

## Part 1

### Business Operations

#### 1. Policies and Overview of TISCO Business

After the enactment of the Financial Institutions Business Act, B.E. 2551 on August 3, 2008, TISCO Bank Public Company Limited (“the Bank” or “TISCO Bank”) submitted an application to the Bank of Thailand to establish a Financial Group by setting up TISCO Financial Group Public Company Limited, a non-bank public company limited, as a holding company and parent company of the Group, in place of TISCO Bank.

TISCO Financial Group Public Company Limited (“the Company”), with TISCO Bank Plc. as its core subsidiary, operates as a shareholder in the companies under the Group and is involved in no other major businesses. TISCO Group provides a broad range of financial services across two primary business lines: commercial banking/lending and capital markets.

##### 1.1 Vision, Mission, Values for business operations and business strategy

To align the goals and direction of business units with those of TISCO Group, the Company has put into writing clearly defined statements outlining its Vision, Mission, and Values. Vision encompasses the ultimate goal of TISCO Group whereas Values are intrinsic attributes that management and staff apply to achieve goals and objectives.

Our Vision is encapsulated in the motto “Wealth of Possibilities”.

Our Mission statement is as follows: “TISCO is a quality growth organization with strong customer priority, committed to delivering valuable financial services with mastery and professionalism. Our promise is to provide financial services that address customer needs across all geographies, to focus on creative financial solutions, and to advise on financial opportunities suitable for the various life stages of our customers. Continuous human capital development and leading-edge technological investments are key to our keeping our service efficient and reliable. TISCO also seeks to foster a culture of integrity, fairness, and transparency that creates sustainable value for our customers, shareholders, staff, and society”.

Our Values are the essence of the service we offer to our customers and the qualities we cultivate in our people. Through induction, training, and comprehensive corporate guidelines, these values are instilled in the TISCO culture and shape our professional attitude. TISCO values consist of:

- |                      |   |
|----------------------|---|
| 1) Customer Priority | Customers are our primary focus. Their needs are our priority. We construct professional and practical solutions that fulfill our customers’ requirements.  |
| 2) Mastery           | Our staffs are obligated to continually learn and develop themselves in order to build an outstanding skillset that maximizes customer satisfaction.  |
| 3) Integrity         | All employees must conduct themselves with honesty and follow a code of ethics of the highest standards.  |
| 4) Creativity        | Our expertise is forged in knowledge, experience, and creativity. We provide advice that is not only accurate, but also creative, helping customers see a wider swath of financial possibilities.   |
| 5) Reliability       | The organization adds value to our financial services through the professional skills and reliable performance of our team.   |
| 6) Guidance          | Because our staff members have a wide range of financial expertise, we can provide our customers with sound financial advice in a friendly and open-minded way, understanding their specific needs in order to help them achieve their goals. |

## **Strategic Plan**

In formulating a 3-year business plan, TISCO considers both the external business environment and internal factors. The external business environment includes economic conditions, regulations, and government policies while internal factors are strengths, weaknesses, opportunities, risks, critical success factors as well as priority issues. Management will take all of these issues into consideration to determine a Corporate Theme. The Corporate Strategy Map, in accordance with the Corporate Theme, will then be crafted along with the Vision. To ensure balance in strategic planning, TISCO Group has adopted a Balanced Scorecard technique that covers four perspectives: financial, customer, internal process, and learning. Key Performance Indicators will be determined for all business areas and linked to performance management so as to gauge employee performance and ensure staffs are awarded fair compensation based on merit. Business performance is also monitored via Performance Dashboard sessions.

## **Implementation of strategic action**

To achieve the organization's goals and align with the Vision and Mission framework, TISCO Group carried out the following strategic actions in 2019:

- Expanded geographical coverage through the microfinance branch network of the auto refinancing brand "Somwang Ngern Sang Dai". During the year, 49 Somwang branches were opened nationwide, raising the total to 287, catering to rising demand for loans against auto license.
- Developed products and services suitable to the ageing/retired society trend, and expanded the wealth management business in the growing upper-middle income segment. Deposit base was also expanded by 9% (YoY). Meanwhile, TISCO Asset arranged retirement financial knowledge seminars for provident fund members throughout 2019.
- TISCO Group emphasized more investment advisory and financial planning services through an open architecture investment and protection platform, thereby enhancing the ability of wealth managers to effectively provide professional financial planning, investment and asset allocation. In 2019, TISCO Group's fund selling agent service covered mutual funds of 12 asset management companies, while 65 wealth relationship managers held AFPT/CFP certification. In term of new products, TISCO launched several funds to service various risk levels; these included the TISCO Income Plus Fund which invests in multiple asset classes to provide diversification during global economic slowdown and heightened trade war risk. TISCO also introduced a comprehensive health protection advisory service in which health insurance plans are selected from leading insurance companies and strategic advice is offered, focusing on comparison of benefits for customers and after-sales services.
- Retained and developed additional business with existing clients through a total solution approach. Extensive collaboration across business groups extended business referrals across the Group and helped development of more products and services that suit customer lifestyle or needs.
- Explored and leveraged business partners for client acquisition and market access. TISCO was entrusted to provide car protection insurance and serve as an insurance agent for leading car producers Ford and Mazda.
- Developed digital infrastructure and the digital service channel to support change in customer behavior and expansion of retail customer base.

## **1.2 Important changes and developments during the past three years**

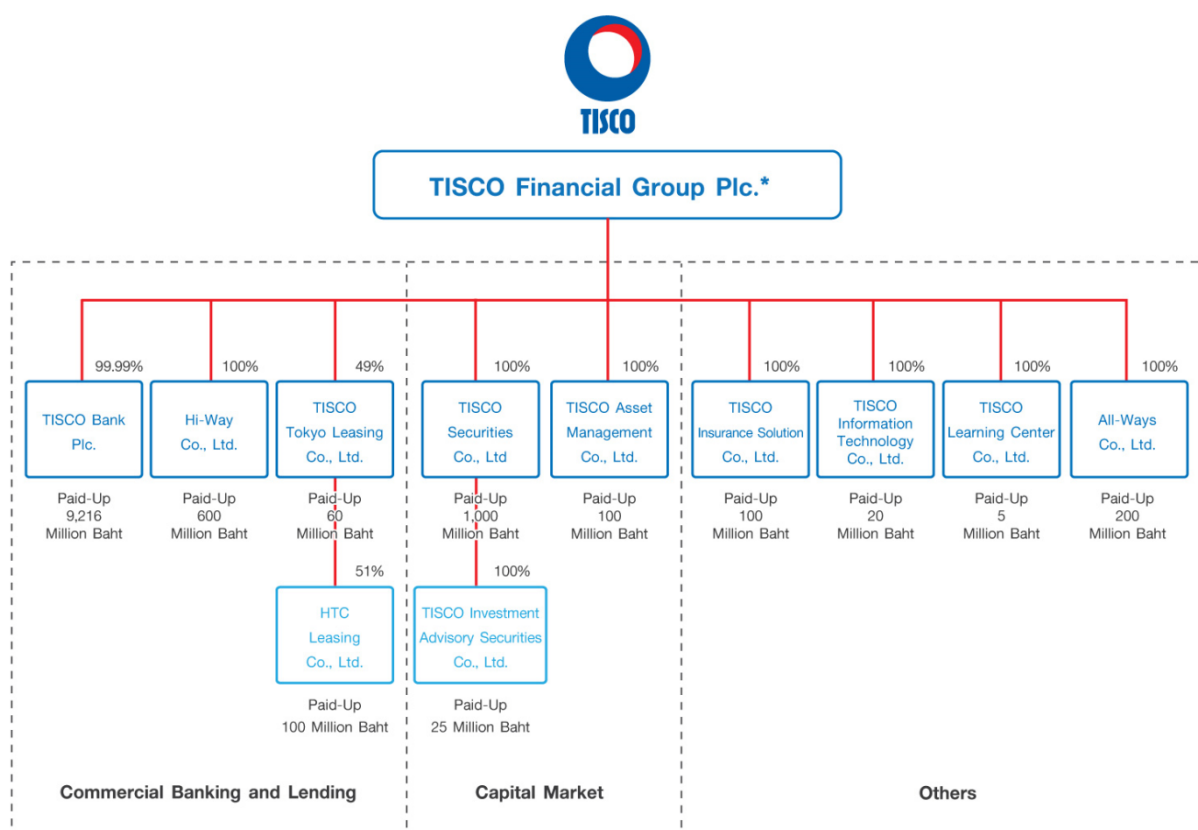
- In 2016, TISCO Bank Public Company Limited and All-Ways Company Limited, subsidiaries under TISCO Group, signed an agreement to transfer the retail banking business of Standard Chartered Bank (Thai) Public Company Limited following the completion of the business acquisition on October 1, 2017. TISCO Bank Public Company Limited acquired the retail banking business, including mortgage loans, personal loans, business loans, wealth management, bancassurance, retail deposits, as well as 4 new bank branches. Meanwhile, All-Ways Company Limited acquired the credit card business.
- In 2018, TISCO Bank Public Company Limited and All-Ways Company Limited, subsidiaries under TISCO Group, entered into agreements for the sale of the personal loan portfolio and credit card business to

Citibank N.A. (Bangkok Branch). The personal loan portfolio was successfully transferred from TISCO Bank on June 4, 2018 while the credit card business was successfully transferred from All-Ways Co., Ltd. on September 23, 2018.

- In 2019, TISCO Financial Group Public Company Limited and TISCO Securities Company Limited, a subsidiary of TISCO Group, signed an agreement to terminate the joint venture agreement for “Deutsche TISCO Investment Advisory Company Limited”, a joint venture between TISCO Securities and Deutsche Bank group that operated under an investment advisory license in Thailand. The agreement was effective from 9 September 2019 onward.

### 1.3 Shareholding structure and business operations of the companies in TISCO Group

As TISCO Financial Group Public Company Limited operates as a shareholder in its subsidiaries and engages in no other major business, its competitive position is best examined through the business operations of the companies in TISCO Group. These companies operate in commercial banking and lending as well as capital markets and offer various financial services that satisfy a diverse range of customer needs. TISCO Group’s structure as of December 31, 2019 is shown below.



\*Listed in The Stock Exchange of Thailand

### Details of juristic person that TISCO Financial Group Plc. directly held more than 10% of issued shares as of December 31, 2019:

Company/Head Office Address	Type of Business	Type of shares	Registered Capital	Paid-up Capital	Issued and paid-up shares	Shareholding by the Company	
						Number of shares held	Percentage of ownership (%)
<b>TISCO Bank Public Company Limited</b> <sup>1</sup> 1 <sup>st</sup> Fl., TISCO Tower, 48/2 North Sathorn Road, Silom, Bangrak, Bangkok 10500 Tel. (66) 2633 6000 Fax. (66) 2633 6800	Commercial Bank	Common	9,215,676,920	9,215,676,920	921,567,588	921,452,629	99.99
		Preferred			104	-	
		Total			921,567,692	921,452,629	
<b>Hi-Way Company Limited</b> 2046/16 New Petchaburi Road, Bangkapi, Huankwang, Bangkok 10310 Tel. (66) 2319 1717 Fax. (66) 2308 7405	Hire Purchase and Leasing	Common	600,000,000	600,000,000	5,994,500	5,994,496	100.0
		Preferred			5,500	5,500	
		Total			6,000,000	5,999,996	
<b>TISCO Tokyo Leasing Company Limited</b> 16 <sup>th</sup> Fl., TISCO Tower, 48/30 North Sathorn Road, Silom, Bangrak, Bangkok 10500 Tel. (66) 2638 0900 Fax. (66) 2638 0913	Hire Purchase and Leasing	Common	60,000,000	60,000,000	60,000	29,400	49.0
<b>TISCO Insurance Solution Company Limited</b> 22 <sup>th</sup> Fl., TISCO Tower, 48/51 North Sathorn Road, Silom, Bangrak, Bangkok 10500 Tel. (66) 2633 6060 Fax. (66) 2633 4400	Insurance Selling Agent	Common	100,000,000	100,000,000	1,000,000	999,965	100.0
<b>TISCO Securities Company Limited</b> 4 <sup>th</sup> Fl., TISCO Tower, 48/8 North Sathorn Road, Silom, Bangrak, Bangkok 10500 Tel. (66) 2633 6999 Fax. (66) 2633 6660	Securities	Common	1,000,000,000	1,000,000,000	100,000,000	99,999,998	100.0
<b>TISCO Asset Management Company Limited</b> 9 <sup>th</sup> Fl., TISCO Tower, 48/16-17 North Sathorn Road, Silom, Bangrak, Bangkok 10500 Tel. (66) 2633 6000 Ext. 4 Fax. (66) 2633 7300	Asset Management	Common	100,000,000	100,000,000	1,000,000	999,994	100.0
<b>TISCO Information Technology Company Limited</b> 6 <sup>th</sup> Fl., TISCO Tower, 48/12 North Sathorn Road, Silom, Bangrak, Bangkok 10500 Tel. (66) 2633 4299 Fax. (66) 2633 7600	Service Support	Common	20,000,000	20,000,000	200,000	199,994	100.0
<b>TISCO Learning Center Company Limited</b> 12 <sup>th</sup> Fl., Zone A, TISCO Tower, 48/20 North Sathorn Road, Silom, Bangrak, Bangkok 10500 Tel. (66) 2633 7154 Fax. (66) 2633 7155	Service Support	Common	5,000,000	5,000,000	50,000	49,997	100.0
<b>All-Ways Company Limited</b> 7 <sup>th</sup> Fl., Zone A, TISCO Tower, 48/13 North Sathorn Road, Silom, Bangrak, Bangkok 10500 Tel. (66) 2633 7129 Fax. (66) 2633 7150	E-marketplace platform	Common	200,000,000	200,000,000	2,000,000	1,999,997	100.0
<b>Primus Leasing Company Limited</b> <sup>2</sup> 22 <sup>nd</sup> Fl., Zone A, TISCO Tower, 48/50 North Sathorn Road, Silom, Bangrak, Bangkok 10500 Tel. (66) 2633 7766 Fax. (66) 2633 7600	Proceeding Liquidation Process	Common	3,000,000	3,000,000	30,000	29,998	100.0

<sup>1</sup> Core company of TISCO Group<sup>2</sup> in the liquidation process

In addition, TISCO Bank Plc., the core company of TISCO Group, held 10% of issued shares in other companies, all of which are non-listed companies. The investments in such companies are classified as general investment. Details are provided in the notes to the consolidated financial statement, section 3.4.5 Investments in which a subsidiary company operating a banking business holds not less than 10 percent of the equity of the investees.

