

Issuer of mutual funds must be an asset management company with a mutual fund license issued by the Ministry of Finance and supervised by the Securities and Exchange Commission as stipulated in the Securities and Exchange Act. The authorized asset management company is called “Asset Management Company (AMC)” or Management Company and after the mutual fund is established, such mutual fund will be regarded as a separate juristic person from the management company. Therefore, in the event that the management company discontinues its operation, the mutual fund can be transferred to a new management company.

Unit Trust of Mutual Fund Company

To raise funds from investors to establish a mutual fund, the AMC must specify the total value of the mutual fund being offered to the public. The total value of the fund will be divided into equal value of shares or units and the price of each unit or “par value”, is usually set at 10 baht per unit (currently, some mutual funds have set a par value at 1 baht). Amount of units available for sale must be stated in the mutual fund project. Once the mutual fund is divided into units, each unit is called “unit trust”, therefore, investors who wish to invest in the mutual fund can purchase any amount of unit trusts depending on how much they want to invest in the mutual fund. Investors who invest in the mutual fund are called “unit holders”. Since a mutual fund is a juristic person established under the Securities and Exchange Act where the fund is divided into unit trusts, these unit trusts of a mutual fund are considered as a type of securities.

Example 9-1 Thai Charoen Mutual Fund has a project value of 1,000 million baht, par value at 10 baht per unit trust, 100 million units available, and an IPO price at 10 baht per unit. If Mr. Somchai wants to invest in 100,000 units, he has to pay in total 1,000,000 baht (excluding fund fees). This would mean that Mr. Somchai has invested 0.10 percent in Thai Chareon Mutual Fund.

Net Asset Value or NAV

Once investors invest their money in a mutual fund and the AMC invests it to generate returns, the value of the invested money may increase in value exceeding the fund's initial value. When the value of mutual fund's asset is recomputed, the AMC will determine the value of each securities and assets invested by the mutual fund based on their daily market price (mark to market), combined with benefits generated from the fund, and subtract expenses and fees to arrive at the net asset value of the mutual fund. Once divided by the total number of units being sold, the final value will be the net asset value per unit trust or also called "Net Asset Value" which can either increase or decrease on a daily basis. Unit holders or individual investors can use this net asset value to compute the investment return by comparing the current net asset value of the fund with the net asset value on the day that they purchase the unit trusts. If the net asset value increases, there will be a positive return or profit, but if the net asset value on that day is lower than the day when they were purchased, then there will be a negative return or a loss.

9.1.2 The Importance and Benefits of Mutual Fund

The Economy

Mutual fund is equivalent to an instrument that gather savings from investors and distribute the money to borrowers or businesses to invest. Such investment is important to the economy since it is one of the components in the gross domestic product (GDP). Investment also creates employment and income distribution within the economy where the businesses will help distribute those limited resources in the economic system. Thus, mutual funds are directly involved in helping develop the economy because the money that are being invested through the mutual funds will result in more investment, employment, and consumption, creating value through the supply chain in the economy.

Money Market

Mutual funds help develop money market by expanding investment alternatives and products in the money market. A wider selection of mutual funds will expand investor base and attractive them to invest their excess savings into the mutual funds which will benefit and facilitate growth in the money market. Moreover, the mutual fund industry helps develop the investment infrastructure and improve regulations of all related transactions.

Investors

Investing in mutual funds help eliminate the need to closely monitor financial news and allow investors to invest despite having limited amount of money to invest in a wide range of securities or assets in order to diversify and help reduce risk that may arise from investing in one particular securities or asset. Investors can also benefit from lower cost that may arise from diversifying since mutual funds have AMCs who employ experts with investment expertise, monitor related information and news, and make investment decision for the investors. Investors can choose to invest in any mutual fund with an investment policy that is suitable to their needs.

AMCs have a transparent and reliable work process. Investing through a mutual fund help ensure confidence for investors since the fund has a trustee acting on behalf of unit holders in order to keep an eye on the benefits such as review that fund management is made according to the fund's objectives and investment policy stated in the prospectus or by auditing the fund net asset value, including disclosure of necessary information to unit holders. Finally, the Securities and Exchange Commission is in charge of regulating and issuing rules and regulations for AMCs.

9.1.3 Advantages and Disadvantages of Mutual Fund

Advantages of investing in mutual funds

- *Managed by professional fund manager*

By investing through a mutual fund, investors will benefit from AMC's investment service which is run by a professional fund manager who have the qualification and have been tested on investment knowledge, rules and regulation, professionalism and ethics. Fund managers are also registered with the Securities and Exchange Commission to ensure that funds are invested according to its policy and conditions stated in the prospectus. Decisions of fund managers are often made carefully by reviewing useful information and various factors before implementing the investment decision which based on sound theoretical investment principle, thereby, providing a level of security that unit holders' money will be well managed by individuals with quality and investment experience.

- *Investment diversification*

Each mutual fund invests in different securities or assets in order to diversify risk. For example, if the mutual fund is an equity fund, it may investment in more than 20-30 stocks, or for a fixed-income mutual fund, it may invest in debt securities issued by public and private sectors. Therefore, if the price of securities or assets invested by the mutual fund were to decrease in value, there may be other securities or assets in that portfolio that increase in price to offset or reduce the loss. This is one way of reducing investment risk. However, if the investment is made without diversifying, such as investing in one particular securities or asset and its price were to depreciate, investors could end up with a much bigger loss.

- *A wide range of investment policies*

With mutual funds, investors have many options to invest in such as stocks, mutual funds, debt mutual funds, mixed mutual funds, mutual funds investing in foreign assets, retirement mutual funds, long-term mutual funds, real estate investment trusts, and infrastructure funds. Investors should choose the right mutual fund by considering the required form of return, risk tolerance level, investment timeframe, and liquidity needs.

- *Convenience and Time-saving investment*

Investors will receive investment services without having to waste time analyzing securities by themselves. They also do not need to have a large amount of money to buy many types of securities in one time in order to diversity because mutual funds already invest for them based on diversification principles. In addition, since

AMC regularly computes net asset value of the fund, investors can conveniently monitor their mutual funds' performance with ease.

- *Maintain liquidity*

Trading of some securities or assets may present liquidity problems. For example, trading stocks of some unpopular companies may create liquidity problems for the investors or affect the price of the securities when traded. However, if the investors were to invest in a mutual fund that invest in those securities, they can easily redeem unit trusts buy selling it back to the mutual fund, which is much easier than investing in the stock directly. Nevertheless, investors should be aware that investment through some mutual funds such as equity funds, is a long-term investment and not the same as short-term deposits. Unit holders should not use short-term deposits to invest in mutual funds because in some cases, selling back the unit trusts cannot be done immediately due to lack of liquidity in the market.

- *Tax Benefits*
  - <u>Tax Exemption</u>

Because investment in mutual funds is an alternative way to invest in the financial market for investors with limited funds, the Revenue Department has exempted income received from mutual fund investment in order to encourage individual investors to invest through this instrument. Ordinary investors do not have to pay tax on capital gain received from selling their unit trusts in a mutual fund. In the event that investors receive dividend paid by the mutual fund, they can opt for a 10% withholding tax of the received dividends without having to include this income towards their annual taxable income. Additionally, in some particular mutual funds that the government wants to promote such as infrastructure funds, the government has granted tax privileges for this type of mutual fund to encourage investment in the infrastructure industry as the foundation of the country's economic development. Investors investing in infrastructure mutual funds will be exempted from paying tax on any dividends for the first 10 years from its establishment.

- <u>Tax Deductible</u>

For individual investors investing in Retirement Mutual Funds or Long-term Mutual Funds, unit holders can use their investment made in that year to reduce their income tax in the same year, thereby, reducing their income tax when compared to investors who did not purchase unit trusts of Retirement Mutual Funds or Long-term Mutual Funds. However, to receive this tax privilege, investors must meet the requirements specified by the Revenue Department. More details on tax regarding investing in Retirement Mutual Funds and Long-term Mutual Funds can be found in Chapter 11.

- *Mechanism in Place to Protect Investors*

Investors are ensured that there is a system in place to protect investors investing in unit trusts of a mutual fund. Since the Securities and Exchange Commission (SEC) is in charge of regulating all parties, the SEC has established a system where related parties can cross-check with each other.

Limitations of Investing in Mutual Funds

- *Investors/Unit holders cannot dictate or control the investment*

Because setting up a mutual fund requires authorization from the Securities and Exchange Commission (SEC), any revision or additions must receive majority vote from unit holders as well as authorization from the SEC, which is different from investing independently where the investment policy can be altered at the investor's will.

- *Continuous Fees and Expenses*

Because mutual fund management is a type of service, unit holders must bear the expenses and fees incurred from operation, which are fees from buying and selling securities and fund management fees. If these expenses and fees are not too high, they will not affect the rate of return earned by the unit holders. But if the mutual funds generate small returns, factoring in higher expenses and fees, the unit holders may receive lower returns when compared to other mutual funds that have the same investment policy but charge lower rate of expenses and fees.

- *Investment information of the mutual fund is not up-to-date*

In general, mutual funds disclose details about their investment through a report every 6 months or 12 months. Therefore, by the time that AMCs prepare and disseminate this information to unit holders or investors, the information would be out dated or much older than the published date. Hence, unit holders or investors may not be able to use such information to make investment decisions. However, at present, some AMCs have published brief investment reports every week or every month as basic information for investors to help make investment decision.

- *No voting rights as direct shareholders*

Investors in a mutual fund do not have statutory right as shareholders of companies that the fund invests in. Investors will only receive rights to vote or decide on important resolutions that are matters of the fund. However, to maximize long-term interest of the fund, AMCs may impose conditions on exercising voting rights on behalf of the fund at the shareholders' meeting and disclose of the voting rights execution in accordance with the announcement of the SEC.

9.1.4 Investment Strategy for Mutual Funds

In general, mutual fund investment strategies can be categorized into two styles; active management and passive management.

Active Management

Active management is an investment strategy designed by a mutual fund manager where trading decision is based on data analysis and market expectation. The goal of the investment is for the fund to achieve a return higher than the market return.

The theoretical background behind active management is based on the assumption that the market is not efficient according to the efficient market hypothesis. As a result, it is possible to a return higher than the market return based on investment strategies of experienced fund managers who are experts at identifying mispriced securities in the market.

Passive Management

Passive management is an investment strategy designed by a fund manager to achieve the same investment return as offered by the market. This management strategy is different from an active management strategy which intends to beat the market. Examples of passive management mutual funds are index funds and Exchanged Traded Funds (ETF) which are designed to achieve return comparable to the corresponding market index such as SET50 Index in the Stock Exchange of Thailand or the S&P 500 in the US stock market. A passive fund manager will attempt to replicate the return offered by such indices.

The theoretical background behind passive management is based on the belief that the market, according to the efficient market hypothesis, is highly efficient, that is, the price of securities in the market already reflects all relevant information into the price and no information advantage can be gained from the market by fund managers. Therefore, it is not possible for anyone to earn more than the average market return. Under this assumption, securities selection is not worth the investment. The best investment strategy is to invest in securities or assets that are included in the referenced index.

Difference between Active Management and Passive Management

The key difference between the two investment strategies is the investment objective of the fund. Passive management emphasizes on achieving a return based on the movement of the referenced market index as well as increasing investment efficiency by controlling fund management costs, such as commission, tax, analysis report expense, and management time, to be low. In contrast, active management emphasizes on achieving returns above the market return. Despite their differences, there is no evidence to prove which investment strategy offers better returns since the market conditions and other external factors may be beneficial to each strategy at different time periods.

9.2 Management Structure and Mutual Fund Related Parties

9.2.1 Management Structure of Mutual Fund Management in Thailand

Asset Management Companies or AMCs who are received fund management license issued by the Ministry of Finance can apply to setup a mutual fund with the SEC. Once the SEC authorized the application, the AMC can begin issuing unit trusts to investors. Once there is a total of 35 investors, as stated in the law, the AMC can list this mutual fund.

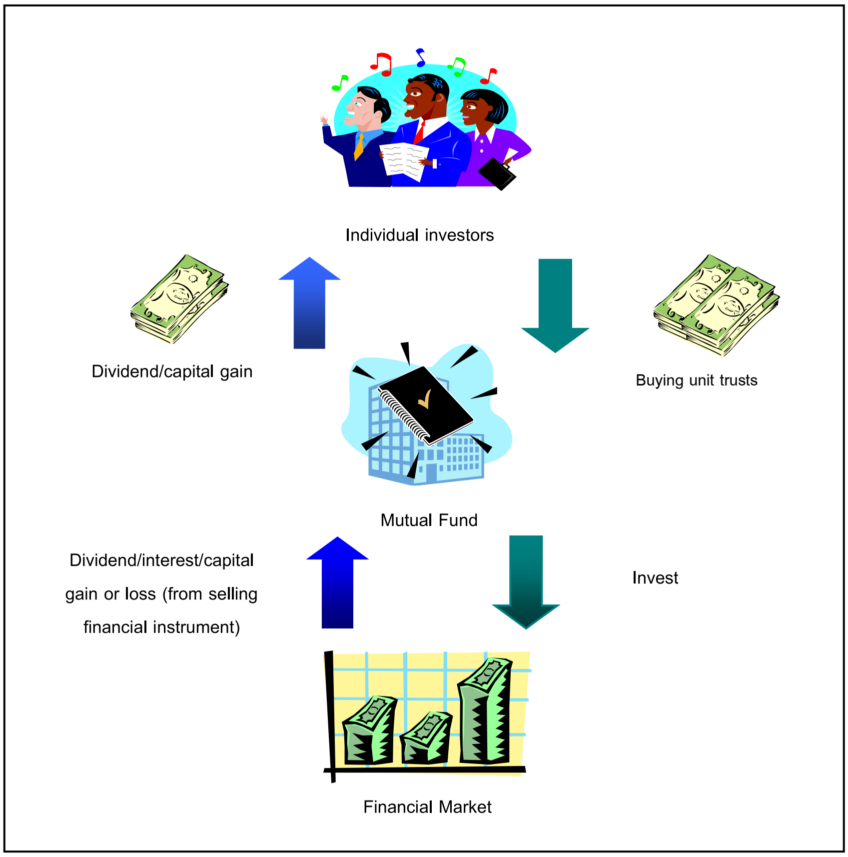
The AMC can then use the raised capital to invest based on the direction of the fund manager. However, the fund can only invest in securities or assets specified in the project or prospectus. The fund cannot lend to any business. Profits (if any) from investment will be distributed as dividends to unit holders according to each investor's percentage of unit trusts invested in the fund. If the mutual fund does not have a policy to pay dividends, any profits from investment will be accumulated and added to the fund's net asset value.

The AMC must compute the fund's net asset value of its assets based on the market value or fair value as specified by the Association of Investment Management Companies in the event that no market value exist at the time of the calculation. The AMC must announce the fund's net asset value and unit trust on a daily basis for open-ended mutual funds and on a monthly basis for close-ended mutual funds to allow investors to be informed of the funds' current value. This is because the net asset value of the fund may increase or decrease based on the market price of securities or assets hold by the fund.

Moreover, mutual funds must have a fund supervisor who is a financial institution with certain qualifications and have received approval from the SEC. The fund supervisor must have neither direct nor indirect association with the AMC issuing the mutual fund in order to allow the fund supervisor to fully perform the role of protecting the interest of unit holders, such as supervising the AMC to operate according to the objective and investment policy authorized by the SEC which is also outlined in the fund prospectus. In the event that the AMC violate its duties, the fund supervisor can prosecute on behalf of the unit holders. Fund supervisors can serve as the fund custodian and clearing house for purchase and sales of assets, as well as, auditing, following on assets and investment benefits, such as dividends or right to purchase new shares, to be accurate and correct. Fund supervisors can also review and verify the net asset value calculation, price of unit trusts and redemption value of the fund. Finally, the fund supervisor must separate its assets from the mutual fund's assets.

The process of mutual fund operations can be summarized as Figure 9-1 below:

Figure 9-1 Mutual Fund Operation



9.2.2 Roles and Duties of Mutual Fund Participants

There are many participants involved in the management of mutual funds. They include government agencies, financial institutions, and many other participants which can be categorized as follows:

Asset Management Companies (AMC)

Asset management companies are a type of securities company authorized by the Ministry of Finance to conduct mutual fund business and are under the supervision of the SEC. AMCs can sell unit trusts to investors and must operate according to the regulations stated in the Securities and Exchange Act. AMCs are also responsible for establishing and managing mutual fund to comply with details outlined in the fund project submitted to the SEC and the fund prospectus distributed to investors.

AMCs must have a management team that consists of a fund manager who has investment knowledge and experience, has received legal and ethics training for fund manager and be registered with the SEC as a fund manager. AMCs receive fund management fees as compensation for its investment management services.

At present (22 March 2017), there are 25 asset management companies that are authorized to operate as mutual fund companies. They are listed in Table 9-1.

Table 9-1 Companies Authorized as Mutual Fund Companies

Rank	Authorized Companies	Rank	Authorized Companies
1	Krung Thai Asset Management Public Company Limited	14	Thai Trust Fund Management Company Limited
2	Krungsri Asset Management	15	Phillip Asset Management
3	Kasikorn Asset Management	16	Phatra Asset Management
4	Capital Link Asset Management	17	Merchant Partners Asset Management
5	CIMB-Principal Asset Management	18	Manulife (Thailand) Asset Management
6	Solaris Asset Management	19	UOB (Thailand) Asset Management
7	TMB Asset Management	20	Land and House Asset Management
8	Talis Asset Management	21	One Asset Management
9	Tisco Asset Management	22	Siam Knight Frank Asset Management
10	Siam Commercial Asset Management	23	Aberdeen Asset Management
11	Thanachart Asset Management	24	MFC Asset Management Public Company Limited.
12	Bualuang Asset Management	25	Asset Plus Asset Management
13	Bangkok Capital Asset Management		

Source: The SEC

Selling Agents

Selling agents are representatives of the AMC to distribute the prospectus and offer unit trusts to investors or redeem unit trusts from investors. Selling agents can be financial institutions, securities companies, juristic persons or individuals set up with the purpose of assisting in the sales of unit trust. For institutional selling agents, they must have representatives who passed required exams and are registered with the SEC to give investment advice for mutual funds. For individual selling agents, they must pass required exams and are registered with the SEC in order to sell unit trusts as well. The SEC has enforced the requirement that individuals intending to be selling agents must pass the Investment Consultant License and use this license to register with the SEC. For financial institutions, securities companies, and juristic persons who want to be selling agents, they must receive Type D License or LBDU License (Limited broker, dealer and underwriter). Additionally, in order to prevent conflict of interest, selling agents must disclose the commission rate they receive from mutual funds to investors.

Investment Consultants

Investment consultants are employees of AMCs or selling agents appointed by the AMCs. AMCs can appoint selling agents that are individuals but these individuals must receive authorization from the SEC.

Unit holders of Mutual Fund

Unit holders are investors who purchase or invest in the mutual fund. Unit holders can be either individuals or juristic persons, and can be any nationality. Any unit holder is entitled to receive return from investment and has the right to voice their opinion when a resolution is requested in order to make any changes regarding the fund operations. Unit holders are considered as owners of the securities and assets invested by the fund where the percentage of ownership depends on the number of unit trusts each investor holds.

Fund Managers

Fund managers are those appointed by the AMC to make investment decision for the fund according to the fund's objective and investment policy as outlined in the project. Fund managers must be individuals approved by the SEC and have these qualifications; at least 20 year olds, completed CFA or CISA Level 1, have no less than 2 years of experience within the past 5 years, or completed CFA or CISA Level 3, or authorized by an international regulatory organization to serve as a fund manager, completed legal and ethical, professional training and exam administered by the Association of Investment Management Companies, must not possess any prohibited characteristics in accordance to the law, and completed securities and exchange rules and regulations refresher course and professional ethics and standards course every two years.

Mutual Fund Supervisors

AMCs must appoint mutual fund supervisors to perform fiduciary duties and act for the best interest of the unit holders. This includes ensuring that the investment is in accordance with the fund scheme, reviewing the calculation of the net asset value (NAV), safekeeping and registration of fund assets. Fund supervisors must separate the fund assets from their own assets. Fund supervisors can serve as the fund custodian and clearing house for the purchase and sales of assets, as well as, auditing assets and investment benefits. In the event that the AMC violates its duties, the fund supervisor can prosecute on behalf of the unit holders. The fund supervisor must be a financial institution with specified qualifications and receive approval from the SEC. It must also have neither direct nor indirect association with the AMC issuing the mutual fund in order to allow the fund supervisor to fully perform the role of protecting the interest of unit holders.

Unit Trust Registrar

The registrar is responsible for preparing a record of unit holders and keeping track of unit amounts and other important information of each unit holder. It is the responsibility of the fund registrar to amend changes in the amount of unit trusts hold by the unit holders and issuing a unit ownership verification letter for unit holders. When the unit holders purchase or redeem unit trusts, the AMC may act as the fund registrar of the fund it has established or managed. However, the SEC has stipulated that only commercial banks, finance companies, securities companies (which includes AMCs), financial securities companies, Securities Depository and other financial institutions that are established under the regulations issued by the SEC can apply to serve as fund registrar. In the case of issuing securities, issuing companies can serve as registrar of the fund without having to apply for authorization from the SEC again. However, at present, the SEC has relaxed the criteria for the fund registrar to allow registered companies and public companies to be a fund registrar.

Mutual Fund Auditors

AMC must appoint an auditor to audit the fund's accounts. The auditors must be registered with the SEC and they must audit and certify the financial statements of the mutual fund every year before the AMC can publish its annual report to unit holders.

Liquidator of Mutual Funds

When a mutual fund is terminated such as reaching project maturity or was redeemed to the point that its net asset value reached the minimum value stated by the law, the AMC must appoint a fund liquidator to oversee termination or liquidation of assets owned by the mutual fund as well as distribution of the liquidation value, net debt payment and expenses, to all unit holders listed in the fund registry on the termination date.

Securities and Exchange Commission Thailand (SEC)

The Securities and Exchange Commission or SEC is an independent organization issuing rules and regulations, announcements, or requirements stipulated under the Securities and Exchange Act. The SEC also supervises all AMCs to practice investment management for their mutual funds in accordance to rules and regulations specified in the Securities and Exchange Act, announcements of the SEC, and other announcements. In the event that the SEC finds an AMC or its employee violating the law or other rules relating to mutual fund management, the SEC is authorized to convict, impose penalty and punish such individuals. Moreover, the SEC is also responsible for overseeing the growth and development of the mutual fund industry.

