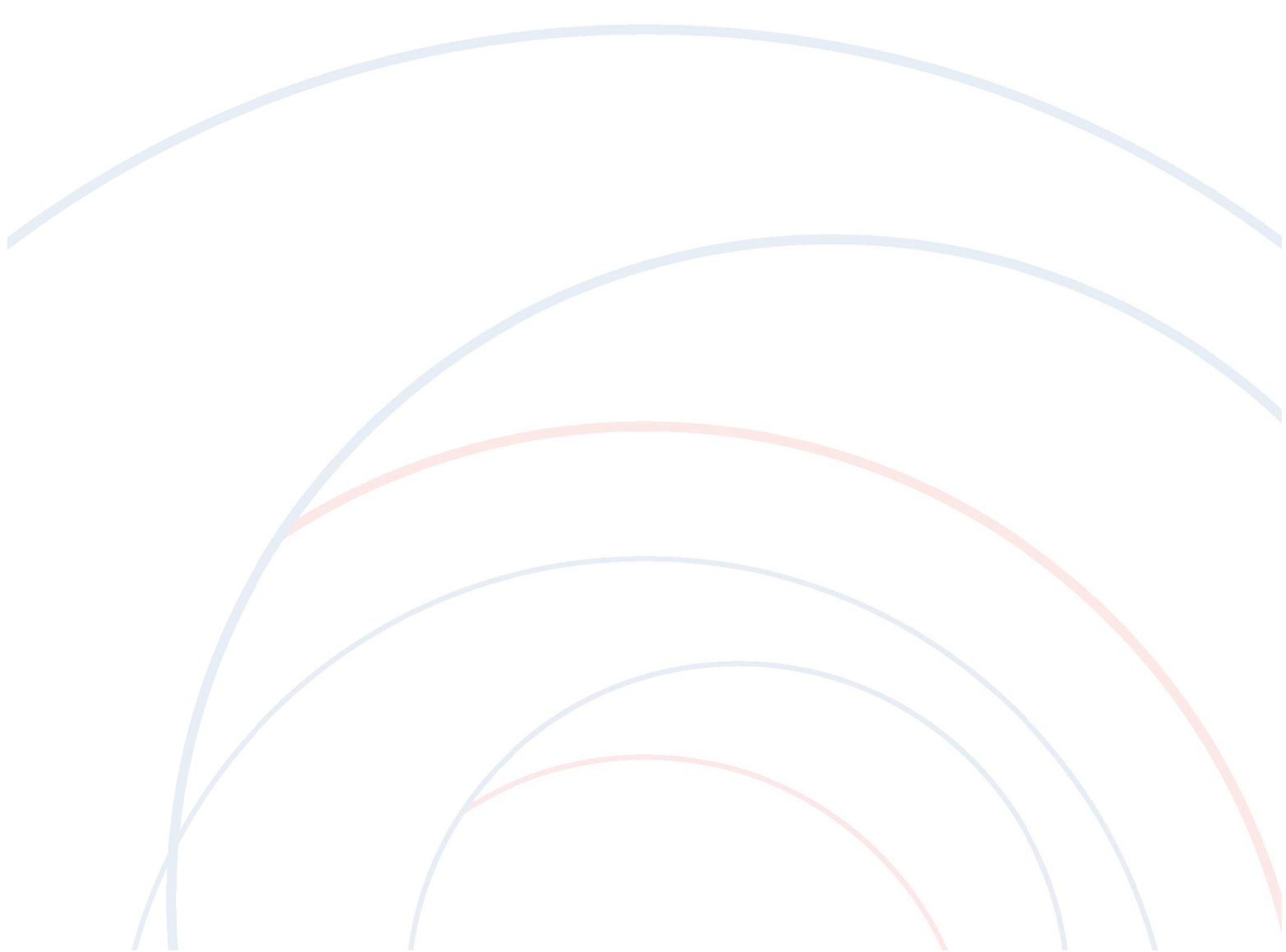




TISCO Financial Group PLC.

Part 1

Business Operation



1. Overview of TISCO Business

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

As TISCO Financial Group Public Company Limited operates as shareholders in other companies with no other major business, in which TISCO Bank Plc. is the core company to the group. TISCO Group provides broad range of financial services which can be divided into 2 main businesses: commercial banking and loan business and securities business.

1.1 Vision, Mission, Values for business operations and Business Strategy

TISCO Group’s general business strategy and planning guidelines for the next three years covering overall business operations are already in place. These strategies and plans will be revised to incorporate changes in the business environment on a yearly basis.

Vision, Mission, and Values for business operations

To align the goals and direction of business units to match those of TISCO Group, the Company has put in 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 in achieving goals and objectives.

Our Vision is “Wealth of Possibilities”.

Our Mission is “TISCO is a quality growth organization with strong customer priority, committed to deliver value financial services with mastery and professionalism. Our promise is to provide financial services that address customer needs in all geographies, with focus on creativity of new financial solutions, and providing of guidance and advice to create financial opportunities for our customers at different stages of their lives. Continuous human capital development and leading-edge technological investments are key to our efficiency and reliability of service. TISCO also adheres to the cultures of integrity, fairness, and transparency, that create sustainable value to our customers, shareholders, people, and society”.

Our values are the essence of the service we offer to our customers and qualities we cultivate and seek in our people. Through induction, training, and comprehensive corporate guidelines, these values are transferred into 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 derive a professional and practical solution that fulfills our customers’ requirements.
2. **Mastery**: Our staff is obligated to continually learn and develop themselves, striving for outstanding capability and skill to maximize customer satisfaction.
3. **Integrity**: All of our employees conduct themselves with honesty and follow a code of ethics of the highest standards.
4. **Creativity**: Our expertise is not only dependent on knowledge and experience, but is also founded on our creativity. We provide advice that is not only accurate, but also creative to help them see all financial possibilities they have.
5. **Reliability**: The organization creates added value in 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 provide our customers with the best financial advisory in a friendly and open-minded way, understanding what exactly they need so we can help them achieve their goals.

Strategic Plan

To formulate 3-year business plan, TISCO has considered of both external business environment and internal factors. The external business environments include economic, regulation, and government policies while internal factors which are strengths, weaknesses, opportunities, risks, critical success factors as well as priority issues. The 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 Vision. To implement strategic planning successfully, TISCO Group has adopted Balanced Scorecard technique with the aim of achieving balance in strategic planning from four perspectives: financial, customer, internal process and learning. Key Performance Indicators will be determined for all business areas, and linked to performance management to gauge employee performance so that staff may be awarded fair compensation based on merit. Additionally, the business performance is constantly monitored via Performance Dashboard session.

Strategic action for the organization

To achieve the organization’s goals, within the Vision framework, TISCO Group has determined strategic actions as follows

- Increase geographical coverage towards microfinance branch network under brand “Somwang”
- Expand individual deposits base and wealth management business in growing upper middle income and retirement segment amidst aging society trend.

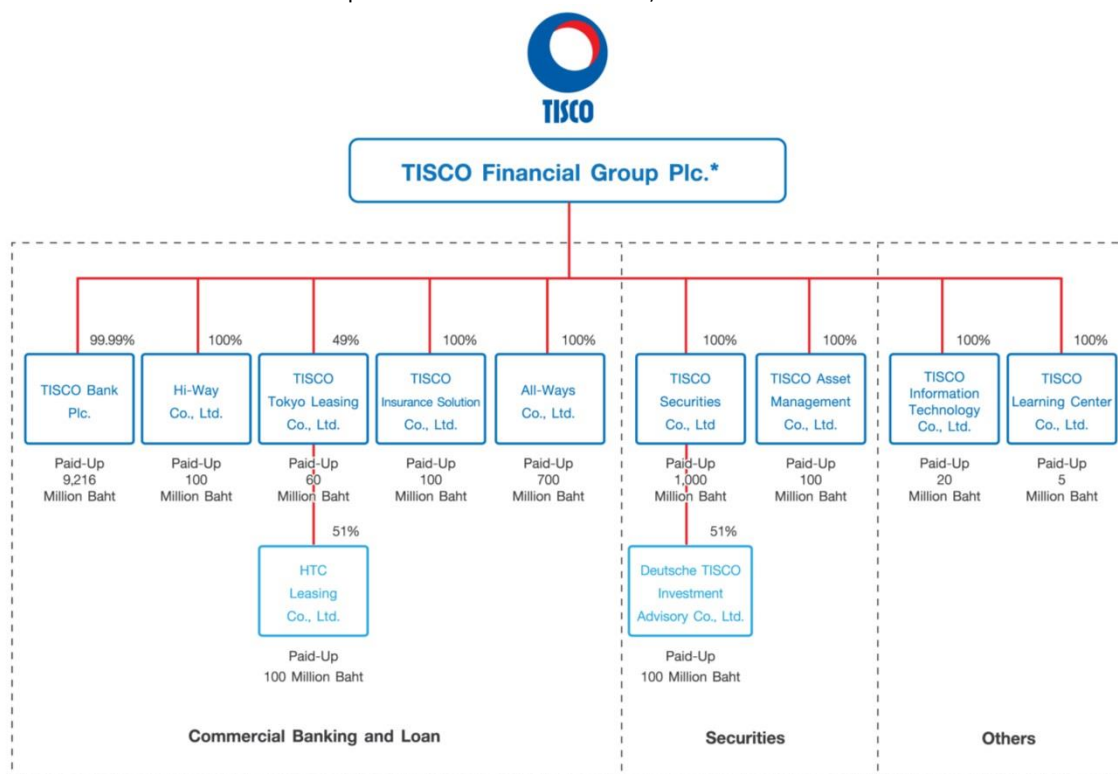
- Continue to explore and leverage on business partners for client acquisition and market access.
- Extensive collaboration to increase customer utilization and business referrals across group's businesses to offer products and services in response to client's lifestyle and various customer needs.
- Retain and develop more businesses with existing clients through total solution approach.
- Enhance quality of wealth manager to provide professional financial planning, investment and asset allocation along with open architect platform.
- Develop digital infrastructure to support change in customer behavior and expansion of retail customer base through new platform.

