

## Management discussion and analysis

### Overview

The operating results of the SET group for the year ended December 31, 2018 were as follows:

(Unit: THB million)	For the year ended December 31			
	2018	2017	Increase /(Decrease)	
			Amount	%
Operating revenue	5,722	5,007	715	14.28%
Other income	270	280	(10)	(3.57%)
Investment income	586	1,045	(459)	(43.92%)
Operating expenses	(3,978)	(3,818)	160	4.19%
Contributions to The Stock Exchange of Thailand Foundation (Foundation)	(186)	(221)	(35)	(15.84%)
Income tax expense	(479)	(504)	(25)	(4.96%)
Revenue over expenses	1,955	1,833	122	6.66%

For the year ended December 31, 2018, revenue over expenses amounted to THB 1,955 million and increased by THB 122 million, compared to 2017. The increase was mainly resulted from a rise in average daily trading volume of both equity and derivatives, especially for the SET50 Index Futures. Investment income decreased by THB 459 million due to the realization of gain from sales of investments at the end of 2017. This was due to the restructuring of the portfolios to reduce the concentration risk of Thai equity instruments, and the sales of some foreign investment fund (FIF) switching to investing in foreign exchange traded fund (ETF). Operating expenses increased by THB 160 million as a result of the increase in employee expenses, and contributions to the SEC in accordance with equity trading volume.

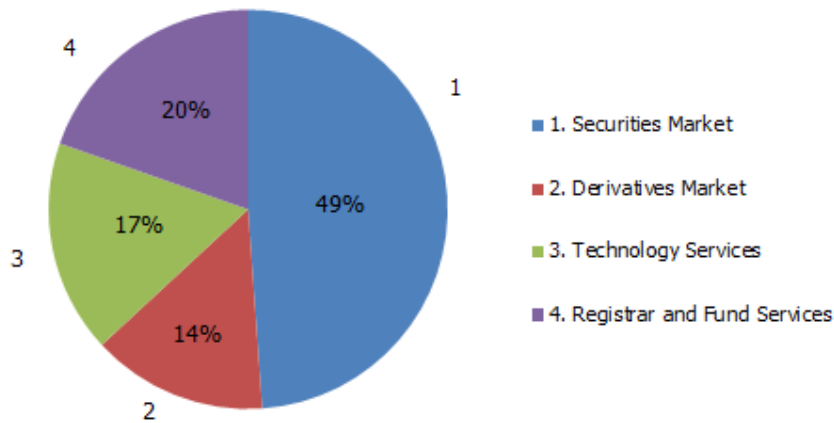
#### 1. Analysis of operating results

##### 1.1 Operating revenue

###### Operating revenue by segment

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

Operating revenue by segment



For the year ended December 31, 2018 (Unit: THB million)

**Securities Market**

- Trading	1,413
- Listing	384
- Clearing and settlement	643
- Depository	341
- Membership	44

**Total 2,825**

**Derivatives Market**

- Trading	509
- Clearing	220
- Membership	36

**Total 765**

**Technology Services**

- Member services	451
- Information services	346
- IT support	200

**Total 997**

**Registrar and Fund Services**

- Securities registrar	1,121
- Fund services	14

**Total 1,135**

**Total operating revenue 5,722**

### 1.1.1 Securities Market

(Unit: THB million)	2018	2017	Increase /(Decrease)	
			Amount	%
<b>Revenue - Securities Market</b>	<b>2,825</b>	<b>2,502</b>	<b>323</b>	<b>12.91%</b>
Trading fees	1,413	1,223	190	15.54%
Clearing and settlement fees	384	337	47	13.95%
Listing fees	643	576	67	11.63%
Depository fees	341	322	19	5.90%
Membership fees	44	44	-	-
<b>Key market indicators</b>				
SET Index at the end of the year (point)	1,564	1,754	(190)	(10.83%)
Average daily trading value - Equity (THB million)	57,674	50,114	7,560	15.09%
Average market capitalization (THB trillion)	17.63	16.36	1.27	7.76%
No. of listed securities at the end of the year (securities)	2,499	2,286	213	9.32%

Operating revenue from securities market rose by THB 323 million or 12.91%, compared to 2017. This increase mainly resulted from the rise in trading fee as increased in the average daily trading value. In addition, listing fees and depository fees increased by THB 67 million and THB 19 million, respectively, reasonable with the increase of the number of listed securities and increase of average market capitalization.

### 1.1.2 Derivatives Market

(Unit: THB million)	2018	2017	Increase /(Decrease)	
			Amount	%
<b>Revenue - Derivatives Market</b>	<b>765</b>	<b>519</b>	<b>246</b>	<b>47.40%</b>
Trading fees	509	332	177	53.31%
Clearing fees	220	144	76	52.78%
Membership fees	36	43	(7)	(16.28%)
<b>Key market indicators</b>				
Average daily trading volume - Derivatives (contracts)	426,212	324,216	101,996	31.46%

Operating revenue from derivatives market rose by THB 246 million or 47.40%, compared to 2017, mainly resulting from the rise in average daily trading volume of key derivatives, SET50 Index Futures.

