



RESILIENCY

AGILITY

SUSTAINABILITY

To Make the Capital Market "Work" for Everyone



Annual Report 2021
The Stock Exchange of Thailand

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Message from the Chairman

In the future,
SET will serve as a
connecting platform
to a wider economic
ecosystem with
more diverse market
participants,
not just a market where
investors access
for securities.”



Dr. Prasarn Trairatvorakul
Chairman



During the past year, what are your viewpoints on the challenges affecting the SET operations?

Dr. Prasarn : The Stock Exchange of Thailand (SET) has been well-prepared to deal with various forms of economic, social and environmental uncertainties, and has always been able to recover quickly. The new forms of challenging situations, especially the exponentially advanced technology, usually come with the complexity of how to develop the capital market effectively. This has become a significant turning point for us to look beyond the short-term growth, while still continuing to develop the capital market both in depth and breadth for the organization's stability and the stakeholders' benefits, such as adding technology services that meet market participants' needs, creating fundraising channels for entrepreneurs of all sizes, or connecting the capital market to the money market so as to extend more access opportunities to the capital market than the past.

What is the future trend of the capital market development?

Dr. Prasarn : SET focuses on capital market development for the mutual benefit of all sectors.

We have broadened our strategy to explore opportunities in many areas, from product development to expanding investor base and providing access to the capital market for businesses of all sizes.

In the future, SET will serve as a connecting platform to a wider economic ecosystem with more diverse market participants, not just a market where investors access for securities. Every year, SET collaborates with various industry sectors to develop and expand products, services, and infrastructures that are in line with the current environment and requirements to meet the demands of entrepreneurs and a variety of investor groups.

SET has a clear vision to develop the Thai capital market to become internationally recognized, which includes promoting new economy companies to raise funds to help strengthen the economy, as well as leveraging modern digital technology to improve the services and operational processes of the capital market. On top of that we have prioritized the development of our human resources and stakeholders to be ready for the changing world.

What are the key success factors of the capital market?

Dr. Prasarn : The value chain of SET is one of the mechanisms that drives the overall economy, comparable to other businesses or sectors that play various functions yet complement each other for a healthy economic system. Therefore, building alliances with other sectors in the economy is a key success factor of the organization and the capital market. Notably, the significance of building partnership is about mutual trust and understanding of our strengths, weaknesses, and limitations so that stakeholders' expectations will be fulfilled mutually and appropriately.

How does SET respond to the current digital asset investment trend?

Dr. Prasarn : As previously mentioned, technological advances affect the economic and social growth in many dimensions including enhancing efficiency of the management system, expanding new products and services, or widening access to the capital market. Investment in digital assets is the consequence of such changes as well.

Digital asset investment is considered as new and presents an opportunity for the capital market. However, there is still need for development in terms of relevant laws and regulations, investors' knowledge and understanding, and particularly the readiness of audit and risk management mechanisms in digital assets.

However, SET recognizes our strength in the confidence aspect of connecting the dots, beginning with the creation of a regulatory mechanism and close monitoring, as well as the digital asset ecosystem readiness in Thailand through a digital asset exchange that offers services such as connecting to the digital token offering system via the initial coin offering (ICO) process, and e-Wallet service to meet the growing demand in the ever-changing market conditions.

We may not know as to whether the development of these products and services will be the mainstream for the capital and the financial markets in the future, but the significance is that we have created an "alternative" for investors, a value added, for the capital market and market participants in the future. In practice, we must understand the changing dynamics and adhere to principles of developing

processes that take into consideration the transparency and benefits of stakeholders.

What is your view on driving ESG in the capital market?

Dr. Prasarn : Today's entrepreneurs recognize that social and environmental changes are risks to their businesses in both short and long term. Therefore, taking environmental, social, and good corporate governance (ESG) factors into account is not just a nice-to-have for businesses, but a path of survival that will help enterprises to foresee opportunities and adapt to such changes.

At the same time, the ESG aspects of business sector reflect the standpoint to create positive outcome to society and environment, and illustrate the benefits and cooperation via knowledge and business potential in a string of facets to improve the quality of life of the people in the society. These outputs can come in the form of products, services, or social-related projects that company implements by its own team or partners.

As for the capital market, we must prepare for ESG-related developments after Thailand declares a net-zero target by 2065, which is a key milestone that encourages enterprises to be more active in driving ESG in a more tangible way. In this regard, I am certain that the Thai capital market will play a significant role in fostering participation in such issues, particularly the push for ESG information disclosure and the gradual establishment of an environment-friendly business ecosystem in the capital market.

What factors will make The Stock Exchange of Thailand achieve sustainable capital market goals in the future?

Dr. Prasarn : As for the factors of the stock market's future growth, we must "Rethink" and "Redesign" to adapt and benefit from the changing situations, especially in terms of rules, regulations, technology development, and marketing models. Significantly in accomplishing growth, we need to think and develop approaches to assist stakeholders based on basic principles such as boosting efficiency and promoting capital accessibility, fairness, transparency in doing business, and forming partnership. These will maintain balance and minimize potential negative impacts on the Thai capital market.



Message from the President

Challenges
are not new tests,
but rather a call to
accelerate the development
of SET
in various fields



Dr. Pakorn Peetathawatchai
President



How can SET cope with capital market challenges in the COVID-19 era and today's uncertain world?

Dr. Pakorn : As SET has constantly faced changes, we need to keep up with current world situations to maintain confidence in the Thai capital market. To me, such challenges are not new tests, but rather a call to accelerate the development of SET in various fields. Following the COVID-19 pandemic, technology has played a critical role in business operations and our daily lives, prompting us to embrace new working styles and transform our market into a digital capital market to better serve the needs of market participants.

Despite the fact that the digital asset market will become a new alternative for entrepreneurs and investors in the future, we believe that traditional and digital asset markets both have strength in their own ways. We have to combine the strengths of these two markets to support each other for the stability of the Thai capital market in the future.

In addition, in the face of such challenges that will have a long-term impact on the capital market's quality and ecosystem, we need to expand capital market opportunities to small businesses, and enhance public awareness of how to use the capital market for savings and achieving financial goals. Technological advancements and capital market competitiveness are crucial for keeping up with rapid changes while maintaining a good governance system that is one of SET's long-standing missions.

What were SET's achievements in 2021?

Dr. Pakorn : In 2021, SET's and Market for Alternative Investment (mai)'s average daily trading value totaled approximately USD 3 billion, the most liquid market in ASEAN, and the total market capitalization at IPO of the newly listed companies was the 7th highest in Asia. Given the wider investment channels and information access via online and offline platforms, investor base jumped considerably, with a 40 percent year-on-year surge in trading accounts, reflecting the stable growth in the value chain of the capital market. In terms of the capital market development toward borderless competition, we focused on increasing business agility by developing technological platforms and digital infrastructure that are available to all sectors of the capital market, such as LIVE Platform, which allows small businesses to be prepared and gain access to the funding sources. Another example is Streaming Fund+, a mutual fund trading platform that connects with National Digital ID (NDID) system to streamline processes, decrease overlapping business procedures, and, in turn, lower capital market participants' costs, boost convenience and transaction execution speed.

Furthermore, we are accelerating the development of market participants to create values in the capital market through knowledge enhancement and advisory on Environmental, Social, and Governance (ESG) practices. Consequently, the number of listed companies selected in Thailand Sustainability Investment (THSI) have increased every year where in 2021, there were 146 companies, accounting for 66 percent of market

capitalization. Meanwhile, many of Thai listed companies were selected in international sustainability indexes such as Dow Jones Sustainability Indices (DJSI) and MSCI ESG Indexes. This reflects that the ESG quality of Thai's businesses was accepted at international levels.

With achievements in the prior years, SET highly prioritized on sustainability development.

Dr. Pakorn : We have incorporated ESG as a part of strategic planning process and SET's activities on an annual basis to create positive and practical outcomes for stakeholders either directly or indirectly. For instance, we supported over three million Thai people to gain access to financial literacy and diversified investment through a modern learning platform. The learners can select their own suitable contents to encourage personal financial planning in the proper way.

In addition, SET has embraced equal opportunities for small entrepreneurs and social enterprises through learning channels. This will help them grow, expand their businesses, and gain access to qualified capital on LIVE and SET Social Impact platforms. SET has also developed investment innovations and services to provide convenient access for everyone, such as FundConnex for mutual fund trading. Moreover, SET promoted ESG products including SETTHSI Index, and disseminated ESG data of listed companies in a systematic and reliable way for an alternative investment in quality securities.

One of our priorities involves human resource development in both SET's organization and the capital market as human capital is the cornerstone of any development. New technologies and innovations were rapidly developed and began to take the role of human labor. Therefore, we must expedite staff development to enhance their skills - think faster, adapt quickly, and work ethically.

In terms of infrastructure, we applied modern and environment-friendly technologies into the internal working system to increase efficiency. In accordance with LEED standards, we developed green building to control and trace greenhouse gas emission from activities. From electrical consumption to efficient waste management, both operational-efficiency and reduction of environmental impacts are highly considered. Besides, we create network to reduce environmental impacts through Climate Care Collaboration Platform. This aims to raise awareness on climate change impacts to all sectors and reduce greenhouse gas emission from business. With over 300 partners, this project had reduced over 12,000-ton

of CO₂-equivalent in the previous year. With above efforts, our responsibilities are not only limited to building the capital market resiliency or promoting business agility, but also contributing ESG benefits to enhance the quality of life for everyone towards sustainability.

In your opinion, what are major achievements of SET?

Dr. Pakorn : SET is a well-established organization that continues to progress year after year. Collaboration among market participants and partners is a key success for us. We have turned challenges into learning opportunities. What we have learned has led to the creation of the capital market that benefits all sectors and is in line with our vision "To Make the Capital Market 'Work' for Everyone".

Other significant success includes being forward-looking and focusing on the present moment by having international standard way of work, developing diversified products and services in a pace of technology and innovation. We are also looking for innovative business models to make it easier for people to access the capital market, in order to meet market participants' expectations and prepare for the changes in economy, society and environment in the long term.

The factors listed above were important in determining SET's strategy, which was conveyed to executives, employees, and market participants so that they could better understand how to collaborate to achieve the goals.

What is the next step of SET?

Dr. Pakorn : Our future development will focus on four dimensions, namely bridging seamless opportunities across all segments in the economy, offering innovative infrastructure to the industry, branching financial sustainability for Thai public at large, and building resilient organization for VUCA world. The role of SET is much deeper and wider than in the past, we have to work more closely with our stakeholders. Connecting with all sectors is essential to create the future Thai capital market together under the partnership platform while developing the skills and capacity of our personnel and market participants in order to be adaptable with the ever-changing environment.

Lastly, I would like to express my gratitude to all stakeholders in all sectors for the collaboration to ride out the crisis throughout the previous year. SET, together with the other Thai capital market participants, is determined to support the growth of the Thai economy and country into the future.



1 SET at-a-Glance in 2021

The Stock Exchange of Thailand (SET) realizes the challenges and the changes in the new normal era. SET, therefore, has driven the Thai capital market with digital technology and developed the economy and society in a sustainable manner. Together with partners and stakeholders, SET strives to adapt and grow sustainably under the vision: **“To Make the Capital Market ‘Work’ for Everyone.”**

Change Factors

In 2021, SET faced a new global context unseen in the past from both internal and external factors as follows:



Uncertainties of Global Economic Policies

- Uncertainties of the global economic policies and geopolitics of super power countries that affect international trade, tourism, and investment
- Changes in the economic policies that lead to high market volatility affecting investments



COVID-19 Pandemic

- Economic activities at standstill, weakening small and medium-sized enterprises with slow recovery and fragilizing the overall economy
- Catalyst to adopt the full scale digital transformation
- Rising household debt and disparity



Entering into Digital Business World

- Adaptability to maintain competitiveness under changes in economic context
- Digital platform creating sharing economy with no need for businesses to own resources but able to share with one another
- Funding sources and investments in digital assets varying and easily accessible at low cost
- Upward trend in cybersecurity issues and data leak



Social and Environmental Movement

- The 26th United Nations Framework Convention on Climate Change Conference of the Parties (UNFCCC COP26) leading to green economy commitment
- Sustainable investment becoming a mainstream in the global capital market
- Labor shortage compelling to reliance on migrant workers and leading to human rights-related risks
- The shift in patterns of production and consumption according to behavior of stakeholders who concern more on social and environmental aspects



The spread of COVID-19 since 2020 has raised concerns to investors as supply chain issue stemmed from the global economic situation has not fully recovered. These factors have bumped up product prices, resulting in inflation spike and a slowdown in global capital markets.

Against the backdrop of the rapidly-changing economy, society, and environment in the new normal era, investors are in quest of various investment forms for good returns. Thematic investment such as healthcare, e-commerce, or green energy businesses has tendency to grow with the changing contexts while sustainable investment concept that places importance on business development covering environmental, social, and governance (ESG) is also on the rise. On top of this, the advanced technology has played a significant role in technology-related business group exponentially, especially cloud computing and artificial intelligence (AI) systems, that prompt a fast development of the digital platform.

Adapting to the New World

In 2021, SET continued to expand and connect investment opportunities in the current world together with the future world, moving towards the country's stable investment hub with state-of-the-art technology. We aim to improve quality of life of everyone in the society in line with the new normal by supporting participation of business sector to take into consideration impact, risks and opportunities of the ESG issues under the strategy of **“Redefine Thai Capital Market Resiliency,”** consisting of four implementation frameworks as follows:



Redefine Thai Capital Market Resiliency ➡

01 Market Growth

➡ Strategy 1 Boost supply-side opportunities

Support fundraising for new business ventures such as new economy, foreign securities, spin-off, SMEs, and startups in a way that suits their risks and types of investors while promoting data utilization to foster business innovation

➡ Strategy 2 Rapid investor expansion

Expand new investment channels to reach a broader base of investors; integrate investment and digital marketing into a part of lifestyle to analyze and offer information, knowledge, and services for suitable access to investment in an easy, convenient and rapid manner; and raise investment appeal of the Thai capital market in the eyes of foreign investors through online channel while offering thematic products and services that serve the needs of institutional investors

02 Infrastructure Expansion

➡ Strategy 3 Building engagement

Improve the concerned regulations according to Regulatory Reforming Plan for higher potentials and efficiencies of listed companies and member companies

➡ Strategy 4 Venturing new frontiers

Connect trading and develop products for cross-border investments to increase opportunities and support borderless investment

03 Environmental Solutions & Social Development

➡ Strategy 5 ESG cultivation

Encourage the integration of environmental, social, and governance (ESG) principles into business operation of both business and personnel in the capital market to enhance the capital market to play a role as mechanism in strengthening itself, society, and the country

➡ Strategy 6 Social empowerment

Embolden financial literacy access for Thais and become contrivance that connects and supports all sectors for social development together with quality growth

04 Continuous Improvement & Talent Empowerment

➡ Strategy 7 Business scalability

Maximize capabilities and upgrade securities trading system to be compatible with international standards as well as collaborate with partners to serve needs of businesses and investors

➡ Strategy 8 Operational excellence

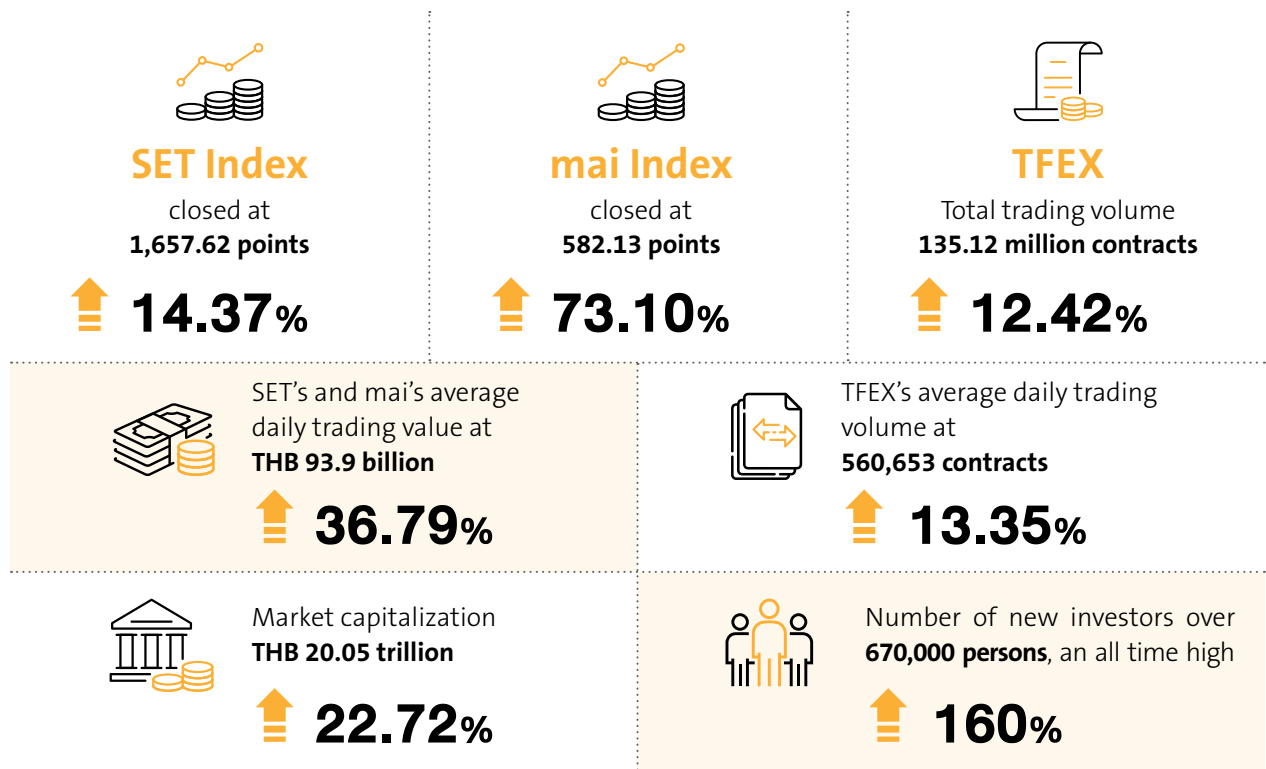
Deploy risk and crisis management to be a sustainable digital organization, while leveling up employee's skills to adapt to the industry's direction and building a working environment to be suitable with the next normal

In 2021, the SET Board of Governors (BoG) reviewed and approved vision, missions, goals, and corporate strategy according to the assessment prepared by the management team based on the current business environment, focusing on adaptability and agility of the organization and market participants' businesses, to gear up for the new normal society inclusively in technology, change in investors' behaviors, and regulatory entity's policies. Such strategy has integrated key economic, social, and environmental issues that affect the capital market's overall implementation, ensuring that the implementation mechanism of the SET group enables all sectors to benefit from the capital market under an efficient and good governance system.

SET Movement in 2021

The global stock markets faced changes from several factors, especially the COVID-19 spread which had so many waves that governments had imposed measures to prevent and curb the pandemic. The economic activities and supply chain around the world were stalled. Moreover, the uncertainties of fiscal policies implemented by the powerful countries flared up concerns and led to the significant volatility in the capital market. However, in the second half of 2021, the increased vaccination rates and easing of monetary policy of many major central banks have picked up economic activities and trades in many countries which boded well for the Thai economy and the capital market with continuous rise in the final quarter of 2021.

At the end of 2021, SET Index closed at the year's high of 1,657.62 points, up 14.37 percent from the end of 2020, buoyed by the growth of almost all industry groups, especially Technology, Industrials, and Financials that surpassed SET Index over the same period. Significantly, the benchmark Index outperformed the average indices of the regional peers. In addition, the Thai bourses managed to retain position as the most liquid market in ASEAN by the average daily trading value for 10th consecutive year.



Source: SETSMART





In developing quality of the capital market to cope with the opportunities and risks in the future, SET has enhanced potential of SET's employees and the capital market participants to be equipped with knowledge, skills, and digital technology system to ensure operational agility and prepare for transforming into digital society and challenges while building adaptability of capital market **(Resiliency)**; increasing flexibility to all stakeholders **(Agility)**; and taking into consideration the economic, social, and environmental benefits for stable and sustainable quality of life of everyone **(Sustainability)** in line with the vision "To Make the Capital Market 'Work' for Everyone."

Resiliency: Building Capital Market Stability

Thai Listed Companies' Strength

Despite uncertainties and accelerating factors that bring changes all the time, Thai listed companies have managed to maintain competitive advantage and continuous growth. At end-2021, listed firms raised fresh fund of THB 1.03 trillion in total, with market capitalization at IPO of THB 450 billion, the 7th highest ranking in Asia. Moreover, listed companies' operating profit margin and net profit margin rose 11.9 percent and 7.5 per cent, respectively, from 2020.

 **776**
companies
listed on SET and mai

Capitalization
at IPO 
THB 450 billion
The 7th highest in Asia

Equal Fundraising Opportunity Expansion

Grooming small and medium-sized enterprises (SMEs) and startups via LIVE Platform knowledge-based channel, while preparing infrastructure, work system, rules and criteria to support the securities trading on LiVE Exchange (LiVEx) with focuses on flexibility and easing burdens of entrepreneurs, and taking into consideration risks of investors and market participants


LiVEx
Preparation for
LiVE Exchange (LiVEx)

Diversifying Products and Investment Channels

Developing cross border products to connect global markets, such as Thailand-Singapore Depositary Receipt (DR) Linkage, and derivatives warrant (DW) on DJSI, NASDAQ-100 Index, Hang Seng Tech Index, and Hong Kong-listed securities. Digital investment services, such as FundConnex, Settrade Streaming Fund+ and Options Starter, have been upgraded to expand investment opportunities for everyone. SET has collaborated with partners to create new investment opportunities based on consumers' lifestyles, such as redemption program of credit cards or loyalty program to mutual funds' units, an initiative to expand new investment channels. SET has also developed investment knowledge courses for investors starting from basic to professional levels via easily accessible digital platform, using big data and machine learning.

Furthermore, SET is in the process of developing work system and infrastructure for Thai Digital Assets Exchange (TDX), a new bourse to be an alternative for new generations.

Aggressive Investor
Base Expansion
with over
5.2 million
trading accounts  **49%**

 Investment channel
expansion
Feature development on
FundConnex
Mutual fund transactions
rose by
160%

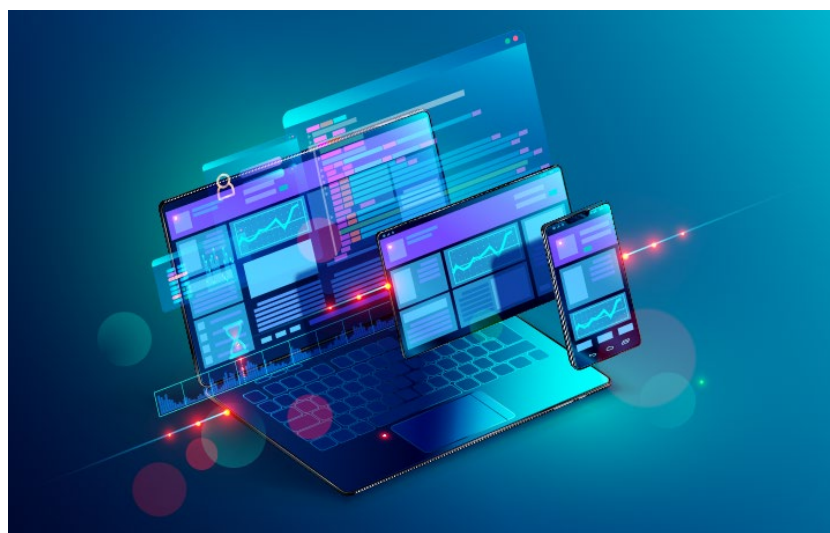
 Average daily trading value
of over **THB 93 billion**
ASEAN's **most**
liquid market
for **10** straight years

Agility: Increasing Flexibility to All Stakeholders

Infrastructure Development for Capital Market

Responding to customers' needs and offering quality services by focusing on providing shared digital platform and infrastructure to increase market participants' business agility and channels to access information for business operation, such as Digital IPO system, DAP e-Shareholder Meeting, service system to connect entrepreneurs with Digital ID platform, and Payment for Capital Market system.

In addition, SET has upgraded digital system to enhance efficiency of the securities trading system, such as Common Infrastructure for Brokers Back Office System project in the form of Application Service Provider (ASP). SET has also improved the trading system for member companies, such as self-match prevention, long order for equity market, pre-trade risk management (PTRM), as well as developing the Creation Redemption Platform to link transactions between primary and secondary markets.



e-Shareholder Meeting

Virtual shareholder meeting to serve new normal era



DAP Digital Gateway

Connecting operators with Digital ID application platform



Application Service Provider

Revolutionizing work system to create new opportunities for member companies



Payment for Capital Market

Offering Direct Debit Registration service to support digital financial transaction with transaction growth of

33%



Creation and Redemption Platform

Linking transactions between primary and secondary markets such as ETF and DR for more flexibility and faster

Creating Business Opportunities with Data

Developing database to cater to the needs to use data of industries, disseminating via convenient and speedy channels, and providing adequate information to support the decision making of relevant persons, such as "Company Snapshot" for investors to access key information of listed companies. SET has also added listed companies' ESG Rating Data assessed by two more global sustainability data providers: S&P Global and MSCI on settrade.com website. SET is set to launch ESG Data Platform in 2022 to promote ESG data utilization in business development and investment decision.



Company Snapshot

ESG Ratings

ESG Data Platform



Sustainability: Developing the Capital Market towards Sustainability

ESG-Driven Capital Market Quality Development

Enhancing quality of participants in the capital market by integrating ESG into business operation and investment decision, while promoting the sustainable investment concept to drive economic, social, and environmental growth in a balanced manner. SET has also encouraged businesses to disclose ESG information transparently and supported ESG assessment such as Thailand Sustainability Investment (THSI) list of sustainable stocks, Corporate Governance Report (CGR) of Thai listed companies, and assessment at international level, such as S&P Global, MSCI, and Dow Jones Sustainability Indices (DJSI), to drive quality businesses as alternatives for domestic and foreign investors.

Sustainable Stocks



146 companies with
market capitalization of
THB 12.50 trillion

66% of the total market
capitalization

Personnel Potential Enhancement

Enhancing knowledge and potential of SET's employees, listed companies' personnel, intermediaries' professionals and entrepreneurs preparing to be listed on stock markets. SET aims to level up capabilities of management and business operation in line with business directions of the capital market and customer behaviors in the new normal era.



1.16 million views

Accessing SET Entrepreneur
Classroom and LiVE Platform

AISA new curriculums
for professionals to widen
opportunities to produce securities
personnel in the capital market

Financial Literacy Empowerment to the Society

Increasing channels to disseminate basic financial knowledge to Thai people at all levels, such as virtual tour service in INVESTORY Investment Discovery Museum that provides experience similar to on-site visit, financial planning boardgame (Moneyfolio) development and promotion as educational media for online classes. Significantly, the "Happy Money" project has continued to enhance knowledge and understanding on financial planning among working age population covering both formal and informal workers, and senior citizens.

3 million



users who accessed
to financial
planning knowledge

Low Carbon Business Network Initiative

Joining forces with alliances to reduce greenhouse gas emitted from business operations and organization's activities continuously through Climate Care Collaboration Platform

Climate Care Platform



Building alliances to lower
greenhouse gas emissions by

12,245

tons of CO₂ equivalent

The COVID-19 Assistance Measures for Stakeholders

- Providing discount up to 50 percent for annual fee and up to 35 percent for annual registrar fee, based on the conditions as specified by the SET group, to alleviate listed companies' expenditure burden
- Facilitating employees to work from home conveniently and providing preventive knowledge and essential resources to reduce risks from the COVID-19 spread
- Collaborating with organizations and entities regarding the provision of the COVID-19 prevention equipment, medical supplies and vaccination, and assisting the needy and underprivileged persons to access quality healthcare system and ease impact from the situation



THB 103 million

Provided budget to aid needy
people and relieve impacts from
the COVID-19 pandemic

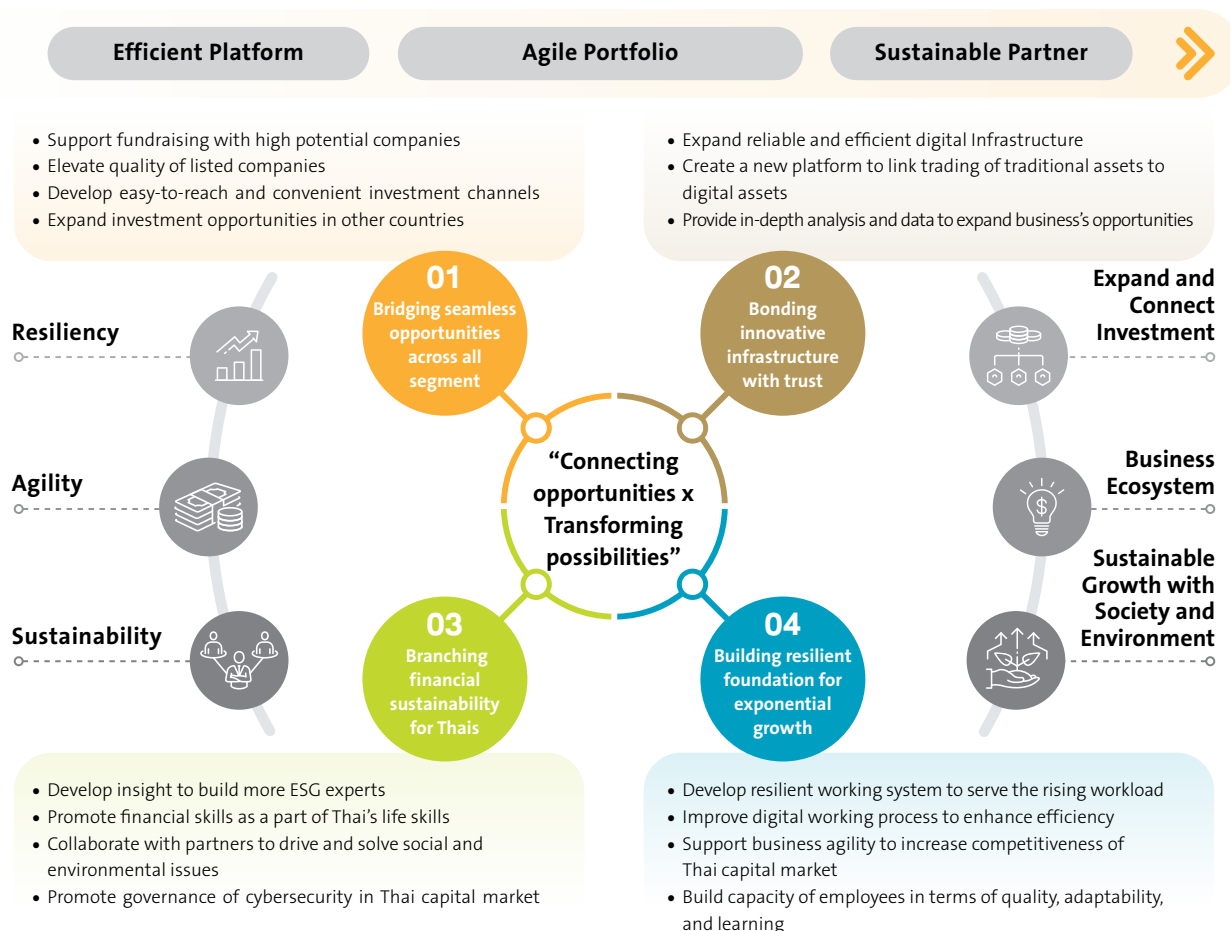
Connecting opportunities x Transforming possibilities

Although SET in 2021 managed to grow and cope with changes, the impacts from the COVID-19 outbreak and the uptrend in interest rate worldwide are expected to reduce liquidity in 2022, resulting in more volatility of capital flows than the usual levels. Therefore, SET focuses on building immunity, continuously expanding opportunities for the Thai capital market and accelerating opportunity expansion among diverse groups of entrepreneurs and investors in order to create values and sustainable growth for the country's economy, society, and environment.

The stronger economic rebound is a silver lining for not only export industry but also others. Noticeably, the advanced technology has changed consumers' behaviors, enabling digital assets to be part of the capital market ecosystem and a key factor that speed up changes in the economic cycle. At the same time, investors' expectation on long-term investment and global movements on social and environmental issues have forced business and investment sectors to adapt to support the sustainable investment trend.

With realization on impacts and growth opportunities in the capital market, SET, therefore, has set the 2022 direction which centers on expanding opportunities to continuously keep up with the global trend based on the concept of **"Connecting opportunities x Transforming possibilities"** as follows:

To Make the Capital Market 'Work' for Everyone



2 Structure and Operation of the SET Group

2.1 Overview of Policy and Performance

2.1.1 Vision and Mission

Vision

“To Make the Capital Market ‘Work’ for Everyone”

The capital market is an integral part in driving a holistic economy, so we strive to create the capital market that benefits all sectors of society. We believe that quality business growth will strengthen the country and this in turn will improve the population's quality of life.

Mission

- 1) To “plant” state-of-the-art financial Platform Development that is both innovative and accessible to our customers locally, regionally, and globally
- 2) To innovatively “grow” Product Development that is not only caters to market needs but also resonates with the sustainable growth
- 3) To “foster” People Development to ensure that our people will be best equipped with effective and proactive working spirit with synergy, while adhering to professional integrity
- 4) To “implant” an Inclusive Growth Approach that will enable us to perform as the best business partners and social supporters
- 5) To continuously “cultivate” ourselves and our stakeholders by investing in Knowledge Management creating, sharing and generating knowledge as part of an intangible asset

The Stock Exchange of Thailand: SET

is a market or a center for trading securities and provides related services. Incorporated under the Stock Exchange of Thailand Act 1974, SET is a legal entity that is currently operated by the Securities and Exchange Act 1992.

The Stock Exchange of Thailand Building

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2.1.2 Achievement Awards in 2021

In 2021, SET was presented **“Best Stock Exchange Southeast Asia 2021”** award from Global Banking and Finance Review, reflecting the international recognition as a leading stock exchange in the Asian region. In addition, SET has also received **“ESQR’s Quality Achievements Award 2021”** from the European Society for Quality Research (ESQR) granted to global organizations that have achieved quality improvement.



2.1.3 Key Strategies and Developments in 2021

SET has set up the goals and strategies in accordance with the ever-changing capital market conditions regarding the digital technology, economy, society, and environment by determining to manage organization and business development based on the concept of “**Redefine Thai Capital Market Resiliency**”, consisting of three main objectives as follows:



In 2021, SET developed and expanded various digital work systems to achieve greater efficiency (Efficient Platform), while innovating and responding to market participants' needs through various data platforms. Moreover, SET focused on creating diverse investment products (Agile Portfolio) to make funding and investment sources more accessible, as well as acting as a bridge for domestic and international partners to work together to drive sustainable growth for the capital market, economy, society, and environment (Sustainable Partner). SET defined the operating framework according to the strategy, and set up the goals clearly. The key performances were as follows:

Development according to SET Strategy 2021

Strategy	Goal	Key Performance in 2021
Framework 1: Strengthening Business Operation Capabilities		
1) Building opportunities for fundraising accessibility Promoting new business fundraising, such as the New Economy, foreign securities, spin-off, and small and medium-sized enterprises (SMEs) and startups appropriately according to risk and investor type, while supporting the use of data to benefit business innovation creation	<ul style="list-style-type: none"> To increase the number of listed companies in new business sector and their market capitalization To improve services by developing data driven analytics platforms 	<ul style="list-style-type: none"> A total of 41 new securities listed on SET and mai, an increase of 13 securities from the previous year Listing of numerous large securities such as PTT Oil and Retail Business pcl (OR), Ngern Tid Lor pcl (TIDLOR), and The ONE Enterprise pcl (ONEE), etc. A THB 1.03 trillion increase in market capitalization derived from listed companies' fundraising, of which THB 454.02 billion was initial public offerings (IPOs) and THB 578.88 billion from secondary offering (SO) Preparing for the launch of the Thai Digital Assets Exchange (TDX) in 2022



	Strategy	Goal	Key Performance in 2021
			<ul style="list-style-type: none"> Developing SMEs and startups via LiVE Platform, in collaboration with 28 partners to develop basic and in-depth e-Learning courses, and arrange business coaching via LiVE Acceleration Program and LiVE Incubation Program with over 4,100 participants Collaborating with the SEC to develop criteria for SMEs and startups on LiVE Exchange (LiVEx), in consideration of the investment patterns and investors' background at acceptable risk level as specified by the SEC, and increasing the regulatory role under the concept of Light-Touch Supervision Developing measures to facilitate, reduce duplicate process via the Digital IPO system to support the use of digital signature for issuers when applying for securities issuance and offering Amending criteria for foreign listing to raise funds on the Thai stock exchange more conveniently by shortening period required Financial Advisor (FA) to oversee the company after listing to 1 year from 3 years, to be equivalent to the criteria for Thai companies listing process and comply with the rules of the SEC. In addition, shortening the silence period of strategic shareholders to one and a half years from 3 years with effective from 2022

Table 1: Initial Public Offering (IPO) by types of securities in 2021

	Type of Securities	Number of Securities	Fundraising Value (THB million)	Market Capitalization at IPO (THB million)
	Common stock	38	88,660	444,551
	REIT	3	9,465	9,465
	IFF	-	-	-
	Total	41	98,125	454,016

Source: SETSMART

Table 2: Fundraising value and market capitalization of listed companies by type of fundraising

Type of fundraising	Fundraising Value (THB million)			Market Capitalization (THB million)		
	2019	2020	2021	2019	2020	2021
Initial Public Offering (IPO)	101,560	149,222	97,285	383,749	555,299	454,016
Secondary offering (SO)	309,793	95,867	381,474	401,129	132,649	578,878
Total	411,353	245,089	478,759	784,878	687,948	1,032,894

Source: SETSMART

Strategy	Goal	Key Performance in 2021
<p>2) Exponential investor base expansion</p> <p>Expanding new investment channels that can reach broader range of investors, making investments part of their lifestyle, using digital marketing to analyze and deliver knowledge, services, and investment products that meet investors' needs, enabling them to access investments easily, conveniently, and swiftly. Furthermore, SET has attracted more foreign investors through online channels and the introduction of thematic products along with services to meet the needs of institutional investors.</p>	<ul style="list-style-type: none"> • To expand access for the capital market • To use the database to build new investment opportunities in products, and services • To leverage digital platforms to expand investment exponentially • To expand access with mutual funds and stocks 	<ul style="list-style-type: none"> • Enhancing capital market infrastructure through Digital Access Platform Co., Ltd. (DAP) by developing the service that connects entrepreneurs with digital ID platform, and government agencies in a secure and standardized electronic format. In 2021, the number of transactions for all Digital Gateway services increased exponentially, particularly the NDID Proxy service, due to the increasing online account opening transactions during the COVID-19 pandemic. • Developing FundConnnext, a fund trading for convenient account opening of various product platforms. In 2021, FundConnnext recorded more than 33,000 mutual fund transactions per day or 160 percent increase from 2020. Twelve more mutual fund brokerage firms have joined as FundConnnext service users, making a total of 46 firms. • Further promoting the "Point to Invest" project to enable credit card holders / investors to redeem the points of credit cards or loyalty cards in the form of mutual funds. In 2021, the project could attract more alliances, as such reaching the database of over 23 million customers. • Developing tools for mutual fund investing via the Streaming Fund+ application, an extension of the Streaming for Fund application, to provide investors with functions that are easy-to-use, modern, and end-to-end • Developing "Company Snapshot" information system that provides investors with access to key information about listed companies, such as Form 56-1, annual reports, business plans and risk factors etc.





Strategy

Goal

Key Performance in 2021

Framework 2: Developing Capital Market Infrastructure

3) Building engagement and supporting business operation

Revising the criteria that support relevant operations to increase potential and efficiency of business operations, and continuously carrying out transactions of listed companies and member companies according to the Regulatory Reform plan

- To solve problems and provide quality service
- To set up a joint digital infrastructure platform to efficiently promote a wide range of business operations
- To open data access channels for business operations
- Improving the disclosure and withdrawal criteria of member companies appropriately, while still having adequate information available for investment decisions
- Amending the trading criteria and member companies' criteria suitable for business circumstance, improving governing and overseeing efficiency, and lowering duplication barriers of related transactions
- Enhancing SETLink's format and system by adding end-to-end function for XR capital increase which the system will create the process starting from the information disclosure in line with the criteria, among others, to related registrar operations (TSD) for higher business agility
- Providing conference system service: DAP e-Shareholder Meeting. In 2021, a total of 53 companies used the service
- Developing infrastructure for member companies in the form of Application Service Provider (ASP) to reduce their operating costs and technology constraints
- Developing the Payment for Capital Market system to expand the service to support comprehensive payment-related processes, and to provide Direct Debit Registration service to support the entire process of digital financial transactions, resulting in a 33 percent increase in transaction volume

4) Increasing investment diversity

Connecting trading and development of investment products across markets to expand opportunities and promote borderless investment

- To deliver a wide range of products with investment links via foreign capital markets
- To develop products/services, seek new opportunities for the capital market continuously
- Collaborating with the Singapore Exchange (SGX) to develop a cross-market product in the form of Depositary Receipt (DR), which is expected to be ready for trading in 2022
- Developing the system for the Creation and Redemption Platform to connect transactions between the primary and secondary markets of equity instruments such as ETF and DR, issued under the total amount subject to the SEC approval, for greater flexibility, convenience, and speed
- Collaborating with the Shenzhen Stock Exchange (SZSE) to expand investment opportunities in Thailand and China by





Strategy

Goal

Key Performance in 2021

disseminating information from 33 Thai listed companies in the electric vehicle (EV) industry on the SZSE's V-Next platform

- Presenting SET's highlights demonstrating the potential and outstanding sustainability development of Thai listed companies at the 2nd "Embassies @ SET" event in order to build investment confidence among 84 high-ranking diplomats including ambassadors, commercial counselors, commercial attachés, and diplomatic staff from 40 countries

Framework 3: Driving for Environment and Society

5) Laying foundation for the capital market towards sustainability

Encouraging the business sector and personnel in the capital market to embed environmental, social, and corporate governance issues into business operation, and reinforcing the capital market as a mechanism to strengthen its operations, the society and the nation as a whole

- To increase capabilities and develop the business of SET and market participants with ESG
- To promote sustainable investment in the capital market ecosystem
- To build partnerships to drive ESG issues
- Disseminating the list of listed companies in Thailand Sustainability Investment (THSI) list, which increased to 146 companies from 124, representing a market capitalization of THB 12.50 trillion, or 66 percent of the total market capitalization
- Developing the 1st generation of ESG Professionals from various organizations such as listed companies, intermediary institutions, educational institutions, and related agencies, totaling 120 people in order to expand and extend the ESG knowledge to the capital market and Thai society
- Adding ESG Ratings of listed companies on settrade.com, from two more global sustainability data providers: S&P Global and MSCI
- Gearing up to launch a sustainability data management system (ESG Data Platform) for the Thai capital market so as to promote the use of ESG data for business development and investment decisions, which will be opened for service in 2022
- 28 Thai listed companies ranked by S&P Global in the "The Sustainability Yearbook 2021" report, 10 of which are Gold class, making Thailand the highest number among 40 countries worldwide
- Connecting over 300 business partners to jointly reduce greenhouse gas emissions from business processes via Climate Care Platform





Strategy

Goal

Key Performance in 2021

6) Strengthening the Thai society and jointly solving problems

Empowering the Thai society and helping solve problems, promoting access to financial literacy among the Thai people, as well as serving as a mechanism to connect and encourage all sectors to participate in the country's social development in order to grow together with quality

- To promote financial literacy for the Thai people
- To integrate business mechanisms to produce sustainable outcome for the society
- To support solutions to problems / problem solving guidelines in order to strengthen the society's foundation
- Providing learning sources and financial literacy through easily accessible online channels, in line with current learning behavior, including a 20 percent increase in the SET group's social media followers, a 30 percent rise in website visitors, and SET members reaching over 1 million. Adopting big data and machine learning for analysis to cater and create personalized content
- Implementing the Happy Money project by collaborating with 606 partners to disseminate financial planning knowledge covering the target group of over 3 million working people, and developing the Happy Money application to help the starters to manage easy-to-use personal finance tools with 217,423 cumulative downloads and over 49,301 accounts of active users
- Supporting over 6,000 target groups who are Thais to test their financial literacy level via the SET Fin Quizz website, with the goal of becoming Thailand's National Financial Literacy Assessment Center in the future
- Developing the SE101 Online Offering through www.setsocialimpact.com as an online learning channel for learners to access basic knowledge about social enterprise skills, focusing on promoting thinking (learning) as well as hands-on working (doing) with more than 260,000 people accessing the knowledge via these channels in 2021
- Building the SET Social Impact network on a continuous basis, with currently over 200 organizations in the membership network and more than 50 collaborations jointly working to solve social and environmental problems through business networking





Strategy	Goal	Key Performance in 2021
		<ul style="list-style-type: none">Cooperating with the government, social sector, and relevant public health entities by contributing a budget of over THB 103 million to assist in securing equipment, medical supplies, and vaccine development needed to prevent the spread of COVID-19. Furthermore, SET gave helping hand to the underprivileged or those who are not covered by Social Security Fund to obtain quality health care and lessen the effects of such circumstances.

Framework 4: Enhancing Business Capabilities and Personnel Potential

7) Enhancing capabilities to handle business expansion

Broadening capabilities and upgrading the trading system to international standards, as well as collaborating with partners to find solutions to match the needs of businesses and investors

- To develop trading systems to support the expansion of the capital market
- To develop work systems that help reduce market participants' costs
- To upgrade the security measures of information technology (IT) systems
- To increase the potential and capabilities of the IT system to support the needs of the business
- Increasing capabilities by upgrading the trading system using Nasdaq Technology, as well as improving the member companies service system (Independent Software Vendor: ISV) which will be jointly tested in preparation for the use of the new trading system in 2023
- Setting up an Industry Working Group (IWG) to provide useful viewpoints on the industry's development, adjusting the work system to meet international standards, and handling the volume of transactions expected to grow in the future
- Upleveling cybersecurity measures and preparing readiness to cover the entire industry in accordance with international standards, as well as setting up guidelines for managing detection and responding against cyber threats





Strategy

Goal

Key Performance in 2021

8) Operational excellence

Managing risks and preparing to transform into a digital organization that can grow sustainably, while increasing employee skills to adapt to the industry's direction, and developing the working environment in accordance with the next normal era

- To create a work system that can help save time and minimize errors
- To encourage the use of data for analysis in order to develop the organization and respond to business needs
- To prepare employees' skills and abilities for every change
- To develop clean and safe working environment and promote happy working atmosphere for employees
- Developing a new Financial Management System to increase the efficiency of accounting and finance systems, while utilizing the Robotic Process Automation (RPA) to increase working, so as to save time and reduce errors in operations
- Analyzing corporate financial data in the past by building a data insight model to effectively manage current funds and financial resources, as well as supporting data for making business decision (data-driven decision) by forecasting the financial needs of the organization in the future
- Upgrading the efficiency of the Enterprise Mobile Application (SET DNA App) system to be fully compatible with employees' working and learning style in the new normal era, such as the Knowledge Sharing system with notifications to ensure that employees will not miss any organization's news and information, and providing the employees with necessary tools to perform the tasks effectively, either working in the office or at home
- Developing employees' potential according to the learning model by emphasizing on-the-job skills and real-world experiences at 70 percent, coaching at 20 percent and self-learning via training courses that focus on upskilling, reskilling, and multi-skilling at 10 percent



2.1.4 The Capital Market Situation in 2021

In 2021, the global economy did not fully recover from inflation and supply chain problems disrupted by the COVID-19 pandemic in many countries around the world. As a result, asset prices were volatile, entailing negative correlation with bond yields, while stocks could still deliver gain.

The overall picture of the Thai stock market improved due to the government's easing measures of the COVID-19 situation. Business sector began to adjust and recover at a faster pace than the previous year. Export and tourism industries, in particular, started to attract more foreign investors to return to the capital market, resulting in the SET Index closing at 1,657.62 at the end of 2021, the highest level of the year with a 14 percent increase from the end of 2020, and higher growth rate than the average of other stock indices in the region. Analyzing growth of each industry, the Technology, Consumer Products and Financials industry groups fared better than the SET Index average. At the end of 2021, the market capitalization of SET and mai recorded at THB 20.05 trillion.

SET's average daily trading volume surged 37 percent to THB 93.9 billion, the highest liquidity in ASEAN for the 10th consecutive year with retail investors' trading ratio accounting for 47 percent, foreign investors at 37 percent, securities companies' proprietary traders at 9 percent, and domestic institutional investors at 7 percent. Thailand Futures Exchange PCL (TFEX) continued to grow especially the Single Stock Futures. At the end of 2021, TFEX's average trading volume totaled 560,653 contracts per day, a 13 percent increase from 2020.

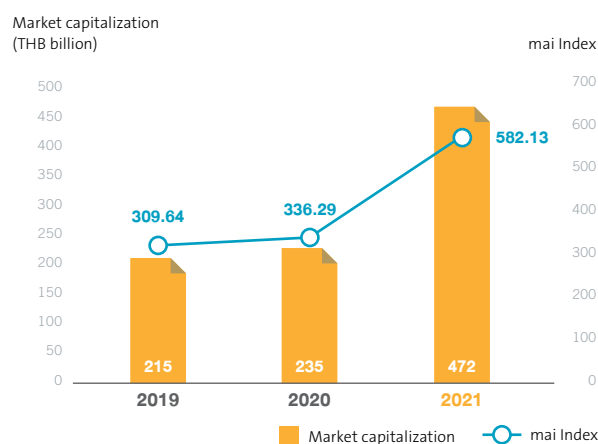
In terms of investor base expansion, the number of trading accounts was the record increase of 49 percent from 2020 or 1.7 million, adding the total trading accounts to 5.2 million. Active accounts (accounts traded at least once a month) represented 16.2 percent of the total, while the number of derivatives trading accounts totaled 270,494 accounts, or a 25 percent increase from the previous year.

Furthermore, Thai listed companies were recognized in international sustainability development. S&P Global ranked 28 Thai listed companies in "The Sustainability Yearbook 2021" report, 10 of which were classified at Gold class level, the highest number among 40 countries worldwide. In addition, numerous Thai listed companies were selected to be included in international sustainability indices, such as the MSCI Global Standard Index totaling 40 companies, and the Dow Jones Sustainability Indices (DJSI) totaling 24 companies, etc. At the end of 2021, the average dividend yields of SET and mai were 2.65 percent and 1.34 percent, respectively. The forward P/E ratios of SET and mai as at the end of 2021, were 19.36 times and 38.34 times, respectively.

The Stock Exchange of Thailand (SET)



Market for Alternative Investment (mai)



2.1.5 SET's Development Direction

In accordance with the strategic plan and context of the Thai economy, SET has studied and analyzed industry trends both domestically and internationally, with coverage of economic, social, and environmental issues, which are used to formulate SET's strategic plan regularly every year. Integration of data into the plan is to find guidelines to develop and enable the Thai capital market to be equipped with competitive capabilities and can keep pace with the fast-changing world. In 2021, SET considered various factors with impact on the SET's development direction in 2022 as follows:

1) "K-Shaped" Economic Recovery

The COVID-19 outbreak's severity has resulted in a significant shift in socioeconomic activities. The Thai economy is expected to experience a K-shaped graph recovery following the outbreak of COVID-19, indicating an uneven recovery. Some industries may have recovered and returned to normalcy, while others may continue to tumble. Moreover, the K-shaped recovery also reflects rising economic inequality, as different industries are impacted differently, and low-income earners are facing a prolonged crisis. These are obstacles to long-term economic development.

Business operation is expected to become smaller, more fragmented, and more reliant on technology in the future. Many entrepreneurs see opportunities in digital technology to improve their strengths and increase their flexibility in expanding their businesses exponentially. This will result in a rapidly growing new economy with fierce competition, considered a challenge for traditional businesses to adapt and keep up with market conditions.

The development of major stock exchanges around the world indicates that cross-border linkage investment is widely promoted, and the platform is being accelerated to enhance access to capital markets and support investor needs as the digital industry transforms. The Korea Exchange (KRX), for example, has publicized new economy industry indexes like battery biotech and online gaming, while partnering with Shanghai Stock Exchange (SSE) to list a cross-market ETF and jointly developed index, or Hong Kong Exchanges and Clearing (HKEX) publicizing the Tech Index to support the digital technology industry's exponential growth. Meanwhile, SGX and Nasdaq are collaborating to create a system that allows companies to conveniently carry out cross-market listing.

What will we do



Bridging seamless opportunities across all sectors

- 1) Promote fundraising among high-potential companies
- 2) Upgrade the quality of governing and overseeing listed companies
- 3) Develop more accessible investment channels
- 4) Connect opportunities to invest overseas

2) The Exponential Growth of Digital Technology

The COVID-19 pandemic is a catalyst for technological advancement in every industry, causing rapid changes in consumer behavior. Simultaneously, the digital technology factor has driven the investment model to be more complicated. However, the digital asset business trend continues to grow. As such, global stock markets need to closely monitor technological and innovation developments to maintain competitive edge.

Moreover, digital technology adoption allows a large amount of user data to flow through the system, resulting in the analysis of various data to develop products and services that better meet the needs of stakeholders. This includes using information about a company's environmental, social, and governance (ESG) to consider and make the informed decisions. Take leading global stock exchanges as examples. Deutsche Borse has collaborated with Institutional Shareholder Services (ISS) to provide ESG data and analysis services, while Nasdaq has offered end-to-end ESG solutions including issuer disclosure to investors. However, advancement in digital technology has also resulted in cyber risks, making a challenge for the industry to find safeguards and build trust among market participants.

What will we do

Bonding innovative infrastructure with trust

- 1) Expand secure and efficient digital infrastructure
- 2) Create a platform that connects current assets trading to digital assets trading
- 3) Create business opportunities by utilizing and analyzing data insight



3) ESG Trend in the Capital Market

Continuous increase in economic activities, production, and consumption has created impact on the society and the environment, resulting in global issues such as greenhouse gas emissions, resource deterioration, human rights violations, fraud & corruption, etc. The international community has therefore attempted to find solutions and communicate to businesses and investors all over the world to realize that irresponsible production and consumption, as well as a profit-driven mindset, will not help businesses to survive in the next normal era.

Using capital market mechanisms to develop innovation, and financial and investment products that can help solve these problems have made sustainable investments start to play a greater role in investor decision making. This can be seen in the steadily rising value of assets and sustainable investment products (ESG products) such as ESG funds, sustainability indices and green bonds.

In a meantime, the results of the United Nations Climate Change Conference (COP26) in 2021 demonstrated the severity of climate change, which has impact on human quality of life and throughout the supply chain operations. The consensus reached at the meeting, such as reducing greenhouse gas emissions, using electric vehicles, reducing methane gas, and ending deforestation, have emerged as the factors that will shape the clearer direction of the green economy system.

As a result, stock exchanges all over the world have collaborated to make this mission a success by leveraging the potential of businesses as a medium for developing products, infrastructure, and services that have positive social impacts,

What will we do

 **Branching financial sustainability for Thais**

- 1) Build ESG experts to the capital market
- 2) Promote financial literacy and discipline for the Thai people
- 3) Collaborate with partners to solve social and environmental problems
- 4) Promote cybersecurity for the Thai capital market

such as ensuring equitable access to the capital market for entrepreneurs, disseminating financial and investment knowledge for the public, as well as promoting knowledge for personnel to understand and apply ESG issues to the corporate operations in a practical manner. Furthermore, SET is a mechanism that connects the network of government and business sectors in order to upgrade social well-being quality, reduce inequality, and assist the underprivileged and vulnerable groups in gaining access to resources and basic necessities for a decent standard of living with equality.

4) Growth and Competition in the Global Capital Market

Throughout 2021, the global capital markets were volatile as the severe and ongoing COVID-19 crisis stalled business activities, causing overall global economic slowdown. Moreover, the uncertainty about the Federal Reserve's interest rate hike policy and concerns about the oil demand downturn dampened investor confidence. However, during the second half of the year, the global economy began to recover as a result of relief measures in many countries, and easing concerns about the COVID-19 outbreak as vaccination rates increased. However, each region's economic recovery may be uneven. Emerging market economies are expected to gradually improve compared to 2021. However, rising inflation and tightening global central banks' monetary policies may still affect the global capital markets' volatility.