1.2 Important Changes and Developments during the past 3 years

- In 2014, TISCO Bank Plc. increased capital as approved by shareholder's ordinary general meeting for the year 2014. The objective of capital increase is used to support future growth and ensure sufficient capital cushion in the increasingly volatile environment. The Bank issued and offered newly issued common share to the existing shareholders (Right Offering) accounted for new capital of 1,023.96 million baht. As a result, the paid up capital of the Bank increased to 9,215,676,920 baht.
- In 2015, TISCO Tokyo Leasing Co., Ltd acquired 51% stake in HTC Leasing Co., Ltd, in which it provides captive hire purchase loan for Hitachi construction machinery, and further became an affiliate under TISCO Financial Group.
- In 2016, TISCO Bank Public Company Limited and All-Ways Company Limited, the subsidiaries under TISCO Group, have signed an agreement to transfer retail banking business from Standard Chartered Bank (Thai) Public Company Limited whereby the business acquisition was completed successfully on October 1, 2017. In addition, the business acquisition will be strengthened retail banking business following larger customer base and product coverage together with synergy benefit from the business acquisition. After the transfer, TISCO Bank Public Company Limited acquired the retail banking business including mortgage loans, personal loans, business loans, wealth management and retail deposit business, as well as 4 new bank branches from the transfer. Meanwhile, All-Ways Company Limited acquired credit card business. The transfer was aligned with TISCO Group's business growth and customer base expansion strategy, together with the offer of a wide range of comprehensive financial products and services to retail customers in every sector

1.3 Businesses of TISCO Group

As TISCO Financial Group Public Company Limited operates as shareholders in other companies with no other major business, the competitive position can be categorized by business operations of companies in TISCO Group which divided into 2 main businesses: commercial banking business and securities business which offer various kinds of financial services in order to satisfy diverse customers' needs. TISCO Group's structure as of December 31, 2017 is shown below.



*Listed in The Stock Exchange of Thailand

Details of the juristic person that TISCO Financial Group Plc. held directly more than 10% of their issued shares as of December 31, 2017:

Company/Head Office's Address	Type of Business	Type of shares	Registered Capital	Paid-up Capital	Issued and paid-up shares	Shareholding by the Company	
						Amount of shares held	Percentage of ownership (%)
TISCO Bank Public Company Limited ¹ 1 st 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	921,452,229	100.0
		Preferred			104	-	
		Total			921,567,692	921,452,229	
Hi-Way Company Limited 2046/16 New Petchaburi Road, Bangkapi, Huankwang, Bangkok 10310 Tel. (66) 2319 1717 Fax. (66) 2308 7405	Hire Purchase and Leasing	Common	100,000,000	100,000,000	994,500	994,496	100.0
		Preferred			5,500	5,500	
		Total			1,000,000	999,996	
TISCO Tokyo Leasing Company Limited 16 th 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
All-Ways Company Limited 17 th Fl., Zone A, TISCO Tower, 48/35 North Sathorn Road, Silom, Bangrak, Bangkok 10500 Tel. (66) 2633 6000 Ext. 7 Fax. (66) 2633 7150	Credit Card	Common	700,000,000	700,000,000	7,000,000	6,999,997	100.0
TISCO Securities Company Limited 4 th 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
TISCO Asset Management Company Limited 9 th 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
TISCO Insurance Solution Company Limited 22 th Fl., TISCO Tower, 48/51 North Sathorn Road, Silom, Bangrak, Bangkok 10500 Tel. (66) 0 2633 6060 Fax. (66) 2633 4400	Insurance Selling Agent	Common	100,000,000	100,000,000	1,000,000	999,965	100.0
TISCO Information Technology Company Limited 6 th 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
TISCO Learning Center Company Limited 12 th 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
Primus Leasing Company Limited 22 nd 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	-	-	30,000	29,998	100.0

¹ Core company of TISCO Group

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

2. Business Operations by Area

TISCO Financial Group Public Company Limited ("the Company"), the parent company of TISCO Group ("the Group"), and its subsidiaries operate two main businesses: commercial banking business and securities business.

Commercial banking business: TISCO Group offers financial services under its Commercial Banking Business license. Banking services including loan and deposit are offered through distribution network of its subsidiary, TISCO Bank's ("the Bank") and Hi-Way Co., Ltd.

Securities business: TISCO Group provides securities services under its Securities and Asset Management licenses. These businesses are serviced through the headquarters and branches of subsidiaries across the country.

Revenue structure

The revenue structure of the TISCO Group is as follows.

(unit: Million baht)

	2015		2016		2017	
	Amount	%	Amount	%	Amount	%
Interest Income						
- TISCO Bank Plc.	15,994	97.0	15,185	89.0	15,522	80.5
- Hi-Way Co., Ltd.	722	4.4	712	4.2	758	3.9
- Other Subsidiaries	172	1.0	115	0.7	190	1.0
Total Interest Income	16,888	102.4	16,012	93.9	16,470	85.4
Total Interest Expenses	(6,758)	(41.0)	(5,091)	(29.8)	(4,815)	(25.0)
Net Interest Income	10,130	61.4	10,920	64.0	11,655	60.4
Fee and Service Income						
- TISCO Bank Plc.	3,126	19.0	3,134	18.4	3,288	17.1
- TISCO Asset Management Co., Ltd.	1,142	6.9	1,143	6.7	1,686	8.7
- TISCO Securities Co., Ltd.	915	5.5	985	5.8	1,064	5.5
- Other Subsidiaries	73	0.4	135	0.8	357	1.9
Fees and Service Income	5,256	31.9	5,397	31.6	6,395	33.2
Fees and Service Expenses	(199)	(1.2)	(230)	(1.3)	(250)	(1.3)
Net Fees and Service Income	5,057	30.7	5,167	30.3	6,145	31.9
Other Operating Income	1,302	7.9	973	5.7	1,477	7.7
Total Operating Income	16,489	100.0	17,061	100.0	19,277	100.0

2.1 Area of Services

As the Company operates as a shareholder of other companies (Holding Company) with no other major business, the area of services can be categorized by business operations of its subsidiary companies which can be divided into 2 main businesses including commercial banking business and securities business. In accordance with client centric approach, the service operations of TISCO Group are divided into 4 business pillars namely 1) Retail Banking 2) Corporate Banking 3) Wealth & Asset Management 4) Corporate Affairs & CSR. Details for each service operation are as follows.

1. Retail Banking

Retail Banking group provides 2 service types as follows.

1.1 Retail Loans

Retail loans are conducted by offering loan services to retail customers, which mainly have specific loan purposes for individual consumption. 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 allow borrowers to buy assets under hire-purchase terms. The buyer makes a down payment at the predetermined proportion of asset value and pays equal installment amounts over the contract period. The ownership of assets is then transferred to the buyer after all installments are paid. Contract periods are ranged from 1 to 7 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, and

trailers. In addition, hire-purchase financing also offers on loans for buying machinery and equipment for commercial purposes such as printing machines and medical equipment.

As of December 31, 2017, hire-purchase loans were 129,719.70 million baht, decreased by 6.4% from 138,565.68 million baht in 2016 resulting from the prudent lending policy.

Table shows details of car and motorcycle hire purchase loans

Hire Purchase	December 31, 2015 (Million baht)	December 31, 2016 (Million baht)	December 31, 2017 (Million baht)	Growth rate (%)
Car	150,174.57	135,994.84	126,568.60	(6.9)
Motorcycle	2,733.21	2,570.84	3,151.10	22.6
Total*	152,907.78	138,565.68	129,719.70	(6.4)

* Excluding loan of TISCO Tokyo Leasing Co., Ltd. and HTC Leasing Co., Ltd.

In 2017, TISCO Group (specified for TISCO Bank and credit granting companies) granted hire purchase loan for new car, ranked by car brands contribution, with 38.6% from Ford, 21.2% from Mazda, 13.2% from Isuzu, 10.2% from Toyota, 5.7% from Chevrolet and 11.1% of other brands. The proportion of hire purchase loan between new car and used car were 87% and 13%. In addition, the TISCO Group's strategy is to continue on expanding hire-purchase financing, given the ongoing market demand with the enhancement of service quality while continues to offer variety of services, as well as effective control of asset quality rather than engaging in price competition. In addition, the interest rates charged are competitive and the maximum payment period is in compliance with the Bank of Thailand rules.

• Consumer Loans

Consumer loans are mainly operated by TISCO Bank, providing consumer loans according to market needs with a strong focus on acceptable risk-adjusted return on capital (RAROC). The consumer loans segment has four main categories as follows,

Mortgage Loans are granted to acquire residential property, including multipurpose loans, which use property as collateral to support the client's liquidity. The repayment terms are varied 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 fixed interest rate at certain pre-defined period such 1-3 years.

