



To Make
the Capital Market
"Work" for Everyone

Vision

The Capital Market is an integral tool for economic growth, and should not be privileged to only some.

Hence we work hard to ensure the capital market benefits all stakeholders both directly and indirectly.

We believe that good business growth will lead to national strength and this in turn leads to the betterment of society.

This is what we envision and are committed to.

To Make the Capital Market
“**Work**” for Everyone

MISSION



To “plant” state-of-the-art financial **Platform Development** that is both innovative and accessible to our customers locally, regionally, and globally



To innovatively “grow” **Product Development** that is not only caters to market needs but also resonates the sustainable growth



To “foster” **People Development** to ensure that our people will be best equipped with effective and proactive working spirit with synergy, while embracing professional integrity



To “implant” an **Inclusive Growth Approach** that will enable us to perform as the best business partners and social supporters



To continuously “cultivate” ourselves and our stakeholders by investing in **Knowledge Management** creating, sharing and generating knowledge as part of an intangible asset

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“ To grow continuously and sustainably, our organization is ready for changes while **growing together with all sectors of the society** ”

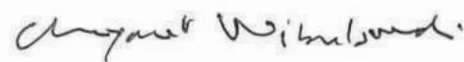
Message from the Chairman

In line with The Stock Exchange of Thailand (SET)'s vision **“To Make the Capital Market ‘Work’ for Everyone”**, the Board of Governors, management and employees are committed to the principles to develop the Thai capital market that will benefit the economy, the society, and the country.

In order to promote the sustainable growth for the enterprises, it is necessary to have two important elements: Firstly, readiness to adapt itself to accommodate changes. Today's interconnected global economy and social situations affected each other. Business environment has been changed and state-of-the-art technology has evolved and changed the world to be much more different from the world in the past. Bracing for innovation will be an immunity for an organization to get through the transition period. SET has instilled the culture of creating innovations, starting from the launch of internal innovations competition and then extending to the capital market as a whole by creating the Capital Market Innovation Awards. This stage is to showcase innovative products, services and business models which leading to the overall capital market development. Another initiative is the Chief Transformation Officer training program for C-level executives who will intensively steer their organizations towards changes.

Secondly, embracing all stakeholders to grow together. SET has prioritized sustainability framework, consisting of environment, social and governance (ESG), taken into account to promote inclusive growth in a balanced manner. Significantly, SET has integrated experiences and expertises to create synergy and benefits at a wider scale by enhancing knowledge to equip the Thai people from all walks of life with basic financial skills. It has also reinforced the potential of numerous small businesses including startups, small and medium-sized enterprises or SMEs, and social enterprises nationwide for quality and well-managed systematically. These entrepreneurs will become key mechanism of the country's economic system.

On behalf of SET, I would like to express gratitude to state agencies, private sectors, listed companies, SET members and market participants from all organizations, as well as the social sector, investors, together with SET's management and employees for their efforts to drive the Thai capital market development. We are determined to develop the Thai capital market that will drive the Thai economy and society in a sustainable manner.



Dr. Chaiyawat Wibulswasdi
Chairman

“45 years
of strength
poised to grow
together for the
betterment of
everyone”



Message from the President

The year 2020 marks the 45th anniversary of The Stock Exchange of Thailand (SET). We have committed to an important mission of promoting the capital market, the society, and the country towards sustainable growth.

In 2019, the Thai capital market encountered a series of global headwinds that affected the economy and industry. However, with the solid foundation and infrastructure in the market, we managed to adapt and capitalize these challenges to utmost advantages. SET has been committed to fostering growth among all stakeholder groups, prioritizing the development of core products, services and instruments for fundraising and investment to respond to the demand of each customer group.

Significantly, SET's core business in fundraising has been even more active while more Thai listed firms have gained international recognition based on their performance and quality. Listed companies capitalized on SET and Market for Alternative Investment (mai) for business expansion and value creation, mobilizing fund over THB 400 billion (approximately USD 12.5 billion) in 2019. Currently, 40 Thai listed firms were included as constituents on MSCI indices, and 20 as constituents on the Dow Jones Sustainability Indices (DJSI), the highest number in ASEAN. In addition, seven of them were ranked the world's top-scoring in each of their industry group.

As technology has further transformed investment landscape and changed the context of competition, we have taken advantage of creating opportunities in new businesses for the capital market industries and business sectors via infrastructure by extending our proprietary "FundConnex" to facilitate cross-border mutual fund investment. In addition, SET has enhanced the linkage between financial intermediaries and related parties on digital platforms for extensive business and investor base expansion. It is evident that investors have been utilizing digital technology that enables them to make investment transactions with convenience, confidence and security.

The synergy of our management and employees, together with business partners, has led the Thai capital market to be at the forefront of the region. As a result, SET in 2020 prioritizes to promote inclusive growth of the capital market, society, and nation in a balanced manner with quality and sustainability in the long run under three key strategies: first, to grow with efficiency; second, to grow with new opportunities; and finally to grow with stakeholders & sustainable society.



Dr. Pakorn Peetathawatchai
President

Board of Governors



1. Dr. Chaiyawat Wibulwasdi
Chairman

2. Pattera Dilokrunghthirapop
Vice Chairman

3. Charamporn Jotikasthira
Governor

4. Professor Kitipong Uraepatanapong
Governor

5. Paiboon Nalinthrangkurn
Governor

6. Thiti Tantikulanana
Governor





7. Norachet Sangruji
Governor

8. Dr. Seree Nonthasoot
Governor

9. Sopawadee Lertmanaschai
Governor

10. Voravan Tarapoom
Governor

11. Dr. Pakorn Peetathawatchai
President



As of January 1, 2020

Board of Governors

Dr. Chaipayat Wibulswasdi Chairman

Education

- Ph.D., Massachusetts Institute of Technology, USA
- B.A., Williams College, USA

Executive Education

- National Defence Course for the Joint State Private Sector, The National Defence College of Thailand
- Certificates: 1. Director Certification Program; and 2. Director Accreditation Program, Thai Institute of Directors Association
- Certificate, Capital Market Academy Leadership Program, The Stock Exchange of Thailand

Other current positions

- | | |
|------------|--|
| Since 2019 | Chairman, Capital Market Development Fund Committee |
| Since 2019 | Advisor, Charoen Pokphand Foods Public Company Limited |
| Since 2015 | Chairman, Thailand Futures Exchange Public Company Limited |

Past experience

- | | |
|-----------|---|
| 2016–2019 | Independent Director and Chairman of The Audit Committee, Charoen Pokphand Foods Public Company Limited |
| 2013–2015 | Chairman, Executive Board, Corporate Social Responsibility Institute (CSRI) |
| 2007–2008 | Vice Chairman, The Securities and Exchange Commission, Thailand |
| 2004–2010 | Chairman of the Board of Executive Directors, Krung Thai Bank Public Company Limited |
| 2001–2006 | Advisor to Deputy Prime Minister and Minister of Finance |
| 1997–1998 | Governor, Bank of Thailand (Worked at Bank of Thailand for 25 years.) |
| 1996 | Deputy Finance Minister and Acting Finance Minister |

Pattera Dilokrunthirapop Vice Chairman

Education

- Master Degree of Engineering Science, University of Queensland, Brisbane, Australia
- Bachelor Degree of Engineering, Monash University, Melbourne, Australia

Executive Education

- Certificates: 1. Director Certification Program; 2. Director Accreditation Program; 3. Role of The Chairman Program; 4. Role of the Compensation Committee; and 5. 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

- | | |
|------------|---|
| Since 2019 | Chairman, Risk Management Committee, The Stock Exchange of Thailand |
| Since 2019 | Chairperson of Advisory Committee, Association of Thai Securities Companies (ASCO) |
| Since 2018 | Subcommittee of Digital Strategy for Capital Market of The Securities and Exchange Commission |
| Since 2017 | Director, The Thai Bond Market Association |
| Since 2015 | Director, TSFC Securities Public Company Limited |
| Since 2010 | Director, Thailand Futures Exchange Public Company Limited |
| Since 2001 | Chief Executive Officer, DBS Vickers Securities (Thailand) Co., Ltd. |

Past experience

- | | |
|-----------|--|
| 2010–2019 | Chairperson, Association of Thai Securities Companies (ASCO) |
| 2010–2019 | Vice Chairman, Federation of Thailand Capital Market |
| 2013–2015 | Director, TRIS Rating Co., Ltd. and TRIS Corporation Limited |
| 2014–2015 | Chairman, Corporate Governance and Social Responsibilities Committee, The Stock Exchange of Thailand |
| 2014–2015 | Chairman, Nomination and Remuneration Committee, The Stock Exchange of Thailand |
| 2011–2015 | Vice Chairman, The Stock Exchange of Thailand |

Charamporn Jotikasthira Governor

Education

- MBA, Harvard University, USA
- BS (Electrical Engineering and Computer Science), Massachusetts Institute of Technology, USA

Executive Education

- National Defence Course for the Joint State Private Sector, The National Defence College of Thailand
- Certificate, The Executive Program of Energy Literacy for a Sustainable Future, Thailand Energy Academy
- Certificate, Director Certification Program, Thai Institute of Directors Association
- Certificate, Capital Market Academy Leadership Program, The Stock Exchange of Thailand

Other current positions

- | | |
|------------|--|
| Since 2019 | Chairman, Information Technology Committee, The Stock Exchange of Thailand |
| Since 2019 | Advisor, Thai Group Holdings Public Company Limited |
| Since 2017 | Executive Director, Bangkok Bank Public Company Limited |
| Since 2017 | Independent Director, Minor International Public Company Limited |
| Since 2017 | Independent Director, Singha Estate Public Company Limited |
| Since 2017 | Member of the Chulabhorn Royal Academy Council |
| Since 2017 | Director, The Thai Silk Company (Jim Thompson) |
| Since 2017 | Director, Thai Institute of Directors Association |

Past experience

- | | |
|-----------|--|
| 2014–2018 | President, Thai Airways International Public Company Limited |
| 2011–2014 | Chairman, Electronic Transactions Development Agency (Public Organization) |
| 2011–2014 | The Financial Institutions Policy Committee (FIPC), Bank of Thailand |
| 2010–2014 | President, The Stock Exchange of Thailand |
| 2008–2010 | Chief Information Officer, Siam Commercial Bank Public Company Limited |

Professor Kitipong Uraepeatanapong Governor

Education

- LLM, University of British Columbia, Canada
- LLM, Chulalongkorn University
- LLB, Chulalongkorn University
- Barrister-At-Law, The Thai Bar Under the Royal Patronage

Executive Education

- Certificate, Completion on Company Directors, Australian Institute of Company Directors
- Diploma for Executives Program, King Prajadhipok's Institute
- Certificate for Senior Executives, The Judicial Training Institute
- National Defence Course for the Joint State Private Sector, The National Defence College of Thailand
- Certificate, The Role of The Chairman Program, Thai Institute of Directors Association
- Certificate, Capital Market Academy Leadership Program, The Stock Exchange of Thailand

Other current positions

Since 2019	Steering Committee, Office of the National Higher Education, Science, Research and Innovation Policy Council
Since 2019	Member, Independent Director and Member of the Governance and Nomination Committee, SCG Packaging Co., Ltd.
Since 2019	Independent Director, Prukso Holding Public Company Limited
Since 2019	Member, Legal Committee, The Stock Exchange of Thailand
Since 2018	Chairman, Disciplinary Committee, The Stock Exchange of Thailand
Since 2011	Professor, The Faculty of Law, Chulalongkorn University
Since 2011	Chairman, Tax and Regulation Committee and Director, The Thai Chamber of Commerce
Since 2001	Executive Director, Siam Piwat Co., Ltd. Since 1990 Chairman, Baker & McKenzie Ltd.

Past experience

2016–2018	Chairman, Legal Committee, The Stock Exchange of Thailand
2014–2015	Member, SET Head Office Construction Committee, The Stock Exchange of Thailand
2014–2015	Member, Listing Expansion Committee, The Stock Exchange of Thailand
2014–2015	Executive Member, The National Reform Council

Norachet Sangruji Governor

Education

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

Executive Education

- Certificates: 1. Directors Accreditation Program; and 2. 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

Since 2019	Member, Audit Committee, The Stock Exchange of Thailand
Since 2019	Member, Risk Management Committee, The Stock Exchange of Thailand
Since 2019	Member, Nomination and Remuneration Committee, The Stock Exchange of Thailand
Since 2018	Chairman of the Advisory Board, Association of Securities Companies/ Investment Banking Club
Since 2018	Director, ASCO Business Promotion Company Limited
Since 2017	Audit Committee, Phatra Securities Public Company Limited
Since 2017	Director, Association of Thai Securities Companies
Since 2017	Director, Noppakit Company Limited
Since 2013	Director, Phatra Capital Public Company Limited
Since 2004	Director, Phatra Securities Public Company Limited
Since 2005	Advisor to Management Committee, Mitr Technical Consultant Company Limited
Since 2000	Director, Pantavanij Company Limited
Since 1990	Director, Kasetin Company Limited

Past experience

2018–2019	Member, Corporate Governance and Social Responsibilities Committee, The Stock Exchange of Thailand
2015–2018	First Executive Vice President and Head of Corporate Banking Group, Kiatnakin Bank Public Company Limited
2009–2018	Chairman of Investment Banking Club, Association of Securities Companies/ Investment Banking Club
2007–2012	Executive Director, Phatra Securities Public Company Limited
2005–2007	Managing Director/ Head of Investment Banking, Phatra Securities Public Company Limited
2004–2005	Managing Director, Phatra Securities Public Company Limited

Paiboon Nalinthrangkurn Governor

Education

- MBA (Finance), Indiana University at Bloomington, USA
- BA (Computer and Information Sciences), University of California at Santa Cruz, USA

Executive Education

- Certificate, Chartered Financial Analyst, CFA Institute, USA
- Certificate, Capital Market Academy Leadership Program, The Stock Exchange of Thailand

Other current positions

Since 2019	Director, Capital Market Development Fund Committee
Since 2019	Honorary Advisor to the Senate Committee on the Economy
Since 2018	Chairman, Federation of Thai Capital Market Organizations
Since 2018	Director, Thai Capital Market Development Committee
Since 2009	Chairman, Investment Analysts Association
Since 2008	Chief Executive Officer, TISCO Securities Co., Ltd.

Past experience

2016–2017	Honorary Advisor to the National Reform Steering Assembly Committee on the Economy
2014–2015	Chairman, the Sub-committee on Capital Market Reforms, the National Reform Council
2014–2015	Member, the National Reform Council
2012–2014	Director, Thai Capital Market Development Committee
2011–2014	Member, Joint Public and Private Sector Consultative Committee
2010–2014	Chairman, Federation of Thai Capital Market Organizations

Dr. Seree Nonthasoot

Governor

Education

- Doctor of Philosophy, University Of Oxford, England, United Kingdom
- Master of Philosophy, University of Oxford, England, United Kingdom
- Magister Juris (European And Comparative Law), University of Oxford (Chevening Scholarship)
- LL.M. (International Law), Columbia University School of Law, (Fulbright Scholarship)
- Barrister-At-Law, The Thai Bar Under the Royal Patronage
- LL.B., Thammasat University, Bangkok, Thailand

Executive Education

- Certificate Program in Good Governance for Medical Executives, King Prajadhipok Institute
- Ministry of Foreign Affairs, Civil Servant Commission, Sasin School of Management
- Certificate, Directors Certification Program and Advanced Audit Committee Program (Thai Institute of Directors Association)
- Certificates: 1. Infrastructure in a Market Economy: Public-Private Partnerships in a Changing World; and 2. The Practice of Trade Policy: Economics, Negotiations, and Rules, Harvard Kennedy School of Government, Cambridge, Massachusetts, USA
- Asia-Europe Programme, Institut D'etudes Politiques (Sciences Po)
- Certificates: 1. Capital Market Academy Executive Education; and 2. Capital Market Academy Leadership Program, The Stock Exchange of Thailand

Other current positions

Since 2019	Chairman, Legal Committee, The Stock Exchange of Thailand
Since 2019	Member, Disciplinary Committee, The Stock Exchange of Thailand
Since 2018	Director and Chair of the Audit Committee, Thailand Post Co., Ltd.
Since 2018	Board Member and Chair of the Corporate Governance Committee, Government Pension Fund
Since 2016	Member, Law Reform Committee (set up by the Prime Minister)
Since 2015	Director and Chair of the Audit Committee, Small and Medium Enterprise Development Bank of Thailand (SME Development Bank)
Since 2012	Senior Executive Vice President, Institute of Research and Development for Public Enterprises

Past experience

2018-2019	Chairman, Securities Investor Protection Fund Committee, The Stock Exchange of Thailand
2012-2018	Director and Chair of the Audit Committee, KTB Law Co., Ltd.
2015-2018	Director, KTB Computer Services Co., Ltd.
2013-2018	The Representative of Thailand to the ASEAN Intergovernmental Commission on Human Rights (AICHR)
2012-2014	Director, General Hospital Products Public Company Limited (GHP)
2003-2012	Legal Counsel, State Enterprise Policy Office, Ministry of Finance (Drafted the bills on public, private partnerships and state enterprise reform.)
1995-2000	Legal Advisor, Office of the Council of State, Office of the Prime Minister

Sopawadee Lertmanaschai

Governor

Education

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

Executive Education

- The Wharton Advanced Management Program, University of Pennsylvania, USA
- Certificates: 1. Director Certification Program; 2. Audit Committee Program; and 3. Successful Formulation & 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

Since 2019	Independent Director, Dohome Public Company Limited
Since 2018	Independent Director and Chairman of The Audit Committee, Central Plaza Hotel Public Company Limited
Since 2018	Chairman and Independent Director, Ktbst Reit Management Co., Ltd.
Since 2015	Independent Director and Chairman of The Audit Committee, Maybank Kim Eng Securities (Thailand) Public Company Limited
Since 2014	Independent Director and Member of The Audit Committee, Intouch Holdings Public Company Limited
Since 2014	Advisor to Chairman of the Board of Directors and Member of the Investment Committee, Dhipaya Insurance Public Company Limited

Past experience

2015-2017	Director, Eco Energy Group Corporation Co., Ltd.
2014-2018	Director, Government Pharmaceutical Organization
2013-2016	Discipline Committee, The Securities and Exchange Commission, Thailand
2010-2013	Secretary General, Government Pension Fund
2010-2013	Director, IRPC Public Company Limited
2010-2013	Director, Nok Airlines Public Company Limited

Thiti Tantikulanan

Governor

Education

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

Executive Education

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

Other current positions

Since 2019	Member, Risk Management Committee, The Stock Exchange of Thailand
Since 2019	Member, Information Technology Committee, The Stock Exchange of Thailand
Since 2019	Member, Legal Committee, The Stock Exchange of Thailand
Since 2019	Director, TRIS Corporation Limited
Since 2019	Director, Association of Thai Securities Companies
Since 2013	Executive Chairman, Kasikorn Securities Public Company Limited
Since 2008	Capital Markets Business Division Head, Kasikornbank Public Company Limited

Past experience

2012-Apr 2019	Director and Member of The Audit Committee, The Thai Bond Market Association
2009-2011	President, ACI Thailand
2006-2008	Capital Markets Business Head, Kasikornbank Public Company Limited
2003-2006	Vice President and Head of Trading, HSBC, Bangkok
2000-2003	Vice President and Head of Trading, JP Morgan, Bangkok
1994-2000	Vice President and Head of FX Trading, Citibank, Bangkok
1993-1994	Trader, Standard Chartered Bank, Bangkok

Voravan Tarapoom

Governor

Education

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

Executive Education

- Certificates: 1. Corporate Governance for Capital Market Intermediaries; 2. Role of the Compensation Committee; 3. Director Certification Program; 4. Audit Committee Program; 5. Role of the Chairman Program; and 6. Risk Management Committee Program, Thai Institute of Directors Association
- Certificate, Capital Market Academy Leadership Program, The Stock Exchange of Thailand

Other current positions

Jan 2020	Honorary Advisor, Thai Financial Markets Committee, Bank of Thailand
Since October 2019	Member, The best practice for environmental, social and corporate governance working group, Thai Institute of Directors Association
Since 2019	Member, Sustainable Finance Working Group, The Securities and Exchange Commission, Thailand
Since 2019	Vice Chairman, An Nimmanahaeminda Foundation
Since 2019	Chairman, Nomination and Remuneration Committee, The Stock Exchange of Thailand
Since 2019	Chairman, Corporate Governance and Social Responsibilities Committee, The Stock Exchange of Thailand
Since 2018	Honorary Chairman, Association of Investment Management Companies
Since 2017	Chairman of Executive Board and Director, BBL Asset Management Co., Ltd.
Since 2014	Member, Disciplinary of Personnel in Capital Market Industry Committee, The Securities and Exchange Commission, Thailand
Since 2013	Director, Bangkok Mass Transit System Public Company Limited

Past experience

2018	Chairman, Risk Management Committee, The Stock Exchange of Thailand
2014–2018	Chairman, Federation of Thai Capital Market Organizations
2010–2016	Chief Executive Officer, BBL Asset Management Co., Ltd.
2002–2009	Managing Director, BBL Asset Management Co., Ltd.
2000–2002	Deputy Managing Director, MFC Asset Management Public Company Limited
1995–1999	Managing Director, Thai Asia Asset Management Co., Ltd. (currently UOB Asset Management Co., Ltd.)
1992–1994	Senior Vice President, Thana One Finance & Securities Co., Ltd.
1985–1992	Vice President, Bank of Asia Public Company Limited
1982–1985	Account Executive, Datamat Co., Ltd.

Dr. Pakorn Peetathawatchai

President

Education

- Doctoral 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 Education

- Columbia Senior Executive Program, Columbia University, USA
- Certificate, Director Certification Program, 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

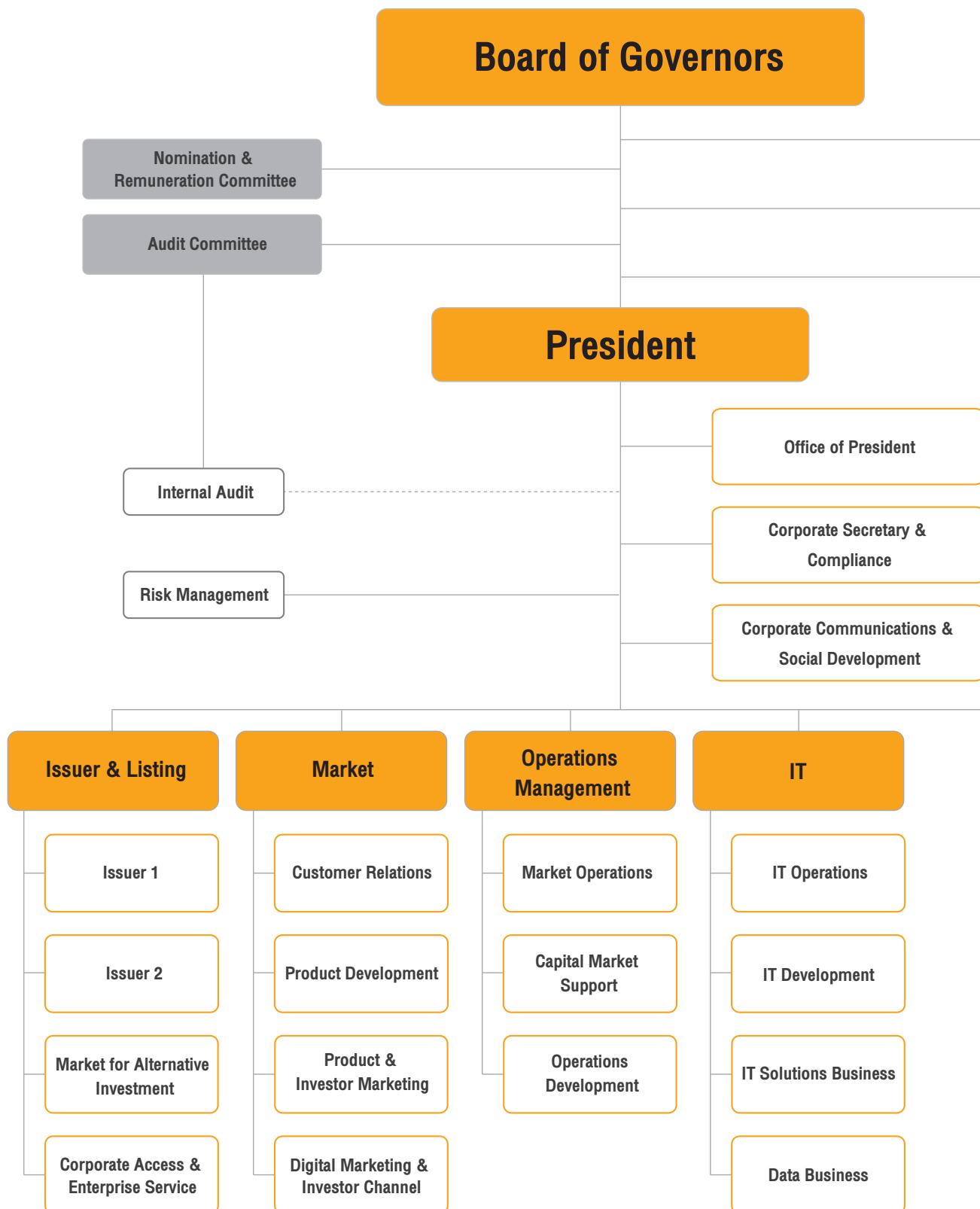
Other current positions

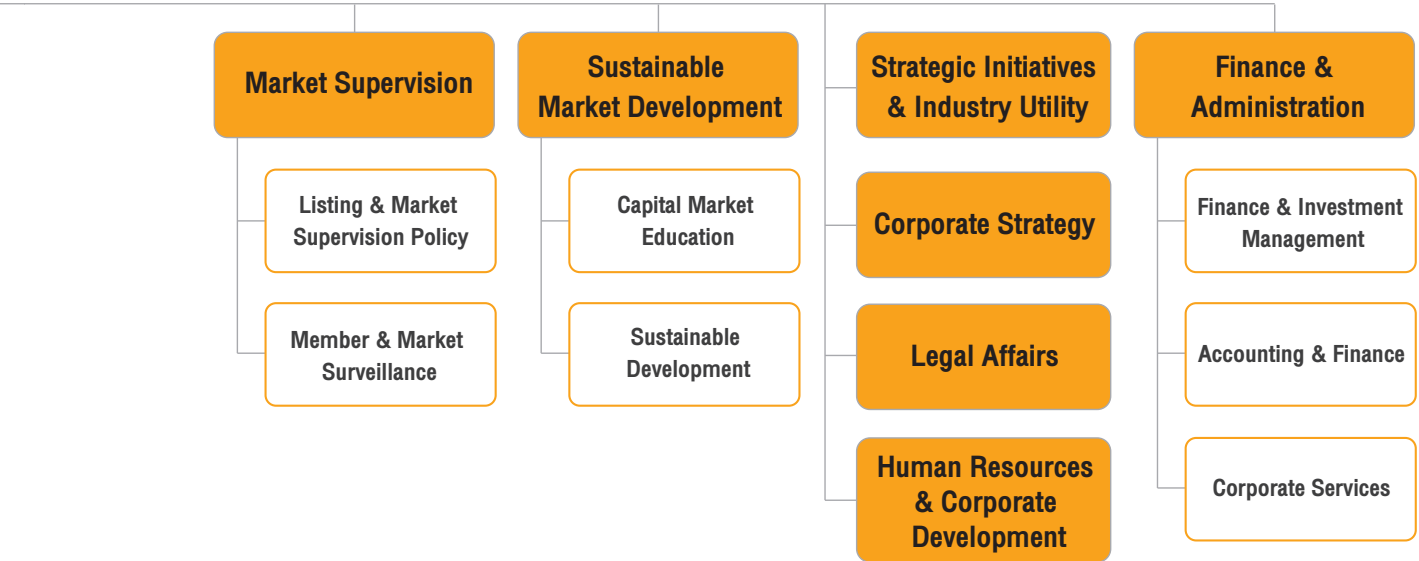
Since 2019	Director, Capital Market Development Fund
Since 2018	Member and Secretariat, Capital Market Development Committee
Since 2018	Vice Chairman, Thailand Futures Exchange Public Company Limited
Since 2018	Chairman, Thailand Clearing House Co., Ltd.
Since 2018	Chairman, Thailand Securities Depository Co., Ltd.
Since 2018	Chairman, Settrade.com Co., Ltd.
Since 2018	Chairman, Thai NVDR Co., Ltd.
Since 2018	Chairman, FinNet Innovation Network Co., Ltd.
Since 2018	Chairman, LiVE Fin Corp Co., Ltd.

Past experience

May 2018–Oct 2019	Vice-Chairman of the Emerging Markets Working Group and Director of World of Federation of Exchanges (WFE)
2013–2017	Senior Executive Vice President, Head of Corporate Strategy Division and Head of Finance & Investment Division, The Stock Exchange of Thailand
2010–2012	Senior Executive Vice President, Chief Marketing Officer, The Stock Exchange of Thailand
2010	Senior Executive Vice President, Finance, Mitr Phol Sugar Corporation Limited
2006–2009	Executive Vice President, Group Head, Treasury Group, Siam Commercial Bank Public Company Limited
2005–2009	Director and Chairman of the Investment Committee, Siam Commercial New York Life Insurance Public Company Limited

Organization Structure





SET Executives



Thirapun Sanpakit
Senior Executive
Vice President
Head of Information
Technology Division

Dr. Soraphol Tulayasathien
Senior Executive
Vice President
Head of Corporate
Strategy Division

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

Aphisak Kiewkarnkha
Senior Executive
Vice President
Head of Finance &
Administration Division



Dr. Pakorn Peetathawatchai
President

Manpong Senanarong
Senior Executive
Vice President
Head of Issuer &
Listing Division

Dr. Krisada Sektrakul
Senior Executive
Vice President
Head of Sustainable
Market Development
Division

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

SET Executives



1 Duangrat Samudavanija
Executive Vice President
Head of Listing & Market
Supervision Policy Group

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

3 Kitti Sutthiatthasil
Executive Vice President
Head of Office of President
and Managing Director - Finnet
Innovation Network Co., Ltd

4 Nat Luengnaruemitchai
Executive Vice President
Head of IT Operations Group

5 Pannavadee Ladavalya Na Ayudhya
Executive Vice President
Head of Capital Market Education Group

6 Paveena Sriphothong
Executive Vice President
Head of Market Supervision Division

7 Paythai Petcharat
Executive Vice President
Head of Capital Market Support Group





8 Amnouy Jiramahapoka
Executive Vice President
Head of Issuer Group 1

9 Noppakao Sucharitakul
Executive Vice President
Head of Corporate Communications &
Social Development Group

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

11 Prapan Charoenprawatt
Executive Vice President
and President - Market for Alternative
Investment (mai)

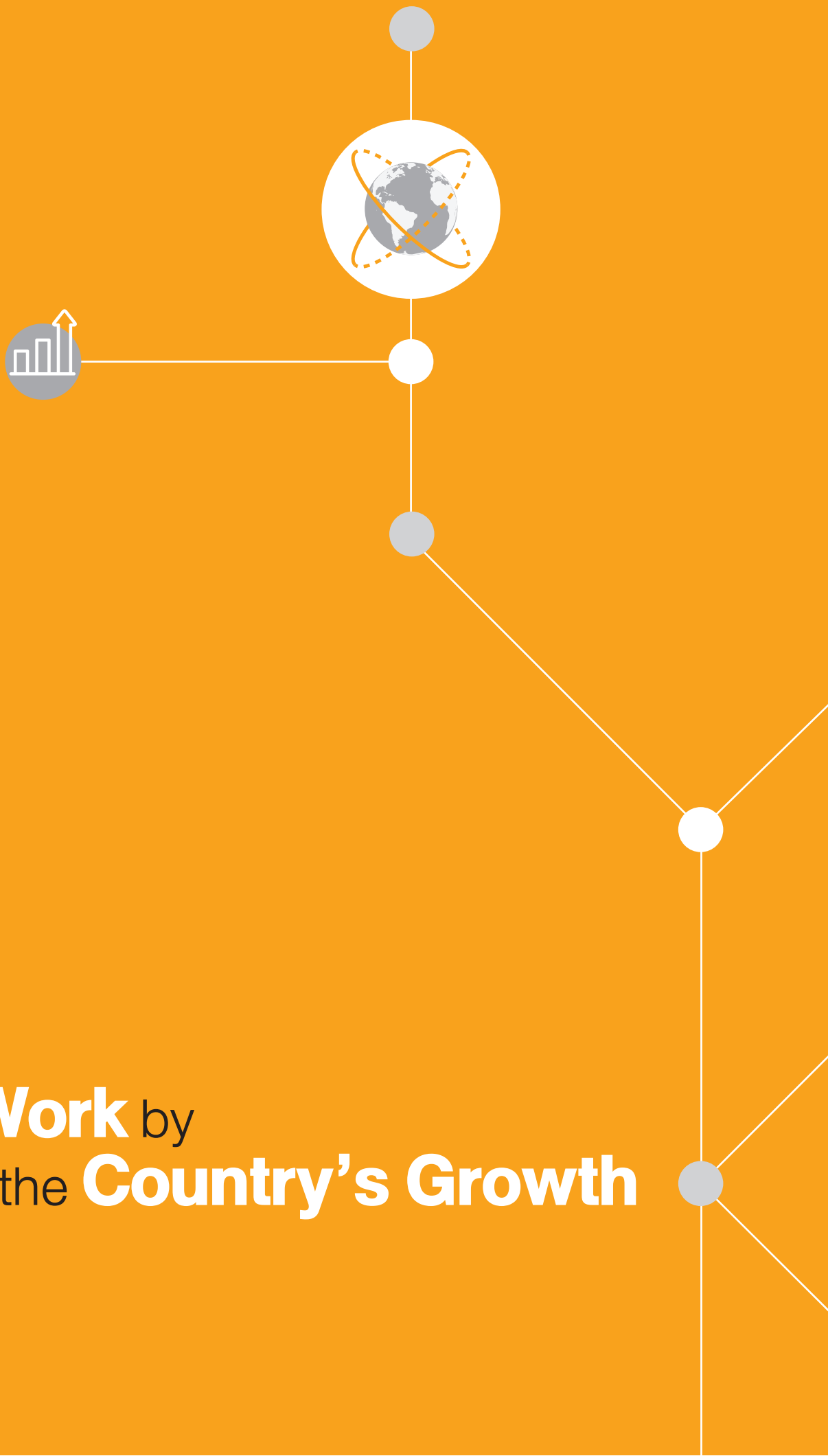
12 Rongrak Phanapavudhikul
Executive Vice President
Head of Legal Affairs Division
and Head of Corporate Secretary &
Compliance Group

13 Rungtip Charoenvisuthiwong
Executive Vice President
Head of Issuer Group 2

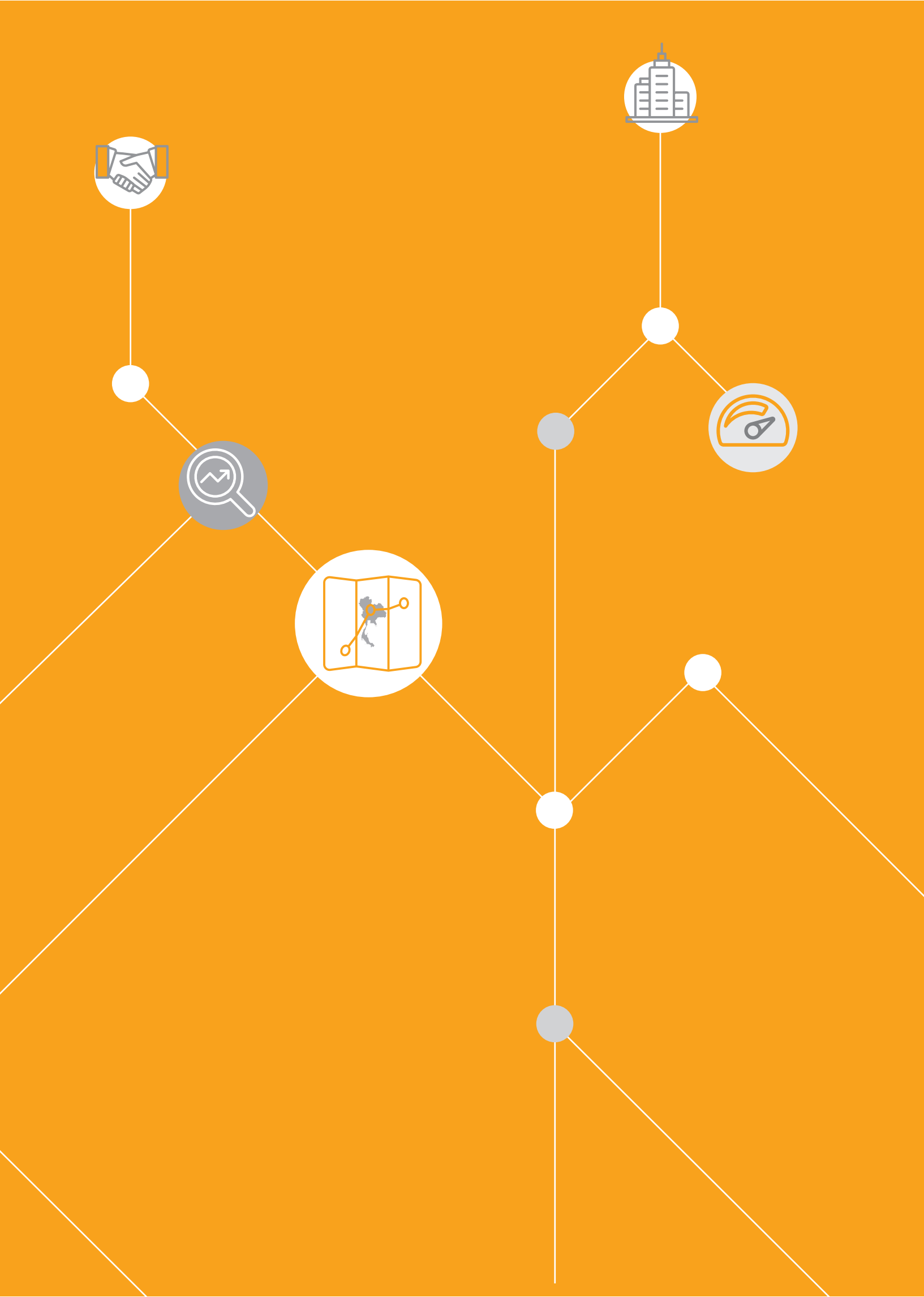
14 Yupawan Sirichainarumit
Executive Vice President
Head of Market Operations Group
and Managing Director - Thailand
Securities Depository Co., Ltd.



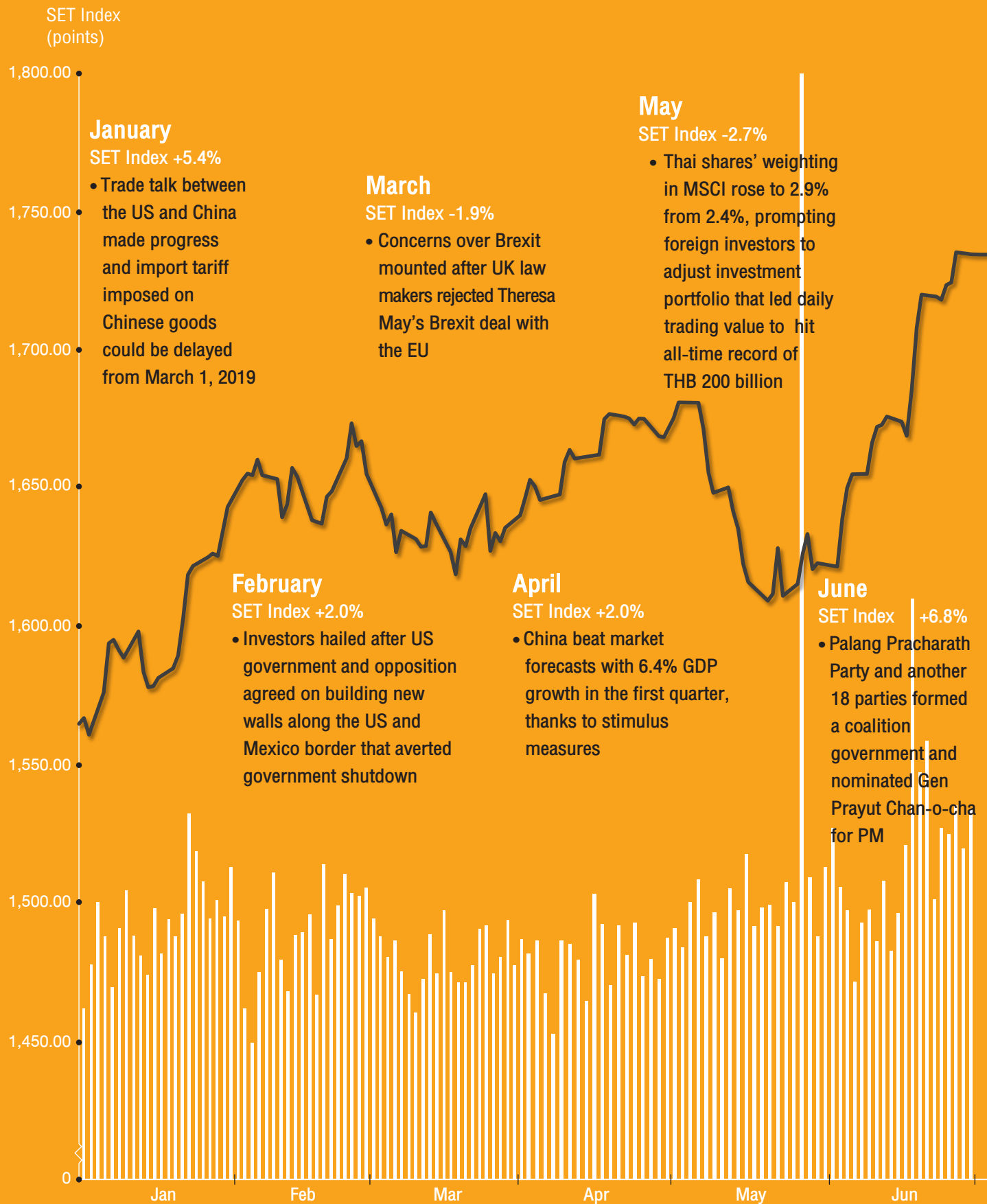
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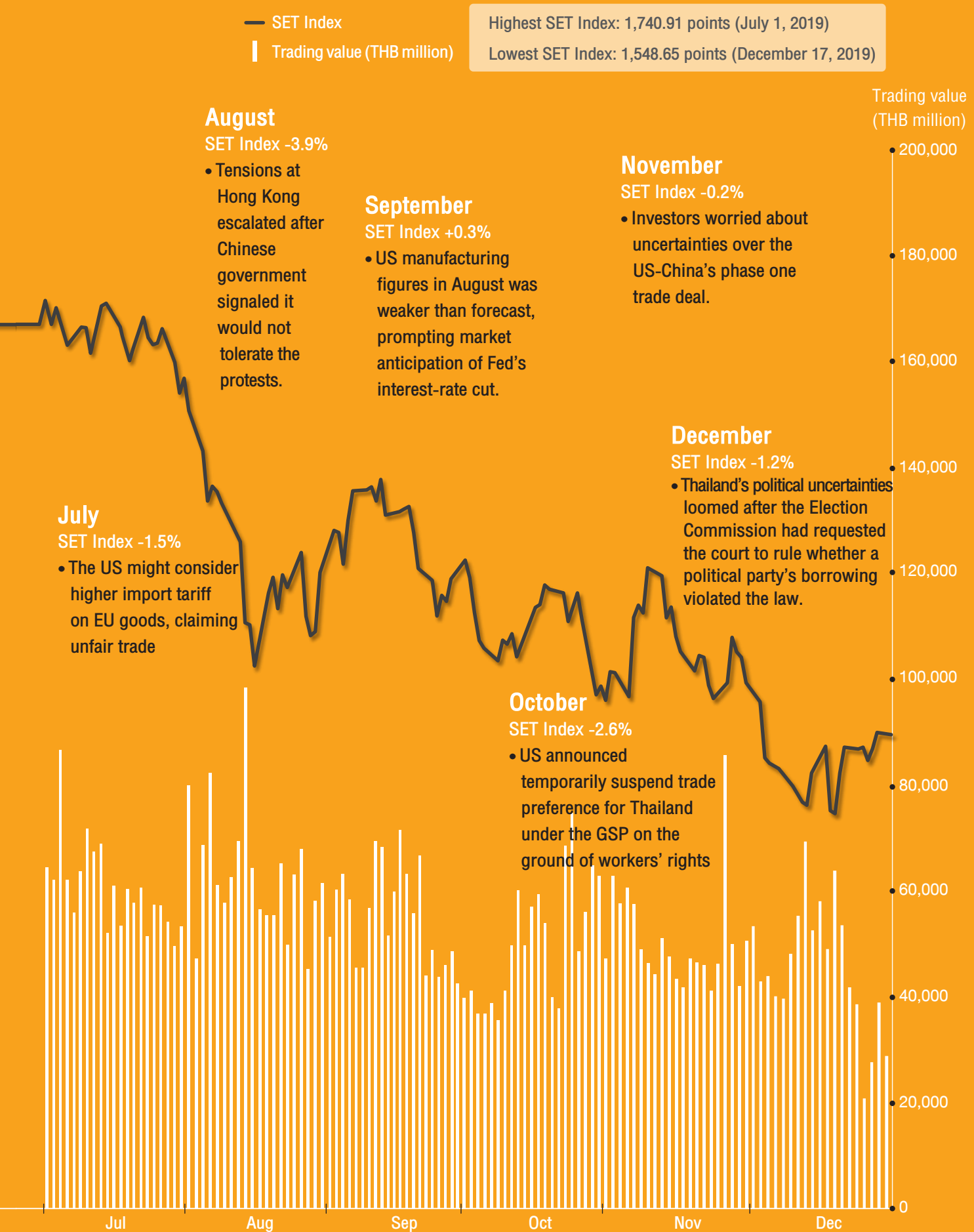


Make it **Work** by
Enabling the **Country's Growth**



SET Market Movement 2019





SET Group Financial Highlights

(In Million Baht)

	2019	2018	2017	2016	2015
Consolidated statements of revenues and expenses					
Total revenues	7,286	6,578	6,331	6,047	5,215
Operating revenues	5,884	5,722	5,007	5,099	4,518
Investment income, net	948	586	1,045	767	492
Other income ¹	454	270	280	181	205
Operating expenses	4,217	3,978	3,818	3,694	3,335
Revenues over expenses from operation	3,114	2,609	2,548	2,379	1,912
Transfer money to the Capital Market Development Fund	5,700	-	-	-	-
Revenues over (under) expenses, net	(2,599)	1,955	1,833	1,759	1,382
Consolidated statements of cash flows					
Net cash provided by (used in) operating activities	(2,681)	2,212	763	1,217	636
Net cash provided by (used in) investing activities	3,908	(2,353)	(217)	(2,157)	(332)
Consolidated statements of financial position					
Total current assets ²	21,919	25,251	22,265	21,709	17,324
Long-term investments	7,904	8,838	8,478	8,312	9,263
Total assets	44,994	48,771	45,196	39,539	36,136
Total current liabilities ²	15,492	17,451	15,215	11,947	10,759
Total liabilities	18,576	20,106	17,821	14,141	12,747
Fund balances	26,418	28,665	27,375	25,398	23,389
Assets/payables of margin deposits and benefits ²	13,385	15,510	13,398	10,160	8,830
Key financial ratios					
Total revenues growth (%)	10.76	3.90	4.70	15.95	(0.42)
Operating revenues growth (%)	2.83	14.28	(1.80)	12.86	7.55
Operating expenses to operating revenues ratio (%)	71.67	69.52	76.25	72.45	73.82
Net profit margin ³ (%)	(35.67)	29.72	28.95	29.09	26.50
Return on fund balance (%)	(9.84)	6.82	6.70	6.93	5.91
Current ratio (Times)	1.41	1.45	1.46	1.82	1.61
Debt to fund ratio (Times)	0.70	0.70	0.65	0.56	0.54

In 2019, the SET group had total revenues of THB 7,286 million, an increase of 11% from the previous year. The operating revenues increased by THB 162 million, resulting from an increase in a number of new listed companies and new securities. Other income increased by THB 184 million from the compensation from insurance companies regarding the fire damage at the previous office building of the Stock Exchange of Thailand (SET). Investment income increased by THB 362 million due to the realization of gains from sales and mark-to-market value of investments. Operating expenses of THB 4,217 million increased by 6% from the previous year due to the increase in employee benefit expenses according to the new Labor Act. As a result, in 2019, the SET Group had total revenues over operating expenses of THB 3,114 million.