As a result, global stock exchanges, which play a crucial role in each country's economic growth, are accelerating their efforts to strengthen the foundation and seek out new business opportunities continuously to ensure investor confidence in the capital markets' stability, such as expanding fundraising channels to small and medium-sized entrepreneurs, and emerging businesses to expand their base and increase the stability of the capital market. They also develop products that meet the needs of digital investors, as well as creating investment options in the clean energy group, the ESG group, and the cyber security group inclusive of expanding online channels to provide more opportunities to access investment services using secure and cutting-edge technology. Consequently, SET must accelerate the development of personnel, work systems, and digital infrastructure that promote business agility in the future, which will be more flexible and competitive on a digital platform that connects global capital markets without borders.

What will we do

Building resilient foundation for exponential growth

- 1) Enhance core systems for more resiliency
- 2) Use digital technology to improve workflow
- 3) Facilitate business agility
- 4) Cultivate quality workforce ready to adapt and learn new things



Expanding Continuously




2.2 Nature of Business

SET is an intermediary connecting potential entrepreneurs to access capital sources and raise funds for business expansion. Moreover, SET develops channels that facilitate investors and the public to invest in a variety of businesses and financial products for savings and generating investment returns. When all sectors grow steadily with quality, it will lead to positive outcomes for the economy, such as higher employment rates and consumer purchasing power, money circulated in the economic system resulting in liquidity and investment in infrastructure to improve the quality of life for people in the society as a whole.

Therefore, SET intends to offer products, services, and investment innovations that respond to all sectors, together with developing corporate governance and management systems and the capital market to be effective continuously. SET realizes the benefits to the stakeholders, society, and environment in every business operating process from the securities registration to the dissemination of investment knowledge and information to the society.

2.2.1 Products and Services

Securities Business Function

	The Stock Market Business	Product and Service
1. Equity and debt instruments		
<ul style="list-style-type: none"> • Listing and trading Entrepreneurs can raise fund from investors and investors can trade via SET and mai. As of December 31, 2021, there were 593 companies listed on SET and 183 companies on mai. 	Including <ul style="list-style-type: none"> • Common stock • Preferred stock • Warrant • Non-Voting Depositary Receipt (NVDR) • Derivative Warrants (DW) • Depositary Receipt (DR) • Exchange-Traded Fund (ETF) • Real Estate Investment Trust (REIT) • Infrastructure Fund 	
<ul style="list-style-type: none"> • Clearing and settlement The SET group is the center of clearing and settlement for transactions taking place on the stock market and the debt instruments market by being a clearing house, as such minimizing the counterparty risk from securities trading. 	<ul style="list-style-type: none"> • Guaranteeing clearing and settlement (central counterparty: CCP) for all trading activities executed in the market. If any member breaks the contract, the clearing house will take the responsibility by paying or delivering the securities to the counterparty in lieu. • Clearing services for over the counter (OTC) trading of the debt instruments 	
<ul style="list-style-type: none"> • Securities depository The SET group is the center of securities depository for both equity and debt instruments, using a secure and efficient scripless system. 	<ul style="list-style-type: none"> • Securities deposit service • Securities withdrawal service • Securities transfer service • Securities pledge and pledge revocation service 	
<ul style="list-style-type: none"> • Supervisory and surveillance The SET group takes the responsibility of surveillance of: investors' trading and member companies' duty to ensure trust, transparency, and efficiency, reflecting the real price of the securities, as well as listed securities' information disclosure to investors to ensure accuracy, transparency, and punctuality. 	<ul style="list-style-type: none"> • Supervising the trading of investors • Supervising the duties of member companies • Supervising the disclosure of listed securities to investors 	





2. Derivatives business

The SET group is the center of trading and clearing of the trading transactions of derivatives with underlying assets being commodities, debt instruments, interest rates, and exchange rates, and takes the duty of surveillance of investors' derivatives trading and member companies' derivatives business.

- Derivatives with underlying assets tracking securities, commodities, debt instruments, interest rates and foreign exchange
- Supervising derivatives trading activities of investors and derivatives business operation of securities member companies

Currently, Thailand Futures Exchange PCL opens for trading of 12 types of derivatives: SET50 Index Futures, SET50 Index Options, Single Stock Futures, Sector Index Futures, Gold Online Futures, Gold Futures (10 Baht and 50 Baht), Gold- D, Silver Online Futures, Japanese Rubber Futures, Rubber Futures (RSS3D Futures and RSS3 Futures), USD Futures and Interest Rate Futures.

3. Technology services and capital market infrastructures

The SET group provides technology and infrastructure service of the capital market to support customer needs and help reduce costs for industries so that entrepreneurs can access and benefit from the technology more and more. Moreover, these will help shorten the timeline for the development of products and services of market participants.

- Securities and mutual fund trading services via online channels consisting of Front-Office Service Bureau (FSB) system, internet trading system, and Back-office Service Bureau (BSB) system for securities companies
- Securities trading and listed securities dissemination services (market data) for data vendor and investors to be used in decision making, including preparing and disseminating key indices that are internationally recognized
- Payment system service for the capital market by linking between intermediary institutions and commercial banks, to increase efficiency of payment process in the capital market
- FundConnex system service to expand more channels for access to mutual funds by being a central system to connect asset management companies with selling agents for more efficiency, while making it faster and more convenient for investors with only one account opening at a mutual fund selling agent and can trade via numerous asset management firms
- National digital identity verification (NDID Proxy service by connecting the data to National Digital ID Co., Ltd. (National Digital ID: NDID) catering to business operators so that investors can open accounts to trade securities, mutual funds, life insurance and other types of accounts conveniently and quickly, via a fully digital process





- Purchase and payment service for Electronic Stamp by connecting with the Revenue Department conveniently, safely and rapidly to streamline process and respond to entrepreneurs' needs in doing business, such as affixing duty stamp for contracts, authorization, vote-casting proxy at meetings, etc.
- Electronic meeting system (EMS) service (e-Shareholder Meeting) to facilitate listed companies and shareholders to be able to attend shareholders' meeting via online channels

In addition, SET together with the Association of Thai Securities Companies (ASCO) and the Thai Bankers' Association under the support of the Capital Market Development Fund (CMDf) is a system developer for co-development and service provision of "Digital Infrastructure for Thai Capital Market" which is in the process of developing a system for private debentures as a pilot project.

4. Registrar services

The SET group is a registrar that keeps record and takes care of securities information, as well as preparing securities holders' registration to be accurate, complete and updated. Other functions are to manage information of shareholder benefits by connecting with the securities depository system, and control the securities holding ratio of foreign investors trading on SET in compliance with the rule and regulations of relevant government entities. Furthermore, the SET group has secure data storage and processing system with security vault system to safeguard securities and rights certificates for listed companies and shareholders.

- Preparing securities holders' registration
- Managing benefits information of shareholders
- Providing safeguarding, compilation and processing systems to collect and process information in the securities registration



Sustainable Capital Market Development Function

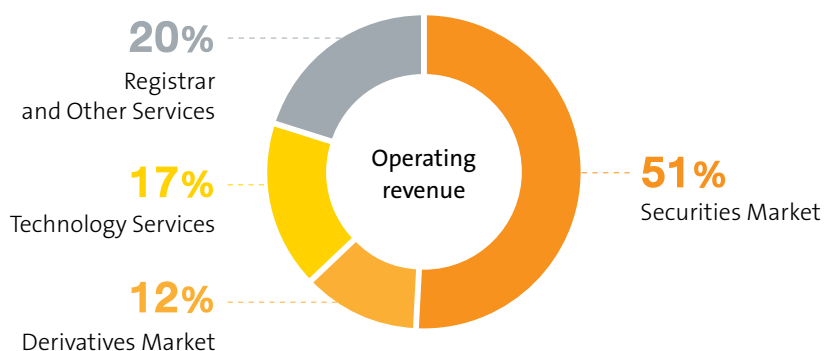
Sustainable Development Strategy		Implementation
1. Developing and promoting financial literacy and investment	<ul style="list-style-type: none">• Developing skills and knowledge of investors and potential investors to create financial stability, and support long-term expansion of investor base• Developing knowledge of the capital market and basic finance for students, undergraduates and the public, as well as developing capital market learning centers for the general people to access such as the Maruay Library and INVESTORY Investment Discovery Museum• Raising the standard of knowledge and competence of professionals in the capital market• Developing entrepreneurial skills for listed companies' personnel to be knowledgeable and of high quality• Building knowledge, understanding and utilization of capital market mechanisms to key players of the country, corporate leaders, and new generation corporate leaders, while creating a network of key players in the capital markets of the Mekong sub-region and ASEAN countries	
2. Promoting the capital market toward sustainability	<ul style="list-style-type: none">• Promoting knowledge and developing a sustainable investment ecosystem for the capital market• Developing work systems and infrastructure for the capital market to support the growth of the ecosystem of sustainable business and investment development• Promoting knowledge and developing an ecosystem of Social Enterprise (SE) in Thailand to continuously grow via the SET Social Impact Platform• Building the network and collaboration to promote sustainable environmental management for the business sector via the Climate Care Platform	
3. Developing capital market research	<ul style="list-style-type: none">• Producing and disseminating the capital market research, including the capital market's leading indicators that the market participants, organizations and the general public can use as reference• Developing the capital market's key database for researchers and various business sectors• Connecting the capital market knowledge between research producers and entrepreneurs for further development, and utilization of research results, while promoting the capital market research to reach the general public	



- Working jointly with the Capital Market Development Fund (CMDF) to develop quality research results, such as the capital market infrastructure development projects, developing the potential of personnel in the capital market, and promoting knowledge and understanding of the capital market, among other projects
- Connecting the capital market's business sector and the education sector to produce academically accepted and practical capital market research studies that can be further developed to benefit the capital market and the Thai economy

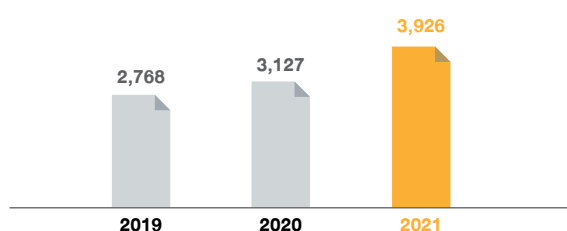


2.3 Revenue Structure



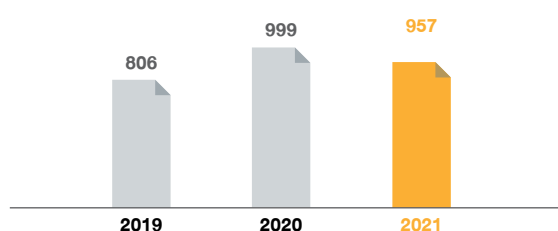
Securities Market

(THB million)



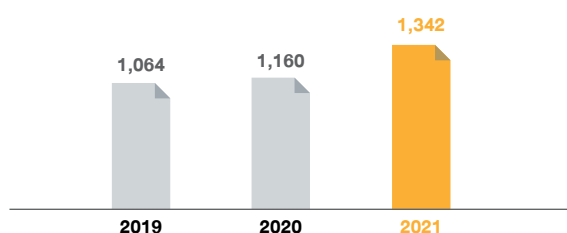
Derivatives Market

(THB million)



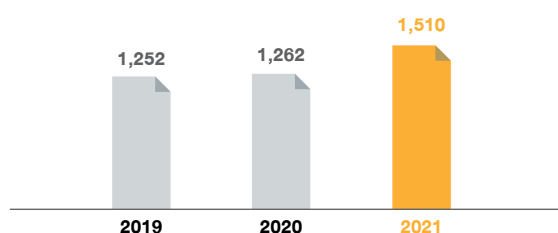
Technology Services

(THB million)




Registrar and Other Services

(THB million)



Operating revenue by key business segment consisting of Securities Market, Derivatives Market, Technology Services, and Registrar and Other Services is as follows:

(Unit: THB million)

 Product Line / Business Group	For the year ended December 31					
	2021		2020		2019	
	Revenue	%	Revenue	%	Revenue	%
Securities Market						
- Trading	2,262	29.24	1,667	25.46	1,298	22.04
- Listing	696	9.00	682	10.42	723	12.28
- Clearing and settlement	557	7.20	450	6.87	368	6.25
- Depository	379	4.90	296	4.52	347	5.89
- Membership	32	0.42	32	0.49	32	0.54
Total	3,926	50.76	3,127	47.76	2,768	47.00
Derivatives Market						
- Trading	647	8.37	677	10.34	541	9.19
- Clearing	278	3.59	290	4.43	233	3.96
- Membership	32	0.41	32	0.49	32	0.54
Total	957	12.37	999	15.26	806	13.69
Technology Services						
- Member services	507	6.56	437	6.67	420	7.13
- Information services	424	5.48	378	5.77	367	6.23
- IT support	411	5.31	345	5.27	277	4.70
Total	1,342	17.35	1,160	17.71	1,064	18.06
Registrar and Other Services						
- Securities registrar services	1,458	18.85	1,229	18.77	1,226	20.81
- Fund services	32	0.41	24	0.36	20	0.34
- Payment services	13	0.17	9	0.14	6	0.10
- Digital Gateway services	7	0.09	-	-	-	-
Total	1,510	19.52	1,262	19.27	1,252	21.25
Total operating revenue	7,735	100.00	6,548	100.00	5,890	100.00

2.4 Shareholding Structure

(1) Policy on operations of companies in the SET group

SET, as a parent company, is responsible for governing and overseeing, and being the center of all the controlling and supporting units of the SET group. The subsidiaries are strategically responsible for developing products and services, marketing and sales. In addition, SET also provides specific services for core businesses of each companies, such as securities depository service, registrar service, and derivatives products development, etc.

The SET group governs and oversees the subsidiaries by using key corporate governance policies and key management policies, such as accounting policies, IT security policies, approval and appointment of external auditor and the fee for service, and the account auditing. The subsidiaries are under the governing and overseeing of the corporate governance related committees while their operations are audited by SET's internal functional units including Internal Audit, Risk Management Department and Compliance Department.

The subsidiaries under the new business & infrastructure development function are managed by SET Venture Holding Co., Ltd. (SVH), a holding company, under a flat organizational structure. The SVH's board of directors is responsible for reporting the performance to the SET's Board of Governors on a regular basis.

(2) The SET group's shareholding structure

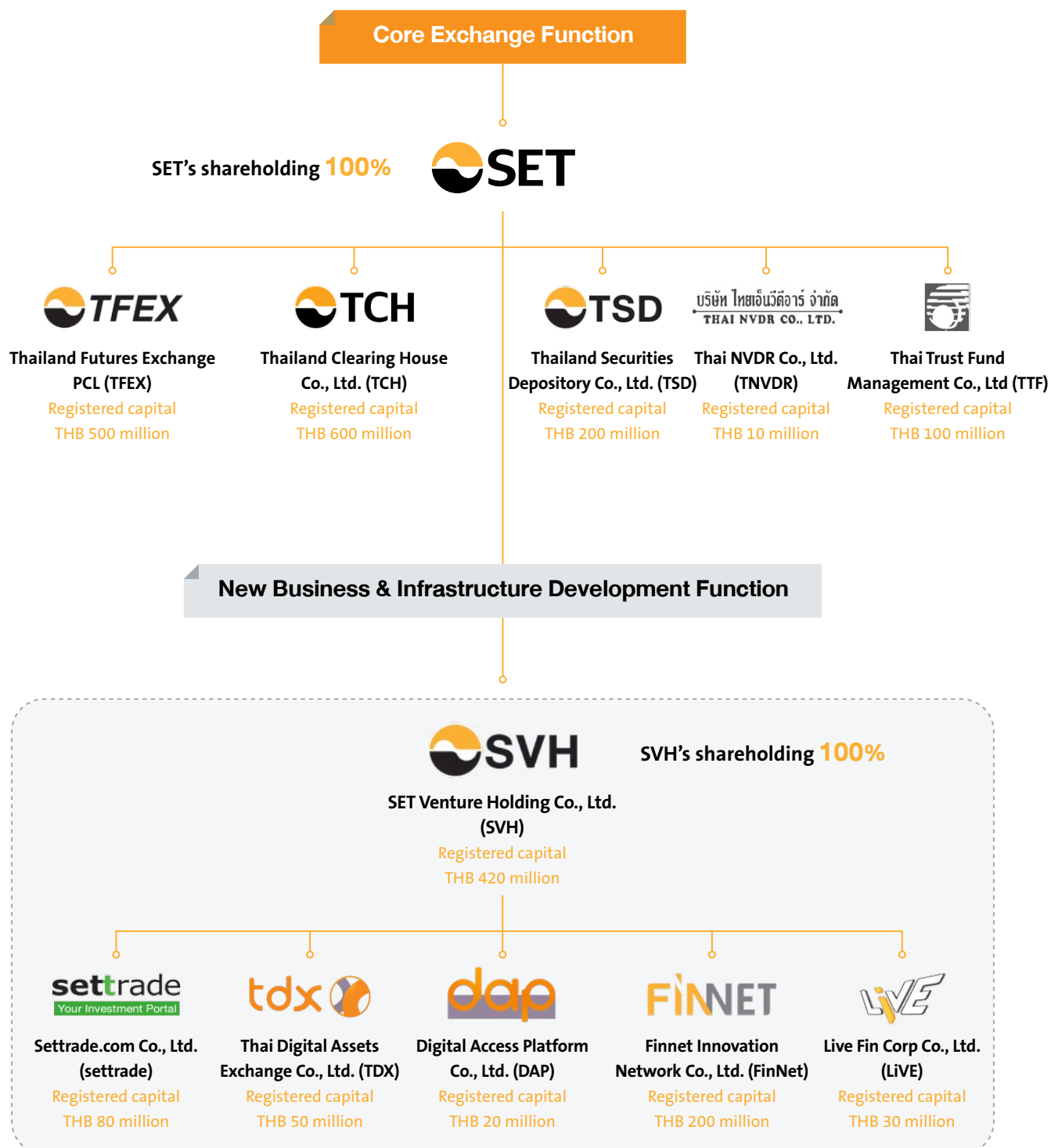
The SET group consists of SET and subsidiaries which can be categorized by the SET group's business structure into two main groups as follows:

- 1) Core Exchange Function is directly associated with the SET operations as stipulated in the Securities and Exchange Act.
- 2) New Business & Infrastructure Development Function is engaged in developing basic infrastructure to support SET's business operations and lay solid foundation regarding the capital market's infrastructure for market participants.







Shareholding Structure

as of December 31, 2021



Joint Ventures and Companies that SET is a Shareholder

			 InnoSpace (Thailand) Co.,Ltd. บริษัท อินโนสเปซ (ประเทศไทย) จำกัด
TSFC Securities PCL (TSFC)	TRIS Corporation Co., Ltd.	National Digital ID Co., Ltd.	InnoSpace (Thailand) Co., Ltd.
<p>To be a center for both short- and long-term fundraising, and provide borrowing and lending for securities business entrepreneurs and securities investors</p>	<p>To be a credit rating institution to assess the creditworthiness of debt instruments, as supporting information for investors' decision making</p>	<p>To provide services to link database regarding digital proof and identity verification with relevant agencies, such as the Department of Administrative Affairs, Department of Business Development, and private sector</p>	<p>To be a center to help promote and develop Thai startups on an end-to-end basis</p>
SET's shareholding 40.65%	SET's shareholding 13.34%	SET's shareholding 7.50%	SET's shareholding 9.52%*

Note: * Including shareholding ratio of LiVE (a SET subsidiary) in InnoSpace (Thailand) at 2.72 percent.



3 Management Discussion and Analysis (MD&A)

3.1 Discussion and Analysis of Financial Position and Performance

For the year ended December 31, 2021 were as follows:

(Unit: THB million)

	For the year ended December 31			
	2021	2020	Increase / (Decrease)	
			Amount	%
Operating revenue	7,735	6,548	1,187	18
Other income	180	163	17	10
Investment income (loss), net	369	(364)	733	201
Total revenues	8,284	6,347	1,937	31
Operating expenses	(5,036)	(4,289)	747	17
Non-operating revenue	46	36	10	28
Revenues over expenses before contribution to the Capital Market Development Fund (CMDf) and income tax	3,294	2,094	1,200	57
Income tax expense	(1,114)	(378)	736	195
Revenues over expenses before contribution to CMDf	2,180	1,716	464	27
Contribution to CMDf	(583)	(362)	221	61
Revenues over expenses, net	1,597	1,354	243	18

In 2021, the SET group had total revenues of THB 8,284 million, an increase of 31 percent from the rise in average daily trading volume of equity, while investment income increased by THB 733 million or 201 percent, focusing on investing in Thai equity securities and debt instruments. Operating revenue, which was net amount after discount on various fees as part of the relief measures for the stakeholders during the COVID-19 pandemic, increased by THB 1,187 million or 18 percent.

Total operating expenses amounted to THB 5,036 million, an increase of 17 percent, mainly resulting from the fee contributed to the Securities and Exchange Commission (SEC) in accordance with an increase in equity trading volume and the higher registrar service expenses as result of increasing volume of corporate actions services. In addition,

donations and CSR expense also increased to support various COVID-19 epidemic prevention and control projects. Consequently, the SET group had total revenue over expenses before remittance to the CMDf fund and before taxes of THB 3,294 million for the year 2021.

SET provided the annual contribution to CMDf totaling THB 583 million, accounting for 90 percent of the revenue after deduction of expenses, taxes, and reserves, based on the 2021 consolidated financial statements. As a result, the SET group had net revenue over expenses of THB 1,597 million in 2021.

3.2 Analysis of Operating Results

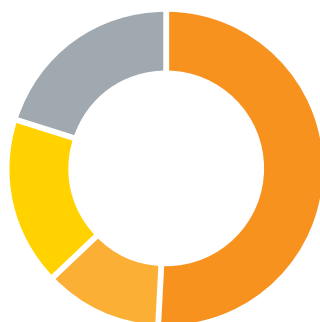
3.2.1 Operating revenue by business type

Operating revenue classified by key business type consists of Securities Market, Derivatives Market, Technology Services, and Registrar and Other Services.

Operating revenue by business type

For the year ended December 31, 2021 as follow:

(Unit: THB million)



- **51%**
1. Securities Market
- **12%**
2. Derivatives Market
- **17%**
3. Technology Services
- **20%**
4. Registrar
and Other Services



Securities Market

- Trading	2,262
- Clearing and settlement	557
- Listing	696
- Depository	379
- Membership	32

Total	3,926
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Derivatives Market

- Trading	647
- Clearing	278
- Membership	32

Total	957
--------------	------------



Technology Services

- Member services	507
- Information services	424
- IT support	411

Total	1,342
--------------	--------------



Registrar and Other Services

- Securities registrar services	1,458
- Fund services	32
- Payment services	13
- Digital Gateway services	7

Total	1,510
--------------	--------------

Total operating revenue	7,735
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Securities Market

(Unit: THB million)

	2021	2020	Increase / (Decrease)	
			Amount	%
Revenue - Securities Market	3,926	3,127	799	26
Trading fees	2,262	1,667	595	36
Clearing and settlement fees	557	450	107	24
Listing fees	696	682	14	2
Depository fees	379	296	83	28
Membership fees	32	32	-	-
Key market index indicators				
SET Index at the end of the year (points)	1,657	1,449	208	14
Average daily trading value - Equity (THB million)	93,846	68,607	25,239	37
Average market capitalization (THB trillion)	18.49	14.72	3.77	26
Number of listed securities (securities)	3,007	2,853	154	5

Operating revenue from securities market, net of discounts and promotional activities on various types of fees as relief measures for stakeholders during the COVID-19 pandemic, increased by 26 percent or THB 799 million. The increase was mainly from trading fees and clearing and settlement fees in correlation with the rise in average daily trading value. In addition, the depository fees also increased in line with the increase in average market capitalization.

Derivatives Market


(Unit: THB million)

	2021	2020	Increase / (Decrease)	
			Amount	%
Revenue - Derivatives Market	957	999	(42)	(4)
Trading fees	647	677	(30)	(4)
Clearing fees	278	290	(12)	(4)
Membership fees	32	32	-	-
Key market index indicators				
Average daily trading volume – Derivatives (contracts)	560,652	494,624	66,028	13

Average daily trading volume: derivatives rose by 13 percent or the 66,028 contracts, particularly the rise of Single Stock Futures and Gold Online Futures, while the SET 50 Index futures declined from the previous year. As a result, operating revenue from derivatives market, net of a reduction in trading fees to mitigate the impact of COVID-19 pandemic to stakeholders decreased by 4 percent or THB 42 million.

Technology Services

(Unit: THB million)




	2021	2020	Increase / (Decrease)	
			Amount	%
Revenue - Technology services	1,342	1,160	182	16
Member service fees	507	437	70	16
Information services fees	424	378	46	12
Customization and IT support fees	411	345	66	19

Net operating revenue from technology services increased by 16 percent or THB 182 million, driven by securities firms' service fee, data & information service fee, and customization & IT support fee, in consistent with the increasing number of users. Moreover, SET has provided information services to investors via the SET Information Services system in various formats, such as real-time trading data, end-of-day data, historical data, and web-based application data, all in line with SET's marketing strategic plan to expand investor base to access information services in a timely manner and cater to their needs of more information.

Registrar and Other Services

(Unit: THB million)



	2021	2020	Increase / (Decrease)	
			Amount	%
Revenue - Registrar and other services	1,510	1,262	248	20
Securities registrar fees	1,458	1,229	229	19
Fund services	32	24	8	33
Payment service fees	13	9	4	44
Digital Gateway service fees	7	-	7	n/a

Total operating revenue from registrar and other services, net of discounts on annual registrar fees as part of the COVID-19 relief to stakeholders, rose by 20 percent or THB 248 million, mainly due to the increase in corporate actions services in accordance with the number of securities and securities holders.



Other Income

(Unit: THB million)

	2021	2020	Increase / (Decrease)	
			Amount	%
Other income	180	163	17	10
Revenue from fees of funds management	51	48	3	6
Revenue from education activities	17	23	(6)	(26)
Revenue from rental and utilities	11	12	(1)	(8)
Revenue from fines	8	12	(4)	(33)
Revenue from securities borrowing and lending	4	4	-	-
Revenue from funding for small entrepreneurs	4	3	1	33
Revenue from others	85	61	24	39

Other income increased by 10 percent or THB 17 million, mainly from the grant to support small entrepreneur project by CMDP, which increased in line with the activities concerning knowledge development of small entrepreneurs in 2021. SET also plans to expand its business to promote fundraising for new businesses such as small and medium-sized enterprises (SMEs) and startups by considering the appropriateness according to the risks and types of venture capital. Moreover, SET supports the use of data & information for business innovation. The implementation according to such strategic plan is expected to affect the related revenues in the future.

Investment Income (loss)

(Unit: THB million)

	2021	2020	Increase / (Decrease)	
			Amount	%
Investment income (loss)	369	(364)	733	201
Interest income	147	152	(5)	(3)
Dividend income	67	66	1	2
Realized gain (loss) from sale of investments	43	(320)	363	113
Unrealized gain (loss) from investments	395	(180)	575	319
Loss on exchange rate and others	(278)	(78)	(200)	(256)
Allowance for expected credit loss	(5)	(4)	(1)	(25)

In 2021, the SET group's net investment income rose by 201 percent or THB 733 million largely due to the sales and unrealized gains from the mark-to-market method, focusing on investing in Thai equity securities and certain debt instruments in line with the direction of the government bond yields amid the downturn market. In 2020, there was volatility in the capital markets and financial markets globally due to the impact of the COVID-19 pandemic, resulting in the divestment and unrealized loss from investment in equity funds and real estate funds.

Operating Expenses

(Unit: THB million)

	2021	2020	Increase / (Decrease)	
			Amount	%
Operating expenses	5,036	4,289	747	17
Employee benefit expenses	2,146	1,947	199	10
The SEC fees	910	669	241	36
Direct service expenses	523	379	144	38
Depreciation and amortization	520	529	(9)	(2)
Technology expenses	271	226	45	20
Building and office expenses	184	180	4	2
Marketing expenses	134	125	9	7
Donations and CSR expenses	112	11	101	918
Fees and compensation expenses	103	116	(13)	(11)
Educational activities expenses	38	29	9	31
Others	95	78	17	22

Operating expenses in 2021 amounted to THB 5,036 million, or a 17 percent increase from the previous year due to donations and CSR activities to support various COVID-19 pandemic prevention and control projects, such as the COVID-19 vaccine development projects, the field hospital for COVID-19 patients, etc. In addition, the expense included the fees contributed to the SEC which corresponded with the equity trading volume, while the increase in the direct service expenses resulting from the higher volume in corporate actions. Furthermore, there were expenses regarding the capital market quality development plan according to SET strategic plan, consisting of activities / projects to promote financial literacy and investment knowledge, including the development of the potential of entrepreneurs and market participants via various platforms, as such the expenses for knowledge dissemination recorded an increase of 9 percent in 2021.

3.3 Analysis of Financial Position

(Unit: THB million)

	Dec 31, 2021	Dec 31, 2020	Increase / (Decrease)	
			Amount	%
Total assets	56,881	54,427	2,454	5
Total liabilities	27,512	26,720	792	3
Funds balances	29,369	27,707	1,662	6

Significant changes in assets, liabilities and funds of the SET group as of December 31, 2021 compared to the balance as of December 31, 2020, were as follows:

3.3.1 Analysis of assets

As of December 31, 2021, total assets of the SET group amounted to THB 56,881 million, an increase of THB 2,454 million or 5 percent in comparison with the balance as of December 31, 2020. Significant details are as follows:

- 1. Cash and cash equivalents, cash at banks for financial benefits payable, and financial assets** were THB 20,966 million or 37 percent of total assets, an increase of THB 3,642 million or 21 percent, categorized as follows:

(Unit: THB million)

	Dec 31, 2021	Dec 31, 2020	Increase / (Decrease)	
			Amount	%
Cash and cash equivalents	9,017	8,012	1,005	13
Cash at banks for financial benefits payable	84	76	8	10
Financial assets	11,865	9,236	2,629	28
- Investment in debt instruments measured at FVTPL	10,602	7,088	3,514	50
- Investment measured at amortized cost	1,209	2,094	(885)	(42)
- Investment in equity instruments measured at FVTOCI	54	54	-	-
Total	20,966	17,324	3,642	21

The SET group has a policy to invest in various types of investments such as cash deposit at banks, debt instruments (government bonds and corporate debentures), mutual funds and other domestic and foreign financial instruments, enabling total cash and financial assets incremental to yearly operating results. The investment portfolio of each type of financial asset has been adjusted to suit the investment trend and conditions as well as overall market volatility.

- 2. Assets for margin deposits and benefits, and assets for clearing system protection and benefits** recorded at THB 21,825 million or 38 percent of total assets, a decrease of 3 percent or THB 718 million. This resulted from the withdrawal of collaterals of Thailand Clearing House Co., Ltd. (TCH)'s members, who are obliged to place the assets as collateral for derivatives trading at the specified rate.
- 3. Reserve fund for TCH security on clearing and settlement** amounted to THB 5,702 million or 10 percent of total assets, a 2 percent drop or THB 102 million, mainly from paying back the return on investment.

3.3.2 Analysis of liabilities

As of December 31, 2021, total liabilities of the SET group amounted to THB 27,512 million, an increase of 3 percent or THB 792 million, comparing with the balance as of December 31, 2020. Significant details are as follows:

- 1. Margin deposits and assets for clearing system protection and benefits payable** amounted to THB 21,683 million or 79 percent of total liabilities, a decrease of 3 percent or THB 713 million. The decrease resulted from the lower risk and lower trading volume of derivatives at the end of the year, therefore, the withdrawal of collaterals of Thailand Clearing House Co., Ltd. (TCH)'s members was incurred.
- 2. Trade and other payables** amounted to THB 2,999 million or 11 percent of total liabilities, an increase of 20 percent or THB 502 million mainly from the 2021 annual remittance to CMDf, and the subscription money for new shares in excess of the rights to be returned to the shareholders.


3.3.3 Analysis of funds

As of December 31, 2021, the total funds of the SET group amounted to THB 29,369 million, an increase of 6 percent or THB 1,662 million, in comparison with the balance as of December 31, 2020. The SET group's revenue over expenses for 2021 reached THB 1,597 million with gain from the actuarial adjustment of THB 65 million.

3.4 Analysis of Liquidity

Cash flows of the SET group for the year ended December 31, 2021 and 2020 can be summarized as follows:

(Unit: THB million)

	2021	2020	Increase / (Decrease)	
			Amount	%
Cash flows from operating activities	3,297	2,312	985	43
Cash flows from (used in) investing activities	(2,320)	3,397	(5,717)	(168)
Cash flows used in financing activities	(16)	(14)	2	14
Cash and cash equivalents at the end of year	9,101	8,088	1,013	13

Cash and cash equivalents as of December 31, 2021 amounted to THB 9,101 million, an increase of 13 percent or THB 1,013 million from the year 2020. The details of the inflows and outflows are as follows:

- Net cash from operating activities totaled THB 3,297 million.
- Net cash used in investing activities totaled THB 2,320 million, mainly from the purchase of financial assets of net THB 2,092 million and investment in new assets amounted to THB 428 million.

Liquidity Risk

The SET group has no significant exposure to liquidity risk because it holds sufficient cash to support its operations. The Group also maintains flexibility in funding through the use of financial resources available within the Group.

3.5 Reserves and Contribution to the Capital Market Development Fund ("CMDF")

The Securities and Exchange Act (No. 6), enacted on April 16, 2019, requires the Stock Exchange of Thailand (SET) to contribute no less than 90 percent of the revenue after deduction of expenses, tax, and reserves to CMDF. In this regard, the consolidated financial statements of SET shall be used to calculate the contribution amount. The provision of reserves shall be in accordance with the type and amount specified by the SET's Board of Governors. Details are as follows:



1. Reserves

The type, allocation principles, and reserve amount are presented as follows:

(Unit: THB million)

Type of reserve	Principles for reserve allocation to ensure adequacy of funding sources	Reserve amount	
		2021	2020
1. Reserves set aside according to law or criteria in business operation as specified, including reserve amount to accommodate special situations	1.1 Legal reserve	17	24
	1.2 Reserves according to business operation such as European Market Infrastructure Regulation (EMIR), Principles for financial Market Infrastructures (PFMI) to meet an increase (decrease) of business operation each year	26	(37)
	1.3 Reserves allocated for specific funds such as approval of additional capital in specific funds during the year, benefit sharing of Securities Investor Protection Fund (SIPF), Derivatives Investor Protection Fund (DIPF), Clearing Fund (CLF) or other similar funds	13	261
	1.4 Reserves allocated for accommodating operations risks and emergency measures	467	424
2. Reserves set aside to accommodate the fluctuation of investments	According to unrealized gain (loss) during the year	395	(180)
3. Reserves set aside for investment in businesses or fixed assets	According to the investment amount in businesses and fixed assets approved by the Board of Governors	614	822
Total reserves		1,532	1,314

2. Contribution to CMDF

The annual contribution has been calculated as follows:

(Unit: THB million)

	2021	2020
Revenue over expenses before contribution to CMDF (according to the statement of comprehensive revenue and expenses)	3,294	2,094
Less Income tax expense	(1,114)	(378)
Revenue after deduction of expenses and tax before reserves	2,180	1,716
Less Reserves	(1,532)	(1,314)
Revenue after deduction of expenses, tax, and reserves	648	402
Annual contribution amount at the rate of 90%	583	362

Accumulated contribution expenses to CMDF as of December 31, 2021 can be presented as follows.

	(THB million)
Money transferred to CMDF in 2019	5,700
Annual contribution amount for 2020	362
Annual contribution amount for 2021	583
Total accumulated contribution expenses	6,645

For 2021 operations, SET continued to develop business to grab new business opportunities in accordance with the change in the capital market ecosystem, particularly digital asset market growth and thematic investment in new industries such as e-Commerce or green energy, enabling SET to develop various investment products and services, and better serve market participants. In a meantime, digital technology advancement enables connection with global stock market more conveniently, attract all sectors to reap benefits from the capital market, and enlarge entrepreneur base in raising fund and increase number of investors which are the crucial factor in strengthen the capital market foundation. SET takes into account impacts and risks that could occur as stated in the next chapter.





4 Risk Management



4.1 Enterprise Risk Management Policy and Plan

The Board of Governors (BoG) of The Stock Exchange of Thailand (SET) has set up risk management policy of the SET group in accordance with the Enterprise Risk Management (ERM) framework of the Committee of Sponsoring Organizations of the Treadway Commission (COSO). SET also focuses on environmental, social, and governance (ESG) issues, which is considered challenging. SET has to manage risks in such a way as to create opportunities and reduce risks that affect the organization's profitability capabilities, competitiveness, corporate image, and public confidence in the capital market by identifying: (1) risk factors, (2) assessment of risk control efficiency, and (3) assessment of inherent risk and residual risk to manage risks at acceptable level.

In 2021, the SET group aimed to boost the technological capabilities for more efficiency and agility in the operations, while using information to analyze and make decision for risk management in driving the business to meet the goals according to the SET group's strategic plan.

4.1.1 Governance and Risk Management Structure

The SET BoG has assigned the Risk Management Committee (RMC) to govern, oversee, consider, and provide opinions on the enterprise risk management policy and framework of the SET group before presenting to the SET BoG for approval. Furthermore, the BoG shall encourage all employees to monitor and manage risks both at departmental and project levels such as Risk and Control Self-Assessment (RCSA), risk management for new projects, among others. The Risk Management Department shall advise the business units on risk assessment and management, and regularly prepare reports on the status of key risks of the SET group to the management, the RMC, and the SET BoG.

4.1.2 Enterprise Risk Management Policy and Guideline


Amid the changing economic landscape, politics, information technology (IT) and internal factors such as strategic planning, organization management, and IT management, etc., the SET BoG realizes and places importance on risk management as one of the key factors to become a good corporate governance system. This can help strengthen SET's internal control system to respond to current changes in a timely manner, as such reducing obstacles from operations, increasing competitiveness internationally, while creating value to stakeholders. The policy and guideline of risk management of the SET group consist of key points as follows:

- 1) To specify that **risk management is the responsibility of employees at all levels** who must realize the potential risks in work process in their departments and the organization. There shall be monitoring various risks to be at acceptable level
- 2) To set risk management process to be in line with the international practice guideline and in the same direction enterprise-wide by **utilizing the risk management system as part of the decision making, strategic planning, business plans, and operations of the SET group** in search of excellence in operations and confidence among related parties
- 3) To set up the **guidelines of risk prevention and mitigation** for the operations of the SET group, in order to avoid damage or loss that may occur, including the **monitoring and assessing of the risk management** on a regular basis
- 4) To report risk management information to the senior management, the RMC, the Audit Committee, the SET BoG and the board of directors of the SET subsidiaries on a continuous basis
- 5) To specify **certain risk management policies** in accordance with the current context of business operations, such as Business Continuity Management Policy, and IT Security Policy which covers IT risk management, etc.

4.2 Risk Factors

In 2021, the SET BoG closely governs and oversees the management to assess and monitor the situations affecting the organization, capital market, economy, and society to ensure that SET is capable of driving the capital market efficiently amid various risks, impacts and uncertainties that could affect the stakeholders' confidence. The SET group's key operational risk factors have been specified to cover environmental, social, and governance (ESG) issues, as well as emerging risks that may impact the SET group's operation in the next three to five years as follows:

4.2.1 Strategic Risk

 Description	Potential Impact to Business Operations	Risk Management Measure
Digital Technology Disruption Risks		
The COVID-19 pandemic has accelerated the technological advancement of both domestic and international capital markets. As a result, SET has to adapt to cope with the growth of the digital capital market and the rapid change of investment behavior.	<ul style="list-style-type: none">Financial impact and operational impact of the SET group	<ul style="list-style-type: none">Expanding access to the capital market for entrepreneurs with equality in line with the current traditional market, simultaneously with the development of infrastructure to support digital capital markets such as Thai Digital Assets Exchange (TDX) and LiVE Platform development, etc. to create opportunities to access funding of SMEs, startups, and social enterprisesExpanding online services and investment channels such as e-Meeting, or developing mutual fund trading systems, and creating Streaming Fund+ investment plans, etc.Adapting to the new normal way of working for employees to be remote working and improving various systems to support 'Work from anywhere'





Description

Potential Impact to Business Operations

Risk Management Measure

Environmental and Social Changes Risks

Environmental and social issues such as climate change are factors that have impact on economic direction, e.g. the creation of new business models, products that rely on digital innovation. At the same time, investors are becoming increasingly interested in businesses that are socially and environmentally friendly.

SET realizes that these changes affect the business environment and the industry, as such SET aims to enhance the efficiency focuses on developing the quality of the capital market by integrating ESG practices so that businesses and investors realize the risks, the search of opportunities and competitive edge, including social and environmental impact, coupled with infrastructure development that in accordance with the current capital market context and the capabilities to support future growth.

- Quality of listed companies and investors' confidence
- Impact on the competitive capabilities of the Thai capital market
- Increasing expectation of SET among stakeholders

- Set the corporate strategy to cover ESG issues for SET's operations and stakeholders in the capital market
- Support access to knowledge in finance and investment continuously for investors and the public, focusing on developing media and learning resources tailored to suit the target audience and learning behavior, especially for working age group to prepare for happy retirement
- Enhance the quality of the capital market by integrating ESG practices under the corporate governance system. SET, on yearly basis, makes reviews a list of Thailand Sustainability Investment (THSI) Index. The constituents of this index are those with outstanding performance. This is an alternative investment. In addition, SET has also developed an ESG database system as a center for service and dissemination of ESG data for the Thai capital market.

4.2.2 Operational Risk



Description

Potential Impact to Business Operations

Risk Management Measure

Critical System Failure and Business Interruption Risks

SET plays a key role in providing securities trading services on a continuous basis. Therefore, SET must regulate, control, oversee the organization's computer

- Impact on the securities trading system, including the operation of the capital market and the economy as a whole

- Implement the Business Continuity Management (BCM) that covers the Emergency Response Plan, Business Continuity Plan, and IT Disaster Recovery Plan



Description	Potential Impact to Business Operations	Risk Management Measure
and IT systems to ensure security, equipped with information reporting process concerning operational damage incidents, root cause analysis, and improvement guidelines in order to achieve continuity of operations.	<ul style="list-style-type: none">• Impact on the confidence of related parties in the capital market	<ul style="list-style-type: none">• Review, rehearse and conduct practical tests together with the entities in the capital market regularly every year, in order to prepare for and respond to various critical situations in an efficient and timely manner. Regarding the COVID-19 pandemic situation, SET has adapted its operating model to match more digital platforms to support the operations of the capital market for more efficiently. Furthermore, SET has provided various resources to support employees in performing their work to keep up with the pandemic situation and to ensure continuity of SET's operations.
Cyberattack Risks		
Technological advancement threats and risks of cyberattack and cyber threats, which can damage properties and confidence among stakeholders. SET prioritizes this issue and has therefore set up the action plan in accordance with the International standards, equipped with advanced preventive security tools and continuously educated employees on the usage applications of information technology.	<ul style="list-style-type: none">• Impact on the financial performance of the organization• Impact on the securities trading system, including the operation of the capital market and the economy as a whole• Impact on the confidence of related parties in the capital market	<ul style="list-style-type: none">• Manage security risks of key data, and IT system in compliance with the relevant laws and regulations, and relevant international standards namely ISO27001 (Information Security Management System), ISO20000 (IT Service Management System), and ISO27701 (Privacy Information Management System)• Review and assess IT security management guidelines regularly to keep pace with the emerged situation and test cybersecurity readiness regularly, as well as participating in the cybersecurity testing with the regulatory entity and other related entities• Set up a working group to handle the cybersecurity incidents in order to give advice and recommendations, support the operations, while providing useful guidelines to cope with IT cyber threats• Provide various types of advanced preventive and precautionary cybersecurity tools with international standard, such as Antivirus and AntiMalware, Firewall, DDoS Protection Service, etc.• Communicate and share knowledge on IT security with staff and related parties regularly





Description

Potential Impact to Business Operations

Risk Management Measure

Fraud and Corruption Risks

SET is one of the country's leading financial institutions, with an end-to-end securities trading and investment services. Therefore, if there is a case of corruption involving the operations of SET, it will seriously damage the stakeholders and the SET's reputation.

- Impact on SET's financial and business operations
- Impact on the confidence of related parties in the capital market

- Set up anti-corruption guideline in accordance with the Anti-Corruption Practice Guide of the Private Sector Collective Action Coalition Against Corruption Council (CAC)
- Specify that each department must assess and identify risk measures on fraud and corruption regularly every year. Moreover, there must also be an internal control system that can examine the effectiveness of such measures continuously.
- Implement in compliance with the Corporate Governance best practices, such as the segregation of duties, the review of operation both by business units and by the Internal Audit Department, as well as the insistence for employees to perform duties in compliance with the Code of Conduct
- Communicate and provide knowledge on anti-corruption measures and 'No Gift' Policy in SET's operating process with all groups of stakeholders

4.2.3 Financial Risk



Description

Potential Impact to Business Operations

Risk Management Measure

Counterparty or Clearing and Settlement – related Risks

Thailand Clearing House Co., Ltd. (TCH) is a center for clearing and settlement of securities, and is also a central counterparty (CCP) for SET, for both the buyers and sellers. TCH takes the risks of the liabilities of the clearing and settlement of all transactions of securities and derivatives traded on SET, mai, and TFEX. In the event that a TCH member is unable to fulfill its obligations, whether it be clearing and settlement, TCH has the duty to manage risks whether it be the outstanding

- The impact of liquidity risk of TCH which has the duty to handle the clearing and settlement on behalf of the members
- Impact from the fact that TCH has to handle on behalf of the members who cannot comply with the obligations in clearing and settlement of securities due to the members' liquidity problem and/or bankruptcy (credit risk)

- TCH specifies membership qualifications based on financial strength, risk management, working system, and workforce of those who want to be members to ascertain their business stability and minimize potential risks to the industry. TCH regularly monitors the qualifications and compliance of its members.
- TCH requires all members of SET and TFEX to place collaterals to prevent any damage that may occur from holding the members' positions. The collateral value varies depending on the purpose, whether it be to accommodate risks occurring in a normal situation or risks under a stressful event.



Description	Potential Impact to Business Operations	Risk Management Measure
status of a defaulting member, and the provision of funding sources for payment on behalf of the TCH member, inclusive of the value of the damage that may occur in order that the market participants can operate the business.		<ul style="list-style-type: none">• The collateral placed by the member must have low market, liquidity, and credit risk to be able to support cases that TCH may enforce such collateral to settle the unpaid debts or cover the damages incurred.• TCH manages financial resources to accommodate damages that may arise from default or delivery of securities, including Clearing Fund, and SET Reserve Fund. TCH clearly specifies the “Default Waterfall” according to each market, and conducts the “Stress Testing” to test capital sources adequacy in the event of a crisis.• TCH monitors, evaluates, and provides liquidity resources to cover damages that may arise due to failure of members or related parties to meet their obligations within the specified time.
Investment Risks		
Investment risks can be classified by asset classes such as funds, equities, bonds, gold, and commodities, etc., which may be caused by volatility in the market conditions and the economy in general.	<ul style="list-style-type: none">• Impact on SET’s financial performance and reserves	<ul style="list-style-type: none">• in accordance with the investment policy and ratio of portfolio management as stipulated by SET’s BoG. In addition, the investment working group has also been appointed to oversee the investments according to the set policy and ratio. The investment risk status is also regularly monitored and reported to the investment committee, the RMC, the AC, and the SET BoG to ensure that risk is kept within the set level.• Diversify investment in various types of securities and set an investment limit to each financial institution or issuer to ensure the appropriate investment diversification and the limited impact on investment if damage occurs. Furthermore, the value at risk (VaR) statistical calculation tool has also been adopted to control overall level of risk in the portfolio within a specified limit.• In case of debt instruments, SET will invest in various types of securities such as government bonds, bank deposits, money market mutual funds, and corporate bonds with at least “A-” credit rating or equivalent.



5 Driving Business towards Sustainability

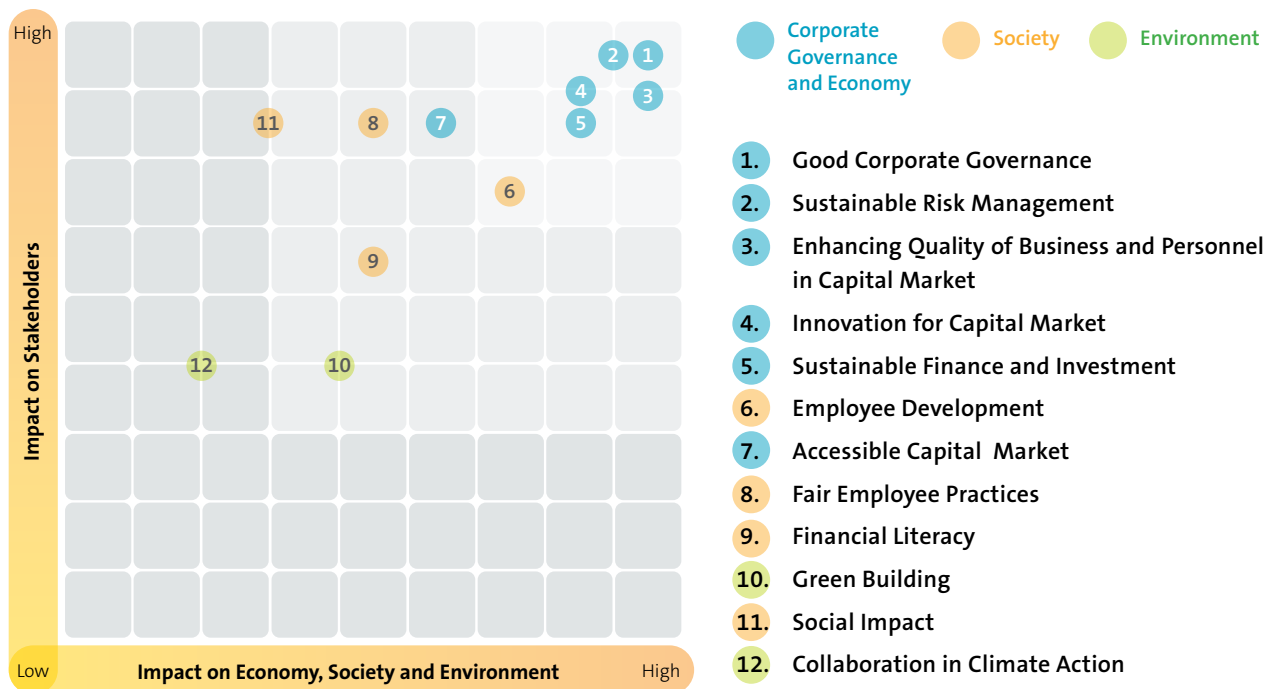
5.1 SET Sustainability Framework

The Stock Exchange of Thailand (SET)'s Board of Governors (BoG) has set up the SET Sustainability Framework with 5 dimensions, consisting of 1) Sustainability Management 2) Market Growth 3) Employee Development 4) Social Development and 5) Environmental Management. The framework is in line with the Strategic Direction 2021-2023 to **“Redefine Thai Capital Market Resiliency”** to drive the capital market towards Efficient Platform, become connector of opportunities by Agile Portfolio, and collaborate with networks and coalitions from business and social sectors as Sustainable Partner.

During the past years, SET has set the strategic direction by taking environmental, social and governance (ESG) aspects into consideration in our missions. SET has developed the organizations and the capital market to cover all these aspects with continuous improvement to ensure that the SET goals will be achieved to deliver positive outcomes to stakeholders, society, and the country.

In 2021, SET assessed and reviewed sustainability material topics in line with the SET Sustainability Development Framework and GRI standards, with coverage of the organization's opportunities and risks factors, consisting of 12 topics as follows:








Besides, SET has specified such plan to be in accordance with the UN Sustainable Development Goals (SDGs) to raise SET's standard of operation and ESG performance to be recognized internationally as follows:

1) Sustainability Management


Material Topic	Strategy	Implementation in 2021	SDGs
Good Corporate Governance	<ul style="list-style-type: none"> Enhancing efficiency of corporate governance and internal control system development 	<ul style="list-style-type: none"> Leveling up the Legal Committee (LC) as one of SET's good corporate governance-related committees Determining additional sections on government officials' recruitment policy Reviewing and separating functions between market supervision unit and customer services unit for independence reason 	
Sustainable Risk Management	<ul style="list-style-type: none"> Raising SET's value chain quality continuously Developing stable and safe infrastructure and digital technologies 	<ul style="list-style-type: none"> Managing risks on liquidity and credit efficiently Carrying out emergency drills for both computer system and building safety Leveling up digital infrastructure and system for capital market with secure and modern technology in line with international standards 	





Material Topic	Strategy	Implementation in 2021	SDGs
Innovation for Capital Market	<ul style="list-style-type: none"> Developing Infrastructure to support investment in digital assets and transactions 	<ul style="list-style-type: none"> Developing innovations that enhance the access to digital transactions as Digital Gateway. This includes preparation of LiVE Exchange structure for SMEs, and Thai Digital Assets Exchange (TDX) 	  

2) Market Growth

Material Topic	Strategy	Implementation in 2021	SDGs
Enhancing Quality of Business and Personnel in Capital Market	<ul style="list-style-type: none"> Enhancing knowledge on good corporate governance and sustainable business development for listed companies equally Increasing knowledge on financial, accounting, and investor relations to personnel of listed companies Upskilling to build potential of securities professionals ready to cope with the rapid changes Developing tools to increase efficiency and agility in performing duties of securities professionals 	<ul style="list-style-type: none"> Developing curriculums and providing advice on good corporate governance and sustainable business development for listed companies continuously Expanding ESG professionals base in the capital market Developing curriculum on accounting and finance for both executive and operation levels of listed companies Building knowledge to adapt to the COVID-19 era for small to medium-sized SMEs Raising standards of tests and curriculum for securities professionals in line with international standards continuously Developing online courses for securities professionals on Professional Link (Prof. Link) platform Developing Prof. Link application to facilitate training course information and renewal of securities professional licenses 	  
Accessible Capital Market	<ul style="list-style-type: none"> Developing knowledge and preparing readiness of small entrepreneurs, such as SMEs, startups, and social entrepreneurs with quality accessibility of funding sources Improving diverse formats of financial and investment literacy by focusing on online channels, which are convenient, easy to access, and suitable for target groups 	<ul style="list-style-type: none"> Developing LiVE platform as a knowledge hub for SMEs, startups, and social entrepreneurs to access essential information and knowledge for being quality entrepreneurs Developing learning courses on investment of the current trend, such as "21-Day Challenge" campaign and expanding curriculums on SET e-Learning platform Developing online investment channels which are user-friendly and meet investors' demands, such as Settrade Streaming Fund+, or FundConnex, etc. 	  