In 2017, new mortgage product namely "Mortgage Saver" was introduced. Mortgage Saver allows customer to make repay over to lower mortgage interest and withdraw such excess cash anytime without requesting to approve new loan. At the moment, Mortgage Saver is the only mortgage product in Thailand that has this unique feature allowing customers to benefits the most from effective cash management and satisfying various customer demands.

As of December 31, 2017, mortgage loans were 20,757.33 million baht, increased by 2,020.7% primarily from the transfer of retail banking business from Standard Chartered Bank (Thai).

Consumption Loans are operated by TISCO Bank Plc, and Hi-Way Co., Ltd; providing multipurpose loans for individuals and business owners in need of cash flow for various purposes under brand "TISCO Auto Cash" and "Somwang". The loan against vehicle registration has continually enhanced in responses to diverse needs of customer segments covering car, truck and motorcycle. Key feature of loan against vehicle registration includes repayment periods up to 72 months without transfer of vehicle registration as well as allow customer to fully settle entire outstanding debt prior to the due date.

To enhance customers' convenience in accessing service, TISCO has expanded branch network of loans against vehicle registration nationwide under "Somwang" branches. With an aim to enhance service convenience for new generation of customer, TISCO plans to develop online application service besides website "www.tiscoautocash.co.th" and "www.somwang.co.th".

As of December 31, 2017, consumption loans were 26,824.54 million baht, increased by 27.6% from 21,027.63 million baht at of 2016.

Personal Loans are operated by TISCO Bank Plc providing multipurpose loans for individuals and business owners in need of cash flow for various purposes.

As of December 31, 2017, personal loans were 3,930.96 million baht.

Credit card are operated by All-Way Co., Ltd. providing loans for individuals and operates card business for sales finance and cash advance. All-Way Co., Ltd. offer variety of credit card by Visa and/or Master card for various purposes to satisfy the needs of our cardholders.

As of December 31, 2017, personal loans were 2,952.19 million baht.

Table shows details of retail loans

Retail Finance	December 31, 2015		December 31, 2016		December 31, 2017		Change (%)
	Amount (Million baht)	%	Amount (Million baht)	%	Amount (Million baht)	%	
Hire purchase loans	152,907.78	88.4	138,565.68	86.3	129,719.70	70.4	(6.4)
Mortgage loans	1,224.55	0.7	978.81	0.6	20,757.33	11.3	2,020.7
Consumption loans	18,856.15	10.9	21,027.63	13.1	26,824.54	14.6	27.6
Personal loans*					3,930.96	2.1	N.A.
Credit card*					2,952.19	1.6	N.A.
Total	172,988.48	100.0	160,572.12	100.0	184,184.72	100.0	14.7

*Personal loans and credit card transfer from Standard Chartered Bank (Thai) on October 1, 2017

Customer and Distribution Channels

Target customers of the hire-purchase business are individuals with regular income or salary and good repayment record. The Group service's channels operate through the Bank's headquarters and its branch network and other subsidiary companies. The car hire-purchase business in TISCO Group is operated by TISCO Bank Plc, and TISCO Tokyo Leasing Co., Ltd while motorcycle hire-purchase is operated by Hi-Way Co., Ltd. TISCO Group has expanded client base towards dealer platform whereby the most of hire-purchase client has regular income and good repayment record. Moreover, the Bank had 60 branches and Hi-Way Co., Ltd. under "Somwang" brand with 190 branches nationwide.

For consumption loans which are operated by TISCO Bank Plc., Hi-Way Co., Ltd and All-Ways Co., Ltd. TISCO Group targets individual customer with good payment background and adequate earning ability.

1.2 Bancassurance

The Bank has been granted Insurance Broker License since 2005 from the Department of Insurance under the Ministry of Commerce. The Bank provides insurance brokerage services for both life and non-life insurances covering various types of insurances. Over 12 years of servicing, the Bank has focused to select and develop both life and non-life insurance products that match with risks and needs of each customer segment towards open-architect platform and the open-architect platform enable the Bank to select and develop product with the insurance company who is product expertise in the different business area. As a result, the Bank can provide suitable and valuable product for the customer. For non-life insurance, the service includes motor insurance, fire insurance, accidental insurance, critical illness insurance, and miscellaneous insurance. For life insurance, the service includes group-life insurance, health insurance. In addition, the Bank presently partner with several business partners who are the leading insurance companies with strong market presence and financial stability.

In 2017, the Bank emphasized to develop insurance product for the high net-worth and retail client. For the high net-worth client, the Bank launched short-term saving insurance policy and a unit linked insurance plan. The highlight product is namely "TISCO My Link", a unit linked insurance plan, the investor will benefit from both valuable life protection and maintaining good return from investment under a single integrated plan. For the retail customer, the bank has been appointed from Mazda Sales (Thailand) Co Ltd (MST) to be official insurance broker, by serving all Mazda customers with the Mazda Premium Insurance policy (MPI). In addition, the Bank has developed health insurance product towards concept "Health is Wealth" to alleviate burden from health expenses as well as support aging society trend by offering various types of insurance policy that meet customers' needs in every life stage. Moreover, the Bank launched new campaign "Pay it forward". The fund was a partial income of "TISCO Zero Cancer Insurance Plan" (ZCP) applications under the campaign for cancer research and cancer patients care at Ramathibodi Foundation.

For the year 2017, TISCO introduced a new company namely "TISCO Insurance Solution Co. Ltd." This company offers well-selected insurance products to the customer. In addition, the products information are provided through website "www.tiscoinsure.com" to increase customer convenience.

2. Corporate Banking

Corporate Banking group provides 3 service types as follows

2.1 Corporate Lending

Corporate Lending service 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 industry and seasonal businesses, by facilitating loans for buying raw materials and inventory, and loans for account payable repayments. They are

revolving loans, with 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 need created by medium or long-term business development projects which have a specific purpose. The funding project, 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 developments, infrastructure construction, project bids such as power plant or buying industrial machinery.

- **Other Commercial Loans**

Other than the two above-mentioned types, 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, which are 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 asset earning ability.

- **Guarantee and Aval Services**

The Bank provides guarantees and aval services for our client's 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.

- **Custodian Service**

The Bank provides custodian service for safekeeping the clients' assets and securities, payment and delivery, and performs the fiduciary duty of acting as custodian for provident fund, private fund, juristic person and individual, including confirmation of net asset value for provident fund.

2.2 Commercial Lending

Commercial lending provides commercial credits mainly in small and medium-sized businesses such as inventory financing for car dealers, working capital loans, project finance and hire-purchase and leasing loans for customers in various segments including automobile & parts, logistics, etc. Moreover, the Bank actively joined hand with Thai Credit Guarantee Corporation (TCG) under government project portfolio-guarantee scheme phase 6 to facilitate small and medium-sized enterprises (SMEs).

As of December 31, 2017, TISCO Group had a corporate lending portfolio of 50,607.51 million baht (accounted for 20.1% of total loans) increased by 8.8% (YoY) from 46,509.94 million baht at the end of 2016 mainly due to the loan drawdown from the clients in real estate and construction sector and agriculture and mining sector. Furthermore, in the beginning of 2017, the Company has made loan classification adjustment by reclassifying some clients in Commercial Lending sector to Corporate Lending sector at the approximate amount of 2,100 million baht, with purpose to improve efficiency of loan management.

The commercial loan portfolio stood at 15,099.95 million baht, decreased by 8.2% (YoY) from 16,454.07 million baht at the end of 2016 from the reclassification of some clients to Corporate Lending sector. Nonetheless, during 2017, the Company received the transfer of small business loans from Standard Chartered Bank (Thai). The loan portfolios are detailed as follows :

Type of Business	December 31, 2015		December 31, 2016		December 31, 2017		Change (%)
	Amount (Million baht)	%	Amount (Million baht)	%	Amount (Million baht)	%	
Manufacturing and commerce	12,126.50	5.1	10,496.69	4.7	11,019.73	4.4	5.0
Real estate and construction	11,987.70	5.0	11,696.34	5.2	14,972.95	6.0	28.0
Public utilities and services	18,837.43	7.9	23,908.50	10.6	22,696.33	9.0	(5.1)
Agriculture and mining	375.67	0.2	408.41	0.2	1,918.50	0.8	369.7
Corporate Lending	43,327.30	18.2	46,509.94	20.7	50,607.51	20.1	8.8
Commercial Lending	19,888.60	8.3	16,454.07	7.3	15,099.95	6.0	(8.2)
Retail loans and other loans	175,043.93	73.5	161,969.99	72.0	185,676.33	73.9	14.6
Total TISCO Loan	238,259.84	100.0	224,934.00	100.0	251,383.79	100.0	11.8

Customer and Distribution Channels

The target customers are mainly customer base who have established long-term relationship with the Bank, and new customers from industries that support economic growth or sectors with strong government backing, such as automobile and parts, agriculture and food processing, transportation and logistics, and tourist.

The Bank provides corporate and commercial loans towards headquarter in Bangkok. The customer will directly contract through our customer relationship officer. In addition, the Bank also participate loan syndication for mega project with other financial institutions both local and foreign bank.

