



GLOBAL



INVESTMENT

GLOBAL INVESTMENT PARTNER

# 2019 MIRAE ASSET DAEWOO INTEGRATED REPORT



DIGITALIZATION



PENSION

## About this report

The 2019 Mirae Asset Daewoo Integrated Report was created with an aim of reviewing our sustainability management activities and our achievements, and thus providing stakeholders with information in a transparent manner.

### Reporting Status

This report is the eighth sustainability report since we published sustainability reports for the first time in the industry in 2006 and is the third after the merger with Mirae Asset Securities in December 2016. In addition, this report has been developed as an Integrated Report which consolidates an annual report and a sustainability report since 2018.

### Reporting Method and Period

This report is compiled in accordance with the Core option of the Global Reporting Initiative (GRI) Standards, a global standard for sustainability reports, and the framework of the International Integrated Reporting Council (IIRC). It is also aligned to the 10 principles of the UN Global Compact, which the company has been upholding since 2006.

The reporting period of this report is from 1 January 2018 to 31 December 2018 and some topics disclose three-year data from 2016 for trend comparison. Both financial information and non-financial information are reported according to the company's fiscal years following our disclosure policy, and information that do not fit such criteria have footnotes added. This report also includes information on major activities executed in the first half of 2019.

### Reporting Scope

The scope of information in this report encompasses the company headquarters, Customer Support Center, IT Center, domestic branch network, and overseas subsidiaries and offices and other areas where Mirae Asset Daewoo performs business activities. The reporting scope of the data provided in this report satisfies at least 75% of the company's sales on a consolidated basis. However, as for overseas business sites, such as overseas subsidiaries and offices, the scope of reporting includes business performance only for data collection is difficult due to physical limitations in terms of material management and assessment.

### Independent Assurance

To enhance the internal and external credibility of this report, the company commissioned an independent assurance statement from the DNV GL, which is a professional assurance organization. Also, credibility and fairness in the compilation process, disclosure data and other content have been ensured by VeriSustain™, which is an assurance protocol of DNV GL in accordance with international standards including International Standard on Assurance Engagements (ISAE) 3000.

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# Mirae Asset Daewoo at a Glance

## Global Network (As of the end of March, 2019)

DOMESTIC NETWORK

111

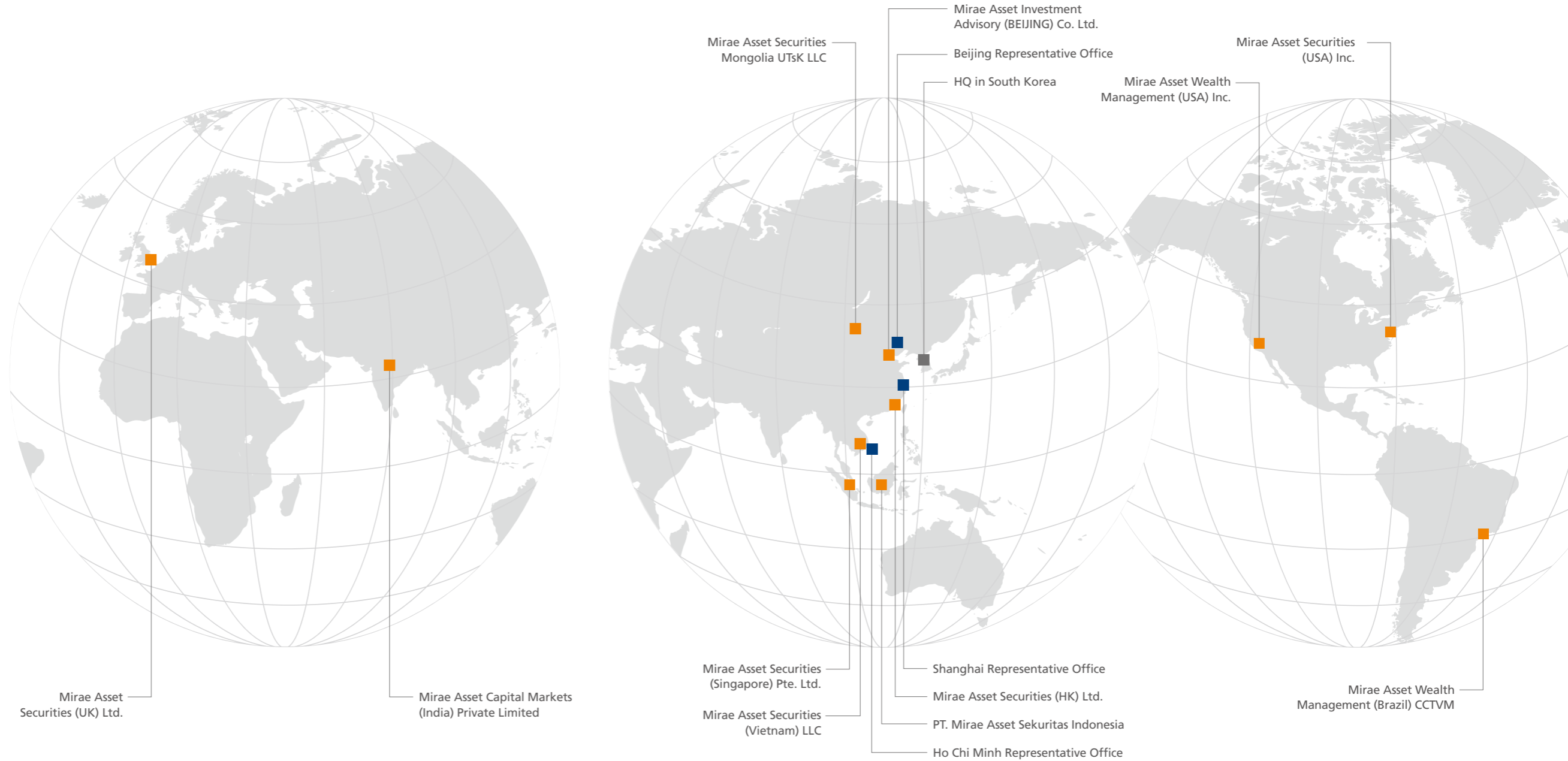
REPRESENTATIVE OFFICES

3

OVERSEAS SUBSIDIARIES

11

(Number of corporations in operating activities)



### Global Investment Partner — Mirae Asset Daewoo

Mirae Asset Daewoo is making relentless endeavor to make a leap forward into becoming a global top-tier investment bank by expanding our global business.

Total Assets

118.1  
KRW trillion

Equity Capital

8.4  
KRW trillion

Total Client Assets

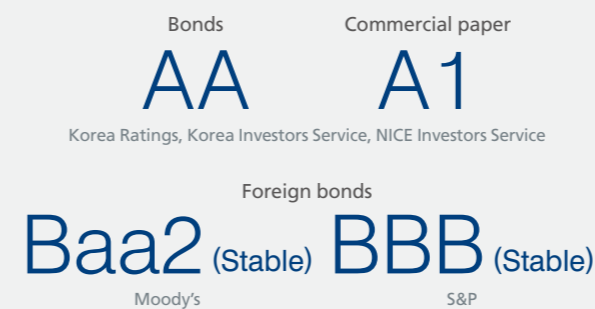
234.4  
KRW trillion

Market Share in Brokerage Commissions for Equity Securities

10.5 %

(As of December 31, 2018; Consolidated figures basis)

### Credit Ratings



### Shareholder Composition

Shareholder Name	Number of shares	Ownership (%)
Mirae Asset Capital Co., Ltd.	126,980,000	19.29
National Pension Service	65,769,075	9.99
Naver	47,393,364	7.20
Employee Stock Ownership Plan	1,703,912	0.26
Treasury Stock	109,581,643	16.65
Others	306,888,414	46.62
<b>Total</b>	<b>658,316,408</b>	<b>100.00</b>

(As of December 31, 2018; Ordinary shares basis)

# CEO Message

## Dear clients, shareholders and other stakeholders of Mirae Asset Daewoo,

I would like to extend my utmost gratitude for your unwavering support and encouragement which has been vital to our continued success.

It is my great pleasure to have the opportunity to share our achievements in 2018 in creating economic, social, and environmental value, as well as our vision for the future through this Integrated Report.

For most financial institutions, including Mirae Asset Daewoo, 2018 was a challenging year. The year began with high hopes, triggered by exponential growth of the companies leading the Fourth Industrial Revolution. However, there was dramatic volatility in the second half of the year, caused by the US-China trade conflict and interest rate hikes by the US Federal Reserve, which in turn led to a marked economic decline in Korea and overseas.

Throughout 2018, however, Mirae Asset Daewoo has maintained our focus on overcoming the challenges we faced, and has continued to lay the foundation for becoming a global investment bank.

We solidified our position as a major mega IB through a capital increase of KRW 70 million in early 2018, which expanded our equity capital to KRW 8.4 trillion. At the same time, we have leveraged our investment capabilities to secure over KRW 6 trillion investment assets in Korean and overseas. We have thus created a series of strong, differentiated engines for growth in investment banking (IB), principal investment (PI), and trading. In addition, we have established our overseas business as a new revenue source by strengthening the capital of our overseas subsidiaries, and issued U.S. dollar-denominated bond worth USD 300 million for the first time among Korean securities companies, in order to secure an additional source of funding.

Our client assets are the foundation and reason for our business, so that we have proactively protected them from the impact of the market downturn. In particular, we expanded long-term assets in pension products from just over KRW 10 trillion to almost KRW 12 trillion, and overseas stock consignments, which are emerging as a new destination for investments, rose from just over KRW 3 trillion to KRW 5 trillion. We have thus successfully created an investment portfolio which both meets our clients' requirements and safeguards their assets. We have also increased the number of our high net worth individual customers (those with investments of KRW 100 million or more) to 150,000.

As such, 2018 was a significant year for Mirae Asset Daewoo, in which we laid the foundation for achieving our mid-to long-term vision of becoming a global investment bank.

### Dear client, shareholders and stakeholders,

In 2019, we will reflect on the achievements and challenges of 2018, and build on them to achieve sustainable growth.

First of all, we are establishing a flexible organizational structure which is able to respond swiftly to the changing competitive landscape. We are setting up large WM centers suited to the fast-changing mobile era, while also putting in place independent management structures needed for IB, trading, and wealth management (WM), in order to establish responsible management and speed management.

In addition, we will upgrade the G.I.D.P (Global, Investment, Digitalization, and Pension) strategy formulated last year to a strategy of 'creating synergy through convergence'. We will double our execution capacity for overseas deals

in IB and PI by making full use of our extensive overseas network. We have also started to use advanced digital technologies, including big data, to introduce a new market forecast methodology into our WM business. These efforts will lead to the development of differentiated global products and services, enabling our clients to benefit from higher quality financial investments.

Above all, we are striving to transform the fundamentals of our business so that we can become a global investment bank. We will further increase our investment assets in Korea and overseas, which stand at KRW 6 trillion. We will also continue to improve our investment organization, and hire the best professionals so that we can sharpen our competitive edge in IB and trading.

Last but not least, Mirae Asset Daewoo is fully committed to fulfilling our social responsibilities. We are establishing a model for sustainable growth so that we can create good jobs, offer high-quality products and services for the prosperity of society, and continue to make heartfelt contributions to people in need. Our activities relating to corporate social responsibilities are focused on three main areas – nurturing talent, social welfare, and a culture of sharing in partnership with the Mirae Asset Park Hyeon Joo Foundation. These activities reflect our commitment to sharing our profits with the socially marginalized and wider society, and building a better tomorrow.

Mirae Asset Daewoo firmly believes that we can make a contribution to the world through investment. Based on this, all of our business activities revolve around our core principles of 'customer alliance' and 'enhancing shareholder value'.

The reason that Mirae Asset Daewoo is aiming to become a global investment bank is so that we can provide our individual and corporate clients, both in Korea and overseas, with differentiated content, products, and services that they need to achieve optimal asset allocation and profitability, and thus ensure a secure retirement. We are also continuously striving to uncover diverse and profitable new opportunities for generating income, so that we can improve our return on equity and create greater returns for our shareholders.

Mirae Asset Daewoo will strive through 'Permanent Innovation and Investment' to open new roads towards national and international prosperity. These efforts will be supported by our complete commitment to being a company which is based on ethics and transparency, dedicated to the principles of sharing and volunteering.

Your continued support and encouragement would be most appreciated.

Thank you.

**Choi Hyun Man**

Executive Vice Chairman/CEO,  
Mirae Asset Daewoo



# Company Profile

## BUSINESS PHILOSOPHY

### We value our people and embrace the future with an open mind.

Putting our clients' needs first, we aspire to be a consistent partner. Business philosophy is what guides us and is a never-changing value of Mirae Asset.

## VISION

### As a global financial group, we pursue excellence in investment management to help our clients achieve their long-term objectives.

We strive for our clients' lifetime well-being. Our Group vision presents Mirae Asset's evolving role and strategy as a global investment company working towards our clients' lifetime well-being.

## CORE VALUES

Our four core values – Clients First, Objectivity, Team Play and Citizenship – should be the key decision-making criteria for all Mirae Asset employees.



#### Clients First

Our clients' success is our success. We will nurture long-term relationships by helping our clients build wealth for life with proven investment strategies.



#### Objectivity

We assess opportunity impartially. Our independence helps ensure our decisions are aligned with the needs of our clients.



#### Team Play

We grow through respect for each individual and belief in team spirit. We aim to create an ethical meritocracy in which talent is rewarded and opportunity is equally available to all.



#### Citizenship

Profoundly aware of our responsibilities as a good corporate citizen, we give back to the communities that nurture us and pledge to continue to support a range of community initiatives.

Mirae Asset Daewoo has been taking a step forward with sincerity to grow into a global IB. As a global investment expert and based on its global network, Mirae Asset Daewoo has been taking the lead in providing products with distinctive values by proactively identifying assets of high quality all around the world and actively pursuing overseas investment opportunities.

## Company Overview

Company name	Mirae Asset Daewoo Co., Ltd.
Headquarters	Mirae Asset CENTER 1 Bldg., 26, Eulji-ro 5-gil, Jung-gu, Seoul 04539, Korea
CEOs	Choi Hyun Man, Cho Ung Kee
Business type	Financial investment
Global network	U.S., UK, Brazil, China, Hong Kong, Singapore, Indonesia, Vietnam, etc.

(As of December 31, 2018)

## Subsidiaries

Company name	Location	Capital stock	Main business	Ownership
Mirae Asset Venture Investments Co., Ltd.	Korea	KRW 26.5 billion	SME start-up investments	72.6%
Mirae Asset Life Insurance Co., Ltd.	Korea	KRW 990.7 billion	Insurance business	17.1%
Mirae Asset Securities (Hong Kong) Ltd.	Hong Kong	USD 634.3 million	Brokerage and investment	100%
Mirae Asset Securities (UK) Ltd.	UK	USD 607.7 million	Brokerage, investment and investment advisory	100%
Mirae Asset Securities (USA) Inc.	U.S.	USD 232.45 million	Brokerage and investment	100%
Mirae Asset Realty (Singapore) Pte.	Singapore	USD 61.04 million	Real estate investment and leasing	100%

(As of December 31, 2018)

## Investment Principles

As Korea's leading financial institution, our investment activities are firmly based on solid investment principles and know-how accumulated with our professional experiences. Furthermore, we strive to provide our clients with greater value and contribute to creating a vibrant society through investment.



Mirae Asset identifies the sustainable competitiveness of companies.

- Companies with "sustainable competitiveness" refer to those companies with a competitive advantage in market share, business model, corporate governance and earnings growth. It is Mirae Asset's belief that share prices eventually converge with earnings growth and subsequent cash flow.
- Thus, our effort to identify companies with sustainable competitiveness is a search for high quality factors in a company that will lead to stable earnings growth.



Mirae Asset invests with a long-term perspective.

- A long-term perspective is needed when determining whether a company's competitiveness is sustainable. Though share prices may be volatile over the short-term, earnings growth is the main driver behind long-term price movements.
- Investing in individual company's intrinsic competitiveness and generating stable cash flow is the very essence of long-term investment.



Mirae Asset assesses investment risks with expected return.

- Investment risks should always be simultaneously assessed with expected return. Key factors such as valuation, corporate governance and liquidity should be continuously monitored for any potential damage on the long-term competitiveness of a company.
- Exposure to assets that may incur too much risk should be limited while the Risk Management Division should constantly monitor whether actual investment adheres to our investment principles.



Mirae Asset values a team-based approach in decision-making.

- Successful investment management at Mirae Asset is not based on an individual's decision-making but rather on a team's decision to firmly adhere to our investment principles and processes.
- Mirae Asset does not rely on star managers. Portfolios in accordance with our investment principles are created through extensive discussions and teamwork among division members.

## Value Chain

Mirae Asset Daewoo is committed to doing our business in a sustainable way throughout the entire business lifecycle from product development to sales, customer care, investment, and asset management. This enables us to maximize our business performance, while providing clients with long-term and systematic asset management services.

### Approach

We develop products from a long-term perspective aimed at protecting financial consumers. In particular, we take a comprehensive approach encompassing customer, product, and channel, and thus develop products that meet customer needs.

We make sure that clients can enjoy our products and services more conveniently and access our diversified sales channels more easily. In particular, we are compliant with our sales practices and pursue complete selling.

We offer customized wealth management services as well as a variety of services specific to online and mobile channels, which in turn, lead to differentiated customer experiences.

We enhance the value of client assets through successful asset management from a long-term perspective. In particular, we are committed to fulfilling our social responsibility by engaging in socially responsible investments such as new and renewable energy.

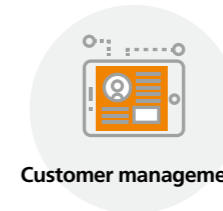
### Major issues

- Develop products to meet societal needs and changes such as aging society
- Develop eco-friendly products such as a product responding to climate change

- Operate diverse sales channel platforms
- Comply with ethics and compliance

- Provide customers with customized products
- Promote communication with customers
- Protect private and financial information of customers

- Generate stable cash flow
- Pursue sound asset management
- Expand socially responsible investments



# G.I.D.P Innovation

## The Permanent Innovator

We are forward-looking and never stop innovating – this is the core of our strengths. We are taking a leap forward to being a global top-tier IB by 2020 through innovation in the four areas of Global, Investment, Digitalization, and Pension.

### GLOBAL

#### Pursue globalization of business structure

Generate 30% of profits from global business by 2020

##### Achievements in 2018

- Became the first in the industry to exceed KRW 5 trillion in overseas stock asset
- Became the first in the industry to enter the capital market in India by establishing an Indian subsidiary
- Became the first in the industry to issue U.S. dollar-denominated bonds of USD 300 million

##### Plans for 2019

- We will pursue globalization of our business structure by going beyond global network expansion and sourcing global IB deals and allocating customer assets and proprietary assets globally
- We aim to achieve global business to bring balance back to the domestic-dependent profit structure and enhance the company's profit stability

G

### DIGITALIZATION

#### Establish a foundation for future growth through digitalization

##### Achievements in 2018

- Successfully launched the 'Mirae Asset Permanent Innovation System (MAPIS)' to proactively respond to the Fourth Industrial Revolution
- Opened the Digital Innovation Platform homepage to collaborate with fintech companies
- Became the first in the industry to release an authentication service which connects a PC and mobile devices

##### Plans for 2019

- We aim to become an integrated financial investment company to offer all types of financial transactions anytime, anywhere, with ease and convenience
- We will expand the scope of digitalization to include not only customer services but also our way of work

D

### INVESTMENT

#### Achieve growth through investment

##### Achievements in 2018

- Discovered and invested in unicorn companies in Korea and overseas, such as Didi Chuxing, Grab, and DJI
- Made investment in Alphadom City in Pangyo to support nurturing a cluster for the Industry 4.0 and convergence among high-tech industries
- Made investment in corporate-style public housing initiatives to improve the housing environment and supply public housing in Korea

##### Plans for 2019

- We will identify and invest in sound investment assets and companies with growth potential, driven by a dedication to contribute to customers and society
- We will productize our differentiated investment to allow Korean investors an opportunity to invest in outstanding global assets

I

### PENSION

#### Strengthen pension-based integrated marketing

##### Achievements in 2018

- Became the first in the industry to achieve KRW 11 trillion in pension assets
- Expanded non-face-to-face customer services and carried out infrastructure innovation to improve customer convenience
- Established an 'Open Pension Asset Management Center' to offer accessibility not only for our customers but also for others

##### Plans for 2019

- We will run our pension business in a consistent manner, from a long-term perspective, with the goal of helping our customers enjoy a comfortable retirement
- We aim to provide optimum pension solutions based on the largest collection of pension products in Korea and differentiated profitability management systems

P

# Business Segment

## Wealth Management



We provide top-tier wealth management services that are well suited for customer's purpose and propensity of investment, backed by our global network – the largest among Korean securities companies.

### OVERVIEW

#### Customized integrated consulting service

Mirae Asset Daewoo provides comprehensive consulting services for complicated issues by leveraging our expertise in tax, real estate, legal, investment, and insurance. Furthermore, we create and deliver timely contents with the financial and non-financial market evolvement.

#### VIP service

Mirae Asset Daewoo has launched 'Oblige Club', an exclusive wealth management brand for VIP customers who pursue values beyond wealth and honor, to provide not only financial services but also greater values. Our VIP services include Global Vacation Club, which provides leisurely time with dignity and ideal services, private culture and art programs with diverse and in-depth themes, and premium lifestyle services to ensure relaxing and graceful life for VIP customers. The Oblige Club will stand by our customers to help them enjoy their post-retirement life.

### FEATURES

**Global asset allocation** In a bid to provide high quality financial services to our customers, Mirae Asset Daewoo has launched a global expertise development program to nurture talents with global business competences from a long-term perspective. Furthermore, we have a top-tier research center and global network through which our customers can receive differentiated investment information and advanced and stable financial products. In particular, we are seeing innovative products with combined IB and trading further expand the horizon for customer's asset management.

**Customer services at mega-sized branches** We have taken a step in 2018 to create mega-sized branches by consolidating and merging 28 branches. This was in line with our goal of providing a more streamlined customer service and enhancing the quality of customer consulting services. As of the end of March 2019, there are 111 branches in operation.

## Pension



We help our customers manage their assets to prepare for a stable post-retirement life through the efficient management of their retirement and individual pensions based on our distinctive global market asset allocation capabilities.

### OVERVIEW

#### Differentiated pension consulting service

We support all business operations necessary to make decisions on the introduction of a retirement pension system and our highly-experienced consultants and other dedicated professionals provide specialized consulting services on the adoption of a retirement pension system and stable management of pension assets. We are the only one in the industry to operate a dedicated administrative organization for seamless support and own a leading retirement pension system.

#### Wrap account for global asset allocation

We are the first securities firm in Korea to launch a global asset allocation wrap account which provides a one-stop service across the entire process from investment strategy (Plan) to product selection (Do) and monitoring (See). Our investment experts provide systematic services, ranging from product selection to investment execution and after-sales management, thereby assisting the successful management of customer's pension assets.

#### Affiliation with SEMA to support its pension business

Scientists and Engineers Mutual-aid Association (SEMA) consigned Mirae Asset Daewoo to conduct its pension operations in 2010. We were designated as the sole consignment operator of SEMA's pension management through a fair competition, and have conducted IT system development and asset management operations, including management (recording) of SEMA pension, asset management services, and order transaction services. As of the end of 2018, there are 21,199 subscribers with KRW 1,740 billion assets under management.

### FEATURES

**A wide range of products** We provide well-diversified products by leveraging our outstanding global asset allocation capabilities. We also pursue both stability and profitability, with the goal of helping our customers create and manage pension assets that will ensure their comfortable retirement.

**Services based on well-structured organizations** Mirae Asset Daewoo is reaching out to its pension customers through nationwide WM branches, Investment Wealth-Management Center (IWC), and Corporate RM Center at its headquarters. We have established internal teams of dedicated pension experts, such as Pension Asset Management Team, Pension Information Team, Mirae Asset Retirement Institute, and Pension Consulting Department, providing competitive services.

## IB



We will establish a business model where growth of the company is translated into benefits for investors and share them with our clients.

### OVERVIEW

#### IB Division1

It provides full services for corporate initial public offerings (IPO) and various corporate financing solutions, such as pre-IPO investments, paid-in capital increase and issuance of equity-linked notes and corporate bonds. It also offers such diverse financial services as finance for publicly-traded REITs, structured finance and credit exposure.

#### IB Division2

It undertakes real estate projects in Korea and overseas in various forms that require large-scale financing. In addition, it conducts diverse alternative investments including aviation and ship finances, and also provides financial advisory and funding services for power & energy and infrastructure projects.

#### IB Division3

It leverages its domestic and overseas networks to participate in the acquisition finance market and provides M&A advisory services. It invests in overseas real estate and SOC financings through global investments, and also provides top-tier private equity fund (PEF) management services as a general partner (GP).

### FEATURES

**Total financial solutions** Mirae Asset Daewoo offers customized services of various nature, such as corporate financing, real estate, alternative investment, and acquisition financing, and thus presents comprehensive solutions based on experiences accumulated both in Korea and overseas.

## Trading



Mirae Asset Daewoo is an independent investment specialist, equipped with a globally competitive human network and financial infrastructure. We strive to increase profitability in a stable and consistent manner through product-linked trading and principal investments.

### OVERVIEW

#### Product-linked trading

We offer diverse investment opportunities with our in-house developed equity-linked securities (ELS), derivative-linked securities (DLS) and exchange-traded notes (ETN) with such various underlying assets as stocks, indices, foreign currencies, credit and commodities, to meet client needs for medium-risk medium-return investments in the current low interest rate environment. These financial products are linked to our hedging investments as well. Furthermore, we operate repurchase agreements (RP) in a stable manner, and provide our clients with short-term fixed interest through cash management accounts (CMA).

#### Principal investments

We are making investments in global companies with high competitiveness from mid-to long-term perspectives, based on our global network, the largest among Korean securities firms. A thorough risk management system has been in place to pursue stable profitability and generate return on capital. A number of advanced trading methodologies are applied to the management of bond, foreign exchange and derivatives products, pursuing proprietary trading which generates a stable and consistent return on capital.

### FEATURES

**Organization with expertise and capabilities** Mirae Asset Daewoo has categorized its trading organization into two divisions, in order to ensure responsible management, professionalism, and distinctive competitiveness. Accordingly, Trading Division1 is in charge of derivatives trading, while Trading Division2 is dedicated to fixed income trading.

- Derivatives trading: On the back of the state-of-the-art financial engineering methodologies and expertise accumulated for over a decade, we develop in-house models, and monitor and analyze derivatives-related positions. In addition, we provide full support for the derivative product system and internal IT system to upgrade product offerings and trading process.

- Fixed income trading: Based on a distinguished management process, we carry out product-linked trading for bonds denominated in KRW and foreign currencies along with proprietary trading. We also supply bonds denominated in KRW and foreign currencies to retail customers. Furthermore, we offer bond brokerage services for both domestic and overseas institutional investors, while providing clear guidance on global and local interest rates aimed at diversifying bond investment and improving profitability.



## Wholesale



We provide institutional investors and corporations in Korea with a series of products and solutions, including equity, derivatives-linked securities (DLS), alternative investment products and financial products from home and abroad, suited to their institution-level financial management.

### OVERVIEW

#### Securities brokerage service

For Korean institutional investors covering both Korean and foreign corporations, rich research contents and services are provided to optimize their decision-making and investment execution processes. In addition, we offer various investment solutions, such as unlisted securities brokerage and overseas pre-IPO services, in order to satisfy the demand of institutional investors for new types of investment.

#### Customized investment products

For Korean institutional investors and corporations, we offer customized investment solutions including trusts, wrap accounts, collective investment securities, derivatives-linked securities, such as ELS and DLS, and alternative investment products, such as domestic and overseas real estate and overseas blind funds.

### FEATURES

**Providing distinctive services** We are devoted to developing competitive products by joining hands with relevant teams and major asset managers both in Korea and overseas to launch products that cater to varying needs of institutional customers including Korea's major pension funds, public institutions, insurers, and commercial corporations. To proactively respond to growing demand for overseas alternative investment products, we have expanded our product portfolio to incorporate hedge funds, PEF, debt funds, infrastructure funds, and real estate funds.

## PBS



We contribute to vibrant investment activities in hedge funds while also helping our customers increase their assets by providing services for hedge fund management, such as securities lending and borrowing, leverage, marketing, consignment, and swap.

### OVERVIEW

#### Hedge fund service

We support the effective execution of hedge fund management strategies by making investments in domestic and overseas assets. We also offer incubation services through seeding and marketing, brokerage services for domestic and overseas securities and bonds, funding through broker loans, and consignments for investment.

#### Securities lending and borrowing service

This refers to a securities lending service to support short covering and arbitrage trading strategies. We are expanding the service scope to allow retail customers to leverage this service.

#### Over-the-counter (OTC) derivatives service

Based on our global network, we are offering hedge funds with investment accessibility for multiple countries. We are pursuing financing and fund expansion through total return swap, while endeavoring to maximize the profit.

### FEATURES

**One-stop business platform** This division reports directly to the CEO and offers adequate services in a timely and efficient manner. The division itself operates an integrated organization to provide all services on its own and also offers professional services and feedback that are suited to customer demands in a fast and accurate manner.

## Global



Mirae Asset Daewoo is leveraging its industry know-how built through long-standing business operations both at home and overseas and a highly-competitive global network to discover and invest in prime assets around the globe. In particular, by establishing specialized business models through localization, we are committed to establishing a successful overseas business model.

### OVERVIEW

#### Most extensive global network among Korean securities firms

We have built a global network which is the largest in the industry with 11 overseas subsidiaries and three representative offices in ten countries across Europe, U.S., South America, and Asia. There are around 850 professionals fully engaged in business areas including IB, global brokerage, trading, WM, and prime brokerage.

#### Proactive overseas market expansion and strategies to predominate the market

Mirae Asset Daewoo is the only Korean securities company that has entered Brazil, Mongolia, and India, and we are an established market participant in the local markets. In particular, our New York subsidiary launched PBS business for the first time among overseas subsidiaries of Korean securities companies, demonstrating our pioneering position not only in terms of countries where we operate but also the businesses we carry out.

#### Establishing overseas business model tailored to a local market

We focus on building our own business models, tailored to each region based on long-standing overseas expansion experiences, instead of following typical overseas expansion models. This contributed to all overseas subsidiaries recording profits in 2018, creating a successful overseas expansion model.

### FEATURES

**Strategy for developed markets** In developed markets, we are vigorously establishing an efficient investment ecosystem by identifying and investing in prime assets and taking a step further in productizing investment assets for WM clients. In addition, we focus on developing a sustainable business model by penetrating niche markets that reflect each region's characteristics to create stable sources of revenue.

**Strategy for emerging markets** In emerging markets, we are expanding our business to include IB and trading based on brokerage services for retail and institutional investors, while earning a stature as a full-service local securities firm through a customized localization strategy that takes local circumstances into consideration. As a specialist in the emerging market, we continue to make investments in overseas business from a long-term perspective.

## Digital



Equipped with competitive investment solution platforms such as the home trading system (HTS) and mobile trading system (MTS), we provide differentiated customer services by analyzing big data.

### OVERVIEW

#### Non-face-to-face online business

We have launched online and mobile transaction services to enable 24/7 account opening through automated identity card authentication and immediate transactions. In particular, we have adopted fintech solutions such as simple authentication and video calls to expand services that can enhance customer convenience.

#### Customized financial services

Mirae Asset Daewoo is leveraging big data and AI technologies to offer customized financial services in various areas, such as global investment, financial products, and pensions.

### FEATURES

**Distinctive investment solutions** We offer such differentiated financial services as Global Portfolio Solution (GPS) and m.Club through multiple channels including the industry's first MTS, HTS with proven strengths, websites, and blogs.

**Digital finance innovation** Amid fast-changing financial environment, we are offering customers a new financial experience backed by innovative digital financial solutions. In particular, partnership with fintech companies and ICT companies allow us to pioneer into discovering innovative digital finance technologies and develop differentiated financial services, such as our digital advisory service.



# GOVERNANCE

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# Corporate Governance

## Role and Status of BOD

Mirae Asset Daewoo has built a sound and transparent corporate governance structure, in order to promote long-term growth and protect the interest of shareholders, financial consumers and other stakeholders. In addition, we have made continued efforts to improve transparency in management and build a robust framework for responsible business management. The Board of Directors (BOD) consists of seven directors – three executive directors and four independent directors. We maintain the independence of the BOD from management by composing a majority of directors with qualified independent directors.

## Appointment and Expertise of Directors

In constituting our Board of Directors, Mirae Asset Daewoo takes diversity into consideration, such as race, gender, religion, birthplace, and nationality in accordance with our Internal Corporate Governance rules. In terms of expertise, we eliminate biases, such as having a specific common background or representing the interest of certain job positions and groups. Furthermore, the BOD consists of directors with a proper level of experience and knowledge from diverse areas to fulfill directors' duties. As of April 2019, the BOD consists of five members with expertise in financial investment, one in law/administration and taxation, and one in economics and business administration. Our independent directors are required to meet independence criteria in addition to diversity and expertise and independent director candidates are managed on an ongoing basis.

## Efficient Operation of BOD

The BOD and subcommittees under the Board are Mirae Asset Daewoo's key decision-making entities and are fully executing their roles and responsibilities. Five committees are in place, such as the Committee for Recommendation of Candidates for Executive Officers, Audit Committee, Risk Management Committee, Compensation Committee and Steering Committee. In particular, the Steering Committee has been established within the BOD to deliberate and decide key management and operational affairs. This is to ensure that major decisions of the company go through internal deliberation of the Steering Committee, established based on the Commercial Act and Articles of Incorporation, to enhance the adequacy and legitimacy of managerial decisions as well as transparency and fairness of the decision-making process. This also allows us to deliver values of sound corporate governance and responsible management.

## Audit Committee

The Audit Committee supervises the propriety and legitimacy of the management's actions to help deliver rational management decisions. Comprised of three independent directors qualified in terms of independence, the Committee members have professional backgrounds in financial investment, financial supervisory, and accounting and finance. There are grounds to leverage advisory from external experts, if necessary. To reinforce independence and fairness, of particular note, the Committee members are appointed and dismissed by an annual general meeting (AGM), and they execute duties in a stance independent from the BOD or execution bodies. Resolutions made by the Audit Committee cannot be objected to by the BOD.

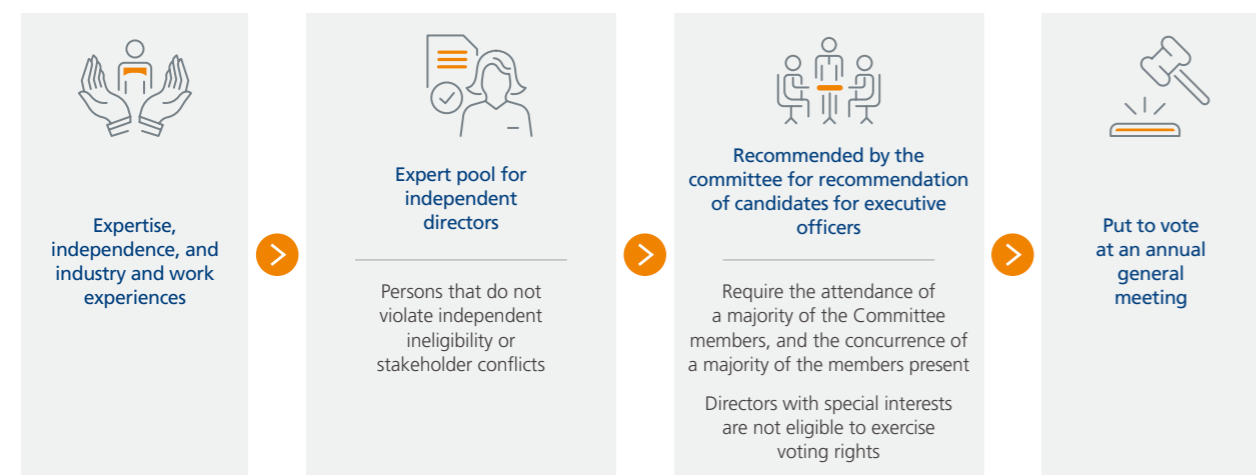
### Board of Directors

(As of May 2019)

Classification	Name	Expertise	Key Profile	Tenure
Executive directors	Choi Hyun Man	· Financial investment · Economics and business administration	· Executive Vice Chairman, Mirae Asset Life Insurance · Currently Executive Vice Chairman & CEO, Mirae Asset Daewoo	14 years 11 months
	Cho Ung Kee	· Financial investment · Economics and business administration	· President & CEO, Mirae Asset Securities · Currently Vice Chairman & CEO, Mirae Asset Daewoo	7 years 11 months
	Kim Sang Tae	· Financial investment	· Head of IB Division1, Executive Vice President, Mirae Asset Daewoo · Currently President/Head of Investment Banking, Mirae Asset Daewoo	1 year 1 month
Independent directors	Hwang Kun Ho	· Financial investment · Economics and business administration	· Chairman, Korea Financial Investment Association · Currently Visiting Professor, Sogang Business School	4 years 1 month
	Kim Byeong Il	· Law and administration · Accounting and tax	· Administrative Chief Official & Secretary, Ministry of Finance and Economy · Currently Professor, Tax Economics Department, Kangnam University	3 years 2 months
	Kwon Tae Kyun	· Economics and business administration · Government authority	· Deputy Minister of Trade Investment, Ministry of Knowledge Economy · Currently Advisor, Yulchon LLC	2 years 1 month
	Park Chan Soo	· Financial investment · Government authority	· Assistant Superintendent, Financial Supervisory Service · Currently CEO, Pinestone	1 year 1 month

\* Chairman of BOD

### Independent Director Appointment Process



### Committees under the BOD

Classification	Roles & Responsibilities	Composition	Number of Meetings Held in 2018 (Handled Agenda)
Committee for Recommendation of Candidates for Executive Officers	<ul style="list-style-type: none"> <li>Recommend candidates for independent directors, members of the Audit Committee and CEO</li> </ul>	Executive director: 1 Independent directors: 2	1 time (3 agenda)
Audit Committee	<ul style="list-style-type: none"> <li>Build propriety of the overall internal control system</li> <li>Establish and execute internal audit plans to evaluate and improve the company's business performance</li> </ul>	Independent directors: 3	11 times (22 agenda)
Risk Management Committee	<ul style="list-style-type: none"> <li>Supervise comprehensively and create a controlled environment to enable efficient risk management and build internal control framework</li> <li>Build integrated risk management policies, and assign roles and responsibilities for supervising</li> </ul>	Executive director: 1 Independent directors: 2	16 times (35 agenda)
Compensation Committee	<ul style="list-style-type: none"> <li>Determine compensation amount and payment method</li> <li>Develop and disclose an annual report on compensation payment</li> </ul>	Executive director: 1 Independent directors: 2	4 times (4 agenda)
Steering Committee	<ul style="list-style-type: none"> <li>Deliberate and vote on matters delegated by the BOD, including overall corporate affairs and related matters</li> </ul>	Executive directors: 3	16 times (19 agenda)

## Independence and Diversity of BOD

Mirae Asset Daewoo adheres to the principle of appointing independent and professional independent directors to build a sound corporate governance system. We comply with the appointment procedures and principles, and thus secure independence. Qualifications for appointing competent candidates are as follows:

- I. Person with sufficient job experience or professional expertise in such fields as finance, economy, business management, accounting and law, required to perform duties as the company's independent director or audit committee member
- II. Person capable of performing duties without being restricted by certain interests for the interests of all shareholders or financial consumers as the company's independent director or audit committee member
- III. Person with appropriate sense of ethics and responsibility to perform duties as the company's independent director or audit committee member

In addition, we leverage strategic decision-making to review candidates from various fields to contribute to flexible and efficient management.

- I. Appoint a person with relevant experience with business management, law, administration and other fields that may comprehensively contribute to the business, despite lack of direct relevance in the financial and securities industries
- II. Constitute the BOD by appointing experts with a proper level of experience and knowledge from diverse areas to fulfill directors' duties; and eliminate biases, such as having a specific common background or representing the interest of certain job positions and groups
- III. Build a dedicated team that consistently provides training and business support to independent directors to support expertise in financial industry, and hold regular and irregular meetings to encourage and complement individual expertise

## Preventing Conflict of Interest

Directors who wish to leverage business opportunities that benefit or may benefit the company's interests are required to obtain prior approval. Activities related to conflict of interest are managed and monitored in compliance with Articles 397 and 398 of the Commercial Act. Accordingly, the 7th and 16th board meetings in 2018 deliberated on the fairness of transactions and unanimously voted on the 'Comprehensive Approval of the Transactions with Key Shareholders, etc.' The Fair Trade Act mandates prior approval from the BOD if affiliates

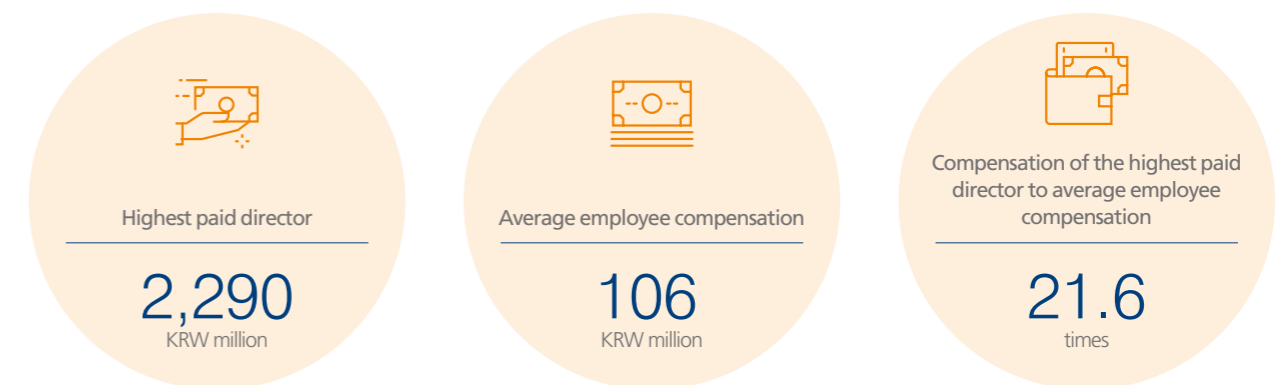
or conglomerates banned from doing cross-investment among affiliates engage in transactions exceeding KRW 5 billion or 5% of the larger between total capital and capital with a person with a special relationship. In line with the regulation, we have obtained approval from the 2nd, 5th, 7th, 8th, 9th, 10th, 11th, 12th, 14th, 15th, 16th, and 17th board meetings in 2018 on large-scale internal transactions of affiliates in accordance with the Fair Trade Act.

## Evaluation and Compensation of BOD

Mirae Asset Daewoo reviews the composition and operation of the BOD and its internal committees prior to an AGM every year. A comprehensive evaluation is carried out, assessing whether the BOD has adequately performed its roles to contribute to the interests of internal and external stakeholders, as well as their expertise, understanding of work duties, ethical and social responsibilities and demonstrated fairness in conflict of interests. This is initiated by the BOD, but specific duties are commissioned and independently performed by supporting divisions. In addition, the Compensation Committee has set

in place under the BOD to build and run a fair compensation framework. The Committee is responsible for reviewing whether the compensation framework for management and specific positions are reasonably developed against risk structure, and monitors the connection among the compensation framework, the company's financial position and risks on a regular basis. The Committee also runs an independent probe to monitor whether governance best practices of a financial company are adequately complied with, thereby strengthening the objectivity of evaluation.

### Employee Compensation against Highest Paid Director



### Compensation of Directors

Classification	Headcount <sup>1)</sup> (Person)	Total amount paid <sup>2)</sup> (KRW million)	Per capita (KRW million)
Executive Director	3	4,462	1,487
Independent Director	1	59	59
Audit Committee Member	3	186	62
<b>Total</b>	<b>7</b>	<b>4,708</b>	<b>673</b>

<sup>1)</sup> Number of registered directors as of December 31, 2018

<sup>2)</sup> Total compensation amount paid to directors of the BOD during 2018

### Criteria for Determining Independency of Independent Directors

(Disqualification of Independence, Article 382 of the Commercial Act)

1. Directors, executive directors and employees who are engaged in the regular business of the relevant company; or directors, auditors, executive directors and employees who have engaged in the regular business of the relevant company within the latest two years
2. The largest shareholder, his or her spouse, lineal ascendants and lineal descendants
3. Directors, auditors, executive directors and employees of the corporation, in cases where the largest shareholder is a corporation
4. Spouse, lineal ascendants and lineal descendants of directors, auditors and executive directors
5. Directors, auditors, executive directors and employees of a parent company or a subsidiary company of the relevant company
6. Directors, auditors, executive directors and employees of a corporation which has a significant interest in the relevant company, such as business transactional relationship
7. Directors, auditors, executive directors and employees of another company where directors, executive directors and employees of the relevant company serve as directors and executive directors

# Ethical Management

## Ethical Management System

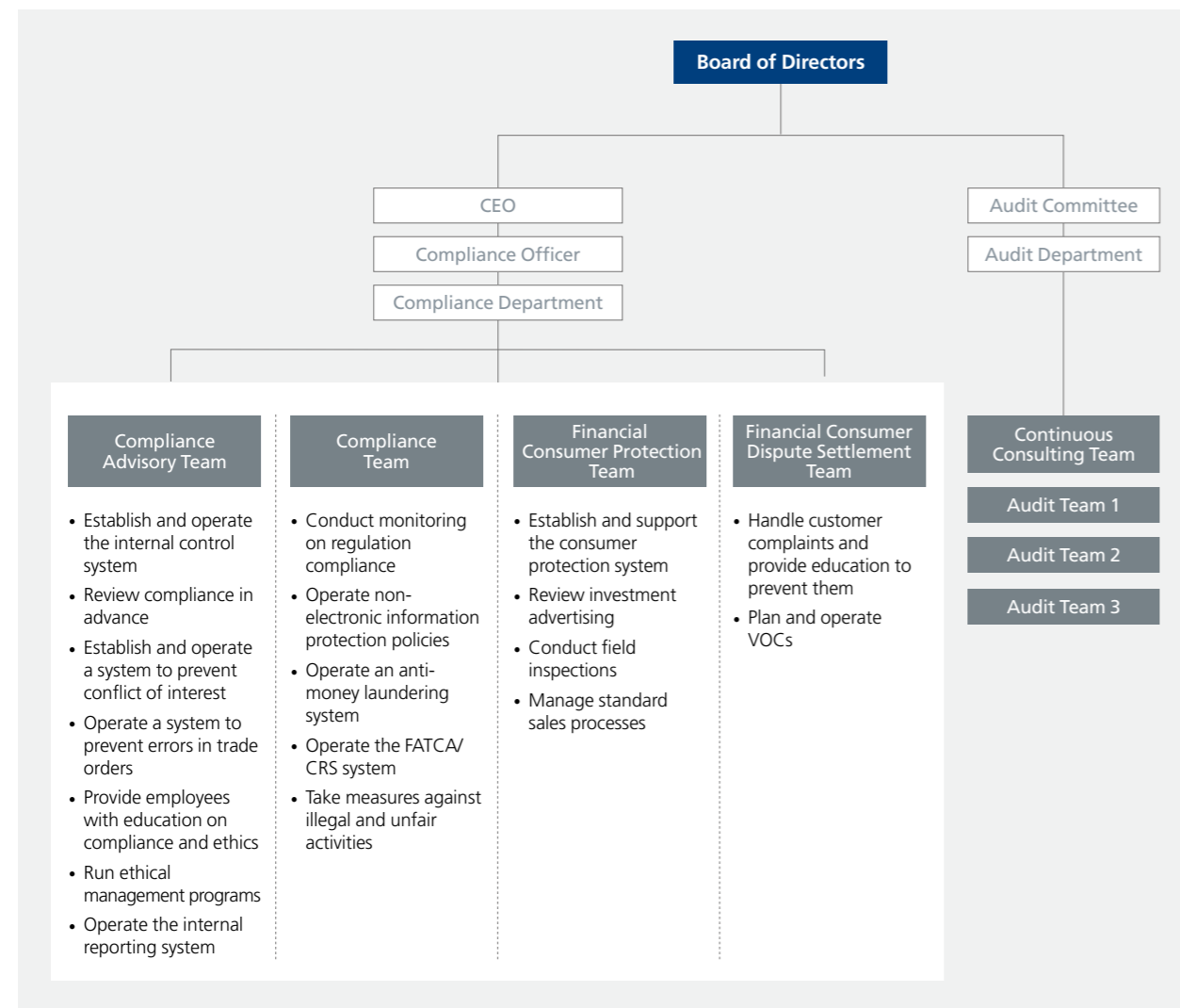
### Rules of Ethics on Sales Practices

Mirae Asset Daewoo upholds ethical management as the first and foremost priority of the financial industry and pursues ethical practices to take a firm root in employees' business activities through the Code of Ethics. In 2018, we established the Rules of Ethics on Sales Practices to further enhance the rights and benefits of investors by preventing illegal practices and financial incidents that may arise in the course of the company's sales activities. The Rules stipulate fair and accurate business processes and prevention of financial incidents, establishment of a system to prevent conflicts of interest, building of a faithful information provisioning process, efficient handling of complaints, and protection of investor information. Various efforts are underway to spread the new Rules of Ethics through internal communication and employee training.

### Organization for Ethical Management

A Compliance Officer has been appointed to independently supervise corporate-wide ethics and compliance. The Compliance Department is in charge of ethical management of the company, and it manages rules on ethics and compliance, policies and conformity with procedures. In 2018, we have newly set up the Financial Consumer Dispute Settlement Team in addition to existing Compliance Advisory Team, Compliance Team, and Financial Consumer Protection Team. The Financial Consumer Dispute Settlement Team is in charge of handling consumer complaints, conducting training for complaints prevention, and planning and operating a voice of customer (VOC) system.

### — Ethical Management Organization



### — Policies and Regulations on Ethical Management



#### Code of Ethics

We have overhauled our Code of Ethics to emphasize our ethical responsibilities and obligations we hold for our customers, shareholders and investors, employees and the company, as well as the nation and society as a socially responsible corporation.



#### Code of Conduct

We have newly enacted the Code of Conduct to present detailed guidelines to practice ethical management, such as fair execution of job duties, prohibition on obtaining unfair benefits and fostering a healthy corporate culture.



#### Rules of Ethics on Sales Practices

We have established the Rules of Ethics on Sales Practices to stipulate the company's internal rules and regulations on such matters as fair and accurate work execution, prevention of financial incidents, establishment of a system to prevent conflicts of interest, building of a faithful information provisioning process, efficient handling of complaints, and protection of investor information.

## Ethics and Compliance Report

Mirae Asset Daewoo manages internal matters of ethics and compliance violations through a system to protect the whistleblower's anonymity. Diverse ethics and compliance reporting channels have been established, including company intranet, telephone and emails through which an employee's ethics violation and compliance failure can be reported. Any kind of disadvantageous treatment and discrimination in the form of working condition against whistle-blowers is strictly banned in accordance with the company's internal control standards and rules of operation. In addition, whistle-blowers are entitled to an incentive program to encourage employees' participation, thereby creating a culture of ethics which is trusted across the enterprise.

### Financial Irregularities Report Center

We operate various channels, such as the Voice of Customer (VOC) system at our Customer Center, the Financial Consumer Dispute Settlement Team, and the complaints section on our website, in order to ensure safe financial transactions for our customers. In addition, the Compliance Department operates the internal reporting system. Through these methods, we are striving to prevent financial irregularities and to contribute to eradicating corruption. In particular, the internal reporting system has several measures in place such as whistle-blower protection and incentives.

### — Ethics and Compliance Reporting and Handling Status

Classification	2018	Note
No. of reports	7	4 on unethical behavior, 2 on prohibition of fair business execution, 1 on information leakage
No. of effective reports	3	3 complaints were submitted and handled internally
No. of punishments	0	None of the reports were identified to be of non-compliance and illegal nature

## Culture of Ethics and Compliance

Mirae Asset Daewoo strives to enhance the value of employees' integrity and spread a culture of ethics and compliance through continuous training and self-evaluation.

### Ethics and Compliance Campaign Video

Mirae Asset Daewoo has created videos as part of its ethics and compliance promotion campaign with the goal of increasing the awareness of ethics and compliance among its employees. The video includes contents of employees' basic obligations such as employees' investment products transaction, provision and reception of property interest, obligations with the firm, and cautionary details when receiving orders. Such campaign videos are regularly broadcast through the internal IPTV channels.

### Online Compliance Training

We have been running an online training program for compliance in order to establish a culture of ethics. This program takes place each year for the entire workforce on compliance basics, and a total of 4,277 employees attended and completed the course in 2018. Furthermore, those subject to mandatory training on anti-money laundering (AML) — 236 executives and 3,993 staff — are to attend an annual online training course on anti-money laundering so as to enhance the company's overall understanding of the AML system.

### — Activities to Spread a Culture of Ethics and Compliance

 <h4>Ethics and compliance training</h4> <ul style="list-style-type: none"> <li>• Provide trainings on the company's ethics and compliance system, basic obligations for employees, hands-on compliance monitoring, and ethics and compliance issues</li> <li>• Training program: Visiting training to sales offices on ethics and compliance; collective training for compliance managers; collective training on ethics and compliance for major sales activities, such as IB, trading, wholesale, and research; and training on unfair transactions at the headquarters and branches</li> </ul>	 <h4>Review of the fairness on affiliates' transaction for products and services</h4> <ul style="list-style-type: none"> <li>• Conduct evaluation whether any transactions among affiliates are made in a fair manner in order to eliminate unfair transactions in products and services</li> <li>• Prevent discriminatory actions between affiliated companies and non-affiliated companies by reviewing whether fair transaction conditions are met, whether business opportunities were provided for affiliated companies, and reasonable comparison of transaction conditions</li> </ul>
 <h4>Written oath on ethical management practice</h4> <ul style="list-style-type: none"> <li>• Each year, the entire workforce at Mirae Asset Daewoo shall submit a written oath to practice ethical management which stipulates that employees ought to 'conduct fair and transparent ethical management to contribute to enhancing the corporate value and developing a healthy financial industry and to fulfill the corporate's social responsibilities'</li> <li>• New hires and newly appointed independent directors are required to submit the oath, in a bid to promote the ethics and compliance mindset across the entire workforce</li> </ul>	 <h4>Self-evaluation on ethics and compliance</h4> <ul style="list-style-type: none"> <li>• The entire workforce is required to conduct self-evaluation on their ethics and compliance practice on a regular basis, in order to establish a culture of ethics and compliance culture</li> <li>• Evaluate whether such ethical behavior criteria are met as the fair execution of duties and ban on receipt of unlawful goods and gifts.</li> <li>• A monthly 'Ethics and Compliance Day' is designated when departments and branches meet to share and discuss key issues on ethics and compliance</li> </ul>

## Internal Control System

We have established a corporate-wide internal control system in order to manage the ethical and compliance process, as part of our endeavor to create value of fairness and transparency. Employees are banned from engaging in political activities during business hours, and all company premises are assessed for exposure to corruption to further grow the company into one that fulfills its ethical responsibilities.