However, in 2019, the Securities and Exchange Act (No. 6) was enacted requiring the SET transfer money to the Capital Market Development Fund (CMDF) in the amount of THB 5,700 million, which was an extra item in 2019, causing the SET group had expenses over revenues, net of THB 2,599 million.

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

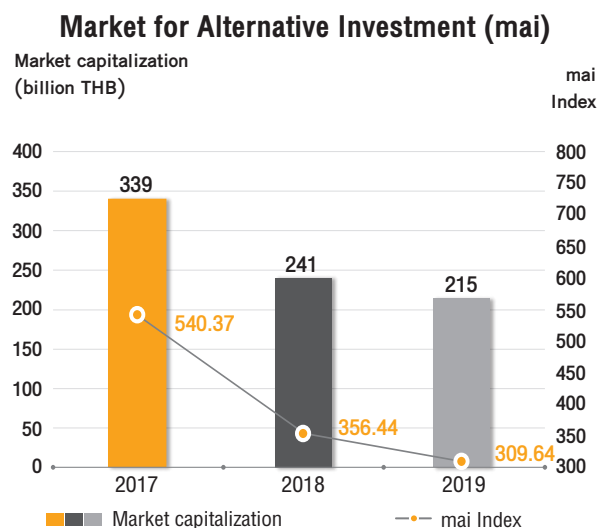
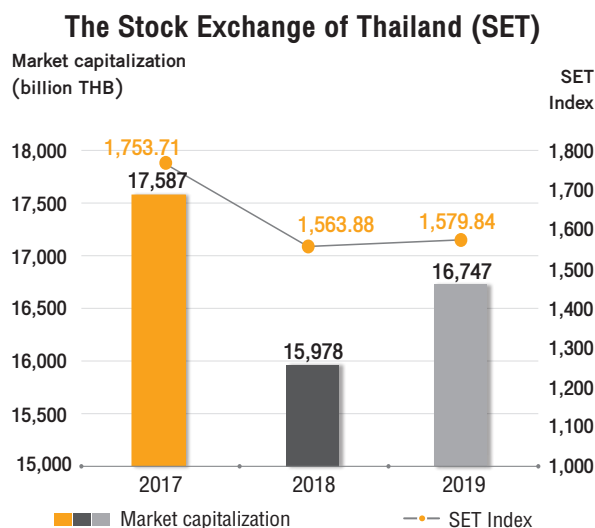
Thai Bourse's 2019 Performance

2019 Overview of Exchange Activities

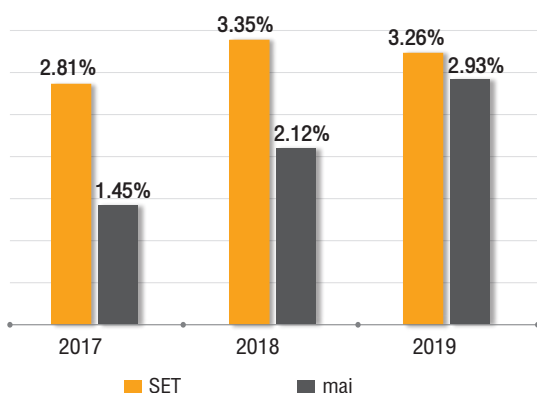
In 2019, the Thai stock market, among regional bourses, continued to perform well in spite of high global uncertainties such as the U.S.-China trade war, the United Kingdom exit from the European Union (Brexit) and the ongoing political upheaval in Hong Kong. The domestic economy resilience and Thai financial system stability including tourism boom were considered significant factors that drove The Stock Exchange of Thailand (SET)'s performance. At the end of 2019, SET Index closed at 1,579.84 points up by 1.0 percent, from the end of 2018. The sectors that outperformed the market were Agro & Food, Technology, Resources and Services. In addition, the SET Index returns in terms of US dollars were impressive increasing at 9.7 percent, from the year 2018, reflecting foreign investor confidence on the Thai market. In addition, listed firms continuously raised large amount of fund through the initial public offering (IPO) and secondary public offering (SPO), resulting in the increase of the market capitalization of the Stock Exchange of Thailand (SET) and Market of Alternative Investment (mai) to THB 16.69 trillion (USD 550.0 billion), up by 4.8 percent from the end of 2018. Moreover, the value

of newly listed companies on SET and mai was considered the highest value in ASEAN in terms of market capitalization. In terms of liquidity, the daily average trading value of SET and mai were averaged at THB 53.2 billion (USD 1,773 million), 7.8 percent drop from last year, trending in the same direction as other major stock exchanges in the region. Comparing to the year before, trading value by investor types, the ratios of foreign investors and institutional investors were higher, while local investors' was comparatively lower in 2019.

Significantly, Thai listed companies have improved in their quality and increasingly gained global recognition. There were 40 Thai listed companies added to MSCI Standard Index, a leading global index, while 20 Thai listed companies added to Down Jones Sustainability Index (DJSI), the highest number in ASEAN for 5 consecutive years. Moreover, the dividend yield and forward P/E ratio of SET and mai at the end of 2019 remained attractive. The dividend yields of SET and mai were 3.26 percent and 2.93 percent respectively, while forward P/E ratio was at 16.87 times for SET and 20.38 times for mai.

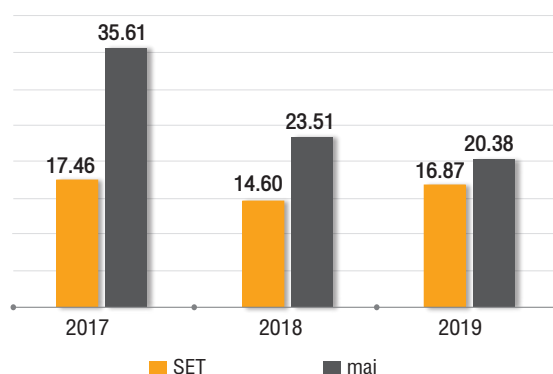


Dividend Yield



Source: Bloomberg

Forward P/E



Source: Bloomberg

Stock Market Trading Activities

The Thai stock market has been the most liquid market in ASEAN since 2012. In 2019, the daily average trading value of SET and mai averaged at THB 53.2 billion (USD 1,773 million), decreasing 7.8 percent from 2018.

In 2019, the total trading of SET and mai, categorized by investor types, consisted of: 1) Local investors with daily average trading value at THB 17.94 billion (USD 600 million), 33.72 percent of total trading value, down 40.82 percent from the previous year. 2) Foreign investors, currently the most active segment in 2019 with daily

average trading value at THB 22.01 billion (USD 730 million), 41.38 percent of total trading value, up 36.39 percent from the previous year. 3) Local institutions with daily average trading value at THB 6.04 billion (USD 180 million), 11.35 percent of total trading value, up 10.52 percent from the previous year. 4) Proprietary traders with daily average trading value at THB 7.21 billion (USD 240 million), 13.55 percent of total trading value, up 12.28 percent from the previous year.

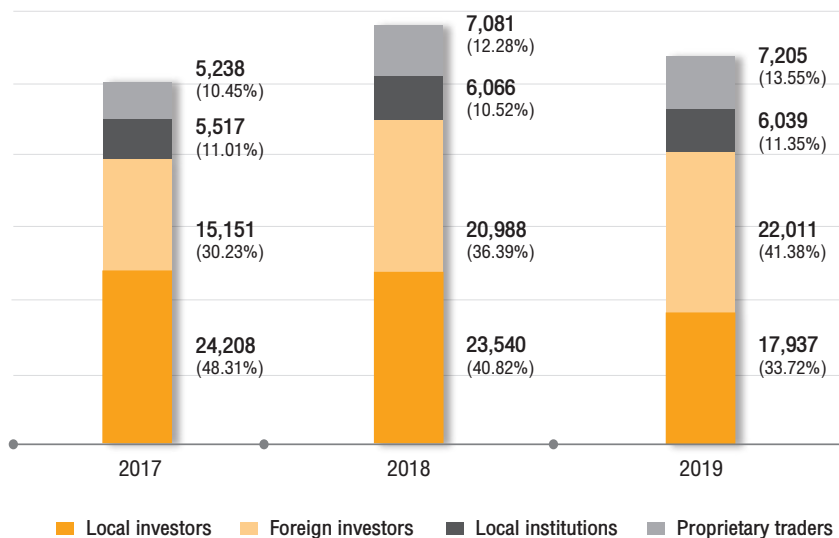
Trading value of SET and mai (unit: THB million)

Trading Value (unit: THB million)	2017	2018	2019
Trading value of SET	11,652,312	13,820,220	12,802,291
Trading value of mai	575,437	309,858	176,763
Trading value of SET and mai	12,227,749	14,130,078	12,979,054
Daily average trading value of SET and mai	50,114	57,674	53,192
Percentage change from previous year (y-o-y)	-4.59	15.09	-7.77

Source: SETSMART

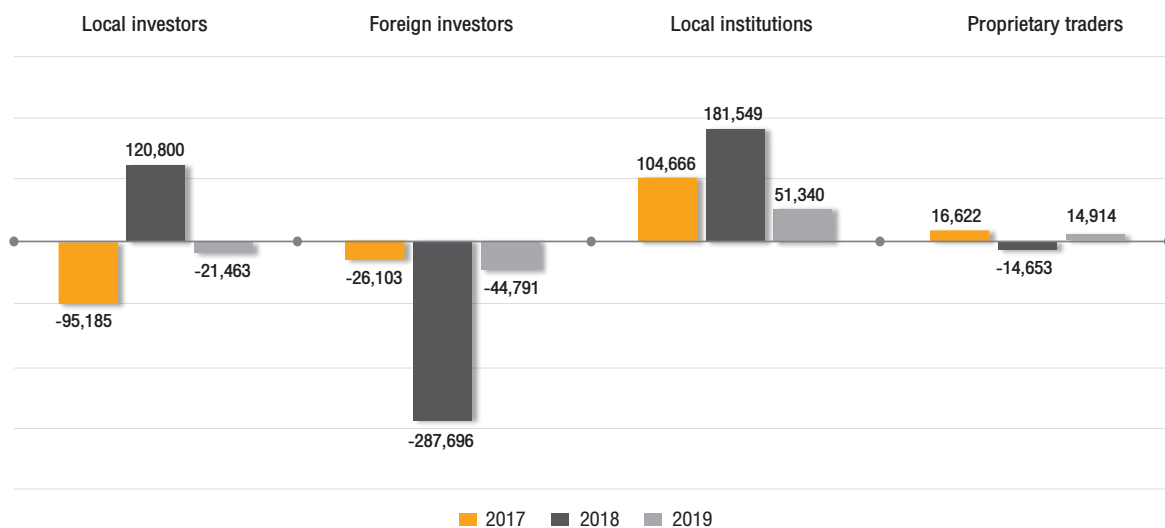
In 2019, the trading values of SET and mai can be summarized as follow: Local institutions and proprietary traders were the major net buyers in the Thai stock markets, buying net THB 51.34 billion (USD 1.7 billion) and THB 14.91 billion (USD 0.5 billion) respectively. Local investors and foreign investors were the net sellers, selling a net THB 21.46 billion (USD 0.7 billion) and THB 44.79 billion (USD 1.5 billion) respectively.

Trading value combined SET and mai by investor type (unit: THB million per day, percent)



Source: SETSMART

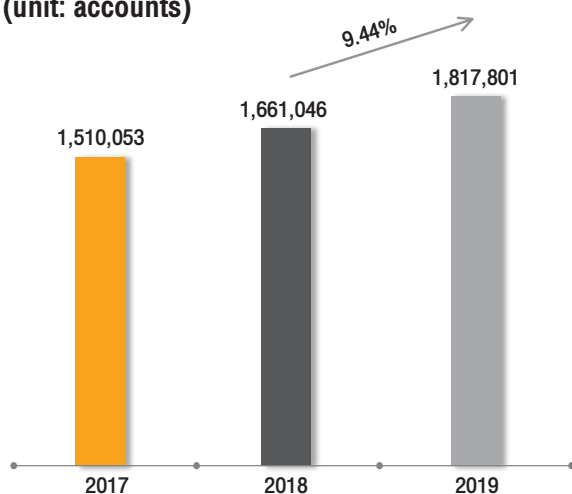
Net position of SET and mai in 2019 by investor types (unit: THB million)



Source: SETSMART

The number of trading accounts has continuously increased, reaching record highs. At the end of 2019, it amounted to 1,871,801 accounts, a 9.44 percent increase from the end of 2018. The number of active accounts was 18.70 percent of total trading accounts.

Trading accounts of SET and mai (unit: accounts)



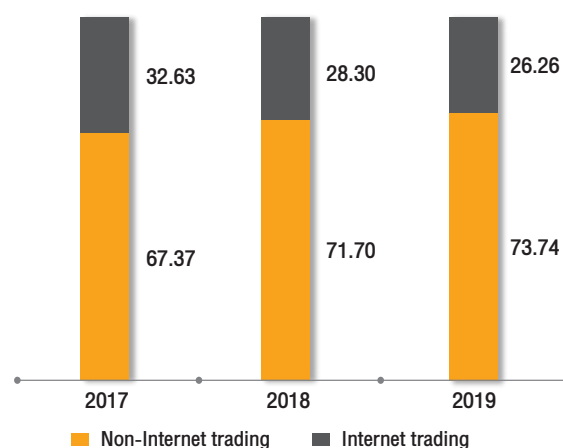
Source: SET

During 2019, internet trading continued to grow. The number of internet trading accounts at the end of 2019 amounted to 1,668,013 accounts, increased 11.00 percent from the end of 2018. The number of active internet trading accounts reached 240,219 accounts. The value of internet trading accounted for 26.26 percent of the total trading value.

Regarding the trading value of stocks categorized by market capitalization in 2019, it can be summarized as follows: 1) SET 1-10: having daily average trading value of THB 15.61 billion, 29 percent of total trading value compared to 33 percent in 2018. 2) SET 11-30: having daily average trading value of THB 13.39 billion, 25 percent

As for the local investors, the average trading value per account in 2019 was THB 3.27 million (USD 0.1 million), up from 3.24 million per account in the previous year.

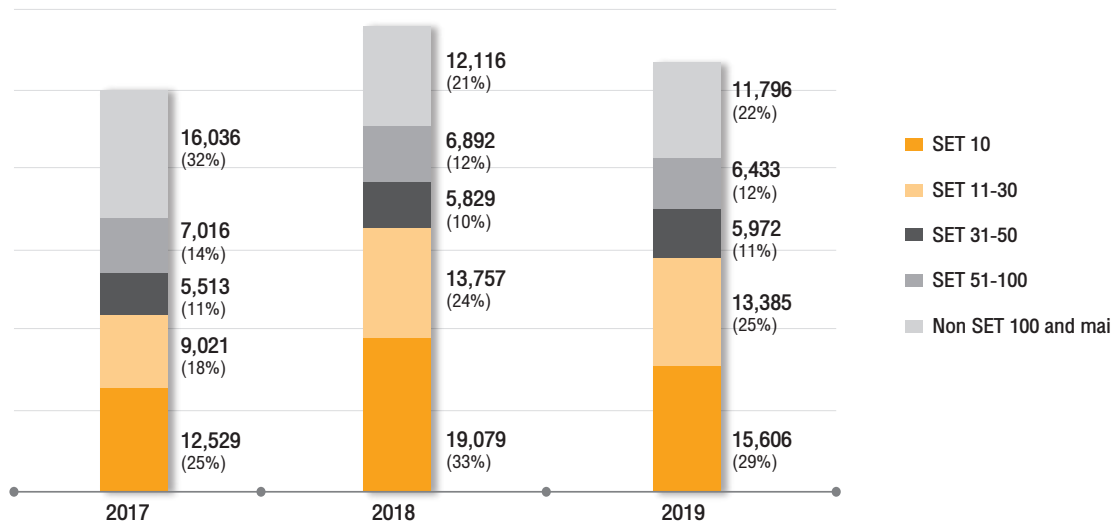
Trading value (SET and mai) by trading channel (unit: percent)



Source: SET

of total trading value compared to 24 percent in 2018. 3) SET 31-50: having daily average trading value of THB 5.97 billion, 11 percent of total trading value, a slight increase from 10 percent in 2018. 4) SET 51-100: having daily average trading value of THB 6.43 billion, 12 percent of the total trading value, approximately the same level as in the previous year. 5) Non SET 100 and mai: having daily average trading value of THB 11.8 billion, 22 percent of total trading value compared to 21 percent in 2018.

Trading value (SET and mai) by market capitalization (THB million, percent)



Source: SETSMART

Derivatives Market Trading Activities

The daily average trading volume of Thailand Futures Exchange (TFEX) was 428,369 contracts per day, 0.51 percent increasing from 2018. The increase in trading volume was mainly from 1) online gold futures 2) SET50 index futures and 3) SET50 index options. The trading volume of online gold futures, compared to previous year, increased by 6 times, while SET50 index options and SET50 index futures increased by 23.61 percent and 0.19 percent from 2018, respectively.

In addition, the number of trading accounts in derivatives market has continuously enlarged. At the end of 2019, the number of trading accounts was 186,813 accounts, up from 168,506 accounts, or 10.9 percent from the end of 2018.

Daily average trading volume of TFEX (Contracts)

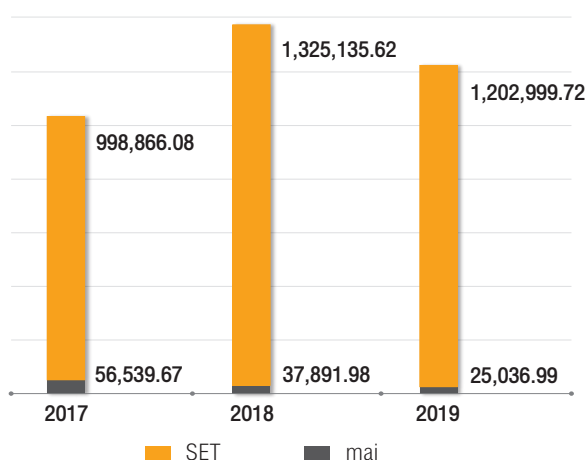
Products	2017	2018	2019
SET50 Index Futures	107,873	173,649	173,976
SET50 Index Options	4,433	5,561	6,874
Single Stock Futures	194,593	225,846	213,517
50 Baht Gold Futures	783	675	477
10 Baht Gold Futures	14,347	16,475	14,177
Gold-D	722	434	136
Gold Online Futures	-	2,326	16,289
USD Futures	1,422	2,799	2,758
Rubber Futures	44	141	233
Total	324,217	426,213	428,369
Change from previous year (percent)	13.68	31.46	0.51

Source: SETSMART

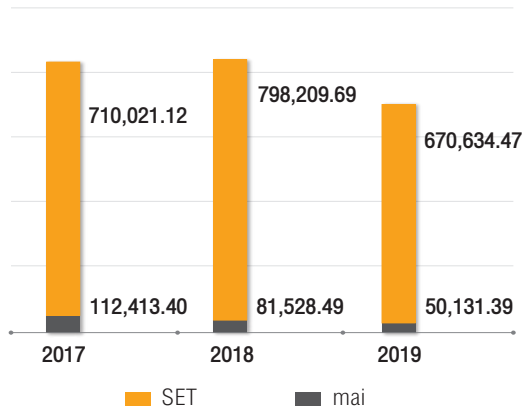
Post-Trade Operational Review 2017-2019

	2017	2018	2019
Securities Depository			
Number of depository participants (participants)	110	110	110
Brokers	40	40	41
Banks	35	35	35
Others	35	35	34
Number of securities deposited in the securities depository system (securities)			
Equity	3,967	4,266	4,785
Government Bond	362	323	317
Corporate Bond	1,327	1,444	1,563
Securities Clearing and Settlement			
Number of participants in the clearing house (participants)			
Equity & Debt	40	39	40
Derivatives	40	40	40
Securities Registration			
Number of companies in the securities registration system (companies)	747	770	800
Companies Listed on The Stock Exchange of Thailand (SET)	567	577	593
Companies Listed on The Market for Alternative Investment (mai)	150	162	170
Others	30	31	37
Number of securities in the securities registration system (securities)	2,559	2,879	3,455
The Stock Exchange of Thailand (SET)	2,187	2,410	2,987
Market for Alternative Investment (mai)	214	210	203
Others	158	259	265
Number of shareholder in the securities registration system	1,455,618	1,568,499	1,679,051

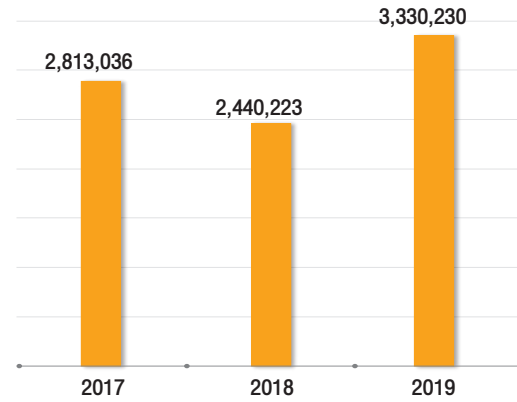
Total Value of Securities Clearing and Settlement (THB million)



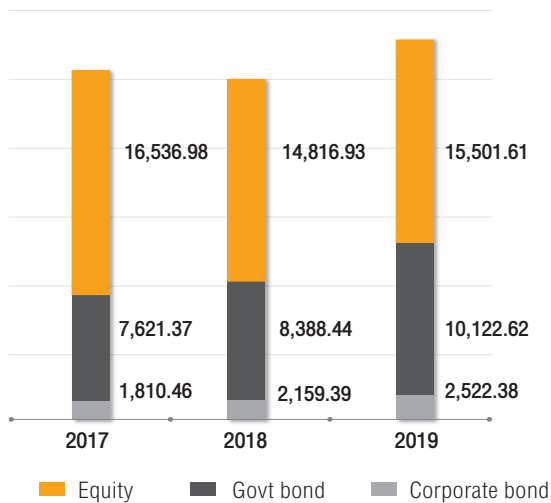
Total Volume of Securities Clearing and Settlement
(million shares)



Open Interest for derivative's Market (Contract)



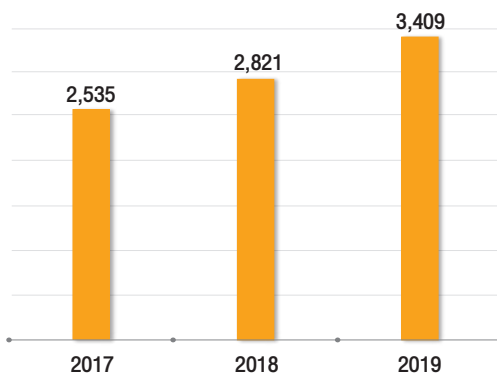
Total Value of Securities Deposited in the Securities
Depository System (THB billion)



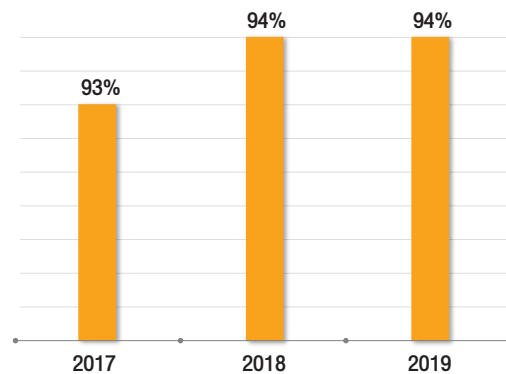
Number of Companies/Securities in Securities
Registrar System



Number of Securities under e-Dividend Service



Proportion of e-Dividend paid



Business Operation of the SET Group

Vision and Mission

The Stock Exchange of Thailand (SET) and its subsidiaries or the SET group has a vision “To Make the Capital Market ‘Work’ for Everyone.” Our objective is to make the Thai capital market as a driving engine to the economy and to be beneficial to all stakeholders. We believe that a suitable business growth will lead to national strength, and, in turn, will lead to the sustainable betterment of society.

The SET group operates under five missions: (1) To “plant” excellent financial Platform Development of the source of capital and investment that is both up-to-date and accessible to our stakeholders locally, regionally, and globally, (2) To efficiently “grow” Product & Service Development that is not only relevant to market needs but also resonate with the future 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 embracing professional integrity, (4) To “implant” an Inclusive Growth Approach that will enable us to perform as the best business partners and social supporters, and (5) To continuously “cultivate” ourselves by investing in Knowledge Development, i.e.—creating, sharing, and generating knowledge as part of a sustainable asset.

Business Overview

The SET group is the only stock exchange in Thailand. SET provides end-to-end exchange services consisting of the following core businesses:

Exchange Business

1. Securities market

Listing and trading: The SET group provides securities listing and trading services for equity instruments through SET and Market for Alternative Investment (mai) while

providing services for bond instruments through Thailand Bond Exchange (TBX). The listed companies can raise funds from investors in primary market and investors can trade securities in the secondary market. As of December 31, 2019, there were 556 companies listed on SET and 169 on mai along with 288 bond products listed on TBX. Other types of securities are also listed, such as warrants, derivative warrants (DW), depositary receipts (DR), exchange-traded fund (ETF), real estate investment trust (REIT), and infrastructure fund (IFF).

Clearing and settlement: SET Group is a clearinghouse for transactions taking place on SET, mai, and TBX. SET Group serves as the central counterparty (CCP) for all trading activities on those exchanges. The SET, as a clearinghouse, will guarantee all transactions of any party who fails to settle. The SET will settle funds and securities in order to reduce counterparty risks incurring in the market. In addition, the SET group also provides clearing and settlement services for over-the-counter (OTC) bond trading.

Depository: The SET group acts as a central securities depository for stocks and bonds, using a secure and efficient scripless system. Inclusively, SET Group provides services for securities deposit, withdrawal, transfer, pledge and pledge revocation. Investors can conduct these transactions through our depository participants. The SET Group also controls shareholding limit of foreign investors as prescribed by the relevant rules and regulations.

Market supervision: The SET group supervises trading activities of all investors and brokerage houses to ensure that the market is reliable, transparent and efficient. The SET group also requires listed companies to disclose accurate, transparent, and timely information to investors and the public.

2. Derivatives market

The SET group operates a derivatives market that trades derivatives products with underlying assets consisting of securities, commodities, government bonds, short-term interest rates and foreign exchange. The SET group also supervises the trading activities of investors in the derivatives market and all derivatives market members to ensure a well-functioning market operation.

3. Technology services and capital market infrastructures

Besides the above mentioned trading and settlement services, the SET group also provides both front and back office services for members, such as front-office service bureau (FSB) system, Internet trading system, and back-office service bureau (BSB) system. These centralized services provide economies of scale to the industry and to shorten time for new products and services development.

In addition, the SET group also provides market data services; services that develop and disseminate stock indices, trading market data and listed companies' information for data vendors and investors. The SET group also prepares and disseminates several internationally recognized indices.

Moreover, the SET group also provides the FundConnex business service as a centralized mutual fund platform to connect among asset management companies and selling agents. The platform helps broaden mutual fund access and improve market efficiency. On top of that, the SET group also provides the payment system infrastructure called FinNet, which centralizes payment process and sets connecting standards between intermediaries in the capital market and commercial banks, with the aim to enhance the efficiency of payment process in the capital market.

4. Registrar services

The SET group acts as a registrar for equity products and maintain the register book that contains accurate and complete shareholder information. Our services also cover information of shareholder benefits and connect registrar services with a direct linkage to the Securities Depository Center for the benefits of listed companies and investors.

Furthermore, the SET group has secured data storage and processing system with the corresponding back-ups ready to ensure the continuity of our services. Our vault and data management systems have been in place to secure the physical share certificates and other rights documents to be safe for the securities holders and listed companies.

Capital Market Long-term Development

The SET group is committed to promoting a long-term development of the Thai capital market to become a sustainable capital market that will improve competitiveness of the Thai economy and support the quality growth of the capital market's stakeholders and the Thai society. The SET group has set three major capital market development strategies as follows:

1. Capital market education

The SET group organizes the educational development into five aspects according to the target groups: (1) Professional Education—to uplift knowledge standards of financial professionals in the capital market, (2) Enterprise Education—to enhance knowledge of listed company personnel, (3) Investor Education—to develop skills and knowledge for general investors for their financial health and long-term investment, (4) Public Education—to focus on financial literacy for students and the Thai people by the use of educational centers, such as Maruey Knowledge & Resource Center, INVESTORY (investment discovery museum) and SET Investment Center, (5) Executive Education—to focus on the education and understandings of the public sector and business leaders about the capital market and building a network among capital market leaders not only in Thailand but also in CLMV and ASEAN region.

2. Sustainable development (SD)

The SET group promotes corporate governance (CG) to be an international standard of corporate governance, and sustainable development (SD) for listed companies to be integrated in business model and operation and to

build the ecosystem that will support SD in the Thai capital market, such as encouraging local institutional investors to invest responsibly and motivating listed companies to invest and collaborate with social enterprises (SE). The SET group also encourages, promotes and prepares listed companies to conform to criteria defined by global players in sustainability field such as Dow Jones Sustainability Index (DJSI), among others.

3. Capital market research

The SET group conducts and disseminates relevant capital market research and capital market leading indicators of the Thai capital market to benefit stakeholders, various

organizations and the general public. The SET group will continue to establish a platform where researchers and market practitioners can contribute the knowledge for long-term development of the Thai capital market. In addition, the SET group also connects researchers to entrepreneurs to utilize research work for commercial or social benefits, while promoting the capital market research to be more accessible to the general public.

Revenue Structure

The SET group's revenue structure during the past 3 years (2017–2019) were as follows:

(Unit: THB million)

Products and services	2019		2018		2017	
	Revenue	%	Revenue	%	Revenue	%
Securities Market						
– Trading fees	1,298	22.06	1,413	24.69	1,223	24.42
– Listing fees	723	12.29	643	11.24	576	11.50
– Clearing and settlement fees	368	6.25	384	6.71	337	6.73
– Depository fees	347	5.90	341	5.96	322	6.43
– Membership fees	32	0.54	44	0.77	44	0.88
Total	2,768	47.04	2,825	49.37	2,502	49.96
Derivatives Market						
– Trading fees	541	9.19	509	8.90	332	6.63
– Clearing fees	233	3.96	220	3.84	144	2.88
– Membership fees	32	0.54	36	0.63	43	0.86
Total	806	13.69	765	13.37	519	10.37
Technology Services						
– Member services fees	420	7.14	451	7.88	426	8.51
– Information services fees	367	6.24	346	6.05	343	6.85
– IT support fees	277	4.71	200	3.50	150	3.00
Total	1,064	18.09	997	17.42	919	18.36
Registrar and Fund Services						
– Securities registrar fees	1,226	20.84	1,121	19.59	1,065	21.27
– Fund services fees	20	0.34	14	0.24	2	0.04
Total	1,246	21.18	1,135	19.84	1,067	21.31
Total operating revenues	5,884	100.00	5,722	100.00	5,007	100.00

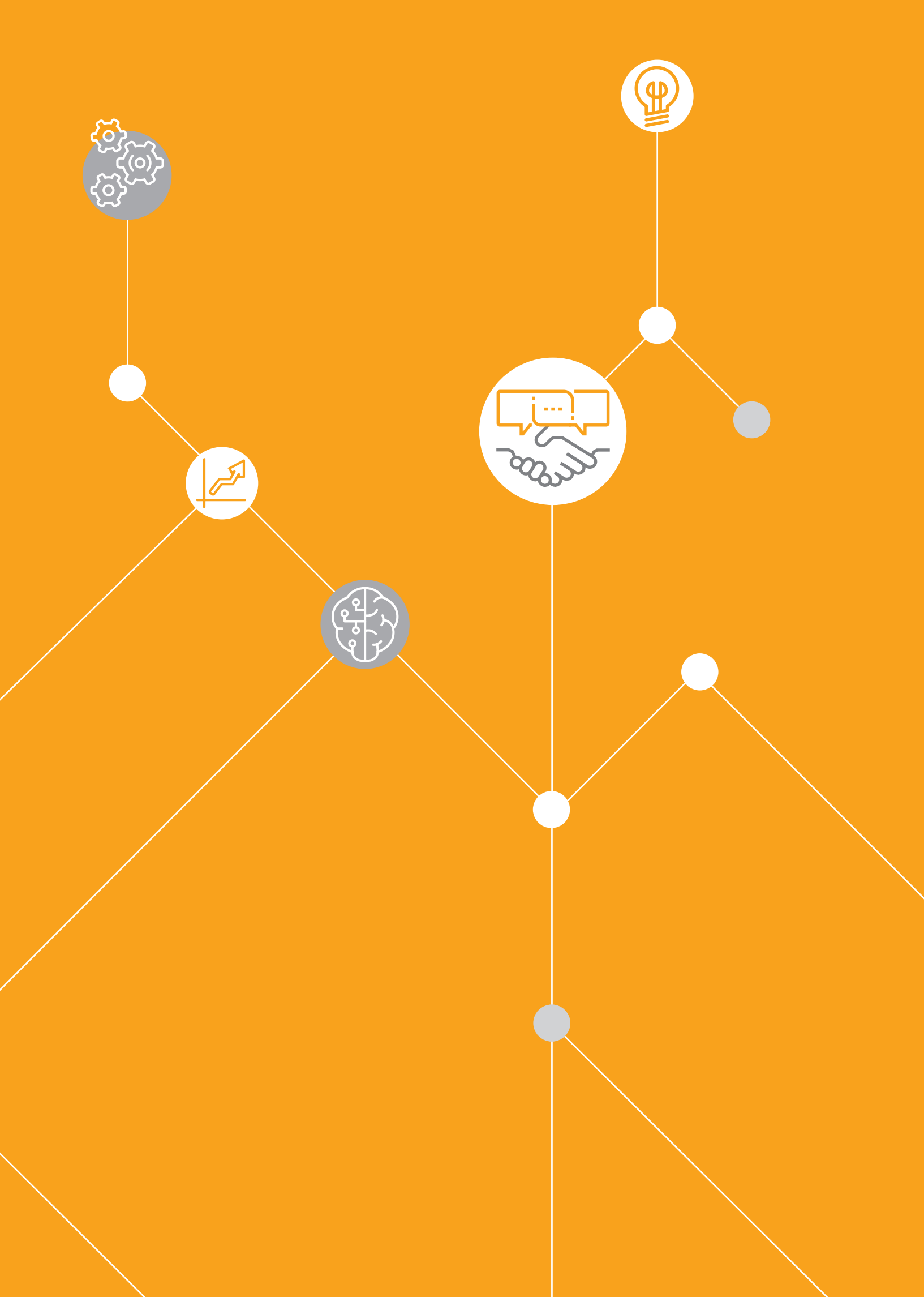
Business Competition

The financial liberalization and global connectedness around the world can bring huge benefits, but at the same time can also create competition. The SET group has therefore been operating under highly competitive environment. Although the SET group operates the only stock exchange in Thailand, local companies can raise fund through other exchanges abroad or use other alternative funding sources. Investors can choose to invest in other exchanges freely to suit their preferences. On top of that, foreign exchanges can develop similar investment products or substitutes to attract both Thai and international investors.

Furthermore, the new wave of trading platform in global stock exchange such as alternative trading system (ATS), competition triggered by digital asset exchange in term of fund raising and new asset alternatives for investment, as well as blockchain technology will enhance business and operational efficiency to better serve customer demands. This could be the opportunities of the Thai exchange to be a partner with other players or a competitor with them in the future.



Make it **Work** by
**Enhancing Operational
Efficiency**



SET's Key Developments in 2019

Throughout the year 2019, The Stock Exchange of Thailand (SET) has steered the Thai capital market forward, focusing on the creation of partnership platform to drive inclusive growth, to boost competitiveness of the market, and to cope with fast-changing business environment. SET's four key strategies consist of : Expand business activities (Expand); Explore new opportunities with technology (Explore); Reform regulations and streamline processes (Reform); and Restructure business portfolio (Restructure). Under these strategies, the key developments in 2019 are as follows:

Expand Business Activities:

Supporting the listing of quality companies and boosting listed companies' potential

SET is a key fundraising source to help business expansion under normal or slow economic growth. In 2019, the fundraising from newly listed companies and existing listed companies totaled THB 400.60 billion (approx. USD 12.76 billion), making a total of THB 784.88 billion (approx. USD 24.99 billion) in market capitalization.

In terms of the number of newly listed firms, altogether 32 companies were listed on SET and mai, an increase from the previous year, attracting large-sized companies in various major industries. Meanwhile, fundraising of existing companies also rose with over 60% based on inorganic growth strategy.

Total fundraising and market capitalization, according to types of fundraising

Types of Fundraising	Total Fund Raised (THB million)			Market Capitalization (THB million)		
	2017	2018	2019	2017	2018	2019
Initial Public Offering (IPO)	106,280	81,573	90,839	426,349	183,141	383,749
Secondary Offering (SO)	160,144	125,220	309,762	257,293	189,511	401,127
Total	266,424	206,793	400,601	683,642	372,652	784,876

Source: SETSMART

Newly listed companies, classified by the types of securities in 2019

Types of Securities	Number of Securities	Total Fund Raised (THB million)	Market Capitalization at the IPO (THB million)
Common stocks	28	73,694	362,850
REIT	3	11,995	15,739
IFF	1	5,150	5,150
Total	32	90,839	383,749

Source: SETSMART

In order to enhance business knowledge, in 2019 SET joined the Ministry of Commerce and related agencies to organize seminars on the latest version of Thai Financial Reporting Standards (TFRS) and International Financial Reporting Standards (IFRS). This included the adjustment of the financial statement format in line with the new standards that will be implemented in a few years. Moreover, SET has designed a new project to help boost business potential called the Chief Transformation Officer (CTO) training course for top executives, while SET's digital roadshow initiative to provide investors with listed companies' information, started in 2018, has been participated by increasing number of listed companies and international investors.

Expanding investor base and developing products and services to serve financial market participants' demand

SET is determined to continuously expand quality investor base. By the end of 2019, there were 1,244,799 retail investors nationwide, including over 130,000 new retail investors, an 11.5% increase from the previous year. Out of this, 62% were young generation with the average age of 20 – 35 years. At the same time, SET has been promoting the dollar-cost averaging (DCA) savings culture resulting in over 80,000 active DCA investors or a 38% rise. For mutual fund investors, there has been a noted shift in investor behavior into retirement mutual fund (RMF).

SET has also adopted the digital technology in promoting knowledge and understanding and introducing new investment channels such as selling agents, wealth advice service and mobile applications to cater to investor demand, as well as communicating with media alliances, particularly digital media, such as LINE TODAY, to reach out to new target audience.

In terms of developing international products that enable investors to efficiently manage their investment portfolios, SET has introduced derivatives warrants (DW) with international market indexes as underlying assets. Macquarie Securities (Thailand) Limited was the first DW

issuer with Hang Seng Index as the underlying index which debuted trading on August 14, 2019. In addition, SET has promoted regional connectivity in terms of fundraising and investment, especially in Cambodia, Laos, Myanmar, and Vietnam or CLMV countries, such as unsponsored DRs, etc. The Thai-Lao working group has been set up to study and improve relevant regulations, while Cambodia is in the process of enacting legislation of similar nature. The Thai bourse has also been working collaboratively with leading international markets to promote the connectivity of certain products.

In 2019, SET unveiled the SET Well-Being Index (SETWB), an index consisting of listed securities with potential, competitive to other markets and attractive to international investors. The new index was launched on April 1, 2019.

Thailand Futures Exchange PCL (TFEX) has developed products and services as well as investment decision making tools, such as the addition of 19 underlying securities for stock futures, the introduction of nine new brokers for USD futures, the adjustment of the calculation of collateral value for SET50 options to align with international practices, and the development of real-time price calculator for options and Greek parameters, among others.

Developing capital market infrastructure to reduce industry costs

SET has always recognized the importance of the development of the capital market infrastructure to support all businesses and reduce the overall costs borne by all of the whole industry. In 2019, FinNet Innovation Network Co., Ltd., a subsidiary of SET, launched the inter-bank payment system for the capital market in order to improve the settlement standard and to increase the Thai capital market's competitiveness. In addition, SET has developed a platform to electronically connect financial intermediaries with related agencies: the stamp duty payment system connected to the Revenue Department launched in July 2019; and a channel to link financial intermediaries with National Digital ID (NDID) Co., Ltd. to support SET members' business expansion while increasing investor base.

SET has developed the Professional Link Digital Platform (Prof. Link) to facilitate capital market professionals in preparing them for the continuous professional education (CPE) training and professional license renewal in the forms of mobile and web applications. SET has also planned to link SET's database of license holders with that of the Securities and Exchange Commission (SEC), scheduled to be activated at the beginning of 2020.

SET has strengthened the cyber security standards based on best practices in compliance with ISO 27001, expanding to cover more key systems, in line with the regulations of the Bank of Thailand (BOT) and the SEC. This consists of the SET WATCH system (trading surveillance system), the SET CLEAR system (securities clearing system), the central securities depository (CSD) system, the SWIFT Network for TSD, including the Cyber Trust-Engagement project which supports and allocates standard service providers of IT security inspection and safety assessment. A total of 14 SET members have already signed up.

Creating learning platform to promote investment and business operations knowledge

SET has continuously developed access for investment knowledge, especially online channels that reach out to the public and investors on a broader scale, responding effectively to the demand of different groups. To-date, there have been 94,400 people signed up for SET e-learning and over 23 million online searches for related information. In addition, more than 700,000 investors used the SET e-Book application in 2019. SET has also launched the “Happy Money” application as a one-stop financial management tool to promote savings and investment.

With the commitment to encourage investors to access more investment information, SET has worked with the SEC and the Investment Analysts Association (IAA) to prepare the “Extended Research Coverage” analysis for investors, offering 40 chapters of interesting and in-depth analyses of securities available via www.settrade.com/IAAConsensus

In addition to e-learning promotion, SET, jointly with the business allies, has implemented the “Happy Money, Happy Retirement” project for seven consecutive years, during which 1,553 financial trainers have been trained to disseminate investment knowledge to participating organizations totaling 2,175,136 employees. At the same time, SET has also initiated the INVESTORY Camp 2019 project, an extension of INVESTORY investment discovery museum, as well as the “Mobile Exhibition on Schools” project to promote financial planning education among the youth and school teachers.