2.3 Investment Banking

TISCO Securities Co., Ltd. is a leader in investment banking service with a long-established reputation more than 46 years in providing the best service to both with corporate and government-related clients. With high caliber and 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, together with a wealth of experience in 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 are covering various types of instrument including equity, debt, and convertible instruments. Moreover, TISCO Securities Co., Ltd. also provides financial advisory service for merger & acquisition, privatization advisory and implementation, project financing, debt restructuring, feasibility study, project valuation, and general advisory, etc.

In 2017, TISCO's investment banking was trusted by our customers to provide various financial advisory services including financial advisory and underwriting service for the Initial Public Offering ("IPO"), financial advisory for fund raising, tender offer, merger and acquisition, and company valuation. The highlighted transactions in 2017 included the financial advisor and lead underwriter for the initial public offering of TPI POLENE POWER Plc. (TPIPP), S.KIJCHAI ENTERPRISE Plc. (SKN) and SYNERGETIC AUTO PERFORMANCE Plc. (ASAP) with the issue size of 17,500 million Baht, 1,470 million Baht and 636 million Baht respectively; and financial advisory for 300 million USD debt raising to BCPG Plc.

3. Wealth & Asset Management

With an aim to become "Top Advisory House", TISCO offers 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 for our clients in meeting up with their savings and investment demand. TISCO Wealth's client can be categorized into 3 groups including TISCO Premium, TISCO Platinum, and TISCO Private. These groups are defined by total consolidated portfolio including both investment in fund, securities, and deposits. TISCO Premium is defined as client having total consolidated portfolio of 1 to 5 million baht. TISCO Platinum is defined as clients having total consolidated portfolio of 5 to 20 million baht while TISCO Private is defined as clients having total consolidated portfolio of more than 20 million baht. TISCO Wealth clients are closely serviced by our personal banking officers, wealth managers, and private bankers, who provide deposit services and various types of investment advisory for both onshore and offshore investment.

TISCO Wealth clients enjoy full range of financial and lifestyle privileges including fees exemption on financial transaction services, updates on investment news, investment seminars, and special privileges including birthday privilege, lifestyles events, travelling, healthcare privilege, and special discounts on selected stores.

In 2017, TISCO Wealth continues to focus on its service excellence in being a full coverage investment advisory house. Regarding this aspect, TISCO's Economic Strategy Unit has issued TISCO Investment Portfolio Strategy or TIPS, a comprehensive report covered in-depth analysis of global economy, financial markets, and investment strategy. Moreover, TISCO Wealth has offered foreign investment funds and trigger funds which are used as wealth management solutions for each of our clients. TISCO Wealth has emphasized to enhance staff's quality by aiming to acquire Certified Financial Planner (CFP) in the future. Furthermore, the Bank launched the full initiation of Open Architecture platform for our clients to enjoy benefits from 10 asset management companies including TISCO Asset Management's together with our expertise in wealth advisory service at one-stop process or "Fund Stop Service" via branch network.

Wealth & Asset Management group provides 7 service types as follows:

3.1 Private Banking

Private Banking is in charge of high net-worth clients with deposits and investment portfolio of more than 20 million baht. The Private Banking services including deposits, cash management services, professional financial and investment advisory as well as fund management services. In 2017, TISCO Bank continues to provide in-depth investment advisory services covering all investment types and asset classes around the world through professional investment consultant at TISCO Bank branches. In addition, TISCO has regularly arranged investment seminars by TISCO Investment Guru to support investors' needs.

3.2 Retail Deposit

TISCO Bank has offered a variety of deposit products such as current account, savings account, and fixed deposits account along with related financial transaction services including issuance of cashier cheque and personal cheque, cheque clearing, and funds transfer.

In 2017, TISCO Bank has continued to focus on its complete range of financial and investment products by offering new savings account targeting retail deposits customers which is TISCO My Savings. TISCO My Savings is a savings account with no minimum opening balance in which interest rate is paid monthly with the maximum rate of 1.85% p.a. Besides, TISCO My Savings offers unlimited deposit, withdrawal, and transfer. The clients will also enjoy the benefits of unlimited transactions without fee through TISCO Mobile Banking including bill payment transactions, PromptPay transactions, as well as conduct purchasing transactions via TISCO Debit Card.

TISCO Bank realizes the importance of financial channels development for more convenient, quicker, and safer banking transactions. In 2017, the Bank has developed TISCO Mobile Banking application for banking transactions via mobile phone including balance inquiry, transfer, bill payment, and PromptPay registration for transactions anywhere and anytime. Apart from that the Bank has launched TISCO Debit Card allowing withdrawal, transfer and purchasing at network stores under the symbol of Thai Payment Network (TPN). Lastly, TISCO Bank also launched TISCO Alert Notification service that will keep the account owner informed of credit-debit transactions from deposit account through SMS for more convenient.

3.3 Private Sales Brokerage

Private Sales Brokerage is operated by TISCO Securities Co., Ltd ("TISCO Securities"), as a member number two on the Stock Exchange of Thailand, offering brokerage services to retail clients through head office in Bangkok and four other branches upcountry including Chiang Mai, Nakhon Pathom, Nakhon Ratchasima, and Udon Thani. In 2017, TISCO Securities Co., Ltd co-operate with TISCO Bank launched new branch at Thonglor to provide wealth service for customer. Service foundation of TISCO Securities Co., Ltd is built on quality and client satisfaction while adhering to ethics and service integrity. In addition, client can choose services by placing orders through their designated marketing officers or by themselves through internet channel.

At the end of 2017, TISCO Securities Co., Ltd's market share of individual customer was at 1.9%. With an aim to expand market aggressively in term of customer base, trading volume and developing new technology, TISCO Securities Co., Ltd has continued Banker to Broker initiative with the Stock Exchange of Thailand in which investors can open trading account of both equity and derivatives at TISCO Bank branches.

To align with the digital securities brokerage business, TISCO Securities has enhanced the capability of TISCO Stock Scan, a stock investment application in which investors can search for stocks according to their investment style and risk appetite. The new TISCO Stock Scan Version 2.0 has a new function called "Model Portfolio" or a function for investors to compare between different portfolios including comparison with suggested portfolios from TISCO Weekly Stock Guru and TISCO Smart Tactics. To provide real-time services, investors can contact TISCO via Line application: @TISCOeResearch which provides news and research by TISCO Research team. In addition, TISCO Securities has continually promoted marketing activities and provide investment knowledge in Bangkok and key provinces to investors as well as our marketing staffs to attain the best possible service for the customer. Apart from domestic investment, TISCO Securities also provides international brokerage services namely "TISCO Global Trade" to provide investment opportunities for the customer who demands to invest in world-class companies in 5 leading countries including United State of America, Britain, Japan, Hong Kong, and Singapore.

Table shows information on TISCO Securities business

(Unit: Million baht)

Information of TISCO Securities Business	2015	2016	2017
Trading values of Individual Customer	214,260.86	206,359.12	206,293.45
Overall Market Share – Company ¹	2.8	2.4	2.6
Market Share – Individual Customer	1.9	1.6	1.9

¹ SET and MAI excluding Proprietary Trading

Source: TISCO Securities Co., Ltd.

3.4 Institutional Brokerage

TISCO Securities Co., Ltd offers brokerage services to institutional clients through head office in Bangkok. As of December 31, 2017, the market share of institution customer was 2.7% comprised of 3.3% from local institution investor and 2.3% from foreign institution investor. In 2017, the strategy for institutional brokerage aims at expanding the market aggressively by brought leading corporation's representatives to meet with global investors through Deutsche TISCO Investment Advisory Company Limited in providing world-class equity research and strategic investment advisory service for domestic and foreign institutional investors.

Table shows information on TISCO's Securities Business

(Unit: Million baht)

Information of TISCO Securities Business	2015	2016	2017
Trading values of Institutions Customer	299,084.84	318,798.58	337,049.55
- Domestic	141,833.11	157,520.69	171,316.87
- Foreign	157,251.73	161,277.89	165,732.68
Market Share – Institutions Customer^{/1}	3.4	2.7	2.7
- Domestic Institutions	3.6	3.0	3.3
- Foreign Institutions	3.3	2.5	2.3

^{/1} SET and MAI

Source: TISCO Securities Co., Ltd.

3.5 Asset Management

TISCO Asset Management Co., Ltd. operates provident funds, private funds, and mutual funds management as permitted under its 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 setting up provident funds, and registrar and advisory services for provident fund committees. Fund investments may cover a wide range of instruments, in line with consent from the respective provident fund committees.

As of December 31, 2017 there were 66 provident funds accounted for asset under management amounted to 151,053.42 million baht, up by 15.2% (YoY), representing 4,375 companies and 632,605 members. As of December 31, 2017, the provident fund business accounted for a market share of 14.0% putting the company in 3rd place in the overall market, based on net asset value. The breakdown of TISCO Asset's provident fund types is shown below

(Unit: Million baht)

TISCO Asset Provident Fund	2015	2016	2017	% Growth
Single Fund	44,938.98	46,782.57	48,502.87	3.7
Master Fund	73,797.99	84,290.67	102,550.55	21.7
Total	118,736.97	131,073.24	151,053.42	15.2

• Private funds

TISCO Asset Management Co., Ltd provides private fund management services for individuals and juristic persons taking into account the client's risk-return profile in offering a wide range of investment alternatives including equity, fixed income, and mutual funds. Clients receive reports which summarize fund performance on a regular basis.