### Internal Control Committee

Following the legislation of the Governance Act, Mirae Asset Daewoo convenes Internal Control Committee meetings in a semi-annual basis. The CEO presides over the Internal Control Committee meetings to discuss matters pertaining to internal control assessment results and response measures for key internal control issues. The Committee consists of eight members including the CEO who is also the Chairman of the Committee, Compliance Officer, and heads of core business lines. The roles and responsibilities of the Committee include sharing the internal control assessment results; review of improvement plans which reflect employee evaluation; overhauling and planning to respond to internal control vulnerabilities such as financial incidents; deliberation on key matters related to internal control; and reviewing ideas to enhance our employees' sense of ethics and compliance.

### — Internal Control System Performance and Plan

Performance in 2018
<h4>Revamped and reinforced compliance system</h4> <ul style="list-style-type: none"> <li>• Revised four company policies including the internal control standards and newly established Rules of Ethics for Sales Practices</li> <li>• Conducted preliminary review on 252 compliance matters and suggested 24 ideas to improve regulations on sales activities to FSS</li> <li>• Enhanced the existing AML system and implemented risk-based approach (RBA) system</li> <li>• Incorporated improvement measures for our stock trading system into the business procedures and IT system (strengthened the criteria to prevent order mistakes, established a system to block employees' stock trading, and formulated manuals for order mistakes)</li> <li>• Reviewed mandatory vacations (19 employees) to prevent financial incidents</li> </ul>

## Ethical Management for Partner Companies

### Ethics Training for Partner Companies

Mirae Asset Daewoo provides ethics trainings to employees of its partner companies in order to foster ethical practices within the supply chain. In particular, we have included a language in the agreement to consign handling of personal (credit) information that the partner company shall conduct privacy training more than once a year.

### Support for Developing Partners Companies' Code of Ethics

We have announced details of our Code of Ethics to help partner companies develop a proper understanding of our Code of Ethics. Upon request, we are providing our policies and standards on ethical management to them for reference purpose.

In addition, we have stipulated an article in the Code of Ethics to ban receiving entertainment, gift, or monetary goods from stakeholders outside the company to prohibit our employees from receiving any undue gifts, entertainment, and monetary goods from external stakeholders with regards to business. Furthermore, when it comes to partner cooperation, a clause for contracting with integrity is mandated into the partner agreement to ensure all business practices, such as bidding, contracts, and execution of contracts, shall abide by procedures set forth by relevant company regulations and be made in a fair and transparent manner and our employees shall not exploit one's superior position to solicit money and goods, coerce unfair transaction conditions, and make unlawful demands to intervene with partner's own business execution.

Plans for 2019
<h4>Establish field-based ethics and compliance system</h4> <ul style="list-style-type: none"> <li>• Operate a dedicated team for field training and inspection</li> <li>• Ease regulations on sales activities</li> </ul> <h4>Upgrade internal control system</h4> <ul style="list-style-type: none"> <li>• Review domestic and global stock trading systems, and re-establish work processes for securities lending and borrowing and covered short selling.</li> </ul> <h4>Reinforced self-assessment functions</h4> <ul style="list-style-type: none"> <li>• Strengthen monitoring for wrap account/consignment cross trading and started monitoring for adequacy in covered short selling</li> </ul>

# Risk Management

## Risk Management System

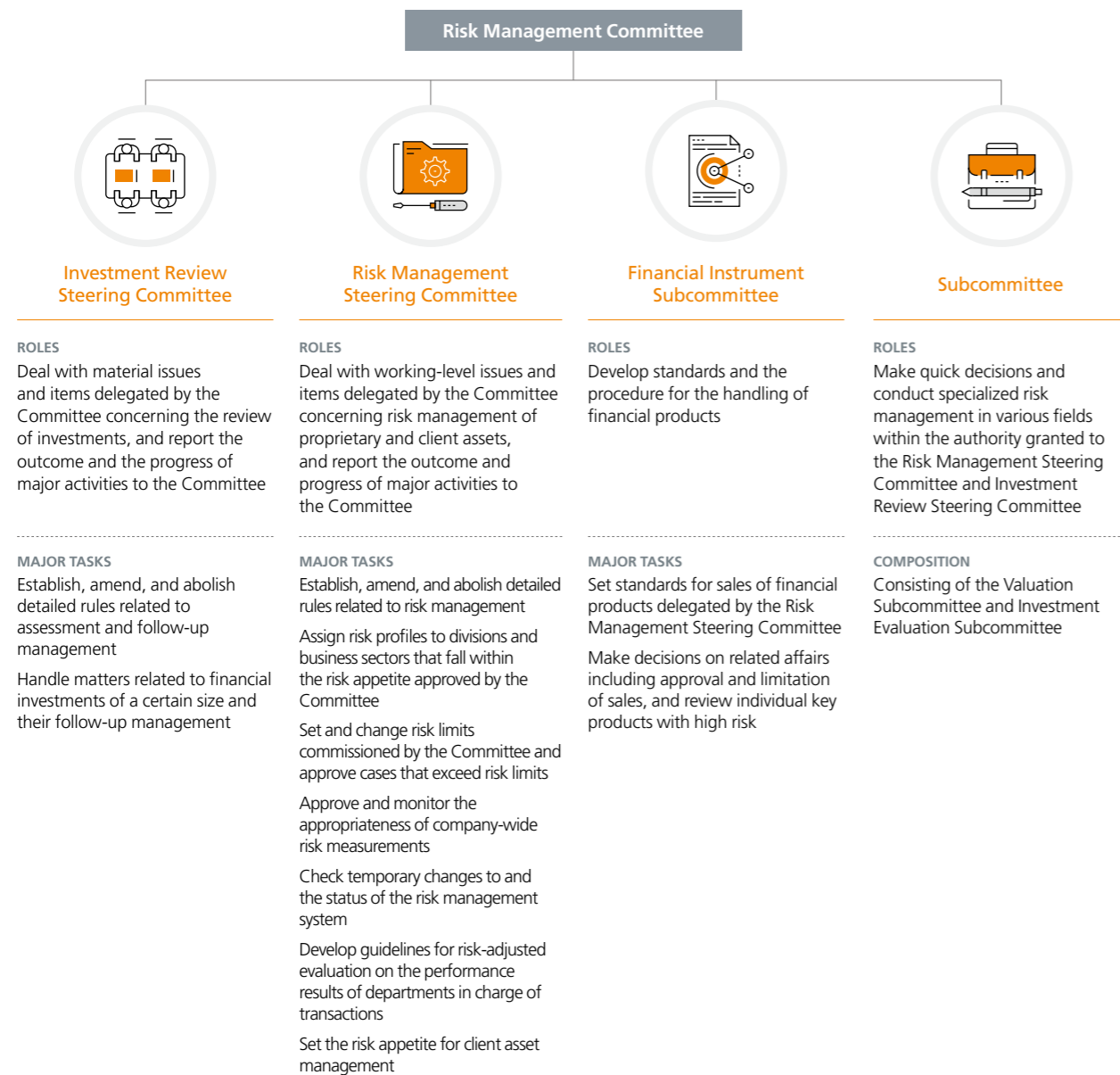
### Risk Management Governance

Mirae Asset Daewoo has set the Risk Management Committee in place under the Board of Directors. The Committee, consisting of more than three directors of which a majority are independent directors, is the prime decision-making entity on the company's risks and is in charge of formulating a risk management strategy in line with the company's management strategy and supervising whether risk management operations are properly carried out. Major matters deliberated and decided by the Committee include establishing a basic risk management direction and strategies and inspecting implemented matters; establishing, amending, and abolishing general regulations related to risk management; setting the company's risk-adjusted capital and minimum line of asset soundness; establishing the company-wide risk appetite and

loss limits and approving excess limits; approving and monitoring stress tests; and handling other significant issues related to the company's risk management system. The Committee members are appointed and dismissed by the BOD, with one independent director chairing the Committee.

In addition, we have established two steering committees – the Investment Review Steering Committee and the Risk Management Steering Committee – in order to assist the effective operation of the Risk Management Committee. We have also established the Subcommittee to make quick decisions and conduct specialized risk management in various fields within the authority granted to the Risk Management Steering Committee and the Investment Review Steering Committee.

### Risk Management Organization



**Establishment of the Financial Instrument Subcommittee** Mirae Asset Daewoo has established the Financial Instrument Subcommittee under the Risk Management Steering Committee in accordance with Article 23 of our Risk Management Policy in order to make quick and professional decisions, such as approval and limitation of sales of financial products to customers, and development of standards for sales. The Subcommittee had two meetings in 2018 after its establishment, where standards and approval for handling of various financial products; and prime brokerage transactions of OTC derivatives (portfolio swap), requested by individual investors and listed companies, were discussed and resolved, respectively. In 2019, the Subcommittee aims to reinforce preliminary risk assessment for sales of new high-risk financial products, and contribute to investors' successful asset operation by building a well-structured risk management process through after-sales monitoring.

**Integrated Crisis Management System** Mirae Asset Daewoo has established an integrated crisis management system for preemptive and timely response to crisis situations, including increasing market volatility in Korea and overseas. We have classified crisis situations into three categories – attention, caution, and emergency – based on 'financial market stability indicators' and 'internal soundness indicators,' and set detailed execution plans for each level, in order to thoroughly prepare ourselves against all crisis situations. In addition, we have ensured regular and practical monitoring by diversifying monitoring of domestic and foreign markets and selecting specific risk indicators that reflect the characteristics of each department and product, and report monitoring results to senior management. To prevent risks that arise from natural disasters such as fire, floods and earthquakes, as well as risks that are caused by IT system failures, we have developed and operated a business continuity plan (BCP) at the company level. We also have created an emergency manual to ensure continuity and stability of business operations by providing seamless business services in case of system failures.

## Risk Management System

**Integrated Risk Management System** Mirae Asset Daewoo has established an integrated risk management system to meet 'Minimal Requirements for Risk Management at Brokerage Firms' recommended by the financial supervisory authorities, and to strengthen the total risk management system. By doing so, we have built a foundation for calculating total capital at risk, managing risk, the risk adjusted performance measurement (RAPM) and stress test. We improved our overall risk management competencies in 2018 by increasing efficiencies in collaboration between business departments and Risk Management Department personnel. In addition, we strive to further strengthen our risk management competencies to ensure more accurate and prompt responses through the risk management system.

## Risk Management Framework

We have categorized risks to be managed into market risk, credit risk, liquidity risk, and operation risk in order to ensure systematic management of risks we face. In addition, management system and guidelines are established that are appropriate for the characteristics of each risk to execute appropriate recognition, analysis, evaluation, and control of risks.

<b>Market Risk</b>	<ul style="list-style-type: none"> <li>We use standardized methods set in the Financial Investment Industry Regulations to measure market risks.</li> <li>We calculate market value at risk (VaR) by using an internal model based on the market risk-measuring system of SAS.</li> </ul>
<b>Credit Risk</b>	<ul style="list-style-type: none"> <li>We set acceptable exposure limits by counterparty type or credit rating. We also maintain an appropriate level of capital adequacy by controlling credit VaR limits based on standard models.</li> <li>We identify and closely manage counterparties in the high risk category through regular monitoring of credit risk status.</li> </ul>
<b>Liquidity Risk</b>	<ul style="list-style-type: none"> <li>We use liquidity gaps and ratios as key indicators to measure liquidity risks. Also, departments related to risk management or funds regularly monitor risks and report them to senior management.</li> <li>In addition to general liquidity risk management, we formulate contingency plans to deal with any liquidity crises that may arise. We classify crisis situations into four levels – attention, caution, and emergency – depending on the condition of the company's liquidity and the level of stability in financial markets. Specific action plans are established for each level to prepare for crisis situations.</li> </ul>
<b>Operational Risk</b>	<ul style="list-style-type: none"> <li>We manage and control operational risks through risk &amp; control self assessment (RCSA), key risk indicator (KRI) management, loss data management, establishment of countermeasures, and calculation of operational VaR based on internal models.</li> <li>Regular RCSAs are carried out to gauge the level of risks of concern each department faces. If an indication of risk is found, countermeasures are established to control it preemptively.</li> </ul>

BUSINESS CASE

# Managing Emerging Risks



Mirae Asset Daewoo analyzes social and environmental changes on a regular basis, and thus establishes and executes measures that allow us to effectively respond to long-term risk factors that influence our overall business.

Potential Risk	Expanding investment into overseas assets and venture capital	Change of risk responses resulting from digitalization
Business and Social Environment	<ul style="list-style-type: none"> <li>Limited growth potential of traditional investment assets (domestic stock, low interest rates, etc.)</li> <li>Need to continuously expand investments into new growth industries, such as the Industry 4.0, and overseas assets including stock, bonds, and alternative assets</li> </ul>	<ul style="list-style-type: none"> <li>Ever increasing growth potentials of a full-service investment company, thanks to the development and polarization of digital technology</li> <li>A full-service investment company which is behind the curve of financial services innovation will lose new investment opportunities as well as investors</li> <li>Increasing IT risks and data security risks due to the adoption of new technology</li> </ul>
Impact from Risk	<ul style="list-style-type: none"> <li>Overseas assets and new growth industries can present attractive opportunities to generate profits. However, they also involve such risks as sovereign risk, exchange risk, individual company's default risk, etc.</li> <li>Possible risks, such as increased investment loss caused by expanding investment asset exposure and deteriorating capital adequacy ratio</li> </ul>	<ul style="list-style-type: none"> <li>The business process of a full-service investment company has rapidly evolved due to digitalization, leading to rapid market dominance, stable adoption of digital technology, and development of new business opportunities, products and services</li> </ul>
Countermeasures	<ul style="list-style-type: none"> <li>Follow a deliberation process prior to investment according to the policies</li> <li>Follow-up monitoring and formulation of exit plans to maximize risk-adjusted profit ratio</li> <li>Strengthen competencies of investment analysts and risk management personnel</li> </ul>	<ul style="list-style-type: none"> <li>Strengthen internal competencies in products and investments by applying digital technology</li> <li>Develop a risk management system as a global investment firm beyond the No. 1 securities company in Korea</li> <li>Untiring risk management efforts to improve the quality of profit</li> </ul>
Future Plans	<ul style="list-style-type: none"> <li>Improve internal processes and expertise to expand investments into overseas assets and venture capital</li> </ul>	<ul style="list-style-type: none"> <li>Risk management to respond to market diversification and increasing volatility</li> </ul>

# Stakeholder Engagement

## Stakeholder Management System

### Definition of Stakeholders

Mirae Asset Daewoo defines its key stakeholders as the individuals or groups that have a direct or indirect influence on the company and vice versa. This also includes shareholders, group institutions with legal, financial and operational responsibilities, the media, labor union, NGOs, social organizations, local community, competitors, opinion leaders, and academia.

### Classification of Stakeholders

Stakeholders of Mirae Asset Daewoo are categorized based on their role, level of impact, and relations. We have designated customers, shareholders & investors, employees, and the local community as four key stakeholders, and then manage them in a systematic manner. We identify key issues and events for each stakeholder group and these are reflected in our business activities.

## Stakeholder Communication

### Stakeholder Communication Channel

Mirae Asset Daewoo has established various communication channels to listen to stakeholder opinions and expectations, and operates them year-round or on a regular basis. In particular, the company undertakes stakeholder interviews and surveys to identify core issues, and discloses them in its integrated reports as a way to actively communicate with its stakeholders.

### Stakeholder Communication Channels and Key Issues





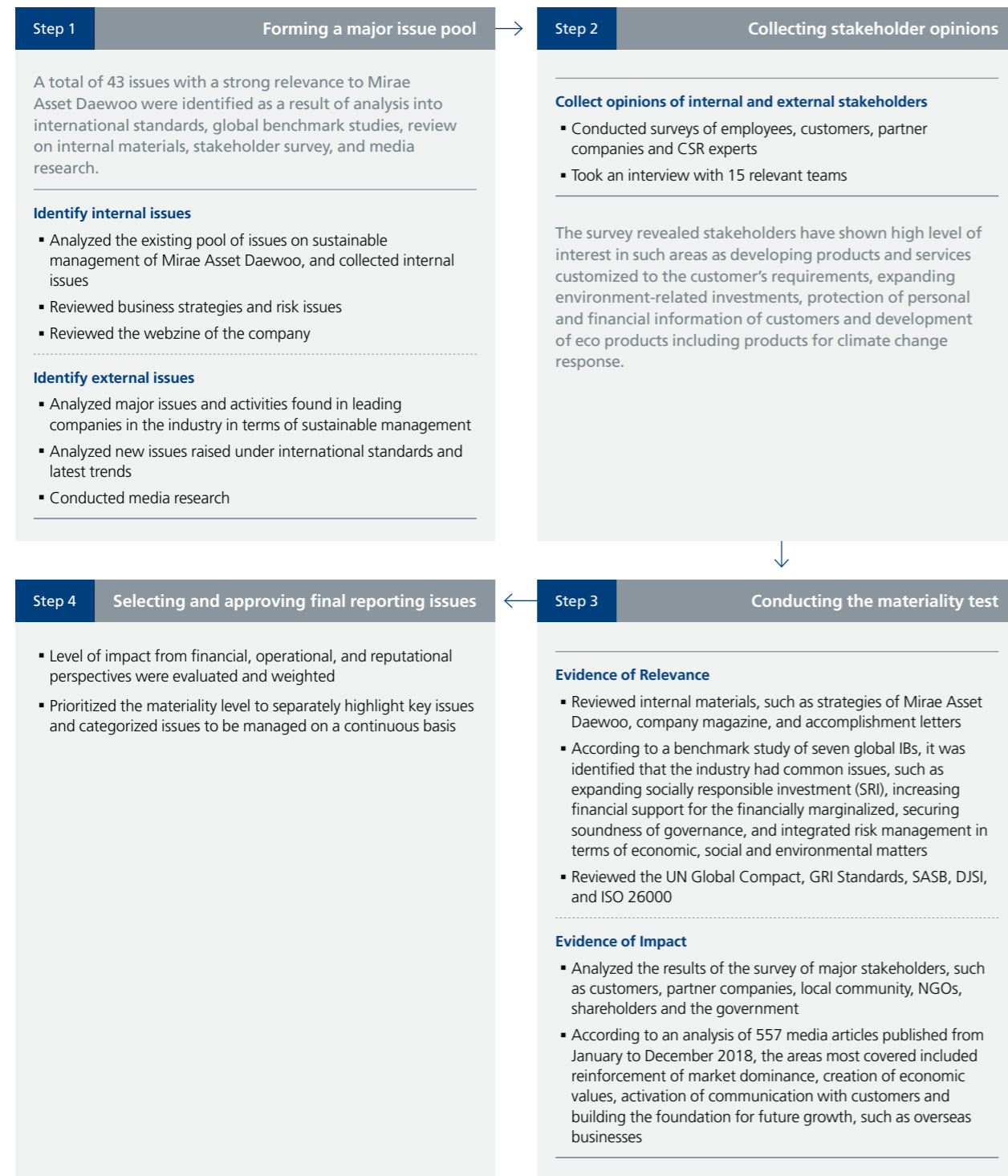
# Materiality Test

## Conducting the Materiality Test

Mirae Asset Daewoo selects issues of keen interest to our business and stakeholders through the materiality test, and reports them in a balanced manner. The materiality test was carried out based on various methods, such as the methodology of AccountAbility and Global Reporting Initiative (GRI) standards.

We analyzed our corporate vision and strategies, global IB and other industry issues, global standards, and media exposure in a comprehensive manner. In addition, a survey was conducted of internal and external stakeholders, with an aim to listen to their voices.

## Materiality Test Process

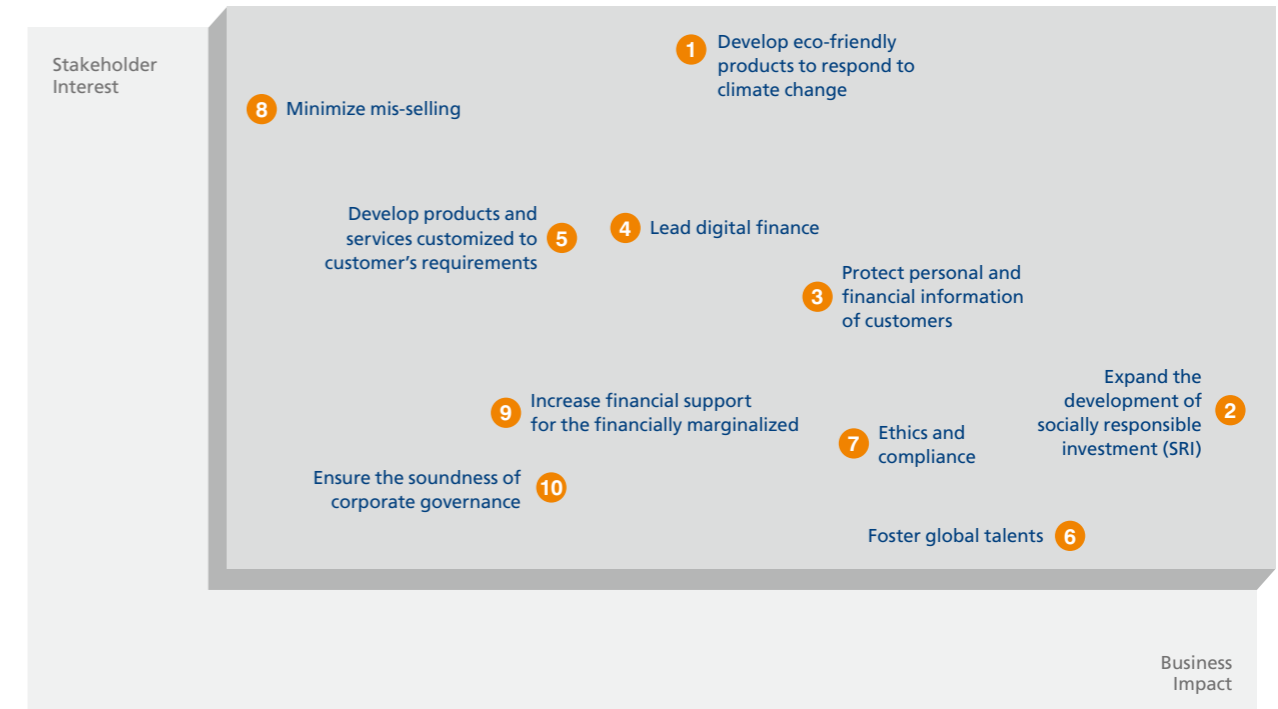


## Selecting Core Sustainability Issues

We conducted the materiality test in comprehensive consideration of business relevance and impact on the company's direct and indirect stakeholders. As a result of the test, 10 out of 43 issues

were selected as having materiality and our business activities related to such issues are outlined in pages marked in the table below.

## Materiality Map



No	Core Issues	Major Stakeholders	Impact Evaluation	Page
1	Develop eco-friendly products to respond to climate change	Customer, Shareholder/Investor, Local Community	Finance	36-38
2	Expand the development of socially responsible investment (SRI)	Customer, Shareholder/Investor, Local Community	Finance	36-38
3	Protect personal and financial information of customers	Customer, Shareholder/Investor	Operation	40-43
4	Lead digital finance	Customer, Shareholder/Investor, Local Community	Finance	44-47
5	Develop products and services customized to customer's requirements	Customer	Finance	70
6	Foster global talents	Employee	Operation	64-65
7	Ethics and compliance	Shareholder/Investor, Employee	Operation	24-27
8	Minimize mis-selling	Customer, Local Community	Operation	48-51
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# SUSTAINABILITY ISSUE

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# Pursuing Sustainable Finance



## OUR PERFORMANCE

Amount of socially responsible investment

**57.5** KRW billion

Financial education for financial minorities

**10** times (920 persons)

## Why it matters?

Our society is faced with a multitude of problems, such as marginalization due to the information gap, low birth rate and aging population, and environmental pollution. Social issues call for corporates' greater responsibility, and at the same time, present new opportunities. In particular, socially responsible investment (SRI) has emerged as a global keyword and is a major means of fulfilling the social responsibility of corporates and financial institutions, an area highlighted by the current Korean government.

## Major issues

- **Various investment risks** There are risks against eco-friendly investment due to issues caused by licensing and national risks, credit uncertainty of business counterparts, and expanding market volatility, while investment opportunities are decreasing owing to the reduced number of large-scale SOC businesses.
- **Reinforced legislations and systems** The stewardship code, which is focused on active participation in SRI by public pension funds and corporate involvement, has been developed and adopted; and the government has been increasing its financial support to ease the burden of the financially marginalized.

## Our responses

Mirae Asset Daewoo pursues investments that not only lead to high returns but also make positive impacts on society with the goal of realizing sustainable finance. It is in this regard that we are committed to making eco-friendly investments, such as new and renewable energy, developing products and services to cater to such social issue as aging population, and providing funding to SMEs. In addition, there are many activities intended to improve financial accessibility of financial minorities, and we also provide financial education programs for easy understanding of financial services.

## Expanding Socially Responsible Investment

### Socially Responsible Investment (SRI) Financial Products

Mirae Asset Daewoo selects and offers eco-friendly financial products developed to support social enterprises and respond to climate changes in its effort to pursue a sustainable society and environment. We have built a portfolio of various SRI fund products, such as the Mirae Asset Green Index, Mirae Asset Green Energy, Mirae Asset Natural Gas, Multi Asset Global Clean Energy, KIAMCO Green Finance Infra, Midas Responsible Investment, ABL Active SRI, and Franklin Sustainable Growth, thereby fulfilling our social responsibility. We have launched the Dongbu Econation Fund, a private equity fund (PEF) developed through donations from high net worth individuals (HNWIs), to transfer a certain portion of the income as a scholarship fund, and we also offer financial services tailored to SMEs to fulfill social values through finance. We have also established the Mirae Asset New Growth Venture Investment Corp. Trust to make co-investments with Mirae Asset Venture Investment and Mirae Asset Group under the purpose of providing individual customers opportunities to make investments in SMEs or startups with growth potential while opening up financing opportunities for SMEs.

### Investment, Advisory, and Arrangement for Eco-Friendly Projects

In addition to selecting and selling financial products aimed for SRI, we are making direct investments and providing financial advisory and arrangement services for eco-friendly projects. In particular, we consider not only investment returns but also environmental impacts when making investment decisions. In a bid to better respond to the global climate change, we are offering a financing solution for renewable energy projects. Furthermore, we have provided advisory and arrangement services for a 105 MW solar power project in Chile and 25MW solar power project in Geogeu-do in Korea.

## — Sustainable Value Investment



### Socially Responsible Investment Fund

We offer SRI funds, such as the Mirae Asset Green Index Fund and Allianz Corporate Value-up Fund, and thus strive to fulfill our social responsibilities.



### Investment in eco-friendly industry

We strive to create new values by enhancing society's capability to respond to environmental risks and climate change and invigorating green businesses.

## Joint Growth through Finance

### Mirae Asset New Growth Venture Investment Corp. Trust

In collaboration with Mirae Asset Venture Investments, we have released a series of the Mirae Asset New Growth Venture Investment Corp. Trust since 2016. Mirae Asset Group makes joint investments with customers backed by the strong reliability of Mirae Asset Venture Investment, with over 350 accumulated investment experiences in innovative SMEs for 21 years as a dedicated investment house, has tolerated losses to a certain extent. This trust is designed to lead the sound and joint growth of our society by providing investors with investment opportunities in venture capital while providing innovative SMEs with venture capital funds for the purpose of innovative finance. In early 2019, we released a trust product for the fourth time following the high returns of our previous performance. We plan to expand the products included in the Mirae Asset New Growth Venture Investment Association Trust along with KOSDAQ venture funds and will actively communicate the investment result of the trust with customers.

### Providing Financial Products Customized for SMEs and Small Giants

We are offering financial services that are specialized for SMEs and small giants, thereby making contributions to the nation's economic development based on mutual growth. In particular, through Partners Club, a collaborative business model between SMEs and Mirae Asset Daewoo, we are providing total financial services that are specialized for SMEs so that senior management at SMEs can focus more on strategic and efficient business management. Various seminars and programs of the Partners Club will equip SMEs with new knowledge that helps their respective business and takes advantage of opportunities to broaden their network by industry and region.



## Exclusive Finance

### Financial Education for the Financial Minorities

One of our core values lies at acknowledging and fulfilling the company's social responsibility. Fraudulent practices have become increasingly sophisticated and diversified. We therefore offer education programs to the financial minorities, such as the disabled, homeless, low-income class, and seniors, to raise their financial understanding and prevent financial fraud. Furthermore, we are providing guides on how to make use of financial services reasonably to enhance their right to knowledge. There are special trainings provided to the youth, financial consumers of tomorrow, to help them build right understanding and make better career decisions. To this end, our Financial Consumer Protection Team visited nine welfare facilities around the nation in 2018 to deliver information sessions on how to prevent financial fraud by introducing various types of fraud such as voice phishing, smishing, and farming, and providing information on how to prevent and respond to them.

### Increasing Accessibility to Finance

We are exerting our best efforts to ensure financial minorities, including the disabled and seniors, can receive financial services in any circumstance by obtaining web accessibility certification for our website, and by offering a voice recognition service and a chatting service for the visually impaired. In addition, guidelines on protecting financial consumers were developed for the visually impaired and distributed to sales branches. We also operate an ARS service for the visually impaired and published braille code instruction materials. We also have located English-speaking employees in the customer center, to provide services dedicated to foreign consumers. Our plan for 2019 is to diversify financial accessibility by rolling out a 'Visual ARS Service'.

### Increasing Accessibility to Our Website for the Visually Impaired

Mirae Asset Daewoo is the first in the Korean financial investment industry to apply the web standards and web accessibility to its web trading system (WTS) and all of the company's websites, which entitled the company to the 'Web Accessibility (WA)' certification. The websites have a screen reader for the visually impaired, and are also designed to help investors with color blindness or weakness easily check the web contents. Since gaining the initial certification, we have managed to renew the certification consecutively, and renewed the certification for the company website and our recruitment website in 2018.

### Offering Fee Discounts for the Visually Impaired

Customers who are financially marginalized, such as the visually impaired, are experiencing inconveniences when trading via online channels. To eliminate such difficulties, we are offering a special service to allow online commission fees when they are making Korean stock purchases in offline channels, such as branch offices or customer centers.

“  
Mirae Asset Daewoo provides education programs for those with poor accessibility to financial information, in order to minimize damage caused by financial fraud and thus establish a healthy financial environment.  
”

## BUSINESS CASE

### Issuing sustainability bonds



#### GREEN BOND

New and renewable energy  
Green buildings  
Sustainable water and wastewater management

#### SOCIAL BOND

Funding for SMEs and micro finance  
Affordable housing

Mirae Asset Daewoo issued sustainability bonds for the first time among securities companies in the world, with the goal of fulfilling our social responsibility including environmental responsibility. This is an iconic case that symbolizes our dedication to CSR. The total issued amount of USD 300 million will be used for investing in eco-friendly buildings, supporting SMEs, and improving housing environment, and investment details will be disclosed on our website on an annual basis.

## BUSINESS CASE

### Raising Social Awareness on Protecting the Financial Minorities



#### Education on Financial Fraud Prevention

We are actively carrying out financial education programs on topics, such as how to prevent new types of financial fraud, so that those financially marginalized including seniors can be better prepared and protected. As of 2018, we have offered financial fraud prevention training to 920 attendees in nine social welfare facilities including the Jinhae Center for the Disabled.

#### Financial Education for Military Forces

We participate in the Finance Lounge Bus program, operated by the Financial Supervisory Service, and visit 15 military bases around the nation to provide financial information sessions and counselling services, thereby helping military personnel become more informed financial consumers.

# Building a Strong Information Protection System



## OUR PERFORMANCE

Information leakage

# Zero

Information security certifications

# ISMS, ISO 27001

### Protecting Customer Information

**Strengthening information protection infrastructure** Customers' personal information is more than a means to identify a customer in that it is a part of customer assets that companies should protect with a sense of responsibility. To strengthen the safety of customer information protection, we received ISO 27001 certification, which is an international information protection management system standard, and Information Security Management System (ISMS) certification, which is a domestic certification system. We also encrypt resident registration numbers in accordance with the Personal Information Protection Act, and make various efforts to protect information and prevent leakage of personal information.

**Information Protection Committee** We have established the Information Protection Committee in order to bolster our level of information protection status. The Committee is in charge of formulating strategies and plans to ensure security in financial transactions and protect service users; confirming vulnerability analysis and evaluation of online financial infrastructure and action plans for improvement measures; and deliberation and resolution of disciplinary measures for those involved in IT security breaches and related regulation violations.

### Why it matters?

The business landscape is evolving rapidly due to digital innovation, and the number of customers using financial services via digital channels is rapidly increasing. As a result, many organizations are realizing the growing importance of cyber security and information protection to better prepare themselves against potential customer data leakage and financial incidents. Massive customer data leakage or disruptions to the transaction systems caused by digital financial incidents or data leakage will hamper the reputation of the financial institutions. Moreover, it will bring negative financial impact due to customer compensation, system restoration cost, and litigation cost.

### Major issues

- **Strengthening cyber security management system** As the financial services industry is adopting many emerging IT technologies, customers are increasingly demanding high accountability of the way their data is managed. Companies therefore should establish a strong management system to respond to such demand.
- **Importance of privacy protection** As the use of personal data in digital devices is increasing, monitoring and regulations on companies storing such data are intensified as shown in the General Data Protection Regulation (GDPR) legislation in the EU.

### Our responses

Mirae Asset Daewoo is engaged in various activities to deliver online financial services in a secure and convenient manner. We have upgraded our anti-hacking and intrusion protection systems for physical security, and have also established a system to prevent sophisticated data theft schemes. Furthermore, we have set up cyber security governance system led by the Information Protection Committee in order to internalize a culture of information protection and bolster such information protection system.

ROLES	Deliberate and resolve matters critical to information protection and report the Committee activities to the CEO		
MAJOR TASKS	<ul style="list-style-type: none"> <li>• Formulate strategies and plans to ensure security in financial transactions and protect financial consumers</li> </ul>	<ul style="list-style-type: none"> <li>• Confirm vulnerability analysis and evaluation online financial infrastructure and action plans for improvement measures</li> </ul>	<ul style="list-style-type: none"> <li>• Deliberate and resolve disciplinary measures for those involved in IT security breaches and related regulation violations</li> </ul>

### Information Protection Strategy and System

#### Information Protection Strategy

As an endeavor to deliver online financial services in a secure and convenient manner, Mirae Asset Daewoo has established information protection strategy and is carrying out information protection activities based on three key action items.

VISION	Provide safe and convenient digital financial services		
MISSION	Establish an in-house security system		
3 MAJOR TASKS	<p><b>Enhance hacking and intrusion prevention system</b></p> <ul style="list-style-type: none"> <li>• Upgrade anti-hacking system for secure online financial services</li> <li>• Run security operation service 24/7 to bolster real-time response system</li> <li>• Conduct security drills and penetration testing to continuously improve weaknesses</li> </ul>	<p><b>Establish intelligent information protection system</b></p> <ul style="list-style-type: none"> <li>• Establish an internal fraud detection system by using big data, AI, and other new technologies</li> <li>• Prevent falsification and leakage of critical data by blocking ransomware and malicious codes</li> <li>• Enhance security and confidentiality through customer data encryption and access controls</li> </ul>	<p><b>Achieve proactive security governance</b></p> <ul style="list-style-type: none"> <li>• Establish an enterprise-wide security assessment process through risk management</li> <li>• Raise employee security awareness through continuous security check-ups and information protection training</li> <li>• Continue to improve the level of information protection management system</li> </ul>

## Spreading a Culture of Information Protection

### Raising the Awareness of Information Protection

Mirae Asset Daewoo carries out diverse activities to spread a culture of information protection at the corporate-wide level, including protecting information and preventing risks of leakage incidents.

Information protection training	Share security issues	Raise security awareness
Customized information protection training is provided for each type of trainee, including general staff, IT staff, information protection managers, executives, and partner companies	Build a system for quick review and sharing of the latest security issues through 24/7 internal control by an information protection-specializing company and external control through the Financial Security Institute	Help employees independently enhance their awareness of the importance of security by designating a 'Day of Information Security Inspection' to have all staff members conduct a security inspection

### Activities to Manage Stakeholder Information

#### Mirae Asset Daewoo

- Operate prevention measures against DDOS attacks and intrusion detection systems to safeguard our internal IT system against intrusion and hacking attacks, and adopt a high level of data encryption to prevent data leakage
- Strengthen countermeasures against external hacking and internal information leakage incidents by separating the entire work network of the IT Center, headquarters, and branches from the Internet network
- Establish a data loss prevention (DLP) system to prevent external breaches of any document containing personal information, and encrypt documents automatically through digital rights management (DRM) in case of document leakage, in order to block external viewing of information
- Categorize trainees into general staff, IT staff, information protection managers, executives, and partner companies, and conduct information protection training that is adequate for each group
- Make an annual contract with an information protection specialist for security consulting, and improve the level of information protection on a regular basis
- Obtain and maintain both international standard (ISO 27001) and domestic standard (ISMS) for information protection and management system as part of our continued endeavor for data protection
- Operate an anti-APT system to block malicious attacks, such as ransomware, and to prevent subsequent loss of data
- Implement more stringent authority management schemes on personal computers to control installation and implementation of unauthorized programs which may contain malicious codes
- Continuously monitor security incident status to perform preventive activities against abnormal symptoms and behavior



#### Customers

- Encourage customers to change into OPT tokens to prevent the exposure and leakage of security cards
- Detect and analyze customers' login information in real time by establishing the FDS for e-financial transactions. Establish a system to contact customers immediately if deemed fraudulent, identify the situation, and register the incident through an integrated system where internal information protection unit, Customer Support Center, and other financial institutions are linked
- Inform and publicize precautions against online financial fraud to protect customers' financial assets

#### Partner Companies

- Provide training on information protection for staff as well as major partner company employees to enhance awareness of information protection
- Set a guideline for outsourced companies entrusted with personal information, and take actions against companies failing to meet minimum standards for correction or their replacement
- Expand field check-ups for external resources to minimize risks associated with outsourcing

# Strengthening Digital Finance



## OUR PERFORMANCE

Number of new non-face-to-face accounts<sup>1)</sup>

**367,000** accounts

Total client assets of non-face-to-face channels<sup>2)</sup>

**10.5** KRW trillion

Number of digital finance specialists<sup>2)</sup>

**92** persons

<sup>1)</sup> As of 2018

<sup>2)</sup> As of May 2019 (Excluding the Client Care Department)

## Implementing Digital Finance Strategy

### Digital Finance Organizations

In 2017, Mirae Asset Daewoo became the first securities firm in Korea to operate a digital finance unit, and since then has continuously expanded the organization. The unit consists of three departments — Digital Innovation Department which pursues digital innovation by identifying new business, adopting new fintech solutions and big data and building platforms; Digital Biz Department which promotes existing businesses in an online front, such as domestic and overseas stocks, financial products, and asset management as well as providing customer services; and Client Care Department which is responsible for identifying customer needs and fulfilling communication through customer contact points.

### Digital Finance Strategy

We are implementing three execution strategies to fulfill the vision of becoming the leading player in digital finance. This will help us become better equipped to changes in the digital environment and ensure continuity and consistency in promoting digital finance.

## Why it matters?

Fintech, big data, AI, and other digital technologies are anticipated to shape financial institutions' core competitiveness and survival strategy for the future in the era of the Fourth Industrial Revolution. Financial institutions in Korea and overseas therefore are fast achieving digital transformation in such areas as customer services and digital platforms. Furthermore, many financial institutions are recently eager to enhance enterprise-wide capabilities to plan and execute digital transformation by discovering and nurturing startups to build a digital ecosystem.

## Major issues

- **Intensifying competition in digital finance** Changes in the business landscape are accelerating, such as digital finance technologies emerging as key competitiveness. The convergence of industries has been further intensifying competition in the digital financial market.
- **Positive changes in the external environment** The development of advanced digital technology and deregulation is creating an environment conducive to promoting diverse innovation in terms of products, channels and services.

## Our responses

Mirae Asset Daewoo strives to lead the fast-evolving digital finance by exerting all our competencies. In particular, we have established a digital-based platform to provide easy and fast online transaction services, anytime and anywhere, to serve our stature as Korea's largest securities company. In addition, efforts are being made to sharpen our competitive edge in the digital finance market by developing talents with digital expertise.

Mirae Asset Daewoo will become a “**finance platform**” itself, not just a company that owns one



## BUSINESS CASE

### Platform V, an Electronic Voting System



Mirae Asset Daewoo has released Platform V, an electronic voting system, for the first time among Korean securities companies. Platform V enables shareholders to exercise their voting right through an online platform, which was previously only available on paper, and the result can be shared in real time. Any listed companies or shareholders who wish to access Platform V can register for the system by using their official certificate. Platform V offers online vote and voting right delegation service and shareholder notification service as well as publishing agenda and materials for shareholders meetings and IR materials so that listed companies can communicate with their shareholders via Platform V. Furthermore, as shareholders' meeting details and e-voting notification can be delivered via text messages and Kakao Talk, Platform V is expected to encourage minority shareholders to exercise their voting rights.

## Digital Finance Activities



### Upgraded the opening process for non-face-to-face accounting

- In 2018, Mirae Asset Daewoo introduced the 24/7 account opening and immediate transaction initiation service by adopting automated ID card authentication and mobile one time password (OTP) systems, and we also started non-face-to-face CMA account opening service by partnering with Naver. As a result, a total of 370,000 new accounts were created via online channels in 2018.
- In 2019, the company plans to introduce no-ID and simple authentication process for all channels, enable mobile accounting opening on web browsers without application installation, and allow name and identity authentication through video calls, in our continuous efforts to enhance customer convenience.



### Expanded digital asset management services

- In 2018 we launched AI-based mobile-only services — Robo-Port, a robo-advisor service, and Robo-Pick, a stock recommendation service. In particular, Robo-Port has added an advisory service for IRP products, seamlessly integrating portfolio recommendation with stock purchase services and enabling customers to manage their pension assets more conveniently
- In 2019, the company plans to boost the competitiveness of online financial products and improve the transaction convenience. In addition, the portfolio recommendation algorithm in the Global Portfolio Solution (GPS), which has constantly garnered a good reputation, will be further sophisticated by embedding big data and AI technologies in order to offer more diversified portfolio and products.



### Developed the MAPIS ODS for branch digitalization

- MAPIS ODS is a system that supports efficient sales activities of all sales workforce including account opening, customer care, and product information. The service is available via tablet PCs to enable financial services, anytime and anywhere. In 2018, we completed the development and adoption of account opening, customer care, and product information services, and plan to add more functionalities in 2019 including product transaction service and back-office processing service.



### Run the financial blog, FN Ginii

- FN Ginii is a blog featuring financial contents which creates and offers fun and easy-to-understand financial information in Korea and overseas. The blog, recording 2.1 million hits in 2018, is fast responding to customers' investment needs by introducing not only various financial products but also tips on overseas stock investment.



### Launched the Mirae Asset Daewoo-Npay CMA account opening service

- We released the Mirae Asset Daewoo-Npay CMA account opening service in 2018 in partnership with Naver, Korea's largest portal service provider. This service enables online opening of CMA account on the Naver mobile website and connects to Npay, Naver's simple payment platform as a demonstration of our commitment to synergy generation with fintech companies.
- In 2019, we will continue strengthening our ties with Naver while seeking other fintech companies to form a partnership.

## Collaboration on Digital Finance

### Mirae Asset Digital Innovation Platform

Mirae Asset Daewoo is committed to taking the lead in digital finance innovation together with fintech companies, global financial institutions, fintech hubs, and our customers. Mirae Asset Fintech Hub connects global financial institutions on the Hub's platform through which ideas for digital innovation are discovered and fintech companies can receive support for overseas expansion. In 2018, the first Fintech Partnership Program was launched to present open innovation initiatives and co-developed solutions with fintech companies for digital finance innovation. Our plan for 2019 is to further expand Mirae Asset Fintech Hub operation and run the second Fintech Partnership Program to continue our journey towards digital innovation.

### Industry-Academia Cooperation

In 2017, we signed an agreement on big data cooperation with Seoul National University and have since been delivering personalized product recommendation services via online channels. Through this cooperation, we have developed a product recommendation model for various products including domestic and overseas stocks, funds, and pensions where recommendations are tailored based on customer's investment propensity and prime product selection. In 2019, we are developing a customer behavior prediction model and conducting research under the topic of making contributions to digital asset management through machine learning technology.

### Big Data Festival

We hosted a big data algorithm contest together with Naver, for the first time in the Korean financial industry, thereby creating a good example of a financial company's cooperation with an ICT company. The second contest took place in 2018 where 176 teams from 69 universities participated in intensive competition in such diverse areas as financial analysis, including stock price prediction, and development of financial services. In 2019, our goal is to provide opportunities to jointly research creative ideas on a mentorship with financial analysts and to offer more benefits such as overseas financial industry visits, as part of our continued efforts to create an environment fostering digital talents.

### PyCon Sponsorship

Mirae Asset Daewoo is a sponsor for PyCon, Korea's largest non-profit conference for Python and machine learning. By sponsoring and supporting Python and other non-profit online communities, we are contributing to expanding a base for machine learning and facilitating related communities.

## BUSINESS CASE

### Expanded m.Club, an online financial service platform



Mirae Asset Daewoo launched our own online financial service platform, m.Club, in November 2017, and has since attracted more than 100,000 subscribers as of March 2019. By using big data and AI, the m.Club offers various, customized investment information to customers who find it hard to make right investment decisions. Of nine contents currently being offered, Choice of *Chogosu*<sup>1)</sup> shares information on stocks traded among high-yield individual investors, and My Trading Pattern compares individual customer's monthly investment patterns.

In March 2019, a new service named Dr. Big's Investment Diagnostics was added to the service which diagnoses and analyzes MY Trading Pattern and stocks based on big data algorithms. Going forward, we will continue to expand the scope of our products and contents by reflecting customer opinions.

<sup>1)</sup> Korean word meaning a master; Refers to a group of Mirae Asset Daewoo clients with top 1% rate of return



# Protecting Financial Consumers



## OUR PERFORMANCE

Customer suggestion adoption rate

51 %

VOC handling rate

100 %

### Why it matters?

There have been inappropriate sales practices of financial institutions, which in turn bring about financial consumers' damage and privacy infringement, such as leakage of personal data. In response, financial authorities are expanding measures to protect consumers' interest by strengthening regulations aimed at reinforcing customer value and reducing complaints. Against this backdrop, financial institutions ought to establish a healthy business environment based on autonomous regulations and execute business operations with a consumer-centric mindset which focuses on principles and foundations.

### Major issues

- **Strengthen policies to protect financial consumers** Financial authorities are bolstering measures and systems to protect consumer rights in order to stabilize financial systems and protect financial consumers.
- **Ensure customer trust** Prevent mis-selling, provide services for the financial minority, and expand a culture of financial consumer protection in order to solidify customers' trust, thus improving corporate sustainability.

### Our responses

The fundamentals and principles of the financial industry are to sell financial products in accordance with a fair set of procedures and thus assist customers in making right investment decisions. For Mirae Asset Daewoo, the key focus area lies at enhancing consumers rights across the entire lifecycle from product development to sales and after-sales customer care for the purpose of a sustainable financial industry. To this end, we have set in place a stringent internal control system to prevent customer data leakage and hacking incidents, and strive to protect financial consumers by focusing on eradicating the mis-selling of financial products.

## Financial Consumer Protection Governance

### Governance to Protect Financial Consumers

'Clients first' is one of Mirae Asset Daewoo's core values, and it also serves as the guiding principle of the company's financial consumer protection policy. Chief Customer Officer (CCO) is appointed directly under the CEO and is commissioned to lead a team dedicated to planning, training, assessing, and monitoring policies related to financial consumers. Dedicated personnel are guaranteed to perform their duties in an independent manner, in a bid to ensure effective operation of the financial consumer protection system.

In 2018, we established a team in charge of handling customer complaints directly under the CCO in order to ensure professional and timely handing of customer complaints. We also transferred Happy Call staff to the financial consumer protection organization to improve effectiveness of complete selling monitoring and proactive consumer protection. Furthermore, the Financial Consumer Protection Council was established for a cohesive, enterprise-wide alignment of consumer protection activities. Council meetings are convened on a quarterly basis to review issues related to consumer protection and discuss measures aimed at proactive consumer protection such as how to better safeguard senior investors and how to strengthen evaluations of consumer complaints.

### Customer Panel

We have established an offline customer panel team, called Mi-Supporters, for the purpose of fulfilling customer-centric values and enhancing financial consumer rights. In 2018, a total of 33 participants formed the panel and conducted evaluation

and monitoring on our products and suggested ideas for improvement. More than 86% of their opinions were actually reflected or considered of great importance in our decision-making process. As such, our customer panel is playing an important role as a major customer participation channel which extends well beyond a simple communication channel. In 2019, we will enlarge the panel to 45 members, the largest in the industry, and expand the panel to the regional areas to boost their role in generating customer-centric values that Mirae Asset Daewoo aspires to achieve.

### Independent Expert Panel

In 2019, Mirae Asset Daewoo has formed an independent expert panel consisting of three outside experts, for the first time in the industry, in an attempt to timely reflect the voices of the field and society on consumer protection and rapidly-changing consumer protection policies. The expert panel will provide various counseling services to protect the rights of financial consumers and, in particular, is expected to bring up various ideas to rectify practices unfair to financial consumers and improve their rights.

## Reinforcing Financial Consumer Protection System

### Overhaul Financial Consumer Protection System

Mirae Asset Daewoo has revamped relevant protection systems and strengthened its functionality in order to protect financial consumers.

Activities	Achievements
Implement and operate recording system for derivatives-linked securities (DLS), etc.	· Completed the establishment
Strengthen field inspection and KPI evaluation for sales process	· 119 branches
Award employees with outstanding performance in terms of financial consumer protection	· 21 employees
Tighten the criteria to transfer and handle confirmation call after sales	· Completed the process
Share supervision authorities' policies via quarterly meeting of the Financial Consumer Protection Council	· Quarterly
FSS evaluation on the status of financial consumer protection and mystery shopping system for complete selling	· Evaluation result: Good
Run the One Company One School financial education program, and provide financial education to the financially marginalized	· One Company One School financial education: 12,939 persons · Financial experiences: 1,597 persons · Education for the financially marginalized: 920 persons · Military financial literacy program: 612 persons
Encourage more active resolution of complaints through internal collaboration based on complaint-handling responsibility system	· Complaint drop rate: 36%
Enhance customer satisfaction by proactively incorporating customer ideas and suggestions	· Customer suggestion adoption rate: 51%

## Facilitating Customer Communication

### Enhance Complaints Management for Customer Rights Protection

In order to better protect the rights of financial consumers and handle complaints in a more professional manner, we have set in place a dedicated team in charge of handling customer complaints and managing VOCs under the CCO. Furthermore, we have established an integrated complaints management system and operate diverse complaints communication channels for more efficient and prompt complaints handling. Guidelines on complaint prevention, which details actual complaints and dispute case studies and tips to prevent complaints, were created and distributed to all employees and the entire workforce including executives are obliged to attend complaint prevention training at least once a year, as part of our diverse initiatives to prevent complaints. 'NAME and SHAME Program' is to share critical monthly complaints, complaint analysis to review key points in each complaint type, complaints early alert system to call for company-wide attention for issues that undermine consumer rights – all these programs are intended to raise employees' awareness of complaints and prevent similar complaints occurrence and are shown to be effectively executed.

### Customer-Centric Opinion Gathering Activities

Our core value of customer centricity begins from upholding the principle of 'Client first' to stay attentive to customers' voices and make necessary improvements.

#### Customer Service Improvement Council

'Customer Service Improvement Council' was set in place to enable prompt response to various customers' opinions collected via a range of customer contact points. The council meetings take place each month where responsible employees from related departments discuss and analyze customers' suggestions and complaints and the outcome of the meeting is reflected in our business processes. In 2018, 3,352 ideas out of 6,497 customer suggestion were adopted in 2018 (customer suggestion adoption rate of 51%), demonstrating that the Council plays its role as a key channel to strengthen customer rights. Among the chosen ideas, 26 items which made a significant contribution to improving customer service quality were awarded, encouraging customers to speak up their voices.



## Pursuing Complete Selling

### Conducting On-site Inspection and Self Evaluation

Mirae Asset Daewoo is rolling out various activities aimed at complete selling practices and investor protection. On-site inspection was conducted against all sales offices to evaluate whether complete selling processes and procedures for financial products are effectively in place at the sales field, with intensive focus across the product sales lifecycle including protection of marginalized investors such as seniors and fulfillment of complete selling, in a bid to strengthen our consumer protection efforts. The inspection also looks at whether posters and brochures promoting financial consumer rights are appropriately positioned in the offices and if not, immediate corrective actions and training are taken on the spot and the results are reflected in the KPI evaluation of sales offices. Furthermore, random inspections are also conducted based on five indices with high tendency towards mis-selling to ensure early detection of mis-selling signs and enhance employees' awareness on complete selling practices.

### Mystery Shopping for Complete Selling

Mirae Asset Daewoo has a regular mystery shopping program in place to ensure the complete selling of financial products. Each year over six rounds of mystery shopping visits are conducted thoroughly against entire sales offices, all employees, and all financial products without any blind spot and stricter shopping criteria were adopted in 2018 with greater point deductions and weight on key areas in need of improvements.

#### Complaint Prevention Proposal System

For consumer protection and dispute prevention, we are operating a complaint prevention proposal system, where those on the frontline sales organizations listen to customers' opinions and make relevant proposals. By improving potential factors undermining the rights of financial consumers and those financially marginalized and unfair practices, we aim to prevent complaints from occurring, thus delivering a more trustworthy financial service.



## Culture of Financial Consumer Protection

### Education to Prevent Mis-selling

Mirae Asset Daewoo is actively rolling out internal training sessions aimed at consumer protection, such as on-site training, in-class training and online training. To promote complete selling, in-class training, sales office training, online training take place around the year, complemented by internal mystery shopping and role-playing activities for sales offices to ensure all the training provided to reinforce standard sales processes is firmly adhered to.

We also strive to increase our employees' awareness on consumer protection and improve relevant capabilities by rolling out various programs and campaigns, such as consumer protection training tailored for job levels, lectures provided by external experts for an update on the latest trend in consumer protection and major issues. In particular, when such critical issues as customer complaints take place, we provide mandatory training to prevent customer complaints, and training results are reflected in the evaluation to make sure consumer protection activities are properly carried out.

### Financial Consumer Protection Day

Every Wednesday in the first week of each quarter is designated as 'Financial Consumer Protection Day' to diffuse the culture of financial consumer protection across the company. In 2018, we conducted a survey to all employees on consumer protection and survey findings were reflected in related policy formulation. As such, the Financial Consumer Protection Day serves as an opportunity to build an enterprise-wide consensus and dedication to customer protection.