### 1.1.3 Technology Services

(Unit: THB million)	2018	2017	Increase/(Decrease)	
			Amount	%
<b>Revenue - Technology services</b>	<b>997</b>	<b>919</b>	<b>78</b>	<b>8.49%</b>
Member services fees	451	426	25	5.87%
Information service fees	346	343	3	0.87%
Customization and IT support fees	200	150	50	33.33%

Operating revenue from technology services increased by THB 78 million or 8.49%, compared to 2017. This increase was mainly from member services fees, which were up in accordance with the increase in the average daily trading volume of both equity and key derivative instruments, especially SET50 Index Futures. Customization and IT support fees rose as the number of users increased.

### 1.1.4 Registrar and Fund Services

(Unit: THB million)	2018	2017	Increase/(Decrease)	
			Amount	%
<b>Revenue - Registrar and fund services</b>	<b>1,135</b>	<b>1,067</b>	<b>68</b>	<b>6.37%</b>
Securities registrar fees	1,121	1,065	56	5.26%
Fund services	14	2	12	600.00%

Operating revenue from registrar services rose by THB 68 million or 6.37%, compared to 2017. This was contributed by the rise in securities registrar services as number of listed securities increased, including the fee from fund services, Fund Connex, which started services in 2018.

### 1.2 Other income

(Unit: THB million)	2018	2017	Increase/(Decrease)	
			Amount	%
<b>Total other income</b>	<b>270</b>	<b>280</b>	<b>(10)</b>	<b>(3.57%)</b>
Educational activities income	73	75	(2)	(2.67%)
Revenue from fines	59	14	45	321.43%
Revenue from fees and management funds	42	28	14	50.00%
Revenue from marketing events	24	53	(29)	(54.72%)
Revenue from rental and utilities	16	17	(1)	(5.88%)
Revenue from transfer of rights for building utilization	-	33	(33)	(100%)
Revenue from transfer of rights of membership	-	10	(10)	(100%)
Others	56	53	3	5.66%

Other income decreased by THB 10 million or 3.57%, compared to 2017 because, in 2017, revenue from marketing events additionally increased from the rescheduling of marketing activities in 2016, such as the SET in the City event and SET Awards events. In addition, there was a certain amount of income from the transfer of rights for building utilization of THB 33 million, and income from the transfer of rights of membership of THB 10 million. In 2018, revenue from fines increased by THB 45 million, and revenues from fees and management funds increased by THB 14 million.

### 1.3 Investment income

(Unit: THB million)	2018	2017	Increase /(Decrease)	
			Amount	%
<b>Investment income</b>	<b>586</b>	<b>1,045</b>	<b>(459)</b>	<b>(43.92%)</b>
Interest income	206	200	6	3.00%
Dividend income	211	216	(5)	(2.31%)
Realized gain from investments	206	596	(390)	(65.44%)
Unrealized gain (loss) from investments	(31)	13	(44)	(338.46%)
Gain (loss) on exchange rate and others	(6)	20	(26)	(130.00%)

Investment income dropped by THB 459 million or 43.92%, compared to 2017 due to the realization of gain from sales of investments at the end of 2017. This was due to the restructuring of portfolios to reduce the concentration risk of Thai equity instruments, and the sales of FIF funds switching to investing in foreign ETF. In addition, in the fourth quarter of 2017, the price of Thai and global equity securities were at a high level, resulting in a gain from sales of investments higher than the gain in 2018.

### 1.4 Operating expenses

(Unit: THB million)	2018	2017	Increase /(Decrease)	
			Amount	%
<b>Operating expenses</b>	<b>3,978</b>	<b>3,818</b>	<b>160</b>	<b>4.19%</b>
Employee benefit expenses	1,688	1,569	119	7.58%
The SEC fees	567	491	76	15.48%
Depreciation and amortization	483	463	20	4.32%
Direct service expenses	292	292	-	-
Technology expenses	230	213	17	7.98%
Building and office expenses	183	200	(17)	(8.50%)
Educational activities expenses	164	162	2	1.23%
Marketing expenses	161	222	(61)	(27.48%)
Fees and compensation expenses	99	88	11	12.50%
Others	111	118	(7)	(5.93%)

In 2018, the operating expenses amounted to THB 3,978 million, 4.19% increased from 2017. This increase was mainly from employee benefit expenses, and the SEC fees corresponding to the increase in equity trading volume.