As of December 31, 2017, there were 278 private funds accounted for asset under management amounted to 41,855.28 million baht, increased by 56.6%. As of December 31, 2017, the private funds business accounted for a market share of 5.0%, putting the company in 5th place in the overall private fund market. The breakdown of TISCO Asset Management Co., Ltd.'s private fund types is shown below

(Unit: Million baht)

TISCO Asset Private Fund	2015	2016	2017	% Growth
Juristic person	15,791.17	15,789.24	30,939.45	96.0
Individual	10,622.07	10,943.71	10,915.82	(0.3)
Total	26,413.25	26,732.95	41,855.28	56.6

• Mutual funds

TISCO Asset Management Co., Ltd provides mutual fund management services for retail investors. Mutual fund units are sold to the general public with due consideration given to finding the right investment type suitable for each investor's needs. TISCO Asset Management Co., Ltd focuses on efficient investment based on continuous research and risk management. It reports fund performance to the public regularly.

As of December 31, 2017, there were 90 mutual funds accounted for asset under management amounted to 47,334.10 million baht. As of December 31, 2017, the mutual fund business accounted for a market share of 0.9% and ranked 14th in the overall mutual fund market.

Distribution Channels

In general, TISCO Asset Management Co., Ltd. uses direct market approach as main channel for all fund types. For mutual fund business, the company has additional channels consisting of selling agents from banks, finance and

securities companies, as stated in their prospectus. In addition, TISCO Asset Management Co., Ltd also increased distribution channel through internet trading in order to increase customer's service convenience. Moreover, TISCO Securities offering brokerage services to retail clients through head office and Thonglor Branch in Bangkok and four other branches upcountry including Chiang Mai, Nakhon Pathom, Nakhon Ratchasima, and Udon Thani.

3.6 Cash Management Services

The Bank's Cash Management Services include cash inflow and cash outflow management for corporate clients, which ultimately help increase operation efficiency and reduce operating cost for clients. Cash Management Services comprise of three main business areas, TISCO Collection, TISCO Payment, and TISCO Liquidity Management. Additionally, TISCO E-Cash Management was introduced to facilitate customer in performing business transaction and enquiring consolidated account information.

3.7 Mutual Fund Selling Agent

Mutual Fund Selling Agent is operated by TISCO Bank Co., Ltd offering advisory mutual fund products and services via Open Architecture platform for our clients to enjoy benefits from 10 asset management companies, 500 funds including TISCO Asset Management's together with our expertise in wealth advisory service. Additionally, TISCO will also facilitate customer in research and investment strategy to maintaining good return from investment along with the good choice of investment including asset allocation strategy for the customer.

4. Corporate Affairs & CSR

Corporate Affairs & CSR group aims to promote business operational efficiency while ensuring that business ethics and a strong sense of social responsibility are incorporated into corporate core values. With an aim to achieve sustainable value creation to all stakeholders, TISCO has placed great emphasis on building strong supportive 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; subsidiary companies shall outsource all such activities back to the Company. These include, but not limited to, the following functions :

- Enterprise Risk Management, Risk Research, Investment, Corporate Accounting, Planning & Budgeting, Credit Control
- Product Development and Marketing, Digital Channel, Bancassurance
- Internal Audit, Compliance, Operational Risk Management, Legal Office, Corporate Secretariat Office
- Corporate Marketing & Communication, Economic Strategy, Corporate Services
- Human Resource Administration, Human Resource Services,
- Productivity, Data Management, Project Management Office, Solutions Development, Enterprise Architecture, Information Security

In addition, TISCO also has Treasury department as a unit under the Bank, which is responsible for asset and liability management activities including the procuring of funding sources from local and foreign financial institutions, and investing and trading bonds in order to maximize return under the corporate guidelines and risk policy and in compliance with all related rules and regulations. It also manages liquidity according to the 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. However, securities trading volume was insignificant because TISCO Securities has maintained its investment policy of long-term return rather than short-term trading gain. In addition, TISCO Securities Co., Ltd actively performs securities trading when the stock market is in favorable condition. TISCO Securities Co., Ltd only invests in good performance and strong fundamental securities to minimize market risk.

2.2 Market and Competition

2.2.1 Commercial Banking Business

• Market

As of December 31, 2017, there were 30 banks consist of 16 Thai commercial banks and 14 subsidiaries and branches of foreign banks. The conditions of deposits and loans market are detailed as follows

Deposits

As of December 31, 2017, deposits in Thai commercial bank industry¹ were at 12,098,764 million baht, up by 6.5% (YoY) along with the growth in loan demand. At the end of 2017, average 3-month deposit interest rate of the top four large

¹ Summary of Assets and Liabilities Form (C.B. 1.1) Bank of Thailand

banks remained stable at 0.93% following the deposit demand of commercial bank. In 2017, the Bank's deposits¹ was 181,499 million baht, increased by 16.4% (YoY), stemming from the transfer of deposit from Standard Chartered Bank (Thai).

Table showing movement of average interest rates of Thai commercial banks

(Unit: % per year)

	2015	2016	2017
Minimum Lending Rate (MLR) ^{/1}	6.51	6.26	6.20
3-month fixed deposit rate ^{/1}	1.01	0.93	0.93

^{/1} Average interest rate at the end of each period of four large banks, i.e. Bangkok Bank Plc., Siam Commercial Bank Plc., Krung Thai Bank Plc. and Kasikornbank Plc.

Loans

As of December 31, 2017, total outstanding loans of Thai commercial bank industry were 11,061,078 million baht, increased by 4.4% (YoY) amid economic recovery. At the end of 2017, the average MLR at the top four large banks was at 6.20% per year, decreased from 6.26% p.a. at the end of year 2016. The Bank's loan was 234,228 million baht, improved by 9.4% (YoY).

Table exhibits comparison of assets, deposits and loans as of December 31, 2017

(Unit: Million baht)

Commercial Banks	Assets	Market Share (%)	Deposits	Market Share (%)	Loans	Market Share (%)
1. Krung Thai Bank Plc.	2,970,037	17.9	2,252,421	18.6	1,817,136	16.4
2. Bangkok Bank Plc.	2,781,740	16.7	2,073,594	17.1	1,748,653	15.8
3. Siam Commercial Bank Plc.	2,725,632	16.4	2,087,890	17.3	1,931,839	17.5
4. Kasikorn Bank Plc.	2,444,824	14.7	1,875,729	15.5	1,662,880	15.0
5. Bank of Ayudhya Plc.	1,999,809	12.0	1,316,705	10.9	1,384,881	12.5
6. Thanachart Bank Plc.	954,460	5.7	717,807	5.9	645,628	5.8
7. Thai Military Bank Plc.	842,976	5.1	611,508	5.1	618,386	5.6
8. UOB Bank Plc.	516,964	3.1	370,279	3.1	340,023	3.1
9. CIMB Thai Bank Plc.	296,307	1.8	177,703	1.5	195,872	1.8
10. TISCO Bank Plc.	288,275	1.7	181,499	1.5	234,228	2.1
11. Kiatnakin Bank Plc.	245,088	1.5	133,278	1.1	184,342	1.7
12. Standard Charter Bank(Thai) Plc.	230,396	1.4	143,742	1.2	150,618	1.4
13. Land & House Bank Plc.	179,892	1.1	100,350	0.8	101,088	0.9
14. ICBC (Thai) Plc.	155,373	0.9	56,259	0.5	45,504	0.4
Total	16,631,773	100.0	12,098,764	100.0	11,061,078	100.0

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

Car hire-purchase business, the major business of the Bank, generally expanded in line with automobile industry growth. In 2017, domestic car sales were 871,647 units, increased by 13.4% (YoY) due to new car models from manufacturers along with improving economic condition. For year 2017, the total new car sales comprised 39.7% of passenger car and 60.3% of commercial car. In addition, TISCO's penetration rate was at 7.2% to total new car sales.

Table showing car sales in Thailand during 2013-2017

(Unit: Vehicle)

Category	2013	2014	2015	2016	2017
Passenger car	631,223	369,836	299,309	279,827	346,247
Commercial car	699,447	511,996	500,323	488,961	525,400
Total	1,330,670	881,832	799,632	768,788	871,647

Source: Automobile Institute

• Competition

In 2017, the performance of commercial banking industry was improved however the net profit decreased compared with the previous year mainly from the setup of provisions to support asset quality deterioration and prepare for the change in accounting standard of IFRS 9 in 2018. Meanwhile, the loan growth expanded by 4.4%, with growth acceleration towards the end of the year in both SME and consumer loans. On the loan quality front, the ratio of gross non-performing loans (NPLs) to total loan increased to 2.91% at decelerated growth rate. The weak consumer confidence together with high level of household debt have pressured on asset quality of loan portfolio. Nevertheless, the provision buffer and capital fund remained solid which had cushion against the weak asset quality. Meanwhile, the Bank of Thailand maintained the policy rate at the 1.50% in 2017 to

¹ Deposit includes the short-term borrowings

stimulate consumption and support the domestic economic recovery. The competition in deposit market slightly increased alongside with the loan growth. The commercial banks launched deposit campaigns to maintain customer base as well as term deposits to maintain cost of fund. In light of changing customer behavior, some banks are downsizing and revamping the physical branch networks, adding more financial service to mobile apps and internet banking to shift towards consumer preference for digital service and support National E-Payment policy including PromptPay which launched in early of 2017. Furthermore, the Bank of Thailand tightened controls on credit cards and unsecured personal loans, by reduce the maximum credit card interest rate to 18% from 20% and curbs credit line limits of both credit cards and personal loans in order to control high household debt levels. In addition, TISCO Bank continued to focus on expanding retail deposit customer base by offering savings products that earn appropriate yield as well as improving services to enhance customer convenience.