## 2. Nature of Business

Through its subsidiaries, TISCO Financial Group Public Company Limited ("the Company"), the parent company of TISCO Group ("the Group"), operates two main businesses: commercial banking and lending, and capital markets.

**Commercial banking and lending:** TISCO Group conducts commercial banking and lending services under the Financial Institution Business Act and related regulations. Financial services are offered through the Company's headquarters and the nationwide branch network of TISCO Bank Plc. and subsidiaries.

**Capital Markets:** TISCO Group provides securities and asset management services under the Securities and Exchange Act.

### Revenue structure of TISCO Group

For 2019, the Company and its subsidiaries had net interest income and non-interest income at a ratio of 65.5 percent and 31.8 percent, respectively. Interest on loans held the largest proportion at 92 percent of total income. Details are as follows.

(unit: Million baht)

	2019		2018		2017	
	Amount	%	Amount	%	Amount	%
<b>Interest Income</b>						
- TISCO Bank Plc.	16,716	86.0	16,728	83.5	15,521	84.4
- Hi-Way Co., Ltd.	1,069	5.5	871	4.4	759	4.1
- Other Subsidiaries	96	0.5	91	0.4	102	0.5
<b>Total Interest Income</b>	<b>17,881</b>	<b>92.0</b>	<b>17,690</b>	<b>88.3</b>	<b>16,382</b>	<b>89.0</b>
Total Interest Expenses	(5,089)	(26.2)	(5,075)	(25.3)	(4,814)	(26.2)
<b>Net Interest Income</b>	<b>12,792</b>	<b>65.8</b>	<b>12,615</b>	<b>63.0</b>	<b>11,567</b>	<b>62.8</b>
<b>Fee and Service Income</b>						
- TISCO Bank Plc.	2,716	14.0	3,181	15.9	3,266	17.8
- TISCO Asset Management Co., Ltd.	1,757	9.0	1,523	7.6	1,686	9.2
- TISCO Securities Co., Ltd.	785	4.0	944	4.7	1,064	5.7
- Other Subsidiaries	1,253	6.4	691	3.4	329	1.8
<b>Fees and Service Income</b>	<b>6,511</b>	<b>33.5</b>	<b>6,339</b>	<b>31.6</b>	<b>6,345</b>	<b>34.5</b>
Fee and Service Expenses	(326)	(1.7)	(244)	(1.2)	(246)	(1.3)
<b>Net Fee and Service Income</b>	<b>6,185</b>	<b>31.8</b>	<b>6,095</b>	<b>30.4</b>	<b>6,099</b>	<b>33.2</b>
Other Operating Income	459	2.4	1,323	6.6	728	4.0
<b>Total Operating Income</b>	<b>19,436</b>	<b>100</b>	<b>20,033</b>	<b>100.0</b>	<b>18,394</b>	<b>100.0</b>

### 2.1 Areas of Service

As the Company operates as a shareholder of other companies (Holding Company) with no other major business, the areas of service can be categorized by the business operations of its subsidiaries, namely the commercial banking business and the securities business. In accordance with a client centric approach, the service operations of TISCO Group are divided into four business pillars: 1) Retail Banking, 2) Corporate Banking, 3) Wealth & Asset Management, and 4) Corporate Affairs & CSR. Details for each service follow below.

#### 1. Retail Banking

Retail Banking group provides loan services to retail customers and SME customers, including retail loans, commercial lending, and bancassurance. Details are provided as follows:

##### 1.1 Retail Loans

Retail loans consist of loan services offered to individuals seeking funding for specific consumption purposes. This segment can be classified by loan purpose as follows:

- **Hire-Purchase Financing**

Hire-purchase financing is operated by TISCO Bank Plc, Hi-Way Co., Ltd, TISCO Tokyo Leasing Co., Ltd and HTC Leasing Co., Ltd and allows borrowers to buy assets under hire-purchase terms. The buyer makes a down payment at a predetermined proportion of asset value and pays equal installment amounts over a contract period. Ownership of assets is then transferred to the buyer after all installments are paid. Contract periods range from 1 to 8 years. A fixed interest rate is charged, in line with the market rate on the contract date. TISCO Group provides hire-purchase loans for all types and models of new and used automobiles. This includes passenger cars, multipurpose vehicles, motorcycles, and commercial vehicles such as sedans, trucks, excavators, and trailers. In addition, hire-purchase financing also offers loans for buying machinery and equipment for commercial purposes such as printing machines, medical equipment, construction equipment, etc.

In 2019, TISCO Group (specified for TISCO Bank and credit granting companies) granted hire purchase loans for new cars at a proportion of 43.2% Ford, 20.1% Mazda, and 36.7% other brands. The proportion of hire purchase loans for new cars and used cars was 91% and 9%. Amidst high market demand for hire-purchase loans, TISCO Group has focused on expanding the business by enhancing service quality, offering a greater variety of services, and engaging in effective asset control rather than price competition.

- **Consumer Loans**

Consumer loans, mainly offered by TISCO Bank, are in accordance with market needs and have a strong focus on acceptable risk-adjusted return on capital (RAROC). The consumer loans segment has four main categories as follows:

- **Mortgage Loans**

Mortgage Loans are granted to acquire residential property and for refinancing. The repayment terms vary from 3 to 30 years with full collateral. The interest rates of mortgage loans are either floating rate or combination of fixed and floating rate which shall be used as a fixed interest rate at a certain pre-defined period, such as 1-3 years. Moreover, TISCO provides home equity loans which are multi-purpose loans using real estate as collateral. The maximum credit line is 80% of appraised value with an installment period of up to 15 years.

In 2019, TISCO focused on increasing awareness in digital channels of Mortgage Saver, a product which allows customers to make prepayments. This can reduce mortgage interest while allowing customers to make withdrawals of excess cash anytime without requesting approval of a new loan. As a result, customers can effectively manage their cash and get consistent benefits.

- **Consumption Loans**

Consumption Loans are operated by TISCO Bank Plc, and Hi-Way Co., Ltd. Multipurpose loans are provided to individuals and business owners in need of cash under the brands TISCO Auto Cash and Somwang Ngern Sang Dai. The loans against vehicle registration cover various types of vehicles, including cars, trucks and motorcycles. Key features include repayment periods of up to 72 months without transfer of vehicle registration. In 2019, TISCO enhanced its products by increasing collateral coverage and launching a new lending service for SME clients. To enhance customer access to service, TISCO expanded its branch network of loans against vehicle registration nationwide under Somwang. At the end of 2019, there were 287 Somwang branches nationwide. In addition, TISCO expanded into a new online channel through an Official Line Account to provide even greater convenience for customers.

## **1.2 Commercial Lending**

Commercial lending provides commercial credit facilities, mainly to small and medium-sized businesses such as inventory financing for car dealers, working capital loans, project finance, hire-purchase loans for commercial assets such as commercial trucks, bus, machinery, and medical instruments, as well as commercial loans with a credit guarantee by the Thai Credit Guarantee Corporation (TCG). In 2019, the Bank signed a memorandum of understanding for the Portfolio Guarantee Scheme-phase 8 projects aimed at small and medium-sized enterprises (SMEs). In addition, TISCO joined the Transformation Loan project to offer loans to SMEs with interest rates of 4 percent per annum.

### 1.3 Bancassurance

TISCO Bank and TISCO Insurance Solution Co. Ltd. have an Insurance Broker license from the Department of Insurance under the Ministry of Commerce. TISCO provides insurance brokerage services for both life and non-life, covering various types of insurances. TISCO has put more emphasis on selecting and developing both life and non-life insurance products to suit customer needs and risk profile. TISCO has worked in collaboration with many well-known insurance companies through an Open Architecture platform which enables TISCO to select and develop products with the insurance companies, who have product expertise in different areas. These enable TISCO to provide suitable and valuable products for customers. Presently, TISCO collaborates with several leading insurance companies which boast strong market presences and financial stability. The strong business partnerships with insurance companies give TISCO a competitive advantage in accessing best-in-class products, including life and non-life insurance, particularly healthcare and critical illness insurance for customers.

TISCO's bancassurance strategy utilizes an open architecture approach while considering needs, age, and lifestyle of each customer segment. In 2019, TISCO increased on-shelf products for two main customer segments: individual and private banking. For the individual customer segment, TISCO launched Somwang Gun Pai which focused on developing products, including car & motorcycle insurance and personal accident protection, through Somwang branches. For the wealth customer segment, TISCO extended service offerings from investment advisory to health protection advisory (TISCO Health Protection Advisory), offering best-in-class protection products structured to fit client lifestyle and ensure financial stability. In addition, TISCO has partnered with Ford and Mazda to serve as an insurance sales agent under the Ford Ensure and Mazda Premium Insurance schemes. In addition, for the third consecutive year, TISCO donated a part of income from selling healthcare and critical illness insurance to Ramathibodi Foundation. This philanthropic event reflects TISCO's determination as a financial institution to support medical researchers in improving healthcare and quality of life in Thai society.

## 2. Corporate Banking

Corporate Banking group provides fund raising services to corporate clients, corporate lending and investment banking services. Details are provided as follows:

### 2.1 Corporate Lending

Corporate Lending is operated by TISCO Bank. Commercial finance facilities are provided to large corporate clients for commercial purposes, including loans and related services such as guarantees, aval, loan arrangement services and loan restructuring. Commercial lending is classified by the following service types:

- **Working Capital Loans**

Working capital loans fill the need for business liquidity and cash flow, especially for industrial and seasonal businesses, by facilitating loans for buying raw materials and inventory, and loans for accounts payable repayments. The revolving loans have repayment terms set for within one year. The terms and conditions of such loans are subject to credit review annually.

- **Project and Term Loans**

Project and term loans fill the specific needs created by medium or long-term business development projects. The project funding, as the ultimate source of funds for loan repayment, must be traceable in terms of project progress. This segment mainly consists of term loans which have a repayment schedule in line with the timeline, progress and cash flow of the project. The Bank's policy is to support industry and manufacturing in all business areas, especially ones that support national development. Project and term loans are generally offered for building factories, offices or business expansion, property development, infrastructure construction, and project bids such as for power plants, or for buying industrial machinery.

- **Other Commercial Loans**

The Bank also provides credit for other commercial purposes such as loans against deposits or liquid assets with short or medium terms, using liquidity assets as collateral. This segment includes loans for investment, specifically



medium or long-term funds which investors use to buy assets, such as property, which they then use as collateral, with the terms and conditions of the loan set according to the assets earning ability.

- **Guarantee and Aval Services**

The Bank provides guarantees and aval services for our clients' business partners by issuing project bidding bonds, performance bonds and purchase guarantee letters to manufacturers. Terms of letters of guarantee are flexible and made to suit the beneficiary's needs.

- **Loan Consultancy and Related Services**

The Bank provides full-service loan consultation services in such areas as financial structuring and debt restructuring, and is also a syndicated loan arranger, facility agent, and security agent.

## **2.2 Investment Banking**

TISCO Securities Co., Ltd. is a leader in investment banking with a reputation of more than 50 years in providing superior service to both corporate and government-related clients. Staffed by highly experienced professionals, TISCO Securities Co., Ltd. is specialized in many essential industries such as energy & utilities, petrochemicals, telecommunications, transportation & logistics, health care, banking & financial institutions, media & entertainment, and manufacturing, and boasts a wealth of experience in the equity and debt markets, both domestically and internationally. TISCO Securities Co., Ltd. has been approved by the SEC to provide financial advisory services and granted an underwriting license from the Ministry of Finance. The full range of financial advisory and underwriting services cover various types of instruments, including equity, debt, and convertible instruments. Moreover, TISCO Securities Co., Ltd. provides financial advisory services for mergers & acquisitions, privatization advisory and implementation, project financing, debt restructuring, feasibility study, project valuation, and general advisory.

In 2019, TISCO's investment banking arm provided customers with various financial advisory services including mergers & acquisitions and project valuation in various industries, such as transportation & logistics, petrochemicals, and energy & utilities. The highlighted transactions in 2019 were project valuation for a logistics company, financial advisory for a merger & acquisition in the petrochemical industry and for a power plant, and financial advisory in the search for a partner to make a joint venture deal.

## **3. Wealth & Asset Management**

Aiming to be a top advisory house, TISCO offers a full range of financial and investment advisory services under the brand TISCO Wealth. TISCO Wealth provides comprehensive wealth management services, including banking, securities brokerage, and asset management to deliver investment solutions that meet the savings and investment goals of our clients. TISCO Wealth clients are also serviced by our professional relationship managers who provide unbiased advice on both onshore and offshore investment instruments as well as protection products. To elevate its service ability, TISCO has introduced a one stop service for mutual fund trading and insurance through an open architecture platform. The platform enables customers to invest in various mutual funds from 12 leading asset management companies, including TISCO Asset Management, and purchase protection plans from 8 leading insurance companies, with fund selection and comprehensive wealth advisory services offered at TISCO Bank's branches.

TISCO intends to expand its individual client base, enlarge assets under management, enhance staff service abilities, and improve its digital services. In 2019, TISCO Wealth continued to focus on service excellence as a full coverage investment advisory house. Under this theme, TISCO's Economic Strategy Unit published the TISCO Investment Portfolio Strategy or TIPS, a comprehensive report with in-depth analysis of the global economy and portfolio investment strategies. To deliver the best wealth solutions for clients, TISCO has developed various types of funds, including foreign investment funds and trigger funds which offer tactical market timing opportunities for clients. For long-term investments, TISCO has developed funds that align with mega trends, such as healthcare and REITs. Meanwhile, TISCO Wealth has developed mobile applications, including TISCO My Funds for mutual fund clients, My PVD My TISCO for provident fund clients, and TISCO Guru Plus for brokerage clients with an aim to enhance customer experience and service accessibility. Finally, TISCO seeks to enhance staff quality by aiming to acquire Certified Financial Planners (CFP)

Wealth & Asset Management group provides 8 service types as follows:

### **3.1 Private Banking**

TISCO Group provides comprehensive financial and investment advisory services across multiple asset classes with professional assistants for high net-worth clients with deposit and investment portfolios of more than 20 million baht.