## 2. Analysis of financial position

(Unit: THB million)	Dec 31,	Dec 31,	Increase /(Decrease)	
	2018	2017	Amount	%
Total assets	48,771	45,196	3,575	7.91%
Total liabilities	20,105	17,821	2,284	12.82%
Fund balances	28,666	27,375	1,291	4.72%

Significant movements in assets, liabilities and funds of the SET group as at December 31, 2018 in comparison with the balance as at December 31, 2017, were as follows:

### 2.1 Analysis of assets

As at December 31, 2018, total assets of the SET group amounted to THB 48,771 million, an increase of THB 3,575 million or 7.91%, in comparison with the balance as at December 31, 2017. Significant details are as follows:

2.1.1 Cash and cash equivalents, cash at banks for financial benefits payable and investments were THB 17,865 million or 36.63% of total assets, a THB 1,408 million or 8.56% increases, categorized as follows:

(Unit: THB million)	Dec 31,	Dec 31,	Increase /(Decrease)	
	2018	2017	Amount	%
<b>Cash and cash equivalents</b>	<b>1,119</b>	<b>1,261</b>	<b>(142)</b>	<b>(11.26%)</b>
<b>Cash at banks for financial benefits payable</b>	<b>69</b>	<b>68</b>	<b>1</b>	<b>1.47%</b>
<b>Investment portfolio</b>	<b>16,677</b>	<b>15,128</b>	<b>1,549</b>	<b>10.24%</b>
Trading	3,449	3,351	98	2.92%
Available-for-sale	11,251	9,965	1,286	12.91%
Held-to-maturity	1,965	1,792	173	9.65%
General investments	12	20	(8)	(40.00%)
<b>Total</b>	<b>17,865</b>	<b>16,457</b>	<b>1,408</b>	<b>8.56%</b>

The SET group maintains a policy to invest in various types of investments such as fixed deposits, debt instruments (government bonds, corporate debentures, etc.), foreign funds and other financial instruments through mutual fund. The investment amount increased from the annual operation results will be allocated to enlarge investment proportion of available-for-sale in order to enhance return as expected.

2.1.2 Assets for margin deposits and benefits, and assets for clearing system protection and benefits recorded at THB 17,493 million or 35.87% of total assets, up by THB 2,193 million or 14.33%. This margin deposits and benefits of Thailand Clearing House Co., Ltd. (TCH) increased in accordance with the increase in trading volume of derivatives. TCH members are obliged to place the required margin deposits as a future trading guarantee according to the specified rate, and also as a guarantee to cover the damage from default or other damage caused by members in the clearing and settlement transactions with TCH.

2.1.3 Reserve fund for TCH security on clearing and settlement amounted to THB 5,328 million or 10.92% of total assets, up by THB 204 million or 3.98%. Reserve for TCH's clearing and settlement on SET's part was established in 2017 as a source of funds for the clearing house. In 2018, SET transferred the additional reserve fund of THB 200 million.

## 2.2 Analysis of liabilities

As at December 31, 2018, total liabilities of the SET group amounted to THB 20,105 million, up by THB 2,284 million or 12.82%, in comparison with the balance as at December 31, 2017. Significant details are as follows:

2.2.1 Margin deposits and assets for clearing system protection and benefits payable amounted to THB 17,349 million or 86.29% of total liabilities, an increase of THB 2,191 million, or 14.45%. The increase in deposits at TCH was in accordance with the increase in trading volume of derivatives.

## 2.3 Analysis of funds

As at December 31, 2018 total funds of the SET group amounted to THB 28,666 million, up by THB 1,291 million or 4.72%, in comparison with the balance as at December 31, 2017. The SET group's revenue over expenses for 2018 reached THB 1,955 million. The loss incurred from an increase in the market value of investment in mutual funds, equity securities and foreign fund, and loss from exchange rate of investments in foreign funds totaling THB 664 million.

### 3. Analysis of liquidity

Cash flows of the SET group for the year ended December 31, 2018 and 2017 can be summarized as follows:

(Unit: THB million)	2018	2017	Increase /(Decrease)	
			Amount	%
Cash flows from operating activities	2,212	763	1,449	189.91%
Cash flows from investing activities	(2,353)	(217)	2,136	984.33%
Cash and cash equivalents at the end of year	1,188	1,329	(141)	(10.61%)

Cash and cash equivalents as at December 31, 2018 amounted to THB 1,188 million, a decrease of THB 141 million or 10.61%, compared to 2017. The details of the sources and uses of funds are as follows:

- Net cash receipts from operating activities totaled THB 2,212 million.
- Net cash used in investing activities totaled THB 2,353 million. This was mainly from an investment in financial instruments of THB 2,586 million and investment in new assets of THB 383 million. The interest income and the gain on sales of investments totaled THB 376 million and the dividend income totaled THB 212 million.