Stock Exchange of Thailand

Stock Exchange of Thailand serves as a secondary market for investors wishing to buy or sell unit trusts of the mutual funds, both close-ended mutual funds and ETF funds. AMCs of close-ended funds must register the funds as listed securities and the investors must open an account with license brokers before trading the unit trusts.

Association of Investment Management Companies

Companies that received mutual fund license, whether they are operators of mutual funds, private funds, or provident funds, must become member of the Association of Investment Management Companies (AIMC). AIMC is responsible for promoting business ethics, developing investment management business, and working in collaboration with the SEC to establish standards necessary in the investment management operation such as performance index and appraisal of assets for net asset value calculation. In addition to establishing investment management standards, the association is authorized to enforce punishment to members as outlined in the association's declaration.

Mutual Fund Rating

The SEC has authorized 4 companies to rate mutual funds. They are Fitch Rating (Thailand) Limited, Reuters (Thailand) Limited, Morning Star Research (Thailand) Limited, and Tris Rating Limited. All four companies had received rating license from the SEC.

9.3 <u>Establishment and Offering of Mutual Fund</u>

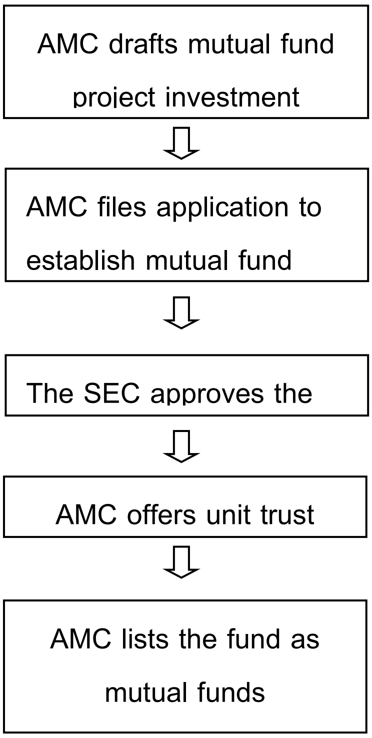
9.3.1 Applying to Establish a Mutual Fund

An asset management company that wishes to establish a mutual fund shall apply for approval from the SEC by filing an application for mutual fund establishment together with specified documents which includes project details of the mutual fund, draft obligation between unit holders and the asset management company, draft contract on the appointment of trustee and draft prospectus.

9.3.2 Establishment Process of Mutual Funds

The establishment process of mutual funds starts with the asset management company drafting the mutual fund project detail and filing an application to the SEC. After the SEC approves the application, the asset management company can sell its unit trust to investors and register the funds as a mutual fund according to Figure 9-2

Figure 9-2 Establishment Process of Mutual Fund



1. *Submit Investment Project*

When submitting an application to establish a mutual fund, the AMC must show important details of the mutual fund project consisting of the following information at the least.

- Name of Mutual Fund Project
- Name of the AMC
- Name of the Fund Supervisor
- Type, Objective, and Fund Maturity

- Nature of the project; available to individual investors or institutional investors
- Amount of Capital Investment and Policy on additional financing after the fund is registered as a mutual fund, and operating procedures (if any)
- Par value of unit trust
- Type of unit trust: must have the following information;
  (a) Type of unit trust must be made clear whether there is only one or more than one type. If there are more than one type of unit trusts, conditions and criteria for classification must be shown.
  (b) Benefits or returns unit holders will receive and dividend policy. If there are multiple types of unit trusts, the information must be shown separately for each type.
- Name of Insurer (if any)
- Investment Policy of the Fund
- Dividend Payment Policy
- Selling and Redemption of the unit trusts

2. Submit Fund Prospectus

Fund prospectus is an important piece of document that the AMC must provide according to the regulation of the SEC and must be made available to investors or distributed to investors (when requested). When a mutual fund is being offer to the public, the fund prospectus must contain complete and adequate information to allow investors to make investment decisions. The prospectus must be easy to understand and must not contain fabricated or misleading information. As for the summary section of the prospectus, the SEC requires the AMC to provide the following information;

- *What are you investing in?*
- *Who is this mutual fund best-suited for?*
- *Anything in particular to watch out for?*
- *Percentage allocated to different types of assets*
- *Fees*
- *Performance*
- *Other information*

More information is available in Chapter 11 Section 11.3.1

3. Unit Trust Offering

Public offering of the unit trust can be made only after the AMC has sent or distributed the prospectus, and disclosed the approval date to establish and manage the mutual fund.

4. Registration of Mutual Fund

Money received from the sale of units of each mutual fund project shall be pooled together and registered with the SEC as a mutual fund in accordance with the rules and procedures as specified in the notification of the SEC. The registered mutual fund shall be a juristic person with the objective of investment in accordance with the approved mutual fund project and be responsible for the operation of the mutual fund.

9.3.3 Public Offering of Unit Trust

Initial Public Offering of the Unit Trust

Initial public offering of a mutual fund is the sale of new unit trusts issued by the AMC. In general, initial offering price is set at 10 baht per unit and the timing of the sale must be no shorter than 2 days. For mutual funds available to individual investors, the minimum investment level of each individual investor can be determined but cannot exceed 50,000 baht limit (for mutual funds available to high-end investors, minimum investment level can be set higher than 50,000 baht). The AMC is responsible for distributing the prospectus to investors to support their investment decision. After the fund receives payment from investors, the money will be managed according to the investment policy outlined in the prospectus.

Additional Offering After Initial Public Offering

Subsequent public offering is only applicable to open-ended mutual funds. Investors can purchase unit trusts at the AMC or its selling agents specified in the prospectus. The price of the unit trust will depend on the net asset value on a given day which will depend on the fund’s performance. The value and price of unit trusts must be the value and price certified by the fund supervisor.

9.4 <u>Types of Mutual Funds</u>

Types of mutual fund can be classified based on many aspects such as based on redemption methods, investment policy and/or type of assets invested, special conditions, domestic versus foreign content, or form of return. Below are some classifications;

9.4.1 Based on Unit Trust Redemption

Close-Ended Fund or Fund that do not allow redemption before maturity

For this type of mutual fund, the AMC of the establishing fund will not allow redemption before the fund’s maturity date. Offering of the fund is made only once in order to raise capital for investment, with a clearly specified duration. Therefore, after the initial public offering date has passed, the amount of unit trust sold by the AMC will remain that amount for the entire life of that mutual fund. Once the fund reaches maturity, the AMC will redeem unit trusts from investors by using the money received from the sale of all assets owned by the fund once the fund is terminated. However, some close-ended mutual funds may set conditions allowing the AMC to change the close-ended fund to another type of fund that allows unit redemption. In that case, the AMC must notify the unit holders to allow them to make decisions on whether or not they will continue to invest in the fund or will redeem their units when the fund reaches maturity. The AMC must list the fund on the SET or the Securities Depository before the fund reaches maturity to give existing unit holders the opportunity to sell their unit trusts to other investors. However, the price of the unit trust in the secondary market may be higher or lower than its value depending on the demand and supply of such mutual fund. A premium occurs when the market price exceeds the unit trust’s value, while a discount occurs when the market price is below the unit trust’s value. Currently, the close-ended funds that are available today are property funds, real estate investment trusts, and infrastructure funds.

Open-ended Funds or mutual funds that allow redemption before maturity

For this type of mutual fund, the AMC can offer to sell additional unit trusts after the fund's initial public offering in the event that investors want to invest. The AMC will also accept redemption of unit trust should investors wish to do so. Therefore, the number of the fund's unit trusts may increase or decrease depending on whether or not more investors buy or redeem their unit trust. Each open-ended fund will have different investment policies, for example, equity mutual funds, debt mutual funds, or mixed mutual funds. Open-ended funds can either have or not have a maturity date, but most open-ended funds do not have a maturity date. Since buying and selling unit trust of the open-ended fund can take place at the AMC or its selling agents, it is not necessary for the AMC to register the open-ended fund with the SET. At the end of each business day, the AMC will compute the fund's net asset value, offer price, redemption price, and announced this information to investors. When an investor invests in the fund, the AMC will compute how many unit trusts belong to the investor based on the net asset value divided by the offer price. When a unit holder redeems the unit trust, the AMC will calculate how much money the unit holder will receive by multiplying the number of unit trust with redemption price. Open-ended mutual funds will be terminated when the number of unit holder is less than 35 investors on any given day or when more than 2/3 of unit trusts sold are redeemed in one day, or in 5 consecutive business days. However, this does not apply to redemption of money market mutual funds, or mutual fund investing in foreign assets, or feeder funds.

At present, open-ended mutual funds allow unit holders to buy or redeem unit trusts during business hours but some open-ended funds may specify weekly, monthly, quarterly trading hours, or even particular dates of the year. This type of open-ended fund is called "interval open-ended fund", therefore, investors must be aware and understand buying and redemption conditions of the fund.

To provide understanding of the differences between close-ended and open-ended funds, the table below lists key differences of the two funds.

Table 9-2: Comparison Between Close-Ended and Open-Ended Funds

Close-ended Fund	Open-ended Fund
1. Most have a fixed maturity date, such as 5 or 7 years.	1. May or may not have a maturity date. Fund with no maturity date will be terminated when number of unit holder fall below the amount required by law or under conditions as stated by law.
2. Number of unit trust is fixed because there is only one offering date.	2. Number of unit trust is not fixed, may increase or decrease of investors buys or redeems the unit trusts.
3. Unit holders can redeem unit trusts based on its net asset value only at maturity. The AMC does not allow redemption before maturity but it can register the fund to allow unit holders to sell the units in the Stock Exchange of Thailand.	3. Unit holders can redeem unit trusts before maturity by placing the order through the AMC or its selling agents
4. Offer and bid price depends on investor demand (assuming the fund is listed on the Exchange)	4. Offer and bid price depends on daily net asset value.

9.4.2 Based on Policy and/or Types of Assets Invested

Fixed Income Fund

The investment policy for this type of fund is investment in only debt securities and deposits. Debt securities that this fund can invest in are bonds, debentures, bills of exchange, and promissory notes. This fund will not invest in equity instruments. Because the fund only invests in debt securities, the fund’s return will be in the form of interest earned and capital gain (loss) from the price of debt securities. While the net asset value for this type fund will fluctuate like any other fund, it is suitable for investors wanting stable and consistent return with low investment risk. Fixed income funds can be further classified into 3 types:

1. *General Fixed-income Fund*

This fund is focused on investing in diverse types of debt securities without any conditions on the securities' maturity. The fund manager will determine the average maturity of the debt securities invested by the fund to correspond with the current debt market and market interest rate.

2. *Short-term Fixed-income Fund*

This fund is focused on investing in mainly short-term debt securities by setting investment conditions for the entire portfolio so that the average duration does not exceed 1 year. An example of this fund is the money market fund which has an investment policy to invest 100% in the debt securities with maturity less than 1 year. In general, short-term debt securities fund will offer low returns on investment but higher than returns from deposits, and a stable net asset value. Therefore, this fund is suitable for investors requiring high liquidity or suitable to invest during rising market interest rates since the return of fund will increase continuously when each debt securities reaches maturity one after another.

3. *Long-term Fixed-income Fund*

This fund is focused on investing in mainly long-term debt securities by setting investment condition for the entire portfolio so that the average duration is no less than 1 year. Investment in long-term debt securities will offer higher interest rates and returns than short-term debt securities. Moreover, since the price of debt securities increase when the interest rate is expected to decrease, unit holders of long-term debt securities fund will receive higher return than those invested in short-term debt securities fund when the interest rate is expected to decrease. However, when market interest rate fluctuates or becomes unpredictable, the net asset value of long-term debt securities fund will fluctuate more than that of short-term debt securities fund. Long-term debt securities fund is suitable for investors who anticipate that market interest rates will decrease in the future because the unit holders will not only receive returns from interest rates of the debt securities but also returns from capital gain when the price of the debt securities adjust upwards.

However, investors investing in this type of fund should consider the risk that may arise from the debt securities invested by the fund. If the fund invests a high proportion in high risk debt securities, the high credit risk of that fund may affect the overall risk of the fund. In the event that the debt securities invested by the fund default and are unable to pay interest or principal, it will drive the fund's net asset value down.

Equity Fund

Equity fund's main investment objective is to seek investment returns from investing in equity securities such as common stocks and warrants, where the fund's net exposure from investing in equity securities for each accounting year cannot be less than 80% of the fund's net asset value. The fund will invest the remaining portion in either debt securities or deposits depending on the fund manager's discretion. In general, equity fund managers will invest significantly in equity securities, particularly in the period when investing in the SET offers higher returns. Thus, equity funds are suitable for investors seeking investment returns in the form of dividends and capital gains from equity securities listed on the SET. The fund's NAV will fluctuate on a daily basis based on the securities' price in the market. When securities' price in the market fluctuates, the fund's NAV will fluctuate in the same way. Hence, investors investing in equity funds should understand the risk of investing in equity securities which, by nature, the price of this type of securities will fluctuate more than others. Moreover, money used to invest in this type of fund should be money that can be invested for a longer duration than money invested in other types of funds. While equity investment comes with short and medium term fluctuations, in the long run it offers higher returns, with lesser chance of incurring loss. Thus, equity funds are suitable for investors seeking high investment returns and are capable of accepting high investment risk.

Alternative Investment Fund

The investment policy for this type of fund is to have net exposure of no less than 80% of the fund's net asset value in property funds, infrastructure funds, gold, futures, or structured notes with underlying assets such as crude oil or gold, on each accounting year. Examples of alternative investment funds are;

Commodity Fund

This is one type of alternative investment fund. Commodity fund is a fund that invests mainly in commodities such as gold bullions, crude oil, or agriculture products. This fund offers a good alternative for investors to increase their investment return. In general, fluctuation of commodity prices does not move in the same direction with those of stocks or bonds. Therefore, investors may allocate some of their investments towards commodities in order to diversify investment risk. Since commodity prices fluctuate more than others, investing in commodities either directly or indirectly through a mutual fund will also have the same risk of the unit trusts increasing or decreasing in value.

While a commodity fund may also invest in physical assets, such as gold funds, most commodity funds will invest in futures or other securities with commodities as the underlying asset rather than investing directly in physical assets in order to eliminate difficulty in arranging for storage of the commodities, and to reduce cost of warehousing and storage which can be quite significant (such as storage of crude oil, agriculture products, or precious metal). Additionally, investing in futures offers better liquidity. At present, commodity funds in Thailand are funds that invest in foreign investment funds (FIF). Investment policy of Thai commodity funds are to invest in FIFs that invest in commodities, which usually uses passive management strategy, and invest in exchange traded funds that mimics the returns of the funds' underlying commodities.

A key feature of commodity goods is that they are raw materials which can be used to produce consumer products. They can be precious metals such as gold or agriculture products, as well as energy products like crude oil. Investors investing in commodity goods include businesses with the need to use these commodities in their production such as oil companies and jewelry companies, or speculative commodity traders. Investing in commodity goods directly can create additional burden and costs in transportation and storage for investors. Since commodity goods are standardize around the world, their prices are determined by global demand and supply, thereby, causing commodity prices to move in the same direction around the globe. For example, price of gold in Chinatown in Thailand moves according to price of gold in the global market.

Commodity goods can be divided into 5 groups; 1) energy goods such as crude oil, fuel oil, natural gas, 2) industrial metals such as aluminum, copper, and lead, 3) precious metals such gold and silver, 4) agricultural such as corn, soy beans, coffee, and sugar, 5) livestock such as feeder cattle, live cattle, and lean hogs.

Investing in commodity funds can help diversify investment risk because movement of commodity prices does not correlate with the price of bonds or stocks. When the bond market and stock market falls, commodity funds should generate positive returns from investing in commodity goods. In general, price of commodities with limited supply tend to adjust upward mimicking inflation rate (however, prices of some commodities may not mimic inflation rate). Investors have the opportunity to capitalize on higher NAV or capital gain when they redeem their unit trust at a price higher than what they had purchased, and capital gain is tax exempted for individual investors.

Even though investing in commodity goods or in commodity funds is a way of diversifying investment, investors should understand the risk of investing in commodity goods and commodity funds well. The key risk of investing in commodity funds is the highly volatile price of commodity goods which is sensitive to news or events. Also, since the majority of commodity funds in Thailand are funds that invest in commodity funds overseas, they are exposed to foreign exchange rate risk, which is important since a portion of return from foreign investment funds come from foreign exchange rate fluctuations. Thus, investors should carefully study all the details before investing in commodity funds no matter if they have policy to hedge against foreign exchange risk or not.

Investors suitable for commodity funds are those who seek returns similar to the movement of commodity prices and can accept relatively high risk since commodity prices tend to fluctuate considerably. They may also expose investors to foreign exchange rate risk if the fund invests in foreign commodity funds.

Property Fund

Property funds seek investment return mainly in the form rent because buying and selling properties are difficult. Property funds are close-ended funds that may or may not have set a maturity date. Investment in property funds offers similar returns to investment in fixed-income funds because the fund often receives steady returns from rent. Fortunately, the fund may receive some capital gain when the fund can sell some of its assets for a price higher than its original price. Also, at the end of the account period, the fund will consider paying out dividend to its unit holders. In the event that the fund management companies lists the property fund in the SET, investors or unit holders can buy and sell the unit trusts on the Exchange, and investors can either make profit or loss from the transaction depending on the demand of that fund. This type of fund invests in many types of properties such as hotels, service apartments, office buildings, factory buildings, shopping center buildings, and so forth. The fund may purchase the property as one of its property (freehold) or invest to earn rights to the property's lease (leasehold).

From 2014 onwards, former property funds cannot increase any new capital while most new funds will register the fund as a form of Real Estate Investment Trust (REITS).

- Types of Property Fund
  - Freehold Property Fund

    Freehold fund is a property fund that invests and purchases ownership of properties. Income of the fund comes from rent generate from the properties and the sale of the properties when the fund is terminated. Rent received from the properties will be distributed as dividends to unit holders and when the sale of the property exceeds its original value, the fund NAV will increase in value. Therefore, investors have the opportunity to receive returns in the form of capital gain that arise from the sale of the property.

  - Leasehold Property Fund

    Leasehold fund is a property fund that does not invest in the ownership of the property but purchase only the rights to the leasehold, therefore, the fund does not have ownership in the property but have the rights to use the property to generate returns during the term of the lease such as 20 or 30 years. At the end of the lease, the fund has to return the property to its owner. When the lease term expires, the fund's NAV will be zero since there is no sale of the property. Rent is the only income the fund will receive during the life of the leasehold, therefore, the main investment return investors will receive is only in the form of dividends paid out by the fund. However, investors may profit from selling the unit trust in the SET in the event that the fund increases in value. Investors investing in a leasehold property fund may receive some money back in the event that the fund reduces capital which arise from yearly evaluation of leasehold rights that is being amortized every year, resulting in an accounting loss or unrealized loss.

Table 9-3 Comparison between Freehold vs. Leasehold

Key Point	Freehold	Leasehold
1. **Ownership**	Yes	No
2. **Return**	Dividend + Possible capital gain when the fund is terminated (depending on the property value when liquidated at the end)	Dividend and capital reduction (if any)
3. **At Termination**	Opportunity to redeem unit trust for capital gain or loss when the fund is terminated.	Net asset value is zero

- Return and Risk of Property Funds

When the fund receives income from managed properties, after deducting expense, and there are profits, the fund will distribute dividend to its unit holders no less than 90% of net profit. Such dividend payment is made every year or every quarter depending on the fund's dividend payment policy. Another form of return is profits from selling unit trusts in the SET (the fund must register its units in the secondary market to increase liquidity). Risk of property funds can be classified into external and internal risks, as follows;

- External Risks
  1. General risks from natural disaster, the economy, and political uncertainty. These risks affect property rental demand, for example, in the case of hotels many events may affect tourism and resulting in lower number of occupants.
  2. Higher competition in each industry sector. For example, more operators in the service apartment sector and hospitality sector may cause lower number of occupants which will affect the fund's income.
- Internal Risks
  1. Most property funds will invest in one property or if invest in multiple properties, they will be the same type of property which lack of diversification. Therefore, should some factors affect one property or group of properties, they will have considerable affect on the fund's income and performance.
  2. Risk from tenants. For leasehold property funds, the only income of the fund will come from tenants' rent. Therefore, if a property management company purchases a contract to manage the property but cannot pay the lease and meet the requirements specified in the contract, forcing the fund to look for new management company to manage the property, this could interrupt or reduce revenue stream of the fund.
  3. Efficiency in property management and the need to renovate or recondition the property may affect the fund's revenue at some stages.
  4. Illiquidity risk. Because property funds are close-ended funds, despite regulations forcing the fund to be listed in the SET to enhance liquidity, trade volume for property fund in the SET is still low. Therefore, investors may experience liquidity problems when selling the unit trusts.

- <u>Which type of investor is property fund for?</u>

Property funds are suitable for investors looking to invest long-term, seeking consistent return, and can accept risk from volatility in the property market that will affect rent income of the fund. However, rent volatility, the main source of income for property fund, is relatively lower than volatility from investing in common stocks.

Real Estate Investment Trusts (REITS)

This type of fund invests in properties but operates as a trust fund, not a juristic person as the property fund. REITs must invest in property no less than 500 MB and it is owned by a trustee who has the authority to supervise and manage assets under the REIT, including supervising the REITs manager in the interest of the trust holders. Trust holders are the beneficiary of the assets in the REITs, and REITS are under the supervision of the SEC.