Significantly, in 2019 SET developed business knowledge to improve entrepreneurs' potential through the “Enterprise Classroom” project aiming at start-up entrepreneurs. More than 180 pieces of knowledge treasure relating to startup businesses and digitally-driven businesses have been created, such as SET e-learning, online Innovative Entrepreneur courses, Startup Fundraising video clips, etc., well-received by more than 80,000 views. Furthermore, SET has collaborated with academic institutions in each region to organize training sessions for university students, teachers and local entrepreneurs and has also provided the start-up knowledge package to all universities nationwide. *(More information and details are available in the 2019 Sustainability Report.)*

Explore New Opportunities with Technology: Developing digital platforms for new businesses

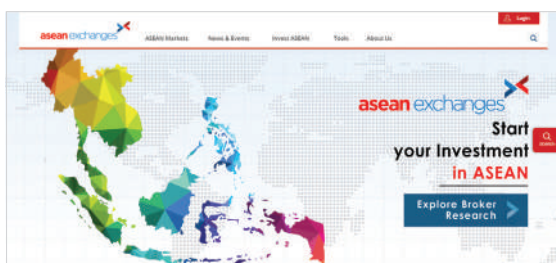
SET has been working collaboratively with several organizations to formulate the layout of the capital market infrastructure in order to create new business opportunities for both the capital market and the business sector, while enabling the public to invest conveniently, safely and confidently in this digital age.

SET has developed an open and complete digital platform to serve and offer many opportunities to all sectors of the society. In September 2019, SET connected this platform with its proprietary “FundConnex” service to allow mutual fund cross-border trades by linking it with “Vestima” system of Clearstream Banking S.A. – an international central securities depository of Deutsche Börse Group. This has enabled both Thai and foreign investors to invest in the Thai and overseas markets conveniently with no boundaries.

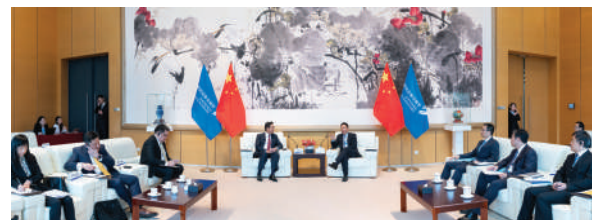
In terms of digital asset market development, SET has worked with alliances in the capital market and the fintech industry to develop a prototype digital asset market, currently being tested with business cases internally to assess the system readiness before implementing.

Building alliances for foreign business connectivity

SET has been instrumental in the development and improvement of www.aseanexchanges.org, established under the collaboration of ASEAN stock markets, consisting of Indonesia, Malaysia, Philippine, Singapore, Vietnam, and SET. The website has been enhanced in terms of look & feel, compiling information from all six participating markets, covering over 3,600 securities on a single platform aiming to attract investment regionally and globally. This newly revitalized website is scheduled to be launched in early 2020.



Moreover, in April 2019 SET signed a Memorandum of Understanding (MoU) with Shenzhen Stock Exchange to promote small and medium-sized enterprises (SMEs) of the two countries, and to connect as well as to expand opportunities for Thai and Chinese securities to be mutually recognized. As a part of this initiative, the Thailand-China Capital Market Cooperation seminars were held in Bangkok and Shenzhen. Furthermore, SET has also signed an MoU with International Finance Corporation (IFC) to enhance the development of the Thai capital market taken into consideration the importance of sustainability while creating an ecosystem covering all dimensions of sustainability, making the Thai capital market attractive to investors globally.



To explore more coverage, in 2019, SET organized the Embassies @ SET event for the first time with highlight of the presentation on the Thai capital market's potentials and business opportunities related to other countries, attended by ambassadors, trade commissioners, and members of the diplomatic corps from 30 countries.

Reform Regulations, Streamline Processes, and Sustainable Development:

Reform regulations and streamline processes

SET is determined to provide all services to directly and efficiently meet the demand of listed companies. Therefore in 2019 SET collaborated with the SEC to develop One-Stop Services for listed companies. The services covered business consultancy for various transactions and fundraising through the SETLink system, a communication channel that enables listed firms to prepare and manage all corporate actions more quickly and efficiently.



In 2019, SET continued to implement the Regulatory Reform project to ensure the integration and clarity of the roles of different regulatory agencies, while enhancing the operations' flexibility and reducing the costs of the entire capital market industry. At the same time investors would constantly receive sufficient information for their investment decision. In addition, the efficiency of listed firms' corporate governance on securities trading surveillance and member companies' supervision continues to be well-balanced.

In addition, several regulatory criteria have also been improved, such as the criteria for the stock listing of holding companies and infrastructure companies, the regulations on temporary trade for stocks with SP (suspension) signs or pre-delisting stocks, the calculation guideline for stocks with the C (caution) signs. Moreover, SET has also refined the regulations related to the trading of stocks with cross-border products as underlying assets, the regulations to allow more short sale list for investors to have more options in making investment and managing risks. Furthermore, certain criteria were also adjusted to avoid duplication, making them in line with the SEC criteria, such as information disclosure, transferable subscription rights (TSR), among others.

For further benefits to listed firms, SET realizes that the procedures of information disclosure and compliance with the set criteria are also vital to the business flexibility and cost reduction. SET has therefore launched the one-stop service project to lift up the quality level of the single platform service for listed firms and related agencies to reduce redundancy in the process. SET has developed the SETLink system for inclusive information dissemination and has revised free float reporting system to make it easy for listed firms, while promoting the use of electronic data. Necessary tools have been developed for listed companies to facilitate their compliance with the regulations more effectively. As such these will enable investors to receive complete information in a timely

manner, such as the "Checklist" (guidelines for key data disclosure), the "Simplified Regulations" (easy guidelines of regulatory details), frequently asked questions (FAQs) and case studies, as well as the "e-Learning" for listed companies to study all regulations conveniently, anywhere, anytime, among other tools. These included the understanding in SET's practice guidelines concerning member supervision and securities trading surveillance, such as securities borrowing for short selling and samples of inappropriate trading orders, and more.

Regarding system development, SET has also designed a system to support the adjustment of regulations and procedures, such as the "DW One-Stop Service" to enable the issuance of DW to 1 day from previously 2 days after submitting the application, this system was launched in March 2019.

Furthermore, in February 2019 SET also took part in the evaluation of the Thai capital market under the Financial Sector Assessment Program (FSAP) to make sure the process meets international standards. Most of the assessment result scores were good and excellent.

Operating business towards sustainable development

SET has been supporting businesses with environmental, social and corporate governance (ESG) aspects. SET's own operations have embraced the principle of sustainability in all work processes, particularly the environmental preservation that has been put into practice with numerous activities all year round. In 2019, SET initiated the "Care the Whale" project that synergized cooperation from network of organizations to drive environment in order to create a balanced environment and promote the circular economy from upstream to downstream. With an aim to become a 'carbon-free' organization, SET has received a carbon neutral certification from Thailand Greenhouse Gas Management Organization (Public Organization).



Significantly, SET has promoted sustainable development among listed companies through knowledge and best practice on how to develop business toward sustainability. Listed firms have applied knowledge and practices to promote growth of their businesses, society and environment in a balanced manner. In 2019, SET introduced www.setsustainability.com to be the source of data and information on sustainability for listed firms and interested public.

SET has focused on elevating the quality of listed companies' sustainability report to be used as a tool for business development and for boosting investor confidence. Through the collaboration with the SEC, SET has enhanced the regulations relating to the disclosure of information on sustainability in the 56-1 annual report form, has organized the "CGR one-on-one" activities, and has developed the manual of sustainability report.

On top of that, SET has continuously encouraged listed companies to participate in the assessment of business performance on sustainability. In 2019, a total of 131 companies participated in the process and earned an average score of 69%, while 98 companies were selected to be included in the Thailand Sustainability Investment (THSI) consisting of outstanding companies having sustainable development. Some of THSI list were included in SETTHSI Index. Moreover, in 2019, 20 companies (the highest in ASEAN) were selected to be included in the Dow Jones Sustainability Indices (DJSI), seven of them achieved the world's Industry Leaders.

(For more information on listed companies' sustainability business operations, please see the 2019 Sustainability Report.)

Restructure Business Portfolio:

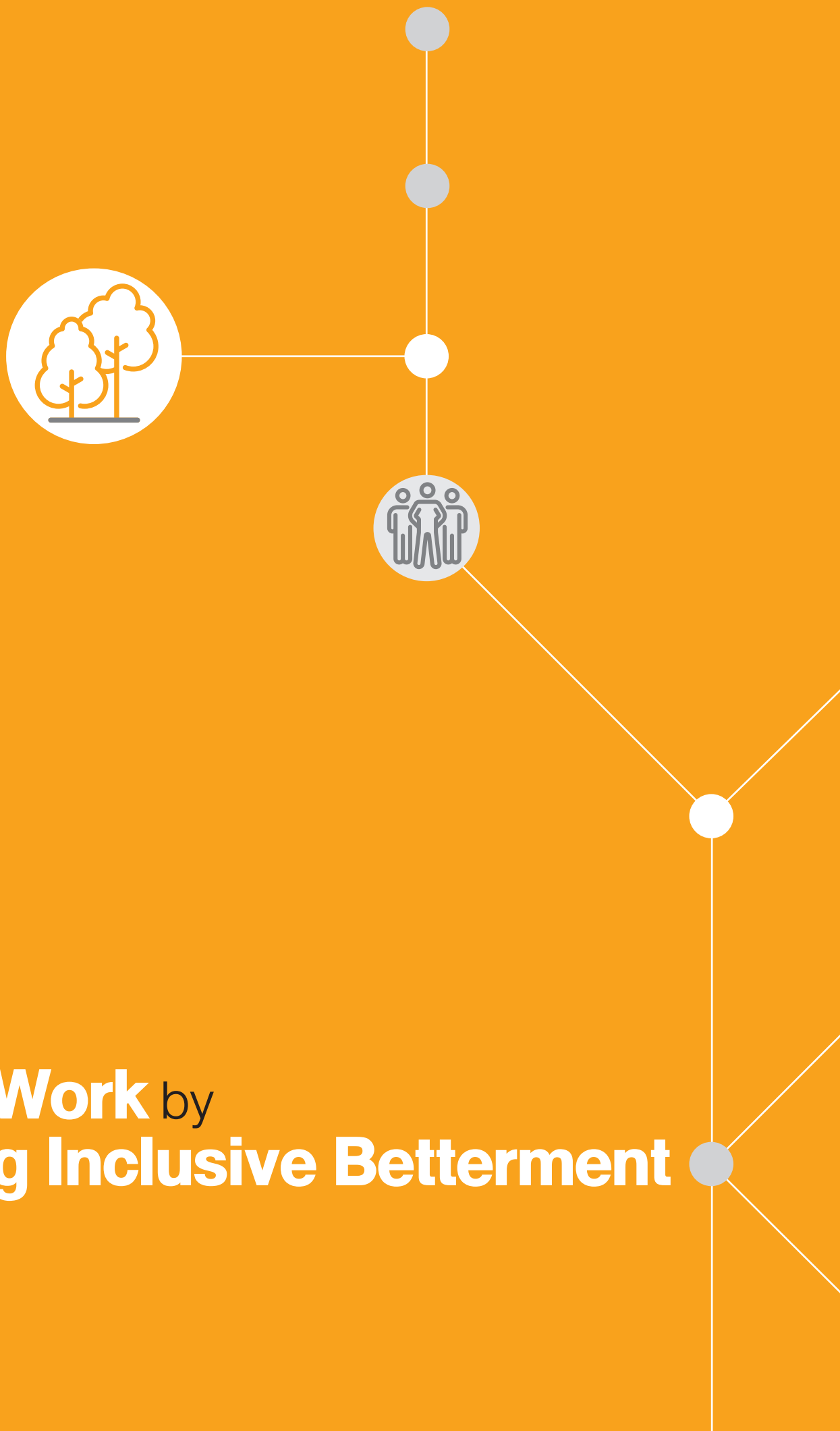
Restructuring to enhance efficiency and potential of the capital market

SET has restructured the organization in accordance with future missions. The operating model has been designed based on the end-to-end working process to ensure integrated connection throughout the process, and to enhance efficiency in working with all alliances as well as catering to customer needs. SET aims to achieve continued growth and to increase business opportunities and potential in the new context of competitiveness in the global capital markets. Most importantly, SET continues to focus on personnel development. The new organizational structure, effective in early 2020, consists of three aspects as follows:

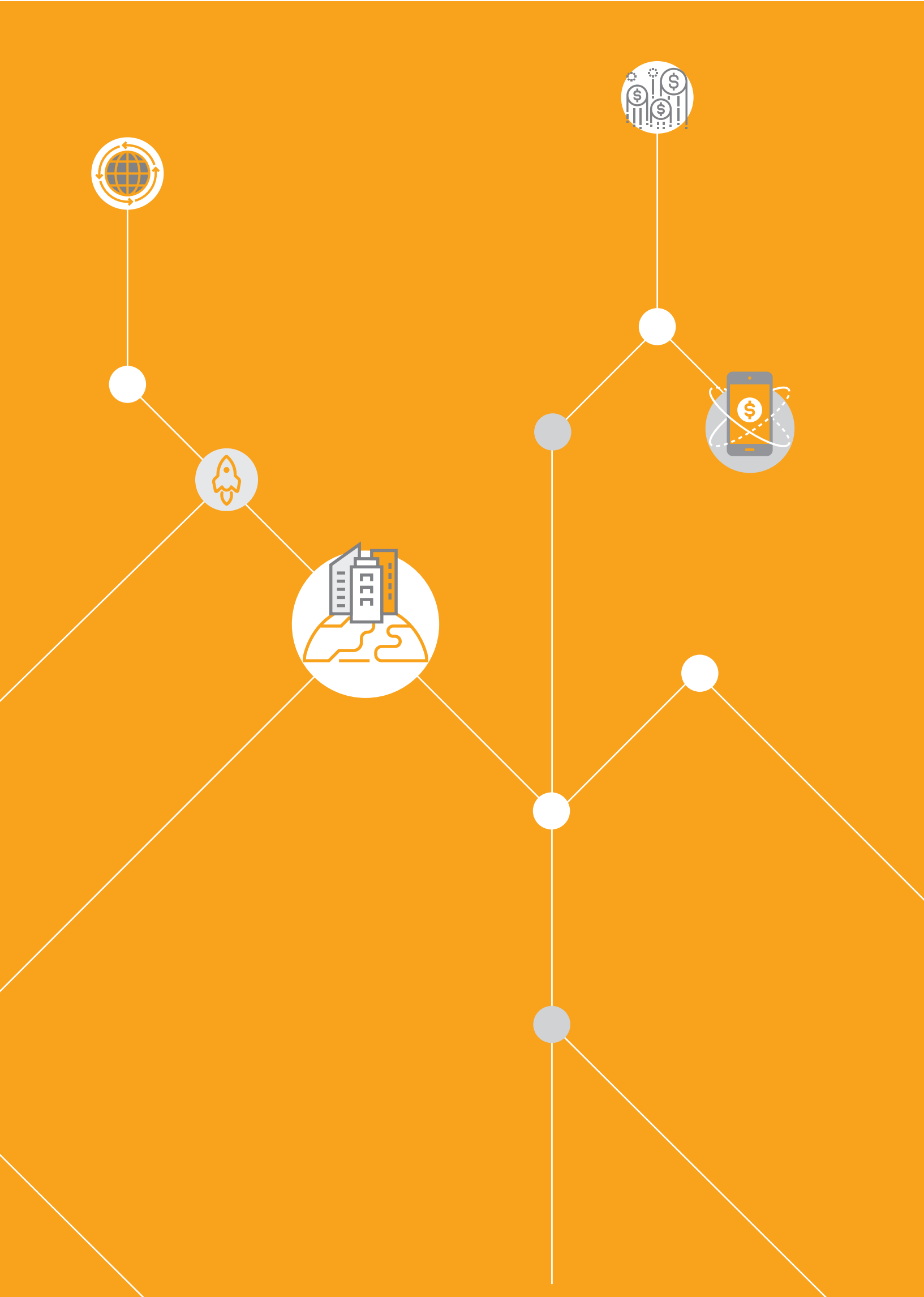
Customer focus: Focusing on the end-to-end service in order to learn more about customer needs and to improve accordingly, to gain maximum satisfaction

Capital market infrastructure: Focusing on strengthening the capital market infrastructure while exploring new opportunities amid the ever-changing business environment

Efficiency improvement: Focusing on the internal integration and cooperation among all business units enterprise-wide to increase efficiency and support the other two aspects above, to enable successful business operations.



Make it **Work** by
Driving Inclusive Betterment

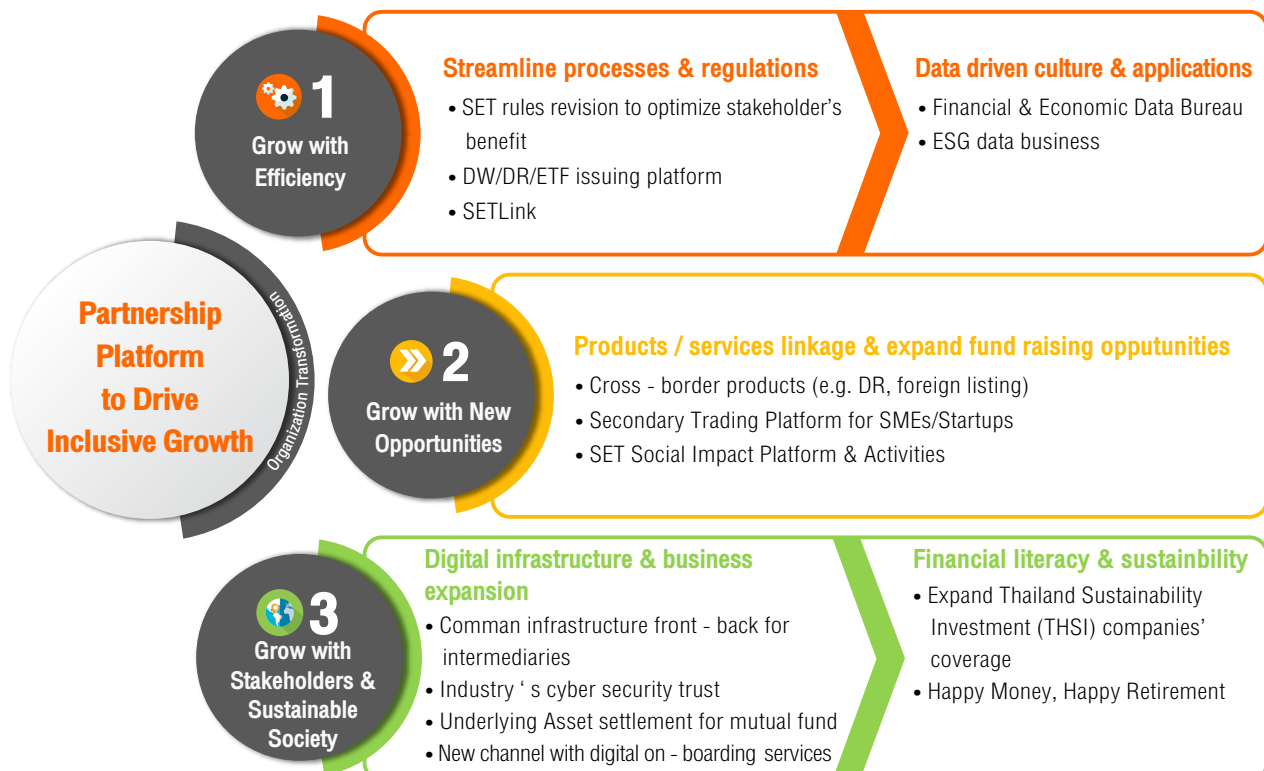


The SET Group's Strategic Plan for 2020-2022

To cope with fast-changing landscape and dynamic environment from economic, social and technological challenges, The Stock Exchange of Thailand (SET) aims to promote growth for inclusive well-being by focusing on stakeholder benefits and capital market infrastructure development. With the goal to enhance competitive capabilities and bring benefits to all sectors in a sustainable manner, SET has set the strategic direction **'Creating Partnership Platform to Drive Inclusive Growth'** and committedly steering toward two key goals: **1) to enhance internal operating efficiency and pass on to stakeholders;** and **2) to enable stakeholders to achieve long-term sustainable growth.**

To achieve the goals, **SET has set a 3-year (2020-2022) strategic plans** consisting of 3 strategies: grow with efficiency, grow with new opportunities, and grow with stakeholders & sustainable society.

SET Strategic Plans 2020-2022



1. Grow with Efficiency:

Improve Enterprise-Wide Business Management

1.1 Streamline processes and regulations to support stakeholders

SET has collaborated with relevant regulators and supervisory agencies to further reform and revise regulations that are outdated, unclear, inconsistent or redundant to gain flexibility and trusts of the whole capital market industry.

In addition, SET will further enhance end-to-end process platforms for stakeholders such as 1) SETLink system to help listed companies to facilitate workflows and information dissemination. The system will be a central platform for information disclosure, training and seminars to serve listed companies for their efficiency and flexibility; 2) Product issuing platform to improve product issuing time for derivatives warrant (DW), exchange traded fund (ETF) and depository receipts (DRs), among others.

1.2 Build data-driven culture for business expansion

SET has continued to develop Financial & Economic Data Bureau (FEDB); a central database for economic, financial and industrial data that can be accessed by stakeholders and general public. The database aims to provide eight major industries' data by the year 2021 and deliver an equal opportunity to access the data for everyone.

Moreover, SET will develop environmental, social and governance (ESG) database for stakeholders to utilize the data for product development and thematic investment in ESG- focused companies.

SET always emphasizes the value of data-driven culture by encouraging data analytics and utilization to reap the benefits for both internal and external uses. This will be done through several approaches such as tools and skills development; creation of a "community of practice," a place where everyone can exchange their knowledge and know-how and preparation for Personal Data Protection Act which will become effective in May 2020.

2. Grow with New Opportunities:

Reachout and Expand Businesses

2.1 Products/services international linkage & fundraising opportunities

SET aims continuously to be an exchange that connects fundraising and investment in Cambodia, Laos, Myanmar, and Vietnam or CLMV countries. SET will further partner with global exchanges such as Shenzhen Stock Exchange and Hong Kong Stock Exchange to explore potential products, e.g. unsponsored depository receipts (DRs) and exchange-traded fund (ETFs). In addition, SET will conduct feasibility studies in partnering with leading regional exchanges to form more alliances especially among Thailand, Indonesia and Philippines (TIP).

Furthermore, SET will take part in supporting growth opportunities for small and medium enterprises (SMEs) and startups that will be future core engines in Thai economic growth by developing trading platform for SMEs & startups. The platform will enable alternative fundraising sources for these enterprises and enhance operational capabilities and efficiency to reduce costs by providing standardized shared services such as legal and accounting.

Significantly, SET is committed to be a platform that bridge business and social sectors to jointly create exponentially positive social impact through SET Social Impact Platform and related activities. SET aims to develop the potentials of social enterprises to be capable sustainably.

3. Grow with Stakeholders & Sustainable Society: Development Toward Inclusive Growth

3.1 IT infrastructure development & business expansion

SET has continued IT infrastructure development to reduce costs and promote business operation for the capital market industry mainly in 3 areas:

- 1) Maintain stability and security of capital market systems through cybersecurity program for the intermediary institutions that connect core systems to the SET;
- 2) Reduce operating cost for SET member companies through central IT system covering trading system, risk management system, front-middle-back office systems;
- 3) Enhance transactional efficiency of asset management companies through underlying asset settlement platform for mutual fund.

In addition, SET is developing digital on-boarding services in collaboration with intermediary institutions such as electronic Know Your Customer (e-KYC) and electronic account opening (e-account opening) for stock and mutual fund. These services will serve as backbone services for new investment channels, reduce customer on-boarding cost for industry, and provide convenience for first-time investors, aiming to make investment easier for everyone.

3.2 Financial literacy & sustainability

SET has been operating by taking into consideration the environmental, social and governance (ESG) aspects aiming at being a role model of a sustainable organization. SET will move forward to implement major activities such as

- 1) Enhancing listed companies' quality by integrating ESG into business process and encouraging transparent ESG disclosure and corporate governance or CG reporting among small and medium-sized listed companies;
- 2) Increasing number of listed companies in Thailand Sustainability Investment Index (THSI) and international sustainability indices such as Dow Jones Sustainability Index (DJSI) and Morgan Stanley Capital International ESG (MSCI ESG), together with enhancing investor recognition for the investment in sustainability-driven companies.

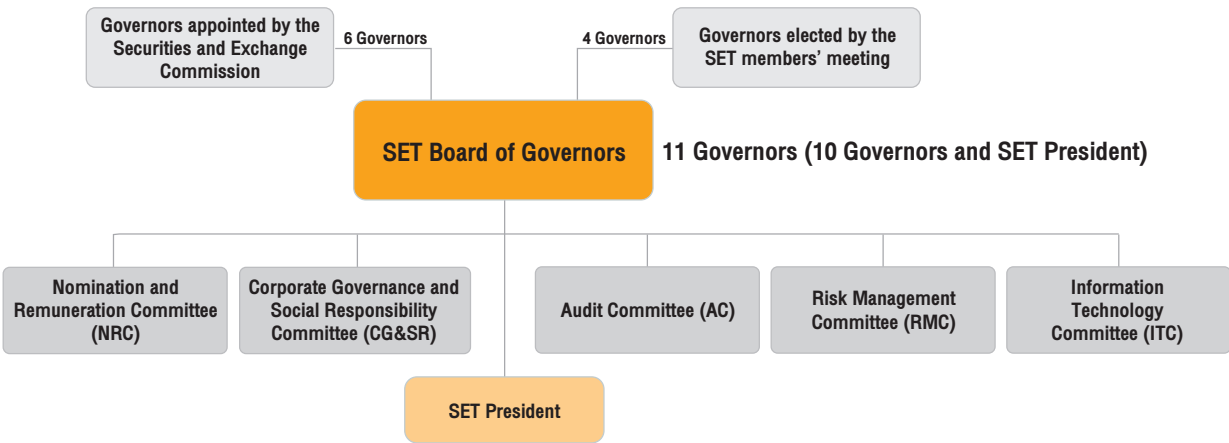
Moreover, SET also focuses on developing a comprehensive education platform both knowledgeable activities and education programmes to provide online financial knowledge to investors and general public. In addition, SET will also collaborate with partners including media, and public and private sectors in expanding channels with new presentation formats to reach wider audience, while using big data to analyze the learning journey and assess the performance effectiveness of various activities in terms of contents and presentation that can meet the needs of each target group to help build savings and investment culture in preparation for happy retirement.

Corporate Governance Report

Part 1 Corporate Governance Structure and SET Board of Governors

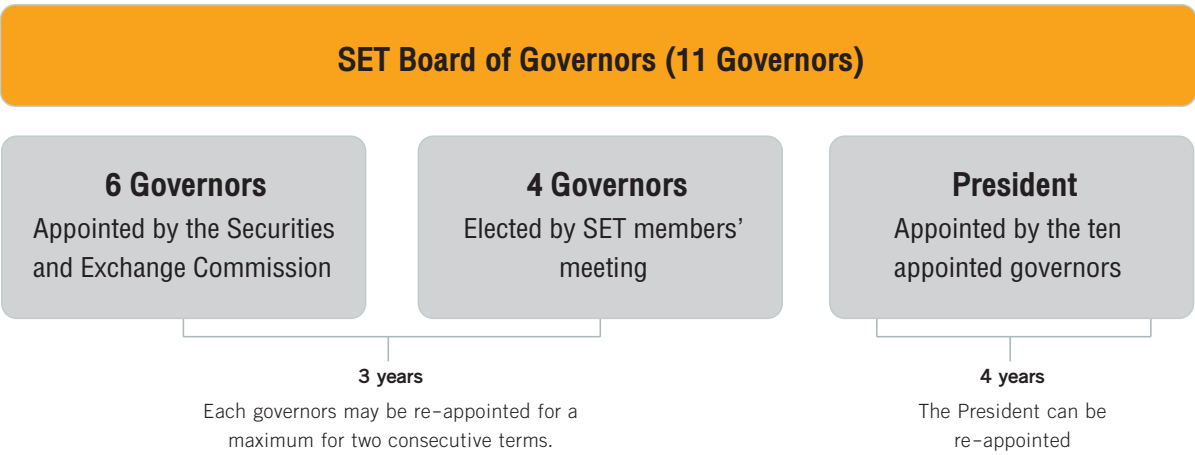
1. Corporate Governance Structure

The SET Board of Governors (BoG) oversees the operations of the SET group, under the leadership of the SET president who is accountable to the BoG. The president's duty is to run SET operations according to the policies prescribed by the BoG. The BoG has appointed the Corporate Governance and Social Responsibility Committee to screen important matters before presenting to BoG. The corporate governance structure is as follows:



2. The Board of Governors

In 2019, the Securities and Exchange Act (No. 6) was effective with the amended composition of the SET BoG. It specified that the SET BoG shall consist of not more than four individuals elected by the SET members' meeting and six individuals appointed by the Securities and Exchange Commission (SEC), selected from the list of individuals or organizations considered as stakeholders in the capital market taking into consideration the benefits of the entire capital market, while the SET president shall serve as an ex officio governor. Furthermore, the term of office of the governor, other than the SET President, is also extended from two years to three years to ensure continuity of the operation. This Act has been effective since April 17 2019. The composition of the current SET BoG is as follows:



(Name and profile of SET Board of Governors are under the topic of "Board of Governors")

The SET BoG considers it an important policy to strictly practice its duties in compliance with the legal regulations and SET's Corporate Governance principles in accordance with the standard of The Organization for Economic Co-operation and Development (OECD). Additionally, the SET BoG also suitably adopts and applies the corporate governance principles of the listed companies to the SET business undertakings with confidence that adherence to corporate governance practices is a vital foundation for sustainable growth.

Independence of the Board's practice and duties is in line with the corporate governance principle which can be summarized as follows:

Good Corporate Governance Practices	Results of SET Governors' practices
<ul style="list-style-type: none"> The chairman is an independent non-executive director, not the same person as the president and has no relationship with management. 	✓
<ul style="list-style-type: none"> The chairman is not a committee member of any of the various committees. 	✓
<ul style="list-style-type: none"> Governors have independence and impartiality in carrying out their duties 	✓ (the BoG requires that all governors, committee members and experts appointed by the BoG sign a Letter of Independence each time each person is appointed or reappointed for another term)
<ul style="list-style-type: none"> Any governor with any conflict of interest in the issue to be considered must notify the meeting of such interest and is not permitted to join that meeting. 	✓
<ul style="list-style-type: none"> Governors shall report the acquisition or disposition of listed securities and other interests. 	✓

According to the Securities and Exchange Act B.E. 2535, the BoG has to elect one governor, excluding the SET president, as chairman of the Committee. The chairman must be an independent non-executive director, not the same person as the president and has no relationship with management. The aim is to lead and play a key role in policy decision-making, with supports and suggestions in business operation to the management, without intervening in any routine activity under the management's responsibilities. In addition, the chairman shall not be chairman or member of any committee, to ensure independence and to be in accordance with good governance and best practice.

The SET BoG has appointed Mr. Rongrak Phanapavudhikul as BoG Secretary. The Corporate Secretary Department supports the Board by providing legal advice, keeping informed of key regulations, good corporate governance

practices, as well as systematically organizing meetings and meeting documentation, and taking care of the BoG's other activities while monitoring matters in compliance with the resolutions.

The SET BoG's scope of authority and responsibility is in line with the Securities and Exchange Act, the Charter of SET Board of Governors, and other relevant requirements. The SET BoG complies with the SET group's Corporate Governance Policy and Code of Conduct and has the authority to govern, form policies and control the operations to ensure sustainable growth, in line with the objectives, resolution of the SET BoG, including related requirements, and relevant regulations, while carrying out duties with prudence and honesty. The SET BoG takes into consideration the utmost benefits of the organization, stakeholders, and the country's economic system as a whole.

The Chairman's Duty

1. Convene the meetings of the Board and act as chairman of the meeting. In an event a final decision by the meeting is required and there is an equality of votes, the chairman shall have a casting vote.
2. Determine the agenda of the meetings of the BoG by consulting with the president to ensure that important matters are listed in the agenda.
3. Process the meetings of the BoG according to the agenda, relevant laws and good corporate governance. Allocate sufficient time and encourage all governors to participate in the discussion. Exercise prudent discretion and freely express opinion.
4. Oversee and follow up the performance of the duty by the BoG to ensure efficiency and achievement in accordance with the corporate goals.
5. Build good relationship between the Board and the management team.

The Board has delegated authority to the management team to manage certain functions such as:

- Regarding fixed assets and operating expenditures within the budget approved by the Board: Expenditure over THB 2 million must be submitted to the BoG for approval.
- The purchase or procurement of products or services, within the budget approved by the Board must not exceed THB 20 million. If over THB 20 million, must be submitted to the BoG for approval.
- The increase of manpower or the increase of employees' salary base must be within 10 percent. If over 10 percent, must be submitted to the BoG for approval.

3. The SET Committees

To ensure good corporate governance, efficiency and effectiveness of the SET BoG's operation in accordance with relevant requirements, various SET committees have been appointed as follows:

- Committee relating to good corporate governance consisting of Audit Committee (AC), Nomination and Remuneration Committee (NRC), Corporate Governance and Social Responsibility Committee (CG&SR), and Risk Management Committee (RMC).

Furthermore, in 2019 the SET BoG approved the setting up of the Information Technology Committee (ITC) with the objectives to promote the SET operations and provide constructive opinions to improve the IT-related operations, to foster the development of innovation and appropriate usage of technology to enhance the standard of the Thai capital market, as well as considering and granting the provision of IT projects or the IT maintenance in line with the budget specified by the BoG.

- Committees in charge of legal or regulatory requirements namely Legal Committee, Disciplinary Committee, Appeal Committee, and Securities Investor Protection Fund Committee

4. The Board of Governors and Committees' Meeting

The Securities and Exchange Act (No. 6) B.E. 2562, effective since April 17, 2019, requires that the Securities and Exchange Commission and SET members appoint or elect the new governors of the SET BoGs within 120 days following the effective date of this Act or no later than August 14, 2019. In this regard, four governors were elected at the meeting of the SET members on June 26, 2019 and six governors were appointed by the Securities and Exchange Commission at its meeting on August 1, 2019. The a forementioned appointment has been effective from August 5, 2019 onwards. Therefore, all of the ten new governor have started their duties from August 5, 2019.

In this connection, the BoG stipulated meeting schedules for the board for the whole year in advance to ensure that each governor could allocate their time to attend the meetings. However, in some cases the newly elected/appointed governors have a ready had previous engagements prior to the effective date. It has therefore resulted in the absence of some governors in attending Board meetings.

For the meetings of the BoG and committees, at least half of the total members must be present to constitute a quorum. If any member of the BoG or any committee has any interest in the issue to be considered, the member must notify the meeting of such interest. The minutes must record all declarations of possible conflict of interest and such member shall leave the meeting and refrain from voting on the issue.

The Chairman of the Board encourages non-executive directors to hold meetings among themselves to debate various issues without participation of the management. In 2019, the BoG held two meetings without participation of the management.

In 2019 SET convened the board meetings and committees meetings. The details are as follows:

Name of the SET BoG	BOARD (11 persons)	AC (3 persons)	NRC (5 persons)	CG&SR (5 persons)	RMC (8 persons)	ITC (7 persons)
Number of meetings	14 times	12 times	8 times	6 times	7 times	7 times
Chaiyawat Wibulswadi ¹	14/14					
Pattera Dilokrunthirapop ²	12/14	2/2	2/2		7/7	6/7
Professor Kittipong Urapeepatanapong ¹	2/7					
Charamporn Jotikasthira ¹	11/14		7/8	4/4	1/2	4/4
Thiti Tantikulanan ²	7/7				2/2	3/4
Norachet Sangruji ²	12/14	4/5	3/3	2/4	5/7	
Paiboon Nalinthrangkurn ²	7/7			2/2	2/2	4/4
Voravan Tarapoom ¹	13/14	10/10	8/8	2/2		
Sopawadee Lertmanaschai ¹	5/7	5/5	3/3	2/2		
Seree Nonthasoot ¹	12/14			1/2		
Pakorn Peetathawatchai	14/14		7/8	6/6	7/7	6/7
Governors whose terms ended during 2019						
Chaipatr Srivisarvacha	7/7	2/2	5/5		3/3	
Prinn Panitchpakdi ³	3/4			1/2		
Oranuch Apisaksirikul	7/7	7/7		4/4		
Anuchit Anuchitanukul	7/7	7/7				3/3
Experts/external Specialist						
Vachira Arromdee					5/7	
Professor Anya Khanthavit					5/7	
Pannaporn Sapsomboon						5/7
Pichet Sithi-Amnuai						6/7
Attendance rate	88%	97%	95%	86%	84%	86%

¹ Appointed, by the Securities and Exchange Commission, August 5, 2019

² Elected, by the SET members' meeting, August 5, 2019

³ Resigned, effective May 15, 2019

5. The Board of Governors and Committees' Remuneration

Subject to the provisions of the Securities and Exchange Act, the BoG Chairman and other BoG members will receive remuneration as determined by a meeting of member companies. This ensures that all payments are decided transparently and without the BoG's involvement.

The Nomination and Remuneration Committee examined the compensation policy and criteria for the BoG prior to proposing to the member companies' meeting for approval, in accordance with the provisions of the Securities and Exchange Act.

Monthly fees (THB)	BOARD	AC	NRC	CG&SR	RMC	ITC
Chairman	135,000	75,000	52,500	52,500	52,500	52,500
Members	90,000	50,000	35,000	35,000	35,000	35,000

As for committees in charge of legal or regulatory requirements, their members receive meeting allowance. The chairman of the committee receives the allowance of THB 15,000 per meeting and the committee member receives the allowance of THB 10,000 per meeting.

Total remuneration in 2019 (excluding the president)	BOARD	AC	NRC	CG&SR	RMC**	ITC**
Chaiyawat Wibulswasdi	6,046,613*	-	-	-	-	-
Pattera Dilokrunghirapop	1,080,000	83,929	88,125	-	504,617	431,794
Professor Kittipong Uraepatanapong	438,387	-	-	-	-	-
Charamporn Jotikasthira	1,080,000	-	418,871	374,274	145,645	218,468
Thiti Tantikulanan	438,387	-	-	-	145,645	145,645
Norachet Sangruji	1,080,000	208,065	169,355	249,516	395,161	-
Paiboon Nalinthangkurn	438,387	-	-	145,645	145,645	145,645
Voravan Tarapoom	1,080,000	480,588	598,931	218,468	88,125	-
Sopawadee Lert-manaschai	438,387	312,097	169,355	145,645	-	-
Seree Nonthasoot	1,080,000	-	-	145,645	-	-

Note

* The chairman's remuneration included THB 370,000 per month, as approved by the annual general meeting of member companies in accordance with the additional roles and responsibilities designated by the BoG.

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

6. Executives

SET senior executives consist of the president, seven senior executive vice presidents and 15 executive vice presidents, totaling 23 persons. The president is the top executive, responsible for running SET operations in accordance with SET policies, strategic goals, laws and others as specified by the BoG. They will also report the progress of the implementation of strategic plans and SET performance, including key operating results of the SET group and member companies to the BoG on a quarterly basis. On issues relating to the external parties, the president will represent SET and may assign other persons to carry out certain functions, but such delegation of power must not violate SET rules and regulations.

In considering remuneration for the president and senior executives, the BoG assigns the Nomination and Remuneration Committee to consider the remuneration policies and criteria for the committee members, president and senior executives and make recommendations for the BoG's approval. The criteria to assess the performance of governors, president and senior executives have been clearly prescribed and linked with the payment rate per specified criteria. The remuneration will be considered based on the organization's performance and the execution of policies assigned by the BoG together with other external factors such as the overall socio-economic conditions.

As of December 31, 2019, SET senior executives receive remuneration including salaries, allowances, special gratuities, bonuses and contributions to the provident fund from SET for 2019 worth a total amount of THB 243.27 million.

(Name and profile of senior executives are under the topic of "SET Executives")

7. Human Resources

SET recognizes that employees are the integral part of the organization's success and growth. Therefore, SET has focused on recruitment and compensation in terms of welfare and benefits as well as staff development by

adhering to the principles of equality, transparency, fairness, non-violation of human rights and enhancing the working atmosphere to create unity and employee engagement in the long run.

As of December 31, 2019, there were 741 employees working for SET and subsidiaries, consisting 231 male and 510 female staff. In 2019, SET paid a total of THB 1,939.47 million worth of compensation to employees consisting of salary, bonus and provident fund.

In addition, SET has enhanced the knowledge and understanding and provided training on environmental responsibility, safety, occupational health and environment for executives and employees. The activities carried out in 2019 are as follows:

Welfare benefits

SET provided life and health insurance, an in-house clinic with medical staff, financial welfare and emergency loans, provident fund scheme, savings co-operative unit, including scholarships for master's degrees both in Thailand and abroad for knowledge enhancement. In addition, SET has designed and arranged the workplace by applying ergonomic theory, and encourage work-life balance among employees.

Remuneration and career advancement opportunities

SET uses Balance Scorecard as a benchmarking tool, using KPIs to assess performance at corporate and individual levels, combined with employees' competency to consider remuneration and promotion for the management and employees. SET has a remuneration system competitive to leading corporations, corresponding with the economic situation and SET's long-term achievements. As a tradition, SET holds an annual ceremony to honor employees who have continuously worked in the organization for long periods, with token of appreciation at every five years of service, starting from year 10 onwards.

Employees training and development

As employees are valuable resources and key success factor of the organization, SET recognizes the importance of developing its human resources by providing career development programs both internal and external training as well as providing scholarships to employees to study for a master's degree to enhance employee competency and career advancement opportunities.

Training courses or programs attended by the SET executives and employees in an effort to enhance their operational efficiency in 2019 can be summarized as follows:

Training courses attended by senior executives	<ul style="list-style-type: none"> • Focused on the course with the aim to continually improve leadership competency such as: <ul style="list-style-type: none"> -Strategy and innovation for business in Asia -TLCA executive development program -Thailand Insurance Leadership Program -CMA-GMS International Program -The Executive Program in Energy Literacy for a Sustainable Future -The Young Executive Program in Energy Literacy for a Sustainable Future -Capital Market Academy Programs-Executives Education -Digital Economy CEO Program
Internal training programs	<ul style="list-style-type: none"> • Focused on online learning courses in line with digital lifestyle • Focused on fostering leadership and management quality • Organized knowledge sharing sessions about health, finance, and technology on a monthly basis
External training program	<ul style="list-style-type: none"> • Participated in training programs organized by external parties to increase specialization and expand business network to external organization to improve operational standard to match that of the leading organizations

Furthermore, SET promoted knowledge and organized training courses about environmental responsibility, safety, occupational health, and workplace environment for executives and employees. In 2019, these actions were taken:

(1) Social responsibility

- SET initiated various environmental protection campaigns to become “Green Office” such as
 - “Zero Foam ... No Plastic” campaign, organized to encourage SET’s staff to stop using polystyrene foam and plastic containers and use eco-friendly containers and cloth bags instead
 - No plastic bags project, campaigning among SET staff and visitors at SET’s green canteen
 - Minimal desk arrangement in green office style

(2) Safety, occupational health and environment

- Organized training courses to share knowledge with the executives and employees such as
 - Organized training courses related to workplace safety for a total of 24 batches, participated by 691 executives and employees—accounting for 90% of the total workforce, namely workplace safety procedures according to the manual related to workplace safety, fire prevention and control training, CPR training, demonstration of Automated External Defibrillator (AED) use in order to reduce the loss of life in the event of cardiac arrest
 - Organized training courses according to legal requirements such as a training course for employees related to workplace safety and registered a total of 481 employees with the Department of Labour Protection and Welfare, consisting of 84 executives at the management level and 126 supervisors
- Organized the annual fire drill and evacuation exercise in March 2019, participated by 1,060 employees, accounting for 93.6 percent of total employees

Number of sick leave days and accident or sickness rate

In 2019, the employees' sick leaves were recorded at approximately 2.9 man-days/year with no incidents that risked disruption to work, or contraction of diseases arising from work.

Part 2 Corporate Governance**1. Corporate Governance Policy and Code of Conduct for the SET group**

The BoG has approved the SET group's Corporate Governance Policy and Code of Conduct and expects that governors, committees, experts, and employees at all

levels of the SET group strictly adhere to the SET Policy and Code of Conduct. In 2019, the governors, committees, and employees of the SET group fully complied with the SET group's Corporate Governance Policy and Code of Conduct. There was no misconduct case that was against the requirements and relevant laws governing operations of the SET group and the governors and employees neither exploited internal data nor misused their authorities to acquire or sell listed securities.

The contents of the SET group's Corporate Governance Policy and Code of Conduct cover two parts. The first part is 'Corporate Governance Policy' which focuses on the principles in compliance with the OECD practice. SET has applied such principles in three sections : Section 1 : Roles and Treatment of Stakeholders; Section 2 : Disclosure and Transparency; and Section 3 : Responsibilities of the Board. The second part of the content is about 'Policies and Code of Conduct' which specifies the policy and code of conduct for business operations; code of conduct for governors, committee members, experts and consultants; and code of conduct for employees. Additional details are available on the SET website.