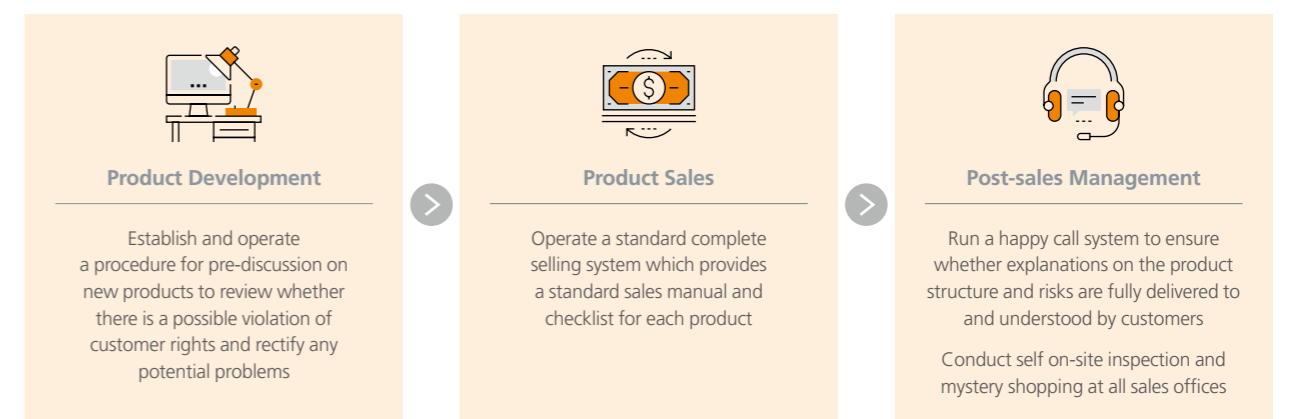
### Other Activities to Protect Financial Consumers

Mirae Asset Daewoo undertook external consulting advice on financial consumer protection to proactively respond to the changing market environment and establish a leading consumer protection system. Through this consulting service from experts outside the company, we were able to develop plans with an objective, external viewpoint on how to revamp the system to protect financial consumers, how to enhance the complaint handling system, and how to protect consumers following increasing non-face-to-face channels. The consulting deliverables were reported to the CEO and key executives in a bid to continue our endeavor towards practical and proactive consumer protection.

### Activities to Expand a Culture of Financial Consumer Protection

Classification	Unit	2016	2017	2018	
Education on complete selling process and financial consumer protection	Education hour	Hour	13	13	14
	Q1		98	87	82
	Q2		97	95	95
	Q3	Point	99	95	91
	Q4		87	94	91
Receiving and handling of VOCs	VOC handling rate	%	100	100	100

### Complete Selling throughout Product Lifecycle

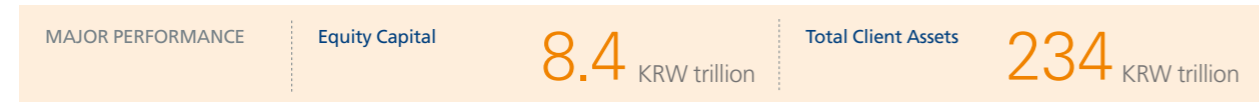


# MANAGEMENT DISCUSSION & ANALYSIS

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# Business Performance

Mirae Asset Daewoo has successfully created differentiated values in the diverse business areas of wealth management (WM), pension, IB, trading, wholesale, PBS, global, and digital. Through perpetual innovation and transformation, we will seek new opportunities to generate economic growth that make contributions to advancing the domestic financial market.



## Market Review and Outlook

### Securities Market

In 2018, the global stock market faced downturns on the back of the U.S.-China trade dispute and the interest rates hike by the US Federal Reserve. The stock market index both in developed and emerging markets went down by 10.4% and 16.6%, respectively. In contrast, the global stock market is expected to recover driven by cyclical economic rebound and as central banks of the U.S. and the EU are not likely to increase interest rates. Moreover, the US Federal Reserve's announcement to end the balance sheet runoff in September is expected to promote higher liquidity and depreciation of the U.S. dollar. Therefore, diversified investments in the U.S., Europe and emerging market are expected to be promising. However, in Korea, because corporate earnings are forecasted to decline and the decrease in Korea's proportions in the MSCI emerging market index will have adverse effects on supply and demand relationship, the Korean market is likely to underperform. Thus, the U.S.-China trade dispute will be a key risk factor not only for the stock market but for global financial markets as a whole.

### Bond Market

In 2018, the interest rates of 10-year government bonds by major countries continued to fall, except for a moderate increase in the U.S. in early 2018. The accelerating interest rate hikes by the U.S. Federal Reserve prompted other developed nations to increase their interest rates, the overall interest rates however continued to fall in the second half of 2018 coupled with the downturn in the stock market.

In 2019, developed nations are expected to maintain their interest rates at the current level until the third quarter, and Korea is also likely to freeze its interest rate within this year. However, if liquidity expansion causes asset prices to soar, this may prompt the governments to adopt contractionary monetary policies. As the global economy cycle is likely to improve in the second half of 2019, interest rates of government bonds issued by developed nations are likely to rise moderately, rebounding from the downturn in the first half of the year.

## Changes in Laws and Regulations for the Financial Market

### Business Model Change and Product Diversification

The trend in the securities industry in 2019 can be summarized as business model change and product diversification. In terms of business model change, many securities companies are going through M&As and equity expansion to focus more on changing business models. Attempts to solidify existing revenue streams, such as brokerage and WM, are taken simultaneously with attempts to establish a proactive IB model based on capital. The securities landscape in 2019 is to build unique and distinctive business models, rather than an identical structure, profitability, and profit model. In terms of bills issued, securities companies certified for short-term financial business have issued approximately KRW 6 trillion in issued bills under management, which flows into the insurance, construction, and ship-building industries serving as venture capital. The IB sector of a mega-sized securities firm will expand its role as venture capital, and finance industry is expected to play a greater role in industrial development. Product diversification emerged as prolonged low-growth economic structure in Korea and diverse investment target in the overseas market led to establishing overseas stocks as an alternative medium of investment. Furthermore, real estate and alternative investment asset took root as alternative products and structured products, such as ELS, are evolving towards leveraging overseas basic assets.

### Government Initiative to Reform Capital Market

The Korean government has presented five measures to reform and innovate the capital market including establishing realistic standards for the issuance of private equity funds (PEFs), easing regulations on PEFs, introduction of Business Development Companies (BDC), expansion of individual professional investors, and improving IPO system. Mirae Asset Daewoo strives to properly respond to the initiative by drawing up measures for each agenda.

## Generating Economic Values

### Business Performance and Plan

2018 was a year when Mirae Asset Daewoo was focused on laying the foundation to make a leap forward into becoming a global IB. Although we were not able to meet the target by recording KRW 585 billion in income before tax and KRW 462 billion in net income on a consolidated basis, we have increased our total equity capital to KRW 8.4 trillion, firmly settling our stature as Korea's outstanding mega-sized IB. We also proactively leveraged our investment capabilities, and thus secured nearly KRW 6 trillion in Korean and global investment assets, equipping ourselves with differentiated growth engines in IB, PI, and trading businesses. Furthermore, new sources of revenue created in overseas business enabled us to achieve a balanced profit ratio at home and abroad, building a foundation on which Mirae Asset Daewoo can grow into a global IB.

In 2019, Mirae Asset Daewoo will continue our efforts to overcome challenging market situations and turn them into opportunities. Our G.I.D.P strategy, put in place from 2018, will be upgraded to 'Synergy Creation through Convergence' strategy, based on which we will develop new products and services for the global market, and offer financial investment services of higher level.

### Business Overview

As of the end of 2018, Mirae Asset Daewoo operates 136 branches, three overseas representative offices, and 11 overseas subsidiaries (excluding those undergoing liquidation and merger). Total client assets reached KRW 234 trillion, and balance for financial product sales recorded KRW 112 trillion, maintaining a stable growth pace. The number of high net worth individuals (HNWIs) with investments of KRW 100 million or more exceeded 150,000 at the end of 2018.

### Credit Rating

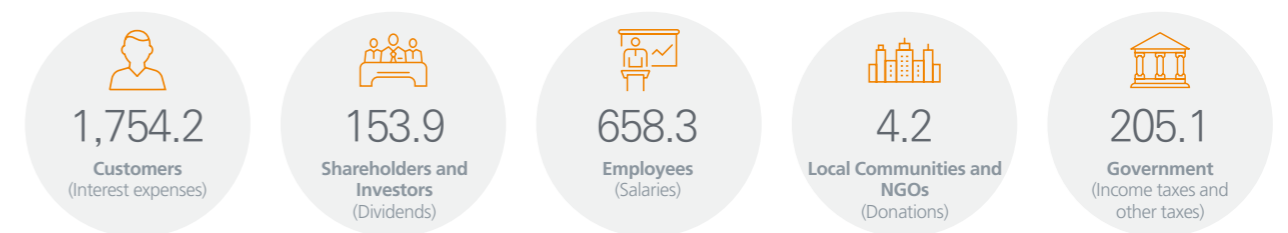
In 2018, we received an AA grade from Korea Ratings, the Korea Investors Service, and NICE Information Service for our non-guaranteed corporate bonds. In addition, we received Baa2 (Stable) grade for foreign currency-denominated long-term fixed income from Moody's, an overseas credit rating agency, and are maintaining that rating, and we are also received a BBB (Stable) rating from S&P.

## Distributing Economic Values

### Distribution of Values

Mirae Asset Daewoo pursues a fair and transparent distribution of values we have generated to enhance customer value and promote sound social growth. In 2018, a total of KRW 2,775.7 billion was distributed to key stakeholders, such as customers, shareholders, investors, executives and employees, and local community, while supporting their values.

Unit: KRW billion



### Tax Payment



### Fulfillment of Tax Payment Obligations

Mirae Asset Daewoo complies with our tax payment obligations for domestic business sites as well as our overseas business sites based on criteria set forth by the respective local governments. When tax laws are unclear to us, we receive help from external professional organizations to satisfy legal standards. We disclose income tax-related information through an audit report that is made available on the Data Analysis, Retrieval and Transfer (DART) system. Financial statement and footnote information on the audit report includes the criteria for calculating income tax expenses, deferred tax assets and liabilities. We manage risks that may arise in relation to taxation, and prevent tax-related risks by fulfilling our tax payment obligations in a fair and transparent way. For international transactions with overseas subsidiaries, we observe domestic tax laws as well as the OECD Transfer Pricing Guidelines, and execute tax payment obligations based on local laws. We have overseas subsidiaries in the U.S., Brazil, Hong Kong, and other countries, and we transparently disclose the amount of taxes we pay in each region.

# Performance Review & Plan by Business



## Wealth Management

**2018 Performance** In 2018, overseas stock investment increased and positioned itself as a prime source of revenue. Overall, our wealth management (WM) business recorded 15% higher net operating revenue compared to the previous year owing to the growth of stable WM revenue. Stable WM revenue, an area where we have long been strong at, was combined with gradually increasing brokerage revenue to achieve KRW 660.9 billion in net operating revenue. Despite market decline and increased volatility, our pension and global assets grew by KRW 3.2 trillion.

### Detailed Key Performance

Our WM business is offering differentiated products aimed at successful asset investment for our customers. In addition, we have been active in responding to a shift in the global investment paradigm, thereby consistently generating increased revenue in overseas brokerage.

**Total customer assets in WM** In 2018, total customer assets in our WM business decreased by KRW 6 trillion year-on-year to KRW 150.5 trillion mainly due to the deteriorating stock market in the second half of the year. Brokerage revenue, however, saw a net growth of KRW 68 billion to record KRW 370.4 billion. In particular, overseas stock investment is on a rapid increase serving as a major source of revenue. Assets under management for pension and global brokerage, our strategic assets to strengthen ties with customers, grew by KRW 3.2 trillion. Our assets for overseas brokerage, which recorded KRW 0.7 trillion in the beginning of 2017, grew to KRW 2.7 trillion by the end of 2017, and KRW 4.1 trillion in 2018, demonstrating growth of approximately six times in the past two years. We maintain No. 1 ranking in the industry in terms of overseas stock assets and contracts.

(Unit: KRW trillion)

Classification	Beginning of the Year	End of the Year	Change			
WM assets	Funds	9.9	10.0	0.1		
	Others	42.9	43.4	0.5		
	Sub Total	52.8	53.5	0.7		
Brokerage Assets	Domestic Brokerage	101.0	93.0	-8.0		
	Overseas Brokerage	2.7	4.1	1.4		
	Sub Total	103.7	97.1	-6.6		
Total Customer Assets				156.5	150.5	-6.0
Strategic Assets	Pension Assets	10.2	11.7	1.5		
	Global Assets	5.5	7.2	1.7		
	Total	15.7	18.9	3.2		

\* Based on retail customers

## 2019 Plan and Strategy

### Business Plan

In 2019, to fortify our position as a leading asset manager in the industry, we will remain focused on laying the foundation for sustained growth, enhancing customer values, and improving WM competitiveness, all in an effort to generate better results.

### Business Strategy

Lay the foundation for sustained growth	Enhance customer values	Improve WM competitiveness
<b>Increase global core assets</b> • Global stocks • WM assets • Pension assets	<b>Provide differentiated products</b> • Expand collaboration between IB and trading divisions for linked products • Expand PEF products • Expand medium-risk, medium-yield products	<b>Pursue innovation and improve efficiency in organization (channel) operations</b> • Synergy through mega-sizing
<b>Increase overseas core stock by accelerating the 'reformation of accounts'</b>	<b>Respond to markets proactively</b>	<b>Improve competitiveness of WM personnel</b> • Strengthen an integrated consulting process (Total solutions for investment assets) • Provide one-stop services
<b>Big data-based marketing</b>	<b>VIP service innovation</b> • Global infrastructure services • Investment solutions for professional investors	<b>Strategic and efficient operations of human resources</b>

## Pension

**2018 Performance** On the back of competitive product offerings and distinctive consulting services which we have accumulated over the past 10 years, Mirae Asset Daewoo has grown into a leading pension management company with KRW 11.7 trillion in pension assets under management (KRW 8.6 trillion in retirement pension and KRW 3.1 trillion in individual pension as of the end of 2018).

### Detailed Key Performance

Mirae Asset Daewoo has been focused on delivering diverse products, customer care, and differentiated services. Our pension asset is on a steady increase each year.

**Products** We have launched Robo-Port individual pension advisory service, and developed a line-up of retirement pensions into deposits at savings banks (11 in KRW 230 billion), and are operating Global Retirement Pension Asset Allocation Wrap (25,862 subscribers at KRW 936 billion).

**Non-face-to-face customer management and services** We have established Pension Asset Management Center as an online asset management organization and were the first to introduce loans secured by retirement pensions.

**Infrastructure and accolades** We launched MAPIS, a next-generation mobile system for retirement pension management. We received the Grand Prize at the 5th Retirement Pension Award by The Korea Economic Daily (special prize for pension customer education) and Grand Prize at the 5th Retirement Pension Awards by Money Today (best securities firm for retirement pension).

(Unit: KRW billion)

Classification	2016	2017	Contribution
			2018
DB	3,744.6	4,192.3	4,588.2
DC	2,046.7	2,545.2	2,962.4
IRP	769.7	953.6	1,110.4
Individual pension	2,039.2	2,794.3	3,096.0
Total	8,600.2	10,485.4	11,757.1

\* As of the end of 2018; No. 1 in contributions for retirement pension and personal pension among securities companies in Korea (Excluding the performance of subsidiaries for retirement pension)

## 2019 Plan and Strategy

### Business Plan

The pension market has so far grown in quantity and the pension market of the future will be focused on quality growth. In this regard, Mirae Asset Daewoo will strive to enhance customer satisfaction in 2019, solidifying our position as a top-tier pension management company.

### Business Strategy

We strive to enhance customer satisfaction through proactive customer care and differentiated pension consulting services. We will offer better education, seminar, consulting, and non-face-to-face customer management services, and increase profitability for our pension customers via outstanding global asset allocation.

We will upgrade the retirement pension management system to enhance work efficiency and innovate the infrastructure to boost the quality of customer service both in online and offline channels. Furthermore, we will remain proactive in responding to the external environment such as changing pension policies so that we can build a company image as a leading pension business provider.

## IB

### 2018 Performance

In 2018, we have achieved excellent performance across all sectors in IB business. In terms of ECM, we contracted large deals for paid-in capital increase, marking outstanding sales earnings. In the IPO operation, our achievement included arranging a deal worth KRW 500 billion with a market share of 17%, topping the IPO League Table for two consecutive years from 2017. In addition, in terms of acquisition financing, we arranged 14 deals worth KRW 2.7 trillion, making it to the top position and successfully arranging a number of landmark projects in Korean and foreign real estate and alternative investments, demonstrating our strength as the most well-capitalized securities house in Korea.

#### Detailed Key Performance

**IPO** Beginning with the IPO deals for Lotte Data Communication Company and Hana Pharmaceuticals worth more than KRW 100 billion, Mirae Asset Daewoo has listed Café 24, SV Investment, Robotis, and Air Busan, exerting market influence.

**Acquisition financing** We have arranged acquisition financing and refinancing for many Korean companies including Coway, Ssangyong Cement, and Doosan Machine Tools, as well as overseas acquisition financing for Pepper Group, maintaining our market leading position for two consecutive years.

**ECM & DCM** We strengthened our market position by serving as a lead arranger for paid-in capital increase of Samsung Heavy Industries, Lotte Tour Development, Jeju Bank, as well as corporate bond offerings of high-grade issuers such as LG Group. Our market presence was further solidified by successfully issuing bonds with warrants (BW) for Hanwha Galleria Time World and arranging a number of block deals.

**Real estate** We are vigorously participating in profit-driven real estate investment and development projects such as the acquisition project for Pangyo Alphadom City 6-3BL office and development project for 6-1BL and 6-2BL offices at the Alphadom City in Pangyo. Furthermore, we have delivered financial advisory services for acquisition fund of KRW 363 billion and were the first to issue a credit tenant lease (CTL) loan in high credit rating (AA+) based on the cash flow of real estate asset rent fee for Samsung C&T's East Central Tower investment. In addition, we participated in the world's largest scale acquisition financing (KRW 5.5 trillion) and conducted new investments for The Center office in Hong Kong.

**Alternative investment** By diversifying our IB strategy beyond traditional deal sourcing methods, we were able to secure prime brands both at home and abroad and executed an actual investment of 11 deals worth KRW 1.2 trillion thanks to the outstanding performance of the newly established Global Investment Finance Department.

### 2019 Plan and Strategy

#### Business Strategy

<b>IB Division1</b>	We will expand our coverage for new-growth companies and improve less-developed coverages to achieve market competitiveness and will diversify our profit sources by offering financing plans utilizing company-owned assets and corporate restructuring schemes. We will expand our IPO efforts into outstanding overseas corporations and the Industry 4.0 companies and promote pre-IPO sales. We will also expand our position in core assets both at home and abroad and improve returns via asset-backed financing services, such as mezzanine, alternative investment, REITs, and structured financing.
<b>IB Division2</b>	Leveraging our network with construction companies, developers, and key customers, we will secure mid-to long-term revenue sources, such as equity investments, bridge loans, and development profits securitization. We will also participate in various markets including policy/public/municipal projects to continuously discover high value deals. Furthermore, we are fortifying our total financial solution capabilities as a global IB house by arranging finance, investing in, and managing loans and equity in overseas real estate and infrastructure.
<b>IB Division3</b>	We aim to strengthen our deal pipeline and pioneer new businesses with key partners by penetrating overseas acquisition financing markets. We will also implement a basecamp strategy for local markets and products, and thus localize deal sourcing channels. In addition, we will enter the new real estate financing market by participating in government policy-linked projects and discovering new businesses.

## Trading

### 2018 Performance

Our trading business is equipped with a globally competitive human network and financial infrastructure. Our bonds, derivatives and multi-strategy management is empowered by our team-oriented approach and strategic decision making, and based on which we develop financial products with an aim to improve our profitability while also increasing customers' assets.

#### Detailed Key Performance

**Trading Division1** Mirae Asset Daewoo issued ELS products worth KRW 9.1 trillion in 2018 to achieve the largest ELS market share in Korea for two consecutive years. We issued foreign equity-linked products worth KRW 150 billion, including KRW 80 billion issuance of the first Korean equity products that makes payment at maturity with foreign stocks. We also expanded the issuance of derivative products, such as knock-in products that meet market trends and customer requirements, and lizard products with better stability. In addition, we generated additional profits by employing strategic hedging against higher volatility.

**Trading Division2** In Won-denominated bond trading, we outperformed through active trading of stability-focused portfolios. In Won-denominated bond brokerage, we increased our profits as sourcing of corporate bonds was expanded as well as the Bank of Korea consistently selected us as an outstanding financial institution. As for foreign currency bond brokerage, we increased the inbound brokerage volumes and expanded private placement of foreign currency bonds, which led to improvement in profitability. We were named the foreign currency trade institution by the Bank of Korea (UST, credits). As for the brokerage of Won-denominated bond in-bound trades by foreign investors, we ranked first with a market share of 12.02% (Named the best securities company in 2018 by the Swiss National Bank).

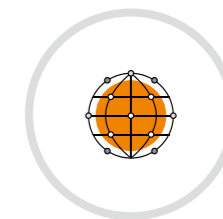
### 2019 Plan and Strategy

#### Business Plan



#### Trading Division1

We will provide innovative products which can generate stable earnings by creating new business to cope with market uncertainties and enhancing our business capabilities. To accommodate global investment needs, we will diversify channels for currency exchange clients and provide new products with expanded external credit lines. Furthermore, we will diversify our sources of revenue and broaden our footprints in the market by developing new ELW/ETN products and active asset management.



#### Trading Division2

We will increase the proportion of customer asset-focused foreign bond assets and expand earnings from overseas business. To strengthen our global business capabilities, we aim to generate at least 30% of our earnings within this division from overseas and will promote intra-team management and intra-division trades to create synergy with sales and trading business. We will also continue to promote collaboration with our WM and wholesale businesses and analyze the sales environment and new market opportunities in order to develop new businesses.

## Wholesale

**2018 Performance** In 2018, our Equity Sales Department received top grades from major pension funds and asset managers in Korea. Our Multi Solution Department led the market by expanding overseas sales of alternative investment products.

**Detailed Key Performance**

**Equity Sales Department** We received top grades from public pension funds, such as Korea National Pension Service and Korea Post, in their biannual or quarterly brokerage house ratings. In addition, we solidified our leading position in traditional securities brokerage fields including block deals for corporations and trading of non-listed stocks. We also expanded our foreign ETF sales capacity as Mirae Asset Financial Group acquired Global X. Moreover, the Korea National Pension Fund named Mirae Asset Daewoo as its new foreign stock broker, which led to remarkable growth in commitments and revenue from foreign equity sales.

**Multi Solution Department** We provided institutional investors with competitive products through foreign asset managers and deal sourcing. The balance of financial products offered by the Multi Solution Department increased KRW 5.3 trillion year-on-year to KRW 54.8 trillion as of the end of 2018, as a result of expanding earnings and the sale of financial products, thereby solidifying our position as a market leader. The Department also focused on collaborating with IB sectors of relevant teams, and thus expanded the sourcing channels for alternative investments.

## 2019 Plan and Strategy

**Business Plan**  
In 2019, the Equity Sales Department aims to receive the highest grades from major pension and institutional funds in their brokerage house ratings. It also plans to continuously expand overseas equity sales by leveraging the global network of Mirae Asset Financial Group. Our Multi Solution Department1 and Multi Solution Department2 will diversify earnings by developing a wide range of products through close collaboration with our IB Division, and by soliciting new institutional investors. Furthermore, in response to the growing demand for foreign alternative investment products, we will focus more on increasing sales in alternative investments by leveraging our global network including foreign asset managers and global real estates.

**Business Strategy**  
**Equity Sales Department** The Equity Sales Department will create new deals by collaborating with our IB, WM and global divisions, and provide competitive services. In addition, by partnering with new private equity firms and investment advisors, we will enhance our sales capabilities. We will also complete the construction of a Korean local brokerage platform for offshore pre-IPOs.

**Multi Solution Department1 and 2** The Multi Solution Department1 and Multi Solution Department2 will continue to attract new institutional investors and provide differentiated products. We will also continuously expand placement agent operations targeting foreign asset managers and supply in-house products to institutional investors. We also aim to solicit funds to cope with the growth of Outsourced Chief Investment Officer (OCIO) market.

## PBS

**2018 Performance** Our PBS Department achieved remarkable performance in 2018. We became the second largest hedge fund operator in Korea with KRW 5,014.2 billion under management by winning new prime brokerage service (PBS) contracts worth more than KRW 3.4 trillion. Our growth marked the largest among the six companies engaging in PBS business in Korea. Also, our active marketing efforts led a number of hedge fund managers to partner with us. On the back of these accomplishments, Mirae Asset Daewoo received the PBS of the Year Award in the 2019 Korea Wealth Management Awards.

**Detailed Key Performance**

**Net profit** (Unit: KRW billion)

Year	Net profit (KRW billion)
2015	23.9
2016	26.7
2017	17.5
2018	27.4

**Assets under management** (Unit: % for M/S; and KRW billion for assets under management)

Year	Assets under management (KRW billion)	YoY Growth (%)
2015	1,057.8	-
2016	1,349.2	31%
2017	1,596.5	20%
2018	5,014.2	21%

**Prime Service Team** Mirae Asset Daewoo has the second largest share in the hedge fund contract volume in Korea. In 2018 alone, our contract volume increased by KRW 3,425.1 billion, while maintaining a solid partnership with hedge fund management as an optimized solution provider. We closely communicate with our clients and provide various services tailored to their requirements in the right place at the right time. We offer incubating services, such as seeding and marketing, and we also provide hedge funds with liquidity through credit exposure. We also contribute to maximizing hedge fund returns by providing total return swap (TRS) for all asset classes such as equity, bonds, and fund securities.

**Equity Finance Team** Our balance in the short sale accounts is KRW 2.5 trillion. We lend stocks under management to domestic and foreign entities through global standard short sale contracts. Based on the short sale account balance, we lend our stocks to help our hedge fund clients employ long-short selling strategies and arbitraging, enabling them to stabilize returns regardless of market fluctuations.

## 2019 Plan and Strategy

**Business Plan**  
In 2019, we aim to achieve the largest hedge fund contract amounts and expand security-lending and over-the-counter derivatives, while also providing unrivaled services. Furthermore, we will offer products and services covering over-the-counter derivatives and foreign security lending to more customers including retail customers.

**Business Strategy**  
We will diversify marketing activities for investors by providing hedge fund portfolios, while expanding hedge fund sales channels to include retail channels. We will also continuously expand underlying assets for TRS, such as mezzanine, funds and offshore stocks, and thus securitize various types of assets. In addition, we will offer security lending services to retail and institutional customers by leveraging our domestic stocks and the balance of foreign stocks worth KRW 5 trillion.

## Global

**2018 Performance** Based on the reputation and network accumulated as Korea's representative global IB, Mirae Asset Daewoo is expanding its investment into prime overseas assets.

**Detailed Key Performance**

**Increasing profitability and IB assets of overseas subsidiaries** In 2018, profit before tax from our global subsidiaries grew by 148% compared to the previous year, especially the IB sector witnessed an increased revenue of 164% over the year. In particular, our overseas PBS business, initiated in 2017, combined the know-how and expertise of Korean business with the local market, and thus achieved a 287% revenue growth in 2018 compared to the previous year, being recognized for a successful business localization.

**Capital increase and market entry to drive growth** We conducted capital increase for the Indian and Vietnamese subsidiaries in order to better leverage benefits of the economic growth in India and Vietnam. This served as a turning point to transform the typical business model in emerging countries mainly focused on brokerage into one with a particular focus on IB business. As such, we are establishing ourselves as a major IB player in the emerging markets by capturing and investing in new business opportunities.

**Expanding our business through market entry** Mirae Asset Capital Markets (India) Private Limited, our Indian subsidiary began its business in early 2018, generated 15% of our total revenue for the year from overseas subsidiaries. This achievement was made possible by driving strong IB and trading businesses based on outstanding local professionals and accurate understanding of the local market. Mirae Asset Capital Markets (India) Private Limited is expected to serve as a major pillar of our global business growth in the future.

<p><b>1. UK</b> Perform IB business</p>		<p><b>7. Vietnam</b> Target the local market with a particular focus on brokerage and IB</p>
<p><b>2. India</b> Become established in the local market for all areas including IB and trading</p>		<p><b>8. Singapore</b> Diversify businesses from equity sales to include other areas</p>
<p><b>3. Mongolia</b> Perform IB business</p>		<p><b>9. Indonesia</b> Continue to focus on the local brokerage market and expand WM business</p>
<p><b>4. China</b> Perform cross-border deals between Korea and China</p>		<p><b>10. U.S. (L.A.)</b> Strengthen WM business by creating synergy with IB</p>
<p><b>5. Korea</b></p>		<p><b>11. U.S. (New York)</b> Generate stable profits from PBS business</p>
<p><b>6. Hong Kong</b> Invest in and productize big deals by strengthening IB capacity and collaborating with headquarters</p>		<p><b>12. Brazil</b> Secure competitiveness customized to South America in local brokerage and WM businesses</p>

## 2019 Plan and Strategy

### Business Strategy

**Strengthen our position as a global IB** Mirae Asset Daewoo will strengthen our position in the global IB market by identifying profitable deals and core assets based on the network and expertise that we have accumulated through IB deal experiences around the world. In addition, we will develop localization plans suited for each market environment in order to establish competitive organization and secure diversified investment portfolio. Based on that, we will offer investment products to local customers, thereby maximizing the efficiency of our IB business.

**Enhancing profitability through business model diversification** We will diversify our business models to establish an overseas expansion model for sustainable growth. In advanced markets, we will designate and drive specialized businesses suited for each region, while in emerging markets, we will respond closely to the region's economic and regulatory changes and proactively discover and pursue new businesses.

**Strengthen our position as a local integrated securities company** We will further bolster our brokerage business in emerging markets by leveraging our know-how accumulated through our localization experiences over a long time. We will also successfully establish a wide range of businesses, including IB and WM, by securing outstanding professionals in the fields, thus establishing our strong position as an integrated securities company.

## Digital Finance

**2018 Performance** We strive to upgrade the account opening processes for our non-face-to-face channels by adopting an automated identity card authentication and mobile OTP system. As a result, 366,000 new accounts were created in 2018 via non-face-to-face-based direct channels. The number of m.Club subscribers, our online financial service platform, exceeded 100,000 thanks to our continued efforts including the expansion of content. In addition, we established a digital innovation platform, formed partnerships with 13 institutions to build a fintech hub, and completed two tasks with three fintech companies through the first fintech partnership program.

## 2019 Plan and Strategy

### Business Plan

In 2019, we will continue to proactively respond to the changing digital environment with the goal of leading digital finance. To this end, we will upgrade the account opening processes for our non-face-to-face channels, enhance UI and UX, fortify big data-driven customized customer management services, including m.Club, and make other efforts to sharpen our competitive edge. In addition, we will strengthen our partnership with fintech companies and companies in different industries to expand our customer and sales base. In response to the changes in the financial industry with the regulations being lenient, we will explore new business opportunities in fintech, such as payment gateway (PG) business and overseas remittance services. These will enable us to attract more non-face-to-face customers and increase profitability.

### Business Strategy





# Human Resources Management



It is most important for Mirae Asset Daewoo to secure outstanding talent to develop into a global IB. To this end, we are providing systematic training programs to strengthen employees' financial expertise and global competitiveness. We also pursue employee diversity and strive to build a flexible, creative organizational culture, in addition to providing a safe work environment to employees and helping them enjoy a healthy life.



## Employee Recruitment

### Principles of Fair Employment

We attract talent based on our principles of fair employment that do not place a restriction on academic background, gender, age, etc. We have created a blind interview process that evaluates only the job skills and competencies of applicants which form the basis of executing work, through which we measure factors that are adequate for the characteristics of each duty and recruit talent with job competency.

### Expanding Overseas Recruitment

Mirae Asset Daewoo places its highest priority in sourcing global top talents with investment experience in Vietnam, India, Singapore, and Hong Kong with the goal of securing diverse overseas investment opportunities. Going forward, our plan is to diversify our recruiting channels to operate global talent recruiting process and overseas job fairs to find and hire professionals from extensive channels.

## Human Resources Development

### Strengthening Financial Expertise

**Global equity expert fostering course** A global equity expert fostering course has been in place in order to secure a pool of global brokerage experts and boost WM competencies. This course serves as an opportunity where participants can learn global economic analysis techniques, share their actual investment experiences, and develop competencies required for successful management of customer assets. Professional competency training was provided on four occasions in 2018, nurturing 123 global brokerage experts.

**Tax and real estate expert fostering course** This is an in-depth training program designed to satisfy the specific and diverse needs of our customers. This program has enabled the learning of field knowledge across tax and real estate required for comprehensive asset management consulting services and analysis of actual customer cases to boost customer consulting competencies. The program was first launched in 2018 and nurtured 22 experts.

**Pension expert course** We offer a pension expert course to develop pension professionals who design and plan customers' stable retirement life in an aging society. Course participants will first acquire professional pension expertise and then receive hands-on training on drafting consulting reports and hosting customer seminars to reach the competency level of proposing tailored solutions for customers. It was first launched in 2018 offered on two occasions, and 57 participants have completed the course.

**WM Academy** Created to foster global investment experts, WM Academy is an intensive training program consisting of specialized courses covering global equity and bond, pension consulting, and tax/real estate consulting. In 2018, 1,408 employees undertook the course.

### Expert Status

(Unit: Person)

Classification	2016	2017	2018
AFP <sup>1)</sup>	1,802	1,805	1,582
CFP <sup>2)</sup>	328	329	300
FP <sup>3)</sup>	1,495	1,499	1,285

<sup>1)</sup> AFPK: Associate Financial Planner Korea

<sup>2)</sup> CFP: Chartered Financial Planner

<sup>3)</sup> FP: Financial Planner

### Strengthening Digital Competencies

**Professional financial data analytics course** Emerging digital technologies, such as fintech, big data, and robo-advisor, are vital to Mirae Asset Daewoo's competitiveness. We are therefore offering a professional financial data analytics course where employees receive intensive training in order to nurture internal data experts specializing in data analysis and algorithms. Not only IT staff but also any employee can apply for this course because it is designed to improve the overall digital competencies of the company. In 2018, a total of 115 data analytics experts were developed by completing this program.

**Digital innovation leader program** Digital innovation leader program was provided to all executives with the goal of encouraging them to develop a digital transformation-oriented mindset and to promote a creative sense of urgency. It was provided on two occasions in 2018, and 80 executives attended the program.

**Fostering experts in digital convergence finance** In order to develop internal experts to lead our digital transformation, we have signed an agreement with the Korea University Graduate School of Computer & Information Technology. Accordingly, around 20 employees are given an opportunity and support to enter the master's course in Digital Convergence Finance at Korea University.

### Promoting Global Mindset

**Self-management learning program** For the purpose of nurturing key talents equipped with global competitiveness and mindset and share innovative ideas across the enterprise, we are operating a self-management learning program. Designed to motivate employees via self-led learning, participants visit the U.S., Europe, and other countries for two-week overseas training, and share their experiences with other employees. In 2018, 26 employees completed the program.

**Global expert fostering program** We have dispatched junior staff to our overseas subsidiaries so that they can have a better understanding of the global investment market situation and help discover new business areas. 16 trainees were chosen to go through a three-week preparation training and participate in the overseas work and experience program for three months.

## BUSINESS CASE

### Fostering talent to strengthen competitiveness in global IB



Mirae Asset Daewoo is operating various training programs intended to enhance our competencies in global IB. The training is based on actual cases and designed to be immediately applicable to the job execution. Also, its well-structured curriculum is effective in strengthening global IB competencies both for the company and individuals. In addition, a risk management training program is provided for specific areas of bond investment, real-estate, financial analysis, and alternative investment, and thus solidifies the expertise of a chief risk officer (CRO).

Classification	Course	Details	Performance in 2018
Global IB	Basic program	Enhance understanding of the capital market, and acquire key knowledge by business area to assist related sales activities	102 persons, 28 hours
	Basic and advanced course on real-estate PF	Nurture real-estate PF experts and boost competencies towards becoming global investors	89 persons, 41 hours
	Intensive course for infra/energy related alternative investments	Nurture experts in alternative investments to strengthen competitiveness in global IB	40 persons, 20 hours
	Basic and intermediate course for financial modeling	Provide education on teaching financial modeling techniques that can be used by junior IB professionals in the field	64 persons, 23 hours
	Financial statement analysis course for valuation	Support new hires and sales support staff to improve their understanding of IB business and learn accounting knowledge	24 persons, 30 hours
	Fundamental analyst development program	Enhance global analysis competency through training on global M&A and investment analysis methods	21 persons, 21 hours
Risk management	Bond investment, real-estate, financial analysis, alternative investments	Strengthen expertise of a CRO (understanding bond investment, real-estate legal matters in practice, financial analysis by each industry/company, securities derivatives product-hedge in practice, alternative investments)	213 persons, 71 hours

## Establishment of an Innovative Corporate Culture

### Sharing a Culture of Innovation

Mirae Asset Daewoo has in place a number of programs aimed at establishing a corporate culture of innovation and investment and share the culture at the corporate-level.

**Innovation School** We provided the Innovation School course to our junior managers and working-level employees in order to promote change and mind-set for customer alliance and to draw up detailed methodologies.

**Open Space, Open Education** It is a bottom-up training planning program where employees can plan and design their own training courses in addition to existing top-down training. As a result, various types of training, such as digital financial study and book clubs, have been planned and executed through employee's participation.

**Book Square** It is a point accrual system for book-reading to encourage employees to read books in a voluntary manner so as to enhance the individual's competencies and spread forward-looking corporate culture.

### Promoting Labor-Management Communication

**Labor-Management Council** Representing all staff, the Labor-Management Council is in charge of engaging in discussions with top management on major issues related to staff. In 2018, the Labor-Management Councils was held on a quarterly basis, leading to agreements on restructuring the salary scheme, introducing the flexible work system, such as flex-time work hour, and selective lunch time, as well as the early adoption of 52-hour workweek. We respect employees' decision to join the labor union and engage in union activities. As of the end of 2018, there are 2,890 members of the labor union on the basis of check off.

**Separately and Together** It is a program that promotes team activities by creating an arena of communication and harmony for each team, while looking for ways to generate synergy in the entire organization. In 2018, a total of 94 employees from four teams took part in the program on three occasions.

**Handling employee grievance** Mirae Asset Daewoo has assigned employee grievance handling staff to address employees' complaints or grievances, and is making sincere efforts in drafting various measures to protect customer-facing employees. We have strengthened the company's sexual harassment prevention and disciplinary obligations in order to prevent workplace sexual harassment. Furthermore, psychotherapy and counselling programs are in place to help employees maintain mental health as well as supporting the work & life balance the company is pursuing. In 2019, following revision of the Labor Standards Act, we will ban office bullying and develop a prevention and response system which is to be stipulated in the Rules of Employment.



## Employee Evaluation and Compensation

### Performance Evaluation Principle

Mirae Asset Daewoo is impartially evaluating employees' achievement and competency based on a transparent process and reasonable grounds. Under the mission statement of becoming a "company that evaluates according to performance and compensates according to performance", we revamped the seniority-based evaluation practices of the past into one which measures employees' achievement and performance in a fair and transparent manner. In this way, we are motivating staff and increasing work efficiency.

### Fostering-type Performance Evaluation Process

We conduct the fostering-type evaluations by facilitating communication between team heads and staff. In 2018, we held an official mid-term feedback session and a year-end final evaluation session to provide comprehensive feedback. In addition to the official mid-term feedback session, we are recommending our team heads to provide staff with coaching and feedback on a regular basis, and support with online management system through which they can manage staff feedback.

### Promotion System Based on Job Competency

Mirae Asset Daewoo has established a promotion system with a selection-type promotion approach where employees who can perform higher roles are chosen from among employees with outstanding achievements and competencies. We have thus institutionalized a structure that evaluates employees' performance only by their achievements regardless of backgrounds, gender and age, so that capabilities of those who continuously generate performance are recognized. In addition, our efforts to foster female employees have been increasing, and the the percentage of female managers (40.9%) is on the rise as well.

## Work-Life Balance

### Maternity Protection System

To encourage childbirth and protect mothers' rights against the backdrop of a low birthrate in Korea, we guarantee maternity and childcare leaves that are stipulated in laws. Also, we have been operating child care centers since 2011 to help employees feel less burdened from childbirth and childcare, and help them achieve a balance between work and personal life.

### Establishment of Healthy Work Conditions

We are enhancing work efficiency and helping staff achieve a balance between work and personal life by adopting the concentrated work system, minimizing overtime work, and promoting the use of vacations. In particular, we have already adopted the 52-hour workweek system, and flex-time work hours has been implemented. Furthermore, we are planning to expand the flexible work system based on job characteristics in the near future.

## Employee Safety and Health

### Health Management Programs for Employees

Mirae Asset Daewoo runs the employee health management program to protect staff from grievance and psychological stress that may occur in the process of handling work. We operate the Employee Assistance Program (EAP) to provide professional psychological counseling and coaching services for resolution of various issues that staff come across inside and outside of work. We also offer 'TodakTodak', a psychological counseling program, and 'Inside Out', a self-reflection program, for staff who provide customer services. By providing the 'Begin Again' program, which is an arena for understanding and communication, we encourage staff to enjoy a positive, enterprising life.

### Emotional Care Program

Our emotional care program is intended to alleviate employees' stress and help them recognize and adjust their emotional status, thus contributing to enhance employees work emotional satisfaction. This program is focused on psychotherapy and is run year-round. In 2018, 85 employees received counseling service for 259 times in total.

## Human Rights Management

### Human Rights Management Principle

Mirae Asset Daewoo supports the human rights principles presented by the 'UN Universal Declaration of Human Rights' and the 'UN Guiding Principles on Business and Human Rights' of the United Nations Commission on Human Rights. After joining the UN Global Compact (UNGC) in June 2006, we have been observing the ten major principles on human rights, labor, the environment, and anti-corruption, thereby fulfilling social responsibilities that are in line with global standards. By establishing and distributing human rights protection principles, we seek to protect the human rights of all stakeholders, including all staff.

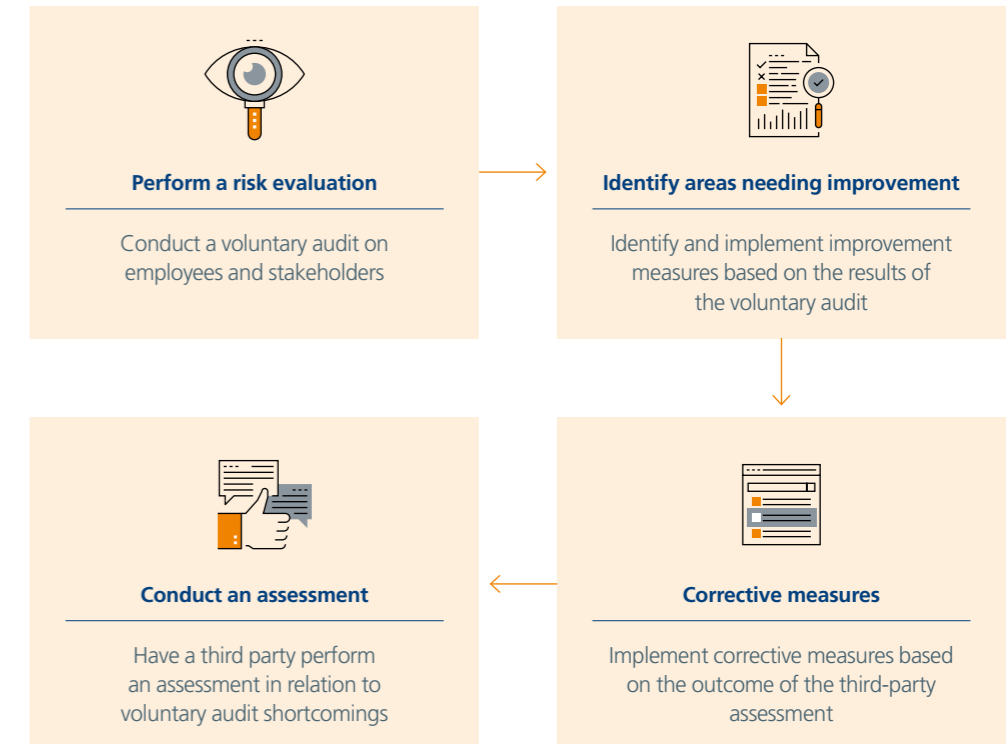
#### Human Rights Management Principle

- I. Mirae Asset Daewoo believes that protecting human rights is its most basic responsibility in running its business, and has adopted, as its basic principles for running its business, respect for comprehensive human rights principles, including prohibition of child labor and forced labor, and prohibition of discrimination.
- II. Mirae Asset Daewoo's principle on protecting human rights applies equally to staff at our business sites, shareholders, investors, customers, trading organizations, collaborative organizations, and local communities.
- III. Mirae Asset Daewoo does not discriminate against customers based on gender, religion, race, political leaning, etc., and strives to protect customers' information and to achieve stable revenue generation.
- IV. Mirae Asset Daewoo respects the basic rights of individual employees, and strives to provide a work environment that strikes a balance between work and personal life.
- V. Mirae Asset Daewoo examines compliance with the human rights protection principle, and in the event of a human rights violation and discrimination, the company implements a process that resolves the issue in accordance with a set procedure.

#### Process to Identify Human Rights Risks & Improvement Measures

We identify potential human rights issues throughout our business activities, and take corrective measures for identified issues. We identify the issues by comprehensively considering whether human rights issues occurred in the past, their frequency, as well as financial and non-financial seriousness. We continuously manage vulnerabilities for each identified issue, and designate a division to continue managing relevant matters.

#### Risk Analysis Process



#### Outcome of a Human Rights Audit

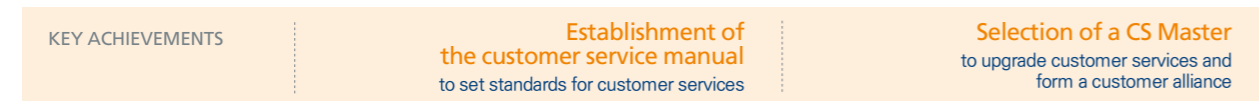
We conduct voluntary audits on employees and stakeholders, and audits through an outside, third-party organization. In the case of voluntary audits, we comprehensively assess compliance with the Labor Standards Act, salary, and non-discrimination principle. In the case of an audit by a third-party organization, actual implementation of labor/human rights rules is examined. Results of the voluntary audit and third-party organization audit conducted in 2018 indicated shortcomings in relation to compliance with operation of the grievance handling process. We completed 100% corrective measures for these shortcomings. We are particularly making efforts to improve work conditions for service counseling employees, which has recently become a social issue. We will strengthen the human rights protection system for service counseling employees by continually strengthening such programs as mental health diagnosis and stress management.



# Customer Satisfaction Management



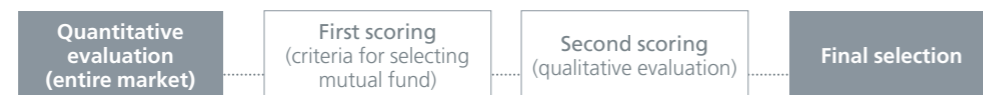
It has been becoming increasingly important to develop products that are adequate for customer and market trends and to provide higher profitability as a result of fierce circumstances in the domestic financial market and increased customer interest in asset management and preparation for life after retirement due to the rapidly aging population. Setting enhancement of customer profitability as our top-priority goal, we continue to implement customer-centered management activities, such as communicating with customers, developing diverse products that satisfy customer needs, and providing distinctive financial services.



## Developing Customer-centric Products

### Product Development Process

Mirae Asset Daewoo has set a product selection process in place to build an excellent product lineup that is suited for the long-term future, customer needs, and the global investment environment. We conduct the first scoring process on funds ranked high according to the result of quantitative evaluation on all available funds in the market. The second scoring process will then finalize a new and recommended product lineup. In 2018, we engaged in regular communication with a customer advisory group to reflect customer opinions in the product selection process.



### Product Strategy Council

The Product Strategy Council is a voluntary entity where team heads from 16 teams, such as product solution, sales and marketing, conduct thorough analysis of clients' asset portfolio and increase profitability in a stable manner. The council meetings have been held on a monthly basis since 2017, to scrutinize products with low return and strengthen portfolio rebalancing for clients. Furthermore, the entity evaluates various issues that may impact the return from different perspectives and incorporate the voices of customer-facing sales organization to enhance transparency in product policy and achieve the value of client alliance the company pursues. Furthermore, a customer panel was established to keep ears open to the varying needs of clients and incorporate their voices into the process of releasing products and services.

## BUSINESS CASE

### Major Products



#### KOSDAQ Venture Fund

Mirae Asset Daewoo launched the KOSDAQ Venture Fund for the purpose of invigorating the KOSDAQ market in line with the FSS announcement in January 2018. The Fund allocates over 50% of assets into outstanding venture firms as well as promising SMEs in new growth areas. We have 18 public offering and private equity funds on offer, contributing to the government's policy to promote the growth of SMEs.

#### Target Income Fund

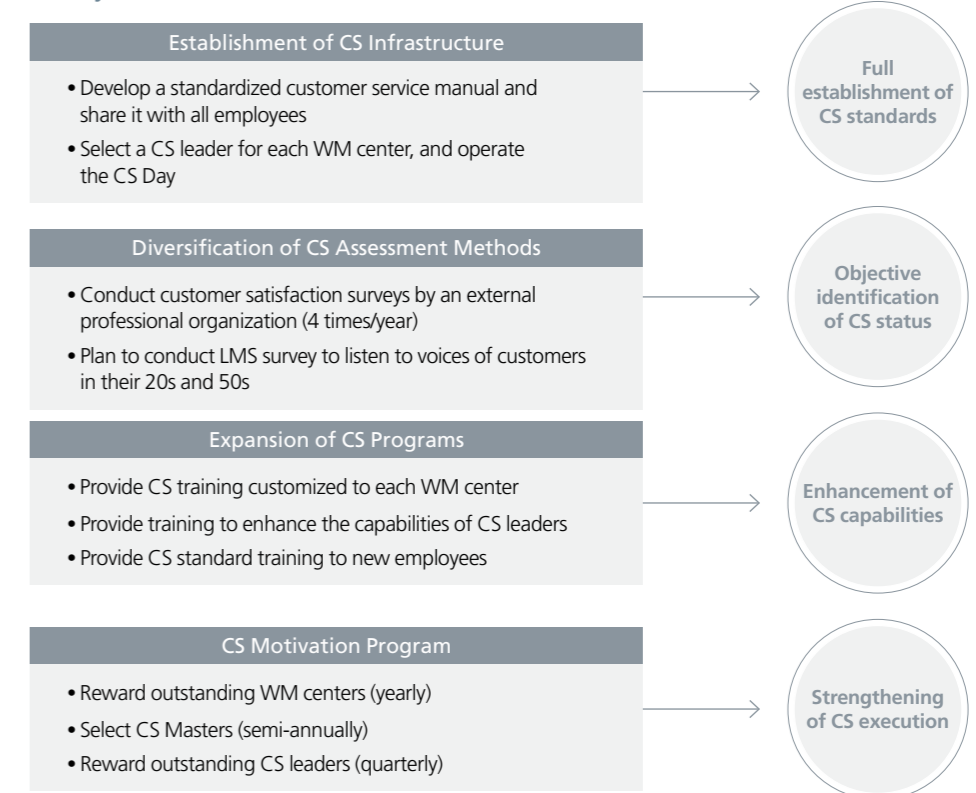
Mirae Asset Daewoo developed Target Date Fund (TDF) products which differentiate asset allocation ratio according to different time period especially for investors with specific long-term plans, such as retirement fund or tuition fee at a certain target date. In addition, we launched a Target Income Fund (TIF) in March 2019. TIF is a pension investment solution that offers stable and consistent cash income, so that it is suitable for investors who are in need of withdrawing their pension fund after retirement.

## Customer Satisfaction Management

### Advancing CS System

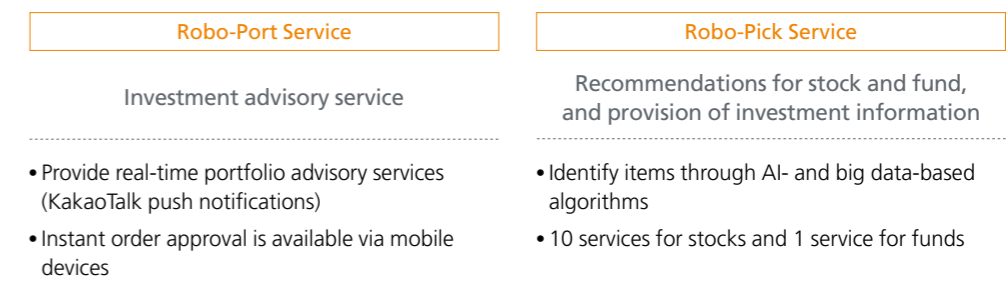
Mirae Asset Daewoo has established its own CS system, and is solidifying it in order to realize the principle of 'Clients First' and 'Clients Alliance', and to ensure WM services of the same quality across the nation. A survey was conducted on customers who visited WM centers in 2018, and found their satisfaction rate to be 93.9 points based on internal CSI criteria. Furthermore, employees with outstanding CS services were designated as CS Masters to further drive employees' service-centric mindset. In 2019, we will sophisticate our CS system through various training programs and by nurturing outstanding talents as CS instructors.

#### CS System



### Providing CS Services

**Mobile asset management services** Mirae Asset Daewoo has been expanding the scope of its Robo-Port and Robo-Pick services, which provide small investors with more convenient asset management services. Robo-Port offers quality online counseling and one-click ordering functions and Robo-Pick discovers promising stocks for investment and offers investment information through AI- and big data-based algorithms through alliances with fintech companies. These two services aim at satisfying diverse investment styles and needs.



# Social Contributions



Mirae Asset Daewoo strives to share our success with society by practicing 'warm-hearted, caring capitalism'. We also strive to go beyond our role as a Korea's leading investment financial group, and create a greater social value. We therefore carry out various social contribution activities based on the three pillars of 'Nurturing Talent', 'Social Welfare', and 'Culture of Sharing'.