- <u>Return and Risk from REITs</u>

Return from REITs is similar to return from property funds. When REITs receive revenue from managed property, after deducting expense and accounting for gain or loss from property sale, if there are profits, REITs will pay dividend to unit holders no less than 90% of net profit every year or every quarter, depending on each REIT's policy. Another form of return is from capital gains from selling the unit in the SET. Risk of REITs is similar to risk of property funds, however, REITs have additional risk arising from the flexibility of REITs' management conditions. Risks of REITs can be categorized as follows;

- Internal Risk
  1. *Risk from assets acquired:* Some businesses have inconsistent revenue streams, for examples, revenue of hotels during the New Year's holiday are higher than other periods of the year or occupancy is low during the rainy season for golf courses, causing revenue and return of investors to be inconsistent. For office buildings or factories, revenue tends to be more consistent since tenants will sign a long term lease. Another factor that must be considered is location of the acquired property. In the event that REITs have only one property under investment and it is located in an area affected by a problem, for example, being hit by tsunami or fire

forcing the tenants to move out, this may force the REITs to have no income until the disaster is gone and repairs must be made to restore the property. However, if REITs invest in properties in various locations, this can be a good way to diversify risk.

2. *Risk from leverage:* In the event that REITs are highly leveraged and the REITs manager can generate returns higher than interest rate, REITs profits and dividend will increase. However, if the REITs manager makes a mistake, there is a greater chance that REITs will experience loss when compared to REITs with low to zero leverage. Therefore, leverage ratio should be taken into account and if investors cannot accept additional risk from a highly leveraged fund, they should invest in REITs that do not leverage. However, if the investor is confident that the REITs manager will generate returns higher than the borrowing rate, the investor should invest in leveraged REITs.

3. *Guaranteed Income:* Some REITs may guarantee income with at least one insurer being a juristic person. For example, in the first period after REITs is listed on the SET, an insurer may guarantee minimum dividend payment which will can help reassure investors that they will receive income for certain. However, investors should consider the creditability of the income insurer and the true potential of the REIT in the long run more than short term guaranteed income.

4. *Dividend payout rate and opportunity for dividend growth:* Dividend payout rate, computed from dividend per unit divided by unit price, indicates REITs' attractiveness in terms of cash inflow, the higher the rate, the better the fund. The risk of price decrease is also reduced. In addition, opportunity for dividend growth must also be taken into consideration. REITs that payout higher dividend every year are more attractive than REITs that have stagnant dividend rate. If the dividend rate of a REIT was too low due to higher market price or the fund was

unable to payout the same amount of dividend, it is possible that the market price will considerably adjust downward.

- Which type of investor is REITs for?

REITs is suited for investors interested in investing in property but does not want to invest a large amount of money as investing directly in a property. REITs also offer higher liquidity and option to invest in diverse types of properties (e.g. shopping malls, office buildings, hotels, conference and exhibition buildings, etc.). At the same time, investors have the opportunity to earn reasonable returns under the management of a skillful and experienced manager. Investing in REITs is an investment to gain long-term consistent profit sharing as well as the possibility of profiting from a higher appraised value of the property invested by the REITs.

Table 9-4 Comparison Between Property Fund and REIT

Topic	Property Fund	REIT
1.Establish by Law	Securities and Exchange Act	Trust for Transactions in Capital Market Act
2.Fund Status	Juristic Person	Asset
3.Responsible Management	Asset Management Company	Trustee
4.Asset Owner	Property Fund	Trustee
5.Contract Counterparty	Property Fund	Trustee
6.Asset Keeper	Fund Supervisor	Trustee
7. Bankruptcy from Fund Management	Can be bankrupt as a juristic person	Cannot be bankrupt
8.Asset Protection	If the fund goes bankrupt, some assets may be included in the bankrupt fund.	If the trustee goes bankrupt, the trust fund will be ring fence out.

Information from the SEC

Infrastructure Fund

This type of fund was setup to attract investment from individual investors and institutional investor to use fund to improve infrastructure businesses for public's interest in both state and private projects. There are 12 projects which are rail or pipeline transport, electricity, water, roads, airports, deep sea ports, telecommunications or IT projects, alternative energy, water management and irrigation system, natural disaster prevention systems, waste management system, and infrastructure projects. The fund must outline the particular infrastructure project that it will invest in. Most of these projects belong to the government or state owned enterprises and requires massive investment capital. Waiting budget allocation can take a long time, therefore, raising capital through an infrastructure fund can speed up infrastructure investment and development. The fund also provides an option for the private sector to raise capital required for infrastructure development.

- Two Types of Returns from Infrastructure Funds are;
    1. Dividend is a share of profit from the project's rental and service income after expenses have been distributed as dividend to unit holders. The SEC requires that the fund pays out no less than 90% of adjusted profit (adjustment item is unrealized gain from appraisal value, repair and maintenance reserves or restoration fund, loan payable or other contingent liability of the fund based on borrowing policy). The AMC must payout dividend at least once a year (or can be multiple times per year such as quarterly or semi-annually). Some infrastructure projects invested by the fund have stable and sound performance allowing investors to receive consistent dividends for a long period. Individual investors received tax exemption for investment for 10 years starting from the fund's year of establishment. After 10 years, dividend is subject to 10% withholding tax.

2. Capital gain from selling the unit trust in the SET: Investors have the opportunity to make capital gain (or loss) since unit price will fluctuate according to the fund's performance and the market conditions.

- Risk under consideration before investing in infrastructure funds are;

1. Investors should consider the type of project that the fund invest in since each project has different risks and income potential resulting in different investment returns. The fund is also authorized to invest in greenfield projects, however, investors must factor in the project's progression because any delay in the project could increase project cost when compared to investment in brownfield project.

2. Risk from the unit trusts' liquidity and price since unit trust of infrastructure funds (for brownfield project with income) must be listed in the SET. Investors may experience liquidity problem when trading the unit trust as the price will depend on supply and demand and other factors such as economic and political conditions, trend of the industry in which the fund invests in, as well as future expectation of the fund's performance.

3. Infrastructure fund are also subject to technological risk, competition, asset deterioration, and high concentration of assets invested by the fund. Therefore, investors should consider whether or not the fund has policies or measures to protect against these risks.

- Which type of investor is infrastructure fund for?

Infrastructure fund is suitable for investors preferring long term investment and dividend, and those with time to study the details of each infrastructure project since each project is different and subject to different risks.

Infrastructure funds have similar investment styles as property funds. While property fund focuses on investing in assets with income from leasing property, infrastructure fund focuses on investing in government, state owned enterprise and private sector's infrastructure projects according to the investment policy of each fund.

Income of the fund will come from future revenue streams generated the project such as fees from express way, or selling electricity. This income will be used to pay dividend based on the specified amount and time. Infrastructure funds are also permitted to invest in greenfield projects, while property funds can only invest in completed property or at least 70% completed based on project value.

Mixed Fund

Mixed funds are other mutual funds that are not fixed-income funds, equity funds, or alternative investment funds. Mixed funds can either have or not have a specified asset allocation percentage in the fund project.

9.4.3 Based on Special Characteristics

Money Market Fund

This type of fund allows redemption at the end of each business day. The fund invests in bank deposits or debt securities such as treasury bills, bills of exchange, promissory notes, bonds and debentures. These debt securities must have maturity no longer than 397 days starting from the investment date. Debt securities invested must not be subordinate debentures with portfolio duration no longer than 92 days. Money market fund can invest in either baht denominated or foreign currency denominated assets. Funds cannot invest in foreign currency denominated assets exceeding 50% of the fund's net asset value and must have measures for protection against foreign exchange risk for the entire duration of that foreign asset's life.

Deposits and debt securities that the fund invests in must have high credit ratings (in the first and second rating position for short-term or first, second, and third rating position for long-term). Money market funds must invest in highly liquid securities for at least 10% of the fund net asset value, making this type of fund to have high liquidity and significantly low risk from default.

This type of fund is suitable for investors looking for place to store money for a short period of time for liquidity management purposes, or investing for a short period.

Such investors can only accept risk at a low level, which is a level similar to a deposits account. The advantage of money market funds is high liquidity and less unit price volatility. Returns from money market funds is also tax exempted with lower risk than fixed-income funds.

Capital Protected Fund

The investment policy of this type of fund is to invest with the goal of protecting investors' principal investment. The fund invests in low risk assets such as government securities, deposits or certificate of deposits issued by Government Savings Bank, or foreign government securities, deposits, certificate of deposits or P/N issued by financial institutions with some degree of creditability similar to money market funds.

In addition to focusing on protecting principal, the fund will specify a minimum investment ratio to show that such ratio can protect the principal according to the duration and detail outlined by the fund.

In the event that capital protected fund is subjected to foreign exchange rate risk, the fund must have measures to protect against this risk for the entire duration.

Returns earned on this type of fund will be consistent but not a significant amount since the fund can only invest in limited assets that are low-risk assets.

This fund is suitable for investors who can take only a low level of risk and do not want to lose any capital invested more than the amount stated in the investment project in the event that the fund's investment does not meet the anticipated outcome.

Sector Fund

This type of fund focuses on investing in particular sectors, hence, called Sector Fund. For example, the fund investing in only energy and banking sector: the fund will have higher risk than regular equity fund since this type of fund invests in only some particular sector stated in the project. For example, in 2012 even though the stock index in Thailand went up by 35% and equity funds were able to generate approximately 40% return, the return in the energy sector was only 8-9%. Because this type of fund does not diversify its investment, the fund's net asset value may adjust significantly upwards if the sector in which that fund invested in expands significantly.

On the other hand, a sector fund's net asset value may adjust significantly downwards or experience negative returns if the fund experiences a slowdown phase. Therefore, investors investing in sector funds should understand the corresponding risks in each sector.

The main risk from sector fund comes from concentration of investment in one particular sector. If the sector in which the fund invests in were to experience external crisis that cannot be controlled such as economic crisis or inequality of market demand and supply, the fund value and return could decrease. On the contrary, if the economy is favorable to the sector invested by the fund, the fund value and return could increase considerably.

Sector funds are suitable for investors who want returns similar to the movement of the sector index invested by the fund. Investors must have good understanding and capability of accepting risk from NAV and returns volatility, which could be significantly reduced in the event that the sector is experiencing economic crisis.

Fund of Funds

The main investment policy for this type of fund is to invest in other mutual funds (no less than 80% of the fund's net asset value) in order to facilitate investors who wish to diversify their investment in mutual funds that have good performance. The fund may focus on investing in one particular fund by investing in no less than 80% of the fund's net asset value. This type of fund is called feeder fund. The fund may also invest in multiple funds with different investment policies. This type of fund is called fund of funds. Most funds will invest in foreign investment funds since the ability to invest in some foreign securities may be limited by lack of information, expertise, or legal constraints. Therefore, the fund chooses to raise capital and use the money to invest in funds that are already established abroad, with experienced fund managers managing the fund.

The return and risk of this fund will depend on the type of fund it invests in. For example, if the fund invested in equity funds with high risk, the fund may receive high returns. However, this fund must rely on the asset allocation skill and expertise of the fund manager, including effective diversification.

This type of fund is suitable for investors seeking to diversify their investment in multiple funds. Some funds are funds that invest overseas or in foreign securities that investors may not be able to invest directly due to various conditions. Such investors are hoping that the fund manager will be able to most effectively choose funds to invest in on their behalf.

Tax Privileged Funds

(Note: The content in this section ("Tax Privileged Funds") has been revised for Retirement Mutual Fund, RMF and added for Super Saving Fund, SSF and Super Saving Fund Extra, SSFX in this version, according to the notification of the director-general of the Revenue Department on income tax No. 401 (RMF) and No. 369 (SSF) and No. 376 (SSFX))

- ***Retirement Mutual Fund or RMF***

RMF is a type of mutual funds that aims to encourage investors to voluntarily save or invest for their retirement. Revenue Department provides tax deduction as an incentive for investors to continually invest in the long run.

RMF provides various investment policies for investors to select; for example, equity mutual fund, fixed income mutual fund, money market fund and mixed fund. They are open-ended funds that investors can buy or redeem the units every working day or as indicated in the fund prospectus. Investors can deduct the amount they invested in RMF from their taxable income of the same tax year. The deductible amount is no more than 30% of the taxable income. No minimum investment of the RMF is required. The total amount invested in RMF, Super Saving Funds (SSF), National Savings Fund, Provident Fund, Government Pension Fund, Retirement Insurance Premium and Private Teacher Aid Fund must be no more than 500,000 baht. Investors must continually invest for no less than 5 years and hold the units till they are at least 55 years old.

RMF is suitable for investors who prefer long-term saving for their retirement, especially for

- Self-employed individual who has no welfare for retirement,
- Employees whose employers do not provide provident fund for them to contribute and invest for their retirement,
- Employees or government officials who already have retirement saving welfare but want to additionally save and to utilize maximum tax benefit of 500,000 baht limit as incentivized by the government.

- ***Super Saving Fund (SSF)***

SSF is another type of mutual funds that also aims to encourage voluntarily long-term saving or investment. Similar to RMF, SSF provides various investment policies.

To be eligible for tax benefit, the total amount invested in SSF must be no more than 30% of taxable income of the same tax year and no more than 200,000 baht. Moreover, the **total amount invested in SSF, RMF, National Savings Fund, Provident Fund, Government Pension Fund, Retirement Insurance Premium and Private Teacher Aid Fund** altogether must be no more than 500,000 baht in the same tax year.

Regarding the current policy, investors can utilize tax benefit through SSF investment from 2563 B.E. to 2567 B.E. with the condition that they must hold the units for no less than 10 years from the day they bought the unit but they do not need to invest continually and there is no minimum investment required.

- ***Super Saving Fund Extra (SSFX)***

SSFX is SSF of which investment policy is to invest in the Stock Exchange of Thailand no less than 65% of the NAV. It is one of the policies aiming to increase investors' confidence affected by the impact of COVID-19 pandemic on capital markets. Investors can deduct the amount invested in the SSFX no more than 200,000 baht from their taxable income. The 200,000 baht limit is the addition to the usual SSF limit. The 200,000 baht limit is not included in the deductible limit of the total savings for retirement, i.e. contributions to the provident fund and RMF. Investors who are eligible for SSFX tax benefit must invest in SSFX during the period of April 1st, 2563

B.E. to June 30th, 2563 B.E., and hold the units no less than 10 years from the day they bought the units (which is similar to the condition of SSF).

The details of RMF, SSF, and SSFX tax benefit can be learnt more from chapter 11, topic 11.3.4 Conditions and Tax Benefit of RMF, SSF and SSFX.

Index Fund

Index fund is a fund that uses passive management to manage the fund. The fund manager will manage a group of securities that matches the stock market, or choose only securities that represent the stock market, or select a stock index to build a portfolio to manage. Example of this fund is the SET50 index fund where the fund consists of securities identical to the securities that comprise the SET50 Index and each stock weighted proportionally as they were in the SET50 Index. In practice, index fund manager will choose to invest in all securities of the index in equal proportion. However, to save time and expense in managing according to the index, fund managers prefer to use mathematical models and computer programs to assist. However, investment in index funds may not yield the same return as the index due to many factors such as affect from management expense fee and other fees charged by the fund, or discrepancies from variables used in the model or computer program to help the fund manager compute the weight of each stock in the portfolio. Hence, investors investing in index funds must understand the characteristic of the fund, its return, and risk that may arise from the investment, as follows:

- Investors should want to invest long-term by believing that the referenced index will adjust upwards in the future. Also, money used to invest in this fund should be made for long-term investment to reduce risk from having to sell before the right time because the referenced index is adjusting downward as a result of the depression of the overall market.

- Investors should expect returns similar to the index return and be satisfied with the returns generated by the index fund.

- The fund can help investors with limited funds to diversity efficiently (not capable of using the money they have to invest in a diversified portfolio). An index fund can help diversify investment risk to be same as the underlying index.

Exchange Traded – Fund or ETF

The investment policy for this type of fund is to generate returns in the same direction as the underlying index. The fund can use any index as its underlying index such as stock index, bond index, including commodities index such as gold and crude oil. However, most funds prefer to mimic stock index since price calculation is easy, speedy, and transparent. ETF will be listed in the SET and can be traded like common stocks. The price of ETF units will be similar to the NAV of the fund at that time or commonly known as Indicative NAV (i-NAV) or Real-time NAV which is computed for the entire trading session. Unlike ETF, buying and redeeming mutual funds must be made via AMC selling agents or supporting agents at the end of day price and the NAV is computed only once per day. Another difference between ETF and normal mutual fund is ETF will have market maker supervising the price and liquidity of the ETF listed in the SET in order to assure investors that they can trade the ETF unit all the time at a certain price. The goal of ETF is similar to other close-ended or open-ended mutual funds which are to increase investment option for investors to own a portfolio that is similar to an index by not having to invest in every security but indirectly by buying unit trust issued by the AMC. The fund also helps improve liquidity and efficiency in the capital market.

Returns of ETF are as follow;

1. *Capital gain/loss from unit trusts:* Unit holders' return from ETF is that same as investing in a common stock where the price may increase or decrease. However, movement of ETF is an aggregate movement of a group of securities. For example, ETF SET50 will adjust based on the market condition. For example, on the day the investors bought the unit, the price was 10 baht/unit, then one month later, the price could go up to 14 baht. Then 3 months later the price could go down to 11 baht. Thus, the 3-month return would be 10%. Investors will be able to see the movement of their unit trust all the time, no different than common stocks.

2. *Dividends:* Dividends are paid by companies in the basket of the fund. Companies will pay dividend at a different rate, while some companies may not even pay dividend. Benefits and rights to dividend will be passed on to the fund, which may or may not payout dividend to the unit holder, however such policy must be made clear in the prospectus.

Risk of an ETF is the same as the underlying group of assets or stock index. For example, if the fund uses the SET 50 is the referenced index, the fund's risk will be the same as the SET 50 index. If the fund were to use a bond index as the referenced index, its risk will the same to that bond index. Risks of ETF can be mainly categorized as below;

1. *Market Risk***:** Since ETF tracks index, investment risk in investing in ETF will arise from macro and micro factors. The former is a risk factor that is external which cannot be avoided or anticipated, such as global economic slowdown, change in interest rates, change in crude oil price in the global market, catastrophes or natural disasters. The micro factor, on the other hand, is risk that arises from the businesses themselves such as financial strength and competitiveness.

2. *Tracking Difference (TD)*: which means any differences from return of ETF when compared to tracking index. For example, the 6-month return of the ETF SET 50 is 10% while the SET 50 index is 9.85, therefore, the TD is equal to 10 – 9.85 = 0.15%. Based on historical information of the overseas market, the TD of the ETF is quite low since ETF can easily increase or decrease unit trusts based on investors need and there are arbitragers looking to exploit differences in the two markets causing the offer and bid price of the ETF to adjust closely to the tracking index.

3. *Other risks:* Liquidity in converting securities into cash in a short period of time, will depend mostly on the market condition, while liquidity of ETF will depend on the fund's underlying securities. As for legal risk or settlement

risk, it will be similar to other open-ended funds. Since the SEC is in charge of authorizing fund establishments, the securities companies will act as co-unit trader and the market maker.

ETF is suitable for investors who do not have adequate time to find information of many securities at the same time but would like to diversify their investment portfolio without having to use a significant amount of money. For example, investing in ETF that tracks the SET50 is similar to holding a portfolio comprising of the 50 stocks in the SET50 index. This will allow investors to diversify their investment in many stocks without having to use large amount of money. ETF is also suitable for investors wanting liquidity from their investment since they can buy and redeem ETF units all the time during SET trading hours.

At present, there is one type of fund that is quite similar to ETF. This fund is called Index Fund. The main similarity between ETF and Index Fund is that they both invest and attempt to mimic returns of the underlying index. The main difference is trading conditions; ETFs are traded through securities brokers while Index Funds are traded through the AMC or selling agents. The second difference is trading fees. ETFs have brokerage fees but Index Funds have front-end fee and back-end fee. The third difference is the listed price of the fund. For ETFs, investors will know the price at the time of the order, whereas, price of Index Fund is only determined at the end of each day. Therefore, investors will know the price on the next business day.

Guarantee Fund

For this type of fund, the AMC will seek a guarantor to guarantee the principal investment or fund's return for their unit holders. However, such guarantee is only for investors who invested in the fund for a period specified by the fund. If the investors did not invest in the fund for a specified period, investors will not be eligible to receive the guaranteed principal or return privileges, and may have to redeem their unit trust based on the fund's NAV.

For fund insurers, they have to satisfy the following conditions specified by the SEC, as follow;

1. Be a commercial bank or financial institution established under the special provision or Act on the Undertaking of Finance Business, Securities Business and Credit Foncier Business and Asset Management Companies. The guarantor must maintain the fund amount and reserves according to the supervising law.

2. Be a foreign commercial bank that is rated within the 4th category from credible rating agencies accepted by the SEC.

In the event that the guarantor terminates the guarantee of principal or return, the AMC which established the fund must find a replacement. If a replacement cannot be found due to higher costs or not approved by the unit holders, the AMC may have to terminate the fund. If the AMC chooses not to terminate the fund, the existing fund name must be renamed and remove the term “Guaranteed” to suggest that the fund is no longer guaranteed.

Term Fund

Term Fund is a fixed income fund that has a specific maturity such as 3 months, 6 months, or a year and invests in debt securities of both government and private sector. Term Funds have specific expected returns indicated at the beginning of the investment. The investor cannot sell the unit trust before its maturity.

Trigger Fund

Trigger Fund is a fund that has a specific rate of return and time of investment. For example, for a trigger fund with a return target of 10% and less than 1 year to maturity, if this fund can make a return of 10% in less than 1 year, the fund will pay the investors that 10% return and then, the fund will be closed down. If the trigger fund cannot make a return of 10% within less than 1 year, the fund will be closed down without paying any returns or change this fund to remain open as other open-ended mutual funds depending on what is indicated in the prospectus of the project.

In Thailand, many trigger funds are available for investors to choose whether they invest in Thailand or abroad, or even in commodities. Trigger funds are suitable for investors who do not have time to track assets invested by trigger funds, or are worried about the volatile market condition, as the fund manager will time the market for investors and when the fund is yet to reach the target, investors can sell the investment and invest in some other assets.

However, the target return of trigger funds is only a target for fund management to try to achieve. It does not provide a guarantee that it will generate the target return. Therefore, investment in trigger funds is subject to risk that the fund may not achieve its target within the timeframe as well as risk of the assets that these funds invest in. For example, trigger funds that invest in stocks will have no difference in risk than any other funds that invest in stocks too. Another risk that investors of this type of fund must face is liquidity risk since trigger funds are close-ended funds and if the fund is still within the contract length and the market fluctuates, investors cannot redeem their unit trusts.