SET's key activities to enhance corporate governance are summarized as follows:**Principle 1 Roles and treatment of stakeholders**

SET plays a vital role in developing the capital market and the Thai economy. We treat all groups of stakeholders with transparency and fairness. We also place importance on sustainable development for the capital market and all stakeholders. The key points are as shown below :

Capital market stakeholders e.g. member companies, listed companies, asset management companies, etc.	Listening to stakeholders and related parties' views, both on regulatory adjustments and new regulations issuance, including creating a clear understanding in compliance with the SET regulations and standards. Organizing extensive public relations activities to promote company profiles, including facts and figures of listed firms, securities and asset management companies, for the benefit of investors and the public
Investors and the public	Developing a variety of financial instruments, products and services with service excellence and providing accurate and adequate information accordingly. Providing complete, accurate and updated information. Providing effective two-way communication channels for investors and the public to access business information as well as to report complaints. Customer information must be kept confidential and must not be used for the benefit of one's own or other persons
Business partners	Treating suppliers and business partners with fairness and transparency, based on mutual benefit. Avoiding dishonest conduct purposely carried out to benefit suppliers/ business partners. All parties must strictly comply with contractual agreements, obligations and conditions. Encouraging partners on the importance and respect of human rights, and consideration of social and environmental aspects. Monitoring and evaluating the business partners to develop business transactions in a sustainable manner
Employees	Providing development programs to enhance employee competency and career advancement opportunities. Managing remuneration and other benefits for employees and management, taking into account the economic situation and SET's long-term achievement, competitively to other leading organizations. Protecting the safety and welfare benefits of employees with equal treatment and Non-Violation of Human Rights. Setting up effective communication channels between management and staff and implementing activities regularly and consistently, covering strategic objectives and directions for the capital market. In addition, all employee opinions and suggestions must be fairly and equally treated.
Creditors	Complying with contracts or agreements transparently. Managing effectively to ensure that creditors have trust in SET's financial status and debt repayment ability (solvency)
Competitors	Competing fairly, not seeking to obtain competitive intelligence dishonestly and not being involved in illegal actions to gain competitive information or beat competitors
Government sector	Supporting the government's policies, in compliance with the rules and regulations of regulatory commission entities, as well as promoting and supporting various government activities to strengthen national stability and growth
Society, community and the environment	Keeping in mind the responsibilities to the society, community, and environment, ensuring the employees are knowledgeable about CSR and strongly encouraging employees' participation in CSR activities (Please find more details in SET's Sustainability Report 2019.)

Customer satisfaction survey

The results of a survey measuring satisfaction in the SET group's services in 2019 among customers and concerned parties consisting of listed companies, member companies, asset management companies, etc. found that the overall satisfaction score was 83%.

Compliance with laws, rules and regulations

The SET BoG realizes the importance of and strictly complies with the provision of Securities and Exchange Act B.E.2535 and all related laws regarding money laundering, labor, and intellectual property. In 2019, SET had no case that violated the laws relating to labor, employment, consumer protection, trade competition and environment.

Whistle-blowing policy

The SET established the policy to provide opportunities for all groups of stakeholders to report or voice their concerns about controversial issues, infringement of rights, unlawful or unethical conducts, incorrect financial report, and defective internal control system of the SET group. In addition, the whistleblower protection policy is also formulated where the persons reporting such matters can either reveal their identity or remain

anonymous. The SET office who takes such whistleblowing information shall keep the information confidential and take into account the safety and damage possibly incurred to the reporting persons. In this regard, those who suffer from the damage shall be entitled to fair and appropriate process. SET arranges for whistleblowing channels to report non-compliance issues and complaints as follows:

For stakeholders	<p>Issues and complaints can be directly submitted to SET via:</p> <ol style="list-style-type: none"> 1. Email: whistleblow@set.or.th 2. Postal mail: Internal Audit Department The Stock Exchange of Thailand 93 Ratchadaphisek Road, Din Daeng, Bangkok 10400 3. SET Contact Center: 02 009 9999 (during business days/ hours) SET Contact Center will further submit the information and complaints to SET's Internal Audit Department.
For employees	<p>Submit whistleblowing information or report any violating action to Human Resource Department, Compliance Department, and supervisors at all levels that they trust</p>

In this connection, whistleblowing information and complaints submitted to SET will be examined, assessed, and filtered to study possible impact. The matters will be presented to the Audit Committee to consider whether appropriate measures to be carried out in line with the set complaints handling process.

In 2019, SET received two cases of whistleblowing information and complaints. One case was already resolved according to the SET group's Corporate Governance Policy and Code of Conduct, as not related to violation of ethical conduct, while another case is currently in consideration process.






Principle 2 Disclosure and transparency

SET plays a vital role in encouraging listed companies to disclose their information accurately and transparently. The BoG oversees to ensure that important information is disseminated sufficiently, accurately, timely and transparently. The information is available in both Thai and English through easily accessible channels with fairness and credibility.

The information disclosed through the SET website include the business operations, both financial and non-financial information, of the SET group, information for listed companies and securities companies and information for investors or interested persons, among others.

SET financial reports : SET's annual financial report, including audited financial statements and Management Discussion and Analysis will be available on the website no later than 60 days after year-end, (same criteria as listed companies). The 2019 SET financial report was published on February 19, 2020. The BoG provides a statement of its responsibilities related to the SET financial reports alongside the auditor's report in the SET's annual report. SET's annual report is also available on its website no later than 120 days after year-end, (same criteria as listed companies). SET's 2019 annual report will be circulated to the members' meeting (April 27, 2020).

SET provides various communication channels for all stakeholders for information, enquiry, including advice on the SET group's services, via SET Contact Center, as follows:

	0 2009 9999		SETContactCenter@set.or.th
	www.set.or.th/contactcenter		Customer Contact Department
	www.facebook.com/set.or.th		The Stock Exchange of Thailand
			93 Ratchadaphisek Road, Din Daeng, Bangkok 10400

Enquiries on SET services via SET Contact Center are handled accordingly and appropriately.

Principle 3 Responsibilities of the Board

SET strictly performs its operation according to the Securities and Exchange Act and relevant laws. In this regard, the Board exerts authority to formulate policies as well as governs and oversees the SET group's operations and other operations in line with the Act. The SET president is responsible for managing SET's business in accordance with the policies, rules and regulations, as well as the Board's resolutions.

(Details of compositions of the BoG, duties and responsibilities of the Chairman, roles and responsibility of the governors, and committee appointment are included in 'Management Structure and the Board' provided in this report.)

The details of the scopes of duties and responsibilities of the Board are included in the SET's Board of Directors' Charter already approved by the Board to be prepared in writing which is now available on SET's website. Furthermore, to ensure that governors are fully capable of performing the tasks, each governor shall not hold a position in more than three listed companies except for the position being *held before elected or selected as the members of the Board*.

Establishment of vision, mission, and strategic plan

The BoG has established vision, missions, objectives, and long-term strategic framework as well as conducting assessment on environmental conditions, global mega trend, capital market participants, including policies of the government and regulatory agencies likely to have impact on the SET group's operation. These efforts will enable SET to improve the corporate strategic framework in line with the changing landscape, placing primary focus on the adoption of technological innovations to enhance business efficiency.

The BoG's meeting no. 12/2562 dated October 19, 2019 considered and reviewed the vision and missions, and approved the three-year strategic framework (2020–2023) under the vision “To make the capital market ‘Work’ for everyone” by focusing on creating ‘Partnership platform to drive inclusive growth’. Furthermore, the organization will be restructured to efficiently drive new sets of strategies to better respond to the capital market's stakeholders, enhancing competitive capabilities of the Thai capital market, while creating benefits for all stakeholders for sustainable growth. There are two main operational objectives to be achieved (1) enhance internal operational efficiency and pass on to stakeholders (Efficiency) and (2) strengthen potential of the Thai capital market to satisfy the needs of all stakeholders for sustainable growth (Enabling). Furthermore, the United Nations' (Sustainable Development Goals (SDGs) will also be put into practice to develop the capital market toward sustainability for the benefits of the society and the economy as a whole.

In order to achieve the aforementioned targets, SET has formulated the strategic plan for the period of the year 2020–2023 by placing focus on three dimensions: (1) Grow with efficiency by upgrading its operation, updating regulations for stakeholders, creating innovations, and using data to expand business (2) Grow with new opportunities by connecting products and services internationally with the expansion of comprehensive crowdfunding opportunities for SMEs / startups (3) Grow with stakeholders and sustainable society by developing digital infrastructure and expanding business collaboration with stakeholders, as well as providing financial knowledge and promoting sustainable growth of Thailand’s business and society.

Furthermore, the BoG has established the short-term and long-term corporate KPIs, budget, workforce, and 2020 corporate KPIs in parallel with overseeing its operations to meet specified objectives in an efficient and effective manner. In 2019, the management functions reported the status of corporate KPIs, progress on compliance with strategic framework, and SET’s performance to the Board regularly on a quarterly basis.

Performance Evaluation for the President

The Nomination and Remuneration Committee examines the compensation policy and criteria for the president based on the compensation rate according to specified criteria by considering business performance and policy execution as assigned by the BoG together with other external factors such as the overall socio-economic environment.

Succession planning

SET places importance on succession planning to ensure the work progress and continuity of top executive positions. The Nomination and Remuneration Committee will review and present recommendations to the Board for consideration and approval. The successor recruitment and development process is jointly planned with

experienced consultants using criteria on knowledge, experience, capability, attitude and ethics. The committee regularly reports to the BoG meetings.

Enhancement Plan for the Board of Governors

SET gives utmost importance to the continuous and consistent enhancement plan for the governors. SET governors participate in educational courses and observe business activities of various stock exchanges both in Thailand and abroad in order to enhance their knowledge and broaden their perspectives. For a new governor, SET will provide an orientation about SET operations, strategic plan, business plan and the overall operations of the subsidiaries. New governors will also receive a Board of Governors manual which contains key facts and other useful information which are essential for performing their duty.

Enhancement of governors’ competency

In 2019, the SET governors participated in training programs and seminars to enhance their understanding about roles, duties, and responsibilities as well as to equip themselves with necessary skills to perform tasks as governors such as

- Training program on ‘Corporate Governance for Capital Market Intermediaries’, organized by the Thai Institute of Directors (IOD), attended by Sopawadee Lertmanaschai
- Seminar on ‘SEC Capital Market Symposium 2019’ under the theme ‘Competitive and Accessible for Sustainable Development’ to strengthen collaboration for preparing and presenting capital market research projects as well as disseminating knowledge to the general public, among other programs.

In addition, the governors also participated in knowledge sharing panels regarding the industry developments to foster and reinforce collaborations among the SET members in ‘CEO Networking 2019’ event, organized by SET.

Current governors/ Courses		DCP	DAP	RCP	AACP	ACP	RMP	RCC	CGI	others
Chaiyawat	Wibulswasdi	✓	✓							
Pattera	Dilokrunthirapop	✓	✓	✓				✓	✓	
Professor Kittipong	Urapeepatanapong	✓		✓						DCP Re, TTT
Charnporn	Jotikasthira	✓	✓							ITG
Thiti	Tantikulan								✓	
Norachet	Sangruji	✓	✓						✓	
Paiboon	Nalinthrangkurn	✓								
Voravan	Tarapoom	✓		✓		✓	✓	✓	✓	MFR, MIR, ELP, SFE
Sopawadee	Lertmanaschai	✓								
Seree	Nonthasoot	✓	✓			✓			✓*	SFE
Pakorn	Peetathawatchai	✓	✓						✓	

✓ *seminar course which governors attended in 2019

DCP: Director Certification Program

DAP: Director Accreditation Program

RCP: The Role of Chairman Program

AACP: Advance Audit Committee Program

ACP: Audit Committee Program

RMP: Risk Management Committee Program

RCC: Role of the Compensation Committee

CGI: Corporate Governance for Capital Market Intermediaries

ITG: IT Governance and Cyber Resilience Program

MFR: Monitoring the Quality of Financial Reporting

MIR: Monitoring the System of Internal Control and Risk Management

ELP: Ethical Leadership Program

SFE: Successful Formulation & Execution of strategy

2. Corporate Governance

The BoG specified that the SET group’s Corporate Governance Policy and Code of Conduct be reviewed on an annual basis. The Corporate Governance and Social Responsibility Committee has been assigned to consider and screen the document before presenting it to the BoG for approval. In 2019, the BoG granted the approval at its meetings dated June 19, 2019 and November 20, 2019 for the update of the SET group’s Corporate Governance Policy and Code of Conduct covering the following essence:

- Added the information related to the SET Corporate Governance Policy and Structure; compositions, duties, responsibilities of the committees appointed by the BoG; scopes of authority of the management functions and management committees appointed by the SET president, including supervisory guidelines for subsidiaries and affiliates
- Updated the contents of the policies and code of conduct in doing business concerning the preventing of conflict of interest, whistle-blowing policy, including the details of Code of Conduct for the SET BoG and SET employees on providing information and viewpoints to the public and outsiders
- Added the details on the policy for specifying consecutive terms of office for governors, committee members of various committees being external individuals to ensure independence of the committee members responsible for supporting the operations of the governors

At the same time, SET has carried out activities to promote and raise awareness and understanding of the staff in compliance with CG principles and code of conduct for the SET group regularly and continuously, including the following activities:

- Organizing orientation sessions for new governors and employees under the topic of corporate governance policy and code of conduct for the SET group by summarizing the essence of the code of conduct including important rules, such as regulations relating to the acquisition or disposal of securities, anti-corruption policy and policy to prevent and eliminate conflict of interest, etc.
- Disseminating articles via electronics channels regularly to create understanding of the essence of corporate governance principles, employee ethics and rules and regulations related to employees
- Promoting staff participation in training and seminars related to corporate governance to enhance knowledge and understanding continuously, both the ones organized by SET and by other organizations.

The Compliance Department under the Legal Affairs Division performs its duty with independence in presenting to the Corporate Governance and Social Responsibility Committee the revision of the corporate governance policy and code of conduct for the SET group as well as related CG guidelines. After the Committee has considered and provided opinions, the revised document will be submitted to the BoG for approval. These include recommendations and follow-ups on the implementation in accordance with the policy and regulations specified by SET. All these operations are reported to the Audit Committee and Corporate Governance and Social Responsibility Committee on a regular basis.

In addition, SET also promoted the enhancement of the listed companies' quality in running their business by adhering to corporate governance principles with social and environmental responsibility, while increasing strength, growth, and operating business in a sustainable manner. In addition, SET has also encouraged listed companies and member companies to enhance their

personnel capabilities as well as professionalism of intermediaries in the capital market. All these efforts have contributed to the continuity of CG standard development of the listed companies and they have placed increasing focus on sustainable business growth. Some of the achievements in 2019 are as follows :

- 20 Thai listed companies were internationally recognized as members of the Dow Jones Sustainability Indices (DJSI) for the sixth consecutive years—the highest number of the ASEAN companies that received such recognition. Out of this number, seven companies received the world's highest sustainability scores in seven industries (an increase from five companies in 2018). Most companies with outstanding sustainability performance are in the industries that play significant role in growing Thailand's economy with impact on the country's employment rate.

3. Internal Control and Risk Management

Internal Audit and Internal Control

Realizing the importance of efficient internal control at all levels, the BoG has strongly supported management in setting up transparent working processes, restructuring and segregating duties with checks and balances, clearly specifying authority and putting things in writing. Monitoring system has also been set up. The BoG has appointed an Audit Committee to supervise and review SET's internal control system to ensure conformity with international standards, and the Internal Audit Department to review internal control in various systems such as operation process, financial reporting and compliance with rules and regulations of the regulator. These are to ensure that SET operations are based on the internal control guidelines and framework of The Committee of Sponsoring Organization of Tradeway Commission (COSO).

The Internal Audit Department is an independent function that reports directly to the Audit Committee on audit matters. Administrative matters have to be reported directly to the SET president. Audit Committee members

consider the appointment, transfer or removal, and evaluate the Head of the Internal Audit Department. In 2019, Chanapai Supphasuk was Head of the Internal Audit Department.

The Internal Audit Department is independent in the access of necessary information for auditing. The Internal Audit Department audits and evaluates the adequacy, suitability and efficiency of the internal control system of various procedures and systems according to SET's annual audit plan, developed by using a risk-based approach which is reviewed annually to match with change of risks, to be approved by the Audit Committee. The audit findings and follow-up results on the management's operation have been directly reported to the Audit Committee continuously.

In 2019, SET conducted various activities and key projects to support the development and enhance efficiency of internal control and internal audit. The details of key projects can be summarized as follows:

- SET developed a new computer system to support new transactions such as Payment System for Capital Market (Interbank) and SET Link system, etc. by focusing on developing the system to ensure good internal control, with intensive system testing and incompliance with relevant regulatory requirements. The Internal Audit Department has been assigned to perform the pre-implementation review.
- The Internal Audit Department has developed the quality of internal audit operation on a continuous basis. The officers of the Internal Audit Department participated in domestic and international training programs/seminars to enhance their competencies and specialization, such as ACIIA Seminar 2019 in Japan and other training programs where they received a total of 14 certificates such as CIA, CISA, CSX, CPIAT, and other relevant certificates. In 2019, the officers of the Internal Audit Department attended training courses for a total of 73 man-days and received certificates from both domestic and overseas institutions. In addition, the audit software has also been developed to enhance the efficiency and quality of the audit operation.

- SET carries out a Quality Assessment Review (QAR) to assess the effectiveness of internal audit activities based on the International Professional Practices Framework. The Internal Audit Department conducts "peer review" assessment every year and hires external independent appraisers every five years for efficiency in line with international standards. The last assessment by external independent appraisers was in 2016.

Risk Management

The BoG places emphasis on the systematic risk management framework whereby the BoG exercises supervision over the management functions to comprehensively manage the organizational risks in an efficient and effective manner and to promote and support operations related to enterprise-wide risk management. In this regard, the Risk Management Committee has been established consisting of a group of experienced expert, at least one of whom should be an expert who possesses experience in the information and technology and one of whom should be expert with experience in risk management to screen and give opinions and recommendations to the BoG and management functions. This is to appropriately formulate policies and risk management framework and ensure that the risk management operation is in accordance with the policy, framework, and SET's risk management process covering IT risks, cyber security risk, operational risk, financial and investment risks. The Committee is also responsible for reporting significant risks of the SET group to the BoG on a regular basis. In addition, the Risk Management Department is also responsible for supporting the operation of and reporting the risk management performance to the Risk Management Committee for acknowledgement. Furthermore, the Department performs task as a risk liaison function responsible for coordinating and taking relevant actions related to risk management of the SET group, as well as supporting the SET subsidiaries by providing guidelines in compliance with the risk management framework and process.

4. Principles to Support Honest and Transparent Business Operation

Anti-Corruption

SET's BoG realizes the importance of conducting business with integrity and transparency. The BoG approved the "SET's Anti-Corruption Guidelines", indicating best practices for governors, committee members, advisors/ experts and employees. The guidelines specify the principles in line with best practice to combat

corruption as regulated by the Private Sector Collective Action Coalition Against Corruption Council (CAC) and adheres to the principle of No Gift Policy to establish a good governance and best practice for employees to follow with transparency, without conflict of interest. The policy has been communicated to listed companies, member companies and related agencies in the Thai capital market. SET is a member of the Anti-Corruption Organization of Thailand.

Key supporting activities to implement the Anti-misconduct and Anti-corruption policies in 2019:

Communication in the Anti-Corruption policy	<p>Internal</p> <ul style="list-style-type: none"> -Disseminated "SET's Anti-Corruption Guidelines" and "No Gift Policy" via internal site. -Organized orientation sessions on SET's Anti-Corruption Guidelines for new employees. <p>Suppliers, listed companies, other stakeholders, etc.</p> <ul style="list-style-type: none"> -Communicated the key points and essence of policy and measures with listed companies and securities firms via letters and articles by addressing directly to managing directors. -Disseminated anti-corruption measures and no-gift policy to organizations or individuals directly involved.
Risk assessment	<p>Fraud and corruption are considered key risks facing the organization. Every year, each department must evaluate and identify the measures required to manage such risks. Each department has to continuously monitor and report risk status to ensure that SET can handle risks in a timely manner and manage risks efficiently, keeping them at an acceptable level. The Risk Management Department regularly tracks and reports risk status to senior management, the Risk Management Committee and the SET Board of Governors, keeping them constantly informed. The Internal Audit Department verifies the effectiveness of internal control measures related to the prevention of fraud and corruption.</p>
Monitoring	<p>The Compliance unit is directly responsible for consulting with and providing suggestions to staff, as well as ensuring that SET operations comply with SET anti-corruption policy and guidelines. In addition, this unit manages whistle-blowing from staff who has found actions likely to lead to corruption, coordinating with the internal audit unit for investigation, for transparency and fair treatment with all parties and then report to the SET president and the Audit Committee.</p>
Creating awareness among governors, executives and staff	<p>SET has continuously encouraged our governors, executives and employees to participate in various activities to support anti-corruption efforts, for example:</p> <ul style="list-style-type: none"> -On September 6, 2019, the SET group's team joined the "National Anti-Corruption Day 2019" organized by Anti-Corruption Organizations of Thailand, under the concept "Synergy ... Volunteering to fight corruption" at BITEC Exhibition and Convention Center, Bangna (east of Bangkok). -On December 9, 2019, the SET group's team attended the "International Anti-Corruption Day (Thailand) 2019" organized by the Anti-Corruption Organization of Thailand, joined by both public and private sectors, under the concept of "Zero Tolerance : Thais do not tolerate corruption." at Impact Exhibition and Convention Center, Muang Thong Thani (north of Bangkok).

Acquisition or disposition of listed securities by governors and employees

To foster public trust in The Stock Exchange of Thailand, the SET Board of Governors has stipulated the securities trading practices that governors and staff are required to follow. These practices require that subscription to and

trading of securities must be done honestly, without exploitation of confidential information or misuse of authority or position. SET governors and employees are required to follow specified procedures in the acquisition or disposition of listed securities. Governors must report on their securities holdings or those of their spouses, cohabiting couple or minor children. Such reports shall remain confidential.

(Please find more details on "Acquisition or disposition of listed securities by governors and employees" on SET website.)

Managing conflict of interest

In order to prevent employees from engaging in any act that may lead to conflict of interest, SET has established the guidelines for such as:

- Not allowed to serve as the boards or consultants of listed companies or member firms
- If serving as a board member of other companies or organizations, must seek prior approval from the President. In case of the President, must seek prior approval from the Chairman.
- If involving in transactions with SET, must disclose in writing any relationship, both direct and indirect, with related person engaged in those transactions, and must abstain from participating in the procurement process, among other guidelines.

As of December 31, 2019, no SET senior executives served as director, sub-committee member or consultant in a listed company or a member company, except for companies under the SET group and organizations or agencies related to the development of the Thai capital market.

Policies on confidentiality and data usage

To protect and safeguard SET confidential information and prevent information leak, SET has created the Data Classification Policy. Written procedures and guidelines for data classification have defined categories and criteria, to be used by SET to classify data and specify the roles and responsibilities of employees within the organization. SET has instructed the business functions to follow this policy and has also provided appropriate tools for data disclosure in the most effective and efficient manner, as well as preventing data leak.

In addition, in 2019, SET announced the 'Measures to prevent the acquisition of confidential information between functions and employees (Chinese Wall)', written procedures and guidelines for the organizational structures by clearly separating the functions of the unit and personnel in charge of confidential information from the other functions, as well as appropriately creating management measures to handle key and confidential data.

5. Information and Communications Technology

The BoG emphasizes the importance of security management of the information technology (IT) system. The BoG has approved the Information Technology Management and Information Security Management Policy framework in line with international standards and related rules and criteria as appropriate. Emphatically, all employees have to make use of IT carefully for utmost benefit to the organization with no negative impact on SET or stakeholders.

Today the SET group manages state-of-the-art technology that is efficient and world-class in line with ISO27001 (Information Security Management System), ISO 20000 (Information Technology Service Management System), etc. The IT Management and Information Security Management Policy and measures are based on the principle of Confidential, Integrity, Availability (CIA), in compliance with ISO27001.

6. Compensation for External Auditors

- **Audit Fee** : In 2019, The Stock Exchange of Thailand and its subsidiaries paid the audit fee of THB 4,325,000 to the audit firm.

- **Non-Audit Service Fee** : The Stock Exchange of Thailand paid the other service fees of THB 532,880 to the audit firm for the cost of a Black Box Penetration Testing, and the speakers of the seminar course under the topic of "Supply Chain Management". The management considered that using the audit firm's other services apart from an audit work is not regarded as conflict of interest and not self-examined. This did not result in the lack of independence nor impartiality in auditing, and has been approved by the Audit Committee.

Committees of The Stock Exchange of Thailand (SET) 2019

1. Appeals Committee
2. Audit Committee
3. Corporate Governance and Social Responsibilities Committee
4. Disciplinary Committee
5. Information Technology Committee
6. Legal Committee
7. Nomination and Remuneration Committee
8. Risk Management Committee
9. Securities Investor Protection Fund Committee

1. Appeals Committee

Support unit: Enforcement Department

Structure: The committee consists of three to five members (appointed by the SET BoG with the approval of the SEC Board) Each member must be expert in at least one of the following fields: law, accounting and finance, or securities business.

Term: October 3, 2019–October 2, 2021 (two-year term in compliance with the SET regulation : Consideration and Decision on Appeal, 2000)

Name		Position
1. Kulpatra	Sirodom	Member
2. Chalee	Chantanayingyong	Member
3. Wanchart	Santikunchorn	Member

Responsibilities of the Appeals Committee are

1. To review any appeal made against any punishment or orders issued by the SET BoG, Disciplinary Committee or President, and to determine the innocence or guilt of appellants
2. To review any request for suspension of punishment execution orders (if any) and may also specify conditions or collaterals as necessary
3. To advise the SET BoG regarding punishments, reductions in punishments, orders not to punish, or confirming punishment orders being appealed, or any other matters raised by appellants
4. To give an order to cease and dispose of the appeal if the appellant withdraws the case before or during the process of the consideration and decision of the Appeal Committee

2. Audits Committee

Support unit: Internal Audit Department

Structure: 1. Members consist of three to five SET governors.

2. At least half must be governors appointed by the SEC.

3. At least one member must have knowledge, understanding and expertise in accounting, finance or auditing.

Term: Until the end of each given person's tenure as governor

Name		Position
1. Sopawadee	Lertmanaschai	Chairman
2. Voravan	Tarapoom	Member
3. Norachet	Sangruji	Member

Responsibilities of the Audit Committee are

1. Financial report

- (1) To review financial reports of the SET group and the SET Foundation
- (2) To consider and review the accounting policies
- (3) To review important items or unusual transactions that have an effect on the Financial Statements

2. Internal Audit

- (1) To consider and review the operations of the internal audit department
- (2) To consider internal audit plan
- (3) To consider budget and resource of internal audit
- (4) To consider and approve the appointment, transfer, termination of employment, compensation, and evaluate the performance of the head of the internal audit department

3. External Audit

- (1) To advise management on the appointment of SET's auditor and determine the auditor's remuneration, and evaluate performance of the SET group's auditor and the SET Foundation's auditor
- (2) To review the audit scope and planning of the SET group's auditor and the SET Foundation's auditor

4. Internal Control and Risk Management

- (1) To consider and evaluate the adequacy of the internal control system and risk management of the SET group
- (2) To ensure compliance with the laws and regulations of the regulatory entities of the SET group including the standard and internal regulations as specified by the SET group

5. Whistleblowing and Fraud

- (1) To review and proceed to report clues and investigate the conflicts or suspicions of illegal behavior, ethics, rights violations, invalid financial report, deficiency of internal control system and fraud
- (2) To review fraud preventive and detective processes

6. Any duty related to the Audit Committee as assigned by the BoG

3. Corporate Governance and Social Responsibilities Committee

Support unit: Corporate Governance Development Department

- Structure:**
1. At least three SET governors
 2. At least half must be governors appointed by the SEC.
 3. Committee Chairman must be appointed by the SEC.

Term: Until the end of each given person's tenure as governor

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

Responsibilities of the Corporate Governance and Social Responsibilities Committee are

1. Corporate governance and social responsibility for the SET group
 - 1.1 SET's Corporate Governance (CG)
 - (1) To consider and advise the SET BoG regarding the SET's CG framework in line with the SET operational structure and comparable to international standard on CG practices or principles
 - (2) To consider the appropriateness and adequacy of the CG and best practice policies of the SET group, improving in line with the international principles before presenting to the SET BoG for consideration
 - (3) To examine the SET CG report as disclosed in the annual report
 - (4) To recommend the development plan of the SET group in accordance with the SET policy
 - (5) To provide consultation, advice and suggestions to the SET BoG and management on CG development of the SET group
 - (6) To advise the appropriateness of the BoG charter before presenting to the BoG for consideration
 - (7) To consider and recommend regarding the BoG performance assessment process, as well as preparing the summary of the assessment result before presenting it to the BoG
 - 1.2 Social Responsibility (SR)
 - (1) To consider and recommend the SR policy framework and SR development guidelines in line with international standard on SR practices or principles in order to ensure sustainable growth for the SET group, before presenting them to the SET BoG for consideration
 - (2) To recommend the preparation of SR development plan of the SET group according to the set SR policy framework
 - (3) To provide consultation and suggestions, including recommendations to the SET BoG and management regarding SR development of the SET group

2. Corporate governance and social responsibility for listed companies, social enterprises and related organizations in the capital market

2.1 To consider and recommend to the SET BoG regarding policies framework and development guidelines to enhance listed companies, social enterprises and related organizations in the capital market, including building systems and developing guidelines to implement CG and SR principles in the companies' management to achieve sustainable growth as well as creating value added for the Thai capital market, the society and the country

2.2 To provide consultations and suggestions to the SET BoG, and the SET management for the benefit of CG and SR development to enhance the Thai capital market

2.3 Others: To carry out other duties assigned by the BoG within the scope of related work

4. Disciplinary Committee

Support unit: Enforcement Department

Structure: The five committee members consist of:

1. At least one member being a SET governor
2. At least one member having expertise and experience in the Exchange business, securities business or finance
3. At least one member being a legal expert
4. At least one member being the SET president or an executive being at least Executive Vice President, assigned by the SET president

Term: The term ends on December 31, 2020 (a two-year term according to Consideration of Offence and Disciplinary Action, 2000)

Name		Position
1. Kitipong	Urapeepatanapong	Chairman
2. Seree	Nonthasoot	Member
3. Chao	Arunyawat	Member
4. Sutthi	Sookying	Member
5. The SET president or an executive being at least Executive Vice President, as assigned by the SET president		Member

Responsibilities of the Disciplinary Committee are

1. To examine any alleged wrongdoing and punish any individual or juristic person who violates or associates in violating SET's rules and regulations, and report the punishment to the SET BoG, except in cases concerning
 - (1) securities delisting
 - (2) temporary trading suspension of a member company
 - (3) membership revocation
 - (4) other cases as specified by the SET BoG
2. To examine and give explicit instructions according to SET's rules and regulations, including taking any other action necessary for the disciplinary process

5. Information Technology Committee

Support unit: Information Technology Division

Structure: At least five committee members, but not more than nine, consisting of:

1. At least two member being SET governors
2. The SET president
3. At least two members must be experts in IT management.

Term: The term ends on December 31, 2020

Name		Position
1. Charnporn	Jotikasthira	Chairman
2. Pattera	Dilokrunghthirapop	Member
3. Paiboon	Nalinthrangkurn	Member
4. Thiti	Tantikulan	Member
5. Pichet	Sithi-Amnuai	Member
6. Pannaporn	Sapsomboon	Member
7. The SET President		Member

Responsibilities of the Information Technology Committee are

1. To provide advice and recommendations on SET's strategies, Information Technology (IT) development policies and new IT strategic projects of the SET group; to support operations as a capital market center; to promote operations and provide opinions which can benefit the development of SET's IT in compliance with the standard accepted by the industry; to support the innovations development and appropriate technology implementation in order to enhance the Thai capital market to be competitive to leading stock exchanges in the region
2. To consider and approve the followings:
 - (1) Procurement of IT projects which cost more than THB 20 million but not more than THB 50 million. If over THB 50 million budget, the Committee's duty is to screen before presenting to the SET BoG for consideration and approval
 - (2) Procurement of IT maintenance for items that cost more than THB 20 million, which must be within the approved budget In addition, the Information Technology Committee has to report Procurements No. 1 and No. 2 above to the SET BoG.
3. To carry out other duties assigned by the SET BoG

6. Legal Committee

Structure: Legal Department

Structure: At least five committee members, consisting of:

1. At least one SET governor acting as committee chairman
2. With expertise in law and/or capital market

Term: The term ends on December 31, 2020

Name		Position
1. Seree	Nonthasoot	Chairman
2. Thiti	Tantikulan	Member
3. Surasak	Vajasit	Member
4. Somkiet	Kuwawattananont	Member
5. Tithiphan	Chuerboonchai	Member
6. Wichien	Harnpraween	Member

The responsibility of the Legal Committee is to provide the SET BoG, SET and SET subsidiaries with advice, opinions and recommendations regarding Securities and Exchange ACT, the Derivatives ACT, including the SET group's rules and regulations.

7. Nomination and Remuneration Committee

Support unit: Human Resources Management Department

Structure: 1. Member consists of three to five SET Governors.

2. At least half must be governors appointed by the SEC.

3. The committee chairman must be appointed by the SEC Board.

Term: Until the end of each given person's tenure as governor

Name		Position
1. Voravan	Tarapoom	Chairman
2. Charamporn	Jotikasthira	Member
3. Norachet	Sangruji	Member
4. Sopawadee	Lertmanaschai	Member
5. The SET President		Member

Responsibilities of the Nomination and Remuneration Committee are

1. Nomination

- (1) To review and screen candidates for members of the SET committees before presenting to SET BoG for appointment, including reviewing the list of committee members and sub-committee members of SET subsidiaries before seeking approval from the BoG
- (2) To review and screen the list of experts for SET and subsidiaries before seeking approval from the BoG or the subsidiaries' board of directors (BoD) depending on each case, for approval and appointment

- (3) To review and recruit SET senior executive vice presidents and other positions equivalent to Head of Division including top executives of the subsidiaries before presenting to the BoG or the subsidiaries' board of directors (BoD) depending on each case, for approval and appointment
- (4) To review the annual succession plan for SET's key positions before presenting to the BoG for consideration, as well as to review such plan regularly every year
- (5) To carry out other duties assigned by the BoG

2. Remuneration

- (1) To review and screen the policies, criteria and remuneration of the SET BoG, committees, advisors, and SET subsidiaries' BoD nominated by the SET BoG, before presenting to the BoG or the subsidiaries' BoD (depending on each case), for approval
- (2) To review and screen the policies, criteria and overall remuneration structure of SET employees before seeking approval from the BoG
- (3) To review and screen the budget for annual salary adjustments including annual bonus before seeking approval from the BoG
- (4) To review and screen criteria concerning remuneration including salary adjustment and the annual remuneration adjustment for SET's executives nominated by the Committee, before seeking approval from the BoG
- (5) To carry out other duties assigned by the BoG

8. Risk Management Committee

Support unit: Risk Management Department

Structure: At least five, but not more than nine committee members, consisting of:

1. At least two governors
2. The SET President
3. At least two members must be experts in finance, accounting, risk management or IT; at least one member must be IT expert, and one member must be risk management expert.

Term: The term terminates on December 31, 2020

Name		Position
1. Pattera	Dilokrunthirapop	Chairman
2. Charnporn	Jotikasthira	Member
3. Norachet	Sangruji	Member
4. Paiboon	Nalinthrangkurn	Member
5. Thiti	Tantikulan	Member
6. Anya	Khanthavit	Member
7. Vachira	Arromdee	Member
8. The SET President		Member

Responsibilities of the Risk Management Committee are

1. To consider and advise on SET's Risk Management policy and framework, including IT security and cyber security
2. To consider and provide opinions on risk appetite and risk tolerance to be presented to SET's BoG for consideration and approval
3. To consider and provide opinions on risk assessment, guidelines, and risk management measures, including IT risks, cyber security, operational risk and financial and investment risks
4. To advice on Enterprise risk management as well as encouraging and supporting improvement and development of corporate risk management system continuously
5. To carry out other duties assigned by the SET BoG

9. Securities Investor Protection Fund Committee

Support unit: Member Supervision Department

Structure: Six committee members consist of:

1. One governor appointed by the SEC
2. One governor elected by SET members
3. One Fund Member elected by Securities Investor Protection Fund members
4. President of the Thai Investor Association
5. The SET President or an executive delegated by the SET President
6. SET's Executive Vice President – Market Supervision Division, or higher level, who also serves as Secretary

Term: In accordance with the rules of membership of the Fund to protect investors in securities.

Name		Position
1. Kitipong	Urapeepatanapong	Chairman
2. Pattera	Dilokrunthirapop	Member
3. Pornpring	Suksantisuwan	Member
4. Kengkla	Rakpaopan	Member
5.	The SET President or the executive delegated by the SET President	Member
6.	The Executive Vice President level responsible for Market Supervision Division	Member and Secretary

Responsibilities of the Securities Investor Protection Funds Committee are

1. To determine fund management policies which may be invested in securities or other assets, or other alternative investments to make profits, as deemed appropriate
2. To consider all relevant facts and evidences concerning investor protection as requested by investors and report the findings to the SET BoG
3. To boost investors' confidence in buying or selling securities traded on SET
4. To carry out other tasks and activities assigned by the SET BoG

Audit Committee Report

The Stock Exchange of Thailand (SET)'s current Audit Committee was appointed by the Board of Governors (BoG) on August 27, 2019. The Committee consists of three independent non-executive directors with expertise and experience in various fields inclusive of the capital market, accounting, finance, management, and information technology. It is chaired by Sopawadee Lertmanaschai, with Voravan Tarapoom and Norachet Sangruji as committee members.

During 2019, there were four committee members whose term expired namely Chaipatr Srivisarvacha, and Pattera Dilokrunghthirapop with expiration date on February 19, 2019 as they were appointed to perform duties in other committees. Oranuch Apisaksirikul's and Dr. Anuchit Anuchitanukul's terms were expired in accordance with the Security and Exchange Act on August 4, 2019.

In 2019, the Committee held 12 meetings, including one with the executive management team and without the presence of the Internal Audit Department's team. There were three meetings with SET's external auditor to provide opinions on the auditing plan and to review the audit results. The attendance record of the Audit Committee's members is shown in the Corporate Governance Report. (page 51)

The Committee has performed its duties and expressed viewpoints independently under the scope of authority, duty and responsibilities assigned by the BoG, as shown on page 68 The Committee reports the operating results to the BOG on a quarterly basis. A summary of key activities in 2019 is as follows:

- **Financial statements:** The Committee reviewed the quarterly financial statements together with the management team and jointly reviewed the 2019 annual financial statements with the external auditor by considering the accuracy of the financial statements, the appropriateness in accounting policy and the sufficient information disclosure. In addition, the Committee also jointly worked with the external auditor on the impact of the effectiveness of the new Thai Financial Reporting Standards (TFRS) such as the principle of Financial Instruments from TFRS9 and the principle of Leases from TFRS 16, among others, including the review of internal

control related to the preparation of the financial statements.

- **Risk management:** The Committee has overseen the key risk management implementation. In 2019, the Committee held one meeting with the Risk Management Committee, and quarterly meetings with the SET's risk management team. The meetings aimed to realize the role, duty, responsibility, coordination, and cooperation to ensure that the internal audit and the risk management operations were moving in the same direction which assisted the internal audit service to be in accordance with the risks and aiming at utmost benefit to the organization. Moreover, the Committee attended the presentation from experts on the topic of "Data Protection & Cyber Security Awareness" to exchange knowledge on Cyber Security and the preparation for incidents that might occur.

The Committee has placed importance on SET's technology risk management by assigning the internal auditor to conduct the pre-implementation review of new systems before the launch such as Payment System for Capital Market (Interbank) and SETLink, etc.

- **Internal control:** In 2019, the Committee reviewed the adequacy, efficiency and effectiveness of SET's internal control system. This was carried out by reviewing the audit report presented by Internal Audit Department while following up the internal control system enhancement, and the external auditor's viewpoints. In addition, the Committee also invited the management team of key business units to provide information and viewpoints on their implementations. Furthermore, the Committee also reviewed the assessment of the adequacy of internal control regarding the Committee of Sponsoring Organizations of the Treadway Commission (COSO).
- **Internal audit:** In 2019, the Committee 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, The Committee considered the assessment of self-quality assurance which was conducted by the Internal Audit Department to ensure the Internal Audit operation in compliance with the International Professional Practices Framework (IPPF).

The Committee has continuously encouraged the internal auditor's professional enhancement activities. In 2019, the Internal Audit Department's staff attended the training and seminar programs to enhance internal auditing skills and specialized skills. The programs were both local and international such as the Asian Confederation of Institutes of Internal Auditors (ACIIA) Conference 2019 in Japan, etc. The support also included the attendance of the staff in professional examinations to achieve certifications such as CIA, CISA, CSX, CPIAT, etc. In addition, the Committee also encouraged the development of internal audit management software to enhance audit quality and efficiency.

- **Whistleblowing and fraud:** SET provides various channels for employees and stakeholders to voice their complaints on the SET group's misconducts, controversial issues, and doubts on unlawful or unethical conduct, violation of rights, financial report, and internal audit system, in order to further investigate. The details of whistleblowing channels are published on SET's website under "Whistleblowing policy" topic.

In 2019, SET received two complaints related to the SET Code of Conduct. The Committee proceeded an investigation according to pre-defined guideline in SET Policy on the Good Corporate Governance. One of the complaints was resolved with no violation of the policy, while the other was currently in process.

- **Related law and regulatory compliance:** The Committee regularly meets with the management teams responsible for legal and regulatory compliance to review the result to ensure that the SET operations comply with related laws and regulations as well as international standards.

- **Related party transaction:** In 2019, The Committee approved the related party transaction between SET and Baker & McKenzie, a legal consulting firm. The Committee considered that the agreement process in performing the transaction was reasonable, beneficial to SET, and did not aim to provide benefit to any person.

- **Appointment of 2020 external auditors:** The Committee has considered, and provided opinions to the BoG on the appointment of the external auditor. The Committee reviewed the performances, and the independence in carrying out the duties, including the non-audit services of the external auditor, and considered Deloitte Touche Tohmatsu Jaiyos Audit Co., Ltd. as having suitable experience, expertise and professionalism with independence. The Committee then proposed that the auditor from Deloitte Touche Tohmatsu Jaiyos Audit Co., Ltd. (the main auditor) be the auditor of SET and its subsidiaries for the 2020 financial statement with the proposed audit fee amount of THB 4.6 million and presented to the BoG's for consideration. The BoG will further seek approval and appointment of the auditor and the audit fee from the meeting of SET member companies.

In summary, in 2019 the Committee performed its duties in accordance with the Audit Committee Charter. The Committee viewed that SET's financial statements were prepared in accordance with Generally Accepted Accounting Principles and were accurate in essence, with sufficient information disclosure. In addition, the Committee also viewed that the internal control system and the risk management were sufficient and appropriate for the business and did not find practices that were non-compliant with relevant laws and regulations.



(Sopawadee Lertmanaschai)

Chairperson, Audit Committee

February 6, 2020

Nomination and Remuneration Committee Report

The current Nomination and Remuneration Committee (NRC) was appointed by The Stock Exchange of Thailand (SET)'s Board of Governors (BoG). The NRC consists of five committee members, chaired by Voravan Tarapoom, and the other four committee members are Charamporn Jotikasthira, Norachet Sangruji, Sopawadee Lertmanaschai and Dr. Pakorn Peetathawatchai.

During 2019, the tenure of two committee members expired, namely Pattera Dilokrunghthirapop, whose term expired on February 19, 2019, being appointed to be a member of another committee; and Chaipatr Srivisarvacha, whose term expired on August 4, 2019.

In 2019, the committee held eight meetings. The Committee has completely performed its duties under the scope of responsibilities specified in the Charter. A summary of key activities is as follows:

Nomination

- (1) Considered and screened the list of qualified persons for the SET committees and the list of committee members and sub-committee members of the subsidiaries, including the list of experts for SET and subsidiaries as follows:
 - Considered the 5 Matrix Skills of the BoG, as stipulated by the SEC, covering business/ marketing strategies, risk management, Information technology, business law, finance, capital markets, or international rules related to capital markets, including international competitiveness. In addition, the Committee also proposed additional matrix skills on sustainable development (ESG/ Sustainability), cyber security and innovative IT-related business, for the BoG's approval, with the possibility to be included in the BoG's qualifications requirements.

- Outlined the requirements to specify the qualifications details consisting of suitable number of matrix skills, including the tenure of the committees of SET and subsidiaries as well as the SET experts. All these will be used as guidelines for considering the list of candidates.

- (2) Recruited executives for the positions of executive vice president (EVP), by taking into consideration the qualifications, knowledge, experience and competency, as well as determining compensation rates that are appropriate for the jobs assigned and competitive to the industry.
- (3) Considered and provided guidelines for the succession plan of key positions of SET to ensure the business operations are in line with the corporate strategic plan. The succession plan will be reviewed annually.

Remuneration

- (1) Considered and screened the policies, criteria and guidelines for the remuneration including proposing fair and reasonable remuneration for the SET BoG, committee members, experts and the subsidiaries' Board of Directors (BoD) appointed by the BoG before seeking approval from the SET BoG or the subsidiaries' BoD.
- (2) Considered the guidelines for the payment of remuneration (bonus) for the year 2019 of employees by specifying the consideration mainly from corporate KPIs for submission to the BoG for approval.