For corporate and SMEs banking businesses, the competition remained intense to maintain the existing customer base as well as expanded new customer. Most of the players adopted pricing strategy and integrated financial solution to serve the customer. Nevertheless, the commercial banks tightened credit policy for SMEs segment to curb the weakened asset quality. Meanwhile, some of corporate customers tend to raise fund from the issuance from equity and debt instrument. TISCO Bank has focused on controlling asset quality as well as preparing to cope with economic uncertainty. Thus, the Bank aims to compete on service quality rather than pricing. The Bank also expands customer base by deploying long experience in the business, excellence operation, and quality service to response with diverse needs of the customer.

For auto hire purchase business, the competitors in auto hire purchase business can be divided into two major groups: 1) commercial bank and leasing company, a subsidiary of commercial bank and 2) subsidiary companies of car manufacturers and car dealers (captive finance companies). For the year 2017, the competition in auto hire purchase market remained intense despite the total car sales was increased by 13.4% (YoY) following the end of the first-time car buyer scheme units along with improving economic condition. Meanwhile, the used car sales improved from the previous year partly due to the higher price of new car and more reasonable price of used car. Nevertheless, TISCO Group has retained the competitive advantage in new car business from being the key strategic partner with car manufacturers and car dealers of Ford and Mazda. Amidst economic volatility, TISCO Group continues to expand customer base through efficient and high standard of service, long experience in hire purchase business, good relationship with car dealers, effective cost and risk management together with extensive customer database.

As of December 31, 2017, the Bank was ranked at 10th place among Thai commercial banks based on asset size. The market share of assets, deposits and loans were 1.7%, 1.5% and 2.1% respectively.

2.2.2 Securities Business

(1) Securities and investment banking business operated by TISCO Securities Co., Ltd.

• Market

At the end of 2017, there are 42 companies¹ who have been granted to operate brokerage business service and 73¹ companies who have been granted to operate financial advisory service by the office of Securities and Exchange Commission. In 2017, SET index closed at 1,753.71 points, increased by 210.77 points (13.7% YoY) from 1,542.94 points at the end of 2016. Meanwhile, the average daily turnover was at 47,755 million baht, decreased by 5.0% from 2016. For derivative market, total trading volume increased 13.5% to 79 million contracts from a year earlier. The average daily volume increase to 324,217 contracts per day, significantly improved from 285,189 contracts per day in 2016. In primary market, there were 39 newly listed companies in SET and MAI markets, 6 property funds (REITs) and 1 infrastructure fund (IFF). The total offering size of newly listed securities was 106,279.61 million baht, down by 101.36% (YoY).

In light of equity market rally in 2017, the domestic capital market was continuously improved led by bullish market sentiment in the second half of 2017 following investor confidence toward Thai government stability and the growing corporate income.

Table shows capital market conditions

	2015	2016	2017
SET index (points)	1,288.02	1,542.94	1,753.71
Market capitalization (million baht)	12,282,755	15,079,272	17,587,433
Trading turnover (million baht)	9,997,372	12,259,772	11,652,311
Average daily turnover (million baht)	41,141	50,245	47,755
Dividend yield (%)	3.36	3.04	2.70
Price to earnings ratio (times)	22.57	18.55	19.06
Number of listed companies on the SET	517	522	538
Volume of derivative contract (contracts)	48,538,899	69,576,164	78,990,574

Source: The Stock Exchange of Thailand

¹ Source: www.sec.or.th

- **Competition**

Although there are a lot of players in securities brokerage market, the new players still interest to enter the market amidst the brokerage business liberalization. Thus, the brokerage market competition remained intense to maintain and expand market share. Most of market player has adopted price cutting strategy as well as pure online trading brokerage service to reduce operating cost. Furthermore, some of market players adopted revenue diversification strategy through new sources of income including cross-border business activity to expand investment banking business, exclusive partnership with international brokers in order to increase market share in foreign institution and extend to global market services, and new business expansion such as derivatives warrant business, derivatives business, selling agent business, etc. Also many securities companies extensively operated their own proprietary trading to increase trading income. Going forward, the competitive pressure will be significantly increased led by commission fee liberalization in which sliding scale commission fee will be applied to individual investor while freely negotiated commission fee will be applied to institutional client. TISCO Securities Co., Ltd has no policy in aggressive price cutting. However, TISCO Securities Co., Ltd. focuses to serve fundamental investors rather than speculative investors, by producing high quality research article, and developing other services as an alternative for the investor.

For the year 2017, TISCO Securities has enhanced several service capabilities. For instance, the new Stock Scan application which is a tool that helps customer to sort out prominent stock according to investment style and their risk appetite to be more modern and outstanding, Aspen application for helped customer to received instant news around the world, also the smart technical tools as well as launching Line: @TISCOeResearch which provide news and research by TISCO Research team. For the institutional client business, Deutsche TISCO Investment Advisory Co., Ltd has continually developed research and investment advisory services to serve local and foreign institutional investors. In 2017, TISCO Securities Co., Ltd accounted for a market share (excluding proprietary trading) of 2.5%, ranked 18th place among 38 securities companies.

For the investment banking market, the competition is intense as there are a lot of market players while market demand is limited. Most of the players emphasize in quality of team, experience and expertise in financial advisory as well as established long-term relationship with customer.

(2) Asset Management business operated by TISCO Asset Management Co., Ltd.

- **Market**

For the asset management industry, there are 27 players including asset management companies, commercial banks, securities companies, and insurance companies. As of December 31, 2017, the asset under management of asset management market totaled 6,909,910 million baht, increased by 10.6% (YoY). Furthermore, the provident funds totaled 1,082,620 million baht, increased by 11.2% (YoY) while private funds totaled 841,078 million baht, increased by 12.7% (YoY). Mutual funds totaled 4,986,212 million baht, increased by 10.1% (YoY). The details of market funds at year-end of 2015 to 2017 are shown as follows:

Table shows Asset Management market

(Unit: Million baht)

Funds	2015	2016	2017
Provident Fund	883,693	973,273	1,082,620
Private Fund	590,791	746,170	841,078
Mutual Fund	3,977,595	4,529,538	4,986,212
Total	5,452,079	6,248,981	6,909,910

Source: Association of Investment Management Companies

- **Competition**

Overall asset management industry remained highly competitive in all business segments. For provident fund business, TISCO Asset Management Co., Ltd (TISCO Asset) has continued to maintain its market share and leading market position with the highest number of corporate accounts. In 2017, the number of leading corporates that newly assigned TISCO Asset as their provident fund manager were more than 200 companies, e.g. Jay Mart Mobile Co.,Ltd., New City (Bangkok) Plc., Rama 3 Group Honda Automobile Co., Ltd., Benz Amorn Ratchada Group and etc. Also there are funds that transferred to TISCO Asset such as PTT Group, Allianz Ayudhya Assurance Plc., Dow Corning (Thailand) Ltd. and etc. In 2017, TISCO Asset launched "TISCO Smart Retirement" Project including 4 aspects of retirement planning which are Smart Saving, Smart Spending, Smart Living and Smart Insure. The main objective of the project is to encourage younger generations to plan for retirement during their working period to ensure that their retirement goal will be achieved. As of December 31, 2017, total provident fund under management was 151,053.42 million baht.

In 2017, the brighter economic prospect especially in USA, EU and Japan, will bolster investors' sentiment. Even though the Federal Reserve raised interest rates and reduced in bond holding to drain liquidity in the market. However, the investors continue to invest in various asset including medium and high risk assets such as local and foreign equity. Moreover, the equity fund growth more than 20% YoY compared with total mutual fund market growth 10% YoY. In the past year, the asset management companies launched various investment product including Foreign Investment Fund (FIF), Income Fund, Multi-asset Fund and Retirement Mutual Fund (RMF). Moreover, TISCO Asset Management launched variety of product such as

Global Emerging Markets Fund, Global Technology Equity Fund, Global Infrastructure Equity Fund and US Financial Fund that remains popular among investor. Meanwhile, all of the trigger fund launched and achieved the target in 2017. With the strategy to offer product that suitable for customer need, mutual fund continually grew 34% with total size of 47,334 million baht.

As of December 31, 2017, private fund continually grew to 41,855.28 million baht from 26,732.95 million baht or 57% due to the appointment from university client. The private fund business also has intense competition especially in institutional clients for example university group, co-operative group and organization group. Nonetheless, TISCO Asset Management focused on expanding individual client base with professional investment advisory service by highly experienced fund managers that can meet variety of clients' demands, together with effective risk management.