Accredited Investors or AI

At present, the SEC has relaxed the fund establishment rule to allow more investment options such as non-investment grade or unrated bonds. Therefore, the SEC had issued a rule clarifying the two types of Accredited Investors (AI), as follows;

(1) Institutional investors such as commercial banks, mutual funds, provident funds, government pension funds, social security fund, and life-insurance companies.

(2) High net worth investors

In setting the criteria of Accredited Investors, the objective is to allow more options to raise capital as well as allowing investors who can accept more risk, invest in more investment options, with some degree of protection. Since AIs are individuals with investment capability and ability to accept risk, the SEC has authorized issuers and agents to offer complex or high-risk financial instruments to AI. However, issuers and agents can also offer some AI product to individual investors but the SEC will set the limit on investment depending on the complexity and risk of the securities.

When offering the fund to AIs, the fund must include warnings in the fact sheet that fund is being offered to only AIs. The fund must not invest more than 25% of the net asset value in a security of one company (company limit) and must include additional risk information.

For fund offering, the SEC has set criteria that the issuer must have operations in place before offering or providing service to AI. Investors must understand the product they invest in and receive information before making decisions. The fund has to conduct client due diligence, have investors complete the suitability test, and notify investors about the risk that they may receive less information when compared to product offering to the public. However, the suitability test is exempted for (1) institutional investors (2) High Net Worth investors, juristic person who turned down the suitability test and those that the issuer is confident that they have good understanding of the investment product, and (3) funds that are managed by AMC.

9.4.4 Based on Foreign Related Risk

Non-Foreign Related Risk Mutual Fund

These are mutual funds that invest in securities in Thailand. The investing decision depends on each mutual fund's policy. For example, the fixed income fund normally invests in Thai government bonds, private debt securities, and deposits, and mutual funds that normally invest in Stock Exchange of Thailand. The return and risk depends on the asset invested in the fund. However, there will be no exchange rate risk from investing in the non-Foreign Related Risk Mutual Fund because the fund will be invested in Thailand and in Baht currency only.

Foreign Related Risk Mutual Fund

The objective of this mutual fund is to invest money received from selling units in foreign securities or assets including foreign mutual funds so that the net exposure to foreign securities risk is not lower than 80% of net asset value.

At present, the Bank of Thailand allows investors to invest a limited amount of money abroad each year. It can be said that retail investors invest in this type of mutual fund to expand their investment abroad. However, to efficiently increase the investment opportunity including risk diversification, the AMC may allow a fund manager in foreign country to be an advisor or manage the foreign related mutual fund. This is because the foreign related mutual fund needs managers who specialize in this type of fund. Each fund has different investing policies, for example, some funds are mutual funds, some are fixed income funds, and some are mixed funds.

As for an investment risk in the foreign related risk mutual funds, besides price risk, there are also country risk and currency risk in which this type of mutual fund may hedge against the exchange rate risk by being fully hedged or partially hedged depending on the fund's policy. The investor should read and understand the policy and the different types of risks involved from investing in this type of mutual fund from the prospectus thoroughly.

- ***ASEAN Collective Investment Scheme (ASEAN CIS)***

Besides investing in foreign mutual funds managed by AMCs in Thailand, the SEC has allowed the offering of the ASEAN Collective Investment Schemes or ASEAN CIS to general investors. It has originated from the co-operation of 3 countries; Thailand, Malaysia, and Singapore. AMCs in Malaysia and in Singapore can offer their funds' unit trust to the investors in Thailand and AMCs in Thailand can offer their funds' unit trust to the investors in Malaysia and Singapore.

The condition for ASEAN CIS offering is that the offer needs to happen in the home country and the transaction needs to be done through a licensed AMC. The characteristics of the fund supervisor and the investment requirement of ASEAN CIS need to be in line with the standards of qualifying CIS. Moreover, ASEAN CIS from a foreign country must not have more complex investments than mutual funds in Thailand and each country should have an agent available to help facilitate and coordinate. The ASEAN CIS unit trust offered through security companies in Thailand need to disclose information to the investors as other mutual funds in Thailand through, for example, the prospectus, fund fact sheet, or annual report, and have an agent to help facilitate the work such as the announcement of unit price or distributing the report to unit holders including action regarding disputes that may happen.

- ***Greater Mekong Subregion Fund (GMS Fund)***

GMS Fund is a fund that has an investment policy to invest in the greater Mekong subregion. It is an economic cooperation among 6 countries namely Thailand, Cambodia, Lao, Myanmar, Vietnam, and China (only Yunnan province).

However, there are still many problems such as international money inflow and outflow, no real time transaction system, and unfavorable taxation to capital market development. Because of these problems, GMS Fund needs further development in several areas such as standard requirement for the investment, setting the investment control policy, development of product accessibility, variety of products, development of investment's intermediation, and securities issuing service provider. And, because the GMS group has investment limitations, most mutual funds offer policies that invest in ASEAN as it allows the fund to be managed more efficiently.

Domestic and Foreign Related Risk Mutual Fund

Mutual fund investing in both domestic and foreign securities can invest in the equity securities, debt securities, deposits, hybrid securities, unit trusts of foreign mutual funds, and other securities and assets both domestically and internationally. The investment proportion according to the above policy depends on the AMCs' decision based on the appropriateness and market condition at each period. This mutual fund that invests in both domestic and foreign securities has foreign exchange rate risk caused by investing in the foreign country. This risk may result in a loss for the investors or the investors receiving less return than the original amount invested. However, if the mutual fund hedges against the exchange rate risk, the fee to manage the fund will be higher which results in lower returns in general.

9.4.5 Based on Forms of Return

Pays out Dividend

Mutual funds that have a policy to payout dividend will set dividend payment term for investors, for example, no more than 1 or 2, or 4 times per one accounting year as stated in the prospectus. Investors will receive periodic returns during the life of the fund without having to redeem their unit trusts. This is a way to mitigate concern from price fluctuation. Unfortunately, mutual funds that have policy to pay dividend do not have to pay dividend every period since dividend payment can only be made when the fund is profitable. Also, the net asset value of the fund will reduce equal to the amount of dividend paid. Dividends received from mutual funds are subject to 10% withholding tax, which is done by the AMC. The unit holders will not include the dividend received toward their annual taxable income. However, if the unit holders' income is less than amount required to pay tax, they can notify the AMC not to apply withholding tax but the unit holders must include the dividend income as part of their annual taxable income in the form PIT 90 or PIT 91.

Dividend payment made by the mutual fund will allow investors to receive intermediate return from investment but investors may lose the opportunity for their investment to grow continuously. When the market is in an upward trend, investors will lose the opportunity for their investment to continue to grow rapidly. Thus, this type of mutual fund is best-suited for investors who wish to receive cash return during their investment period or investors who have the option to reinvest their dividend payment based on the current market condition.

Does not pay Dividend

For mutual funds that do not have policy to payout dividend, the only form of return comes from the redemption of unit trusts, which is not subject to tax. For this type of fund, the fund will use the proceeds to reinvest in order to increase its net asset value, therefore, the value of the unit trust will increase more rapidly than mutual funds that pay dividend, allowing the investors to maximize their investment return when the market is on its way up. However, the fund's net asset value may be at risk of declining when the market is going down.

Mutual funds that do not pay dividend are suitable for investors that do not need to receive cash payment from their investment and do not want to any tax liability from dividend payment.

To help improve understanding between dividend-paying and non dividend-paying mutual funds, see the comparison table below:

Table 9-5 Comparison Between Dividend-Paying and Non Dividend-Paying Mutual Funds

Dividend-Paying Mutual Fund	Non Dividend-Paying Mutual Fund
- suitable for investors with periodic need to use money	- suitable for investors without periodic need to use money
- help reduce loss for investors (due to prior dividend payments) in the event that the market is in a downward trend.	- When the market is in a downward trend, investors will incur more loss when compared to dividend payment mutual funds since there is no intermediate payment during the investment period.
- Dividend received are subject to 10% withholding tax (once the withholding tax is paid, investors do not need to include such amount to their annual taxable income)	- No dividend payment, thus, no withholding tax.

Auto Redemption funds

Auto redemption funds are mutual funds that will automatically redeem unit holders some portions of their unit trusts during the investment whenever the conditions specified by the project are satisfied. This automatic redemption will provide investors with intermediate cash flow similar to receiving dividend, but in the form of redemption of some portions of the unit trusts. The redemption will not affect the fund's net asset value since the amount of unit trusts is reduced in proportion. Such redemption is similar to receiving dividends but without needing to pay tax.

Example of auto redemption: Assume that an investor invests 10,000 baht (1,000 units @ 10 baht per unit) in this type of mutual fund. Later on the fund was able to generate 10% return or 1,000 baht. The investor's net value from the share of this mutual fund is now worth 11,000 baht. If the fund were to proceed with auto redemption, it will distribute 1,000 baht to the investor (without any tax liability).

As for the number of unit trusts owned by the investor, when the value goes up to 11,000 baht, the unit trust value will increase from 10 baht to 11 baht and his original number of unit trusts will remain the same at 1,000 units. When the investor receives the return of 1,000 baht, the total number of unit trusts will be reduced by the amount equivalent to 1,000 baht received divided by the redemption value of the fund on that day (11 baht). Thus, the investor's number of unit trusts will go down by 90.9 units, leaving the investor with 909.1 units invested in the fund. However, the investor's investment in the fund will remain the same at 10,000 baht (909.1 units X 11 baht). However, when computing the funds' net asset value, the AMC will subtract its management fees before arriving at the net asset value. To help improve understanding between dividend-paying mutual funds versus auto redemption fund, the table below provides a comparison between the two.

Table 9-6 Comparison Between Dividend-Paying Mutual Fund and Auto Redemption Mutual Fund (Assume Equal Return)

Detail	Dividend-Paying Mutual Fund	Redemption Mutual Fund
Net asset value per unit trust before dividend payment/auto redemption	11 baht	11 baht
Number of unit trusts	1,000 unit trusts	1,000 unit trusts
Return on Investment	1,000 baht (subject to withholding tax)	1,000 baht
Value of unit trust reduced (per unit)	1 baht	-
Number of unit trusts reduced	-	90.9091 (=1,000/11)
Net asset value per unit trust after dividend payment/auto redemption	10 baht	11 baht

Detail	Dividend-Paying Mutual Fund	Redemption Mutual Fund
Remaining unit trusts after dividend payment/auto redemption	1,000 unit trusts	909.09 unit trusts
Remaining invested value in the fund	10,000 baht	10,000 baht

Even though investors investing in auto redemption fund will receive periodic return that is not subject to withholding tax, the risk of this auto redemption fund is not different from other types of mutual funds. Investors must have a good understanding before investing since the net asset value of the fund can go up or down depending on the type of instruments under investment. The only difference for this type of fund is the way unit redemption is made.

Conclusion

Mutual funds are investment innovations designed to facilitate individual investors who are want to invest but may have some obstacles preventing them from investing by themselves. These mutual funds, which are managed by mutual funds companies, are regulated and undergo clearly specified standards and rules, as well as laws that are supervised by audited agencies, starting from setting up of a mutual fund, raising capital for the funds, registering as a mutual fund, including management and operation process of the fund. Investors who are interested in investing in mutual funds must review fund information and the types of mutual funds as there are many ways of classifying mutual funds such as by fund redemption, by compensation, by foreign risk factors, by fund policy or assets types, including other special characteristic of the fund, whereby, each type of fund will present different risk exposures and different return opportunities. Investors should therefore review the fund's information and understand the type of mutual funds and its risk level in detail before making investment decisions.

10. Rate of Return and Risk of Mutual Fund Investment

Required Readings:

1. Product Knowledge
    - Chapter 10 Risk and Return in Mutual Fund Investment

Learning Objectives :

1. Explain return from mutual fund investment (capital gain, dividend, total return).
2. Calculate total return from mutual fund investment.
3. Explain the derivation of NAV, apply NAV for investment consulting.
4. Explain meaning of risks and distinguish types of risks of mutual fund investment.
5. Explain the concepts of using benchmark to compare performances of active and passive management funds.
6. Distinguish benchmark suitable for each type of mutual funds.
7. Explain the principles of mutual fund performance measurements: Sharpe ratio, tracking error, information ratio.
8. Explain concepts of fund ratings by using Morningstar risk-adjusted return.

Chapter 10

Rate of Return and Risk of Mutual Fund Investment

Mutual fund investment is an investment where investors pool their funds to invest together. Fund managers invest the fund in securities or various assets in the money market or capital market according to the investment policy indicated in the fund prospectus. Therefore, forms of risk and return vary by asset classes that the fund invests in. This means that the mutual fund bears the same risk as if investors invest directly in the particular assets. However, the risk may be lower because the mutual fund has good diversification strategy and is managed by an experienced fund manager who has information for investment decision which can significantly reduce investment mistakes.

Investors should understand returns and risks associated with mutual funds to select the fund that suit their level of risk tolerance and provide the return required. Information about the fund's risk and return is important in past performance comparison between mutual funds to identify the suitable fund for investment. Although the funds are managed by professional fund managers, investors should know how to assess the fund's performance which requires a benchmark that is consistent with the investment policy of each particular fund. They have to know the tools to assess the efficiency of fund manager's management as it is one of the factors considered for the mutual fund investment selection.

10.1 Returns from mutual fund investment

In mutual fund investment, investors expect future returns from the investment units held. Forms of returns expected by investors can be categorized into 2 types.

10.1.1 Capital gain / loss from changing net asset value (NAV)

Capital gain/loss is the difference between NAV at redemption and NAV at time of investment. If investors redeem the units at a price higher than the price they paid for the units, the difference will be capital gain. If the price at redemption is lower than the price paid to buy the investment units, the difference will be capital loss.

If investors do not redeem the units to realize capital gain/loss, they can consider the difference of the unit's current NAV and the price paid for the fund's unit. Capital gain/loss expected from the units which have not been redeemed is called unrealized capital gain / loss). The calculation of capital gain/loss is as shown in example 10-1.

<u>Example 10-1</u> Mr. A invests in TSI Mutual Fund of which the details are provided as follows.

Date	NAV per unit of TSI Mutual Fund (baht/unit)
Buy a unit on March 1st, 20X8	12.5964
Sell a unit on March 15th, 20X8	14.5964

Regarding example 10-1, capital gain/loss can be calculated as follows.

Capital gain/loss = (NAV per unit at the end – NAV per unit at the beginning)

= (14.5964 – 12.5964)

= 2.00 baht per unit

Or calculate in form of the rate of return

$$= \frac{\text{(NAV per unit at the end – NAV per unit at the beginning)}}{\text{NAV per unit at the beginning}}$$

$$= \frac{(14.5964 - 12.5964)}{12.5964}$$

= 15.88% per period

To calculate capital gain/loss, investors should factor in front end and back end fees to calculate the rate of return from the investment.

Mutual fund calculates the securities' NAV and the fund's NAV every working day to facilitate unit holders in tracking the fund's performance. The mutual fund must update the value of securities and assets invested to the current market price which is called 'Mark to Market'. In general, the asset management company calculates the net asset value (NAV) and net asset value per unit (NAV per unit) of funds at the end of every working day and announces on the next day through various channels such as daily newspaper, the company's website or selling agents, and AIMC's website. NAV of a mutual fund can calculated using the formula:

Net Asset Value = Market value of assets + Unearned revenue + Cash – Liabilities

Example 10-2 Wealthy Thai Mutual Fund has 1,200 million baht in total market value of assets, 10 million baht unearned revenue, 40 million baht cash, and 80 million baht liabilities. What is the Wealthy Thai mutual fund's NAV?

NAV of Wealthy Thai mutual fund can be calculated as follows.

NAV = Total market value of assets + Unearned revenue + Cash – Liabilities
= 1,200,000,000 + 10,000,000 + 40,000,000 – 80,000,000
= 1,170,000,000 baht

Regarding example 10-2, if Wealthy Thai mutual fund has 100 million units issued, NAV per unit can be calculated as follows.

$$\text{NAV per unit} = \frac{\text{NAV}}{\text{Number of investment unit issued}} = \frac{1{,}170{,}000{,}000}{100{,}000{,}000} = 11.7 \text{ baht per unit}$$

Note: NAV per unit cannot indicate whether the fund is cheap or expensive. For example, Fund A's NAV per unit is 10.0000 baht while Fund B's NAV per unit is 20.0000 baht. It does not mean that Fund B is more expensive than Fund A.

10.1.2 Dividend

Dividend is the return that the mutual fund pays to unit holders in the form of cash. In any accounting period, the fund may pay dividend more than 1 time or suspend the payment depending on the dividend policy and performance of the fund. The mutual fund that can pay dividend to its unit holders must be a fund with a dividend payment policy and has retained earnings or operating profits. Investors who prefer returns in form of dividends should select only the fund with dividend which will be indicated in the fund prospectus. However, the return in the form of dividend will be taxed at 10% withholding tax. Investors should take the tax into consideration when consider the return in form of dividend.

10.1.3 Total return

Total return is return from investing in a particular investment unit in total during a particular period of time including dividends and capital gain/loss. Investors have to take expenses associated with the investment into consideration. Total return after all relevant expenses is called net total return which is the difference between total return from investment and investment expenses. Therefore, to compare the investment return, investors should employ net total return as an important number to consider the mutual fund's return. Total return can be calculated as shown in example 10-3 as follows.

Example 10-3 Mr. A invests in TSI mutual fund of which details are as provided in the below table.

Date	NAV per unit of TSI mutual fund (baht/unit)
Buys an investment unit on December 30th, 20X8	12.5964
Receives dividend on June 30th, 20X9	0.1234
Sells the unit on December 30th, 20X9	14.5964

Total return from TSI mutual fund investment

= (NAV unit sold + dividend per unit during the period - NAV per unit bought)

= (14.5964 + 0.1234 – 12.5964)

= 2.1234 baht per unit

Or calculate in the form of rate of return

$$= \frac{\text{(NAV unit at the end + dividends received during the period – NAV unit at the beginning)}}{\text{NAV unit at the beginning}}$$

$$= \frac{(14.5964 + 0.1234 – 12.5964)}{12.5964}$$

= 16.86% per period

If investment expenses are deducted from the total return, it will be net total return.

10.2 Risk of mutual fund investment

Despite having an experienced fund manager managing the fund, risks associated with mutual fund investment still exists like investing in securities directly by investors themselves. However, the risk is lower from better investment diversification and investment decision because of more efficient tool for analysis. Risk associated with mutual fund investment can be categorized as follows.

10.2.1 Asset class risk

Risk associated with mutual fund investment can vary by investment policies of each mutual fund. Funds investing only in safe assets such as cash, treasury securities, or debt securities have lower overall risk than funds investing in risky assets such as stocks, commodities, or property. Nevertheless, the expected return from the fund investing in safe assets will be lower than the fund investing in risky assets. Investors, therefore, should carefully learn about the fund's investment policy before choosing the fund and consider whether or not it is consistent to their required return and acceptable risk level.

The SEC has set guideline for mutual fund risk level (Risk Spectrum) which ranks risk into 8 levels from low risk to high risk to be used as a guideline for investors when choosing which investment is suitable for their acceptable risk.

Table 10-1 Level of risk associated with different types of mutual fund

Risk Profile	Risk Level	Type	Securities Principally Invested
Low risk	1	Money market mutual fund investing in Thailand only	Investment policy is to have no foreign risk by investing only in cash deposits or equivalents, debt securities, other assets, or other investment as specified by the SEC which provides liquidity on demand or of which maturity is less than 397 days from the day of the investment or signing the agreement. Portfolio duration at any point in time must be no more than 92 days.

Risk Profile	Risk Level	Type	Securities Principally Invested
Low to moderate risk	2	Money market mutual fund	Investment policy is to have some foreign risk but no more than 50% of NAV. The fund invests in cash deposits or equivalents, debt securities, or other investment as specified by the SEC which provides liquidity on demand or of which maturity is less than 397 days from the day of the investment or signing the agreement. Portfolio duration at any point in time must be no more than 92 days.
	3	Government bonds mutual fund	The fund's net exposure is mainly government bonds. It must invest at least 80% of NAV on average in government bonds.
	4	Fixed-income mutual fund	The fund's net exposure is at least 80% in cash deposits or equivalents or debt securities of NAV at any point in time. - In case that the fund has no more than 20% net exposure of NAV in non-investment grade/unrated security, the fund is rated at risk level 4. - In case that the fund has more than 20% but less than 80% net exposure of NAV in non-investment grade/unrated security, the fund is rated at risk level 5. - In case the fund has at least 80% net exposure of NAV in non-investment

Risk Profile	Risk Level	Type	Securities Principally Invested
			grade/unrated security on average, the fund is rated at risk level 6. - In case of being a feeder fund that the master fund is allowed to invest in other assets that are not allowed for fixed-income funds to invest in, the fund is rated at risk level 4 – 5.
Low to high risk	5	Balanced fund (Mixed fund)	The net exposure can be equity market, debt, or alternative assets. Balanced fund of which equity market investment proportion is not determined, the fund will be rated at the risk level of its actual investment policy. For example, if the fund invests mainly in equities, the fund will be rated at the similar risk level as an equity fund.
High risk	6	Equity mutual fund	The net exposure is equities which at least 80% of NAV are invested in equities on average.
	7	Industry mutual fund	The net exposure is equities in a particular industry on average at least 80% of NAV.
Very high risk	8	Mutual fund investing in alternative assets	The net exposure is alternative assets such as REITs / infrastructure fund / property fund / commodity indices, gold, and crude oil at least 80% of NAV on average.

Risk Profile	Risk Level	Type	Securities Principally Invested
Significantly very high risk	8+	Mutual fund with significant investment risk	The fund significantly invests in derivatives, repo (purposely for investment) and short selling.

10.2.2 Credit risk

Credit risk can be assessed by credit ratings which is the information indicating the level of debt repayment ability considered from past performance and financial conditions of the security issuer. The credit ratings of bonds are indicated by signs which can be interpreted as follows.

