

## Management Discussion and Analysis (MD&A)

### Overview

The operating results of the SET group for the year ended December 31, 2022 were as follows:

(Unit: THB million)	For the year ended December 31			
	2022	2021	Increase / (Decrease)	
			Amount	%
Operating revenue	7,554	7,735	(181)	(2)
Other income	197	180	17	9
<b>Total operating revenues</b>	<b>7,751</b>	<b>7,915</b>	<b>(164)</b>	<b>(2)</b>
Operating expenses	(5,134)	(5,036)	98	2
<b>Revenues over expenses from operation</b>	<b>2,617</b>	<b>2,879</b>	<b>(262)</b>	<b>(9)</b>
Investment income (loss), net	(365)	369	(734)	(199)
Non-operating revenue	29	46	(17)	(37)
<b>Revenues over expenses before contribution to CMDF and income tax</b>	<b>2,281</b>	<b>3,294</b>	<b>(1,013)</b>	<b>(31)</b>
Income tax expense	(336)	(1,114)	(778)	(70)
<b>Revenues over expenses before contribution to CMDF</b>	<b>1,945</b>	<b>2,180</b>	<b>(235)</b>	<b>(11)</b>
Contribution to CMDF	(539)	(583)	(44)	(8)
<b>Revenues over expenses, net</b>	<b>1,406</b>	<b>1,597</b>	<b>(191)</b>	<b>(12)</b>

In 2022, the SET group had total operating revenues of THB 7,751 million, a decrease of THB 164 million or 2% from the previous year due to a decrease in revenue from securities market of THB 482 million on trading fees. Clearing and settlement fees decreased in line with the decrease in average daily trading volume of equity. Other business income increased by THB 318 million, especially securities registrar services and other services with an increase of THB 146 million in accordance with the increasing volume of corporate action transactions and number of securities. Total operating expenses amounted to THB 5,134 million, a 2% increase, mainly resulting from the increase in registrar service expenses in line with the increase in its revenue. Technology expenses increased according to the new IT system and its maintenance. Regarding the investment performance in 2022, the investment loss of THB 365 million because of the stock market and the bond market where prices dropped sharply was caused by central banks, particularly the US Federal Reserve, implementing strict monetary policy to control price stability. As a result, financial markets and capital markets around the world have fluctuated throughout 2022. Consequently, the SET group had total revenue over expenses before remittance to the CMDF and taxes of THB 2,281 million in 2022.

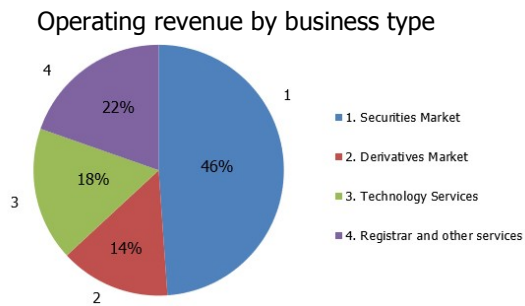
SET had provided the annual contribution to CMDF totaling THB 539 million at end 2022, accounting for 90% of the revenue after deduction of expenses, taxes and reserves, based on the SET group's 2022 consolidated financial statements. As a result, the SET group had net revenue over expenses of THB 1,406 million in 2022.

## 1. Analysis of Operating Results

### 1.1 Operating revenue

#### Operating revenue by business type

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



**For the year ended December 31, 2022**

(Unit: THB million)

<b>Securities Market</b>	
- Trading	1,850
- Clearing and settlement	492
- Listing fee	668
- Depository	402
- Membership	32
<b>Total</b>	<b>3,444</b>
<b>Derivatives Market</b>	
- Trading	717
- Clearing	308
- Membership	32
<b>Total</b>	<b>1,057</b>
<b>Technology Services</b>	
- IT support	489
- Member services	477
- Information services	431
<b>Total</b>	<b>1,397</b>
<b>Registrar and other Services</b>	
- Securities registrar services	1,595
- Fund services	38
- Digital Gateway services	13
- Payment services	10
<b>Total</b>	<b>1,656</b>
<b>Total operating revenue</b>	<b>7,554</b>