Material Topic	Strategy	Implementation in 2021	SDGs
Sustainable Finance and Investment	<ul style="list-style-type: none"> Promoting ESG products and services for sustainable investment Providing knowledge and guidelines for sustainable investment Expanding partnerships with all sectors in the capital market and national organizations to enhance sustainable investment 	<ul style="list-style-type: none"> SETTHSI Index comprising 77 listed companies, representing 59.75 percent of the total market capitalization at end-2021 Developing e-Learning: Sustainable Investment courses for investors and securities professionals Disseminating ESG rating information of listed companies for those who are interested in investing in sustainable stocks at www.settrade.com 	

3) Employee Development

Material Topic	Strategic	Implementation in 2021	SDGs
Fair Employee Practices	<ul style="list-style-type: none"> Developing environment and quality of working life for all employees in line with the next normal 	<ul style="list-style-type: none"> Adapting working styles and promoting digital tools to support work from home for employees Developing working environment in workplace and preventing the COVID-19 spread 	
Employee Development	<ul style="list-style-type: none"> Reskilling and upskilling employees to keep pace with industry trend and the next normal 	<ul style="list-style-type: none"> Increasing curriculum and online learning channels suitable for employees' working skills and for future direction of capital market development 	



4) Social Development

Material Topic	Strategy	Implementation in 2021	SDGs
Financial Literacy	<ul style="list-style-type: none"> Increasing opportunities to access learning sources, and financial and investment tools suitable for people behaviors in the next normal era 	<ul style="list-style-type: none"> Developing new functions such as financial target record, expenditure budget and liabilities, among others to support Happy Money App to be an end-to-end tool for financial management Developing modern and interesting learning media platform such as financial planning board game or Moneyfolio Widening access to online financial and investment knowledge, such as virtual tour service in Investment Discovery Museum, or increasing efficiency of e-Library via Maruey App 	



Material Topic	Strategy	Implementation in 2021	SDGs
Social Impact	<ul style="list-style-type: none"> Linking and expanding network via SET Social Impact platform to create good outcome to society exponentially Engaging society and communities to improve quality of life of Thai people in a sustainable way 	<ul style="list-style-type: none"> Enhancing potential of social entrepreneurs via online and offline channels, such as SE101 Online Offering SE101@University, SE102 course for social entrepreneurs and Impact Gym project focusing on coaching and mentoring Contributing over THB 103 million to government and social sectors, and related public health agencies to procure essential medical equipment and supplies, and vaccination development the COVID-19 protection, as well as supporting the underprivileged or persons uncovered by healthcare safety net in accessing quality healthcare system and easing the economic impact from the situation 	

5) Environmental Management

Material Topic	Strategy	Implementation in 2021	SDGs
Green Building	<ul style="list-style-type: none"> Managing, maintaining, and taking care of the SET building to make the best use of energy and resources and mitigate environmental impacts Promoting environmentally friendly suppliers, and green services in line with SET's green procurement practice guideline 	<ul style="list-style-type: none"> Managing energy and raising efficiency of electricity generation by using renewable energy (solar panels) Improving wastewater filtration system, wastewater treatment system, and water conditioning system Increasing efficiency of waste management by reusing waste as a fuel source for cement production Reducing greenhouse gas emission in the enterprise-wide management by 1.29 percent from 2020 	
Collaboration in Climate Action	<ul style="list-style-type: none"> Promoting Collaboration with listed companies; private, public and social sectors to lower greenhouse gas emissions from business operation process 	<ul style="list-style-type: none"> Building partnership on environmental management via Climate Care Collaboration Platform which managed to reduce greenhouse gas emissions of 12,245 tons of CO₂ equivalent per year 	

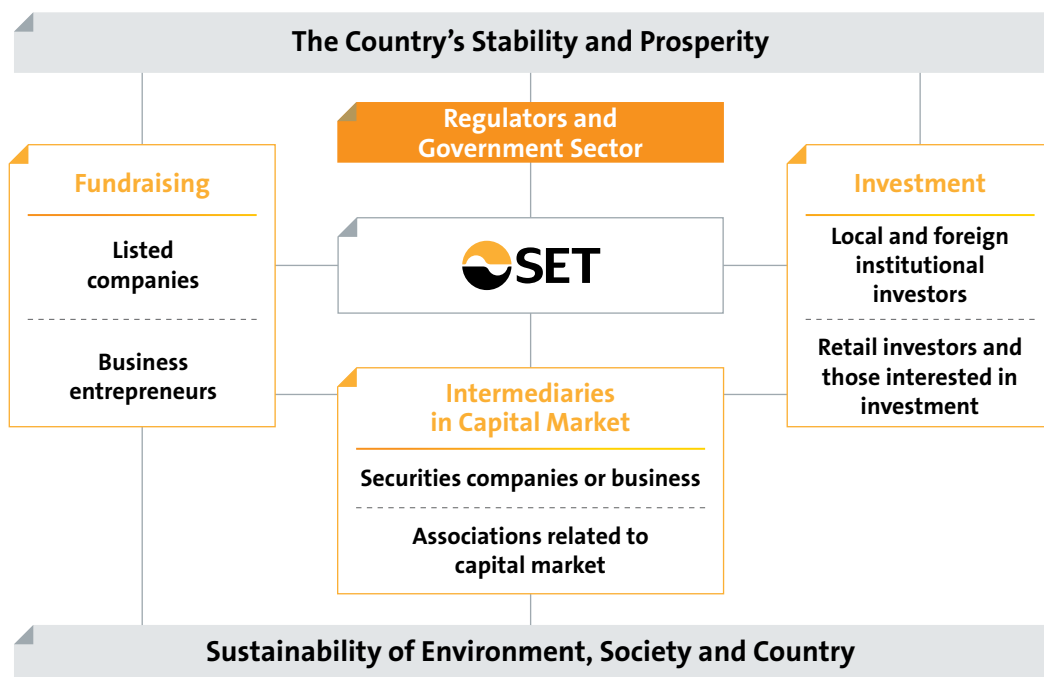
5.2 SET's Value Chain and Stakeholders

5.2.1 SET's Value Chain

SET acts as connector, enabling entrepreneurs to access funding sources and fundraising for business expansion, while developing channels to make it convenient for investors and the public to invest in diverse businesses and financial products for savings purpose and generate return on investment.

Stable and quality growth at all sectors will deliver good results to economy, such as higher employment rates and stronger purchasing power among consumers as such boosting liquidity, improving cashflows and investing in basic infrastructure which will enhance the quality of life of everyone in the society.

SET has therefore developed the organization while offering diverse products, services, and investment innovations that continuously respond to the needs of market participants. Simultaneously, SET governs the organization and the capital market to ensure transparency and efficiency in line with international standards by taking into consideration the benefits to stakeholders, society and environment in every step of the business process, starting from securities listing to promoting and disseminating knowledge on finance and investment to the public.



In addition, SET places importance on building a thriving ecosystem in the capital market with linkage of collaboration with relevant sectors to create access to the capital market and support developments in different areas, such as the development of digital infrastructure and good corporate governance system, and the enhancement of the capital market towards sustainability.

5.2.2 SET's Stakeholders

SET adheres to best practices and treat all stakeholders fairly. SET prioritizes engagement process and opens for feedback via various communication channels. SET will gather information from the opinions of each group of stakeholders and analyze to identify solutions to appropriately address their needs.

In 2021, there were six stakeholder groups who are vital to the organization's operations, consisting of 1) Listed companies and entrepreneurs, 2) Member companies and intermediaries, 3) Investors, 4) The SET group's employees, 5) Regulators and government sector, 6) Entities relevant to capital market and social sector as follows:



Stakeholders in SET's Value Chain

Engagement Channels



Stakeholder Group	Expectation	Engagement Channel					Sample of Response to Expectation
		Advisory services	Performance report	Website and social media	Training & seminar	Meeting	
Listed companies and entrepreneurs <ul style="list-style-type: none"> Companies listed on SET and Market for Alternative Investment (mai) Business with potential and interested in listing on the Exchange SMEs and startups 	<ul style="list-style-type: none"> Opportunities to access quality funding sources Fundraising platform which is efficient, reliable, and suitable for businesses Rules and regulations that are not complicated and can facilitate business operations Uncomplicated registration process Recognized by investors and stakeholders Obtaining complete and efficient information, news, and services 	✓	✓	✓	✓	✓	<ul style="list-style-type: none"> Providing advisory services for entrepreneurs who are interested in listing equally Providing knowledge, advice, and tools for listed companies to enhance skills in the operation for those who work in finance, accounting, and ESG Developing digital structure, platform, and services to support business operations such as LiVE platform Developing and adjusting criteria to support businesses with efficiency and transparency Upgrading quality of ESG data and information disclosure to build confidence for investors and capital market Developing SETLink by harnessing digital technology such as Digital IPO and e-Shareholding Meeting in creating agility to business
Member companies and intermediaries <ul style="list-style-type: none"> Securities firms Asset management firms Securities professionals, such as investment consultants, investment analysts, investment planners, etc. 	<ul style="list-style-type: none"> Securities trading system which is stable, safe and also helps reduce business costs End-to-end service system to reduce redundancy A diverse range of financial products and services Expansion of quality investor base Highly competent securities business professionals 	✓	✓	✓	✓	✓	<ul style="list-style-type: none"> Providing services in securities trading system connecting with foreign markets via ETF and depositary receipt (DR) with exposure of various foreign currencies Offering one-stop mutual fund trading (FundConnect) Developing the knowledge of securities professionals in accordance with industry trend
Investors <ul style="list-style-type: none"> Retail investors Institutional investors Foreign investors 	<ul style="list-style-type: none"> Attractive and regular return on investment Low costs of investment Diverse investment products Efficient and transparent system and trading process Easily accessible and sufficient knowledge and information for investment decision making 	✓	✓	✓	✓	✓	<ul style="list-style-type: none"> Providing investment and capital market data & information covering both financial and ESG Providing service on digital on-boarding system to increase convenience in access to investment channels such as Settrade Streaming Fund+, and NDID Providing investment knowledge in line with the lifestyles of new generation investors Getting ready for Thai Digital Assets Exchange: TDX Developing secure and stable IT and trading system with personal data protection according to international standards

 Stakeholder Group	Expectation	Engagement Channel					Samples of Response to Expectation
							
The SET group's employees	<ul style="list-style-type: none"> • Job security / career advancement • Transparent communications between management and employees • Work-life balance • Working environment that is supportive to learning 	✓	✓	✓	✓	✓	<ul style="list-style-type: none"> • Developing human resource system in line with regulations and digital era • Crafting development plan for employees at all levels via both online and offline learning channels • Supporting employee communication and engagement via various channels, such as SET's Employee Club and virtual meeting, etc. • Promoting occupational health and quality of life according with new normal lifestyle, such as work from home / remote working
Regulators and government sector <ul style="list-style-type: none"> • The Securities and Exchange Commission (SEC) • Government agencies 	<ul style="list-style-type: none"> • Compliance with the Securities and Exchange Act • Cooperation in public policy push 			✓	✓		<ul style="list-style-type: none"> • Discussing capital market development guidelines with the SEC continuously • Planning to upgrade the quality of sustainability reporting in 56-1 One Report form, together with the SEC and Thailand Greenhouse Gas Management Organization (TGO)
Entities related to the capital market and social sector <ul style="list-style-type: none"> • Associations related to capital market • Media • Educational institutions • General public • Social enterprises • Foundations and community networks 	<ul style="list-style-type: none"> • Promoting finance and investment knowledge among youths and the public • Contributing benefits and good outcome to society • Providing access to news and movements of the organization and the capital market in a rapid and thorough manner 			✓	✓	✓	<ul style="list-style-type: none"> • Disseminating knowledge and tools regarding personal financial planning for the general public, such as Happy Money App, etc. • Developing online channels to reach the services of SET's Maruey Library and INVESTORY Investment Discovery Museum • Expanding the SET Social Impact platform by synerging business and social sectors, and social enterprises to amplify the outcome and raise the quality of life for all in the society • Expanding network and cooperation to reduce greenhouse gas emission via Climate Care Platform project • Communicating information, news, and movement of the capital market via online and offline channels continuously • Supporting continuous operations of associations related to capital market including the Federation of Thai Capital Market Organizations (FETCO) and the Capital Market Development Fund (CMDF)



5.3 SET's Sustainability Performance

5.3.1 Sustainable Organization Management

The key goal is to steer SET towards strategic direction of **“Redefine Thai Capital Market Resiliency”**, based on the policies on corporate governance and risk management (*details are available on page 91 and page 48, respectively*). This aims to enhance readiness in terms of resiliency to adapt with current changes in the market situation, social condition, and environment, while increasing efficiency and agility of the systems to cater to market participants' demands, as well as developing technology and innovation that can connect opportunities of all sectors to grow together sustainably.

Innovation Development for Capital Market

SET has applied technology to the working process and services while cautiously monitoring cyber threats across the value chain in accordance with international standards, consisting of Information Security Management Standard (ISO 27001), IT Service Management Standard (ISO 20000), and Privacy Information Management Standard (ISO 27701).

- **Technology in the organization**, such as applying Financial Management System to accounting and financial operations, adopting Robotic Process Automation (RPA) to increase working efficiency and agility, and developing an Enterprise Mobile Application (SET DNA App) to fully respond to working in a new normal environment, among others
- **Technology for stakeholders**, focusing on continuous development of the working system and IT for the capital market to increase opportunity and agility for businesses and investors in the digital era as follows:



Upgrade digital infrastructure and innovation to drive economic growth, open up opportunities and raise financial access to achieve sustainable financial and investment management



1) Increasing Efficiency of Transactions and Digital System



Scheme	Implementation in 2021
Digital IPO system	Adding Digital Signature function to facilitate issuers in seeking approval to issue and offer securities for sales, and the listing application in a more convenient way
DAP e-Shareholder Meeting system	Developing ordinary / extraordinary shareholders' meeting service via electronic platform with On-Cloud services to serve virtual meeting process, starting from the functions of registration to meeting attendance, e-Question, and e-Voting. In 2021, there were 53 listed companies using this platform.



Scheme	Implementation in 2021
Digital Gateway service to connect entrepreneurs via Digital ID platform	Developing service systems to connect entrepreneurs via Digital ID, covering 4 services as follows: (1) National Digital ID Proxy (NDID Proxy) (2) Payment of e-Stamp Duty (3) Connecting with Thailand's Department of Provincial Administration (DOPA Gateway) for verification of citizens' ID card (4) Connecting with database of Anti-Money Laundering Office (AMLO Gateway) In 2021, the transactions have grown exponentially, especially the NDID Proxy service as the new online accounts have increased during the COVID-19 pandemic.
Common Infrastructure for Brokers Back Office System project in the form of Application Service Provider (ASP)	Joining hands with KG Information Systems Co., Ltd. (KGiSL) to upgrade securities trading's operating system to provide alternatives and opportunities for member companies so as to reduce operating costs and support the needs and growth of the industry in the future
Increasing efficiency of the securities trading system	Upgrading trading system for member companies, such as self-match prevention, long orders for equity market, and pre-trade risk management (PTRM) ready to support new products, including single stock options with an aim to maximize capabilities in services efficiently and safely
Mutual fund trading system (FundConnex)	Developing the central system for receiving and sending trading and settlement information between distributors and investment management companies, resulting in over 33,000 mutual fund transactions per day, an increase of 160 percent from 2020. Moreover, there were 12 additional distributors, raising the total to 46 distributors.
Payment System for capital market	Expanding Direct Debit Registration service to facilitate account opening, transfers, debit, or settlement via end-to-end digital system. In 2021, the number of transactions rose 33 percent.
e-Open Account system	Developing e-Open Account which requires the one-time data filing for trading account opening of products across the board



2) Developing Digital Investment Channels



Scheme	Implementation in 2021
Streaming Fund+ program	Increasing channels for end-to-end mutual fund trading platform on the application and website: settrade.com to facilitate mutual fund trading activities and creating mutual fund investment plan in a single application. This program aims to support the expansion of mutual fund investor base.
Options Starter program	Increasing channels for derivatives trading platform on the application and website: settrade.com to facilitate Options trading beginners by providing information and market movement forecast (Long Call or Long Put) to boost confidence in investment decision making



3) Developing Information Service System for Investment

	Scheme	Implementation in 2021
	Company Snapshot	Developing and disseminating data system of listed companies (Company Snapshot) so that investors can access key data for more effective decision making, such as information based on annual report, business plan, business risk factors, etc. Investors can access Company Snapshot and trade right away via Settrade Streaming system.
	ESG Ratings: service of information on sustainability assessment for listed companies	Collaborating with two more Sustainability Rating Agencies: Morgan Stanley Capital International (MSCI) and S&P Global to disseminate the sustainability assessment results (ESG ratings) of listed companies via settrade.com website, free of charge. These two sustainability rating agencies are on top of the two existing agencies in 2020: Arabesque S-Ray and Vigeo Eiris, raising the total number of collaborating agencies in 2021 to four.

4) Direction towards Digital Capital Market

In 2022, SET sets sight on the full-scale digital capital market by developing infrastructure and relevant regulations to support Thai Digital Assets Exchange (TDX) in offering both digital token trading and e-Wallet service via Initial Coin Offering (ICO) process, aiming to increase fundraising opportunities for business sector and to be an alternative for investors who are looking for new investment products. In addition, the LiVE Exchange platform has been developed to support the expansion of the capital market ecosystem to cater to small and medium-sized enterprises (SMEs), startups, and social entrepreneurs with growth potential, as such creating opportunities for them to access the sources of capital equally.



5.3.2 Market Growth

The key goal is to increase potential, create economic values and contribute positive outcome to society and environment in the capital market ecosystem with transparency, integrity, and responsibility, starting from listing process to investor base expansion. The key issues are as follows:

Enhancing Quality of Business and Personnel in Capital Market

SET realizes the quality of listed companies and personnel in capital market, and potential entrepreneurs of all sizes that play important roles in driving the capital market towards stability and strength. SET therefore enhances their knowledge and skills equally to widen their perspectives, inspire their creativity, and lay business foundation in terms of profitability, and social and environmental development to grow together sustainably. The key performances are as follows:



Enhancement of essential skills and knowledge to capital market's personnel to help create products that serve demands in terms of both quality and quantity, and mechanism to navigate capital market towards sustainable growth



1) Developing Business and Sustainability for Listed Companies

	Scheme	Implementation in 2021
	Listed Companies' Classroom	<ul style="list-style-type: none"> Developing curriculum and tools to enhance knowledge and skills of executives and personnel in finance, accounting, and rules and regulations necessary for business operations by disseminating a total of 56 pieces of work via SETLink system Organizing online annual seminars on finance and accounting such as trend and direction of M&A and M&A strategy formulation, summary of key essence, highlight of TFRS for PAEs implemented and changes in 2021, and courses for high-ranking executives on finance and accounting participated by over 5,500 audiences, up 119 percent from the previous year
	Developing ESG for listed companies	<p>Promoting knowledge on sustainable business development</p> <ul style="list-style-type: none"> Enhancing knowledge and providing advice by experts in various fields, such as marketing and human resource management to equip the COVID-19-hitting small and medium-sized listed companies (Mid-Small Caps) with knowledge to maximize their ability in adapting and maintaining competitive potential in the new normal era. There were 215 listed companies across industries participating in this project. Providing in-depth advice on how to drive ESG development to executives and operation teams of 28 small and medium-sized listed companies, via SD Journey project, with an aim to provide understanding on ESG planning in line with corporate strategy which is practical and can create utmost benefits to their organizations Creating SET ESG Expert Pool network to encourage personnel from all sectors to collaboratively expand knowledge of sustainable business development to the capital market, embracing 120 founding members in this first batch



**Leveling up quality of ESG data disclosure**

- Organizing online course and test form on “Reporting ESG data according to One Report”. A total of 787 personnel from 462 listed companies participating in this course and test, with passage rate of 87 percent.
- Organizing workshop and providing consultation on sustainability report for each industry group to enable listed companies to prepare quality report according to their business context, and in compliance with the Form 56-1 One Report, Sustainable Development Goals: SDGs, as well as the world-class GRI standards, etc. Notably, 98 percent of the total of 109 participating companies could come up with ESG contents suitable for their businesses, covering 8 industry groups.
- Organizing “ESG One Report Clinic” activity to give advice and keep listed companies well-prepared for the report on ESG in accordance with Form 56-1 One Report. A total of 319 companies participated in this activity.

Quality assessment on sustainability performance of listed companies


- Assessing the sustainability performance of listed companies. In 2021, there were 146 listed companies selected in Thailand Sustainability Investment (THSI) list, an increase from the previous list of 124 listed companies. The 146 listed companies’ market capitalization accounted for 66 percent of the total market value.
- Supporting Thai Institute of Directors (IOD) in assessing Corporate Governance Report of Thai Listed Company (CGR). In 2021, the average score of listed companies was 84 percent, reflecting transparent information disclosure on good corporate governance of listed companies.
- Improving the new CGR assessment form to enhance corporate governance performance in compliance with Form 56-1 One Report, and the current ESG development

Enhancing sustainable business at international level

- Preparing readiness of potential listed companies to be included in international sustainability index. In 2021, the number of listed companies selected in Dow Jones Sustainability Indices (DJSI), MSCI ESG Universal Index, and FTSE4Good Emerging Markets Index were the highest in ASEAN.
- 10 Thai listed companies were selected at ‘Gold-Class’ level by S&P Global in The Sustainability Yearbook 2021 report, the highest number of the sustainability assessment in 40 countries globally.

2) Developing Securities Professionals of Intermediary Institutions

SET has collaborated with Association of Securities Companies (ASCO) and Investment Analysts Association (IAA) to formulate the development plan and enhance the quality of personnel for securities companies to correspond with the current direction of the capital market by designing special courses specifically for their roles and duties, namely investment advisers, investment analysts, as well as officers in securities operations and human resources. This aims to enhance potential and raise quality of professional standards including investment services in accordance with direction of securities business in the digital age and sustainable investment concept.

 Scheme	Implementation in 2021
Professionals Classroom	<ul style="list-style-type: none">• Modernizing curriculum for securities professionals in line with direction of securities business in the digital age, as well as promoting the concept of sustainable investors with a focus on ESG factors. The knowledge was disseminated via live training with interactive virtual experience. In a meantime, 72 e-Learning courses were available via Professionals Classroom website, covering Fundamental Analysis, Comply with Regulatory, Product Expert, Investment Strategy and Self Development. There were over 8,000 persons accessing this knowledge-sharing platform.• Developing 15 new courses and disseminating 15 micro-learning pieces. Over 8,000 securities operation and human resources personnel joined these courses.
Enhancing standards of securities professional tests	<ul style="list-style-type: none">• Improving new curriculum of Certified Investment and Securities Analysis (CISA) to be in line with the changes in the capital market and to upgrade knowledge standard among younger generation personnel according to the industry's needs. The new CISA curriculum has been certified by the SEC for the registration of securities professionals, and is ready for dissemination to various educational media and other easy-to-access communication channels to over 30,000 target audiences.• Developing new CISA basic level curriculum "Accredited Investment and Securities Analyst (AISA)" to increase personnel in the field of investment analysis and investment management for capital market. In 2021, over 3,200 university students took the AISA training course, and 660 students were granted a test scholarship under the New Breed Financial Professional project.• Further developing Prof. Link application to manage training course data and renewal of professional licenses



Accessible Capital Market

SET encourages entrepreneurs of all sizes or all industries, investors and interested public to access the capital market equally, taking into consideration the availability of various learning channels to disseminate knowledge on fundraising and investment for everyone. SET is also well-prepared to ensure that everyone efficiently taps capital market.



Prepare readiness and provide knowledge for entrepreneurs to expand base and open up opportunities for business at all sizes to access capital market equally



1) Developing Potential of Entrepreneurs Equally



Scheme	Implementation in 2021
SET Entrepreneurs' Classroom and LiVE Platform	<ul style="list-style-type: none"> Developing over 150 necessary learning courses and tools for entrepreneurs to get ready for reaching capital sources, such as sustainable entrepreneur and innovation, management, marketing, accounting, and entrepreneurial finance & fundraising via SET website and LiVE Platform, with 1.16 million views Developing Capital Market Readiness Assessment (CMRA) as a tool to assess knowledge and readiness of over 44,000 SMEs and startups. to prepare readiness and boost potential before listing on capital market

2) Accessible Investment for All



Scheme	Implementation in 2021
Developing knowledge for investors	<ul style="list-style-type: none"> Developing over 650 online knowledge content items on Investor Classroom website, consisting of various contents to suit investors' diverse interests from beginners to professionals. Such materials were presented via easy-to-access digital channels, such as live online activities of Investor Classroom, with over 80,000 views, as well as other SET digital platforms, with over 11.95 million views. Initiating "21-Day Challenge" campaign, self-mission trading and investment challenges for 21-days by selecting one's own stocks, learning and keeping track of the self-progress throughout 21 days. This campaign aims to build investment discipline and readiness before turning professional investors. In addition, SET prepared online learning materials and tools for investors to apply for use in actual investment.
Expanding investor base and Opportunities	<ul style="list-style-type: none"> Initiating AOM YOUNG project in collaboration with Student Loan Fund (SLF) and Krungrthai Asset Management plc to promote savings discipline and investment culture among student loan borrowers, and encourage them to start saving and investing regularly in mutual funds for better future, embracing over 170,000 students

Scheme	Implementation in 2021
	<ul style="list-style-type: none"> Developing new investment channels by expanding the “Point to Invest” project to allow investors to redeem credit card points for mutual fund units. In 2021, there were two more credit card partners: United Overseas Bank (Thai) and Ayudhya Capital Services Co., Ltd. (Krungsri First Choice), making a total of eight. Moreover, SET partnered with the first loyalty program, PTT Blue Card, enabling the Point to Invest project to reach over 23 million customers.
Accessing investment information via digital channels	<ul style="list-style-type: none"> Gaining followers via social media, such as Facebook, YouTube, LINE, and Twitter to reach the new generation viewers. In 2021, there were over 2.9 million followers from all social media platforms, an increase of 20 percent from 2020. Reaching over 1 billion views in 2021 for SET websites, such as www.set.or.th, www.settrade.com, and www.setinvestnow.com, up 30 percent from 2020 Promoting access investment knowledge and information via diverse channels and platforms including “SET in the City” virtual conference Increasing number of SET members to 1 million in 2021 from 700,000 previously. SET has also used machine learning to analyze big data to respond to investors’ needs and provide suitable information, knowledge, products, and services for each group of investors efficiently, taking into consideration the Personal Data Protection Act (PDPA).

Sustainable Finance and Investment

SET supports collaboration to drive the concept of sustainable finance and investment to enable the capital market mechanism to support balanced growth of the economy, society, and environment as follows:



Develop quality capital market by enhancing knowledge on responsible investment and collaborating with several related sectors towards balanced growth



1) Promoting Sustainable Investment

Scheme	Implementation in 2021
Thailand Sustainability Investment (THSI) Index	<ul style="list-style-type: none"> Disseminating SET’s THSI Index consisting of stocks that have passed the criteria assessment of the THSI list to reflect securities price movement of listed companies which have taken into consideration the environmental, social and governance (ESG) aspects. The SETTHSI Index is both a benchmark index and an underlying index for issuing other financial products, such as mutual funds or exchange-traded funds (ETFs) tracking the sustainable stock list. At the end of 2021, 77 listed companies, accounting for 59.75 percent of the total market capitalization, were the SETTHSI Index’s constituents.



Scheme	Implementation in 2021
Enhancing knowledge on sustainable investment for intermediary institutions and investors	<ul style="list-style-type: none"> Developing 16 ESG courses for investors and securities business professionals to support sustainable investment and ESG investment products / services in the capital market, while disseminating over 40 courses and educational materials via online channels, making them conveniently accessible to over 9,200 investors and securities business professionals Collaborating with the Association of Investment Management Companies (AIMC) to exchange knowledge and develop guidelines for sustainable investment for investment management companies in accordance with international standards, enabling them to apply ESG as part of the decision-making and design investment products efficiently

2) Creating Capital Market Network for Sustainable Development

Scheme	Implementation in 2021
Joining hands to develop sustainable for the Thai capital market	<ul style="list-style-type: none"> Teaming up with the Bank of Thailand, the SEC, the Office of Insurance Commission, and Fiscal Policy Office to set up the Working Group on Sustainable Finance in order to prepare and disseminate the practice guideline on Sustainable Finance Initiative for Thailand for the purpose of specifying direction framework of sustainability implementation for businesses and financial institutions
Collaborating for international sustainability development	<ul style="list-style-type: none"> Hosting virtual conference on “the 32nd ASEAN Exchanges CEOs Meeting”, participated by top executives of stock markets in ASEAN to discuss the cross-border product development with an aim to make ASEAN capital markets shine at international level. This also includes the establishment of ESG working group to study sustainability data disclosure of listed firms of ASEAN exchanges to promote investors to use ESG data for their investment decision.





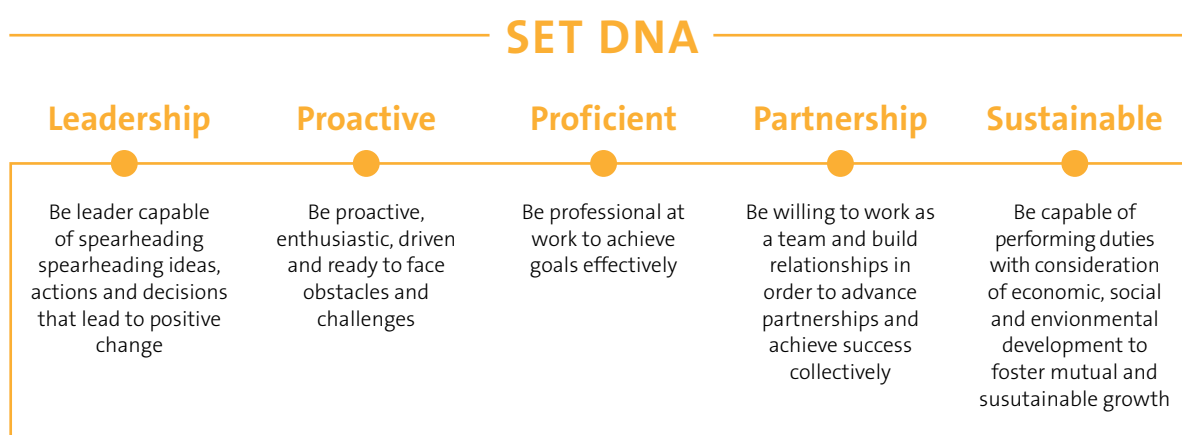
THE 32nd ASEAN EXCHANGES CEOs MEETING

30th March 2021
Virtual Meeting hosted by SET



5.3.3 Employee Development

The key goal is to develop and equip employees with capabilities and adaptive skills to cope with the rapid change of the capital market environment, while creating the corporate culture or the “SET DNA” and strengthen it under an open work environment suitable for learning and participation. All these are to create employee engagement and relations enterprise-wide with the synergy to respond to the expectations of stakeholders, the organization and society.

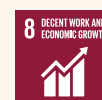


Fair Employee Practices

SET treats employee fairly and equally by taking into consideration human rights, starting from the process of recruitment, welfare, potential development, performance evaluation, and remuneration. All these are to encourage employee engagement and willingness to take part in driving the organization towards sustainable growth. In 2021, the key implementations were as follows:



Provide equal opportunities by strictly following labor laws and respecting human rights together with establishment of effective measures to enhance safe work environment and ensure quality public health access to all employees

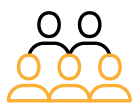


1) Employee Statistics

SET recruits and selects employees on the basis of their qualifications, capabilities and attitudes that are in line with and suitable for the job description and corporate values, with equal opportunities, without discrimination against gender, disability, age, educational institutions, religious beliefs, or political views.

In 2021, SET employed 759 employees, with average age of 42 years old and average service length of 15 years. Turnover rate was 4.5 percent.





Total number of Employees

759 persons



Average working period

15 years



Average Age of Employees

42 years

Statistics and ratio of employees by gender



male

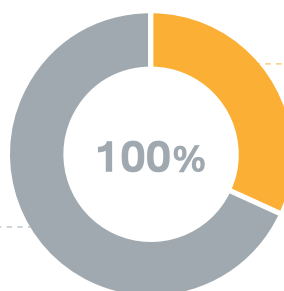
245 persons



female

514 persons

female
68%



male
32%

Statistics and rate of voluntary resignation by gender



male

13 persons

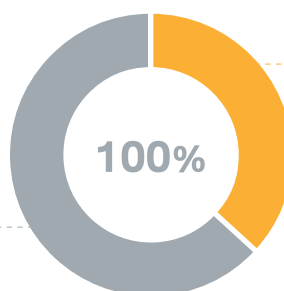


female

22 persons

Total 35 persons

female
63%



male
37%

Statistics and ratio of employees by level



Employee Level



Male



Female

Top executives 15 11

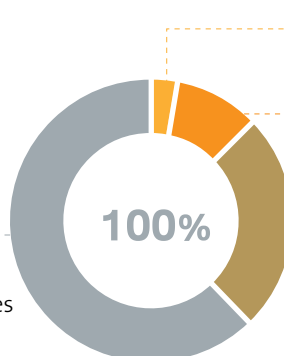
Mid-level executives 29 45

Junior executives 68 126

Employees 133 332

Total 245 514

Employees
62%



Top executives
3%

Mid-level executives
10%

Junior executives
25%

Statistics and ratio of employees by age



Age (years)



Male



Female

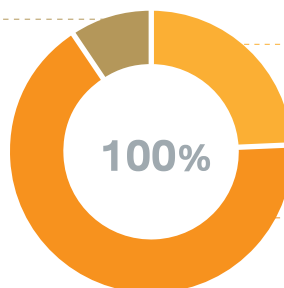
Over 50 45 140

30 to 50 173 329

Below 30 27 45

Total 245 514

Below 30
9%



Over 50
24%


30 to 50
66%

2) Occupational Health and Safety


	Scheme	Implementation in 2021
	COVID-19 prevention measures	<p>COVID-19 Prevention Measures for Employees</p> <ul style="list-style-type: none"> • Providing COVID-19 vaccination and booster doses for employees and close persons • Encouraging employees to work from home with 84 percent to minimize risks of commuting to work at the SET building, and providing working system and equipment to facilitate remote working by delivering computer, pocket Wi-Fi, and other necessary office equipment to employees' homes • Developing a health screening system on the SET DNA application and setting up a health screening point before entering the SET building • Providing COVID-19 protective equipment for employees consisting of face masks, hand sanitizer gels and practice guideline in the SET building • Offering a special service on mental health consulting under "Friends in Need by SET & Relation Flip" project • Disseminating knowledge and understanding on guidance under the COVID-19 situation continuously via online channels, such as Facebook Live by top executives and SET Open Talk program <p>SET's Occupational Health Standard Certification</p> <ul style="list-style-type: none"> • Fitwel Viral Response Module (VRM) standard organized by Center for Active Design (CfAD), in recognition of standard of organizations and buildings with management and measures to reduce the rate of respiratory infectious diseases • Amazing Thailand Safety & Health Administration (SHA and SHA Plus) standard for the SET canteen, in recognition of enterprises with cleanliness and health safety measures to gain customer confidence • THAI STOP COVID+ standard organized by the Ministry of Public Health for the SET canteen and conference rooms, in recognition of safety measures according to COVID Free Setting guidelines of the Centre for the Administration of the Situation due to the Outbreak of the Communicable Disease Coronavirus 2019 (COVID-19)
	Employee's healthcare	<ul style="list-style-type: none"> • Increasing channels to make medical services accessible to employees who work at the office and work from home, and offering annual check-up at any convenient hospitals on the list instead of office and Influenza vaccine for employees • In 2021, employees' average sick leave of 1.72 working days and "Zero" accident or infection at work <div>  <p>Accident and Infection at Work</p> <p>"Zero"</p> </div>



3) Fair and Appropriate Employee Welfare

 Scheme	Implementation in 2021
Employee discussion on welfares & benefits	<ul style="list-style-type: none">Appointing social welfare committee and provident fund committee by organizing meetings to discuss between executive representatives and elected employees to consider benefits in line with the current situation and for equal fairness
Increasing employee potential in savings and financial planning	<ul style="list-style-type: none">Establishing Provident fund (PVD) as an alternative savings option for employees with the matching contribution of up to 15 percent of monthly salary by employees and 10 percent by SET. The financial planning in provident fund has been regularly communicated to all employees.Setting up a savings and credit cooperative to be a savings channel for SET employees. At end-2021, number of members was 579, representing 76 percent of total employees.Offering housing and personal loans, such as home repair and auto purchase for employees
Educational enhancement for employees	<ul style="list-style-type: none">Providing scholarships for master's degree and above in both Thailand and abroad, in related fields, to encourage employees' self-development so that they can apply their knowledge and experiences to further develop the organization

4) Employee Participation and Engagement

 Scheme	Implementation in 2021
SET Employees Club	<ul style="list-style-type: none">Supporting an establishment of the SET Employee Club, of which 21 committee members are elected or appointed from employees with a one-year term. The duty is to organize activities to promote employee's participations in line with SET DNA values. Moreover, the club is considered as a channel for on-the-job-training to develop employee skills beyond their regular work, and to practice their leadership skills, create ideas and carry out social responsibilities. In 2021, the club organized activities to strengthen relationship between the employees and organization in accordance with the remote working approach under the concept of Chance for Change by focusing more on promoting employees' participation via online channels.
Communication channels with employees	<ul style="list-style-type: none">Broadcasting "Pee Pui Chuan Kui" program with live steam on Facebook as a two-way communication channel to motivate employees and executives to talk, exchange opinions and communicate each other regarding the organization's information and important policy. In 2021, the program was broadcast 25 episodes with 80 percent employees' engagement.Offering SET Open Talk, an online channel for talking and exchanging viewpoints on working and life in workplace among employees, governors and the President. Information from the channel is used to improve many aspects related to employees for the organization's benefits.



Scheme

Implementation in 2021

Employee engagement

- Collaborating with Kincentric, a leading human resource management consulting firm, to survey and assess employee engagement within the organization in order to use the findings in human resource management and development. In 2021, 100 percent of employees answered the survey questionnaires. The findings showed that the average employee engagement score was 78 percent, unchanged from the previous year.



Employee Engagement Score

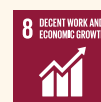
78%

Employee Development

SET develops employees' potential in line with corporate business direction and the SET DNA values, focusing on learning in new normal regarding various training courses to suit the demands of each employee group, and enrich employees' skills and potential ready to cope with rapid changes in today's world.



Upskilling employees to keep pace with change in industry and unleash their potential in creating benefits for all



1) Development of Employees' Skills and Knowledge



Scheme

Implementation in 2021

70-20-10 learning model

- Enhancing employees' knowledge: 70 percent from actual working and experience, 20 percent from coaching & knowledge transfer, and 10 percent from training courses. There has been enhancement via upskill, reskill and multi-skill necessary for personal and professional development. In 2021, the employee development expenses totaled THB 38 million. Training hours for executives and employees averaged 69 hours / person / year, focusing on online channels at 98 percent.



Average Training Hours


69 Hours per person




Proportion of Online Learning

98%



	Scheme	Implementation in 2021
	Individual Development Plan (IDP)	<ul style="list-style-type: none"> Developing online learning channel to better match today's learning lifestyle, while contents focus on the enhancement of leadership and management skills. Additionally, the Sharing Session activities have also been conducted continuously to keep employees well-informed of the knowledge on working system and products in the capital market, risk prevention & management especially the cybersecurity issue, as well as the knowledge on healthcare and financial planning for all employees. Improving learning channels that each employee can access efficiently in line with the current situation with follow-up and assessment the learning result of each employee continuously, so as to use the information to develop and enhance the annual IDP plan suitable for employees' learning process

2) Fair Performance Evaluation and Employee Remuneration

	Scheme	Implementation in 2021
	Performance evaluation	<ul style="list-style-type: none"> Evaluating performance by using Balance Scorecard together with employees' competency based on the SET DNA values. Key performance indicators (KPIs) have been set up for both organizational and individual levels, with clear criteria and monitoring process via SAP SuccessFactors system. SET takes into consideration personal data protection, facilitates and enables executives and employees to access the assessment system via website or application conveniently.
	Employee remuneration	<ul style="list-style-type: none"> Considering the organization's performance in accordance with the economic situations, the average benefit package of the industry and each employee performance so as to manage the remunerations and promotions for executives and employees in a transparent and fair manner. In 2021, the remuneration for employees amounted to THB 1.17 billion, comprising salary, bonus, and provident fund and etc.

5.3.4 Social Development

The key goals are to create opportunity to access learning sources on finance and investment for the Thai people inclusively and build awareness of financial planning that lead to financial achievement appropriate for each stage of their life. Besides, SET acts as a mechanism to link all sectors together to develop and create positive and sustainable outcomes to the society for happiness and good quality of life for all the Thai people.

Promoting Financial Knowledge Accessible to Thai People

SET, along with partners, has distributed financial knowledge and promoted savings via investments to the public at all levels, selecting appropriate contents for each target group via online and offline learning channels making it easy and more convenient for the lifestyle of the new generations.



Create opportunity for all in the society to access quality sources of financial and investment literacy to build immunity for the country's economy




1) Promoting Basic Financial Literacy for All



Scheme	Implementation in 2021
Maruey Library and INVESTORY Investment Discovery Museum	<ul style="list-style-type: none"> Developing and updating the Maruey app to provide more convenient access to resources of the library both in a form of e-library and a large variety of books Developing and disseminating knowledge via financial planning board game or Moneyfolio, and conducting training courses for teachers and professors nationwide on how to effectively use such educational media for online classes Improving exhibitions in the INVESTORY Investment Discovery Museum with the concept of "Inspire to Invest for Sustainability" Developing virtual tour in the INVESTORY Investment Discovery Museum to provide the similar experience to an onsite visit Disseminating financial knowledge for students across the country through Online Mobile Exhibition on Schools Project in line with school online courses In 2021, learners and the general public accessed Maruey Library and INVESTORY Investment Discovery Museum for a total of 1.72 million visits. <div> </div>



2) Enhancing Financial Planning Knowledge

 Scheme	Implementation in 2021
Happy Money application	<ul style="list-style-type: none">Developing Happy Money app as a tool for beginners in financial management by facilitating users functions such as income and expense records and preparation of financial budgets in a systematic way. In addition, this app assists users to plan and analyze financial health planning, leading to a change in personal financial management behavior.In 2021, the accumulated app downloads (from 2019 to 2021) reached 217,423 times, with a 73 percent rise in the active users to 49,301.
SET Fin Quizz	<ul style="list-style-type: none">Developing SET Fin Quizz website as “National Financial Literacy Assessment Center”, connecting to all SET’s knowledge sources to increase potential of the Thai people in financial planning. In 2021, 6,000 target persons were invited to take the financial knowledge level test via this website for self-evaluation of basic knowledge and create inspiration in financial planning.
SET e-Learning Platform for financial and investment planning	<ul style="list-style-type: none">Collaborating with partners to expand users’ access and develop over 80 courses on SET e-Learning Platform to support knowledge on the financial and investment planning of the target groupIn 2021, SET e-Learning had over 2.20 million followers, a whopping 275 percent rise from 2020.
Happy Money: financial mentors	<ul style="list-style-type: none">Collaborating with partners on ‘Happy Money’ Project to continuously enhance the understanding and knowledge on financial planning especially for working age groups in both formal and informal workers, as well as for elderly personsDeveloping communication media and tools for financial planning in online and office channels such as knowledge clips, courses, and guidelines. For instance, the course of financial mentors on SET e-Learning and retirement program suitable for each target groupShifting the face-to-face learning to Flip Classroom for broader outcomesIn 2021, the number of financial mentors increased by 3,314 persons, adding the accumulated number to 9,121. Such mentors act as intermediaries in expanding financial knowledge to over 3 million persons in any organizations.

Social Impact

SET plays a part in connecting all sectors, including business partners, entrepreneurs, and social and private sectors, to participate in community and social development by contributing human resources and knowledge useful for upgrade of the wellbeing and quality of life of the Thai people.




Support capital market mechanism to drive society towards quality and create equality for everyone



1) SET Social Impact Platform

The SET Social Impact Platform is a knowledge resource and space for social network building by linking business sector which has resources and experiences with social enterprises (SEs) to determine solutions for social and environmental issues through business process. Moreover, this is a channel to create opportunities for entrepreneurs to access information, knowledge, and capital that help to add economic and social values throughout their supply chain, such as joint ventures, employment, as well as product and service supports. In 2021, the key implementations were elaborated as below.

 Scheme	Implementation in 2021
SE101 Online Offering	<ul style="list-style-type: none">Developing online learning channel via www.setsocialimpact.com to make fundamental knowledge on social enterprise accessible to those who take courses. The enhancement of critical thinking (learning) is focused together with real practices (learning by doing). In 2021, there were over 260,000 users that reached the learning channel.
SE102 and SET Social Impact Gym	<ul style="list-style-type: none">Offering a workshop training course, SE102 for 27 social entrepreneurs, eight of them were selected to join SET Social Impact Gym Project to learn and beef up skills for being entrepreneurs who are able to create financial and social outcomes towards sustainable growth. 33 top executives of mai and SET's subsidiaries were volunteer coaches to closely give advice on business operation skills and share their useful experiences for business operations.In 2021, over 200 organizations participated in SET Impact Platform and joined hands to address over 50 social and environmental issues through business networking.



2) Social Responsibility

The SET's BoG and the SET Foundation center on and support quality of life improvement of the underprivileged group to narrow disparity and create equality in society.

	Scheme	Implementation in 2021
Disaster mitigation	<p>SET analyzed severity of the COVID-19 pandemic and found that assistance needs were different in each period, so budget and resources were allocated based on emergency and magnitude of problems to 28 public health-related agencies in Bangkok and other provinces to ensure that people and agencies would fully receive assistance. SET's aid focused on hospitals with high number of patients but shortage of necessary medicine, and medical equipment and supplies. SET also supported vaccination research to curb the COVID-19 outbreak. Moreover, another 25 foundations, charity organizations and volunteer networks were provided support. Key performances were as follows:</p> <ul style="list-style-type: none"> • Stage 1: at the beginning stage of the outbreak, the infected cases were rapidly increased, resulting in the shortage of equipment and ventilators. SET proactively provided over 10,000 pieces of equipment to ease the shortage and widen opportunity for all to quickly access public health services. • Stage 2: due to spike in infected cases, the capacity of hospitals was limited resulting in a lack of patient beds. SET actively supported to build field hospitals and supplied other equipment to patients in communities and home isolation system. • Stage 3: the situation became more severe and uncontrollable. The government imposed restrictions on areas and economic activities that led to the higher unemployment rate and the wider disparity, particularly among low income earners. SET therefore supported volunteer groups such as Tae Jai, Khlongtoey Dee Jung, Zendai, Duang Prateep Foundation, Ped Thai Su Pai, 'Thoong Karn-Rean-Roo Pun Yim' project (smiling learning bags) of Equitable Education Fund, and Pid Thong Lang Phra Foundation to alleviate the affected people by creating jobs to enable them to generate income during the crisis. • Stage 4: to provide equal access to medicine and equipment, SET supported research & development of COVID-19 vaccines that are safe and meet standard under vaccination for Thais project. <p>These developments increased quality of public health system and alleviated burden of related public health personnel to overcome the crisis and adapt to the situation. Besides, SET helps vulnerable group who are the underserved and unable to access healthcare security for a better quality of life. Details of SET's actions were as below.</p>	
	List of Donation	Budget (THB)
	1) Supporting public and field hospitals in Bangkok and other provinces in securing necessary medical equipment for COVID-19 treatment, such as ventilators, high-flow oxygen and pressure regulators, portable negative pressure rooms, and personal protective equipment	28,371,000



Scheme

Implementation in 2021

List of Donation	Budget (THB)
2) Providing equipment for medical treatment, such as mobile COVID-19 test vehicles, negative pressure rooms and breathing apparatus, and creating jobs (from May to December 2021)	14,490,000
3) Monetary donation for hardship alleviation to cover living expenses through volunteer networks of civil societies and charitable organizations, and to the needy and the underprivileged people, and communities surrounding the SET's building	14,900,000
4) Supporting a budget for the COVID-19 management platform and databased system in emergency developed by the digital startup, Ped Thai Su Pai (Thai Ducks Fighting the Crisis)	5,000,000
5) Supporting study and research of the COVID-19 vaccination conducted by agencies developing vaccines for Thais, including Chula-Baiya Vaccine Project, the Faculty of Pharmaceutical Sciences, Chulalongkorn University; and ChulaCov19 Project, the Faculty of Medicine, Chulalongkorn University as well as King Chulalongkorn Memorial Hospital, the Thai Red Cross Society	40,000,000





Scheme

Implementation in 2021

Enhancing youth athlete potential

- Supporting junior table tennis's athletes for eight years through Table Tennis Association of Thailand by providing budget for training, in-camp training, organizing SET Star Junior Table Tennis program and sending athletes to join national and international competitions to improve their potential in turning professionals and gain reputations to Thailand's table tennis circle
- In 2021, two athletes under SET Star Junior Table Tennis program were selected to join the Olympic Games in Tokyo 2020 in Japan, marking the first time in Thailand's table tennis history that local athletes participated in the Olympic Games and advanced to the round of the final 16 players.

Executive Functions Approach

Executive Functions Approach is to develop executive functions (EF) necessary for growing up as adults with appropriate qualifications in terms of both emotional or social health. The key developments were as follows:

- Creating EF Facilitator in public health network by collaborating with partners to provide knowledge for caregivers who take care of primary school children in nurseries, doctors and nurses who treat youth and children in hospitals and public health promotion centers, executives in local administration organizations, communities, and parent. In this regard, the Phaya Mengrai Hospital in Chiang Rai province is a role model. In 2021, this pilot project was expanded to another two districts in Chiang Rai province. Therefore, the public health networks gain EF knowledge and understanding, which had developed EF to over 5,000 primary school children. Over 400 teachers and parents have also received EF knowledge and applied to the children.
- Creating EF educational personnel including executives and teachers in schools, educational supervisors and parents with Lamplaimat Pattana School in Buriram province as a model school developed into educational network of 20 schools in 14 provinces. There were 324 executives and teachers participated in EF training and able to arrange new teaching plan for schools that benefits around 9,000 students and family members.

Assistance to vulnerable and the underprivileged groups

- Sarn Fun Scholarship Project
- Collaborating with Equitable Education Fund (EEF) through the SET Foundation to offer the three-year scholarships to outstanding students with academic excellence or student athletes, or the underprivileged children whose household income is below the poverty line. In 2021, SET started granting such scholarships for 200 students to complete higher secondary or vocational education levels. These scholarships will help youth to select their career path and professional aside from labor works and then open up opportunities for them to generate more income, lift their family living standard, and escape from inter-generational poverty cycle. Consequently, this will solve social problems, such as crimes, drug addicts, and other issues.
- Positive Energy Music Project "Dek Phum Dee"
Collaborating with the Sukree Charoensuk Foundation to equip underserved children with musical skill to create immunity for them to shy away from substance abuse and all vices, make them proud and generate income. In 2021, there were 270 beneficiaries from this project. The music bands had 11 performances in various events and helped build five model schools under this project.

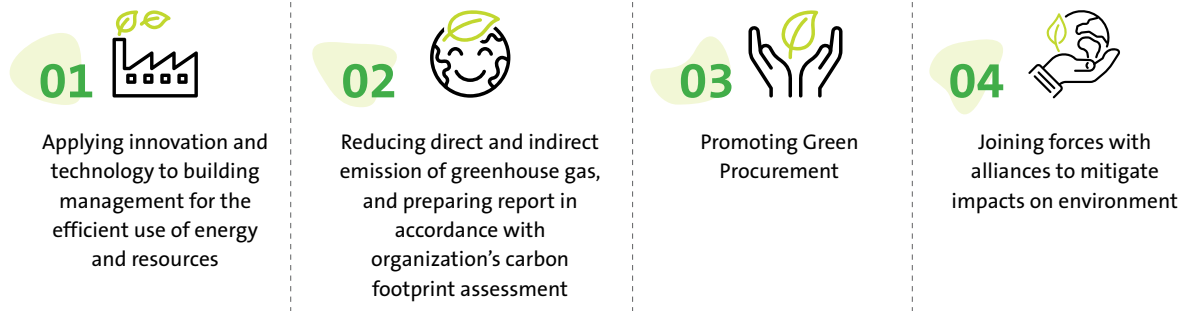


Scheme	Implementation in 2021
Quality of life development	<ul style="list-style-type: none"><u>Relearning Space @ Library Project</u> Since 2020, SET has operated pilot project with Thai Library Association (TLA). The space of public library is used as learning center for community in which people are interested in learning and start 'second career'. The purpose of this project is to generate income for the community. In 2021, there were over 16,000 participants in the training and learning centers had been extended to five in five provinces, consisting of Uttaradit, Surat Thani, Lampang, Ubon Ratchathani, and Phetchabun. In addition, number of training courses reached 78, and generated extra income of THB 388,000 per month, translating into THB 5,315 per person per month.<u>Positive Power of the Music Project 'Wong Ploi Kae'</u> This project aims to promote the quality of elderly life with full of energy and happiness by using music as a channel to create collective activities towards the enhancement of 'mental health'. The establishment of music band, called 'Wong Ploi Kae' at Ban Kha district, Ratchaburi province reinvigorates the elderly, keeps them lively, and makes them more proud of their lives. In 2021, 120 senior citizens joined this project and eight music performances were held in different occasions. Besides, the number of model communities was increased to four, comprising Ban Kha district in Ratchaburi province, Ban Tho district in Chiang Mai province, Yala City Municipality in Yala province, and Plub Pla sub-district in Ratchaburi province.
Pan Hoon Aom Boon and Pan Pol Aom Suk projects	<ul style="list-style-type: none">SET's Thailand Securities Depository (TSD) has gathered shares or monetary benefits for donation to foundations or any charitable agencies, including the Sai Jai Thai Foundation under the Royal Patronage, Ramathibodi Foundation under the Royal Patronage and Faculty of Medicine Vajira Hospital. Donors can give either shares or dividends according to their intentions. In 2021, there were 516 aggregate donors with 629 items worth THB 11.46 million in total.



5.3.5 Environmental Management

The key goal is to provide and use internal resources in the most worthwhile and efficient manner to reduce greenhouse gas emission and mitigate environmental impacts in all business activities, while building attitude and realization of environmental impacts on all employees and stakeholders, and at the same time promoting participation in sustainable environmental management with 4 practice guidelines as follows:



Regarding internal environmental management, SET has outlined environmental policies in accordance with relevant laws, regulations, and standards, by monitoring and reporting the implementation results to the BoG continuously as follows:

Green Building

The SET building serves as the center of the Thai capital market's investment services and learning, consisting of office area and public multi-purpose area, such as Maruey Library and INVESTORY Investment Discovery Museum. To facilitate such activities for convenience and comfort of users, SET has placed importance on the practice along the Green Building concept according to Leadership in Energy and Environmental Design (LEED) standard to make the best use of energy and reduce environmental impacts from the business operations covering key activities as follows:



Reduce environmental impacts from business operations by efficiently using natural resources together with building awareness on climate change issues to achieve sustainable capital market development



1) Efficient Energy Management



Scheme

Implementation in 2021

Electricity conservation

- Applying sensor systems in electrical equipment and appliances along with the plan to reduce the use of electrical appliances in line with the time of use
- Installing solar power generation system or solar panel. The system has been upgraded to double power generating capacity.
- In 2021, the total electricity consumption was 7,761,480-kilowatt hours, down 0.75 percent or 58,349 kilowatt hours. Of the total usage, 7,701,000 kilowatt hours were purchased and the remaining 60,480 kilowatt hours were solar energy. The lower power consumption cut down THB 1.13 million in electricity bills.

Summary of Electrical Consumption (unit: kilowatt hours)

Electricity Consumption in 2020	2021 Target	Electricity Consumption in 2021
7,819,829	7,585,234 (-3.00%)	7,761,480 (-0.75%)

Summary of Electricity Sources

Year	Electricity Purchased (kilowatt hours)	Solar Power Generation (kilowatt hours)	Cost Savings (THB/year)
2020	7,750,000	69,829	2,470,119
2021	7,701,000 (-0.63%)	60,480 (-13.39%)	1,128,138 (-54.33 %)

Promotion of electric vehicle (EV) usage


- Promoting the use of electric vehicles (EV) instead of fuel powered vehicles. The number of hybrid vehicles increased by 25 percent from 2018 or accounted for 65 percent of the organization's total vehicles.
- Providing three parking lots with EV chargers for plug-in hybrid EVs and battery powered EVs
- In 2021, fuel consumption reduced by 21.39 percent or 17,206 liters from 2020 to 63,228 liters due to the higher number of hybrid and electric vehicles and the lower commute trips following the spread of the COVID-19

Summary of Fuel Consumption (unit: liters)

Fuel Consumption in 2020	Fuel Consumption in 2021
80,434	63,228 (-21.39%)



2) Efficient Water Management




Scheme


Implementation in 2021

Water management	<ul style="list-style-type: none">Planning tap water supply system, using water-efficient sanitary ware and treating wastewater continuously to reuse wastewater in the building. The target of treated water usage is at 20 percent of total wastewater.In 2021, the total water consumption was 43,768 cubic meters, rising 3.58 percent or 1,512 cubic meters from 2020.		
	Summary of Tap Water Consumption (unit: cubic meters)		
		2020	2021
	Water consumption	42,256	43,768 (+3.58%)
Total wastewater	12,677	13,060	

3) Efficient Waste Management

Scheme	Implementation in 2021
Waste management in the building	<ul style="list-style-type: none"> Campaigning waste reduction to raise employee's awareness and promote employee engagement in lowering and segregating waste in the right manner under the concept of 'Invisible Waste of Care the Whale Project with the target of 'Zero Waste to Landfill' Promoting waste segregation under the principle of 3R. For instance, reducing single-use plastics such as plastic bags, spoons and forks as well as eliminating the use of plastic bottle Partnering with Siam Cement Group pcl to convert non-recyclable waste into a fuel source for cement production with 45 percent of 18.47 tons of non-recyclable waste being used as fuel for the cement production <div>  <p>Reuse Wastes in Cement Production</p> <p>18.47 Tons</p> </div> <div> <p>=</p> <p>Accounting for 45% Of total waste</p> </div>





Scheme

Implementation in 2021


- In 2021, SET generated 40.961 tons of total waste, down 52.44 percent or 45.16 tons, classified into two types of waste: non-hazardous waste at 40.52 tons and hazardous waste at 0.44 tons. As most of waste was generated from the offices and meeting rooms, the amount of non-hazardous waste was higher than hazardous waste.