Table 10-2 Credit ratings by local rating agencies

Credit Rating	Explanation	TRIS	Fitch (Thailand)	
		long-term	long-term	short-term
Investment Grade	The highest rating having the lowest possibility to default	AAA	AAA(tha)	F1+
	The second highest rating having very low possibility to default	AA+	AA+(tha)	
		AA	AA(tha)	
		AA-	AA-(tha)	
	Possibility to default is low.	A+	A+(tha)	F1
		A	A(tha)	
		A-	A-(tha)	F2
	Moderate risk and moderate ability to repay.	BBB+	BBB+(tha)	
		BBB	BBB(tha)	F3
		BBB-	BBB-(tha)	
Speculative Grade	High risk of default	BB+	BB+(tha)	B
		BB	BB(tha)	
		BB-	BB-(tha)	
	Very High risk of default	B+	B+(tha)	
		B	B(tha)	
		B-	B-(tha)	
	Highest risk of default	C	CCC(tha)	C
			CC(tha)	
			C(tha)	
	Being in default or susceptible to default	D	D(tha)	D

Table 10-3 Credit ratings by international credit rating agencies

<table>
<tr><th rowspan="2">Credit Rating</th><th rowspan="2">Explanation</th><th colspan="2">Moody's</th><th colspan="2">S&P</th><th colspan="2">Fitch</th></tr>
<tr><th>long-term</th><th>short-term</th><th>long-term</th><th>short-term</th><th>long-term</th><th>short-term</th></tr>
<tr><td rowspan="10">Investment Grade</td><td>The highest rating having the lowest possibility to default</td><td>AAA</td><td rowspan="6">P-1</td><td>AAA</td><td rowspan="4">A-1+</td><td>AAA</td><td rowspan="4">F1+</td></tr>
<tr><td rowspan="3">The second highest rating having very low possibility to default</td><td>Aa1</td><td>AA+</td><td>AA+</td></tr>
<tr><td>Aa2</td><td>AA</td><td>AA</td></tr>
<tr><td>Aa3</td><td>AA-</td><td>AA</td></tr>
<tr><td rowspan="3">Possibility to default is low.</td><td>A1</td><td>A+</td><td rowspan="2">A-1</td><td>A+</td><td rowspan="2">F1</td></tr>
<tr><td>A2</td><td>A</td><td>A</td></tr>
<tr><td>A3</td><td rowspan="2">P-2</td><td>A-</td><td rowspan="3">A-2</td><td>A-</td><td rowspan="2">F2</td></tr>
<tr><td rowspan="3">Moderate risk and moderate ability to repay.</td><td>Baa1</td><td>BBB+</td><td>BBB+</td></tr>
<tr><td>Baa2</td><td rowspan="2">P-3</td><td>BBB</td><td>BBB</td><td rowspan="2">F3</td></tr>
<tr><td>Baa3</td><td>BBB-</td><td>A-3</td><td>BBB-</td></tr>
<tr><td rowspan="14">Speculative Grade</td><td rowspan="3">High risk of default</td><td>Ba1</td><td rowspan="14">Not Prime</td><td>BB+</td><td rowspan="6">B</td><td>BB+</td><td rowspan="6">B</td></tr>
<tr><td>Ba2</td><td>BB</td><td>BB</td></tr>
<tr><td>Ba3</td><td>BB-</td><td>BB-</td></tr>
<tr><td rowspan="3">Very High risk of default</td><td>B1</td><td>B+</td><td>B+</td></tr>
<tr><td>B2</td><td>B</td><td>B</td></tr>
<tr><td>B3</td><td>B-</td><td>B-</td></tr>
<tr><td rowspan="5">Highest risk of default</td><td>Caa1</td><td>CCC+</td><td rowspan="5">C</td><td>CCC+</td><td rowspan="5">C</td></tr>
<tr><td>Caa2</td><td>CCC</td><td>CCC</td></tr>
<tr><td>Caa3</td><td>CCC-</td><td>CCC-</td></tr>
<tr><td rowspan="2">Ca</td><td>CC</td><td>CC</td></tr>
<tr><td>C</td><td>C</td></tr>
<tr><td rowspan="3">Being in default or susceptible to default</td><td>C</td><td>RD</td><td rowspan="3">D</td><td>DDD</td><td rowspan="3">D</td></tr>
<tr><td>/</td><td>SD</td><td>DD</td></tr>
<tr><td>/</td><td>D</td><td>D</td></tr>
</table>

10.2.3 Market risk

Market risk is the risk that value of the investment unit reduces from the bought price. Any securities traded such as stocks, government bonds, bonds, convertible bonds, property, and commodities, have market risk. However, the level of market risk for each mutual fund category varies varied by the price of assets invested by the particular mutual fund. For example, commodity mutual fund has higher market risk than equity mutual fund.

Factors affecting market risk of mutual funds are varied by invested asset classes.

1. Market risk of fixed-income mutual funds is caused by the change of interest rate which depends on external factors such as the investment climate and local and global political factors. Debt security's price moves in the opposite direction of the interest rate. For example, if the market interest rates is expected to increases, the interest rate of newly issued debt security will also increase which will put pressure on the market price of debt securities issued earlier so their trading price will be lower. The fund with high portfolio duration is affected by price change more than the fund with lower portfolio duration. Fixed-income mutual fund also has risk associated with specific factors of the invested debt security. If the credit rating of the invested security changed in a negative direction, the fund's NAV will also decrease.

2. Market risk of equity mutual fund is the risk that the value of the stocks invested may increase or decrease from the company's internal factors such as company performance trend, and external factors such as investment climate and local and global political factors.

Risk of unit's NAV volatility can be observed the fund's standard deviation (SD). If the SD is high, it means that the mutual fund is volatile due to changes in stock prices.

10.2.4 Concentration risk

Concentration risk is caused by the funds having similar investment policy but different extent of diversification. The fund that invests in fewer stocks or in a similar group of stocks with high investment weight has more volatile NAV per unit than the more diversified fund. This is because if the price of one of the invested stocks is volatile, the fund that puts relatively more weight in that stock will be affected more. The NAV per unit of the more diversified fund is less sensitive to any particular stock price as the weight given to each stock is less, thus affected less by price volatility of a particular stock. For example, if oil price is negatively affected, commodity fund investing only in crude oil is more volatile than commodity fund investing in gold, oil, and steel. However, in case that an invested stock with high weight performs better compared to overall market performance, the fund performance will be relatively better than the more diversified fund.

10.2.5 Liquidity risk

Most mutual funds allow trading every working day. There is no trading value limit, but must not be more than the fund's registered capital. As a result, the liquidity risk here does not mean the risk that investors cannot buy or sell the investment units but it means the risk in which the trading volume of the invested securities is not sufficient for the trading demand when clients want to buy or redeem the investment units (as some securities have low trading volume). When lots of unit holders want to redeem the units, the fund will also sell lots of invested securities. If the selling amount is more than the security's usual trading volume, the price will drop dramatically and affect the mark to market value of the security invested. The fund will also make less money than it should. For example, a small capitalization equity fund has higher liquidity risk than a large capitalization equity fund, and a short-term fixed income fund has lower liquidity risk than a long-term fixed-income fund.

10.2.6 Reinvestment risk

Some categories of fund have reinvestment risk such as fixed income term fund and trigger fund. At the fund maturity or when the target is reached, the principal together with capital gain will be repaid to unit holders. However, in some cases, investors may not be able to find better alternatives to replace their matured fund. They may have to accept a lower return on investment or lose the opportunity to invest continuously.

10.2.7 Exchange rate risk

Exchange rate risk means the changes in exchange rate has an effect on the value of the investment unit; for example, the fund invests with USD when THB is weak but sells when THB is strong. The fund will receive less amount of money in THB. On the other hand, if the fund invests with USD when THB is strong and sell when it is weak, the return will be higher. Therefore, exchange rate hedging is an important tool to manage the exchange rate risk which can be done as follows.

- Fully or almost fully hedged: Investors are not exposed to exchange rate risk.
- Partly hedged by clearly specifying the hedged proportion: Investors may be exposed to exchange rate risk.
- May be hedged at the fund manager's discretion: Investors may be exposed to exchange rate risk as whether to or not to hedge the risk is at the fund manager's discretion.
- No hedging: Investors are exposed to exchange rate risk.

10.2.8 Fund manager risk

Although actively managed funds aim to make higher returns than the benchmark or the average of other mutual funds in the market from utilizing the fund manager's capability, the fund is exposed to the fund manager risk, whose outlook may not consistent with the investment or whose decision is wrong and in turn generates lower return than the benchmark or mutual funds' average (while passively managed funds aim to provide return close to the benchmark). Investors should learn about the investment philosophy, investment policy, reliability of the asset management company, past performance, and fund manager's outlook before making investment decisions.

10.3 Mutual fund performance assessment

Mutual fund investment is an investment technique utilizing professionals to manage the investment. As a result, investors should obtain information to be able to assess the fund manager’s competency, return on investment or mutual fund performance. Return on investment reflects whether investment through mutual fund is worth the associated expenses or not. Investors can compare the performance of mutual funds with other investment techniques to make investment decisions. Comparative performance measurement reflects the fund manager’s investment decision, whether it was good or not, to determine the right investment strategy in the future. Chartered Financial Analyst Institute (CFA Institute) is an international organization that determines the standard performance measurement. The Global Investment Performance Standards (GIPS) is a set of standardized, industry-wide principles that guide investment firms on how to calculate and present their investment results to prospective clients. It is being promoted for investors to have a standardized principle to measure mutual fund performance. In Thailand, the Association of Investment Management Companies (AIMC) sets a standardized principle to measure mutual fund performance allowing investors to compare performance of various mutual funds.

10.3.1 Benchmark

Assessing fund performance from the total return figure alone may be unsuitable because investment conditions (economics, financial market and capital market conditions) of each period may be very different. Funds investing in high risk assets may provide wide-ranging returns each year; for example, 10% return from mutual fund in this year may not be perceived as “high” if the stock market of the same year provides 15% return. In some year, 2% return from equity fund can be perceived as “high” if the market index is negative. Therefore, performance measurement should be comparative to a benchmark in the same period of time.

Mutual funds must specify the suitable benchmark in its fund prospectus; for example, a suitable benchmark for Thai equity mutual fund is the SET Total Return Index, while a suitable benchmark for Thai fixed income funds is the ThaiBMA Government Bond Total Return Index.

Performance comparison between the fund's performance and the benchmark must be the performance of the same period of time, such as the rate of return since the beginning of the year, past 3-month/ 6-month/ 12-month rate of return, or quarterly/annual return.

Benchmark calculation

Benchmarks mentioned above are calculated and published by the SET, the Thai BMA, and the BoT (Bank of Thailand) on their websites.

10.3.2 Peer Performance Measurement

Peer performance comparison is one of the easiest and most straightforward assessment. It is the comparison between the total return of the funds with similar investment policies in the same period such as comparing the past 3-year total rate of return of fixed income funds with the average rate of total return of fixed income funds in the market. However, the rate of total return comparison may reflect only the return but not the risk investors have to bear when they invest in the fund. In principle, high risk will provide high expected returns and low risk will provide low expected returns. In other words, risk and return are positively correlated. Risk should therefore be included for fair and suitable performance assessment.

Association of Investment Management Companies (AIMC) publishes the peer group fund performance report for investors to compare funds' performance of each period with other funds in the similar category at various percentiles: 5^{th}, 25^{th}, 50^{th}, 75^{th} and 95^{th} percentile. Risk or standard deviation of funds are also presented at similar percentiles which allows investors to compare the fund performance with other funds of the same type. The fund performance information including the percentiles of similar funds is presented in the fund fact sheet of the fund prospectus.

Performance measurement

Performance and risk measurement of funds that are commonly-used are Sharpe's ratio, tracking error and Information ratio

Sharpe's Ratio

The Sharpe measure is a measure for fund performance assessment by comparing the fund's risk-adjusted rate of return with the market's risk-adjusted rate of return. Risk is measured by standard deviation of return which assesses the total risk of securities. When investors accept such additional risk, they will expect additional return or excess return to the risk-free return to compensate the additional risk.

Sharpe measure can also be called "Reward-to-Variability Ratio" or rate of extra return (in addition to the risk-free rate of return) per 1 unit of total risk. The Sharpe measure calculation is as follows.

1) Sharpe measure

$$S_p = \frac{R_p - \mathrm{R}_f}{\sigma_p}$$

which

S_p = Risk-adjusted excess return of the fund

R_p = Return of a particular fund

R_f = Risk-free return (which is the rate of return of 91-day treasury bill)

σ_p= Standard deviation calculated from the volatility of return deviated from the average return of the fund or the fund's risk

2) Compared to the selected benchmark which is risk-adjusted rate of market excess return

$$S_m = \frac{R_m - R_f}{\sigma_m}$$

which

S_m = Risk-adjusted market excess return

R_m = Market return of Benchmark return

R_f = Risk-free return

(which is the rate of return of 91-day treasury bill)

σ_p = Standard deviation of market or securities included in the selected benchmark

The higher the Sharpe Ratio, the higher the excess return per 1 unit of risk made by the fund manager

If S_p is more than S_m , the fund's risk-adjusted performance is higher the market's.
If S_p is less than S_m , the fund's risk-adjusted performance is lower than the market's.

Example 10-4

ABC mutual fund has 15% return while DEF mutual fund has 10% return. ABC mutual fund has 20% standard deviation while DEF mutual fund has 10% standard deviation. Assuming that 91-day treasury bill's rate of return is 1.5%

Sharpe's Ratio of ABC mutual fund = (15% - 1.5%) / 20% = 0.675
Sharpe's Ratio of DEF mutual fund = (10% - 1.5%) / 10% = 0.850

Looking at the funds' rate of return, ABC provides better returns but Sharpe Ratio which includes risk into consideration indicates that DEF has better performance because DEF provide higher return per 1 unit of risk.

Tracking Error (TE)

Tracking error is measuring how much fund performance deviated from the benchmark. T.E. is calculated from the standard deviation of differences between fund performance and the benchmark.

$$\text{T.E.} = \sqrt{\frac{\sum_{i=1}^{n}(R_{pi} - R_{bi})^2}{n-1}}$$

which

T.E.	=	Tracking Error
Rpi	=	The fund's return
Rbi	=	The benchmark's return
n	=	number of information applied to assess performance

Low T.E. means that the fund's performance deviated a little bit from the benchmark while high T.E. means high deviation in that period. In general, actively managed mutual funds have higher T.E than passively managed mutual funds because active investment policy aims to beat the benchmark's performance while passive investment policy aims to match the benchmark' performance. However, T.E. does not indicate whether the fund performs better or worse than the benchmark in the relevant period but only indicates the deviation of fund's performance from the benchmark.

For example, SET50 mutual fund aims to mimic the SET50 Index return (by investing in the first 50th largest capitalization stocks with similar weight of each stock as in the SET50 index) and uses SET50 Index as a benchmark. Tracking error may be set at no more than 2%. While T.E. may be close to 0% at the beginning, it will increase overtime due to many factors such as holding cash in hand for unit holder redemption, change in stocks included in the benchmark, odd lot adjustment in accordance with the trading rules, and expenses deduction from the fund performance. Therefore, the fund manager has to regularly adjust the portfolio to maintain tracking error within the limits and as principle of index investment.

Information Ratio

Information Ratio (I.R.) measures the capability of the fund manager in making additional return above the benchmark (alpha) while also taking risk associated with the additional return above the benchmark (Tracking Error). Information Ratio (I.R.) can be calculated as follows:

$$Information\ Ratio = \frac{R_p - R_b}{\mathrm{T.E.}} = \frac{R_p - R_b}{\sqrt{\frac{\sum_{i=1}^{n}(R_{pi} - R_{bi})^2}{n-1}}}$$

which

Rp	=	The fund's return
Rb	=	The benchmark's return
T.E.	=	Tracking Error
Rpi	=	The fund's return
Rbi	=	The benchmark's return
n	=	number of information applied to assess performance

The fund with high I.R. reflects that the fund manager can make additional return better than the fund with lower I.R. based on equal risk of benchmark deviation.

Example of Information Ratio in comparing 2 actively managed equity mutual funds: AAA and XYZ. In the past 1 year AAA provides 4.15% return on average while XYZ provides 3.50%. The benchmark's return is 3.25%. Tracking Error of AAA is 12.25% while that of XYZ is 7.5%. Information Ratio of both funds can be calculated as follows.

AAA fund	=	(4.15% - 3.25%) / 12.25%	=	0.073
XYZ fund	=	(3.50% - 3.25%) / 7.50%	=	0.033

For actively managed funds, the higher the Information ratio, the better. The high information ratio reflects the stability of rate of additional return above the benchmark. In the case, AAA is more interesting than XYZ.

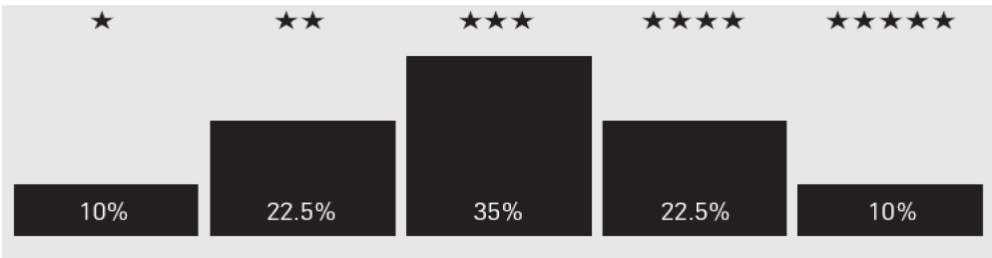
However, it is noticeable that both Sharpe's Ratio and Information Ratio compares the return per a unit of risk but the difference is that Sharpe Ratio focuses on excess return above the risk-free rate by considering fund's volatility while Information Ratio focuses on the excess return above the benchmark by considering deviation from benchmark. In other words, Sharpe Ratio is an absolute measure while Information Ratio is relative measure. Comparing funds using these 2 measures may result in different conclusions. Investors should apply the measures suitable for the objective of comparison.

Morningstar's fund rating

There are many companies providing fund rating and ranking services which facilitate investors in selecting mutual funds to invest. These companies set their own standardize criteria for fund performance assessment. The criteria for assessment and for categorizing funds can be significantly different for different companies.

In Thailand, Morningstar Thailand is one of the widely-accepted companies. It rates mutual funds using Morning Star Risk Adjusted Return – MRAR as a criteria which has 5 levels, from the highest 5 stars to the lowest 1 star. The rating period is 3 years, 5 years, and 10 years.

Morning Star Rating Distribution follows a bell-shape distribution



Nevertheless, fund ratings provided by any company are based on past performance which does not guarantee future performance. The fund may have significant changes in the future such as fund management structure, investment philosophy, or the fund manager. Therefore, investors should study other aspects of the funds as well.

To sum up, the mutual fund performance is based on past performance which may not reflect future returns.

Summary

To invest in mutual funds, investors should assess themselves about the required return and acceptable risk level (how much return they require and how much loss is acceptable to them) in order to select the mutual fund that is consistent to their risk tolerance and return expectations. Investors can apply the SEC's Risk Spectrum as a guideline to select the suitable fund. Then, they should decide whether to invest in an actively managed fund or a passively managed fund by considering both their advantages and disadvantages. For actively managed funds, they should learn its investment philosophy, investment pattern or style, fees, and compare long-term past performance such as 3 years, 5 years or 10 years of similar mutual funds. Sharpe's ratio and information ratio may be also useful. If investors prefer passively managed funds, they should select funds that have an investment policy that provides returns consistent to that of the particular benchmark by focusing on tracking error and low fee as important factors. After investment, investors should continuously monitor the portfolio's performance to understand the investment situation of the portfolio and rebalance to suit their acceptable risk level and current situation.

11. Mutual Fund Basic Analysis and Investment Strategy

Required Readings

1.Product Knowledge

- Chapter 11 Fundamental Analysis and Investment Strategies in Mutual Fund

Learning Objectives:

1. Explain significance of factors affecting purchasing/selling mutual fund.
2. Explain the methods of considering related factors in purchasing/selling funds.
3. Identify and distinguish expenses collected from mutual funds, or collected from investors.
4. Identify personal factors affecting to the purchasing/selling of mutual fund.
5. Apply methods of the analysis of factors relating to mutual fund investment decision.
6. Explain and distinguish reasons of rebalancing a portfolio.
7. Explain, distinguish, and apply investment strategies in fund investment: Timing the Market, Dollar-Cost Averaging, The Combined Method, Core & Satellite.
8. Explain significance and be able to distinguish details of source of information for purchasing/selling each type of mutual funds.
9. Explain tax conditions and privileges of each type of mutual funds.
10. Explain tax conditions and privileges of SSF, RMF. (adjusted)

Chapter 11
Mutual Fund Basic Analysis and Investment Strategy

Presently, there are a lot of mutual funds with various investment policies. Investors have to analyze to select mutual funds that suit investment environment and investors' needs. Therefore, investors must know factors included in the analysis to screen, select, and invest in the right mutual funds. Also they should know various investment strategies to make the investment successful as expected.

11.1 Factors considered to invest in mutual fund

To invest in mutual funds, investors should have knowledge and understanding about relevant factors which are personal factors, mutual fund information, investment environment, and mutual fund investment strategies. These factors are important for investors to make right decision in investing in mutual funds.

11.1.1 Personal factors

Individual investor has different needs and limitations which affect his/her investment decision. These factors are

Investment goal

Investor's investment goal will indicate investment objective. Factors that indicate investment objective are investor's required return to meet his/her needs which can be building his/her family's wealth, regular expenses, buying house, post-retirement expenses, healthcare expenses, children education, leisure, liquidity or tax savings. Generally, benchmark should be selected according to investment objective and limitation of the investor to achieve expected goal.

Investment objective can be indicated by the investor himself or by personal information analysis. The analysis will indicate his investment objective and policy. The investment objective must be explicit and consistent with investor's lifestyle. Clear objective will make the investment most efficient (investment by objective). Investor must understand and learn about investment information whether the selected investment suits his goal. Which mutual funds investors should invest in depends on investors required return and risk appetite and whether the funds achieve the investment goals in a required time frame.

Risk tolerance

Risk tolerance is the level of risk the investor is willing and capable of acceptance. Level of risk tolerance is how much volatility of invested money the investor can face to receive required return in the long run as specified investment objective. Investors with high risk tolerance can invest relatively higher portion in high risk securities than investors with low risk tolerance.

Knowledge about mutual funds

Investors should understand about categories of mutual fund investment, how to make returns, factors affecting the price, and various risks before investing in mutual funds in order to select mutual fund that is suitable with their risk tolerance and investment objective. Investors with the knowledge about mutual fund investment will be able to invest more efficiently than investors who do not or barely understand.