## Social Contribution Strategies

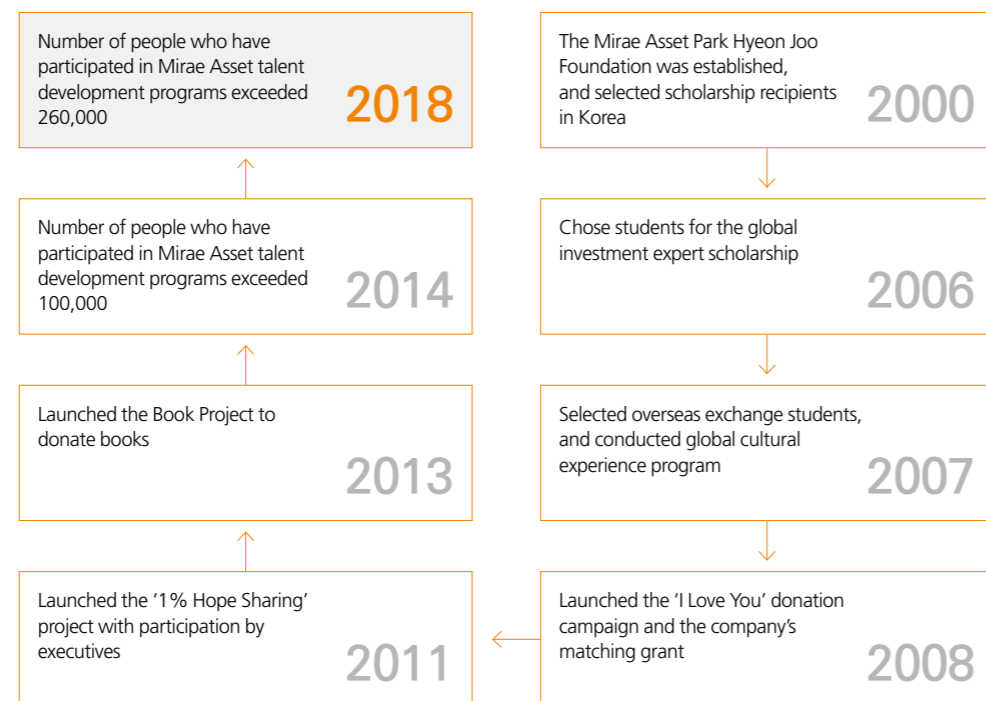
### CSR Directions

With the 'Mirae Asset Park Hyeon Joo Foundation' performing central roles, Mirae Asset is rolling out CSR activities through cohesive cooperation among affiliates. The three main areas of the company's CSR activities are nurturing talent, social welfare, and culture of sharing. We are systematically and continually executing scholarship and education support programs based on the slogan, 'Mirae Asset will serve as hope for the youth'. We will return the profits earned through our business activities to society, and strive to build a healthy and sound society where we stand by the side of the underprivileged through volunteering.

### Major CSR Areas



### Mirae Asset's CSR Milestones



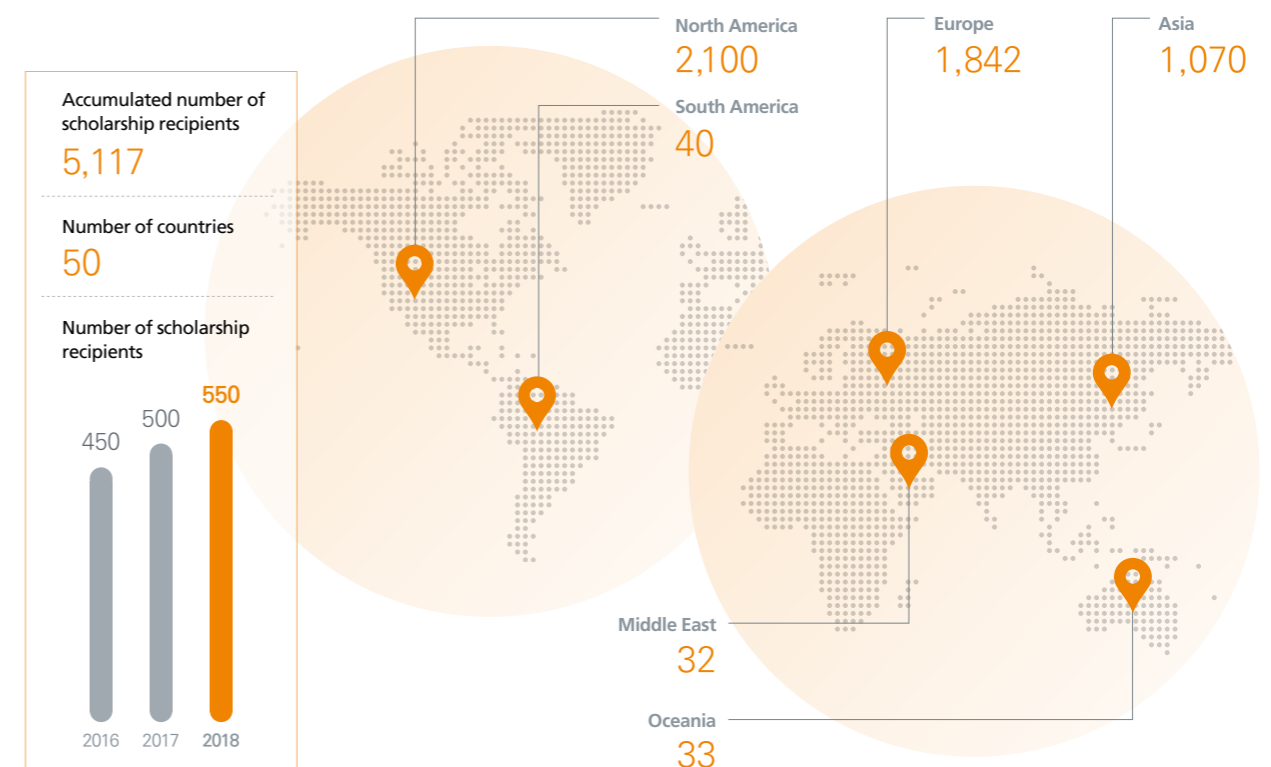
## Nurturing Talent

### Adding Hope to Challenge — Mirae Asset Overseas Exchange Program

Under the slogan, 'Mirae Asset will serve as hope for the youth', we have been rolling out the Mirae Asset overseas exchange program as a core part of our social contribution activities in the largest scale in Korea. In order to provide opportunities to more college students, we have lifted the limitation on certain colleges and major, and also eliminated the interview process. In doing so, we help scholarship students who have experienced and learned from the overseas exchange program have bigger dreams to grow further.

Began in 2007, this program has supported 5,117 college students to study abroad in 50 countries including the U.S., Europe, the Middle East, and Asia. A total of 550 scholarship recipients were chosen twice a year with up to KRW 7 million granted per person. From 2019, the number of students will grow to 650 a year so that help more Korean young adults grow into a global talent in the future.

99 students in eight classes, selected as 'Mirae Asset Global Correspondents' since 2014, are sharing their unique cultural, economic, and regional experiences and information by posting on personal blogs with students preparing for the exchange program. 'Sharing Day' is an event where students who have received the grant serve as mentors for new students, and also carry out diverse voluntary activities such as baking, wall painting, and carrying briquettes, thereby creating a virtuous cycle of sharing their experiences and talent with society



### VOICE OF STAKEHOLDERS



Mirae Asset overseas exchange program has made it possible for me to experience the greater world and have priceless experience and memory. I will always keep in mind my commitment to 'become a warm-hearted global leader who understands the value of sharing' written in my application for the scholarship program, and will become a talent who practices sharing and contributes to society.

**Jinwoo Han**  
(selected in spring semester 2018; and sent to Netherlands)

Social Welfare

**Global Cultural Experience Program**

The Global Cultural Exchange Program is one of Mirae Asset's major talent nurturing programs offering opportunities for the youth to broaden their view and grow into global leaders. Participants take a trip to Shanghai, the Chinese financial capital, and stay for four days, visiting the Provisional Government Site of the Republic of Korea, Yuyuan Garden, Shanghai Science and Technology Museum, the Bund financial district, and thus learn history and culture. In 2018, they also had a first-hand experience of the O2O (Online to Offline) services of the advanced fintech industry in Shanghai.

**Book Project**

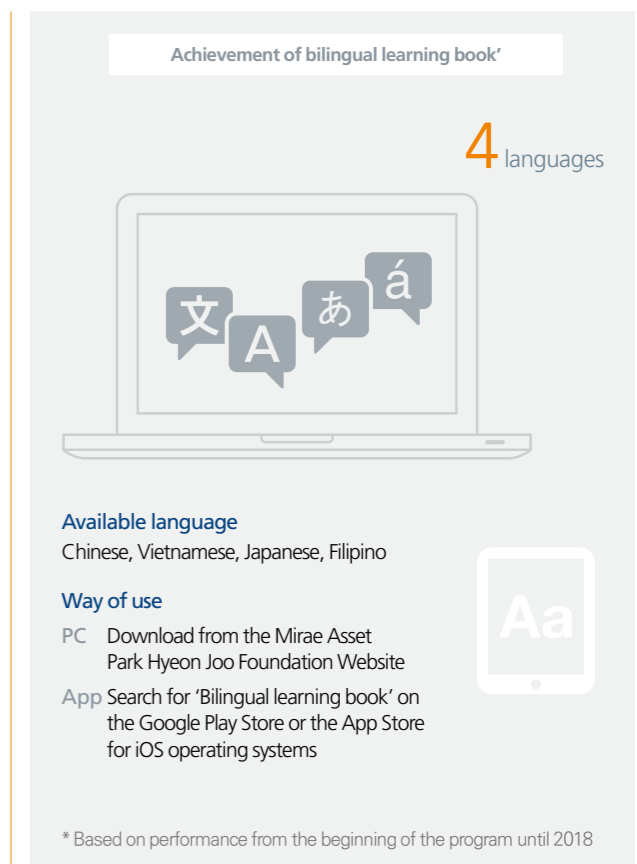
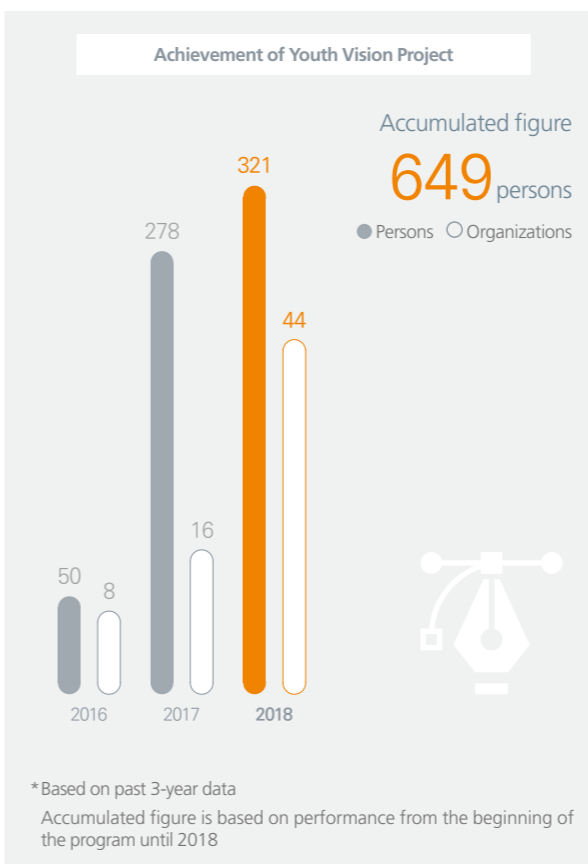
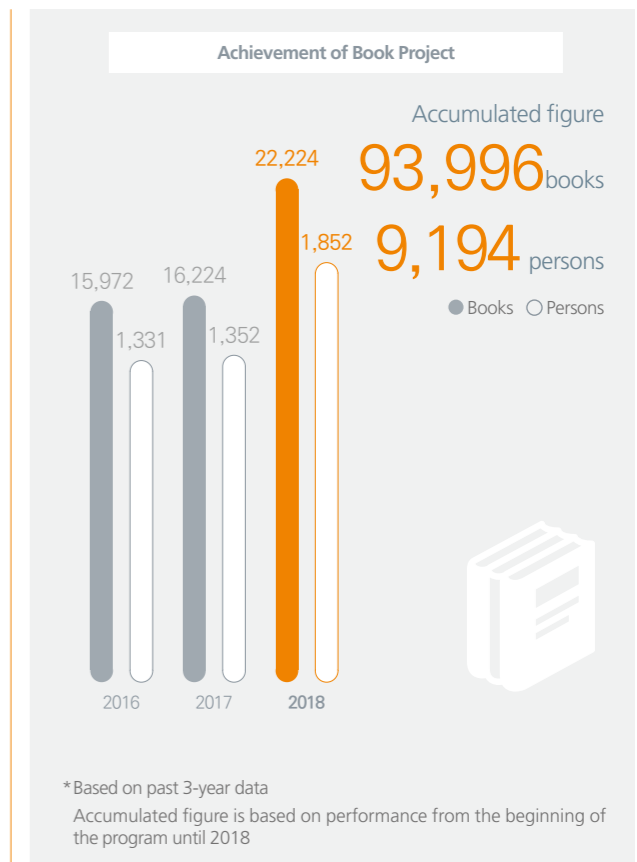
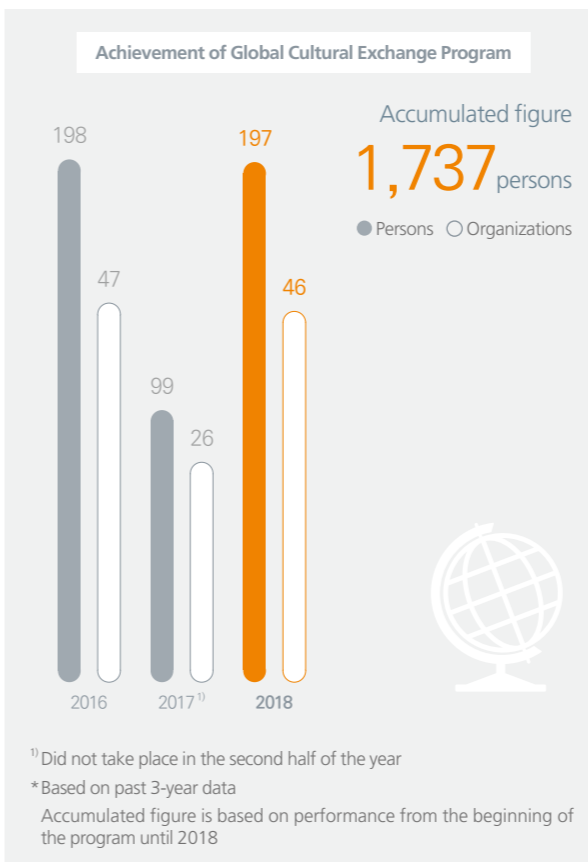
The Book Project aims at fostering a happy reading environment so that the youth can experience the greater world and develop creativity and thinking power through books. Participants are presented with books which suit their areas of interest, background, and reading level and professionals in social welfare facilities are given workshops to boost their reading instruction capability and create a quality reading environment.

**Bilingual e-learning Books**

We upgraded our bilingual textbooks, which we had developed for children from multicultural families, to e-books for better learning effectiveness and easier distribution. These e-books are designed to enhance readers' interest and immersion by recording native speakers' reading and offering various types of activities such as drag and drop, drawing lines, and ticking the right answer. We expect children from multicultural families can learn the different languages and culture of their parents and grow into talents with greater communication capabilities.

**Youth Vision Project**

The Youth Vision Project offers programs based on design thinking and maker education to help students develop creative and flexible thinking to design the future in the fast-changing environment. Furthermore, we offer professionals in children's welfare facilities workshops which include know-how on planning and conducting maker education, assisting them to roll out various activities in the field.



# Environmental Management



There has been increasing interest around the globe in environmental and climate change issues, such as increase in wastes and abnormal climate, and continued efforts are being made to counter them. Companies in the financial sector therefore are fulfilling their social responsibilities in relation to environmental issues by implementing diverse policies, such as green financing and the carbon emission trading scheme. Accordingly, Mirae Asset Daewoo strives to create new business opportunities by adopting and executing environmental policies. In addition, we do our utmost to fulfill our environmental responsibilities by reducing greenhouse gas emissions, energy consumption, and waste discharge based on our eco-friendly management system.



## Environmental Management System

### Environmental Management

We are enhancing environmental awareness of our employees through corporate-wide eco-friendly management, while also engaging in activities to reduce environmental impact for sustainable development. We systematically manage diverse environmental data, such as greenhouse gas emissions, waste discharge, and energy consumption, and report our status on countering climate change to the Carbon Disclosure Project (CDP). By doing so, we actively take part in international efforts to combat climate change.

### Management of GHG and Energy

To reduce energy consumption and greenhouse gas emissions, Mirae Asset Daewoo has been reducing unnecessary energy consumption and continually managing energy use. There is almost zero direct GHG emission caused by energy sources directly owned or managed by Mirae Asset Daewoo, given the nature of the financial industry. We therefore focus on managing Scope 2, which refers to indirect emissions. We also manage Scope 3 by reducing paper use and wastes, and by increasing business trip efficiency. In particular, we encourage employees to take part in GHG emissions reduction activities in their daily work, including when they commute, carry out work, and provide customer service. We also strive to reduce energy consumption by conducting such campaigns as turning off lights during off hours and refraining from the use of air-conditioning units and heating devices. We will expand the scope of eco-friendly management to cover branches in addition to headquarters, thereby preventing potential environmental risks and strengthening the fulfillment of environmental responsibilities.

### Management of Water, Resources and Waste

Mirae Asset Daewoo has a system in place for using greywater and rainwater. Clean water that is used once and rainwater is purified to be reused for bathrooms and landscaping, and thus saving water. There is a sewage treatment facility inside the Mirae Asset CENTER 1 Building that handles internal purification to minimize our impact on the environment. In addition, we are refraining from unnecessary printing and using an electronic reporting system to reduce paper use. Given the nature of the financial industry, all the waste discharged is domestic waste, which is treated by an outsourced company. Wastewater is batch treated at a sewage treatment plant of the Seoul Metropolitan Government, and we also strive to minimize our environmental impact through thorough separation of garbage disposal and recycling.

## Culture of Sharing

### One Company One School Financial Education

Mirae Asset Daewoo appreciates the adolescent as the financial consumers of the future, and thus carries out various financial education programs to help them choose their career path. In particular, we have expanded the 'One Company, One School' financial education by the Financial Supervisory Service (FSS), and formed sisterhood ties with 394 schools around the nation, the largest scale in the financial industry, in 2018. In recognition of our efforts to invigorate the financial education for the youth, we won the FSS Governor Award in 2016 and 2017, and also received the Outstanding Staff Award in One Company One School Financial Education from the FSS Governor.

In addition, we are carrying out many participation-based hands-on programs, such as inviting elementary, middle, and high school students to Mirae Asset headquarters for financial education, and career counseling program jointly conducted with Korea Exchange and Korea Financial Investment Association, thereby fulfilling our social responsibility as a financial institution.

### Expanding Employee Donation and Volunteering through the Hope Chain Leader

Mirae Asset Daewoo held the launching ceremony of 'Hope Chain Leader' in May 2018. We had workshops to discover various ideas for CSR activities and selected 10 models, based on which we have been conducting innovative CSR activities since August 2018. 20 volunteer organizations have been set up by division at headquarters and regional departments, and each organization, led by 3-4 volunteer leaders, participates in voluntary activities more than once per quarter. This program is noteworthy as it is a bottom-up voluntary activities where employees plan and participate in various CSR activities themselves, instead of the traditional top-down approach. Some 30 CSR activities, including 10 activities planned by employees, have been conducted for the past five months since the launch of the Hope Chain Leader in 2018. We have also signed a partnership deal with Naver Happy Bean and other non-profit organizations to introduce CSR themes and activities to our employees with the goal of establishing a culture of employee donation.

## BUSINESS CASE

### Major Programs of the Hope Chain Leader



#### Hands-On Voluntary Activities (Orange box)

Our employees prepare orange boxes filled with gifts they make during lunch time, and donate them to families with single mom, foster care families, children who were victims of harassment, the elderly living alone, and children from multicultural families in Vietnam.



#### Cultural Experience Festival

This program started with providing water play toys, and has expanded to various cultural experience programs, such as coding training and basketball classes.



#### Jump & Joy

This is a program which enables children in local childcare facilities with limited travel opportunities to visit regions of other children in similar facilities to experience the joy of traveling. The program also supports children to make their own craft gift and donate to overseas children of a similar age group.

#### Multicultural Cooking Class

We provide cooking programs where the youth from Vietnam, China, and Russia can meet each other, introduce their unique cultures and cook their nation's representative foods. This allows participants to have a mutual understanding of another country's history and culture and provides opportunities to exchange and network with neighbors of diverse ethnicities.

#### Sharing Truck

With the Sharing Truck program, we aim to provide children from socially marginalized families to learn the global culture and taste global food. This year we featured an Indian food truck to help food trucks in poor financial shape as well as provide children with global cuisine and culture experiences.

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MIRAE ASSET  
미래에셋

## Independent Auditors' Report

Based on a report originally issued in Korean

To the Board of Directors and Shareholders of  
Mirae Asset Daewoo Co., Ltd.

### Opinion

We have audited the consolidated financial statements of Mirae Asset Daewoo Co., Ltd. and its subsidiaries (collectively the "Group"), which comprise the consolidated statements of financial position as of December 31, 2018 and 2017, the consolidated statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes, comprising significant accounting policies and other explanatory information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2018 and 2017, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with Korean International Financial Reporting Standards ("K-IFRS").

### Basis for Opinion

We conducted our audits in accordance with Korean Standards on Auditing (KSAs). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in the Republic of Korea, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements as of and for the year ended December 31, 2018. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

#### (1) Valuation of financial instruments classified under level 3 fair value hierarchy

If the fair value of a financial instruments is measured using valuation techniques where significant inputs are not observable, the Group classifies the fair value hierarchy of the financial instruments as Level 3.

As of December 31, 2018, the Group's level 3 financial assets and liabilities amount to KRW 2,944,636 million and KRW 9,688,587 million, respectively, which include derivatives, hybrid instruments, and unlisted equity instruments (refer to Note 3.(9) of the consolidated financial statements).

We have identified valuation of financial instruments classified under level 3 fair value hierarchy as a key audit matter, considering significant degree of management judgment involved, and the following associated risks:

- Risk that the estimate of the financial instruments' fair value is materially misstated due to applying inappropriate valuation methodology and inputs (i.e. volatility of discount rate, stock price, and individual factors and correlation between the factors, etc).
- Risk that the estimate of the financial instruments' fair value is materially misstated due to inappropriate assumptions used in estimating future cash flows.

The primary audit procedures we performed to address the above key audit matters included:

- We have tested certain internal controls over the process of changes in the methodology used to value the financial instruments, and the appropriateness of the model applied to the valuation of new products based on the characteristics of the products.
- We have tested certain internal controls over the process of selection and approval of inputs used to estimate fair value.
- We have tested certain internal controls over the process of compiling the underlying data used to estimate the future cash flows and discount rates and the process of assessing the accuracy of the data used with reference to internal data, observable market data, macroeconomic indicators, and so on.
- We have also involved our internal valuation specialists to assist us in evaluating the reasonableness of methodologies and inputs used in the estimation of fair values on a sample basis. In addition, we have assessed the assumptions used by management by considering the business environment of the Group, market and macroeconomic indicators on a sample basis. We have also compared the historical financial data used by management in the valuation to the information publicly available.
- For valuation of unlisted equity instruments, we have independently re-calculated the fair value and compared it to the Group's estimates on a sample basis of unlisted equity instruments.



## (2) Revenue recognition of commission fee revenues from non-standard transactions

The Group recognized the commission revenues of KRW 1,059,082 million for the year ended December 31, 2018, which includes revenues derived from non-standard transactions of KRW 380,245 million (refer to Note 37 of the consolidated financial statements).

The timing of revenue recognition related to non-standard transactions depends on the individual terms of each transaction. We have identified revenue recognition of commission fee revenues from non-standard transactions as a key audit matter considering the following risks identified:

- Risks that revenue may be deliberately misstated through early revenue recognition or adjustment of revenue allocation for the period as a result of management override resulting from the pressure certain individual departments or management may feel to achieve performance goals or expectations.
- Risks that the revenue may be misstated as a result that the calculation of revenue recognition is complex due to various and complicated terms of each contracts.

The primary audit procedures we performed to address the above key audit matters included:

- We have tested certain internal controls over process of review each contracts to determine whether timing of commission fee revenues from non-standard recognition is accurate (i.e. whether it is subject to deferred revenue recognition).
- We have tested certain internal controls over process of assessment whether deferred commission fee revenues from non-standard transactions are accurately allocated and recognized for each month.
- We have tested certain internal controls over process of confirm accuracy of calculation of commission fee revenues from non-standard transactions including stock underwriting commissions, corporate bond underwriting commissions and other underwriting commissions.
- For selected samples from commission fee revenues from non-standard transactions, compared the terms of contracts provided by management with terms of contracts publically disclosed.
- For selected samples from commission fee revenues from non-standard transactions, inspection of documentation including contracts to assess the accuracy of timing of revenue recognition and recalculation of commission fee revenues from non-standard transactions.

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

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

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

## Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with KSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

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

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used in the preparation of the consolidated financial statements and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements as of and for the year ended December 31, 2018 and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditors' report is Myung-Ki Seok.

## Other Matter

The procedures and practices utilized in the Republic of Korea to audit such consolidated financial statements may differ from those generally accepted and applied in other countries.

KPMG Samjong Accounting Corp.  
Seoul, Korea  
March 11, 2019

This report is effective as of March 11, 2019, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying consolidated financial statements and notes thereto. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

# Consolidated Financial Statements

## Consolidated Statements of Financial Position

As of December 31, 2018 and 2017

Mirae Asset Daewoo Co., Ltd. and its subsidiaries

(In Korean won)

	Notes	2018	2017
<b>Assets</b>			
Cash and cash equivalents	45,47	₩ 1,717,840,165,734	1,374,448,969,904
Financial assets at fair value through profit or loss	5,6,8,10,15,22,30,31,45,47	-	30,267,532,823,491
Financial assets measured at fair value through profit or loss	5,6,8,10,15,22,30,31,45,47	35,064,492,273,331	-
Available-for-sale financial assets	5,6,12,15,22,45,47	-	8,838,520,107,354
Financial assets measured at fair value through other comprehensive income	5,6,12,15,22,45,47	8,203,072,869,074	-
Loans and receivables	5,8,14,15,22,45,47, 56	-	46,923,425,478,459
Financial assets measured at amortized cost	5,8,14,15,22,45,47, 56	69,385,395,391,406	-
Investments in associates	17	1,049,040,379,186	673,055,861,630
Property and equipment, net	18	232,152,045,602	198,576,441,900
Investment properties, net	19	1,086,179,552,339	1,140,599,627,851
Intangible assets, net	20	654,825,151,295	650,053,632,828
Other assets	21	70,023,704,118	113,910,623,579
Income tax receivable		3,280,804,264	1,785,334,715
Deferred tax asset	52	619,197,137,563	444,690,399,842
<b>Total assets</b>		<b>₩ 118,085,499,473,912</b>	<b>90,626,599,301,553</b>
<b>Liabilities</b>			
Financial liabilities at fair value through profit or loss	5,15,23,30,31,45,47	₩ -	17,432,460,637,775
Financial liabilities measured at fair value through profit or loss	5,15,23,30,31,45,47	17,740,007,802,711	-
Deposits due to customers	5,15,25,45,47	5,465,538,408,517	5,118,877,230,489
Borrowings	5,6,15,26,45,47	72,363,400,367,451	49,390,196,184,989
Debentures	5,15,27,47,56	4,249,204,789,706	3,085,496,672,057
Provisions	28	22,926,315,377	20,377,052,332
Other liabilities	5,15,29,45,47,56	9,804,343,180,993	8,171,135,639,184
Income tax payable		87,711,840,937	22,782,013,768
Deferred tax liabilities	52	-	768,141,323
<b>Total liabilities</b>		<b>₩ 109,733,132,705,692</b>	<b>83,242,093,571,917</b>
<b>Equity</b>			
Capital stock	32	₩ 4,101,960,790,000	3,401,960,790,000
Capital surplus	33	2,153,912,358,019	2,164,649,228,172
Retained earnings	34,36	2,250,141,496,796	1,874,982,489,194
<small>(Regulatory reserve for credit losses of ₩88,581,001,870 and ₩50,848,967,579 as of December 31, 2018 and 2017 respectively)</small>			
<small>(Provision for (reversal of) regulatory reserve for credit losses amounted to ₩(-)13,120,063,229 and ₩37,732,034,291 as of December 31, 2018 and 2017 respectively)</small>			
Capital adjustment	35,55	(6,847,094,937)	(7,714,262,282)
Accumulated other comprehensive loss	11,12,35	(185,614,512,179)	(77,205,546,703)
Non-controlling interests		38,813,730,521	27,833,031,255
<b>Total equity</b>		<b>8,352,366,768,220</b>	<b>7,384,505,729,636</b>
<b>Total liabilities and equity</b>		<b>₩ 118,085,499,473,912</b>	<b>90,626,599,301,553</b>

See accompanying notes to the consolidated financial statements.

## Consolidated Statements of Comprehensive Income

For the years ended December 31, 2018 and 2017

Mirae Asset Daewoo Co., Ltd. and its subsidiaries

(In Korean won)

	Notes	2018	2017
<b>Operating revenue</b>			
Commissions	37,56	₩ 1,059,081,807,074	895,239,308,614
Gains on financial instruments at fair value through profit or loss	31,38	-	7,002,686,182,399
Gains on financial instruments measured at fair value through profit or loss	31,39	8,273,683,930,871	-
Gains on available-for-sale financial assets	40	-	114,486,993,943
Gains on financial assets measured at fair value through other comprehensive income	41	4,885,302,388	-
Interest income	7,42	-	-
Interest income		-	1,152,767,665,404
Financial assets measured at amortized cost		1,793,637,323,651	-
Financial assets measured at fair value through other comprehensive income		130,348,729,098	-
Financial assets measured at fair value through profit or loss		484,386,836,000	-
Gains on loans and receivables	43	-	5,031,242,135
Reversal of credit loss allowances	44	2,018,261,112	-
Gains on foreign currency transactions	45	1,181,895,204,758	742,658,913,994
Others	46,56	394,002,657,506	385,779,522,179
		<b>13,323,940,052,458</b>	<b>10,298,649,828,668</b>
<b>Operating expenses</b>			
Commissions expense	37,56	203,812,635,264	161,043,126,453
Losses on financial instruments at fair value through profit or loss	30,31,38	-	6,856,852,969,311
Losses on financial instruments measured at fair value through profit or loss	30,31,39	8,378,381,247,879	-
Losses on available-for-sale financial assets	40	-	52,226,218,053
Losses on financial assets measured at fair value through other comprehensive income	41	4,081,958,499	-
Interest expense	7,42	1,754,212,264,589	581,452,620,235
Losses on loans and receivables	43	-	2,141,545,956
Provision for credit loss allowance	44	17,664,878,555	-
Losses on foreign currency transactions	45	1,292,743,701,374	898,308,939,487
Employee costs	48	658,267,396,434	647,272,403,418
Selling and administrative expense	49	456,430,612,154	436,918,970,835
Others	46,56	46,015,990,020	34,680,464,383
		<b>12,811,610,684,768</b>	<b>9,670,897,258,131</b>
<b>Operating profit</b>		<b>₩ 512,329,367,690</b>	<b>627,752,570,537</b>
<b>Non-operating income, net</b>			
Non-operating income	7,50	₩ 154,295,087,590	111,624,182,081
Non-operating expense	7,51	81,614,666,539	74,627,745,824
		<b>72,680,421,051</b>	<b>36,996,436,257</b>

Mirae Asset Daewoo Co., Ltd. and its subsidiaries

(In Korean won)

	Notes	2018	2017
<b>Profit before income tax expense</b>		<b>₩ 585,009,788,741</b>	664,749,006,794
<b>Income tax expense</b>	7,52	<b>123,000,183,925</b>	159,815,280,306
<b>Profit for the year</b>			
Equity holder of the Company		<b>456,565,313,872</b>	503,175,503,631
Non-controlling interests		<b>5,444,290,944</b>	1,758,222,857
		<b>₩ 462,009,604,816</b>	504,933,726,488
<b>Other comprehensive income for the year, net of tax</b>			
Items that are or may be reclassified to profit or loss:			
Net change in unrealized fair value of available-for-sale financial assets	11	<b>₩ -</b>	(24,346,294,579)
Gains on financial asset measured at fair value through other comprehensive income	12	<b>66,010,063,382</b>	-
Equity in other comprehensive income (loss) of associates	17	<b>5,444,934,500</b>	(8,193,453,933)
Hedges of a net investment in foreign operations	31	<b>(11,731,060,892)</b>	12,599,573,133
Foreign currency translation adjustments for foreign operations		<b>63,890,554,804</b>	(186,417,906,574)
Items that will never be reclassified to profit or loss:			
Valuation loss on financial asset measured at fair value through other comprehensive income	12	<b>(109,625,006,968)</b>	-
Changes in own credit risk on financial liabilities designated as measured at fair value through profit or loss	24	<b>2,577,123,786</b>	-
		<b>16,566,608,612</b>	(206,358,081,953)
<b>Total comprehensive income for the year</b>			
Equity holder of the Company		<b>473,152,003,611</b>	297,040,195,817
Non-controlling interests		<b>5,424,209,817</b>	1,535,448,718
		<b>₩ 478,576,213,428</b>	298,575,644,535
<b>Earnings per share</b>			
Basic and diluted earnings per share			
Common stock	53	<b>660</b>	944
2 preferred stock		<b>660</b>	-

See accompanying notes to the consolidated financial statements.

## Consolidated Statements of Changes in Equity

For the years ended December 31, 2018 and 2017

Mirae Asset Daewoo Co., Ltd. and its subsidiaries

(In Korean won)

	Attributable to equity holders of the Group						Non-controlling interests	Total
	Capital stock	Capital surplus	Capital adjustment	Accumulated other comprehensive income(loss)	Retained earnings	Sub-Total		
<b>Balance at January 1, 2017</b>	₩ 3,401,960,790,000	1,813,265,000,459	(103,038,495,934)	128,929,761,111	1,397,747,543,513	6,638,864,599,149	26,900,107,765	6,665,764,706,914
<b>Total comprehensive income for the year:</b>								
Profit for the year	-	-	-	-	503,175,503,631	503,175,503,631	1,758,222,857	504,933,726,488
Net changes in unrealized valuation of available-for-sale financial assets	-	-	-	(24,123,520,440)	-	(24,123,520,440)	(222,774,139)	(24,346,294,579)
Equity in other comprehensive income of associates	-	-	-	(8,193,453,933)	-	(8,193,453,933)	-	(8,193,453,933)
Hedges of a net investment in foreign operations	-	-	-	12,599,573,133	-	12,599,573,133	-	12,599,573,133
Gain or loss on translation of foreign operations	-	-	-	(186,417,906,574)	-	(186,417,906,574)	-	(186,417,906,574)
<b>Transaction with owners, etc.:</b>								
Dividends paid	-	-	-	-	(25,940,557,950)	(25,940,557,950)	-	(25,940,557,950)
Changes in treasury stocks	-	351,445,658,768	33,096,916,634	-	-	384,542,575,402	-	384,542,575,402
Stock option	-	-	(83,572,665)	-	-	(83,572,665)	-	(83,572,665)
Others	-	(61,431,055)	62,310,889,683	-	-	62,249,458,628	(602,525,228)	61,646,933,400
<b>Balance at December 31, 2017</b>	₩ 3,401,960,790,000	2,164,649,228,172	(7,714,262,282)	(77,205,546,703)	1,874,982,489,194	7,356,672,698,381	27,833,031,255	7,384,505,729,636
<b>Balance at January 1, 2018</b>	₩ 3,401,960,790,000	2,164,649,228,172	(7,714,262,282)	(77,205,546,703)	1,874,982,489,194	7,356,672,698,381	27,833,031,255	7,384,505,729,636
Adoption effect of K-IFRS No. 1109, net of tax(Note 4)	-	-	-	(124,995,655,215)	120,149,622,780	(4,846,032,435)	(246,851,929)	(5,092,884,364)
<b>Balance at January 1, 2018 (Restated)</b>	3,401,960,790,000	2,164,649,228,172	(7,714,262,282)	(202,201,201,918)	1,995,132,111,974	7,351,826,665,946	27,586,179,326	7,379,412,845,272
<b>Total comprehensive income for the year:</b>								
Profit for the year	-	-	-	-	456,565,313,872	456,565,313,872	5,444,290,944	462,009,604,816
Net changes in unrealized valuation of financial assets measured at fair value through other comprehensive income	-	-	-	(43,614,943,586)	-	(43,614,943,586)	-	(43,614,943,586)
Equity in other comprehensive income of associates	-	-	-	5,444,934,500	-	5,444,934,500	-	5,444,934,500
Credit risk fluctuation of financial liabilities designated as measured at fair value through profit or loss	-	-	-	2,577,123,786	-	2,577,123,786	-	2,577,123,786
Hedges of a net investment in foreign operations	-	-	-	(11,731,060,892)	-	(11,731,060,892)	-	(11,731,060,892)
Gain or loss on translation of foreign operations	-	-	-	63,910,635,931	-	63,910,635,931	(20,081,127)	63,890,554,804
<b>Transaction with owners, etc.:</b>								
Dividends paid	-	-	-	-	(124,691,658,520)	(124,691,658,520)	-	(124,691,658,520)
Capital increase with consideration	700,000,000,000	(13,175,806,743)	-	-	-	686,824,193,257	5,472,187,018	692,296,380,275
Changes in treasury stocks	-	2,340,572,587	(76,400,928,322)	-	-	(74,060,355,735)	-	(74,060,355,735)
Retirement in treasury stocks	-	-	76,864,270,530	-	-	(76,864,270,530)	-	-
Stock option	-	-	647,077,315	-	-	647,077,315	429,518,363	1,076,595,678
Others	-	98,364,003	(243,252,178)	-	-	(144,888,175)	(98,364,003)	(243,252,178)
<b>Balance at December 31, 2018</b>	₩ 4,101,960,790,000	2,153,912,358,019	(6,847,094,937)	(185,614,512,179)	2,250,141,496,796	8,313,553,037,699	38,813,730,521	8,352,366,768,220

See accompanying notes to the consolidated financial statements.

## Consolidated Statements of Cash Flows

For the years ended December 31, 2018 and 2017

Mirae Asset Daewoo Co., Ltd. and its subsidiaries

(In Korean won)

	2018	2017
<b>Cash flows from operating activities</b>		
Profit for the year	₩ 462,009,604,816	504,933,726,488
Adjustments:		
Interest income	(2,408,372,888,749)	(1,152,767,665,404)
Dividend income	(81,374,193,120)	(220,313,095,925)
Interest expense	1,754,212,264,589	581,452,620,235
Income tax expense	123,000,183,925	159,815,280,306
Loss on valuation of financial assets held for trading	-	111,300,620,278
Loss on valuation of financial assets measured at fair value through profit or loss	534,158,728,885	-
Loss on valuation of financial liabilities held for trading	-	21,511,487,771
Loss on valuation of financial liabilities measured at fair value through profit or loss	19,482,069,411	-
Loss on valuation of financial assets designated at fair value through profit or loss	-	52,623,031,178
Loss on valuation of financial liabilities designated at fair value through profit or loss	-	468,735,340,889
Loss on valuation of financial liabilities designated as measured at fair value through profit or loss	234,379,942,244	-
Loss on valuation of derivatives	1,340,413,565,620	1,128,513,534,990
Loss on disposal of available-for-sale financial assets	-	25,058,425,258
Loss on disposal of financial assets measured at fair value through other comprehensive income	4,081,958,499	-
Impairment loss on available-for-sale financial assets	-	27,167,792,795
Impairment loss on financial assets measured at fair value through other comprehensive income	2,268,252,290	-
Loss on valuation of investments in associates	9,688,903,637	3,224,192,264
Loss on disposal of investments in associates	38,153,447	28,132,093
Loss on disposal of investments in subsidiaries	8,588,332,469	6,791,201,528
Depreciation	24,023,647,165	22,718,086,404
Depreciation on investment properties	29,865,965,523	29,115,730,988
Loss on disposal of property and equipment	628,497,568	289,046,322
Loss on disposal of investment properties	6,682,043	-
Amortization	41,844,744,571	42,901,954,200
Loss on disposal of intangible assets	7,817,040	17,431,920
Impairment loss on intangible assets	-	152,715,509
Stock option expense	3,534,378,078	7,365,438,269
Rent expense	2,227,578,610	2,912,487,630
Bad debt expense	-	1,966,765,028
Provision of allowances on credit losses	9,352,813,621	-
Other bad debt expense	-	1,653,079,039
Provision of allowances on credit losses of other financial assets	1,552,746,323	-
Loss on foreign currency translation	77,296,618,298	235,981,266,357
Provision of allowances	8,990,774,826	12,402,576,548
Other operating expenses	12,998,954,445	7,226,595,543
Gain on valuation of financial assets held for trading	-	(161,133,276,663)
Gain on valuation of financial assets measured at fair value through profit or loss	(405,316,597,359)	-

Mirae Asset Daewoo Co., Ltd. and its subsidiaries

(In Korean won)

	2018	2017
Gain on valuation of financial liabilities held for trading	₩ -	(7,955,205,898)
Gain on valuation of financial liabilities measured at fair value through profit or loss	(29,658,052,144)	-
Gain on valuation of financial assets designated at fair value through profit or loss	-	(58,874,322,184)
Gain on valuation of financial liabilities designated at fair value through profit or loss	-	(376,139,857,576)
Gain on valuation of financial liabilities designated as measured at fair value through profit or loss	(714,828,114,049)	-
Gain on valuation of derivatives	(858,848,789,630)	(1,364,624,758,347)
Gain on disposal of available-for-sale financial assets	-	(114,486,993,943)
Gain on disposal of financial assets measured at fair value through other comprehensive income	(4,885,302,388)	-
Gain on disposal of investments in associates	-	(79,734,357)
Gain on valuation of investments in associates	(40,039,913,005)	(50,787,176,636)
Gain on disposal of investments in subsidiaries	(15,773,484,185)	(8,403,873,610)
Gain on disposal of property and equipment	(2,415,783,388)	(1,805,011,499)
Gain on disposal of investment properties	(48,083,362,851)	-
Gain on disposal of intangible assets	(150,000,000)	(89,178,000)
Reversal of bad debt allowances	-	(1,477,834,881)
Reversal of credit loss allowance	(171,694,496)	-
Reversal of other bad debt allowances	-	(715,261,956)
Reversal of provision on credit losses of other financial assets	(38,552,466)	-
Gain on foreign currency translation	(130,332,632,151)	(67,477,826,955)
Reversal of provisions	(9,905,864,655)	(3,404,459,429)
	(507,551,651,509)	(639,610,699,921)
Changes in:		
Due from financial institutions for customer accounts	₩ (2,670,231,841,543)	(470,479,042,077)
Financial assets held for trading	-	333,741,534,637
Financial assets measured at fair value through profit or loss	(2,044,850,643,681)	-
Financial assets designated at fair value through profit or loss	-	2,737,051,329,492
Loans and receivables	-	(8,902,982,471,849)
Financial assets measured at amortized cost	(3,226,225,658,895)	-
Other assets	(20,098,028,797)	18,607,768,190
Financial liabilities held for trading	-	192,076,848,963
Financial liabilities measured at fair value through profit or loss	121,539,315,140	-
Financial liabilities designated at fair value through profit or loss	-	(4,908,975,621,420)
Financial liabilities designated as measured at fair value through profit or loss	648,148,823,701	-
Deposits due to customers	355,771,556,716	996,338,089,654
Other liabilities	1,534,616,953,546	5,288,053,347,849
Provisions	(169,296,999)	(4,263,116,089)
	(5,301,498,820,812)	(4,720,831,332,650)

Mirae Asset Daewoo Co., Ltd. and its subsidiaries

(In Korean won)

	2018	2017
Interest received	₩ 2,327,707,493,064	1,101,197,090,473
Interest paid	(1,730,967,326,103)	(572,210,250,197)
Dividends received	75,868,525,683	216,004,048,640
Income tax paid	(201,114,484,955)	(34,063,456,901)
<b>Net cash used in operating activities</b>	<b>(4,875,546,659,816)</b>	<b>(4,144,580,874,068)</b>
<b>Cash flows from investing activities</b>		
Proceeds from disposal of available-for-sale financial assets	-	7,229,759,117,774
Proceeds from disposal of financial assets measured at fair value through other comprehensive income	4,090,636,831,863	-
Proceeds from disposal of investments in subsidiaries	28,580,217,210	-
Proceeds from disposal of investments in associates	975,474,125	46,829,663,293
Proceeds from disposal of property and equipment	6,843,580,700	10,476,407,369
Proceeds from disposal of investment properties	57,219,070,833	-
Proceeds from disposal of intangible assets	1,110,320,000	1,912,359,980
Decrease in deposits	19,241,099,970	9,770,782,962
Increase in withdrawals	377,114,887	5,542,232,310
Acquisition of available-for-sale financial assets	-	(7,391,671,283,378)
Acquisition of financial assets measured at fair value through other comprehensive income	(6,492,854,154,314)	-
Acquisition of investments in associates	(360,840,024,027)	(272,295,013,851)
Acquisition of property and equipment	(64,152,258,433)	(46,562,286,746)
Acquisition of investment properties	(85,596,047,107)	-
Acquisition of intangible assets	(36,318,014,598)	(41,657,356,373)
Increase in deposits	(4,104,179,770)	(8,191,373,473)
Decrease in deposits received	(3,014,370,960)	(2,498,930,000)
<b>Net cash used in investing activities</b>	<b>(2,841,895,339,621)</b>	<b>(458,585,680,133)</b>
<b>Cash flows from financing activities</b>		
Proceeds from borrowings, net	6,274,497,896,823	3,040,699,405,955
Proceeds from debentures, net	1,159,391,623,332	382,541,028,869
Proceeds from capital stock increase with consideration	692,296,380,275	-
Proceeds from disposal of treasury stock	-	498,499,990,230
Increase in other liabilities	277,469,801,339	179,520,346,595
Dividends paid	(124,691,658,520)	(25,940,557,950)
Acquisition of treasury stock	(76,864,270,530)	(172,801,387)
Decrease in other liabilities	(147,854,042,381)	(24,545,342,752)
Increase in non-controlling interest	-	(602,525,228)
<b>Net cash provided by financing activities</b>	<b>8,054,245,730,338</b>	<b>4,049,999,544,332</b>
<b>Effect of exchange rate fluctuations on cash and cash equivalents held</b>	<b>₩ 6,587,464,929</b>	<b>(78,412,741,390)</b>
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>343,391,195,830</b>	<b>(631,579,751,259)</b>
<b>Cash and cash equivalents at beginning of year</b>	<b>1,374,448,969,904</b>	<b>2,006,028,721,163</b>
<b>Cash and cash equivalents at end of year</b>	<b>₩ 1,717,840,165,734</b>	<b>1,374,448,969,904</b>

See accompanying notes to the consolidated financial statements.

# Independent Auditors' Report

Based on a report originally issued in Korean

To the Board of Directors and Shareholders of  
Mirae Asset Daewoo Co., Ltd.

## Opinion

We have audited the separate financial statements of Mirae Asset Daewoo Co., Ltd. (collectively the "Company"), which comprise the separate statements of financial position as of December 31, 2018 and 2017, the separate statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes, comprising significant accounting policies and other explanatory information.

In our opinion, the accompanying separate financial statements present fairly, in all material respects, the separate financial position of the Company as of December 31, 2018 and 2017, and its separate financial performance and its separate cash flows for the years then ended in accordance with Korean International Financial Reporting Standards ("K-IFRS").

## Basis for Opinion

We conducted our audits in accordance with Korean Standards on Auditing (KSAs). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Separate Financial Statements section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the separate financial statements in the Republic of Korea, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

## Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the separate financial statements as of and for the year ended December 31, 2018. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

### (1) Valuation of financial instruments classified under level 3 fair value hierarchy

If the fair value of a financial instruments is measured using valuation techniques where significant inputs are not observable, the Group classifies the fair value hierarchy of the financial instruments as Level 3.

As of December 31, 2018, the Company's level 3 financial assets and liabilities amount to KRW1,560,818 million and KRW 9,688,587 million, respectively, which include derivatives, hybrid instruments, and the unlisted equity instruments (refer to Note 3.(9) of the separate financial statements).

We have identified valuation of financial instruments classified under level 3 fair value hierarchy as a key audit matter, considering significant degree of management judgment involved, and the following associated risks:

- Risk that the estimate of the financial instruments' fair value is materially misstated due to applying inappropriate valuation methodology and inputs (i.e. volatility of discount rate, stock price, and individual factors and correlation between factors, etc).
- Risk that the estimate of the financial instruments' fair value is materially misstated due to inappropriate assumptions used in estimating future cash flows.

The primary audit procedures we performed to address the above key audit matters included:

- We have tested certain internal controls over the process of changes in the methodology used to value the financial instruments, and the appropriateness of the model applied to the valuation of new products based on the characteristics of the products.
- We have tested certain internal controls over the process of selection and approval of inputs used to estimate fair value.
- We have tested certain internal controls over the process of compiling the underlying data used to estimate the future cash flows and discount rates and the process of assessing the accuracy of the data used with reference to internal data, observable market data, macroeconomic indicators, and so on.
- We have also involved our internal valuation specialists to assist us in evaluating the reasonableness of methodologies and inputs used in the estimation of fair values on a sample basis. In addition, we have assessed the assumptions used by management by considering the business environment of the Company, market and macroeconomic indicators on a sample basis. We have also compared the historical financial data used by management in the valuation to the information publicly available on a sample basis.
- For valuation of unlisted equity instruments, we have independently re-calculated the fair value and compared it to the Company's estimates on a sample basis of unlisted equity instruments.

## (2) Revenue recognition of commission fee revenues from non-standard transactions

The Company recognized the commission revenues of KRW 1,020,575 million for the year ended December 31, 2018, which includes revenues derived from non-standard transactions of KRW 386,738 million (refer to Note 36 of the separate financial statements).

The timing of revenue recognition related to non-standard transactions depends on the individual terms of each transaction. We have identified revenue recognition of commission fee revenues from non-standard transactions as a key audit matter considering the following risks identified:

- Risks that revenue may be deliberately misstated through early revenue recognition or adjustment of revenue allocation for the period as a result of management override resulting from the pressure certain individual departments or management may feel to achieve performance goals or expectations.
- Risks that the revenue may be misstated as a result that the calculation of revenue recognition is complex due to various and complicated terms of each contracts.

The primary audit procedures we performed to address the above key audit matters included:

- We have tested certain internal controls over process of review each contracts to determine whether timing of commission fee revenues from non-standard recognition is accurate (i.e. whether it is subject to deferred revenue recognition).
- We have tested certain internal controls over process of assessment whether deferred commission fee revenues from non-standard transactions are accurately allocated and recognized for each month.
- We have tested certain internal controls over process of confirm accuracy of calculation of commission fee revenues from non-standard transactions including stock underwriting commissions, corporate bond underwriting commissions and other underwriting commissions.
- For selected samples from commission fee revenues from non-standard transactions, compared the terms of contracts provided by management with terms of contracts publically disclosed.
- For selected samples from commission fee revenues from non-standard transactions, inspection of documentation including contracts to assess the accuracy of timing of revenue recognition and recalculation of commission fee revenues from non-standard transactions.

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

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

In preparing the separate financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

## Auditors' Responsibilities for the Audit of the Company Financial Statements

Our objectives are to obtain reasonable assurance about whether the company financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with KSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these separate financial statements.

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

- Identify and assess the risks of material misstatement of the separate financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used in the preparation of the separate financial statements and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the separate financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the separate financial statements, including the disclosures, and whether the separate financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the separate financial statements as of and for the year ended December 31, 2018 and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditors' report is Myung-Ki Seok.

## Other Matter

The procedures and practices utilized in the Republic of Korea to audit such separate financial statements may differ from those generally accepted and applied in other countries.

KPMG Samjong Accounting Corp.  
Seoul, Korea  
March 11, 2019

This report is effective as of March 11, 2019, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying separate financial statements and notes thereto. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

# Separate Financial Statements

## Separate Statements of Financial Position

As of December 31, 2018 and 2017

Mirae Asset Daewoo Co., Ltd.

(In Korean won)

	2018	2017
<b>Assets</b>		
Cash and cash equivalents	₩ 945,067,253,594	848,986,514,634
Financial assets at fair value through profit or loss	-	27,791,775,259,746
Financial assets measured at fair value through profit or loss	31,576,860,388,993	-
Available-for-sale financial assets	-	8,040,524,984,525
Financial assets measured at fair value through other comprehensive income	7,824,119,174,033	-
Loans and receivables	-	14,053,568,958,115
Financial assets measured at amortized cost	18,801,470,714,918	-
Investments in subsidiaries	5,404,675,176,709	4,724,056,202,313
Investments in associates	491,135,355,727	362,271,349,884
Property and equipment, net	199,747,852,975	167,809,205,230
Investment properties, net	147,864,678,942	256,276,723,969
Intangible assets, net	647,732,420,713	638,283,576,844
Other assets	49,116,000,455	92,704,533,504
Deferred tax asset	596,077,712,628	441,028,324,626
<b>Total assets</b>	₩ 66,683,866,729,687	57,417,285,633,390
<b>Liabilities</b>		
Financial liabilities at fair value through profit or loss	₩ -	17,462,103,172,600
Financial liabilities measured at fair value through profit or loss	17,961,111,679,354	-
Deposits due to customers	5,371,613,042,052	5,083,222,114,515
Borrowings	22,667,573,778,727	18,612,446,620,185
Debentures	3,649,576,630,992	2,880,759,775,243
Provisions	22,399,441,209	20,377,052,332
Other liabilities	8,692,140,876,141	5,931,767,122,084
Income tax payable	84,203,681,268	19,766,660,800
<b>Total liabilities</b>	₩ 58,448,619,129,743	50,010,442,517,759
<b>Equity</b>		
Capital stock	₩ 4,101,960,790,000	3,401,960,790,000
Capital surplus	2,152,389,719,289	2,163,224,953,445
Retained earnings	2,082,209,872,334	1,765,094,658,016
(Regulatory reserve for credit losses of ₩88,581,001,870 and ₩50,848,967,579 as of December 31, 2018 and 2017 respectively)		
(Provision for (reversal of) regulatory reserve for credit losses amounted to ₩(-)13,120,063,229 and ₩37,732,034,291 as of December 31, 2018 and 2017 respectively)		
Capital adjustment	2,232,955,726	1,364,758,700
Accumulated other comprehensive loss	(103,545,737,405)	75,197,955,470
<b>Total equity</b>	8,235,247,599,944	7,406,843,115,631
<b>Total liabilities and equity</b>	₩ 66,683,866,729,687	57,417,285,633,390

See accompanying notes to the consolidated financial statements.

## Separate Statements of Comprehensive Income

For the years ended December 31, 2018 and 2017

Mirae Asset Daewoo Co., Ltd.

(In Korean won)

	2018	2017
<b>Operating revenue</b>		
Commissions	₩ 1,020,575,249,715	845,768,008,497
Gains on financial instruments at fair value through profit or loss	-	6,844,214,618,543
Gains on financial instruments measured at fair value through profit or loss	7,836,819,374,710	-
Gains on available-for-sale financial assets	-	90,996,846,426
Gains on financial assets measured at fair value through other comprehensive income	4,785,751,744	-
Interest income		
Interest income	-	864,032,115,384
Financial assets measured at amortized cost	434,135,300,126	-
Financial assets measured at fair value through other comprehensive income	129,532,323,344	-
Financial assets measured at fair value through profit or loss	443,402,720,823	-
Gains on loans and receivables	-	1,477,834,881
Reversal of credit loss allowances	1,988,440,118	-
Gains on foreign currency transactions	1,114,908,633,462	551,737,696,441
Others	291,169,890,863	266,579,373,122
	11,277,317,684,905	9,464,806,493,294
<b>Operating expenses</b>		
Commissions expense	166,830,307,869	129,973,748,618
Losses on financial instruments at fair value through profit or loss	-	6,737,147,149,262
Losses on financial instruments measured at fair value through profit or loss	8,097,140,698,635	-
Losses on available-for-sale financial assets	-	40,535,714,825
Losses on financial assets measured at fair value through other comprehensive income	3,995,879,686	-
Interest expense	460,812,115,308	327,800,628,351
Losses on loans and receivables	-	1,875,572,707
Provision for credit loss allowance	15,629,744,096	-
Losses on foreign currency transactions	1,070,502,478,377	750,400,228,238
Employee costs	588,805,742,746	585,645,625,576
Selling and administrative expense	319,445,299,401	315,390,428,942
Others	12,927,222,783	22,818,148,109
	10,736,089,488,901	8,911,587,244,628
<b>Operating profit</b>	₩ 541,228,196,004	553,219,248,666
<b>Non-operating income, net</b>		
Non-operating income	₩ 52,346,205,105	15,651,415,111
Non-operating expense	37,192,384,660	14,584,563,476
	15,153,820,445	1,066,851,635

Mirae Asset Daewoo Co., Ltd.