Summary of Waste Volume (unit: tons)

	2020	2021
Total waste	86.120	40.961
Non-hazardous waste		
- General waste	33.62	12.86
- Organic waste	28.08	19.56
Hazardous waste	0.26	0.44

4) Greenhouse Gas Management

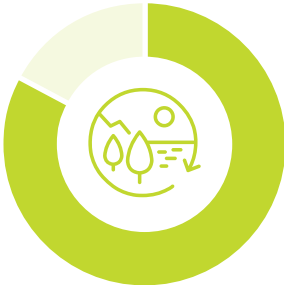


Scheme	Implementation in 2021
Reduction and control of greenhouse gas emissions (GHG)	<ul style="list-style-type: none"> Reducing GHG direct (scope 1) and GHG indirect (scope 2) by capping the total volume of emission at 5,398 tCO₂ eq per year (compared to the base year of 2017) Carrying out operation in line with the organization's energy conservation plan, particularly reduction of purchased electricity to reduce the volume of indirect greenhouse gas emissions which dominated 95 percent of the organization's total GHG emissions
Thailand Voluntary Emission Reduction Program: T-VER	<ul style="list-style-type: none"> Participating in the Thailand Voluntary Emission Reduction Program: T-VER. During 2018-2021, SET managed to reduce 3,663 tCO₂ eq of accumulated GHG emissions by using solar energy and replacing conventional with LED lightbulbs.
Greenhouse gas emission report	<ul style="list-style-type: none"> In 2021, SET's GHG emissions totaled 4,003 tCO₂ eq per year, down 1.29 percent or 53 tCO₂ eq per year from 2020. Preparing the GHG emissions report in accordance with the guidelines of the Carbon Footprint for Organization (CFO) and standard of the Thailand Greenhouse Gas Management Organization (TGO). The report covers GHG scope 1 and scope 2 but it, at the time of going to print, is in process to verify the accuracy of data. <div>  <p>Greenhouse Gas Emissions Reduction</p> <p>4,003 tons of CO₂ equivalent</p> <p>↓ 1.29% from 2020</p> </div>



Scheme	Implementation in 2021	
	Summary of Greenhouse Gas Emissions (unit: tons of CO ₂ equivalent)	
	2020	2021
	Direct GHG emissions (Scope 1)	174153
	Indirect GHG emissions (Scope 2)	3,8823,850
	Total GHG emissions (Scope 1 and Scope 2)	4,0564,003 (-1.29%)

5) Green Procurement

Scheme	Implementation in 2021
Green procurement guidelines	<ul style="list-style-type: none"> Increasing number of environmentally friendly suppliers and green products / services Updating database of green products and services to be a procurement alternative for employees In 2021, SET increased green procurement value to 83.93 percent, exceeding target of 80 percent. <div>  <div> Green Procurement Value Ratio 83.93% a 9% increase from 2020 </div> </div>
Collaboration for promoting green procurement	<ul style="list-style-type: none"> Conducting environmental assessment before and after operations to ensure that suppliers are aware of and take into account environmental impacts. Materials or products used by the suppliers must be reusable and able to create benefits to society after their original intended use. For instance, eliminating the use of plastic and foam decorative materials and using natural or recycled materials. Participating in projects on driving policy to integrate natural or recycled materials into operations to be able to analyze and propose the additional environmentally friendly products / services, and set sustainable and eco-friendly consumption guideline that can be put into practice for various organizations

Greenhouse Gas Emissions Management in Value Chain

SET has created a collaboration network to efficiently accommodate greenhouse gas emissions management in business operations and activities via Climate Care Collaboration Platform consisting of three key initiatives Care the Bear Project, Care the Whale Project, and Care the Wild Project, with important implementations as follows:



Build Collaboration Network to manage environmental impacts, and enhance sustainable ecosystem and greenhouse gas emissions reduction



Scheme

Implementation in 2021

Care the Bear Project: "Change the Climate Change"

- Extending the partnership networks to 125 organizations, including private sector, listed companies, civil sector, government agencies and educational institutions. Such organizations have been members of the network to promote reduction of greenhouse gas emitted in business operations. The guideline for members and partners is in accordance with six cares as below.



Promote the use of public transport and shared mobility



Reduce the use of paper, plastic, and package



Refrain from using foam packaging or for decoration



Reduce energy consumption by using energy-saving electrical equipment



Using reusable decorative materials



Use of reusable decorative materials

- In 2021, the network members managed to reduce greenhouse gas emissions by 2,241.5 tCO₂ eq which is equivalent to planting 249,052 10-year-old trees.



Greenhouse Gas Emissions Reduction

2,241
tCO₂ eq



Planting

249,052
10-year-old Trees





Scheme

Implementation in 2021

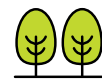
Care the Whale Project

- Extending the waste management project from its origin to destination under the concept of 'Invisible Waste' to other districts in Bangkok such as Khlong Toei, Ploenchit, Salaya, and Ramintra. In addition, the partnership network has been expanded to Saha Pathanapibul pcl and Wat Chak Daeng to jointly develop a model community, Kung Bangkachao community under the "Zero Waste Station @Bang Kachao River Bend" Project, under which provided a training course on waste segregation and built the community collaboration to sort and recycle their household waste at Wat Chak Daeng.
- In 2021, Care the Whale Project reduced greenhouse gas emissions by 9,760.9 tCO₂ eq which is equal to planting 1,085,451 10-year-old trees.



Greenhouse Gas Emission Reduction

9,760
tCO₂ eq



Planting

1,085,451
10-year-old Trees

Care the Wild Project "Plant & Protect"

- Developing 'Care the Wild' digital platform to connect the collaboration with public and private sectors with an aim to facilitate the fundraising for reforestation activities by increasing at least 500 Rais in forest areas across the country, equivalent to planting 100,000 trees. In comparison, such trees can absorb greenhouse gas of 900,000 tCO₂ eq. The partners can conveniently select areas and monitor progress of the reforestation through Care the Wild app.
- In 2021, Care the Wild Project had 15 partners and planted 27,000 trees in 135 Rais of six forest communities (1 Rai = 1,600 Square meters). This can reduce greenhouse gas emissions at 243 tCO₂ eq. Moreover, site visit to survey and monitor progress of reforestation have been held with donors, communities and Royal Forest Department every 6 months to ensure that the trees can be grown up sustainably.



Greenhouse Gas Emissions Reduction

243
tCO₂ eq



35 Rais of Reforestation Areas

27,000
Trees





6 Corporate Governance Policy



6.1 Overview of Corporate Governance Policy and Practice

6.1.1 Corporate Governance System

SET's corporate governance system is in accordance with **"Corporate Governance Policy and Code of Conduct of the SET Group"** which has to be strictly practiced by the SET governors, committee members, experts, and employees at all levels enterprise-wide. Such policy is in line with international standard of the Organization for Economic Co-operation and Development (OECD) while the Principles of Good Corporate Governance for listed companies are also applied. In addition, the SET BoG monitors the implementation in compliance with such policy regularly to ensure that the internal control system and the organization's operations are adequately transparent and efficient to lead the capital market to achieve the goals regarding credibility and trust from all stakeholders, serving as a good model for other organizations in the Thai capital market.

SET was established under the Securities and Exchange Act B.E. 2535 (1992). The SET BoG has authority and duty to formulate

policies to supervise SET's operations and other actions as specified in the Securities and Exchange Act. With realization that SET is an exchange that offers securities trading and related transaction services, the SET BoG adheres to performing the duties according to good corporate governance principles with integrity, transparency, and fairness based on reliable and efficient operation systems to enhance the Thai capital market towards sustainable development and growth in both quantity and quality.

The SET BoG has appointed various committees and members to ensure good corporate governance, and support execution of the SET BoG's duties, including screening important tasks that require specialized knowledge and expertise. Each committee maintains independence in performing their duties as assigned by the SET BoG. The committees appointed by the SET BoG consist of:



For good corporate governance purpose	For regulatory or business purpose
Audit Committee (AC) Nomination and Remuneration Committee (NRC) Sustainability Committee (SC) Risk Management Committee (RMC) Information Technology Committee (ITC) Legal Committee (LC)	Appeals Committee Disciplinary Committee Securities Investor Protection Fund Committee

6.1.2 Policies Relating to Corporate Governance

The SET BoG places importance on corporate governance, legal rights protection and human rights principles for all stakeholders including executives and employees, listed companies, securities firms, intermediaries, investors, regulators, the government sector

and agencies, entrepreneurs, and associations related to the capital market. These are carried out by setting up policies and code of conduct for the implementation of various matters which are integral parts of the SET group's Corporate Governance Policy and Code of Conduct. The essence of the policies is as follows:



1) Anti-Corruption Policies

The SET BoG has formulated the policies and measures which are in line with the Anti-Corruption Practical Guide of the Private Sector Collective Action Coalition Against Corruption Council (CAC). The measures to control and oversee are as follows:

- **Regulating and Overseeing Risks on Fraud and Corruption**

Each department must carry out risk assessment on fraud and corruption, as well as specifying measures to manage these risks regularly every year in order to oversee risks at acceptable level. The Risk Management Department is responsible for monitoring and updating risk status to the management team, the RMC, and the BoG on a regular basis, while the Internal Audit Department is in charge of examining the outcome and the effectiveness of the related internal control measures.

- **Preventing and Combatting Fraud and Corruption**

The Compliance Department is responsible for giving practical advice to various working units, ensuring compliance with the anti-corruption measures, and receiving whistleblowing complaints which could be fraud and corruption. After receiving the complaints, the Compliance Department and the Internal Audit Department are responsible for jointly conducting a fair and transparent investigation process for all related parties, and preparing a summary report to the SET President and the AC. Besides, SET is committed to practicing the “No Gift Policy” which has been continuously conducted aiming to build good standards of the SET group’s operations altogether with integrity and transparency.

2) Policy on Acquisition or Disposition of Listed Securities, and Reporting on Conflict of Interest

The SET BoG has set up regulations on the acquisition or disposition of governors’ and employees’ listed securities and reporting conflict of interest of governors in order to guard against the use of insider information and the conflict of interest issue. Such regulations consist of key criteria for practices, such as:

- Good practices and restrictions regarding the acquisition or disposition of listed securities of governors and employees
- Criteria for governors in conflict of interest reporting such as reporting on shareholdings, position-holding as governors, executives or advisors in any listed company or any other company. Those reports will be kept as evidence and shall be deemed confidential at the Corporate Secretary Department.

In 2021, each SET governor held positions as directors in not more than five listed companies which is in compliance with the Principles of Good Corporate Governance for listed companies. According to the SET BoG Charter, of which standard is higher, each governor is permitted to be a director in not more than three listed companies, with exception that the holding of position occurs prior to being appointed or elected as governor. Currently, two governors take board seats in more than three but not over five listed companies, in which each of them holds the director position prior to becoming the governor.



3) Policy on the Prevention and Management of Conflict of Interest

SET has set up practice guidelines to prevent and manage conflict of interest for employees in various matters, such as:

- Prohibiting from being a board member of or an advisor to listed companies and / or member companies
- Holding position in other company subject to the President's approval and an approval from the Chairman of the BoG required for the case of the President
- Avoiding conflict of interest with the SET group's benefits. Barring employees with direct or indirect conflict of interest from taking part in any decision making process to make sure of the practice by taking into consideration the benefits of the SET group as utmost important

4) Policy to Prevent the Use of Insider Information and the Safeguarding of Confidential Information

SET has formulated the policies and practice criteria on the use of insider information and the safeguarding of confidential information, such as the measures to prevent the acquisition of confidential information between functions and employees (Chinese Wall measures), and the information classification practices.

5) Policy on the Use of Information Technology (IT) and Communication

SET has formulated the IT Security Policy to ensure that SET's business operations are in line with the principles of security and risk management in the area of IT.

SET communicates to all employees via Intranet, Cybersecurity Awareness curriculum, and surprise test on cybersecurity threats, aiming to motivate employees to realize the compliance with information technology security measures, both in the office and work from home environments.

In addition, SET has allocated both human and financial resources to committedly oversee, prevent, and monitor the IT security, such as setting up various IT Security units under the Information Technology Division, an internal working group to monitor and prevent IT-related threats and the standard manual for operations and report of any unusual IT-related incidents, etc.

6) Policy on Whistleblowing and Complaints

The SET BoG has set up the policy for whistleblowing or complaints for inappropriate behaviors, violation of rights, unlawful or unethical conducts, incorrect financial report, or faulty internal control system of the SET group. Moreover, the Whistleblower Protection Policy has been formulated, enabling whistleblowers or complainants to remain anonymous. The SET officer who takes such whistleblowing information shall keep the information confidential and consider the possible safety and damage that may occur to such persons. In this regard, those who suffer from the damage shall be eased off, and entitled to fair and appropriate process. The SET group provides whistleblowing channels as follows:





For stakeholders

Chairman of the Audit Committee

ChairmanOfTheAuditCommittee@set.or.th

or by postal mail: The Stock Exchange of Thailand,
93 Ratchadaphisek Road, Din Daeng, Bangkok 10400

Internal Audit Department

whistleblow@set.or.th

or by postal mail: The Stock Exchange of Thailand,
93 Ratchadaphisek Road, Din Daeng, Bangkok 10400

SET Contact Center

www.set.or.th/contactcenter

or 0 2009 9999 (during business days and hours)
SET Contact Center will further submit the information and complaints to SET's Internal Audit Department.

For employees

Report whistleblowing or file complaints to Internal Audit Department, Human Resources Management Department, Compliance Department, or supervisors whom employees at all levels trust

In this regard, whistleblowing information and complaints submitted to SET will be examined, processed and filtered to assess possible impact. The matters will be presented to the AC to consider the appropriate measures to be carried out in line with the complaints handling process.

In 2021, SET received one case of whistleblowing information and complaint on improper actions of SET employees. The AC has already taken actions according to the procedures set forth in the Corporate Governance Policy and Code of Conduct. The results showed that such actions were proceeded in accordance with the procedures and guidelines of SET's trading surveillance and SET has already informed to the complainant accordingly.

7) Policy on Best Practice on Stakeholders

SET has emphasized the best practice on all groups of stakeholders with fairness in accordance with laws and relevant standards without infringing the stakeholders' rights. SET also realizes the benefits, ownership,

and equitable rights of other's intellectual property. SET has arranged channels through which the stakeholders can voice their opinions and suggestion, and disclose information to stakeholders in a transparent, adequate and appropriate manner.

A service satisfaction survey is conducted on a yearly basis among the clients including securities companies, listed companies, and asset management companies. In 2021, the result of the survey was highly appreciated with an overall satisfaction score of 90 percent which increased from 88 percent in 2020. SET is committed to improving customer service and working together with market participants continuously. SET has recently implemented a project called SET - ASCO Partnership Model in collaboration with member companies, focusing on three dimensions: products & regulations, investors & infrastructure, and fees. In addition, SET has used the achievement of this project as part of the organization's KPIs in 2021 and set the target of the satisfaction survey for the SET group's services at 80 percent.

Based on these Corporate Governance Policy and Code of Conduct, SET believes that we have a strong foundation to build confidence and bring maximum efficiency to the stakeholders in the capital market, while promoting enhancement in business capabilities and personnel potential, especially the excellence in work, in line with the 2021 strategies. In a meantime, SET is well-prepared to drive the 2022 strategic direction ‘Connecting opportunities x Transforming possibilities’, navigating the current capital market together with the future world, connecting the investment and sustainability aspects to the business and social sectors to grow together harmoniously.

6.2 Significant Developments in Corporate Governance in 2021

The SET BoG realizes the changes of society and the demand of stakeholders across sectors, and has taken these into consideration to drive the organization as planned in the 2021-2023 strategic direction. Therefore, the SET BoG has prioritized the review of policies, guidelines, and good corporate governance systems to be implemented according to the development direction. In 2021, the BoG at meetings on January 20, 2021 and December 14, 2021 resolved to approve the review of CG policies

by revising component and expanding duty scope of the LC as well as adding policy formulation on hiring government officials to be governors, experts or advisors to the SET group (details are included in Section on ‘*Report on Key Performance Regarding Corporate Governance*’ page 121).

Given the determination of strengthening the organization and sustainable growth, SET in 2021 received world-class awards which demonstrate the achievement of the process of corporate governance and thrust.

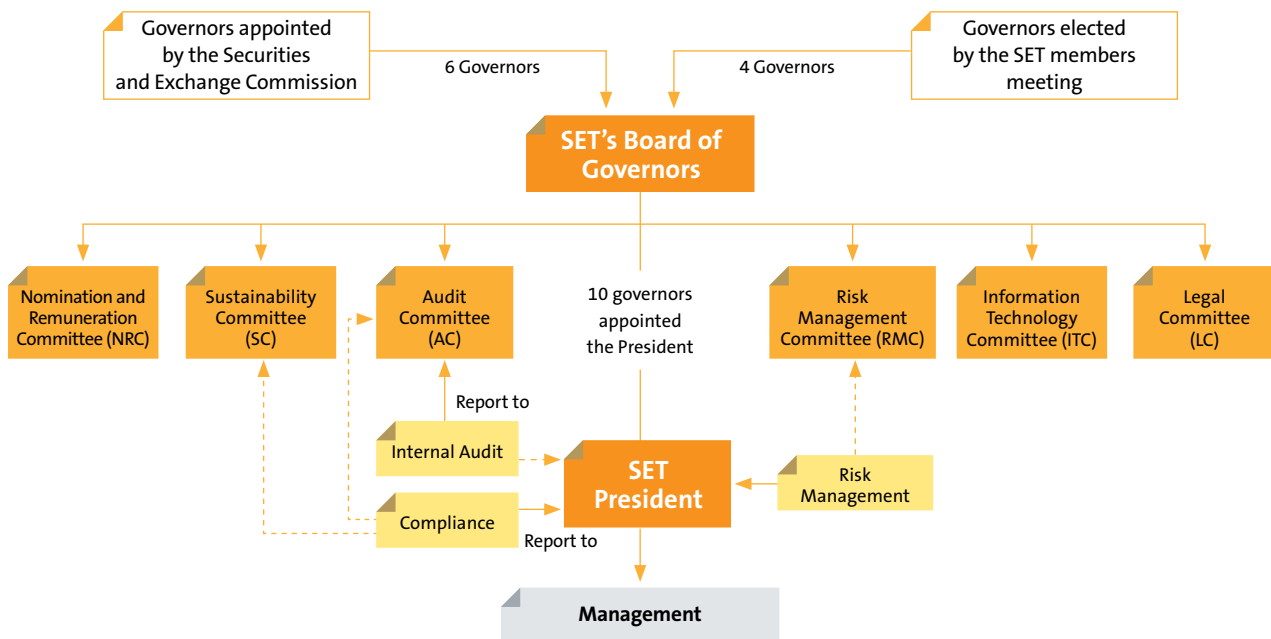
- **“Best Stock Exchange Southeast Asia 2021”**
from Global Banking and Finance Review magazine reflects SET’s outstanding operations, ability to efficiently adapt to changes, and development of infrastructure that connects the capital market ecosystem to facilitate the operations of the industry as a whole.
- **“ESQR’s Quality Achievements Award 2021”**
from European Society for Quality Research (ESQR) is presented to organizations that are successful in developing quality products and services, together with promoting potential of personnel in the capital market, such as entrepreneurs, professionals, and investors, as well as the public, on a continuous basis.



7 Corporate Governance Structure and System

7.1 Corporate Governance Structure

The SET Board of Governors (BoG) has the authorities and duties to govern, oversee and control the operations of the SET group, including other operations and duties in compliance with the Securities and Exchange Act, having the SET President as the highest-ranking executive who adopts the policies from the BoG and implements to achieve the goals. In addition, the SET BoG has also set up committees to screen important governance-related issues to the governors, and assign other internal functions to govern, oversee and audit the implementation for efficiency and transparency. The Governance Structure is illustrated below:

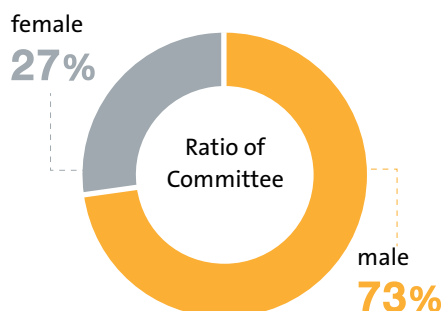


7.2 Information on the Board of Governors

7.2.1 The Board Composition

The structure and term of the BoG are in accordance with the Securities and Exchange Act. The essence of the information is as follows:

- 1) The BoG comprises 11 governors, 10 of them (including Chairman) are non-executive governors and the other one is the SET President who is an executive. The Chairman cannot be the same person as the SET President.
- 2) The term of non-executive governor is three years and each governor may be re-appointed for a maximum of two consecutive terms. The tenure of the SET President is four years and after the term ends, the BoG can consider the reappointment.



Ratio of Female to Male Committee Members (persons)

1 : 2.7



female
3 persons



male
8 persons

The SET Board of Governors: Name and Position of each Governor

	Name of the SET BoG		Position in Committee					
	Name-Surname	Position	AC	RMC	NRC	SC	ITC	LC
1	Dr. Prasarn Trairatvorakul	Chairman						
2	Pichet Sithi-Amnuai	Vice Chairman		●			○	
3	Dr. Anuchit Anuchitanukul	Governor		○			●	
4	Dr. Kulpatra Sirodom	Governor	○	○	○			
5	Norachet Sangruji	Governor	○	○	○			
6	Paiboon Nalinthrangkurn	Governor		○		○	○	
7	Dr. Seree Nonthasoot	Governor	○			○		●
8	Sopawadee Lertmanaschai	Governor	●		○	○		
9	Thiti Tantikulanan	Governor		○	○		○	
10	Voravan Tarapoom	Governor	○		●	●		
11	Dr. Pakorn Peetathawatchai	President		○		○	○	○

Remarks: ● stands for Chairman

○ stands for members of committees.

Please note that the qualified and external experts have not been included in the above list of RMC, ITC, and LC.

Name list of the 2021 committees is available on page 104

7.2.2 Roles, Duties and Responsibilities of the Board of Governors and President

The SET BoG has the authorities and duties to set the policy, govern and control the SET group's implementation and other operations in accordance with the Securities and Exchange Act and other applicable laws. In addition, the BoG Charter has specified the responsibilities and duties of the BoG, the duties of the Chairman, etc. Such Charter has been disseminated via the SET website. The roles and duties of the SET BoG and the management are clearly separated as follows:



QR Code
SET Board of
Governors Charter

Roles, Duties, and Responsibilities

The Board of Governors	<ul style="list-style-type: none"> To set strategic directions, policies and goals of the organization, as well as to govern and oversee the management so as to implement according to the policies, regulations, as well as in compliance with related laws To approve the strategic plan, annual budget and manpower plan To govern and oversee to ensure that the accounting system, financial reporting, internal control, internal audit, corporate governance tasks, and risk management systems are effective and reliable To assign and delegate authority to the management at appropriate level for efficient operation, as well as having good internal control system
The President	<ul style="list-style-type: none"> To be responsible for managing SET's businesses according to the policies, strategic goals, laws and regulations as specified by the BoG To update the progress of the operations according to the strategic plans, and SET's performance, including the key operating results of subsidiaries and joint ventures, to the BoG on a quarterly basis

In addition, the SET BoG has granted authorities to a certain extent to the management, such as authorizing the use of fixed assets and operational budgets (within the limits approved by the BoG), the procurement of products and services within the THB 20 million budget, and the annual increase in manpower of up to 10 percent, etc.






Board of Governors


Data as of December 31, 2021




 **Dr. Prasarn Trairatvorakul**
Chairman

 **Pichet Sithi-Amnuai**
Vice Chairman




 **Dr. Anuchit Anuchitanukul**
Governor



 **Dr. Kulpatra Sirodom**
Governor



 **Norachet Sangruji**
Governor





➤ **Paiboon Nalinthrangkurn**
Governor



➤ **Dr. Seree Nonthasoot**
Governor



Sopawadee Lertmanaschai
Governor



Thiti Tantikulanan
Governor



Voravan Tarapoom
Governor



Dr. Pakorn Peetathawatchai
President





Board of Governors

Dr. Prasarn Trairatvorakul

Chairman

Age 69 years

Assume the position of governor on February 5, 2021

Education

- Doctor of Business Administration, Harvard University, Massachusetts, USA
- Master in Business Administration, Harvard University, Massachusetts, USA
- Master of Engineering in Industrial Engineering and Management, Asian Institute of Technology
- Bachelor of Engineering, First class Honors in Electrical Engineering, Chulalongkorn University
- Honorary Doctor of Economics, Chulalongkorn University
- Honorary Doctor of Philosophy, National Institute of Development Administration
- Honorary Doctor of Economics, The University of the Thai Chamber of Commerce
- Honorary Doctor of Economics, Khon Kaen University
- Honorary Doctor of Business Administration, Rajamangala University of Technology Suvarnabhumi

Executive Program

- Certificates: 1. The Role of the Chairman Program; 2. Director Certification Program; 3. Ethical Leadership Program; 4. Board Nomination and Compensation Program and 5. IT Governance and Cyber Resilience Program, Thai Institute of Directors Association
- Diploma, the Joint State-Private Sector Course, the National Defense College
- Certificate, the Executive Program of Energy Literacy for a Sustainable Future, Thailand Energy Academy

Other Current Positions

Position in Listed Companies

- Chairman, Central Retail Corporation Public Company Limited
- Chairman, SCG Packaging Public Company Limited
- Chairman, Pruksa Holding Public Company Limited
- Independent Director, the Siam Cement Public Company Limited

Position in Private Limited Companies or Other Businesses

- Chairman, Capital Market Development Fund
- Chairman, Thailand Futures Exchange Public Company Limited
- Chairman, the SET Foundation
- Director, Crown Property Bureau Equity Company Limited
- Director, Siam Sindhorn Company Limited
- Senior Advisor, Central Group
- Chairman of the Board, Mahidol Wittayanusorn School
- Chairman of the Board of Governance, Equitable Education Fund
- Chairman of the Board of Directors, Thailand Development Research Institute
- Executive Director, Thai Red Cross Society
- Advisor, Crown Property Bureau
- Member, Property Management Committee, Chulalongkorn University
- Member, Asset Management Committee of Vajiravudh College

Past Experiences

- Secretary-General, Securities and Exchange Commission
- President, Kasikornbank Public Company Limited
- Governor, Bank of Thailand
- Chairman, National Economic Reform Committee of Thailand
- Chairman, Public Procurement Committee of Thailand
- Member, Education Reform Committee of Thailand
- Member, State Enterprises Supervisory Board of Thailand

Pichet Sithi-Amnuai

Vice Chairman

Age 56 Years

Assume the position of governor on February 5, 2021

Education

- Master of Education, Program in Early Childhood Education, Chulalongkorn University
- Master of Business Administration, University of Texas at Austin, USA
- Bachelor of Engineering (Industrial Engineering), Chulalongkorn University

Executive Program

- Certificates: 1. Director Leadership Certification Program; 2. Director Certification Program; 3. Audit Committee Program; 4. Role of the Compensation Committee; 5. Corporate Governance for Capital Market Intermediaries; 6. Monitoring Fraud Risk Management; 7. Monitoring the Internal Audit Function; 8. Monitoring the Quality of Financial Reporting; 9. Successful Formulation & Execution the Strategy; 10. Anti Corruption for Executive Program and 11. What the Board Should Do in a Turnaround Situation, Thai Institute of Directors Association
- Certificate, TLCA Leadership Development Program
- Certificate, TLCA Executive Development Program
- The Executive Program in Energy Literacy for a Sustainable Future, Thailand Energy Academy
- Business Revolution and Innovation Network, The Federation of Thai Industries
- Certificate, Capital Market Academy Leadership Program, The Stock Exchange of Thailand

Other Current Positions

Position in Listed Companies

-

Position in Private Limited Companies or Other Businesses

- Chairman of the Risk Management Committee, Member of the Information Technology Committee and Member of the Securities Investor Protection Fund Committee, The Stock Exchange of Thailand
- Member, Derivatives Investor Protection Fund, Thailand Futures Exchange Public Company Limited
- Vice Chairman and Member of the subcommittee, The SET Foundation
- Member, The Fund Performance Evaluating Committee, Capital Market Development Fund
- Director, CMDP Digital Infrastructure Company Limited
- Director, Association of Thai Securities Companies
- President, Bualuang Securities Public Company Limited
- Director and Chairman of Risk Management Committee, TSFC Securities Public Company Limited
- Director, SS Family Holding Company Limited
- Director, HO HO Kitchen Company Limited
- Director, ASCO Business Promotion Company Limited

Past Experiences

- Member, Disciplinary Sub-committee, Thailand Futures Exchange Public Company Limited
- Member, Business Conduct Sub-committee, Thailand Clearing House Company Limited
- Specialist, Thai Listed Companies Association's representative; Appeals Committee, The Stock Exchange of Thailand
- Independent Director and Chairman of the Audit Committee, Mermaid Maritime Public Company Limited
- Director, Master Franchise of Gymboree Play & Music in Thailand, Play & Music Company Limited
- First Vice President of Corporate Finance Department, Jardine Fleming Thanakorn Securities Company Limited
- Assistant General Manager, International Business Division, MMC Sittipol Company Limited

Dr. Anuchit Anuchitanukul

Governor

Age 50 years

Assume the position of governor on February 5, 2021

Education

- Doctor of Philosophy in Computer Science, Stanford University, USA
- Master of Science in Computer Science, Stanford University, USA
- Master of Business Administration, Chulalongkorn University
- Bachelor of Engineering (1st Class Hons), Chulalongkorn University

Executive Program

- Strategy and Innovation for Businesses in Asia (SIBA 2012), CMMU-MIT
- Top Executive Program in Commerce and Trade, University of the Thai Chamber of Commerce
- Certificate, Director Certification Program, Thai Institute of Directors Association
- Certificates: 1. Thailand Insurance Super Leadership Program and 2. Thailand Insurance Leadership Program, OIC Advanced Insurance Institute - Office of Insurance Commission
- Executive Education (Program for Senior Management 4), Fiscal Policy Research Institute (FPRI) Kellogg-Schulich-Maxwell
- Certificate, TLCA Executive Development Program
- Certificate, Economics & Investment Analysis, Faculty of Economics, Chulalongkorn University
- Certificate, Capital Market Academy Leadership Program, The Stock Exchange of Thailand

Other Current Positions

Position in Listed Companies

- Independent Director and Member of the Audit Committee, I.C.C. International Public Company Limited
- Director, WHA Corporation Public Company Limited
- First Executive Vice President, Advisor to Chief Executive Office, Kiattakin Phatra Bank Public Company Limited

Position in Private Limited Companies or Other Businesses

- Chairman, SET Venture Holding Company Limited
- Chairman of the Information Technology Committee and Member of the Risk Management Committee, The Stock Exchange of Thailand
- Director, The SET Foundation
- Chairman and Member of the Audit Committee, Arkitetura Company Limited
- Director, Aksorn Education Company Limited
- Director and Member of the Audit Committee, Capital Market Development Fund Committee
- Expert Member, Commission Policy on Private Participation in State Affairs, State Enterprise Policy Office
- Director, Committee For The Protection Of Credit Information
- Electronic Transactions Committee/Computer Science Qualified Committee/Subcommittee on Standards and Governance/Strategic and Promotion Subcommittee
- State Enterprise Development Assessment Sub-committee for Digital Transformation and Knowledge and Innovation Management, State Enterprise Policy Office
- Advisor/Member in Committee for the Digitalization of the Revenue Department, The Revenue Department

Past Experiences

- Director and Member of the Risk Management Committee, Bangkok Corporation Public Company Limited
- Subcommittee on Digital Strategy of Capital Markets
- Advisor, National e-Payment Committee, Ministry of Finance
- Directors of the Big Data Steering and Management Committee, Ministry of Finance
- Director, Krung Thai Computer Services Company Limited
- Director, Krung Thai Panich Insurance Company Limited
- Director, National ITMX Company Limited
- Director, KTB Securities Company Limited
- Senior Executive Vice President & Managing Director, Krung Thai Bank Public Company Limited
- Director of Business Development and Technology, Freewill Solutions

Dr. Kulpatra Sirodom

Governor

Age 65 years

Assume the position of governor on February 5, 2021

Education

- Doctor of Philosophy in Finance, University of Pittsburgh, USA
- Master of Business Administration in Finance, West Virginia University, USA
- Bachelor of Business Administration in Finance, Thammasat University

Executive Program

- Certificates: 1. Director Certification Program; 2. Audit Committee Program and 3. Director Leadership Certification Program, Thai Institute of Directors Association
- Certificate, Global Association of Risk Professionals
- Certificate, Capital Market Academy Leadership Program, The Stock Exchange of Thailand

Other Current Positions

Position in Listed Companies

- Independent Director, Chairperson of the Audit Committee and Member of the Corporate Governance Committee, Thai Group Holdings Public Company Limited
- Independent Director and Chairperson of the Audit Committee, Thai President Foods Public Company Limited
- Independent Director and Chairperson of the Audit Committee, The Erawan Group Public Company Limited
- Independent Director, Chairperson of the Audit Committee and Member of the Corporate Governance Committee, Thai Wacoal Public Company Limited
- Independent Director, Chairperson of the Audit Committee and Member of the Nomination and Compensation Committee, TISCO Financial Group Public Company Limited

Position in Private Limited Companies or Other Businesses

- Member of the Audit Committee, Member of the Nomination and Remuneration Committee and Member of the Risk Management Committee, The Stock Exchange of Thailand
- Independent Director and Member of the Audit Committee, TISCO Bank Public Company Limited
- Member, The Fund Performance Evaluating Committee, Capital Market Development Fund
- Member and Treasurer, Social Enterprise Thailand Association
- Director and Chairperson of the Audit Committee, Thai Listed Companies Association
- Independent Director and Chairperson of the Audit Committee, Mae Fah Luang Foundation
- Director and Member of the subcommittee, The SET Foundation
- Director, The Siam Commercial Foundation
- Director, Professor Sangvian Indaravijaya Foundation

Past Experiences

- Member, Appeals Committee, The Stock Exchange of Thailand
- Independent Director, Thailand Securities Depository Company Limited
- Independent Director and Chairperson of the Risk Management Committee, Thailand Clearing House Company Limited
- Director, Member of the Audit Committee and Member of the Corporate Social Responsibility Committee, The Siam Commercial Bank Public Company Limited
- Independent Director, Total Industrial Services Company Limited
- Expert Member of The Board of Director, Member of the Risk Management Committee and Member of the Investment Risk Management Sub-Committee, Social Security Fund
- Advisor, Federation of Accounting Professions Under The Royal Patronage of His Majesty The King
- Member, Revolving Evaluation Sub-Committee, Comptroller General's Department
- Member, Risk Management Sub-Committee, Government Pension Fund
- Director, H.R.H. Prince Pijitjirapa Tevakul Foundation
- Dean, Faculty of Commerce and Accountancy, Thammasat University

Norachet Sangruji

Governor

Age 59 Years

Assume the position of governor on August 5, 2019

Education

- MBA in Finance & Marketing, Syracuse University, USA
- MS in Electrical Engineering (Telecommunication), Syracuse University, USA
- BSc in Electrical Engineering, Chulalongkorn University

Executive Program

- Certificates: 1. Director Leadership Certification Program; 2. Director Refreshment Program; 3. Directors Accreditation Program; 4. Director Accreditation Program and 5. Corporate Governance for Capital Market Intermediaries, Thai Institute of Directors Association
- Advanced Certificate Course in Politics and Governance in Democratic Systems for Executives, King Prajadhipok's Institute
- Certificate, Capital Market Academy Leadership Program, The Stock Exchange of Thailand

Other Current Positions

Position in Listed Companies

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Position in Private Limited Companies or Other Businesses

- Member of the Audit Committee, Member of the Risk Management Committee and Member of the Nomination and Remuneration Committee, The Stock Exchange of Thailand
- Director, The SET Foundation
- Member, The Fund Performance Evaluating Committee, Capital Market Development Fund
- Chairman of the Advisory Board, Investment Banking Club, Association of Securities Companies
- Member, Audit Committee, Kiatnakin Phatra Securities Public Company Limited
- Director, KKP Capital Public Company Limited
- Director, Kiatnakin Phatra Securities Public Company Limited
- Advisor, Kiatnakin Phatra Financial Group
- Associate Director, Association of Thai Securities Companies
- Director, Noppakit Company Limited
- Director, Pantavanij Company Limited
- Director, Kasetsin Company Limited
- Advisor to Management Committee, Mitr Technical Consultant Company Limited

Past Experiences

- First Executive Vice President and Head of Corporate Banking Group, Kiatnakin Bank Public Company Limited
- Chairman, Investment Banking Club, Association of Securities Companies
- Executive Director, Phatra Securities Public Company Limited
- Managing Director / Head of Investment Banking, Phatra Securities Public Company Limited
- Managing Director, Phatra Securities Public Company Limited

Paiboon Nalinthrangkurn

Governor

Age 55 years

Assume the position of governor on August 5, 2019

Education

- Master of Business Administration in Finance, Indiana University at Bloomington, USA
- Bachelor of Arts in Computer and Information Sciences, University of California at Santa Cruz, USA

Executive Program

- Certificates: 1. Director Certification Program; 2. Director Accreditation Program and 3. Corporate Governance for Capital Market Intermediaries, Thai Institute of Directors Association
- Certificate, Chartered Financial Analyst, CFA Institute, USA
- Certificate, Capital Market Academy Leadership Program, The Stock Exchange of Thailand

Other Current Positions

Position in Listed Companies

- Senior Executive Vice President, TISCO Financial Group Public Company Limited

Position in Private Limited Companies or Other Businesses

- Chief Executive Officer, TISCO Securities Company Limited
- Director, Capital Market Development Fund
- Director and Member of the subcommittee, The SET Foundation
- Member of the Corporate and Sustainability Committee, Member of the Risk Management Committee and Member of the Information Technology Committee, The Stock Exchange of Thailand
- Chairman of the Research Committee, Member of the Investment Committee and Member of the Nomination and Remuneration Committee, Capital Market Development Fund
- Honorary Advisor to the Senate Committee on the Economy
- Chairman, Federation of Thai Capital Market Organizations
- Director, Thai Capital Market Development Committee, Ministry of Finance
- Chairman, Investment Analysts Association

Past Experiences

- Honorary Advisor, National Reform Steering Assembly Committee on the Economy
- Chairman, the Sub-committee on Capital Market Reforms, the National Reform Council
- Member, the National Reform Council
- Member, Joint Public and Private Sector Consultative Committee



Dr. Seree Nonthasoot

Governor

Age 48 years

Assume the position of governor on August 5, 2019

Education

- Doctor of Philosophy, University of Oxford, England, United Kingdom
- Magister Juris in European and Comparative Law, University of Oxford (on the British Chevening Scholarship granted by the United Kingdom's government)
- Master of Laws in International Law, Columbia University School of Law, (on the Fulbright Scholarship)
- Barrister-At-Law, The Thai Bar Under the Royal Patronage
- Graduate Diploma in Business Law, Thammasat University
- Bachelor of Laws, Thammasat University, Bangkok, Thailand

Executive Program

- Certifications: 1. Director Leadership Program; 2. Advanced Audit Committee Program and 3. Director Certification Program, Thai Institute of Directors Association
- Foundations in Responsible Investment, Institute UN PRI
- GRI Professional Certification Reporting Initiative, GRI Academy
- The Program of Senior Executive of Justice Administration, National Justice Academy, Judicial Training Institute, Office of Courts of Justice
- ASEAN Leader Program, Office of the Civil Service Commission, Office of the Prime Minister and Sasin Graduate Institute of Business Administration
- Executive Certificate Program in Good Governance for Medical Executives, King Prajadhipok's Institute and the Medical Council of Thailand
- Infrastructure in a Market Economy: Public-Private Partnerships in a Changing World, Kennedy School of Government, Cambridge, Massachusetts, USA
- The Practice of Trade Policy: Economics, Negotiations and Rules, Cambridge, Massachusetts, USA
- Asia-Europe Programme, Institut D'etudes Politiques (Sciences Po)
- Certificates: 1. CMA-GMS; 1. Capital Market Academy Executive Education; 2. Capital Market Academy Leadership Program, The Stock Exchange of Thailand

Other Current Positions

Position in Listed Companies

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Position in Private Limited Companies or Other Businesses

- Board member, Director of Audit Committee, Director and Chair of Good Corporate Governance and Sustainability Committee, Gunkul Power Development Company Limited
- Chairman of the Legal Committee, Member of the Audit Committee and Member of the Sustainability Committee, The Stock Exchange of Thailand
- Member of the United Nations Committee on Economic, Social and Cultural Rights
- Director and Chairman of the Legal Committee and the Audit Committee, Dhanarak Asset Development Company Limited
- Financial Policy Subcommittee, Thai Health Promotion Foundation
- Board member, Director and Chair of KPI Committee, Neighbouring Countries Economic Development Cooperation Agency (Public Organization)
- Director, The SET Foundation
- Director and Chairman of the Audit Committee and the Legal Committee, Thailand Post Company Limited
- Senior Executive Vice President, Institute of Research and Development for Public Enterprises

Past Experiences

- Board Member and Chair of the Corporate Governance Committee, Government Pension Fund
- Member of the Appeals Committee and Chairman, Securities Investor Protection Fund Committee, The Stock Exchange of Thailand
- Member of Urgent Law Reform Committee
- Director and Chair of the Audit Committee, Small and Medium Enterprise Development Bank of Thailand (SME Development Bank)
- Director, KTB Computer Services Company Limited
- The Representative of Thailand to the ASEAN Intergovernmental Commission on Human Rights (AICHR)
- Director and Chairman of the Audit Committee, KTB Law Company Limited
- Expert member in the Occupational Safety and Health Committee, Ministry of Labour
- Director, General Hospital Products Public Company Limited
- Legal Counsel, State Enterprise Policy Office, Ministry of Finance (Drafted the bills on public, private partnerships, and state enterprise reform)
- Government Legal Reform Committee, Expert Member (appointed by the prime minister)
 - Member, Law Reform Committee, Chairing the Sub-Committee on Integration of Public Agency Works
- Legal Advisor, Office of the Council of State, Office of the Prime Minister
- Lawyer, Office of the Council of State

Sopawadee Lertmanaschai

Governor

Age 68 years

Assume the position of governor on August 5, 2019

Education

- Master of Science (Accounting), Thammasat University
- Bachelor of Law, Thammasat University
- Bachelor of Science (Accounting), Thammasat University

Executive Program

- The Wharton Advanced Management Program, University of Pennsylvania, USA
- Certificates: 1. Director Certification Program; 2. Director Accreditation Program; 3. Audit Committee Program; 4. Corporate Governance for Capital Market Intermediaries; 5. Director Certification Program Update and 6. Successful Formulation and Execution of Strategy, Thai Institute of Directors Association
- King Prajadhipok's Institute, Intermediate Certificate Course in Good Governance for Executives
- Certificate, Capital Market Academy Leadership Program, The Stock Exchange of Thailand

Other Current Positions

Position in Listed Companies

- Independent Director and Chairperson of Audit Committee, Central Plaza Hotel Public Company Limited
- Independent Director and Chairperson of Audit Committee, Maybank Securities (Thailand) Public Company Limited
- Independent Director and Chairperson of Audit Committee, JSP Pharmaceutical Manufacturing (Thailand) Public Company Limited

Position in Private Limited Companies or Other Businesses

- Chairperson of the Audit Committee, Member of the Nomination and Remuneration Committee and Member of the Sustainability Committee, The Stock Exchange of Thailand
- Director, The SET Foundation
- Director and Secretary, Professor Sangvian Indaravijaya Foundation
- Director, Chotiwat Manufacturing Public Company Limited
- Chairperson and Independent Director, KTBST REIT Management Company Limited
- Advisor to Chairman of the Board of Directors and Member of the Investment Committee, Dhipaya Insurance Public Company Limited

Past Experiences

- Independent Director and Member of The Audit Committee, Intouch Holdings Public Company Limited
- Independent Director, Dohome Public Company Limited
- Director and Chairperson of Audit Committee, Metropolitan Electricity Authority
- Director and Executive Director, Government Pharmaceutical Organization
- Commissioner, The Securities and Exchange Commission, Thailand
- Secretary General, Government Pension Fund
- Director, IRPC Public Company Limited
- Director, Nok Airlines Public Company Limited

Thiti Tantikulanan

Governor

Age 52 years

Assume the position of governor on August 5, 2019

Education

- Bachelor's degree (Business Administration), University of Washington, USA

Executive Program

- Certificate, Corporate Governance for Capital Market Intermediaries, Thai Institute of Directors Association
- Certificate, Capital Market Academy Leadership Program, The Stock Exchange of Thailand

Other Current Positions

Position in Listed Companies

-

Position in Private Limited Companies or Other Businesses

- Member of the Nomination and Remuneration Committee, Member of the Risk Management Committee and Member of the Information Technology Committee, The Stock Exchange of Thailand
- Executive Chairman, Kasikorn Securities Public Company Limited
- Capital Markets Business Division Head, Kasikornbank Public Company Limited
- Director, ASCO Business Promotion Company Limited
- Director, Association of Thai Securities Companies
- Director, The SET Foundation

Past Experiences

- Director, TRIS Corporation Limited
- Legal Committee, The Stock Exchange of Thailand
- First Senior Vice President - Executive Vice President and Senior Vice President, Kasikornbank Public Company Limited
- Director and Member of the Audit Committee, The Thai Bond Market Association.
- Vice President and Head of Trading, HSBC, Bangkok
- Vice President and Head of Trading, JP Morgan, Bangkok
- Vice President and Head of FX Trading, Citibank, Bangkok
- Trader, Standard Chartered
- Officer, Bangkok Bank
- President, ACI Thailand

Voravan Tarapoom

Governor

Age 66 Years

Assume the position of governor on August 5, 2019

Education

- MBA North Texas State University, Denton, Texas, USA (University of North Texas)
- Bachelor of Architecture, Silpakorn University

Executive Program

- Certificates: 1. Director Certification Program; 2. Role of the Compensation Committee; 3. Audit Committee Program; 4. Risk Management Committee Program; 5. The Role of the Chairman Program; 6. Corporate Governance for Capital Market Intermediaries; 7. Monitoring the Quality of Financial Reporting; 8. Monitoring the System of Internal Control and Risk Management; 9. Ethical Leadership and 10. Successful Formulation & Execution of Strategy, Thai Institute of Directors Association
- Certificate, Capital Market Academy Leadership Program, The Stock Exchange of Thailand

Other Current Positions

Position in Listed Companies

-

Position in Private Limited Companies or Other Businesses

- Chairman of the Nomination and Remuneration Committee, Chairman of the Corporate and Sustainability Committee, Member of the Audit Committee and Member of the Appeals Committee, The Stock Exchange of Thailand
- Director, The SET Foundation
- Member, The Fund Performance Evaluating Committee, Capital Market Development Fund
- Honorary Advisor, Thai Financial Markets Committee, Bank of Thailand
- Member, Bond Market Development Committee, Securities and Exchange Commission, Thailand
- Member, Sustainable Finance Working Group and Bond Market Development Committee, Securities and Exchange Commission, Thailand
- Member, The Best Practice for Environmental, Social and Corporate Governance working group, Thai Institute of Directors Association
- Honorary Chairman, Association of Investment Management Companies
- Director and Chairperson of Executive Board, BBL Asset Management Company Limited
- Director, Bangkok Mass Transit System Public Company Limited
- Director, Anti-Corruption Organization of Thailand

Past Experiences

- Member, Disciplinary of Personnel in Capital Market Industry Committee, The Securities and Exchange Commission, Thailand
- Chairperson, the Risk Management Committee, The Stock Exchange of Thailand
- Chairperson, Federation of Thai Capital Market Organizations
- Chief Executive Officer and Managing Director, BBL Asset Management Company Limited
- Deputy Managing Director, MFC Asset Management Public Company Limited
- Managing Director, Thai Asia Asset Management Company Limited (currently UOB Asset Management Company Limited)
- Senior Vice President, Thana One Finance & Securities Public Company Limited
- Vice President, Bank of Asia Public Company Limited
- Account Executive, Datamat Company Limited

Dr. Pakorn Peetathawatchai

President

Age 57 years

Assume the position of President on June 1, 2018

Education

- Doctor of Business Administration in Finance and Economics, Boston University, USA
- Master of Business Administration, Finance Major, University of Wisconsin, USA
- Bachelor of Engineering in Electronics, King Mongkut's Institute of Technology Ladkrabang

Executive Program

- Columbia Senior Executive Program, Columbia University, USA
- Certificates: 1. Director Certification Program; 2. Director Accreditation Program and 3. Corporate Governance for Capital Market Intermediaries, Thai Institute of Directors Association
- Certificate, The Executive Program of Energy Literacy for a Sustainable Future, Thailand Energy Academy
- Certificate, Capital Market Academy Leadership Program, The Stock Exchange of Thailand

Other Current Positions

Position in Listed Companies

-

Position in Private Limited Companies or Other Businesses

- Director, Thai Capital Market Development Committee, Fiscal Policy Office, Ministry of Finance
- Director, Capital Market Development Fund
- Chairman, Thai Digital Assets Exchange Company Limited
- Chairman, Thailand Clearing House Company Limited
- Chairman, Thailand Securities Depository Company Limited
- Chairman, Thai NVDR Company Limited
- Chairman, Thai Trust Fund Management Company Limited
- Chairman, CMDF Digital Infrastructure Company Limited
- Vice Chairman, Thailand Futures Exchange Public Company Limited
- Vice Chairman, SET Venture Holding Company Limited
- Member of the Sustainability Committee, Member of the Risk Management Committee, Member of the Information Technology Committee and Member of the Legal Committee, The Stock Exchange of Thailand
- Director and Secretariat, The SET Foundation
- Member and Secretariat, Federation of Thailand Capital Market Organizations

Past Experiences

- Chairman, Settrade.com Company Limited
- Chairman, FinNet Innovation Network Company Limited
- Chairman, LiVE Fin Corp Company Limited
- Vice Chairman of the Emerging Markets Working Group and Director of World Federation of Exchanges
- Senior Executive Vice President, Head of Corporate Strategy Division and Head of Finance & Investment Division, The Stock Exchange of Thailand
- Senior Executive Vice President, Chief Marketing Officer, The Stock Exchange of Thailand
- Senior Executive Vice President, Finance Mitr Phol Sugar Corporation Limited
- Executive Vice President, Group Head, Treasury Group, Siam Commercial Bank Public Company Limited
- Director and Chairman of the Investment Committee, Siam Commercial New York Life Insurance Public Company Limited



7.3 Information on Committees

The BoG has appointed various committees to ensure good corporate governance and to support the SET BoG's duties: the Audit Committee (AC), the Risk Management Committee (RMC), the Nomination and Remuneration Committee (NRC), the Sustainability Committee (SC), the Information Technology Committee (ITC), and the Legal Committee (LC). Each Committee has clearly specified the scope of duties and responsibilities in the Charter of each Committee, already disseminated via the SET website.


Moreover, three regulatory or business purpose-related committees have been appointed by the BoG to support works in accordance with relevant laws and regulations. These committees are the Disciplinary Committee, the Appeals Committee and the Securities Investor Protection Fund Committee.

The Stock Exchange of Thailand (SET)'s Committees for 2021

Data as of December 31, 2021

7.3.1 Appeals Committee

- Overseeing unit** : Appeal and Litigation Department
- Composition** : At least three but not more than five members (as approved by the SEC Board). Each of At least one committee member must be expert who possesses comprehensive knowledge and experience in each field as follows: legal, accounting & finance, and securities business.
- Terms of office** : According to the SET regulations Re: Consideration and Decision on Appeal B.E. 2543 (2000)

	Name	Position
1. Chatrapee	Tantixalerm ²	Member
2. Chavalit	Chindavanig ¹	Member
3. Kaisri	Nuengsigkapan ¹	Member
4. Somkiet	Kuwawattananont ¹	Member
5. Yaowaluk	Aramthaveethong ²	Member

¹ Term on Dec 2, 2021 - Dec 1, 2024

² Term on Jan 9, 2020 - Jan 8, 2022

Duties of the Appeals Committee are as follows:

1. To consider any appeal made against any punishment order issued by the SET BoG, the Disciplinary Committee, and the SET President, whether the appellant actually did not violate the SET's rules as appealed
2. To consider any request to lessen the execution of punishment orders (if any) and may specify conditions or collaterals as necessary
3. To present opinions to the SET BoG to consider the order of punishment, punishment reduction, punishment omission, or confirmation of the appealed punishment orders, or any order on matters raised by the appellants
4. To order the termination and withdrawal of any appeal previously or during consideration and judgment process by the Appeals Committee

7.3.2 Audit Committee

Overseeing unit : Internal Audit Department

Composition : 1. At least three but not more than five must be SET governors
2. At least half must be governors appointed by the Securities and Exchange Commission (SEC).
3. At least one committee member shall possess knowledge, understanding or experience in accounting, finance or auditing.

Terms of office : According to the terms of office of the SET governors

	Name	Position
1.	Sopawadee Lertmanaschai	Chairperson
2.	Dr. Kulpatra Sirodom	Member
3.	Norachet Sangruji	Member
4.	Dr. Seree Nonthasoot	Member
5.	Voravan Tarapoom	Member

Duties of the Audit Committee are as follows:

1. Financial report

- (1) To review financial reports of the SET group
- (2) To consider and review accounting policies
- (3) To review key or irregular transactions that could impact the financial statements

2. External audit

- (1) To provide advice on the appointment, employment termination, remuneration determination and performance assessment of the auditors of the SET group
- (2) To review the auditing scope and plan of the auditors of the SET group

3. Internal audit

- (1) To consider and review work performance of the internal audit unit
- (2) To consider the internal audit plan
- (3) To consider the budget and resources of the internal audit unit
- (4) To consider and approve the appointment, transfer, employment termination, remuneration payment and assessment of work performance of head of the internal audit unit

4. Internal control and risk management

To consider and assess the adequacy and appropriateness of the internal control system and risk management of the SET group

5. Compliance with relevant laws, rules and regulations

- (1) To ensure compliance with the laws and regulations of the units that govern and oversee the SET group, as well as standards and internal regulations stipulated by the SET group
- (2) To consider related party transactions or the transactions which may cause conflict of interest

6. Whistleblowing and fraud

- (1) To review and take action concerning whistleblowing cases, and investigate any controversial or suspicious action considered against the laws, ethics, infringement of rights, inaccurate financial report, defective internal control system and frauds
- (2) To review the process for preventing and detecting frauds

7. Other duties

- (1) To review financial report of the SET Foundation on a six-month basis and annual basis prior to presenting it to the SET Foundation Committee
- (2) To provide advice pertaining to the appointment, employment termination, remuneration determination, work performance assessment, and the auditing scope and plan of the auditor of the SET Foundation
- (3) To perform other tasks as assigned by the SET Board of Governors (BoG)



7.3.3 Disciplinary Committee

- Overseeing unit** : Regulations & Disciplinary Enforcement Department
- Composition** : Five committee members consisting of:
1. At least one member must be a SET governor.
 2. At least one member must have good knowledge and experience in the business of the stock exchange, securities, or finance.
 3. At least one committee member must be a legal expert.
 4. At least one committee member must be the SET President or an executive holding at least the position of Executive Vice President who is delegated by the SET President.
- Terms of office** : According to the SET regulations Re: Consideration of Offence and Disciplinary Action B.E. 2543 (2000)

	Name	Position
1.	Assoc.Prof. Tithipahan Chuerboonchai	Chairman
2.	Chao Arunyawat	Member
3.	Voravan Tarapoom	Member
4.	Yingyong Nilasena	Member
5.	Paveena Sriphothong	Member

Duties of the Appeals Committee are as follows:

1. To consider an offence and punishment of person who violates or associates with others in violating SET's rules and to report the punishment to the SET BoG except in the following cases where the Disciplinary Committee is required to consider relevant facts and evidences and present viewpoints to the SET BoG for consideration:
 - (1) The order to delist listed securities
 - (2) The order to temporarily suspend trading of a member company
 - (3) The order to revoke membership of a member company
 - (4) Other cases as specified by the SET BoG
2. To consider and order any other matters in accordance with the regulations related to disciplinary violation consideration and punishment; and take any action necessary for the process of disciplinary violation consideration and punishment

7.3.4 Information Technology Committee

- Overseeing unit** : Information Technology Department
- Composition** : At least five but not more than nine members consisting of:
1. At least two SET governors
 2. The SET President
 3. At least two information technology (IT) experts
 4. The Chairman of the Information Technology Club of the Association of Thai Securities Companies
- Terms of office** : 1. Committee member who is a SET governor or the SET President shall be according to the term of office of the governor or the SET President, as the case may be.
2. Committee member who is an outsider and is not a SET governor¹ shall have a tenure of three years until December 31, 2023.