- (3) Considered the guidelines for performance appraisals of the SET president for the year 2019 for submission to the BoG for approval by determining the Corporate KPIs and Competency as factors in the evaluation. In addition, the SET President was also required to summarize the annual performance evaluation for the BoG's approval.
- (4) Considered the overall allocation of remuneration for executives and employees in accordance with the assigned guidelines.

Others

- (1) Considered and provided opinions on the results of the HR Diagnosis to assess the overall performance of the SET's human resource operation in comparison with leading organizations locally and globally. It was considered advantageous to obtain more complete and extensive information before adopting to formulate policy and enhance personnel operations.
- (2) Considered guidelines and procedures for selecting qualified members of the Capital Market Development Fund (CMDf) in order to propose to the SET BoG, including screening name list of executives to be qualified as president of CMDf before submitting to the SET BoG for selection and appointment.

- (3) Considered, screened and provided guidelines for the organization restructuring so that the SET structure is in line with the corporate strategy.
- (4) Considered and approved the reviewing of the SET's regulations regarding human resources management in compliance with labor protection laws and related laws as during 2019 the relevant laws have been revised. Moreover, the content had to be in accordance with the guidelines for sustainable development goals (SDGs), while ensuring management flexibility.

In summary, the Committee has carried out its duty in line with the missions, duties, experiences and responsibilities assigned to each member, in accordance with the SET's corporate governance and best practice guidelines.



Voravan Tarapoom

Chairperson

Nomination and Remuneration Committee

February 7, 2020

Risk Management Committee Report

The current Risk Management Committee (RMC) was appointed by The Stock Exchange of Thailand (SET)'s Board of Governors (BoG) on August 27, 2019. The RMC consists of eight committee members : five Board members, the SET President, and two non-executive experts in the fields of finance, accounting or risk management, as follows:

- | | |
|-----------------------|--------------------------------|
| 1. Pattera | Dilokrunghirapop (Chairperson) |
| 2. Charamporn | Jotikasthira |
| 3. Norachet | Sangruji |
| 4. Paiboon | Nalinthrangkurn |
| 5. Thiti | Tantikulan |
| 6. Pakorn | Peetathawatchai |
| 7. Vachira | Arromdee (expert) |
| 8. Professor Dr. Anya | Khanthavit (expert) |

During 2019, the committee members whose terms expired / resigned from RMC are as follows:

- Voravan Tarapoom, whose term expired since February 19, 2019, was appointed to be a member of another Committee
- Prinn Panitchpakdi, term expired since February 19, 2019
- Chaipatr Srivisarvacha, term expired since August 4, 2019

RMC has governed and considered risk management process to ensure that it was in line with the corporate risk management policy and framework. RMC has regularly reported key risk status of the SET group to the BoG under the scope of responsibilities specified in the Charter.

During 2019, RMC held seven meetings, including one joint meeting with the Audit Committee. The attendance record of the committee members is shown in the Corporate Governance Report. A summary of key activities and performance in 2019 is as follows:

- **Enterprise Risk Management:** RMC reviewed and provided suggestions and recommendations on corporate risk appetite and risk tolerance, corporate risk profile, key risk indicators (KRIs), as well as reviewing the assessment criteria of impact and likelihood, and RMC Charter. In addition, RMC also monitored the progress of the 2019 strategic plan on a regular basis and followed up the implementation according to the key objectives of each strategy. This helped strengthen the link between risk management and corporate strategic planning.
- **Risk management of new business and projects:** RMC reviewed and provided additional suggestions and recommendations on the risks related to SET's various projects: 1) Providing digitized Professional Link platform services to better manage the overall training process and license renewal of professional personnel in the Thai capital market; 2) Developing SET Link system, a single application for listed companies, compiling data related to listed companies including the training, seminars and news dissemination system; 3) Extending trading hours without intermission during 12.30 p.m.- 2.30 p.m. for cross-border products for investors' benefit; 4) Providing Index Customization service as an alternative for asset management companies to create more varieties of fund products; 5) Expanding connections to other organizations for verifying identification number via Digital Gateway platform of Finnet Innovation Network Co., Ltd., a SET subsidiary.

- **Risk management of key operations:** RMC reviewed and provided recommendations on the risk management of various key operations such as the review of risk limit of SET's investment, the update of implementation in compliance with Cyber Security Act B.E. 2562 and Personal Data Protection Act B.E. 2562, including the annual review of selection criteria of SET's insurance company, among other things.
- **Risk management of SET's subsidiaries:** RMC has continuously and regularly reviewed and provided recommendations on the risk management of SET's subsidiaries to ensure that the risk management of the subsidiaries were carried out in line with the SET group and international standard, such as the review of investment management guideline of TSD and TCH, and others.
- **Risk monitoring:** RMC has regularly monitored the status of key risks of the SET group to ensure continuous and efficient risk monitoring and overseeing. In 2019, RMC reported its performance to the BoG regularly 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 2019, RMC held one joint meeting with the Audit Committee (AC) and at the same time invited an expert to conduct a presentation on "Data Protection & Cyber Security Awareness" aiming to exchange information and share experience on cyber security threats and preventive measures. This will further boost the organizational operations and will benefit the organization as a whole.

In summary, RMC viewed that the SET group has developed and enhanced enterprise risk management to cover all key aspects continuously, in line with the changing environment. All the regular RMC meetings as well as the meeting with AC have enhanced the efficiency and appropriateness of SET's risk management operations to control and minimize risks at acceptable level.



(Pattera Dilokrunghthirapop)

Chairperson

Risk Management Committee

February 26, 2020

Corporate Governance and Social Responsibility Committee Report

The Corporate Governance and Social Responsibility Committee (“the Committee”) consists of five directors from the SET Board of Governors (BoG), four of whom are independent directors, and the SET President. In 2019, the Committee held a total of six meetings and carried out their duties independently within the scope of their responsibilities outlined in the Committee charter. Details of the meetings are included in the “Corporate Governance Report”. The Committee reports its performance to the SET BoG on a quarterly basis. Key duties carried out by the Committee in 2019 can be summarized as follows:

Corporate Governance and Social Responsibility for the SET group

1. Enhanced the governance structure, components, qualifications and roles & duties of the Committee and Sub-committee

to be in accordance with the current operational situation and to reflect SET’s roles and duties as a stock exchange. In addition, the Committee also reviewed the SET group’s Corporate Governance Policy, as well as the Code of Conduct for businesses, for governors, and for employees in compliance with current laws and international corporate governance standards. The details are as follows:

- Specifying the qualifications, knowledge and experiences of the SET governors in the CG Policy which will be beneficial to the recruitment of SET governors possessing the knowledge and experiences that are diverse and valuable to the organization, and in compliance with the Securities and Exchange Act B.E. 2562 (amended). In addition, the Committee also enhanced the components, roles & duties, including the tenure period of all committees by increasing the terms of independent

members to be not over nine years, in order to clearly indicate their independence, adequacy, and appropriate knowledge and experiences for carrying out duties in screening various issues.

- Setting up two new committees:

- 1) Information Technology Committee: to provide consultations and recommendations to the SET BoG on strategies and IT development policy, including innovation development and appropriate technology applications
- 2) Management Committee to screen and provide inputs on policies, strategic goals, plans and budgets, including talent management plan and succession plan; and to monitor management in line with corporate policy and goals

- Enhancing the Code of Conduct for Conducting Business, Section, “Prevention on Conflict of Interest,” as follows:

- Enhanced the regulations on the issue of “the SET group’s criteria for conducting related party transactions,” to serve as best practice guidelines for governors and executives. Such transactions must be transparent, reasonable, while protecting the benefits of the SET group.
- Enhanced the implementation on the acquisition or disposal of securities by employees to cover newly issued bonds.
- Specified the guidelines for the receiving of fees by management team and employees in case they are invited to be speakers at events, or they assume positions as directors/advisors in other organizations, to ensure that the management team and employees have clear practice guidelines and to prevent conflicts of interest.

- Enhancing the Code of Conduct for governors and employees levels on the issue concerning “providing information and viewpoints to the public including outsiders” to ensure that they conduct accurately reflecting their responsibilities and authorities, and in such a way that benefits the organization

2. Promoted knowledge and implementation of the CG Policy and Code of Conduct by proposing and seeking approval from the SET BoG for SET to carry out knowledge tests on the CG Policy for all employees once every two years, beginning in 2018, and to use the test results as one of the evaluation criteria for probation process. In addition, the CG Policy and Code of Conduct as well as various criteria were also added as orientation topics for the management and new employees. The newly enhanced CG Policy and Code of Conduct have been distributed regularly through SET’s internal communications channels.

Corporate Governance and Social Responsibility for Listed Companies and Other Related Organizations in the Capital Market

In 2019, the Committee promoted corporate governance and sustainable business operations among listed companies: The Committee provided inputs and recommendations to SET’s operation for the promotion of sustainable business practices among listed companies. The Committee has encouraged high-potential listed companies to attain international standards regarding sustainability indicators while maintaining sustainability leadership in the ASEAN region. In addition, the Committee also encouraged small and medium-sized listed companies to improve their efficiency by adopting innovations to strengthen competitiveness, including disclosing information in compliance with the principles of good governance, and increasing their disclosure of social and environmental data in line with international standards.

Apart from promoting sustainability among listed companies, the Committee also recognizes the importance of expanding sustainable development to all stakeholder groups in the capital market, such as securities companies, asset management companies, analysts, and investors, among others. In addition, the Committee has also promoted knowledge and understanding on sustainability to non-listed companies that are interested in developing their businesses sustainably. The Committee has proposed this as part of the SET 2020 Strategic Plan on sustainability development to reach out to more organizations other than listed companies. Furthermore, the Committee has also provided recommendations to promote and develop social enterprises or SEs to ensure sustainable business growth, by optimizing the potential of the capital market and listed companies for the benefit of all groups of stakeholders.

In conclusion, it is the Committee’s view that SET has appropriately and efficiently demonstrated performance on corporate governance and social responsibility inclusively covering the SET group, listed companies, and stakeholders. In 2019, the SET’s performance was achieved according to the set targets on promoting and developing sustainability for the capital market, as well as ensuring the information disclosed in the Corporate Governance Report was acceptable, suitable and in line with international standards.



(Voravan Tarapoom)

Chairman,

**Corporate Governance and
Social Responsibility Committee**

February 6, 2020

Enterprise Risk Management (ERM)

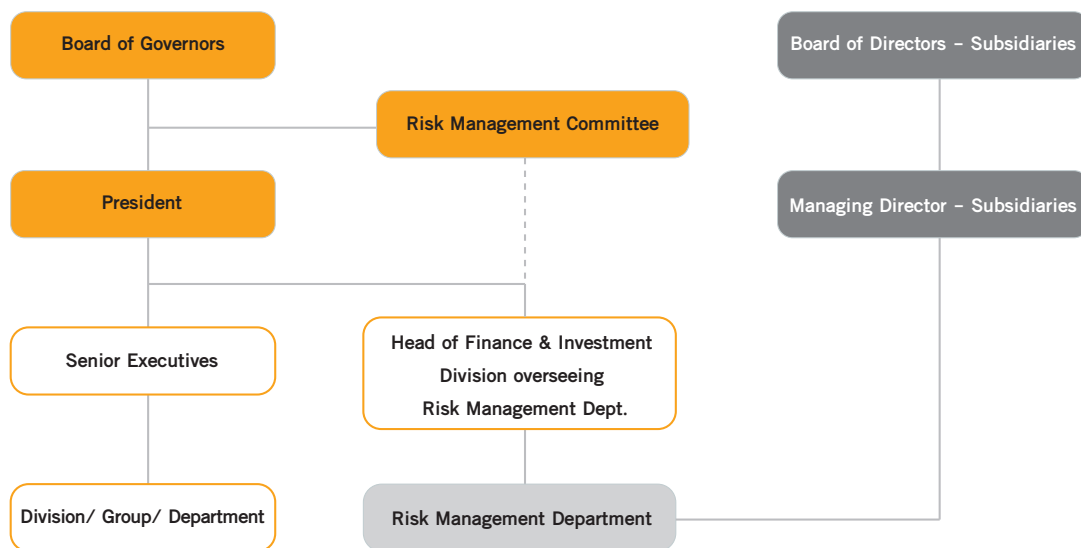
1. Overview of Risk Management

The Stock Exchange of Thailand (SET) emphasizes the enterprise-wide risk management, aiming to support the organization to achieve business objectives, strengthen confidence, value-added and sustainability of all stakeholders including investors, regulatory organizations, member companies,

employees and related parties. SET manages risks in line with the corporate policy and international standards covering the operations in the SET group.

The governance structure of SET's risk management is illustrated below:

Governance Structure of SET's Risk Management



SET has specified the risk management structure. The Board of Governors (BoG) is responsible for governing the executives to implement appropriate and effective enterprise-wide risk management process. The BoG has appointed the Risk Management Committee (RMC) to oversee and consider risk management process to ensure that the process is in line with the enterprise risk management policy, framework and process. RMC also regularly reports the status of the SET group's key risks to the BoG.

All executives and staff have responsibilities to assess and manage their related risks based on the SET policy, guidelines and process. All subsidiaries have to apply and implement risk management process according to the guidelines.

The risk management department supports RMC operations and presents the risk management report to RMC. In addition, the risk management department also coordinates and implements the risk management process for the SET group as a whole.

2. Risk Management in Various Aspects

SET recognizes the importance of overseeing and managing all key risks which may affect SET's business operation. The risk management is in line with COSO¹ Enterprise Risk Management Framework and those of leading exchanges. The risk assessment analyzes potential causes and sources of risks, current controls and risk mitigation, as well as the effectiveness of such mitigation plans, in order to consider inherent risk and residual risk compared with risk appetite. Key risk indicators (KRIs) of all key risks are set for monitoring the trend of risk and used as early warning if the risk level increases or decreases in which areas. This can assist SET to prevent or reduce the magnitude of its impact in time. All these risks cover strategic, operational, financial and compliance aspects, as follows:

Strategic Risk

New business and project risks

SET has implemented the strategic plans by improving working efficiency and diversifying into new businesses to make the capital market “Work” for everyone. To explore new opportunities for business and respond to changing business landscape, risk management of new business and projects is vital and essential. SET focuses on risk assessment and management of such new projects. RMC reviews and provides viewpoints on risk issues and management of new business and projects in 2019 such as (1) the expansion of connections to other organizations for verifying identification number via Digital Gateway platform of Finnet Innovation Network Co., Ltd., a SET subsidiary and (2) the extended trading hours without intermission for cross-border products, etc.

Financial Risk

Credit risk (counterparty or clearing and settlement-related risk)

Thailand Clearing House Co., Ltd.(TCH), as central counterparty (CCP) for SET and Thailand Futures Exchange PCL (TFEX), has continued to develop risk management

measures in line with international standards and best practice. In 2019, TCH reviewed and improved the margin rate calculation methodology for the derivatives market by specifying the minimum volatility level to assist the stability of margin rate and better respond to the risks from various possible events. TCH also reviewed the procedure guidelines for members who fail to comply with the TCH regulations. This aims to enhance efficiency of member supervision.

In addition, in 2019 TCH revised the stress test calculation methodology to be more flexible and adaptable to market conditions. This included the revision of calculation methodology and collection of uncovered risk margin from both equities members and derivatives members in accordance with TCH's risk appetite of having to allocate sufficient financial resources in case having two members with highest risk of default at the same time. Moreover, TCH also conducted a study to assess collateral margin for derivatives contracts with underlying products that resume trading after a long suspension. These revisions will be in effect in 2020.

Investment risk

SET's investment portfolio, managed by the Investment Committee (IC), operates under investment and strategic asset allocation policies and ratio as approved by the BoG. In addition, SET also monitors the investment risk status and reports to the IC, RMC, Audit Committee (AC) and the BoG regularly to ensure that risk are within the acceptable level.

SET manages risks by investing in various securities and sets the investment limit in each financial institution or issuer in order to diversify the investment suitably and to ensure the limited loss. In addition, SET also uses the Value at Risk (VAR) technique to ensure that the aggregate portfolio risks is within the specified scope. SET invests in instruments such as government bonds, bank deposits, money market funds and corporate funds with at least “A-” credit rating or equivalent, among others.

¹ The Committee of Sponsoring Organizations of the Treadway Commission (COSO)

Operational Risk

Risks from critical system failure and business interruption

SET assesses, monitors and manages risks that may affect critical computerized systems. This includes the procedures of incident reports, root cause analysis and solution findings in order to provide continuous services and development.

SET establishes Business Continuity Management (BCM) covering emergency response plan, crisis management plan, business continuity plan and IT disaster recovery plan. SET also reviews, exercises and tests business continuity plan in conjunction with related participants in the capital market to committedly cope with crisis or disaster regularly every year. SET emphasizes the preparedness of its staff, systems of both its main and alternate sites, while testing alternate system with member companies to ensure that trading can continue without disruption if disasters occur.

Cyberattack risk

Cyber attack is on the rise and can devastatingly and substantially affect service level and confidence of related parties, especially financial institutions. Therefore, SET has implemented the followings to cover five key areas: (1) setting up information security management systems including information security policy and practice in line with ISO27001 which plans to expand the coverage of more main systems in the future, including in accordance with rules and regulations of related parties. These involve reviewing, setting priority for the strategic plan and objectives, assessment for appropriateness, inclusive of the test of efficiency and effectiveness of IT security policy regularly every year; (2) setting up measures and procedures to cope with situations that may affect IT security, as well as testing those procedures to assess the preparedness every year; (3) setting up Cybersecurity Incident Response

Team to support and provide consultation, and suggestion for responding cyber threat in line with international and industry standard; (4) communicating and sharing knowledge on IT security to staff regularly; and (5) implementing tools for monitoring and preventing cyberattack risk such as Antivirus and AntiMalware, Firewall, DDoS Protection Service, etc.

Fraud and corruption risk

Fraud and corruption risk is one of SET's key risks. Every year, every unit assesses and identifies measure to manage such risk. This includes monitoring and reporting risk status continuously to make certain that SET can manage such risk promptly within the acceptable level. Risk management department monitors and reports the risk status to the BoG, RMC and executives regularly, while the internal audit department assesses the effectiveness of internal control measures related to anti-corruption.

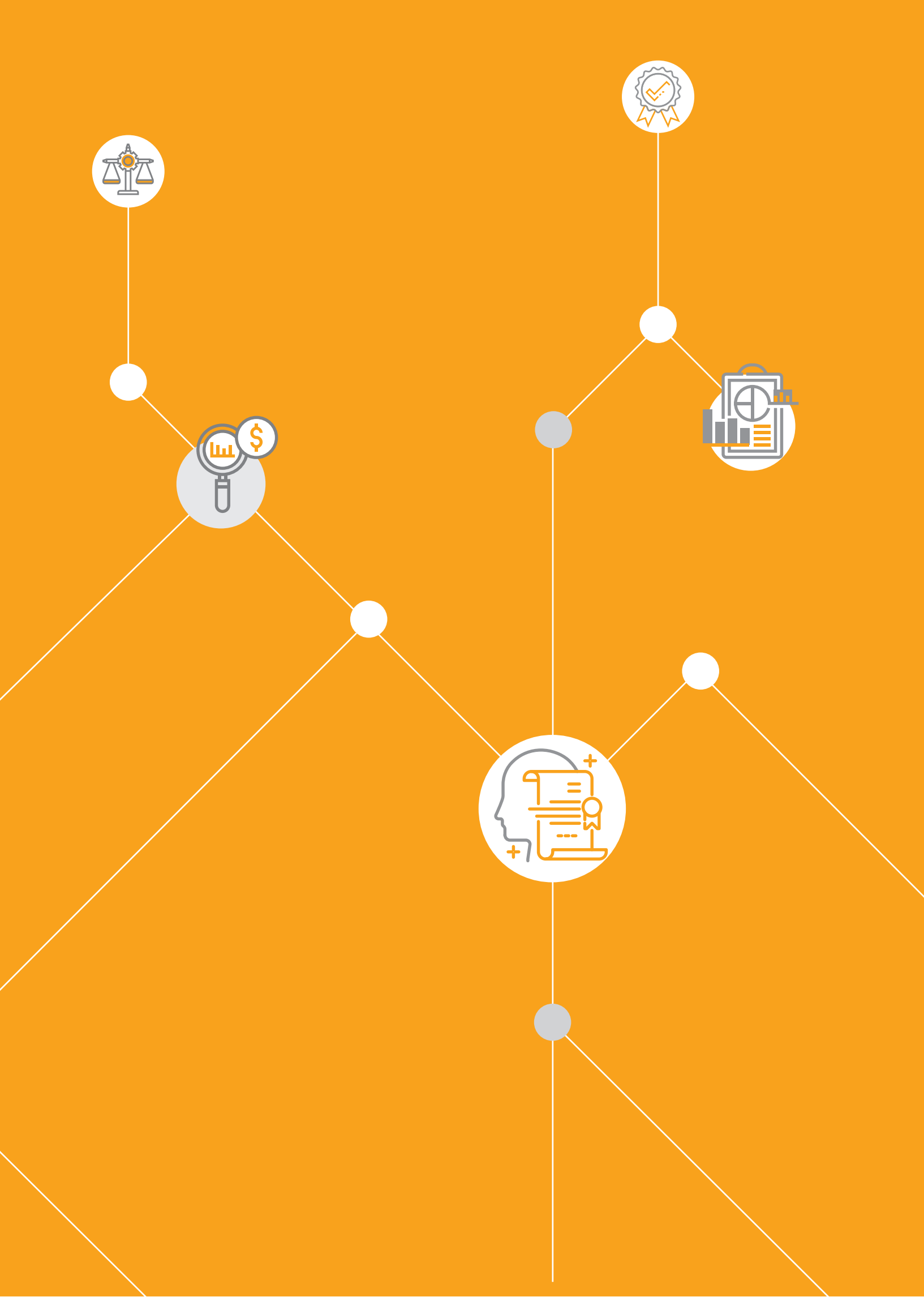


Compliance Risk

SET has assessed, monitored and managed compliance risk, covering those of violating rules and regulations of regulatory bodies. In addition, SET also oversees the executives and staff to strictly be in compliance with related regulations. The risk management department and compliance department support the executives and staff to manage the compliance risk at the acceptable level while the internal audit department reviews the operating processes to be in accordance with related regulations.



Make it **Work** by
Ensuring Transparency



Management Discussion and Analysis

Overview

The operating results of the SET group for the year ended December 31, 2019 were as follows:

(Unit: THB million)	For the year ended December 31			
	2019	2018	Increase/(Decrease)	
			Amount	%
Operating revenues	5,884	5,722	162	3%
Other income	454	270	184	68%
Investment income	948	586	362	62%
Operating expenses	(4,217)	(3,978)	239	6%
Contributions to The Stock Exchange of Thailand Foundation (SET Foundation)	186	(186)	372	200%
Transfer money to the Capital Market Development Fund (CMDf)	(5,700)	-	5,700	100%
Income tax expense	(214)	(479)	(265)	(55%)
Revenues over (under) expenses	(2,599)	1,955	(4,554)	(233%)

For the year ended December 31, 2019, revenues under expenses amounted to THB 2,599 million and decreased by THB 4,554 million, compared to 2018. The operating revenues increased by THB 162 million, resulting from an increase in a number of new listed companies and new securities. Other income increased by THB 184 million from the compensation from insurance companies regarding the fire damage at the previous office building of The Stock Exchange of Thailand (SET) of THB 145 million. Investment income increased by THB 362 million due to the realization of gain from sales and mark-to-market value of investments. Operating expenses increased by THB 239 million realized by the increase in employee benefit expenses according to the new Labor Act. In addition, during the year there was a reversal of outstanding donations to the SET Foundation from canceling the allocation of SET's annual revenues over expenses, effective from 2018 onwards. Furthermore, SET transferred the amount of THB 5,700 million to CMDf as specified in the Securities and Exchange Act (No. 6) dated on April 16, 2019, in order for the purpose of promoting the capital market development in various areas, such as organizational development and infrastructure related to the capital market, development of personnel capabilities related to the capital market or capital market governance and supervision, among others.

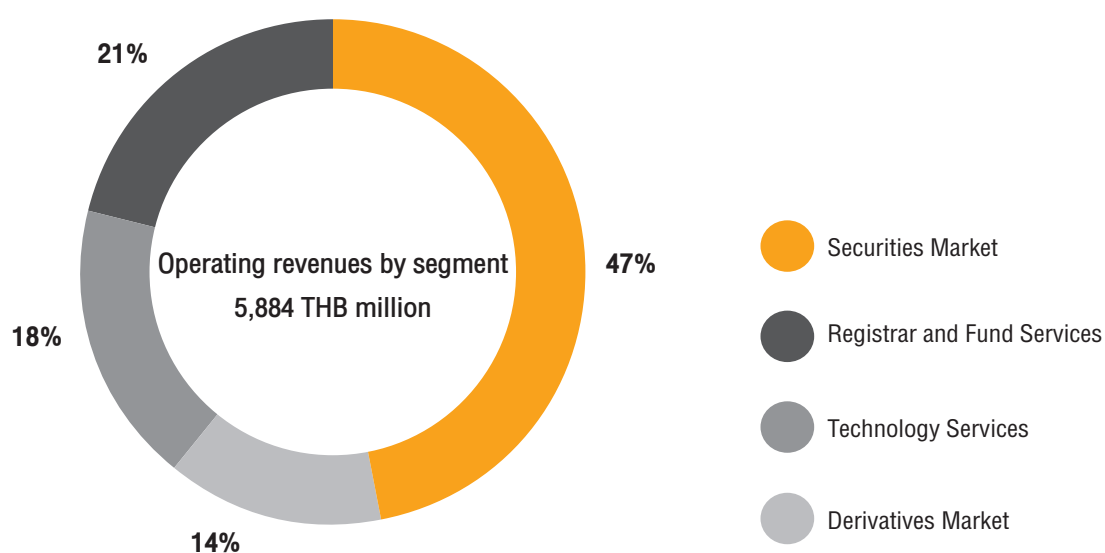
1. Analysis of operating results

1.1 Operating revenues

Operating revenues by segment

Operating revenues classified by key business segments consists of Securities Market, Derivatives Market, Technology Services, and Registrar and Fund Services.

For the year ended December 31, 2019		(Unit: THB million)
Securities Market		
- Trading fees		1,298
- Listing fees		723
- Clearing and settlement fees		368
- Depository fees		347
- Membership fees		32
Total		2,768
Derivatives Market		
- Trading fees		541
- Clearing fees		233
- Membership fees		32
Total		806
Technology Services		
- Member services fees		420
- Information services fees		367
- IT support fees		277
Total		1,064
Registrar and Fund Services		
- Securities registrar fees		1,226
- Fund services fees		20
Total		1,246
Total operating revenues		5,884



1.1.1 Securities Market

(Unit: THB million)	2019	2018	Increase/(Decrease)	
			Amount	%
Revenues–Securities Market	2,768	2,825	(57)	(2.02%)
Trading fees	1,298	1,413	(115)	(8.14%)
Clearing and settlement fees	368	384	(16)	(4.17%)
Listing fees	723	643	80	12.44%
Depository fees	347	341	6	1.76%
Membership fees	32	44	(12)	(27.27%)
Key market indicators				
SET Index at the end of the year (points)	1,580	1,564	16	1.02%
Average daily trading value–Equity (THB million)	53,192	57,674	(4,482)	(7.77%)
Average market capitalization (THB trillion)	17.17	17.63	(0.46)	(2.61%)
No. of listed securities at the end of the year (securities)	3,022	2,499	523	20.93%

Operating revenues from securities market decreased by THB 57 million or 2.02%, compared to 2018. The decrease mainly resulted from the drop in trading fees and clearing & settlement fees by THB 131 million in line with the drop in average daily trading value, while the listing fees increased by THB 80 million in accordance with the number of listed securities.

1.1.2 Derivatives Market

(Unit: THB million)	2019	2018	Increase/(Decrease)	
			Amount	%
Revenues–Derivatives Market	806	765	41	5.36%
Trading fees	541	509	32	6.29%
Clearing fees	233	220	13	5.91%
Membership fees	32	36	(4)	(11.11%)
Key market indicators				
Average daily trading volume–Derivatives (contracts)	428,368	426,212	2,156	0.51%

Operating revenues from derivatives market increased by THB 41 million or 5.36%, compared to 2018, mainly resulting from the rise in average daily trading volume of derivatives, especially Gold Online Futures.

1.1.3 Technology Services

(Unit: THB million)	2019	2018	Increase/(Decrease)	
			Amount	%
Revenues-Technology services	1,064	997	67	6.72%
Member services fees	420	451	(31)	(6.87%)
Information services fees	367	346	21	6.07%
Customization and IT support fees	277	200	77	38.50%

Operating revenues from technology services increased by THB 67 million or 6.72%, compared to 2018. This increase was mainly from the increase in data services fees and IT support fees as the number of users was up.

1.1.4 Registrar and Fund Services

(Unit: THB million)	2019	2018	Increase/(Decrease)	
			Amount	%
Revenues-Registrar and Fund services	1,246	1,135	111	9.78%
Securities registrar fees	1,226	1,121	105	9.37%
Fund services fees	20	14	6	42.86%

Operating revenues from registrar and fund services increased by THB 111 million or 9.78%, compared to 2018. This was contributed by the rise in securities registrar services as number of listed securities increased, including the fee from fund services, FundConnex, which started the services in 2018.

1.2 Other income

(Unit: THB million)	2019	2018	Increase/(Decrease)	
			Amount	%
Total other income	454	270	184	68.15%
Compensation income from insurance companies	145	-	145	100.00%
Revenue from fines	80	59	21	35.59%
Revenue from education activities	64	73	(9)	(12.33%)
Revenue from fees and management funds	37	42	(5)	(11.90%)
Revenue from securities borrowing and lending	34	14	20	142.86%
Revenue from marketing events	23	24	(1)	(4.17%)
Revenue from transfer of rights from securities companies	11	-	11	100.00%
Others	60	58	2	3.45%

Other income increased by THB 184 million or 68.15%, compared to 2018. In 2019 SET received compensation from the insurance companies for the fire damage incident at the previous head office of The Stock Exchange of Thailand of THB 145 million, as well as from having members' fine income of THB 21 million and including income from the transfer of rights from securities member companies of THB 11 million.

1.3 Investment income

(Unit: THB million)	2019	2018	Increase/(Decrease)	
			Amount	%
Investment income	948	586	362	61.77%
Interest income	217	206	11	5.34%
Dividend income	144	211	(67)	(31.75%)
Realized gain from investments	420	206	214	103.88%
Unrealized gain (loss) from investments	90	(31)	121	390.32%
Gain (loss) on exchange rate and others	77	(6)	83	1,383.33%

Investment income increased by THB 362 million or 61.77%, compared to 2018. The increase mainly resulted from the realization of gain from sales of funds and mark-to-market value of investments, while dividends received from mutual funds decreased since most funds refrained from paying dividends in 2019.

1.4 Operating expenses

(Unit: THB million)	2019	2018	Increase/(Decrease)	
			Amount	%
Operating expenses	4,217	3,978	239	6.01%
Employee benefit expenses	1,939	1,688	251	14.87%
Depreciation and amortization	525	483	42	8.70%
SEC fees	521	567	(46)	(8.11%)
Direct service expenses	344	292	52	17.81%
Building and office expenses	193	183	10	5.46%
Technology expenses	191	230	(39)	(16.96%)
Marketing expenses	172	161	11	6.83%
Fees and compensation expenses	128	99	29	29.29%
Educational activities expenses	65	164	(99)	(60.37%)
Others	139	111	28	25.23%

Operating expenses in 2019 were THB 4,217 million, an increase of 6.01% from 2018. This mainly resulted from the increase of employee benefit expenses in accordance with the new Labor Protection Act, including the increase of registrar service expenses in accordance with the increase of securities borrowing and lending transactions and corporate action. The SEC fee decreased due to a drop in equity trading volume. In addition, the educational activities expenses decreased as not having to pay to support one joint-venture business which liquidated the company in December 2018.

2. Analysis of financial position

(Unit: THB million)	Dec 31, 2019	Dec 31, 2018	Increase/(Decrease)	
			Amount	%
Total assets	44,994	48,771	(3,777)	(7.74%)
Total liabilities	18,576	20,105	(1,529)	(7.61%)
Fund balances	26,418	28,666	(2,248)	(7.84%)

Significant movements in assets, liabilities and funds of the SET group as at December 31, 2019 in comparison with the balance as at December 31, 2018, were as follows:

2.1 Analysis of assets

As at December 31, 2019, total assets of the SET group amounted to THB 44,994 million, a decrease of THB 3,777 million or 7.74%, in comparison with the balance as at December 31, 2018. Significant details are as follows:

2.1.1 Cash and cash equivalents, cash at banks for financial benefits payable and investments were THB 15,703 million or 34.90% of total assets, a THB 2,162 million or 12.10% decreases, categorized as follows:

(Unit: THB million)	Dec 31, 2019	Dec 31, 2018	Increase/(Decrease)	
			Amount	%
Cash and cash equivalents	2,329	1,119	1,210	108.13%
Cash at banks for financial benefits payable	86	69	17	24.64%
Investment portfolio	13,288	16,677	(3,389)	(20.32%)
Trading	3,408	3,751	(343)	(9.14%)
Available-for-sale	8,202	11,251	(3,049)	(27.10%)
Held-to-maturity	1,641	1,663	(22)	(1.32%)
General investments	37	12	25	208.33%
Total	15,703	17,865	(2,162)	(12.10%)

The SET group maintains a policy to invest in various types of investments such as fixed deposits, debt instruments (such as government bonds, corporate debentures), mutual funds and other domestic and foreign financial instruments. In this regard, investments decreased from the transfer of funds to the Capital Market Development Fund (CMDf) for the amount of THB 5,700 million as specified in the Securities and Exchange Act (No. 6) dated on April 16, 2019 in order to promote the development of the capital market in various areas such as organizational development and infrastructure related to the capital market, the development of personnel capabilities related to the capital market or capital market governance & supervision, among others.

2.1.2 Assets for margin deposits and benefits, and assets for clearing system protection and benefits recorded at THB 15,590 million or 34.65% of total assets, a decrease of THB 1,903 million or 10.88% decrease. This resulted from the withdrawal of collaterals of Thailand Clearing House Co., Ltd. (TCH)'s members, in accordance with the decrease in trading volume of derivatives at the end of the year.

2.1.3 Reserve fund for TCH security on clearing and settlement amounted to THB 5,590 million or 12.42% of total assets, up by THB 261 million or 4.90%, supported by the reserve for TCH's clearing and settlement on SET's part which was established in 2017 as a source of funds for the clearing house. In 2019, SET transferred the additional reserve fund of THB 200 million to TCH.

2.2 Analysis of liabilities

As at December 31, 2019, total liabilities of the SET group amounted to THB 18,576 million, decreased by THB 1,529 million or 7.61%, in comparison with the balance as at December 31, 2018. Significant details are as follows:

2.2.1 Margin deposits and assets for clearing system protection and benefits payable amounted to THB 15,442 million or 83.13% of total liabilities, a decrease of THB 1,907 million, or 10.99%. The decrease in deposits at TCH resulted from the withdrawal of collaterals of TCH's members in accordance with the decrease in trading volume of derivatives at the end of year.

2.3 Analysis of funds

As at December 31, 2019 the total funds of the SET group amounted to THB 26,418 million, a decrease of THB 2,248 million or 7.84%, in comparison with the balance as at December 31, 2018. The SET group's revenue under expenses for 2019 reached THB 2,599 million. The gain incurred from an increase in the market value of investment in mutual funds and foreign fund, and the gain from exchange rate of investments in foreign funds totaling THB 351 million.

3. Analysis of liquidity

Cash flows of the SET group for the year ended December 31, 2019 and 2018 can be summarized as follows:

(Unit: THB million)	2019	2018	Increase/(Decrease)	
			Amount	%
Cash flows from (used in) operating activities	(2,680)	2,212	(4,892)	(221.16%)
Cash flows from (used in) investing activities	3,908	(2,353)	6,261	266.09%
Cash and cash equivalents at the end of year	2,415	1,188	1,227	103.28%

Cash and cash equivalents as at December 31, 2019 amounted to THB 2,415 million, an increase of THB 1,227 million or 103.28%, compared to 2018. The details of the inflows and outflow are as follows:

- Net cash used in operating activities totaled THB 2,680 million. This was mainly from transferring the sum of THB 5,700 million to the Capital Market Development Fund (CMDf).
- Net cash receipt from investing activities totaled THB 3,908 million. This was mainly from sales of financial instruments of THB 3,832 million, investment income and interest income of THB 696 million, and dividend income of THB 143 million, including investment in new assets of THB 528 million.

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

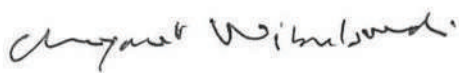
The Board of Governors is responsible for the consolidated financial statements of The Stock Exchange of Thailand (SET) and its subsidiaries, and the separate financial statements of The Stock Exchange of Thailand, including the financial information presented in this annual report. The financial statements for the year ended December 31, 2019 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 transparent manner, providing benefits to the public.

The Board of Governors has provided and maintained the risk management system, internal control system, and internal audit system including 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, Deloitte Touche Tohmatsu Jaiyos Audit Co., Ltd. In conducting the audit, SET has provided supporting information and documents so that the auditor could examine and express opinions in accordance with generally accepted auditing standards. 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, 2019 are reliable and in compliance with Thai Financial Reporting Standards and related regulations.



(Mr. Chaiyawat Wibulswasdi)
Chairman



(Mr. Pakorn Peetathawatchai)
President

Report of the Independent Certified Public Accountants

To The Members of The Stock Exchange of Thailand and
The Stock Exchange of Thailand

Opinion

We have audited 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 (the “SET”), which comprise the consolidated and separate statements of financial position as at December 31, 2019, and the related consolidated and separate statements of comprehensive revenues and expenses, changes in fund balances and cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated and separate financial statements 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 December 31, 2019, and financial performance and cash flows for the year then ended in accordance with Thai Financial Reporting Standards (“TFRSs”).

Basis for Opinion

We conducted our audit in accordance with Thai Standards on Auditing (“TSAs”). Our responsibilities under those standards are further described in the Auditor’s Responsibilities for the Audit of the Consolidated and Separate Financial Statements section of our report. We are independent of the Group in accordance with the Federation of Accounting Professions’ Code of Ethics for Professional Accountants together with the ethical requirements that are relevant to the audit of the consolidated and separate financial statements, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matter is the matter that, in our professional judgment, was of most significance in our audit of the consolidated and separate financial statements of the current period. This matter was addressed in the context of our audit of the consolidated and separate financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on this matter.

Key Audit Matter	Audit Response
<p>Revenue recognition–Trading fees</p> <p>Trading fees have terms and conditions to charge the fees based on trading volume. The Group makes use of information and technology system in storing of trading volume and calculating trading fees.</p> <p>We focused our and if on the following are as of trading fees specifically relating of:</p> <ul style="list-style-type: none"> • Storing of securities trading data and processing the information and technology system, • Accuracy and completeness of information used to revenue recognition. <p>The accounting policies of revenue recognition, the details of trading fees and operating segment information were disclosed in Note 2.18, Note 6 and Note 26 to the financial statements respectively.</p>	<p>Our key audit procedures were as follows:</p> <ul style="list-style-type: none"> • Understand the revenue recognition–trading fees process and related internal control procedures • Review the design and implementation of the internal control procedures • Perform the operating effectiveness testing over the internal control procedures around revenue recognition process including related information and technology system • Perform substantive testing as follows: <ul style="list-style-type: none"> – Examine the trading volume information of the customers and trading fees rates, recalculate the trading fees and examine the related supporting documents of those revenues whether the trading fees have been completely and accurately recognized. – Perform substantive analytical procedures relating to the trading fees.

Other Information

Management is responsible for the other information. The other information comprises information in the annual report, which is expected to be made available to us after the date of this auditor's report.

Our opinion on the consolidated and separate financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated and separate financial statements, our responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

When we read the annual report, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance and the management of the SET.

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

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

In preparing the consolidated and separate financial statements, management is responsible for assessing the Group's and the SET'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 Consolidated and Separate Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated and separate 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 our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with TSAs 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 consolidated and separate financial statements.

As part of an audit in accordance with TSAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated and separate 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 our 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 and the SET's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group and the SET to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated and the separate financial statements, including the disclosures, and whether the consolidated and separate 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. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We 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 we identify during our audit.

We also provide those charged with governance with a statement that we 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 our independence, and where applicable, related safeguards.

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



Dr. Suphamit Techamontrikul
Certified Public Accountant (Thailand)

Registration No. 3356

DELOITTE TOUCHE TOHMATSU JAIYOS AUDIT CO., LTD.