### 1.1.1 Securities Market

(Unit: THB million)	2022	2021	Increase / (Decrease)	
			Amount	%
<b>Revenue - Securities Market</b>	<b>3,444</b>	<b>3,926</b>	<b>(482)</b>	<b>(12)</b>
Trading fees	1,850	2,262	(412)	(18)
Clearing and settlement fees	492	557	(65)	(12)
Listing fees	668	696	(28)	(4)
Depository fees	402	379	23	6
Membership fees	32	32	-	-
<b>Key market index indicators</b>				
SET Index at the end of the year (points)	1,668	1,657	11	0.7
Average daily trading value - Equity (THB million)	76,773	93,846	(17,073)	(18)
Average market capitalization (THB trillion)	20.06	18.49	1.57	8
Number of listed securities (securities)	3,193	3,007	186	6

Operating revenue from securities market, net of discounts and promotional activities on various types of fees as relief measures for stakeholders during the COVID-19 pandemic, decreased by THB 482 million or 12%. The decrease was mainly from trading fees and clearing and settlement fees in correlation with the drop in average daily trading value, whereas the depository fees also increased in accordance with the increase in average market capitalization.

### 1.1.2 Derivatives Market

(Unit: THB million)	2022	2021	Increase / (Decrease)	
			Amount	%
<b>Revenue - Derivatives Market</b>	<b>1,057</b>	<b>957</b>	<b>100</b>	<b>10</b>
Trading fees	717	647	70	11
Clearing fees	308	278	30	11
Membership fees	32	32	-	-
<b>Key market index indicators</b>				
Average daily trading volume - Derivatives (contracts)	565,627	560,652	4,975	1

Average daily trading volume: derivatives rose by 1%, particularly the rise of SET 50 Index Futures, Currency Futures and Gold Online Futures. As a result, operating revenue from derivatives market, net of a reduction in trading fees to mitigate the impact of COVID-19 pandemic to stakeholders increased by THB 100 million or 10%.

### 1.1.3 Technology Services

(Unit: THB million)	2022	2021	Increase / (Decrease)	
			Amount	%
<b>Revenue - Technology services</b>	<b>1,397</b>	<b>1,342</b>	<b>55</b>	<b>4</b>
IT support fees	489	411	78	19
Member service fees	477	507	(30)	(6)
Information services fees	431	424	7	2

Operating revenue from technology services increased by THB 55 million or 4%, driven mainly by the rise in IT support fees in line with the higher number of users.

### 1.1.4 Registrar and Other Services

(Unit: THB million)	2022	2021	Increase / (Decrease)	
			Amount	%
<b>Revenue - Registrar and other services</b>	<b>1,656</b>	<b>1,510</b>	<b>146</b>	<b>10</b>
Securities registrar fees	1,595	1,458	137	9
Fund services	38	32	6	19
Digital Gateway service fees	13	7	6	86
Payment service fees	10	13	(3)	(23)

Operating revenue from registrar and other services, net of discounts on annual registrar fees as part of the COVID-19 relief to stakeholders, rose by THB 146 million or 10%, mainly due to the increase in corporate actions services in accordance with the increasing number of securities.

## 1.2 Other income

(Unit: THB million)	2022	2021	Increase / (Decrease)	
			Amount	%
<b>Total other income</b>	<b>197</b>	<b>180</b>	<b>17</b>	<b>9</b>
Revenue from fees of funds management	48	49	(1)	(2)
Revenue from education activities	29	17	12	71
Revenue from rental and utilities	10	9	1	11
Revenue from fines	14	8	6	75
Revenue from securities borrowing and lending (SBL)	1	4	(3)	(75)
Revenue from others	95	93	2	2

Other income increased by THB 17 million or 9%, mainly from education activities, which increased in line with training activities after the COVID-19 situation started to subside.

### 1.3 Operating expenses

(Unit: THB million)	2022	2021	Increase / (Decrease)	
			Amount	%
<b>Operating expenses</b>	<b>5,134</b>	<b>5,036</b>	<b>98</b>	<b>2</b>
Employee expenses	2,162	2,146	16	1
The SEC fees	746	910	(164)	(18)
Direct service expenses	608	523	85	16
Depreciation and amortization	536	520	16	3
Technology expenses	337	271	66	24
Building and office expenses	212	184	28	15
Marketing expenses	167	134	33	25
Fees and compensation expenses	148	103	45	44
Donations and CSR expenses	61	112	(51)	(46)
Educational activities expenses	48	38	10	26
Others	109	95	14	15

Operating expenses in 2022 amounted to THB 5,134 million, a 2% increase, mainly from the increase in direct service expenses, the growth in corporate action transactions, the increasing number of securities, and increasing technology expense in line with new IT system and maintenance, whereas the fees contributed to the SEC decreasing due to the decrease in equity trading volume.