	Name	Position
1.	Dr. Anuchit Anuchitanukul	Chairman
2.	Paiboon Nalinthrangkurn	Member
3.	Pannaporn Sapsomboon	Member
4.	Pichet Sitthi-Amnnuai	Member
5.	Prakrit Thanwalai	Member
6.	Thiti Tantikulan	Member
7.	The SET President	Member

Duties of the Information Technology Committee are as follows:

1. To provide consultation and suggestions on the strategy and policy of SET's IT development, including New IT Strategic Projects of the SET group in order to support the mission as being the center of the capital market. To promote the implementation and give opinions that can benefit SET's IT development in accordance with the set standard recognized by the industry, as well as supporting innovation development and suitable application of technology in order to raise the standard of the Thai capital market to be on par with and competitive to} leading stock exchanges in the region
2. To consider and approve the procurement as follows:
 - (1) The procurement of IT projects with a transaction that costs over THB 20 million but not over THB 50 million. As for the transaction over THB 50 million, the ITC shall screen prior to presenting to the SET BoG for further consideration and approval.
 - (2) The procurement of IT maintenance for a transaction over THB 20 million with no budget ceiling is subject to the budget that has already been approved. In this regard, the ITC shall report the procurements according to item (1) and (2) to the SET BoG for further acknowledgement.
3. To perform other tasks as assigned by the SET BoG

¹ Committee member who is an outsider member and is not a SET governor shall have a term of office of three years at each term and may be eligible for reappointment after the end of the term of office provided that he or she may not hold the position for more than two consecutive terms, unless the SET Board of Governors has considered and viewed that it is necessary for him or her to hold the position for a longer period. However, the consecutive terms of office shall not exceed nine years. At the end of such term, there shall be an interval of at least a period of one year before the reappointment.



7.3.5 Legal Committee

Overseeing unit : Appeal and Litigation Department

Composition : At least five but not more than nine members consisting of:

1. At least a SET governor appointed by the SEC
2. Legal expert and/or capital market expert
3. The SET President

A SET governor shall be Chairman of the Legal Committee. The members of Legal Committee shall not be authorized directors of securities companies, the SET President, Senior Executive Vice President or persons holding equivalent position under other names of securities companies.

Terms of office : 1. Committee member who is a SET governor or the SET President shall have the term of office according to the term of office of the SET governor or the SET President, as the case may be.
2. Committee member who is an outsider and is not a SET governor² shall have the term of office of 3 years until December 31, 2023.

	Name	Position
1.	Dr. Seree Nonthasoot	Chairman
2.	Professor Dr. Kumchai Jongjakapun	Member
3.	Assoc. Prof. Pises Sethsathira	Member
4.	Somkiet Kuwawattananont	Member
5.	Surasak Vajasit	Member
6.	The SET President	Member

Duties of the Legal Committee are as follows:

1. To provide advice, opinions, and suggestions to the SET BoG and SET on matters related to legal issues pursuant to laws on the securities and the exchange, derivatives and other laws, and SET's rules and regulations
2. To consider matters related to key information which is beneficial to SET's future operations (forward looking) and to proactively provide advice on matters related to SET's operations or to provide advice as a precaution to protect the interest of SET, as well as providing opinions or suggestions on various matters which will benefit SET's operations and performing any other duties as assigned by the SET BoG

² Committee member who is an outsider member and is not a SET governor shall have a term of office of three years at each term and may be eligible for reappointment after the end of the term of office provided that he or she may not hold the position for more than two consecutive terms, unless the SET Board of Governors has considered and viewed that it is necessary for him or her to hold the position for a longer period. However, the consecutive terms of office shall not exceed nine years. At the end of such term, there shall be an interval of at least a period of one year before the reappointment.

7.3.6 Nomination and Remuneration Committee

- Overseeing unit** : Human Resources Management Department
- Composition** : 1. At least three but not more than five must be SET governors.
2. At least half of the members must be governors appointed by the SEC.
3. The Chairperson of the NRC must be a governor appointed by the SEC.
- Terms of office** : According to the term of office of the SET governors

	Name	Position
1.	Voravan Tarapoom	Chairperson
2.	Dr. Kulpatra Sirodom	Member
3.	Norachet Sangruji	Member
4.	Sopawadee Lertmanaschai	Member
5.	Thiti Tantikulanan	Member

Duties of the Nomination and Remuneration Committee are as follows:

1. Nomination:

- (1) To consider and screen the list of members of SET's committees before presenting and seeking approval from the SET BoG for further appointment; and to consider and screen the list of directors and committee members of subsidiaries prior to presenting and seeking approval from the Board of the subsidiaries for further appointment
- (2) To consider and screen the list of experts for SET and subsidiaries, before seeking approval from the SET BoG or the subsidiaries' Board (as the case may be) for further appointment
- (3) To consider and nominate personnel for the positions of SET's senior executive vice president and those equivalent to division head and the subsidiaries' top executives, in order to seek approval from the SET BoG or the subsidiaries' Board (as the case may be) for further appointment
- (4) To consider succession plan for SET's key positions before presenting the plan to the SET BoG for consideration and review on an annual basis
- (5) To perform other tasks as assigned by the SET BoG

2. Remuneration:

- (1) To consider and screen the remuneration policies, criteria, and payment to the SET BoG, committees' members, experts, and the subsidiaries' Board appointed by the SET BoG before seeking approval from the SET BoG or the subsidiaries' Boards (as the case may be) in the next steps
- (2) To consider and refine policies, criteria and SET's overall employee remuneration structure, prior to seeking approval from the SET BoG further
- (3) To consider the budget for annual salary adjustment and annual bonus of SET employees, prior to seeking approval from the SET BoG further
- (4) To consider and refine criteria concerning remuneration payment, including criteria for adjustment of salary and annual remuneration rate of executives recruited by the NRC, prior to seeking approval from the SET BoG further
- (5) To perform other tasks as assigned by the SET BoG



7.3.7 Risk Management Committee

- Overseeing unit** : Risk Management Department
- Composition** : 1. At least five but not more than nine committee members
2. At least two SET governors
3. The SET President
4. At least two experts in finance, accounting, risk management or information technology (IT), at least one of them must be an IT expert and one person must be a risk management expert
- Terms of office** : 1. Committee member who is a SET governor or the SET President shall be according to the term of the SET governor or the President as the case may be.
2. Committee member who is an outside member and is not a SET³ governor shall have a term of 3 years each, starting from January 1, 2021 to December 31, 2023.

	Name	Position
1.	Pichet Sithi-Amnuai	Chairman
2.	Dr. Anuchit Anuchitanukul	Member
3.	Dr. Kulpatra Sirodom	Member
4.	Norachet Sangruji	Member
5.	Paiboon Nalinthrangkurn	Member
6.	Somkiat Sirichatchai	Member
7.	Thiti Tantikulanan	Member
8.	Dr. Vachira Arromdee	Member
9.	The SET President	Member

Duties of the Risk Management Committee are as follows:

- To consider and provide opinions on the Risk Management Policy Framework of the SET group including the IT Security and Cybersecurity Policies) in order to present to the SET BoG for consideration and approval
- To consider and provide opinions on specifying the level of risk appetite and risk tolerance in order to present to the SET BoG for consideration and approval
- To acknowledge, consider and provide opinions on risk assessment, risk management guidelines and measures, as well as operational plans in order to manage risk at an acceptable level, covering IT, cybersecurity, operational, and financial and investment risks
- To follow up the implementation to ensure continuous risk management
- To provide recommendations on the organization-wide risk management, and continuously promote and support the improvement and development of the SET group's corporate risk management systems
- To regularly keep the SET BoG well-informed of the material risk status of the organization including the risk management implementation
- To provide opinions and suggestions on using external parties' independent consulting services concerning risk management for the Risk Management Department
- To initially consider and screen the appointment of risk management experts, in case there is no committee member who is an expert in this field prior to presenting the document to the NRC's meeting for consideration and approval
- To perform other tasks as assigned by the SET BoG within the scope of relevant tasks

³ Committee member who is an outsider member and is not a SET governor shall have a term of office of three years at each term and may be eligible for reappointment after the end of the term of office provided that he or she may not hold the position for more than two consecutive terms, unless the SET Board of Governors has considered and viewed that it is necessary for him or her to hold the position for a longer period. However, the consecutive terms of office shall not exceed nine years. At the end of such term, there shall be an interval of at least a period of one year before the reappointment.

7.3.8 Securities Investor Protection Fund Committee

- Overseeing unit** : Member Supervision Department
- Composition** : Six committee members consisting of:
1. One SET governor appointed by the SEC
 2. One SET governor elected by SET members
 3. One committee member elected by members of the Securities Investor Protection Fund
 4. President of the Thai Investor Association
 5. The SET President or an assigned person
 6. One SET executive at the level not less than Executive Vice President of the Market Supervision Division
- Terms of office** : According to the regulations of the membership of the Securities Investor Protection Fund

	Name	Position
1.	Dr. Anuchit	Anuchitanukul
2.	Pichet	Sithi-Amnuai
3.	Pornpring	Suksantisuwan
4.	Yingyong	Nilasena
5.	Aphisak	Kiewkarnkha
6.	Paveena	Sriphothong
		Chairman
		Member
		Member
		Member
		Member
		Member and Secretary

Duties of the Securities Investor Protection Fund Committee are as follows:

1. To set the investment policy of the fund which may specify to invest in securities or other assets, or to gain profits in other ways, as appropriate
2. To consider relevant facts and document evidences and present the viewpoints to the SET BoG in order to protect the investors who have submitted requests for protection from the Securities Investor Protection Fund
3. To support confidence among investors who trade securities on SET
4. To carry out any other tasks assigned by the SET Board of Governors

7.3.9 Sustainability Committee

- Overseeing unit** : Sustainable Business Development Department
- Composition** : 1. At least three but not more than five must be SET governors.
2. At least half of the members must be governors appointed by the SEC.
3. The Chairperson of the SC must be a governor appointed by the SEC.
- Terms of office** : According to the term of office of the SET governors

	Name	Position
1.	Voravan	Tarapoom
2.	Paiboon	Nalinthrangkurn
3.	Dr. Seree	Nonthasoot
4.	Sopawadee	Lertmanaschai
5.	The SET President	
		Chairperson
		Member
		Member
		Member
		Member



Duties of Sustainability Committee are as follows:

1. Corporate governance and sustainability aspects for the SET group

1.1 Corporate Governance (CG):

- (1) To consider and provide recommendations to the SET BoG on specifying the corporate governance scope in line with SET's operational structure as well as being comparable to international practice or principle
- (2) To consider the appropriateness and adequacy of corporate governance and code of conduct policy of the SET group, while adjusting it to be in line accordance with international CG practice and principle, prior to presenting to the SET BoG for consideration
- (3) To review the SET corporate governance CG report to be disclosed in the annual report
- (4) To provide recommendations to the SET group in preparing the CG development plan to be in compliance with the CG policy
- (5) To provide useful consultation, advice and suggestions to the SET BoG and the management in the CG development of the SET group
- (6) To provide recommendations on the appropriateness of the Charter of the SET Board of Governors, before presenting to the SET BoG for consideration
- (7) To consider and provide recommendations on the assessment process of the results of the BoG's performance of duties, and to prepare the summary of the assessment results and present it to the SET BoG

1.2 Sustainability:

- (1) To consider and provide recommendations in formulating the SET group's sustainability development (SD) policy framework and guideline to meet the set standard, including being comparable to international practice or principle, as such enabling efficient implementation in response to stakeholder needs, while being responsible for the society and environment towards sustainable growth of the SET group
- (2) To provide recommendations for preparation of the SET group's social responsibility development plan in accordance with the set policy framework
- (3) To provide useful consultation, advice and suggestions to the SET BoG and the management in sustainability development of the SET group

2. Corporate governance and social responsibility aspects for related stakeholders in the capital market

- 2.1 To provide recommendations in setting up CG and sustainability development policy framework and guideline for stakeholders to equip them with knowledge and understanding to be able to develop good governance projects, system and practice, together with operating businesses with responsibilities for society and environment, while promoting responsible investment
- 2.2 To provide useful consultation, advice and suggestions to the SET BoG and the management in CG and sustainability development for the capital market.

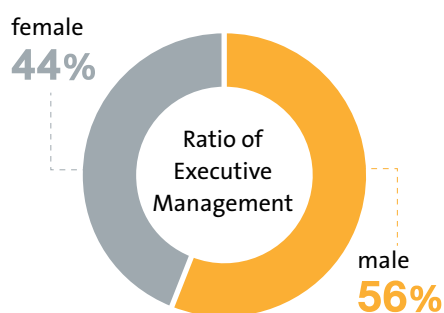
3. To perform other tasks as assigned by the SET BoG within the scope of relevant tasks



7.4 Information on Executives

SET senior executives consists of the SET President, seven Senior Executive Vice Presidents and 17 Executive Vice Presidents, totaling 25 persons, with the duty to manage and drive the strategies as assigned by the BoG in order to achieve the set goals.

In addition, SET places importance on gender equality, according to the executive structure that provides equal opportunities for females to become leaders in the organization. SET's top executives consist of 14 males and 11 females, with the ratio of male to female executives at 1 : 1.27.



Ratio of Female to Male Committee Members (persons)

1 : 1.27



female
11 persons



male
14 persons

7.4.1 Executive Remuneration

The NRC takes a responsibility for remuneration policy and criteria consideration for committee members, the SET President, and high-ranking executives in order to be presented to the BoG for approval. The criteria to assess the performance of the president and top executives are in line with the set remuneration rate based on the organization's performance, duties and responsibilities, and the implementation results according to the policies from the BoG, together with other external factors such as the overall social and economic conditions, among others.

As of December 31, 2021, the SET management team received remuneration covering salaries, bonuses, and provident fund contributions, etc. from SET for the year 2021 worth a total amount of THB 257 million.

7.4.2 Succession Plan for Top Executives

The SET BoG recognizes the importance of being well-prepared in terms of readiness of personnel to succeed the top executive positions to ensure smooth and consistent operations. The succession plan is carried out and reviewed regularly every year. The NRC's duty is to screen and agree with the succession plan before presenting to the BoG for approval. Notably, process of selecting and grooming successors has to be jointly carried out with a consulting firm with expertise by taking into consideration the candidate's knowledge, experiences, capabilities, attitudes, and integrity, to be reported to the BoG meeting regularly.



Data as of December 31, 2021



Dr. Pakorn Peetathawatchai

President



Manpong Senanarong

Senior Executive Vice President
Head of Issuer & Listing Division



Prapan Charoenprawatt

Executive Vice President
President - Market for Alternative
Investment (mai)
and President - LiVE Exchange



Rungtip Charoenvisuthiwong

Executive Vice President
Head of Issuer Group 2



Amnouy Jiramahapoka

Executive Vice President
Head of Issuer Group 1



Dr. Rinjai Chakornpipat

Senior Executive Vice President
Head of Market Division
and Managing Director -
Thailand Futures Exchange Public Company Limited



Piyaporn Krongchan

Executive Vice President
Head of Digital Marketing & Investor
Channel Group and Head of Product
& Investor Marketing Group



Triwit Wangvorawudhi

Executive Vice President
Head of Customer Relations Group



Pataravasee Suvarnsorn

Senior Executive Vice President
Head of Operations Management Division
and Managing Director -
Thailand Clearing House Co., Ltd.



Yupawan Sirichainarumitr

Executive Vice President
Head of Market Operations Group
and Managing Director -
Thailand Securities Depository Co., Ltd.



Paythai Petcharat

Executive Vice President
Head of Capital Market Support Group





Thirapun Sanpakit

Senior Executive Vice President
Head of Information Technology Division



Nat Luengnaruemitchai

Executive Vice President
Head of IT Operations Group



Pattana Wongnirund

Executive Vice President
Head of IT Development Group



Putthipong Skonthawat

Executive Vice President
Head of IT Solutions Business Group



Dr. Soraphol Tulayasathien

Senior Executive Vice President
Head of Corporate Strategy Division
and Head of Sustainable Market Development Division



**Pannavadee Ladavalaya
Na Ayudhya**

Executive Vice President
Head of Capital Market Education Group



Ratvalee Anantanont

Executive Vice President
Head of Sustainable Development Group



Apisak Kiewkarnkha

Senior Executive Vice President
Head of Finance & Administration
Division



Kirati Kosicharoen

Executive Vice President
Head of Accounting & Finance Group
and Head of Corporate Services Group



Paveena Sriphothong

Senior Executive Vice President
Head of Market Supervision Division



Duangrat Samudavanija

Executive Vice President
Head of Listing & Market Supervision
Policy Group



Rongrak Phanapavudhikul

Executive Vice President
Head of Legal Affairs Division
and Head of Corporate Secretary
& Compliance Group



Noppakao Sucharitakul

Executive Vice President
Head of Corporate Communications
& Social Development Group



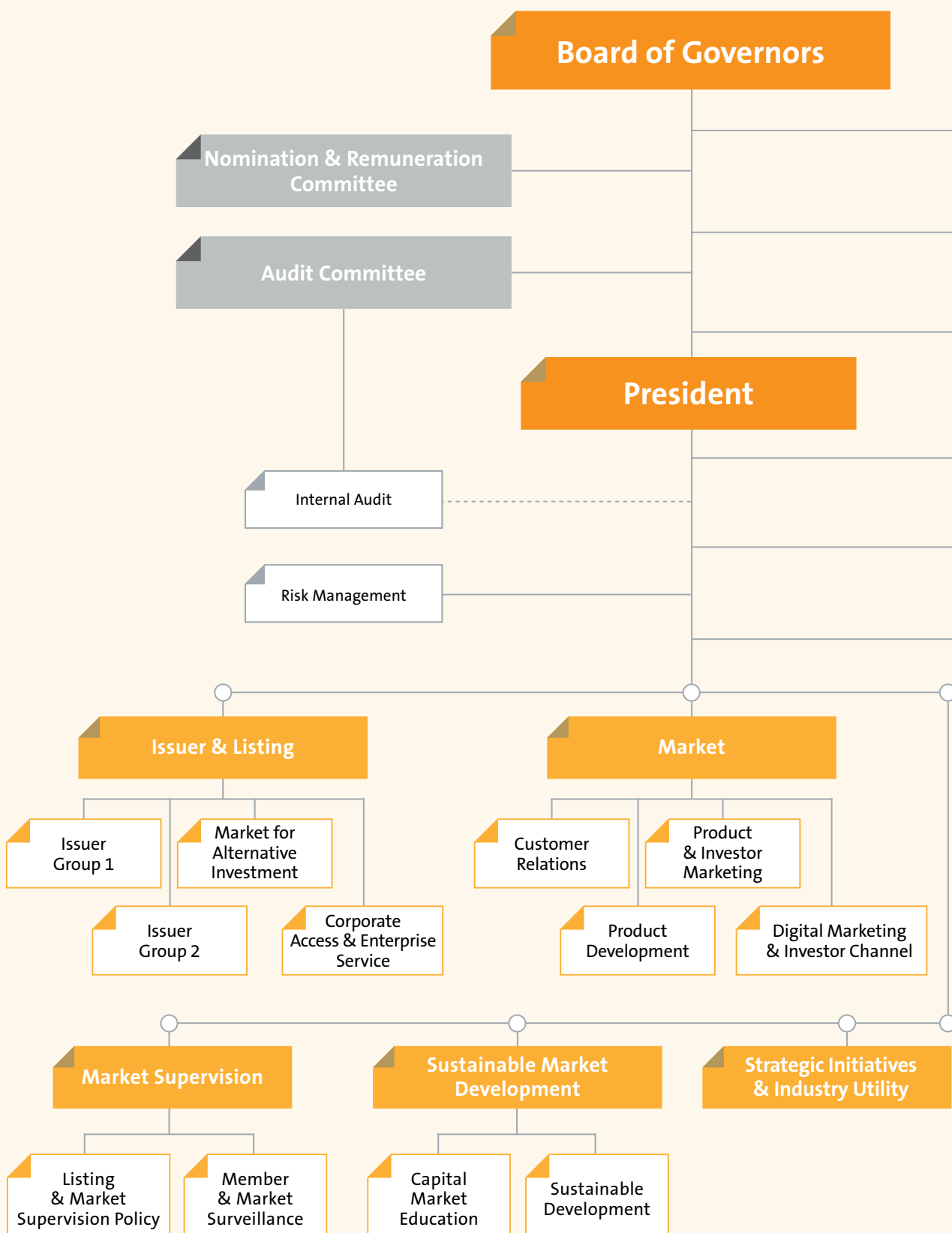
Kitti Sutthiatthasil

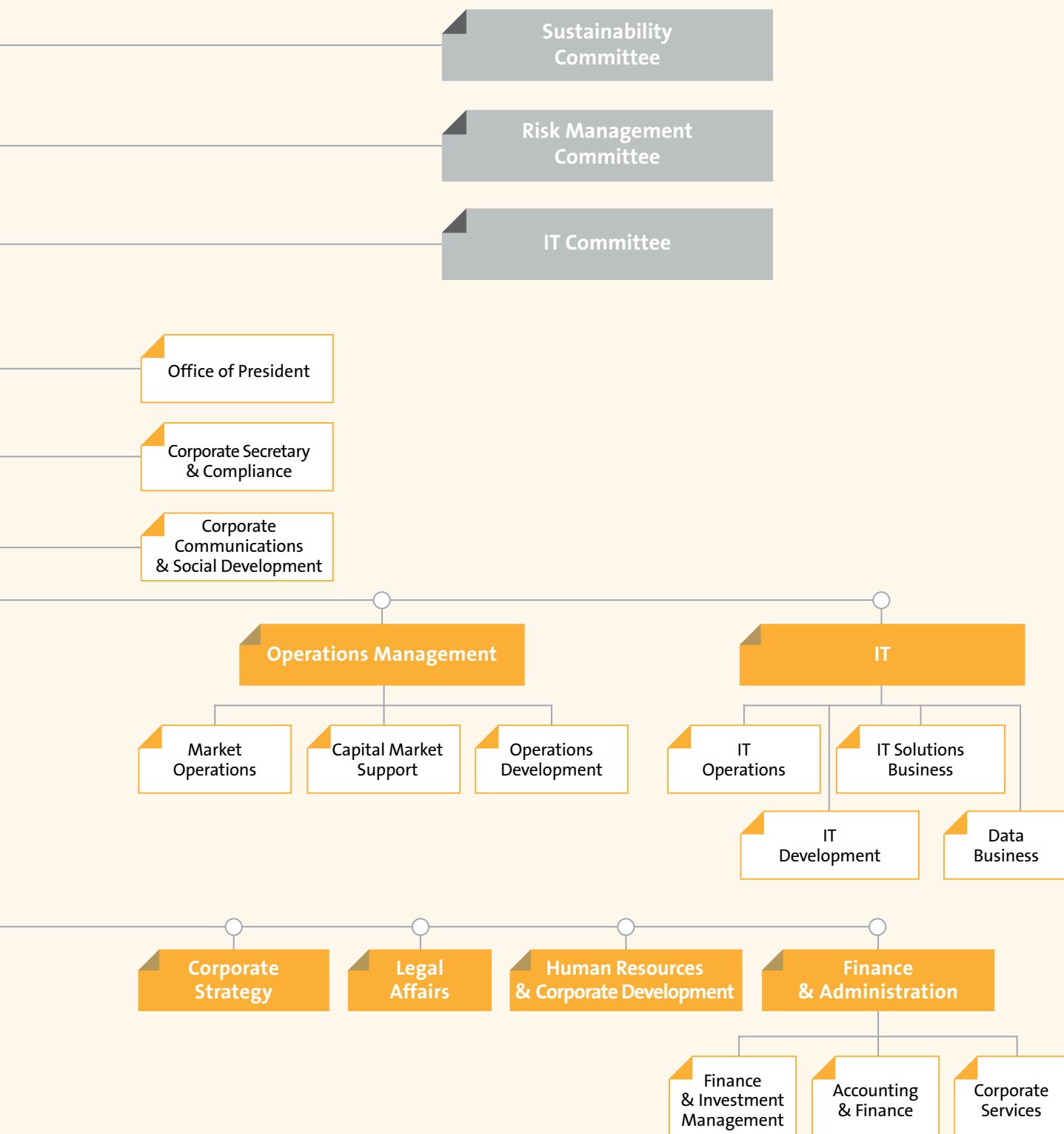
Executive Vice President
Strategic Initiatives & Industry
Utility Division
and Managing Director - Thai Digital
Assets Exchange Co., Ltd.



Organization Structure

Effective from July 1, 2021





7.5 Other significant information

7.5.1 Secretary to the BoG

The BoG has appointed Rongrak Phanapavudhikul as Secretary to the BoG. Rongrak is Executive Vice President - Head of Legal Affairs Division and overseeing Corporate Secretary & Compliance Group.

7.5.2 Head of Internal Audit Department

As of end-2021, Chanapai Supphasuk was Head of the Internal Audit Department as considered and approved the appointment by the AC.

7.5.3 Auditor's Remuneration

In 2021, SET hired EY Office Co., Ltd. to provide auditing services. The remuneration details are as follows:

- Audit Fee: In 2021, the total fee for the auditing of SET and subsidiaries paid to the auditor amounted to THB 3.5 million.
- Other fees: No





8 Report on Key Performance Regarding Corporate Governance



8.1 The Board of Governors' (BoG) Performance of Duties

In accordance with SET's Corporate Governance policies in 2021, the performance of duties can be summarized in various topics as follows:

8.1.1 Summary of the SET BoG's Performance of Duties in 2021

(1) Review of Structure and Policy on Corporate Governance

- **Restructuring of Committees Related to Good Corporate Governance** by upgrading the Legal Committee (LC) to be one of SET's committees on good corporate governance. In addition, the components and scopes of operations and duties of the LC have been revised in line with the roles and duties of the LC.
- **Setting Up Policy for the Recruitment of Government Officials** by not hiring, nominating, or appointing government officials with direct regulatory authority on the SET group to be governors, committee members, experts or advisors of the SET group. This is to be integrated as a part of the SET group's CG and Code of Conduct policy.
- **Reviewing on Separation of Roles and Duties between Market Supervision Function and Customer Service Function** by specifying that the functions responsible for customer service and market supervision must be clearly separated from each other for independence purpose. Furthermore, there must be working cooperation with the Securities and Exchange Commission (SEC) under the One Stop Service project in order to increase regulatory efficiency of companies preparing to be listed on SET, and existing listed companies.

(2) Formulation of Vision, Mission, Goal and Corporate Strategy

- The SET BoG approved vision, missions, goals and long-term corporate strategy as the management has assessed environment and tendency that the global changes would be more intensified. Therefore, SET has to place importance on agility, bracing for the 'new normal' in terms of customer behavior, innovative technologies and the needs of market participants, as well as the changes in policies of the government sector and regulatory entities which will have impact on the SET group's operations.
- The BoG considered and approved the three-year strategic framework (2022-2024) under the theme "Connecting opportunities x Transforming possibilities" The strategic plan is in line with vision "To Make the Capital Market 'Work' for Everyone", and SET's missions as approved by the BoG.
- The BoG approved short and long-term goals or corporate KPIs, budget, manpower and 2022 corporate KPIs, while governing and overseeing operations according to the set plan efficiently and effectively. The management regularly reports status of the corporate KPIs, progress of the strategic plan's implementation, and SET's performance to the BoG on a quarterly basis.

(3) Information Disclosure and Transparency

- The BoG governs and oversees SET and subsidiaries to disclose information to the public and stakeholders in an accurate, timely and transparent manner. Information is disseminated via the SET website such as the information related to SET and subsidiaries, regulations related to participants in the capital market (e.g. listed companies, member companies, clearing house members, depository members, etc.), products and services of SET and subsidiaries, information on securities trading and futures contracts, as well as financial reports of SET and subsidiaries consisting of annual financial statements and Management Discussion and Analysis (MD&A).



- SET provides channels for inquiries, information requests, and advice on how to use services of the SET group via SET Contact Center. SET also discloses these contact channels on the SET website, such as phone calls, Facebook chat, and post mail. SET has implemented according to the process as appropriate and responded the results to the enquirers accordingly.

8.1.2 Meetings of the Board of Governors (BoG)

Meetings are scheduled on a monthly and quarterly basis in advance for the entire year. For the monthly meeting, it will be held on the third Wednesday of every month. The BoG is informed the meeting schedule in advance for effective time allotment. The meeting process can be summarized as follows:

- The Chairman and the President consider and approve the agenda of the meeting before proposing to the BoG.
- Meeting invitation letter and documents will be distributed at least seven days prior to each meeting to allow sufficient time for the BoG to study the information. The exception is for urgent matters, of which the meeting documents can be delivered afterwards.
- In the case that any governor has conflict of interest in the matter to be considered, such person must inform the meeting of such conflict of interest and is not allowed to participate in the consideration of such matter.
- The Chairman of the BoG encourages non-executive directors to hold meetings among themselves when necessary to discuss various issues without participation of the management.

In 2021, 17 Board meetings were conducted, and there were three meetings without participation of the management. After each of these meetings, the issues from the meetings were communicated to the governors and the President.

Average meeting attendance rate of each governor



100%



Meetings of the BoG and Attendance of Each Governor in 2021

	BoG Meeting in 2021	Physical Meeting at the SET office	e-Meeting	Total Number of Physical Meeting and e-Meeting
Number of Meeting		5 times	12 times	17 times
Name of the current SET BoG				
1	Dr. Prasarn Trairatvorakul ¹	4/4	11/11	15/15
2	Pichet Sithi-Amnuai ¹	4/4	11/11	15/15
3	Dr. Anuchit Anuchitanukul ¹	4/4	11/11	15/15
4	Dr. Kulpatra Sirodorn ¹	4/4	11/11	15/15
5	Norachet Sangruji	5/5	12/12	17/17
6	Paiboon Nalinthrangkurn	5/5	12/12	17/17
7	Dr. Seree Nonthasoot	5/5	12/12	17/17
8	Sopawadee Lertmanaschai	5/5	12/12	17/17
9	Thiti Tantikulanan	5/5	12/12	17/17
10	Voravan Tarapoom	5/5	12/12	17/17
11	Dr. Pakorn Peetathawatchai	5/5	12/12	17/17
BoG terms ended during the year				
1	Dr. Chaiyawat Wibulswasdi ²	1/1	1/1	2/2
2	Charnporn Jotikasthira ²	1/1	1/1	2/2
3	Professor Kittipong Urapeepatanapong ²	1/1	1/1	2/2
4	Pattera Dilokrunghirapop ²	1/1	1/1	2/2
Attendance Rate (%)				100

¹ Effective from February 5, 2021

² Term ends on February 4, 2021

Meetings of Committees related to Good Corporate Governance in 2021

Committee	AC	NRC	SC	RMC	ITC	LC
Number of Meeting	12 times	12 times	5 times	7 times	12 times	7 times
Format of Meeting	Physical Meeting	e-Meeting	e-Meeting	e-Meeting	e-Meeting	Physical Meeting
	1 time	11 times	12 times	5 times	7 times	12 times
Name of current committee member						
Dr. Prasarn Trairatvorakul						
Pichet Sithi-Amnuai				6/6	11/12	
Dr. Anuchit Anuchitanukul				6/6	10/10	

Meetings of Committees related to Good Corporate Governance in 2021

Committee	AC		NRC	SC	RMC	ITC	LC	
Number of Meeting	12 times		12 times	5 times	7 times	12 times	7 times	
Format of Meeting	Physical Meeting	e-Meeting	e-Meeting	e-Meeting	e-Meeting	e-Meeting	Physical Meeting	e-Meeting
	1 time	11 times	12 times	5 times	7 times	12 times	3 times	4 times
Name of current committee member								
Dr. Kulpatra Sirodom	1/1	9/9	11/11		6/6			
Norachet Sangruji	1/1	11/11	12/12		7/7			
Paiboon Nalinthrangkurn				5/5	6/7	11/12		
Dr. Seree Nonthasoot	1/1	9/9		5/5			3/3	4/4
Sopawadee Lertmanaschai	1/1	11/11	12/12	5/5				
Thiti Tantikulanan			9/10		7/7	12/12		
Voravan Tarapoom	0/1	11/11	12/12	5/5				
Dr. Pakorn Peetathawatchai			2/2	5/5	7/7	12/12		4/4
External Expert / Advisor								
Professor Dr. Kumchai Jongjakapun							3/3	4/4
Pannaporn Sapsomboon						11/12		
Assoc. Prof. Pises Sethsathira							2/3	4/4
Prakrit Thanwalai						6/6		
Somkiat Sirichatchai					7/7			
Somkiet Kuwawattananont							3/3	4/4
Surasak Vajasit							3/3	4/4
Tharatporn Techakitkachorn						4/5		
Dr. Vachira Arromdee					7/7			
Attendance Rate (%)	98.21		97.10	100.00	98.33	95.06	97.44	

8.1.3 Remuneration for Governors

The NRC is the committee that considers criteria for remuneration and benefits of the governors prior to presenting to the members' meeting, which is in compliance with the Securities and Exchange Act, for an approval. Details of the remuneration of each governor in 2021 are as follows:

Monthly Fee (THB)	Board	AC	NRC	SC	RMC	ITC	LC
Chairman	135,000	75,000	52,500	52,500	52,500	52,500	52,500
Governors / Members	90,000	50,000	35,000	35,000	35,000	35,000	35,000

Name of the BoG	Total remuneration of governor in 2021 (THB) (excluding the President)						
	BoG	AC	NRC	SC	RMC**	ITC**	LC**
Dr. Prasarn Trairatvorakul	5,482,857*						
Pichet Sithi-Amnuai	977,143				547,500	420,000	
Dr. Anuchit Anuchitanukul	977,143				365,000	570,000	
Dr. Kulpatra Sirodom	977,143	521,429	380,000		365,000		
Norachet Sangruji	1,080,000	600,000	420,000		420,000		
Paiboon Nalinthrangkurn	1,080,000			420,000	420,000	420,000	
Dr. Seree Nonthasoot	1,080,000	521,429		420,000			210,000
Sopawadee Lertmanaschai	1,080,000	900,000	420,000	420,000			
Thiti Tantikulanan	1,080,000		365,000		420,000	420,000	
Voravan Tarapoom	1,080,000	600,000	630,000	630,000			

Remarks. * Including the Chairman's special remuneration of THB 370,000 per month, in accordance with the additional roles and responsibilities designated by the BoG

** Excluding remuneration of committee members who are external experts / advisors

8.1.4 Performance Evaluation of the BoG and Committees on Good Corporate Governance

The BoG and the committees on good corporate governance conduct the assessment of performance of duties regularly every year to review their performance of duties and increase working efficiency in line with the principles of good corporate governance. The Sustainability Committee (SC) has been assigned the task to consider and provide recommendations on the assessment process, as well as to prepare assessment results summary and present to the BoG, except for the performance of the Chairman. As for the assessment of the BoG Chairman, the Chair of the SC shall report directly to the BoG Chairman. In 2021, the BoG was informed of the assessment results of the BoG and all the committees related to good corporate governance, namely the AC, the NRC, the SC, the RMC, the ITC, and the LC.

The assessment of performance of duties of the BoG and the committees related to good corporate governance comprises the format, assessment topics, and assessment results as follows:

	Type of Assessment	Example of Assessment Topic
The SET BoG	1. Assessment of the BoG as a whole	<ul style="list-style-type: none"> • Strategy formulation and business planning • Risk management and internal control • Performing duties and responsibilities • Board meetings • Good corporate governance and social responsibility • Overseeing to prevent possible conflict of interest • Personnel preparation and succession planning
	2. Individual assessments 2.1 Self-assessment 2.2 Cross evaluation	<ul style="list-style-type: none"> • Performing duties and responsibilities • Board meetings • Independence • Readiness and self-enhancement
	3. Assessment of Chairman's performance	Duty performance of the Chairman
Committees on Good Corporate Governance	Assessment of the committees as a whole	Scope of duties and responsibilities as specified in the Charter of each committee which has been disseminated via the website.



In addition, each governor has undergone the assessment of the skills, knowledge, and ability separately from the self-assessment in performing duties.



Performance Assessment Results of the BoG and Committees on Good Corporate Governance in 2021

- The BoG's performance assessment result was at 4.72, and the average score of each committee exceeded 4.7 (total score out of 5), as illustrated in this graphic.



- The governors' individual performance: self-assessment and cross-evaluation were 4.89 and 4.82 (total score out of 5), respectively.

In this regard, the recommendations from the governors based on the 2021 assessment results were implemented by the management to develop and improve for efficiency in performing their duties, such as conducting additional seminars and training courses to enhance knowledge, etc., as well as providing information on other topics of interest, such as digital technology and cybersecurity in the form of seminar.

8.1.5 Enhancement for the BoG


SET prioritizes the continuous and regular development of the BoG, providing the governors with knowledge training and visits of related business both local and international markets to enhance knowledge and maintain far-sighted vision.

In 2021, the governors continued to participate in training courses and seminars to enhance the understanding of their roles, duties, responsibilities, and skills that are essential to their position as governor, with details as follows:

- Participation in cybersecurity workshop for directors of companies in financial sector under the topic of "Cyber Resilience Leadership : Herd Immunity" to enhance realization and raise readiness on cyber resilience in financial sector. This also included building knowledge about current types of cyber incidents and the scenario of future cyber threats via case studies and simulations for the participants to learn, analyze, and make decision.
- Participation in the seminar under the topic of "Cyber Security / Zero Trust"
- Participation in the seminar under the topic of "Startup Valuation"

In addition, the governors have joined ESG training courses from six leading institutions overseas, namely Harvard Business School Online, International Corporate Governance Network (ICGN), Global Reporting Initiative (GRI) Academy, Global Association of Risk Professionals (GARP), and UN PRI Academy and CFA Institute. The aims are to promote knowledge and understanding on developing a sustainable organization, to enhance their visionary leadership aspects to be updated to cope with the rapid changes in the business environment which will benefit the performance of duties as governors.



 Name of Governor / IOD Course	DLCP	DCP	DAP	RCP	AACP	ACP	RMP	RCC	CGI	Other Courses
Dr. Prasarn Trairatvorakul		✓		✓						ELP, BNCP, ITG
Pichet Sithi-Amnuai	✓*	✓				✓		✓	✓	MIR, MIA, MFM, SFE, ACEP
Dr. Anuchit Anuchitanukul		✓								
Dr. Kulpatra Sirodom	✓*	✓				✓				
Norachet Sangruji	✓*	✓	✓						✓	DRP*
Paiboon Nalinthangkurn		✓	✓						✓	
Dr. Seree Nonthasoot	✓*	✓			✓					ITG*
Sopawadee Lertmanaschai		✓	✓			✓			✓	SFE, DCPU
Thiti Tantikulanan									✓	
Voravan Tarapoom		✓		✓		✓	✓	✓	✓	MFR, MIR, ELP, SFE
Dr. Pakorn Peetathawatchai		✓	✓						✓	

Note: * seminar course in which governors attended in 2021

DLCP : Director Leadership Certification Program	CGI : Corporate Governance for Capital Market Intermediaries	ELP : Ethical Leadership
DCP : Director Certification Program	BNCP : Board Nomination and Compensation Program	SFE : Strategic Executive
DAP : Director Accreditation Program	TOT : Train of the trainer	DRP : Director Refreshment Program
RCP : The Role of Chairman Program	ITG : IT Governance and Cyber Resilience Program	MIA : Monitoring the Internal Audit Function
AACP : Advance Audit Committee Program	MFR : Monitoring the Quality of Financial Reporting	MFM : Monitoring Fraud Risk Management
ACP : Audit Committee Program	MIR : Monitoring the System of Internal Control and Risk Management	ACEP : Anti - Corruption for Executive Program
RMP : Risk Management Committee Program		DCPU : Director Certification Program Update
RCC : Role of the Compensation Committee		

8.1.6 Governance & Oversight of Subsidiaries and Joint Ventures

The SET group consists of SET and subsidiaries which are categorized into two main business functions: Core Exchange Function, and New Business & Infrastructure Development Function. Besides, there are joint ventures and other companies that SET holds stake in order to support SET's policy-related operations. (Details of business structure and shareholding have been disclosed via the SET website).

SET has set the governance & oversight policy for subsidiaries and joint ventures (JV) in the CG policy, which is available on the website, covering various key issues, such as the policy-related issues on key operations & corporate governance policy, governance & oversight of operations via SET representatives appointed as a board director of a JV firm.

In 2021, the BoG acknowledged the report on the operations of the subsidiaries on a quarterly basis. This included both the Core Exchange Function and SET Venture Holding (SVH) in the position of a parent company as a holding company to directly govern and oversee business of the subsidiaries grouped in the New Business & Infrastructure Development Function.

8.1.7 Monitoring to Comply with CG Policy

The Compliance Department's duty is to oversee and liaise regarding the review of policies and practice guidelines related to corporate governance as well as to advise and monitor the business operations to be in compliance with the laws, rules, policies, and other regulations determined by SET and SET's and subsidiaries' regulators. The Compliance Department shall report its operating results to the AC and the SC regularly.







The monitoring results regarding compliance with laws, regulations and CG policy in 2021 can be summarized as follows:

- There was no case that the SET group violated, disobeyed, or not abide by the laws related to SET or subsidiaries, such as Securities and Exchange Act, Derivatives Act, Anti-Money Laundering Securities Act, Labor and Human Rights law, and Copyright law or Intellectual Property related to law, among others.
- All practices were completely in compliance with the CG policy, with no cases of disputes with competitors or breach of customer information confidentiality. There were no complaints on improper or unethical conduct of governors, management, and employees of SET and subsidiaries, such as use of insider information, corruption, or other conflicts of interest.

Compliance on key issues related to business operation and Code of Conduct policy can be summarized as follows:

1) Anti-Fraud and Anti-Corruption

The BoG supports the process of communicating and creating understanding regarding the SET group's anti-fraud and anti-corruption measures among the governors, management, and employees to ensure that they acknowledge and prioritize the prevention of fraud and corruption in the SET group's business operations. These measures can be summarized as follows:

 Stakeholder	Measure	2021 Performance
Management and employees 	<ul style="list-style-type: none"> • Communicated the essence of anti-corruption measures and the No Gift policy via various formats such as meeting with Compliance Champions' of each department and e-newsletter • Arranged orientation sessions for new employees to understand the significant matters of anti-corruption measures • Arranged CG courses for employees via e-learning, consisting of contents on anti-fraud and anti-corruption 	All executives and employees passed the SET's CG and Code of Conduct test.
Suppliers and potential suppliers 	<ul style="list-style-type: none"> • Communicated the key contents on best practice of the anti-fraud and anti-corruption measures to suppliers and potential suppliers through various channels such as indicating SET's intention in the compliance principles of anti-fraud and anti-corruption measures in the bidding announcements, purchasing and hiring orders, and terms of reference (TOR) • Followed up to ensure that all suppliers have signed the Suppliers' Code of Conduct covering the operation of business with honesty, integrity and ethics, and promoted best practice in anti-fraud and anti-corruption, including measures to prevent anti-fraud and anti-corruption. 	No complaints or cases of fraud or corruption in any procurement process were found.
External parties 	Communicated policies and measures on anti-fraud and anti-corruption via website and participated in activities related to the organization's intention in not supporting fraud or corruption.	No complaints or cases of fraud or corruption in SET's business operation process were found.

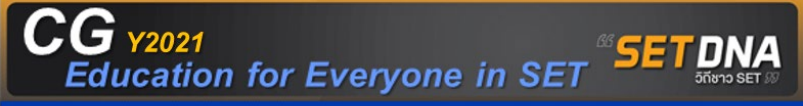

2) Other Key Issues on CG and Code of Conduct of the SET Group

Topic	Performance Results in 2021
Use of insider information and safeguarding of confidential information	Operated according to the policy on the use of insider information and the safeguarding of confidential information. No cases of violation or complaints of the use of insider information were found among governors, management, or employees.
Acquisition or disposition of listed securities by governors, management and employees	No violations or breaches of requirements on the acquisition or disposal of securities were found among governors, management, or employees, including their spouses or cohabitants, and underage children.
Prevention and management of conflict of interest	No cases were found regarding the violation or incompliance with the policy and guidelines on preventing and managing the conflict of interest among the governors, management, and employees.
Maintenance and use of IT and communication systems	IT management system were conducted efficiently in accordance with global standards such as ISO 27001 (Information Security Management System), ISO 20000 (Information Technology Service Management System), and ISO27701 (Privacy Information Management System). Synergized cooperation among employees to be cautious when using IT and communication systems, not to have impact on the organization or stakeholders, including online training courses, phishing mail testing, etc. No cases of key data leakage were found.

3) Communicating and Creating Understanding of CG Policy

SET has disseminated and communicated the CG policy which covers various practices important to the operations via SET's internal electronic system for governors and employees. This covers the orientation sessions for new governors and employees, the dissemination of articles in e-newsletter and meetings to enhance knowledge and create understanding via Compliance Champion of each department.

In addition, SET has arranged CG online training courses for every employee via e-learning platform, and required every employee to pass the test according to the set criteria. In 2021, all employees attended the training courses and completely passed the test.

ตลาดหลักทรัพย์แห่งประเทศไทย
องค์กรแห่งความซื่อสัตย์ โปร่งใสตามแนวทางการกำกับดูแลกิจการที่ดี
พนักงาน SET Group ทุกคน คือ ส่วนหนึ่งในการขับเคลื่อนองค์กร
ให้เป็นที่ยอมรับและเชื่อถือจากสังคมและหน่วยงานต่าง ๆ

CG Training Course for Employees

1. Corporate Governance (CG) towards Sustainability
2. Best Practice on Stakeholders
3. Acquisition or Disposition of Listed Securities
4. Anti-Fraud and Anti-Corruption
5. Prevention and Management of Conflict of Interest
6. Preventing Use of Insider Information and Safeguarding of Confidential Information
7. Use of Technology and Communication
8. Taking Whistleblowing and Complaints
9. Key Laws Employees Need to Know and Comply
10. Personal Data Protection Act: PDPA

8.2 Summary of Results of Performance of Duties of the Audit Committee (AC)

Audit Committee Report

SET's Audit Committee (AC) consists of five independent non-executive directors with expertise and experience in various fields including capital market, accounting, finance, management, and legal affairs. It is chaired by Sopawadee Lertmanaschai, with Voravan Tarapoom, Norachet Sangruji, Dr. Kulpatra Sirodom, and Dr. Seree Nonthasoot, as committee members. Both Sopawadee Lertmanaschai, and Dr. Kulpatra Sirodom graduated with a degree in Accounting and Finance, having related experience in accounting and finance.

The Board of Governors (BoG) appointed Dr. Kulpatra Sirodom and Dr. Seree Nonthasoot as committee members, effective February 17, 2021.

In 2021, AC held 13 meetings, one of which was a joint meeting with the Risk Management Committee (RMC). There were three meetings with the external auditor to express opinions on the audit plan and to review the auditor's audit results, one of which was held without the presence of the management in order to discuss and be informed of the independent views of the external auditor. The attendance record of the Committee's members is available in the Corporate Governance Report section of the Annual Report. (Please find details on page 122).

AC performs its duties and expresses its views independently under the scope of authority, duty and responsibilities assigned by the BoG as specified on page 105. The Committee reports its performance to the BoG on a quarterly basis. A summary of key operations and activities in 2021 is as follows:

- **Financial Statements:** The Committee reviewed quarterly financial report together with the management, and reviewed the annual financial report together with the management and the auditor by considering the accuracy of the financial report, the appropriateness of the accounting policy, and the adequacy of information disclosure. In addition, the Committee also reviewed, together with the external auditor, the impact of the announcement of the financial report standard which have already been in effect such as TF59

on financial tools and TFRS16 on lease contracts, including internal controls related to financial reporting, etc.

- **Risk Management:** The Committee ensures the key risk management implementation. The Committee held one meeting jointly with RMC to be informed of the accomplishment and lessons learned from project operations after the new key systems were launched (Post Implementation); Cybersecurity management performance the year 2021; and the summary of the overall incidents. In addition, the Committee also arranged quarterly meetings with the Risk Management team to establish a good understanding of their roles and responsibilities including the coordination and cooperation, and to facilitate better alignment between the risk management and the internal audit tasks. All these will help promote the internal audit services to be in accordance with the risk management operations, resulting in the ultimate benefits to the organization.
- **Internal Control System:** The Committee considered and reviewed the adequacy, efficiency and effectiveness of SET's internal control system based on the audit results presented by the internal audit team. In addition, the Committee also monitored the progress of the improvement of internal control system, including the external auditor's opinions. Moreover, the Committee also invited executives of key departments to provide information and viewpoints on their implementations. Furthermore, the Committee also reviewed the adequacy of the assessment of the internal control system in compliance with the standard of the Committee of Sponsoring Organizations of the Treadway Commission (COSO).
- **Internal Audit:** The Committee audited and approved the annual internal audit plan and budget, as well as the adequacy and suitability of the resources and the independence of the internal audit department's operation. The Committee has also continuously provided recommendations on audit quality improvement for more efficiency.

In addition, there was one meeting with the top executives without the presence of the internal audit team in order to listen to and share the viewpoints on the internal audit department's operation.

In 2021, the Committee approved the implementation of Quality Assessment Review project to be conducted by external qualified professionals to ensure that the internal audit practices meet the International Professional Practices Framework (IPPF). The assessment was benchmarked against leading organizations and other foreign stock exchanges, and concluded that SET's internal audit operations generally conformed 100 percent to the standard and the performance was at "Advanced" level.

The Committee usually encourages internal auditors to continuously develop their professional knowledge and expertise. In 2021, the internal audit team earned 15 certificates in total, including local and international audit professional certificates, and other related certificates. The Committee also supported the adoption of audit tools to analyze and verify data, as well as providing the Internal Audit Management System to support internal audit department's operations to comply with the standards and to become more efficient.

The Committee considered and approved the appointment of the head of the internal audit department in substitution of the former position due to employee retirement term at the end of 2021.

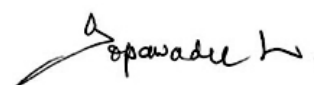
- **Whistleblowing and Fraud:** SET provides channels for employees and stakeholders to report concerns about possible inappropriateness of the SET group including unlawful and unethical conducts, violations of rights, inaccurate financial reporting and faulty internal control system, for further investigation. The details regarding the whistleblowing channels are published on SET's website under the "Whistleblowing policy" section.

In 2021, SET received one whistleblowing complaint related to SET's employee inappropriateness in market surveillance operations. The Committee conducted the investigation into the matter according to the Good Corporate Governance Policy of the SET group. It was found that SET has

already taken action in compliance with the process and guidelines of the market surveillance standards.

- **Compliance with Related Laws and Regulations:** The Committee meets with the legal and regulatory management team on a regular basis to ensure that SET's operations are in compliance with relevant laws, and regulations. In 2021, there were no practices that were non-compliant with relevant laws and regulations.
- **Related Party Transaction:** The Committee reviews the related party transactions regularly on a quarterly basis. In 2021, there was no related party transaction with persons or businesses other than SET's subsidiaries.
- **Appointment of 2022 External Auditors:** The Committee is responsible for considering and providing opinions to propose the appointment of the external auditor. The Committee considered the performance and independence of the auditor in carrying out the duties by the auditor. The Committee therefore proposed the Auditor from EY Office Limited as the Auditor of SET and subsidiaries for the financial statement of 2022. The proposed audit fee was THB 3.5 million, to be presented to the SET BoG for consideration, and for the BoG to further seek the approval for the appointment of the Auditor and the audit fee from the meeting of SET member companies.

In summary, AC has carried out its duties completely in accordance with the Audit Committee Charter, and the Committee is of the opinion that SET has prepared the financial statements according to the Generally Accepted Accounting Principles, which are accurate in essence, with adequate information disclosure. In addition, the Committee also viewed that the internal control system and the risk management were sufficient and appropriate for the business operations.



(Sopawadee Lertmanaschai)

Chairperson

Audit Committee

January 24, 2022



8.3 Summary of Results of Performance of Duties of Other Committees

Risk Management Committee Report

The current Risk Management Committee (RMC) has been appointed by the SET Board of Governors (BoG). RMC consists of nine committee members: six Board members, two non-executive experts, and the SET President as follows:

1. Pichet Sithi-Amnuai* (Chairperson)
2. Dr. Anuchit Anuchitanukul*
3. Dr. Kulpatra Sirodom*
4. Norachet Sangruji
5. Paiboon Nalinthrangkurn
6. Thiti Tantikulanan
7. Somkiat Sirichatchai (expert)
8. Dr. Vachira Arromdee (expert)
9. Dr. Pakorn Peetathawatchai

* was appointed effective from February 17, 2021

RMC oversees and considers the risk management process to ensure that such process complies with the policy, framework, and process of the risk management of the organization. RMC also regularly reports key risk status of the SET group to the BoG according to the scope of responsibilities specified in the Charter.

In 2021, RMC held eight meetings, including one joint meeting with the Audit Committee (AC). The attendance record of each committee member is available in the Corporate Governance Report section (Please see details on page 122). A summary of key activities and performance in 2021 is as follows:

- **Risk Management of Businesses and New Projects:** RMC considered and provided opinions and additional suggestions on the risk management related to Fractional Depositary Receipts trading on SET.
- **Risk Management of Key Operations:** RMC considered and provided suggestions on the risk management of various key operations, such as 1) Risk profile of the SET Group for 2021; 2) The review of the SET group's policies related to risk management; 3) the implementation in compliance with Personal Data Protection Act – PDPA; 4) the annual review of Directors & Officers (D&O) and Financial Institutions Professional Indemnity (FIPI) insurance policy of the SET group; 5) the overview of investment risk management, etc.
- **Risk Management of SET's Subsidiaries:** RMC has continuously and regularly considered and provided suggestions on the risk management of SET's subsidiaries to ensure that the risk management of the subsidiaries are carried out in alignment with the SET group: 1) the expansion of the digital gateway project under SET's Digital Access Platform Company Limited (DAP) that provides linkage services for Mobile ID of Thailand National Frequency Allocation Table; 2) the guidelines of risk management for SET's LIVE Platform project; 3) the policy and guidelines of risk management of the operation of Thailand Digital Exchange (TDX); 4) the guidelines of risk management related to Issuer account service for the depository of those debentures that the Thailand Securities Depository Co., Ltd. (TSD) is not a registrar, while providing services as Investor Service, among others.
- **Risk Status Monitoring:** RMC has regularly monitored the status of key risks of the SET group, to ensure continuous and efficient risk monitoring and supervision. In addition, RMC also reports the performance of RMC to the BoG on a quarterly basis.

- **Risk Management and Internal Audit:**

RMC has communicated, exchanged information and coordinated with related parties regarding risk management and internal audit. In 2021, RMC held one joint meeting with AC to be informed of the accomplishment and lesson learned from project operation after the new key systems were launched (Post implementation); Cybersecurity management performance in 2021; and the summary of the overall incidents. This will be the guidelines for the development and enhancement of SET's operation.

In summary, RMC viewed that in 2021 the SET group has developed the enterprise risk management to cover all key aspects continuously, in line with the changing situations. In addition to RMC's regular meetings, RMC has also conducted a joint meeting with AC, all of which have enabled SET's risk management operations to be efficient and appropriate, while being able to control and minimize risks at acceptable level.



(Pichet Sithi-Amnuai)

Chairperson

Risk Management Committee

February 17, 2022



Nomination and Remuneration Committee Report

The current Nomination and Remuneration Committee (NRC) was appointed by the SET Board of Governors (BoG) on August 6, 2019. NRC consists of five committee members who are SET governors, namely Voravan Tarapoom as NRC chairperson, and Norachet Sangruji, Sopawadee Lertmanaschai, Dr. Kulpatra Sirodom and Thiti Tantikulanan as committee members.