Table shows the TISCO's asset under management by type of fund business as of December 31, 2017

Funds	Net asset under management (Million baht)	Market Share (%)	Market Rank
Provident Fund	151,053.42	14.0	3/16
Private Fund	41,855.28	5.0	5/24
Mutual Fund	47,334.10	0.9	14/23
Total	240,242.80	3.5	9/27

Source: Association of Investment Management Companies

2.3 Resources

1) Sources of Fund

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

(Unit: Million baht)

Sources of Fund	2015	2016	2017
Deposit and Short-term Borrowings	165,281.11	161,034.44	188,280.76
Interbank and Money Market Items	10,030.06	5,196.60	4,017.51
Debentures	67,582.00	64,362.00	63,601.70
Other Liabilities	9,206.18	9,353.82	12,756.67
Total Sources of Fund from Liabilities	252,099.35	239,946.86	268,656.64
Capital	28,194.33	31,325.54	34,731.76
Total Sources of Fund	280,293.68	271,272.40	303,388.41

As of December 31, 2017, list of assets and liabilities breakdown by term to maturity is shown in the following table:

(Unit: Million baht)

Transactions	At call	0 – 3 months	3- 12 months	1-5 years	Over 5 years	Unspecified	Non-performing loans*	Total
Financial assets								
Cash	1,325	-	-	-	-	-	-	1,325
Interbank and money market items	1,652	42,995	-	-	-	-	-	44,647
Investments - net	-	3,391	2,059	289	2	1,806	-	7,547
Loans to customers	2,503	21,507	49,479	128,672	44,100	-	5,829	252,090
Securities and derivatives business receivables	-	2,342	-	-	-	-	-	2,342
	5,480	70,235	51,538	128,961	44,102	1,806	5,829	307,951
Financial liabilities								
Deposits	70,469	64,855	45,075	405	-	-	-	180,804
Interbank and money market items	540	993	215	2,269	-	-	-	4,017
Liabilities payable on demand	431	-	-	-	-	-	-	431
Derivative liabilities	-	-	-	30	-	-	-	30
Debts issued and borrowings	37	27,514	13,848	23,000	6,680	-	-	71,079
Securities and derivatives business payables	-	2,216	-	-	-	-	-	2,216
Payables to clearing house	-	114	-	-	-	-	-	114
	71,477	95,692	59,138	25,704	6,680	-	-	258,691
Commitment and contingent liabilities								
Avals to bills and guarantees of loans	2	10	31	14	-	571	-	628
Other commitments	-	-	13	2,222	-	575	-	2,810

* Non-performing loan according to the BOT's guidelines

Details of risk of duration mismatch are described in Part 1 Section 3: Risk Factor.

2) 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. In each new credit approval, the Bank thoroughly considers the borrower's business potential, opportunities, ability to repay, collateral, and also the rate of return that justifies the risk of each borrower. TISCO Group focuses on expanding business into markets with acceptable risks/returns in which it has sufficient expertise. TISCO Group performs analysis and key risk characteristics prior to entering new markets.

The collateral policies vary, depending on the type of credit. Prudent collateral policies 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 considered 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 prudence procedures for all credit approvals to ensure high credit quality while maintaining customer satisfaction. Approved credits are reviewed and controlled in compliance with overall credit policies.

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

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 by systematically implementing a credit-scoring system which has been developed from an internal database to effectively control and shorten the loan approval process.

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

For mortgage loans, the approved credits do not exceed 90% of the collateral value with terms and conditions varying with the types of collateral, while 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.

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

For the retail credit portfolio, which naturally covers small transaction sizes, the credit approval process and delegation of authority varies according to the level of credit limit as controlled by 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 hire purchase business, TISCO has also implemented a credit-scoring system to assist the loan approval process in which customer characteristics, loan terms and conditions are taken into consideration for the computation of credit scores.

- **Credit Risk Management**

The Risk Management Committee of the Bank, 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. Meanwhile, the Credit Committee and Chief Credit Officer, who are in charge of the loan approval processes of each credit transaction, 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 set up appropriate provisions for potential loan losses. Moreover, Risk Management Committee will report risk management activities to the Risk

Management Committee of TISCO Financial Group Public Company Limited, the parent company, on a regular basis in compliance with Consolidated Supervision principle of the Bank of Thailand.

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 in credit risk assessment for both corporate and retail credit portfolios in accordance with the implementation of the Internal Ratings Based approach (IRB) resulting in more efficiency in capital utilization in the long term.

In controlling risks from credit concentration, TISCO Group has set up 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 exposure of equity investment. Furthermore, TISCO Group complies with the regulations of 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 follows up accounts with potential problems promptly 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. In the follow-up procedures, the credit officer reports to the Problem Loan Committee on all restructure 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 economic conditions and related laws and regulations, particularly with regard to notification from the Office of Consumer Protection. The main 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 are affected by economic downturns or the borrower's financial difficulties. Under TISCO Group's procedures on debt restructuring, there are various methods such as relaxing of payment conditions, debt-to-assets conversion, debt-to-financial-instruments conversion, and debt-to-equity conversion.

Debt restructuring can be conducted with every type of borrower, either defaulted or 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 environments, 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 the 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, and recalculated for impairment loss.

(3) 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. Currently, the Bank of Thailand sets the capital adequacy ratio for banks registered in Thailand at 9.75%, where Tier-I Capital must be maintained at a level equal to at least 7.25% of risk assets.

The year-end Capital Adequacy Ratio for 2015 to 2017 has been maintained above the regulatory requirements with details as follows:

(Unit: Percentage)

Capital Adequacy Ratio	December 31, 2015	December 31, 2016	December 31, 2017	Regulatory Requirement
Tier-I Capital to Risk Assets	13.98	14.73	15.98	7.25
Total Capital to Risk Assets	18.01	19.59	20.72	9.75

Remark: Applied IRB approach

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

(4) 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 mismatches, funding concentration and daily deposit/withdrawal levels. Furthermore, a liquidity contingency plan has been established for outlining clear procedures and responsibilities in detail for liquidity management in times of crisis.

Meanwhile, the Treasury function is responsible for daily liquidity management and preparation for securing 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.

(5) Asset Classification, Provisions and Write-offs

The Group defines asset classifications according to the notification of the Bank of Thailand regarding worthless or irrecoverable assets and doubtful assets that may be worthless or irrecoverable 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 according to 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 of repayment or 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-owing 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.

The Group has a conservative provisioning policy. As of December 31, 2017, the Bank's reserves were 10,709.29 million baht, or 234.8% of those required by the BoT. Our asset classification policies are in compliance with those set by the Bank of Thailand and the Securities and Exchange Commission as presented in Part 1 Section 4: Operating Assets item: 4.2

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

(1) Sources of fund

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

(2) Credit approval and authorization

TISCO Securities Co., Ltd. has a credit approval policy to screen qualified customers as well as to provide customers with a good understanding of securities trading. The credit line for a particular customer will be based on the customer's financial status and collateral. The Executive Board of Directors 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 for approving general credit lines complying with the Credit Committee's guidelines and policy.

(3) Margin trading accounts

All clients of securities brokerages are cash accounts.

(4) Investment Policy

For listed equity, TISCO Securities Co., Ltd. has a policy to invest in businesses with strong fundamentals by considering liquidity, risk and return on securities and the diversification of its portfolio. As for non-listed equity, 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 a short-term and a long-term investment depending on their investment policy and fund performance. Moreover, the company has a policy to invest in derivative instruments to earn gains from trading and for risk management purpose upon investment climate in the stock market.

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

(5) Capital Adequacy Ability

The Net Capital Rule (NCR) ratio of TISCO Securities Co., Ltd. as of December 31, 2017 is 58.24%, 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 Function is 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 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. Risk Management Committee, supported by enterprise risk management, risk and business analytics, and operational risk management functions, are 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 Office of the Credit Committee 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. Additionally, risk limits triggered as well as new businesses shall be reported monthly to the Risk Management Committee for acknowledgement. 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.

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 Management Committee

The Risk Management Committee of the company, comprising the senior managements from the TISCO Group, has been delegated from the Executive Board of Directors of the company 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, and operational 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. Moreover, Risk Management Committee of TISCO Bank has also been established in effective management and control of risks in various business units of the bank by adopting the risk management policy from the parent company. Under consolidated supervision principle of the Bank of Thailand, Risk Management Committee of TISCO Bank directly reports to the Risk Management Committee of the company.

- 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 Office of the Credit Committee 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, 2017, NPL ratio of TISCO Group decreased from 2.54% at the end of 2016 to 2.32% at the end of 2017 mainly resulting from a decrease in non-performing loan of retail and SME portfolios. 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 2.85% at the end of 2016 to 2.74% at the end of 2017, where NPL ratio of corporate loan remained stable at 0.94% in 2017. Total NPLs was 5,829.35 million baht which increased by 2.1% or 119.21 million baht. NPLs of the Bank were 5,300.68 million baht and there was NPLs of 528.67 million baht from other subsidiaries.

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. In 2017, TISCO Group has utilized portion of general reserve to compensate the potential losses in the future. Meanwhile, as of December 31, 2017, loan loss reserve of TISCO Group was 11,456.11 million baht, or 196.5% of NPLs. Total loan loss reserve of the Bank was 10,709.29 million baht or accounted 234.8% of minimum loan loss reserve requirement, 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, 2017, hire purchase and commercial loans represented 51.6% and 20.1% of the total credit portfolio, respectively. The hire purchase portfolio, of which concentration was very low, had 129,719.70 million baht outstanding. Top-10 borrower exposure of hire purchase portfolio stood at 979.80 million baht or 0.8% of the total hire purchase portfolio, or equal to 0.4% of the total credit portfolio.