Condition and limitation of investment

Investors should define their investment condition and limitation to specify their suitable investment policies. Condition and Limitation are; for example,

- Sources of fund or objective of the fund such as savings/investment, savings for emergency case, savings for post-retirement, investment, buying things/house/car, education, and/or wedding.
- Level of required rate of return
- Level of risk tolerance
- Liquidity requirement
- Investment time horizon
- Pattern of returns such as requiring regular cash flows from dividends throughout investment time horizon or preferring return and invested principal at the end of investment time or at the investment unit redemption
- Preference to or not to invest in some specific assets or securities
- Investment for tax savings benefits

Most investors do not thoroughly define their relevant factors. In practice, there is an assessment form provided by an asset management company for investors to assess themselves before investment.

11.1.2 Mutual fund information

Detailed information related to the fund is important for investors to consider. To select the funds to meet the demand and in line with the acceptable level of risk tolerance, including investment policy, past performance, fund risk level, invested asset types, fund managers, expenses related to the fund. The details of such fund information are included in the fund's prospectus and fund fact sheet. The fund's important information is as follows.

Investment policy

Investment policy is investment framework of the fund manager to acknowledge investors about the types of assets the fund invested and investment strategy. Investors can read mutual fund investment policy and assess whether the fund is in line with their investment objective. Investment policy indicates investment conditions such as types of assets allowed, ratio of various assets invested, and exchange rate risk protection.

Past performance

Investor should consider a period of at least 1-year past performance of the mutual fund. Past performance in a longer than an economic cycle will be better to see the ability to manage the fund both during the uptrend and downtrend whether it performs well compared to the market benchmark.

Although past performance reflects mutual fund management efficiency compared to the market performance, it is however the past performance while investment decision should focus more on the future. Therefore, investors also have to forecast the mutual fund performance whether it will be able to maintain its performance in the future under changing investment environment.

Risk level

Mutual fund risk level must be considered in various perspectives. Investors should include them to assess the overall risk level of the mutual fund. Relevant risks are asset class risk, concentration risk, market risk, liquidity risk, exchange rate risk, and fund manager risk. In practice, investors can consider level of mutual fund risk from Risk Spectrum in the fund prospectus and fund fact sheet. Considering mutual fund risk level allows investors to select the fund with risk level that in line with their risk tolerance. However, the mutual fund with good risk management can lessen its risk level.

Types of assets invested

Mutual fund's risk and return depend on the invested asset class. For example, commodities and equities have high risk and high return; debt securities have medium risk and medium return; and short-term money market securities have low risk and low return. Investors have to understand types of risk and return of the assets the mutual fund invests to select the right mutual fund that meets their investment goal and consistent with their risk tolerance. Other following factors are also important to consider.

<u>Mutual fund size</u>

Risk and return of a small mutual fund are more sensitive to high volume of additional investment or high volume redemption. If this is not acceptable, investors should rather invest in the large mutual fund. However, if the mutual fund is too large, investing in small-cap and medium-cap stocks may not yield the return as expected because trading small-cap stocks can face market impact cost that will increase the trading cost, in turn, decrease the return.

<u>Asset characteristics</u>

Certain characteristic of asset has impact on its risk and return such as real estate investment. Risk and return also depend on types of real estate asset invests. For example,

- Investment in hotel has high risk because of short-term rental – daily or weekly – rather than long term contract. This can be easily affected when there is situation that is not attractive to tourists such as political protest or natural disaster.

- Investment in office rental building has lower risk because of its long-term contract which provides lower return volatility than that of the hotel.

Investment Pattern of fund manager

Investors have to understand investment pattern of the fund manager to make the right choice that is in line with their investment objective. Investment pattern includes

- Active Management

"Active management" means fund manager aims to beat the return of the market. Fund manager expects that the mutual fund's return exceeds that of its benchmark. Generally, the active fund charges higher management fee than the passive fund as it requires competency of the fund manager to choose the right investment strategy and securities to achieve the goal – making higher return (after all expenses) than the benchmark. Investors who invest in active fund usually invest for long-term expecting high return in the long run as the result of selecting good stocks yields in the long run. For example,

<u>Value Style Investment</u>

Value style investment is investing in good companies with appropriate price. Fund manager may select stable companies with moderate growth. Value style stocks may not be expensive (considering from low P/E and low P/BV ratios) reflecting that investors do not perceive it as high profitable company or are not very interested in this stock and believe that forecasted operating profit is quite accurate – not very volatile. Investors expect return from buying at low price and selling at higher price in the future. Value company usually has hidden value from being a good company but in unpopular industry; a good company with increasingly improving fundamental which has not been known by the market; or just an unpopular company for most investors. Value style investors should expect long-term return or invest during volatile economic cycle because the value style perform relatively better during such volatile period.

Growth Style Investment

Growth style investment focuses on high revenue and/or income growth company compared to other companies in the same industry on average. Growth companies usually produce innovative products; have innovations which are likely to be able to commercialize; or small/medium-size companies with high growth potential. If these companies succeed, they will make high return in the future. The uncertainty makes their stock price volatile. Growth Style investors should expect long term return from capital gain because these companies highly reinvest in their business, in turn, low dividend payment, but may provide good return during uptrend economic cycle.

Investment by Market Capitalization

Mutual fund with this investment pattern varies by its investment policy and strategy. It can be divided into 2 types: small capitalization investment and large capitalization investment. Investors expect long-term return from growth of small capitalization companies but stable return from large capitalization companies. Investors should know their investment objective and risk tolerance to consider which market capitalization they should select. Small capitalization companies have high volatility and high return while large capitalization companies are stable, less volatile. If they want to diversify their investment, they may select the mutual fund investing widely in both large capitalization and small capitalization stocks.

- Passive Investment

“Passive investment” is investment pattern that the fund manager aims to match the return with the fund standard or the benchmark index. Passive mutual fund charges lower management fee than active mutual fund as the fund manager can select securities according to the benchmark index. Investors who prefer passive mutual fund usually invest in expecting similar growth to the benchmark. As the fund has the similar movement as the benchmark, investors can analyze the movement easier and make profit from such movement.

Mutual fund expenses

There are managing expenses in managing mutual funds. Expenses can be divided into 2 types: expenses charged directly to investors and expenses charged to the fund.

Expenses charged to clients

Asset management company directly charges investors apart from regular fees charged to the mutual fund. These fees vary with asset management companies so this can be one of the important factors considered in selecting the mutual fund. Generally, the fees are:

- Front end fee. The front end fee must be paid when buying the mutual fund units. The fund company may or may not charge this fee. The fee is charged as percentage of NAV (Net Asset Value). The front end fee is included in the unit's offer price daily announced by the fund.
- Back end fee. The back end fee is deducted from the NAV that unit holders will receive when selling the mutual fund unit. The fund may or may not charge this fee. The fee is charged as percentage of NAV (Net Asset Value) and may vary by the investment time horizon. The back end fee is included in the unit's bid price daily announced by the fund company.
- Switching fee. When the investor switches the investment from a fund to another, money invested in the new selected fund will be deducted for switching fee. The fund may or may not charge this fee. The fee is charged as percentage of NAV (Net Asset Value) or a fix amount per transaction.

The information about various fees is provided in the fund fact sheet of each mutual fund.

Example of investment unit amount calculation

On July 2nd 20X7, NAV of mutual fund A is 11.2438 Baht unit. Front end fee (VAT included) is 1.5% of NAV. Offer price is 11.4126 Baht. Bid price is 11.2438 Baht (Fund A does not charge back end fee.) The investor wants to invest 1,000,000 Baht in Fund A. How many investment units will the investor receive on July 2nd 20X7.

The investor will receive 1,000,000 / 11.4126 = 87,622.4523 units

Note : 1. Offer price = (NAV + 0.0001) + (NAV x front end fee)

So the offer price = (11.2438 +0.0001) + (11.2438 x 1.5%) = 11.4126 Baht

2. Investment unit calculation is rounded to four decimal places.

Expenses charged to the mutual fund

Expenses charged to the mutual fund are expenses in managing the fund. It is calculated as percentage of NAV or as actual expenditures. The asset management company charges the fee daily or actual expenditures reflected in NAV. The fee consists of

- Management fee. It is the largest expense charged to the fund.
- Registrar fee. It is expense of managing the unit holders' list.
- Custodian and trustee fee. It is expense of acting as unit holders' agent to monitor, review, guarantee asset value and keep asset.
- Marketing and marketing material fee. The fee is for marketing expenses for selling the particular fund.
- Auditing fee. The fee is paid to certified auditor.

The asset management company may have other expenses rather than the 2 types explained. The office of the Securities Exchange Commission (SEC) requires the fund to disclose details of any expenses higher than 0.01% of the NAV as the individual item to prevent the fund from obscuring inappropriate expenses in other expense items.

It can be seen that information about mutual fund expenses is important. The office of the SEC, therefore, requires the company to disclose the information in the fund prospectus and the fund annual report for the accounting period in the standard form of table presenting expenses charged to clients and expenses charged to the mutual fund to allow convenient comparison between funds for investors. Moreover, the table includes total expense ratio which is a tool for investors to compare how efficient the mutual funds manage their expenses. However, if any 2 mutual funds charge the same amount of fees, the larger fund will have lower total expense ratio than the smaller fund. The passive fund usually have lower total expense ratio than the active fund because the passive fund charges lower management fee.

Total Expense Ratio is calculated from total expenses charged to the fund divided by NAV.

$$\text{Total Expense Ratio} = \frac{\text{Expenses charged to the fund}}{\text{Net Asset Value}} \times 100$$

<u>Example: Total Expense Ratio Calculation</u> Open ended oil fund 1

Fee charged to the fund (% p.a. of NAV)

- Management (no more than 2.14%) (at present 1.07%)
- Custodian (no more than 0.11%) (at present 0.06%)
- Registrar (no more than 0.50%) (at present 0.11%)
- Actual miscellaneous expenses (at present 0.10%)
- Allowed expenses charged to the fund 3.50% maximum

Therefore, Total Expense Ratio = 1.07% +0.06% +0.11%+ 0.10%
= 1.34% p.a. of NAV

11.1.3 Investment environment

Investment environment should be taken into consideration for investment decision. The environment includes local and global economy, economic and social policies, population structure, and lifestyle which have different impacts on investment in terms of asset class effect, region or country effect, industry or sector effect and security effect.

Important economic index regularly used as a factor for investment decision are GDP growth rate, inflation rate, interest rate, exchange rate, fiscal policy, consumer confidence index, manufacturing confidence index, unemployment rate, consumption, central bank policy of each country and real estate information.

Investors use economic analysis result to select asset classes that suit the particular economic cycle. For example, during the economic slowdown, interest rates are lower, government securities will provide better return while during the economic recovery period, interest rates are higher, stocks will provide better return. During high growth period, inflation is rapidly increasing, commodities provide better return, etc.

Together with the above investment environment factors personal factors i.e. investment objective, risk tolerance, investment time horizon, and investment limitations must be included to select investment policy suitable for each investor. For example, when the stock market significantly falls because of economic slowdown, high risk tolerance investors may invest in equities or commodities in higher portion to expect high return during economic recovery. Medium-risk tolerance investors may invest in equities or commodities in medium portion and invest more in debt securities. Low risk tolerance investors may invest in equities or commodities in small proportion or may not invest at all but invest higher portion in debt securities or money market securities. However, investor with medium and low risk tolerance may increase risky asset when the market recovers.

11.2 Mutual fund investment strategy

As investment condition can be volatile, investors may not be able to expect the market condition; therefore, investment strategy is an important tool or framework for investment decision to be more sensible, systematic, and efficient. Basic mutual fund investment strategies are

11.2.1 Strategy for investing in an individual mutual fund

When the investor analyses and decides to invest in a particular mutual fund; for example, mixed fund that the fund manager will adjust the investment proportion in various assets to suit economic condition for long term return, the investor can select the following strategies to invest in such mutual fund as follows.

Timing the Market

Timing the market is the strategy choosing the right time to buy or sell the fund to make highest profit from the gap within the certain period of time. Investors using this strategy usually prefer short-term investment. For example, the investor buys the fund that is 10% lower in NAV and sell when it is 5% higher in NAV in a short period of time. However, if investors usually use this strategy and frequently trade the fund, it will be harder for the company to achieve the good return. The company prevents the frequent trade problem by charging back end fee from selling units of some funds if the investors redeem units before the specified period. Nevertheless, timing the market strategy can also be used for long-term investment. This strategy suits investors who have time to keep up with the market.

Dollar-Cost Averaging (Invest with the same amount of money every specific interval)

Dollar-cost average strategy is buying the unit regularly with the same amount of invested money at the same specific period of time. The costs can be high or low depending on the market condition at the specific buying time. Dollar cost averaging is a good and easy strategy to prevent investing too much when the price is high and investing too little when the price is low. Moreover, this strategy is related to investment psychology. When investors buy units and the market is down, they do not feel very bad as they did not invest all the money but still have a chance to buy more when the price is lower. If the price is higher, they will be happy from the capital gain. However, dollar cost average strategy cannot indicate whether investors make profit when the market is increasing or prevent loss when the market is decreasing. This strategy suits investors who do not have time to keep up with the market. Table 11-1 shows that in case of decreased NAV before increasing later, dollar-cost average strategy makes investment cost (Average NAV = 10.3833) lower.

Table 11-1 Dollar-Cost Averaging

		Dollar Cost Averaging	
Month	NAV	No. of Units	THB
1	10.0000	1,000.00	10,000.00
2	10.5000	952.38	10,000.00
3	10.3000	970.87	10,000.00

		Dollar Cost Averaging	
Month	NAV	No. of Units	THB
4	9.8000	1,020.41	10,000.00
5	9.6000	1,041.67	10,000.00
6	9.9000	1,010.10	10,000.00
7	10.2000	980.39	10,000.00
8	10.5000	952.38	10,000.00
9	10.8000	925.93	10,000.00
10	11.0000	909.09	10,000.00
11	11.2000	892.86	10,000.00
12	11.1000	900.90	10,000.00
	Total	**11,556.98**	**120,000.00**
	Average NAV = (120,000 / 11,556.98) = 10.3833		

The Combined Method (Dollar-Cost Averaging and Timing the Market)

It is the combined methods of dollar - cost averaging (DCA) and timing the market to buy investment units regularly with the same amount of invested money every specific time interval but also choosing the right timing to buy units to make higher return than applying DCA alone. For example, an investor invests every 5,000 baht per month at the end of the month every month applying DCA strategy. With the Combined Method, he/she will invest 5,000 baht once a month but he will choose to buy on the day he expects the unit price is the lowest. This strategy is suitable for investors who have time to keep up with the market.

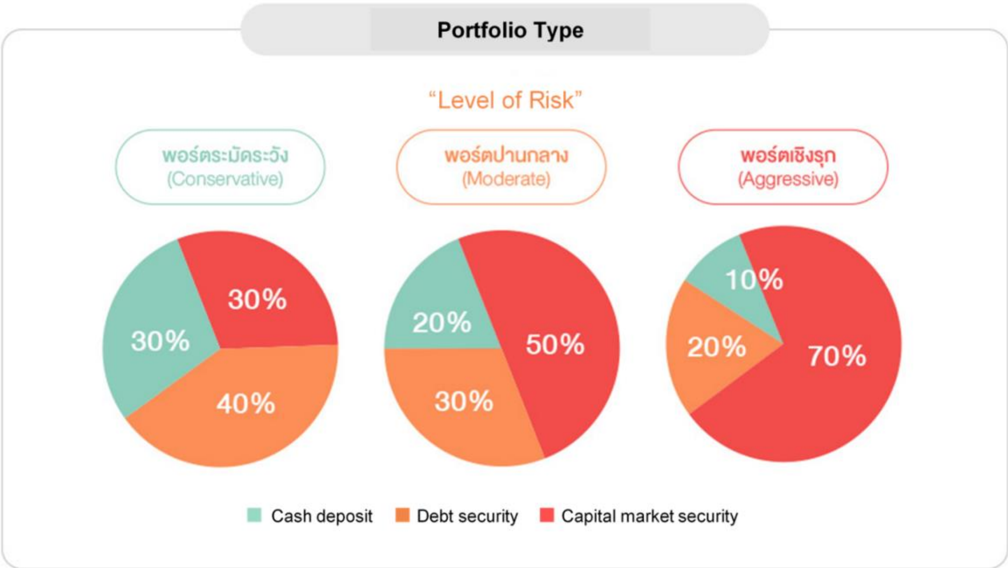
11.2.2 Asset class or portfolio of mutual fund investment strategy

Investors may design their investment by selecting proportional asset classes to suit their investment objective and risk tolerance by investing in different categories of mutual funds as a portfolio with following strategies.

Portfolio allocation for long-term growth with proportional equities, debt security, and liquid asset.

This strategy divides invested fund into 3 portions which are

- Equities investment. This proportion is for long-term growth. Equities usually provide good return in the long run as the growth of economy and listed companies. Equities fund is for long-term investment because it has higher volatility than fixed income fund.
- Debt securities investment. This proportion is for long-term investment and for investment diversification. In the long-run, debt securities usually provide lower return compared to equities but it helps diversify risk of the portfolio with equities investment because these asset classes provide good return in the different situations.
- Liquid asset investment. This proportion is invested in liquid assets or cash for investors' liquidity.



Asset Class	Expected Rate of Return (Ri)	Conservative		Moderate		Aggressive	
		Weight (Wi)	WiRi	Weight (Wi)	WiRi	Weight (Wi)	WiRi
Equities	12.0%	30%	3.6%	50%	6.0%	70%	8.4%
Debt Security	5.7%	40%	2.3%	30%	1.7%	20%	1.1%
Cash Deposit	1.0%	30%	0.3%	20%	0.2%	10%	0.1%

Source: https://www.set.or.th/set/education/html.do?name=begin&showTitle=F

It is noticeable that the higher the equities investment, the higher the expected rate of return. However, such portfolio will have higher volatility of return. Investors should select the portfolio suitable to their investment objective and level of risk tolerance.

Core & Satellite (Core investment for long-term goal and partly invested for additional profit opportunity)

This strategy divides investment into 2 parts.

- About 80-90% core investment is for long-term goal. It will be invested in the passive managed funds for the return near to the benchmark. Investment expenses are low because of the funds are passive managed.
- The smaller investment about 10-20% will be in satellite part, expecting higher return than that of the market (alpha). This investment is short-term investment. Investment will be in active managed funds focusing on specific industry, region, or small/large cap, expecting higher return than investing in core investment alone.

Core & Satellite is expected to provide higher return than passive investment alone while investment expenses are not as high as those of active investment. In addition, it barely deviates return movement from the benchmark.

Rebalancing a portfolio

As each asset class provides different returns, some asset classes weight may be higher or lower than originally allocated over time. Investors, therefore, should rebalance their portfolio allocation to the strategic asset allocation. Portfolio rebalancing may require:

- Regular interval such as every 1 year
- When the allocation deviates from the strategic asset allocation more than a particular percentage such as more than 5 - 10%

Other causes than securities price movement requiring portfolio rebalancing are

- Changing in personal factors leading to different investment objective, risk tolerance level, condition and limitations; for example,
  - Marital status such as married or divorce;
  - Number of family members such as birth, death, or adoption;
  - Wealth such as wealth inheritance, jackpot winning, or loss of wealth
- Changing in macroeconomic factors leading to change in expected rate of return. Investors may have to rebalance portfolio to suit such economic situation which is tactical asset allocation (short term rebalance).
- Changes their investment strategy (manager change or style change) which in turn changes expected return and risk. Investors may have to switch to other mutual funds that are more suitable than the existing one. However, they may switch back if it performs better in the future.
- Changing investment goals leading to different expected required rate of return. Portfolio rebalancing is required to meet the different investment objective.

11.3 Sources of information and relevant taxes of mutual fund investment

11.3.1 Sources of information for mutual fund investment

Mutual fund rating report

There are various mutual funds in the market. They are different in terms of investment policy, fund features and different past performance which complicates investment decision comparing and selecting the mutual funds from different fund houses. Mutual fund rating agencies therefore exist with the SEC approval. The agencies must meet the SEC's Fit & Proper criteria such as good profile, capability, tools and criteria for fund rating.

The approved fund rating agencies are as follows.

- Fitch Ratings (Thailand) (approved on June 23rd, 2004.)
- Reuters (Thailand) (approved on July 6th, 2004.)
- Morningstar Research (Thailand) (approved on March 10th, 2009.)
- Tris Rating (approved on October 19th, 2012.)

Association of Investment Management Companies (AIMC) releases categories of mutual fund report and peer group fund performance report to allow investors to compare year on year fund performance in 5th, 25th, 50th, 75th and 95th Percentile. Risk and standard deviation are also categorized and presented in different percentiles.

For example, if there are 100 money market funds, AIMC will rank their performance from the highest to the lowest for the past year. The 5th, 25th, 50th, 75th, and 95th will be presented as the percentile information in the peer group fund performance report. AIMC will rank standard deviation of these 100 money market funds in each period; for example, standard deviation of 100 money market funds from the lowest to the highest for the past year. The 5th, 25th, 50th, 75th, and 95th will be presented as the percentile information in the peer group fund performance report. If the last year return of a particular fund is higher than the 5th rank regarding the peer group fund performance report, it can be interpreted that the particular fund's last year return is top 4 of 100 money market funds. If the particular fund has last year standard deviation less than the 5th but higher than 25th regarding the peer group fund performance report, it is understood that its last year standard deviation was ranked between the 6th to the 24th from the lowest to the highest of all money market funds.

Fund fact sheet

Fund fact sheet provides basic and useful information for investors in investment decision. Information provided are; for example, fund features, fund house information, investment policy, expenses, investment conditions, dividend policy and historical dividend payment, and part performance relative to the benchmark. Elements of the fund fact sheet are

- *What are you investing in?*

  Fund house provides its investment policy and strategy as follows.

  - <u>Investment policy</u>

    The information is about asset classes that the fund will invest; for example, equities, debt securities, and/or derivatives; whether the fund invest locally or globally, and/or focusing on any specific industries, non-investment grade or unrated bond, or greater Mekong Sub region, GMS funds, etc.