In 2021, the Committee held 12 meetings in order to completely perform the duties under the scope of responsibilities specified in the Charter. A summary of key activities is as follows:

Nomination

- 1) Considered the guidelines for selecting committee members for various committees of SET and subsidiaries, and approved the name list of the committee members of various committees of SET's subsidiaries and joint ventures for the year 2021, and the name lists of the Disciplinary Committee and the Audit Committee members
- 2) Considered the list of additional Expert Pool candidates for the nomination and appointment as board members, committee members, and experts in different fields
- 3) Considered the chairmanship recruitment for corporate governance-related committees, as well as reviewing the limitations of being members of each committee
- 4) Considered the guidelines that allow board members, both appointed by the Securities and Exchange Commission (SEC) and elected by the members, to serve as Chairman of the Sustainability Committee (SC), as well as considering the guidelines for recruiting chairman in each of the various committees in the future as follows:
 - 4.1 The classification of the key group which still comprise corporate governance-related committees (namely NRC, SC, AC, RMC, and ITC). The management was requested to further study the meeting's recommendations accordingly
 - 4.2 The consideration for the appointment of board members to serve as Chairman of the key group which are corporate governance-related committees to be one person per committee to ensure equally distributed workload and provide opportunity for every board member to serve as chairman of each committee
- 5) Considered the promotion of Executive Vice President (EVP) to Senior Executive Vice President (SEVP)
- 6) Considered and reviewed the restrictions on the allocation of board governors serving as committee members in various committees as follows:
 - 6.1 To maintain the same principles and constituents in appointing the chairman and members of corporate governance-related committees, and adjust the composition that specifies that the chairman of SC may be a SET governor appointed by the SEC board or elected by the members
 - 6.2 The management to consult with the SC expert on business development towards sustainability regarding suitability and harmony of the corporate governance and best practice principles of the constituents of each member of the various committees
 - 6.3 To provide explanation and clarification of the information relating to the composition of the various committees, including the fact that SET does not specify about "independent directors" regarding the new director orientation, to be well-informed of the background, roles, duties, and scope of responsibilities of the members of each committee starting from the appointment date
- 7) Considered and reviewed the classification of corporate governance-related committees:
 - 7.1 Reviewed the inclusion of the Legal Committee as one of the corporate-governance related committees, and opined that the Committee should propose the SET President to be part of the Legal Committee
 - 7.2 Adjusted the guidelines of the remuneration rate to be suitable for the scope of work and duty, and in line with the corporate governance-related committees
 - 7.3 Suggested that the management further study the composition, the expansion of the scope of duties and responsibilities, and the management of COI issues of the Legal Committee
- 8) Considered and reviewed the composition and list of board members of New Business companies. Regarding SET Venture Holding Co., Ltd. (SVH)'s board members, NRC viewed that the

SEC-appointed board member should serve as chairman of SVH. In addition, in case there is a new committee member, the management should arrange to explain and clarify the information of best practice guidelines for SVH and other New Business subsidiaries in the orientation program for new board members

- 9) Considered the appointment of the CMDF's 2021 Performance Review Committee members, consisting of some former members with the appointment of new members
- 10) Considered the appointment of the committee members SET's Information Technology Committee (ITC) and the Securities Investor Protection Fund (SIPF), as well as the appointment of the new committee members of TFEX's Derivatives Investor Protection Fund (DIPF) to fill the vacancy
- 11) Considered the list of TFEX Disciplinary Committee members for 2021
- 12) Considered the results of the consultation with the SC expert on the appropriateness of the composition of the corporate governance-related committees, and considered the opinions of SET's Legal Committee regarding the NRC's recommendations
- 13) Considered the nomination / the extension of the terms of SET's Appeal Committee members
- 14) Considered the appointment of the advisor on the capital market sustainability development, and also delegated the tasks to the executives at senior executive vice president level
- 15) Considered the principles for the appointment and composition of the SET's and TFEX's Disciplinary Committees, and approved the revised guidelines for TFEX's Disciplinary Committee's recruitment regarding experts and/or persons with experience in futures contract business

Remuneration

- 1) Considered the overall 2020 bonus allocation, as well as the 2021 pay raise for the management and employees
- 2) Considered the guidelines for performance assessment of the SET President in 2021
- 3) Considered the principles for the bonus payment for employees by taking into consideration the past bonus payment guidelines, operational performance data, payment ability, payment rate

from the previous year, and the industry benchmark in order to ensure flexibility and suitability of each year's circumstance

- 4) Considered using the service of Mercer, a consulting firm, to conduct a study and review of the SET Executive Pay Benchmarking for the remuneration for the SET President and Senior Executive Vice President positions in comparison to other leading organizations and foreign exchanges
- 5) Considered the comparative study of the remuneration for the SET President and top executives according to the SET Executive Pay Benchmarking by Mercer project as a supporting information for considering the remuneration for the SET President
- 6) Considered the remuneration and benefits packages for the SET President

Others

- 1) Monitored the progress of the implementation of the Succession Plan for SET's key positions
- 2) Considered the launch of the voluntary resignation, via two programs, as follows:
 - Early Retirement Program (ERP)
 - Mutual Separation Program (MSP)
- 3) Considered the suitability of the current NRC Charter, which was viewed as not necessary to adjust at present
- 4) Considered the overall operating performance of the Human Resources and Corporate Development Division

In summary, the Committee has performed its duties appropriately according to the missions, duties, experiences, and responsibilities assigned to each committee member, in compliance with SET's corporate governance and best practice guidelines.



(Voravan Tarapoom)

Chairperson

Nomination and Remuneration Committee

February 17, 2022



Sustainability Committee Report

The Sustainability Committee (SC) consists of five directors from the SET Board of Governors (BoG), four of whom are not involved in management affairs, and the other is governor-cum-SET president. Over the course of 2021, SC held five meetings which all members attended. (Details of each meeting attendance are available under the “Corporate Governance” section.) They performed their duties completely according to the Charter of the SC and the assignments of BoG, including reporting their work to BoG on a quarterly basis.

The highlights of the SC’s performance in 2021 are as follows:

1. The policy setting and monitoring of corporate governance and sustainability practices across the SET group

SC considered, reviewed and approved the SET group’s Corporate Governance Policy and Code of Conduct 2021 which met the best international practice. SC approved the anti-corruption measures of the SET group to prohibit the employment or appointment of the government officials who have direct supervisory authority over the SET group to be committee members, sub-committee members, specialists or consultants of the SET group. In addition, SC also shaped a policy for SET to undergo evaluation under the Thai Private Sector Collective Action Against Corruption (CAC) project implemented by the Thai Institute of Directors (IOD) which is an independent organization to create confidence in the efficiency of the SET’s internal control system in preventing and reducing the risks of fraud and corruption. The evaluation results showed that SET has virtually fulfilled the evaluation criteria of the CAC project.

SC emphasized that the SET group should utilize the code of conduct in all the work enterprise-wide, regularly carry out surveillance and promote compliance within the organization. Moreover, SC recommended the SET group improve the CG Education course for staff by increasing the content of the course to completely cover all

policies and the code of conduct and including practices in compliance with key laws concerning staff and the Personal Data Protection Act (PDPA) and organize a test to ensure knowledge and understanding of the CG Education course content among staff. All staff members have taken this course and passed the test.

In addition, SC shared opinions with BoG on the adequacy of the Charters of BoG and SC and the evaluation of BoG and SC and reviewed reports on SET’s corporate governance and SC’s performance before placing the disclosure in the SET Annual Report 2021.

2. Sustainability development for listed companies and stakeholders in the capital market

Views and recommendations were made to ensure that the sustainability development policy for listed companies and intermediaries is formulated in consistence with the SET Sustainability Framework, developed in accordance with the UN Sustainable Stock Exchanges (SSE) Initiative and relevant international standards.

2.1 Sustainability development for listed companies

SC has set the policy and recommendations on the production and development of handbooks on environmental, social and governance (ESG) practices that are updated and can catch up with the changing world and international principles so that listed companies, intermediary institutions and various companies can apply them in their organizations’ contexts. These cover Guidance on Human Rights Risks for Thai Listed Firms, the best practices of boards of directors in setting up sustainability-oriented strategies, the disclosure of climate-related information according to Task Force on Climate-related Financial Disclosures (TCFD) recommendations, and new corporate governance report (CGR) assessment criteria. In addition, in 2021, SC also set the policy on the systematic



development of the ESG database in accordance with the development plan of the ESG Data Platform so that data can be used for the efficiency and benefit of the industries as a whole. Moreover, for the continuous sustainability development of listed companies, SC also proposed the enhancement of ESG professionals who will play an important role in promoting sustainability knowledge in the capital market.

Furthermore, SC has also provided the key policy and recommendations on elevating the sustainability-related performance of listed companies to create visibility and attract local and foreign investors. It is promoting the increase in the quantity and quality of listed companies qualified to be Investment Stars in sustainability indices locally and globally in line with the sustainable investment direction.

2.2 Sustainability development for related organizations in the capital market

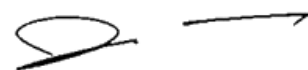
SC has set the policy for the development of organizations and stakeholders in the capital market by sharing knowledge to a broad range of stakeholders such professionals, startups, SMEs and investors as well as students and interested public.

In 2021, to expand learning further in line with the work from home (WFH) and ongoing COVID pandemic spread situation, SC set the policy to manage learning mainly via digital and e-Learning channels to serve various target groups on the topics that boost capital market development such as the contents about new assets for investment, digital tools for investment and customer services, necessary skills for entrepreneurs and sustainability development, among others. Significantly, the contents, learning approach and assessment of a key project on investment and savings knowledge have been improved. This refers to Financial Literacy under the Happy Money project, aiming to cover wider target groups and focusing more on behavioral changes which can help solve financial problems in the Thai society substantially.

SC views that SET's knowledge-sharing mission is an important mission that has been carried out continuously and actively, and that SET should continue to implement this mission, especially in this current situation. By sharing financial knowledge, we can help build financial immunization of the Thai people and can also help develop the capital market personnel to be well-equipped with financial knowledge and skills, having responsible investment, to support the capital market development in a sustainable manner.

In addition, in 2021, SC also set the policy on the sustainable development of social enterprises which is based on the partnership between the capital market and the social sector. The various projects were implemented via the collaboration with universities and organizations in both government and private sectors. In addition, we have also promoted the development of platforms to reduce global warming via 3 projects namely 1) Care the Bear, to reduce global warming, 2) Care the Whale, to carry out waste management and environmental management and 3) Care the Wild, to raise funds for reforestation via plant & protect approach: planting new trees, adding more trees, and promoting forest maintenance.

In conclusion, SC is of the opinion that SET has appropriately and efficiently implemented the development of corporate governance and sustainability for the SET group as well as listed companies and stakeholders in line with the objective to promote and develop the sustainability of the Thai capital market. In addition, SET has also disclosed information in the corporate governance report with transparency, appropriateness and in compliance with international standards.



(Voravan Tarapoom)

Chairperson

Sustainability Committee

March 28, 2022



Information Technology Committee Report

The current Information Technology Committee (ITC) was appointed by the SET Board of Governors (BoG) on December 30, 2020, consisting of four SET Board members, one executive being the Chairperson of the Information Technology Club (IT Club) under the Association of Thai Securities Companies (ASCO), one information technology expert, and the SET President. The seven committee members are as follows:

1. Dr. Anuchit Anuchitanukul (Chairperson)
2. Paiboon Nalinthrangkurn
3. Pannaporn Sapsomboon (expert)
4. Pichet Sithi-Amnuai
5. Prakrit Thanwalai (Chairperson of IT Club, ASCO)
6. Thiti Tantikulanan
7. Dr. Pakorn Peetathawatchai

During 2021, there were two committee members whose tenure as SET governors ended on February 4, 2021, namely Charamporn Jotikasthira and Pattera Dilokrunghirapop. The BoG has resolved to appoint Dr. Anuchit Anuchitanukul as chairperson of the ITC instead of Charamporn Jotikasthira, and to appoint Pichet Sithi-Amnuai as a committee member effective from February 17, 2021 until the end of their terms as governors. In addition, one committee member resigned from his position as the Chairperson of IT Club, ASCO, namely Tharatporn Techakitkachorn with his term ending on May 31, 2021. The BoG has then resolved to appoint Prakrit Thanwalai to be a committee member in the role as Chairperson of IT Club, ASCO effective from July 21, 2021 until December 31, 2023.

In 2021, the Committee held 12 meetings and the attendance of each committee member is shown in Corporate Governance Report. The Committee performed its duties and expressed opinions in accordance with the scope of authority, duties and responsibilities as assigned by the BoG regarding strategy and policy for information technology development by taking into consideration all groups

of stakeholders in all aspects. In addition, the performance of the Committee was also reported to the BoG on a quarterly basis. The key duties carried out by the Committee can be summarized as follows:

Strategic Project Implementation and Major System Improvements to Support Business Operations

- Provided consultations and suggestions on technology projects of the SET group in compliance with the industry standards in order to be instrumental in leveling up the Thai capital market to be competitive to the stock exchanges in the region. Samples of these projects are the Trading System Upgrade project, the Common Infrastructure for Brokers Back Office System project, the Digital Asset Platform project, LiVE Platform project
- Considered and provided policies, and suggestions on the improvement of key systems to support the increasing trading transactions in a sustainable manner, such as SET CONNECT system, Settrade system, broker's front office systems, SET CLEAR system, NDID system, including the provision of equipment for the Data Center to replace the existing equipment nearing expiration date, as well as the procurement for service provider of the SETNET3 network management
- Provided policies to upgrade the creation of software for industries for domestic consumption and export, in order to boost potential growth of businesses

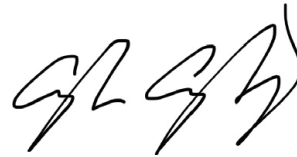
Cybersecurity

- Referring to the various news on damages incurred as a result of continued rise of cyber threats, the Committee took action by continuously monitoring the related operations of the management such as the black box penetration test conducted by expert consultant, security awareness test among employees through phishing email activities, etc.

to ensure that the SET group realizes and understands the situations. In addition, the Committee has also ensured effective preparation of cybersecurity prevention plan when an incident occurs. Moreover, the Committee also provided practical opinions via activities such as training to educate employees enterprise wide, disseminating cybersecurity awareness short clips from Microsoft among employees at SET and other companies industry-wide. All these are in compliance with the SEC's cybersecurity announcement and the international standards (ISO) that SET has been certified

- Encouraged the adoption of the ISO27701 standard to manage sensitive information and high-risk personal data in the SET group's system that was certified by the auditors of British Standards Institution (BSI) in May 2021
- Cooperated with the SEC, together with Price Waterhouse Coopers (PwC) to assess IT & Cybersecurity in three aspects of the SET group's systems: 1) Data Protection and Governance 2) Change Management 3) Incident Management, so as to be well-prepared before the Personal Data Protection Act (PDPA) enforcement is effective

In summary, the ITC Committee has performed the duties in accordance with the Charter, based on the experiences and the changing situations, suitable for business operations. The Committee has considered the guidelines for implementation and has monitored the progress of various key projects, as well as providing suggestions related to technology which can benefit the overall industry, in compliance with the corporate good governance principles of SET.



(Dr. Anuchit Anuchitanukul)

Chairperson

Information Technology Committee

February 9, 2022





9 Internal Control



9.1 Internal Control

The Board of Governors (BoG) recognizes the importance of efficient internal control at all levels, the BoG has supported the management in setting up regulations and working processes, segregating duties with checks and balances, clearly specifying authorities in writing and putting in place an efficient monitoring system. The Audit Committee (AC) has been assigned to supervise and review SET group's internal control, and the Internal Audit Department to ensure that internal controls over operation process, financial reporting, and regulatory compliance are in line with the Committee of Sponsoring Organization of Treadway Commission (COSO).

9.1.1 Internal Audit Department Structure

The Internal Audit Department is an independent function that generally reports to the AC with administrative reporting to the SET President. The AC considers and approves the appointment, transfer or termination of employment and performance assessment of the Head of the Internal Audit Department, as well as approving the department's budget. At end-2021, the top executive of the Internal Audit function was Chanapai Suppasuk, Senior Vice President, Internal Audit Department.

9.1.2 Internal Audit Operations

The function scope of the internal audit covers the departmental tasks, supporting systems, and the operations / businesses of the SET group. The Internal Audit Department has access to all information necessary to the auditing in order to perform their duty to audit and evaluate certain adequacy, suitability, and efficiency of the internal control system of various processes, and operating systems according to the audit plan approved by the AC. The annual audit plan, using the risk-based approach, is under constant reviews throughout the year to covering of corporate strategy and to address the emerging risk. The audit results and follow-up reports on actions taken by the management are directly reported to AC on a regular basis.

In 2021, SET held a number of projects to enhance effectiveness of its internal control and internal audit systems with details summarized below:

- SET prioritized the development of computer systems with efficient internal controls, intensive system testing, and in compliance with related regulations. A thorough assessment had also been conducted by the Internal Audit Department prior to the actual implementation (Pre-Implementation Review)
- The Internal Audit Department has implemented audit tools for data analysis and verification in order to increase efficiency in both the speed and size of audit transaction samplings. In addition, the Internal Audit Management System has also been available to support the department's working process to be in compliance with the standards and to make it more efficient.
- SET supports continuous development of knowledge and capabilities of internal auditors via training, seminars on internal audit skills and specific skills, and taking courses and exams to gain both national and international professional audit certificates and other relevant certificates. Currently, the department's officials hold 15 certificates. In 2021, the department's officials attended training courses for a total of 110 days (man-days).

9.1.3 Quality Assessment of Internal Audit Function

SET holds a Quality Assessment Review (QAR) based on the International Professional Practices Framework. The Internal Audit Department conducts annual peer review assessment and specifies that the assessment to be conducted by an external independent expert every five years.

In 2021, the Internal Audit Department was assessed by an external independent assessment expert. The assessment result can be summarized that the internal audit operation was 100 percent in compliance with the standards, comparable to leading organizations and foreign stock exchanges. The operation was at "Advance" level, ensuring that the quality of internal audit functions will support SET's operations to achieve the set goals through a transparent, efficient, and effective internal control system.



SET Group Financial Highlights

(Unit: THB million)

	2021	2020	2019
Consolidated statements of revenues and expenses			
Total revenues	8,284	6,347	7,286
Operating revenues	7,735	6,548	5,890
Investment income (loss), net	369	(364)	948
Other income ¹	180	163	448
Operating expenses	5,036	4,289	4,217
Revenues over expenses from operation	3,248	2,058	3,069
Contribution to the Capital Market Development Fund	583	362	5,700
Revenues over (under) expenses, net	1,597	1,354	(2,599)
Consolidated statements of cashflows			
Net cash provided by (used in) operating activities	3,297	2,312	(2,681)
Net cash provided by (used in) investing activities	(2,320)	3,397	3,908
Net cash used in financing activities	(16)	(14)	-
Consolidated statements of financial position			
Total current assets ²	35,220	34,516	21,919
Non-current financial assets and long-term investments	6,264	4,769	7,904
Total assets	56,881	54,427	44,994
Total current liabilities ²	23,498	23,471	15,492
Total liabilities	27,512	26,720	18,576
Fund balances	29,369	27,707	26,418
Assets / payables of margin deposits and benefits ²	19,776	20,326	13,385
Key financial ratios			
Total revenue growth (%)	30.52	(12.89)	10.76
Operating revenue growth (%)	18.13	11.17	2.88
Operating expenses to operating revenues ratio (%)	65.11	65.50	71.60
Net profit margin ³ (%)	19.28	21.33	(35.67)
Return on fund balance (%)	5.44	4.89	(9.84)
Current ratio (Times)	1.50	1.47	1.41
Debt to fund ratio (Times)	0.94	0.96	0.70

Note: ¹ Other income consist of educational activities income, revenues from marketing events, revenues from fees and management funds, etc.

² Other current assets and other current liabilities included margin deposits and benefits at the same amount (as the guarantee for derivative contracts of the clearing house)

³ Net profit margin calculated by revenues over (under) expenses, net / total revenues





SET's Sustainability Performance

Topics	Indicators	Unit	Performance					
			2021		2020		2019	
Sustainability Management								
Good Corporate Governance and Sustainable Risk Management	Male governors	persons / %	8	73	8	73	8	73
	Female governors	persons / %	3	27	3	27	3	27
	Total number of governors	persons / %	11	100	11	100	11	100
	Average board meeting attendance	%	100		97		88	
	Number of complaints or incidents related to corruption in SET's operations	case (s)	0		0		0	
	Number of complaints or violations of regulations on the acquisition or disposal of securities by governors, management, and employees	case (s)	0		0		0	
	Number of complaints or incidents related to insider trading violations by governors, management, and employees	case (s)	0		0		0	
	Incidents of cyberattacks or system malfunctions	case (s)	0		0		0	
Market Growth								
Enhancing Quality of Business and Personnel in Capital Market	Number of listed companies in the Thailand Sustainability Investment (THSI) list	companies	146		124		98	
	Market capitalization of listed companies in the THSI list	%	66.00		69.00		65.00	
	Number of listed companies in the Dow Jones Sustainability Indices (DJSI)	companies	24		21		20	
	Average Corporate Governance Report (CGR) score of listed companies	%	84		83		82	
Accessible Capital Market	Number of users accessing the Entrepreneur's Classroom Website and LiVE Platform	million views	1.16		0.33		-	
	Number of users accessing the SET online investment knowledge platform	million views	11.95		0.58		-	
	Number of SET Member accounts on SET Website	million accounts	1.00		0.70		-	
Sustainable Finance and Investment	Number of listed companies in the SETTHSI Index	companies	77		58		53	
	Market capitalization ratio of listed companies in the SETTHSI Index	%	59.75		61.00		55.70	
	Number of investors and investment professionals accessing the Sustainable Investment Education	persons	9,200		-		-	
Employee Development								
Fair Employee Practices	Male employees	persons / %	245	32	244	32	237	32
	Female employees	persons / %	514	68	509	68	508	68
	Total number of employees	persons / %	759	100	753	100	745	100
	Employee workplace-related injuries or fatalities	case(s)	0		0		0	
	Absentee rate	working days	1.72		1.62		2.90	
	Average employee engagement score	%	78		78		-	
	Employee turnover rate	%	4.5		3.0		5.0	
Employee Development	Employee development expenses	THB million	38.00		34.70		35.40	
	Average training hours of management and employees	hours / person / year	69		54		64	



Topics	Indicators	Unit	Performance		
			2021	2020	2019
Social Development					
Financial Literacy	Number of people accessing the Capital Market Knowledge Center ¹	million people	1.72	1.12	1.04
	Number of people learning about financial planning for retirement through the Happy Money Project	million people	3.00	2.44	2.16
Social Impact	Number of social enterprises benefitting from the SET Social Impact Platform	organizations	114	94	–
	Number of members of the SET Social Impact Platform	organizations	300	250	156
	Number of people accessing the SET Social Impact website	views	260,000	192,798	120,160
Social Responsibility	Charitable Contributions	THB million	112 ²	11	–
	Value of shares donated to Pan Hoon Aom Boon and Pan Pol Aom Suk projects	THB million	11.46	11.00	9.16
Environmental Management					
Green Building	Greenhouse gas emissions				
	Scope 1 Greenhouse gas emissions	tons CO ₂ eq per year	153	174	205
	Scope 2 Greenhouse gas emissions		3,850	3,882	4,837
	Total greenhouse gas emissions		4,003	4,056	5,042
	Electricity consumption				
	Electricity purchased	kilowatt - hours	7,701,000	7,750,000	8,310,000
	Electricity generated from solar energy		60,480	69,829	74,092
	Total electricity consumption		7,761,480	7,819,829	8,384,092
	Total fuel consumption	liters	63,228	80,434	82,190
	Water consumption				
	Water supply use	cubic meters	43,768	42,256	50,996
	Treated wastewater		13,060	12,677	15,299
	Waste management				
	Hazardard waste	tons	40.52	85.86	156.48
	Non-hazardard waste		0.44	0.26	0.48
	Total waste		40.96	86.12	156.96
	Proportion of waste reused as fuel for cement production	%	45.10	29.78	25.31
	Proportion of green procurement	%	83.93	77.00	66.00
Collaboration in Climate Action	Total reduction of greenhouse gas emissions from the Climate Care Collaboration Platform	tons CO ₂ eq per year	12,245	12,323	–

Note: ¹ SET's Capital Market Knowledge Center consists of the Maruey Library and INVESTORY Museum

² Donation to healthcare related agencies for assistance and alleviation of social impact from the COVID-19 pandemic in a tune of THB 103 million

Symbol (-) is to show that there is no data record for the year or project has yet to operate





Report of the Board of Governors Relating to Responsibility for Financial Reporting

The Board of Governors is responsible for the consolidated financial statements of The Stock Exchange of Thailand (SET) and its subsidiaries, and the separate financial statements of The Stock Exchange of Thailand, including the financial information presented in this annual report. The financial statements for the year ended December 31, 2021 have been prepared in accordance with Thai Financial Reporting Standards. In preparing the financial statements, appropriate accounting policies have been adopted and regularly adhered to, using careful discretion and reasonable estimates. Important information has also been adequately disclosed in the notes to financial statements, so as to reflect the financial status, performance and cash flows in an accurate and transparent manner, providing benefits to the public.

The Board of Governors has provided and maintained the risk management system, internal control system, internal audit system and effective corporate governance to ensure that accounting records are accurate, complete and adequate to secure its assets and prevent risks, while preventing fraud or irregular operations in essence as well.

To accomplish this task, the Board of Governors has appointed an Audit Committee, consisting of independent non-executive directors, to be responsible for the quality of financial reports, the review of internal control system, internal audit system and risk management system. The opinions of the Audit Committee are included in the Audit Committee Report section of this annual report.

The consolidated financial statements of The Stock Exchange of Thailand (SET) and its subsidiaries, and the separate financial statements of The Stock Exchange of Thailand have been examined by an external auditor, EY Office Limited. In conducting the audit, SET has provided supporting information and documents so that the auditor could examine and express opinions in accordance with Thai Standards on Auditing. The auditor's opinion is presented in the auditor's report as part of this annual report.

The Board of Governors is of the opinion that the SET's overall internal control system is adequate and appropriate, and can create confidence that the consolidated financial statements of The Stock Exchange of Thailand (SET) and its subsidiaries, and the separate financial statements of The Stock Exchange of Thailand for the year ended December 31, 2021 are reliable and in compliance with Thai Financial Reporting Standards and related regulations.



(Dr. Prasarn Trairatvorakul)

Chairman



(Dr. Pakorn Peetathawatchai)

President



Independent Auditor's Report

To the members of The Stock Exchange of Thailand and The Stock Exchange of Thailand

Opinion

I have audited the accompanying consolidated financial statements of The Stock Exchange of Thailand and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at 31 December 2021, and the related consolidated statements of comprehensive revenues and expenses, changes in fund balances and cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies, and have also audited the separate financial statements of The Stock Exchange of Thailand (SET) for the same period.

In my opinion, the financial statements referred to above present fairly, in all material respects, the financial position of The Stock Exchange of Thailand and its subsidiaries and of The Stock Exchange of Thailand as at 31 December 2021, their financial performance and cash flows for the year then ended in accordance with Thai Financial Reporting Standards.

Basis for Opinion

I conducted my audit in accordance with Thai Standards on Auditing. My responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of my report. I am independent of the Group in accordance with the Code of Ethics for Professional Accountants as issued by the Federation of Accounting Professions as relevant to my audit of the financial statements, and I have fulfilled my other ethical responsibilities in accordance with the Code. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Key Audit Matters

Key audit matters are those matters that, in my professional judgement, were of most significance in my audit of the financial statements of the current period. These matters were addressed in the context of my audit of the financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters.

I have fulfilled the responsibilities described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of my report, including in relation to these matters. Accordingly, my audit included the performance of procedures designed to respond to my assessment of the risks of material misstatement of the financial statements. The results of my audit procedures, including the procedures performed to address the matters below, provide the basis for my audit opinion on the accompanying financial statements as a whole.

Key audit matters and how audit procedures respond for each matter are described below.

Revenue recognition - trading fees

As disclosed in Note 4 and Note 26 to the consolidated financial statements, the principal source of revenue of SET is trading fees, presenting it as "Operating revenues", under statement of comprehensive revenues and expenses. The revenue is subject to terms and conditions used in setting variable fees based on trading volume, and SET uses information technology to gather trading volume data and to calculate trading fees. I therefore focused on the audit of the gathering and processing of securities trading data by information technology systems as well as the accuracy and completeness of the trading volume data used in the revenue calculation.

The key audit procedures were as follows:

- Gained an understanding of operations and internal control procedures related to the recognition of revenue from trading fees.
- Assessed and tested, on a sampling basis, the internal controls relevant to recognition of trading fees revenue, including IT general controls, application controls and other related internal controls.
- Applied a sampling method to select agreements and test the revenue calculation to ensure that the trading fee revenue recognised was correct, consistent with the conditions of the relevant agreement and in accordance with Thai Financial Reporting Standards.



- On a sampling basis, examined supporting documents for trading fee revenue transactions occurring during the year and near the end of the reporting period.
- Performed analytical procedures on the relationship of the accounting transactions to the trading fees and performing analytical procedures on disaggregated data to detect possible irregularities in transactions throughout the period.
- Reviewed credit notes that SET issued after the period-end.

Corporate income tax related to remittance contributed to Capital Market Development Fund (“CMDF”)

As discussed in Note 33 to the consolidated financial statements related to recording of income tax with respect to the remittance of Baht 5,700 million contributed to CMDF by SET in 2019 in accordance with Section 40 of the Securities and Exchange Act (No.6) B.E. 2562 and the annual remittance to CMDF under Section 182/1 of the Securities and Exchange Act B.E. 2535 at the rate of 90% of income after deduction of expenses, taxes, and reserves recognised as an expense in statement of comprehensive revenues and expenses for the year 2020 and 2021 of Baht 362 million and 583 million, respectively.

The transaction related to corporate income tax with respect to such remittance requires the management to exercise significant judgment, taking into account applicable laws and regulations and Interpretation of Financial Reporting Standards with the supporting legal reasons, both factual and legal issues from SET’s internal legal advisor and external tax advisor in interpreting and considering the law related to the matter. As the uncertainty and complexity of interpretations of relevant laws and regulations as well as the effects that may occur are significant to the financial statements, I therefore determined that this matter is the key audit matter.

The key audit procedures were as follows:

- Inquired with SET’s management, and SET’s internal legal advisors regarding the facts, progress and relevant information with respect to this matter.

- Reviewed the correspondence related to this matter between SET and relevant tax authorities.
- Reviewed the opinions of SET’s internal legal advisor and external tax advisor used to support the management’s judgment.
- Assessed the appropriateness of recognition of this transaction including disclosure of corporate income tax with respect to the remittance contributed to the CMDF in the notes to the consolidated financial statements.

Other matter

The Consolidated financial statements of The Stock Exchange of Thailand and its subsidiaries (the Group) and the separate financial statements of The Stock Exchange of Thailand for the year ended 31 December 2020, were audited by another auditor who expressed an unmodified opinion thereon with emphasis of matter regarding the adoption of group of Financial Instruments Standards, under his report dated 17 February 2021.

Other Information

Management is responsible for the other information. The other information comprise the information included in annual report of the Group, but does not include the financial statements and my auditor’s report thereon.

My opinion on the financial statements does not cover the other information and I do not express any form of assurance conclusion thereon.

In connection with my audit of the financial statements, my responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or my knowledge obtained in the audit or otherwise appears to be materially misstated.

When I read the annual report of the Group, if I conclude that there is a material misstatement therein, I am required to communicate the matter to those charged with governance of correction of the misstatement.



Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Thai Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Thai Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Thai Standards on Auditing, I exercise professional judgement and maintain professional skepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

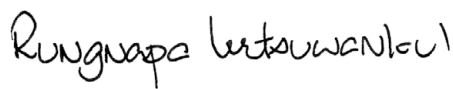


I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I also provide those charged with governance with a statement that I have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, I determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. I describe these matters in my auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, I determine that a matter should not be communicated in my report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

I am responsible for the audit resulting in this independent auditor's report.



Rungnapa Lertsuwankul

Certified Public Accountant (Thailand) No. 3516
EY Office Limited

Bangkok: 23 February 2022



Statements of financial position

The Stock Exchange of Thailand and its subsidiaries
As at 31 December 2021

(Unit: Thousand Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020
Assets					
Current assets					
Cash and cash equivalents	7	9,016,927	8,011,828	6,499,135	7,386,963
Cash at banks for financial benefits payable		83,578	76,323	-	-
Assets for margin deposits and benefits	17	19,775,717	20,326,369	-	-
Other current financial assets	8	5,601,530	4,467,120	3,511,715	2,452,742
Trade and other receivables	9	690,405	1,261,229	514,816	683,435
Derivative assets		7,311	42,140	7,311	42,140
Other current assets	10	44,878	330,505	40,764	296,804
Total current assets		35,220,346	34,515,514	10,573,741	10,862,084
Non-current assets					
Other non-current financial assets	11	6,264,029	4,768,844	6,259,029	4,763,844
Investments in subsidiaries	12	-	-	1,832,700	1,787,291
Investments in associates and joint venture	13	1,017,057	995,351	790,047	790,061
Assets for clearing system protection and benefits	18	2,049,124	2,216,908	150,613	150,723
Securities Investor Protection Fund	25	856,836	840,604	856,836	840,604
Derivatives Investor Protection Fund	25	112,871	111,797	-	-
Long-term loans to a subsidiary	6	-	-	5,690,834	5,690,834
Reserve Fund for clearing and settlement	19	5,702,029	5,804,065	-	-
Property, plant and equipment	14	4,228,078	4,485,549	4,227,746	4,485,172
Right-of-use assets	15	27,261	25,313	27,261	25,313
Intangible assets	16	799,339	660,225	794,550	657,788
Deferred tax assets	33	146,107	595	143,332	-
Other non-current assets	20	457,893	2,485	425,940	2,485
Total non-current assets		21,660,624	19,911,736	21,198,888	19,194,115
Total assets		56,880,970	54,427,250	31,772,629	30,056,199

The accompanying notes are an integral part of the financial statements.





Statements of financial position (continued)

The Stock Exchange of Thailand and its subsidiaries
As at 31 December 2021

(Unit: Thousand Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020
Liabilities and fund balances					
Current liabilities					
Margin deposits and benefits payable	17	19,784,276	20,329,161	-	-
Trade and other payables	21	2,999,293	2,497,259	1,997,931	1,726,274
Derivative liabilities		29,840	-	29,840	-
Current portion of lease liabilities	15	14,256	14,629	14,256	14,629
Fees received in advance		300,367	346,164	270,317	318,752
Income tax payable		121,560	114,547	-	-
Short-term loans from subsidiary	6	-	-	1,810,985	2,416,422
Other current liabilities	22	248,651	169,258	148,038	107,405
Total current liabilities		23,498,243	23,471,018	4,271,367	4,583,482
Non-current liabilities					
Lease liabilities, net of current portion	15	14,680	12,593	14,680	12,593
Assets for clearing system protection and benefits payable	18	1,898,511	2,066,872	-	-
Contributions and benefits to Securities Investor Protection Fund	25	344,488	337,673	344,488	337,673
Contributions and benefits to Derivatives Investor Protection Fund	25	55,438	54,878	-	-
Deferred tax liabilities	33	-	15,684	-	-
Provision for long-term employee benefits	23	731,444	751,187	731,444	751,187
Provision for tax liabilities	33	952,000	-	952,000	-
Other non-current liabilities		17,261	10,166	17,261	10,166
Total non-current liabilities		4,013,822	3,249,053	2,059,873	1,111,619
Total liabilities		27,512,065	26,720,071	6,331,240	5,695,101
Fund balances					
Funds	24	29,368,904	27,707,178	25,441,389	24,361,098
Other components of funds balances		-	-	-	-
Non-controlling interests		1	1	-	-
Total fund balances		29,368,905	27,707,179	25,441,389	24,361,098
Total liabilities and fund balances		56,880,970	54,427,250	31,772,629	30,056,199

The accompanying notes are an integral part of the financial statements.





Statement of comprehensive revenues and expenses

The Stock Exchange of Thailand and its subsidiaries
For the year ended 31 December 2021

(Unit: Thousand Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020

Revenues and expenses:

Revenues

Operating revenues	26	7,734,730	6,547,755	3,809,064	3,059,298
Investment revenue (loss), net	27	369,419	(363,689)	1,075,682	122,442
Other income	28	180,107	163,088	1,978,798	1,906,820
Total revenues		8,284,256	6,347,154	6,863,544	5,088,560

Expenses

Employee benefit expenses	29	2,146,278	1,947,178	2,146,278	1,947,378
Directors' remuneration		32,352	30,434	28,211	26,337
Direct service expenses		522,668	378,964	-	-
Building and office expenses		184,483	179,802	183,848	179,371
Technology expenses		271,125	225,913	270,959	225,745
Marketing expenses		134,331	124,615	107,151	103,099
Educational activity expenses		37,933	29,411	37,933	29,411
SEC Fees	30	910,368	668,859	904,672	666,859
Depreciation and amortisation	14, 15, 16	519,922	528,998	518,791	527,699
Other expenses	31	276,150	174,884	268,276	146,104
Total expenses		5,035,610	4,289,058	4,466,119	3,852,003
Revenues over expenses		3,248,646	2,058,096	2,397,425	1,236,557

Non-operating revenues

Income derived from Securities Investor Protection Fund, net	25	9,417	7,157	9,417	7,157
Income derived from Derivatives Investor Protection Fund, net	25	514	723	-	-
Share of profit of investments in associates and joint venture, net of tax	13	35,590	28,025	-	-
Revenues over expenses before contribution to the Capital Market Development Fund		3,294,167	2,094,001	2,406,842	1,243,714
Contribution to the Capital Market Development Fund	32	(582,978)	(361,641)	(582,978)	(361,641)
Revenues over expenses before income tax expenses		2,711,189	1,732,360	1,823,864	882,073
Income tax expenses	33	(1,114,558)	(378,279)	(808,668)	(107,314)
Revenues over expenses for the years		1,596,631	1,354,081	1,015,196	774,759

The accompanying notes are an integral part of the financial statements.





Statement of comprehensive revenues and expenses (continued)

The Stock Exchange of Thailand and its subsidiaries
For the year ended 31 December 2021

(Unit: Thousand Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020
Other comprehensive revenues (expenses):					
Other comprehensive revenues (expenses) not to be reclassified to revenues or expenses in subsequent periods					
Actuarial gain (loss), net of tax	23	65,095	(61,720)	65,095	(61,720)
Other comprehensive revenues (expenses) not to be reclassified to revenues or expenses in subsequent periods, net of tax					
		65,095	(61,720)	65,095	(61,720)
Other comprehensive revenues (expenses) for the years					
		65,095	(61,720)	65,095	(61,720)
Total comprehensive revenues over expenses for the years					
		1,661,726	1,292,361	1,080,291	713,039

Revenues over expenses attributable to:

Owners of the parent	1,596,631	1,354,081	1,015,196	774,759
Non-controlling interests	-	-		
	1,596,631	1,354,081		

Total comprehensive revenues over expenses for the year attributable to:

Owners of the parent	1,661,726	1,292,361	1,080,291	713,039
Non-controlling interests	-	-		
	1,661,726	1,292,361		

The accompanying notes are an integral part of the financial statements.





Statement of changes in fund balances

The Stock Exchange of Thailand and its subsidiaries
For the year ended 31 December 2021

(Unit: Thousand Baht)

	Consolidated financial statements				
	Fund balances	Other components of fund balance	Total of fund balance	Non-controlling interests	Total fund balances
Balance as at 1 January 2020	26,414,817	-	26,414,817	1	26,414,818
Other comprehensive revenues (expenses)					
for the year (Note 24)	(61,720)	-	(61,720)	-	(61,720)
Revenues over expenses (Note 24)	1,354,081	-	1,354,081	-	1,354,081
Balance as at 31 December 2020	<u>27,707,178</u>	<u>-</u>	<u>27,707,178</u>	<u>1</u>	<u>27,707,179</u>
Balance as at 1 January 2021	27,707,178	-	27,707,178	1	27,707,179
Other comprehensive revenues (expenses)					
for the year (Note 24)	65,095	-	65,095	-	65,095
Revenues over expenses (Note 24)	1,596,631	-	1,596,631	-	1,596,631
Balance as at 31 December 2021	<u>29,368,904</u>	<u>-</u>	<u>29,368,904</u>	<u>1</u>	<u>29,368,905</u>

(Unit: Thousand Baht)

	Separate financial statements		
	Fund balances	Other components of fund balance	Total fund balances
Balance as at 1 January 2020	23,648,059	-	23,648,059
Other comprehensive revenues (expenses)			
for the year (Note 24)	(61,720)	-	(61,720)
Revenues over expenses (Note 24)	774,759	-	774,759
Balance as at 31 December 2020	<u>24,361,098</u>	<u>-</u>	<u>24,361,098</u>
Balance as at 1 January 2021	24,361,098	-	24,361,098
Other comprehensive revenues (expenses)			
for the year (Note 24)	65,095	-	65,095
Revenues over expenses (Note 24)	1,015,196	-	1,015,196
Balance as at 31 December 2021	<u>25,441,389</u>	<u>-</u>	<u>25,441,389</u>

The accompanying notes are an integral part of the financial statements.





Cash flow statement

The Stock Exchange of Thailand and its subsidiaries
For the year ended 31 December 2021

(Unit: Thousand Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020
Cash flows from operating activities					
Revenues over expenses before income tax expenses		2,711,189	1,732,360	1,823,864	882,073
Adjustments to reconcile revenue over expense before tax to net cash provided by (paid from) operating activities:					
Depreciation and amortisation	14, 15, 16	519,922	528,998	518,791	527,699
Investment loss (revenue), net		(592,072)	238,982	(1,141,219)	(261,913)
Income derived from Securities Investor Protection Fund, net	24	(9,417)	(7,157)	(9,417)	(7,157)
Income derived from Derivatives Investor Protection Fund, net	24	(514)	(723)	-	-
Employee benefits obligation expenses	23	73,919	68,003	73,919	68,003
Loss (gain) from disposal and write-off of assets		394	(490)	394	(490)
Expected credit loss		9,286	3,812	1,545	3,504
Impairment loss of investment in joint venture		14	-	14	-
Share of profit from investments in associates and joint venture - net of tax	13, 24	(35,590)	(28,025)	-	-
Finance cost		1,507	1,578	1,507	1,578
Revenue over expense from operating activities before changes in operating assets and liabilities		2,678,638	2,537,338	1,269,398	1,213,297
Operating assets (increase) decrease					
Assets for margin deposits and benefits		544,885	(6,944,499)	-	-
Trade and other receivables		562,500	(755,967)	100,575	(198,099)
Other current assets		15,176	(45,170)	15,924	(45,503)
Assets for clearing system protection and benefits		167,861	(11,610)	110	(2,807)
Securities Investor Protection Fund		(16,560)	(6,488)	(16,560)	(6,488)
Derivatives Investor Protection Fund		(1,332)	(1,910)	-	-
Other non-current assets		(7,535)	-	(7,525)	-
Operating liabilities increase (decrease)					
Margin deposits and benefits payables		(544,885)	6,944,499	-	-
Trade and other payables		520,206	957,671	289,841	377,330
Fees received in advance		(45,797)	(7,235)	(48,435)	596
Other current liabilities		79,393	(1,187)	40,633	11,534
Assets for clearing system protection and benefits payable		(168,361)	9,003	-	-

The accompanying notes are an integral part of the financial statements.





Cash flow statement (continued)

The Stock Exchange of Thailand and its subsidiaries
For the year ended 31 December 2021

(Unit: Thousand Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020
Contributions and benefits to Securities Investor					
Protection Fund		6,815	1,419	6,815	1,419
Contributions and benefits to Derivative Investor					
Protection Fund		560	837	-	-
Other non-current liabilities		7,095	317	7,095	317
Employee benefits paid	23	(7,282)	(10,052)	(7,282)	(10,052)
Cash flows from operating activities		3,791,377	2,666,966	1,650,589	1,341,544
Corporate income tax paid		(494,163)	(354,587)	(175,814)	(108,592)
Net cash flows from operating activities		3,297,214	2,312,379	1,474,775	1,232,952



Cash flows from investing activities

Payment for long-term loans to a subsidiary	6	-	-	-	(250,000)
Cash received from investment		253,481	114,398	207,650	142,146
Purchase of other current financial assets		(3,295,945)	(1,987,402)	(2,716,681)	(1,843,446)
Proceeds from disposals of other current financial assets		2,249,838	2,893,314	1,754,446	2,559,836
Cash paid investments in subsidiary		-	-	(6,000)	(90,000)
Purchase of other non-current financial assets		(1,957,998)	(3,039,796)	(1,957,998)	(3,034,796)
Proceeds from disposals of other non-current financial assets		912,157	5,839,659	912,157	5,839,659
Cash receipt from foreign currency forward contracts		9,329	95,185	9,329	95,185
Cash paid from foreign currency forward contracts		(257,650)	(140,451)	(257,650)	(140,451)
Cash receipt (paid) from reserve fund for clearing and settlement, net		102,036	(213,627)	-	-
Purchase of property, plant and equipment		(102,643)	(113,405)	(102,643)	(113,405)
Proceeds from disposals of property, plant and equipment		1,084	2,269	1,084	2,269
Purchase of intangible assets		(325,779)	(146,336)	(322,351)	(145,436)
Benefits received from Securities Investor Protection Fund		9,746	5,069	9,746	5,069
Benefits received from Derivatives Investor Protection Fund		772	1,073	-	-
Dividend received		81,445	86,859	617,627	195,102
Net cash flows from (used in) investing activities		(2,320,127)	3,396,809	(1,851,284)	3,221,732

The accompanying notes are an integral part of the financial statements.





Cash flow statement (continued)

The Stock Exchange of Thailand and its subsidiaries
For the year ended 31 December 2021

(Unit: Thousand Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020
Cash flows from financing activities					
Cash receipt from short-term loan from subsidiaries	6	-	-	513,500	1,010,000
Repayment of short-term loan from subsidiaries	6	-	-	(1,048,937)	(112,000)
Cash paid for lease liabilities	15	(15,820)	(14,135)	(15,820)	(14,135)
Interest paid		-	-	(11,149)	(22,493)
Net cash flows from (used in) financing activities		(15,820)	(14,135)	(562,406)	861,372
Allowance for expected credit loss of cash and cash equivalents		366	(2,060)	366	(2,060)
Net foreign exchange difference		50,721	(19,769)	50,721	(19,769)
Net increase (decrease) in cash and cash equivalents		1,012,354	5,673,224	(887,828)	5,294,227
Cash and cash equivalents at beginning of year		8,088,151	2,414,927	7,386,963	2,092,736
Cash and cash equivalents at end of year		9,100,505	8,088,151	6,499,135	7,386,963

Supplementary for cash flows information

Cash and cash equivalents are as follows:

Cash and cash equivalents	7	9,016,927	8,011,828	6,499,135	7,386,963
Cash at banks for financial benefits payable		83,578	76,323	-	-
		9,100,505	8,088,151	6,499,135	7,386,963

Non-cash transactions:

Loss on investment measured at fair value					
through profit or loss		-	(392,260)	-	(400,030)
Other payables from purchase of assets		31,463	70,921	31,452	70,921
Increase in right-of-use assets and lease liabilities		16,028	13,087	16,028	13,087
Decrease in short-term loans from subsidiaries by offsetting					
dividend income	6	-	-	70,000	400,291
Increase in shares capital and disposal investment					
by shares swap		-	-	114,000	-

The accompanying notes are an integral part of the financial statements.





Notes to consolidated financial statements

The Stock Exchange of Thailand and its subsidiaries
For the year ended 31 December 2021

1. General information

The Stock Exchange of Thailand (SET) is a juristic entity incorporated in Thailand under the Securities Exchange of Thailand Act B.E. 2517. The principal business activities of SET are serving as the market or the centre for trading of securities and providing related services without the objective of distribution of profit to members. SET commenced its trading of securities on 30 April 1975 and operates under the framework of the Securities Exchange of Thailand Act B.E. 2535. Its registered office is located at 93 Floor 17th, Ratchadapisek Road, Kwaeng Din Daeng, Khet Din Daeng, Bangkok.

The principal activities of SET and its subsidiaries are summarised as follows:

- 1) Securities markets comprise the operation of securities listing, trading system, clearing and settlement, depository, including market surveillance and supervision of listed companies and member companies.
- 2) Derivatives markets comprise the operation of trading and clearing of futures contracts and financial securities, providing other services related to futures trading transactions.
- 3) Technology services comprise the operation of internet trading platform for securities and derivatives, information services and other member services.
- 4) Securities registrar services
- 5) Other services comprise fund services and payment services provider.

2. Basis of preparation

- 2.1 The financial statements have been prepared in accordance with Thai Financial Reporting Standards enunciated under the Accounting Professions Act B.E. 2547 and their presentation has been made in compliance with the stipulations under the Accounting Act B.E. 2543.

The financial statements in Thai language are the official statutory financial statements of SET. The financial statements in English language have been translated from the Thai language financial statements.

The financial statements have been prepared on a historical cost basis except where otherwise disclosed in the accounting policies.



2.2 Basis of consolidation

- a) The consolidated financial statements include the financial statements of The Stock Exchange of Thailand (“SET”) and the following subsidiary companies (“the subsidiaries”) (collectively as “the Group”):

Company's name	Nature of business	Country of incorporation	Percentage of shareholding (%)	
			2021	2020
Direct subsidiaries				
Thailand Securities Depository Co., Ltd.	Securities depository and registrar services	Thailand	100.00	100.00
Thai Trust Fund Management Co., Ltd.	Mutual fund management	Thailand	100.00	100.00
Thai NVDR Co., Ltd.	Investment management in Non-Voting Depository Receipts	Thailand	100.00	100.00
SETTRADE.COM Co., Ltd.*	Computer system services	Thailand	-	100.00
Thailand Futures Exchange Public Company Limited	Derivatives exchange	Thailand	100.00	100.00
Thailand Clearing House Co., Ltd.	Clearing house and related back-office services for securities and derivatives contracts	Thailand	100.00	100.00
SET Venture Holding Co., Ltd.**	Holding company	Thailand	100.00	100.00

(Date of incorporation on 21 May 2020)

* On 16 June 2021, the Board of the Governors of SET passed resolution to approve the transfer of 799,998 common shares of SETTRADE.COM Co., Ltd. held by SET to SET Venture Holding Co., Ltd. This share transfer was registered with the Ministry of Commerce on 1 October 2021.

** On 20 May 2020, the Board of the Governors of SET passed resolution to approve the transfer of 20,000,000 common shares of Finnet Innovation Network Co., Ltd. and 3,000,000 common shares of Live Fin Corp Co., Ltd. held by SET to SET Venture Holding Co., Ltd. This share transfer was registered with the Ministry of Commerce on 1 July 2020.

On 16 June 2021, the Board of the Governors of SET passed resolution to approve the increase in the registered shares capital of SET Venture Holding Co., Ltd. from Baht 300 million to Baht 420 million by issuing new ordinary shares offered to SET. This increase in shares capital was registered with the Ministry of Commerce on 1 October 2021.

Company's name	Nature of business	Country of incorporation	Percentage of shareholding (%)	
			2021	2020
Indirect subsidiaries				
Finnet Innovation Network Co., Ltd.	Rendering payment service for the capital market	Thailand	100.00	100.00
Live Fin Corp Co., Ltd.	Provider of electronic network system for investment	Thailand	100.00	100.00
Digital Access Platform Co., Ltd. (Date of incorporation on 22 May 2020)	Providing electronic networking service and/or supporting system to support electronic and digital transactions	Thailand	100.00	100.00
Thai Digital Assets Exchange Co., Ltd. (Date of incorporation on 14 September 2020)	Trading center for digital assets and providing infrastructure or related systems to support digital assets trading	Thailand	100.00	100.00
SETTRADE.COM Co., Ltd.	Computer system services	Thailand	100.00	-
Associates				
Clearing Fund	Fund	Thailand	6.79	7.76
TSFC Securities Public Company Limited	Securities financing services and securities borrowing and lending	Thailand	40.70	40.70
Joint venture				
Family Know-how Co., Ltd. (The dissolution was registered on 26 December 2018)	Media business specialising in financial and investment information	Thailand	50.00	50.00



Details of SET's associates and joint venture as at 31 December 2021 and 2020 are as follows:

1) Associates

1.1) Clearing Fund

The Clearing Fund operates under the Regulations of the Clearing Fund (No.1) B.E. 2541, which require that a one-time payment of Baht 100 million be made as an initial contribution by SET. The ownership interest percentage will be reduced based on further contributions made by other members of the Clearing Fund in the future. SET has no control over the Clearing Fund's operations, but has influences in policy and operation. Therefore, the investment in the Clearing Fund is classified as investment in an associate.

1.2) TSFC Securities Public Company Limited (TSFC)

TSFC Securities Public Company Limited has been established to provide liquidity for securities companies and to support to the further development of securities market. SET has appointed 5 representatives to be member of the 11-member Board of Directors of TSFC. The Board of Directors will participate in the decision-making on monetary policies and operations of the company. Therefore, the investment in TSFC is classified as investment in an associate.

TSFC Securities Public Company Limited is a public company and its stock is not traded in the market price.

2) Joint venture

2.1) Family Know-how Co., Ltd.

Family Know-how Co., Ltd. is a media company that broadcasts information about economics and investment for the benefits of investor. SET has performed joint arrangement with a company which have rights to the net assets of the arrangement. Therefore, the investment in Family Know-how Co., Ltd. is classified as investment in joint venture.

Family Know-how Co., Ltd. is a private limited company and its stock is not traded in the market price.

A Company has registered the dissolution with the Ministry of Commerce on 26 December 2018, and is currently in the process of liquidation.



- b) SET is deemed to have control over an investee or subsidiaries if it has rights, or is exposed, to variable returns from its involvement with the investee, and it has the ability to direct the activities that affect the amount of its returns.
 - c) Subsidiaries are fully consolidated, being the date on which SET obtains control, and continue to be consolidated until the date when such control ceases.
 - d) The financial statements of the subsidiaries are prepared using the same significant accounting policies as SET.
 - e) Material balances and transactions between the Group have been eliminated from the consolidated financial statements.
 - f) Non-controlling interests represent the portion of revenues and expenses and net assets of the subsidiaries that are not held by SET and are presented separately in the consolidated comprehensive revenues and expenses and within fund balance in the consolidated statement of financial position.
- 2.3 The separate financial statements present investments in subsidiaries, joint venture and associates under the cost method.

3. New financial reporting standards

3.1 Financial reporting standards that became effective in the current year

During the year, the Group has adopted the revised and new financial reporting standards and interpretations which are effective for fiscal years beginning on or after 1 January 2021. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes directed towards clarifying accounting treatment and providing accounting guidance for users of the standards.

The adoption of these financial reporting standards does not have any significant impact on the Group's financial statements.

3.2 Financial reporting standards that will become effective for fiscal years beginning on or after 1 January 2022

The Federation of Accounting Professions issued a number of revised financial reporting standards, which are effective for fiscal years beginning on or after 1 January 2022. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes directed towards clarifying accounting treatment, providing temporary reliefs or temporary exemptions for users of the standards.



The management of the Group believes that adoption of these amendments will not have any significant impact on the Group's financial statements.

4. Significant accounting policies

4.1 Revenue and expense recognition

Fees income

Trading fees, initial securities registrar fees, initial listing fees, clearing and settlement fees, member services fees, initial of information service fees, depository fees, initial customisation and IT support fees, initial membership fees, initial fund service fees and Digital Gateway service fees are recognised as revenue when the entity has fulfilled the obligations.

Annual securities registrar fees, annual listing fees, member service fees and Digital Gateway service fees by overtime, annual membership fee, fund service fees, payment service fees and Digital Gateway service fees by overtime are recognised revenue based on the obligations that must be completed throughout the period.

The recognised revenue which is not yet due per the contracts has been presented as accrued income under the caption of other receivables in the statement of financial position. The amounts recognised as other receivables are reclassified to trade receivables when the entity's right to consideration is unconditional.