BANGKOK

February 19, 2020

Statements of Financial Position

The Stock Exchange of Thailand and Its Subsidiaries

As At December 31, 2019

(Unit: Thousand Baht)

	Notes	Consolidated Financial Statements		Separate Financial Statements	
		2019	2018	2019	2018
Assets					
Current assets					
Cash and cash equivalents	8	2,329,358	1,118,595	2,092,736	948,769
Cash at banks for financial benefits payable		85,569	69,086	-	-
Assets for margin deposits and benefits	17	13,384,662	15,510,404	-	-
Short-term investments, net	9	5,383,557	7,838,876	3,183,195	7,838,876
Trade and other receivables	10	518,753	611,915	525,182	573,599
Short-term loans to a joint venture entity	7	-	7,500	-	7,500
Other current assets	11	217,505	94,326	184,849	62,523
Total current assets		21,919,404	25,250,702	5,985,962	9,431,267
Non-current assets					
Investments in subsidiaries	12	-	-	1,697,291	1,697,291
Investments in associates and joint venture entity, net	13	988,420	968,228	791,015	800,620
Long-term investments, net	14	7,903,958	8,837,845	7,903,958	8,837,845
Assets for clearing system protection and benefits	18	2,205,298	1,982,549	147,916	144,156
Securities Investor Protection Fund	25	832,028	798,473	832,028	798,473
Derivatives Investor Protection Fund	25	110,237	104,150	-	-
Long-term loans to a subsidiary	7	-	-	5,440,834	5,240,834
Reserve Fund for clearing and settlement	19	5,590,438	5,328,576	-	-
Property, plant and equipment, net	15	4,737,773	4,979,082	4,737,156	4,978,197
Intangible assets, net	16	612,385	375,757	609,788	372,279
Deferred tax assets	20	91,768	139,821	91,743	137,655
Refundable deposits		2,485	5,485	2,485	5,485
Total non-current assets		23,074,790	23,519,966	22,254,214	23,012,835
Total assets		44,994,194	48,770,668	28,240,176	32,444,102

Statements of Financial Position (Continued)

The Stock Exchange of Thailand and Its Subsidiaries

As At December 31, 2019

(Unit: Thousand Baht)

	Notes	Consolidated Financial Statements		Separate Financial Statements	
		2019	2018	2019	2018
Liabilities and fund balances					
Current liabilities					
Margin deposits and benefits payable	17	13,384,662	15,510,404	-	-
Trade and other payables	21	1,490,467	1,317,727	1,296,758	1,119,754
Fees received in advance		353,399	335,255	318,156	298,559
Income tax payable		90,638	151,593	-	49,194
Short-term borrowings from subsidiaries	7	-	-	1,918,713	3,783,500
Other current liabilities	22	172,997	136,350	98,423	110,884
Total current liabilities		15,492,163	17,451,329	3,632,050	5,361,891
Non-current liabilities					
Assets for clearing system protection and benefits payable	18	2,057,869	1,838,393	-	-
Contributions and benefits to Securities Investor Protection Fund	25	336,254	322,847	336,254	322,847
Contributions and benefits to Derivatives Investor Protection Fund	25	54,041	48,802	-	-
Employee benefits obligation	23	613,393	436,321	613,393	436,321
Deferred tax liabilities	20	12,676	-	-	-
Other non-current liabilities		9,849	7,712	9,849	7,712
Total non-current liabilities		3,084,082	2,654,075	959,496	766,880
Total liabilities		18,576,245	20,105,404	4,591,546	6,128,771
Fund balances					
Funds	24	26,090,633	28,679,406	23,313,433	26,321,432
Other components of fund balances		327,315	(14,143)	335,197	(6,101)
Non-controlling interests		1	1	-	-
Total fund balances		26,417,949	28,665,264	23,648,630	26,315,331
Total liabilities and fund balances		44,994,194	48,770,668	28,240,176	32,444,102

Notes to the financial statements form an integral part of these financial statements

Statements of Comprehensive Revenues and Expenses

The Stock Exchange of Thailand and Its Subsidiaries

For The Year Ended December 31, 2019

(Unit: Thousand Baht)

	Notes	Consolidated Financial Statements		Separate Financial Statements	
		2019	2018	2019	2018
Revenues					
Operating revenues	26	5,883,591	5,722,355	2,652,268	2,601,316
Investment income, net	27	947,954	586,185	1,549,021	862,130
Other income	28	454,253	269,999	2,060,116	1,901,827
Total revenues		<u>7,285,798</u>	<u>6,578,539</u>	<u>6,261,405</u>	<u>5,365,273</u>
Expenses					
Employee benefit expenses	29	1,939,471	1,687,752	1,938,260	1,687,555
Directors' remuneration	7	27,714	27,252	24,200	23,692
Direct service expenses		344,368	292,846	-	-
Building and office expenses		192,513	183,063	192,118	182,654
Technology expenses		191,142	230,164	190,933	230,036
Marketing expenses		172,390	160,839	158,446	139,939
Educational activity expenses		64,603	164,079	64,698	164,134
SEC fees	30	521,154	567,203	519,154	565,203
Depreciation and amortization	15 and 16	524,849	482,615	523,700	482,052
Other expenses	31	238,615	182,272	214,870	164,246
Total expenses		<u>4,216,819</u>	<u>3,978,085</u>	<u>3,826,379</u>	<u>3,639,511</u>
Share of profit of investments in associates and joint venture entity, net of tax	13	45,383	8,630	-	-
Revenues over expenses		<u>3,114,362</u>	<u>2,609,084</u>	<u>2,435,026</u>	<u>1,725,762</u>
Non-operating revenues (expenses)					
Income derived from Securities Investor Protection Fund, net	25	13,930	9,937	13,930	9,937
Income derived from Derivatives Investor Protection Fund, net	25	848	686	-	-
Transfer money to the Capital Market Development Fund	32	(5,700,000)	-	(5,700,000)	-
Reversal (contributions) to the Stock Exchange of Thailand Foundation	7	186,132	(186,132)	186,132	(186,132)
Revenues over (under) expenses before income tax expense		<u>(2,384,728)</u>	<u>2,433,575</u>	<u>(3,064,912)</u>	<u>1,549,567</u>
Income tax (expense) revenue	33	(214,271)	(478,662)	46,687	(236,286)
Revenues over (under) expenses		<u>(2,598,999)</u>	<u>1,954,913</u>	<u>(3,018,225)</u>	<u>1,313,281</u>
Revenues over (under) expenses for the years attributable to:					
Owners of the parent		(2,598,999)	1,954,913	(3,018,225)	1,313,281
Non-controlling interests		-	-	-	-
		<u>(2,598,999)</u>	<u>1,954,913</u>	<u>(3,018,225)</u>	<u>1,313,281</u>

Notes to the financial statements form an integral part of these financial statements

Statements of Comprehensive Revenues and Expenses (Continued)

The Stock Exchange of Thailand and Its Subsidiaries

For The Year Ended December 31, 2019

(Unit: Thousand Baht)

	Notes	Consolidate Financial Statements		Separate Financial Statements	
		2019	2018	2019	2018
Revenues over (under) expenses		(2,598,999)	1,954,913	(3,018,225)	1,313,281
Other comprehensive revenues and expenses:					
Items that will be reclassified subsequently to revenues and expenses					
Share of other comprehensive profit (loss) of investments in associates	13	158	(103)	-	-
Change in value of available-for-sale investments managed by SET	25.2	417,992	(825,957)	417,992	(825,957)
Change in value of available-for-sale investments from Securities Investor Protection Fund	25.2	6,218	(10,646)	6,218	(10,646)
Income tax relating to items that will be reclassified subsequently to revenues and expenses	25.2	(82,910)	171,725	(82,912)	170,698
Total items that will be reclassified subsequently to revenues and expenses		<u>341,458</u>	<u>(664,981)</u>	<u>341,298</u>	<u>(665,905)</u>
Items that will not be reclassified subsequently to revenues and expenses					
Remeasurements of post-employment benefits obligations	25.2	10,226	606	10,226	-
Income tax relating to items that will not be reclassified subsequently to revenues and expenses	25	-	(121)	-	-
Total items that will not be reclassified subsequently to revenues and expenses		<u>10,226</u>	<u>485</u>	<u>10,226</u>	<u>-</u>
Other comprehensive revenues and expenses		<u>351,684</u>	<u>(664,496)</u>	<u>351,524</u>	<u>(665,905)</u>
Total comprehensive revenues and expenses		<u>(2,247,315)</u>	<u>1,290,417</u>	<u>(2,666,701)</u>	<u>647,376</u>
Total comprehensive revenues and expenses for the years attributable to:					
Owners of the parent		(2,247,315)	1,290,418	(2,666,701)	647,376
Non-controlling interests		-	(1)	-	-
		<u>(2,247,315)</u>	<u>1,290,417</u>	<u>(2,666,701)</u>	<u>647,376</u>

Statement of Changes in Fund Balances

The Stock Exchange of Thailand and Its Subsidiaries

For The Year Ended December 31, 2019

(Unit: Thousand Baht)

	Note	Consolidated Financial Statements						
		Fund balances (See Note 24)	Other components of fund balances				Total fund balances	Non- controlling interests
			Change in value of available-for-sale investments managed by SET (net of tax)	Change in value of available-for-sale investments from Securities Investor Protection Fund (net of tax)	Share of other comprehensive profit (loss) of associates (net of tax)	Total other components of fund balances		
Opening balance as at January 1, 2018		26,724,008	639,642	11,223	(28)	650,837	27,374,845	2
Other comprehensive revenues and expenses, net of tax	24	485	(659,735)	(5,142)	(103)	(664,980)	(664,495)	(1)
Revenues over expenses	24	1,954,913	-	-	-	-	1,954,913	-
Closing balance as at December 31, 2018		<u>28,679,406</u>	<u>(20,093)</u>	<u>6,081</u>	<u>(131)</u>	<u>(14,143)</u>	<u>28,665,263</u>	<u>1</u>
Opening balance as at January 1, 2019		28,679,406	(20,093)	6,081	(131)	(14,143)	28,665,263	1
Other comprehensive revenues and expenses, net of tax	24	10,226	335,082	6,218	158	341,458	351,684	-
Revenues under expenses	24	(2,598,999)	-	-	-	-	(2,598,999)	-
Closing balance as at December 31, 2019		<u>26,090,633</u>	<u>314,989</u>	<u>12,299</u>	<u>27</u>	<u>327,315</u>	<u>26,417,948</u>	<u>1</u>

(Unit: Thousand Baht)

	Note	Separate Financial Statements				
		Fund balances (See Note 24)	Other components of fund balances			Total fund balances
			Change in value of available-for-sale investments managed by SET (net of tax)	Change in value of available-for-sale investments from Securities Investor Protection Fund (net of tax)	Total other components of fund balances	
Opening balance as at January 1, 2018		25,008,151	648,581	11,223	659,804	25,667,955
Other comprehensive revenues and expenses, net of tax	24	-	(660,763)	(5,142)	(665,905)	(665,905)
Revenues over expenses	24	1,313,281	-	-	-	1,313,281
Closing balance as at December 31, 2018		<u>26,321,432</u>	<u>(12,182)</u>	<u>6,081</u>	<u>(6,101)</u>	<u>26,315,331</u>
Opening balance as at January 1, 2019		26,321,432	(12,182)	6,081	(6,101)	26,315,331
Other comprehensive revenues and expenses, net of tax	24	10,226	335,080	6,218	341,298	351,524
Revenues under expenses	24	(3,018,225)	-	-	-	(3,018,225)
Closing balance as at December 31, 2019		<u>23,313,433</u>	<u>322,898</u>	<u>12,299</u>	<u>335,197</u>	<u>23,648,630</u>

Notes to the financial statements form an integral part of these financial statements

Statements of Cash Flows

The Stock Exchange of Thailand and Its Subsidiaries

For The Year Ended December 31, 2019

(Unit: Thousand Baht)

	Notes	Consolidated Financial Statements		Separate Financial Statements	
		2019	2018	2019	2018
Cash flows from operating activities					
Revenues over (under) expenses before income tax expense		(2,384,728)	2,433,575	(3,064,912)	1,549,567
Adjustments for					
Depreciation and amortization	15 and 16	524,849	482,615	523,700	482,052
Investment income, net		(843,366)	(593,398)	(1,516,714)	(861,978)
Income derived from Securities Investor Protection Fund, net	25	(13,930)	(9,937)	(13,930)	(9,937)
Income derived from Derivatives Investor Protection Fund, net	25	(848)	(686)	-	-
Reversal of allowance for impairment of investments		(3,395)	-	(3,395)	-
Doubtful debts expenses		1,763	-	3,544	-
Employee benefits obligation	23	192,132	51,008	192,132	51,008
Loss from write-off of assets		52	507	52	507
Share of profit of investments in associates and joint venture entity, net of tax	13	(45,383)	(8,630)	-	-
		(2,572,854)	2,355,054	(3,879,523)	1,211,219
Changes in operating assets and liabilities					
(Increase) decrease in operating assets					
Assets for margin deposits and benefits		2,125,742	(2,112,519)	-	-
Trade and other receivables		102,061	195,996	127,681	256,360
Other current assets		13,827	(19,118)	9,197	(11,474)
Assets for clearing system protection and benefits		(222,749)	(80,152)	(3,760)	(1,646)
Securities Investor Protection Fund		(33,457)	(11,750)	(33,457)	(11,750)
Derivatives Investor Protection Fund		(6,321)	(13,007)	-	-
Refundable deposits		3,000	(500)	3,000	(500)
Increase (decrease) in operating liabilities					
Margin deposits and benefits payables		(2,125,742)	2,112,519	-	-
Trade and other payables		180,274	218,991	184,538	182,819
Fees received in advance		18,144	21,388	19,597	25,029
Other current liabilities		35,889	18,966	(13,219)	19,773
Assets for clearing system protection and benefits payable		219,476	78,506	-	-
Contributions and benefits to Securities Investor Protection Fund		13,407	9,472	13,407	9,472
Contributions and benefits to Derivative Investor Protection Fund		5,239	11,978	-	-
Employee benefits paid	23	(4,076)	(18,666)	(4,076)	(18,568)
Transfer of employees from a subsidiary		-	-	-	1,354
Other non-current liabilities		2,099	(1,942)	2,099	(1,045)
Cash flows generated from (used in) operations		(2,246,041)	2,765,216	(3,574,516)	1,661,043
Less Income tax paid		(434,413)	(553,532)	(171,030)	(353,187)
Net cash provided by (used in) operating activities		(2,680,454)	2,211,684	(3,745,546)	1,307,856

Notes to the financial statements form an integral part of these financial statements

Statements of Cash Flows (Continued)

The Stock Exchange of Thailand and Its Subsidiaries

For The Year Ended December 31, 2019

(Unit: Thousand Baht)

	Notes	Consolidated Financial Statements		Separate Financial Statements	
		2019	2018	2019	2018
Cash flows from investing activities					
Investment income received		695,567	375,973	661,827	386,611
Dividend received		143,356	211,998	814,866	532,529
Purchase of short-term investments	9	(2,472,237)	(3,018,708)	(271,875)	(3,018,708)
Proceeds from disposals of short-term investments	9	4,904,849	2,044,831	4,904,849	2,044,831
Proceeds from disposals of investment in joint venture entity		13,000	-	13,000	-
Purchase of general investments	14	(24,500)	-	(24,500)	-
Proceeds from short-term loans to joint venture entity	7	7,500	-	7,500	-
Short-term loans to joint venture entity	7	-	(7,500)	-	(7,500)
Purchase of long-term investments	14	(1,999,380)	(3,703,981)	(1,999,380)	(3,703,981)
Proceeds from disposals of long-term investments	14	3,398,504	2,303,330	3,398,504	2,303,330
Proceeds from long-term loans to a subsidiary	7	-	-	-	5,957
Payment for long-term loans to a subsidiary	7	-	-	(200,000)	(200,000)
Reserve fund for clearing and settlement		(261,862)	(204,256)	-	-
Purchase of property, plant and equipment		(148,220)	(298,163)	(148,220)	(297,941)
Proceeds from disposals of property, plant and equipment		1,643	-	1,643	-
Purchase of intangible assets		(381,177)	(85,017)	(381,177)	(82,121)
Proceeds from share of profit of investments in joint venture entity	13	-	2,047	-	-
Proceeds from share of profit of investments in associates	13	15,743	12,595	-	-
Benefits received from Securities Investor Protection Fund		13,832	12,924	13,832	12,924
Benefits received from Derivatives Investor Protection Fund		1,082	1,029	-	-
Net cash provided by (used in) investing activities		3,907,700	(2,352,898)	6,790,869	(2,024,069)
Cash flows from financing activities					
Cash inflow on short-term borrowings from subsidiaries	7	-	-	458,713	1,226,000
Repayment of short-term borrowings from subsidiaries	7	-	-	(2,323,500)	(364,000)
Interest paid		-	-	(36,569)	(51,360)
Net cash provided by (used in) financing activities		-	-	(1,901,356)	810,640
Net increase (decrease) in cash and cash equivalents		1,227,246	(141,214)	1,143,967	94,427
Opening balances		1,187,681	1,328,895	948,769	854,342
Closing balances		2,414,927	1,187,681	2,092,736	948,769
Supplemental disclosures of cash flows information					
Cash and cash equivalents are as follows:					
Cash and cash equivalents	8	2,329,358	1,118,595	2,092,736	948,769
Cash at banks for financial benefits payable		85,569	69,068	-	-
		2,414,927	1,187,681	2,092,736	948,769
Significant non-cash transactions					
Unrealized gain (loss) on available-for-sale securities		418,150	(826,060)	417,992	(825,957)
Unrealized gain (loss) on available-for-sale securities					
from Securities Investor Protection Fund	25.2	6,218	(10,646)	6,218	(10,646)
Other payables from purchase of assets		18,735	26,269	18,735	26,269

Notes to the financial statements form an integral part of these financial statements

Notes to the Consolidated and Separate Financial Statements

The Stock Exchange of Thailand and Its Subsidiaries

For The Year Ended December 31, 2019

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 (1974). 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 April 30, 1975 and operates under the framework of the Securities Exchange of Thailand Act B.E. 2535 (1992). Its registered office is located at 93 Floor 17 Ratchadapisek Road, Kwaeng Din Daeng, Khet Din Daeng, Bangkok 10400, Thailand.

For reporting purposes, SET and its subsidiaries are referred to as the Group.

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) Registrar services and fund services comprise the operation of securities registrar and fund services.

Details of SET's subsidiaries, associates and joint venture entity as at December 31, 2019 and 2018 are as follows:

Name of entity	Type of business	Country of incorporation	Ownership interest %	
			2019	2018
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	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
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
Joint venture entity				
Family Know-how Co., Ltd. ⁽¹⁾ (the dissolution was registered on December 26, 2018)	Media business specialising in financial and investment information	Thailand	50.00	50.00
Associates				
Clearing Fund ⁽²⁾	Fund	Thailand	8.59	9.42
TSFC Securities Public Company Limited ⁽³⁾	Securities financing services and securities borrowing and lending	Thailand	40.65	40.65

Details of SET's associates and joint venture entity as at December 31, 2019 and 2018 are as follows:

(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 is classified as investment in joint venture entity.

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 December 26, 2018, and is currently in the process of liquidation.

(2) Clearing Fund

The Clearing Fund operates under the Regulations of the Clearing Fund (No.1) B.E. 2541 (1998), 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.

(3) 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. Accounting Policies

2.1 Basis of preparation

The consolidated and separate financial statements have been prepared in accordance with Thai Financial Reporting Standards under the Accounting Act B.E. 2543 (2000), being those Thai Financial Reporting Standards issued under the Accounting Profession Act B.E. 2547 (2004).

The consolidated and separate financial statements have been prepared under the historical cost convention except as disclosed in the accounting policy for investments below.

The preparation of financial statements in conformity with Thai Financial Reporting Standards requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the Group's accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the consolidated and separate financial statements are disclosed in Note 3.

An English version of the consolidated and separate financial statements has been prepared from the statutory financial statements that are in the Thai language. In the event of a conflict or a difference in interpretation between the two languages, the Thai language statutory financial statements shall prevail.

2.2 Revised financial reporting standards, and related interpretations

2.2.1 Thai Financial Reporting Standards affecting the presentation and disclosure in the current period financial statements

During the period, the Group has adopted the revised and new financial reporting standards and guidelines on accounting issued by the Federation of Accounting Professions which become effective for fiscal years beginning on or after January 1, 2019. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards, with most of the changes directed towards revision of wording and terminology, and provision of interpretations and accounting guidance to users of standards. The adoption of these financial reporting standards does not have any significant impact on the Group's financial statements. However, the new financial reporting standards which was changed the core principle is Thai Financial Reporting Standard No.15 "Revenue from Contracts with Customers" ("TFRS 15"). The Group's accounting policies for revenues are disclosed in Note 2.18 to the financial statements. The application of TFRS 15 has no significant impact on the financial position and/or financial performance of the Group.

2.2.2 Thai Financial Reporting Standards announced in the Royal Gazette but not yet effective

The Federation of Accounting Professions has issued the Notification regarding Thai Accounting Standards, Thai Financial Reporting Standards and Thai Financial Reporting Standard Interpretation which have been announced in the Royal Gazette and will be effective for the financial statements for the period beginning on or after January 1, 2020 onwards, as follows:

Group of Financial Instruments Standards

Thai Accounting Standards ("TAS")

TAS 32	Financial Instruments: Presentation
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Thai Financial Reporting Standards ("TFRS")

TFRS 7	Financial Instruments: Disclosures
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TFRS 9	Financial Instruments
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Thai Financial Reporting Standard Interpretations ("TFRIC")

TFRIC 16	Hedges of a Net Investment in a Foreign Operation
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TFRIC 19	Extinguishing Financial Liabilities with Equity Instruments
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These group of Standards make stipulations relating to the classification of financial instruments and their measurement at fair value or amortized cost; taking into account the type of instrument, the characteristics of the contractual cash flows and the Company's business model, the calculation of impairment using the expected credit loss method, and the concept of hedge accounting. These include stipulations regarding the presentation and disclosure of financial instruments. These Standards will supersede the Standards and Interpretations relating to the financial instruments upon its effective date.

Thai Financial Reporting Standards No. 16 “Leases” (“TFRS 16”)

This TFRS provides a comprehensive model for the identification of lease arrangements and their treatment in the financial statements of both lessees and lessors.

This TFRS will supersede the following lease Standards and Interpretations upon its effective date, which are Thai Accounting Standard No.17 “Leases”, Thai Accounting Standard Interpretation No.15 “Operating Lease-Incentives”, Thai Accounting Standard Interpretation No. 27 “Evaluating the Substance of Transactions involving the Legal Form of a Lease” and Thai Financial Reporting Standard Interpretation No. 4 “Determining whether an Arrangement contains a Lease”.

For lessee accounting, there are significant changes to lease accounting in this TFRS by removing the distinction between operating and finance leases under TAS 17 and requiring a lessee to recognize a right-of-use asset and a lease liability at commencement for all leases, except for short-term leases and leases of low value assets. However, the lessor accounting treatment continues to require a lessor to classify a lease either as an operating lease or a finance lease, using the same concept as TAS 17.

Other financial reporting standards

Thai Accounting Standards (“TAS”)

TAS 12	Income Taxes
TAS 19	Employee Benefits
TAS 23	Borrowing Costs
TAS 28	Investments in Associates and Joint Ventures

Thai Financial Reporting Standards (“TFRS”)

TFRS 3	Business Combinations
TFRS 11	Joint Arrangements

The Group’s management has assessed the impact of this TFRS and believed that it will not have any material impact on the financial statements of the Group in the period of initial application.

2.3 Group Accounting-Investments in subsidiaries, associates and joint ventures entity

1) Subsidiaries

Subsidiaries are all entities (including structured entities) over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases.

Intercompany transactions, balances and unrealized gains or loss on transactions between the Group are eliminated. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the transferred asset. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group.

In the separate financial statements, investments in subsidiaries are accounted for at cost less impairment. Cost is adjusted to reflect changes in consideration arising from contingent consideration amendments. Cost also includes direct attributable costs of investment.

2) Transactions and non-controlling interests

The Group treats transactions with non-controlling interests as transactions with the Fund. For purchases from non-controlling interests, the difference between any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recorded in the Fund. Gains or losses on disposals to non-controlling interests are also recorded in the Fund.

3) Disposal of subsidiaries

When the Group ceases to have control, any retained interest in the entity is re-measured to its fair value, with the change in carrying amount recognized in revenues and expenses. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognized in other comprehensive revenues and expenses in respect of that entity are accounted for as if the Group had directly disposed of the related assets or liabilities.

4) Associates

Associates are all entities over which the Group has significant influence but not control, generally accompanying a shareholding of between 20% and 50% of the voting rights. Investments in associates are accounted for using the equity method of accounting. Under the equity method, the investment is initially recognized at cost, and the carrying amount is increased or decreased to recognize the investor's share of the profit or loss of the investee after the date of acquisition. The Group's investment in associates includes goodwill identified on acquisition.

If the ownership interest in an associate is reduced but significant influence is retained, only a proportionate share of the amounts previously recognized in other comprehensive revenues and expenses is reclassified to revenues and expenses where appropriate.

The Group's share of its associates' post-acquisition profits or losses is recognized in the revenues and expenses, and its share of post-acquisition movements in other comprehensive revenues and expenses is recognized in other comprehensive revenues and expenses. The cumulative post-acquisition movements are adjusted against the carrying amount of the investment. When the Group's share of losses in an associate equals or exceeds its interest in the associate, including any other unsecured receivables, the Group does not recognize further losses, unless it has incurred obligations or made payments on behalf of the associate.

The Group determines at each reporting date whether there is any objective evidence that the investment in the associate is impaired. If this is the case, the Group calculates the amount of impairment as the difference between the recoverable amount of the associate and its carrying value and recognizes the amount adjacent to share of profit/(loss) of associates in the statement of comprehensive revenues and expenses.

Unrealized gains on transactions between the Group and its associates are eliminated to the extent of the Group's interest in the associates. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred.

Accounting policies of associates have been changed where necessary to ensure consistency with the policies adopted by the Group. Dilution gains and losses arising in investments in associates are recognized in the revenues and expenses.

In the separate financial statements, investments in associates are accounted for at cost less impairment. Cost is adjusted to reflect changes in consideration arising from contingent consideration amendments. Cost also includes direct attributable costs of investment.

5) Joint venture entity

Under the equity method of accounting, interests in joint ventures are initially recognized at cost and adjusted thereafter to recognize the Group's share of the post-acquisition profits or losses and movements in other comprehensive revenues and expenses. When the Group's share of losses in a joint venture equals or exceeds its interests in the joint ventures (which includes any long-term interests that, in substance, from part of the Group's net investment in the joint ventures), the Group does not recognize further losses, unless it has incurred obligations or made payments on behalf of the joint ventures.

Unrealized gains on transactions between the Group and its joint ventures are eliminated to the extent of the Group's interest in the joint ventures. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of the joint ventures have been changed where necessary to ensure consistency with the policies adopted by the Group.

2.4 Foreign currencies

a) Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates (the functional currency). The consolidated financial statements are presented in Thai Baht, which is the Group's functional and the Group's presentation currency.

b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuation where items are re-measured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognized in the revenues or expenses.

When a gain or loss on a non-monetary item is recognized in other comprehensive revenues and expenses, any exchange component of that gain or loss is recognized in other comprehensive revenues and expenses. Conversely, when a gain or loss on a non-monetary item is recognized in revenues or expenses, any exchange component of that gain or loss is recognized in revenues or expenses.

2.5 Underlying assets

Underlying assets are the financial assets carried by Thai NVDR Co., Ltd. (the subsidiary). The financial liabilities are the Non-Voting Depository Receipts (NVDRs). The subsidiary will offset the financial assets and financial liabilities, and show the net amount in the financial statements. According to the regulations and conditions in the prospectus, the subsidiary are responsible for issuing and selling NVDRs and making investments in listed companies in the Stock Exchange of Thailand at the same amount and in the same period (Back to back). In addition to the entitlement of financial benefits of those underlying securities as the registered holder, the subsidiary has an obligation to repay those financial benefits to the investors in the NVDRs as mentioned in the prospectus. Those benefits are not recognized as revenues or expenses of the subsidiary.

2.6 Cash and cash equivalents

Cash and cash equivalents comprise cash on hand, call deposits (excluding deposits held-to-maturity), other short-term highly liquid investments held for working capital and short-term commitment payment purposes with maturities from acquisition date of three months or less.

2.7 Investments

Investments other than investments in subsidiaries, associates and joint ventures are classified into the following four categories: 1) trading investments; 2) held-to-maturity investments; 3) available-for-sale investments; and 4) general investments. The classification is dependent on the purpose for which the investments were acquired. Management determines the appropriate classification of its investments at the time of the purchase and re-evaluates such designation on a regular basis.

- 1) Trading investments are acquired principally for the purpose of generating a profit from short-term fluctuations in price are classified as trading investments and included in current assets.
- 2) Held-to-maturity investments are investments with fixed maturity that the management has the intent and ability to hold to maturity are classified as held-to-maturity and are included in non-current assets, except for maturities within 12 months from the statement of financial position date which are classified as current assets.
- 3) Available-for-sale investments are investments intended to be held for an indefinite period of time, which may be sold in response to liquidity needs or changes in interest rates, are classified as available-for-sale; and are included in non-current assets unless management has expressed the intention of holding the investment for less than 12 months from the statement of financial position date or unless they will need to be sold to raise operating capital, in which case they are included in current assets.
- 4) General investments are investments in non-marketable equity.

All categories of investments are initially recognized at cost, which is equal to the fair value of consideration paid plus transaction cost.

Trading investments and available-for-sale investments are subsequently measured at fair value. The fair value of investments is based on quoted bid price at the close of business on the statement of financial position date by reference to the Stock Exchange of Thailand and the Thai Bond Dealing Centre. The unrealized gains and losses of trading investments are recognized in revenues and expenses. The unrealized gains and losses of available-for-sale in investments are recognized in other comprehensive revenues and expenses.

Held-to-maturity investments are carried at amortized cost using the effective yield method less impairment loss.

General investments are carried at cost less impairment loss.

A test for impairment is carried out when there is a factor indicating that an investment might be impaired. If the carrying value of the investment is higher than its recoverable amount, impairment loss is charged to revenues and expenses.

On disposal of an investment, the difference between the net disposal proceeds and the carrying amount is charged or credited to the revenues and expenses. When disposing part of the holding of a particular investment in debt or equity securities, the carrying amount of the disposed part is determined by the weighted average carrying amount of the total holding of the investment.

2.8 Trade and other receivables

Trade and other receivables are carried at original invoice amount less allowance for doubtful accounts (if any).

The allowance for doubtful accounts is assessed primarily on analysis of payment histories and future expectations of customer payments, assessment of the future cash flows, known and identified instances of default and consideration of market trends. Bad debts are written off when incurred and recognized as part of other expenses in the statement of comprehensive revenues and expenses.

2.9 Property, plant and equipment

Land is stated at cost less impairment losses. Property and equipment are stated at cost less accumulated depreciation and impairment losses (if any).

Depreciation is charged to expenses in the statement of comprehensive revenues and expenses on a straight-line basis over the estimated useful lives of each part of an item of property, plant and equipment, except for land which is considered to have an unlimited useful life. The estimated useful lives are as follows:

Buildings	10–50 years
Building improvements	5–30 years
Furniture and fixtures	5–20 years
Office equipment	5–20 years
Vehicles	5 years

Management determines the estimated useful lives and residual values for the Group's property and equipment. Management will appropriately revise the residual values and useful lives of assets when the residual values and useful lives differ from previous estimations, or it will write-off technically obsolete assets or assets which have been sold or abandoned.

Where the carrying amount of an asset is greater than its estimated recoverable amount, it is written down immediately to its recoverable amount.

Repair and maintenance expenses are charged to the statement of comprehensive revenues and expenses during the financial period in which they are incurred. The cost of major renovation is included in the carrying amount of the asset when it is probable that future economic benefits in excess of the originally assessed standard of performance of the existing asset will flow to the Group. Major renovations are depreciated over the remaining useful lives of the related assets.

Gains and losses on disposal are determined by comparing the proceeds with the carrying amount and are included in the statement of comprehensive revenues and expenses.

2.10 Borrowings

Borrowings are recognized initially at fair value, net of transaction cost incurred. Borrowings are subsequently stated at amortized cost; any difference between proceeds (net of transaction costs) and the redemption value is recognized in revenues or expenses over the period of the borrowings using the effective yield method.

2.11 Intangible assets

Intangible assets, computer software, patent and right in operation, that are acquired by the Group, which have finite useful lives, are recognized at cost less accumulated amortization and impairment losses. Intangible assets are amortized in the statement of comprehensive revenues and expenses on a straight-line basis over their estimated useful lives from the date that they are available for use. The estimated useful lives are 2–10 years.

Costs associated with developing or maintaining computer software are recognized 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 recognized 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 recognized as an intangible asset.

Management determines the estimated useful lives of intangible assets. Management will revise the amortization charge where useful lives differ from the previous estimations or it will write-off technically obsolete assets or assets which have been sold or abandoned.

2.12 Impairment

Assets that have an indefinite useful life are not subject to amortization and are tested annually for impairment. Assets that are subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized for the amount by which the carrying amount of the assets exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest level for which there are separately identifiable cash flows. Non-financial assets that suffered an impairment are reviewed for possible reversal of the impairment at each reporting date.

2.13 Interest-bearing liabilities

Interest-bearing liabilities are recognized initially at fair value less attributable transaction charges. Subsequent to initial recognition, interest-bearing liabilities are stated at amortized cost with any difference between cost and redemption value being recognized in the statement of comprehensive revenues and expenses over the period of the borrowings on an effective interest basis.

2.14 Trade and other payables

Trade and other payables are stated at cost.

2.15 Employee benefits obligation

1) Short-term benefits

The Group recognizes salaries, wages, bonuses, contributions to the social security fund and cumulative annual leave as expenses when incurred.

2) Contributions to provident fund

The Group operates a provident fund, being a defined contribution plan. The assets of which are held in a separate trustee-administered fund. The provident fund is funded by payments from employees and by the Group. The Group's contributions to provident fund are charged to expenses in the statement of comprehensive revenues and expenses in the period to which the contributions relate.

3) Retirement benefits and other benefits

Employee benefits that will be paid upon retirement usually depends on one or more factors such as age of employees, years of service and compensation. In addition, the Group provides other long-term employee benefit plans, namely long service awards.

The liability recognized in the statement of financial position in respect of defined benefit retirement plans is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets. The defined benefit obligation is calculated by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using market yield of government bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating to the terms of the related retirement liability. The Group reviews the assumptions used annually.

Remeasurement gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to the Fund in other comprehensive revenues and expenses in the period in which they arise.

Past service cost are recognized immediately in revenues and expenses.

Past service cost related to the plan amendment is recognized as an expense in the statement of revenues and expenses when the plan amendment is effective.

4) 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 recognizes 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; or 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.

2.16 Provisions

Provisions are recognized when the Group has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources will be required to settle the obligation; and the amount has been reliably estimated. Provisions are not recognized for future operating losses.

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 recognized 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 recognized as interest expense.

2.17 Lease-where a Group is the lessee

Leases of assets under which all the risks and benefits of ownership are effectively retained by the lessor are classified as operating leases.

Payments made under operating leases are recognized in the statement of comprehensive revenues and expenses on a straight-line basis over the term of the lease. Lease incentives granted are recognized in the statement of comprehensive revenues and expenses as an integral part of the total rental income. Contingent rentals are charged to the statement of comprehensive revenues and expenses for the accounting period in which they are incurred.

When an operating lease is terminated before the lease period has expired, any payment required to be made to the lessor by way of penalty is recognized as an expense in the period in which termination takes place.

2.18 Revenue

For the year ended December 31, 2019, the Group's change the basis according to the adoption of TFRS No. 15 "Revenue from Contracts with Customers". Therefore, the accounting policy for revenue recognition for the year ended December 31, 2019 and 2018 were contrast as below:

For the year ended December 31, 2019

Trading fees, initial securities registrar fees, initial listing fees, clearing and settlement fees, member services fees, initial of information services fees, depository fees, initial customization and IT support fees, initial membership fees and initial fund services fees is recognized revenue when the entity has fulfilled the obligations to be completed.

Annual securities registrar fees, annual listing fees, member services fees by overtime, information services fees by overtime, customization and IT support fees by overtime, annual membership fees and fund services fees by overtime is recognized revenue according to the obligations that must be completed throughout the period.

Interest income is recognized on a time proportion basis, taking into account the principal outstanding and the effective rate over the period to maturity, when it is determined that such income will accrue to the Group.

Dividend income is recognized in the statement of comprehensive revenues and expenses when the Group's right to receive payment is established.

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

For the year ended December 31, 2018

Service income is recognized upon performance of services.

Membership fees comprise initial and annual fees. The initial fees are recognized as revenue in the commencing day on which the service is rendered. Annual fees are recognized on a time proportion basis.

2.19 Expense

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

2.20 Directors' remuneration

Directors' remuneration comprises the benefits paid to the Board of Governors of SET and the Board of Directors of subsidiaries including benefits received by the members of sub-committees (excluding salaries, bonus and related benefits payable to management).

2.21 Current and deferred income taxes

The tax expense for the period comprises current and deferred tax. Tax is recognized in revenue or expense, except to the extent that it relates to items recognized in other comprehensive revenues and expenses or directly in fund balances. In this case the tax is also recognized in other comprehensive revenues and expenses or directly in fund balances, respectively.

The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the end of reporting period. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred income tax is recognized, using the liability method, on temporary differences arising from differences between the tax base of assets and liabilities and their carrying amounts in the financial statements. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantially enacted by the end of the reporting period and are expected to apply when the related deferred income tax asset is realized or the deferred income tax liability is settled.

Deferred income tax assets are recognized only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilized.

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred income tax assets and liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities where there is an intention to settle the balances on a net basis.

2.22 Segment reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the Group's senior management.

3. Critical Accounting Estimates, Assumptions and Judgments

Use of management's judgements and key sources of estimation uncertainty

3.1 Management's judgements in applying accounting policies

The preparation of financial statements in conformity with Thai Financial Reporting Standards requires the Group's management to exercise various judgements in applying accounting policies that can significantly affect the recognition and disclosures in the financial statements. Significant judgements in applying accounting policies are as follows:

Allowance for doubtful accounts

Detail of the allowance for doubtful is set out in Note 2.8.

Impairment

Detail of the impairment of asset is set out in Note 2.12.

Employee benefits obligation

Details of the employee benefits obligation are set out in Notes 2.15 and 23.

Provisions

Detail of the provisions is set out in Note 2.16.

Deferred tax

Details of the deferred tax are set out in Notes 2.21 and 20.

3.2 Key sources of estimation uncertainty

The Company has estimates with the assumptions concerning the future. Although these estimates are based on management's reasonable consideration of current events, actual results may differ from these estimates. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are outlined below:

Fair value measurements and valuation processes

Fair value measurements are for information disclosure purposes.

The Group regularly review significant unobservable inputs and valuation adjustments. If third party information is used to measure fair values, then the Group assess the evidence obtained from the third parties to support the conclusion that such valuations meet the requirements of TFRS 13, including the level in the fair value hierarchy.

When measuring the fair value of an asset or a liability, the Group use market observable data as the first priority. Fair values are categorized into different levels in a fair value hierarchy based on the inputs used in the valuation techniques for fair value measurement as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.
- Level 2 inputs are inputs, other than quoted prices included within Level 1, which are observable for the asset or liability, either directly or indirectly.
- Level 3 inputs are unobservable inputs for the asset or liability.

4. Financial Risk Management

4.1 Financial risk factors

The Group's activities expose it to a variety of financial risks: currency risk, fair value interest rate risk and cash flow interest rate risk, credit risk, liquidity risk and risk from investments and deposits. The Group's financial risk management programme focuses on investment management under investment policies and strategic asset allocation which is approved by SET's Board of Governors and subsidiaries' Board of Director. The investment committees are strictly established to oversee the investment in compliance with the policies and strategic asset allocation defined. The investment policy aims on maintaining stability of the principal, liquidity and return on the appropriate level of risk.

1) Foreign exchange 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 investments in some foreign mutual funds which is in foreign currency. The Group has appropriately applied forward exchange contracts to hedge foreign exchange risk of such investments.

2) Interest rate risk

Interest rate risk arises from fluctuations in market interest rates which may affect the Group's operating results and cash flow. The Group does not have interest rate derivative in order to manage fluctuation of the interest rate.

3) 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.

4) 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.

5) Risk from investments and deposits

The Group is exposed to market risks as the investor of financial instruments, and credit risk from the issuer of financial instruments. The Group, therefore, has a policy of diversifying its investments and deposits to high credit financial institutions according to the investment policy prescribed by the resolution of the investment committee.

The investment policies framework regarding types and proportion of investments are as follows:

Type of investment	Proportion of investment
Investments in debt securities	
Government securities, debentures or bonds of state enterprises or entities incorporated by specific laws and guaranteed by the Ministry of Finance	Unlimited
Fixed deposits or NCDs at commercial banks and promissory notes of finance companies or financial institutions incorporated by specific laws	Not to exceed 15% of total debt investment per institution
Debentures or warrants of debentures and bills of exchange	Not to exceed 5% of total debt investment per issuer
Investment units or warrants of investment units in mutual funds invested in debt securities	Not to exceed 10% of total debt investment per mutual fund
Investments in domestic equity securities	
Investment units or warrants of investment units in mutual funds invested in equity securities	Not to exceed 10% of total equity investment per each Fund, and not to exceed 10% of fund size
Investments in Property Funds	
Property Funds	Not to exceed 10% of fund size per each Fund, except for fund of Property Funds, not to exceed 20% of fund size
Investments in Foreign Investment Funds	
Foreign Investment Funds	<ul style="list-style-type: none"> - Foreign Investment Funds in Thailand; not to exceed 30% of fund size - Direct investment in mutual fund in Foreign and Exchange Traded Fund "ETF": not to exceed 10% of all foreign equity value per each Fund (2018: Direct investment in mutual fund and ETF: not to exceed 10% of foreign equity value per each Fund)
Investments in Absolute Return Strategy Funds	
Absolute Return Strategy Funds	Not to exceed 25% of the initial investment amount in Absolute Return per each Fund
Investments in Gold Funds	
Gold Funds	Not to exceed 10% of fund size per mutual fund

Investments in each asset management company should not exceed 40% of total investments.

4.2 Accounting for derivative financial instruments and hedging activities

Foreign currency forward contracts protect the Group from movements in exchange rates. The Group enters into contract establishing the rate at which a foreign currency asset will be realized or a foreign currency liability will be settled in the future. The Group recognize foreign currency forward contracts transaction in the financial statements in fair value measurement. The unrealized gain (loss) from fair value measurement of foreign currency forward contracts will be included in unrealized gain (loss) on exchange rate in the statements of comprehensive revenues and expenses.

Disclosures about derivative financial instruments to which the Group is a party are provided in Note 37.

5. Capital Risk Management

The Group's objectives when managing capital are to safeguard the Subsidiaries in the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to increase investor and stakeholder confidence.

In order to maintain or adjust the capital structure, the subsidiaries in the Group may adjust the amount of dividends paid to shareholders depending on their operating performance.

6. Segment Information

Segment information is presented in respect of the Group's business segments. The primary format, business segments, is based on the Group's management and internal reporting structure.

The Group comprises the following 5 main business segments:

- 1) Securities Markets (including securities trading, clearing and settlement, listing, depository and membership fees)
- 2) Derivatives Markets (including trading and clearing of future contracts and membership fees)
- 3) Technology Services (including member services, information services and technology support)
- 4) Registrar Services (including securities registrar)
- 5) Capital Market Development and others, i.e., rental income and other miscellaneous income. Capital Market Development including capital market education improving financial and investment capabilities, promoting sustainable development of capital market industry and conducting of capital market research.

Financial information presented in the consolidated financial statements as at December 31, 2019 and 2018 and for the years ended December 31, 2019 and 2018 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 December 31, 2019							
Revenues from operation	3,052,745	1,020,689	684,848	1,226,040	353,523	-	6,337,845
Revenues from inter-segment	707,417	501,619	79,415	566,721	75,765	(1,930,937)	-
Total revenues	3,760,162	1,522,308	764,263	1,792,761	429,288	(1,930,937)	6,337,845
Segment revenues over (under) expenses	<u>1,195,706</u>	<u>382,197</u>	<u>381,245</u>	<u>366,746</u>	<u>(204,869)</u>	<u>-</u>	<u>2,121,025</u>
Investment income, net							947,954
Share of profit of investments in joint venture entity, net of tax							7,248
Share of profit of investments in associates, net of tax							38,135
Revenues over expenses in operations							<u>3,114,362</u>
Non-operating revenues (expenses)							
Income derived from Securities Investor Protection Fund, net							13,930
Income derived from Derivatives Investor Protection Fund, net							848
Transfer money to the Capital Market Development Fund							(5,700,000)
Reversal of contributions to the Stock Exchange of Thailand Foundation							186,132
Revenues under expenses before income tax expense							<u>(2,384,728)</u>
Income tax expense							<u>(214,271)</u>
Revenues under expenses							<u>(2,598,999)</u>
As at December 31, 2019							
Segment assets	4,131,925	27,709,288	895,417	690,872	254,054	(5,944,386)	27,737,170
Other assets	-	-	-	-	20,675,624	(3,418,600)	17,257,024
Total assets	<u>4,131,925</u>	<u>27,709,288</u>	<u>895,417</u>	<u>690,872</u>	<u>20,929,678</u>	<u>(9,362,986)</u>	<u>44,994,194</u>
Segment liabilities	1,676,534	21,474,802	238,203	482,867	648,225	(5,944,386)	18,576,245
Other liabilities	-	-	-	-	1,918,713	(1,918,713)	-
Total liabilities	<u>1,676,534</u>	<u>21,474,802</u>	<u>238,203</u>	<u>482,867</u>	<u>2,566,938</u>	<u>(7,863,099)</u>	<u>18,576,245</u>

(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 December 31, 2018							
Revenues from operation	3,107,109	957,548	592,399	1,120,937	214,361	-	5,992,354
Revenues from inter-segment	810,061	426,274	92,044	500,202	27,006	(1,855,587)	-
Total revenues	3,917,170	1,383,822	684,443	1,621,139	241,367	(1,855,587)	5,992,354
Segment revenues over (under) expenses	<u>1,240,378</u>	<u>578,592</u>	<u>196,337</u>	<u>341,708</u>	<u>(342,746)</u>	<u>-</u>	<u>2,014,269</u>
Investment income, net							586,185
Share of loss of investments in joint venture entity, net of tax							(30,933)
Share of profit of investments in associates, net of tax							39,563
Revenues over expenses in operations							<u>2,609,084</u>
Non-operating revenues (expenses)							
Income derived from Securities Investor Protection Fund, net							9,937
Income derived from Derivatives Investor Protection Fund, net							686
Contributions to the Stock Exchange of Thailand Foundation							(186,132)
Revenues over expenses before income tax expense							<u>2,433,575</u>
Income tax expense							(478,662)
Revenues over expenses							<u>1,954,913</u>
As at December 31, 2018							
Segment assets	4,008,194	29,027,065	921,289	743,866	460,892	(5,656,956)	29,504,350
Other assets	-	-	-	-	24,579,501	(5,313,183)	19,266,318
Total assets	<u>4,008,194</u>	<u>29,027,065</u>	<u>921,289</u>	<u>743,866</u>	<u>25,040,393</u>	<u>(10,970,139)</u>	<u>48,770,668</u>
Segment liabilities	1,503,384	23,093,450	226,649	443,766	495,111	(5,656,956)	20,105,404
Other liabilities	-	-	-	-	3,783,500	(3,783,500)	-
Total liabilities	<u>1,503,384</u>	<u>23,093,450</u>	<u>226,649</u>	<u>443,766</u>	<u>4,278,611</u>	<u>(9,440,456)</u>	<u>20,105,404</u>

Reconciliation of reportable segment assets/liabilities were as follows:

(Unit: Thousand Baht)

	Consolidated Financial Statements	
	2019	2018
Assets		
Assets for reportable segments	27,737,170	29,504,350
Unallocated amounts:		
– Cash and investments	15,185,428	17,234,806
– Short-term loans to a joint venture entity	–	7,500
– Investments in related parties	988,420	968,228
– Accrued interest receivable	31,298	21,177
– Land and work in process	1,051,878	1,034,607
Total assets	<u>44,994,194</u>	<u>48,770,668</u>
Liabilities		
Liabilities for reportable segments	<u>18,576,245</u>	<u>20,105,404</u>
Total liabilities	<u>18,576,245</u>	<u>20,105,404</u>

7. Transactions with Related Parties

Enterprises and individuals that directly, or indirectly through one or more intermediaries, control, or are controlled by, or are under common control with, the entity, including holding companies, subsidiaries and fellow subsidiaries are related parties of the entity. Associates and individuals owning, directly or indirectly, an interest in the voting power of the entity that gives them significant influence over the enterprise, key management personnel, including directors and officers of the company and close members of the family of these individuals and companies associated with these individuals also constitute related parties.

In considering each possible related party relationship, attention is directed to the substance of the relationship, and not merely the legal form.

Transactions with related parties are conducted at prices based on market prices or at contractually agreed prices where no market price exists.