### **3.2 Retail Deposit**

TISCO Bank offers a variety of deposit products and related financial transaction services. In 2019, TISCO continued to offer TISCO My Savings, a savings account with a monthly interest payment at a maximum deposit rate of 2.00% p.a. The distinguishing features of TISCO My Savings are unlimited deposits, withdrawals, and transfers while customers can make transactions on the TISCO Mobile Banking application anytime, anywhere. TISCO My Savings has received positive feedback from customers, leading to it generating the highest growth in terms of numbers of accounts and deposit amount among TISCO's savings accounts.

### **3.3 Private Sales Brokerage**

Private Sales Brokerage is operated by TISCO Securities Co., Ltd ("TISCO Securities") as member number two on the Stock Exchange of Thailand, offering brokerage services to retail clients through the head office in Bangkok, as well as the Thonglor Branch and four other branches upcountry, including Chiang Mai, Nakhon Pathom, Nakhon Ratchasima, and Udon Thani. The Thai stock market in 2019 was highly volatile with a downward trend, which weighed on retail investors. In response, TISCO Securities developed a new value-added service, TISCO Guru Investment, a portfolio advisory with execution service. TISCO Guru Investment service also provides investment strategies, stock selection, and portfolio monitoring by TISCO's professional team. TISCO Guru Investment has received a very positive response from clients with over 6,600 million baht in investment. In addition, TISCO Securities provides a fund sales agent service with an open architecture approach, enabling customers to invest in various funds from leading asset management companies through a mobile application. TISCO Securities taps investment advisors' knowledge to offer the best services to customers, including fund information and asset allocation. Apart from domestic investment, TISCO Securities also provides international brokerage services through TISCO Global Trade. The service provides investment opportunities for customers seeking to invest in world-class companies in five leading markets: United States of America, United Kingdom, Japan, Hong Kong, and Singapore.

To broaden access to research for retail investors, TISCO Securities developed TISCO Guru Plus, a stock investment application in which investors can search for stocks according to their investment style and risk appetite with a model portfolio function. The application also provides real time research publications which the investor can be notified of as desired. The previous year, TISCO Securities switched its effective information channel from the Line application to Telegram which is an efficient and convenient channel to serve customers. TISCO Securities has continually promoted marketing activities which provide investment knowledge in Bangkok and key provinces to investors as well as our marketing staff to provide the best possible service for customers. In 2019, retail investor market share was 1.9%.

### **3.4 Institutional Brokerage**

TISCO Securities Co., Ltd offers brokerage services to both local and foreign institutional investors through an experienced and professional team which specialize in comprehensive equity research and world-class investment strategy. TISCO Securities proactively carries out marketing activities by arranging meetings between representatives of leading corporations and global investors and by setting up financial seminars. Institutional client market share was 1.8%, comprised of 2.9% from local institution investors and 1.2% from foreign investors. TISCO Securities Co., Ltd signed an agreement to terminate the joint venture agreement for "Deutsche TISCO Investment Advisory Company Limited" on September 4, 2019. However, TISCO Securities Co., Ltd continues to provide brokerage services and equity research to all client segments as usual.

### 3.5 Asset Management

TISCO Asset Management Co., Ltd. operates provident funds, private funds, and mutual fund management as permitted under mutual fund and private fund management licenses granted by the Ministry of Finance. Details are provided as follows:

- **Provident funds**

TISCO Asset Management Co., Ltd's provident fund management license covers advisory services for establishment of provident funds and registrar and advisory services for provident fund committees. Fund investments cover multiple asset classes, including bonds, debentures, equities and ETFs, in line with consent from the respective provident fund committees. For 2019, TISCO Asset Management was trusted by 330 companies to manage provident funds, including PTT Global Chemical group and Microchip Technology (Thailand) Co., Ltd. Moreover, the mobile application "My PVD My TISCO" was developed to provide greater convenience for provident fund members by offering fund information, statement enquiry, as well as investment and retirement planning.

As of December 31, 2019, there were 119 provident funds accounted for with assets under management of 184,246.82 million baht, up 13.6% (YoY). TISCO Asset Management has been trusted by 4,542 companies and 680,965 members to manage provident funds. As of December 31, 2019, the market share of TISCO's provident fund business was 15.07%, holding first place in the overall market, based on net asset value.

- **Private funds**

TISCO Asset Management Co., Ltd provides private fund management services for individuals and legal entities. The services take into account client risk-return profile and include a wide range of investment alternatives, including equities, fixed income, and mutual funds. Clients receive reports which summarize fund performance on a regular basis.

As of December 31, 2019, there were 250 private funds accounted for with assets under management of 56,824.62 million baht, increased by 35.1% (YoY). The market share of TISCO's private fund business was 5.05%, ranked fifth in the overall market. For 2019, growth was seen in number of new clients, both individual and institutional, as well as from the Social Security Office, with investment amount reaching 12,000 million baht.

- **Mutual funds**

TISCO Asset Management Co., Ltd provides mutual fund management services for retail investors. Customer risk profile is analyzed to provide products suitable to investment objectives and risk tolerance. TISCO Asset Management Co., Ltd put more emphasis on effective investment management with first-hand fundamental research, risk management, as well as regular updates on the market and investment risk to the customer. TISCO Asset Management Co., Ltd. strategically offers various types of funds to suit customer needs. This was clearly reflected in the launch of new funds, including the Global Emerging Markets Fund, Global Technology Equity Fund, Global Infrastructure Equity Fund, US Financial Sector Fund and Trigger Fund. In 2019, TISCO Asset Management continued to focus on market timing when searching for investment opportunities. TISCO Asset Management launched 15 new mutual funds, comprising 3 trigger funds, 2 fixed income funds, 2 REITs, 4 domestic and global equity funds, and 4 mixed funds. In addition, TISCO Asset Management developed a mobile application, TISCO My Funds, that provides customers with greater convenience when doing transactions and allows customer to access investment news updates. This mobile application is seeing a growing positive response from customers since being launched the previous year.

As of December 31, 2019, there were 94 mutual funds accounted for, with assets under management amounting to 49,167.54 million baht. Mutual fund business held a market share of 0.9% and ranked 13th in the overall mutual fund market.

### 3.6 Mutual Fund Sales Agent

Mutual Fund Sales Agent is operated by TISCO Bank Co., Ltd and offers advice on mutual fund products and services via an Open Architecture platform. The platform allows clients to enjoy benefits from 12 asset management companies, 500 funds, including TISCO Asset Management, and our expertise in wealth advisory. TISCO helps customers maintain healthy return with a competitive choice of investments and robust asset allocation strategy.

### 3.7 Cash Management Services

The Bank's Cash Management Services include cash inflow and cash outflow management for corporate clients, which is aimed at increasing the operational efficiency and reducing operating costs for clients. Cash Management Services are across three business areas: TISCO Collection, TISCO Payment, and TISCO Liquidity Management. Additionally, TISCO E-Cash Management was introduced to facilitate business transactions and consolidated account information enquiries for customers.

### 3.8 Custodian Service

The Bank provides custodian services which range from the safekeeping of client assets and securities, payment and delivery, and fiduciary duties such as acting as custodian for provident funds, private funds, juristic persons, and individuals, including confirmation of net asset value for provident funds.

## 4. Corporate Affairs & CSR

Corporate Affairs & CSR aim to promote business operational efficiency while ensuring that business ethics and a strong sense of social responsibility are incorporated into corporate core values. Aiming for sustainable value creation for all stakeholders, TISCO has placed great emphasis on building a strong support network among our stakeholders to promote long-term social development, environmental awareness, and arts & cultural support programs. Furthermore, all governance and support functions are centralized at the Company while subsidiary companies shall outsource all such activities back to the Company. These include, but are not limited to, the following functions:

- Enterprise Risk Management, Risk & Business Analytics, Corporate Accounting, Planning & Budgeting, Credit Control, Appraisal & Valuation
- Internal Audit, Corporate Compliance, Operational Risk Management, Legal Office, Credit Review, IT Risk Management
- Corporate Marketing & Communication, Economic Strategy Unit, Treasury & Investment
- Corporate Services, Corporate Sourcing & Vendor Management
- Human Resources Management, Human Resources Services

In addition, TISCO has a Treasury Department unit under the Bank, which is responsible for asset and liability management activities, including the procurement of funding sources from local and foreign financial institutions, and investing and trading of bonds in order to maximize return under the corporate guidelines and risk policy and in compliance with all related rules and regulations. The unit also manages liquidity in accordance with BOT regulations.

TISCO Securities Co., Ltd handles the securities trading business and trades equity securities for company accounts, with an aim to maximize investment return. Securities trading volume was small as TISCO Securities maintained its investment policy of long-term return rather than short-term trading gain and tends to be less active with securities trading when stock market conditions are unfavorable. TISCO Securities Co., Ltd only invests in securities which offer performance backed by strong fundamentals to minimize market risk.

## 2.1 Market and Competition

### Commercial Banking Business

#### • Market

As of December 31, 2019, there were 30 commercial banks in Thailand's entire commercial banking system, comprising 19 domestically-registered commercial banks and 11 subsidiaries and branches of foreign banks. At the end of 2019, TISCO Bank ranked eleventh in asset size among the domestically-registered commercial banks with market shares of assets, deposits, and net loans of 1.6%, 1.7% and 1.9% respectively.

As of December 31, 2019, net loans of 19 domestically-registered commercial banks totaled 12,043,078 million baht, up by 2.1% (YoY), in line with growth of the domestic economy. At the end of 2019, the average MLR of the four largest banks was 6.01% per year. TISCO Bank's net loans totaled 228,084 million baht, increased by 1.4% (YoY),

while deposits totaled 13,191,094 million baht, up 3.9% (YoY). At the end of 2019, the average 3-month deposit interest rate of the four largest banks declined from 0.93% to 0.86%. Furthermore, the Bank of Thailand cut its policy rate (Overnight Repo) twice in 2019, from 1.75% to 1.25%, to shore up the economy.

### **Comparison of assets, deposits and net loans as of December 31, 2019**

(Unit: Million baht)

Commercial Banks	Assets	Market Share (%)	Deposits	Market Share (%)	Net Loans	Market Share (%)
1. Bangkok Bank Plc.	3,123,361	17.0	2,316,035	17.6	1,832,828	15.2
2. Siam Commercial Bank Plc.	2,952,447	16.1	2,156,489	16.3	1,995,248	16.6
3. Krung Thai Bank Plc.	2,908,358	15.8	2,158,460	16.4	1,879,541	15.6
4. Kasikorn Bank Plc.	2,724,055	14.8	2,065,669	15.7	1,826,520	15.2
5. Bank of Ayudhya Plc.	2,234,725	12.2	1,558,780	11.8	1,610,374	13.4
6. TMB Bank Plc.	1,045,343	5.7	663,559	5.0	646,194	5.4
7. Thanachart Bank Plc.	999,575	5.4	734,561	5.6	693,929	5.8
8. UOB Bank Plc.	566,212	3.1	456,411	3.5	404,342	3.4
9. CIMB Thai Bank Plc.	385,109	2.1	199,132	1.5	222,002	1.8
10. Kiatnakin Bank Plc.	299,216	1.6	172,661	1.3	230,062	1.9
11. TISCO Bank Plc.	285,288	1.6	218,433	1.7	228,084	1.9
12. Land & House Bank Plc.	230,548	1.3	165,018	1.3	151,569	1.3
13. ICBC (Thai) Plc.	215,797	1.2	129,823	1.0	110,246	0.9
14. Standard Charter Bank(Thai) Plc.	142,378	0.8	61,908	0.5	27,653	0.2
15. Sumitomo Mitsui Bank(Thai) Plc.	81,785	0.4	19,133	0.1	52,014	0.4
16. Bank of China(Thai) Plc.	69,996	0.4	47,088	0.4	46,462	0.4
17. The Thai Credit Retail Bank Plc.	56,635	0.3	47,325	0.4	48,204	0.4
18. ANZ Bank(Thai) Plc.	32,175	0.2	7,372	0.1	17,889	0.1
19. Mega International Commercial Bank Plc.	25,555	0.1	13,237	0.1	19,917	0.2
<b>Total</b>	<b>18,378,558</b>	<b>100.0</b>	<b>13,191,094</b>	<b>100.0</b>	<b>12,043,078</b>	<b>100.0</b>

Source: Summary of Assets and Liabilities Statement (C.B. 1.1) Bank of Thailand

#### **• Competition**

Regarding sector performance in 2019, the commercial bank industry recorded higher net profit vs. the previous year, driven by gain from investment sales at some commercial banks and an increase in net interest income, in line with loan expansion. Net interest margin was stable at 2.73%, supported by high-yield loan expansion. Total outstanding loans expanded by 2.00% (YoY) while NPL ratio rose to 2.98%, affected by deterioration in quality of SMEs, housing, and auto loans. Nevertheless, commercial banks had sufficient loan loss reserves to cushion against weak asset quality while capital funds remained solid.

In 2019, the banking industry underwent various uncertainties and macro challenges, including the domestic economy, regulations, and technological changes. The domestic economy in 2019 was highly volatile and marked by uncertainty due mainly to impact from the prolonged China-U.S. trade war and high level of household debt. Meanwhile, more stringent regulations, especially the macro prudential policy and market conduct guidance of the Bank of Thailand, coupled with preparation for Thailand Financial Reporting Standards (TFRS 9) in 2020 put some pressure on loan expansion and the operating performance of the banking business. In the wake of tremendous growth in banking transactions in digital channels, many banks have downsized their physical branches to cut operating costs and focused on investing and adopting new financial innovations to strengthen service abilities. Commercial banks are also carrying out digital transformations to cope with intensified competition from both incumbents and new market players from the technological sector. There were also a number of sizable merger and acquisition transactions in the banking industry in 2019, objectives of which included business restructuring, entry into new markets, and strengthening the competitive advantage of banks.

**Securities and investment banking business operated by TISCO Securities Co., Ltd.**
**• Market**

At the end of 2019, 44 companies held brokerage business licenses and 76 companies<sup>1</sup> held financial advisory service licenses granted by the Securities and Exchange Commission. At end-2019, the SET index closed at 1,579.84 points, increased by 15.96 points (1.0% YoY) from 1,563.88 points at the end of 2018. Meanwhile, average daily turnover was 52,468 million baht, declined by 7.0% from 2018. Derivatives market saw total trading volume increase by 0.1% to 104.5 million contracts from a year earlier. Average daily volume increased to 428,369 contracts per day, slightly improved from 426,213 contracts per day in 2018. In the primary market, there were 30 newly listed companies in the SET and MAI markets, 3 real estate investment trusts (REITs) and 1 infrastructure fund (IFF). Total offering size of newly listed securities was 90,838.73 million baht, up by 11.4% (YoY).