  - <u>Investment strategy</u>

    The information provided is about investment strategy; for example, aim for passive management/ index tracking or active management for higher expected return. If the manager will use fund strategy different from other mutual funds of the same category; for example, absolute return fund that provides positive return in all market situations trigger fund that will automatically redeem all units when the target price reached, the manager will provide management strategy information, how to achieve the goal, in this section.

In case that the mutual fund has complicated return[10], the fund house will illustrate pay-off diagram which indicates factors affecting increased or decreased return, and provides information about what kinds of expectation investors can expect from the fund.

- *Who is suitable for this mutual fund?*

The information allows investors to know whether the fund is suitable or unsuitable for different investor expectations. The SEC provides examples as follows.

[10] Complicated return fund means the return will be varied by any formulated calculation or conditions that ordinary investors cannot easily understand.

Mutual Fund Category	Who is suitable for the fund?	Who is not suitable for the fund?
1. Daily fixed income	§ Investors expect return higher than cash deposit and accept that the return may be lower than stock. § Investors can redeem every working day and receive money back within T+ (the day that investors will receive money).	§ Investors expect certain amount of money or preserve 100% of invested principal. § Investors only prefer high quality debt securities with high liquidity and low price volatility as the fund is not restricted to such securities as money market mutual fund.
2. Debt security fund (buy and hold)	§ Investors expect return higher than cash deposit and accept that the return may be lower than stock.	§ Investors expect certain amount of return or preserve 100% of invested principal. § Investors want to redeem the unit within x months
3. Money market fund	§ Investors expect return close to cash deposit and accept returns that may be lower than debt security funds. § Investors prefer high liquidity. § Investors prefer low risk investment.	§ Investors expect high return.
4. Equity fund	§ Investors accepts price volatility of stocks invested by the fund which can be higher or lower than the principal invested and in turn making loss. § Investors who can invest medium to long term to expect	§ Investors expect certain amount of return or preserve 100% of invested principal.

Mutual Fund Category	Who is suitable for the fund?	Who is not suitable for the fund?
	long-term return higher than that of the debt security investment.	
5. Industry-specific mutual fund such as healthcare	§ Investors accepts price volatility of stocks invested by the fund which can be higher or lower than the principal invested and in turn making loss. § Investors who can invest medium to long term to expect long-term return higher than that of the debt security investment. § Investors want to diversify their investment in healthcare sector.	§ Investors expect certain amount of return or preserve 100% of invested principal.
6. Equity/ mixed funds that is trigger fund.	§ Investors understand that fund value is not a guarantee of investment returns and cannot redeem units within X months § Investors accepts price volatility of stocks invested by the fund which can be higher or lower than the principal invested and in turn making loss. § Investors expect short-term return from marketing timing.	§ Investors want to redeem units within X months § Investors expect certain amount of return or preserve 100% of invested principal.
7. Gold mutual fund	§ Investors accepts price volatility of gold which can be higher or lower than the principal invested and in turn making loss.	§ Investors expect certain amount of return or preserve 100% of invested principal.

Mutual Fund Category	Who is suitable for the fund?	Who is not suitable for the fund?
	§ Investors prefer alternative investment for investment diversification. § Investors expect return from investing in gold.	

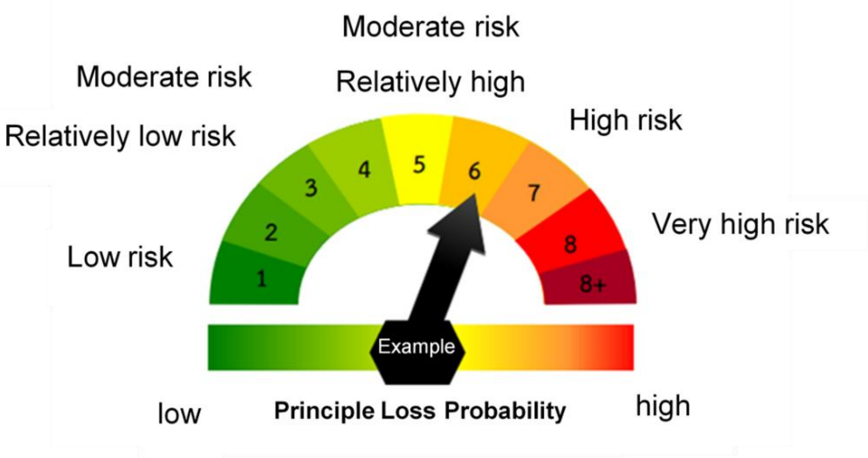
- *What do you have to be aware of?*

This information focuses on risk of the particular fund which are risk spectrum diagram, important risk factors, and risk perspective explanation as following details.

- <u>Important warning</u>

It indicates warning to acknowledge investors before investing using easy wordings; for example, the fund has policy to invest in derivatives not for hedging purpose or the fund has policy to invest in securities related to derivatives will indicate warning that the funds have higher risk than those invest directly in the securities. Such funds require lower investment so they provide higher profit/ make higher loss than investing directly in the particular securities.

- <u>Risk spectrum diagram</u>



Risk spectrum diagram presents mutual fund risk position using arrow pointing to the certain risk level on the spectrum which can be divided into 1 to 8+ level.

- <u>Important risk factors</u>

The information provides information about risk factors in the form of risk perspective associated with the mutual fund investment ranking by probability and significant impact from the highest to the lowest, including explanation of each risk such as credit risk of security issuer, market risk from NAV volatility, and currency risk.

- *Asset allocation*

The information provides overall asset allocation of the fund, the proportion of assets invested, including the top 5 list and the weight regarding ratings for investors to use in their investment decision. Information provided in the fund proposal is detailed as follows.

- <u>Asset class allocation</u>

Proportion of each asset type is provided such as how many percent to NAV invested in cash deposit, government bond, debentures, stock, sector stock shown in a pie chart.

- <u>The top 5 securities the fund invests</u>

In general, the fund will list the top 5 assets and its proportion compared to NAV. In case of debt securities fund, ratings of debt securities are additionally presented.

- <u>Weight of investment according to ratings</u>

  In case of debt security fund, weight of ratings is provided by separating local and foreign debt securities.

If the mutual fund invests more than 20% of NAV in any foreign mutual funds, the published investment information of the foreign fund as generally available will be provided.

- *Fee*

  Fee information is provided as fee charged to the fund as percentage (%) per year of NAV and fee charged to clients as percentage of trading amount. The fees include VAT and other relevant taxes.

- *Performance*

  This part is a summary of historical fund performance which provide following important information.

  - Benchmark of the mutual fund for performance comparison.
  - Historical performance and benchmark in a calendar year.
  - Highest loss within 5 years (maximum drawdown).
  - Performance volatility (standard deviation).
  - Tracking error (TE) (if any).
  - Peer group fund performance.
  - Year on year pinned performance.
  - Performance of the umbrella fund (if any).

- *Other information*

  Other important information useful for investment decision of investors, including information about

  - Dividend policy.
  - Trustee.

- Date of the fund registration.
- Age of the fund.
- Information about purchase and redeem of the unit trusts.
- List of fund managers.
- Portfolio turnover ratio (PTR).
- List of the fund agents.
- Location, contact details to receive fund prospectus or to complain.
- Connected transactions that may bring conflict of interest.
- Other information related to the fund useful and sufficient for investors' investment decision.

Portfolio turnover ratio (PTR)

Portfolio turnover ratio (PTR) allows investors to know the volume of the fund's assets trading which better reflects the fund strategy. It can be calculated form total value of assets bought or total value of assets sold in the past period, whichever lower, divided by average NAV of the mutual fund in the same period.

Information in the fund fact sheet is a summary part of the fund prospectus. Investors should learn more details in the full version prospectus before investment. The full version prospectus can be requested from the fund agents and the asset management companies, or the prospectus submitted to the SEC which is published in the SEC's website.

Annual report

Annual report is operating performance and financial performance of the mutual fund published every accounting period of the particular fund. The report provides important information for investors or information that may affect unit holders' benefits such as summary table of operating performance, trustee comment and report, financial statements and auditor report, and details of investment, etc.

11.3.2 Taxes for mutual fund investment

Taxes relating to mutual fund investment

A mutual fund is a juristic person separated from the asset management company (the fund house). Returns from the mutual fund such as dividends and capital gain from stocks and interests, discount, and capital gain from debt securities are tax exempted. Taxes for mutual fund's unit holders can be summarized as follows.

Table 11-2 Taxes relating to mutual fund investment

Types of return from mutual fund investment	Ordinary person	Juristic person who is a listed company in the SET	Other juristic persons
Capital gain from the unit redemption	Tax exemption income	Included as assessable income for corporate tax calculation	Included as assessable income for corporate tax calculation
Dividend from the mutual fund	10% withholding tax may be applied or must be included as assessable income for personal income tax calculation at the end of the year (investors cannot get tax credit from dividend).	Not included as assessable income if the units are held for at least 3 months before and after the XD date	Allow a half of the dividend revenue to be excluded from assessable income if the units are held for at least 3 months before and after the XD date

The revenue department, Ministry of Finance is reviewing taxing the mutual fund investing in debt securities or taxing investors who invest in it. Information may have been changed. Investors should learn more about a particular tax issue information before investment.

11.3.3 Taxes related to REITs and infrastructure fund

Property Fund

Property fund is a mutual fund established by the asset management company to invest fund from selling investment units in properties or rights in property rental, and harvest from invested properties. The property fund aims to provide alternative investment in property and provide opportunity to receive regular returns. Supervision gives importance to property investment that provides regular rental fees and does not allow the fund to operate other businesses than collecting rental fees. It also gives importance to selling investment units widely to make sure any individual investors can buy the units.

However, property fund application could be submitted for approval until December 31st, 2013. REITs have been a tool for property investment since then.

Taxes related to property fund investors can be categorized into taxes for ordinary person and juristic person as follows.

Table 11-3 Taxes related to property fund investment

	Ordinary person	Juristic person
Dividend	10% withholding tax	Listed companies receive tax exemption if holding units at least 3 months before and after dividend payment. In case of non-listed companies holding units at least 3 months before and after dividend payment, pay a half tax or 10%.
Capital gain	Exempted	Taxed at a normal rate

Real Estate Investment Trusts (REITs)

REITs is a trust held by trustees. It is not a juristic person. Trust founder will be a REIT manager, who will offer trust units and provide money to reliable trustees to establish REITs. Founder agreement appoints trust manager to manage the trust and trustees to supervise manager's management and be a custodian.

Taxes related to investors investing in REITs can be divided into ordinary person and juristic person detailed as follows.

Table 11-4 Taxes related to REITs investment

	Ordinary person	Juristic person
Dividend	10% withholding tax	Normal tax rate
Capital gain	Tax exempted	Normal tax rate

Infrastructure Fund

Infrastructure fund is the mutual fund aiming to raise fund from both individual investors and institutional investors to invest in public infrastructure useful for the country. Investors will receive returns from investing in the infrastructure funds in 2 forms: dividend and capital gain. Taxes related to investors in investing in the infrastructure fund can be explained as taxes for ordinary person and taxes for juristic person as the following details.

Table 11-5 Taxes related to infrastructure fund investment

	Ordinary person	**Juristic person**
Dividend tax	Taxed exempted for ordinary person on dividend from infrastructure funds founded with the Securities Act for 10 consecutive tax years since the tax year that the fund registered regarding the Notification of the Director-General of Revenue Department. (Normal tax rate is 10%).	Tax exempted for listed companies holding units for at least 3 months before and after dividend payment. Non-listed companies holding units for at least 3 months before and after dividend payment pay half tax payment or 10%.
Capital gain tax	Exempted	Local juristic person includes capital gain for corporate tax calculation. Foreign juristic person as defined by Thai law neither pays corporate tax nor withholding tax.

11.3.4 **Condition and Tax Benefit of RMF, SSF and SSFX**

(Note: The content in this section ("Condition and Tax Benefit of RMF, SSF and SSFX") has been revised for Retirement Mutual Fund, RMF and added for Super Saving Fund, SSF and Super Saving Fund Extra, SSFX in the third version, according to the notification of the director-general of the Revenue Department on income tax No. 401 (RMF) and No. 369 (SSF) and No. 376 (SSFX))

Retirement Mutual Fund: RMF

RMF is a type of mutual funds that is supported by the government sector to encourage long-term savings for retirement. Investors can receive tax deduction no more than 500,000 baht per year when the investment conditions are fulfilled.

RMF is established to encourage people's long-term regular "saving" so they can take care of themselves during their retirement or when they do not work and do not have regular income. RMF is beneficial for self-employed individuals or employees who have no access to tax-free saving for their retirement because they do not have access to Government Pension Fund or Provident Fund. It is also beneficial for those who want to save and invest more for their retirement although they have Provident Fund because Provident Fund alone may not be enough for their retirement.

Therefore, government officials and employees who have Government Pension Fund or Provident Fund can invest in RMF as their additional investment to utilize tax benefit to the maximum limit of 30% of taxable income. (The limit has been raised from 15% to 30% since 2563 B.E. onward.) The maximum limit is 500,000 baht in total including SSF, National Savings Fund, Government Pension Fund, Provident Fund, Retirement Insurance Premium and Private Teacher Aid Fund in the same tax year. Saving and investing in RMF does not only provide tax benefit in the current tax year but also provide financial cushion during retirement years.

Moreover, if investors have low risk tolerance, they can invest in low risk RMF such as fixed income fund and/or money market fund. This is one of the advantages of RMF. It provides various investment selections – equity funds, fixed income funds, mixed funds - which are associated with different risk levels.

RMF investment policy

Similar to any mutual fund, RMF includes funds with various investment policies for investors to choose. This depends on the policy of each asset management company, whether they want to manage the fund investing in which asset class as regulated by the SEC to match the risk appetite for age range and investment experience of investors, ranging from low to high risk level. Generally, RMF can be categorized by risk levels as follows.

- RMF mainly invests in low risk securities

This kind of RMF mainly invests in debt securities, both in short-term such as money market fund and long-term bonds such as investing solely in government bonds or in government and corporate bonds. This kind of RMF, therefore, has low risk and low return.

- RMF mainly invests in moderate risk securities

This kind of RMF invests in both debt securities and equities or so called "Balanced Fund". So it is associated with moderate risk level and provides moderate return.

- RMF mainly invests in high risk securities

This kind of RMF mainly invests in high risk securities to expect long-term average return that is higher than two types of the RMF mentioned earlier. It invests mainly in the equities which are associated with higher risk and higher return. In addition, RMF also has other investment policies such as foreign investment or gold investment.

Conditions of RMF Investment

1. In each year, investors can invest in one or many RMFs in one or many asset management companies **(no minimum investment required)**.

2. In each year, investors can invest in RMFs no more than 30% of taxable income in any asset management companies altogether and the total amount must be no more than 500,000 baht per year including **SSF, National Savings Fund, Provident Fund, Government Pension Fund, Retirement Insurance Premium and Private Teacher Aid Fund** altogether. For example, if the investor has Government Pension Fund or Provident Fund, he must sum up his RMF investment and his Government Pension Fund or Provident Fund in the same year and can deduct no more than 500,000 baht from his taxable income.
3. In each year, investors must buy RMF at least once a year (invest continually every year). However, he can stop investing no more than 1 year consecutively else violating to the investment condition. This condition will not be applied if the investor does not have any taxable income in that year or many years consecutively. The investment year is counted only if it is the year that the investor bought the RMF units at the amount eligible for tax deduction.
4. Investors must hold the units of RMF continuously until their 55 years of age and have held the units for no less than 5 years (The investment year is counted only if it is the year that the investor bought RMF at the amount eligible for tax deduction. The 5-year-term is counted between two dates). This condition will not be applied in case of disability or death of investors.
5. RMF investment units cannot be sold, transferred, pledged or collateralised because they are bound to personal income tax of each investor.
6. Investors are obliged to include the income from redeeming RMF investment units including both investment principal and capital gain as taxable income by indicating it as tax-exempted income (in the case that all investment conditions are fulfilled).
7. Investors should not invest in RMF more than the eligible amount for tax benefit (because capital gain of the excess amount invested will be taxable whenever redeeming). If investors want to invest more than the eligible amount, they should invest in usual mutual funds instead.

Tax Benefits of RMF Investment

RMF Investment provides tax benefits as follows.

1. The amount invested in RMF is exempted from taxable income but limited to 30% of taxable income in that tax year and no more than 500,000 baht limit in total, including **SSF, National Savings Fund, Provident Fund, Government Pension Fund, Retirement Insurance Premium and Private Teacher Aid Fund**.
2. The amount redeemed from RMF including capital gain will be tax-exempted when the investor is at least 55 years of age and has invested for no less than 5 years starting from the date he/she initially invested in RMF. The investor will be tax exempted for the whole amount of RMF investment.
3. In case of disability or death, the redeemed RMF is tax-exempted for the whole amount.

Differences between RMF and Other Mutual Fund

1. RMF investment provides tax benefit. Investors can deduct the amount invested in RMF from taxable income in the same tax year before calculating personal income tax, if the investment conditions are fulfilled.
2. In case that the investor violates the investment conditions such as redeeming the RMF units before the required period of time and the redeemed amount is higher than the average cost of the RMF units, the capital gain is taxable and must be included as taxable income to calculate personal income tax.
3. RMF investment units cannot be transferred, pledged or collateralised.
4. All types of RMF do not pay dividend.

Example of Tax Benefit Calculation for a Taxpayer Investing in RMF

Example 11-1 If Mr. A earns 250,000 baht salary, or 3,000,000 baht per year and contributes 5% of his salary into Provident Fund which is 150,000 baht per year (3,000,000 x 5%). Assuming that he receives 400,000 baht bonus and has no other income, his total income is 3,400,000 baht (3,000,000 + 400,000) per year.

If he would like to get tax benefit from RMF investment, he **can invest any amount as a minimum investment depending on the requirement of each fund (as there is no minimum requirement for tax benefit eligibility)** and if he wants to invest in RMF to get the maximum tax benefit, the eligible amount is 30% of taxable income which is 1,020,000 baht (3,400,000 x 30%).

However, in this case, Mr. A should not invest in RMF at the maximum of 30% of taxable income because the amount of RMF calculated earlier and his **Provident Fund altogether** is more than the maximum limit of 500,000 baht allowed by the Revenue Department. Mr. A should invest only 350,000 baht in RMF at the maximum (calculating from the maximum limit 500,000 baht - 150,000 baht Provident Fund **contribution**). Therefore, the whole amount of 350,000 baht in RMF investment can be deducted from his taxable income before calculating his personal tax in that year. He can save tax in the amount equal to the investment in RMF in that year regardless of funds or asset management companies times the highest tax rate paid to the Revenue Department. For example, if the highest tax rate applied to Mr. A income tax is 30% and Mr. A invests 350,000 baht in RMF, he would save tax by 105,000 baht. The amount invested in RMF will also be the investment for his retirement.

The Return of Tax Benefit if the Investment Conditions is Violated

In the case that investors invested in RMF received the tax benefit but later on they violate one or more investment conditions. They must return the tax benefit received as follows.

- **In case that the investor has invested in RMF for less than 5 years.** The counting of investment period starts from the first day that the investor bought the RMF units and includes only the year that he bought the RMF units at the eligible amount and received the tax benefit. If the investor has invested in RMF for less than 5 years that violates the investment conditions, he/she must return the tax benefit received in the past years.

- **In case that the investor has redeemed the RMF units before 55 years of age.** Although the investor has invested in RMF for no less than 5 years but if he is less than 55 years of age and redeems some or all of the RMF units, he/she violates the investment conditions.
- **In case that the investor stops buying RMF more than 1 year consecutively.** This condition will not be applied if in that year or many following years if the investor does not have any taxable income. However the investor must not forget to inform the revenue department in P.N.D. 90 or P.N.D. 91 forms.

Since the objective of RMF is to encourage long-term saving for retirement with tax benefit as an incentive for investors to invest in RMF funds, there are investment conditions as prescribed by the Revenue Department. If the conditions are not fulfilled, the investors have to act as follows.

- The investors must include capital gain from RMF redemption as taxable income and act as follows.
  - If the redemption is made before the investment conditions are completed, i.e. the investor is less than 55 years old and has invested for less than 5 years or stops investing more than 1 year consecutively, the investor must return tax benefit received in the past 5 (calendar) years by filing tax at the amount invested in RMF and got the tax benefit in each year to pay additional tax for those years. This must be done by the end of March of the next calendar year.

  - In case that the investor fails to file and pay tax within March, the Revenue Department will perceive the investor as failure to file tax which generally incurs 1.5% surcharge per month of the unpaid taxes calculated from April onward. However, the surcharge will not be more than the outstanding taxes that are unpaid.

- In case of negligence, failing to file and pay tax within March and receiving tax summons, penalty might be occurred at the amount of 1-2 times of the unpaid taxes outstanding which is a standard practice.
- In case of redeeming some or all of the RMF units before the required period, capital gain must be included as taxable income except that the investment has been held for no less than 5 years (counting from the first day the investor initially bought the RMF).

Example 11-2 In case that the investor violates the investment conditions of RMF investment by redeeming some or all of the RMF units before 5 years. He is also less than 55 years of age.

Investor Age	Investment Date	Order of Year	Amount of RMF invested
40 years old	March 5th, 25x1	1	5,000
41 years old	December 15th, 25x2	2	5,000
42 years old	April 1st, 25x3	3	5,000
43 years old	March 5th, 25x4	4	5,000
44 years old	December 30th, 25x5	5	Redeem some or all of the investment units (violating the condition)

Regarding the **example 11-2**, the investor initially bought RMF on March 5th, 25x1 when he was 40 years old and redeemed the units on December 30th, 25x5 when he was 44 years old which violates the RMF investment conditions because the holding period is less than 5 years (counting between two dates) and he was less than 55 years of age. **The investor must return the tax benefit received in the past 5 calendar years (year 1 - 4) within March of year 6.**

Moreover, he must also include capital gain from the redemption as his taxable income within that tax year to calculate and pay personal income tax.

Advantages and Cautions of RMF Investment

<u>Advantages</u>

1. RMF provides selections of funds with different investment policies depending on risk appetite and expected return of the investor. The investment policy of RMF does not require investors to invest only in equities or only in fixed income.
2. Investors have selections to save and invest to guarantee the future for themselves or their families when they are retired.
3. Investors will receive tax benefit each year they invest in RMF.
4. Investors can switch the investment units from one RMF to another RMF as they see suitable for an investment situations in a certain period of time.