(In Korean won)

		2018	2017
<b>Profit before income tax expense</b>	₩	556,382,016,449	554,286,100,301
<b>Income tax expense</b>		122,296,567,474	129,857,979,171
<b>Profit for the year</b>	₩	434,085,448,975	424,428,121,130
<b>Other comprehensive income for the year, net of tax</b>			
Items that are or may be reclassified to profit or loss:			
Net change in unrealized fair value of available-for-sale financial assets	₩	-	(33,440,423,751)
Gains on financial asset measured at fair value through other comprehensive income		11,237,467,068	-
Items that will never be reclassified to profit or loss:			
Valuation loss on financial asset measured at fair value through other comprehensive income		(104,247,626,526)	-
Changes in own credit risk on financial liabilities designated as measured at fair value through profit or loss		2,656,932,638	-
		(90,353,226,820)	(33,440,423,751)
<b>Total comprehensive income for the year</b>	₩	343,732,222,155	390,987,697,379
<b>Earnings per share</b>			
Basic and diluted earnings per share			
Common stock	₩	628	797
2 preferred stock		628	-

See accompanying notes to the consolidated financial statements.

## Separate Statements of Changes in Equity

For the years ended December 31, 2018 and 2017

Mirae Asset Daewoo Co., Ltd.

(In Korean won)

	Capital stock	Capital surplus	Capital adjustment	Accumulated other comprehensive income(loss)	Retained earnings	Total
<b>Balance at January 1, 2017</b>	₩ 3,401,960,790,000	1,811,898,689,162	(93,647,213,914)	108,638,379,221	1,366,607,094,836	6,595,457,739,305
<b>Total comprehensive income for the year:</b>						
Profit for the year	-	-	-	-	424,428,121,130	424,428,121,130
Net changes in unrealized valuation of available-for-sale financial assets	-	-	-	(33,440,423,751)	-	(33,440,423,751)
<b>Transaction with owners, etc.:</b>						
Dividends paid	-	-	-	-	(25,940,557,950)	(25,940,557,950)
Changes in treasury stocks	-	351,445,658,768	33,096,916,634	-	-	384,542,575,402
Stock option	-	-	(83,572,665)	-	-	(83,572,665)
Others	-	(119,394,485)	61,998,628,645	-	-	61,879,234,160
<b>Balance at December 31, 2017</b>	₩ 3,401,960,790,000	2,163,224,953,445	1,364,758,700	75,197,955,470	1,765,094,658,016	7,406,843,115,631
<b>Balance at January 1, 2018</b>	₩ 3,401,960,790,000	2,163,224,953,445	1,364,758,700	75,197,955,470	1,765,094,658,016	7,406,843,115,631
Adoption effect of K-IFRS No. 1109, net of tax(Note 4)	-	-	-	(88,390,466,055)	84,585,694,393	(3,804,771,662)
<b>Balance at January 1, 2018 (Restated)</b>	3,401,960,790,000	2,163,224,953,445	1,364,758,700	(13,192,510,585)	1,849,680,352,409	7,403,038,343,969
<b>Total comprehensive income for the year:</b>						
Profit for the year	-	-	-	-	434,085,448,975	434,085,448,975
Net changes in unrealized valuation of financial assets measured at fair value through other comprehensive income	-	-	-	(93,010,159,458)	-	(93,010,159,458)
Credit risk fluctuation of financial liabilities designated as measured at fair value through profit or loss	-	-	-	2,656,932,638	-	2,656,932,638
<b>Transaction with owners, etc.:</b>						
Dividends paid	-	-	-	-	(124,691,658,520)	(124,691,658,520)
Capital increase with consideration	700,000,000,000	(13,175,806,743)	-	-	-	686,824,193,257
Changes in treasury stocks	-	2,340,572,587	(76,400,928,322)	-	-	(74,060,355,735)
Retirement in treasury stocks	-	-	76,864,270,530	-	(76,864,270,530)	-
Others	-	-	404,854,818	-	-	404,854,818
<b>Balance at December 31, 2018</b>	₩ 4,101,960,790,000	2,152,389,719,289	2,232,955,726	(103,545,737,405)	2,082,209,872,334	8,235,247,599,944



## Separate Statements of Cash Flows

For the years ended December 31, 2018 and 2017

Mirae Asset Daewoo Co., Ltd.

(In Korean won)

	2018	2017
<b>Cash flows from operating activities</b>		
Profit for the year	₩ 434,085,448,975	424,428,121,130
Adjustments:		
Interest income	(1,007,070,344,293)	(864,032,115,384)
Dividend income	(68,308,230,692)	(248,072,020,048)
Interest expense	460,812,115,308	327,800,628,351
Income tax expense	122,296,567,474	129,857,979,171
Loss on valuation of financial assets held for trading	-	104,100,355,278
Loss on valuation of financial assets measured at fair value through profit or loss	396,741,542,027	-
Loss on valuation of financial liabilities held for trading	-	21,511,487,771
Loss on valuation of financial liabilities measured at fair value through profit or loss	19,482,069,411	-
Loss on valuation of financial assets designated at fair value through profit or loss	-	52,169,130,340
Loss on valuation of financial liabilities designated at fair value through profit or loss	-	471,132,045,371
Loss on valuation of financial liabilities designated as measured at fair value through profit or loss	235,307,011,967	-
Loss on valuation of derivatives	1,301,936,273,626	1,096,823,832,808
Loss on disposal of available-for-sale financial assets	-	21,534,331,722
Loss on disposal of financial assets measured at fair value through other comprehensive income	3,995,879,686	-
Impairment loss on available-for-sale financial assets	-	19,001,383,103
Impairment loss on financial assets measured at fair value through other comprehensive income	2,266,422,392	-
Impairment loss on investments in subsidiaries	21,306,090,125	1,787,864,769
Loss on disposal of investments in subsidiaries	8,218,172,327	3,895,552,019
Loss on disposal of investments in associates	26,140,209	28,290,432
Depreciation	22,216,757,205	20,675,859,565
Depreciation on investment properties	2,110,605,856	1,960,505,148
Loss on disposal of property and equipment	621,583,173	231,743,312
Loss on disposal of investment properties	6,682,043	-
Amortization	35,080,414,068	34,799,754,176
Loss on disposal of intangible assets	7,817,040	17,431,920
Stock option expense	3,534,378,078	7,198,180,951
Rent expense	2,227,578,610	2,912,487,630
Bad debt expense	-	1,703,859,058
Provision of allowances on credit losses	7,339,940,374	-
Other bad debt expense	-	1,187,123,666
Provision of allowances on credit losses of other financial assets	1,532,315,009	-
Loss on foreign currency translation	55,822,304,455	221,429,052,415
Provision of allowances	8,440,475,889	12,402,576,548
Other operating expenses	12,730,295,360	14,003,087,583
Gain on valuation of financial assets held for trading	-	(136,510,645,302)

Mirae Asset Daewoo Co., Ltd.

(In Korean won)

	2018	2017
Gain on valuation of financial assets measured at fair value through profit or loss	₩ (332,184,519,076)	-
Gain on valuation of financial liabilities held for trading	-	(7,955,205,898)
Gain on valuation of financial liabilities measured at fair value through profit or loss	(29,459,179,415)	-
Gain on valuation of financial assets designated at fair value through profit or loss	-	(57,065,693,331)
Gain on valuation of financial liabilities designated at fair value through profit or loss	-	(378,557,718,228)
Gain on valuation of financial liabilities designated as measured at fair value through profit or loss	(715,635,288,811)	-
Gain on valuation of derivatives	(847,761,620,261)	(1,353,102,535,643)
Gain on disposal of available-for-sale financial assets	-	(90,996,846,426)
Gain on disposal of financial assets measured at fair value through other comprehensive income	(4,785,751,744)	-
Gain on disposal of investments in subsidiaries	(9,027,432,977)	(1,377,809,078)
Gain on disposal of investments in associates	-	(3,600,840,649)
Gain on disposal of property and equipment	(2,398,254,527)	(1,805,011,499)
Gain on disposal of investment properties	(38,351,546,053)	-
Gain on disposal of intangible assets	(150,000,000)	(89,178,000)
Reversal of bad debt allowances	-	(1,477,834,881)
Reversal of credit loss allowance	(163,657,340)	-
Reversal of other bad debt allowances	-	(715,261,956)
Reversal of provision on credit losses of other financial assets	(16,768,628)	-
Gain on foreign currency translation	(103,175,761,988)	(57,497,748,418)
Reversal of provisions	(9,905,864,655)	(3,404,459,429)
Other income	(246,681,053)	-
	(444,581,469,801)	(638,096,381,063)
Changes in:		
Due from financial institutions for customer accounts	(2,527,541,129,719)	(566,947,941,182)
Financial assets held for trading	-	(1,996,800,576,199)
Financial assets measured at fair value through profit or loss	(1,784,233,330,741)	-
Financial assets designated at fair value through profit or loss	-	5,239,846,407,690
Loans and receivables	-	(4,600,503,059,590)
Financial assets measured at amortized cost	(2,445,725,890,852)	-
Other assets	(20,672,201,481)	25,291,522,868
Deposits due to customers	298,919,932,553	979,205,524,161
Financial liabilities held for trading	-	(133,542,972,385)
Financial liabilities measured at fair value through profit or loss	516,025,372,759	-
Financial liabilities designated at fair value through profit or loss	-	(4,864,503,533,393)
Financial liabilities designated as measured at fair value through profit or loss	476,953,255,517	-
Other liabilities	2,883,524,402,426	3,622,489,884,381
Provisions	(159,340,979)	(4,263,116,089)
	(2,602,908,930,517)	(2,299,727,859,738)

Mirae Asset Daewoo Co., Ltd.

(In Korean won)

		2018	2017
Interest received	₩	973,667,497,967	861,027,600,847
Interest paid		(453,736,445,931)	(326,178,088,833)
Dividends received		70,151,578,252	247,733,456,249
Income tax paid		(177,519,440,602)	(15,811,306,318)
<b>Net cash used in operating activities</b>		<b>(2,200,841,761,657)</b>	<b>(1,746,624,457,726)</b>
<b>Cash flows from investing activities</b>			
Proceeds from disposal of available-for-sale financial assets		-	7,371,258,317,903
Proceeds from disposal of financial assets measured at fair value through other comprehensive income		4,066,205,924,640	-
Proceeds from disposal of investments in subsidiaries		2,967,140,880,261	1,411,114,982,972
Proceeds from disposal of investments in associates		931,629,003	10,119,674,452
Proceeds from disposal of property and equipment		6,831,202,829	6,508,388,535
Proceeds from disposal of investment properties		10,465,888,081	-
Proceeds from disposal of intangible assets		1,105,320,000	1,912,360,000
Decrease in deposits		19,197,293,400	9,745,436,981
Increase in withdrawals		367,958,900	6,106,932,310
Acquisition of available-for-sale financial assets		-	(7,348,343,030,410)
Acquisition of financial assets measured at fair value through other comprehensive income		(6,187,407,754,314)	-
Acquisition of investments in subsidiaries		(3,676,910,754,391)	(825,723,310,274)
Acquisition of investments in associates		(129,821,775,055)	(30,290,844,028)
Acquisition of property and equipment		(62,187,143,981)	(43,342,200,444)
Acquisition of intangible assets		(34,808,197,157)	(20,792,299,892)
Increase in deposits		(3,047,902,730)	(7,702,796,898)
Decrease in deposits received		(3,014,370,960)	(3,063,630,000)
<b>Net cash provided by (used in) investing activities</b>		<b>(3,024,951,801,474)</b>	<b>537,507,981,207</b>
<b>Cash flows from financing activities</b>			
Proceeds from borrowings, net		4,065,346,581,862	289,962,247,791
Proceeds from debentures, net		771,231,886,895	639,799,380,000
Proceeds from disposal of treasury stock		-	498,499,990,230
Proceeds from capital stock increase with consideration		686,824,193,257	-
Dividends paid		(124,691,658,520)	(25,940,557,950)
Acquisition of treasury stock		(76,864,270,530)	(172,801,387)
<b>Net cash provided by financing activities</b>		<b>5,321,846,732,964</b>	<b>1,402,148,258,684</b>
Effect of exchange rate fluctuations on cash and cash equivalents held	₩	27,569,127	(2,951,289,104)
<b>Net increase in cash and cash equivalents</b>		<b>96,080,738,960</b>	<b>190,080,493,061</b>
Cash and cash equivalents at beginning of year		848,986,514,634	658,906,021,573
Cash and cash equivalents at end of year	₩	945,067,253,594	848,986,514,634

See accompanying notes to the consolidated financial statements.

# APPENDIX I

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# Mirae Asset Financial Group

## Group Overview

Since its establishment in 1997, Mirae Asset has relentlessly pursued financial innovation including strong entrepreneurship and global business expansion, and has thus grown into Asia's leading global investment group. We are diversifying our revenue structure by investing into various core assets that go beyond the Korean market to the global arena, from traditional investment asset to natural environment and infrastructure. Our mission is to make contribution to our clients and society through investment. Towards this mission, we strive to manage client asset in a stable manner to ensure a secure retirement, while creating social values through investment.

### Asset Under Management and Equity Capital of the Group

Based on distinctive specialization of subsidiaries, Mirae Asset is currently managing an asset of KRW 438 trillion, while expanding the global investment arena based on stable capital position of all subsidiaries. (Asset under management<sup>1)</sup>: KRW 438 trillion; Equity capital<sup>2)</sup>: KRW 13.9 trillion)

<sup>1)</sup> Based on net asset as of March 31 2019; sum of subsidiaries' asset

<sup>2)</sup> As of December 31 2018; sum of subsidiaries' equity capital

## Subsidiaries

Mirae Asset is an independent global investment group consisting of asset management, comprehensive financial investment, life insurance, venture investment, and other financial businesses. Beginning with the establishment of the Hong Kong subsidiary of Mirae Asset Global Investments in 2003, for the past 16 years, we have built a global network of some 30 overseas subsidiaries and offices in 14 countries as of March 31 2019.

Korea	Mirae Asset Global Investments, Mirae Asset Daewoo, Mirae Asset Life Insurance, Multi Asset Global Investments, Mirae Asset Financial Services, Mirae Asset Mobile, Mirae Asset Venture Investment, Mirae Asset Capital, Mirae Asset Consulting, Mirae Asset Fund Services, Energy Infra Asset Management, Mirae Asset Retirement Institute, Mirae Asset Park Hyeon Joo Foundation
Mongolia	Mirae Asset Daewoo
U.S.	Mirae Asset Global Investments, Mirae Asset Daewoo (LA), Mirae Asset Daewoo (New York), Global X
Vietnam	Mirae Asset Global Investments, Mirae Asset Daewoo, Mirae Asset Finance Company, Mirae Asset Prévoir Life insurance, Mirae Asset Capital Vietnam Company
Brazil	Mirae Asset Global Investments, Mirae Asset Daewoo
Singapore	Mirae Asset Daewoo
UK	Mirae Asset Global Investments, Mirae Asset Daewoo
India	Mirae Asset Global Investments, Mirae Asset Daewoo
Indonesia	Mirae Asset Daewoo
China	Mirae Asset Daewoo, Mirae Asset Huachen Fund Management, Mirae Asset Daewoo Shanghai Rep. Office, Mirae Asset Daewoo Beijing Rep. Office
Canada	Horizons ETFs
Colombia	Global X*
Australia	Mirae Asset Global Investments, BetaShares
Hong Kong	Mirae Asset Global Investments, Mirae Asset Daewoo, Horizons ETFs

\* As of May 2019

## Mirae Asset Organization

All subsidiaries of Mirae Asset strive to maintain independent competitiveness through strict risk management practices. As of March 31 2019, there are around 10 subsidiaries with 12,500 employees in total.

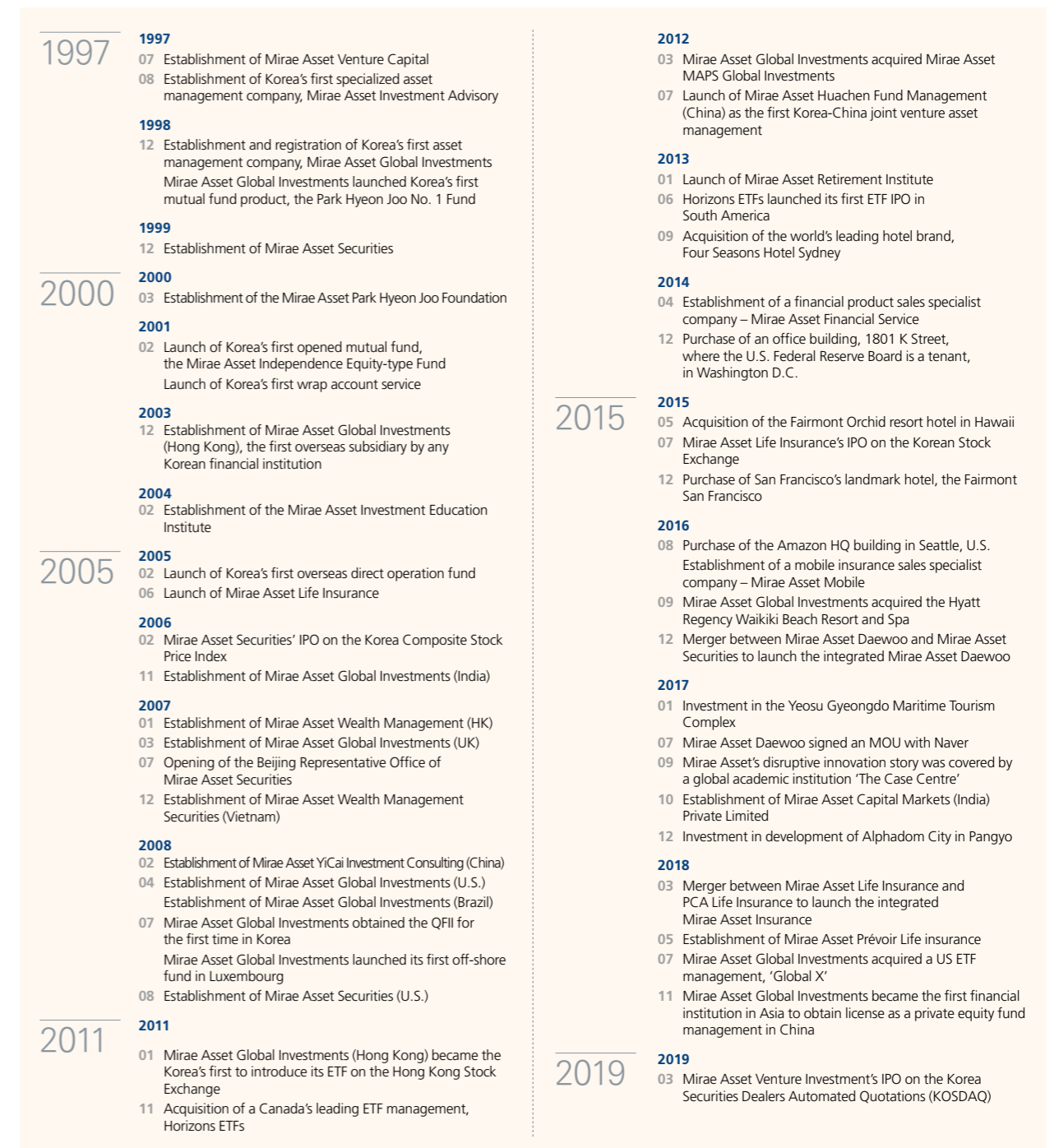


\* Based on financial subsidiaries (including social contributions)

## Business Milestones

Beginning with the establishment of Mirae Asset Venture Capital and Mirae Asset Global Investments in 1997, we have established Mirae Asset Securities in 1999 and Mirae Asset Life Insurance in 2005. In 2011, we acquired two ETF providers of Horizons ETFs in Canada and BetaShares in Australia. With the merger between Mirae Asset Securities and Daewoo Securities in December 2016, an integrated Mirae Asset Daewoo was born as Korea's largest securities company. In 2018, Mirae Asset Life Insurance acquired the Korean subsidiary of PCA Life Insurance, a UK-headquartered insurer, and settled itself as an insurer specializing in variable insurance and pension. Our global business expansion is underway with the acquisition of a US ETF provider Global X and Prévoir Vietnam Life Insurance in 2018.

Harvard Business School has chosen Mirae Asset's success story as a case study and our financial innovation journey was covered by a global academic institution, 'The Case Centre'.



# Independent Assurance Statement

## Introduction

Mirae Asset Daewoo Co., Ltd. ("Mirae Asset Daewoo") commissioned DNV GL Business Assurance Korea, Ltd. ("DNV GL"), part of DNV GL Group, to undertake independent assurance of 2019 Mirae Asset Daewoo Integrated Report (the "Report"). The directors of Mirae Asset Daewoo have sole responsibility for the preparation of the Report. The responsibility of DNV GL in performing the assurance work is to the management of Mirae Asset Daewoo in accordance with the terms of reference. DNV GL's assurance engagements are based on the assumption that the data and information provided by the client to us as part of our review have been provided in good faith.

## Scope and Basis of Assurance

Based on non-financial data and sustainability performance data of Mirae Asset Daewoo in Korea in 2018, we have assessed 'Reporting Principles for defining report content' and 'Reporting Principles for defining report quality' set forth in GRI Sustainability Reporting Standards 2016. We have reviewed that the Topic-specific disclosures of GRI Standards which are identified in the materiality determination process;

No.	Material Topics	GRI Disclosure <sup>1</sup>	No.	Material Topics	GRI Disclosure
1	Response to climate change and development of eco-friendly products	FS8, FS10, FS11	6	Fostering global talents	404-1
2	Increase in Socially Responsible Investment (SRI)	FS7, FS8, FS10, FS11	7	Ethics and compliance	205-3
3	Protection of personal and financial information of customers	418-1	8	Zero incomplete sales	417-2, 417-3
4	Leading FinTech	Non-GRI	9	Increase in economic support for the underprivileged	413-2, FS14
5	Development of products and services meeting customer needs	Non-GRI	10	Establishment of sound governance system	Non-GRI

DNV GL's assurance methodology, VeriSustain<sup>TM2</sup> which is based on our professional experience, international assurance best practice including International Standard on Assurance Engagements 3000 (ISAE 3000) is applied for the assurance engagement with the limited level of assurance. The assurance was carried out from May and till June 2019. The site visit was made to Mirae Asset Daewoo's Headquarters in Seoul, Korea. We undertook the following activities as part of the assurance process:

- challenged the sustainability-related statements and claims made in the Report and assessed the robustness of the underlying data management system, information flow and controls;
- interviewed representatives from the various departments;
- conducted document reviews, data sampling and interrogation of supporting databases and associated reporting system as they relate to selected content and performance data;
- reviewed the materiality assessment report.

## Limitations

The engagement excludes the sustainability management, performance and reporting practices of Mirae Asset Daewoo' subsidiaries, associated companies, suppliers, contractors and any third-parties mentioned in the Report. DNV GL did not interview external stakeholders as part of this Assurance Engagement. Economic performance based on the financial data is cross-checked with internal documents, the audited consolidated financial statements and the announcement disclosed at the website of Korea Financial Supervisory Service (<http://dart.fss.or.kr>) as well as Mirae Asset Daewoo's website ([www.miraeassetdaewoo.com](http://www.miraeassetdaewoo.com)). These documents, financial statements and the announcements are not included in this Assurance Engagement. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied. The baseline data for Environmental and Social performance are not verified, while the aggregated data at the corporate level are used for the verification. DNV GL expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Assurance Statement.

<sup>1</sup> FS: GRI G4 Financial Services Sector Disclosures

<sup>2</sup> The VeriSustain protocol is available upon request at DNV GL Website ([www.dnvgl.com](http://www.dnvgl.com))

## Conclusion

On the basis of the work undertaken, nothing comes to our attention to suggest that the Report does not properly address the adherence to the Principles for defining report content in GRI Standards. Further opinions with regards to the adherence to the Principles are made below;

**Stakeholder Inclusiveness** Mirae Asset Daewoo has identified 4 major internal and external stakeholder groups such as Customers, Shareholders and Investors, Employees and Local community. Mirae Asset Daewoo engages with the stakeholders at the company and business unit levels through various channels. Stakeholder engagement and expectations are described in the Report.

**Sustainability Context** Mirae Asset Daewoo pursues a 2020 global top-tier investment bank with four major innovations (Globalization, Investment, Digitalization, and Pension). The Report presents stakeholders with achievements in 2018, and the 2019 innovation plan. Various sustainability achievements are also provided in the Report. In addition, the Report explains its effort to meet the principles in UN Global Compact and its contribution to help to meet UN Sustainable Development Goals. Socially Responsible Investment including investment in renewable energy project demonstrates the implementation of social responsibility.

**Materiality** Mirae Asset Daewoo has conducted the materiality assessment to prepare the Report. 43 various issues have been derived by analysing the topics covered in various global initiatives and standards, global benchmarking, internal data review and media research. The issue pools were used on internal and external stakeholder survey to rate the material topics. Finally, 10 material topics were prioritized and Mirae Asset Daewoo has mapped the material topics out with the disclosures as defined in GRI Standards. The assurance team has reviewed the materiality assessment process and confirmed relevant material topics prioritized from the process are addressed in the Report. The Report presents key stakeholders and their impacts (financial, operational, and reputational) linked to material topics to help readers understand Mirae Asset Daewoo's sustainability management.

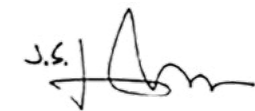
**Completeness** Mirae Asset Daewoo provides stakeholders with information on stakeholder impacts, key issues, and 2018 performance (how to manage performance) on sustainability management material topics during the reporting period. The reporting boundary is set to include headquarters, customer support center, IT center, domestic branches as well as overseas subsidiaries and offices over which Mirae Asset Daewoo has business control. In case of overseas subsidiaries and offices, only economic performance is included in the reporting scope due to the limitation of data gathering. Nothing comes to our attention that would cause us to believe that the performance results of material topics within the reporting boundary were not complete.

**Balance, Comparability, Accuracy, Timeliness, Clarity and Reliability** The assurance team has sampled data and tested accuracy and reliability. The assurance team interviewed the data owners and reviewed the data gathering process with the supporting documents and records. The depth of data verification is limited to the aggregated data level. Based on the test, the intentional error or misstatement is not noted from the data and information disclosed in the Report. Data owners were able to demonstrate the origin and interpretation of the data in a reliable manner. The data was identifiable and traceable. In addition, the Report provides the latest three-year performance on material topics, helping stakeholders understand the changes over the years in organizational performance. The Report describes the follow-up actions and corrective actions on consumer disputes and complaints and the efforts to prevent recurrence. Mirae Asset Daewoo provides timely information to stakeholders by annual reporting.

## Competence and Independence

DNV GL applies its own management standards and compliance policies for quality control, in accordance with ISO/IEC 17021:2011 - Conformity Assessment Requirements for bodies providing audit and certification of management systems, and accordingly maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. We have complied with the DNV GL Code of Conduct<sup>3</sup> during the assurance engagement and maintain independence where required by relevant ethical requirements. This engagement work was carried out by an independent team of sustainability assurance professionals. DNV GL was not involved in the preparation of statements or data included in the Report except for this Assurance Statement. DNV GL maintains complete impartiality toward stakeholders interviewed during the assurance process. DNV GL have no other contract with Mirae Asset Daewoo and did not provide any services to Mirae Asset Daewoo in 2019 that could compromise the independence or impartiality of our work.

June 2019  
Seoul, Korea



**Jang Sup Lee**  
Country Representative  
DNV GL Business Assurance Korea, Ltd.



<sup>3</sup> DNV GL Code of Conduct is available from DNV GL website ([www.dnvgl.com](http://www.dnvgl.com))

# Verification of GHG Emissions Data Reports

## Introduction

Korea Productivity Center was required to verify '2018 Greenhouse Gas (GHG) emissions Statements (hereinafter 'Statement')', of which reporting years was defined as January 1, 2018 to December 31, 2018, by Mirae Asset Daewoo.

## Levels of Assurance

A reasonable level of assurance was agreed.

## Verification Scope

2018 Greenhouse gas emissions throughout domestic 12 company buildings of Mirae Asset Daewoo's own

## Verification Criteria

- GHG Energy Target Management Guideline
- IPCC Guideline: 2006, WRI/WBCSD GHG Protocol: 2004
- ISO14064-3: 2006 standard

## Limitation

Having investigated by sampling method, the Statement might have errors and uncertainties. Final GHG estimates may contain uncertainty for the reasons such as unspecified standard and method, although no exceptional factor has been reported.

## Conclusion

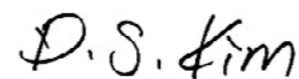
- The verification team confirmed that the 'Statements (2018)' was being reported in accordance with self-inspection guideline based on GHG Energy Target Management Guideline and IPCC Guideline.
- Appropriate corrective action was taken by Mirae Asset Daewoo in accordance with investigation results from the verification team.
- The verification team confirms that the 'Statements (2017)' was being reporting 'appropriately' in accordance with relevant standards.

Classification	Greenhouse Gas (GHG) Emissions
Direct Emissions (Scope 1)	1,033 ton CO <sub>2</sub> e
Indirect Emissions (Scope 2)	11,757 ton CO <sub>2</sub> e
Other Indirect Emissions (Scope 3)	1,018 ton CO <sub>2</sub> e
<b>Total Emissions (Scope 1, Scope 2)</b>	<b>12,790 ton CO<sub>2</sub>e</b>

5th June 2019

Korea Productivity Center,  
Sustainability Management Center

Director **Dong-Soo, Kim**



# GRI Index

## 1. General Disclosures

Classification	Disclosure	Indicators	Page	Note
Organizational profile	102-1	Name of the organization	8	
	102-2	Activities, brands, products, and services	8, 9, 14-17	
	102-3	Location of headquarters	4, 5, 8	
	102-4	Location of operations	4, 5	
	102-5	Ownership and legal form	Refer to page 618 in the business report	
	102-6	Markets served	4, 5, 14-17, 56-63	
	102-7	Scale of the organization	4, 5, 8, 14-17, 110	
	102-8	Information on employees and other workers	110, Refer to page 630 in the business report	
	102-9	Supply chain	11	
	102-10	Significant changes to the organization and its supply chain	Refer to page 21-26 in the business report	
	102-11	Precautionary Principle or approach	28-30	
	102-12	External initiatives	109	
	102-13	Membership of associations	115	
Strategy	102-14	Statement from senior decision-maker	6, 7	
	102-15	Key impacts, risks, and opportunities	6, 7, 29, 30	
Ethics and integrity	102-16	Values, principles, standards, and norms of behavior	8	
	102-17	Mechanisms for advice and concerns about ethics	25	
Governance	102-18	Governance structure	20-23	
	102-40	List of stakeholder groups	31	
Stakeholder engagement	102-41	Collective bargaining agreements	66, 110	
	102-42	Identifying and selecting stakeholders	31	
	102-43	Approach to stakeholder engagement	31	
	102-44	Key topics and concerns raised	32	
Reporting practice	102-45	Entities included in the consolidated financial statements	Refer to page 3-7 in the business report	
	102-46	Defining report content and topic Boundaries	32, 33	
	102-47	List of material topics	33	
	102-48	Restatements of information	-	Stated separately at the related content
	102-49	Changes in reporting	-	Stated separately at the related content
	102-50	Reporting period	2	
	102-51	Date of most recent report	2	
	102-52	Reporting cycle	2	
	102-53	Contact point for questions regarding the report	2	
	102-54	Claims of reporting in accordance with the GRI Standards	2	
	102-55	GRI content index	105-108	
102-56	External assurance	102-103		

## 2. Topic-specific Disclosures

Classification	Disclosure	Indicators	Page	Note
Anti-corruption	103-1 - 3	Management Approach	24-27, 33, 111	
	205-3	Confirmed incidents of corruption and actions taken	25	No case of contract cancellation due to anti-corruption
Training and Education	103-1 - 3	Management Approach	33, 64	
	404-1	Average hours of training per year per employee	111	Fair training opportunity regardless of gender and position
Local Communities	103-1 - 3	Management Approach	33, 36, 72, 77	
	413-2	Operations with significant actual and potential negative impacts on local communities	4, 5, 30, 77	
	FS14	Initiatives to improve access to financial services for disadvantaged people	38, 39	
Marketing and Labeling	103-1 - 3	Management Approach	33, 48, 49	
	417-2	Incidents of non-compliance concerning product and service information and labeling	-	No violation
	417-3	Incidents of non-compliance concerning marketing communications	-	No violation
Customer Privacy	103-1 - 3	Management Approach	33, 40	
	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	-	No violation
Product Portfolio	FS1 - 5	Policies with specific environmental and social components, assessing, monitoring, improving staff competency, and environmental and social risks and opportunities, applied to business lines	33, 36	
	FS7	Monetary value of products and services designed to deliver social benefits for each business line	37	
	FS8	Monetary value of products and services designed to deliver environmental benefits for each business line	37, 38	
Audit	FS12	Voting policy(ies) applied to environmental or social issues for shares over which the reporting organization holds the right to vote shares or advises on voting	37	

## 3. Disclosures for Non-material Issues

Classification	Disclosure	Indicators	Page	Note
<b>Economic Performance</b>				
Economic Performance	201-1	Direct economic value generated and distributed	54, 55	
	201-2	Financial implications and other risks and opportunities due to climate change	36-38	
Market Presence	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	110	
Indirect Economic Impacts	203-1	Infrastructure investments and services supported	72-76, 111	
	203-2	Significant indirect economic impacts	36, 37	
Anti-corruption	205-1	Operations assessed for risks related to corruption	-	100%
	205-2	Communication and training about anti-corruption policies and procedures	26, 111	
Anti-competitive Behavior	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	-	No such case
<b>Environmental Performance</b>				
Energy	302-1	Energy consumption within the organization	112	
	302-2	Energy consumption outside of the organization	112	
	302-3	Energy intensity	112	
	302-4	Reduction of energy consumption	77, 112	
Water	303-1	Water withdrawal by source	112	
	303-2	Water sources significantly affected by withdrawal of water	-	All from tap water and sewage
Emissions	305-1	Direct (Scope 1) GHG emissions	112	
	305-2	Energy indirect (Scope 2) GHG emissions	112	
	305-3	Other indirect (Scope 3) GHG emissions	112	
	305-4	GHG emissions intensity	112	
	305-5	Reduction of GHG emissions	77, 112	
Effluents and Waste	306-1	Water discharge by quality and destination	-	Wastewater is treated by a wastewater treatment plant operated by a local autonomous entity
	306-2	Waste by type and disposal method	112	
Environmental Compliance	307-1	Non-compliance with environmental laws and regulations	-	No violation

# UNGC & UN SDGs

## UNGC

Mirae Asset Daewoo joined the UN Global Compact (UNGC), a voluntary corporate initiative that calls for corporations to assume social responsibility, in October 2006. By abiding by its ten principles concerning human rights, labor, the environment, and anticorruption, we are taking part in global standards on corporate social responsibility and declaring our strong determination to practice sustainability management.

Classification	Principles	Activities of Mirae Asset Daewoo	Page
Human Rights	Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and	We establish human rights protection principles, and provide training on preventing various human rights violations, including sexual harassment.	68-69
	Principle 2: make sure that they are not complicit in human rights abuses.		
Labour Standards	Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;	We operate the Labor-Management Council based on communication.	64-67
	Principle 4: the elimination of all forms of forced and compulsory labour;		
	Principle 5: the effective abolition of child labour; and	We establish principles on protecting human rights concerning the eradication of child labor and forced labor, and implement the principles throughout our business activities.	
	Principle 6: the elimination of discrimination in respect of employment and occupation.	Prohibition on discrimination based on gender, age, religious belief, social status, region of origin, school, childbirth, medical history, etc. is specified on the Rules of Employment.	
Environment	Principle 7: Businesses should support a precautionary approach to environmental challenges;	We develop alternative energy through the Green Index Fund and Clean Energy Fund, participate in new & renewable energy power generation projects, including the floating photovoltaic on Hapcheon Dam, as part of efforts to save energy, and build a green office.	77, 112
	Principle 8: undertake initiatives to promote greater environmental responsibility; and		
	Principle 9: encourage the development and diffusion of environmentally friendly technologies.		
Anti-Corruption	Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.	We conduct compliance and ethical management activities, such as blocking the inflow of illegal funds.	24-27

## UN SDGs

Mirae Asset Daewoo is conducting activities to achieve the Sustainable Development Goals (SDGs) that were established by the UN for the sustainable development of the international community.

Classification	Goals	Activities of Mirae Asset Daewoo	Page
Goal 04	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	Social contributions (Scholarship)	73
Goal 05	Achieve gender equality and empower all women and girls	Career development of female employees	64-65, 67
Goal 07	Ensure access to affordable, reliable, sustainable and modern energy for all	Participating in new & renewable energy power generation projects	77
Goal 08	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Socially responsible finance and fund management; and leading digital finance	37, 45-47, 63
Goal 09	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	Providing financial services customized to medium-sized enterprises and small giants	38
Goal 10	Reduce inequality within and among countries	Increasing financial accessibility for minorities	39
Goal 13	Take urgent action to combat climate change and its impacts	Energy saving efforts	77
Goal 16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	Protecting personal information	42-43

Classification	Disclosure	Indicators	Page	Note
<b>Social Performance (GRI 400)</b>				
Employment	401-1	New employee hires and employee turnover	110	
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	66, 67	
	401-3	Parental leave	110	
Occupational Health and Safety	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	110	
	404-2	Programs for upgrading employee skills and transition assistance programs	64, 65	
Training and Education	404-3	Percentage of employees receiving regular performance and career development reviews	110	
	405-1	Diversity of governance bodies and employees	20, 110	
Diversity and Equal Opportunity	405-2	Ratio of basic salary and remuneration of women to men	110, Refer to page 630 in the business report	
	406-1	Incidents of discrimination and corrective actions taken	68	No violation
Freedom of Association and Collective Bargaining	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	68, 110	
Child Labor	408-1	Operations and suppliers at significant risk for incidents of child labor	68	No violation
Forced or Compulsory Labor	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	68	No violation
Rights of Indigenous Peoples	411-1	Incidents of violations involving rights of indigenous peoples	68	No violation
Human Rights Assessment	412-1	Operations that have been subject to human rights reviews or impact assessments	68	
	412-2	Employee training on human rights policies or procedures	68, 111	
	412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	68	
Socioeconomic Compliance	419-1	Non-compliance with laws and regulations in the social and economic area	-	No violation

# Social Performance

Classification		Unit	2016	2017	2018
<b>Total number of employees<sup>1)</sup></b>			4,818	4,659	<b>4,564</b>
By region	Domestic	Person	4,782	4,642	<b>4,544</b>
	Overseas		36	17	<b>20</b>
By position	Executives	Person	201	280	<b>290</b>
	PB Executives		0	0	<b>46</b>
	Head manager		493	760	<b>770</b>
	Senior manager		1,840	1,534	<b>1,533</b>
	Manager		1,493	1,744	<b>1,502</b>
	Assistant manager		527	543	<b>394</b>
	Others		67	40	<b>38</b>
By type	Full-time	Person	4,063	3,953	<b>3,914</b>
	Part-time		755	706	<b>650</b>
	Number of employees converted from part-time to full-time		118	139	<b>116</b>
Recruitment and retirement	New hires	Person	306	259	<b>276</b>
	Female new hires		177	120	<b>114</b>
	Quit rate	%	5.5	7.8	<b>8.0</b>
	Turnover rate	%	4.2	6.2	<b>7.1</b>
By gender	Male	Person	2,722	2,614	<b>2,543</b>
	Female		2,096	2,045	<b>2,021</b>
Minorities	Disabled people	Person	24	23	<b>23</b>
	Foreigners		26	24	<b>23</b>
Parental leave	Number of people returning to work after parental leave	Person	307	201	<b>174</b>
	Number of people staying at work for 12 months since returning to work after parental leave	%	94.9	93.9	<b>82.9</b>
Labor union membership percentage <sup>2)</sup>		%	44	45	<b>63</b>
Occupational injury	Number of absentees due to injuries or illness	Person	134	12	<b>50</b>
	Lost work days	Day	8,133	271	<b>4,658</b>
	Number of injuries	Person	0	0	<b>0</b>

<sup>1)</sup> Number of employees including registered executives

<sup>2)</sup> Major agreements, including collective bargaining agreements with the labor union, are applied to all employees (100%)

Classification	Unit	2018
Ratio of standard entry level wage compared to local minimum wage		<b>232.7</b>
Employee participation rate in performance evaluation	%	<b>91.7</b>

Classification		Unit	2016	2017	2018
<b>Employee Training</b>					
Total training hours		Hour	181,309	198,542	<b>210,524</b>
Number of employees received training		Person	12,463	16,584	<b>18,234</b>
Total training expenses		KRW billion	6.6	6.6	<b>7.2</b>
<b>Education on Human Rights and Ethics</b>					
Ethical management training		Occasion	159	165	<b>253</b>
Number of people who participate in education programs on ethics and compliance			4,812	4,659	<b>4,277</b>
Number of people who participate in education programs on sexual harassment prevention		Person	4,304	4,592	<b>4,915</b>
Number of people who participate in education programs on information protection			2,882	4,421	<b>4,253</b>
<b>Social Contribution Expenditures and Participants</b>					
Expenditures in social contributions <sup>1)</sup>		KRW billion	6.3	4.0	<b>4.2</b>
Hours for volunteer activities		Hour	8,166	428	<b>733</b>
Participants in volunteer activities <sup>2)</sup>		Person	2,836	140	<b>349</b>

<sup>1)</sup> CSR expenditures consist of cash donation, goods donation, and operating expenses for voluntary activities; Expenses for voluntary activities per employee = Total hours of participation x average hourly wage per person

<sup>2)</sup> Data prior to 2016 is an aggregation of both weekend and weekday volunteers and from 2017 the data is based on the number of weekday volunteers

## Major Association Expenses in 2018\*

(Unit: KRW million)

Korea Financial Investment Association	Financial Security Institute	Korea Capital Market Institute	Korea Financial Telecommunications & Clearings Institute	Korea Chamber of Commerce and Industry	Others	Total
4,372	641	285	217	92	362	<b>5,968</b>

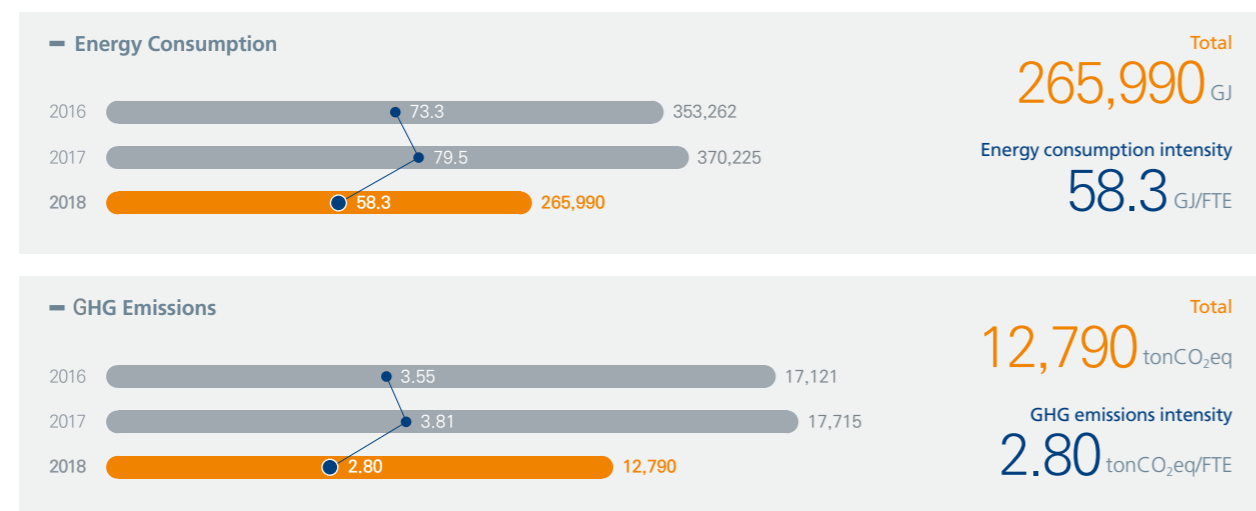
\* Mirae Asset Daewoo strictly bans any forms of donation or aid towards political campaigns and election funds, political parties/political entities/politicians, and lobbying organizations/lobbyists



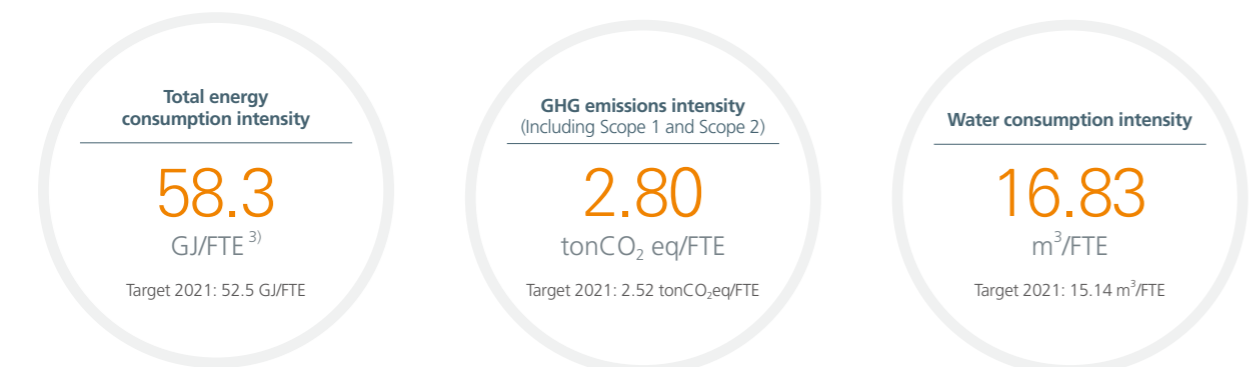
# Environmental Performance

Classification	Unit	2016	2017	2018
<b>Energy Consumption</b>				
LNG		13,426	20,401	19,987
Gasoline, diesel		216	143	0
Kerosene	GJ	340	442	276
Electricity		332,680	342,610	242,064
District heating		6,600	6,629	3,663
<b>GHG Emissions</b>				
Direct GHG emissions (Scope 1)		719	1,075	1,033
Indirect GHG emissions (Scope 2)	tonCO <sub>2</sub> eq	16,402	16,640	11,757
Other indirect GHG emissions (Scope 3) <sup>1)</sup>		502	681	1,018
<b>Water Consumption</b>				
Tap water and sewage	m <sup>3</sup>	105,101	97,545	76,794
<b>Weight of Waste</b>				
General wastes <sup>2)</sup>	kg	63,750	268,478	245,978

<sup>1)</sup> Scope of measurement was expanded, resulting in increase in Scope 3 emissions  
<sup>2)</sup> 2017 data was corrected due to the expanded scope and change in measurement method



\* Total GHG emissions and GHG emissions intensity are based on Scope 1 and Scope 2



<sup>3)</sup> Full Time Employee

# Tax Policy

## Governing Message

Mirae Asset Daewoo understands that compliance with tax laws and responsible, transparent tax payments that go beyond observance of laws is an important factor in contributing to national finance, enhancing shareholder value, and maximizing stakeholder profits, and that it is a fundamental condition that needs to be met for the company's long-term growth. We have therefore established tax rules and policy, and pursue cooperative, constructive relations with taxation authorities for faithful implementation of our tax policy. We make transparent tax payments and disclose relevant information according to the following rules.

## Principles on Tax

- We recognize that compliance with tax laws and transparent tax payments are important parts of management.
- We faithfully report and pay taxes in accordance with responsible tax rules.
- We do not abuse differences in tax laws among countries to avoid taxes.
- We evaluate the adequacy of transfer price in accordance with the arm's length principle.
- We do not manage a legal entity for the purpose of avoiding taxes at a tax haven where sharing of tax information is impossible and where we do not have any economic activity.
- We make utmost efforts to fulfill cooperation obligations that are stipulated in tax laws to maintain constructive and cooperative relations with taxation authorities.
- We conduct preemptive management and monitoring to reduce tax risks.
- We document and store tax reports, documentary evidence, and materials related to decision-making on accounting issues.
- We perform regular monitoring of tax issues.

## Disclosure of Tax Payment Information

In Korea, we responsibly disclose income tax-related details through an audit report which is available on the Financial Supervisory Service's electronic official notice system (Dart.fss.or.kr). Disclosed content includes the following.

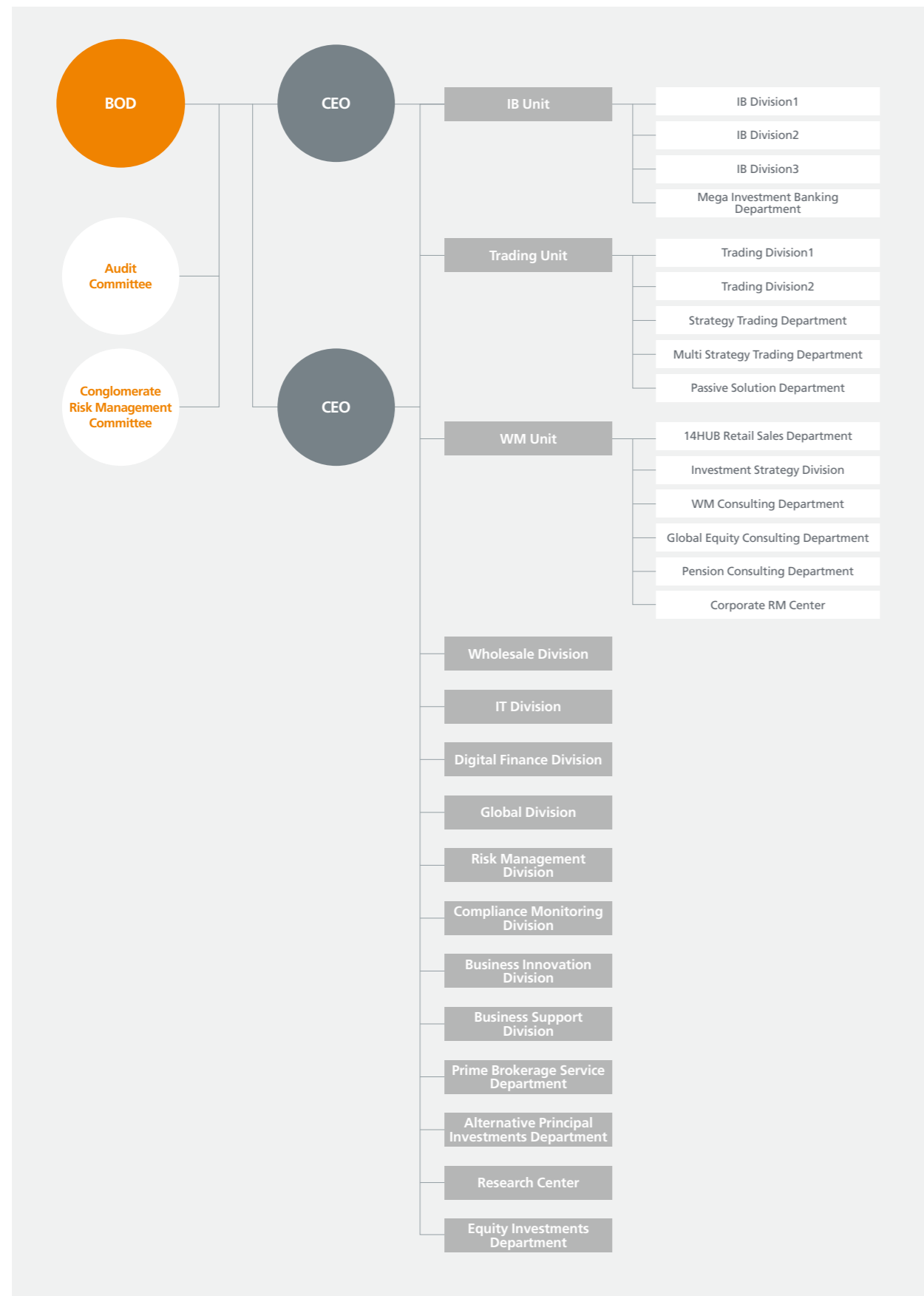
1. Accounting criteria for calculating income taxes
2. Deferred tax asset and liability details
3. Composition details regarding temporary differences
4. Income tax expense composition details and tax rate information

In addition, through our annual Sustainability Report and Audit Report, we disclose revenue and tax payment amount information by country, the difference between the valid tax rate and statutory tax rate of income taxes, and the reason for this difference.

## Base Erosion and Profit Shifting

Taxation authorities have made it mandatory to submit a report by country, which is Action 13 (Transfer Pricing Documentation) of the Base Erosion and Profit Shifting (BEPS) Project, for multinational companies through the Adjustment of International Taxes Act. Parties obligated to submit a report, such as a controlling entity in Korea of a multinational company with sales exceeding KRW 1 trillion based on consolidated financial statements of the preceding tax year, is obligated to submit a report by country that includes revenue details, pre-tax profits and losses, and other such information by country for affiliated companies within the multinational company group. Mirae Asset Daewoo is faithfully fulfilling this obligation.