### 1.4 Investment income (loss)

(Unit: THB million)	2022	2021	Increase / (Decrease)	
			Amount	%
<b>Investment income (loss)</b>	<b>(365)</b>	<b>369</b>	<b>(734)</b>	<b>(199)</b>
Interest income	206	147	59	40
Dividend income	35	67	(32)	(48)
Realized gain (loss) from investments	(258)	(235)	(23)	10
Unrealized gain (loss) from investments	(357)	395	(752)	190
Reversal (allowance) for expected credit loss	9	(5)	14	(280)

In 2022, the SET group had a net loss on investment of THB 365 million, compared to the year 2021 with a net gain on investments of THB 369 million (down THB 734 million or 199 percent), mainly due to the sale of investments and unrealized losses from the valuation of investments (mark to market) in the global equities and the global bond, which was directly affected by the inflation rate and the rising policy interest rate, resulting in the volatility of global capital markets and global financial markets throughout the year 2022.

## 2. Analysis of Financial Position

(Unit: THB million)	Dec 31,	Dec 31,	Increase / (Decrease)	
	2022	2021	Amount	%
Total assets	56,306	56,881	(575)	(1)
Total liabilities	25,442	27,512	(2,070)	(8)
Funds balances	30,864	29,369	1,495	5

Significant changes in assets, liabilities and funds of the SET group as at December 31, 2022 in comparison with the balance as at December 31, 2021, were as follows:

### 2.1 Analysis of assets

As at December 31, 2022, total assets of the SET group amounted to THB 56,306 million, a decrease of THB 575 million or 1%. Significant details are as follows:

2.1.1 Cash and cash equivalents, cash at banks for financial benefits payable, and financial assets were THB 21,015 million or 37% of total assets, which the balance was closely the same as the end of 2021, categorized as follows:

(Unit: THB million)	Dec 31,	Dec 31,	Increase / (Decrease)	
	2022	2021	Amount	%
<b>Cash and cash equivalents</b>	<b>5,621</b>	<b>9,017</b>	<b>(3,396)</b>	<b>(38)</b>
<b>Cash at banks for financial benefits payable</b>	<b>84</b>	<b>84</b>	<b>-</b>	<b>-</b>
<b>Financial assets</b>	<b>15,310</b>	<b>11,865</b>	<b>3,445</b>	<b>29</b>
- Investment in debt instruments measured at FVTPL	10,992	10,605	387	4
- Investment measured at amortized cost	1,795	1,206	589	49
- Investment in debt instruments measured at FVTOCI	1,612	-	1,612	n/a
- Investment in equity instruments measured at FVTOCI	911	54	857	1,587
<b>Total</b>	<b>21,015</b>	<b>20,966</b>	<b>49</b>	<b>0.2</b>

The SET group has a policy to invest in various types of investments such as cash deposit at banks, debt instruments (e.g. government bonds, corporate debentures, etc.), mutual funds and other domestic and foreign financial instruments, enabling total cash and financial assets incremental to yearly operating results. The investment portfolio of each type of financial asset has been adjusted to suit the investment trend and conditions as well as overall market volatility. In 2022, additional investments were made in equities of non-listed companies, in the believe that the SET group and capital market participants will gain various benefits from this investment. In addition, the portfolio adjustment in debt securities with clear objectives to maintain liquidity will also enable an increase of investments in debt instruments and equity securities measured at fair value through other comprehensive income.

2.1.2 Assets for margin deposits and benefits, and assets for clearing system protection and benefits recorded at THB 20,737 million or 37% of total assets, a decrease of THB 1,088 million or 5%. This resulted from the withdrawal of collaterals of Thailand Clearing House Co., Ltd. (TCH)'s members, who are obliged to place the assets as collateral for derivatives trading at the specified rate.

2.1.3 Property, plant and equipment and intangible assets amounted to THB 5,182 million or 9% of total assets, a THB 155 million or 3% rise, mainly from additional investment in developing IT system to support business operations.