The capital market in 2019 was highly volatile throughout the year due to rising uncertainty from both internal and external factors. Likewise, the earnings of listed companies softened in line with the economy, resulting in weakened investor sentiment. Foreign investors were net sellers throughout 2019 with net selling value at 45,244.85 million baht, accounting for 41.9% of total market trading value. Meanwhile, the proportion of retail investors in total market trading value shrunk to 32.9% from 39.6% a year earlier amid change in investor behavior and the advent of high-speed algorithmic trading programs.

**Table shows capital market conditions**

	2019	2018	2017
SET index (points)	1,579.84	1,563.88	1,753.71
Market capitalization (million baht)	16,747,455	15,978,252	17,587,433
Trading turnover (million baht)	12,802,090	13,820,220	11,652,311
Average daily turnover (million baht)	52,467	56,409	47,755
Dividend yield (%)	3.14	3.22	2.70
Price to earnings ratio (times)	19.40	14.75	19.06
Number of listed companies on the SET	556	545	538
Derivative contract volume (contracts)	104,521,995	104,422,200	78,990,574

Source: The Stock Exchange of Thailand

**• Competition**

In 2019, brokerage market competition remained fierce as most market players adopted price cutting strategies. As a result, brokerage commission income continued to decline, especially from foreign investors which saw the lowest commission margin as most transactions were mainly from direct market access. As a result, some market players adopted revenue diversification strategies, tapping new sources of income, including proprietary trading, derivatives warrants, derivatives trading, margin loans and securities borrowing and lending, fund sales, and global equity market services to offset declining revenue from commission fees. Moreover, the trading service of brokerage firms has changed from Execution-only service to Portfolio Advisory with Execution service whereby the client receives advice about investment allocation or investment strategy in accordance with their goals and risk appetite.

TISCO Securities Co., Ltd has no policy for aggressive price cutting, focusing instead on serving fundamental investors rather than speculative investors by producing high quality research that serves both local and foreign institutional investors. Furthermore, TISCO Securities Co., Ltd provides investment advisory services as an alternative for investors. As of December 31, 2019, the market share of TISCO Securities Co., Ltd (excluding proprietary trading) was 2.1%.

For the investment banking market, market competition is intense as there are numerous market players while market demand is limited. The players compete on price and quality of services. In response, TISCO Securities focuses on quality of team, experience, and expertise in financial advisory as well as long-term relationships with customers.

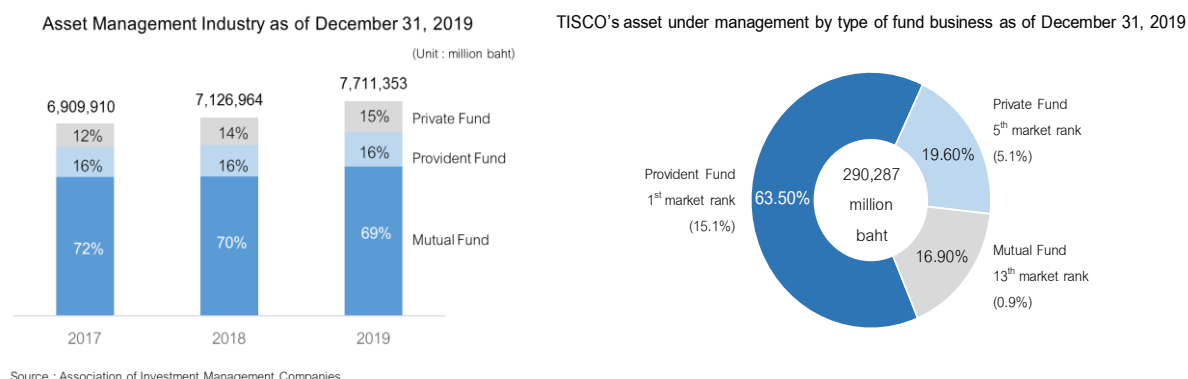
<sup>1</sup> Source: www.sec.or.th



## Asset Management business operated by TISCO Asset Management Co., Ltd.

### • Market

For the asset management industry, there are 26 players, including asset management companies, commercial banks, securities companies, and insurance companies. As of December 31, 2019, the assets under management of the asset management market totaled 7,711,353 million baht, increased by 8.2% (YoY). Furthermore, provident funds totaled 1,222,250 million baht, increased by 8.3% (YoY) while private funds totaled 1,124,581 million baht, increased by 13.7% (YoY). Mutual funds totaled 5,364,522 million baht, increased by 7.1% (YoY). TISCO Asset Management's market share in provident funds, private funds, and mutual funds is 15.1%, 5.1%, and 0.9%, respectively.



### • Competition

In 2019, overall performance of the provident fund business grew steadily despite intense market competition, especially from the top market share asset management companies which carried out aggressive marketing campaigns highlighting attractive prices, greater variety of funds, and fund performance to attract customers. Moreover, most of the asset management companies developed mobile applications which enable customers to change investment policies while also serving as a channel to provide specific investment advice for individual customers. Nevertheless, TISCO Asset Management Co., Ltd won Best Provident Fund Provider Thailand 2019 for the second consecutive year from Global Banking and Finance Review, one of the world's leading financial magazines, reflecting its excellent fund performance and high customer service standards.

In the private fund business, industry growth remained high, driven by fund inflow from institutional clients due to the low interest rates. TISCO Asset Management avoided competition in this segment because of the intense price competition, focusing instead on individual clients. While institutional clients largely tend to reward competitive prices, individual client preferences differ in terms of higher risk tolerance and higher return expectation, consideration of organizations' creditability, investment advisory services, as well as fund management team. In 2019, TISCO's private funds grew 35% (YoY) driven by both new and existing customers.

TISCO's mutual fund businesses have continually grown with assets under management as of 2019 at 49,168 million baht, increased by 10% (YoY) compared with industry growth of 7% (YoY). Mixed funds, which invest in multiple asset classes, exhibited particularly strong growth. With concern over the global economy slowing and risk relating to trade war easing, investors invested in mixed funds which have moderate risk and offer higher risk-adjusted return than fixed income funds given the low market interest rate and the fact that gains from investment in fixed income funds are subject to withholding tax for the first year. As such, Thai and foreign equity funds slightly contracted, especially foreign equity funds. However, TISCO's Thai equity funds outperformed the SET index amid high market volatility.

In terms of fund performance, the TISCO Income Plus fund exhibited the highest Asset under Management (AUM) growth. Presently, the AUM of the TISCO Income Plus fund is over 6,000 million baht with excellent risk-adjusted return. In addition, the TISCO Income Plus fund is rated 5 stars by Morningstar Rating. Meanwhile, the TISCO Strategic Fund achieved top Thai equity fund performance in 2019, with the strongest three-year and five-year returns, while TISCO Asset Management was awarded Best Equity RMF 2019 from Morningstar, reflecting its expertise in fund management and consistently strong performance.

Indeed, TISCO Asset Management has gained wide recognition for outstanding fund performance and excellent fund management. In 2019, TISCO Asset Management received numerous awards from the capital market business authorities and international organizations. These included “Best Asset Management Company Thailand 2019” by International Finance Publications, one of the leading global financial magazines, and “Outstanding Asset Management Company Award 2019” at the SET Awards 2019 organized by the Stock Exchange of Thailand and Banking and Finance magazine. For its social responsibility efforts, TISCO Asset Management Co., Ltd received “Best of the Best Award 2019” from Asia Asset Management, a leading investment magazine in Asia.

## 2.2 Arrangement of Products or Services

### Sources of Funds

Apart from the Group’s capital, most of the funds from the Group and its subsidiaries are sourced from deposits, the interbank and money markets and short and long-term borrowing. The details of sources of funds are as follows:

(Unit: Million baht)

Sources of Fund	2019	2018	2017
Deposits <sup>1</sup>	216,121.47	198,985.23	188,280.76
Interbank and Money Market Items	4,656.13	4,374.67	4,017.51
Debentures	24,980.00	49,680.00	63,601.70
Other Liabilities	13,350.38	11,675.28	12,756.67
<b>Total Sources of Funds from Liabilities</b>	<b>259,107.98</b>	<b>264,715.18</b>	<b>268,656.64</b>
Capital	39,196.11	37,829.45	34,731.76
<b>Total Sources of Funds</b>	<b>298,304.09</b>	<b>302,544.63</b>	<b>303,388.41</b>

### Lending

- **Credit granting policy**

#### Commercial loans

TISCO Group (specified for TISCO Bank and credit granting companies) has a policy to emphasize prudent growth in commercial and retail lending. For each new credit approval, the Bank thoroughly considers the borrower’s business potential, opportunities, ability to repay, collateral, and the rate of return that justifies the risk of each borrower. TISCO Group focuses on expanding its business into markets with acceptable risk/return and in which it has sufficient expertise. TISCO Group performs analysis of key risk characteristics prior to entering new markets.

Collateral policies vary, depending on the type of credit, and are employed with effective procedures to stabilize collateral values under the specified conditions and to minimize potential losses. However, TISCO Group may selectively grant loans without collateral to certain borrowers judged to have high creditworthiness on a case-by-case basis. For the appraisal of collateral values, the Bank has a policy to have the collateral appraised by an independent appraiser or the internal asset appraisal unit before any loan can be drawn. TISCO Group’s Appraisal Sub-Committee is responsible for approving the appraisal value proposed by the internal unit and independent appraisers under the company’s guidelines, in compliance with the regulations of the BOT.

TISCO Group has established prudent procedures for all credit approvals to ensure high credit quality while maintaining customer satisfaction. Approved credit is reviewed and controlled in compliance with overall credit policies.

The maximum credit terms are set in accordance with the regulations of the BOT. TISCO Group has constructed a pricing policy aligned with current market conditions and credit exposure as well as cost of funds without any price undercutting strategy.

<sup>1</sup> Total deposits including short-term borrowings



## Retail loans

The hire-purchase business covers a large portion of the retail credit portfolio. TISCO Group has a policy to aggressively expand its hire-purchase business in this market with justified risk-adjusted returns. TISCO Group has established a standard approval process for the hire-purchase portfolio and other retail loan portfolios which includes a credit-scoring system developed from an internal database to effectively control and shorten the loan approval process.

Credit policies are regularly reviewed to reflect the current market situation and support loan expansion in a prudent manner, while maintaining appropriate risk-adjusted return. Meanwhile, TISCO Group has a policy to maintain highly competitive credit quality without resorting to a price-cutting policy. In this respect, focus is on enhancing quality of service and good business relationships as vital competitive tools. For collateral policy, hire-purchase assets are supported by adequate secondary markets and appropriate insurance strategies.

For mortgage loans, approved credit does not exceed 90% of the collateral value with terms and conditions varying with the type of collateral. Meanwhile other retail loans without collateral require higher interest rates to offset the higher risk being assumed.

- **Credit Approval Limits and Authorities**

The Credit Committee is responsible for overseeing the credit approval process under the credit policies and guidelines set forth by the Executive Board.

Credit approval policies are clearly stated, specifying terms of credit limits and delegation of authority. All corporate loan transactions must be reviewed and approved by the Credit Committee while loan facilities which are considered material in size must be approved by the Executive Board.

For the retail credit portfolio which covers small transaction sizes, the credit approval process and delegation of authority varies according to the level of credit limit and is controlled by the overall credit policies. Large retail credits must be approved by the Credit Committee or the Executive Board after reviewing the types and purposes of loans on a case-by-case basis.

For the hire purchase business, TISCO has implemented a credit-scoring system to assist the loan approval process, in which customer characteristics and loan terms and conditions are taken into consideration for computation of a credit score.

- **Credit Risk Management**

The Risk Management Committee of TISCO Group, comprised of senior management from key business lines, has been delegated the authority to set up policies, guidelines and procedures for overall credit risk management in compliance with the Consolidated Supervision principle of the Bank of Thailand. Meanwhile, the Credit Committee and Chief Credit Officer, who are in charge of the loan approval processes of each credit transaction, have set up guidelines for the delegation of approval authority at different levels for different types of facilities. The Problem Loan Committee is set up to monitor and follow up on problem loans and to set up appropriate provisions for potential loan losses.

To ensure independence in carrying out the credit approval process and reporting to the Risk Management Committee, credit quality control functions are clearly separated from marketing functions. Moreover, credit review functions assigned by the Internal Control function and the Audit Committee are responsible for reviewing ongoing credit approval processes and ensuring transparency in overall credit granting procedures.

A credit grading system has been adopted for credit risk assessment in both corporate and retail credit portfolios, in accordance with the implementation of the Internal Ratings Based approach (IRB), resulting in greater efficiency in capital utilization in the long term.

To mitigate credit concentration risk, TISCO Group has set a concentration limit which defines the maximum credit exposure for each individual borrower or borrowing group. Moreover, concentration in a single sector is also controlled within an acceptable level and considered in combination with the sector's exposure to equity investment. TISCO Group complies with the regulations of the BOT, concerning single lending limits.

- **Credit Collection**

TISCO Group regularly performs credit reviews of the loan portfolio and monitors problem accounts. The Credit Committee closely co-ordinates with credit departments and promptly follows up on accounts with potential problems after a missing repayment is reported. Also, Problem Loan Committee meetings are arranged to review the status of borrowers, set up debt collection schedules and follow-up procedures, pursue legal action, and set aside provisions for loan losses. As part of the follow-up procedure, the credit officer reports to the Problem Loan Committee all restructured cases on a regular basis.

For the retail credit portfolio, TISCO Group strives to continuously improve the strategies and procedures for debt collection and follow-up, in line with the economic conditions and related laws and regulations, particularly with regard to notification from the Office of Consumer Protection. The primary collection and follow-up process includes collection, follow-up and asset repossession, legal process and enforcement.

- **Debt restructuring**

The objective of debt restructuring is to resolve problem loans which have been affected by economic downturns or the borrower's financial difficulties. TISCO Group's procedures for debt restructuring involve various methods, such as relaxing of payment conditions, debt-to-asset conversion, debt-to-financial-instrument conversion, and debt-to-equity conversion.

Debt restructuring can be conducted with every type of borrower, defaulted and non-defaulted. The corporate lending function is responsible for the debt restructuring process, including the decision to select borrowers for restructuring. The delegated officers will evaluate the borrower's credit qualities and related financial and operating environment and perform projections on repayment possibilities.