# Organization Chart



# Membership & Awards

Membership		
Asia Society Korea Center	ISDA	Korea Management Association
Association of Compliance Officers	K-OTC	Korea Money and Finance Association
Capital Market Association of Securities Companies	Korea Association of Real Estate Investment Trusts	Korea Options, Swaps & Derivative Association
Center for Financial Law of Seoul National University	Korea Capital Market Institute	Korean Pension Association
Committee on Financial Informatization Promotion	Korea Center for International Finance	Korean Securities Association
Financial Information Business	Korea Chamber of Commerce and Industry	Korean Securities Law Association
Financial Information Security Council	Korea Economic Research Institute	National Strategy Institute
Financial Law Center, Sogang University	Korea Employers Federation	Seoul IB Forum
Financial Security Forum	Korea Federation of Banks	The Institute of Internal Auditors
Financial Security Institute	Korea Financial Investment Association	UN Global Compact
Global Finance Society	Korea Financial Telecommunications & Clearings Institute	
Institute for Global Economies	Korea Listed Companies Association	

Awards		
Jan. 09	Hankyung Business, 2H2017 Research House & Analyst Awards	The Best Research House in Securities Industry
Jan. 24	The 7th Yonhap Media Group Finance Awards	IPO
Jan. 25	The Bell 2018 Korea Capital Markets TheBell League Table Awards	The Best IPO House of the Year
Jan. 26	15th Korea IB Awards Sponsored by Money Today	The Best ECM Underwriter
Feb. 05	2017 Chosun Research House Awards in Securities Industry	Global Coverage Awards
Feb. 08	MK Economy, Securities Awards	The Best Investment Banking
Feb. 26	Korea Economy, Investment Banking Awards	IPO Awards
Apr. 02	HK Money – the Best PB Center of 2018	Showing its presence and capability of overseas investment
Apr. 25	2018 E-daily, Best Financial Investment Award	Best Awards in Retail
Jun. 20	Money Today, 2018 Korea Analyst Awards	Grand Awards in Securities Industry
Jun. 25	Money Today, 2018 Retirement Pension Awards	Best Awards in Securities Industry
Jul. 17	MK Economy, The 5th Best Model Portfolio Awards	Best Global Portfolio
Oct. 04	2018 Asia Today, Financial Grand Award	Awards in Research House Category
Oct. 22	Asia Today MTS Award	The Best Innovation
Nov. 26	2018 Herald Biz Fund Distribution Award	The Best Wealth Management Awards
Dec. 05	2018 National Consumer Satisfaction Index (NSCI) Awards	Grand Prize in Securities Industry
Dec. 10	2018 Asia Economy Capital Investment Awards	Best IB
Dec. 13	2018 Aju Economy Securities Awards	Best IB
Dec. 18	2018 Newsis IR awards in Securities Industry	The Best Global Business Awards
Dec. 20	E-today Marketleader Awards	Excellence in Wealth Management

# APPENDIX II



## Notes to the Consolidated Financial Statements

### 1. Reporting Entity

#### (1) Parent company

Mirae Asset Daewoo Co., Ltd. (the "Company") was originally incorporated on September 23, 1970, under the name of Dong Yang Securities Co., Ltd. and changed its name to Daewoo Securities Co., Ltd. on October 20, 1983. The Company merged with Sambo Securities Co., Ltd. on December 19, 1983, and changed its name to Mirae Asset Daewoo Co., Ltd. on May 13, 2016. In addition, the Company merged with Mirae Asset Securities Co., Ltd. on December 29, 2016.

The Company is headquartered in Suha-dong, Jung-gu, Seoul and also operates a network of 136 domestic branches, 3 overseas liaison offices, 14 overseas subsidiaries and 1 overseas investment consulting company as of December 31, 2018.

The shares of the Company were initially listed on the Korea Exchange in September 1975, and the Company has increased its capital by issuing new paid-in shares, bonus issue, and stock dividend, etc. The Company's outstanding capital (including preferred shares) as of December 31, 2018, amounted to ₩4,101,961 million, and major shareholders of the Company as of December 31, 2018, are as follows:

Name of shareholder	Number of Shares	Percentage of ownership (%)
Mirae Asset Capital Co., Ltd.	126,980,000	19.29
Treasury stock	109,581,643	16.64
Employee stock ownership association	1,703,912	0.26
Others	420,050,853	63.81
	658,316,408	100.00

#### (2) Subsidiaries

##### 1) Mirae Asset Venture Investment

Mirae Asset Venture Investment Co., Ltd. was founded on June 8, 1999, to primarily support the establishment of smaller businesses and registered as a small investment business company with the Small and Medium Business Administration on June 28, 1999. The entity is mostly engaged in projects regarding investments and venture capital fund managements for small businesses. The entity's headquarters is located at Seongnam City, Gyeonggi Province. The entity had ₩10,000 million as capital at the time of establishment, and with issuances of new stocks, the entity has ₩26,032 million of common stocks and ₩500 million of preferred stocks of paid-in capital, as of December 31, 2018.

##### 2) Mirae Asset Securities (UK) Ltd.

Mirae Asset Securities (UK) Ltd. was established by the Company on May 3, 1991, and it is engaged in securities brokerage, sale, acquisition and arrangement of proprietary assets, etc. The entity changed its name from Daewoo Securities (Europe) Ltd. to Mirae Asset Securities (UK) Ltd. on November 28, 2016.

##### 3) Mirae Asset Securities (USA) Inc.

Mirae Asset Securities (USA) Inc. is wholly owned by Mirae Asset Securities Holdings (USA) Inc.. Established on July 7, 1992, it is engaged in securities brokerage, sale of proprietary assets, etc. The entity changed its name from Daewoo Securities (America) Inc. to Mirae Asset Securities (USA) Inc. on November 28, 2016.

##### 4) Mirae Asset Securities (HK) Limited

Mirae Asset Securities (HK) Limited was established by the Company, and it obtained a permit for operation from relevant authorities in Hong Kong on January 11, 2007. It is engaged in securities brokerage, proprietary trading, corporate finance consulting, and asset management etc. Upon the merge with Daewoo Securities (Hong Kong) Ltd., the entity changed its name from Mirae Asset Wealth Management (HK) Limited to Mirae Asset Securities (HK) Limited on March 1, 2017.

#### 5) Mirae Asset Wealth Management (Brazil) CCTVM

Mirae Asset Wealth Management (Brazil) CCTVM was established through a merger between Mirae Asset Brasil Holdings, a holding company controlled by Mirae Asset Securities (HK) Limited in order to operate securities brokerage business in Brazil, and Mirae Asset Securities (Brazil) CCTVM LTDA for overall business on the region on February 25, 2014. The entity was renamed from Mirae Asset Securities (Brazil) CCTVM to Mirae Asset Wealth Management (Brazil) CCTVM on February 9, 2015.

#### 6) PT. Mirae Asset Sekuritas Indonesia

PT. Mirae Asset Sekuritas Indonesia was established by Mirae Asset Securities (HK) Limited on August 1, 2013. It is engaged in securities brokerage, sale, acquisition and proprietary trading, consulting, etc. The entity is renamed from PT. Daewoo Securities Indonesia to PT. Mirae Asset Sekuritas Indonesia on December 26, 2016.

#### 7) Mirae Asset MAPS Frontier US Private Real Estate Investment Trust 6-2

Mirae Asset MAPS Frontier US Private Real Estate Investment Trust 6-2 is a collective investment securities designed to invest in Fairmont Hotel located in San Francisco, USA. The Group holds its equity on the amount of ₩141,500 million (book value) which is correspond to 99.92% from its total portion as of December 31, 2018.

#### 8) Mirae Asset MAPS Frontier US Private Real Estate Investment Trust 7

Mirae Asset MAPS Frontier US Private Real Estate Investment Trust 7 is a collective investment securities designed to invest in Hyatt Regency Waikiki Hotel located Oahu Waikiki beach in Hawaii, USA. The Group holds its equity in the amount of ₩317,077 million (book value) which is correspond to 99.83% of its total shares as of December 31, 2018.

## 2. Basis of preparation

### (1) Statement of compliance

The Company and its subsidiaries (“the Group”) have prepared the consolidated financial statements in accordance with the Korean International Financial Reporting Standards (“K-IFRS”), as prescribed in the Act on External Audits of Stock Companies in Republic of Korea.

The accompanying consolidated financial statements have been translated into English from the Korean language financial statements.

The consolidated financial statements were authorized for issue by the Board of Directors on January 31, 2019, which will be submitted for approval to the stockholder’s meeting to be held on March 27, 2019.

### (2) Basis of measurement

The consolidated financial statements have been prepared on the historical cost basis except for the following material items in the consolidated statement of financial position which are measured at fair value:

- Derivative financial instruments
- Financial assets measured at fair value through profit or loss
- Financial assets measured at fair value through other comprehensive income
- Share-based payments measured at fair value

### (3) Functional and presentation currency

Each group entity’s financial statements are prepared using the respective currency of the primary economic environment in which the group entities operate (functional currency). The Group’s consolidated financial statements are presented in Korean won (“₩”), which is also the Company’s functional and presentation currency.

### (4) Use of estimates and judgments

The preparation of the consolidated financial statements in conformity with K-IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are evaluated on an ongoing basis. Revisions to accounting estimates are recognized in the year in which the estimates are revised and in any future years affected.

### 1) Management’s judgment

Information about critical judgments in applying accounting policies that have the most significant effect on the amounts recognized in the consolidated financial statements is included in the following notes:

- Note 3. (7) – Non-derivative financial assets
- Note 3. (8) – Derivative financial assets
- Note 3. (9) – Fair value of financial instruments
- Note 3. (10) – Impairment of financial assets
- Note 3. (13) – Investment property
- Note 3. (17) – Hybrid financial instruments
- Note 3. (21) – Provisions
- Note 3. (27) – Income tax

### 2) Uncertainty of assumptions and estimations

Information about assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment within the next fiscal year are included in the following notes:

- Note 3. (27): Income tax
- Note 14: Financial assets measured at amortized cost
- Note 15: Fair value of financial asset and liability
- Note 28 and 54: Provisions, commitments and contingencies
- Note 55: Share-based payments

## 3. Significant accounting policies

Except for the new standards and the amendments to existing standards as described in note 4 to the consolidated financial statements, which were applied from January 1, 2018, the accounting policies applied by the Group in preparing the 2018 consolidated financial statements are consistent with prior year. Significant accounting policies applied by the Group are as follows:

### (1) Basis of consolidation

The consolidated financial statements integrate the financial statements of the parent and those of its subsidiaries. The Group controls an investee if the Group has 1) Power over the investee 2) Exposure, or rights, to variable returns from its involvement with the investee, and 3) The ability to use its power over the investee to affect its returns. The Group reevaluates whether or not it controls over an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control.

The Group with less than a majority of the voting rights has rights that are sufficient to give it power when the investor has the practical ability to direct the relevant activities unilaterally. When assessing whether the Group’s voting rights are sufficient to give it power, the Group considers all facts and circumstances, including:

- The size of the investor’s holding of voting rights relative to the size and dispersion of holdings of the other vote holders.
- Potential voting rights held by the investor, other vote holders or other parties.
- Rights arising from other contractual arrangements, and
- Any additional facts and circumstances that indicate the investor has, or does not have, the current ability to direct the relevant activities at the time that decisions need to be made, including voting patterns at previous shareholders’ meetings.

Income and expenses of a subsidiary acquired or disposed of during the year are included in the statement of comprehensive income from the date the Group gains control until the date or the Group ceases to control the subsidiary. The carrying amount of the non-controlling interests is proportionate share of the recognized amount of the identifiable net assets at the acquisition date and the amount of change in equity related to non-controlling interest thereafter. The Group shall also attribute total comprehensive income to the owners of the parent and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

If a subsidiary of the Group uses accounting policies other than those adopted in the consolidated financial statements for like transactions and events in similar circumstances, appropriate adjustments are made to the subsidiary's financial statements in preparing the consolidated financial statements.

All transactions between the group entities are eliminated upon consolidation.

The transactions of changes in the Group's ownership interest that do not result in a loss of control are accounted for as equity transactions. Changes in equity from subsidiary are accounted for by adjusting book value of controlling interest and non-controlling interest. The differences between the adjusted amount of the non-controlling interest and the fair value of the considerations are directly recognized to equity attributable to the parent.

If a parent loses control of a subsidiary it will recognize gains or losses from the disposal of its subsidiaries at the difference between 1) the fair value of the considerations received and 2) the carrying amounts of the assets (including any goodwill), liabilities of the subsidiary and non-controlling interests at the date when control is lost. If a parent loses control of a subsidiary, the parent shall account for all amounts previously recognized in other comprehensive income in relation to that subsidiary on the same basis as would be required if the parent had directly disposed of the related assets or liabilities. At the date of losing control over subsidiaries, the fair value of investment retained in the former subsidiary shall be regarded as the fair value on initial recognition of a financial asset in accordance with K-IFRS No.1109 or, when appropriate, the cost on initial recognition of an investment in an associate or joint venture.

## (2) Business combinations

Acquisitions of subsidiaries and businesses are accounted for using the acquisition method. The consideration transferred in a business combination is measured at fair value, which is calculated as the sum of the fair values of the assets transferred by the Group at the acquisition date, liabilities incurred by the Group to the former owners of the acquiree and equity instruments issued by the Group in exchange for control of the acquiree. Acquisition-related costs are generally recognized in profit or loss as incurred.

At the acquisition date, the identifiable assets acquired and the liabilities assumed are recognized at their fair value at the acquisition date, except that:

- Deferred tax assets or liabilities and liabilities or assets related to employee benefit arrangements are recognized and measured in accordance with K-IFRS 1012, *Income Taxes*, and K-IFRS 1019, *Employee Benefits*, respectively;
- Liabilities or equity instruments related to share-based payment arrangements of the acquiree or share-based payment arrangements of the Group entered into to replace share-based payment arrangements of the acquiree are measured in accordance with K-IFRS 1102, *Share-based Payment*, at the acquisition date; and

Goodwill is measured as the excess of the sum of a) the consideration transferred, b) the amount of any non-controlling interests in the acquiree and c) the fair value of the acquirer's previously held equity interest in the acquiree (if any), over the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed. If, after reassessment, the net of the acquisition-date amounts of the identifiable assets acquired and liabilities assumed exceeds the sum of a) the consideration transferred, b) the amount of any non-controlling interests in the acquiree and c) the fair value of the acquirer's previously held interest in the acquiree (if any), the excess is recognized immediately in profit or loss as a bargain purchase gain.

Non-controlling interests that are current ownership interests and entitle their holders to a proportionate share of the entity's net assets in the event of liquidation may be initially measured either 1) at fair value or 2) at the non-controlling interests' proportionate share of the recognized amounts of the acquiree's identifiable net assets. The choice of measurement basis is made on a transaction-by-transaction basis. Other types of non-controlling interests are measured at fair value or, when applicable, on the basis specified in another K-IFRS.

When the consideration transferred by the Group in a business combination includes assets or liabilities resulting from a contingent consideration arrangement, the contingent consideration is measured at its acquisition-date fair value and is included as part of the consideration transferred in a business combination. Changes in the fair value of the contingent consideration that qualify as measurement-period adjustments are adjusted retrospectively, with corresponding adjustments against goodwill. Measurement-period adjustments are adjustments that arise from additional information obtained during the 'measurement period' (which cannot exceed one year from the acquisition date) about facts and circumstances that existed at the acquisition date.

The subsequent accounting for changes in the fair value of the contingent consideration that do not qualify as measurement-period adjustments depends on how the contingent consideration is classified. Contingent consideration that is classified as equity is not remeasured at subsequent reporting dates and its subsequent settlement is accounted for within equity. Contingent consideration that is classified as an asset or a liability is remeasured at subsequent reporting dates in accordance with K-IFRS No. 1109, *Financial Instruments*, or K-IFRS No. 1037, *Provisions, Contingent Liabilities and Contingent Assets*, as appropriate, with the corresponding gain or loss being recognized in profit or loss.

When a business combination is achieved in stages, the Group's previously held equity interest in the acquiree is remeasured to fair value at the acquisition date (i.e., the date when the Group obtains control) and the resulting gain or loss, if any, is recognized in profit or loss. Amounts arising from interests in the acquiree prior to the acquisition date that have previously been recognized in other comprehensive income are reclassified to profit or loss where such treatment would be appropriate if that interest were disposed of.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group recognizes provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted during the measurement period (see above), or additional assets or liabilities are recognized to reflect new information obtained about facts and circumstances that existed at the acquisition date that, if known, would have affected the amounts recognized at that date.

## (3) Investments in associates and joint ventures

An associate is an entity over which the Group has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

The results and assets and liabilities of associates or joint ventures are incorporated in these consolidated financial statements using the equity method of accounting, except when the investment is classified as held for sale, in which case it is accounted for in accordance with *K-IFRS No.1105 Non-current Assets Held for Sale and Discontinued Operations*. Under the equity method, an investment in an associate or a joint venture is initially recognized in the consolidated statement of financial position at cost and adjusted thereafter to recognize the Group's share of the profit or loss and equity changes of the associate or joint venture. When the Group's share of losses of an associate or a joint venture exceeds the Group's interest in that associate or joint venture (which includes any long-term interests that, in substance, form part of the Group's net investment in the associate or joint venture), the Group discontinues recognizing its share of further losses. Additional losses are recognized only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate or joint venture.

Any excess of the cost of acquisition over the Group's share of the net fair value of the identifiable assets, liabilities and contingent liabilities of an associate or a joint venture recognized at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment and it undergoes impairment test as a part of the investment assets. Any excess of the Group's share of the net fair value of the identifiable assets, liabilities and contingent liabilities over the cost of acquisition, after reassessment, is recognized immediately in profit or loss.

Upon disposal of an associate or a joint venture that results in the Group losing significant influence over that associate or joint venture, any retained investment is measured at fair value at that date and the fair value is regarded as its fair value on initial recognition as a financial asset in accordance with *K-IFRS No.1109 Financial Instruments*. The difference between the previous carrying amount of the associate or joint venture attributable to the retained interest and its fair value is included in the determination of the gain or loss on disposal of the associate or joint venture. In addition, the Group accounts for all amounts previously recognized in other comprehensive income in relation to that associate or joint venture on the same basis we would be required if that associate or joint venture had directly disposed of the related assets or liabilities. Therefore, if a gain or loss previously recognized in other comprehensive income by that associate or joint venture would be reclassified to profit or loss on the disposal of the related assets or liabilities, the Group reclassifies the gain or loss from equity to profit or loss (as reclassification adjustment) when it loses significant influence over that associate or joint venture.

When the Group reduces its ownership interest in an associate or a joint venture but the Group continues to use the equity method, the Group reclassifies to profit or loss the proportion of the gain or loss that had previously been recognized in other comprehensive income relating to that reduction in ownership interest if that gain or loss would be reclassified to profit or loss on the disposal of the related assets or liabilities. In addition, the Group applies *K-IFRS No.1105 Non-current Assets Held*

for *Sale and Discontinued Operations* to a portion of investment in an associate or a joint venture that meets the criteria to be classified as held for sale.

The requirements of *K-IFRS No. 1109 Financial Instruments* are applied to determine whether it is necessary to recognize any impairment loss with respect to the Group's investment in an associate or a joint venture. When necessary, the entire carrying amount of the investment (including goodwill) is tested for impairment in accordance with *K-IFRS No. 1036 Impairment of Assets* by comparing its recoverable amount (higher of value in use and fair value less costs to sell) with its carrying amount; any impairment loss recognized forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognized in accordance with *K-IFRS No. 1036 Impairment of Assets* to the extent that the recoverable amount of the investment subsequently increases.

The Group continues to use the equity method when an investment in an associate becomes an investment in a joint venture or an investment in a joint venture becomes an investment in an associate reversely. There is no remeasurement to fair value upon such changes in ownership interests.

When a group entity transacts with an associate or a joint venture of the Group, profits and losses resulting from the transactions with the associate or joint venture are recognized in the Group's consolidated financial statements only to the extent of interests in the associate or joint venture that are not related to the Group.

#### (4) Goodwill

Goodwill resulting from an acquisition of a business is carried at cost as established at the date of acquisition of the business less accumulated impairment losses, if any.

For the purpose of impairment testing, goodwill is allocated to each of the Group's cash-generating units (or groups of cash-generating units) that is expected to benefit from the synergies of the combination.

A cash-generating unit to which goodwill has been allocated is tested for impairment annually, or more frequently when there is indication that the unit may be impaired. If the recoverable amount of the cash-generating unit is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit on a pro-rata basis based on the carrying amount of each asset in the unit. Any impairment loss for goodwill is recognized directly in profit or loss. An impairment loss recognized for goodwill is not reversed in subsequent periods.

On disposal of the relevant cash-generating unit, the attributable amount of goodwill is included in the determination of the profit or loss on disposal.

#### (5) Foreign currency transactions

##### 1) Foreign currency transactions

Transactions in foreign currencies are translated to the respective functional currencies of the Group entities at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies are retranslated to the functional currency using the report date's exchange rate. Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are translated to the functional currency at the exchange rate at the date that the fair value was determined. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction.

Foreign currency differences arising on translation of monetary items are recognized in profit or loss, except for differences arising on the settlement of monetary items, a financial liability designated as a hedge of the net investment in a foreign operation, or in a qualifying cash flow hedge, which are recognized in other comprehensive income. Translation differences on Non-monetary items whose fair value gain or loss is recognized in other comprehensive income or profit or loss is also recognized in other comprehensive income or profit or loss, respectively.

##### 2) Foreign operations

If the presentation currency of the Group is different from a foreign operation's functional currency, the financial statements of the foreign operation are translated into the presentation currency using the following methods.

Unless the functional currency of foreign operations is in a state of hyperinflation, assets and liabilities of foreign operations are translated at the closing exchange rate at the end of the reporting period. Revenues and expenses on the

statement of comprehensive income are translated at average rate for the accounting period. Foreign currency differences that arise from translation are recognized as other comprehensive income, and reclassified as profit or loss when foreign operations are disposed and the disposal profit or loss is recognized.

Any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amounts of assets and liabilities arising on the acquisition of that foreign operation is treated as assets and liabilities of the foreign operation. Thus, they are expressed in the functional currency of the foreign operation and translated at the closing rate.

When a foreign operation is disposed the relevant amount in the translation is transferred to profit or loss as part of the profit or loss on disposal. In any other partial disposal of a foreign operation, the relevant proportion is reclassified to profit or loss.

#### 3) Translation of net investment in the foreign operation

Monetary items receivable from or payable to a foreign operation, with none or little possibility of being settled in the foreseeable future, are considered a part of the net investment in the foreign operation. Therefore, the exchange difference is recognized as other comprehensive profit or loss in the financial statement, and reclassified to profit or loss as of the disposal of the related net investment.

#### (6) Cash and cash equivalents

Cash and cash equivalents comprise cash on hand, demand deposits, and short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in their fair value, and are used by the Group in the management of its short-term commitments. Equity investments are excluded from cash equivalents unless they are, in substance, cash equivalents, for example, in the case of preferred shares when it has a short maturity with a specified redemption date.

#### (7) Non-derivative financial assets

##### 1) Classification and measurement

###### Policy applicable from January 1, 2018

In accordance with K-IFRS No. 1109, the Group classifies non-derivative financial assets with financial assets measured at fair value (recognizing fair value changes either on other comprehensive income or profit or loss) or at amortized cost. In general, the classification is determined sequentially based on how the financial instrument is managed within business models and its contractual cash flow is characterized.

The Group assesses the purpose of the business models at the portfolio level of financial assets considering how the business is managed and how the information is provided to managements, as follows:

- The account policy and purpose stated for the portfolio, and operation of these policy in practice. Including acquisition of contractual interest, maintenance of specific interest rate, match to the duration of liabilities to fund financial asset with the duration of the financial assets, and management's strategy for an outflow or realization of expected cash flow through disposal of assets.
- How to report the assessment to key management, with assessing the performance of financial assets held by business model.
- The risk affecting the performance of business model (and financial assets held by business model) and how to manage the risk
- How to compensate to management (e.g., whether compensate based on fair value of assets or contractual cash flows)
- Frequency of sale of financial assets for the past period, amount, timing, reason, the expectation about future sale activity

The Group considers terms and conditions of a contract when assess whether the contractual cash flow is composed of solely payments of principal and interest. If non-derivative financial assets include terms and conditions of a contract that change the timing or amount of contractual cash flows, the Group determine whether the contractual cash flow that may arise for the lifetime of the financial assets is composed of solely payments of principal and interest. The Group considers the following:

- The conditional situation that may change the amount or timing of cash flows
- Terms that adjust coupon rate including the characteristics of floating rate
- The characteristics of prepayment or extension
- Terms and conditions that restrict the Group's claim on cash flow from specific assets

A non-derivative financial asset is measured initially at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs that are directly attributable to its acquisition.

#### ① Financial assets measured at amortized cost

A financial asset shall be measured at amortized cost if the financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows, and the contractual term of the financial asset give rise on specified date to cash flows that are solely payments of principal and interest on the principal amount outstanding. Subsequent to initial recognition, financial assets measured at amortized cost are measured at amortized cost using the effective interest rate method. Amortized cost is reduced by impairment loss. Interest income, profit or loss from translation of foreign currency, impairment losses are recognized in profit or loss.

#### ② Financial assets measured at fair value through other comprehensive income

A financial asset shall be measured at fair value through other comprehensive income if the financial asset is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets, and the contractual terms of the financial asset give rise on a specified date to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Profit or loss from all financial assets measured at fair value through other comprehensive income except for the credit losses (reversal), interest income, and foreign exchange gain or loss, are recognized in other comprehensive income. The cumulative gain or loss previously recognized in other comprehensive income will be reclassified from equity to profit or loss as a reclassification adjustment.

Investments in equity instrument that is not held for trading can be irrevocably elected to present the subsequent changes in fair value in other comprehensive income. The choice is decided by individual financial instruments. Dividends from equity securities designated as measured at fair value through other comprehensive income, which do not belong to refund of invested capital, is recognized as profit or loss. Other items are recognized with other comprehensive income and will never be reclassified to profit or loss.

#### ③ Financial assets measured at fair value through profit or loss

A financial instrument shall be measured at fair value through profit or loss unless it is measured at amortized cost or at fair value through other comprehensive income. All gains and losses, including interest and dividend income, are recognized in profit or loss.

A financial asset can be irrevocably designated as financial assets measured at fair value through profit or loss if doing so eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise from measuring assets or liabilities or recognizing the gains and losses on them on a different basis.

#### Policy applicable before January 1, 2018

The Group recognizes and measures non-derivative financial assets by the following four categories: financial assets at fair value through profit or loss ("FVTPL"), held-to-maturity ("HTM") investments, loans and receivables and available-for-sale ("AFS") financial assets. The Group recognizes financial assets in the consolidated statement of financial position when the Group becomes a party to the contractual provisions of the instrument.

Upon initial recognition, non-derivative financial assets are measured at their fair value plus, except for a financial asset at FVTPL, transaction costs that are directly attributable to the asset's acquisition or issuance.

#### ① Financial assets at FVTPL

Financial assets are classified as of FVTPL when the financial asset is either held for trading or is designated at FVTPL. Financial assets at FVTPL are measured at fair value upon initial recognition and changes therein are recognized in profit or loss. Upon initial recognition, attributable transaction costs are recognized in profit or loss as incurred.

A financial asset is classified as held for trading if:

- It has been acquired principally for the purpose of selling it in the near term; or
- On initial recognition, it is part of a portfolio of identified financial instruments that the Group manages together and has a recent actual pattern of short-term profit taking; or
- It is a derivative that is not designated and effective as a hedging instrument.

A financial asset other than a financial asset held for trading may be designated at FVTPL upon initial recognition if:

- Such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise; or
- The financial asset forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Group's documented Risk management or investment strategy, and information about the grouping is provided internally on that basis; or
- It forms part of a contract containing one or more embedded derivatives and K-IFRS No. 1039, *Financial Instruments: Recognition and Measurement*, permits the entire combined contract (asset or liability) to be designated at FVTPL.

#### ② HTM investments

If the non-derivative assets have a fixed maturity with fixed or determinable payments, and the Group has the positive intent and ability to hold them until maturity, then such financial assets are classified as HTM. Subsequent to initial recognition, HTM financial assets are measured at amortized cost using the effective interest rate method.

#### ③ Loans and receivables

Loans and receivables are financial assets with fixed or determinable payments that are not quoted in an active market. Subsequent to initial recognition, loans and receivables are measured at amortized cost using the effective interest method.

#### ④ AFS financial assets

AFS financial assets are those non-derivative financial assets that are designated as AFS or are not classified as financial assets at FVTPL, HTM investments or loans and receivables. Subsequent to initial recognition, they are measured at fair value, with changes in fair value, net of any tax effect, recorded in other comprehensive income in equity. Investments in equity instruments that do not have a quoted market price in an active market and whose fair value cannot be reliably measured and derivatives those are linked to and must be settled by delivery of such unquoted equity instruments are measured at cost. When the investment is disposed of or is determined to be impaired, the cumulative gain or loss previously accumulated in other comprehensive income is reclassified to profit or loss. Dividends on AFS equity instruments are recognized in profit or loss when the Group's right to receive the dividends is established.

### 2) Derecognition of financial assets

The Group derecognizes a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows of the financial asset in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred. Any interest in transferred financial assets that is created or retained by the Group is recognized as a consolidated asset or liability.

If the Group retains substantially all the risks and rewards of ownership of the transferred financial assets, the Group continues to recognize the transferred financial assets and recognizes financial liabilities for the consideration received.

### 3) Offsetting between financial assets and financial liabilities

Financial assets and financial liabilities are offset and the net amount is presented in the consolidated statement of financial position only when the Group currently has a legally enforceable right to offset the recognized amounts, and there is the intention to settle on a net basis or to realize the asset and settle the liability simultaneously.

## (8) Derivative financial instruments

Derivatives are initially recognized at fair value. Subsequent to initial recognition, derivatives are measured at fair value, and changes therein are accounted for as described below.

### 1) Hedge accounting

Derivative instruments are accounted for differently depending on whether hedge accounting is applied, and therefore, are classified into trading purpose derivatives and hedging purpose derivatives. A fair value hedge is a hedge of the exposure to changes in fair value of a recognized asset or liability or an unrecognized firm commitment, or an identified portion of such an asset, liability or firm commitment, that is attributable to a particular risk and could affect profit or loss. A cash flow hedge is a hedge of the exposure to variability in cash flows that (i) is attributable to a particular risk associated with a recognized asset or liability (such as all or some future interest payments on variable rate debt) or a highly probable forecasted transaction and (ii) could affect profit or loss. For trading purpose derivatives transactions, changes in the fair value of derivatives are recognized in profit or loss.

## 2) Embedded derivative instruments

Derivatives may be embedded in another contractual arrangement (a "host contract"). The terms of the embedded derivative would meet the definition of a derivative if they were included in a separate contract, and the economic characteristics and risks of the embedded derivative are not closely related to the economic characteristics and risks of the host contract.

### Policy applicable from January 1, 2018

When the non-derivative financial asset is a hybrid contract with an embedded derivative, except the host contract is not a financial asset under certain condition, the Group considers the entire hybrid contract in determining whether the contractual cash flow is composed of solely payments of principal and interest.

When the non-derivative financial liability is a hybrid contract with an embedded derivative, the Group accounts for the embedded derivative separately from the host contract when the host contract is not measured at fair value through profit or loss. Any changes in the fair value of the separated embedded derivatives are recognized in profit or loss.

### Policy applicable before January 1, 2018

Derivatives embedded in other financial instruments are treated as separate derivatives and recorded at fair value if their economic characteristics and risks are not clearly and closely related to those of the host contract and the host contract is not itself held for trading or designated at FVTPL, unless the Group aggregately designates the host contract and embedded derivative as a financial instrument at FVTPL. These embedded derivatives are separated from the host contract and are carried at fair value, with changes in their fair value recognized in profit or loss.

## 3) Other derivative financial instruments

Changes in the fair value of other derivative financial instrument not designated as a hedging instrument are recognized immediately in profit or loss.

## (9) Fair value of financial instruments

The fair values of financial instruments not actively traded in markets (e.g., OTC derivatives) are determined by using valuation techniques. The Group determines valuation methods and assumptions based on significant market conditions at the end of each reporting period. Diverse valuation techniques are used to determine the fair value of financial instruments, from general market accepted valuation models to internally developed valuation models that incorporate various types of assumptions and variables.

The Group classifies and discloses fair value of the financial instruments into following three-level hierarchy.

(Level 1) Financial instruments measured at quoted prices from active markets are classified as fair value level 1.

(Level 2) Financial instruments measured using valuation techniques where all significant inputs are observable market data are classified as level 2.

(Level 3) Financial instruments measured using valuation techniques where one or more significant inputs are not based on observable market data are classified as level 3.

The method of measuring fair value of financial instruments are as follows:

Type	Fair value measurement method
Deposits	The carrying amount and fair value is the same for cash, and the carrying amount is determined to be the fair value for deposits.
Financial assets measured at fair value through profit or loss	The quoted prices are applied to financial instruments held for trading traded in active markets, like listed stocks. If quoted prices are not available, fair values determined by external evaluation specialized agency are applied hybrid financial instruments apply the fair values determined by valuation techniques.
Derivatives	The quoted prices are applied to in-market derivatives, and as of off-market derivatives, fair values determined by external evaluation specialized agency are applied.
Financial assets measured at fair value through other comprehensive income	The quoted prices are applied to securities traded in active markets, like listed stocks, and if quoted prices are not available, fair values determined by external evaluation specialized agency are applied.
Financial assets measured at amortized cost	The carrying amount is determined to be the fair value.
Deposits due to customers	The carrying amount is determined to be the fair value.
Borrowings	The carrying amount is determined to be the fair value.
Debentures	The fair value is calculated using discounted cash flow model.
Other financial assets and liabilities	The carrying amount is determined to be the fair value for other financial assets and liabilities that are derived from various transactions, since they are relatively short term.

## (10) Impairment of financial assets

### Policy applicable from January 1, 2018

The Group assesses the expected credit losses on a debt instrument measured at amortized cost or fair value through other comprehensive income based on the forward-looking information. Impairment approach will depend on the significant increases in credit risk. Depending on the degree of increase in credit risk on a financial asset since initial recognition, the Group recognizes the amount for loss allowance at an amount equal to either 12-month credit losses or lifetime expected credit losses by 3 stages as shown in the below table.

	Description	Expected Credit Loss
Stage 1	No significant increase in credit risk since their initial recognition(*)	12-month ECL: 12-month expected credit losses: the expected credit losses that result from default events on a financial instrument that are possible within the 12 months after the reporting date.
Stage 2	Significant increase in credit risk since their initial recognition	Lifetime ECLs: the expected credit losses that result from all possible default events over the expected life of a financial instrument.
Stage 3	Assets are non-performing and therefore considered as credit-impaired	

(\*) The Group may assume that the credit risk on a financial instrument has not increased significantly since initial recognition if the credit risk is low at the reporting date.

The Group recognizes the cumulative changes in lifetime expected credit losses since initial recognition as a loss allowance for credit-impaired financial assets.

As for financial assets measured at amortized cost or debt securities measured at fair value through other comprehensive income, the Group regards the following indication as a significant increase in credit risk relative to initial recognition.

### ① Loans

- Loans classified as precautionary of the Financial Supervisory Service's asset soundness classification.
- Loans whose level of default risk exceeds absolutely or relatively high due to significant changes in internal credit rating as of the reporting date after initial recognition(12-month expected credit losses are recognized if external credit rating corresponding to internal credit rating is qualified investment rating)
- Loans for which the principal or interest is overdue for more than 30 days

### ② Bonds

- Bonds whose level of default risk exceeds absolutely or relatively high due to significant changes in internal credit rating of the reporting date after initial recognition(12-month expected credit losses are recognized if external credit rating corresponding to internal credit rating is qualified investment rating)
- Bonds for which the principal or interest is overdue for more than 30 days



The Group considers that credit risk is low if the degree of credit risk rating is at a level that is internationally understood as the definition of 'investment grade'. The Group considers an external credit rating of A or higher to have low credit risk.

The Group defines that a default has occurred if there are objective reasons to reduce the reliably estimated future cash flows after initial recognition. The objective reasons included the following:

- Continuous overdue of principal and interest;
- Deterioration in credit rating such as suspension of overdraft checking accounts of debtor;
- Debtor's bankruptcy or default;
- Occurrence of a significant lawsuit or claim against debtor;
- Debtor's financial situation is poor due to an important factor which is related to a delay in the business schedule; or
- Occurrence of other events that would significantly impact on the solvency of a debtor.

Also, the Group defined the meaning of default in the same way as the regulatory capital management policies. Therefore, the Group believes that the best estimate could be used for the measurement of financial asset impairment.

#### 1) Measurement of expected credit losses

The major variables used by the Group for measuring expected credit losses are as follows. These credit risk measures are estimated using statistical techniques and historical experience data developed internally by the Group and adjusted through reflection of forward-looking information.

- Percentage of default by period obtained from independent credit ratings institutions
- Percentage of loss given default defined by regulatory requirement
- The expected exposure at the time of default and the contractual maturity

#### 2) Reflection of forward-looking information

The Group reflects the forward-looking information presented by the internal expert group based on various information when measuring expected credit losses. For the purpose of forecasting these forward-looking information, the Group utilizes the economic prospects disclosed by domestic and overseas research institutes or government and public institutions.

The Group reflects the anticipated future macroeconomic conditions from a neutral point of view without bias, in measuring expected losses. Expected loss in this respect reflects the most likely outcome and is based on the same assumptions as the Group estimates based on its business plan and management strategy.

#### Policy applicable before January 1, 2018

A financial asset not carried at FVTPL is assessed at each reporting date to determine whether there is objective evidence that it is impaired. A financial asset is impaired if objective evidence indicates that a loss event has occurred after the initial recognition of the asset, and that the loss event had a negative effect on the estimated future cash flows of that asset that can be estimated reliably. However, losses expected as a result of future events, regardless of likelihood, are not recognized.

Objective evidence that a financial asset is impaired includes, but is not limited to, the following events:

- Significant financial difficulty of the issuer or debtor;
- A breach of contract, such as a default or delinquency in interest or principal payments;
- The lender, for economic or legal reasons relating to the borrower's financial difficulty, granting to the borrower a concession that the lender would not otherwise consider;
- It becoming probable that the borrower will enter bankruptcy or other financial reorganization;
- The disappearance of an active market for that financial asset because of financial difficulties; or
- Observable data indicating that there is a measurable decrease in the estimated future cash flows from a group of financial assets since the initial recognition of those assets, although the decrease cannot yet be identified with the individual financial assets in the group

In addition, for an investment in an equity security, a significant or prolonged decline in its fair value below its cost is objective evidence of impairment.

If financial assets have objective evidence that they are impaired, impairment losses are measured and recognized.

#### ① Loans and receivables

Loans and receivables are measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the financial asset's original effective interest rate.

The Group first assesses whether objective evidence of impairment exists individually for loans and receivables that are individually significant, and individually or collectively for financial assets that are not individually significant. If the Group determines that no objective evidence of impairment exists for an individually assessed financial asset, whether significant or not, it includes the asset in a group of financial assets with similar credit risk characteristics and collectively assesses them for impairment.

Impairment losses on loans reduces the carrying amount of the assets through the use of an allowances account, and when a loan becomes uncollectable, it is written off against the related allowances account. If, in a subsequent recognition of impairment, the previously recognized impairment loss is reversed by adjusting an allowance account, the amount of the reversal is recognized in profit or loss.

Individual assessment of impairment losses are calculated by discounting the expected future cash flows of a loan at its original effective interest rate and comparing the resultant present value with the loan's current carrying amount. This process normally encompasses management's best estimate, such as estimating the operating cash flows of the borrower, and the net realizable value of any collateral held, and the timing of anticipated receipts.

For the purpose of a collective assessment of impairment, loans are analyzed on the basis of the Group's internal credit rating system that considers credit risk characteristics such as asset type, industry, geographical location, collateral type, past-due status and other relevant factors.

Future cash flows of the loans collectively assessed are estimated on the basis of historical loss experience for loans with similar credit risk characteristics. Historical loss experience is adjusted on the basis of current observable data to reflect the effects of current conditions on which the historical loss experience is based and to remove the effects of conditions in the historical period that no longer exists. Estimates of changes in future cash flows reflect, and are directionally consistent with, changes in related observable data from year to year (such as changes in unemployment rates, property prices, commodity prices, payment status or other factors that are indicative of incurred loss in the Group and their magnitude). The methodology and assumptions used for estimating future cash flows are reviewed regularly to reduce any differences between loss estimates and actual loss experience.

#### ② AFS financial assets

When a decline in the fair value of an AFS financial asset has been recognized in other comprehensive income and there is objective evidence that the asset is impaired, the cumulative loss that had been recognized in other comprehensive income shall be reclassified from equity to profit or loss as a reclassification adjustment even though the financial asset has not been derecognized.

Impairment losses recognized in profit or loss for an investment in an equity instrument classified as AFS shall not be reversed through profit or loss. If, in a subsequent period, the fair value of a debt instrument classified as AFS increases and the increase can be objectively related to an event occurring after the impairment loss was recognized in profit or loss, the impairment loss shall be reversed, with the amount of the reversal recognized in profit or loss.

#### (11) Day 1 profit or loss recognition

In cases where fair value is determined using data which is not observable in the market, the difference between the transaction price and initial value is amortized in the statement of comprehensive income by using the straight line method over an appropriate period.

#### (12) Property and equipment

Property and equipment are initially measured at cost and after initial recognition, are carried at cost less accumulated depreciation and accumulated impairment losses. The cost of property and equipment includes expenditures arising directly from the construction or acquisition of the asset, any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

Subsequent to initial recognition, an item of property and equipment shall be carried at its cost less any accumulated depreciation and any accumulated impairment losses.

Subsequent costs are recognized in the carrying amount of property, plant and equipment at cost or, if appropriate, as separate items if it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognized. The costs of the day-to-day servicing are recognized in profit or loss as incurred.

Property and equipment, except for land, are depreciated on a straight-line basis over estimated useful lives that appropriately reflect the pattern in which the asset's future economic benefits are expected to be consumed. A component that is significant compared to the total cost of property and equipment is depreciated over its separate useful life.

The estimated useful lives of the Group's assets by categories are as follows:

Descriptions	Useful lives (years)
Structures	20, 40
Vehicles	4
Furniture and fixtures	4
Data processing equipment	4

Each part of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item are depreciated separately. Gains and losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment and are recognized in profit or loss.

Depreciation methods, useful lives and residual values are reviewed at each financial year-end and adjusted if appropriate. The change is accounted for as a change in an accounting estimate.

Property and equipment is impaired when its carrying amount exceeds the recoverable amount. The Company assesses residual value and economic life of its assets at each reporting date and makes adjustments to its useful life when necessary. Any gain or loss arising from the disposal of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is recognized in profit or loss.

### (13) Investment property

Property held for the purpose of earning rentals or benefiting from capital appreciation is classified as investment property. Investment property is measured initially at its cost. Transaction costs are included in the initial measurement. Subsequently, investment property is carried at depreciated cost less any accumulated impairment losses.

Investment property is derecognized upon disposal or when the investment property is permanently withdrawn from use and no future economic benefits are expected from the disposal. Any gain or loss arising on derecognition of the property (calculated as the difference between the net disposal proceeds and the carrying amount of the assets) is included in profit or loss in the period in which the property is derecognized.

Depreciation of investment property is calculated using the straight-line method over their estimated useful lives as follow:

Descriptions	Useful lives (years)
Buildings	20, 40, 50

### (14) Intangible assets

Intangible assets are measured initially at cost and after initial recognition are carried at cost less accumulated amortization and accumulated impairment losses.

Amortization of intangible assets is calculated on a straight-line basis over the estimated useful lives of intangible assets from the date that they are available for use. The residual value of intangible assets is zero. However, as there are no foreseeable limits to the periods over which memberships and settlement system right of use are expected to be available for use, these intangible assets are determined as having indefinite useful lives and not amortized.

Descriptions	Useful lives (years)
Goodwill	Indefinite useful lives
Development cost	4
Software	4
Memberships	Indefinite useful lives
Settlement system right of use	Indefinite useful lives
Others	7

Amortization periods and the amortization methods for intangible assets with finite useful lives are reviewed at the end of each reporting period. The useful lives of intangible assets that are not being amortized are reviewed at the end of each reporting period to determine whether events and circumstances continue to support indefinite useful life assessments for those assets. Changes are accounted for as changes in accounting estimates.

Expenditures on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, are recognized in profit or loss as incurred. Development activities involve a plan or design for the production of new or substantially improved products and processes. Development expenditures are capitalized only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and the Group intends to and has sufficient resources to complete development and to use or sell the asset. Other development expenditures are recognized in profit or loss as incurred.

### (15) Impairment of non-financial assets

The carrying amounts of the Group's non-financial assets, other than assets from employee benefits and deferred tax assets, are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. Goodwill and intangible assets that have indefinite useful lives or that are not yet available for use, irrespective of whether there is any indication of impairment, are tested for impairment annually by comparing their recoverable amount to their carrying amount.

The Group estimates the recoverable amount of an individual asset. If it is impossible to measure the individual recoverable amount of an asset, then the Group estimates the recoverable amount of each cash-generating unit ("CGU"). A CGU is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. The recoverable amount of an asset or CGU is the greater of its value in use and its fair value less costs to sell.

An impairment loss is recognized if the carrying amount of an asset or its CGU exceeds its estimated recoverable amount. Impairment losses are recognized in profit or loss.

Where an impairment loss subsequently reverses, the carrying amount of the asset is increased to the revised estimate of its recoverable amount, so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset in prior years. A reversal of an impairment loss is recognized immediately in profit or loss.

### (16) Non-derivative financial liabilities

Based on the contractual terms and definition of the financial liabilities, the financial liabilities are classified either as financial liabilities measured at fair value through profit or loss or financial assets measured at amortized cost, all of which are recognized in its statement of financial position when, and only when the Group becomes a party to the contractual provisions of the instrument.

#### 1) Financial liabilities measured at fair value through profit or loss

The financial liabilities measured at fair value through profit or loss include financial liabilities designated as measured at fair value through profit or loss at initial recognition. Such financial liabilities measured at fair value through profit or loss are recognized initially at fair value and changes there in are recognized in profit or loss. Upon initial recognition, attributable transaction costs are recognized in profit or loss as incurred.

A financial liability is classified as financial liabilities measured at fair value through profit or loss if:

- It has been acquired principally for the purpose of repurchasing it in the near term; or
- On initial recognition, it is part of a portfolio of identified financial instruments that the Group manages together and has a recent actual pattern of short-term profit taking; or
- It is a derivative that is not designated and effective as a hedging instrument.

A financial liability other than a financial liabilities measured at fair value through profit or loss may be designated as measured at fair value through profit or loss upon initial recognition if:

- Such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise; or
- The financial liability forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Group's documented Risk management or investment strategy, and information about the grouping is provided internally on that basis; or
- It forms part of a contract containing one or more embedded derivatives and K-IFRS No. 1109, Financial Instruments, permits the entire combined contract (asset or liability) to be designated as measured at fair value through profit or loss.

In accordance with K-IFRS No. 1109, the Group recognizes the change in fair value of financial liabilities due to change in credit risk in other comprehensive income, except for recognizing the effect of change in credit risk in other comprehensive income causes or expends an accounting mismatch. The change in fair value of financial liabilities due to change in credit risk is not subsequently reclassified to profit or loss, which is reclassified to retained earning when financial liabilities are derecognized.

## 2) Financial liabilities measured at amortized costs

The non-derivative financial liabilities that are not classified as financial liabilities measured at fair value through profit or loss are measured at amortized costs. Deposits, borrowings and debentures that are not designated as measured at fair value through profit or loss are classified as financial liabilities measured at amortized costs. Financial liabilities measured at amortized cost are recognized initially at fair value, net of transaction costs incurred. They are subsequently carried at amortized cost; any difference between the proceeds (net of transaction costs) and the redemption value is recognized in the statement of comprehensive income over the period of the other financial liabilities using the effective interest rate method.

## 3) Derecognition of financial liabilities

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability. The difference between the carrying value of the original financial liability and the consideration paid is recognized in profit or loss.

## (17) Hybrid financial instruments

The hybrid financial instrument issued by the Group is classified as a financial liability or an equity instrument in accordance with the substance of the contractual arrangement.

The liability component of a convertible bond shall be recognized as the fair value of a similar liability on initial recognition and be measured in amortized cost by the effective interest method until it is extinguished. The equity component is determined by deducting the fair value of the financial liability from the fair value of the hybrid financial instrument as a whole on initial recognition. The tax effect shall be reflected and the instrument is not remeasured afterward. Transaction costs that relate to the issuance of a hybrid financial instrument are allocated to the liability and equity components of the instrument in proportion to the allocation of proceeds.

## (18) Financial guarantee contract liabilities

A financial guarantee contract refers to a contract that requires the issuer to pay the specified amounts to reimburse the holder for a loss because the specified debtor fails to make payment when due under original or revised contractual terms of debt instruments. Financial guarantee contract liabilities are initially measured at their fair values and amortized during the contractual term.

Financial guarantee contract liabilities are subsequently measured at the higher of:

- The amount of expected credit loss determined in accordance with K-IFRS No. 1109, *Financial Instruments*, and
- The initial amount less amortization of fees recognized in accordance with K-IFRS No. 1115, *Revenue from Contracts with Customers*

## (19) Employee benefits

### 1) Short-term employee benefits

Short-term employee benefits are employee benefits that are due to be settled within 12 months after the end of the period in which the employees render the related service. When an employee has rendered service to the Group during an accounting period, the Group recognizes the undiscounted amount of short-term employee benefits expected to be paid in exchange for that service.

### 2) Retirement benefits

The Group operates defined contribution plans for the qualified employees. When an employee has rendered service to the Group during a period, the Group recognizes the contribution payable to a defined contribution plan in exchange for that service as a liability (accrued expense), after deducting any contribution already paid. If the contribution already paid exceeds the contribution due for service before the end of the reporting period, the Group recognizes that excess as an asset (prepaid expense) to the extent that the prepayment will lead to a reduction in future payments or a cash refund.

Meanwhile, the Group operates defined benefit plans for the part timers. The Group's net obligation in respect of defined benefit plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in the current and prior periods, discounting that amount and deducting the fair value of any plan assets.

## 3) Termination benefits

Termination benefits are recognized as an expense when the Group is committed demonstrably, without realistic possibility of withdrawal, to a formal detailed plan to either terminate employment before the normal retirement date, or to provide termination benefits as a result of an offer made to encourage voluntary redundancy. Termination benefits for voluntary redundancies are recognized as an expense if the Group has made an offer of voluntary redundancy, it is probable that the offer will be accepted and the number of acceptances can be estimated reliably. If benefits are payable more than 12 months after the reporting period, then they are discounted to their present value.

## (20) Share-based payments

The Group has granted shares or share options to its employees and other parties. For equity-settled share-based payment transactions, the Group measures the goods or services received, and the corresponding increase in equity as a capital adjustment at the fair value of the goods or services received, unless that fair value cannot be estimated reliably. If the Group cannot reliably estimate the fair value of the goods or services received, the Group measures their value, and the corresponding increase in equity, indirectly, by reference to the fair value of the equity instruments granted.

For cash-settled share-based payment transactions, the Group measures the goods or services acquired and the liability incurred at the fair value of the liability. Until the liability is settled, the Group remeasures the fair value of the liability at each reporting date and at the date of settlement, with changes in fair value recognized in profit or loss for the period.

## (21) Provisions

Provisions are recognized when the Group has a present legal or constructive obligation as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

The risks and uncertainties that inevitably surround many events and circumstances are taken into account in reaching the best estimate of a provision. Where the effect of the time value of money is material, provisions are determined at the present value of the expected future cash flows.

Provisions are reviewed at the end of each reporting period and adjusted to reflect the current best estimate. If it is no longer probable that an outflow of resources embodying economic benefits will be required to settle the obligation, the provision is reversed. Provisions are used only in the expenditures related to initial recognition.

## (22) Regular way trades

Equity securities, debt securities and derivatives, which are traded in Korea Exchange or qualified foreign exchange markets, are treated as regular way trades. The Company's accounting policies about regular way trades are described below.

### 1) Proprietary Trading

In proprietary trading transactions, purchases or sales of asset that require delivery of asset within a time frame established by regulation or convention in the marketplace are recognized or derecognized on the trading date.

### 2) Brokerage

For brokerage services, the Group serves a customer who trades listed stocks and other securities and recognizes the brokerage fee on the trading date. Until the settlement date of the trading on consignment, the Group does not offset the receivables and payables to customers and offsets the receivables and payables to Korea Exchange.

## (23) Interest income and expense

Effective interest method is used in calculating amortized cost of financial assets and liabilities and allocating interest income and expenses through relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life or the financial instrument or, when appropriate, a shorter period to the net carrying amount of the financial asset or financial liability.

When calculating the effective interest rate, the Company estimates future cash flows considering all contractual terms of the financial instrument, but not future credit losses. The calculation of the effective interest rate includes all fees and points paid or received that are an integral part of the effective interest rate. Transaction costs include incremental costs that are directly attributable to the acquisition or issuance of a financial asset or liability. In exceptional cases where the cash flow or expected life of the financial instruments is not reliably estimated, the interest rate is calculated by using contractual cash flows from contractual period.

If the carrying value of financial instruments or the group of relevant financial instruments is reduced by due to recognition of impairment, interest income is measured using interest rate used in measuring impairment of discounting future cash flows.

## (24) Fees and commission income

The Group applies different revenue recognition accounting standards based on the type of service provided to the customers. Fees and commission income and expense that are integral to the effective interest rate on a financial asset or liability are included in the measurement of the effective interest rate.

Fees and commission earned are recognized in accordance with K-IFRS No.1115 Revenue from Contracts with Customers by applying the five-step model (①Identifying the contract → ②Identifying performance obligations → ③Determine the transaction price → ④Allocating the transaction price to performance obligations → ⑤Recognize revenue upon satisfaction of performance obligation).

## (25) Net gains (losses) on financial instruments measured at fair value through profit or loss

Net gains (losses) on financial instruments measured at fair value through profit or loss include the following profit or loss (including changes in fair value, interest rate, dividends, and profit or loss from translation of foreign currency).

- Net gains and losses related to financial assets and liabilities measured at fair value through profit or loss
- Net gains and losses related to derivative financial instruments held for trading (including derivative financial instruments that are held for Risk management objectives, but do not meet the criteria as a fair value hedge)

## (26) Dividends

Dividend income is recognized when the right to receive income is established.

## (27) Income tax

Income tax expense comprises current and deferred tax. Current and deferred taxes are recognized in profit or loss, except to the extent that they relate to a business combination, or items recognized directly in equity or in other comprehensive income.

### 1) Current tax

Current tax is the expected tax payable or receivable on the taxable profit or loss for the year, using tax rates enacted or substantively enacted at the end of the reporting period and any adjustment to tax payable in respect of previous years. The taxable profit is different from the accounting profit for the period since the taxable profit is calculated excluding the temporary differences, which will be taxable or deductible in determining taxable profit (tax loss) of future periods, and non-taxable or non-deductible items from the accounting profit.

### 2) Deferred tax

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

The Group recognizes deferred tax liabilities for all taxable temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, except to the extent that the Group is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. The Group recognizes deferred tax assets for all deductible temporary differences arising from investments in subsidiaries and associates, to the extent that it is probable that the temporary difference will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilized.

The carrying amount of a deferred tax asset is reviewed at the end of each reporting period and reduces the carrying amount to the extent that it is no longer probable that sufficient taxable profit will be available to allow the benefit of part or all of that deferred tax asset to be utilized.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax assets and liabilities are offset only if there is a legally enforceable right to offset the related current tax liabilities and assets, and they relate to income tax levied by the same tax authority and they intend to settle current tax liabilities and assets on a net basis.

Additional income taxes arising from dividend payments are recognized when expenses related to dividend payments are recognized.

## (28) Operating segments

An operating segment is a component of the Group whose operating results are regularly reviewed by the entity's chief operating decision maker to make decisions about resources to be allocated to the segment and assess its performance, and for which discrete financial information is available. Segment results include items directly attributable to a segment as well as those that can be allocated on a reasonable basis.