The pricing policies for particular types of transactions are explained below:

Transaction	Pricing policy
Service income	Cost plus margin
Purchase of services	Cost plus margin
Interest income	With reference to the return of bank deposit and debt securities
Interest expense	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

Related party transactions for the years ended December 31, 2019 and 2018 were as follows:

(Unit: Thousand Baht)

	Consolidated		Separate	
	Financial Statements		Financial Statements	
	2019	2018	2019	2018
Service income				
Subsidiaries	-	-	1,778,466	1,711,474
Joint venture entity	7	15,807	7	14,607
Associates	1,680	1,680	-	-
	<u>1,687</u>	<u>17,487</u>	<u>1,778,473</u>	<u>1,726,081</u>
Purchase of services				
Subsidiaries	-	-	13,407	1,993
Joint venture entity	-	94,320	-	93,120
	<u>-</u>	<u>94,320</u>	<u>13,407</u>	<u>95,113</u>
Interest income				
Subsidiaries	-	-	170,388	90,437
Joint venture entity	41	8	41	8
	<u>41</u>	<u>8</u>	<u>170,429</u>	<u>90,445</u>
Interest expense				
Subsidiaries	-	-	36,569	51,360
	<u>-</u>	<u>-</u>	<u>36,569</u>	<u>51,360</u>

Related party balances as at December 31, 2019 and 2018 were as follows:

(Unit: Thousand Baht)

	Consolidated Financial Statements		Separate Financial Statements	
	2019	2018	2019	2018
Accounts receivable				
Joint venture entity	2	598	2	598
	2	598	2	598
Accrued income				
Subsidiaries	-	-	163,490	172,801
Joint venture entity	-	443	-	443
Associates	140	140	-	-
	140	583	163,490	173,244
Accrued interest receivable				
Subsidiaries	-	-	164,825	86,323
Joint venture entity	-	8	-	8
	-	8	164,825	86,331
Other current assets				
Joint venture entity	-	441	-	441
	-	441	-	441
Accounts payable				
Subsidiaries	-	-	-	124
Joint venture entity	-	6,746	-	6,746
	-	6,746	-	6,870
Accrued expenses				
Subsidiaries	-	-	11,641	184
	-	-	11,641	184
Fees received in advance				
Subsidiaries	-	-	2,585	3,165
	-	-	2,585	3,165
Others current liabilities				
Joint venture entity	-	1,339	-	1,339
	-	1,339	-	1,339

Short-term loans to a joint venture entity

(Unit: Thousand Baht)

	Interest rate (% per annum)		Consolidated and Separate Financial Statements	
	2019	2018	2019	2018
Short-term loans to a joint venture entity	-	5.75	-	7,500

SET lent to a joint venture entity to enhance the liquidity during the dissolution of the joint venture. The loan is in the form of non-convertible promissory notes, which the redemption is on demand.

Movements of short-term loans to a joint venture entity for the years ended December 31, 2019 and 2018 were as follows:

(Unit: Thousand Baht)

	Consolidated and Separate Financial Statements	
	2019	2018
A joint venture entity		
Opening balance	7,500	-
Additions	-	7,500
Repayments	(7,500)	-
Closing balance	-	7,500

Long-term loans to a subsidiary

Long-term loans to a subsidiary as at December 31, 2019 and 2018

(Unit: Thousand Baht)

	Separate Financial Statements	
	2019	2018
Long-term loans to a subsidiary	5,440,834	5,240,834

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 0.30%–0.50% per annum of principle balance. The rate of return will be reviewed on an annual basis (see Note 19).

Movements of long-term loans to a subsidiary for the years ended December 31, 2019 and 2018 were as follows:

(Unit: Thousand Baht)

	Separate Financial Statements	
	2019	2018
A subsidiary		
Opening balance	5,240,834	5,046,791
Additions	200,000	200,000
Repayments	–	(5,957)
Closing balance	5,440,834	5,240,834

Short-term borrowings from subsidiaries

Short-term borrowings from subsidiaries as at December 31, 2019 and 2018

(Unit: Thousand Baht)

	Interest rate (% per annum)		Separate Financial Statements	
	2019	2018	2019	2018
Short-term borrowings from subsidiaries	0.80–1.81	1.33–1.80	1,918,713	3,783,500

The Group has a policy of centralizing the investments and managed by SET in order to maximize 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).

Movements of short-term borrowings from subsidiaries for the years ended December 31, 2019 and 2018 were as follows:

(Unit: Thousand Baht)

	Separate Financial Statements	
	2019	2018
Subsidiaries		
Opening balance	3,783,500	2,921,500
Additions	458,713	1,226,000
Repayments	(2,323,500)	(364,000)
Closing balance	1,918,713	3,783,500

Sponsorship for joint venture entity

Under the shareholder agreement between SET and a Company, SET will be a principal sponsor of a joint venture's program that dissolution was registered on December 26, 2018. Therefore no financial support has been provided to a joint venture entity in 2019 (2018: Baht 90 million).

Contributions to the Stock Exchange of Thailand Foundation (Foundation)

SET realizes the importance of corporate social responsibility (CSR) alongside the core business. To grow the business sustainably, the corporation must be CSR-minded and must put into practice basis, SET has established the Foundation to support outstanding CSR projects that greatly benefit the society and the country as a whole.

The Foundation was established on August 9, 2006. SET's Board of Governors are also the committee members of the Foundation, by position. The Foundation supports two key CSR areas; 1) Increasing the potential in human 2) Increasing the potential of organizations and communities.

SET allocated its annual revenues over expenses to support the implementation of the Foundation. Since 2006, SET appropriated one-third of revenues over expenses. On August 9, 2016, an adjustment was made to allocate 13% of revenues over expenses before income tax.

On July 24, 2019, SET's Board of Governors has resolved to cancel the allocation of funds to the Stock Exchange of Thailand Foundation which will be effective for revenue over expense before income tax expense of the fiscal year 2018 onwards. However, if the Foundation request for contributions, SET may consider allocating funds to the Foundation from time to time as appropriate.

Therefore, SET reversed an accrued contribution to the Foundation in 2018 of Baht 186.13 million for the year ended December 31, 2019 (2018: Contributions to the Foundation of Baht 186.13 million).

Directors' remuneration

The directors' remuneration represents director fees and compensation fees for the Group's board of directors and other sub-committees for the years ended December 31, 2019 and 2018.

(Unit: Thousand Baht)

	Consolidated Financial Statements		Separate Financial Statements	
	2019	2018	2019	2018
Directors' remuneration	27,714	27,252	24,200	23,692
	27,714	27,252	24,200	23,692

8. Cash and Cash Equivalents

Cash and cash equivalents as at December 31, 2019 and 2018

(Unit: Thousand Baht)

	Consolidated Financial Statements		Separate Financial Statements	
	2019	2018	2019	2018
Cash on hand	322	330	319	327
Savings and current accounts	2,329,036	1,118,265	2,092,417	948,442
	2,329,358	1,118,595	2,092,736	948,769

For the year ended December 31, 2019, savings accounts carried the interest at rates ranging from 0.10%–1.30% per annum (2018: from 0.10%–1.10% per annum).

9. Short-Term Investments, Net

Short-term investments, net as at December 31, 2019 and 2018

(Unit: Thousand Baht)

	Consolidated		Separate	
	Financial Statements		Financial Statements	
	2019	2018	2019	2018
Investments managed by SET				
Trading securities	Fair value	Fair value	Fair value	Fair value
Government bond	1,404,201	-	505,921	-
	1,404,201	-	505,921	-
Available-for-sale securities	Fair value	Fair value	Fair value	Fair value
Investments in money market funds	1,275,060	3,190,697	1,275,060	3,190,697
	1,275,060	3,190,697	1,275,060	3,190,697
Held-to-maturity investments	Amortized cost, net	Amortized cost, net	Amortized cost, net	Amortized cost, net
Fixed deposit maturities within 1 year	700,000	887,540	700,000	887,540
Debenture maturities within 1 year	-	10,000	-	10,000
	700,000	897,540	700,000	897,540
Total investments managed by SET	3,379,261	4,088,237	2,480,981	4,088,237
Investments managed by private funds				
Trading securities	Fair value	Fair value	Fair value	Fair value
Share capital	702	702	702	702
Government bond	1,354,362	2,477,345	54,241	2,477,345
Debenture	637,539	730,861	637,539	730,861
	1,992,603	3,208,908	692,482	3,208,908
Held-to-maturity investments	Fair value	Fair value	Fair value	Fair value
Savings account	11,693	1,731	9,732	1,731
Fixed deposit maturities within 1 year	-	300,000	-	300,000
Negotiable certificate of deposit (NCD)	-	240,000	-	240,000
	11,693	541,731	9,732	541,731
Total Investments managed by private funds	2,004,296	3,750,639	702,214	3,750,639
Total short-term investments, net	5,383,557	7,838,876	3,183,195	7,838,876

Movements of short-term investments for the years ended December 31, 2019 and 2018 were as follows:

(Unit: Thousand Baht)

	Consolidated Financial Statements		Seperate Financial Statements	
	2019	2018	2019	2018
Opening balance	7,838,876	6,649,894	7,838,876	6,649,894
Purchases	2,472,237	3,018,708	271,875	3,018,708
Disposals	(4,904,849)	(2,044,831)	(4,904,849)	(2,044,831)
Current portion of long-term investments	-	897,540	-	897,540
Classification of investments (see Note 14)	-	(696,445)	-	(696,445)
Unrealized gain (loss) on available-for-sale securities	(22,707)	14,010	(22,707)	14,010
Closing balance	5,383,557	7,838,876	3,183,195	7,838,876

10. Trade and Other Receivables

Trade and other receivables as at December 31, 2019 and 2018

(Unit: Thousand Baht)

	Note	Consolidated Financial Statements		Separate Financial Statements	
		2019	2018	2019	2018
Trade receivable					
Related parties	7	2	598	2	598
Other parties		84,787	66,756	50,502	30,224
		84,789	67,354	50,504	30,822
Less Allowance for doubtful accounts		(16,891)	(15,128)	(8,568)	(5,024)
		67,898	52,226	41,936	25,798
Other receivable					
Accrued income					
Related parties	7	140	583	163,490	173,244
Other parties		299,732	274,472	101,207	89,867
Cash at banks for dividend accounts					
of investors		89,032	84,042	-	-
Other receivables from sale of investments		-	150,000	-	150,000
Accrued interest receivable					
Related parties		-	8	164,825	86,331
Other parties		31,297	21,169	23,563	19,790
Prepaid expense		27,213	26,104	27,213	26,104
Others		3,441	3,311	2,948	2,465
		450,855	559,689	483,246	547,801
		518,753	611,915	525,182	573,599

Aging analysis for trade receivable are as follows:

(Unit: Thousand Baht)

	Note	Consolidated Financial Statements		Separate Financial Statements	
		2019	2018	2019	2018
Related parties	7				
Within credit terms		2	174	2	174
Overdue:					
Less than 3 months		-	424	-	424
		2	598	2	598
Other parties					
Within credit terms		54,114	36,475	29,201	11,154
Overdue:					
Less than 3 months		13,782	12,614	12,733	11,822
3-6 months		906	2,073	906	1,923
6-12 months		1,853	153	1,853	149
Over 12 months		14,132	15,441	5,809	5,176
		84,787	66,756	50,502	30,224
<u>Less</u> Allowance for doubtful accounts		(16,891)	(15,128)	(8,568)	(5,024)
		67,896	51,628	41,934	25,200
		67,898	52,226	41,936	25,798

The normal credit terms granted by the Group range from 15 days to 30 days.

11. Other Current Assets

Other current assets as at December 31, 2019 and 2018

(Unit: Thousand Baht)

	Consolidated Financial Statements		Separate Financial Statements	
	2019	2018	2019	2018
Withholding tax receivable	160,479	23,592	131,523	-
Loans to employees	30,242	27,114	30,242	27,114
Accounts receivable from net fair values				
of forward exchange contracts	10,673	22,709	10,673	22,709
Inventory-publication	4,666	5,107	4,666	5,107
Pending input tax	4,612	4,619	4,573	4,405
Value added tax receivable	3,662	7,997	-	-
Others	3,171	3,188	3,172	3,188
	217,505	94,326	184,849	62,523

12. Investments in Subsidiaries

Investments in subsidiaries as at December 31, 2019 and 2018, and dividend income for the years then ended were as follows:

(Unit: Thousand Baht)

	Separate Financial Statements							
	Ownership interest (%)		Paid-up capital		Cost method		Dividend income	
	2019	2018	2019	2018	2019	2018	2019	2018
Subsidiaries								
Thailand Securities								
Depository Co., Ltd.	100.00	100.00	200,000	200,000	200,000	200,000	252,294	223,556
Thai Trust Fund Management Co., Ltd.	100.00	100.00	100,000	100,000	100,000	100,000	185	332
Thai NVDR Co., Ltd.	100.00	100.00	10,000	10,000	10,000	10,000	-	494
SETTRADE.COM Co., Ltd.	100.00	100.00	80,000	80,000	74,591	74,591	204,783	-
Thailand Futures Exchange Public								
Company Limited	100.00	100.00	500,000	500,000	500,000	500,000	121,645	51,015
Thailand Clearing House Co., Ltd.	100.00	100.00	600,000	600,000	602,700	602,700	76,872	30,504
Finnet Innovation Network Co., Ltd.	100.00	100.00	200,000	200,000	200,000	200,000	-	-
Live Fin Corp Co., Ltd.	100.00	100.00	10,000	10,000	10,000	10,000	-	-
			<u>1,700,000</u>	<u>1,700,000</u>	<u>1,697,291</u>	<u>1,697,291</u>	<u>655,779</u>	<u>305,901</u>

The business place of all subsidiaries is in Thailand and the nature of business of each subsidiary has already disclosed in Note 1.

13. Investments in Associates and Joint Venture Entity, Net

The amounts recognized in the statement of financial position as at December 31, 2019 and 2018 are as follows:

(Unit: Thousand Baht)

	Consolidated Financial Statements		Separate Financial Statements	
	Equity method		Cost method	
	2019	2018	2019	2018
Associates	966,875	940,930	779,015	775,620
Joint venture entity	21,545	27,298	12,000	25,000
As at December 31,	<u>988,420</u>	<u>968,228</u>	<u>791,015</u>	<u>800,620</u>

The amounts recognized in the statement of comprehensive revenues and expenses are share of profit (loss) of investments in associates and joint venture entity, net of tax are as follows:

(Unit: Thousand Baht)

	Consolidated Financial Statements		Separate Financial Statements	
	Equity method		Cost method	
	2019	2018	2019	2018
Associates	38,135	39,563	-	-
Joint venture entity	7,248	(30,933)	-	-
For the years ended December 31,	45,383	8,630	-	-

a) Investment in associates

Set out below are the associates of the Group as at December 31, 2019 and 2018, which are not material to the Group. The associates as listed below have share capital consisting solely of ordinary shares, which are held directly by the Group.

(Unit: Thousand Baht)

	Ownership interest (%)		Consolidated Financial Statements							
			Paid-up capital		Cost method		Equity method		Dividend income	
	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Associates										
Clearing Fund (“CLF”)	8.59	9.42	2,396,979	2,140,622	100,000	100,000	205,897	201,559	-	-
TSFC Securities Public Company Limited (“TSFC”)	40.65	40.65	1,549,126	1,549,126	679,015	675,620	760,978	739,371	-	-
					779,015	775,620	966,875	940,930	-	-

(Unit: Thousand Baht)

	Ownership interest (%)		Separate Financial Statements									
			Paid-up capital		Cost method		Impairment		At cost, net		Dividend income	
	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Associates												
Clearing Fund (“CLF”)	8.59	9.42	2,396,979	2,140,622	100,000	100,000	-	-	100,000	100,000	-	-
TSFC Securities Public Company Limited (“TSFC”)	40.65	40.65	1,549,126	1,549,126	679,015	679,015	-	(3,395)	679,015	675,620	15,743	12,595
					779,015	779,015	-	(3,395)	779,015	775,620	15,743	12,595

The business place of all associates is in Thailand and the nature of business of each associate has already disclosed in Note 1.

The Group also has interests in a number of individually associates that are accounted for using the equity method in the consolidated financial statements.

(Unit: Thousand Baht)

	2019			2018		
	CLF	TSFC	Total	CLF	TSFC	Total
Aggregate carrying amount of individually immaterial associates	205,897	760,978	966,875	201,559	739,371	940,930
Aggregate amounts of the reporting entity's share of:						
Revenues over expenses from continuing activities, net of tax	4,337	33,798	38,135	2,030	37,533	39,563
Other comprehensive revenues and expenses, net of tax	-	158	158	-	(103)	(103)
Total comprehensive revenues and expenses, net of tax	4,337	33,956	38,293	2,030	37,430	39,460

The Group has no contingent liabilities relating to associates.

b) Investment in joint venture entity

Set out below is a joint venture entity of the Group as at December 31, 2019 and 2018, which are not material to the Group. A joint venture listed below has share capital consisting solely of preferred shares, which is held directly by the Group.

(Unit: Thousand Baht)

	Ownership interest (%)		Consolidated Financial Statements					
			Paid-up capital		Equity method		Dividend income	
	2019	2018	2019	2018	2019	2018	2019	2018
Joint venture entity								
Family Know-how Co., Ltd. ⁽¹⁾	50.00	50.00	50,000	50,000	21,545	27,298	-	-

(Unit: Thousand Baht)

	Ownership interest (%)		Separate Financial Statements					
			Paid-up capital		Cost method		Dividend income	
	2019	2018	2019	2018	2019	2018	2019	2018
Joint venture entity								
Family Know-how Co., Ltd. ⁽¹⁾	50.00	50.00	50,000	50,000	12,000	25,000	-	2,047

The business place of joint venture entity is in Thailand and the nature of business of each entity has already disclosed in Note 1.

⁽¹⁾ At the Extraordinary Shareholder's meeting no. 1/2018 held on December 14, 2018, the shareholders resolved to dissolve the company. The dissolution was registered with the Ministry of Commerce on December 26, 2018 which is currently in the process of liquidation.

The Group also has interests in a joint venture entity that is accounted for using the equity method.

(Unit: Thousand Baht)

	Consolidated Financial Statements	
	2019	2018
Aggregate carrying amount of joint venture entity	21,545	27,298
Aggregate amounts of the reporting entity's share of:		
Revenues over expenses from continuing activities, net of tax	7,248	(30,933)
Other comprehensive revenues and expenses, net of tax	-	(758)
Total comprehensive revenue and expenses, net of tax	7,248	(31,691)

The Group has no contingent liabilities related to joint venture entity.

14. Long-Term Investments, Net

Long-term investments, net as at December 31, 2019 and 2018

(Unit: Thousand Baht)

	Consolidated and Separate Financial Statements	
	2019	2018
Available-for-sale securities	Fair value	Fair value
Investments in general mutual funds	3,001,150	3,629,189
Investments in property funds	1,231,033	1,455,010
Investments in foreign investment funds	2,694,353	2,975,539
	6,926,536	8,059,738
Held-to-maturity investments	Amortized cost, net	Amortized cost, net
Cash at banks under a Memorandum of Understanding (M.O.U.)	501,153	523,742
Government bond maturities after 1 year	239,408	242,004
Debenture maturities after 1 year	200,000	-
	940,561	765,746
General investments	Cost	Cost
Ordinary shares	36,861	12,361
	36,861	12,361
Total long term investments, net	7,903,958	8,837,845

Movements of long-term investments for the years ended December 31, 2019 and 2018 were as follows:

(Unit: Thousand Baht)

	Consolidated and Separate Financial Statements	
	2019	2018
Opening balance	8,837,845	8,478,268
Purchases	2,023,880	3,703,981
Disposals	(3,398,504)	(2,303,330)
Classification of investments (see Note 9)	-	696,445
Unrealized gain/(loss) on available-for-sale securities	440,737	(839,979)
	7,903,958	9,735,385
<u>Less</u> Current portion within 1 year (see Note 9)	-	(897,540)
Closing balance	7,903,958	8,837,845

As at December 31, 2019 and 2018, held-to-maturity investments which were classified by maturity were as follows:

(Unit: Thousand Baht)

	Consolidated and Separate Financial Statements			
	Within 1 year (See Note 9)	1 to 5 years	Over 5 years	Total
As at December 31, 2019				
Deposits at banks	-	-	501,153	501,153
Government bonds	-	239,408	-	239,408
Debentures	-	200,000	-	200,000
	-	439,408	501,153	940,561
As at December 31, 2018				
Deposits at banks	887,540	-	523,742	1,411,282
Government bonds	-	242,004	-	242,004
Debentures	10,000	-	-	10,000
	897,540	242,004	523,742	1,663,286

As at December 31, 2019 and 2018, the fair value of held-to-maturity investments were as follows:

(Unit: Thousand Baht)

	Consolidated and Separate Financial Statements			
	Amortized cost, net		Fair value	
	2019	2018	2019	2018
Deposits at banks	501,153	1,411,282	422,062	1,308,358
Government bonds	239,408	242,004	245,774	241,379
Debentures	200,000	10,000	206,414	10,131
	940,561	1,663,286	874,250	1,559,868
<u>Less</u> Current portion within 1 year (see Note 9)	-	(897,540)	-	(897,671)
	940,561	765,746	874,250	662,197

15. Property, Plant and Equipment, Net

(Unit: Thousand Baht)

	Consolidated Financial Statements					
	Land and land improvements	Buildings and building improvements	Furniture, fixtures and office equipment	Motor vehicles	Work in process	Total
As at January 1, 2018						
Cost	1,014,097	3,990,700	1,321,750	388	256,150	6,583,085
<u>Less</u> Accumulated depreciation	-	(676,540)	(768,962)	(188)	-	(1,445,690)
Net book amount	1,014,097	3,314,160	552,788	200	256,150	5,137,395
For the year ended						
December 31, 2018						
Opening net book amount	1,014,097	3,314,160	552,788	200	256,150	5,137,395
Additions	-	7,747	30,217	-	152,363	190,327
Disposals/write-off	-	(288)	(439)	-	-	(727)
Depreciation charge	-	(205,587)	(138,912)	(60)	-	(344,559)
Transfer	-	254,167	107,189	-	(361,356)	-
Adjustments	-	-	-	-	(3,354)	(3,354)
Closing net book amount	1,014,097	3,370,199	550,843	140	43,803	4,979,082

(Unit: Thousand Baht)

	Consolidated Financial Statements					
	Land and land improvements	Buildings and building improvements	Furniture, fixtures and office equipment	Motor vehicles	Work in process	Total
As at December 31, 2018						
Cost	1,014,097	4,252,326	1,458,070	388	43,803	6,768,684
<u>Less</u> Accumulated depreciation	-	(882,127)	(907,227)	(248)	-	(1,789,602)
Net book amount	1,014,097	3,370,199	550,843	140	43,803	4,979,082
For the year ended						
December 31, 2019						
Opening net book amount	1,014,097	3,370,199	550,843	140	43,803	4,979,082
Additions	-	10,985	43,158	1,450	76,578	132,171
Disposals/write-off	-	(79)	(166)	(1,450)	-	(1,695)
Depreciation charge	-	(197,654)	(174,418)	(60)	-	(372,132)
Transfer	-	22,469	57,716	-	(80,185)	-
Adjustments	-	(221,285)	224,047	-	(2,415)	347
Closing net book amount	1,014,097	2,984,635	701,180	80	37,781	4,737,773
As at December 31, 2019						
Cost	1,014,097	4,064,289	1,424,648	388	37,781	6,541,203
<u>Less</u> Accumulated depreciation	-	(1,079,654)	(723,468)	(308)	-	(1,803,430)
Net book amount	1,014,097	2,984,635	701,180	80	37,781	4,737,773

(Unit: Thousand Baht)

	Separate Financial Statements					
	Land and land improvements	Buildings and building improvements	Furniture, fixtures and office equipment	Motor vehicles	Work in process	Total
As at January 1, 2018						
Cost	1,014,097	3,990,700	1,278,358	388	256,150	6,539,693
<u>Less</u> Accumulated depreciation	-	(676,540)	(726,460)	(188)	-	(1,403,188)
Net book amount	1,014,097	3,314,160	551,898	200	256,150	5,136,505
For the year ended						
December 31, 2018						
Opening net book amount	1,014,097	3,314,160	551,898	200	256,150	5,136,505
Additions	-	7,747	29,995	-	152,363	190,105
Disposals/write-off	-	(288)	(439)	-	-	(727)
Depreciation charge	-	(205,587)	(138,685)	(60)	-	(344,332)
Transfer	-	254,167	107,189	-	(361,356)	-
Adjustments	-	-	-	-	(3,354)	(3,354)
Closing net book amount	1,014,097	3,370,199	549,958	140	43,803	4,978,197
As at December 31, 2018						
Cost	1,014,097	4,252,326	1,414,454	388	43,803	6,725,068
<u>Less</u> Accumulated depreciation	-	(882,127)	(864,496)	(248)	-	(1,746,871)
Net book amount	1,014,097	3,370,199	549,958	140	43,803	4,978,197
For the year ended						
December 31, 2019						
Opening net book amount	1,014,097	3,370,199	549,958	140	43,803	4,978,197
Additions	-	10,985	43,158	1,450	76,578	132,171
Disposals/write-off	-	(79)	(166)	(1,450)	-	(1,695)
Depreciation charge	-	(197,654)	(174,150)	(60)	-	(371,864)
Transfer	-	22,469	57,716	-	(80,185)	-
Adjustments	-	(221,285)	224,047	-	(2,415)	347
Closing net book amount	1,014,097	2,984,635	700,563	80	37,781	4,737,156
As at December 31, 2019						
Cost	1,014,097	4,064,291	1,420,732	388	37,781	6,537,289
<u>Less</u> Accumulated depreciation	-	(1,079,656)	(720,169)	(308)	-	(1,800,133)
Net book amount	1,014,097	2,984,635	700,563	80	37,781	4,737,156

16. Intangible Assets, Net

(Unit: Thousand Baht)

	Consolidated Financial Statements			
	Computer software	Patent	Work in process	Total
As at January 1, 2018				
Cost	1,519,025	2,867	34,007	1,555,899
<u>Less</u> Accumulated amortization	(1,127,753)	(1,288)	-	(1,129,041)
Net book amount	391,272	1,579	34,007	426,858
For the year ended December 31, 2018				
Opening net book amount	391,272	1,579	34,007	426,858
Additions	21,286	-	62,095	83,381
Amortization charge	(137,669)	(387)	-	(138,056)
Transfer	51,922	-	(51,922)	-
Adjustments	7,894	-	(4,320)	3,574
Closing net book amount	334,705	1,192	39,860	375,757
As at December 31, 2018				
Cost	1,600,127	2,867	39,860	1,642,854
<u>Less</u> Accumulated amortization	(1,265,422)	(1,675)	-	(1,267,097)
Net book amount	334,705	1,192	39,860	375,757
For the year ended December 31, 2019				
Opening net book amount	334,705	1,192	39,860	375,757
Additions	272,972	1,050	114,398	388,420
Amortization charge	(152,330)	(387)	-	(152,717)
Transfer	84,353	-	(84,353)	-
Adjustments	929	-	(4)	925
Closing net book amount	540,629	1,855	69,901	612,385
As at December 31, 2019				
Cost	1,958,376	3,917	69,901	2,032,194
<u>Less</u> Accumulated amortization	(1,417,747)	(2,062)	-	(1,419,809)
Net book amount	540,629	1,855	69,901	612,385

(Unit: Thousand Baht)

	Separate Financial Statements			
	Computer software	Patent	Work in process	Total
As at January 1, 2018				
Cost	1,440,305	2,006	34,007	1,476,318
<u>Less Accumulated amortization</u>	<u>(1,049,588)</u>	<u>(790)</u>	<u>-</u>	<u>(1,050,378)</u>
Net book amount	<u>390,717</u>	<u>1,216</u>	<u>34,007</u>	<u>425,940</u>
For the year ended December 31, 2018				
Opening net book amount	390,717	1,216	34,007	425,940
Additions	18,390	-	62,095	80,485
Amortization charge	(137,456)	(264)	-	(137,720)
Transfer	51,922	-	(51,922)	-
Adjustments	7,894	-	(4,320)	3,574
Closing net book amount	<u>331,467</u>	<u>952</u>	<u>39,860</u>	<u>372,279</u>
As at December 31, 2018				
Cost	1,518,511	2,006	39,860	1,560,377
<u>Less Accumulated amortization</u>	<u>(1,187,044)</u>	<u>(1,054)</u>	<u>-</u>	<u>(1,188,098)</u>
Net book amount	<u>331,467</u>	<u>952</u>	<u>39,860</u>	<u>372,279</u>
For the year ended December 31, 2019				
Opening net book amount	331,467	952	39,860	372,279
Additions	272,972	1,050	114,398	388,420
Amortization charge	(151,572)	(264)	-	(151,836)
Transfer	84,353	-	(84,353)	-
Adjustments	929	-	(4)	925
Closing net book amount	<u>538,149</u>	<u>1,738</u>	<u>69,901</u>	<u>609,788</u>
As at December 31, 2019				
Cost	1,876,760	3,056	69,901	1,949,717
<u>Less Accumulated amortization</u>	<u>(1,338,611)</u>	<u>(1,318)</u>	<u>-</u>	<u>(1,339,929)</u>
Net book amount	<u>538,149</u>	<u>1,738</u>	<u>69,901</u>	<u>609,788</u>

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 December 31, 2019 and 2018, the details of investments for which margin deposits were placed by members consist of:

(Unit: Thousand Baht)		
	Consolidated Financial Statements	
	2019	2018
Savings and fixed deposit accounts	10,360,966	12,670,196
Savings account in foreign currency	514,544	378,758
Held-to-maturity investments	1,605,133	1,604,529
Securities collateral	840,265	796,926
Accrued benefits	63,754	59,995
	13,384,662	15,510,404

As at December 31, 2019, savings account in foreign currency of USD 17.16 million (2018: USD 11.73 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 same amount 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 the following:

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 defaults in clearing on 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 the 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 the SET after deducting the first part of the contributions to the Clearing Fund by the 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 the SET after deducting the first part of the contributions to the Clearing Fund by the 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 the 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
- 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 December 31, 2019 and 2018, assets for clearing system protection and benefits consist of:

(Unit: Thousand Baht)

	Consolidated Financial Statements					
	Securities Deposit and benefits		Clearing fund and benefits		Total	
	2019	2018	2019	2018	2019	2018
Investments managed by TCH	698,988	673,494	-	-	698,988	673,494
Investments managed by private fund						
Savings accounts	69	486	52	2,535	121	3,021
Trading securities	203,120	200,975	1,295,715	1,092,175	1,498,835	1,293,150
	902,177	874,955	1,295,767	1,094,710	2,197,944	1,969,665
Accrued interest receivable	354	352	1,955	1,773	2,309	2,125
Other assets	46	59	4,999	10,700	5,045	10,759
	902,577	875,366	1,302,721	1,107,183	2,205,298	1,982,549

(Unit: Thousand Baht)

	Separate Financial Statements	
	2019	2018
Clearing fund and benefits		
Contributions	100,000	100,000
Accumulated benefits	47,916	44,156
	147,916	144,156

Investments managed by TCH

For the year ended December 31, 2019, savings accounts carried interest rates at rates ranging from 0.375% – 1.00% per annum (2018: from 0.375%–1.00% per annum).

Investments managed by private fund

Investments in private fund are managed by 1 asset management company (2018: 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 company's investment policies. For the year ended December 31, 2019, the investment in private fund have return rates ranging from 2.45%–2.46% per annum (2018: from 1.42%–1.43% per annum).

As at December 31, 2019 and 2018, assets for clearing system protection and benefits payable consist of:

(Unit: Thousand Baht)

	Consolidated Financial Statements	
	2019	2018
Securities Deposit and benefits		
Contributions	897,000	871,528
Benefits (semi-annually distribute to members)	5,997	3,838
	902,997	875,366
Clearing fund and benefits		
Contributions	1,011,551	847,572
Accumulated benefits	143,321	115,455
	1,154,872	963,027
	2,057,869	1,838,393

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 January 14, 2015 and April 27, 2016, SET's Board of Governors approved an appropriation of reserve fund for clearing and settlement in the approximately Baht 5,690 million by 2020 for compliance with the standard of clearing house set by the Overseas Securities Regulator and for enhance competitiveness and support future business expansion. As at December 31, 2019, the reserve fund for clearing and settlement was Baht 5,590.44 million (2018: Baht 5,328.58 million).

As at December 31, 2019 and 2018, reserve fund for clearing and settlement consist of:

(Unit: Thousand Baht)

	Consolidated Financial Statements	
	2019	2018
Investments managed by private fund		
Savings accounts	2,202	10,633
Trading securities	5,577,063	5,293,794
	5,579,265	5,304,427
Accrued interest receivable	10,364	10,401
Other assets	809	13,748
	5,590,438	5,328,576

Investments in private fund are managed by 2 asset management companies (2018: 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 December 31, 2019, the investments in private fund have return rates ranging between 2.46%–2.54% per annum (2018: between 1.39%–1.40% per annum).

20. Deferred Income Taxes

Statement of financial position shows the balance as follows:

(Unit: Thousand Baht)

	Consolidated Financial Statements		Separate Financial Statements	
	2019	2018	2019	2018
As at December 31,				
Deferred tax assets	91,768	139,821	91,743	137,655
Deferred tax liabilities	(12,676)	-	-	-
Deferred tax, net	79,092	139,821	91,743	137,655

The gross movement of the deferred income tax account for the years ended December 31, 2019 and 2018 is as follows:

Deferred tax assets:

(Unit: Thousand Baht)

	Consolidated Financial Statements		Separate Financial Statements	
	2019	2018	2019	2018
Opening balance	149,684	89,789	147,515	87,433
Tax charged/(credited) to revenues and expenses	39,473	46,508	39,982	46,695
Tax charged/(credited) to components of other comprehensive revenues and expenses	(12,692)	13,387	(12,692)	13,387
Closing balance	176,465	149,684	174,805	147,515

Deferred tax liabilities:

(Unit: Thousand Baht)

	Consolidated Financial Statements		Separate Financial Statements	
	2019	2018	2019	2018
Opening balance	9,863	172,568	9,860	171,240
Tax charged/(credited) to revenues and expenses	17,291	(5,395)	2,983	(4,070)
Tax charged/(credited) to components of other comprehensive revenues and expenses	70,219	(151,806)	70,219	(151,806)
Adjustments in SIPF's fund balances	-	(5,504)	-	(5,504)
Closing balance	97,373	9,863	83,062	9,860
Deferred tax, net	79,092	139,821	91,743	137,655

The movement in deferred tax assets and deferred tax liabilities during the years is as follows:

(Unit: Thousand Baht)

	Consolidated Financial Statements					
	Allowance for doubtful accounts	Unrealized gain on revaluation of investments	Difference on useful life of assets	Employee benefits obligation from accumulated annual leave	Employee benefits obligation	Total
Deferred tax assets						
As at January 1, 2018	3,026	-	-	5,227	81,536	89,789
Tax charged/(credited) to revenues and expenses	-	789	39,316	(66)	6,469	46,508
Tax charged/(credited) to components of other comprehensive revenues and expenses	-	13,387	-	-	-	13,387
As at December 31, 2018	3,026	14,176	39,316	5,161	88,005	149,684
Tax charged/(credited) to revenues and expenses	348	(789)	4,879	164	34,871	39,473
Tax charged/(credited) to components of other comprehensive revenues and expenses	-	(13,387)	-	-	695	(12,692)
As at December 31, 2019	3,374	-	44,195	5,325	123,571	176,465

(Unit: Thousand Baht)

	Consolidated Financial Statements			
	Unrealized gain on revaluation of available-for-sale securities	Unrealized gain on revaluation of trading securities	Adjustments in SIPF's fund balances	Total
Deferred tax liabilities				
As at January 1, 2018	164,918	7,650	-	172,568
Tax charged/(credited) to revenues and expenses	-	(5,395)	-	(5,395)
Tax charged/(credited) to components of other comprehensive revenues and expenses	(151,806)	-	(5,504)	(157,310)
As at December 31, 2018	13,112	(2,255)	(5,504)	9,863
Tax charged/(credited) to revenues and expenses	-	17,291	-	17,291
Tax charged/(credited) to components of other comprehensive revenues and expenses	70,219	-	-	70,219
As at December 31, 2019	83,331	19,546	(5,504)	97,373

(Unit: Thousand Baht)

	Separate Financial Statements					
	Allowance for doubtful accounts	Unrealized gain on revaluation of investments	Difference on useful life of assets	Employee benefits obligation from accumulated annual leave	Employee benefits obligation	Total
Deferred tax assets						
As at January 1, 2018	1,005	-	-	5,183	81,245	87,433
Tax charged/(credited) to revenues and expenses	-	641	39,316	(21)	6,759	46,695
Tax charged/(credited) to components of other comprehensive revenues and expenses	-	13,387	-	-	-	13,387
As at December 31, 2018	1,005	14,028	39,316	5,162	88,004	147,515
Tax charged/(credited) to revenues and expenses	709	(641)	4,879	164	34,871	39,982
Tax charged/(credited) to components of other comprehensive revenues and expenses	-	(13,387)	-	-	695	(12,692)
As at December 31, 2019	1,714	-	44,195	5,326	123,570	174,805

(Unit: Thousand Baht)

	Separate Financial Statements			
	Unrealized gain on revaluation of available-for-sale securities	Unrealized gain on revaluation of trading securities	Adjustments in SIFP's fund balances	Total
Deferred tax liabilities				
As at January 1, 2018	164,918	6,322	-	171,240
Tax charged/(credited) to revenues and expenses	-	(4,070)	-	(4,070)
Tax charged/(credited) to components of other comprehensive revenues and expenses	(151,806)	-	(5,504)	(157,310)
As at December 31, 2018	13,112	2,252	(5,504)	9,860
Tax charged/(credited) to revenues and expenses	-	2,983	-	2,983
Tax charged/(credited) to components of other comprehensive revenues and expenses	70,219	-	-	70,219
As at December 31, 2019	83,331	5,235	(5,504)	83,062

21. Trade and Other Payables

Trade and other payables as at December 31, 2019 and 2018

(Unit: Thousand Baht)

	Note	Consolidated		Separate	
		Financial Statements		Financial Statements	
		2019	2018	2019	2018
Trade payable					
Subsidiaries	7	-	-	-	124
Joint venture entity	7	-	6,746	-	6,746
Other parties		91,662	62,809	89,536	59,470
		91,662	69,555	89,536	66,340
Other payable					
Accrued expense					
Subsidiaries	7	-	-	11,641	184
Other parties		1,085,998	1,070,267	1,061,803	1,033,558
Dividend payable from					
registrar services to investors		89,032	84,042	-	-
Financial benefits payable		85,569	69,086	-	-
Other payable from purchase					
of investments		121,325	-	121,325	-
Others		16,881	24,777	12,453	19,672
		1,398,805	1,248,172	1,207,222	1,053,414
		1,490,467	1,317,727	1,296,758	1,119,754

22. Other Current Liabilities

Other current liabilities as at December 31, 2019 and 2018

(Unit: Thousand Baht)

	Consolidated		Separate	
	Financial Statements		Financial Statements	
	2019	2018	2019	2018
Withholding tax payable	79,403	34,417	9,581	10,624
Other retention payables	27,407	36,854	27,404	36,850
Employee benefits obligation from				
accumulated annual leave	26,631	25,810	26,631	25,810
Value added tax payable	19,927	21,652	16,862	21,652
Ngoen-Thong-khong-Mee-Kha Fund	11,576	11,576	11,576	11,576
Current portion of employee benefits				
obligation (see Note 23)	4,456	3,699	4,456	3,699
Others	3,597	2,342	1,913	673
	172,997	136,350	98,423	110,884

23. Employee Benefits Obligation

(Unit: Thousand Baht)

	Consolidated Financial Statements		Separate Financial Statements	
	As at December 31		As at December 31	
	2019	2018	2019	2018
Statement of financial position				
Provision to be settled within 1 year				
Retirement benefits (see Note 22)	4,456	3,699	4,456	3,699
	4,456	3,699	4,456	3,699
Provision to be settled after 1 year				
Retirement benefits	571,483	407,020	571,483	407,020
Other benefits	41,910	29,301	41,910	29,301
	613,393	436,321	613,393	436,321
	617,849	440,020	617,849	440,020

(Unit: Thousand Baht)

	Consolidated Financial Statements		Separate Financial Statements	
	For the year ended December 31		For the year ended December 31	
	2019	2018	2019	2018
Expenses charge included in the statement of revenues and expenses				
Retirement benefits	175,446	48,390	175,446	48,390
Other benefits	16,686	2,618	16,686	2,618
	192,132	51,008	192,132	51,008

The amounts recognized in the statement of financial position are determined as follows:

(Unit: Thousand Baht)

	Consolidated Financial Statements		Separate Financial Statements	
	As at December 31		As at December 31	
	2019	2018	2019	2018
Present value of obligations				
Retirement benefits	575,939	410,719	575,939	410,719
Other benefits	41,910	29,301	41,910	29,301
Liabilities in the statement of financial position	617,849	440,020	617,849	440,020

The movement in the defined benefit obligation during the years is as follows:

(Unit: Thousand Baht)

	Consolidated Financial Statements		Separate Financial Statements	
	2019	2018	2019	2018
As at January 1,	440,020	407,678	440,020	406,226
Current service costs	36,115	40,029	36,115	40,029
Interest costs	12,712	10,979	12,712	10,979
Past service costs	143,305	-	143,305	-
Remeasurements:				
Loss from change in demographic assumptions	42,550	-	42,550	-
Gain from change in financial assumptions	(9,274)	-	(9,274)	-
Gain from experience	(43,503)	-	(43,503)	-
	621,925	458,686	621,925	457,234
<u>Less</u> Benefits paid	(4,076)	(18,666)	(4,076)	(18,568)
<u>Add</u> Transfer of employees from a subsidiary	-	-	-	1,354
As at December 31,	617,849	440,020	617,849	440,020
<u>Less</u> Current portion within 1 year (see Note 22)	(4,456)	(3,699)	(4,456)	(3,699)
Total non-current portion	613,393	436,321	613,393	436,321

For the years ended December 31, 2019 and 2018, the amounts recognized in the statement of comprehensive revenues and expenses are as follows:

(Unit: Thousand Baht)

	Consolidated Financial Statements		Separate Financial Statements	
	2019	2018	2019	2018
Current service costs	36,115	40,029	36,115	40,029
Interest costs	12,712	10,979	12,712	10,979
Past service costs	143,305	-	143,305	-
	192,132	51,008	192,132	51,008

The Labor Protection Act (No. 7) B.E. 2562 has been announced in the Royal Gazette on April 5, 2019, which will be effective after 30 days from the date announced in Royal Gazette. This Labor Protection Act stipulates additional legal severance pay rates for employees who have worked for an uninterrupted period of twenty years or more. Such employees are entitled to receive compensation of not less than 400 days at the employees' latest wage rate. This change is considered an amendment to post-employment benefits plan. The Group reflects the effect of such change by recognizing past service cost as an expense in the statement of comprehensive revenues and expenses of the period in which the law is effective.

The principal actuarial assumptions used were as follows:

	2019	2018
Discount rate as of December 31,	1.78%–3.82%	2.75%
Salary incremental rate	7.00%	6.50%
Average turnover rate	0.00%–12.00%	0.00%–13.00%
Pre-retirement mortality rate	Adjust 3% of TMO2017	75% of TMO2017
Retirement age	60 years old	60 years old

	Impact on defined benefit obligation					
	Change in assumption		Increase in assumption		Decrease in assumption	
	2019	2018	2019	2018	2019	2018
Discount rate	0.5%	1%	Decrease by 6%	Decrease by 12%	Increase by 7%	Increase by 12%
Salary growth rate	1%	1%	Increase by 13%	Increase by 14%	Decrease by 11%	Decrease by 12%
Turnover growth rate	20%	20%	Decrease by 4%	Decrease by 6%	Increase by 4%	Increase by 6%

The above sensitivity analyses are based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. When calculating the sensitivity of the defined benefit obligation to significant actuarial assumptions, the same method (present value of the defined benefit obligation calculated with the projected unit credit method at the end of the reporting period) has been applied as when calculating the pension liability recognized within the statement of financial position.

The weighted average duration of the defined benefit obligation is 19 years (2018: 20 years).