For debt restructuring cases related to, both directly and indirectly, Bank directors, persons related to TISCO Group directors or management, the borrower's status, repayment ability and cash flow status must be evaluated by an independent financial institution or third party with no conflict of interest with the Bank and the borrower. Under the regulations of the Bank of Thailand, all restructured loans are reclassified, provisioned for, and recalculated for impairment loss.

### **Capital Adequacy**

The Group has a policy to maintain capital that is adequate to safeguard against company risks in the long run, taking into account long-term solvency within economic uncertainties and the adequacy of regulatory capital-to-risk asset ratios, as required by law. The Bank of Thailand's current capital adequacy ratio for banks registered in Thailand is 11.0%, whereas Tier-I Capital must be maintained at a level equal to at least 8.5% of risk assets.

The capital base of the Group remains strong with the Capital Adequacy Ratio exceeding the requirements of the BOT and sufficient to support forthcoming regulations concerning debt reclassification and provisions.

### **Liquidity Management Policy**

The Risk Management Committee is responsible for monitoring and determining assets-to-liabilities direction and funding structure in detail. The Committee also establishes various liquidity limits to serve as early warning triggers, such as liquid assets, contractual maturity mismatch, funding concentration, and daily deposit/withdrawal levels. Furthermore, a liquidity contingency plan has been established for outlining clear procedures and responsibilities for liquidity management in times of crisis.

Meanwhile, the Treasury function is responsible for daily liquidity management and securing of sources and the use of funds as required. The Treasury function is also responsible for managing the Bank's liquidity position to comply with internal guidelines and the regulatory requirements of the BOT.

### **Asset Classification, Provisions and Write-offs**

The Group defines asset classifications in accordance with the Bank of Thailand's guidance on worthless or irrecoverable assets and doubtful assets that may be worthless or irrecoverable as shown in the financial statement for 2019. Details are provided as follows:

- (1) Assets classified as Loss are claims where there is no possibility of repayment due to death, disappearance, bankruptcy or dissolved business, or losses from debt restructuring, in accordance with the rules and regulations of the Bank of Thailand.

- (2) Assets classified as Doubtful-to-Loss are assets or claims whose entire value is expected to be irrevocable, such as debt claimed on the principal and interest overdue more than 12 months from the payment date.
- (3) Assets classified as Doubtful are assets or claims that are unlikely to be repaid in full, such as debtors with payments overdue more than 6 months from the contractual payment date.
- (4) Assets classified as Sub-Standard are defined as assets or claims with difficulties in repayment or those that do not generate a reasonable income, such as debtor-owing interest and/or principal payments for a cumulative period of over three months from the contractual due date.
- (5) Assets classified as Special Mentioned are assets or claims whose value is deteriorating, such as debtor-owed interest and/or principal payments for a cumulative period of over one month from the contractual due date.
- (6) Assets classified as Pass are assets or claims which are not classified as Loss, Doubtful to Loss, Doubtful, Sub-Standard, or Special Mentioned.

*Our asset classification policies are presented in item: 14.3 of Part 3 Section 14: Non-Performing Loans (NPLs) and Loan Loss Provision*

Securities Business operated by TISCO Securities Co., Ltd is detailed as follows:

#### **Sources of fund**

The sources of funds are mainly equity, operational cash flow, and loans from financial institutions for working capital purposes.

#### **Credit approval and authorization**

TISCO Securities Co., Ltd. has a credit approval policy to screen qualified customers and provide customers with a solid understanding of securities trading. Credit lines for particular customers are based on the customer's financial status and collateral. The Executive Board has granted credit approval authority to the Credit Committee. The Credit Committee approves high-volume credit lines by itself and has granted lesser authority to management responsible to approve general credit lines which comply with the Credit Committee's guidelines and policy.

#### **Margin trading accounts**

All clients of securities brokerages are cash accounts.

#### **Investment Policy**

For listed equity, TISCO Securities Co., Ltd. has a policy to invest in businesses with strong fundamentals, taking into consideration liquidity, risk and return on securities, and the diversification of its portfolio. As for non-listed equities, the Company has no policy to enlarge this portfolio, but will exploit market opportunities for selling the existing securities at the highest price. For debentures, TISCO Securities Co., Ltd. holds them only for liquidity reserve purposes. For unit trusts, the Company holds them as short-term and long-term investments, depending on their investment policy and fund performance. Moreover, the company has a policy to invest in derivative instruments to earn trading gains and for risk management purposes depending on the investment climate in the stock market.

Investment policy complies with the guidelines and policies of the Risk Management Committee, which consist of key executives. This committee determines the investment policy, size of the investment portfolio, maximum limits for daily securities trading, and the loss limit.

#### **Capital Adequacy Ability**

The Net Capital Rule (NCR) ratio of TISCO Securities Co., Ltd. as of December 31, 2019 is 67.21%, well above the 7.0% regulatory requirement of the SEC.

### 3. Risk Factors

#### Overview of Risk Management

TISCO Group places great importance on effective risk management and controls. By establishing an overall risk management framework, including policy objectives for all risk-related transactions, TISCO Group is able to increase awareness, accountability and efficiency in enterprise-wide risk management as well as maintain best practice standards and high-quality corporate governance. In addition, TISCO Group aims to maximize sustainable risk-adjusted return for shareholders over the long run.

#### Risk Management Policy

Overall risk management policy, as a standardized operation for TISCO Group's risk management, encompasses the following structures:

1. Consolidated and centralized risk management

Risk management infrastructure is centralized by consolidating risk exposure from all subsidiaries under the Company through careful risk assessment and the establishment of appropriate risk guidelines and procedures.

2. Business line accountability, independent risk oversight

Each business line is accountable for managing its own risks in the best interests of TISCO Group while complying with risk management policies, guidelines, and procedures. Independent risk oversight and check-and-balance system have been established to ensure that risks are adequately monitored and controlled.

3. Comprehensive risk assessment

Risk assessment is performed comprehensively in all key activities. Risk assessment methodologies may range from basic approaches such as expert judgments to more advanced approaches such as quantitative and statistical analysis, depending on the size and complexity of the risks involved. These assessments are in turn supplemented by fundamental risk analysis and stress testing of extreme risk events.

4. Capital management based on standardized risk tools

Capital represents the ultimate interests of the shareholders. All risk exposures are quantified into a standardized risk measure called Risk Capital based on Value-at-Risk (VaR) concept which can relate risks to the amount of capital required to protect against them according to predefined risk limits. The process of risk assessment under Risk Capital is considered as part of Internal Capital Adequacy Assessment Process (ICAAP) of TISCO. Risk capital enables management and business line managers to understand the level of risks being taken in a meaningful manner. Risks from different levels are integrated to produce an overall risk picture of the Group, which is used for capital adequacy planning and strategic capital allocation both at the corporate and business unit level.

5. Risk Tolerance Level and Capital Allocation

The total risk capital shall not be in excess of available capital fund of the Group where qualitative risk tolerance level shall be applied for non-capital based assessment. Risk Capital shall determine the economic capital adequacy of TISCO, which the available capital is also allocated to the business and operating units such that the capital adequacies to undertaken risk are ensured both at the corporate- and business-unit-level.

6. Adequate return for risk and risk-adjusted performance management

To promote shareholder value creation, risk components are incorporated into business performance measurements with the objective of maximizing risk-adjusted returns for shareholders. Product pricing takes into account varying risks to ensure overall profitability. Business expansion is advocated in the areas where marginal risk-adjusted returns are in excess of the marginal risks.

#### 7. Portfolio management, diversification and hedging

Risk diversification is a key risk management principle in all business activities. Diversification is considered and adopted by management and business line managers both at the portfolio and transaction levels as an effective approach to reducing the aggregate level of risks in accordance with certain guidelines and limits.

#### 8. Strong Risk Awareness Culture

Awareness and understanding of risks and risk management are important for the accountability of risk management. Business heads are expected to have a high degree of awareness and understanding of the risks in their accountable areas and how they contribute to the overall risk of the corporate as a whole.

#### 9. Effective Risk Modeling and Validation

Risks shall be modeled as forward-looking measures that reflect potential likelihood and impact on the intrinsic value of TISCO assets, liabilities, or businesses. Mark-to-market practice shall be adopted in all portfolios as appropriate, where independent validation from risk management shall be adopted in the case of high complexity in valuation. Key risk models with sufficient information shall be validated through a systematic back-testing process or other prudent statistical tools.

#### 10. Regulatory best practice

TISCO Group has adopted risk management policies and guidelines that comply with all regulations and best practice standards of the Bank of Thailand (BOT), the Securities and Exchange Commission (SEC) and other regulatory authorities.

#### 11. New Business or Product

All new businesses or products shall be approved by the portfolio risk authority and relevant specific-area risk authority according to the procedure outlined in the risk management guideline. New business or product will be evaluated in terms of its risk-reward characteristics, the contributions to the overall corporate risk profile, and the consistency with corporate capital capacity.

#### 12. Related Party Transaction

All business transactions among TISCO Group and related party shall be on a similar basis with same treatment of regular customers. Additionally, the related transaction shall be transparent and auditable. Meanwhile, the proportion of business transaction among TISCO Group shall be controlled under regulatory guideline.

#### 13. Stress Testing

Stress testing is a procedure to assess the impact on the company's financial status under extreme risk events. Stress testing process is designed to be as a supplementary tool for the analysis of credit risk, market risk and funding risk. Risk Management Committee is responsible to oversee the framework for stress tests. The Committee will establish guidelines and key required assumptions to perform stress tests based on the appropriate framework. Meanwhile, Risk Management Functions are responsible to facilitate all related business units in order to perform periodically stress tests, and report the stress testing results as well as the recommendations on any important aspects to the Risk Oversight Committee as well as the Risk Management Committee. Stress testing assessment and results shall be integrated to setting and evaluating the internal management strategy which may involve reviewing the need for limit changes or developing contingency plans.

### **Risk Management Framework**

In accordance with enterprise-wide risk management policies and objectives, risk management and internal control have been monitored and controlled by the Board of Directors of the Company with the delegation to the Executive Board of Directors of the Company. An effective management process has been established for assessing and managing all firm-wide risk exposures at both the portfolio and transactional levels to ensure the financial soundness and safety of TISCO Group. Senior management and relevant business advisory committees oversee the entire risk management framework and strategy for all business areas supported by planning and budgeting function. The Risk Oversight Committee is set up to advise the Board of Directors on risk governance framework to ensure

that top management and heads of risk management functions follow the risk management policy, strategies, and risk appetites, as well as to ensure that capital and liquidity management strategies are consistent with the risk appetites. The Risk Oversight Committee also reviews the sufficiency and effectiveness of overall risk management policy and strategies, and reports risk exposures, effectiveness of risk management system and risk governance culture of the organization, as well as any significant factors or required improvement to the Board of Directors, and advises or participates in evaluation of heads of risk management functions. Moreover, the Risk Management Committee, supported by enterprise risk management, risk and business analytics, IT risk management, and operational risk management functions, is set up to oversee that enterprise-wide risk management of the group is undertaken according to the same standard.

Specific-area risk authorities are then established to manage in-depth, transaction-level risks in each particular area, such as the Credit Committee, Problem Loan Committee, and Compliance & Operation Control Committee. These mechanisms are in turn supported by the credit control and other supporting functions, governing compliance, and legal office. Business lines are fully accountable for managing their own risks within the policy guidelines established by the Risk Management Committee and specific-area risk authorities. All the business operations are under the risk limit approved by the Risk Management Committee including new business analysis in each business line, where risk limits triggered as well as new businesses shall be reported monthly to the Risk Management Committee for acknowledgement. Additionally, the Risk Oversight Committee shall review the sufficiency and effectiveness of overall risk management policy and strategies, and reports risk exposures, effectiveness of risk management system and risk governance culture of the organization, as well as any significant factors or required improvement to the Board of Directors, and advises or participates in evaluation of heads of risk management functions. However, to enhance the overall risk management system, the risk management system shall be audited and reported to the Audit Committee which directly reports to the Board of Directors.

In the present, Information Technology (IT) is involved as integral part of business to serve business needs and being customer channels to access information and services as known as Financial Technology (FinTech), in addition to several laws and regulations which have been announced for IT good governance. TISCO Group set up IT Risk Management function to manage in-depth and transaction-level of IT risks and to support the Risk Oversight Committee as well as the Risk Management Committee regarding to IT risk as integral part of operational risk and IT Risk Committee in specific-area risk authorities.

The roles and responsibilities of the relevant committees and risk management authorities are described as follows:

- Board of Directors

The Board of Directors of the Company shall ensure the institution of effective risk management system of the Bank and ensure that the Company has adopted and adhere to TISCO Group Risk Management Policy. The Board has assigned Executive Board the task of overseeing and monitoring risk management activities. This is achieved by setting risk limits and risk appetites, and ensuring the establishment of effective risk management systems and procedures in accordance with the standard practices of risk identification, assessment, monitoring and control, all of which are in line with the Audit Committee standards.

- Board of Directors of Subsidiaries

Under consolidated supervision framework, the Board shall ensure that each subsidiary adopt and adhere to TISCO Group Risk Management Policy approved by the Board of Directors of the parent company. The Board will appoint other committees according to the needs and suitability to carry out specific tasks to ensure that the operations are in compliance with established Corporate Governance Policy and report risk management activities and financial performance to the parent company's Executive Board on a regular basis, in compliance with the Consolidated Supervision Principle of the Bank of Thailand.

- Risk Oversight Committee

The Risk Oversight Committee is set up to advise the Board of Directors on risk governance framework to ensure that top management and heads of risk management functions follow the Board of Directors' approved risk management policy, strategies, and risk appetites, as well as to ensure that capital and liquidity management strategies are consistent with the approved risk appetites. Moreover, the Risk Oversight Committee has



responsibilities on reviewing sufficiency and effectiveness of overall risk management policy and strategies as well as risk appetites, at least once a year or when there is significant change. The Committee also reports on risk exposures, effectiveness of risk management system and risk governance culture of the organization, as well as any significant factors or required improvement to the Board of Directors, and advises or participates in evaluation of heads of risk management functions.