## (29) Earnings per share

The Group calculates basic earnings per share and diluted earnings per share for profit or loss and discloses them in statements of comprehensive income. Basic earnings per share are calculated by dividing the profit or loss attributable to ordinary equity holders of the Company by the weighted-average number of ordinary shares outstanding during the period, adjusted for own shares held. Diluted earnings per share are determined by adjusting the profit or loss attributable to ordinary shareholders and the weighted-average number of ordinary shares outstanding, adjusted for own shares held, for the effects of all dilutive potential ordinary shares.

## (30) Accounting for trust accounts

The Group manages trust accounts and its own account separately in accordance with the Financial Investment Services and Capital Market Act. The Company recognizes trust fees earned from the trust accounts as income from trust operations.

## (31) Regulatory reserve for loan loss

In case that the total sum of allowance for loan losses in accordance with K-IFRS No.1109 is lower than the amount prescribed in the regulations on financial investment business, the Group is required to recognize the difference as a regulatory reserve for loan loss at the end of each fiscal year (as the fiscal year-end reserve amount is not determined every quarter, the projected regulatory reserve for loan losses are measured).

In case the amount of existing regulatory reserve for possible loan losses exceeds the amount needed to be recognized as of the end of the current period, the difference, if any, shall be reversed. If there is undisposed deficit, the Group can accumulate reserves for possible loan losses after disposing deficit.

## (32) Treasury stocks

Own equity instruments that are reacquired (treasury shares) are recognized at cost and deducted from equity. No gain or loss is recognized in the consolidated statement of comprehensive income on the purchase, sale, issue or cancellation of the Group's own equity instruments. Any difference between the carrying amount and the consideration is recognized in other capital surplus or capital adjustment.

## 4. Change in accounting policies

### (1) New standards and interpretations adopted

The Group applied the following new accounting standards from January 1, 2018.

#### 1) K-IFRS No. 1115 'Revenue from Contracts with customers'

The Group applied K-IFRS No. 1115 Revenue from Contracts with Customers. This standard replaced K-IFRS No. 1018 Revenue, K-IFRS No. 1011 Construction Contracts, K-IFRS No. 2031 Revenue-Barter Transactions Involving Advertising Services, K-IFRS No. 2113 Customer Loyalty Programs, K-IFRS No. 2115 Agreements for the Construction of Real Estate, and K-IFRS No. 2118 Transfers of Assets from Customer.

Standards such as K-IFRS No. 1018 and others provide revenue recognition criteria for different types of transactions such as sales of goods, rendering of services, interest, royalties, dividends, and construction contracts. However, the revenue under the new standard K-IFRS No. 1115 is recognized by applying the five-step model (①Identifying the contract → ②Identifying performance obligations → ③Determine the transaction price → ④Allocating the transaction price to performance obligations → ⑤Recognize revenue upon satisfaction of performance obligation).

The Group retrospectively applied K-IFRS No. 1115 and concluded that no adjustment shall be made to the Group's consolidated financial statements as of January 1, 2018.

#### 2) K-IFRS No. 1102 'Share-based Payment'

The amendments clarify that the accounting for the effects of vesting and non-vesting conditions on cash settled share-based payments should follow the same approach as for equity-settled share-based payments and classification of share-based payments settled net of tax withholding.

### 3) K-IFRS No. 1109 'Financial Instruments'

K-IFRS No. 1109 Financial Instruments replaces the recognition of financial assets and liabilities, classification and measurement, derecognition of financial instruments, impairment of financial assets, and hedge accounting related to K-IFRS No. 1039 Financial Instruments: Recognition and Measurements. In addition, K-IFRS No. 1107 Financial Instruments: Disclosure and other standards related to financial instruments have been amended in accordance with the K-IFRS No. 1109.

The Group adopted the K-IFRS No. 1109 effective January 1, 2018, and the Group amended its accounting policies and made cumulative adjustments in its financial statements as of January 1, 2018. The comparative financial statements as of and for the year ended December 31, 2017 have not been restated in accordance with the transitional provisions.

i) Details of changes in retained earnings and accumulated other comprehensive loss of the Group as of January 1, 2018 upon the adoption of K-IFRS No. 1109 were as follows:

Descriptions		Amount
Beginning balance of retained earnings under K-IFRS No. 1039	₩	1,874,982
Adjustment of retained earnings due to adoption of K-IFRS No. 1109		
Reclassification from loans and receivables to financial assets measured at fair value through profit or loss		(690)
Reclassification from available-for-sale financial assets to financial assets measured at fair value through profit or loss		160,067
Measurement of credit losses on debt instruments measured at amortized cost		(3,192)
Measurement of credit losses on debt instruments measured at fair value through other comprehensive income		(2,018)
Measurement of credit losses on loan commitments and financial guarantee contracts		(2,469)
Changes in credit risk of financial liabilities designated as measured at fair value through profit or loss		(3,427)
Income tax effect		(28,121)
		120,150
Beginning balance of retained earnings under K-IFRS No. 1109	₩	1,995,132
Beginning balance of accumulated other comprehensive loss under K-IFRS No. 1039	₩	(77,206)
Adjustment of other comprehensive income due to adoption of K-IFRS No. 1109		
Reclassification from available-for-sale financial assets to financial assets measured at fair value through profit or loss		(160,067)
Measurement of credit losses on debt instruments measured at fair value through other comprehensive income		2,018
Changes in credit risk of financial liabilities designated as measured at fair value through profit or loss		3,427
Income tax effect		29,627
		(124,995)
Beginning balance of accumulated other comprehensive loss under K-IFRS No. 1109	₩	(202,201)

ii) The impact of adoption of K-IFRS No. 1109 on the classification and measurement of Group's financial assets and liabilities on the statements of financial position as of January 1, 2018 were as follows:

	Classification by category in accordance with K-IFRS No. 1039	Classification by category in accordance with K-IFRS No. 1109	Book value in accordance with K-IFRS No. 1039	Book value in accordance with K-IFRS No. 1109
<b>Financial assets</b>				
Cash and cash equivalents	Cash and cash equivalents	Cash and cash equivalents	₩ 1,374,449	1,374,449
Financial assets held for trading	Financial assets held for trading	Financial assets measured at fair value through profit or loss	28,199,027	28,199,027
Financial assets designated at fair value through profit or loss (Equity instruments)	Financial instruments designated at fair value through profit or loss	Financial assets measured at fair value through profit or loss	681,516	681,516
Financial assets designated at fair value through profit or loss (Debt instruments)	Financial instruments designated at fair value through profit or loss	Financial assets measured at fair value through profit or loss	257,751	257,751

	Classification by category in accordance with K-IFRS No. 1039	Classification by category in accordance with K-IFRS No. 1109	Book value in accordance with K-IFRS No. 1039	Book value in accordance with K-IFRS No. 1109
Financial assets designated at fair value through profit or loss (hybrid financial assets)	Financial instruments designated at fair value through profit or loss	Financial assets measured at fair value through profit or loss	1,129,239	1,129,239
Available-for-sale financial assets (Equity instruments)	Available-for-sale financial assets	Financial assets measured at fair value through other comprehensive income Financial assets measured at fair value through profit or loss	1,251,653	671,467 580,186
Available-for-sale financial assets (Debt instruments)	Available-for-sale financial assets	Financial assets measured at fair value through other comprehensive income Financial assets measured at fair value through profit or loss	5,431,865	5,191,196 240,669
Available-for-sale financial assets (Collective investment securities and others)	Available-for-sale financial assets Loans and receivables	Financial assets measured at fair value through profit or loss Financial assets measured at amortized cost Financial assets measured at fair value through profit or loss	2,155,002 46,923,425	2,155,002 46,606,449 312,686
<b>Other assets</b>				
Advance payments	Other assets	Other assets Financial assets measured at amortized cost	80,693	24,490 56,203
<b>Financial liabilities</b>				
Financial liabilities designated at fair value through profit or loss	Financial liabilities designated at fair value through profit or loss	Financial liabilities designated as measured at fair value through profit or loss	15,295,424	15,295,424
<b>Provisions for off-balance sheet items</b>				
Provisions	Provisions	Provisions	-	2,469
Provision of payment guarantees	Provision of payment guarantees	Provision of payment guarantees	83,663	83,663
<b>Deferred tax assets</b>				
Deferred tax assets	Deferred tax assets	Deferred tax assets	444,690	446,195

iii) The adjustments on the consolidated statements of financial position from K-IFRS No. 1039 to K-IFRS No. 1109 as of January 1, 2018 were as follows:

	Book value in accordance with K-IFRS No. 1039	Reclassification	Remeasurement	Book value in accordance with K-IFRS No. 1109	Effects on retained earnings
<b>&lt; Financial assets &gt;</b>					
<b>Cash and cash equivalents</b>					
Book value (K-IFRS No. 1039)	₩ 1,374,449	-	-	-	-
Book value (K-IFRS No. 1109)	-	-	-	1,374,449	-
<b>Financial assets held for trading (Including derivative financial assets)</b>					
Book value (K-IFRS No. 1039)	28,199,027	-	-	-	-
Deduction: Classified as financial assets measured at fair value through profit or loss	-	(28,199,027)	-	-	-
Book value (K-IFRS No. 1109)	-	-	-	-	-

	Book value in accordance with K-IFRS No. 1039	Reclassification	Remeasurement	Book value in accordance with K-IFRS No. 1109	Effects on retained earnings
<b>Financial assets designated at fair value through profit or loss (Equity securities)</b>					
Book value (K-IFRS No. 1039)	681,516	-	-	-	-
Deduction: Classified as financial assets measured at fair value through profit or loss(*1)	-	(681,516)	-	-	-
Book value (K-IFRS No. 1109)	-	-	-	-	-
<b>Financial assets designated at fair value through profit or loss (Debt securities)</b>					
Book value (K-IFRS No. 1039)	257,751	-	-	-	-
Deduction: Classified as financial assets measured at fair value through profit or loss(*1)	-	(257,751)	-	-	-
Book value (K-IFRS No. 1109)	-	-	-	-	-
<b>Financial assets designated at fair value through profit or loss (Embedded derivatives)</b>					
Book value (K-IFRS No. 1039)	1,129,239	-	-	-	-
Deduction: Classified as financial assets measured at fair value through profit or loss(*1)	-	(1,129,239)	-	-	-
Book value (K-IFRS No. 1109)	-	-	-	-	-
<b>Available-for-sale financial assets (Equity securities)</b>					
Book value (K-IFRS No. 1039)	1,251,653	-	-	-	-
Deduction: Classified as financial assets measured at fair value through profit or loss(*1)	-	(580,186)	-	-	-
Deduction: Classified as financial assets (Equity securities) measured at fair value through other comprehensive income	-	(671,467)	-	-	-
Book value (K-IFRS No. 1109)	-	-	-	-	-
<b>Available-for-sale financial assets (Debt securities)</b>					
Book value (K-IFRS No. 1039)	5,431,865	-	-	-	-
Deduction: Classified as financial assets measured at fair value through other comprehensive income (Debt securities)	-	(5,191,196)	-	-	-
Deduction: Classified as financial assets measured at fair value through profit or loss(*2)	-	(240,669)	-	-	-
Book value (K-IFRS No. 1109)	-	-	-	-	-
<b>Available-for-sale financial assets (Collective investment securities and others)</b>					
Book value (K-IFRS No. 1039)	2,155,002	-	-	-	-
Deduction: Classified as financial assets measured at fair value through profit or loss(*3)	-	(2,155,002)	-	-	-
Book value (K-IFRS No. 1109)	-	-	-	-	-
<b>Loans and receivables</b>					
Book value (K-IFRS No. 1039)	46,923,425	-	-	-	-
Deduction: Classified as financial instruments measured at amortized cost	-	(46,609,802)	-	-	-

	Book value in accordance with K-IFRS No. 1039	Reclassification	Remeasurement	Book value in accordance with K-IFRS No. 1109	Effects on retained earnings
Deduction: Classified as financial assets measured at fair value through profit or loss(*4)	-	(313,623)	-	-	-
Book value (K-IFRS No. 1109)	-	-	-	-	-
<b>Financial assets measured at fair value through profit or loss</b>					
Book value (K-IFRS No. 1039)	-	-	-	-	-
Addition: Classified as financial assets held for trading (Including derivative financial assets)	-	28,199,027	-	-	-
Addition: Classified as financial assets designated at fair value through profit or loss(*1)	-	2,068,506	-	-	-
Addition: Classified as available-for-sale financial assets (Equity securities)(*1)	-	580,186	-	-	9,964
Addition: Classified as available-for-sale financial assets (Debt securities)(*2)	-	240,669	-	-	(7,518)
Addition: Classified as available-for-sale financial assets (Collective investment securities and others)(*3)	-	2,155,002	-	-	126,318
Addition: Classified as loans and receivables(*4)	-	313,623	-	-	-
Remeasurement: Deferred loan origination cost and fee	-	-	162	-	117
Remeasurement: Fair value of investment bonds	-	-	(1,099)	-	(852)
Book value (K-IFRS No. 1109)	-	-	-	33,556,076	-
<b>Financial assets measured at fair value through other comprehensive income</b>					
Book value (K-IFRS No. 1039)	-	-	-	-	-
Addition: Classified as available-for-sale financial assets (Equity securities)	-	671,467	-	-	-
Addition: Classified as available-for-sale financial assets (Debt securities)	-	5,191,196	-	-	(1,284)
Book value (K-IFRS No. 1109)	-	-	-	5,862,663	-
<b>Financial assets measured at amortized cost</b>					
Book value (K-IFRS No. 1039)	-	-	-	-	-
Addition: Classified as loans and receivables	-	46,609,802	-	-	-
Addition: Classified as Other assets (Advance payments)(*5)	-	56,203	-	-	-
Remeasurement: measurement of expected credit losses	-	-	(3,354)	-	(2,321)
Book value (K-IFRS No. 1109)	-	-	-	46,662,651	-
<b>&lt; Other assets &gt;</b>					
<b>Advance payments</b>					
Book value (K-IFRS No. 1039)	80,693	-	-	-	-
Deduction: Classified as financial assets measured at amortized cost(*5)	-	(56,203)	-	-	-
Book value (K-IFRS No. 1109)	-	-	-	24,490	-

	Book value in accordance with K-IFRS No. 1039	Reclassification	Remeasurement	Book value in accordance with K-IFRS No. 1109	Effects on retained earnings
<b>&lt; Financial liabilities &gt;</b>					
<b>Financial liabilities designated at fair value through profit or loss</b>					
Book value (K-IFRS No. 1039)	15,295,424	-	-	-	-
Deduction: Classified as financial liabilities designated as measured at fair value through profit or loss	-	(15,295,424)	-	-	-
Book value (K-IFRS No. 1109)	-	-	-	-	-
<b>Financial liabilities designated as measured at fair value through profit or loss</b>					
Book value (K-IFRS No. 1039)	-	-	-	-	-
Addition: Classified as financial liabilities designated at fair value through profit or loss	-	15,295,424	-	-	(2,484)
Book value (K-IFRS No. 1109)	-	-	-	15,295,424	-
<b>&lt; Provisions for off-balance sheet items &gt;</b>					
<b>Provisions (Purchase commitments, unused credit lines and etc.)</b>					
Book value (K-IFRS No. 1039)	-	-	-	-	-
Remeasurement: measurement of expected credit losses	-	-	2,469	-	(1,790)
Book value (K-IFRS No. 1109)	-	-	-	2,469	-
<b>Provision of payment guarantees</b>					
Book value (K-IFRS No. 1039)	83,663	-	-	-	-
Book value (K-IFRS No. 1109)	-	-	-	83,663	-
<b>&lt; Deferred tax assets &gt;</b>					
Book value (K-IFRS No. 1039)	444,690	-	-	-	-
Changes due to measurement of expected credit losses	-	-	1,550	-	-
Changes due to other factors aside from measurement of expected credit losses	-	-	(45)	-	-
Book value (K-IFRS No. 1109)	-	-	-	446,195	-

(\*1) In accordance with K-IFRS No. 1109, these financial assets do not meet the requirement for designation as financial assets measured at fair value through profit or loss. In addition, the Group did not elect to designate the financial assets as fair value through other comprehensive income under K-IFRS No. 1109. As such, these financial instruments were classified as financial assets measured at fair value through profit or loss in accordance with K-IFRS No. 1109. Also some debt securities and all hybrid financial assets are classified with financial assets measured at fair value through profit or loss, because their contractual cash flow characteristics do not solely consist of principal and interest.

(\*2) Certain debt securities classified as available-for-sale financial assets(debt securities) under K-IFRS No. 1039 were classified as financial assets measured at amortized cost under K-IFRS No. 1109. Certain securities which were formerly classified as available-for-sale financial assets(debt securities) under K-IFRS No. 1039 are now classified as financial assets measured at fair value through profit or loss under K-IFRS No. 1109, for their contractual cash flow characteristics do not solely consist of principal and interest.

(\*3) Despite management of assets within a business model of collecting contractual cash flow, some beneficiary securities and other securities which were classified as available-for-sale financial assets under K-IFRS No. 1039 are now classified as financial assets measured at fair value through profit or loss under K-IFRS No. 1109.

(\*4) Certain portion of loans which were classified as loans and receivables as of December 31, 2017 are now classified as financial assets measured at fair value through profit or loss, because the assets' cash flow characteristics do not consist solely of principal and interest. Also on reclassification to financial assets measured at fair value through profit or loss, transaction cost of ₩162 million which occurred on initial recognition were adjusted to retained earnings.

(\*5) Certain portion of prepaid assets which were classified as other assets as of December 31, 2017 are now classified as financial assets at amortized cost, because the assets are held within the business model of collecting contractual cash flow and its characteristics of cash flow consist solely of principal and interest.

iv) Changes in loan loss allowance from K-IFRS No. 1039 to K-IFRS No. 1109 were as follows.

	December 31, 2017	Reclassification(*)	Remeasurement	January 1, 2018
	Book value in accordance with K-IFRS No. 1039			Book value in accordance with K-IFRS No. 1109
				Effects on retained earnings
Loans and receivables	₩ 108,389	(108,389)	-	-
Financial assets measured at amortized cost	-	87,433	3,354	90,787
Financial assets measured at fair value through other comprehensive income	-	-	2,018	2,018
Provisions for off-balance sheet items	-	-	2,469	2,469
	₩ 108,389	(20,956)	7,841	95,274
				(5,396)

(\*) The amount of loss allowance on financial assets measured at amortized cost were reclassified from loans and receivables. Allowance of ₩20,956 million not reclassified from loans and receivables to financial assets measured at amortized cost is related to financial assets measured at fair value through profit or loss.

v) Change in credit risk of financial liabilities designated as measured at fair value through profit or loss

In accordance with K-IFRS No. 1109, changes in fair value of financial liabilities designated as measured at fair value through profit or loss due to change in issuer's credit risk is recognized in equity. As of January 1, 2018, amount of cumulative change in fair value due to changes in issuer's credit risk was ₩3,427 million. The effect on retained earnings as of January 1, 2018 is ₩(-)2,484 million.

## (2) New standards and interpretations issued but not yet adopted

The following new standards have been published and are mandatory for the Group for annual periods beginning after January 1, 2018, and the Group has not early adopted them.

### 1) K-IFRS No. 1116 "Leases"

K-IFRS No. 1116, "Leases", which was enacted on May 22, 2017, is effective for annual periods beginning on or after January 1, 2019, but may be applied early. The Standard is based on current K-IFRS No. 1017 "Leases", K-IFRS No. 2104, "Determining whether an arrangement contains a lease", K-IFRS No. 2015 "Operating lease: Incentive" It will replace K-IFRS No. 2027, "Evaluating the substances of transactions involving the legal form of a lease".

The lessee and lessor must account for each lease element of the lease as a lease, separate from the non-lease element in an agreement that includes a lease or lease.

The lessee is required to recognize a right-of-use asset (lease asset) that represents the right to use the underlying asset and a lease liability that represents the obligation to pay the lease payments. However, in the case of short-term lease (a lease that, at the commencement date, has a lease term of 12 months or less) and leases of low-value asset (e.g. lease of underlying assets with a value of US\$ 5,000 or less), the lessee is not required to separate the non-lease component from the lease component in accordance with the simplified method, and can apply the method of accounting for each lease component and related non-lease component as one lease component.

The accounting treatment of lease provider is not significantly different from the accounting treatment of the current K-IFRS No. 1017.

- Accounting treatment where the Group is a lessee

i) Elected transition method to K-IFRS No. 1116 "Lease"

The Group could elect to retrospectively apply the new standard and recognize the effect of initially applying the retrospective application either to each past reporting period presented in accordance with K-IFRS No. 1008, "Accounting Policies, Changes in Accounting Estimates and Errors" (Full Retroactive Method) or recognize the cumulative effect at the date of initial application("Cumulative Catch-up Transition Method).

The Group plans to apply K-IFRS No. 1116 initially on January 1, 2019 by using the 'Cumulative Catch-up Transition Method'. Therefore, the cumulative effect on adopting K-IFRS No.1116 will be recognized as an adjustment to the opening balance of retained earnings at January 1, 2019, with no restatement of comparative information.

ii) Financial effect of K-IFRS No. 1116 "Lease"

The Group assessed the impact of initial application of K-IFRS No.1116 on the financial statements based on information available as of January 1, 2019.

The aggregate amount of the minimum lease payments prior to the present value discount of the assets for existing operating leases is ₩1,240,989 million and the present value is ₩302,337 million at the incremental borrowing rate of the lessee, including short-term leases and leases of low-value assets in accordance with K-IFRS No. 1116.

The Group will account for each lease element and associated non-lease element as a single lease element, using the simplified method of accounting for contracts that include all or part of the lease or lease.

As a result of a detailed analysis of the effect on the consolidated financial statements, the Group expects right-of-use assets and lease liabilities as of January 1, 2019 to increase by ₩302,967 million and ₩300,714 million, respectively. However, the effect on the financial statements may change depending on additional information available in the future.

- Accounting treatment where the Group is a lessor

As a lessor, the Group does not expect the financial impact of the initial adoption of K-IFRS No. 1116 is significant because the Group's accounting treatment are not different to K-IFRS No. 1116 significantly.

## 2) Amendment of K-IFRS No.1109 "Financial instruments"

Financial assets that are redeemable with reimbursable financial assets are remeasured to be measured at amortized cost. When the financial liabilities measured at amortized cost are changed but not eliminated, the effect of the change should be recognized in profit or loss. These amendments will be effective from the fiscal year beginning on or after January 1, 2019 and are subject to early adoption.

## 3) Amendment of K-IFRS No.1019 "Employee benefits"

If the change in the defined benefit plan results in the revision, reduction or settlement of the plan, the assumptions used in remeasurement of the net defined benefit obligation (asset) to estimate the current service cost and net interest for the remaining period of the period after the adjustments in the plan. In addition, the decrease in excess of the amount of unrecognized actuarial gain or loss is reflected in profit or loss as a part of past service cost or settlement profit or loss. The amendments are applied prospectively to the amendment, reduction, and settlement of systems that have occurred since the fiscal year beginning on or after January 1, 2019.

## 4) Amendment of K-IFRS No.1028 "Investment in associates and joint ventures"

The clarification has been conducted that other financial instruments (financial instruments that do not apply the equity method) related to associates or joint ventures are subject to K-IFRS No. 1109, and that the long-term investment interests that form part of the net investment in the related companies or joint ventures was revised accordingly under K-IFRS 1109. These amendments will be effective from the fiscal year beginning on or after January 1, 2019 and are subject to early adoption. In addition, the first-time adoption of this standard does not require reclassification of comparative information by applying the transitional provisions of K-IFRS No. 1109, and the effect of retroactive application is reflected in the beginning retained earnings (or other appropriate capital elements) at the date of initial application.

## 5) K-IFRS No.2123 "Uncertainty over income tax treatments"

The interpretation is applied to the recognition and measurement of deferred tax and deferred income tax if there is uncertainty about whether or not the tax treatment applied by the entity will be recognized by the taxing authority. Guidance on accounting units of uncertainty in taxation and circumstances requiring reevaluation includes. The interpretation is effective from January 1, 2019, and it can choose between retroactively reclassifying comparative financial statements or reflect the effect of the change on the basis of the first year of adoption.

## 6) Annual Improvements to IFRS Standards 2015 - 2017 Cycle

### i) K-IFRS No.1103 "Business combination"

The business combination that is held in stages to acquire control over the joint business (meeting the definition of the business) while retaining the rights and liabilities for the assets related to the joint business. Therefore, remeasurement should be conducted for all underlying assets and liabilities. The amendments are effective for annual periods beginning on or after January 1, 2019, but may be applied early.

### ii) K-IFRS No. 1111 "Joint arrangements"

If a jointly controlled entity that participates in a joint venture but does not have joint control obtains joint control over the joint venture, the previously held equity interest in the joint venture is not remeasured. This amendment is effective for transactions beginning after January 1, 2019, but may be applied early.

### iii) K-IFRS No.1012 "Income taxes"

The provisions of paragraph 57A of K-IFRS 1012 (defining the timing and recognition of dividend tax effects) apply to all income tax effects of dividends and are recognized in profit or loss, other comprehensive income or capital. This amendment is effective for fiscal years beginning on or after January 1, 2019, but may be applied early.

### iv) K-IFRS No.1023 "Borrowing costs"

If most of the necessary activities to enable the Group to use (or sell) our qualifying assets has been completed, it will include the funds borrowed for specific purposes in ordinary borrowings to acquire those assets. This amendment applies to borrowing costs incurred subsequent to the first year of the application of the amendment and may be applied early in the financial year beginning after January 1, 2019, but may be applied early.

## 5. Risk management

### (1) Risk management organizations and its policies

The Group maintains a comprehensive Group-wide risk management system through specific internal regulations (e.g. Risk Management Regulations, Risk Management Committee Regulations, Market Risk Management Guidelines, Credit Risk Management Guidelines, Liquidity Risk Management Guidelines, Operational Risk Management, Overseas Network Risk Management and Trust Asset Management Guidelines etc.). In addition, the Group has drawn up a set of Assessment Regulations, Investment Review Committee Regulations, Principal Investment Management Guidelines, Acquisition Review Guidelines, NPL Management Guidelines and Real Estate Project Financing Risk Management Guidelines to enhance stability of investment and credit support business, and efficiency of post-investment monitoring.

Risk Management Regulations set members, conference and resolutions of the Risk Management Committee which functions as the highest authority in the hierarchy of the risk management structure, and also set members, process and business details of Proprietary Asset Risk Management Council and Trust Asset Risk Management Council which are installed to treat details about Risk Management Committee's decisions and items delegated by the committee.

The Group sets its own risk management standards in order to achieve capital adequacy and stable risk management via the efficient management of risks and distribution of available investment resources.

Assessment Regulations is developed to manage the Group's investment position consistently by setting up detail monitoring procedures for proprietary investment and credit support business. Investment Review Committee Regulations describe member, conference protocol and resolution items of Investment Review Committee.

The Group established detailed guidelines to effectively manage risk according to the type of asset management and risk exposure. The guidelines include Market Risk Management Guidelines, Credit Risk Management Guidelines, Liquidity Risk Management Guidelines, Operational Risk Management Guidelines, Overseas Network Risk Management Guidelines and Trust Asset Management Guidelines. In addition, Principal Investment Management Guidelines, Acquisition Review Guidelines, NPL Management Guidelines and Real Estate Project Financing Risk Management Guidelines manage steadily the Group's investment position by providing detailed assessment procedures and monitoring procedures.

#### 1) Risk Management Committee

The Committee, comprised of three registered directors including at least two outside directors, heads the Group's risk management structure. The Committee prepares risk management strategies that correspond to the Group's strategies and supervises the risk management process. Major topics that the Committee resolves include enacting and revising Risk Management Regulations and Guidelines, setting adequate capital ratio level and mandating total risk limits by year and quarter. The Committee is held regularly once per quarter and on an ad hoc basis. Nomination and dismissal of the Committee members is determined by the Board of Directors ("BOD") and the Committee chair is selected from among outside directors of the Committee members. The chair presides over the meetings on behalf of the Committee and in the event of a risk-related urgent situation, is entitled to authorize appropriate actions to the pertinent department.

#### 2) Proprietary Asset Risk Management Council & Trust Asset Risk Management Council

The Proprietary Asset Risk Management Council and the Trust Asset Risk Management Council deal with details and the delegated items determined by the Committee and report the results to the Committee. The Council is held quarterly (if necessary, on an as-needed basis). The chairman of Proprietary Asset Risk Management Council and Trust Asset Risk Management Council is Chief Risk Officer and the Council members are appointed by the Committee.

#### 3) Investment Review Committee

The Investment Review Committee is the body responsible for conducting reviews of the Group's investments and is composed of executive officers. The Investment Review Committee convenes irregularly to facilitate investment decision. The chairman of Proprietary Asset Risk Management Council and Trust Asset Risk Management Council is Chief Risk Officer and the Council members are appointed by the Committee.



#### 4) Chief Risk Officer (“CRO”)

The CRO serves as chair of the Proprietary Asset Risk Management Council and Trust Asset Risk Management Council and presides over the meetings of the two bodies and has authority over the risk management organization. The CRO is also entitled to take appropriate measures in the event of an urgent situation in relation to the Group's risk management.

#### 5) Risk Management Department

The Risk Management Department operates independently from other departments, executes the risk management policies determined by the Risk Management Committee or the Proprietary and Trust Asset Risk Management Council through appropriate procedures and systems, plans and controls all risk management-related issues and supports the operation of the Risk Management Committee or the Proprietary Asset Risk Management Council. The department also reports the current status of the Group's asset management and overall risk management issues to the executive management.

## (2) Credit risk

Credit risk refers to the possibility losses that would incur if a counter party or an issuer of financial instruments fails to fulfil its contractual obligations, or is deteriorated in the credit quality. The Group measures credit exposure and credit risk amount by utilizing the standard model provided by Financial Investment Regulation. To manage appropriate level of credit risk, the Group assign exposure limits by each quarter and year. Total limit of credit risk of the Group is finally set through approval of the Committee.

Proprietary Asset Risk Management Council resolves the credit risk amount allocated to each front department. In addition, Proprietary Asset Risk Management Council sets appropriate level of credit exposure limit considering counterparty's credit rate depending on the type of business. Investment & Credit Assessment Department manages credit risk of each investment position by operating pre-assessment process on investment transactions.

The Risk Management Department reports total exposure of the Group's credit risk to the management on a regular basis and reports the analysis of credit risk exposure to executive management. In addition, credit risk Stress-Testing is performed on a regular basis based on various scenarios for the financial market. Enhanced monitoring is carried out for counterparties with significant credit risks.

#### 1) Maximum exposure to credit risk

The Group's maximum exposure to credit risk refers to the net book value of its financial assets, net of provisions, which shows the uncertainties of maximum changes in the net value of financial assets attributable to a particular risk without considering collateral and other credit enhancements obtained.

The maximum exposure to credit risk as of December 31, 2018 and 2017 is as follows:

		2018	2017
Financial assets at fair value through profit or loss	Held for trading (*2)	₩ -	18,537,249
	Designated at fair value through profit or loss (*2)	-	1,922,396
	Derivative assets	-	1,125,230
		-	21,584,875
Financial assets measured at fair value through profit or loss	Bonds and other financial instruments (*2)	25,929,008	-
	Derivative assets	968,115	-
	Hybrid financial instruments	829,415	-
		27,726,538	-
Available-for-sale financial assets	Available-for-sale financial assets (*2)	-	5,431,865
Financial assets measured at fair value through other comprehensive income	Financial assets measured at fair value through other comprehensive income(*2)	7,312,634	-
Loans and receivables	Deposits	-	3,580,259
	Loans(*3)	-	35,744,986
	Other loans and receivables(*3)	-	7,598,180
		-	46,923,425

		2018	2017
Financial assets measured at amortized cost	Deposits	6,246,440	-
	Loans(*3)	54,917,168	-
	Other financial assets(*3)	8,221,787	-
		69,385,395	-
		104,424,566	73,940,165
Guarantees and commitments	Asset-backed commercial paper and asset backed short-term bond purchase commitments	1,541,900	1,438,500
	Guarantees	1,287,244	1,769,876
	Unused line of credit	855,434	86,027
		3,684,578	3,294,403
		₩ 108,109,145	77,234,568

(\*1) Aside from the items that were separately described in note 4-(1)-3-iii), financial assets held for trading, financial assets designated at fair value through profit or loss, available-for-sale financial assets, and loans and receivables as of December 31, 2017 were reclassified as financial assets measured at fair value through profit or loss, financial assets designated as measured at fair value through profit or loss, financial assets measured at fair value through other comprehensive income, and financial assets measured at amortized cost as of December 31, 2018, respectively.

(\*2) Equity securities are excluded.

(\*3) Deferred loan originated costs, fees, present value discounts and allowance for credit loss are considered.

#### 2) Credit risk of loans and receivables

i) The credit risk of loans and receivables by loan conditions as of December 31, 2017 is as follows:

					2017	
	Loans neither overdue nor impaired	Loans overdue but not impaired	Impaired loans	Total	Allowances for credit losses	Carrying amount
<b>Loans</b>						
Call loans	₩ 1,280	-	-	1,280	-	1,280
Broker's loans	6,473,333	-	1,189	6,474,522	(1,189)	6,473,333
Loans receivable(*)	898,444	-	-	898,444	-	898,444
Securities purchased under resale agreements	28,104,834	-	-	28,104,834	-	28,104,834
Loans to employees	52,679	-	18	52,697	(18)	52,679
Purchased loans(*)	121,655	-	88,265	209,920	(61,326)	148,594
Advances for customers	-	-	1,340	1,340	(1,340)	-
Privately placed bonds	55,994	-	29,758	85,752	(19,931)	65,821
Dishonored bills receivable	-	-	122	122	(121)	1
	35,708,219	-	120,692	35,828,911	(83,925)	35,744,986
<b>Other loans and receivables</b>						
Accounts receivable(*)	7,227,630	-	13,716	7,241,346	(13,048)	7,228,298
Accrued income	242,040	-	11,212	253,252	(10,254)	242,998
Guarantee deposits(*)	126,075	-	1,970	128,045	(1,161)	126,884
	7,595,745	-	26,898	7,622,643	(24,463)	7,598,180
	₩ 43,303,964	-	147,590	43,451,554	(108,388)	43,343,166

(\*) Deferred loan originated costs/ fees and present value discounts are considered.

ii) The Group manages its loans and receivables that are neither overdue nor impaired through an internal system. Loans and receivables with appropriate level of collateral and credit enhancements are classified to investment grade and subordinated loans and receivables without collateral and credit enhancements and are highly risky are classified to non-investment grade. Credit quality of loans and other receivables that are neither overdue nor impaired as of December 31, 2017 are as follows:

				2017
		Investment grade	Non-investment grade	Total
<b>Loans</b>				
Call loans	₩	1,280	-	1,280
Broker's loans		6,473,333	-	6,473,333
Loans receivable		898,444	-	898,444
Securities purchased under resale agreements		28,104,834	-	28,104,834
Loans to employees		52,679	-	52,679
Purchased loans		121,655	-	121,655
Privately placed bonds		55,994	-	55,994
		35,708,219	-	35,708,219
<b>Other loans and receivables</b>				
Accounts receivable		7,227,630	-	7,227,630
Accrued income		242,040	-	242,040
Guarantee deposits		126,075	-	126,075
		7,595,745	-	7,595,745
	₩	43,303,964	-	43,303,964

iii) Individually impaired loans and receivables as of December 31, 2017 are as follows:

				2017
<b>Loans</b>				
Broker's loans	₩			1,189
Loans to employees				18
Purchased loans				88,265
Advances for customers				1,340
Privately placed bonds				29,758
Dishonored bills receivable				122
				120,692
<b>Other loans and receivables</b>				
Accounts receivable				13,716
Accrued income				11,212
Guarantee deposits				1,970
				26,898
<b>Total</b>	₩			147,590

### 3) Credit quality of debt securities

i) The Group manages debt securities based on the external credit rating. Credit soundness of debt securities on the basis of External Credit Assessment Institution's rating as of December 31, 2018 and 2017 is as follows:

Grade	2018			Total	
	Financial assets measured at fair value through profit or loss		Financial assets measured at fair value through other comprehensive income		
	Financial assets measured at fair value through profit or loss(*2)	Financial assets designated as measured at fair value through profit or loss			
(1) AAA ~ A	₩	18,557,831	-	7,238,555	25,796,386
(2) A- ~ BBB		192,114	-	74,079	266,193
(3) Lower than BBB-		21,959	-	-	21,959
(4) Unrated		638,769	-	-	638,769
	₩	19,410,673	-	7,312,634	26,723,307

(\*1) Aside from the items that were separately described in note 4-(1)-3-iii), financial assets held for trading, financial assets designated at fair value through profit or loss, and available-for-sale financial assets as of December 31, 2017 were reclassified as financial assets measured at fair value through profit or loss, financial assets designated as measured at fair value through profit or loss, and financial assets measured at fair value through other comprehensive income as of December 31, 2018, respectively.

(\*2) Amounts of financial assets measured at fair value through profit or loss excluded from credit quality disclosure are other debt instruments ₩6,518,335 million, derivative assets ₩968,115 million, and hybrid financial instruments ₩829,415 million as of December 31, 2018.

Grade	2017			Total	
	Financial assets at fair value through profit or loss		Available-for-sale financial assets		
	Held for trading	Designated at fair value through profit or loss			
(1) AAA ~ A	₩	17,987,896	365,937	5,226,748	23,580,581
(2) A- ~ BBB		178,646	4,194	67,299	250,139
(3) Lower than BBB-		665	1,417	328	2,410
(4) Unrated		370,042	558,266	137,490	1,065,798
	₩	18,537,249	929,814	5,431,865	24,898,928

ii) Credit quality of debt securities based on external credit rating agencies' evaluation results as of December 31, 2018 and 2017 were as follows:

#### < Grade Classification >

Domestic	Global		
NICE P&I	MOODY'S	S&P	FITCH
AAA	Aaa ~ Aa3	AAA ~ AA-	AAA ~ AA-
AA+ ~ AA-	A1 ~ A3	A+ ~ A-	A+ ~ A-
A+ ~ BBB-	Baa1 ~ Ba3	BBB+ ~ BB-	BBB+ ~ BB-
BBB-	B1 ~ C	B+ ~ C	B+ ~ C

Credit ratings of debt securities in Korean won are determined based on the domestic external credit rating agency evaluation results. Credit ratings of debt securities in foreign currencies are determined based on the lowest of three external credit rating agencies' evaluation results.

### 4) Credit ratings of Loan and receivables as of December 31, 2018 are as follow:

Grade	2018			Total	
	12-month ECL	Lifetime ECL			
		Not Impaired	Impaired		
(1) AAA ~ A	₩	240,199	-	-	240,199
(2) A- ~ BBB		962,871	-	-	962,871
(3) Lower than BBB-		211,761	-	-	211,761
(4) D		-	-	81,090	81,090
	₩	1,414,831	-	81,090	1,495,921

Amounts of loan and receivables excluded from credit quality are call loans of ₩328 million, broker's loans of ₩10,719,500 million, securities purchased under resale agreements of ₩42,720,530 million, and loans to employees of ₩57,970 million as of December 31, 2018. Credit quality is based on external credit rating of external credit rating agency.

5) Credit ratings of bonds measured at fair value through other comprehensive income as of December 31, 2018 are as follow:

Grade	2018		
	12-month ECL	Not Impaired	Lifetime ECL Impaired
(1) AAA ~ A	₩ 7,238,555	-	-
(2) A- ~ BBB	74,079	-	-
(3) Lower than BBB-	-	-	-
(4) Unrated	-	-	-
	₩ 7,312,634	-	-
			₩ 7,312,634

6) Credit ratings of financial guarantees, other guarantees and unused line of credit as of December 31, 2018 are as follow:

Grade	2018		
	12-month ECL	Lifetime ECL	Total
<b>&lt;Purchase commitments&gt;</b>			
(1) AAA ~ A	₩ 1,541,900	-	1,541,900
(2) A- ~ BBB	-	-	-
(3) Lower than BBB-	-	-	-
(4) Unrated	-	-	-
	₩ 1,541,900	-	1,541,900
<b>&lt;Financial guarantee contract&gt;</b>			
(1) AAA ~ A	₩ 145,418	-	145,418
(2) A- ~ BBB	775,320	-	775,320
(3) Lower than BBB-	366,506	-	366,506
(4) Unrated	-	-	-
	₩ 1,287,244	-	1,287,244
<b>&lt;Unused credit lines and etc.&gt;</b>			
(1) AAA ~ A	₩ 9,627	-	9,627
(2) A- ~ BBB	128,761	-	128,761
(3) Lower than BBB-	70,870	-	70,870
(4) Unrated	646,176	-	646,176
	₩ 855,434	-	855,434

(\*) No financial guarantees, other guarantees and unused line of credit were impaired as of December 31, 2018.

### (3) Market risk

Market risk is the risk of changes in the fair value or future cash flows of the financial instruments arising from trading activities in the volatility of market factors, such as interest rates, stock prices and foreign exchange rates.

#### 1) Market risk management

Market risk refers to the possibility of losses that may incur in proprietary investments and short-term management of available liquid funds due to changes of market price (e.g. equity price, interest rate and exchange rate and other). The Group monitors the standard market Value at Risk (VaR), measured according to Financial Investment Regulations set by Financial Supervisory Service ("FSS"). VaR represents the maximum loss expected on an investment, over a given time period and given a specified degree of confidence level when the market price moves in an adverse direction under normal market conditions. The Company has implemented and operates SAS's system which can calculate the internal market VaR.

The Group has set a limit of market risk on a quarterly and yearly basis to manage appropriate level of market risk. The total limit of market risk of the Company is decided by the Risk Management Committee. Proprietary Asset Risk Management Council also sets reasonably the limit for market risk exposure by considering the type of business.

The Group produces assessment and analysis reports on current market risk on a weekly, monthly, and quarterly basis for brief to the executive management. In addition, market risk Stress-Testing is performed on a regular basis based on various scenarios for the financial market.

Details of the risk factor VaR as of December 31, 2018 and 2017 are as follows:

Factors	2018	2017
Foreign currencies	₩ 107,356	129,529
Interest rates	481,621	364,790
Stock prices	635,845	509,621
Commodities	14,053	2,739
Collective investment securities	694,636	656,458
Options	76,761	153,590
Total risk	₩ 2,010,272	1,816,727

### (4) Liquidity risk

Liquidity risk refers to the "Market Liquidity Risk" that would incur when the Group is unable to offset or settle a position without significantly affecting the market price because of or market disruption. Also, it refers to the "Prudential Liquidity Risk" that would incur when the Group is unable to meet the minimum requirement rate of liquidity.

To measure liquidity risks, the Company operates a liquidity risk management system and uses liquidity gap and liquidity ratios as key indicators. The Company reports the liquidity risk status on a weekly and monthly basis to the executive management while the treasury department also reports the current liquidity situation to the management regularly.

#### 1) Maturity analysis of financial liabilities

i) The Group's non-derivative financial liabilities by residual contractual maturity classified as of December 31, 2018 and 2017 are as follows:

	2018					
	Within 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 to 5 years	Over 5 years
Financial liabilities measured at fair value through profit or loss	₩ 569,076	-	-	-	-	-
Deposits due to customers	5,465,538	-	-	-	-	-
Borrowings(*1)	71,566,335	177,706	13,371	8,659	595,506	1,823
Debentures(*2)	931,532	288,324	20,047	76,966	2,808,719	136,122
Other financial liabilities(*3)	7,840,045	1,636	806	2,079	6,647	3,433
	₩ 86,372,526	467,666	34,224	87,704	3,410,872	141,378
						₩ 90,514,370

							2017
	Within 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 to 5 years	Over 5 years	Total
Financial liabilities at fair value through profit or loss	₩ 816,883	-	-	-	-	-	816,883
Deposits due to customers	5,118,877	-	-	-	-	-	5,118,877
Borrowings(*1)	48,679,000	117,565	1,132	10,614	579,851	2,035	49,390,197
Debentures(*2)	971,115	267,676	216,394	14,344	1,841,892	-	3,311,421
Other financial liabilities(*3)	6,452,965	2,700	1,090	2,675	6,319	3,424	6,469,173
	₩ 62,038,840	387,941	218,616	27,633	2,428,062	5,459	65,106,551

(\*1) Amounts with maturity of more than three months from the date of acquisition include cash flows of both the principal and interests.

(\*2) The cash flow of interest is excluded because it cannot be reliably estimated.

(\*3) Financial guarantee liabilities are excluded in other financial liabilities.

ii) The Group's guarantees and commitments by residual contractual maturity classified as of December 31, 2018 and 2017 are as follows:

				2018
	Within 3 months	Over 3 months		Total
Asset-backed commercial paper and asset backed short-term bond purchase commitments	₩ 1,541,900	-		1,541,900
Guarantees	1,287,244	-		1,287,244
Unused line of credit	855,434	-		855,434
	₩ 3,684,578	-		3,684,578

				2017
	Within 3 months	Over 3 months		Total
Asset-backed commercial paper and asset backed short-term bond purchase commitments	₩ 1,438,500	-		1,438,500
Guarantees	1,769,876	-		1,769,876
Unused line of credit	369,713	-		369,713
	₩ 3,578,089	-		3,578,089

The balances of purchase commitments, guarantees and commitments on loans that are potentially prone to liquidity risks are reclassified to balances with less than three months' maturity from the date of acquisition, which is the earliest possible for repayment. The guarantees are the maximum amount, which the financial institution must pay under the guarantee contracts when the counterparty defaults and principal debtor demands the amount guaranteed. Commitments on loans includes loan commitments and purchase commitments that are related to asset securitizations.

Asset-backed commercial paper ("ABCP") is issued or refinanced based on the underlying assets for securitization that are purchased by SPEs, including SPEs under the *Asset-Backed Securitization Act* and companies under the *Commercial Law*. In this case, ABCP purchase commitments guarantee the Group's purchase of ABCP when all or a portion of ABCP are not sold in the market.

iii) Expected maturity cash flows of the derivative financial liabilities and financial liabilities designated as measured at fair value through profit of loss as of December 31, 2018 and 2017 are as follows:

							2018
	Within 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 to 5 years	Over 5 years	Total
Stock	₩ 179,868	9,264	15,490	11,606	322,692	-	538,920
Interest rate	16,912	19,701	14,288	2,866	125,495	280,542	459,804
Currency	135,789	92,689	61,832	11,686	36,925	-	338,921
Credit	-	-	703	1,177	6,903	-	8,783
Commodity	-	-	-	-	208	-	208
Others	-	-	-	-	17,552	114	17,666
Derivative-linked securities in short position	320,451	616,530	121,105	4,760,757	7,523,800	1,878,500	15,221,143
	₩ 653,020	738,184	213,418	4,788,092	8,033,575	2,159,156	16,585,445

							2017
	Within 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 to 5 years	Over 5 years	Total
Stock	₩ 36,767	10,722	9,087	16,840	73,318	-	146,734
Interest rate	5,483	9,695	11,720	28,648	105,425	219,763	380,734
Currency	244,165	88,187	54,695	42,930	52,029	-	482,006
Credit	-	-	-	48	13,459	-	13,507
Commodity	9,169	354	-	-	67	-	9,590
Others	-	23	36	-	19,676	-	19,735
Derivative-linked securities in short position	570,203	1,768,668	282,410	4,305,492	6,483,271	1,692,763	15,102,807
	₩ 865,787	1,877,649	357,948	4,393,958	6,747,245	1,912,526	16,155,113

(\*) Derivatives traded in the Exchange are excluded because the settlement of the transactions takes place by means of the trading margins within a few days. And financial liabilities designated at fair value through profit or loss as of December 31, 2017 were reclassified as financial liabilities designated as measured at fair value through profit of loss as of December 31, 2018, respectively.

## (5) Operating Risk Management

Operational risk is the possibility of losses arising from shortcomings or failures in internal processes, people or systems, and from external events. The Company manages operational risk through Risk & Control Self Assessment ("RCSA"), Key Risk Indicator ("KRI") management, loss data management, management of countermeasures and calculation of operational VaR using internal model.

By performing RCSA on a regular basis, the Company checks the level of risk of each department, develops countermeasures in advance collects the financial loss data. In addition, the Company implements and operates operational risk management system to work out operational VaR using internal model. The Company has a future plan to expand the target of operational risk management to the parent company and foreign subsidiaries to measure and manage enterprise-wide operational risk.

## (6) Capital management

The Company evaluates the capital adequacy by calculating net capital ratio ("NCR") in accordance with the Financial Investments Regulations and Guidelines in order to maintain adequate capital and comply with supervisory regulation.

The Group's Net Capital Ratio (NCR) as of December 31, 2018 and 2017 are 1,669.01% and 2,386.61%, respectively.

**(7) Offsetting financial assets and financial liabilities**

The Controlling Company applies offsetting agreements to derivatives and repurchase agreement transactions.

**1) Categories of financial assets that offsetting agreements and other similar agreements apply to as of December 31, 2018 and 2017 are as follows:**

Types of financial assets	2018					
	Total amount of recognized financial assets	Total amount of offsetting financial liabilities	Net amount of financial assets in the statement of financial position	Related amount not offset in the statement of financial position (*1)		Net amount
				Financial liabilities	Financial collaterals received (cash collateral included)	
Derivative financial assets (*2)	₩ 875,377	-	875,377	680,698	37,618	157,061
Accounts receivable (*3)	6,253,410	2,245,857	4,007,553	-	-	4,007,553
Securities sold under repurchase agreements (*4)	18,759,240	-	18,759,240	17,287,574	-	1,471,666
Securities purchased under resale agreements (*4)	70,227,575	27,507,045	42,720,530	1,457,976	41,262,554	-
Assets pledged as collateral for securities lending and borrowing (*4)	15,275,500	-	15,275,500	1,108,693	5,754,160	8,412,647
	₩ 111,391,102	29,752,902	81,638,200	20,534,941	47,054,332	14,048,927

Types of financial assets	2017					
	Total amount of recognized financial assets	Total amount of offsetting financial liabilities	Net amount of financial assets in the statement of financial position	Related amount not offset in the statement of financial position(*1)		Net amount
				Financial liabilities	Financial collaterals received (cash collateral included)	
Derivative financial assets (*2)	₩ 956,837	-	956,837	596,437	36,508	323,892
Accounts receivable (*3)	7,472,214	3,467,824	4,004,390	-	-	4,004,390
Securities sold under repurchase agreements (*4)	17,258,879	-	17,258,879	15,662,447	-	1,596,432
Securities purchased under resale agreements (*4)	66,901,248	38,796,414	28,104,834	268,800	27,310,876	525,158
Assets pledged as collateral for securities lending and borrowing (*4)	8,981,091	-	8,981,091	498,428	2,096,834	6,385,829
	₩ 101,570,269	42,264,238	59,306,031	17,026,112	29,444,218	12,835,701

**2) Categories of financial liabilities that offsetting agreements and other similar agreements apply to as of December 31, 2018 and 2017 are as follows:**

Types of financial liabilities	2018					
	Total amount of recognized financial liabilities	Total amount of offsetting financial assets	Net amount of financial liabilities in the statement of financial position	Related amount not offset in the statement of financial position(*1)		Net amount
				Financial assets	Financial collaterals received (cash collateral included)	
Derivative financial liabilities (*2)	₩ 1,213,336	-	1,213,336	680,698	400,217	132,421
Accounts payables (*3)	6,205,995	2,245,857	3,960,138	-	-	3,960,138
Securities sold under repurchase agreements (*4)	90,155,580	27,507,045	62,648,535	18,722,539	28,043,738	15,882,258
Securities sold (*4)	569,076	-	569,076	568,518	558	-
	₩ 98,143,987	29,752,902	68,391,085	19,971,755	28,444,513	19,974,817

Types of financial liabilities	2017					
	Total amount of recognized financial liabilities	Total amount of offsetting financial assets	Net amount of financial liabilities in the statement of financial position	Related amount not offset in the statement of financial position (*1)		Net amount
				Financial assets	Financial collaterals received (cash collateral included)	
Derivative financial liabilities (*2)	₩ 1,052,305	-	1,052,305	596,437	189,137	266,731
Accounts payables (*3)	7,209,376	3,467,824	3,741,552	-	-	3,741,552
Securities sold under repurchase agreements (*4)	81,929,274	38,796,414	43,132,860	15,662,447	18,241,131	9,229,282
Securities sold (*4)	816,883	-	816,883	498,428	318,455	-
	₩ 91,007,838	42,264,238	48,743,600	16,757,312	18,748,723	13,237,565

(\*1) Only for cases of default, insolvency and bankruptcy are eligible to be offset, and all other transactions are considered to have not met the offsetting standards, and therefore are not offset on the statement of financial position, but instead stated separately.

(\*2) Some of the Controlling Company's OTC derivatives are traded in accordance to agreements of the ISDA. In accordance to this agreement, in case the counterparty is bankrupt or has credit issues, all derivative transactions are settled. At the point of settlement, the trading partners receive payments for each transaction, or may offset payments with each other and offer a single payment to one trading partner.

(\*3) Transactions between exchanges, customers and other financial institutions regarding bonds and liabilities are included in the statement of financial position as total amounts in regard to the receivables and payables accounts. Receivables and payables occurring in relation to exchanges and from trading same types of items are eligible to be offset and are disclosed as net amounts on the statement of financial position, according to accounting policies

(\*4) Those are in accordance with the offsetting agreements, which is similar to ISDA offsetting agreements.

## 6. Transfers of financial assets

Transfers of financial assets that are not derecognized in their entirety as of December 31, 2018 and 2017 are as follows:

Description(*)	2018	2017
Transferred financial assets		
Financial assets at fair value through profit or loss	₩ -	14,810,014
Financial assets measured at fair value through profit or loss	14,118,526	-
Available-for-sale financial assets	-	2,448,865
Financial assets measured at fair value through other comprehensive income	4,640,714	-
	₩ 18,759,240	17,258,879
Related liabilities		
Bonds sold under repurchase agreements	₩ 17,287,574	15,662,447

(\*) Aside from the items that were separately described in note 4-(1)-(3)-iii), financial assets at fair value through profit or loss and available-for-sale financial assets as of December 31, 2017 were reclassified as financial assets measured at fair value through profit or loss and financial assets measured at fair value through other comprehensive income as of December 31, 2018, respectively.

## 7. Operating segments

### (1) Reportable segments

The Group's segment information is prepared for the purpose of resource allocation and assessment of each segment's performance and is based on the types of services provided.