An amount of consideration that the entity has received or to receive but the obligation to transfer goods or services to a customer is not completed is presented under the caption of fee received in advance in the statement of financial position. Fee received in advance from customers are recognised as revenue when the entity has fulfilled the obligations.

Interest income

Interest income is calculated using the effective interest method and recognised on an accrual basis. The effective interest rate is applied to the gross carrying amount of a financial asset, unless the financial assets subsequently become credit-impaired when it is applied to the net carrying amount of the financial asset (net of the expected credit loss allowance).

Dividends

Dividends are recognised when the right to receive the dividends is established.

Other income

Other income is recognised when the right to receive cash is established.

Expense

Expense is recognised in the statement of comprehensive revenues and expenses on an accrual basis.

Finance cost

Interest expense from financial liabilities at amortised cost is calculated using the effective interest method and recognised on an accrual basis.

4.2 Cash and cash equivalents

Cash and cash equivalents consist of cash in hand and at banks and all highly liquid investments with an original maturity of three months or less and not subject to withdrawal restrictions.

4.3 Investments in subsidiaries, associates and joint venture

Investments in subsidiaries, associates and joint venture are accounted for in the separate financial statements using the cost method.

Investments in associates and joint venture are accounted for in the consolidated financial statements using the equity method.

4.4 Property, plant and equipment/Depreciation

Land is stated at cost. Buildings and equipment are stated at cost less accumulated depreciation and allowance for loss on impairment of assets (if any).

Depreciation of plant and equipment is calculated by reference to their costs, on the straight-line basis over the following estimated useful lives:

	Useful lives
Buildings	10 - 50 years
Building improvements	5 - 30 years
Fixtures and office equipment	5 - 20 years
Motor vehicles	5 years

Depreciation is included in determining income.

No depreciation is provided on land and assets under installation.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on disposal of an asset is included in revenues over (under) expenses when the asset is derecognised.



4.5 Intangible assets

Intangible assets are initially recognised at cost. Following the initial recognition, the intangible assets are carried at cost less any accumulated amortisation and any accumulated impairment losses (if any).

Intangible assets with finite lives are amortised on the straight-line basis over the economic useful life and tested for impairment whenever there is an indication that the intangible asset may be impaired. The amortisation period and the amortisation method of such intangible assets are reviewed at least at each financial year end. The amortisation expense is charged to revenues over (under) expenses.

A summary of the intangible assets with finite useful lives is as follows:

	Useful lives
Computer software	3 - 10 years
Licences and other intangible assets	10 years

Costs associated with developing or maintaining computer software are recognised as expenses as incurred in the statement of comprehensive revenues and expenses. Costs that are directly associated with identifiable and unique software products controlled by the Group and have probable economic benefits exceeding the cost beyond one year are recognised as intangible assets. Direct costs include the purchase price and an appropriate portion of relevant overheads to allow such asset to be ready for its intended use. Expenditure which is incurred to enhance or extend the performance of computer software beyond its original specifications is recognised as an intangible asset.

The management determines the estimated useful lives of intangible assets of the Group. The management will review the amortisation charge when useful lives differ from the previous estimations or it will write-off obsolete assets or assets which have been sold or unused.

4.6 Leases

At inception of contract, the Group assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.



The Group as a lessee

The Group applied a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets at the commencement date of the lease (i.e. the date the underlying asset is available for use), the Group recognises right-of-use assets representing the right to use underlying assets and lease liabilities based on lease payments.

Right-of-use assets

Right-of-use assets are measured at cost, less accumulated depreciation, any accumulated impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities initially recognised, initial direct costs incurred, and lease payments made at or before the commencement date of the lease less any lease incentives received.

Depreciation of right-of-use assets are calculated by reference to their costs, on the straight-line basis over the shorter of their estimated useful lives and the lease term.

Useful lives	
Motor vehicles	4 - 5 years

If ownership of the leased asset is transferred to the Group at the end of the lease term or the cost reflects the exercise of a purchase option, depreciation is calculated using the estimated useful life of the asset.

Lease liabilities

Lease liabilities are measured at the present value of the lease payments to be made over the lease term. The lease payments include fixed payments less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be payable under residual value guarantees. Moreover, the lease payments include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for terminating the lease, if the lease term reflects the Group exercising an option to terminate. Variable lease payments that do not depend on an index or a rate are recognised as expenses in the period in which the event or condition that triggers the payment occurs.



The Group discounted the present value of the lease payments by the interest rate implicit in the lease or the Group's incremental borrowing rate. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a change in the lease term, a change in the lease payments or a change in the assessment of an option to purchase the underlying asset.

Short-term leases and leases of low-value assets

A lease that has a lease term less than or equal to 12 months from commencement date or a lease of low-value assets is recognised as expenses on a straight-line basis over the lease term.

4.7 Related party transactions

Related parties comprise individuals or enterprises that control, or are controlled by, SET, whether directly or indirectly, or which are under common control with SET.

They also include associates, and individuals or enterprises which directly or indirectly own a voting interest in SET that gives them significant influence over SET, key management personnel, directors, and officers with authority in the planning and direction of SET's operations.

4.8 Foreign currencies

The consolidated and separate financial statements are presented in Baht, which is also the SET's functional currency.

Transactions in foreign currencies are translated into Baht at the exchange rate ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated into Baht at the exchange rate ruling at the end of reporting period.

Gains and losses on exchange are included in determining income.

4.9 Impairment of non-financial assets

At the end of each reporting period, the Group performs impairment reviews in respect of the property, plant and equipment, right-of-use assets and other intangible assets whenever events or changes in circumstances indicate that an asset may be impaired. An impairment loss is recognised when the recoverable amount of an asset, which is the higher of the asset's fair value less costs to sell and its value in use, is less than the carrying amount.



An impairment loss is recognised in revenues over (under) expenses. However, in the cases where property, plant and equipment were previously revalued and the revaluation was taken to fund balances, a part of such impairment is recognised in fund balances up to the amount of the previous revaluation.

In the assessment of asset impairment, if there is any indication that previously recognised impairment losses may no longer exist or may have decreased, the Group estimates the asset's recoverable amount. A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The increased carrying amount of the asset attributable to a reversal of an impairment loss shall not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in revenues over (under) expenses unless the asset is carried at a revalued amount, in which case the reversal, which exceeds the carrying amount that would have been determined, is treated as a revaluation increase.

4.10 Employee benefits

Short-term employee benefits

Salaries, wages, bonuses, contributions to the social security fund and the right to the accumulated annual leave are recognised as expenses when incurred.

Post-employment benefits and other long-term employee benefits

Defined contribution plans

The Group and its employees have jointly established a provident fund. The fund is monthly contributed by employees and by the Group. The fund's assets are held in a separate trust fund and the Group's contributions are recognised as expenses when incurred.

Defined benefit plans and other long-term employee benefits

The Group has obligations in respect of the severance payments it must make to employees upon retirement under labor law and other employee benefit plans. The Group treats these severance payment obligations as a defined benefit plan. In addition, the Group provides other long-term employee benefit plan, namely long service awards.

The obligation under the defined benefit plan and other long-term employee benefit plans is determined by a professionally qualified independent actuary based on actuarial techniques, using the projected unit credit method.



Actuarial gains and losses arising from defined benefit plans are recognised immediately in other comprehensive revenues (expenses).

Actuarial gains and losses arising from other long-term benefits are recognised immediately in revenues over (under) expenses.

Termination benefits

Termination benefits are payable when employment is terminated by the Group before the normal retirement date, or whenever an employee accepts voluntary redundancy in exchange for these benefits. The Group recognises termination benefits when it is demonstrably committed to either: terminating the employment of current employees according to a detailed formal plan without possibility of withdrawal.

Providing termination benefits as a result of an offer made to encourage voluntary redundancy. Benefits falling due more than 12 months after the end of the reporting period are discounted to their present value.

4.11 Provisions

Provisions are recognised when the Group has a present obligation as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

Where there are a number of similar obligations, the likelihood that an outflow will be required in settlement is determined by considering the class of obligations as a whole. A provision is recognised even if the likelihood of an outflow with respect to any one item included in the same class of obligations may be small.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in the provision due to passage of time is recognised as interest expense.

4.12 Income tax

Income tax expense represents the sum of corporate income tax currently payable and deferred tax. Tax is recognised in revenues over (under) expenses, except to the extent that it relates to items recognised in other comprehensive revenues (expenses) or directly in fund balance. In this case the tax is also recognised in other comprehensive revenues (expenses) or directly in fund balance, respectively.



Current tax

Current income tax is provided in the accounts at the amount expected to be paid to the taxation authorities, based on taxable profits determined in accordance with tax legislation.

Deferred tax

Deferred income tax is provided on temporary differences between the tax bases of assets and liabilities and their carrying amounts at the end of each reporting period, using the tax rates enacted at the end of the reporting period.

The Group recognises deferred tax liabilities for all taxable temporary differences while it recognises deferred tax assets for all deductible temporary differences and tax losses carried forward to the extent that it is probable that future taxable profit will be available against which such deductible temporary differences and tax losses carried forward can be utilised.

At each reporting date, the Group reviews and reduces the carrying amount of deferred tax assets to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised.

The Group records deferred tax directly to fund balances if the tax relates to items that are recorded directly to fund balances.

4.13 Financial instruments

The Group initially measures financial assets at its fair value plus, in the case of financial assets that are not measured at fair value through profit or loss, transaction costs. However, trade receivables, that do not contain a significant financing component. The Group are measured at the transaction price as disclosed in the accounting policy relating to revenue recognition.

Classification and measurement of financial assets

Financial assets are classified, at initial recognition, as to be subsequently measured at amortised cost, fair value through other comprehensive income (“FVOCI”), or fair value through profit or loss (“FVTPL”). The classification of financial assets at initial recognition is driven by the Group’s business model for managing the financial assets and the contractual cash flows characteristics of the financial assets.



Financial assets at amortised cost

The Group measures financial assets at amortised cost if the financial asset is held in order to collect contractual cash flows and the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Financial assets at amortised cost are subsequently measured using the effective interest rate (“EIR”) method and are subject to impairment. Gains and losses are recognised in revenues over (under) expenses when the asset is derecognised, modified or impaired.

Financial assets at FVOCI (debt instruments)

The Group measures financial assets at FVOCI if the financial asset is held to collect contractual cash flows and to sell the financial asset and the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Interest income, foreign exchange revaluation and impairment losses or reversals are recognised in revenues over (under) expenses and computed in the same manner as for financial assets measured at amortised cost. The remaining fair value changes are recognised in other comprehensive revenues (expenses). Upon derecognition, the cumulative fair value change recognised in other comprehensive revenues (expenses) is recycled to revenues over (under) expenses.

Financial assets designated at FVOCI (equity instruments)

Upon initial recognition, the Group can elect to irrevocably classify its equity investments which are not held for trading as equity instruments designated at FVOCI. The classification is determined on an instrument-by-instrument basis.

Gains and losses recognised in other comprehensive revenues (expenses) on these financial assets are never recycled to revenues over (under) expenses.

Dividends are recognised as other income in revenues over (under) expenses, except when the dividends clearly represent a recovery of part of the cost of the financial asset, in which case, the gains are recognised in other comprehensive revenues (expenses).

Equity instruments designated at FVOCI are not subject to impairment assessment.



Financial assets at FVTPL

Financial assets measured at FVTPL are carried in the statement of financial position at fair value with net changes in fair value recognised in revenues over (under) expenses.

These financial assets include derivatives, security investments held for trading, equity investments which the Group has not irrevocably elected to classify at FVOCI and financial assets with cash flows that are not solely payments of principal and interest.

Dividends on listed equity investments are recognised as other income in revenues over (under) expenses.

Classification and measurement of financial liabilities

Except for derivative liabilities, at initial recognition the Group's financial liabilities are recognised at fair value net of transaction costs and classified as liabilities to be subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in revenues over (under) expenses when the liabilities are derecognised as well as through the EIR amortisation revenues over (under) expenses. In determining amortised cost, the Group takes into account any fees or costs that are an integral part of the EIR. The EIR amortisation is included in finance costs in revenues over (under) expenses.

Derecognition of financial instruments

A financial asset is primarily derecognised when the rights to receive cash flows from the asset have expired or have been transferred and either the Group has transferred substantially all the risks and rewards of the asset, or the Group has transferred control of the asset.

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in revenues over (under) expenses.

Impairment of financial assets

The Group recognises an allowance for expected credit losses ("ECLs") for all debt instruments not held at FVTPL. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate.



For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12-months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure (a lifetime ECL).

The Group considers a significant increase in credit risk to have occurred when contractual payments are more than 30 days past due and considers a financial asset as credit impaired or default when contractual payment are more than 90 days past due. However, in certain cases, the Group may consider a financial asset to have significant increase in credit risk and to be in default taking into account other internal or external data information, such as credit rating of issuer.

For trade receivables, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognises a loss allowance based on lifetime ECLs at each reporting date. It is based on its historical credit loss experience and adjusted for forward-looking factors specific to the debtors and the economic environment.

ECLs are calculated based on its historical credit loss experience and adjusted for forward-looking factor specific to the debtors and the economic environment.

A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

Offsetting of financial instruments

Financial assets and financial liabilities are offset, and the net amount is reported in the statement of financial position if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.



4.14 Derivatives

The Group uses derivatives, such as forward currency contracts to hedge its foreign currency risks.

Derivatives are initially recognised at fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. The subsequent changes are recognised in revenues over (under) expenses. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative.

Derivatives are presented as non-current assets or non-current liabilities if the remaining maturity of the instrument is more than 12 months and it is not due to be realised or settled within 12 months. Other derivatives are presented as current assets or current liabilities.

4.15 Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between buyer and seller (market participants) at the measurement date. The Group applies a quoted market price in an active market to measure their assets and liabilities that are required to be measured at fair value by relevant financial reporting standards. Except in case of no active market of an identical asset or liability or when a quoted market price is not available, the Group measures fair value using valuation technique that are appropriate in the circumstances and maximises the use of relevant observable inputs related to assets and liabilities that are required to be measured at fair value.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy into three levels based on categorise of input to be used in fair value measurement as follows:

Level 1 - Use of quoted market prices in an active market for such assets or liabilities

Level 2 - Use of other observable inputs for such assets or liabilities, whether directly or indirectly

Level 3 - Use of unobservable inputs such as estimates of future cash flows

At the end of each reporting period, the Group determines whether transfers have occurred between levels within the fair value hierarchy for assets and liabilities held at the end of the reporting period that are measured at fair value on a recurring basis.



5. Significant accounting judgements and estimates

The preparation of financial statements in conformity with financial reporting standards requires management to make subjective judgements and estimates regarding matters that are inherently uncertain. These judgements and estimates affect reported amounts and disclosures; and actual results could differ from these estimates. Significant judgements and estimates are as follows:

Allowance for expected credit losses of trade receivables

In determining an allowance for expected credit losses of trade receivables, the management needs to make judgement and estimates based upon, among other things, past collection history, aging profile of outstanding debts and the forecast economic condition for groupings of various customer segments with similar credit risks. The Group's historical credit loss experience and forecast economic conditions may also not be representative of whether a customer will actually default in the future.

Deferred tax assets

Deferred tax assets are recognised for deductible temporary differences and unused tax losses to the extent that it is probable that taxable profit will be available against which the temporary differences and losses can be utilised. Significant management judgement is required to determine the amount of deferred tax assets that can be recognised, based upon the likely timing and level of estimate future taxable profits.

Post-employment benefits under defined benefit plans and other long-term employee benefits

The obligation under the defined benefit plan and other long-term employee benefit plans is determined based on actuarial techniques. Such determination is made based on various assumptions, including discount rate, future salary increase rate, mortality rate and staff turnover rate.

Litigation and uncertainty of liabilities that may arise from taxation

The Group has contingent and/or contingent liabilities from litigation and uncertainty of liability that may arise from taxation in which tax authorities will accept the group's taxation methods. The management uses judgment to evaluate any such transaction, including reasonable estimating the expected damage. Changing in factors underlying management's assessment and unanticipated circumstances could cause actual results to differ materially from these estimates.

6. Related party transactions

The relationships between SET and its subsidiaries, associates and joint venture are summarised as described in Notes 12 and 13 to the consolidated financial statements.

During the years, the Group had significant business transactions with persons or related parties. Such transactions, arose in the ordinary course of business and were concluded on commercial terms and bases agreed upon between the Group and those persons or related parties which can be summarised as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements		Transfer pricing policy
	2021	2020	2021	2020	
Transactions with subsidiary companies					
(Eliminated from the consolidated financial statements)					
Service income	-	-	1,953,772	1,842,323	Cost plus margin
Interest income	-	-	74,049	140,635	The rate of return is referred to the net return of a private fund plus 0.47% - 1.16% per annum (2020: 0.30% - 0.47%) of principle balance
Dividend income	-	-	606,182	508,543	As declared
Service fees expenses	-	-	14,764	13,432	Cost plus margin
Interest expenses	-	-	11,149	22,492	The interest rate on the loan is based on the floating market interest rate which is referred to the higher interest rate for one-year government bond or one-year fixed deposit on average of 4 banks for corporate credit line of Baht 10 million
Transactions with associates					
Service income	1,680	1,680	-	-	Cost plus margin
Dividend income	-	-	13,870	20,151	As declared



(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements		Transfer pricing policy
	2021	2020	2021	2020	
Transactions with related companies					
Service income	29,482	11,688	17,294	11,688	Cost plus margin
Contribution to the Capital Market					
Development Fund	582,978	361,641	582,978	361,641	Not less than 90% of the revenue after deduction of expense, tax and reserve. The consolidated financial statements of SET shall be used to calculate the contribution amount.

As at 31 December 2021 and 2020, the balances of the accounts between the Group and those related companies are as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Transactions with subsidiary companies				
(Eliminated from the consolidated financial statements)				
Trade and other receivables (Note 9)	-	-	247,992	338,876
Assets for clearing system protection and benefits (Note 18)	-	-	150,613	150,723
Trade and other payables (Note 21)	-	-	4,776	1,360
Fees received in advance	-	-	2,585	2,585
Transactions with associates				
Trade and other receivables (Note 9)	140	140	-	-
Transactions with related companies				
Trade and other receivables (Note 9)	6,204	-	2,235	-
Trade and other payables (Note 21)	582,978	361,641	582,978	361,641

Long-term loans to related parties and short-term loan from related parties

As at 31 December 2021 and 2020, the balances of loans between the Group and those related companies and the movement in loans are as follows:

(Unit: Thousand Baht)

Loans to / Loan from	Related by	Separate financial statements			
		Balance as at 31 December 2020	Increase during the year	Decrease during the year	Balance as at 31 December 2021
Loans to	Subsidiary	5,690,834	-	-	5,690,834
Total		5,690,834	-	-	5,690,834
Loans from	Subsidiary	2,416,422	513,500	(1,118,937)	1,810,985
Total		2,416,422	513,500	(1,118,937)	1,810,985

SET lent to a subsidiary to use as a reserve fund to enhance the competitiveness and support the future business expansion. The rate of return on loan is referred to the net return of a private fund plus 0.47% - 1.16% per annum of principle balance. Due for repayment within 1 February 2023 (2020: The rate of return on loan is referred to the net return of a private fund plus 0.30% - 0.47% per annum of principle balance). The rate of return will be reviewed on an annual basis as shown in Note 19 to the consolidated financial statements.

The Group has a policy of centralising the investments and managed by SET in order to maximise its efficiency and overall returns. The parent will borrow from its subsidiaries in the form of one-year promissory notes. The interest rate on the loan is based on the floating market interest rate which is referred to the higher interest rate for one-year government bond or one-year fixed deposit on average of 4 banks for corporate credit line of up to Baht 10 million (interest rate may be revised as appropriate).

Directors and management's benefits

During the years ended 31 December 2021 and 2020, the Group had employee benefit expenses payable to their directors and management as below.

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Directors	32,352	30,434	28,211	26,337
Management (Note 29)	271,194	246,717	271,194	246,717
Total benefits	303,546	277,151	299,405	273,054



(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Short-term employee benefits	279,098	255,618	274,957	251,521
Post-employment benefits	23,985	21,174	23,985	21,174
Other long-term benefits	463	359	463	359
Total benefits	<u>303,546</u>	<u>277,151</u>	<u>299,405</u>	<u>273,054</u>

7. Cash and cash equivalents

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Cash	304	326	301	323
Bank deposits	9,018,317	8,013,562	6,500,528	7,388,700
Less: Allowance for expected credit loss	<u>(1,694)</u>	<u>(2,060)</u>	<u>(1,694)</u>	<u>(2,060)</u>
Total	<u>9,016,927</u>	<u>8,011,828</u>	<u>6,499,135</u>	<u>7,386,963</u>

As at 31 December 2021, bank deposits in saving accounts carried interests between 0.05% - 0.63% per annum (2020: between 0.05% - 1.30% per annum).

8. Other current financial assets

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Investment managed by SET and subsidiaries				
<u>Debt instruments measured at amortised cost</u>				
Fixed deposit maturities within 1 year	200,000	801,286	200,000	801,286
Government bond maturities within 1 year	109,968	199,986	109,968	199,986
Total	309,968	1,001,272	309,968	1,001,272
Less: Allowance for expected credit loss	(34)	(296)	(34)	(296)
Total debt instruments measured at amortised cost - net	309,934	1,000,976	309,934	1,000,976
<u>Financial assets measured at FVTPL</u>				
Government bond	1,238,646	1,511,207	684,467	949,256
Total financial assets measured at FVTPL	1,238,646	1,511,207	684,467	949,256
Total investment managed by SET and subsidiaries	1,548,580	2,512,183	994,401	1,950,232
Investment managed by private funds				
<u>Debt instruments measured at amortised cost</u>				
Saving deposit	3,095	85,000	906	83,862
Total debt instruments measured at amortised cost	3,095	85,000	906	83,862
<u>Financial assets measured at FVTPL</u>				
Government bond	2,972,175	1,505,577	1,438,728	54,288
Bills of exchange	29,878	-	29,878	-
Debentures	1,047,802	364,360	1,047,802	364,360
Total financial assets measured at FVTPL	4,049,855	1,869,937	2,516,408	418,648
Total investment managed by private funds	4,052,950	1,954,937	2,517,314	502,510
Total other current financial assets - net	5,601,530	4,467,120	3,511,715	2,452,742



9. Trade and other receivables

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
<u>Trade receivables - related parties (Note 6)</u>				
Aged on the basis of due dates				
Not yet due	3,969	-	-	-
Total trade receivables - related parties, net	3,969	-	-	-
<u>Trade receivables - unrelated parties</u>				
Aged on the basis of due dates				
Not yet due	89,396	36,616	35,523	9,145
Past due				
Up to 3 months	10,175	25,749	8,180	24,110
3 - 6 months	646	-	105	-
Over 6 months	20,406	16,891	10,574	8,568
Total	120,623	79,256	54,382	41,823
Less: Allowance for expected credit losses	(21,053)	(16,891)	(10,679)	(8,568)
Total trade receivables - unrelated parties, net	99,570	62,365	43,703	33,255
Total trade receivable - net	103,539	62,365	43,703	33,255
<u>Other receivables</u>				
Cash at bank for clearing collateral	4,470	541,538	-	-
Accrued income - related parties (Note 6)	2,375	140	178,730	202,818
Accrued income - unrelated parties	421,109	459,228	161,799	212,623
Cash at banks for dividend accounts				
of investors	96,991	93,505	-	-
Other receivables from sale of investments	-	55,207	-	55,207
Prepaid expenses	43,246	29,766	43,126	29,646
Accrued interest receivable - related parties	-	-	71,497	136,058
(Note 6)				
Accrued interest receivable - unrelated parties	14,187	18,348	11,654	13,025
Others	4,488	1,132	4,307	803
Total other receivables	586,866	1,198,864	471,113	650,180
Trade and other receivables - net	690,405	1,261,229	514,816	683,435

Set out below is the movement in the allowance for expected credit losses of trade receivables.

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Beginning balance	16,891	-	8,568	-
Allowance for expected credit losses	4,162	16,891	2,111	8,568
Ending balance	21,053	16,891	10,679	8,568

As at 31 December 2021 and 2020, the Group has trade receivables which revenues recognition have been ceased amount of Baht 109.93 million and Baht 91.19 million, respectively (SET: Baht 45.15 million 2020: Baht 36.77 million).

On 21 January 2021, the Group extended the period of the measures to assist listed companies affected by the COVID-19 situation from 11 March 2020 by extending the period of annual fee reduction and reducing the registrar fee.

10. Other current assets

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Withholding tax receivable	-	270,451	-	240,116
Loans to employees	26,697	29,132	26,697	29,132
Future margin deposit	2	16,570	2	16,570
Pending input tax	8,754	4,171	8,320	4,150
Inventory - publication	2,627	3,725	2,627	3,725
Value added tax receivable	3,680	3,345	-	-
Others	3,118	3,111	3,118	3,111
Total	44,878	330,505	40,764	296,804



11. Other non-current financial assets

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
<u>Debt instruments measured at amortised cost</u>				
Cash at banks under a Memorandum of Understanding	512,153	512,153	512,153	512,153
Government bond maturities after 1 year	184,088	296,759	184,088	296,759
Debenture maturities after 1 year	200,000	200,000	200,000	200,000
Total	896,241	1,008,912	896,241	1,008,912
Less: Allowance for expected credit loss	(120)	(58)	(120)	(58)
Total debt instruments measured at amortised cost - net	896,121	1,008,854	896,121	1,008,854
<u>Financial assets designated at FVOCI</u>				
Non-listed ordinary shares	54,336	54,336	49,336	49,336
Total financial assets designated at FVOCI	54,336	54,336	49,336	49,336
<u>Financial assets measured at FVTPL</u>				
Debenture	-	2,482	-	2,482
Mutual fund	5,313,572	3,703,172	5,313,572	3,703,172
Total financial assets measured at FVTPL	5,313,572	3,705,654	5,313,572	3,705,654
Total other non-current financial assets - net	6,264,029	4,768,844	6,259,029	4,763,844

12. Investments in subsidiaries

Details of investments in subsidiaries as presented in separate financial statements

(Unit: Thousand Baht)

Company's name	Paid-up capital		Shareholding percentage (%)		Cost		Dividend received during the years	
	2021	2020	2021	2020	2021	2020	2021	2020
Thailand Securities Depository Co., Ltd.	200,000	200,000	100.00	100.00	200,000	200,000	233,426	269,776
Thai Trust Fund Management Co., Ltd.	100,000	100,000	100.00	100.00	100,000	100,000	13	345
Thai NVDR Co., Ltd.	10,000	10,000	100.00	100.00	10,000	10,000	1,332	2,673
SETTRADE.COM Co., Ltd.	-	80,000	-	100.00	-	74,591	80,000	-
Thailand Futures Exchange Public Company Limited	500,000	500,000	100.00	100.00	500,000	500,000	168,075	130,515
Thailand Clearing House Co., Ltd.	600,000	600,000	100.00	100.00	602,700	602,700	123,336	105,234
SET Venture Holding Co., Ltd.	420,000	300,000	100.00	100.00	420,000	300,000	-	-
Total					<u>1,832,700</u>	<u>1,787,291</u>	<u>606,182</u>	<u>508,543</u>

13. Investments in associates and joint venture

The amounts recognised in the statement of financial position as at 31 December 2021 and 2020 are as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	Equity Method		Cost Method	
	2021	2020	2021	2020
Associates	997,223	975,496	779,717	779,717
Joint venture	19,834	19,855	10,330	10,344
Total	<u>1,017,057</u>	<u>995,351</u>	<u>790,047</u>	<u>790,061</u>

The amounts recognised in the statement of comprehensive revenues and expenses are share of revenues over (under) expenses of investments in associates and joint venture, net of tax for the years ended 31 December 2021 and 2020 are as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	Equity Method		Cost Method	
	2021	2020	2021	2020
Associates	35,597	28,060	-	-
Joint venture	(7)	(35)	-	-
Total	35,590	28,025	-	-

13.1 Investments in associates

13.1.1 Details of associates

Investments in associates represent investments in entities are controlled by SET and other companies. Details of these investments are as follows:

(Unit: Thousand Baht)

Associates	Consolidated financial statements					
	Shareholding percentage (%)		Cost		Carrying amounts based on equity method	
	2021	2020	2021	2020	2021	2020
Clearing Fund	6.79	7.76	100,000	100,000	209,303	209,193
TSFC Securities Public Company Limited	40.70	40.70	679,717	679,717	787,920	766,303
Total			779,717	779,717	997,223	975,496

(Unit: Thousand Baht)

Associates	Separate financial statements					
	Shareholding percentage (%)		Cost		Carrying amounts based on cost method - net	
	2021	2020	2021	2020	2021	2020
Clearing Fund	6.79	7.76	100,000	100,000	100,000	100,000
TSFC Securities Public Company Limited	40.70	40.70	679,717	679,717	679,717	679,717
Total			779,717	779,717	779,717	779,717

13.1.2 Share of comprehensive revenues (expenses) and dividend received

During the years, SET recognised its share of revenues over expenses from investments in associate companies in the consolidated financial statements and dividend income in the separate financial statements as follows:

(Unit: Thousand Baht)

Associates	Consolidated financial statements		Separate financial statements	
	Share of revenues over expenses from investments in associates during the years		Dividend received during the years	
	2021	2020	2021	2020
Clearing Fund	110	3,297	-	-
TSFC Securities Public Company Limited	35,487	24,763	13,870	20,151
Total	35,597	28,060	13,870	20,151

13.2 Investments in joint venture

13.2.1 Details of investments in joint venture

Investments in joint venture represent investments in entities which are jointly controlled by SET and other companies. Details of these investments are as follows:

(Unit: Thousand Baht)

Joint venture	Consolidated financial statements					
	Shareholding percentage (%)		Cost		Carrying amounts based on equity method	
	2021	2020	2021	2020	2021	2020
Family Know-how Co., Ltd.*	50.00	50.00	40,500	40,500	19,834	19,855
Total			40,500	40,500	19,834	19,855

(Unit: Thousand Baht)

Joint venture	Separate financial statements							
	Shareholding percentage (%)		Cost		Allowance for impairment of investments		Carrying amounts based on cost method - net	
	2021	2020	2021	2020	2021	2020	2021	2020
Family Know-how Co., Ltd.*	50.00	50.00	40,500	40,500	(30,170)	(30,156)	10,330	10,344
Total			40,500	40,500	(30,170)	(30,156)	10,330	10,344

* At the Extraordinary Shareholder's meeting No. 1/2018 held on 14 December 2018, the shareholders resolved to dissolve the company. The dissolution was registered with the Ministry of Commerce on 26 December 2018 which is currently in the process of liquidation.



13.2.2 Share of comprehensive revenues (expenses) and dividend received

During the years, SET recognised its share of comprehensive revenues (expenses) from investments in joint venture in the consolidated financial statements and dividend income in the separate financial statements as follows:

(Unit: Thousand Baht)

Joint venture	Consolidated financial statements	
	Share of revenues under expenses from investments in joint venture during the years	
	2021	2020
Family Know-how Co., Ltd.	(7)	(35)
Total	(7)	(35)

14. Property, plant and equipment

Movements of property, plant and equipment for the years ended 31 December 2021 and 2020 are summarised below.

(Unit: Thousand Baht)

	Consolidated financial statements					
	Land and land improvement	Buildings and building improvement	Furniture, fixtures and office equipment	Motor vehicles	Assets under installation	Total
Cost						
1 January 2020	1,014,097	4,064,289	1,424,648	388	37,781	6,541,203
Additions	-	11,275	68,311	1,398	28,167	109,151
Disposals/writes-off	-	-	(95,606)	(1,398)	-	(97,004)
Transfers	-	315	56,122	-	(56,437)	-
Adjustments	-	(1,036)	777	-	(108)	(367)
31 December 2020	1,014,097	4,074,843	1,454,252	388	9,403	6,552,983
Additions	-	5,819	73,530	1,070	18,578	98,997
Disposals/writes-off	-	(706)	(196)	(1,070)	-	(1,972)
Transfers	-	2,588	1,541	-	(4,129)	-
31 December 2021	1,014,097	4,082,544	1,529,127	388	23,852	6,650,008

(Unit: Thousand Baht)

	Consolidated financial statements					
	Land and land improvement	Buildings and building improvement	Furniture, fixtures and office equipment	Motor vehicles	Assets under installation	Total
Accumulated depreciation						
1 January 2020	-	1,079,654	723,468	308	-	1,803,430
Depreciation for the year	-	202,640	156,896	60	-	359,596
Depreciation on disposals/ writes-off	-	-	(95,592)	-	-	(95,592)
31 December 2020	-	1,282,294	784,772	368	-	2,067,434
Depreciation for the year	-	203,031	151,938	20	-	354,989
Depreciation on disposals/ writes-off	-	(388)	(105)	-	-	(493)
31 December 2021	-	1,484,937	936,605	388	-	2,421,930
Net book value						
31 December 2020	1,014,097	2,792,549	669,480	20	9,403	4,485,549
31 December 2021	1,014,097	2,597,607	592,522	-	23,852	4,228,078
Depreciation for the years						
2020						359,596
2021						354,989



(Unit: Thousand Baht)

	Separate financial statements					
	Land and land improvement	Buildings and building improvement	Furniture, fixtures and office equipment	Motor vehicles	Assets under installation	Total
Cost						
1 January 2020	1,014,097	4,064,291	1,420,732	388	37,781	6,537,289
Additions	-	11,275	68,311	1,398	28,167	109,151
Disposals/writes-off	-	-	(95,425)	(1,398)	-	(96,823)
Transfers	-	315	56,122	-	(56,437)	-
Adjustments	-	(1,036)	777	-	(108)	(367)
31 December 2020	1,014,097	4,074,845	1,450,517	388	9,403	6,549,250
Additions	-	5,819	73,530	1,070	18,578	98,997
Disposals/writes-off	-	(706)	(195)	(1,070)	-	(1,971)
Transfers	-	2,588	1,541	-	(4,129)	-
31 December 2021	1,014,097	4,082,546	1,525,393	388	23,852	6,646,276
Accumulated depreciation						
1 January 2020	-	1,079,656	720,169	308	-	1,800,133
Depreciation for the year	-	202,640	156,656	60	-	359,356
Depreciation on disposals/ writes-off	-	-	(95,411)	-	-	(95,411)
31 December 2020	-	1,282,296	781,414	368	-	2,064,078
Depreciation for the year	-	203,031	151,894	20	-	354,945
Depreciation on disposals/ writes-off	-	(388)	(105)	-	-	(493)
31 December 2021	-	1,484,939	933,203	388	-	2,418,530
Net book value						
31 December 2020	1,014,097	2,792,549	669,103	20	9,403	4,485,172
31 December 2021	1,014,097	2,597,607	592,190	-	23,852	4,227,746
Depreciation for the years						
2020						359,356
2021						354,945

As at 31 December 2021, certain items of plant and equipment were fully depreciated but are still in use. The gross carrying amount before deducting accumulated depreciation of those assets amounted to approximately Baht 363.68 million (2020: Baht 292.98 million) (SET: Baht 360.55 million 2020: Baht 289.72 million).

15. Leases

15.1 The Group as a lessee

The Group has lease contracts for various items to use in its operations. Leases generally have lease terms between 4 - 5 years.

a) Right-of-use assets

Movement of right-of-use assets for the year ended 31 December 2021 and 2020 are summarised below:

(Unit: Thousand Baht)

	Consolidated and Separate financial statements
	Motor vehicles
1 January 2020	32,970
Additions	6,809
Depreciation for the year	(14,466)
31 December 2020	25,313
Additions	16,028
Depreciation for the year	(14,080)
31 December 2021	27,261

b) Lease liabilities

(Unit: Thousand Baht)

	Consolidated and Separate financial statements	
	2021	2020
Lease payments	31,007	29,000
Less: Deferred interest expenses	(2,071)	(1,778)
Total	28,936	27,222
Less: Portion due within one year	(14,256)	(14,629)
Lease liabilities - net of current portion	14,680	12,593

A maturity analysis of lease payments is disclosed in Note 37.2 to the consolidated financial statements under the liquidity risk.



c) Expenses relating to leases that are recognised in revenues over (under) expense

(Unit: Thousand Baht)

	Consolidated and Separate financial statements	
	2021	2020
Depreciation expense of right-of-use assets	14,080	14,466
Interest expenses on lease liabilities	1,507	1,578
Expenses relating to leases of low-value assets	10,514	10,588

d) Others

The Group had total cash outflows for leases for the year ended 31 December 2021 of Baht 26.33 million (2020: Baht 24.65 million) (SET: Baht 26.33 million 2020: Baht 24.65 million), including the cash outflow related to short-term lease, leases of low-value assets and variable lease payments that do not depend on an index or a rate.

16. Intangible assets

The net book value of intangible assets as at 31 December 2021 and 2020 is presented below.

(Unit: Thousand Baht)

	Consolidated financial statements				Separate financial statements			
	Computer software	Licences and other intangible assets	Working in process	Total	Computer software	Licences and other intangible assets	Working in process	Total
As at 31 December 2021								
Cost	2,138,927	7,647	381,246	2,527,820	2,056,411	3,348	381,246	2,441,005
Less: Accumulated amortisation	(1,725,359)	(3,122)	-	(1,728,481)	(1,644,611)	(1,844)	-	(1,646,455)
Net book value	413,568	4,525	381,246	799,339	411,800	1,504	381,246	794,550
As at 31 December 2020								
Cost	2,075,614	3,917	158,322	2,237,853	1,993,099	3,056	158,322	2,154,477
Less: Accumulated amortisation	(1,575,085)	(2,543)	-	(1,577,628)	(1,495,107)	(1,582)	-	(1,496,689)
Net book value	500,529	1,374	158,322	660,225	497,992	1,474	158,322	657,788

A reconciliation of the net book value of intangible assets for the years 2021 and 2020 is presented below.

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Net book value at beginning of years	660,225	612,385	657,788	609,788
Additions	289,967	202,668	286,528	201,769
Amortisations	(150,853)	(154,936)	(149,766)	(153,877)
Adjustments	-	108	-	108
Net book value at end of years	799,339	660,225	794,550	657,788

17. Assets for margin deposits and benefits

Thailand Clearing House Co., Ltd. (“TCH”) is the clearing house for derivatives market. Members of TCH who have outstanding positions are obliged to place the required margin deposits as a guarantee according to the rate or amount called by TCH. TCH may invest the margin proceeds according to specified terms and conditions. The benefits, after deducting management fees, shall be distributed to members at the announced rates and procedures.

As at 31 December 2021 and 2020, the details of investments for which margin deposits were placed by members consist of:

(Unit: Thousand Baht)

	Consolidated financial statements	
	2021	2020
Saving and fixed deposit accounts	12,649,631	13,266,083
Saving accounts in foreign currency	3,442,236	2,415,879
Investments measured by the amortised cost	3,579,603	4,558,309
Securities collateral	95,608	68,538
Accrued benefits	17,198	20,352
Total investments for which margin deposits	19,784,276	20,329,161
Less: Allowance for expected credit loss	(8,559)	(2,792)
Total investments for which margin deposits - net	19,775,717	20,326,369



As at 31 December 2021, saving accounts in foreign currency of USD 103.54 million (2020: USD 80.89 million) was translated into Thai Baht using the average transfer buying rate announced by the Bank of Thailand at the end of the accounting period.

The Group presented margin deposits placed by members separately in the account “Assets for margin deposits and benefits” in current assets in the statement of financial position and presented liabilities in the account “Margin deposits and benefits payable” in current liabilities in the statement of financial position.

18. Assets for clearing system protection and benefits

The assets for clearing system protection are established to secure the clearing system of Thailand Clearing House Co., Ltd. (TCH) against any damage caused by defaults by members or other incidents.

Assets for clearing system protection comprise of 2 categories as follow:

18.1 Securities Deposit

Members of TCH are required to place a Securities Deposit according to the announcement made by TCH (the current Securities Deposit for members, who are allowed to clear all types of derivatives, is not less than Baht 5 million and for only one type of derivatives is not less than Baht 4 million).

18.2 Clearing fund contributions comprising contributions from:

- 1) SET amounting to Baht 100 million
- 2) Members of TCH
 - Initial contributions according to the announced rates (currently the initial contribution members, who are allowed to clear all types of derivatives, are not less than Baht 6 million and for only one type of derivatives is not less than Baht 1 million).
 - Monthly contributions at a value of not less than Baht 1,000.

TCH manages the assets for clearing system protection and there are benefits incurred thereon, if such benefits are derived from the assets for clearing system protection of members, TCH shall return them to members after deduction of a management fees in accordance with the procedures and within the period prescribed by TCH.

In the event that members default in clearing or damage is caused by act of members in connection with clearing, TCH shall have the power to use assets for the clearing system protection in the following order:

- 1) Security deposit of the member who is in default or causes damage to the clearing system of TCH, as the case maybe;
- 2) Contribution to the Clearing Fund by the member who is in default or causes damage to the clearing of TCH;
- 3) Contributions to the Clearing Fund by SET in accordance with the amount prescribed by TCH as the first part;
- 4) Assets contributed to the Clearing Fund in the part of other Clearing Fund members who are not in default or who do not cause the damage to the clearing system of TCH, as the case maybe;
- 5) The remaining amount of the contributions to the Clearing Fund by SET after deducting the first part of the contributions to the Clearing Fund by SET;
- 6) Additional contribution according to the proportion made to the Clearing Fund by respective members
- 7) SET Reserve Fund

The use of the assets under 4) and 6) shall be in proportion with the assets contributed by the Clearing Fund members to the Clearing Fund.

The use of contributions to the Clearing Fund under 3) in accordance with the proportion prescribed by TCH, TCH may notify the change of the proportion in the use of such contributions as appropriate.

A member who is in default or causes damage to the clearing of TCH has the duty to return the assets for the clearing system protection or other assets which TCH has used according to the regulation.

In the case that the Clearing Fund has been used, TCH may charge interest for the use of such fund at the maximum rate permitted by the law on interests on loans of financial institutions, as from the date of the use of such fund until the date of the return thereof unless other interest rate is prescribed by TCH.



When the defaulting member or the member who causes damage to the clearing of TCH, has reimbursed the assets for the Clearing System Protection which are equal to the used amount of the assets together with the interest incurred thereon to TCH, the assets shall be allocated as per the order below:

- 1) SET Reserve Fund
- 2) Additional contribution according to the proportion made to the Clearing Fund by respective members
- 3) The remaining amount of the contributions to the Clearing Fund by SET after deducting the first part of the contributions to the Clearing Fund by SET;
- 4) Assets contributed to the Clearing Fund in the part of other Clearing Fund members who are not in default or who do not cause the damage to the Clearing System of TCH, as the case maybe;
- 5) Contributions to the Clearing Fund by SET in accordance with the amount prescribed by TCH as the first part;
- 6) Contribution to the Clearing Fund by the member who is in default or causes damage to the Clearing of TCH as the case maybe;
- 7) Security Deposit of the member who is in default or causes damage to the Clearing System of TCH

The allocation for the return of the assets under 2) and 4) shall be in proportion with that such assets are used pursuant.

When TCH has a resolution to terminate the membership of any members, TCH shall return the assets which such members has provided for the Clearing of TCH, including the remaining benefits therefore after deduction of debts as well as damages and penalty that the member owes to TCH, within the period prescribed by TCH.

The Group has shown the assets to which members have joined as security assets in accordance with the rules specified as a separate item in the account. "Assets for margin deposits and benefits" under non-current assets and have shown the same amount of liabilities in the account "Margin deposits and benefits payable" under non-current liabilities in the statement of financial position.



As at 31 December 2021 and 2020, assets for clearing system protection and benefits consist of:

(Unit: Thousand Baht)

	Consolidated financial statements					
	Securities Deposit and benefits		Clearing fund and benefits		Total	
	2021	2020	2021	2020	2021	2020
Investments managed by TCH	-	505,498	-	-	-	505,498
Investments managed by private fund						
Saving accounts	10,977	469	2,437	252	13,414	721
Investments measured fair value through profit or loss	329,046	200,336	1,690,355	1,491,176	2,019,401	1,691,512
Total	340,023	200,805	1,692,792	1,491,428	2,032,815	1,692,233
Accrued interest receivable	222	173	1,122	1,205	1,344	1,378
Other assets	39	51	14,926	17,825	14,965	17,876
Total investments managed by private fund	340,284	201,029	1,708,840	1,510,458	2,049,124	1,711,487
Total investments	340,284	706,527	1,708,840	1,510,458	2,049,124	2,216,985
Less: Allowance for expected credit loss	-	(77)	-	-	-	(77)
Total assets for clearing system protection and benefits - net	340,284	706,450	1,708,840	1,510,458	2,049,124	2,216,908

(Unit: Thousand Baht)

	Separate financial statements	
	Clearing fund and benefits	
	2021	2020
Contributions	100,000	100,000
Accumulated benefits	50,613	50,723
Total assets for clearing system protection and benefits - net	150,613	150,723

Investments managed by TCH

As at 31 December 2020, saving accounts carried interest rates at rates between 0.05% and 0.30% per annum (2021: None).

On 5 May 2021, the meeting of the investment committee of TCH approved the management of the Securities Deposit and benefits to combine the investments managed by TCH and the investments by the private fund as well as transfer the investments manage by TCH to private fund to manage under the same investment portfolio.



Investments managed by private fund

As at 31 December 2021 and 2020, investments in private fund are managed by 1 asset management company.

The investments policy of private fund is reference to the TCH's regulations in relation to deposits with financial institution and TCH's investment policies. For the year ended 31 December 2021, the investment in private fund have return rates between 0.19% and 0.20% per annum (2020: between 2.19% and 2.23% per annum).

As at 31 December 2021 and 2020, assets for clearing system protection and benefits payable consist of:

(Unit: Thousand Baht)

	Consolidated financial statements					
	Securities Deposit and benefits*		Clearing fund and benefits		Total	
	2021	2020	2021	2020	2021	2020
Contributions	339,912	705,000	1,392,540	1,193,293	1,732,452	1,898,293
Accumulated benefits	372	2,071	165,687	166,508	166,059	168,579
Total assets for clearing system						
protection and benefits payable	<u>340,284</u>	<u>707,071</u>	<u>1,558,227</u>	<u>1,359,801</u>	<u>1,898,511</u>	<u>2,066,872</u>

*Due repayment the accumulated benefits to members every 6 months.

19. Reserve fund for clearing and settlement

Reserve Fund for clearing and settlement from SET established as a source of funds for clearing house to compensate for any damage that may result from default or damages that may be caused by the actions of members in the business relating to the settlement and delivery of securities of the clearing house.

On 14 January 2015 and 27 April 2016, SET's Board of Governors approved an appropriation of reserve fund for clearing and settlement for compliance with the standard of clearing house set by the Overseas Securities Regulator and for enhance competitiveness and support future business expansion. SET will reserve fund for clearing and settlement in the approximately Baht 5,690.00 million by 2020. As at 31 December 2021, the reserve fund for clearing and settlement was Baht 5,702.03 million (2020: Baht 5,804.07 million).

As at 31 December 2021 and 2020, reserve fund for clearing and settlement consist of:

(Unit: Thousand Baht)

	Consolidated financial statements	
	2021	2020
Investments managed by private fund		
Saving accounts	3,408	3,599
Investments measured at fair value through profit or loss	5,688,931	5,790,352
Total	5,692,339	5,793,951
Accrued interest income	5,156	6,543
Other assets	4,534	3,571
Total investments managed by private fund	5,702,029	5,804,065

As at 31 December 2021 and 2020 investments in private fund are managed by 2 asset management companies.

The investment policy of private fund is reference to the TCH's regulations in relation to deposits with financial institution and company's investment policies. For the year ended 31 December 2021, the investments in private fund have return rates between 0.17% and 0.18% per annum (2020: between 1.94% and 2.20% per annum).

20. Other non-current asset

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Withholding tax receivable	447,873	-	415,930	-
Deposit	10,020	2,485	10,010	2,485
Total	457,893	2,485	425,940	2,485



21. Trade and other payables

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Trade payables - unrelated parties	827,963	29,904	113,410	29,880
Accrued expenses - related parties (Note 6)	582,978	361,641	587,754	363,001
Accrued expenses - unrelated parties	1,319,187	1,297,050	1,259,213	1,262,067
Clearing collateral payable	4,436	541,427	-	-
Dividend payable from registrar services to investors	96,991	93,505	-	-
Financial benefits payable	-	76,323	-	-
Other payable from purchase of investments	-	59,735	-	59,735
Others	167,738	37,674	37,554	11,591
Total trade and other payables	2,999,293	2,497,259	1,997,931	1,726,274

22. Other current liabilities

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Withholding tax payable	92,987	57,689	11,888	9,886
Other retention payables	39,573	36,378	31,180	29,686
Provision for employee benefits from accumulated annual leave	68,892	32,872	68,892	32,872
Value added tax payable	30,571	26,533	23,690	21,047
Ngoen-Thong-khong-Mee-Kha Fund	11,576	11,576	11,576	11,576
Others	5,052	4,210	812	2,338
Total other current liabilities	248,651	169,258	148,038	107,405

23. Provision for long-term employee benefits

Provision for long-term employee benefits, which represents compensation payable to employees after they retire, was as follows:

(Unit: Thousand Baht)

	Consolidated and Separate financial statements	
	2021	2020
Provision for long-term employee benefits at beginning of years	751,187	617,849
Included in revenues over expenses:		
Current service cost	52,252	42,804
Interest cost	10,045	14,670
Past service cost and gains or losses on settlement	11,622	10,529
Included in other comprehensive revenues (expenses):		
Actuarial (gain) loss arising from		
Demographic assumptions changes	886	-
Financial assumptions changes	(73,768)	50,431
Experience adjustments	7,787	26,860
Benefits paid during the years	(5,378)	(10,052)
Portion due within one years	(23,189)	(1,904)
Provision for long-term employee benefits at end of years	731,444	751,187

Expenses recognised in the statements of comprehensive revenues and expenses for the year ended 31 December 2021 and 2020 as below:

(Unit: Thousand Baht)

	Consolidated and Separate financial statements	
	2021	2020
Current service cost	52,252	42,804
Interest cost	10,045	14,670
Past service cost	11,792	1,767
Actuarial (gain) loss	(170)	8,762
Expenses recognised in the statements of comprehensive revenues and expenses	73,919	68,003



The Group expects to pay Baht 10.10 million of long-term employee benefits during the next year (2020: Baht 30.47 million) (SET: Baht 10.10 million 2020: Baht 30.47 million).

As at 31 December 2021 and 2020, the weighted average duration of the liabilities for long-term employee benefit is 16 years (SET: 16 years 2020: 16 years).

Significant actuarial assumptions are summarised below:

(Unit: Thousand Baht)

	Consolidated and Separate financial statements	
	2021	2020
Discount rate	0.52% - 3.48%	0.38% - 2.89%
Salary increase rate	5.00% - 11.00%	5.00% - 11.00%
Turnover rate	0.00% - 12.00%	0.00% - 12.00%
Pre-retirement mortality rate	Adjust 3% of TMO2017	Adjust 3% of TMO2017
Retirement age	60 years old	60 years old

The result of sensitivity analysis for significant assumptions that affect the present value of the long-term employee benefit obligation as at 31 December 2021 and 2020 are summarised below:

(Unit: Thousand Baht)

	Consolidated and Separate financial statements					
	Change in assumption		Increase in assumption		Decrease in assumption	
	2021	2020	2021	2020	2021	2020
Discount rate	0.5%	0.5%	(38,989)	(44,114)	42,181	47,943
Salary increase rate	1%	1%	81,018	91,742	(70,756)	(79,391)
Turnover rate	20%	20%	(22,414)	(25,805)	23,776	27,458

24. Fund balances

The statement of change in fund balances for the years ended 31 December 2021 and 2020 presented as part of the consolidated and separate financial statements as follows:

(Unit: Thousand Baht)

Consolidated financial statements									
Fund balances									
	Note	Securities Clearing Reserve Fund	Derivatives Clearing Reserve Fund	Indemnity Fund	Staff Welfare Fund	Securities Investor Protection Fund	Derivatives Investor Protection Fund	General Fund	Total
Balance as at 1 January 2020		4,440,000	1,000,000	100,000	113,997	495,774	56,196	20,208,850	26,414,817
Appropriation of general fund	24.2	-	250,000	-	-	-	-	(250,000)	-
Appropriation of reserve fund	24.1 and 24.2	(1,000,000)	1,000,000	-	-	-	-	-	-
Other comprehensive revenues (expenses), net of tax	25.2	-	-	-	-	-	-	(61,720)	(61,720)
Revenues over expenses	25.2	-	-	-	1,261	7,157	723	1,344,940	1,354,081
Balance as at 31 December 2020		<u>3,440,000</u>	<u>2,250,000</u>	<u>100,000</u>	<u>115,258</u>	<u>502,931</u>	<u>56,919</u>	<u>21,242,070</u>	<u>27,707,178</u>
Balance as at 1 January 2021		3,440,000	2,250,000	100,000	115,258	502,931	56,919	21,242,070	27,707,178
Other comprehensive revenues (expenses), net of tax	25.2	-	-	-	-	-	-	65,095	65,095
Revenues over expenses	25.2	-	-	-	778	9,417	514	1,585,922	1,596,631
Balance as at 31 December 2021		<u>3,440,000</u>	<u>2,250,000</u>	<u>100,000</u>	<u>116,036</u>	<u>512,348</u>	<u>57,433</u>	<u>22,893,087</u>	<u>29,368,904</u>



(Unit: Thousand Baht)

Separate financial statements									
Fund balances									
	Note	Securities Clearing Reserve Fund	Derivatives Clearing Reserve Fund	Indemnity Fund	Staff Welfare Fund	Securities Investor Protection Fund	General Fund	Total	
Balance as at 1 January 2020		4,440,000	1,000,000	100,000	113,997	495,774	17,498,288	23,648,059	
Appropriation of general fund	24.2	-	250,000	-	-	-	(250,000)	-	
Appropriation of reserve fund	24.1 and 24.2	(1,000,000)	1,000,000	-	-	-	-	-	
Other comprehensive revenues (expenses), net of tax	25.2	-	-	-	-	-	(61,720)	(61,720)	
Revenues over expenses	25.2	-	-	-	1,261	7,157	766,341	774,759	
Balance as at 31 December 2020		3,440,000	2,250,000	100,000	115,258	502,931	17,952,909	24,361,098	
Balance as at 1 January 2021		3,440,000	2,250,000	100,000	115,258	502,931	17,952,909	24,361,098	
Other comprehensive revenues (expenses), net of tax	25.2	-	-	-	-	-	65,095	65,095	
Revenues over expenses	25.2	-	-	-	778	9,417	1,005,001	1,015,196	
Balance as at 31 December 2021		3,440,000	2,250,000	100,000	116,036	512,348	19,023,005	25,441,389	

Details of fund balances are as follows:

24.1 Securities Clearing Reserve Fund

In 1997 and 2013, the Board of Governors of SET approved an appropriation of general funds of Baht 2,000 million and Baht 500 million, respectively, totalling Baht 2,500 million to the Securities Clearing Reserve Fund, which is operated by a subsidiary of SET, in order to resolve liquidity risk in the event of default on clearing and settlement from securities trading on SET.

In 2015, the Board of Governors of SET approved an appropriation of general funds to the Securities Clearing Reserve Fund from 2015 - 2019, totalling Baht 2,640 million, starting from 2015 of Baht 1,840 million and in the following years of Baht 200 million per year.

In 2018, the Board of Governors of SET approved an appropriation of the Securities Clearing Reserve Fund to Derivatives Clearing Reserve Fund of Baht 700 million, in order for the clearing house to have sufficient funds in both markets.

In 2020, the Board of Governors of SET approved an appropriation of the Securities Clearing Reserve Fund to Derivatives Clearing Reserve Fund of Baht 1,000 million, in order for the clearing house to have sufficient funds in both markets.

24.2 Derivatives Clearing Reserve Fund

In 2004, the Board of Governors of SET approved an appropriation of general funds of Baht 300 million to the Derivatives Clearing Reserve Fund in order to assure contingent losses from the clearing system of futures contracts at Thailand Clearing House Co., Ltd.

In 2018, Derivatives Clearing Reserve Fund has been allocated from Securities Clearing Reserve Fund of Baht 700 million according to the resolution of the Board of Governors of SET, in order for the clearing house to have sufficient funds in both markets.

In 2020, Derivatives Clearing Reserve Fund has been allocated from Securities Clearing Reserve Fund of Baht 1,000 million and from general fund of Baht 250 million according to the resolution of the Board of Governors of SET, in order for the clearing house to have sufficient funds in both markets.