- Risk Management Committee

The Risk Management Committee of the company, comprising the senior managements from the TISCO Group, has been appointed by the Group CEO in charge of the formulation and implementation of enterprise-wide risk strategies and action plans in connection with risk management policies and guidelines. The Risk Management Committee meeting is regularly held once a month. Enterprise risk management, risk and business analytics, operational risk management, and IT risk management functions support the Risk Management Committee in setting up and monitoring risk management policies and guidelines and performing enterprise-wide risk management activities through research, assessment, and reporting process.

- Specific-Area Risk Authorities

Specific-area risk authorities are set up to address in-depth risk management and controls at the transaction level. Key specific-area risk authorities include the Credit Committee and Problem Loan Committees, which are in turn supported by the credit control in overseeing credit approval and risk management. In addition, Executive board of Directors of the bank and Board of Directors of other credit-granting subsidiaries shall control and follow up all specific risk areas which are directly reported to the Board of Directors of the bank as well as the Board of Directors of the company on a regular basis.

## Risk Types

Risk management of TISCO Group considers five risk factors which are 1) Credit Risk 2) Liquidity Risk 3) Market Risk 4) Operational Risk and 5) Strategic Risk. Details are shown in item 3.1-3.5

The overall risk of TISCO Group is at a manageable level, with amount of capital fund remaining strong for further business expansion which has already been assessed by the Bank of Thailand. Moreover, TISCO Group has guidelines for risk management according to each type of risks.

*Additional details are shown in Part 3 Section 14: Management Discussion and Analysis*

### 3.1 Credit Risk

Credit Risk is defined as the possibility of obligor's failure to meet the contract agreement with TISCO Group. If the failure occurs, it requires the Bank to maintain higher provisions for loan losses. As a result, it adversely impacts net income and capital of TISCO Group.

#### 3.1.1 Default Risk

Default risk occurs from lower credit quality. As of December 31, 2019, NPL ratio of TISCO Group decreased from 2.86% at the end of 2018 to 2.40% at the end of 2019, mainly resulting from completion of the revision of payment hierarchy system, together with write-off of some loan portfolio as preparation before applying the new Thai Financial Reporting Standard No. 9 (TFRS 9). Moreover, in order to prevent rising credit risk, an increase in expected loss was also absorbed by the provision expense set up during the year, with prudently managed non-performing loans (NPLs) including advanced risk management tools and stringent practice of loan collection, debt restructuring and write-off process. Additionally, NPL ratio of retail loan decreased from 3.51% at the end of 2018 to 2.84% at the end of 2019, where NPL ratio of corporate loan increased to 0.71%. Total NPLs was 5,834.49 million baht which decreased by 15.1% or 1,041.72 million baht. NPLs of the Bank was 5,291.79 million baht, where NPLs of other subsidiaries amounted 542.70 million baht.

TISCO Group has applied collective approach for loan loss provisioning to the car hire-purchase portfolio following the Basel III framework. The loan loss reserve was derived from the best estimate of expected credit losses from the portfolio over the next 12 months, based on historical loss data incorporating with adjustment for the recent market situation. TISCO Group has utilized portion of general reserve to compensate the potential losses in the

future. Meanwhile, as of December 31, 2019, loan loss reserve of TISCO Group was 10,716.71 million baht, or 183.7% of NPLs. Total loan loss reserve of the Bank was 10,081.46 million baht or accounted for 225.7% of loan loss reserve required by the Bank of Thailand, reflecting the prudent provisioning policy to mitigate potential risk.

### 3.1.2 Concentration Risk

Concentration risk is the risk from borrower concentration. As of December 31, 2019, hire purchase and corporate loans represented 56.8% and 15.1% of the total credit portfolio, respectively. The hire purchase portfolio, of which concentration was very low, had 138,126.90 million baht of loan outstanding. Top-10 borrower exposure of hire purchase portfolio stood at 58.68 million baht or 0.04% of the total hire purchase portfolio, or equal to 0.02% of the total credit portfolio.

For the corporate loan portfolio, it was diversified into four different sectors: manufacturing and commerce, 2,630.54 million baht; real estate and construction, 14,674.57 million baht; and public utilities and services, 19,388.66 million baht. Lending to the above industrial sectors represented 7.2%, 40.0%, and 52.8% of the total corporate loan portfolio, and represented 1.1%, 6.0%, and 8.0% of the total credit portfolio, respectively. As top-10 borrower exposure stood at 32,226.43 million baht or accounting for 13.3% of the total credit portfolio, there is slight concentration in public utilities and services as well as real estate and construction sector which have been managed under risk management procedure. Moreover, corporate loan portfolio is almost fully collateralized. In loan approval process, appropriate proportion of collateral value and financing amount is maintained to ensure that risks were kept within a manageable level. Furthermore, collateral values will be regularly appraised and effective loan drawdown procedure has been implemented. Portfolio credit quality was closely monitored.

### 3.1.3 Collateral Risk

Collateral risk occurs from borrower defaults and the value after selling collaterals in the debt collection process cannot cover the original debt amount. As of December 31, 2019, lending portfolio of TISCO Group came mostly from TISCO Bank whereby 74.4% of the portfolio was asset backed or with collateral. For the hire purchase portfolio, the underlying asset under the loan agreement itself is still owned by TISCO Group. In case the borrowers of hire purchase loans cannot meet the terms and conditions, TISCO Group can follow up and seize the underlying assets immediately. After repossession, the process of asset liquidation can be completed within one month.

A major risk factor in the hire purchase business depends on the market value of used cars. A substantial decrease in the market value of a used vehicle results in credit loss, which directly affects the net income and capital of TISCO Group. Market prices for used cars depend on such diverse factors as market demand, type, brand, and tax regulations.

According to the past records, the recovery rate for asset liquidation in the secondary market was somewhat high at 70%-90% of the remaining net financing amount, which helped in absorbing losses from defaulted loans. TISCO Group has attempted to minimize credit risk by regularly updating its information regarding trends in the used car market, requiring high-value collateral, sufficient average down payment, and favoring well-known brands in the secondary market.

For commercial and mortgage loans, most collateral extended as loan guarantees was in the form of real estate, of which the value could be deducted for the purposes of loan loss provisioning. Collateral values were appraised according to regulations of the Bank of Thailand. The proportion of collateral value used in deducting the provisioning requirements for NPLs was 81.1% of the NPLs of commercial loan and mortgage loan.

Generally, the risk of real estate value changes depends on economic conditions. A recession in the Thai economy might result in lower values, which would require TISCO Group to reserve higher loan loss provisions. Moreover, the legal process of collateral acquisition through related laws and enforcement is both costly and time consuming. However, all pending cases are closely monitored on a regular basis.



### 3.1.4 Property Risk from Foreclosed Assets

Property risk from foreclosed assets is the impairment of assets transferred from loans, hire purchase receivable on which debtors had defaulted on their repayment obligations under the loan contracts or restructured receivables. The value of repossessed assets is stated at the lower of cost and net realizable value. Outstanding assets in the process of liquidation held by TISCO Group as of December 31, 2019 were worth 18.43 million baht, or 0.01% of total assets. Allowances for impairment stood at 1.5% of total foreclosed assets.

#### ▪ Credit Risk Management Framework

The Risk Management Committee is delegated to oversee credit risk management of the corporate portfolio. The committee is responsible for formulating credit risk strategies and establishing guidelines and limits, as well as advising other credit risk authorities and retaining accountability on related issues. It also monitors and reviews credit risks at the portfolio level and reports essential credit risk information to the Board. In addition, the Risk Oversight Committee shall advise the Board of Directors on risk governance framework to ensure that top management and heads of risk management functions follow the Board of Directors' approved risk management policy, strategies, and risk appetites, while reviewing sufficiency and effectiveness of overall risk management policy and strategies. The Risk Oversight Committee shall also report on risk exposures, effectiveness of risk management system and risk governance culture of the organization, as well as any significant factors or required improvement to the Board of Directors, and advises or participates in evaluation of heads of risk management functions.

Credit risk is mainly incurred from subsidiary companies, in which conducting loan as main business. Specific-Area credit risk authorities include the Credit Committee, and Problem Loan Committee, which are established to oversee credit risk management and control at in-depth transaction level of subsidiary companies. The Credit Committee is responsible for reviewing and granting credit approvals to any single client proposed by lending officers. The Credit Committee may delegate its authority to designated persons for authorizing lower-risk transactions. The Problem Loan Committee was set up to monitor and follow up overdue payment of problem loan accounts and foreclosed assets on a regular basis.

Sound credit risk assessments are key risk practices at TISCO Group such as credit analysis, credit rating, delinquency analysis, concentration level and risk capital. All loan origination must operate under a sound credit granting process in which an effective credit rating system is employed in key business area. In retail lending area, quantitative-oriented approaches to credit grading are implemented, considering its homogenous high-volume characteristics, with emphasis on the use of extensive data mining and analysis. In corporate lending area, qualitative-oriented credit grading approaches shall be employed, taking into account its highly varying risk profiles, with well-defined standard.

Concentration risks are also essential in credit portfolio risk management. Appropriate guidelines on concentration risks are set up considering appropriate business practice and company risk capital capacity.

TISCO Group uses credit risk management guidelines and limits that are comprehensively applied to all credit-related functions both at the portfolio and transactional levels, as well as monitoring and managing problem loan and foreclosed assets.

### 3.2 Liquidity Risk

Liquidity risk is the possibility that TISCO Group might not be able to meet its obligations to repay debts when they come due, whether as a result of a failure in cash management or an inability to raise funds to meet demand in time. Liquidity risk comes from internal and external factors. Internal factors are maturity mismatches in the assets and liabilities profile which affect the level of liquid assets, while market liquidity and depositor confidence represent external factors affecting liquidity risk.

As of December 31, 2019, the value of liquid assets is 55,547.79 million baht, which comprised of cash at 1,102.56 million baht compared to 1,191.80 million baht in December 31, 2018, net transactions with interbank and money market at 45,300.14 million baht compared to 54,071.39 million baht as of December 31, 2018 and net current investment at 9,145.77 million baht compared to 8,792.84 million baht as of December 31, 2018.

Currently, liquidity risk from the maturity mismatch is moderate, once adjustments for the historical behavior of creditors and debtors such as loan defaults or rollovers are taken into account. According to maturity mismatch profile within 1 year, the cumulative gap has shown the matured assets over the matured liabilities accounted for 51,506.32 million baht. In addition, emergency credit line, cash flow from operations as well as inter-bank borrowing shall be utilized as a cushion against funding risk that might occur.

As of December 31, 2019, the Bank reported deposit 216,084.55 million baht, the outstanding long-term debentures (both subordinated and unsubordinated) of 6,680.00 million baht and short-term debentures of 18,300.00 million baht, and bill of exchange amounted to 36.92 million baht.

#### ▪ **Liquidity Risk Management Framework**

Funding risk management is overseen by the Risk Management Committee who delegates day-to-day management of liquidity position to the accountable business line, subject to independent oversight and compliance to the approved risk policies and regulatory requirements. In addition, the Risk Oversight Committee shall advise the Board of Directors on risk governance framework to ensure that top management and heads of risk management functions follow the Board of Directors' approved risk management policy, strategies, and risk appetites.

Key funding risk policies involve the management of cash flow maturity profiles, funding concentration, liquidity coverage ratio, net stable funding ratio, and liquidity contingency plan. Funding risk strategies shall take into account the liquidity status in the market and how unexpected changes would affect the company's risks. A manageable level of maturity mismatches of cash flows from assets and liabilities shall then be consistently maintained and regularly monitored with liquidity stress testing, together with the level of liquidity reserve. Funding sources shall be well-planned to optimize risk/return while controlling excess concentrations in certain funding sources is crucially required. Contingency procedures for liquidity management in the times of unexpected financial crisis must be established and made ready for timely activation.

### **3.3 Market Risk**

Market risk stems from adverse changes in securities prices and interest rates, which affect the volatilities of net income, capital, asset value, and liabilities of TISCO Group.

#### **3.3.1 Equity Price Volatility**

As of December 31, 2019, the equity portfolio stood at 1,366.00 million baht, of which 252.90 million baht was listed equity, 59.01 million baht was unit trust, 836.83 million baht was ETF in current market value, and 217.26 million baht was non-listed equity in book value.

TISCO Group has unrealized loss from the difference between fair value of securities as of December 31, 2019 and unrealized gain(loss) of securities according to the accounting standard of security foreclosure were 14.26 million baht.

##### **(1) Listed Equity Risk and ETF**

TISCO Group exposed to price risk from market price volatilities of listed equity, unit trust and ETF investment. Investment portfolio in available-for-sale book stood at 1,148.73 million baht in which profit and loss will be realized when sale, however, a change in its value would impact the equity through unrealized gains or losses. As of December 31, 2019, unrealized loss from available-for-sale investments equaled 14.26 million baht.

TISCO Group calculates VaR for risk assessment purposes and files reports to management in charge as well as to the Risk Management Committee on a daily basis. VaR is a maximum potential loss at a predefined confidence level and time horizon. Three month investment horizon VaR at a 99.0% confidence level excluded unrealized gain/loss, as of December 31, 2019, was 184.00 million baht, decreased from 206.52 million baht as of December 31, 2018 mainly resulted from decreasing of risk volatility due to diversification effect. For effective risk management and control, trigger limits were set up to monitor the overall market risk profile according to internal guidelines, such as concentration trigger limit, stop-loss trigger limit, etc.

## (2) Non-Listed Equity Risk

Non-listed equity portfolio's book value stood at 217.26 million baht, decreased from 219.51 million baht from the end of 2018 from price revaluation. Presently, our investment strategy is not to increase the size of the non-listed equity portfolio. TISCO Group is instead seeking opportunities to liquidate them, while at the same time closely monitoring portfolio quality on a regular basis.

### 3.3.2 Interest Rate Risk

Interest rate risk can be classified into two types; namely risk from interest-bearing assets and liabilities profile, and fixed-income risk.

#### (1) Risk from Interest-Bearing Assets and Liabilities Profile

Interest rate risk occurs whenever there is a mismatch in the re-pricing period of assets and liabilities. A movement in the level of interest rates may lead to higher borrowing costs when compared to earnings, resulting in lower interest rate income, which in turn influences TISCO Group's income and capital.

The Risk Management Committee also acts as the Assets and Liabilities Management Committee (ALCO), which is responsible for managing and maintaining interest rate risk at an appropriate level. TISCO Group's interest-bearing assets and liabilities structure, as of December 31, 2019, is provided in the following table.