Expected maturity analysis of undiscounted retirement and other benefits:

(Unit: Thousand Baht)

	Consolidated and Separate Financial Statements			
	Within a year	1–5 years	Over 5 years	Total
As at December 31, 2019				
Retirement benefits	5,092	62,741	254,584	322,417
Other benefits	4,518	13,790	14,699	33,007
Total	9,610	76,531	269,283	355,424

(Unit: Thousand Baht)

	Consolidated and Separate Financial Statements			
	Within a year	1–5 years	Over 5 years	Total
As at December 31, 2018				
Retirement benefits	82	34,167	508,512	542,761
Other benefits	3,628	7,660	20,038	31,326
Total	3,710	41,827	528,550	574,087

24. Fund Balances

The statement of change in the fund for the years ended December 31, 2019 and 2018 presented as part of the consolidated and separate financial statements as follows:

(Unit: Thousand Baht)

	Notes	Consolidated Financial Statements							
		Fund balances							
		Securities	Derivatives			Securities	Derivatives		
		Clearing	Clearing		Staff	Investor	Investor		
		Reserve	Reserve	Indemnity	Welfare	Protection	Protection	General	
		Fund	Fund	Fund	Fund	Fund	Fund	Fund	Total
Opening balance as at									
January 1, 2018		4,740,000	300,000	100,000	110,670	459,608	54,662	20,959,068	26,724,008
Appropriation of general fund	24.1	200,000	-	-	-	-	-	(200,000)	-
Appropriation of Securities	24.1 and								
Clearing Reserve Fund	24.2	(700,000)	700,000	-	-	-	-	-	-
Other comprehensive revenues									
and expenses, net of tax	25.2	-	-	-	-	-	-	485	485
Revenues over expenses	25.2	-	-	-	1,404	9,937	686	1,942,886	1,954,913
Closing balance as at									
December 31, 2018		4,240,000	1,000,000	100,000	112,074	469,545	55,348	22,702,439	28,679,406
Opening balance as at									
January 1, 2019		4,240,000	1,000,000	100,000	112,074	469,545	55,348	22,702,439	28,679,406
Appropriation of general fund	24.1	200,000	-	-	-	-	-	(200,000)	-
Other comprehensive revenues									
and expenses, net of tax	25.2	-	-	-	-	-	-	10,226	10,226
Revenues over (under) expenses	25.2	-	-	-	1,923	13,930	848	(2,615,700)	(2,598,999)
Closing balance as at									
December 31, 2019		4,440,000	1,000,000	100,000	113,997	483,475	56,196	19,896,965	26,090,633

(Unit: Thousand Baht)

	Notes	Separate Financial Statements						
		Fund balances						
		Securities Clearing Reserve Fund	Derivatives Clearing Reserve Fund	Indemnity Fund	Staff Welfare Fund	Securities Investor Protection Fund	General Fund	Total
Opening balance as at								
January 1, 2018		4,740,000	300,000	100,000	110,670	459,608	19,297,873	25,008,151
Appropriation of general fund	24.1	200,000	-	-	-	-	(200,000)	-
Appropriation of Securities	24.1 and							
Clearing Reserve Fund	24.2	(700,000)	700,000	-	-	-	-	-
Revenues over expenses	25.2	-	-	-	1,404	9,937	1,301,940	1,313,281
Closing balance as at								
December 31, 2018		<u>4,240,000</u>	<u>1,000,000</u>	<u>100,000</u>	<u>112,074</u>	<u>469,545</u>	<u>20,399,813</u>	<u>26,321,432</u>
Opening balance as at								
January 1, 2019		4,240,000	1,000,000	100,000	112,074	469,545	20,399,813	26,321,432
Appropriation of general fund	24.1	200,000	-	-	-	-	(200,000)	-
Other comprehensive revenues								
and expenses, net of tax	25.2	-	-	-	-	-	10,226	10,226
Revenues over (under) expenses	25.2	-	-	-	1,923	13,930	(3,034,078)	(3,018,225)
Closing balance as at								
December 31, 2019		<u>4,440,000</u>	<u>1,000,000</u>	<u>100,000</u>	<u>113,997</u>	<u>483,475</u>	<u>17,175,961</u>	<u>23,313,433</u>

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.

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.

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 of 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 October 1, 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 December 31, 2019, there were 34 SIPF members from securities companies (2018: 34 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;
- 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 November 15, 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 (2003). As at December 31, 2019, there were 37 DIPF members from security companies (2018: 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 members; 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;
- 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 December 31,	
	2019	2018
Assets		
Current assets		
Cash deposits and short-term investments	297,100	325,128
Accrued interest receivable	3,836	3,530
Other current asset	300	389
Total current assets	301,236	329,047
Non-current assets		
Long-term investments	530,792	469,426
Total non-current assets	530,792	469,426
Total assets	832,028	798,473
Liabilities and fund balances		
Liabilities of members portion		
Contributions from members	227,873	226,628
Benefits on contributions from members	108,381	96,219
Total liabilities of members portion	336,254	322,847
Fund balances		
Initial fund	300,000	300,000
Benefits on contributions from SET	183,475	169,545
	483,475	469,545
Other components	12,299	6,081
Total fund balances	495,774	475,626
Total liabilities and fund balances	832,028	798,473

The DIPF's financial statements included as part of the consolidated financial statements are as follows:

(Unit: Thousand Baht)

	Consolidated Financial Statements	
	As at December 31,	
	2019	2018
Assets		
Current assets		
Cash deposits and short-term investments	68,479	54,587
Contributions from members	15	851
Accrued interest receivable	543	485
Total current assets	69,037	55,923
Non-current assets		
Long-term investments	41,200	48,227
Total non-current assets	41,200	48,227
Total assets	110,237	104,150
Liabilities and fund balances		
Current liabilities		
Income tax payable	396	293
Other current liabilities	1	-
Total current liabilities	397	293
Non-current liabilities		
Contributions from members	50,976	46,634
Benefits on contributions from members	2,668	1,875
Total non-current liabilities	53,644	48,509
Total liabilities	54,041	48,802
Fund balances		
Initial fund	50,000	50,000
Benefits on contributions from TFEX	6,196	5,348
Total fund balances	56,196	55,348
Total liabilities and fund balances	110,237	104,150

25.2 Results of fund operations

Details of the results of fund operations which are included as part of the consolidated and the entity's 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 December 31, 2019					
Revenues					
Operating revenues	-	-	-	5,883,591	5,883,591
Investment income, net	1,923	14,016	1,110	946,031	963,080
Other income	-	-	-	499,636	499,636
Total revenues	1,923	14,016	1,110	7,329,258	7,346,307
Expenses					
Operating expenses	-	86	46	4,216,819	4,216,951
Reversal of contributions to the Stock Exchange of Thailand Foundation	-	-	-	(186,132)	(186,132)
Transfer money to the Capital Market Development Fund	-	-	-	5,700,000	5,700,000
Income tax expense	-	-	216	214,271	214,487
Total expenses	-	86	262	9,944,958	9,945,306
Revenues over (under) expenses	1,923	13,930	848	(2,615,700)	(2,598,999)
Other comprehensive revenues and expenses					
Items that will be reclassified					
subsequently to revenues and expenses					
Share of profit of investments in associates	-	-	-	158	158
Change in value of available-for-sale investments managed by SET	-	-	-	417,992	417,992
Change in value of available-for-sale investments from Securities Investor Protection Fund	-	6,218	-	-	6,218
Income tax relating to items that will be reclassified subsequently to revenues and expenses	-	-	-	(82,910)	(82,910)
Total items that will be reclassified subsequently to revenues and expenses	-	6,218	-	335,240	341,458
Items that will not be reclassified					
subsequently to revenues and expenses					
Remeasurements of post-employment benefits obligations	-	-	-	10,226	10,226
Total items that will not be reclassified to revenues and expenses	-	-	-	10,226	10,226
Total comprehensive revenues and expenses	1,923	20,148	848	(2,270,234)	(2,247,315)
Total comprehensive revenues and expenses for the years attributable to:					
Owners of the parents	1,923	20,148	848	(2,270,234)	(2,247,315)
Non-controlling interests	-	-	-	-	-
	1,923	20,148	848	(2,270,234)	(2,247,315)

(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 December 31, 2018					
Revenues					
Operating revenues	-	-	-	5,722,355	5,722,355
Investment income, net	1,404	12,487	952	584,781	599,624
Other income	-	-	-	278,629	278,629
Total revenues	1,404	12,487	952	6,585,765	6,600,608
Expenses					
Operating expenses	-	117	89	3,978,085	3,978,291
Contributions to the Stock Exchange of Thailand Foundation	-	-	-	186,132	186,132
Income tax expense	-	2,433	177	478,662	481,272
Total expenses	-	2,550	266	4,642,879	4,645,695
Revenues over expenses	1,404	9,937	686	1,942,886	1,954,913
Other comprehensive revenues and expenses					
Items that will be reclassified subsequently to revenues and expenses					
Share of profit of investments in associates	-	-	-	(103)	(103)
Change in value of available-for-sale investments managed by SET	-	-	-	(825,957)	(825,957)
Change in value of available-for-sale investments from Securities Investor Protection Fund	-	(10,646)	-	-	(10,646)
Income tax relating to items that will be reclassified subsequently to revenues and expenses	-	5,504	-	166,221	171,725
Total items that will be reclassified subsequently to revenues and expenses	-	(5,142)	-	(659,839)	(664,981)
Items that will not be reclassified subsequently to revenues and expenses					
Remeasurements of post-employment benefits obligations	-	-	-	606	606
Income tax relating to items that will not be reclassified subsequently to revenues and expenses	-	-	-	(121)	(121)
Total items that will not be reclassified to revenues and expenses	-	-	-	485	485
Total comprehensive revenues and expenses	1,404	4,795	686	1,283,532	1,290,417
Total comprehensive revenues and expenses for the years attributable to:					
Owners of the parents	1,404	4,795	686	1,283,533	1,290,418
Non-controlling interests	-	-	-	(1)	(1)
	1,404	4,795	686	1,283,532	1,290,417

(Unit: Thousand Baht)

	Separate Financial Statements			
	Staff Welfare Fund	Securities Investor Protection Fund (SET's portion)	General Fund	Total
For the year ended December 31, 2019				
Revenues				
Operating revenues	-	-	2,652,268	2,652,268
Investment income, net	1,923	14,016	1,547,098	1,563,037
Other income	-	-	2,060,116	2,060,116
Total revenues	1,923	14,016	6,259,482	6,275,421
Expenses				
Operating expenses	-	86	3,826,379	3,826,465
Reversal of contributions to the Stock Exchange of Thailand Foundation	-	-	(186,132)	(186,132)
Transfer money to the Capital Market Development Fund	-	-	5,700,000	5,700,000
Income tax expense	-	-	(46,687)	(46,687)
Total expenses	-	86	9,293,560	9,293,646
Revenues over (under) expenses	1,923	13,930	(3,034,078)	(3,018,225)
Other comprehensive revenues and expenses				
Items that will be reclassified				
subsequently to revenues and expenses				
Change in value of available-for-sale investments managed by SET	-	-	417,992	417,992
Change in value of available-for-sale investments from Securities Investor Protection Fund	-	6,218	-	6,218
Income tax relating to items that will be reclassified subsequently to revenues and expenses	-	-	(82,912)	(82,912)
Total items that will be reclassified subsequently to revenues and expenses	-	6,218	335,080	341,298
Items that will not be reclassified				
subsequently to revenues and expenses				
Remeasurements of post-employment benefits obligations	-	-	10,226	10,226
Total items that will not be reclassified to revenues and expenses	-	-	10,226	10,226
Total comprehensive revenues and expenses	1,923	20,148	(2,688,772)	(2,666,701)
Total comprehensive revenues and expenses for the years attributable to:				
Owners of the parents	1,923	20,148	(2,688,772)	(2,666,701)
Non-controlling interests	-	-	-	-
	1,923	20,148	(2,688,772)	(2,666,701)

(Unit: Thousand Baht)

	Separate Financial Statements			
	Staff Welfare Fund	Securities Investor Protection Fund (SET's portion)	General Fund	Total
For the year ended December 31, 2018				
Revenues				
Operating revenues	-	-	2,601,316	2,601,316
Investment income, net	1,404	12,487	860,726	874,617
Other income	-	-	1,901,827	1,901,827
Total revenues	1,404	12,487	5,363,869	5,377,760
Expenses				
Operating expenses	-	117	3,639,511	3,639,628
Contributions to the Stock Exchange of Thailand Foundation	-	-	186,132	186,132
Income tax expense	-	2,433	236,286	238,719
Total expenses	-	2,550	4,061,929	4,064,479
Revenues over expenses	1,404	9,937	1,301,940	1,313,281
Other comprehensive revenues and expenses				
Items that will be reclassified				
subsequently to revenues and expenses				
Change in value of available-for-sale				
investments managed by SET	-	-	(825,957)	(825,957)
Change in value of available-for-sale				
investments from Securities Investor Protection Fund	-	(10,646)	-	(10,646)
Income tax relating to items that will be				
reclassified subsequently to revenues and expenses	-	5,504	165,194	170,698
Total items that will be reclassified				
subsequently to revenues and expenses	-	(5,142)	(660,763)	(665,905)
Items that will not be reclassified				
subsequently to revenues and expenses				
Remeasurements of post-employment benefits obligations	-	-	-	-
Income tax relating to items that will not be	-	-	-	-
reclassified subsequently to revenues and expenses				
Total items that will not be reclassified				
to revenues and expenses	-	-	-	-
Total comprehensive revenues and expenses	1,404	4,795	641,177	647,376
Total comprehensive revenues and expenses				
for the years attributable to:				
Owners of the parents	1,404	4,795	641,177	647,376
Non-controlling interests	-	-	-	-
	1,404	4,795	641,177	647,376

26. Operating Revenues

Operating revenues for the years ended 31 December 2019 and 2018 consist of:

	(Unit: Thousand Baht)				
	Consolidated		Separate		
	Financial Statements		Financial Statements		
	2019	2018	2019	2018	
Timing of revenue recognition					
At a point in time					
Trading fees	1,839,019	1,922,481	1,297,886	1,413,007	
Securities registrar fees	532,377	470,865	-	-	
Listing fees	244,945	193,944	244,945	193,944	
Clearing & settlement fees	600,935	603,948	-	-	
Member services fees	379,978	408,635	-	-	
Information services fees	993	2,167	476	1,956	
Depository fees	346,545	341,204	-	-	
Customization and IT support fees	1,375	556	1,375	556	
Membership fees	200	16,260	-	12,858	
Fund services fees	2,800	2,600	-	-	
	3,949,167	3,962,660	1,544,682	1,622,321	
Overtime					
Securities registrar fees	693,662	650,072	-	-	
Listing fees	477,924	449,001	477,924	449,001	
Member services fees	40,347	42,324	-	-	
Information services fees	365,713	343,489	331,525	308,145	
Customization and IT support fees	275,572	199,100	274,737	198,449	
Membership fees	63,830	63,680	23,400	23,400	
Fund services fees	17,376	12,029	-	-	
	1,934,424	1,759,695	1,107,586	978,995	
Total operating revenues	5,883,591	5,722,355	2,652,268	2,601,316	

27. Investment Income, Net

Investment income, net for the years ended December 31, 2019 and 2018

(Unit: Thousand Baht)

	Notes	Consolidated Financial Statements		Separate Financial Statements	
		2019	2018	2019	2018
Interest income		436,238	417,033	278,766	208,939
<u>Less</u> Interest expense					
Short-term borrowings					
from subsidiaries	7	-	-	(36,569)	(51,360)
Assets for clearing system protection-members' portion		(219,577)	(211,527)	-	-
Interest income, net		216,661	205,506	242,197	157,579
Dividend income from					
Mutual funds		140,331	208,304	140,331	208,304
Subsidiaries	12	-	-	655,779	305,901
Associates	13	-	-	15,743	12,595
Joint venture entity	13	-	-	-	2,047
Private fund		31	25	17	14
Other entities		3,536	2,668	3,536	2,668
Realized gain from investments		420,168	206,316	396,471	202,290
Unrealized gain (loss) from trading securities		90,398	(30,918)	18,118	(23,552)
Gain (loss) on exchange rate from foreign investments		73,434	(5,527)	73,434	(5,527)
Reversal of impairment loss		3,395	-	3,395	-
Others		-	(189)	-	(189)
		<u>947,954</u>	<u>586,185</u>	<u>1,549,021</u>	<u>862,130</u>

28. Other Income

Other income for the years ended December 31, 2019 and 2018

(Unit: Thousand Baht)

	Consolidated		Separate	
	Financial Statements		Financial Statements	
	2019	2018	2019	2018
Compensation income (see Note 36.1)	145,088	-	145,088	-
Fines	80,151	58,647	12,418	52,743
Educational activities income	64,442	72,604	64,442	72,604
Revenues from fees and management funds	36,657	41,821	840	770
Revenues from securities borrowing and lending	34,461	14,103	-	-
Revenues from marketing event	22,978	24,266	22,634	24,266
Rental & utilities revenues	15,295	16,403	15,295	16,403
Revenues from transfer of rights from securities companies	11,200	-	10,000	-
Service income from related parties (see Note 7)	1,687	17,487	1,778,473	1,726,081
Other income	42,294	24,668	10,926	8,960
	<u>454,253</u>	<u>269,999</u>	<u>2,060,116</u>	<u>1,901,827</u>

29. Employee Benefit Expenses

Employee benefit expenses for the years ended December 31, 2019 and 2018

(Unit: Thousand Baht)

	Consolidated		Separate	
	Financial Statements		Financial Statements	
	2019	2018	2019	2018
Management				
Salaries and other benefits	232,216	211,189	232,216	211,189
Contributions to provident fund	11,053	9,744	11,053	9,744
	<u>243,269</u>	<u>220,933</u>	<u>243,269</u>	<u>220,933</u>
Other employees				
Salaries and other benefits	1,622,193	1,397,436	1,620,982	1,397,256
Contributions to provident fund	74,009	69,383	74,009	69,366
	<u>1,696,202</u>	<u>1,466,819</u>	<u>1,694,991</u>	<u>1,466,622</u>
	<u>1,939,471</u>	<u>1,687,752</u>	<u>1,938,260</u>	<u>1,687,555</u>

The defined contribution plans comprise provident funds established by the Group for its employees. Contributions are made monthly by the employees at rates ranging from 3.00% to 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 (1992) requires SET to pay to the SEC at a rate as determined by the Board of the SEC.

In 2016, the Board of the SEC has approved to charge SET for the year 2017-2019 (for the period of 3 years) as follows:

1. Charge at the rate of 0.002% of trading value of the year.
2. Charge on total equity of listing companies who have never issued securities for sale under the approval of the SEC, at the same rate that the SEC charge from listed companies who issued securities and submit report to the SEC according to clause 56 of the SEC Act.

In 2017, Board of Governors of SET was resolved to cancel the additional fees as prescribed by the Office of the Securities and Exchange Commission in order to comply with the Securities and Exchange Act (No. 5) B.E. 2559 (2016), effective from December 12, 2016.

However, if there is an event changes or problems of implementation during the period, terms and conditions may be revised.

The Board of the SEC also required Thailand Future Exchange Public Company Limited (subsidiary) to pay the fee of derivatives trading exchange. The rate for year 2017 - 2019 is Baht 2 million per annum.

31. Other Expenses

Other expenses for the years ended December 31, 2019 and 2018

(Unit: Thousand Baht)

	Consolidated Financial Statements		Separate Financial Statements	
	2019	2018	2019	2018
Fees and compensation expenses	128,067	99,166	108,152	84,100
Capital market development expenses	36,492	23,969	36,493	23,941
Travelling and vehicle expenses	35,985	36,524	34,318	35,331
Donation and CSR expenses	11,206	748	11,006	748
Institution membership fees	4,897	5,160	3,661	3,898
Entertainment expenses	3,170	2,850	3,130	2,799
Meeting expenses	2,821	2,755	2,634	2,586
Other expenses	15,977	11,100	15,476	10,843
	<u>238,615</u>	<u>182,272</u>	<u>214,870</u>	<u>164,246</u>

32. Transfer Money to the Capital Market Development Fund

The Securities and Exchange Act (No. 6) B.E. 2562, announced on April 16, 2019, requires that The Stock Exchange of Thailand (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 expense, tax and reserve expenses. In this regard, the consolidated financial statements of SET shall be used to calculate the remittance amount.

SET transferred money in the amount of Baht 5,700 million to the CMDf on July 4, 2019 and recognized in expense for the year 2019.

33. Income Tax Expense

Income tax expense for the years ended December 31, 2019 and 2018

(Unit: Thousand Baht)

	Consolidated		Separate	
	Financial Statements		Financial Statements	
	2019	2018	2019	2018
Current income tax				
Previous income tax	-	-	(9,688)	-
Current income tax	236,452	530,565	-	287,051
Total current income tax	236,452	530,565	(9,688)	287,051
Deferred income tax				
Origination and reversal of temporary differences	(22,181)	(51,903)	(36,999)	(50,765)
Total deferred income tax	(22,181)	(51,903)	(36,999)	(50,765)
Total income tax expense (revenue)	214,271	478,662	(46,687)	236,286

The tax on the Group's revenues over expenses before income tax differs from the theoretical amount that would arise using the Thailand basic tax rate as follows:

(Unit: Thousand Baht)

	Consolidated Financial Statements		Separate Financial Statements	
	2019	2018	2019	2018
Revenues over (under) expenses before income tax expense	(2,384,728)	2,433,575	(3,064,912)	1,549,567
Tax calculated at a tax rate of 20%	(476,945)	486,715	(612,982)	309,913
Income tax from the previous year	(9,688)	(1,542)	(9,688)	(1,720)
Cumulative loss carried forward from the previous year	(953)	-	-	-
Assessed income under Revenue Code	1,552	1,941	723	-
Income not subject to tax	(197,659)	(77,905)	(182,843)	(77,318)
Expenses additional deductible for tax purposes	(2,795)	(2,656)	(2,795)	(2,656)
Expenses not deductible for tax purposes	775,701	44,672	760,898	42,874
Eliminated transaction between related party, net of income tax	125,228	62,382	-	-
Revenues over expenses-Securities/Derivatives Investor Protection Fund, net of income tax	(170)	(3,364)	-	(3,226)
Tax credit recognized during the year	-	(31,581)	-	(31,581)
Income tax	214,271	478,662	(46,687)	236,286
The weight average applicable tax rate (%)	8.99	19.67	-	15.25

34. Commitments with Non-Related Parties

(Unit: Thousand Baht)

	Consolidated		Separate	
	Financial Statements		Financial Statements	
	As at December 31,		As at December 31,	
	2019	2018	2019	2018
Capital commitments				
Computer	14,460	-	14,460	-
Software	12,760	4,736	12,760	4,736
Buildings and other constructions	-	1,081	-	1,081
	<u>27,220</u>	<u>5,817</u>	<u>27,220</u>	<u>5,817</u>
Non-cancellable operating lease commitments				
Within one year	20,887	17,502	20,887	17,502
After one year but within five years	30,906	35,757	30,906	35,757
	<u>51,793</u>	<u>53,259</u>	<u>51,793</u>	<u>53,259</u>
System and building maintenance commitments				
Within one year	97,917	139,603	97,917	139,603
After one year but within five years	40,463	56,373	40,463	56,373
	<u>138,380</u>	<u>195,976</u>	<u>138,380</u>	<u>195,976</u>

35. Fair Value

35.1 Fair value estimation

The fair value of the financial instruments are defined into the following three different levels by valuation method as follows:

- Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices).
- Level 3: Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs).

The following table presents the Group's financial assets and liabilities that are measured at fair value at December 31, 2019 and 2018.

(Unit: Thousand Baht)

	Consolidated Financial Statements			
	2019			
	Level 1	Level 2	Level 3	Total
Trading securities	-	10,472,702	-	10,472,702
Available-for-sales	1,543,835	6,949,265	-	8,493,100
Total	1,543,835	17,421,967	-	18,965,802

(Unit: Thousand Baht)

	Consolidated Financial Statements			
	2018			
	Level 1	Level 2	Level 3	Total
Trading securities	-	10,035,852	-	10,035,852
Available-for-sales	666,596	10,798,050	-	11,464,646
Total	666,596	20,833,902	-	21,500,498

(Unit: Thousand Baht)

	Separate Financial Statements			
	2019			
	Level 1	Level 2	Level 3	Total
Trading securities	-	1,198,404	-	1,198,404
Available-for-sales	1,543,835	6,949,265	-	8,493,100
Total	1,543,835	8,147,669	-	9,691,504

(Unit: Thousand Baht)

	Separate Financial Statements			
	2018			
	Level 1	Level 2	Level 3	Total
Trading securities	-	3,448,908	-	3,448,908
Available-for-sales	666,596	10,798,050	-	11,464,646
Total	666,596	14,246,958	-	14,913,554

The following table presents the Group's financial assets and liabilities that are not measured at fair value at December 31, 2019 and 2018.

(Unit: Thousand Baht)

	Consolidated Financial Statements			
	2019			
	Level 1	Level 2	Level 3	Total
Held-to-maturity investments	-	8,772,169	-	8,772,169
General investments	-	-	36,861	36,861
Total	-	8,772,169	36,861	8,809,030

(Unit: Thousand Baht)

	Consolidated Financial Statements			
	2018			
	Level 1	Level 2	Level 3	Total
Held-to-maturity investments	-	9,318,107	-	9,318,107
General investments	-	-	12,361	12,361
Total	-	9,318,107	12,361	9,330,468

(Unit: Thousand Baht)

	Separate Financial Statements			
	2019			
	Level 1	Level 2	Level 3	Total
Held-to-maturity investments	-	1,411,316	-	1,411,316
General investments	-	-	36,861	36,861
Total	-	1,411,316	36,861	1,448,177

(Unit: Thousand Baht)

	Separate Financial Statements			
	2018			
	Level 1	Level 2	Level 3	Total
Held-to-maturity investments	-	1,229,584	-	1,229,584
General investments	-	-	12,361	12,361
Total	-	1,229,584	12,361	1,241,945

There was no transfers between Levels 1 and 2 during the year.

Other financial instruments not carried at fair value are typically short-term in nature and reprice to current market rate frequently. Accordingly, their carrying amount is a reasonable approximation of fair value. These financial instruments include cash and cash equivalents, cash at banks for financial benefits payable, assets for margin deposits and benefits, accounts receivable, accrued interest receivable, deposits and other benefits in assets for clearing system protection, deposits and other benefits in Securities Investor Protection Fund, deposits and other benefits in Derivatives Investor Protection Fund, accounts payable and short-term borrowings from subsidiaries.

The management believes that the fair value of the Group's financial assets and liabilities does not materially differ from their carrying value.

Valuation techniques used to derive Level 1 fair values

Available-for-sale securities which are listed in the Stock Exchange of Thailand or foreign stock exchanges as shown in long-term investments and Securities Investor Protection Fund. The fair value of investments is measured by using last bid price at the close of business on the statement of financial position date by reference to the other Stock Exchange in which such securities are listed.

Valuation techniques used to derive Level 2 fair values

Other available-for-sale securities presented as short-term investments, long-term investments and Securities Investor Protection Fund. The fair value of investments is measured by using last bid price at the close of business on the statement of financial position date by reference to the Association of Investment Management Companies.

Held-to-maturity investments and trading securities include fixed deposit accounts, bonds and debentures. The fair value of fixed deposit accounts, is measured by using discounted cash flows based on each contract with an average yield of 4 commercial banks. The fair value of bonds and debentures are measured by using the price published in the Thai Bond Market Association at the end of the date in the statement of financial position.

Valuation techniques used to derive Level 3 fair values

As the Group has a general investments in limited companies which the Group's shareholding was insignificant, the Group has no controlling and decision making power in the invested companies resulting in difficulty in obtaining the information to support the fair value valuation in practice. These investments are not in the stock exchange and do not have any market prices which can be used as fair value. The Group also do not have any plan for selling these investments, so the Group did not assess the fair value for the general investments. Therefore, the Group cannot disclose the fair value of the general investments in the notes to the financial statements and have stated these investments at cost less allowance for impairment (if any).

36. Contingent Assets and Contingent Liabilities

36.1 Contingent assets

The Group

In 2012, the Group sued the group of insurance companies for the fire damages of the Stock Exchange of Thailand building (previous office building) in 2010, seeking compensation for the damages under the insurance contract and coverage amounting to Baht 123 million plus interest rate at 7.50% per annum. On April 30, 2019, the Supreme Court issued a judgment ordering the group of insurance companies to make proportionate payment to the Group with interest rate at 7.50% per annum. Subsequently, on August 20, 2019, the Group received the full compensation (see Note 28).

36.2 Contingent liabilities

36.2.1 SET

As at December 31, 2019, SET has letters of guarantee issued by banks totalling Baht 5.13 million (2018 : 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.

SET has issued a letter of comfort to a bank in respect of an overdraft credit line of Baht 2,400 million (2018 : Baht 2,400 million) granted to Thailand Clearing House Co., Ltd. (TCH), a subsidiary, for clearing and settlement of equity instruments and derivatives. Under the terms of the letter of comfort, SET is required to maintain its shareholding at 99.99% of the registered share capital in TCH to the end of the credit period. In addition, SET is required to support TCH's operations to ensure its ability to repay the debt to the bank. As at December 31, 2019, TCH had not drawn down the overdraft credit line.

On December 26, 2017, SET was claimed to recourse for damages arising from not supervising member company to carry out the force selling of the plaintiff's securities in accordance with the specified regulation. The plaintiff was seeking such alleged damages totalling Baht 12.65 million. On November 20, 2019, the Appeal Court dismissed the case, and the plaintiff does not appear to appeal to the Supreme Court within the specific time. Therefore, the case has been finalized.

36.2.2 Subsidiary

36.2.2.1 On January 22, 2019, a subsidiary was claimed to recourse for the damages incurred related to the case of the wrongful acts recalling the asset and compensation from the forgery of the share certificates. The subsidiary has been claimed for the amount of Baht 76.23 million.

On December 4, 2019, the Civil Court ordered the subsidiary to pay the amount of Baht 62.55 million with interest rate at 7.5% per annum, and to pay Baht 400,000 legal fee and litigation cost. The subsidiary is in the process of considering an appeal to the Appeal Court. The outcome of the case has not presently been finalized. As a result, the subsidiary did not record any transaction in relation to the above case in the 2019 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.

36.2.2.2 On December 11, 2019, a subsidiary was indicted to carry out the registration to change the name of shareholders or to pay the price of shares in the amount of Baht 495 million. As at December 31, 2019, the subsidiary was in the process of making the statement to submit to the court. Therefore, the subsidiary did not record such damages in the 2019 financial statements.

37. Financial Instruments-Forward Foreign Exchange Contracts

SET has financial instruments, which their latest settlement date of forward foreign exchange contracts will be on March 30, 2020. The amount of the outstanding contracts as at December 31, 2019 and 2018 to be paid are:

(Unit: Thousand Baht)

	Consolidated Financial Statements		Separate Financial Statements	
	2019	2018	2019	2018
US Dollar currency	2,197,292	1,501,243	2,197,292	1,501,243

The net fair values of forward foreign exchange contracts as at December 31, were:

(Unit: Thousand Baht)

	Consolidated Financial Statements		Separate Financial Statements	
	2019	2018	2019	2018
Forward foreign exchange contracts				
- with positive fair values	93,623	3,739	93,623	3,739

The fair value of forward foreign exchange contracts is in Level 2. They are measured based on forward foreign exchange rate comparing with Thai Baht announced by the Bank of Thailand which input that are observable.

38. Reclassifications

Certain reclassifications have been made in the financial statements for the year ended December 31, 2018, to conform to the classifications used in the financial statements for the year ended December 31, 2019 as follows:

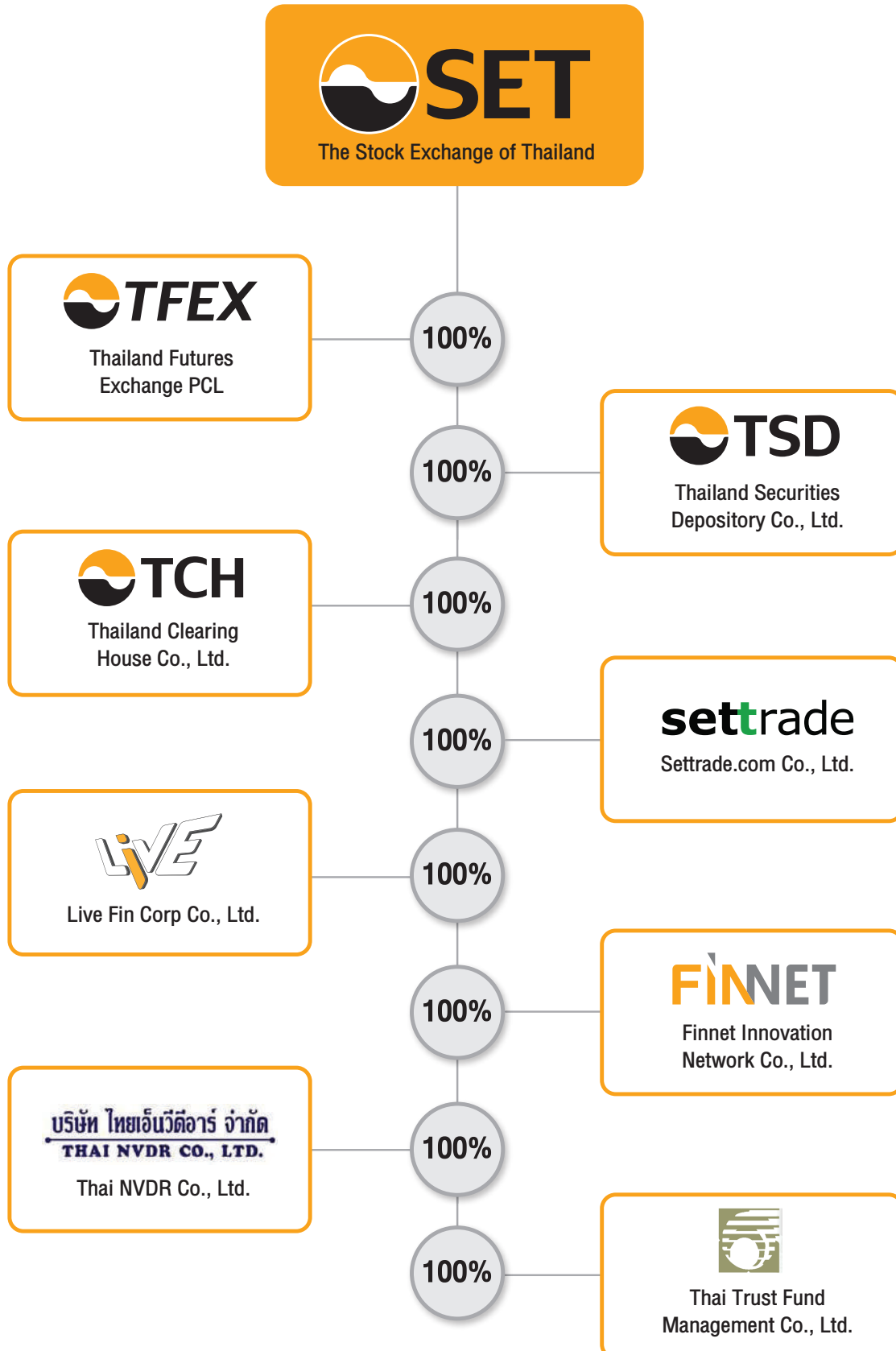
(Unit: Thousand Baht)

Items	Previous classification Presentation	Current classification Presentation	Consolidated Financial Statements	Separate Financial Statements
Assets				
Accrued interest receivable	Accrued interest receivable	Trade and other receivables	21,177	106,121
Other receivables from sale of investments	Other current assets	Trade and other receivables	150,000	150,000
Cash at banks for dividend accounts of investors	Other current assets	Trade and other receivables	84,042	-
Prepaid expenses	Other current assets	Trade and other receivables	26,104	26,104
Others	Other current assets	Trade and other receivables	3,311	2,465
Liabilities				
Dividend payable from registrar services to investors	Other current liabilities	Trade and other payables	84,042	-
Financial benefits payable	Other current liabilities	Trade and other payables	69,086	-
Others	Other current liabilities	Trade and other payables	24,777	19,672

39. Approval of the Financial Statements

These financial statements have been approved for issuance by the Stock Exchange's Board of Governors on February 19, 2020.

Shareholding Structure



Subsidiaries

Thailand Futures Exchange PCL

Thailand Futures Exchange PCL (TFEX), a subsidiary of The Stock Exchange of Thailand (SET), was established on May 17, 2004, as a derivatives exchange market under the Derivatives Act B.E. 2546 (2003). TFEX was granted a license to be a center of derivatives trading under the supervision of the Securities and Exchange Commission (SEC) on February 11, 2005. In November 2016, the Agricultural Futures Exchange of Thailand (AFET) was merged with TFEX.

Operations

TFEX is an exchange for derivatives products based on a variety of asset classes covering financial, precious metal, and agricultural products. By law, TFEX is allowed, under the SEC supervision, to trade futures, options and options on futures where the permitted underlying assets are:

- Equities: Securities indices, stocks, etc.
- Debt instruments: government bonds, interest rate, etc.
- Commodities: precious metal, base metal, energy and agricultures, etc.
- Others financial instruments: exchange rate and other as may be announced by the SEC.

TFEX's objectives are to benefit investors and related parties by:

- Being a center of derivatives trading, meeting international standards and efficiency, and helping investors and entrepreneurs to effectively use as hedging instruments and manage their investment and business operations at reasonable cost.
- Offering alternative investments in a trading system that is fair, transparent and liquid according to international standards, including building confidence in the clearing and settlement of every transaction made on TFEX. Thailand Clearing House Co., Ltd. acts as a central counterparty to all counterparts in the market. This provides investors' confidence on all transactions in the market. Investors and enterprises will then be able to plan their operations and manage their portfolio more effectively.

Registered capital and organizational management

TFEX has a total registered capital of THB 500 million, with the SET holding 100 percent of total registered capital.

Board of Directors

1. Chaibawat	Wibulswasdi	Chairman
2. Pakorn	Peetathawatchai	Vice Chairman
3. Aphisak	Kiewkarnkha	Director
4. Charnchai	Kongthongluck	Director
5. Pataravasee	Suvarnsorn	Director
6. Pattera	Dilokrunthirapop	Director
7. Somjin	Sornpaisarn	Director
8. Suthep	Peetakanont	Director
9. Rinjai	Chakornpipat	Managing Director

Thailand Securities Depository Co., Ltd.

Thailand Securities Depository Co., Ltd. (TSD) is a subsidiary of The Stock Exchange of Thailand. TSD was established on November 16, 1994 and commenced its operations on January 1, 1995, to develop and support post-trade services to effectively reach international standards.

Operations

TSD provides two types of securities post-trade services:

- **Securities depository services:** acts as a central securities depository for stocks and bonds, for participants such as custodian banks, etc. using a secured and efficient scripless system, providing services for securities deposit, withdrawal, transfer, pledge, and pledge revocation both scrip and scripless. Investors can conduct the transactions through depository participants or by themselves, while providing clearing services of debt instruments in OTC market.
- **Securities registration services:** acts as a registrar for common stocks, bonds, investment trust and warrants for listed and non-listed companies. Services mainly cover the functions of preparing and maintaining the Register Book that contains correct, complete and up-to-date information of shareholders, and it is also responsible for managing the foreign holding proportion of the securities traded on the main board and foreign board of The Stock Exchange of Thailand in compliance with related rules and regulations. Our service is executed through the cutting-edge and efficient computer system that has been developed to have a direct linkage to that of the Securities Depository Center. System-wise, we also have secured data storage and processing system of securities registration with the corresponding backups ready for securing the continuity of our service. In addition, our vault and data management systems have been in place to secure the rights of the securities holders. In addition, we also have internal audit system to mitigate risks.

Registered capital and organizational management

TSD has a total registered capital of THB 200 million, with SET holding 100 percent of total registered capital.

Board of Directors

1. Pakorn	Peetathawatchai	Chairman
2. Kulpatra	Sirodom	Independent, Non-Executive Director
3. Nongram	Wongwanich	Independent, Non-Executive Director
4. Aphisak	Kiewkarnkha	Member
5. Rinjai	Chakornpipat	Member
6. Yupawan	Sirichainarumitr	Managing Director

Thailand Clearing House Co., Ltd.

Thailand Clearing House Co., Ltd. (TCH), a subsidiary of The Stock Exchange of Thailand (SET), was established in August 9, 2004 to clear and settle derivatives trades. On February 15, 2010, SET transferred the securities clearing and settlement operation from TSD to TCH. At present, TCH is the center for clearing and settling of securities traded on SET, mai, TBX, and TFEX. Thus, there is a clear separation of operations and management between TCH and TSD, reducing the cost of managing risk and placing collateral, thus bringing the Thai capital market's post-trade services to be more in line with international standards.

Operations

TCH's most important role is to be the center of clearing and settlement of financial products in the Thai capital market by being the central counterparty and guarantor for the clearing and settlement of every transaction made on the markets mentioned above. This reduces risks, building confidence among all market participants and promoting the Thai capital market development in the long term.

Registered capital and organizational management

TCH has a total registered capital of THB 600 million, with the SET holding 100 percent of total registered capital.

Board of Directors

1. Pakorn	Peetathawatchai	Chairman
2. Kulpatra	Sirodom	Independent, Non-Executive Director
3. Nongram	Wongwanich	Independent, Non-Executive Director
4. Aphisak	Kiewkarnkha	Member
5. Rinjai	Chakornpipat	Member
6. Pataravasee	Suvarnsorn	Managing Director

Settrade.com Co., Ltd.

Settrade.com Co., Ltd. (Settrade) was established by The Stock Exchange of Thailand (SET) on October 13, 2000 and commenced operations on November 3, 2000, to provide internet trading platforms and investment technology for securities companies, aiming to offer more channels for securities trading and to make it convenient for investors.

Operations

Settrade provides internet trading system for equities and derivatives, as well as investment technology for SET members and TFEX members. Settrade aims to offer a broader range of trading channels to investors, while developing computer system for securities and derivatives businesses.

Registered capital and organizational management

Settrade has a total registered capital of THB 80 million (USD 2.33 million), with SET holding 100 percent of the total registered capital.

Board of Directors

1. Pakorn	Peetathawatchai	Chairman
2. Aphisak	Kiewkarnkha	Member
3. Kirati	Kosicharoen	Member
4. Krisada	Sektrakul	Member
5. Rinjai	Chakornpipat	Member
6. Rongrak	Phanapavudhikul	Member
7. Thirapun	Sanpakit	Member
8. Amatee	Prapapant	Managing Director

Thai NVDR Co., Ltd.

Thai NVDR Co., Ltd. (Thai NVDR) was established on October 4, 2000, by The Stock Exchange of Thailand (SET). Thai NVDR is responsible for issuing and redeeming Non-Voting Depository Receipts (NVDRs) to investors.

Nature of business

Thai NVDR is responsible for automatically issuing and redeeming NVDRs for investors who wish to trade listed companies shares through NVDRs. NVDR holders receive the same full financial benefits as they will receive if they invest directly in shares (dividends, rights, and warrants) but there are no voting rights for NVDR holders.

Board of Directors

1. Pakorn	Peetathawatchai	Chairman
2. Manpong	Senanarong	Member
3. Pataravasee	Suvarnsorn	Member
4. Rongrak	Phanapavudhikul	Member

Registered capital and organizational management

Thai NVDR has a total registered capital of THB 10 million, with SET holding 100 percent of the total registered capital.

Thai Trust Fund Management Co., Ltd.

Thai Trust Fund Management Co., Ltd. (TTF) was established on December 17, 1996 by The Stock Exchange of Thailand (SET) to promote investors in Thai-listed securities through mutual funds.

Operations

TTF was licensed by the Securities and Exchange Commission (SEC) and is managed by SET and Thailand Securities Depository Co., Ltd. (TSD). Thai Trust Fund is a passive fund. When an investor places a bid through a broker, TTF will place a corresponding order to buy the underlying shares and then will issue units to the investor. TTF will not exercise its voting rights except on motions to delist the underlying shares from SET. The main function of TTF is to look after the financial benefits of unit holders on dividends and rights issues. TTF functions as an open-ended fund, and invests in shares of any listed company. The mutual funds are considered to be Thai juristic entities even though foreigners own all of the fund's units.

Registered capital and organizational management

TTF has a total registered capital of THB 100 million with SET holding 100 percent of the total.

Custodian of the Mutual Fund

TMB Bank plc

Board of Directors

1. Pakorn	Peetathawatchai	Chairman
2. Pataravasee	Suvarnsorn	Member
3. Rongrak	Phanapavudhikul	Member
4. Yupawan	Sirichainarumitr	Member

Live Fin Corp Co., Ltd.

Live Fin Corp Co., Ltd. is a wholly-owned subsidiary of The Stock Exchange of Thailand (SET). Established on June 26, 2017, the company serves as an electronic funding portal to facilitate startups and SME's access to capital funding via fundraising and provides electronic trading facilities for over-the-counter market.

Operations

Live Fin Corp Co., Ltd. operates as an infrastructure provider for startups and SMEs businesses. Startups and SMEs have to register for fundraising in the form of crowdfunding. Live Fin Corp Co., Ltd. oversees the disclosure of information in accordance with the SEC regulations, and allows the investors who are qualified by the SEC to view the campaign information and subscribe newly issued shares via this system.

In addition, Live Fin Corp Co., Ltd. also facilitates trading by negotiation process via the OTC trading platform so that investors who want to trade can negotiate via a safe and reliable system.

Board of Directors

1. Pakorn	Peetathawatchai	Chairman
2. Krisada	Sektrakul	Member
3. Prapan	Charoenprawatt	Member
4. Rinjai	Chakornpipat	Member
5. Thirapun	Sanpakit	Member

Registered capital and organizational management

Live Fin Corp Co., Ltd. has a total registered capital of THB 10 million, with The Stock Exchange of Thailand holding 100 percent of the total registered capital.

Finnet Innovation Network Co., Ltd.

Finnet Innovation Network Co., Ltd. is a subsidiary of The Stock Exchange of Thailand (SET). It was established on August 25, 2017 with the objective to enhance the efficiency of the capital market's payment process. It acts as an intermediary institution that connects payment transactions with commercial banks and sets world-class standard with highest-efficiency.

Operations

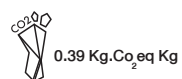
Finnet Innovation Network Co., Ltd. (FinNet) is a payment service provider, acting as an intermediary that processes payment instructions and data management. FinNet processes instructions for financial institutions such as securities companies, asset management companies, listed companies, etc. before the payment being submitted by entrepreneurs. FinNet aims to become the capital market's payment system infrastructure that links between the financial intermediaries and customers with diversity and efficiency, while operating with standardized procedures and economy of scale.

Board of Directors

1. Pakorn	Peetathawatchai	Chairman
2. Pataravasee	Suvarnsorn	Member
3. Thirapun	Sanpakit	Member
4. Yupawan	Sirichainarumitr	Member
5. Kitt	Sutthiatthasil	Managing Director

Registered capital and organizational management

Finnet Innovation Network Co., Ltd. has a total registered capital of THB 200 million, of which 100 percent is held by SET.



SET ensures the 2018 Annual Report is environmentally friendly.
The paper was printed on PS Green, eco-friendly paper, using soy ink,
reducing CO2 emissions equivalent to the power consumption of 149 of 36-watt light bulbs/day.





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