<u>Cautions</u>

1. The investment conditions allowing tax benefit through RMF investment require disciplined investors to invest regularly and long term.
2. Investors must understand their own investment goals and their risk appetite. They should also consider investment and risk diversification in different asset classes to make sure that their investment is suitable to their goals and risk appetite.
3. Investors should consider long-term performance of the asset management companies, focusing on their fund's investment style, service quality and fair management fees and expenses.
4. Do not forget to file P.N.D. 90 or 91 forms to the Revenue Department every year regardless of your income amount or RMF investment amount in the tax year.

5. Investors should select RMF that suits their retirement plan. Lots of investors invest in RMF that provides low long-term average return that they will not have enough money for their retirement.

Super Saving Fund (SSF)

SSF is a type of mutual funds that is supported by the government sector to encourage people's long-term saving. Tax benefit of SSF focuses on first jobbers to middle-income to encourage them to initiate long-term saving early. It also replaces LTF of which tax benefit ended in 2562 B.E.

Conditions of SSF Investment

Investors investing in SSF must fulfill the following conditions:

1. Investors must hold each invested SSF unit for no less than 10 years since the date it was bought (**except** the redemption of the fund in the case of investor's disability or death).
2. There is no minimum required amount (however, it depends on the requirement of each SSF mutual fund.)
3. Investors do not need to regularly invest in SSF. They can invest only in the year that they want to receive tax benefit. They can buy various SSFs.
4. Investors can invest in one or many SSFs in the same or different asset management companies.
5. Investors should not invest more than the eligible amount for tax benefit (because whenever they sell the excess amount of SSF and have capital gain, it will be taxable). If they want to invest more than the eligible amount, they should invest in other mutual funds instead.

Tax Benefits of SSF Investment

Investors investing in SSF will receive tax benefits as follows:

1. The amount invested in SSF is tax-exempted at the maximum limit of 30% of taxable income of each tax year **and** no more than 200,000 baht per year **and** when included with **RMF, National Savings Fund, Provident**

Fund, Government Pension Fund, Retirement Insurance Premium and Private Teacher Aid Fund must be no more than 500,000 baht per year. For example, if the investor has contributed to Government Pension Fund or Provident Fund, he has to sum up SSF investment and Government Pension Fund or Provident Fund altogether that will be tax exempted at the maximum limit of 500,000 baht per year.

2. The amount redeemed from SSF that has been invested for no less than 10 years since the date the units were bought is tax-exempted for the whole amount, both the invested amount and capital gain.
3. Investors are obliged to include the amount redeemed from SSF, both the invested amount and capital gain, as their taxable income but indicate that it is tax-exempted (in the case that the investment conditions are fulfilled).
4. In case of disability or death of the investor, the redeemed amount is tax-exempted for the whole amount, both the invested amount and capital gain.

Differences between SSF and Other Mutual Fund

1. Investors investing in SSF will receive tax benefits if the investment conditions are fulfilled.
2. If investors violate the investment conditions such as redeeming SSF before the specified period and having capital gain, the investors must include the capital gain as taxable income to calculate personal income tax. In addition, they have to pay tax in the tax year that the investors deducted SSF invested amount during the past 5 years since the tax filing date of that year until the day the additional tax is filed with 1.5% per month surcharge of the unpaid tax that must be returned to the Revenue Department (Re: Notification of the director-general of the Revenue Department on income tax No.369 No. 4)
3. SSF has low liquidity because investors must hold the units for no less than 10 years from the day they bought. An asset management company specifies redemption date of each SSF differently (regardless of tax eligibility status).

Example of Tax Benefit Calculation for Taxpayer Investing in SSF

Example 11-3 If your salary is 100,000 baht which is 1,200,000 baht per year and Provident Fund contribution is 60,000 baht per year (1,200,000 x 5%). You additionally invest 200,000 baht in RMF and pay 100,000 baht retirement insurance premium. Assuming that you receive 300,000 baht bonus and have no other income. So this year, your income is 1,500,000 baht (1,200,000 + 300,000).

You would like to get the tax benefit from SSF investment because it has no minimum investment required. Although you want to invest in SSF to the maximum of 30% which is 450,000 baht (1,500,000 x 30%), in this situation, you cannot do so because 30% of the taxable income is over the maximum limit of 200,000 baht.

However, you can invest in SSF at the maximum of 140,000 baht **(calculate from the limit of 500,000 baht – 60,000 baht (Provident Fund) – 200,000 baht (RMF) – 100,000 baht (retirement insurance premium)**. If you invest in SSF more than 140,000 baht, it will exceed the maximum limit of 500,000 specified by the Revenue Department.

The whole amount of 140,000 baht invested in SSF can be deducted from taxable income before calculating personal income tax in the tax year. In this case you will save personal income tax by the total amount you invested in SSF in all asset management companies times the highest tax rate applied. For example, if the highest tax rate of this example is 20% and you invest 140,000 baht in SSF, you will save 28,000 baht maximum.

The Return of Tax Benefit if Violating the Investment Conditions

Since the objective of SSF is to encourage long-term saving incentivized by tax benefit to encourage investors to invest in SSF, the investment conditions are required. If investors violates the investment conditions specified by the Revenue Department, the investors have to act as follows.

- The investors have to return the tax benefits received earlier to the Revenue Department only for the amount that is redeemed before the required period of 10 years counting from the day the units were bought.
- The investors must pay surcharge to the Revenue Department. The surcharge is 1.5% per month of the unpaid taxes but no more than the amount of the unpaid taxes outstanding counting from the tax filing date deadline until the date additional taxes are paid. Therefore, the investors should pay the unpaid taxes as soon as possible.
- The investors have to include capital gain (if any) from the redemption as taxable income in that tax year to calculate personal income tax.

Example 11-4 In case of violating the investment conditions by redeeming SSF that was held less than 10 years counting from the date the units were bought, and the redeemed amount is higher than cost. (Assuming that the investor has taxable income in the tax year that allows him to invest in SSF at the maximum of 200,000 baht.)

	Year invest / redeem	**NAV per unit (baht)**	**No. of unit**	**Investment amount (baht)**	**Redemption amount (baht)**
Invest in SSF	2563	10.00	20,000	200,000	-
	2564	:	:	:	:
	2565	:	:	:	:
Redeem SSF	2566	13.00	(20,000)	-	260,000

From the example 11-4, the investor has invested in SSF units since 2563 B.E. and redeemed all 20,000 units in 2566 B.E. (The investor has held the units for less than 10 years counting from the day he bought which violates the investment conditions), the investor has to act as follows.

1. The investor receives the redemption amount of 260,000 baht (20,000 units times 13.00 baht/unit) which is higher than the cost he paid (200,000 baht calculated from 20,000 units times 10.00 baht/unit). This means that he receives capital gain of 60,000 baht (260,000 – 200,000).
2. The investor is obliged to include the capital gain (60,000 baht) as his taxable income together with his other income received in 2566 B.E. to calculate personal income tax.
3. The investor has to return the tax benefit he received in 2563 B.E. (from deducting 200,000 baht amount invested in SSF from his taxable income in 2563 B.E.) and surcharge (calculating surcharge from the deadline of tax filing date (within March of the next calendar year which is within March 2567 B.E., in this case) until the day he pays the unpaid taxes, so he should pay tax as soon as possible).

Advantages and Cautions of SSF Investment

Advantages

1. Investors do not need to continually invest in SSF every year. They can invest only in the year that they want to utilize tax benefit.
2. SSF investment requires only 10 years investment period which is, for the first jobbers, shorter than fulfilling the investment conditions of RMF investment.
3. Lower- to middle- income taxpayers can receive additional tax benefit from SSF investment.
4. Investors can select various investment policies that suit their requirements.

Cautions

1. SSF investment provides various investment policies which may expose investors to volatility and risk higher than the level they can accept.

Therefore, the investors should understand themselves in terms of investment goals and the level of risk tolerance. They should consider investment and risk diversification in various asset classes to make sure that the investment suits them.

2. Investors must invest in SSF for no less than 10 years counting from the day they invest in the SSF units which may incur investment liquidity risk.
3. Investors should consider long-term performance of the asset management companies, focusing on fund's investment style, service quality and fair management fees and expenses.

Super Saving Fund Extra (SSFX)

SSFX is SSF of which investment policy is to invest no less than 65% of its NAV in securities listed in the Stock Exchange of Thailand to encourage long-term investment and increase confidence in the capital market. The investment conditions are similar to the usual SSF but the tax benefit is different in terms of the investment in SSFX for personal income tax-exempted is no more than 200,000 baht.

Moreover, the tax benefit of SSFX allowance is separated from the allowed limit of the usual SSF and not included in the allowed limit of the investment or contributions in all kinds of retirement funds. Investors must invest **only during the period of April 1st, 2563 B.E. to June 30th, 2563 B.E.** and hold the investment units for no less than 10 years similar to the usual SSF.

Example of Tax Benefit Calculation for Taxpayer Investing in SSFX

Example 11-5 From the information provided in Example 11-3, your salary is 100,000 baht which is 1,200,000 baht per year, and you contribute 5% of your salary into the Provident Fund which is 60,000 baht per year (1,200,000 x 5%). You additionally invest 200,000 baht in RMF and pay 100,000 baht for retirement insurance premium. Assuming that you receive 300,000 baht bonus and have no other income. So in this year, your income is 1,500,000 baht (1,200,000 + 300,000). In this case, you can invest 140,000 baht in the usual SSF.

If you want to **maximize your tax benefit** by investing in SSFX, you can invest in SSFX to the maximum limit of 200,000 baht regardless of your income or other types of deductibles such as Provident Fund, RMF or the usual SSF.

Additionally, in case of redeeming RMF, SSF and SSFX but violating the investment conditions, the asset management company is obliged to collect the withholding tax at the rate of personal income tax on the profit of investment unit redemption to pass on to the Revenue Department instead of the former 3% withholding tax. This rule becomes effective on August 20th, 2562 B.E. Investors who fulfill the investment conditions of RMF, SSF or SSFX will not be affected by such withholding tax.

RMF SSF and SSFX Investment Comparison

Table 11-6 summarize the characteristics of RMF SSF and SSFX as follows.

Table 11-6 RMF SSF และ SSFX Investment Comparison

Items	RMF	SSF	SSFX
Objective of the fund establishment	To encourage people to regularly save long-term to spend during their retirement	To encourage more long-term saving	To encourage long-term investment and increase confidence in the capital market
Investment Policy	Provide various investment policies including equity, fixed income, money market or foreign market, like other mutual funds	Provide various investment policies, including all kinds of securities	Invest no less than 65% of the NAV in securities listed in the Stock Exchange of Thailand
Risk Level	Ranging from low risk to high risk depending on the investment policy of each fund	Ranging from low risk to high risk depending on the investment policy of each fund	Highest risk because SSFX invests mainly in equities
Dividend Payment	Dividend payment is prohibited.	Either pay or not pay dividend. If dividend is paid, investors pay 10% withholding tax on the dividend.	Either pay or not pay dividend. If dividend is paid, investors pay 10% withholding tax on the dividend.

Investment Conditions	No less than 5 investment years (counting on a day to day basis) and redemption can be made after the investors reach 55 years of age.	No less than 10 investment years (counting on a day to day basis)	No less than 10 investment years (counting on a day to day basis)
Investment Continuity	After initial investment, investors must invest every other year. They can buy a number of funds each year.	No need to invest every year, invest only in the year that tax benefit is needed. Investors can buy a number of funds each year.	No need to invest every year. Investors must invest between April 1st, 2563 B.E. and June 30th, 2563 B.E.
Minimum investment required each year	No minimum investment required but depends on the requirement of each fund.	No minimum investment required but depends on the requirement of each fund. (Investors can invest only in the year that the tax benefit is needed).	No minimum investment required but depends on the requirement of each fund. (Investors can invest only during the specified period).

The maximum limit eligible for tax benefit each year	No more than 30% of taxable income and when included with SSF, National Savings Fund, Provident Fund, Government Pension Fund, Retirement Insurance Premium and Private Teacher Fund altogether must be no more than 500,000 baht.	No more than 30% of taxable income and no more than 200,000 baht and when included with RMF, National Savings Fund, Provident Fund, Government Pension Fund, Retirement Insurance Premium and Private Teacher Fund altogether must be no more than 500,000 baht.	No more than 200,000 baht (calculated separately from the limit of the usual SSF) and not included in the limit of all kinds of retirement fund investment or provident fund contributions. (separated from the usual SSF and RMF).

Summary

Mutual fund investment is the important tool to provide return to investors as mutual funds provide investment variety, including more than 25 fund houses and more than 1,000 mutual funds. Therefore, investors should have knowledge and understanding in investment environment to indicate investment opportunities. They have to learn about the fund houses in terms of services, information disclosure, fund manager capability, and information about the funds such as investment policy, top holding list, past performance relative to the benchmark, risk level of a particular fund, the fund manager, and detailed investment expenses. Nevertheless, the investor should consider personal factors in selecting the fund that suits individual needs.

Additionally, the investor has to rebalance the investment portfolio when there is a change in personal factors, relevant economic information affecting the investment, investment policy of the fund, and/or the investor's investment objective. Investors should know about investment strategies which are 1) Timing the Market 2)

Share Cost Averaging 3) Dollar-Cost Averaging 4) The Combined Methods 5) Core & Satellite to make the right choice of investment to suit each individual investor.

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Summary of Suggested Readings and Unofficial Translations

Module/Topic	Suggested Readings	Unofficial Translation Available
Module 1: Fundamental Knowledge		
1.1 The Environment of Investment and Financial Market	• *Money and Capital Markets (Peter S. Rose, Milton H. Marquis, 2008) – Chapter 1: Functions and Roles of the Financial System in the Global Economy* • Financial Management : Theory and Practice (Eugene F. Brigham and Michael C. Ehrhardt, 2009) – Chapter 1: An Overview of Financial Management and the Financial Environment	Only Topic 1.2 Financial Market: LiVE Exchange
1.2 Financial Instruments and Investment Decision	• *Analysis of investments and management of portfolios (Frank K. Reilly, Keith C. Brown, 2012) – Chapter 2: The Asset Allocation Decision, 3: The Global Market Investment Decision* • *Portfolio construction, management, and protection (Robert A. Strong, 2009) – Chapter 8: Capital Markets and Market Efficiency*	Only Topic 2.1.5 Digital Assets
1.3 Risk and Return on Securities Investment	• *Analysis of investments and management of portfolios (Frank K. Reilly, Keith C. Brown, 2012) – Chapter 1: An Overview of the Investment Process* • *Financial Management : Theory and Practice (Eugene F. Brigham and Michael C. Ehrhardt, 2009) – Chapter 4: Time Value of Money*	-
1.4 Risk and Return of Securities Portfolio	• *Analysis of investments and management of portfolios (Frank K. Reilly, Keith C. Brown, 2012) – Chapter 7: An Introduction to Portfolio Management, 8: An Introduction to Asset Pricing Methods, 25: Evaluation of Portfolio Performance*	-
1.5 Economic and Industrial Analysis	• *Analysis of investments and management of portfolios (Frank K. Reilly, Keith C. Brown, 2012) – Chapter 12: Macroanalysis and Microvaluation of the Stock Market, 13: Industry Analysis*	-
1.6 Company Analysis	• *Analysis of investments and management of portfolios (Frank K. Reilly, Keith C. Brown, 2012) – Chapter 10: Analysis of Financial Statements, 14: Company Analysis and Stock Valuation* • *Investments (Frank K. Reilly and Edgar A. Norton, 2006) – Appendix 15 of Chapter 15: Information Sources for Company Analysis* • *Encouraging listed companies to be included in sustainability rankings and indices: https://www.set.or.th/sustainable_dev/en/sr/sd/evaluation_p1.html* • *Sustainable investment promotion:* • *https://www.set.or.th/sustainable_dev/en/sr/sri/sri_p1.html* • *About Thailand Sustainability Investment: https://www.set.or.th/sustainable_dev/en/sr/sri/tsi_p1.html*	Only Topic 6.3 Sustainable Investment Concepts (ESG Investment)
1.7 Securities Technical Analysis	• *Analysis of investments and management of portfolios (Frank K. Reilly, Keith C. Brown, 2012) – Chapter 16: Technical Analysis*	-
1.8 Foreign Securities Investment	• *Investments (Frank K. Reilly and Edgar A. Norton, 2006) – Chapter 3: Selecting Investments in a Global Market* • *Portfolio construction, management, and protection (Robert A. Strong, 2009) – Chapter 7: International Investment and Diversification*	-
Module 2: Rules and Regulations and Suitable Investment Consulting		
2.1 Sales Conduct and Product Services	-	Yes
2.2 Practical Conduct for Professional Contacting to Investors	-	Yes
2.3 Suitable Investment Consulting	-	Yes
Module 3: Product Knowledge		

3.1 Introduction to Equities and Common Stocks	• *Financial Management : Theory and Practice (Eugene F. Brigham and Michael C. Ehrhardt, 2009) – Chapter 1: An Overview of Financial Management and the Financial Environment, 7: Stocks, Stock Valuation, and Stock Market Equilibrium, 19: Hybrid Financing: Preferred Stock, Warrants, and Convertibles* • *Portfolio construction, management, and protection (Robert A. Strong, 2009) – Chapter 9: Picking the Equity Players* • *Capital Markets: a Global Perspective (McInish, T.H., 2000) Chapter 2: Secondary Markets, 6: Equities* • *Listing on the SET: https://www.set.or.th/en/products/listing2/listing_set_p1.html*	-
3.2 Valuation and Investment Strategies in Common Stocks	• *Analysis of investments and management of portfolios (Frank K. Reilly, Keith C. Brown, 2012) – Chapter 11: Security Valuation Principles, 15: Equity Portfolio Management Strategies* • *Financial instruments : equities, debt, derivatives, and alternative investments (David M. Weiss, 2009) – Chapter 1: Common Stock* • *Financial Instruments: https://www.set.or.th/en/products/financial/financial_instruments.html*	-
3.3 Equity Linked Products	• *Financial instruments : equities, debt, derivatives, and alternative investments (David M. Weiss, 2009) – Chapter 1: Common Stock* • *Financial Instruments: https://www.set.or.th/en/products/financial/financial_instruments.html* • *Foundations of financial management (Stanley B. Block, Geoffrey A. Hirt, 2008) – Chapter 19: Convertibles, Warrants, and Derivatives* • *https://www.set.or.th/en/market/product/drx/introduction*	-
3.4 Trading Mechanism of the Stock Exchange of Thailand	-	Yes (updated)
3.5 Fundamental Knowledge of Fixed Income	• *Financial instruments : equities, debt, derivatives, and alternative investments (David M. Weiss, 2009) – Chapter 5: Debt Markets* • *Capital Markets: a Global Perspective (McInish, T.H., 2000) Chapter 2: Secondary Markets, 7: Debt Securities* • *Analysis of investments and management of portfolios (Frank K. Reilly, Keith C. Brown, 2012) – Chapter 17: Bond Fundamentals*	-
3.6 Valuation and Return	• *Analysis of investments and management of portfolios (Frank K. Reilly, Keith C. Brown, 2012) – Chapter 18: The Analysis and Valuation of Bonds*	-
3.7 Risk of Investment in Fixed Income	• *Portfolio construction, management, and protection (Robert A. Strong, 2009) – Chapter 12: Bond Pricing and Selection*	-
3.8 Trading Fixed Income in Thailand	-	Yes
3.9 Fundamental Knowledge of Mutual Fund	-	Yes
3.10 Risk and Return in Mutual Fund Investment	-	Yes
3.11 Fundamental Analysis and Investment Strategies in Mutual Fund	-	Yes

Suggested Readings Books List

1. **Money and Capital Markets (Peter S. Rose, Milton H. Marquis, 2008)**
   - Chapter 1: Functions and Roles of the Financial System in the Global Economy
2. **Financial Management : Theory and Practice (Eugene F. Brigham and Michael C. Ehrhardt, 2009)**
   - Chapter 1: An Overview of Financial Management and the Financial Environment
   - Chapter 4: Time Value of Money
   - Chapter 7: Stocks, Stock Valuation, and Stock Market Equilibrium
   - Chapter 19: Hybrid Financing: Preferred Stock, Warrants, and Convertibles
3. **Analysis of investments and management of portfolios (Frank K. Reilly, Keith C. Brown, 2012)**
   - Chapter 1: An Overview of the Investment Process
   - Chapter 2: The Asset Allocation Decision
   - Chapter 3: The Global Market Investment Decision
   - Chapter 7: An Introduction to Portfolio Management
   - Chapter 8: An Introduction to Asset Pricing Methods
   - Chapter 10: Analysis of Financial Statements
   - Chapter 11: Security Valuation Principles
   - Chapter 12: Macroanalysis and Micro valuation of the Stock Market
   - Chapter 13: Industry Analysis
   - Chapter 14: Company Analysis and Stock Valuation
   - Chapter 15: Equity Portfolio Management Strategies
   - Chapter 16: Technical Analysis
   - Chapter 17: Bond Fundamentals
   - Chapter 18: The Analysis and Valuation of Bonds
   - Chapter 25: Evaluation of Portfolio Performance
4. **Portfolio construction, management, and protection (Robert A. Strong, 2009)**

- Chapter 7: International Investment and Diversification
- Chapter 8: Capital Markets and Market Efficiency
- Chapter 9: Picking the Equity Players
- Chapter 12: Bond Pricing and Selection

5. **Investments (Frank K. Reilly and Edgar A. Norton, 2006)**
    - Chapter 3: Selecting Investments in a Global Market
    - Appendix 15 of Chapter 15: Information Sources for Company Analysis
6. **Capital Markets: a Global Perspective (McInish, T.H., 2000)**
    - Chapter 2: Secondary Markets
    - Chapter 6: Equities
    - Chapter 7: Debt Securities
7. **Financial instruments : equities, debt, derivatives, and alternative investments (David M. Weiss, 2009)**
    - Chapter 1: Common Stock
    - Chapter 5: Debt Markets
8. **Foundations of financial management (Stanley B. Block, Geoffrey A. Hirt, 2008)**
    - Chapter 19: Convertibles, Warrants, and Derivatives

The books listed above are available at Maruey Library,
The Stock Exchange of Thailand