(Unit: Million baht)

Interest Bearing Assets and Liabilities	Changed within 1 month	Changed within 2-12 months	Changed within 1-2 years	Changed after 2 years	Total
Assets	121,864.93	61,457.96	43,620.46	76,243.72	303,187.07
Liabilities	(81,068.12)	(155,013.90)	(686.21)	(9,021.47)	(245,789.70)
Net Gap	40,796.82	(93,555.95)	42,934.25	67,222.25	57,397.37

Under the change of interest rate within 1 year, TISCO Group had liabilities over assets within 2-12 month stand at 93,555.95 million baht. Considering the interest rates outlook of gradually increase trend, the repricing gap structure was still under acceptable risk level.

#### (2) Fixed-Income Risk

Fixed-income risk is the result of a decrease in the value of fixed-income instruments when interest rates increase. As yields in the market go up, the value of fixed-income instruments decreases to maintain yields at the same level.

TISCO Group's fixed-income portfolio as of December 31, 2019 stood at 7,996.36 million baht, increased from 7,652.00 million baht at the end of 2018. Average duration of the bond portfolio was 0.19 year, decreased from 0.30 year from the end of 2018. Meanwhile, average duration of the debenture portfolio was 0.44 years, decreasing from 1.39 years from the end of 2018. However, Fixed-income risk was under acceptable risk and also meets the purpose of maintaining liquidity reserves according to the Bank of Thailand's requirements.

#### ▪ Market Risk Management Framework

Risk Management Committee is responsible to oversee the portfolio risk management and control of market risks. The business lines are accountable to manage market risks in their portfolios within the guidelines and limits set by the Risk Management Committee. Specific-Purpose Risk Authorities have been established in high-risk areas to oversee all aspects of transaction-level risks, such as setting investment guidelines, authorizing investment transactions and trade counterparties etc. In addition, the Risk Oversight Committee shall advise the Board of Directors on risk governance, review sufficiency and effectiveness of overall risk management policy and strategies.

Market exposures shall be grouped appropriately according to the nature and characteristics of risks involved. Suitable risk treatment framework shall be implemented to effectively manage each class of market exposures. Portfolio market risks of all assets and liabilities shall be assessed and quantified using the Value-at-Risk (VaR) concept employing methodologies and techniques appropriate to the nature of risks involved. Back-testing has

been prudently performed to validate internal value-at-risk model. In addition, stress testing in place as a supplement to VaR is performed under various extreme scenarios. The risk assessment and corresponding risk treatment has taken into account the transaction intent as well as the market liquidity of the securities.

Interest rate risk from banking book is analyzed on the basis of mismatch between the timing of interest rate re-pricing of assets and liabilities and its potential impacts on future net interest income of TISCO Group under simulated scenarios.

Sophisticated market risk positions, such as derivatives securities, shall be handled with special attention. Derivative risks must be decomposed into basic risks and analyzed such that the inherent risk profile is clearly understood. In addition, derivative risk management policy has been set up in order to effectively control and manage risks from derivative transactions with appropriation to complexity of the derivative.

### 3.4 Operational Risk

Reference is made to the definition given by Basel Committee on Banking Supervision of the Bank for International Settlements and in accordance with the Policy Statement of the Bank of Thailand in regard to the Operational Risk Management. Operation Risk is defined as the vulnerability of earnings, capital, or business continuity due to inadequate or deficient or failed internal processes, people, technology or external factors including the legal risk and fraud risk. The impact can be classified into financial loss and non-financial loss as reputational damage and business opportunity losses. TISCO Group well realizes that the operational risk is one of the risks those may significantly impact to the business undertaking of TISCO Group. Thereby, TISCO Group puts more emphasis on the operational risk management and continuously develops the operational risk management programs and processes with an aim to minimize the possible operational risks.

#### ▪ Operational Risk Management Framework

The operational risk management policy is set by TISCO Financial Group Public Company Limited and coherent adoption across all subsidiary companies in TISCO Group. Operational Risk Management function performs duties in supporting and impelling all functions in proceeding operations in accordance with the framework stipulated in the operational risk management policy as well as providing assurance on the adequate control systems established for each business under risk-return perspectives. Compliance functions shall have duty in overseeing all functions to operate in compliance with the rules and regulations of the supervisory authorities. IT Risk Management function performs IT risk analysis and provides proper recommendation to all IT and business functions for appropriate IT control level as well as IT compliance. Internal Audit function shall independently conduct audit process and provide assurance on the internal control system and whole risk management processes under the supervision of the Audit Committee.

In year 2019, TISCO Group has expanded new digitalized service channels to customers and new business products; therefore, operational risk increased accordingly following the business expansion. Nevertheless, the inherent risks in all aspects of such new businesses were analyzed and well managed to assure that the possible risks were mitigated to be in acceptable risks with prudent control process establishment in compliance with TISCO New Business Guideline prior launching. As a result of business expansion in year 2019 as well as the increasing trend of complex fraudulent behavior in current environment, addition to the effective implementation of fraud risk management process for proper determining fraud response plan to mitigate risks to contain in the acceptable level. In 2019, TISCO has planned to enhance the capacity of Transaction Fraud Monitoring System. The system shall be capable to detect the irregularities in order to have further prudent investigation on the appropriateness of transactional execution and minimize the possible losses incurred either to customers or TISCO.

Pursuant to the ongoing operational risk management process of the TISCO Group, it starts from the establishment of operational risk management culture by building control awareness to all business units and educating them in regard to the stipulations according to the operational risk management framework for thorough understanding and perception. For practicing as risk owner, all functions shall have to participate and take accountabilities in managing operational risk of functions under their supervision. Operational Risk Management function shall have duty in managing overall operational risk in an enterprise wide addition to the duty in supporting, overseeing and monitoring all functions to proceed in accordance with the determined operational risk management

framework. In the process of operational risk assessment, the key operational risk would be identified together with the assessment on the control effectiveness. The remedial action plan as well as the Key Risk Indicators would be subsequently determined in order to mitigate the revealed residual risks or prevent the incurrence of possible risks for properly mitigating risks for properly containing them within the acceptable risk level appropriate to each business (Risk Appetite). The result of the risk assessment in corporate level would be reported to the Risk Oversight Committee, the Risk Management Committee and the Audit Committee for acknowledgement. Due to the information technology places importance in business operations of TISCO Group as well as the expansion of digitalized service channels, these resulted to the dramatically increasing of IT risk including but not limited to the cyber threats, in 2019, under the consolidation supervision of TISCO Group, IT Risk Management function was set up to be responsible for supervising and governing IT risk. Additionally, the new function also has duty to assess the appropriateness and efficiency of control measures over related to IT risk, follow IT risk through IT KRI for properly mitigating risks and containing them within the acceptable risk level and to determine the appropriate IT risk management. In addition, the specific committee, namely IT Risk Committee has also set up with an aim to govern the efficiency of IT risk management of TISCO Group.

In regard to the incident management process which treated as an integral part of operational risk management, TISCO Group has arranged the supporting system to log and track the incidents. The purpose of the system arrangement is aimed to have the systematic and integrated remedial process with monitoring control for timely responses. Other than that, the incident and loss database would be gathered to make analysis for mitigating repeated risks for monitoring purpose in order to minimize the error rate or enhance the operational efficiency. In addition, the TISCO has formulated the guideline and authority delegation for considering and approving the compensation made to the customers in order to have the standardized practice and fair to affected customers. The overall results of the incident incurrence within TISCO Group as well as the notable operational incidents as well as the summarized report of compensation made to customers would be reported to the relevant committees for acknowledgement and determination remedial actions as deemed appropriate. With respect to the complaint handling and management process, TISCO arranged various channels for accepting complaints and determined the measures for handling and resolving complaints cases within determined timeframe. The complaint cases shall be analyzed and summarized the results to report to the relevant managements for considering improving the effectiveness of operational processes as deemed appropriate. In year 2019, TISCO has planned to enhance the efficiency of the process of accepting and handling customer complaint.

Whereas the TISCO Group undertakes financial businesses and provides financial services to customers, the continuity of business undertaking in order not to disrupt the services provision to the customers is the crucial matter that the TISCO Group highly emphasizes on. TISCO has well developed and proactively prepared readiness of every system and process relating to the critical businesses for ascertaining the continuous business operations (Business Continuity Plan) without any disruption. Within the Business Continuity Plan, it also covers the process for recovering the critical systems to resume their availabilities within the determined period and the other relevant contingency and backup plans. The actions according to the Business Continuity Plan is subjected to be tested on an regular basis in order to make all relevant business units perceive and understand their roles and responsibilities and actions required to be taken whenever disaster incurs. In addition, TISCO has realized the severity of several impacts those may affect to the safety of employees, customers, counterparties or other relevant parties, thereby, the Emergency Plan has been established as an integral part of the Business Continuity Plan to determine appropriate action plans for managing various emergency situations exposed from external events with the primary objective to secure the safety and minimize possible losses. In order to support and enhance the efficiency of the proceeding in accordance with the Business Continuity Plan, TISCO Group has determined communication plan and channels for communication between managements and employees including the communicating channels with the external parties in order to convey the situation updates and the corporate action plans to all relevant persons in the timely manner.

Given the current situation, cyber threats are a growing potential risk that could cause damage to the organization's business operations either in the form of monetary effects or corporate reputation or any other forms. TISCO are well aware of the impact of such threats and proactively prepares the preventive measures and proper response plan in the event of such impacts incurred. To raise awareness and perception of all employees,

the enhancement of the understanding on cyber threats is regularly conducted through organizational training, posting on various office places including the announcement of information on the corporate website with an aim to avoid or reduce the possibility of being affected by cyber threats. Additionally, the study on the potential cyber-crime attack, monitoring and assessment on possible IT risks and cyber threats are regularly conducted in order to effectively improve the quality of risk management, appropriately harden the security and prepare for preventive measures and establish response plan including the communication plan both for internal and external parties. In 2019, TISCO has arranged the cyber drill by simulating the testing scenario for both technical and business session. The participations of the drill comprised of top managements, head of relevant functions including the function responsible for corporate communication and all customer touch point functions, IT staff and Incident Response Team in order to make all relevant functions gain thorough understanding and perceive their roles and responsibilities in responding the cyber-attack whenever the event incurred.

### **3.5 Strategic Risk**

Strategic Risk is a form of uncertainty stemming from the possibility that TISCO Group might make an adverse business decision, improper strategy implementation or misalignment between strategy, target, organization structure, competition and resources that affect TISCO Group's earnings and capital.

#### **3.5.1 Risk from Economic Conditions and Business Competition**

Although TISCO Group diversifies its businesses in areas of high potential, most of them are influenced by changes in economic conditions. For hire purchase businesses, growth and credit quality are directly affected by the state of the economy, levels of competition and growth in public consumption. Strong economic growth results in faster growth in asset size and revenues of TISCO Group, and vice-versa. Strong market share and competitive advantage, however, make TISCO Group less vulnerable to negative economic factors.

For the equity investment of TISCO Group portfolio, the economic outlook, capital market performance and investor sentiment is still crucial to TISCO Group's financial performance. In a bullish economy, equity prices tend to increase significantly, resulting in improving the Bank's profit and capital. Conversely, unexpected events, such as terrorist attacks and natural disasters may cause a substantial drop in equity values, adversely affecting TISCO Group's financial performance. While the brokerage and underwriting business also depends on the condition of the stock market, most income is derived from trading volumes, with the result that the impact of price levels may not be substantial. In effect, TISCO Group has adopted a variable cost structure in the brokerage business, which minimizes the impact of unfavorable market conditions.

The asset management business is dependent only to a minor degree on economic conditions as fee income is based on the net asset value of funds under management. Profit and loss from investments do not directly affect TISCO Group's financial results. However, higher competition on pricing structure is a major risk factor in this business.

#### **3.5.2 Risk from Capital Adequacy**

As of December 31, 2019, as TISCO Bank's capital requirement based on Basel III Internal Rating Based Approach (IRB), the regulatory capital adequacy ratio (BIS ratio) stood at 22.10% remaining higher than the 11% required by the Bank of Thailand. The Tier-I and Tier-II adequacy ratio stood at 17.37% and 4.73%, respectively, in which Tier-I adequacy ratio also remained higher than the minimum requirement at 8.5%. Meanwhile, the net capital rule (NCR) of TISCO Securities Co., Ltd. remained strong at 67.21%, greatly higher than the minimum required ratio by the SEC of 7.0%.

As an internal risk measurement of capital adequacy (ICAAP), the risk-based capital requirement of TISCO Group stood at 15,624.46 million baht, accounting for 40.5% of total projected capital base under Basel III - IRB of 38,562.00 million baht. In addition, capital surplus for future risks and business expansion stood at 22,937.54 million baht.

#### **3.5.3 Risk from Subsidiaries' Financial Performance**

TISCO Financial Group Plc. was established with the purpose of investing in other companies only. Therefore, the performance of the company depends on the performance of invested companies. Subsidiaries' risks involve the risk of TISCO Bank's business operation which is a core business of the company and other subsidiaries' business



operations. The company holds shares of all 8 subsidiaries including TISCO Bank. However, while most of the net income comes from dividends received from its subsidiaries, volatile performance of subsidiaries may affect the overall the company's performance. In effect, the dividend payment to shareholders may also be volatile.

Profit recognition of TISCO Group came from all subsidiaries including TISCO Bank. As of December 2019, net profit of TISCO Bank and other subsidiaries was 6,995.63 million baht, where 1,791.85 million baht was from subsidiaries excluding TISCO Bank. Although the subsidiaries experienced outstanding business performance and generated profits to the company, investment strategy is important in the future. Therefore, the board of directors meeting has defined the investment policy for TISCO Group where the company will invest in those businesses having ability to support the competitive efficiency of the group. Besides, the market and industry trends, competitive environment and long-term profit making capability together with prudent risk management shall be considered.

Net income from subsidiaries, excluding TISCO Bank, accounted for 30.1% of total net income, which significantly affects the overall TISCO Group's income. Additionally, the net income from brokerage and investment banking are from TISCO Securities while net income from asset management is from TISCO Asset Management.

While subsidiary businesses are influenced by market activity and overall economic conditions, the impact of risk from securities and asset management businesses will have a significant effect only on Bank profitability, without having a severe impact on capital as the major focus is on services rather than lending or investment.

Internal control and risk management of subsidiaries is centralized at the Company which applying a universal set of standards and guidelines for all. The company sends its representatives to serve as directors at subsidiaries for at least half of the total directors and to participate in establishing important business policies, in which the annual business plans of subsidiaries require approval by the company.