24.3 Indemnity Fund

In 1993 and 2002, the Board of Governors of SET approved appropriations of general funds totalling Baht 100 million to the Indemnity Fund in order to assist and assure the Board of Governors of SET and those appointed assignees on matters requiring consideration and decisions which may affect or cause damages to other parties.



24.4 Staff Welfare Fund

In 1997 and 2004, the Board of Governors of SET approved appropriations of general funds was Baht 75 million to the Staff Welfare Fund. All benefits earned from this fund are retained in the fund.

24.5 Securities Investor Protection Fund

In 2004, the Board of Governors of SET approved an appropriation of Baht 300 million from broker seat admission fees as an initial fund for the establishment of the Securities Investor Protection Fund (SIPF).

The SIPF was formally established under SIPF regulations on 1 October 2004. The objective of the fund is to protect and build investor confidence in trading listed securities on SET through the members of the SIPF. As at 31 December 2021, there were 33 SIPF members from securities companies (2020: 33 SIPF members).

The assets of SIPF consist of:

- 1) the initial fund from SET of Baht 300 million;
- 2) the cumulative membership entrance fees and monthly fees collected from the members;
- 3) the future benefits generated from investments in the SIPF.

SIPF will protect the investors' assets which are in the custody of the securities brokers who are members of the SIPF. In the event that the members of the SIPF fail to return the assets to investors, each investor shall be compensated by the SIPF for the related damages at the actual cost, but not exceeding Baht 1 million per SIPF member, in the following cases:

- 1) if any SIPF member is in receivership under the Bankruptcy Act or
- 2) if there are disputes concerning the purchase or sale of securities listed on SET between investors and any SIPF member, and the arbitrator's award is that the SIPF member shall return the assets to investors, but the SIPF member violates the award.

The protection will not include any losses from securities trading regardless of who makes the investment decision.

If the number of assets of the SIPF is not sufficient for compensation to investors as mentioned above, the investors will receive from the SIPF for assets in accordance with the proportion of damage sustained by each investor (Pro rata based).

When the Board of Governors of SET resolves to approve granting protection to any investor. SET will use the SIPF to provide protection to such investor, which shall be in the following sequence:



- 1) the SIPF with respect to the part paid by that SIPF's member who caused damage to the investors;
- 2) the SIPF with respect to the yields or benefits;
- 3) the SIPF with respect to the part paid by other member; and
- 4) the SIPF with respect to the part paid by SET

Upon SET's use of SIPF to provide protection to investors in accordance with the rules prescribed, SET shall exercise the right to demand the return of the assets which have been paid to the investors and damages from the SIPF's member in accordance with the right transferred by the investors.

SET shall allocate the assets or money to SIPF which are returned from members who caused damage to the investors in the following sequence:

- 1) the SIPF with respect to the part belonging to SET;
- 2) the SIPF with respect to the part belonging to other members;
- 3) the SIPF with respect to the yield or benefits; and
- 4) the SIPF with respect to the part belonging to SIPF's members who caused damage to the investors

24.6 Derivatives Investor Protection Fund

In 2012 the board of directors of Thailand Futures Exchange Public Company Limited ("TFEX"), a subsidiary, has a resolution to establish the Derivatives Investor Protection Fund ("DIPF") and approved an appropriation of Baht 50 million as an initial fund.

The DIPF was established on 15 November 2012. The objective of the DIPF is to provide protection for derivatives contracts investors in accordance with the rules prescribed by TFEX. Investors need to be protected must become customers of DIPF members and is a Thai natural person, a juristic person incorporated in Thailand who is not an institutional investor under the Derivatives Act B.E. 2546. As at 31 December 2021, there were 37 DIPF members from security companies (2020: 37 DIPF members).

Assets of the DIPF consist of TFEX initial capital, admission fees and contributions collected from members of the DIPF, and yields or benefits obtained from the proceeds and assets of the DIPF after the deduction of expenses for the operation of the DIPF. At the time of its establishment, the DIPF will have assets worth no less than Baht 100 million, which consists of initial capital of Baht 50 million from TFEX and admission fees and contributions from DIPF members in the rest to make the total of Baht 100 million. TFEX may collect additional sums of money as it deems necessary and appropriate.



DIPF will protect the investors' assets which are in the custody of the securities brokers who are members of the DIPF. In the event that the members of the DIPF fail to return the assets to investors, each investor shall be compensated by the DIPF for the related damages at the actual cost, but not exceeding Baht 1 million per DIPF member, in the following cases:

- 1) if any DIPF member is in receivership under the Bankruptcy Act or
- 2) if there are disputes concerning the purchase or sale of securities listed on SET between investors and any DIPF member, and the arbitrator's award is that the DIPF member shall return the assets to investors, but the DIPF member violates the award.

The protection will not include any losses from derivatives trading regardless of who makes the investment decision.

If the number of assets of the DIPF is not sufficient for compensation to investors as mentioned above, the investors will receive from the DIPF for assets in accordance with the proportion of damage sustained by each investor (Pro rata based).

When the Board resolves to approve granting protection to any investor. TFEX will use the DIPF to provide protection to such investor, which shall be in the following sequence:

- 1) the DIPF with respect to the part paid by that DIPF's member who caused damage to the investors;
- 2) the DIPF with respect to the yields or benefits;
- 3) the DIPF with respect to the part paid by other member; and
- 4) the DIPF with respect to the part paid by TFEX

Upon TFEX's use of DIPF to provide protection to investors in accordance with the rules prescribed, DIPF's member who caused damage to investors has the duty to return assets to TFEX. TFEX shall exercise the right to demand the return of the assets which have been paid to the investors and damages from the DIPF's member in accordance with the right transferred by the investors.

TFEX shall allocate the funds which are returned in whole or in part to the DIPF in the following sequence:

- 1) the DIPF with respect to the part belonging to TFEX;
- 2) the DIPF with respect to the part belonging to other members;
- 3) the DIPF with respect to the yield or benefits; and
- 4) the DIPF with respect to the part belonging to DIPF's members who caused damage to the investors



25. Financial position and results of fund operations

25.1 Financial position of fund

The SIPF's financial statements included as part of the consolidated and separate's financial statements are as follows:

(Unit: Thousand Baht)

	Consolidated and Separate financial statements	
	As at 31 December	
	2021	2020
Assets		
Current assets		
Cash deposits	163,656	163,343
Other current financial assets	357,964	365,467
Accrued interest receivable	2,802	3,197
Other current assets	1,110	3,616
Total current assets	525,532	535,623
Non-current assets		
Other non-current financial assets	331,304	304,981
Total non-current assets	331,304	304,981
Total assets	856,836	840,604
Liabilities and fund balances		
Liabilities of members portion		
Contributions from members	229,390	228,886
Benefits on contributions from members	115,098	108,787
Total liabilities of members portion	344,488	337,673
Fund balances		
Initial fund	300,000	300,000
Benefits on contributions from SET	212,348	202,931
	512,348	502,931
Other components	-	-
Total fund balances	512,348	502,931
Total liabilities and fund balances	856,836	840,604



The DIPF's financial statement included as part of the consolidated financial statements are as follows:

(Unit: Thousand Baht)

	Consolidated financial statements	
	As at 31 December	
	2021	2020
Assets		
Current assets		
Cash deposits	34,928	3,482
Other current financial assets	70,597	85,758
Contributions from members	7	11
Accrued interest receivable	220	361
Total current assets	105,752	89,612
Non-current assets		
Other non-current financial assets	7,119	22,185
Total non-current assets	7,119	22,185
Total assets	112,871	111,797
Liabilities and fund balances		
Current liabilities		
Income tax payable	249	338
Other current liabilities	1	1
Total current liabilities	250	339
Non-current liabilities		
Contributions from members	51,335	51,179
Benefits on contributions from members	3,853	3,360
Total non-current liabilities	55,188	54,539
Total liabilities	55,438	54,878
Fund balances		
Initial fund	50,000	50,000
Benefits on contributions from TFEX	7,433	6,919
Total fund balances	57,433	56,919
Total liabilities and fund balances	112,871	111,797

25.2 Results of fund operations

Details of the results of fund operations which are included as part of the consolidated and separate statement of comprehensive revenues and expenses are as follows:

(Unit: Thousand Baht)

	Consolidated financial statements				
	Staff Welfare Fund	Securities Investor Protection Fund (SET's portion)	Derivatives Investor Protection Fund (TFEX's portion)	General Fund	Total
For the year ended 31 December 2021					
Revenues					
Operating revenues	-	-	-	7,734,730	7,734,730
Investment income, net	778	9,510	700	368,641	379,629
Other income	-	-	-	180,107	180,107
Share of profit of investment in associates and joint venture, net of tax	-	-	-	35,590	35,590
Total revenues	778	9,510	700	8,319,068	8,330,056
Expenses					
Operating expenses	-	93	51	5,035,610	5,035,754
Contribution to the Capital Market Development Fund	-	-	-	582,978	582,978
Income tax expenses	-	-	135	1,114,558	1,114,693
Total expenses	-	93	186	6,733,146	6,733,425
Revenues over expenses	778	9,417	514	1,585,922	1,596,631
Other comprehensive revenues (expenses):					
Other comprehensive revenues (expenses) not to be reclassified to revenues or expenses in subsequent periods					
Actuarial gain	-	-	-	65,095	65,095
Other comprehensive revenues (expenses) for the year	-	-	-	65,095	65,095
Total comprehensive revenues over expenses for the year	778	9,417	514	1,651,017	1,661,726
Total comprehensive revenues over expenses for the year attributable to:					
Owners of the parents	778	9,417	514	1,651,017	1,661,726
Non - controlling interests	-	-	-	-	-
	778	9,417	514	1,651,017	1,661,726



(Unit: Thousand Baht)

	Consolidated financial statements				
	Staff Welfare Fund	Securities Investor Protection Fund (SET's portion)	Derivatives Investor Protection Fund (TFEX's portion)	General Fund	Total
For the year ended 31 December 2020					
Revenues					
Operating revenues	-	-	-	6,547,755	6,547,755
Investment income (loss), net	1,261	4,686	981	(364,950)	(358,022)
Other income	-	-	-	163,088	163,088
Share of profit of investment in associates and joint venture, net of tax	-	-	-	28,025	28,025
Total revenues	1,261	4,686	981	6,373,918	6,380,846
Expenses					
Operating expenses	-	146	74	4,289,057	4,289,277
Contribution to the Capital Market Development Fund	-	-	-	361,641	361,641
Income tax expenses	-	(2,617)	184	378,280	375,847
Total expenses	-	(2,471)	258	5,028,978	5,026,765
Revenues over expenses	1,261	7,157	723	1,344,940	1,354,081
Other comprehensive revenues (expenses):					
Other comprehensive revenues (expenses) not to be reclassified to revenues or expenses in subsequent periods					
Actuarial loss	-	-	-	(61,720)	(61,720)
Other comprehensive revenues (expenses) for the year	-	-	-	(61,720)	(61,720)
Total comprehensive revenues over expenses for the year	1,261	7,157	723	1,283,220	1,292,361
Total comprehensive revenues over expenses for the year attributable to:					
Owners of the parents	1,261	7,157	723	1,283,220	1,292,361
Non - controlling interests	-	-	-	-	-
	1,261	7,157	723	1,283,220	1,292,361

(Unit: Thousand Baht)

	Separate financial statements			
	Staff Welfare Fund	Securities Investor Protection Fund (SET's portion)	General Fund	Total
For the year ended 31 December 2021				
Revenues				
Operating revenues	-	-	3,809,064	3,809,064
Investment income, net	778	9,510	1,074,904	1,085,192
Other income	-	-	1,978,798	1,978,798
Total revenues	778	9,510	6,862,766	6,873,054
Expenses				
Operating expenses	-	93	4,466,119	4,466,212
Contribution to the Capital Market Development Fund	-	-	582,978	582,978
Income tax expenses	-	-	808,668	808,668
Total expenses	-	93	5,857,765	5,857,858
Revenues over expenses	778	9,417	1,005,001	1,015,196
Other comprehensive revenues (expenses):				
Other comprehensive revenues (expenses) not to be reclassified to revenues or expenses in subsequent periods				
Actuarial gain	-	-	65,095	65,095
Other comprehensive revenues (expenses) for the year	-	-	65,095	65,095
Total comprehensive revenues over expenses for the year	778	9,417	1,070,096	1,080,291
Total comprehensive revenues over expenses for the year attributable to:				
Owners of the parents	778	9,417	1,070,096	1,080,291
Non - controlling interests	-	-	-	-
	778	9,417	1,070,096	1,080,291



(Unit: Thousand Baht)

	Separate financial statements			
	Staff Welfare Fund	Securities Investor Protection Fund (SET's portion)	General Fund	Total
For the year ended 31 December 2020				
Revenues				
Operating revenues	-	-	3,059,298	3,059,298
Investment income, net	1,261	4,686	121,181	127,128
Other income	-	-	1,906,820	1,906,820
Total revenues	1,261	4,686	5,087,299	5,093,246
Expenses				
Operating expenses	-	146	3,852,002	3,852,148
Contribution to the Capital Market Development Fund	-	-	361,641	361,641
Income tax expenses	-	(2,617)	107,315	104,698
Total expenses	-	(2,471)	4,320,958	4,318,487
Revenues over expenses	1,261	7,157	766,341	774,759
Other comprehensive revenues (expenses):				
Other comprehensive revenues (expenses) not to be reclassified to revenues or expenses in subsequent periods				
Actuarial loss	-	-	(61,720)	(61,720)
Other comprehensive revenues (expenses) for the year	-	-	(61,720)	(61,720)
Total comprehensive revenues over expenses for the year	1,261	7,157	704,621	713,039
Total comprehensive revenues over expenses for the year attributable to:				
Owners of the parents	1,261	7,157	704,621	713,039
Non - controlling interests	-	-	-	-
	1,261	7,157	704,621	713,039

26. Operating revenues

Operating revenues for the years ended 31 December 2021 and 2020 consist of:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Service type:				
Trading fees	2,908,609	2,343,762	2,261,670	1,667,148
Securities registrar fees	1,458,444	1,228,987	-	-
Clearing & settlement fees	835,006	740,026	-	-
Listing fees	696,307	682,298	696,307	682,298
Member services fees	507,172	436,645	-	-
Information service fees	423,781	377,514	390,074	343,119
Customisation and IT support fees	410,753	344,856	437,613	343,333
Depository fees	379,287	296,348	-	-
Membership fees	63,860	63,950	23,400	23,400
Fund services fees	31,678	24,044	-	-
Payment service fees	12,934	9,325	-	-
Digital Gateway service fees	6,899	-	-	-
Total operating revenues	<u>7,734,730</u>	<u>6,547,755</u>	<u>3,809,064</u>	<u>3,059,298</u>

Timing of revenue recognition

At a point in time

Trading fees	2,908,609	2,343,762	2,261,670	1,667,148
Securities registrar fees	895,287	635,827	-	-
Clearing & settlement fees	835,006	740,026	-	-
Listing fees	272,151	200,300	272,151	200,300
Member services fees	490,192	419,785	-	-
Information service fees	423,781	377,514	390,074	343,119
Customisation and IT support fees	410,753	344,856	437,613	343,333
Depository fees	379,287	296,348	-	-
Fund services fees	8,879	5,354	-	-
Payment service fees	12,182	8,845	-	-
Digital Gateway service fees	4,574	-	-	-
Total	<u>6,640,701</u>	<u>5,372,617</u>	<u>3,361,508</u>	<u>2,553,900</u>



(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Overtime				
Securities registrar fees	563,157	593,160	-	-
Listing fees	424,156	481,998	424,156	481,998
Member services fee	16,980	16,860	-	-
Membership fees	63,860	63,950	23,400	23,400
Fund services fees	22,799	18,690	-	-
Payment service fees	752	480	-	-
Digital Gateway service fees	2,325	-	-	-
Total	1,094,029	1,175,138	447,556	505,398
Total operating revenues	7,734,730	6,547,755	3,809,064	3,059,298

27. Investment revenue (loss) - net

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Interest income	249,320	327,223	141,717	198,303
Less: Interest expenses				
Short-term borrowings from subsidiaries (Note 6)	-	-	(11,149)	(22,492)
Assets for clearing system protection - members' portion	(102,648)	(174,824)	-	-
Interest income, net	146,672	152,399	130,568	175,811
Dividend income from				
Mutual funds	63,039	62,386	63,039	62,386
Subsidiaries (Note 12)	-	-	606,182	508,543
Associates (Note 13)	-	-	13,870	20,151
Private fund	-	22	-	22
Other entities	4,536	3,749	4,536	3,749
Realised gain (loss) from investments	42,957	(320,541)	57,953	(371,751)
Loss from derivatives	-	(24,429)	-	(24,429)

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Loss on foreign exchange rate	(74,014)	(55,939)	(74,014)	(55,939)
Realised gain (loss) on foreign exchange rate from forward contracts	(248,321)	5,090	(248,321)	5,090
Realised gain (loss) on exchange rate from foreign investments	44,914	(14,246)	44,914	(14,246)
Unrealised gain (loss) from investments	128,109	(165,130)	209,739	(180,203)
Unrealised gain on exchange rate from foreign investments	280,612	3,316	280,612	3,316
Unrealised gain (loss) on foreign exchange rate from forward contracts	(64,669)	42,140	(64,669)	42,140
Unrealised gain (loss) on foreign exchange rate	50,721	(48,694)	50,721	(48,694)
Allowance for expected credit loss	(5,137)	(3,812)	552	(3,504)
Total investment revenue (loss) - net	<u>369,419</u>	<u>(363,689)</u>	<u>1,075,682</u>	<u>122,442</u>

28. Other income

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Revenues from fees and management funds	51,270	47,917	387	2,710
Service income from related parties	31,162	13,368	1,940,047	1,854,011
Educational activities income	16,802	22,844	16,802	22,844
Rental & utilities revenues	11,443	11,832	11,443	11,832
Fines	7,742	12,347	2,887	7,088
Revenue from funding for small entrepreneur	3,999	3,445	-	-
Revenues from securities borrowing and lending	3,489	3,969	-	-
Revenues from marketing events	70	1,365	30	1,289
Other income	<u>54,130</u>	<u>46,001</u>	<u>7,202</u>	<u>7,046</u>
Total other income	<u>180,107</u>	<u>163,088</u>	<u>1,978,798</u>	<u>1,906,820</u>



29. Employee benefit expenses

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Management				
Salaries and other benefits	257,447	234,554	257,447	234,554
Contributions to provident fund	13,747	12,163	13,747	12,163
Total	271,194	246,717	271,194	246,717
Other employees				
Salaries and other benefits	1,791,147	1,621,849	1,791,147	1,622,049
Contributions to provident fund	83,937	78,612	83,937	78,612
Total	1,875,084	1,700,461	1,875,084	1,700,661
Total employee benefit expense	2,146,278	1,947,178	2,146,278	1,947,378

The defined contribution plans comprise provident funds established by the Group for its employees. Contributions are made monthly by the employees at rates between 3.00% and 15.00% of their basic salaries and by the Group at the rate of 10.00% of the employees' basic salaries. The provident funds are registered with the Ministry of Finance as juristic entities and are managed by a licensed Fund Manager.

30. SEC fees

The Securities and Exchange Act B.E. 2535 requires SET to pay to the SEC at a rate as determined by the Board of the SEC.

The Board of the SEC has approved to charge SET for the year 2020 - 2022 (for the period of 3 years) at the rate of 0.002% of trading value of each year.

On 14 December 2020, the Board of the SEC also required Thailand Future Exchange Public Company Limited (subsidiary) to pay the fee of derivatives trading exchange since 2021 onward. The rate is Baht 2 million per annum but not exceeding Baht 15 million (2020: Baht 2 million).

31. Other expenses

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Donation and CSR expenses	112,158	11,094	112,158	11,096
Fees and compensation expenses	103,046	115,508	99,194	88,306
Capital market development expenses	30,259	27,348	30,259	27,348
Insurance premiums	6,196	3,754	6,196	3,754
Institution membership fees	5,121	4,798	3,655	3,463
Entertainment expenses	3,080	2,492	3,067	2,477
Travelling and vehicle expenses	2,784	2,174	2,767	2,173
Meeting expenses	785	1,711	785	1,692
Other expenses	12,721	6,005	10,195	5,795
Total other expenses	<u>276,150</u>	<u>174,884</u>	<u>268,276</u>	<u>146,104</u>

32. Contribution to the Capital Market Development Fund

The Securities and Exchange Act (No. 6) B.E. 2562, announced on 16 April 2019, requires that SET proceed as follows:

- 1) Transfer the money or any other assets in the amount of Baht 5,700 million to the Capital Market Development Fund (“CMDF”). SET’s Board of the Governors and CMDF’s Committee shall jointly determine the amount or value, type and nature of the money or assets to be transferred.
- 2) Provide the money to CMDF within 150 days from the end of the calendar year at the rate not less than 90% of the revenue after deduction of expenses, taxes and reserves. In this regard, the consolidated financial statements of SET shall be used to calculate the contribution amount. The provision of reserves shall be in accordance with the type and amount prescribed by the Board of Governors of SET.

SET transferred money in the amount of Baht 5,700 million to the CMDF on 4 July 2019 and recognised as expenses in separate financial statements for the year 2019.

SET recorded an annual contribution amount of Baht 582.98 million as an expense in the consolidated and separate financial statements for the year ended 31 December 2021 (2020: Baht 361.64 million). Details of an annual contribution amount are as follows:



Reserves

At the meeting of the Board of Governors of the Stock Exchange of Thailand held on 31 October 2020 and 18 November 2020, the Board approved the type and principle of reserves as prescribed by The Securities and Exchange Act (No. 6) B.E. 2562. On 23 February 2022, the Board of Governors approved reserve for 2021 of Baht 1,532 million (2020: Approved reserves of Baht 1,314 million). Details are as follows:

Type of reserve	Reserve allocation principles to ensure adequacy of funding sources	Reserve amount (Thousand Baht)	
		2021	2020
1. Reserves set aside according to law or criteria in business operation specified, including reserve amount to accommodate special situations	1.1 Legal reserve	17,608	23,635
	1.2 Reserves according to business operation such as EMIR (European Market Infrastructure Regulation), PFMI (Principles for Financial Market Infrastructures) to meet an increase (decrease) of business operation during the year	25,660	(36,960)
	1.3 Reserves allocated for specific funds such as approval of additional capital in specific funds during the year, benefit sharing of Securities Investor Protection Fund, Derivatives Investor Protection Fund, Clearing Fund or other similar funds	12,814	261,176
	1.4 Reserves allocated for accommodating operations risks and emergency measures	467,000	424,000
2. Reserves set aside to accommodate the fluctuation of investments	According to unrealized gain/(loss) during the year	394,773	(179,733)
3. Reserves set aside for investment in business or fixed assets	According to the investment amount in businesses and fixed assets approved by the Board of Governors	614,000	821,781
Total reserve		1,531,855	1,313,899

Annual contribution calculated as follows:

(Unit: Thousand Baht)

	Consolidated and Separate financial statements	
	2021	2020
Revenues over expenses before contribution to CMDf (presented in the statement of comprehensive revenues and expenses)	3,294,167	2,094,001
Less: Income tax expenses	(1,114,558)	(378,279)
Revenue after deduction of expenses, before reserves	2,179,609	1,715,722
Less: Reserves	(1,531,855)	(1,313,899)
Revenue after deduction of expenses, taxes and reserves	647,754	401,823
Annual contribution amount at rate 90%	582,978	361,641

Accumulated contribution to CMDf according to the financial statements as of 31 December 2021 and 2020 can be presented as follows:

(Unit: Thousand Baht)

	Consolidated and Separate financial statements	
	2021	2020
Accumulated contribution at beginning of years	6,061,641	5,700,000
Annual contribution amount	582,978	361,641
Total accumulated contribution expenses	6,644,619	6,061,641



33. Income tax

Income tax expenses for the years ended 31 December 2021 and 2020 are made up as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Current income tax:				
Current income tax charge	323,756	268,527	-	-
Corporate income tax related to remittance to CMDP	952,000	-	952,000	-
Deferred tax:				
Relating to origination and reversal of temporary differences	(161,198)	(132,344)	(143,332)	(134,782)
Adjust deferred tax assets that shall not to be utilised	-	242,096	-	242,096
Income tax expenses reported in revenues over expenses	<u>1,114,558</u>	<u>378,279</u>	<u>808,668</u>	<u>107,314</u>

The amounts of income tax relating to each component of other comprehensive revenues (expenses) for the years ended 31 December 2021 and 2020 are as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Deferred tax on actuarial gains and losses	-	15,571	-	15,571
	<u>-</u>	<u>15,571</u>	<u>-</u>	<u>15,571</u>

The reconciliation between revenues over expenses and income tax expenses as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Revenues over expenses before income tax	2,711,189	1,732,360	1,823,864	882,073
Applicable tax rate	20%	20%	20%	20%
Accounting revenues before income tax multiplied by income tax rate	542,238	346,472	364,773	176,415
Corporate income tax related to remittance to CMDF of previous years	604,935	-	604,935	-
Cumulative loss carried forward from the previous years	(761)	(69,481)	-	(70,009)
Reversal of previous deferred tax asset	(216,059)	-	(216,059)	-
Assessed income under Revenue Code	7,618	3,513	2,102	1,540
Income not subject to tax	(126,187)	(111,096)	(126,187)	(111,096)
Additional expense deductions allows	(7,578)	(5,500)	(7,578)	(5,500)
Non-deductible expenses	186,161	113,904	186,682	115,964
Eliminated transaction between related party, net of tax	124,294	100,612	-	-
Revenues over expenses - Securities/Derivatives Investor Protection Fund, net of tax	(103)	(145)	-	-
Income tax expenses reported in revenues over expenses	1,114,558	378,279	808,668	107,314



The components of deferred tax assets and deferred tax liabilities are as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Deferred tax assets - net	146,107	595	143,332	-
Deferred tax liabilities - net	-	(15,684)	-	-
Deferred tax - net	<u>146,107</u>	<u>(15,089)</u>	<u>143,332</u>	<u>-</u>

Deferred tax assets

Allowance for expected credit losses	10,601	1,660	8,539	-
Unrealised loss on financial asset	4,736	574	1,873	1,600
Accumulated amortisation - computer software	36,661	-	36,661	-
Provision for short-term employee benefits	13,778	-	13,778	-
Provision for long-term employee benefit	145,954	-	145,954	-
Total	<u>211,730</u>	<u>2,234</u>	<u>206,805</u>	<u>1,600</u>

Deferred tax liabilities

Unrealised gain on financial asset	<u>(65,623)</u>	<u>(17,323)</u>	<u>(63,473)</u>	<u>(1,600)</u>
Total	<u>(65,623)</u>	<u>(17,323)</u>	<u>(63,473)</u>	<u>(1,600)</u>

As at 31 December 2020, the Group has deductible temporary differences and unused tax losses totaling Baht 242 million (2021: Nil) (SET: Baht 242 million 2021: Nil), on which deferred tax assets have not been recognised as the Group views that future taxable profits may not be sufficient to allow utilisation of the temporary differences and unused tax losses.

As at 31 December 2020, the Group has unused tax losses amounted to Baht 3,037 million (SET: Baht 3,037 million).

Corporate income tax related to remittance contributed to Capital Market Development Fund (“CMDF”)

In accordance with Section 40 of the Securities and Exchange Act (No. 6) B.E. 2562 dated 16 April 2019 (Securities Act), SET is required to contribute Baht 5,700 million to the CMDF in the year the Act came into force. The remittance contributed was recognised as part of revenues under expenses in 2019 and as tax expenditures for corporate income tax calculation of 2019.

In addition, under Section 182/1 of the Securities Act, SET is required to contribute the remittances of Baht 361.64 million and Baht 582.98 million to CMDF which were recognised as an expense in revenues over expenses for the years 2020 and 2021, respectively, after the contribution of the remittance to the fund under Section 40 as mentioned above at the rate of not less than 90% of income after deduction of expenses, taxes, and reserves.

In the year 2019, SET submitted tax inquiry with respect to tax practice of the remittances to CMDF to the Revenue Department. Subsequently, on 15 December 2021, SET received a letter responding to the aforementioned inquiry from the Large Business Tax Administration Office, Revenue Department, responded to the inquiry that the amount of Baht 5,700 million contributed by SET to CMDF and the remittances to CMDF as mentioned above cannot be considered as tax expenditures.

The SET’s management, internal legal advisors and external tax advisors believe that SET’s compliance with the Securities Act is to achieve the objective of upgrading the development of the Thailand’s capital market. Therefore, such remittance contribution to CMDF and annual remittances can be treated as a deductible expenses for calculation of SET’s corporate income tax. Currently, SET is in the process of providing additional clarification and taking any necessary actions to provide information, facts including the relevant laws to the Revenue Department and other relevant authorities in order to obtain a new conclusion consistent with the current context that SET is an organisation established under a specific law and in accordance with the relevant legal practice in contributing such remittances to CMDF. However, SET would follow the Interpretation of Thai Financial Reporting Standard No. 23, Uncertainty over Income Tax Treatments.



34. Segment information

Operating segment information is reported in a manner consistent with the internal reports that are regularly reviewed by the chief operating decision maker in order to make decisions about the allocation of resources to the segment and assess its performance.

For management purposes, the Group is organised into business units based on its products and services and have five reportable segments as follows:

- Securities Markets (including securities trading, clearing and settlement, listing, depository and membership fees)
- Derivatives Markets (including trading and clearing of future contracts and membership fees)
- Technology Services (including member services, information services and technology support)
- Registrar Services (including securities registrar)
- Capital Market Development and others, (including capital market education improving financial and investment capabilities, promoting sustainable development of capital market industry and conducting of capital market research, payment service provider, rental income and other miscellaneous income).

No operating segments have been aggregated to form the above reportable operating segments.

The chief operating decision maker monitors the operating results of the business units separately for the purpose of making decisions about resource allocation and assessing performance. Segment performance is measured based on operating revenues and expenses and total assets and on a basis consistent with that used to measure operating revenues and expenses and total assets in the financial statements.

The basis of accounting for any transactions between reportable segments is consistent with that for third party transactions.

Financial information presented in respect of the Group's business segments in the consolidated financial statements as at 31 December 2021 and 2020 and for the years ended 31 December 2021 and 2020 are as follows:

(Unit: Thousand Baht)

	Consolidated financial statements						
	Securities Markets	Derivatives Markets	Technology Services	Registrar Services	Capital Market Development and others	Elimination	Total
For the year ended 31 December 2021							
Revenues from operation	3,950,494	1,050,063	1,341,707	1,458,444	114,129	-	7,914,837
Revenues from inter-segment	1,025,718	489,023	36,288	555,909	51,476	(2,158,414)	-
Total revenues	4,976,212	1,539,086	1,377,995	2,014,353	169,605	(2,158,414)	7,914,837
Segment revenues over (under) expenses	2,214,222	412,189	599,294	483,738	(830,176)	-	2,879,227
Investment revenue, net							369,419
Share of loss of investments in joint venture, net of tax							(7)
Share of profit of investments in associates, net of tax							35,597
Revenues over expenses in operations							3,284,236
Non-operating revenues (expenses)							
Income derived from Securities Investor Protection Fund, net							9,417
Income derived from Derivatives Investor Protection Fund, net							514
Contributions to the Capital Market Development Fund							(582,978)
Revenues over expenses before income tax expenses							2,711,189
Income tax expenses							(1,114,558)
Revenues over expenses							1,596,631
As at 31 December 2021							
Segment assets	4,007,610	34,405,362	1,385,814	1,219,126	1,237,845	(6,111,617)	36,144,140
Other assets	-	-	-	-	24,794,515	(4,057,685)	20,736,830
Total assets	4,007,610	34,405,362	1,385,814	1,219,126	26,032,360	(10,169,302)	56,880,970
Segment liabilities	3,108,316	27,924,126	491,181	825,743	3,085,301	(7,922,602)	27,512,065
Other liabilities	-	-	-	-	1,810,985	(1,810,985)	-
Total liabilities	3,108,316	27,924,126	491,181	825,743	4,896,286	(9,733,587)	27,512,065



(Unit: Thousand Baht)

Consolidated financial statements							
	Securities Markets	Derivatives Markets	Technology Services	Registrar Services	Capital Market Development and others	Elimination	Total
For the year ended 31 December 2020							
Revenues from operation	3,327,932	1,237,580	765,452	1,228,987	150,893	-	6,710,844
Revenues from inter-segment	712,061	571,468	70,534	566,174	88,547	(2,008,784)	-
Total revenues	4,039,993	1,809,048	835,986	1,795,161	239,440	(2,008,784)	6,710,844
Segment revenues over (under) expenses	1,443,632	556,019	425,434	304,151	(307,451)	-	2,421,785
Investment loss, net							(363,689)
Share of loss of investments in joint venture, net of tax							(35)
Share of profit of investments in associates, net of tax							28,060
Revenues over expenses in operations							2,086,121
Non-operating revenues (expenses)							
Income derived from Securities Investor Protection Fund, net							7,157
Income derived from Derivatives Investor Protection Fund, net							723
Contributions to the Capital Market Development Fund							(361,641)
Revenues over expenses before income tax expenses							1,732,360
Income tax expenses							(378,279)
Revenues over expenses							1,354,081
As at 31 December 2020							
Segment assets	4,650,427	35,299,608	735,913	732,995	260,965	(6,197,188)	35,482,720
Other assets	-	-	-	-	23,242,978	(4,298,448)	18,944,530
Total assets	4,650,427	35,299,608	735,913	732,995	23,503,943	(10,495,636)	54,427,250
Segment liabilities	1,714,977	29,271,194	259,962	499,393	1,171,733	(6,197,188)	26,720,071
Other liabilities	-	-	-	-	2,416,422	(2,416,422)	-
Total liabilities	1,714,977	29,271,194	259,962	499,393	3,588,155	(8,613,610)	26,720,071

Reconciliation of reportable segment assets/liabilities as at 31 December 2021 and 2020 were as follows:

(Unit: Thousand Baht)

	Consolidated financial statements	
	2021	2020
Assets		
Assets for reportable segments	36,144,140	35,482,720
Unallocated amounts:		
- Cash and investments	18,667,638	16,904,931
- Investments in related parties	1,017,057	995,351
- Accrued interest receivables	14,187	18,348
- Land and work in process	1,037,948	1,025,900
Total assets	<u>56,880,970</u>	<u>54,427,250</u>
Liabilities		
Liabilities for reportable segments	<u>27,512,065</u>	<u>26,720,071</u>
Total liabilities	<u>27,512,065</u>	<u>26,720,071</u>

Geographic information

The Group operates in Thailand only. As a result, all the revenues and assets as reflected in these financial statements pertain exclusively to this geographical reportable segment.

Major customers

For the year 2021 and 2020, the Group has no major customer with revenue of 10% or more of an entity's revenues.

35. Commitments and contingent liabilities

35.1 Capital commitments

As at 31 December 2021, the Group had capital commitments of approximately Baht 261.93 million (2020: Baht 78.46 million), relating to the acquisition of technology equipment, computer software and system development (SET: Baht 261.93 million 2020: Baht 78.46 million).



35.2 Lease commitments

As at 31 December 2021 and 2020, the Group has future short-term lease payments and leases of low-value assets required under these non-cancellable operating lease agreements that have not yet commenced as follows:

(Unit: Thousand Baht)

	Consolidated and Separate financial statements	
	2021	2020
Within 1 year	5,142	7,339
Over 1 and up to 5 years	5,407	10,549
Total	10,549	17,888

35.3 Service commitments

As at 31 December 2021 and 2020, the Group has service commitments as follows:

(Unit: Thousand Baht)

	Consolidated and Separate financial statements	
	2021	2020
Within 1 year	212,111	89,085
Over 1 and up to 5 years	129,223	134,689
Total	341,334	223,774

35.4 Guarantees

As at 31 December 2021 and 2020, SET has letters of guarantee issued by banks totaling Baht 5.13 million in respect of electricity usage in the ordinary course of business from which management anticipates that no material liabilities will arise.

35.5 Other commitments

The Stock Exchange of Thailand (SET) has issued a certificate of support to the bank about overdraft limit given to Thailand Clearing House Co., Ltd. (TCH) which is a subsidiary in the amount of Baht 2,900 million (2020: Baht 2,900 million). Under the terms of the certificate of support, SET is required to maintain its shareholding at 99.99% of the registered share capital in TCH, and required to support TCH's operation.

35.6 Contingent liabilities

Subsidiary

- 1) On 22 January 2019, a subsidiary received a claim statement regarding recourse for the damages incurred from a case regarding the wrongful acts of the asset recall and compensation for the forgery of the share certificates. The subsidiary was claimed for damages totaling Baht 76.23 million.

On 4 December 2019, the Civil Court ordered the subsidiary to pay the amount of Baht 62.55 million with an interest rate of 7.5% per annum, and to pay a legal fee of Baht 400,000. On 23 February 2021, the Appeal Court upheld the judgment of the Civil Court. However, the subsidiary filed a petition for an appeal and filed an appeal with the Supreme Court. As at 31 December 2021, the case was still under consideration by the Supreme Court. The outcome of the case has not been finalised. Therefore, the subsidiary did not record a provision for damages arising from the above mentioned case in the financial statements.

The Group has purchased insurance policy covering professional liability (Financial Institutional Professional Indemnity Insurance) which has fully covered the liability for this case.

- 2) On 11 December 2019, a subsidiary received a claim statement demanding the registration to change the name of shareholders or to pay the price of shares in the amount of Baht 495 million. On 26 January 2021, the case was dismissed by the Civil Court. The plaintiff then filed an appeal with Appeal Court. Therefore, the subsidiary did not record a provision for damages arising from the above mentioned case in the financial statements.



36. Fair value hierarchy

As at 31 December 2021 and 2020, the Group had the assets and liabilities that were measured at fair value or for which fair value was disclosed using different levels of inputs as follows:

(Unit: Million Baht)

	Consolidated financial statement			
	As at 31 December 2021			
	Level 1	Level 2	Level 3	Total
Assets measured at fair value				
Financial assets measured at FVTPL				
Mutual Fund	361	5,199	-	5,560
Government bond	-	11,919	-	11,919
Debenture	-	1,048	-	1,048
Bill of exchange	-	30	-	30
Financial assets measured at FVOCI				
Ordinary shares	-	-	54	54
Derivatives				
Foreign currency forward contract	-	7	-	7
Liabilities measured at fair value				
Derivatives				
Foreign currency forward contracts	-	30	-	30

(Unit: Million Baht)

	Consolidated financial statement			
	As at 31 December 2020			
	Level 1	Level 2	Level 3	Total
Assets measured at fair value				
Financial assets measured at FVTPL				
Mutual Fund	83	3,750	-	3,833
Government bond	-	10,499	-	10,499
Debenture	-	367	-	367
Financial assets measured at FVOCI				
Ordinary shares	-	-	54	54
Derivatives				
Foreign currency forward contracts	-	42	-	42

(Unit: Million Baht)

	Separate financial statement			
	As at 31 December 2021			
	Level 1	Level 2	Level 3	Total
Assets measured at fair value				
Financial assets measured at FVTPL				
Mutual Fund	361	5,199	-	5,560
Government bond	-	2,123	-	2,123
Debenture	-	1,048	-	1,048
Bill of exchange	-	30	-	30
Financial assets measured at FVOCI				
Ordinary shares	-	-	49	49

(Unit: Million Baht)

	Separate financial statement			
	As at 31 December 2020			
	Level 1	Level 2	Level 3	Total
Assets measured at fair value				
Financial assets measured at FVTPL				
Mutual Fund	83	3,750	-	3,833
Government bond	-	1,004	-	1,004
Debenture	-	367	-	367
Financial assets measured at FVOCI				
Ordinary shares	-	-	49	49
Derivatives				
Foreign currency forward contracts	-	42	-	42



37. Financial instruments

37.1 Derivatives

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Derivative assets				
Derivative assets not designated as hedging instrument				
Foreign exchange forward contracts	7	42	7	42
Total derivative assets	7	42	7	42
Derivative liabilities				
Derivatives liabilities not designated as hedging instruments				
Foreign exchange forward contracts	30	-	30	-
Total derivative liabilities	30	-	30	-

Derivatives not designated as hedging instruments

The Group uses foreign exchange forward contracts to manage some of its transaction exposures. The contracts are entered into for periods consistent with foreign currency exposure of the underlying transactions, generally from 3 to 7 months.

37.2 Financial risk management objectives and policies

The Group's financial instruments principally comprise cash and cash equivalents, cash at banks for financial benefits payable, assets for margin deposits and benefits, other current financial assets, trade and other receivables, derivative assets/liabilities, other non-current financial assets, assets for clearing system protection and benefits, securities investor protection fund, derivatives investor protection fund, reserve fund for clearing and settlement, margin deposits and benefits payable, trade and other payables, assets for clearing system protection and benefits payable, contributions and benefits to securities investor protection fund, contributions and benefits to derivatives investor protection fund and lease liabilities. The financial risks associated with these financial instruments and how they are managed is described below.

Credit risk

The Group has no significant concentrations of credit risk. The Group has appropriate policies in place to ensure that the Group provides services to customers who have appropriate credit history.

Trade receivables

The Group manages the risk by adopting appropriate credit control policies and procedures and therefore does not expect to incur material financial losses. Outstanding trade receivables are regularly monitored.

An impairment analysis is performed at each reporting date to measure expected credit losses. The provision rates are based on days past due. The calculation reflects the probability reasonable and supportable information that is available at the reporting date about past events, current conditions and forecasts of future economic conditions.

The Group manages the credit risk relating to investments by determining the minimum credit rating and the proportion of investment to the issuer. The investment framework has been approved by the Investment Committee, which imposed a limit to reduce the concentration risk and default risk of counterparties.

Market risk

There are two types of market risk comprising foreign currency risk and interest rate risk. The Group enters into a variety of forward contracts to mitigate the risk of rising interest rates and foreign currency rates.

Foreign currency risk

The Group has no significant exposure to foreign currency risk relates due to its accounts receivable and accounts payable are mainly made in Thai Baht, except for foreign investments in some foreign currencies. However, the Group has appropriately applied forward exchange contracts to hedge foreign exchange risk of such investments.



As at 31 December 2021 and 2020, the Group has financial assets and liabilities in foreign currency as follows:

Currency	Consolidated financial statements					
	Financial assets (Million)		Financial liabilities (Million)		Average foreign currency (Baht per Foreign Currency)	
	2021	2020	2021	2020	2021	2020
US Dollar	108	155	112	81	33.42	30.04

Currency	Separate financial statements					
	Financial assets (Million)		Financial liabilities (Million)		Average foreign currency (Baht per Foreign Currency)	
	2021	2020	2021	2020	2021	2020
US Dollar	4	74	8	-	33.42	30.04

Interest rate risk

The Group's exposure to interest rate risk relates primarily to long-term loan and short-term loan. Most of the Group's financial assets and liabilities floating interest rates or fixed interest rates which are close to the market rate.

Interest rate risk arises from the volatility of interest rates in the market which may affect the Group's investments in debt securities and operating results and cash flow. The Group has establishment investment policy by stipulating the remaining of the instruments in order to limit interest rate risk. The Group does not have interest rate derivative in order to manage fluctuation of the interest rate.

As at 31 December 2021 and 2020, significant financial assets and liabilities classified by type of interest rate are summarised in the table below, with those financial assets and liabilities that carry fixed interest rates further classified based on the maturity date, or the repricing date (if this occurs before the maturity date).

(Unit: Million Baht)

	Consolidated financial statement						Effective interest rate (% per annum)
	2021						
	Fixed interest rates			Floating interest rate	Non- interest bearing	Total	
Within 1 year	1-5 years	Over 5 years					
Financial assets							
Cash and cash equivalent	-	-	-	8,300	718	9,018	0.05 - 0.63
Cash at banks for financial benefits payable	50	-	-	34	-	84	0.10 - 0.65
Assets for margin deposits and benefit	5,648	834	-	13,189	113	19,784	0.05 - 2.06
Other current financial assets	1,783	3,218	598	3	-	5,602	0.05 - 3.70
Trade and other receivables	61	-	-	21	586	668	0.05 - 0.90
Derivative assets	-	-	-	-	7	7	-
Other non-current financial assets	-	384	-	-	5,880	6,264	2.04 - 3.38
Assets for clearing system protection and benefits	812	1,207	-	13	17	2,049	0.34 - 0.84
Securities Investor Protection Fund	358	29	55	162	253	857	0.13 - 0.84
Derivatives Investor Protection Fund	71	7	-	35	-	113	0.05 - 3.38
Reserve fund for clearing and settlement	2,117	3,533	39	3	10	5,702	0.13 - 1.89
	10,900	9,212	692	21,760	7,584	50,148	

Financial liabilities

Margin deposits and benefit payable	-	-	-	-	19,784	19,784	-
Trade and other payables	-	-	-	-	2,999	2,999	-
Derivative liabilities	-	-	-	-	30	30	-
Assets for clearing system protection and benefits payable	-	-	-	-	1,899	1,899	-
Contributions and benefits to Securities Investor Protection Fund	-	-	-	-	344	344	-
Contributions and benefits to Derivatives Investor Protection Fund	-	-	-	-	55	55	-
Other current liabilities	-	-	-	-	249	249	-
Lease liabilities	14	15	-	-	-	29	5.28 - 5.33
	<u>14</u>	<u>15</u>	<u>-</u>	<u>-</u>	<u>25,360</u>	<u>25,389</u>	



(Unit: Million Baht)

	Consolidated financial statement						Effective interest rate (% per annum)
	2020						
	Fixed interest rates			Floating interest rate	Non- interest bearing	Total	
	Within 1 year	1-5 years	Over 5 years				
Financial assets							
Cash and cash equivalent	-	-	-	5,913	2,101	8,014	0.05 - 1.30
Cash at banks for financial benefits payable	50	-	-	26	-	76	0.10 - 1.50
Assets for margin deposits and benefits	6,100	776	-	13,364	89	20,329	0.01 - 2.13
Other current financial assets	3,148	1,234	-	85	-	4,467	0.05 - 3.70
Trade and other receivables	61	-	-	553	633	1,247	0.05 - 0.90
Derivative assets	-	-	-	-	42	42	-
Other non-current financial assets	-	499	-	-	4,270	4,769	1.70 - 3.38
Assets for clearing system protection and benefits	197	1,495	-	506	19	2,217	0.13 - 0.45
Securities Invertors Protection Fund	366	149	25	106	195	841	0.05 - 3.38
Derivatives Investor Protection Fund	86	22	-	4	-	112	0.05 - 3.38
Reserve fund for clearing and settlement	1,239	4,550	1	3	11	5,804	0.13 - 1.92
	11,247	8,725	26	20,560	7,360	47,918	

Financial liabilities

Margin deposits and benefits payable	-	-	-	-	20,329	20,329	-
Trade and other payables	-	-	-	-	2,497	2,497	-
Assets for clearing system protection and benefits payable	-	-	-	-	2,067	2,067	-
Contributions and benefits to Securities Investor Protection Fund	-	-	-	-	338	338	-
Contributions and benefits to Derivatives Investor Protection Fund	-	-	-	-	55	55	-
Other current liabilities	-	-	-	-	169	169	-
Lease liabilities	15	12	-	-	-	27	5.35 - 5.56
	<u>15</u>	<u>12</u>	<u>-</u>	<u>-</u>	<u>25,455</u>	<u>25,482</u>	

(Unit: Million Baht)

	Separate financial statement						
	2021						
	Fixed interest rates			Floating interest rate	Non- interest bearing	Total	Effective interest rate (% per annum)
	Within 1 year	1-5 years	Over 5 years				
Financial assets							
Cash and cash equivalent	-	-	-	5,786	715	6,501	0.05 - 0.63
Other current financial assets	959	1,971	581	1	-	3,512	0.05 - 3.70
Trade and other receivables	-	-	-	-	482	482	-
Derivative assets	-	-	-	-	7	7	-
Other non-current financial assets	-	384	-	-	5,875	6,259	2.04 - 3.38
Assets for clearing system protection and benefit	-	-	-	-	151	151	-
Securities Investor Protection Fund	358	29	55	162	253	857	0.05 - 3.38
Long-term loans to a subsidiary	-	5,691	-	-	-	5,691	Note 6
	1,317	8,075	636	5,949	7,483	23,460	
Financial liabilities							
Trade and other payables	-	-	-	-	1,998	1,998	-
Derivative liabilities	-	-	-	-	30	30	-
Short-term loans from subsidiaries	1,811	-	-	-	-	1,811	0.38 - 0.99
Contributions and benefits to Securities Investor Protection Fund	-	-	-	-	344	344	-
Other current liabilities	-	-	-	-	148	148	-
Lease liabilities	14	15	-	-	-	29	5.28 - 5.33
	1,825	15	-	-	2,520	4,360	



(Unit: Million Baht)

	Separate financial statement						
	2020						
	Fixed interest rates			Floating interest rate	Non- interest bearing	Total	Effective interest rate (% per annum)
	Within 1 year	1-5 years	Over 5 years				
Financial assets							
Cash and cash equivalent	-	-	-	5,381	2,008	7,389	0.05 - 1.30
Other current financial assets	2,254	115	-	84	-	2,453	0.05 - 3.70
Trade and other receivables	-	-	-	-	662	662	-
Derivative assets	-	-	-	-	42	42	-
Other non-current financial assets	-	499	-	-	4,265	4,764	1.70 - 3.38
Assets for clearing system protection and benefit	-	-	-	-	151	151	-
Securities Invertors Protection Fund	366	149	25	106	195	841	0.05 - 0.45
Long-term loans to a subsidiary	-	5,691	-	-	-	5,691	Note 6
	2,620	6,454	25	5,571	7,323	21,993	
Financial liabilities							
Trade and other payables	-	-	-	-	1,726	1,726	-
Short-term loans from subsidiaries	2,416	-	-	-	-	2,416	Note 6
Contributions and benefits to Securities Investor Protection Fund	-	-	-	-	338	338	-
Other current liabilities	-	-	-	-	107	107	-
Lease liabilities	15	12	-	-	-	27	5.35 - 5.56
	2,431	12	-	-	2,171	4,614	

Liquidity risk

The Group has no significant exposure to liquidity risk as the Group has sufficient cash to support its operations. The Group aims on maintaining flexibility of funding by using internal capital of the Group.

The table below summarises the maturity profile of the Group's non-derivative financial liabilities and derivative financial instruments as at 31 December 2021 and 2020 based on contractual undiscounted cash flows:

(Unit: Million Baht)

	Consolidated financial statement					
	2021					
	On demand	Less than 1 year	1 to 5 years	> 5 years	No maturity	Total
Non-derivatives						
Margin deposits and benefits payable	19,784	-	-	-	-	19,784
Trade and other payables	-	2,999	-	-	-	2,999
Assets for clearing system protection and benefits payable	-	-	-	-	1,899	1,899
Contributions and benefits to Securities Investor Protection Fund	-	-	-	-	344	344
Contributions and benefits to Derivatives Investor Protection Fund	-	-	-	-	55	55
Lease liabilities	-	15	16	-	-	31
Total non-derivatives	19,784	3,014	16	-	2,297	25,111
Derivatives						
Foreign exchange forward contracts	-	30	-	-	-	30
Total derivatives	-	30	-	-	-	30



(Unit: Million Baht)

	Consolidated financial statement					
	2020					
	On demand	Less than 1 year	1 to 5 years	> 5 years	No maturity	Total
Non-derivatives						
Margin deposits and benefits payable	20,329	-	-	-	-	20,329
Trade and other payables	-	2,497	-	-	-	2,497
Assets for clearing system protection and benefits payable	-	-	-	-	2,067	2,067
Contributions and benefits to Securities Investor Protection Fund	-	-	-	-	338	338
Contributions and benefits to Derivatives Investor Protection Fund	-	-	-	-	55	55
Lease liabilities	-	15	14	-	-	29
Total non-derivatives	20,329	2,512	14	-	2,460	25,315

(Unit: Million Baht)

	Separate financial statement					
	2021					
	On demand	Less than 1 year	1 to 5 years	> 5 years	No maturity	Total
Non-derivatives						
Trade and other payables	-	1,998	-	-	-	1,998
Short-term borrowings from subsidiaries	-	1,811	-	-	-	1,811
Other current liabilities	-	43	-	-	-	43
Contributions and benefits to Securities Investor Protection Fund	-	-	-	-	344	344
Lease liabilities	-	15	16	-	-	31
Total non-derivatives	-	3,867	16	-	344	4,227
Derivatives						
Foreign exchange forward contracts	-	30	-	-	-	30
Total derivatives	-	30	-	-	-	30

(Unit: Million Baht)

	Separate financial statement					
	2020					
	On demand	Less than 1 year	1 to 5 years	> 5 years	No maturity	Total
Non-derivatives						
Trade and other payables	-	1,726	-	-	-	1,726
Short-term borrowings from subsidiaries	-	2,416	-	-	-	2,416
Contributions and benefits to Securities Investor Protection Fund	-	-	-	-	338	338
Lease liabilities	-	15	14	-	-	29
Total non-derivatives	-	4,157	14	-	338	4,509

37.3 Fair values of financial instruments

Since the majority of the Group's financial instruments are short-term in nature or carrying interest at rates close to the market interest rates, their fair value is not expected to be materially different from the amounts presented in the statement of financial position.

The carrying amount and fair value of financial assets that are not measured as at 31 December 2021 and 2020 as follows:

(Unit: Million Baht)

	Consolidated financial statements			
	2021		2020	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Financial assets				
Investments measured at amortised cost				
Government bond and debenture	3,908	3,878	5,299	5,281
Fixed deposit	4,300	4,332	5,621	5,683

(Unit: Million Baht)

	Separate financial statements			
	2021		2020	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Financial assets				
Investments measured at amortised cost				
Government bond and debenture	950	916	1,534	1,504
Fixed deposit	698	717	1,016	1,046



The methods and assumptions used by the Group estimating the fair value of financial instruments are as follows:

- a) Financial assets and liabilities which have short-term maturities including cash and cash equivalents, cash at banks for financial benefits payable, cash at banks as shown in assets for margin deposits and benefits, assets for clearing system protection and benefits and reserve fund for clearing and settlement, cash at banks and other current financial assets as shown in securities investor protection fund, derivatives investor protection fund, trade and other receivables, other current financial assets, trade and other payables and margin deposits and benefits payable are presented at their approximate fair value based on the carrying amounts in the statement of financial position.
- b) Debt instruments as shown in other current financial assets, other non-current financial assets, assets for margin deposits and benefits, assets for clearing system protection and benefits, securities investor protection fund, derivatives investor protection fund and reserve fund for clearing and settlement are presented at fair value or calculated by using the rate of return announced by Thai Bond Market Association or other markets.
- c) Equity investments presented under other current financial assets, other non-current financial assets, assets for margin deposits and benefits, assets for clearing system protection and benefits, securities investor protection fund, derivatives investor protection fund and reserve fund for clearing and settlement are presented at fair value or referred generally accepted valuation model in case no market value is available.
- d) Derivatives are presented at fair value calculated by discounted cash flow and of valuation models. Value estimations use data that is observable in related markets such as spot rate, foreign currency forward rate, yield curve of interest rate. The Group considers the effect of credit risk of the counterparty on the estimation of fair value of derivatives.
- e) Contributions and benefits to securities investor protection fund are presented at fair value based on the estimated value close to the carrying amounts in the statement of financial position.
- f) Contributions and benefits to derivatives investor protection fund are presented at fair value based on the estimated value close to the carrying amounts in the statement of financial position.

During the current year, there were no transfers within the fair value hierarchy.



38. Capital management

The primary objective of the Group's capital management is to ensure that it has appropriate capital structure in order to support its business and maximise fund value. As at 31 December 2021, the Group's debt-to-fund ratio was 0.94:1 (2020: 0.96:1) and SET's was 0.25:1 (2020: 0.24:1).

39. Reclassification

The reclassifications from statements of financial position as at 31 December 2020 to be comparable to the presentation of the current period. The reclassification are as follows:

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	As reclassified	As previously reported	As reclassified	As previously reported
Derivative assets	42,140	-	42,140	-
Other current assets	330,505	372,645	296,804	338,944

The reclassifications had no effect to previously reported revenues over (under) expenses for the year or fund balances.

40. Approval of financial statements

These financial statements were authorised for issue by the Stock Exchange's Board of Governors on 23 February 2022.







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