For the commercial loan portfolio, it was diversified into four different sectors: manufacturing and commerce, 11,019.73 million baht; real estate and construction, 14,972.95 million baht; public utilities and services, 22,696.33 million baht; and agricultural and mining, 1,918.50 million baht. Lending to the above industrial sectors represented 21.7%, 29.6%, 44.9%, and 3.8% of the total commercial loan portfolio, and 4.4%, 6.0%, 9.0%, and 0.8% of the total credit portfolio, respectively. As top-10 borrower exposure stood at 33,053.89 million baht or accounting for 11.3% of the total credit portfolio, there is slight concentration in public utilities and services as well as manufacturing and commercial sector which have been managed under risk management procedure. Moreover, commercial loan portfolios are 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, 2017, lending portfolio of TISCO Group came mostly from TISCO Bank whereby 75.2% 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 72.8% 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, 2017 were worth 5.27 million baht, or 0.002% of total assets. Allowances for impairment stood at 69.7% 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.

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, 2017, the value of liquid assets is 53,098.74 million baht, which comprised of cash at 1,324.81 million baht compared to 1,149.00 million baht in December 31, 2016, net transactions with interbank and money market at 44,647.15 million baht compared to 38,067.42 million baht as of December 31, 2016 and net current investment at 7,126.78 million baht compared to 6,752.76 million baht as of December 31, 2016.

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 45,667.56 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, 2017, the Bank reported deposit 180,803.84 million baht, the outstanding long-term debentures (both subordinated and unsubordinated) of 29,680.00 million baht and short-term debentures of 33,921.70 million baht, and bill of exchange amounted to 7,476.92 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. Key funding risk policies involve the management of cash flow maturity profiles, concentrations, liquidity reserves, and emergency 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, 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, 2017, the equity portfolio stood at 1,804.66 million baht, of which 514.72 million baht was listed equity, 869.58 million baht was ETF in current market value and 420.36 million baht was non-listed equity in book value.

TISCO Group gained profit from security investment amounted to 27.19 million baht. Meanwhile, gain from the difference between fair value of securities as of December 31, 2017 and unrealized gain of securities according to the accounting standard of security foreclosure were 79.53 million baht.

(1) Listed Equity Risk and ETF

TISCO Group exposed to price risk from market price volatilities of listed equity and ETF investment. Investment portfolio in available-for-sale book stood at 1,384.30 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, 2017, unrealized gain from available-for-sale investments equaled 79.53 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, 2017, was 192.28 million baht, increased from 154.87 million baht as of December 31, 2016 mainly resulted from increasing of risk exposure due to stock value increase during the year. 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 420.36 million baht, slightly decreased from 436.07 million baht from the end of 2016 from sale transaction. 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, 2017, 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	117,369.75	62,756.36	44,935.26	67,557.28	292,618.65
Liabilities	(100,718.47)	(122,859.73)	(23,385.62)	(8,968.25)	(255,932.07)
Net Gap	16,651.28	(60,103.37)	21,549.64	58,589.02	36,686.57

Under the change of interest rate within 1 year, TISCO Group had liabilities over assets within 2-12 month stand at 60,103.37 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, 2017 stood at 5,743.94 million baht, increased from 5,538.33 million baht at the end of 2016. Average duration of the bond portfolio was 0.21 year, slightly increased from 0.20 year from the end of 2016. Meanwhile, average duration of the debenture portfolio was 0.98 years, decreasing from 1.67 years from the end of 2016. However, Fixed-income risk was under acceptable risk and also meets the purpose of maintaining liquidity reserves according to the BoT'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.

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. 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 2017, TISCO Group has expanded its businesses into various aspects in both extending the existing businesses as well as setting up new businesses; 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 2017 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 2017, 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 and Control Self-Assessment). The result of the risk assessment in corporate level would be reported to the Risk Management Committee and the Audit Committee for acknowledgement.

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.

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 2017, TISCO has arranged the cyber drill in form of tabletop test with the participants of top managements, head of relevant functions including the function responsible for corporate communication and all customer touch point functions 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. In addition, the transfer of retail banking business of Standard Chartered Bank (Thai) Public Company Limited was aligned with TISCO Group's business growth and increased business opportunity to expand customer base from the increase in financial products and services to retail customers.

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, 2017, as TISCO Bank's capital requirement based on Basel III Internal Rating Based Approach (IRB), the regulatory capital adequacy ratio (BIS ratio) stood at 20.72% remaining higher than the 9.75% required by the Bank of Thailand. Tier-I and Tier-II adequacy ratio stood at 15.98% and 4.74%, respectively, in which Tier-I adequacy ratio also remained higher than the minimum requirement at 7.25%. Meanwhile, the net capital rule (NCR) of TISCO Securities Co., Ltd. remained strong at 58.24%, 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 11,526.57 million baht, accounting for 31.9% of total capital base of 36,170.20 million baht. In addition, capital surplus for future risks and business expansion stood at 24,643.63 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 2017, net profit of TISCO Bank and other subsidiaries was 5,674.53 million baht, where 1,373.97 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 22.5% 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, 2016 - 2017 are as follows: These assets are free from any obligations.

(Unit: Million baht)

List	Type of Property Right	Contingent Liability	Value	
			2016	2017
Land				
Cost	owner	none	17.51	17.51
Office condominium and building improvements				
Cost	owner	none	1,093.60	1,179.69
Revaluation	owner	none	2,103.90	2,103.90
Furniture fixtures computer and equipment				
Cost	owner	none	1,071.64	1,153.76
Motor vehicles				
Cost	owner	none	186.18	156.80
Total			4,472.83	4,611.66
<u>Less</u> Accumulated Depreciation			(1,820.31)	(1,958.46)
Land, premises, and equipment – Net			2,652.52	2,653.20

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 - 10 years. As at December 31, 2016 and 2017, future minimum lease payments required under these non-cancellable operating leases contracts were as follows:

(Unit: Million baht)

Types	Maturity	As at December 31,	
		2016	2017
Lease office building and branch office	Within 1 year	164	213
	Over 1-5 years	150	319
	Over 5 years	46	70
Total		360	602

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.	3,533.91
TISCO Tower Office	TISCO Information Technology Co., Ltd.	TISCO Financial Group Plc.	2,329.59
TISCO Tower Office	TISCO Bank Plc.	TISCO Financial Group Plc.	2,458.58
TISCO Tower Office	TISCO Learning Center Co., Ltd.	TISCO Financial Group Plc.	590.00
TISCO Tower Office	Deutsche TISCO Investment Advisory Co., Ltd.	TISCO Financial Group Plc.	375.00

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, 2017 are shown below:

(Unit: Million baht)

Classification	Loans and receivables	Investments in securities	Property foreclosed	Investment in receivable	Total	%
Pass	263,479	-	-	-	263,479	92.1
Special mention	17,158	-	-	-	17,158	6.0
Substandard	2,435	-	-	-	2,435	0.9
Doubtful	1,400	-	-	-	1,400	0.5
Bad debts	1,465	37	14	12	1,528	0.5
Total	285,937	37	14	12	286,000	100.0

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 recognised as income on an accrual basis and is based on principal outstanding. Hire purchase, finance lease and loan against auto license income are recognised 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 recognised 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 recognised 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 are 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, 2017	Cost Method As of December 31, 2017
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.	100	273
TISCO Information Technology Co., Ltd.	20	22
TISCO Insurance Solution Co., Ltd.	100	137
(Previously known as "TISCO Leasing Co., Ltd.")		
Primus Leasing Co., Ltd. ^{/1}	3	33 ^{/2}
TISCO Learning Center Co., Ltd.	5	5
All-ways Co., Ltd.	700	700
TISCO Tokyo Leasing Co., Ltd. ^{/3}	60	73
Investment in subsidiaries and joint venture company - net		20,069

^{/1} Ceased business operation and proceeding liquidation process^{/2} Deducted impairment in investment^{/3} Joint venture Company

5. Legal Disputes

As of December 31, 2017, the Company and its subsidiary companies had 36 unresolved cases from its regular business operations, all of them are civil cases caused by banking business operation (TISCO Bank Plc.) and asset management business (TISCO Asset Management Co., Ltd.) involving an estimated total amount 344.66 million baht, which was less than 5% of its shareholders' equity, consisting of:

- (1) 35 cases that TISCO Bank being sued (estimated total amount of 344.02 million baht), there were 23 cases involving total amount of 97.45 million baht which were in the tribunal process and not yet reach judgment. Furthermore, there were 12 cases, with a total value of 246.57 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
- (2) 1 case that TISCO Asset Management Co., Ltd. being sued (estimated total amount of 0.64 million baht) and the tribunal process was not reach judgment.

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

Company Name	: TISCO Financial Group Public Company Limited
Symbol	: TISCO
Type of Business	: Holding Company
Address	: 48/49 TISCO Tower, 21 st Fl., North Sathorn Road, Silom, Bangrak, Bangkok 10500
Registration Number	: 0107551000223
Total registered capital	: Baht 8,007,032,950 (Eight thousand and seven million, thirty two thousand and nine hundred and fifty Baht)
Paid-up Capital	: 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
Home Page	: www.tisco.co.th
Telephone	: (66) 2633 6888
Fax	: (66) 2633 6880
Reference:	
Share Registrar	: 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 : www.set.or.th/tsd
Auditor	: Ms. Somjai Khunapasut CPA License No. 4499 EY Office Limited 33 rd 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