## 2.2 Analysis of liabilities

As at December 31, 2022, total liabilities of the SET group amounted to THB 25,442 million, a decrease of THB 2,070 million or 8%. Significant details are as follows:

2.2.1 Margin deposits and assets for clearing system protection and benefits payable amounted to THB 20,587 million or 81% of total liabilities, a decrease of THB 1,096 million or 5%. The decrease resulted from the lower risk of derivatives, and the diminishing of the underlying assets in the market. Therefore, the withdrawal of collaterals of Thailand Clearing House Co., Ltd. (TCH)'s members was incurred.

2.2.2 Trade and other payables amounted to THB 2,213 million or 9% of total liabilities, a decrease of THB 788 million or 26% mainly from the Thai NVDR Co., Ltd.'s subscription money for new shares in excess of the rights to be returned to the shareholders totaling THB 709 million at end 2021.

## 2.3 Analysis of funds

As at December 31, 2022 the total funds of the SET group amounted to THB 30,864 million, an increase of THB 1,495 million or 5%. The SET group's revenue over expenses for 2022 reached THB 1,406 million with gain from the actuarial adjustment of THB 77 million, and gain on revaluation of investment in other comprehensive income of THB 12 million.

### 3. Analysis of Liquidity

Cash flows of the SET group for the year ended December 31, 2022 and 2021 can be summarized as follows:

(Unit: THB million)	2022	2021	Increase /(Decrease)	
			Amount	%
Cash flows from operating activities	1,037	3,297	(2,260)	(69)
Cash flows used in investing activities	(4,410)	(2,320)	2,090	90
Cash flows used in financing activities	(16)	(16)	-	-
Cash and cash equivalents at the end of year	5,705	9,101	(3,396)	(37)

Cash and cash equivalents as at December 31, 2022 amounted to THB 5,705 million, a decrease of THB 3,396 million or 37% from the year 2021. The details of the inflows and outflows are as follows:

- Net cash from operating activities totaled THB 1,037 million
- Net cash used in investing activities totaled THB 4,410 million, mainly from the purchase of financial assets of net THB 3,811 million and investment in new assets amounted to THB 677 million, especially in the developing of IT system to support business operations.

### 4. Reserves and Contribution to the Capital Market Development Fund (“CMDF”)

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



#### 4.1 Reserves

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

Type of reserve	Principles for reserve allocation to ensure adequacy of funding sources	Reserve amount (THB million)	
		2022	2021
1. Reserves set aside according to law or criteria in business operation as specified, including reserve amount to accommodate special situations	1.1 Legal reserve	10	17
	1.2 Reserves according to business operation such as European Market Infrastructure Regulation (EMIR), Principles for financial Market Infrastructures (PFMI) to meet an increase (decrease) of business operation each year	(113)	26
	1.3 Reserves allocated for specific funds such as approval of additional capital in specific funds during the year, benefit sharing of Securities Investor Protection Fund (SIPF), Derivatives Investor Protection Fund (DIPF), Clearing Fund (CLF) or other similar funds	5	13
	1.4 Reserves allocated to accommodate financial risks from operations including emergency supporting measures	514	467
2. Reserves set aside to accommodate the fluctuation of investments	According to unrealized gain (loss) during the year	(357)	395
3. Reserves set aside for investment in businesses or fixed assets	According to the investment amount in businesses and fixed assets approved by the Board of Governors	1,287	614
<b>Total reserves</b>		<b>1,346</b>	<b>1,532</b>

#### 4.2 Contribution to CMDF

The annual contribution has been calculated as follows:

(Unit: THB million)	<u>2022</u>	<u>2021</u>
Revenue over expenses before contribution to CMDF (according to the statement of comprehensive revenue and expenses)	2,281	3,294
<b>Less</b> Income tax expense	<u>(336)</u>	<u>(1,114)</u>
Revenue after deduction of expenses and tax before reserves	1,945	2,180
<b>Less</b> Reserves	<u>(1,346)</u>	<u>(1,532)</u>
Revenue after deduction of expenses, tax, and reserves	<u>599</u>	<u>648</u>
Annual contribution amount at the rate of 90%	<u>539</u>	<u>583</u>

Accumulated contribution expenses to CMDF as of December 31, 2022 can be presented as follows:

	<b>(THB million)</b>
Money transferred to CMDF in 2019	5,700
Annual contribution amount for 2020	362
Annual contribution amount for 2021	583
Annual contribution amount for 2022	539
<b>Total accumulated contribution expenses</b>	<b><u>7,184</u></b>