#### ▪ **Strategic Risk Management Framework**

The executive board and senior management directly oversee strategic risks of TISCO Group, with the policy to employ effective sound practices in strategic management that enable it to respond effectively to changes in the business environment and unexpected external events. Vision and mission statements reflect the company's core direction and how our business is conducted, around which all strategies and policies are formulated. Sufficient processes have been set up to carry out effective corporate strategy formulation, business planning, resource management, performance management, and other essential decision support systems. Strategic audit process is then performed at the board level of the company by non-management directors as the ultimate line of protection.

In organization and business practice, the principles and practices of good corporate governance have been adopted to protect the rights and interests of all stakeholders. The corporate governance framework has included corporate governance policy and strong systems of internal controls, which are subject to regular independent assessment and review.

TISCO Group manages strategic risk by setting up 3-year strategic plans to provide a clear business direction together with operating budgets. The plans are reviewed on an annual rolling basis and used to compare actual performance on a monthly basis.

## 4. Operating Assets

### 4.1 Major Fixed Assets

#### Land, premises, and equipment – Net

Land, premises, and equipment of TISCO Group as of December 31, 2018 and 2019 are as follows:  
These assets are free from any obligations.

(Unit: Million baht)

List	Type of Property Right	Contingent Liability	Value	
			2019	2018
<b>Land</b>				
Cost	owner	none	17.51	17.51
<b>Office condominium and building improvements</b>				
Cost	owner	none	800.46	746.84
Revaluation	owner	none	2,488.78	2,477.10
<b>Furniture fixtures computer and equipment</b>				
Cost	owner	none	1,215.00	1,183.60
<b>Motor vehicles</b>				
Cost	owner	none	174.08	164.31
<b>Total</b>			<b>4,695.83</b>	<b>4,589.35</b>
<u>Less</u> Accumulated Depreciation			(1,711.68)	(1,597.12)
<b>Land, premises, and equipment – Net</b>			<b>2,984.15</b>	<b>2,992.23</b>

#### Long-term contract

##### 1. Contract

The subsidiary companies have entered into several lease agreements in respect of the lease of office building and branch office. The terms of the agreements are generally 1 - 15 years. As at December 31, 2018 and 2019, future minimum lease payments required under these non-cancellable operating leases contracts were as follows:

(Unit: Million baht)

Types	Maturity	As at December 31,	
		2019	2018
Lease office building and branch office	Within 1 year	186	192
	Over 1-5 years	228	281
	Over 5 years	47	56
<b>Total</b>		<b>461</b>	<b>529</b>

##### 2. Rental contracts between the Company and its subsidiaries

Office suite rental agreements between the Company and its subsidiaries located at TISCO Tower are based on 1-3 year contracts at normal market prices. These contracts are illustrated as follows:

Type of Assets	Renter	Owner	Area (sq.m.)
TISCO Tower Office	TISCO Securities Co., Ltd	TISCO Financial Group Plc.	3,780.39
TISCO Tower Office	TISCO Information Technology Co., Ltd.	TISCO Financial Group Plc.	464.03
TISCO Tower Office	TISCO Bank Plc.	TISCO Financial Group Plc.	1,286.47
TISCO Tower Office	TISCO Learning Center Co., Ltd.	TISCO Financial Group Plc.	590.00
TISCO Tower Office	TISCO Insurance Solution Co., Ltd.	TISCO Financial Group Plc.	948.91



## 4.2 Loans

### Classification of assets

Asset classification in TISCO group consists of loans and receivables, investments in securities and property foreclosed. Our asset classification policies are in compliance with those set by the BOT and the SEC. The details of asset classification as of December 31, 2019 are shown below:

(Unit: Million baht)

Classification	Loans and receivables	Investments in securities	Property foreclosed	Investment in receivable	Total	%
Pass	258,452	-	-	-	258,452	92.3
Special mention	16,222	-	-	-	16,222	5.8
Substandard	2,927	-	-	-	2,927	1.0
Doubtful	1,409	-	-	-	1,409	0.5
Bad debts	955	42	12	-	1,009	0.4
<b>Total</b>	<b>279,965</b>	<b>42</b>	<b>12</b>	<b>-</b>	<b>280,019</b>	<b>100.0</b>

### Provision for Loan Loss Policy

TISCO Group's provisioning policy for bad debt allowances or losses from debt restructuring are in accordance with the regulations of the BOT and the SEC.

The provisioning requirements for bad debt allowances under the BOT regulations can be summarized as follows:

1. Assets classified as Loss shall be written off.
2. Assets classified as Doubtful to Loss require a provision of 100%.
3. Assets classified as Doubtful require a minimum provision of 100%.
4. Assets classified as Sub-Standard require a minimum provision of 100%.
5. Assets classified as Special Mention require a minimum provision of 2%.
6. Assets classified as Pass require a minimum provision of 1%.

The Bank of Thailand has imposed criteria to set up provisioning whereby the regulations require assets classified as Substandard, Doubtful, and Doubtful to loss to set a minimum provision in accordance with a 100% of the different between asset's carrying amount and present value of estimated future cash flow or the present value of estimated future cash flow from collaterals. Meanwhile, the loan portfolio with similar credit risk profile can be set on a portfolio basis following collective approach.

TISCO Group has a policy in applied portfolio provision basis or collective approach with loan portfolio which as similar credit profiles with adequate historical loss data. TISCO Group will prudently set provision level based on estimation of historical loss.

### Provision of Asset Impairment Policy

TISCO Group will reserve provisioning in cases of asset impairment by considering impairment indicators based on generally accepted accounting principles (GAAP) and by estimating the receivable value of the assets.

### Policy of revenue recognition on interest income

Interest on loans is recognized as income on an accrual basis and is based on principal outstanding. Hire purchase, finance lease and loan against auto license income are recognized over the installment period, using the effective interest rate.

The subsidiary recognises interest on credit card receivables relating to overdue credit card installments from the positing date and interest on credit card receivables arising from cash advances from the date of the cash withdrawals. Interest on credit card receivables paid in installments is recognized on an accrual basis.

The subsidiaries have policies for corporate loans on which interest payments have been defaulted for more than one month, it is the policy of its subsidiaries to cease accruing income. For other loan accounts which are overdue for

more than three months, the recognition of interest income is ceased; already recorded accrued interest is reversed from accounts and after that interest will be recognized as income on a cash basis.

Accrual of interest is ceased for margin loans on which interest is overdue for more than two months and interest is then recognised on a cash basis.

The accounts will be reinstated to an accrual basis when the overdue amounts are received.

Interest or discounts already included in the face value of notes receivable or loans are recorded as deferred income and taken up as income evenly throughout the term of the notes or loans.

#### **4.3 Investment in Securities**

Details of investment in securities are shown in Notes to Financial Statements, 3.4 Investments.

##### **Securities Investment Policy**

Securities investment policy is described in Part 1 Section 2: Business Operations by Area, item 2.3

##### **Risk Management of Investment Portfolio**

TISCO Group diversifies its investments in order to avoid high concentrations in single securities. Appropriate investment opportunities are emphasized to ensure a proper risk-return trade-off. In addition, the Group has set up an integrated risk management system to aggregate all investment risks, where the issues of capital adequacy and the prospect of risk-return from each investment are incorporated to enable timely portfolio adjustment if required. Details of risk management are listed in Part 1 Section 3: Risk Factors.

##### **Allowance for Impairment of Securities**

TISCO Group sets allowances for impairment of securities according to accounting standards. Investments in securities held for trading purposes are determined at fair value. Gains or losses arising from changes in the value of securities are included in determining earnings. Investments in available-for-sale securities, both held for short-term and long-term investment, are determined at fair value. Changes in the value of the securities are shown as separate items in shareholders' equity until the securities is sold, after which they are included in determining earnings.

The fair value of marketable securities is based on the latest bid price of the last working day of the period as quoted on the SET. The fair value of government bonds, state enterprise securities and private debt instruments is determined by using the formula quoted by the BOT, which is based on the yield rate quoted by the Thai Bond Dealing Center or other financial institutions. The fair value of unit trusts is determined based on their net asset value.

In the event the Company and its subsidiaries reclassify their investments in securities, the investments are adjusted to reflect their fair value on the reclassification date. Differences between the carrying amount of the investments and their fair value on that date are included in determining earnings or recorded as a surplus (or deficit) from changes in the value of investments in shareholder equity, depending on the type of investment which is reclassified.

#### **4.4 Policies on investment in subsidiaries and joint venture company**

The details on investment in subsidiaries and joint venture company are presented in Notes to Financial Statements item 3.5 Investment in subsidiaries and joint venture

The subsidiaries and joint venture company has a policy to invest its funds in investment activities that generate sufficient returns in relation to risk, with the objective to maximize value creation for the Company and its shareholders. The Company's investments can be divided into 2 groups Strategic Investment and Financial Investment.

##### **1) Strategic Investment**

Strategic Investments are investment in equity of subsidiaries or affiliated companies for the purpose of fulfilling TISCO Group corporate mission, business strategies, and action plans. The Company will invest in strategic investment to the extent that the Company gains managerial control, and thus able to direct the company according to the Group direction and governance.

Strategic Investments shall be made in company with good business prospects, which supplements well with the group businesses. The investments shall also be justified in terms of risk-return in the long run, considering group's overall sustainability and profitability, and shall be free of any conflict of interests.

Subsidiaries companies under strategic investment are required to strictly comply with group's governance policies, which comprehensively constitutes all key strategic & control areas including governance and operating structure, business strategy, management, operations, risk and control, human resource, finance and accounting, corporate affairs, and public and client communications. All decisions for strategic investment required case by case approval by the Executive Board of TISCO Financial Group Plc.

## 2) Financial Investment

Financial Investments are investment in financial instruments for the purpose of earning financial returns as well as for liquidity management. The investment may be in various types of financial instruments, e.g. fixed income, equities, hybrids, mutual funds, etc.

Financial investments shall be made with good justification of risk and returns, and careful consideration of liquidity, capital adequacy, and risk tolerance.

Financial investments shall also be made only in instruments that the Company has sufficient knowledge of risk and returns, and shall be well supported by good risk management system.

**Table illustrates details of investment in subsidiaries and joint venture company**

(Unit : Million baht)

Company Name	Paid up As of December 31, 2019	Cost Method As of December 31, 2019
TISCO Bank Plc.	9,216	17,641
TISCO Securities Co., Ltd.	1,000	1,075
TISCO Asset Management Co., Ltd.	100	110
Hi-Way Co., Ltd.	600	773
TISCO Information Technology Co., Ltd.	20	22
TISCO Insurance Solution Co., Ltd.	100	137
Primus Leasing Co., Ltd. <sup>/1</sup>	3	33 <sup>/2</sup>
TISCO Learning Center Co., Ltd.	5	5
All-ways Co., Ltd.	200	200
TISCO Tokyo Leasing Co., Ltd. <sup>/3</sup>	60	73
Investment in subsidiaries and joint venture company - net		20,069

<sup>/1</sup> Ceased business operation and proceeding liquidation process

<sup>/2</sup> Deducted impairment in investment

<sup>/3</sup> Joint venture Company

## 5. Legal Disputes

As of December 31, 2019, the Company and its subsidiary companies had 28 unresolved cases from its regular business operations, all of them are cases caused by banking business operation (TISCO Bank Plc.) and asset management business (TISCO Asset Management Co., Ltd.) involving an estimated total amount 314.28 million baht, which was less than 5% of its shareholders' equity, consisting of:

(1) 26 cases that TISCO Bank being sued (estimated total amount of 312.87 million baht), there were 12 cases involving total amount of 3.24 million baht which were in the tribunal process and not yet reach judgment. Furthermore, there were 10 cases, with a total value of 308.41 million baht that already dismissed by the Court of First Instance and/or the Appeal Court, however, the plaintiffs still appealed to the Appeal Court or Supreme (Dika) Court.; and there were 4 cases, with a total value of 1.22 million baht that already reach judgment, however, TISCO Bank still appealed to the Appeal Court.

(2) 2 cases that TISCO Asset Management Co., Ltd. being sued (estimated total amount of 1.41 million baht) 1 case was in the tribunal process was not reach judgment (estimated total amount of 0.77 million baht) and 1 case was appealed to the Appeal Court by TISCO Asset (estimated total amount of 0.64 million baht).

Additional details on legal disputes are presented in Notes to Financial Statements; 3.37.2 Litigation. The management of the TISCO Group believes that neither the Company nor its subsidiary companies will suffer material loss as a result of the abovementioned lawsuits. In addition, there is no claim against the Company by the directors, managements or any related person of the Company or its subsidiary companies.

## 6. General Information

### 6.1 General Information

<b>Company Name</b>	: TISCO Financial Group Public Company Limited
<b>Symbol</b>	: TISCO
<b>Type of Business</b>	: Holding Company
<b>Address</b>	: 21 <sup>st</sup> Fl., TISCO Tower, 48/49 North Sathorn Road, Silom, Bangrak, Bangkok 10500
<b>Registration Number</b>	: 0107551000223
<b>Total registered capital</b>	: Baht 8,007,032,950 (Eight thousand and seven million, thirty two thousand and nine hundred and fifty Baht)
<b>Paid-up Capital</b>	: Baht 8,006,554,830 (Eight thousand and six million, five hundred and fifty-four thousand and eight hundred and thirty Baht)  comprising of 800,645,624 common shares and 9,859 preferred shares, both with par value of 10 baht per share
<b>Home Page</b>	: <a href="http://www.tisco.co.th">www.tisco.co.th</a>
<b>Telephone</b>	: (66) 2633 6000
<b>Fax</b>	: (66) 2633 6800
<b>Reference:</b>	
<b>Share Registrar</b>	: Thailand Securities Depository Co., Ltd. 93 Rachadapisek Road, Dindaeng, Dindaeng, Bangkok 10400 Tel. (66) 2009 9000 Fax (66) 2009 9991 SET Contact Center: (66) 2009 9999 Email: SETContactCenter@set.or.th Website : <a href="http://www.set.or.th/tsd">www.set.or.th/tsd</a>
<b>Auditor</b>	: Ms. Somjai Khunapasut CPA License No. 4499 EY Office Limited 33 <sup>rd</sup> Fl., Lake Rajada Office Complex, 193/136-137 Rajadapisek Road, Bangkok 10110 Tel. (66) 2264 0777 Fax. (66) 2264 0789-90

### 6.2 Other Important Information

None