Reportable segment	Services provided
WM	Providing securities brokerage to individual customers and non-professional investors, offering products of wealth management and financial consulting services
IB	Conducting corporate finance businesses such as various funding and M&A advisory, etc.
Sales & Trading	Bond dealing and brokerage, supplying derivatives, hedge fund management and sales, principal investment and proprietary trading
Wholesale	Sales of various financial instruments to corporate customers, providing domestic equity and derivatives brokerage and related services to domestic institutional investors
PI(Principal Investment) & Others	Conducting principal investment and supporting parts of headquarters and providing other operating activities aside from the above mentioned activities

### (2) Operating results of reportable segments

Details of the operating results of reportable segments for the year ended December 31, 2018 are as follows:

	2018						
	WM	IB	Sales & Trading	Wholesale	PI & others	Intersegment eliminations	Total
Operating revenue	₩ 1,042,497	521,106	9,923,928	2,080,413	(385,622)	141,618	13,323,940
Interest revenue	328,625	97,927	2,205,104	50,366	(281,980)	8,331	2,408,373
Non-interest revenue	713,872	423,179	7,718,824	2,030,047	(103,642)	133,287	10,915,567
Operating expense	(834,983)	(271,462)	(9,875,863)	(2,024,653)	371,784	(176,434)	(12,811,611)
Interest expense	(147,542)	(62,475)	(1,883,613)	(60,663)	396,331	3,750	(1,754,212)
Non-interest expense	(687,441)	(208,987)	(7,992,250)	(1,963,990)	(24,547)	(180,184)	(11,057,399)
Operating income (loss)	207,514	249,644	48,065	55,760	(13,838)	(34,816)	512,329
Non-operating income (loss)	(155)	1,005	958	131	41,807	28,935	72,681
Income (Loss) before tax expense	207,359	250,649	49,023	55,891	27,969	(5,881)	585,010
Income tax expense	(43,598)	(52,700)	(10,307)	(11,751)	(5,881)	1,237	(123,000)
Profit (Loss) for the year	₩ 163,761	197,949	38,716	44,140	22,088	(4,644)	462,010

Details of the operating results of reportable segments for the year ended December 31, 2017 are as follows:

	2017						
	WM	IB	Sales & Trading	Wholesale	PI & others	Intersegment eliminations	Total
Operating revenue	₩ 826,895	300,781	8,111,227	941,280	115,305	3,162	10,298,650
Interest revenue	244,435	34,947	1,152,334	23,598	(299,744)	(2,802)	1,152,768
Non-interest revenue	582,460	265,834	6,958,893	917,682	415,049	5,964	9,145,882
Operating expense	(752,775)	(114,632)	(7,873,800)	(903,818)	37,384	(63,256)	(9,670,897)
Interest expense	(95,817)	(19,341)	(798,296)	(28,159)	351,613	8,547	(581,453)
Non-interest expense	(656,958)	(95,291)	(7,075,504)	(875,659)	(314,229)	(71,803)	(9,089,444)
Operating income (loss)	74,120	186,149	237,427	37,462	152,689	(60,094)	627,753
Non-operating income (loss)	(386)	3,624	5,831	25	(16,391)	44,293	36,996
Income (Loss) before tax expense	73,734	189,773	243,258	37,487	136,298	(15,801)	664,749
Income tax expense	(17,102)	(43,795)	(55,828)	(8,722)	(21,146)	(13,222)	(159,815)
Profit (Loss) for the year	₩ 56,632	145,978	187,430	28,765	115,152	(29,023)	504,934

### (3) Assets and liabilities of reportable segments

Details of the assets and liabilities of reportable segments as of December 31, 2018 and 2017 are as follows:

	2018						
	WM	IB	Sales & Trading	Wholesale	PI & others	Intersegment eliminations	Total
Assets	₩ 4,810,447	3,965,868	79,393,810	5,116,071	31,882,622	(7,083,319)	118,085,499
Liabilities	5,124,456	329,537	76,290,705	2,968,283	25,011,541	8,611	109,733,133

	2017						
	WM	IB	Sales & Trading	Wholesale	PI & others	Intersegment eliminations	Total
Assets	₩ 4,632,273	1,636,338	57,980,932	2,535,938	29,558,095	(5,716,977)	90,626,599
Liabilities	4,715,896	130,777	57,945,772	1,052,545	19,687,377	(290,273)	83,242,094

### (4) Information on products, services and key customers

The Group's revenues are derived from various services classified as interest, non-interest and others; however, since this classification has already been reflected in the component of the operating segments above, revenue from external customers by service type is not separately disclosed. The Group does not have any key customers who account for more than 10% of the Group's sales for the years ended December 31, 2018 and 2017.

### (5) Geographical information

Of the Group's revenue (interest income and non-interest income) from domestic customers for the years ended December 31, 2018 and 2017 amounted to ₩11,570,125 million and ₩9,819,013 million, respectively, and revenue from foreign customers amounted to ₩1,753,815 million and ₩479,637 million, respectively. The Group's non-current assets (investment in associates, investment properties, property and equipment and intangible assets) as of December 31, 2018 and 2017 are ₩1,807,210 million and ₩1,617,886 million, respectively, for the Company and domestic subsidiaries, and ₩1,214,987 million and ₩1,044,400 million, respectively, for foreign subsidiaries.

## 8. Restricted use of financial assets

Details of restricted use of deposits as of December 31, 2018 and 2017 are as follows:

	2018	2017	Descriptions
Financial assets at fair value through profit or loss(*1)			
Reserve for claims of customers' deposits (trust)(*3)	₩ -	3,871,503	Regulation on Financial Investment Business
Financial assets measured at fair value through profit or loss(*1)			
Reserve for claims of customers' deposits (trust)(*3)	₩ 3,786,573	-	Regulation on Financial Investment Business
Loans and receivables(*2)			
Reserve for claims of customers' deposits(*3)	-	702,334	Regulation on Financial Investment Business
Deposits for exchange- traded derivatives	-	567,766	Collateral on derivative transaction and others, etc.
Guarantee deposit for account opening	-	52	Guarantee deposit for account opening
Time deposit	-	2,056,913	Derivatives and collateral on payment and settlement, etc.
	-	3,327,065	
Financial assets measured at amortized cost(*2)			
Reserve for claims of customers' deposits(*3)	₩ 1,151,255	-	Regulation on Financial Investment Business
Deposits for exchange- traded derivatives	₩ 1,051,349	-	Collateral on derivative transaction and others, etc.
Guarantee deposit for account opening	₩ 50	-	Guarantee deposit for account opening
Time deposit	₩ 3,097,555	-	Derivatives and collateral on payment and settlement, etc.
	₩ 5,300,209	-	
	₩ 9,086,782	7,198,568	

(\*1) Aside from the items that were separately described in note 4-(1)-3-iii), financial assets at fair value through profit or loss as of December 31, 2017 were reclassified as financial assets measured at fair value through profit or loss as of December 31, 2018, respectively.

(\*2) Aside from the items that were separately described in note 4-(1)-3-iii), loans and receivables as of December 31, 2017 were reclassified as financial assets measured at amortized cost as of December 31, 2018, respectively.

(\*3) Pursuant to the *Financial Investment Services and Capital Markets Act and Regulation on Financial Investment Business*, the Group is required to deposit with the Korean Securities Finance Corporation for the payment of its customers' deposits and those amounts are restricted for use.

## 9. Financial assets at fair value through profit or loss

The Group's financial assets at fair value through profit or loss as of December 31, 2017 are classified as financial assets held for trading and financial assets designated at fair value through profit or loss.

### (1) Details of financial assets held for trading as of December 31, 2018 and 2017 are as follows:

	2018(*)	2017
Reserve for claims of customers' deposits (trust)	₩ -	3,871,503
Equity securities	-	1,313,794
Government and public bonds	-	2,658,169
Special bonds	-	6,942,767
Corporate bonds	-	5,298,446
Collective investment securities	-	1,963,865
Corporate commercial papers	-	2,076,104
Securities in foreign currencies	-	2,845,103
Asset backed short-term bond	-	89,762
Others	-	14,284
Derivative assets	-	1,125,230
	₩ -	28,199,027

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), the above items were classified as financial assets measured at fair value through profit or loss as of December 31, 2018 and are included in note 10-(1).

### (2) Financial assets designated at fair value through profit or loss as of December 31, 2018 and 2017 are as follows:

	2018(*)	2017
Reducing accounting mismatch		
Equity securities	₩ -	19,230
Government bonds	-	100,620
Special bonds	-	9,955
Corporate bonds	-	147,176
Securities in foreign currencies	-	539,730
Exchange traded fund	-	122,556
	-	939,267
Hybrid financial instruments		
Redeemable convertible preference shares	-	1,000
Convertible bond	-	135,657
Equity-linked securities	-	525,854
Other derivative-linked securities	-	466,728
	-	1,129,239
	₩ -	2,068,506

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), the above items were classified as financial assets designated as measured at fair value through profit or loss as of December 31, 2018 and are included in note 10-(2).

## 10. Financial assets measured at fair value through profit or loss

The Group's financial assets measured at fair value through profit or loss as of December 31, 2018 are classified as mandatory financial assets measured at fair value through profit or loss and financial assets designated as measured at fair value through profit or loss.

### (1) Details of financial assets measured at fair value through profit or loss as of December 31, 2018 and 2017 are as follows:

Details	2018	2017(*)
Equity securities	₩ 2,073,603	-
Investments in partnerships	₩ 245,403	-
Government and public bonds	₩ 2,598,059	-
Special bonds	₩ 6,124,943	-
Corporate bonds	₩ 6,363,126	-
Corporate commercial papers	₩ 494,125	-
Collective investment securities	₩ 4,522,463	-
Securities in foreign currencies	₩ 4,550,787	-
Other securities	₩ 1,375,679	-
Reserve for claims of customers' deposits (trust)	₩ 3,786,573	-
Loan and receivables	₩ 1,132,201	-
Derivative financial assets	₩ 968,115	-
Equity-linked securities	₩ 270,884	-
Other derivative-linked securities	₩ 558,531	-
	₩ 35,064,492	-

(\*) The above items were classified as financial assets held for trading as of December 31, 2017 and are included in note 9-(1), 9-(2).

### (2) There is no financial assets designated as measured at fair value through profit or loss as of December 31, 2018.

## 11. Available-for-sale financial assets

### (1) Details of available-for-sale financial assets as of December 31, 2018 and 2017 are as follows:

	2018 (*1)	2017
Equity securities(*2)	₩ -	854,679
Investments in partnerships(*2)	-	199,374
Government and public bonds	-	39,689
Special bonds	-	1,898,472
Corporate bonds	-	2,705,849
Collective investment securities	-	1,881,044
Securities in foreign currencies(*2)	-	1,249,116
Others(*2)	-	10,297
	₩ -	8,838,520

(\*1) Aside from the items that were separately described in note 4-(1)-3-iii), the above items were classified as financial assets measured at fair value through other comprehensive income as of December 31, 2018 and are included in note 12.

(\*2) Equity securities with no quote market prices in active market and for which the fair value cannot be measured reliably due to lack of basic data and experience used to predict future cash flows are recorded at cost. Carrying amount of available-for-sale equity securities' evaluated cost is ₩104,463 million as of December 31, 2017.

### (2) Maturity analysis of available-for-sale (debt securities) as of December 31, 2017 is as follows:

	2017				Total
	Within 1 year	1 to 5 years	5 to 10 years	More Than 10 years	
Government and public bonds	₩ -	39,689	-	-	39,689
Special bonds	946,862	865,087	86,523	-	1,898,472
Corporation bonds	793,676	1,818,574	53,635	39,964	2,705,849
Securities in foreign currencies	151,740	523,801	53,012	59,302	787,855
	₩ 1,892,278	3,247,151	193,170	99,266	5,431,865

### (3) Details of changes in unrealized changes in valuation of available-for-sale financial assets for the year ended December 31, 2017 are as follows:

	2017					Ending balance
	Beginning balance	Gain (Loss) on valuation	Disposal	Tax effect		
Equity securities	₩ 6,717	1,707	12,802	(6,168)		15,058
Investments in partnerships	11,926	8,226	(9,486)	1,510		12,176
Government and public bonds	(2,225)	(170)	3,357	(1,517)		(555)
Special bonds	(6,091)	1,117	(1,313)	(1,352)		(7,639)
Corporate bonds	(3,400)	(3,504)	3,377	(1,166)		(4,693)
Collective investment securities	108,606	2,543	(31,960)	(3,033)		76,156
Securities in foreign currencies	20,401	(10,145)	5,254	5,797		21,307
	₩ 135,934	(226)	(17,969)	(5,929)		111,810

### (4) Details of changes in accumulated impairment loss of available-for-sale financial assets for the year ended December 31, 2017 are as follows:

	2017				Ending balance
	Beginning balance	Increase	Disposal		
Equity securities	₩ 32,944	17,201	(595)		49,550
Investments in partnerships	10	-	-		10
Corporate bonds	9,071	138	-		9,209
Collective investment securities	80,471	9,773	(40,548)		49,696
Securities in foreign currencies	2,854	56	-		2,910
	₩ 125,350	27,168	(41,143)		111,375

## 12. Financial assets measured at fair value through other comprehensive income

The Group's financial assets measured at fair value through other comprehensive income are classified with financial assets measured at fair value through other comprehensive income (debt securities) and equity securities designated as measured at fair value through other comprehensive items at initial recognition, by its contractual cash flow characteristics and its business model of the instruments.

### (1) Details of financial assets measured at fair value through profit or loss as of December 31, 2018 and 2017 are as follows:

	2018	2017(*)
Equity securities	₩ 527,867	-
Equity securities in foreign currencies	362,572	-
Government and public bonds	20,051	-
Special bonds	1,253,802	-
Corporate bonds	4,284,984	-
Bonds in foreign currencies	1,753,797	-
	₩ 8,203,073	-

(\*) The above items were classified as available-for-sale financial assets as of December 31, 2017 and are included in note 11.

### (2) Equity securities designated as measured at fair value through other comprehensive income

i) Details of equity securities designated as measured at fair value through other comprehensive income are as follows:

	Purchase cost	Book value
Equity securities	₩ 666,570	527,867
Equity securities in foreign currencies	314,077	362,572

(\*1) The above items were classified as available-for-sale financial assets as of December 31, 2017 and are included in note 11.

(\*2) They are held for financial business purposes and strategic purposes, not for trading purposes.

There is no dividend from equity securities eliminated in the current period. The amount of dividends related to equity securities as of December 31, 2018 is ₩12,237 million.

ii) No equity securities designated as measured at fair value through other comprehensive income were disposed for the year ended December 31, 2018.

### (3) Debt securities

i) Debt securities classified as financial assets measured at fair value through other comprehensive income as of December 31, 2018 are as follows:

	Face value	Amortized Cost	Book Value
Government and public bonds	₩ 20,000	20,253	20,051
Special bonds	1,256,900	1,253,851	1,253,802
Corporate bonds	4,278,250	4,279,364	4,284,984
Bonds in foreign currencies	1,763,785	1,768,000	1,753,797
	₩ 7,318,935	7,321,468	7,312,634

(\*) The above items were classified as available-for-sale financial assets as of December 31, 2017 and are included in note 11.



ii) Details of changes in loss allowance of debt securities measured at fair value through other comprehensive income for the year ended December 31, 2018 are as follows:

	2018			Total
	12-month ECL	Not Impaired	Lifetime ECL Impaired	
Beginning Balance(*)	₩ 2,018	-	-	2,018
Replacement				
Replace to Lifetime ECL(Not Impaired)	-	-	-	-
Replace to Lifetime ECL(Impaired)	-	-	-	-
Replace to 12-month ECL	-	-	-	-
Increase	2,269	-	-	2,269
Derecognition	(1,011)	-	-	(1,011)
Other changes	2	-	-	2
Ending Balance	₩ 3,278	-	-	3,278

(\*) The beginning balance is measurement of credit losses on debt instruments measured at fair value through other comprehensive income in note 4-(1)-3-i).

iii) Details of changes in total carrying amount of debt securities measured at fair value through other comprehensive income for the year ended December 31, 2018 are as follows:

	2018			Total
	12-month ECL	Not Impaired	Lifetime ECL Impaired	
Beginning Balance	₩ 5,191,196	-	-	5,191,196
Replacement				
Replace to Lifetime ECL(Not Impaired)	-	-	-	-
Replace to Lifetime ECL(Impaired)	-	-	-	-
Replace to 12-month ECL	-	-	-	-
Acquisition	6,193,171	-	-	6,193,171
Derecognition	(4,088,830)	-	-	(4,088,830)
Evaluation	10,220	-	-	10,220
Other changes	6,877	-	-	6,877
Ending Balance	₩ 7,312,634	-	-	7,312,634

#### (4) Gains and losses on valuation of financial assets measured at fair value through other comprehensive income

Details of changes in gains and losses on valuation of financial assets measured at fair value through other comprehensive income as accumulated other comprehensive income for the year ended December 31, 2018 are as follows:

	2018							Ending Balance
	2017.12.31 (*1)	Reclassification(*2)	Beginning Balance	Evaluation	Disposals and etc.	Tax effect		
Equity securities	₩ 15,058	(16,092)	(1,034)	(94,047)	-	39,542	(55,539)	
Investments in partnerships	12,176	(12,176)	-	-	-	-	-	
Government and public bonds	(555)	4	(551)	552	10	(154)	(143)	
Special bonds	(7,639)	185	(7,454)	8,152	2,234	(2,856)	76	
Corporate bonds	(4,693)	(22)	(4,715)	11,211	1,761	(3,756)	4,501	
Bonds in foreign currencies	(1,942)	(430)	(2,372)	(9,695)	928	2,504	(8,635)	
Collective investment securities	76,156	(76,156)	-	-	-	-	-	
Others	23,249	(23,249)	-	-	-	-	-	
	₩ 111,810	(127,936)	(16,126)	(83,827)	4,933	35,280	(59,740)	

(\*1) The above items were classified as net unrealized gains or losses of valuation of available-for-sale financial assets in accumulated other comprehensive income as of December 31, 2017, and are included in note 11-(3).

(\*2) The effect is reclassified to financial assets measured at fair value through profit or loss in note 4-(1)-3-i).

## 13. Loans and receivables

### (1) Details of loans and receivables as of December 31, 2018 and 2017 are as follows:

	2018(*)	2017
Deposit	₩ -	3,580,259
Loans	-	35,830,812
Deferred loan origination cost and fee	-	(1,901)
Allowance for doubtful accounts	-	(83,925)
	-	39,325,245
Other loans and receivables	-	7,622,643
Allowance for doubtful accounts	-	(24,463)
	-	7,598,180
	₩ -	46,923,425

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), the above items were classified as financial assets measured at amortized cost as of December 31, 2018 and are included in note 14.

### (2) Details of deposits as of December 31, 2018 and 2017 are as follows:

	2018(*)	2017
Reserve for claims of customers' deposits	₩ -	702,334
Trading margin of derivatives	-	567,766
Long-term deposits	-	1,884,491
Restricted deposits and others	-	52
Others	-	425,616
	₩ -	3,580,259

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), the above items were classified as financial assets measured at amortized cost as of December 31, 2018 and are included in note 14.

### (3) Details of loans as of December 31, 2018 and 2017 are as follows:

	2018(*)	2017
Call loans	₩ -	1,280
Broker's loan	-	6,474,522
Securities purchased under resale agreements	-	28,104,834
Loans receivable	-	900,648
Loans to employees	-	52,697
Loans purchased	-	209,617
Advances for customers	-	1,340
Privately placed bonds	-	85,752
Dishonored bills receivable	-	122
Deferred loan origination cost and fee	-	(1,901)
Allowance for doubtful accounts	-	(83,925)
	₩ -	35,744,986

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), the above items were classified as financial assets measured at amortized cost as of December 31, 2018 and are included in note 14.

(4) Details of the other loans and receivables as of December 31, 2018 and 2017 are as follows:

	2018(*)	2017
Accounts receivable	₩ -	7,249,676
Accrued income	-	253,252
Deposits provided	-	131,673
Present value discount	-	(11,958)
Allowance for doubtful accounts	-	(24,463)
	₩ -	7,598,180

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), the above items were classified as financial assets measured at amortized cost as of December 31, 2018 and are included in note 14.

(5) Details of changes in allowance for doubtful accounts for the years ended December 31, 2018 and 2017 are as follows:

	2018(*)	2017
Beginning balance	₩ -	(116,298)
Bad debt expenses	-	(1,427)
Write-off	-	-
Others	-	9,337
Ending balance	₩ -	(108,388)

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), the above items were classified as allowance for credit loss related to financial assets measured at amortized cost as of December 31, 2018 and are included in note 14.

(6) Details of changes in net deferred loan origination costs and fees for the years ended December 31, 2018 and 2017 are as follows:

	2018(*)	2017
Beginning balance	₩ -	(105)
Increases	-	(5,916)
Amortization	-	4,120
Ending balance	₩ -	(1,901)

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), the above items were classified as deferred loan origination cost and fee related to financial assets measured at amortized cost as of December 31, 2018 and are included in note 14.

14. Financial assets measured at amortized cost

(1) Details of financial assets measured at amortized cost as of December 31, 2018 are as follows:

	2018	2017(*)
Deposit		
Reserve for claims of customers' deposits	₩ 1,151,255	-
Trading margin of derivatives	1,051,349	-
Long-term deposits	3,617,929	-
Restricted deposits and others	50	-
Others	425,857	-
	6,246,440	-
Loan and receivables		
Call loan	328	-
Broker's loan	10,719,500	-
Securities purchased under resale agreements	42,720,530	-
Loans receivable	1,025,425	-
Loans to employees	57,970	-
Loans purchased	114,920	-
Advances for customers	1,310	-
Privately placed bonds	354,144	-
Dishonored bills receivable	122	-
Deferred loan originated cost and fee	(1,941)	-
	54,992,308	-
Other loans		
Accounts receivable	7,716,690	-
Accrued income	361,116	-
Advance payments	62,737	-
Deposits provided	116,406	-
Present value discount	(8,895)	-
	8,248,054	-
Allowance for credit loss(Loans)	(75,140)	-
Allowance for credit loss(Other financial assets)	(26,267)	-
	₩ 69,385,395	-

(\*) The above items were classified as loans and receivables as of December 31, 2017 and are included in note 13.

(2) Details of changes in allowances for credit loss of financial assets measured at amortized cost for the year ended December 31, 2018 are as follows:

i) Details of changes in allowances for credit loss of loans and receivables

	2018			Total
	12-month ECL	Not Impaired	Lifetime ECL Impaired	
Beginning Balance	₩ 2,987	-	62,969	65,956
Replacement				
Replace to 12-month ECL	-	-	-	-
Replace to Lifetime ECL(Not Impaired)	-	-	-	-
Replace to Lifetime ECL(Impaired)	-	-	-	-
Disposal	-	-	-	-
Increase (Decrease)	9,187	-	(6)	9,181
Other changes	-	-	3	3
Ending Balance	₩ 12,174	-	62,966	75,140

ii) Details of changes of the allowances for credit loss of other financial assets

	2018			Total
	12-month ECL	Lifetime ECL		
		Not Impaired	Impaired	
Beginning Balance	₩ 368	-	24,464	24,832
Replacement				
Replace to Lifetime ECL(Not Impaired)	-	-	-	-
Replace to Lifetime ECL(Impaired)	-	-	-	-
Replace to 12-month ECL	-	-	-	-
Disposal	(5)	-	-	(5)
Increase (Decrease)	376	-	1,138	1,514
Other changes	-	-	(74)	(74)
Ending Balance	₩ 739	-	25,528	26,267

(3) Details of changes in carrying amount of financial assets measured at amortized cost for the year ended December 31, 2018 are as follows:

Description(*1)	2018			Total
	12-month ECL	Lifetime ECL		
		Not Impaired	Impaired	
Beginning Balance	₩ 770,318	-	92,421	862,739
Replacement				
Replace to 12-month ECL	-	-	-	-
Replace to Lifetime ECL(Not Impaired)	-	-	-	-
Replace to Lifetime ECL(Impaired)	-	-	-	-
Execution	1,845,641	-	15	1,845,656
Repayment	(1,118,171)	-	(11,346)	(1,129,517)
Amortization	-	-	-	-
Disposal(*2)	(82,123)	-	-	(82,123)
Others	(834)	-	-	(834)
Ending Balance	₩ 1,414,831	-	81,090	1,495,921

(\*1) Amounts of loan and receivables excluded from changes in carrying amount are call loans of ₩328 million, broker's loans of ₩10,719,500 million, securities purchased under resale agreements of ₩42,720,530 million, and loans to employees of ₩57,970 million as of December 31, 2018. Amounts of allowances for credit loss are broker loans of ₩1,308 million, loans to employees of ₩114 million as of December 31, 2018. Call loans and Securities purchased under resale agreements are excluded.

(\*2) The loan was disposed for smooth implementation of capital investment for the year ended December 31, 2018, and there is no profit or loss effect on the disposal.

(4) Details of changes in deferred loan origination fees and costs for the year ended December 31, 2018 are as follows:

	2018	2017(*1)
Beginning Balance	₩ (1,901)	-
Remeasurement(*2)	162	-
Beginning balance(Adjusted)	(1,739)	-
Increase	(4,323)	-
Amortization	4,121	-
Ending balance	₩ (1,941)	-

(\*1) The above items were classified as deferred loan origination fees and costs related to loans and receivables as of December 31, 2017 and are included in note 13.

(\*2) As some portion of loans are classified as financial assets measured at fair value through profit or loss described in note 4-(1)-3-iii), deferred loan originated costs and fees, which incurred by acquisition of the asset at initial recognition, are remeasured.

15. The fair value of financial assets and liabilities

(1) The carrying amount and fair value of the Group's financial assets and liabilities as of December 31, 2018 and 2017 are as follows:

	2018(*1)		2017	
	Carrying amount	Fair value	Carrying amount	Fair value
<b>Financial assets</b>				
Deposits	₩ 6,246,440	6,246,440	3,580,259	3,580,259
Financial assets held for trading(*2)	-	-	28,199,027	28,199,027
Financial assets measured at fair value through profit or loss(*2)	35,064,492	35,064,492	-	-
Financial assets designated at fair value through profit or loss(*2)	-	-	2,068,506	2,068,506
Available-for-sale financial assets(*3)	-	-	8,838,520	8,838,520
Financial assets measured at fair value through other comprehensive income	8,203,073	8,203,073	-	-
Loans(*4)	54,917,168	54,917,168	35,744,986	35,744,986
Other financial assets(*5)	8,221,787	8,221,787	7,598,180	7,598,180
	₩ 112,652,960	112,652,960	86,029,478	86,029,478
<b>Financial liabilities</b>				
Financial liabilities held for trading(*2)	₩ -	-	2,137,037	2,137,037
Financial liabilities measured at fair value through profit or loss(*2)	2,280,438	2,280,438	-	-
Financial liabilities designated at fair value through profit or loss(*2)	-	-	15,295,424	15,295,424
Financial liabilities designated as measured at fair value through profit of loss(*2)	15,459,570	15,459,570	-	-
Deposits due to customers	5,465,538	5,465,538	5,118,877	5,118,877
Borrowings(*4)	72,363,400	72,363,400	49,390,196	49,390,196
Debentures	4,249,205	4,278,954	3,085,497	3,071,069
Other financial liabilities(*5)	7,919,826	7,919,826	6,552,574	6,552,574
	₩ 107,737,977	107,767,726	81,579,605	81,565,177

Financial liabilities

Financial liabilities held for trading(*2)	₩ -	-	2,137,037	2,137,037
Financial liabilities measured at fair value through profit or loss(*2)	2,280,438	2,280,438	-	-
Financial liabilities designated at fair value through profit or loss(*2)	-	-	15,295,424	15,295,424
Financial liabilities designated as measured at fair value through profit of loss(*2)	15,459,570	15,459,570	-	-
Deposits due to customers	5,465,538	5,465,538	5,118,877	5,118,877
Borrowings(*4)	72,363,400	72,363,400	49,390,196	49,390,196
Debentures	4,249,205	4,278,954	3,085,497	3,071,069
Other financial liabilities(*5)	7,919,826	7,919,826	6,552,574	6,552,574
	₩ 107,737,977	107,767,726	81,579,605	81,565,177

(\*1) Aside from the items that were separately described in note 4-(1)-3-iii), financial assets held for trading, financial assets designated at fair value through profit or loss, available-for-sale financial assets, financial liabilities held for trading, and financial liabilities designated at fair value through profit or loss as of December 31, 2017 were reclassified as financial assets measured at fair value through profit or loss, financial assets designated as measured at fair value through profit or loss, financial assets measured at fair value through other comprehensive income, financial liabilities measured at fair value through profit or loss, and financial liabilities designated as measured at fair value through profit of loss as of December 31, 2018, respectively.

(\*2) The fair value of derivatives, etc., is the sum of book value and day 1 profit or loss.

(\*3) Included in financial assets classified as available-for-sale are non-marketable equity securities that have been measured at cost.

(\*4) As loans and borrowings are due in one year as of December 31, 2018 and 2017, and due to other reasons, the Group regards book value is similar to the fair value.

(\*5) Other assets and liabilities in the statement of financial position that do not meet the definition of financial instruments, such as advance payments, advance received and income in advance, are excluded.

(2) Fair value hierarchy of financial instruments measured at fair value

1) Fair value hierarchy of financial instruments measured at fair value as of December 31, 2018 and 2017 is as follows:

Description(*)	2018			Total
	Level 1	Level 2	Level 3	
<b>Financial assets</b>				
Financial assets measured at fair value through profit or loss	₩ 14,144,403	17,390,223	3,529,866	35,064,492
Financial assets measured at fair value through other comprehensive income	363,519	7,292,583	546,971	8,203,073
	₩ 14,507,922	24,682,806	4,076,837	43,267,565
<b>Financial liabilities</b>				
Financial liabilities measured at fair value through profit or loss	₩ 1,079,551	837,265	363,622	2,280,438
Financial liabilities designated as measured at fair value through profit of loss	8,258	6,126,347	9,324,965	15,459,570
	₩ 1,087,809	6,963,612	9,688,587	17,740,008

Description(*)	2017			Total
	Level 1	Level 2	Level 3	
<b>Financial assets</b>				
Financial assets held for trading	₩ 14,567,513	13,486,593	144,921	28,199,027
Financial assets designated at fair value through profit or loss	255,685	880,065	932,756	2,068,506
Available-for-sale financial assets	933,099	7,153,499	751,922	8,838,520
	₩ 15,756,297	21,520,157	1,829,599	39,106,053
<b>Financial liabilities</b>				
Financial liabilities held for trading	₩ 1,135,876	881,479	119,682	2,137,037
Financial liabilities designated at fair value through profit or loss	11,425	6,223,166	9,060,833	15,295,424
	₩ 1,147,301	7,104,645	9,180,515	17,432,461

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), financial assets held for trading, financial assets designated at fair value through profit or loss, available-for-sale financial assets, financial liabilities held for trading, and financial liabilities designated at fair value through profit or loss as of December 31, 2017 were reclassified as financial assets measured at fair value through profit or loss, financial assets designated as measured at fair value through profit or loss, financial assets measured at fair value through other comprehensive income, financial liabilities measured at fair value through profit or loss, and financial liabilities designated as measured at fair value through profit of loss as of December 31, 2018, respectively.

2) Details of changes in financial assets and liabilities classified into Level 3 for the years ended December 31, 2018 and 2017 are as follows:

Description(*)	2018						
	Beginning balance	Reclassification(*2)	Profit (Loss)	Other comprehensive income	Purchase/issuance	Disposal/settlement	Ending balance
<b>Financial assets (*1):</b>							
Financial assets measured at fair value through profit or loss	₩2,037,949	17,422	41,234	-	4,541,363	(3,108,102)	3,529,866
Financial assets measured at fair value through other comprehensive income	181,603	-	-	52,111	313,257	-	546,971
	₩2,219,552	17,422	41,234	52,111	4,854,620	(3,108,102)	4,076,837

Description(*)	2018						
	Beginning balance	Reclassification(*2)	Profit (Loss)	Other comprehensive income	Purchase/issuance	Disposal/settlement	Ending balance

**Financial liabilities (\*1):**

Financial liabilities measured at fair value through profit or loss	₩ 119,682	-	69,768	-	244,525	(70,353)	363,622
Financial liabilities designated as measured at fair value through profit of loss	9,060,833	-	(54,898)	(3,555)	9,042,499	(8,719,914)	9,324,965
	₩9,180,515	-	14,870	(3,555)	9,287,024	(8,790,267)	9,688,587

(\*1) Aside from the items that were separately described in note 4-(1)-3-iii), financial assets held for trading, financial assets designated at fair value through profit or loss, available-for-sale financial assets, financial liabilities held for trading, and financial liabilities designated at fair value through profit or loss as of December 31, 2017 were reclassified as financial assets measured at fair value through profit or loss, financial assets designated as measured at fair value through profit or loss, financial assets measured at fair value through other comprehensive income, financial liabilities measured at fair value through profit or loss, and financial liabilities designated as measured at fair value through profit of loss as of December 31, 2018, respectively.

(\*2) Reclassification from level 2 to level 3 is due to change of fair value measurement method. The Group recognizes the reclassification of level at the end of the reporting period in which the events or changes in circumstances that may cause the reclassification of level occur.

Description(*)	2017					
	Beginning balance	Profit (Loss)	Other comprehensive income	Purchase/issuance	Disposal/settlement	Ending balance

**Financial assets (\*1):**

Financial assets held for trading	₩ 148,034	248,819	-	13,137	(265,069)	144,921
Financial assets designated at fair value through profit or loss	1,675,856	57,198	-	474,834	(1,275,132)	932,756
Available-for-sale financial assets	711,492	(5,212)	(39,429)	138,485	(53,414)	751,922
	₩ 2,535,382	300,805	(39,429)	626,456	(1,593,615)	1,829,599

**Financial liabilities (\*1):**

Financial liabilities held for trading	₩ 454,348	(153,060)	-	144,290	(325,896)	119,682
Financial liabilities designated at fair value through profit or loss	12,622,663	577,860	-	8,451,922	(12,591,612)	9,060,833
	₩ 13,077,011	424,800	-	8,596,212	(12,917,508)	9,180,515

(\*1) Aside from the items that were separately described in note 4-(1)-3-iii), financial assets held for trading, financial assets designated at fair value through profit or loss, available-for-sale financial assets, financial liabilities held for trading, and financial liabilities designated at fair value through profit or loss as of December 31, 2017 were reclassified as financial assets measured at fair value through profit or loss, financial assets designated as measured at fair value through profit or loss, financial assets measured at fair value through other comprehensive income, financial liabilities measured at fair value through profit or loss, and financial liabilities designated as measured at fair value through profit of loss as of December 31, 2018, respectively.

3) Valuation techniques and inputs for financial assets and liabilities classified into Level 2 as of December 31, 2018 and 2017 are as follows:

	2018	2017	Valuation techniques	Inputs
<b>Financial assets</b>				
Financial assets held for trading	₩ -	13,486,593	DCF, net asset value, Black-Scholes	Discount rates, interest rates, volatility
Financial assets measured at fair value through profit or loss	17,390,223	-	DCF, net asset value, Black-Scholes	Discount rates, interest rates, volatility
Financial assets designated at fair value through profit or loss	-	880,065	DCF, net asset value	Discount rates, stock prices, exchange rates
Available-for-sale financial assets	-	7,153,499	DCF, net asset value	Discount rates, exchange rates
Financial assets measured at fair value through other comprehensive income	7,292,583	-	DCF, net asset value	Discount rates, exchange rates
	₩ 24,682,806	21,520,157		
<b>Financial liabilities</b>				
Financial liabilities held for trading	₩ -	881,479	Black-Scholes, DCF	Interest rates, volatility, discount rates
Financial liabilities measured at fair value through profit or loss	837,265	-	Black-Scholes, DCF	Interest rates, volatility, discount rates
Financial liabilities designated at fair value through profit or loss	-	6,223,166	Black-Scholes, DCF	Interest rates, volatility, discount rates
Financial liabilities designated as measured at fair value through profit or loss	6,126,347	-	Black-Scholes, DCF	Interest rates, volatility, discount rates
	₩ 6,963,612	7,104,645		

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), financial assets held for trading, financial assets designated at fair value through profit or loss, available-for-sale financial assets, financial liabilities held for trading, and financial liabilities designated at fair value through profit or loss as of December 31, 2017 were reclassified as financial assets measured at fair value through profit or loss, financial assets designated as measured at fair value through profit or loss, financial assets measured at fair value through other comprehensive income, financial liabilities measured at fair value through profit or loss, and financial liabilities designated as measured at fair value through profit of loss as of December 31, 2018, respectively.

4) Quantitative details regarding the valuation techniques and unobservable inputs for financial assets and liabilities classified into Level 3 as of December 31, 2018 is as follows:

	2018	Valuation techniques	Inputs	Range
<b>Financial assets</b>				
Financial assets measured at fair value through profit or loss	₩ 3,529,866	Black-Scholes, DCF, probability model	Volatility, correlation coefficient, discount rates	(Stock) Volatility: 0.42% ~ 62.01% Correlation coefficient: -61.07% ~ 99.99% (Others) Correlation coefficient: -47.49% ~ 90.22% Discount rates: 2.51% ~ 18.96%
Financial assets measured at fair value through other comprehensive income	546,971	DCF and others	Discount rates	Discount rates: 6.50% ~ 15.32%
	₩ 4,076,837			
<b>Financial liabilities</b>				
Financial liabilities measured at fair value through profit or loss	₩ 363,622	Black-Scholes, DCF, probability model	Volatility, correlation coefficient	(Stock) Volatility: 0.42% ~ 62.01% Correlation coefficient: -61.07% ~ 99.99% (Others) Correlation coefficient: -47.49% ~ 90.22%
Financial liabilities designated as measured at fair value through profit of loss	9,324,965	Black-Scholes, DCF, probability model	Volatility, correlation coefficient	(Stock) Volatility: 0.42% ~ 62.01% Correlation coefficient: -61.07% ~ 99.99% (Others) Correlation coefficient: -47.49% ~ 90.22%
	₩ 9,688,587			

Quantitative details regarding the valuation techniques and unobservable inputs for financial assets and liabilities classified into Level 3 as of December 31, 2017 is as follows:

	2017	Valuation techniques	Inputs	Range
<b>Financial assets</b>				
Financial assets held for trading	₩ 144,921	Black-Scholes, DCF, probability model	Volatility, correlation coefficient	(Stock) Volatility: 0.03% ~ 54.61% Correlation coefficient: -66.21% ~ 99.97% (Others) Correlation coefficient: -44.86% ~ 96.22%
Financial assets designated at fair value through profit or loss	932,756	Black-Scholes, DCF, probability model	Volatility, correlation coefficient	(Stock) Volatility: 0.03% ~ 54.61% Correlation coefficient: -66.21% ~ 99.97% (Others) Correlation coefficient: -44.86% ~ 96.22%
Available-for-sale financial assets	751,922	DCF and others	Discount rates	Discount rates: 7.41% ~ 17.62%
	₩ 1,829,599			
<b>Financial liabilities</b>				
Financial liabilities held for trading	₩ 119,682	Black-Scholes, DCF, probability model	Volatility, correlation coefficient	(Stock) Volatility: 0.03% ~ 54.61% Correlation coefficient: -66.21% ~ 99.97% (Others) Correlation coefficient: -44.86% ~ 96.22%
Financial liabilities designated at fair value through profit or loss	9,060,883	Black-Scholes, DCF, probability model	Volatility, correlation coefficient	(Stock) Volatility: 0.03% ~ 54.61% Correlation coefficient: -66.21% ~ 99.97% (Others) Correlation coefficient: -44.86% ~ 96.22%
	₩ 9,180,515			

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), financial assets held for trading, financial assets designated at fair value through profit or loss, available-for-sale financial assets, financial liabilities held for trading, and financial liabilities designated at fair value through profit or loss as of December 31, 2017 were reclassified as financial assets measured at fair value through profit or loss, financial assets designated as measured at fair value through profit or loss, financial assets measured at fair value through other comprehensive income, financial liabilities measured at fair value through profit or loss, and financial liabilities designated as measured at fair value through profit of loss as of December 31, 2018, respectively.

5) Sensitivity analysis on changes in unobservable inputs

Sensitivity analysis of financial instruments is separately estimated as favorable and unfavorable changes based on the changes in value of financial instruments coming from the changes in unobservable inputs using statistical techniques. And sensitivity analysis is calculated based on the most favorable and unfavorable amount in the case that the fair value is affected by more than two inputs.

Sensitivity analysis on changes in inputs of the Group's financial assets and liabilities classified into Level 3 as of December 31, 2018 and 2017 are as follows:

	2018				
	Favorable changes	Profit (Loss)		Other comprehensive income (loss)	
		Unfavorable changes	Favorable changes	Unfavorable changes	
Derivatives linked securities sold and related hedging assets (*1)	₩ 15,660	(21,916)	-	-	
Financial assets measured at fair value through other comprehensive income(*2),(3)	-	-	74,227	(52,985)	
Financial assets measured at fair value through profit or loss (*1),(2),(4)	3,241	(2,416)	-	-	
<b>2017</b>					
	Favorable changes	Profit (Loss)		Other comprehensive income (loss)	
		Unfavorable changes	Favorable changes	Unfavorable changes	
Derivatives linked securities sold and related hedging assets(*1)	₩ 26,609	(27,945)	-	-	
Equity security (*2)	-	-	24,466	(12,915)	

(\*1) Change in fair value is calculated by increasing or decreasing the volatility of the underlying asset by 10%, an input that is impossible to observe.  
(\*2) Change in fair value is calculated by adjusting the growth rate and discount rate each by -1~1%, inputs that are impossible to observe.  
(\*3) Aside from the items that were separately described in note 4-(1)-3-iii), available-for-sale financial assets as of December 31, 2017 were reclassified as financial assets measured at fair value through other comprehensive income as of December 31, 2018, respectively.  
(\*4) Derivatives linked securities sold and related hedging assets are excluded.

6) Details of changes in deferred day 1 profit or loss for the years ended December 31, 2018 and 2017 are as follows:

Description(*)		2018	2017
Beginning balance	₩	(108,436)	(71,207)
New transactions		(155,442)	(165,984)
Recognized in current profit or loss		132,120	128,755
Ending balance	₩	(131,758)	(108,436)

(\*) The deferred day 1 profit or loss arose from derivative financial instruments at Level 3 fair value hierarchy.

### (3) Fair value hierarchy of financial instruments disclosed by fair value

1) Fair value hierarchy of financial instruments disclosed by fair value as of December 31, 2018 and 2017 is as follows:

		2018			Total
		Level 1	Level 2	Level 3	
<b>Financial assets</b>					
Deposits	₩	-	-	6,246,440	6,246,440
Loans		-	328	54,916,840	54,917,168
Other financial assets		3,027,433	-	5,194,354	8,221,787
	₩	3,027,433	328	66,357,634	69,385,395
<b>Financial liabilities</b>					
Deposits due to customers	₩	-	-	5,465,538	5,465,538
Borrowings		-	1,810,000	70,553,400	72,363,400
Debentures		-	4,278,954	-	4,278,954
Other financial liabilities		3,026,460	-	4,893,366	7,919,826
	₩	3,026,460	6,088,954	80,912,304	90,027,718

		2017			Total
		Level 1	Level 2	Level 3	
<b>Financial assets</b>					
Deposits	₩	-	-	3,580,259	3,580,259
Loans		-	1,280	35,743,706	35,744,986
Other financial assets		632,974	-	6,965,206	7,598,180
	₩	632,974	1,280	46,289,171	46,923,425
<b>Financial liabilities</b>					
Deposits due to customers	₩	-	-	5,118,877	5,118,877
Borrowings		-	600,000	48,790,196	49,390,196
Debentures		-	3,071,069	-	3,071,069
Other financial liabilities		632,949	-	5,919,625	6,552,574
	₩	632,949	3,671,069	59,828,698	64,132,716

2) Valuation techniques and inputs for financial assets and liabilities disclosed by fair values classified into Level 2 as of December 31, 2018 and 2017 are as follows:

		2018	2017	Valuation techniques	Inputs
		<b>Financial assets</b>			
Loans receivable	₩	328	1,280	DCF	Discount rates
<b>Financial liabilities</b>					
Borrowings		1,810,000	600,000	DCF	Discount rates
Debentures		4,278,954	3,071,069	DCF	Discount rates
	₩	6,088,954	3,671,069		

## 16. The Group's subsidiaries

### (1) The Group's subsidiaries

Details of subsidiaries as of December 31, 2018 and 2017 are as follows:

Investor	Subsidiaries	Main business	Location	Reporting date	Percentage of ownership and voting rights (%)	
					2018	2017
<b>Domestic subsidiaries:</b>						
Mirae Asset Daewoo Co., Ltd.	Mirae Asset Venture Investment	Small- and medium-sized enterprise venture capital	Korea	December, 31	72.55	77.53
	Mirae Asset MAPS India Frontier Private Real Estate Investment Trust 1st	Collective investment	Korea	December, 31	62.50	62.50
	School Infrastructure Private Investment Trust	Collective investment	Korea	December, 31	100.00	100.00
	Mirae Asset Securities PEF I Green Growth 2009(*1)	Collective investment	Korea	December, 31	-	11.76
	Hyundai CVC CLO Private Equity Investment Trust 2nd	Collective investment	Korea	December, 31	100.00	100.00
	DB Together Private Equity Investment Trust 67th	Collective investment	Korea	December, 31	100.00	100.00
	Hyundai ING CLO Private Special Asset Investment Trust 1st	Collective investment	Korea	December, 31	100.00	100.00
	Multiasset DW – 2nd Fund	Collective investment	Korea	December, 31	100.00	100.00
	Hyundai Private Real Estate Investment Trust 13th	Collective investment	Korea	December, 31	100.00	100.00
	Hyundai Private Real Estate Investment Trust 17th	Collective investment	Korea	December, 31	-	100.00
	Richmond Private Multiflex Real Estate Investment Trust 1st	Collective investment	Korea	December, 31	100.00	100.00
	Richmond Private Multiflex Real Estate Investment Trust 3rd	Collective investment	Korea	December, 31	99.28	99.28
	Richmond Private Multiflex Real Estate Investment Trust 4th	Collective investment	Korea	December, 31	98.43	98.43
	Hana Landchip Private Real Estate Investment Trust No.67	Collective investment	Korea	December, 31	81.91	81.91
	Richmond Private Multiflex Real Estate Investment Trust 5th	Collective investment	Korea	December, 31	98.04	98.04
	Mirae Asset Daewoo Global K Growth Private Equity Fund(*1)	Collective investment	Korea	December, 31	30.30	30.30
	Mirae Asset MAPS Frontier US Private Real Estate Investment Trust 6-2	Collective investment	Korea	December, 31	99.92	99.92
	Mirae Asset Dividend High Equity Focus 30 Private Balanced Investment Trust 1	Collective investment	Korea	December, 31	-	99.99
	Mirae Asset Maps Frontier US Private Real Estate Investment Trust 7th	Collective investment	Korea	December, 31	99.83	99.83
	Multi Asset Gateway Global Prime Convertible Bond Professional Private Investment Trust 1st	Collective investment	Korea	December, 31	-	79.59
MAPS US Professional Investment Private Real Estate Investment Trust 9-1	Collective investment	Korea	December, 31	98.33	98.33	
Richmond Private Gangnam Hotel Investment Trust	Collective investment	Korea	December, 31	-	99.60	
Samsung H Club Global Multi-Strategy Professional Investment Private Investment Trust 1st	Collective investment	Korea	December, 31	-	77.25	
INMARK US Professional Private Investment Trust 8th	Collective investment	Korea	December, 31	-	99.04	
Multi Asset Foreign Real Estate Professional Private Investment Trust 3rd	Collective investment	Korea	December, 31	-	54.73	

Investor	Subsidiaries	Main business	Location	Reporting date	Percentage of ownership and voting rights (%)	
					2018	2017
Mirae Asset Daewoo Co., Ltd.	Heungkuk Balance Investment Private Investment Trust 1st	Collective investment	Korea	December, 31	-	54.61
	My First Asset First Gift Professional Investment Private Investment Trust 3rd	Collective investment	Korea	December, 31	-	62.60
	LKGHC Specialized Privately Placed Investment Trust No.1	Collective investment	Korea	December, 31	78.90	78.90
	Mirae Asset Solomon Short-Term Gov't and Agency Bond Investment Trust (Fixed Income) Class I	Collective investment	Korea	December, 31	-	57.64
	Mirae Asset Corporate Emerging Dollar Prime Gov't and Agency Bond Monthly Payment Investment Trust	Collective investment	Korea	December, 31	-	50.74
	Mirae Asset Smart Q Global Hedge Focus Professional Private Investment Trust 1st	Collective investment	Korea	December, 31	96.16	-
	Mirae Asset Patriot Professional Private Investment Trust 1st	Collective investment	Korea	December, 31	99.76	-
	JB Infra Build-up Professional Private Investment Trust 3rd	Collective investment	Korea	December, 31	89.38	-
	Multi Asset Global Private Debt Professional Private Investment Trust 4th	Collective investment	Korea	December, 31	88.17	-
	Multi Asset Global Private Equity Professional Private Investment Trust 1st	Collective investment	Korea	December, 31	92.31	-
	Hana Alternative Investment US Power Plant Professional Private Special Asset Investment Trust 1st	Collective investment	Korea	December, 31	95.67	-
	INMARK UK Professional Private Real Estate Investment Trust 19th	Collective investment	Korea	December, 31	99.91	-
	Mirae Asset Smart ELS Selection Professional Private Investment Trust 1st	Collective investment	Korea	December, 31	99.80	-
	Mirae Asset Global Bio Investment Fund I	Investment	Korea	December, 31	96.31	96.31
	Mirae Asset Global Unicorn PEF	Investment	Korea	December, 31	86.79	-
	Mirae Asset Daewoo Global I Private Equity Fund (*1)	Investment	Korea	December, 31	26.12	-
	Mirae Asset Daewoo Korea II Private Equity Fund (*1)	Investment	Korea	December, 31	29.88	-
	MADW EP Co. Ltd (*2)	Investment	Korea	December, 31	-	-
	Good Aiming 1st Co., Ltd. (*2)	Other financial service	Korea	December, 31	-	-
	Good Aiming 2nd Co., Ltd. (*2)	Other financial service	Korea	December, 31	-	-
	Good Chance 1st Co., Ltd. (*2)	Other financial service	Korea	December, 31	-	-
	Good Chance 2nd Co., Ltd. (*2)	Other financial service	Korea	December, 31	-	-
	Deogi Dream M.S. Co.,Ltd. (*2)	Other financial service	Korea	December, 31	-	-
	Good Chance 4th Co., Ltd. (*2)	Other financial service	Korea	December, 31	-	-
	Good Chance 5th Co., Ltd. (*2)	Other financial service	Korea	December, 31	-	-
	Good Chance 6th Co., Ltd. (*2)	Other financial service	Korea	December, 31	-	-
	HC Hybrid 1st Co.,Ltd (*2)	Other financial service	Korea	December, 31	-	-
	HC Hybrid 2nd Co.,Ltd (*2)	Other financial service	Korea	December, 31	-	-
	MD Series 1st Co.,Ltd (*2)	Other financial service	Korea	December, 31	-	-
	MD Flight Co.,Ltd (*2)	Other financial service	Korea	December, 31	-	-

Investor	Subsidiaries	Main business	Location	Reporting date	Percentage of ownership and voting rights (%)		
					2018	2017	
Mirae Asset Daewoo Co., Ltd.	MD Flight 2nd Co.,Ltd (*2)	Other financial service	Korea	December, 31	-	-	
	MD GlobalS Co.,Ltd (*2)	Other financial service	Korea	December, 31	-	-	
	MD Flyhigh Co.,Ltd (*2)	Other financial service	Korea	December, 31	-	-	
	Fly High 1st Co.,Ltd (*2)	Other financial service	Korea	December, 31	-	-	
	<b>Domestic subsidiaries:</b>						
	Fly High 2nd Co.,Ltd (*2)	Other financial service	Korea	December, 31	-	-	
	MS Paju 1st Co.,Ltd (*2)	Other financial service	Korea	December, 31	-	-	
	MS Paju 2nd Co.,Ltd (*2)	Other financial service	Korea	December, 31	-	-	
	MASG 1st Co.,Ltd (*2)	Other financial service	Korea	December, 31	-	-	
	MASG 2nd Co.,Ltd (*2)	Other financial service	Korea	December, 31	-	-	
	Landfill Management 1st Co.,Ltd (*2)	Other financial service	Korea	December, 31	-	-	
	Money Market Trust (2018: 16, 2017: 32)	Trust asset management	Korea	December, 31	100.00	100.00	
	2010 KIF-Mirae Asset IT Investment Fund (*1)	Investment	Korea	December, 31	29.83	29.83	
	Mirae Asset Social Corporate Investment Fund (*1)	Investment	Korea	December, 31	16.66	16.66	
	Mirae Asset Agro Project Fund (*1)	Investment	Korea	December, 31	10.00	10.00	
	KoFC-Mirae Asset Pioneer Champ 2011-3rd Investment Fund (*1)	Investment	Korea	December, 31	21.82	21.82	
	Mirae Asset Social Corporate Investment Fund 2nd (*1)	Investment	Korea	December, 31	5.00	5.00	
	Noroo-Mirae Asset Agrostar Project Venture Fund (*1)	Investment	Korea	December, 31	10.00	10.00	
	Mirae Asset Good Corporate Secondary Investment Fund	Investment	Korea	December, 31	51.11	51.11	
	MAVI Good Company Investment Fund #1	Investment	Korea	December, 31	60.00	60.00	
MAVI Good Company Investment Fund #2	Investment	Korea	December, 31	67.14	67.14		
MIRAE ASSET Global Investment Fund (*1)	Investment	Korea	December, 31	37.50	37.50		
Mirae Asset Venture Investment	Koscom-Mirae Asset Fintech Company Investment Fund #1	Investment	Korea	December, 31	60.00	60.00	
	MIRAE ASSET Young Start-Up Investment Fund (*1)	Investment	Korea	December, 31	17.86	17.86	
	Mirae Asset Good Corporate Secondary Investment Fund #2 (81)	Investment	Korea	December, 31	44.50	44.50	
	2016 KIF-MIRAE ASSET ICT Venture Fund (*1)	Investment	Korea	December, 31	30.00	30.00	
	MIRAE ASSET Good Company Investment Fund#16-1 (*1)	Investment	Korea	December, 31	10.40	10.40	
	MIRAE ASSET Good Company Investment Fund#17-1 (*1)	Investment	Korea	December, 31	9.13	9.13	
	Mirae Asset Hi-Tech Frontier Investment Fund (*1)	Investment	Korea	December, 31	24.00	24.00	
	MIRAE ASSET Young Start-Up Investment Fund #2 (*1)	Investment	Korea	December, 31	28.00	28.00	
	MIRAE ASSET Good Company Secondary Investment Fund#18-1 (*1)	Investment	Korea	December, 31	22.25	-	
	MIRAE ASSET Young Start-UP Investment Fund #3 (*1)	Investment	Korea	December, 31	40.10	-	

Investor	Subsidiaries	Main business	Location	Reporting date	Percentage of ownership and voting rights (%)		
					2018	2017	
<b>Overseas subsidiaries:</b>							
Mirae Asset Daewoo Co., Ltd.	Mirae Asset Securities (UK) Ltd.	Securities brokerage and investment, investment consulting	UK	December, 31	100.00	100.00	
	Mirae Asset Securities Holdings (USA) Inc (*3)	Other financial service	USA	December, 31	100.00	-	
	Mirae Asset Securities (HK) Limited (*4)	Securities brokerage and investment	Hong Kong	December, 31	100.00	100.00	
	Mirae Asset Realty (Singapore) PTE.	Real estate investment and rent	Singapore	December, 31	100.00	100.00	
	Asia Opportunity Arbitrage Fund	Collective investment	Cayman Islands	December, 31	-	84.38	
	Mirae Asset China Growth Equity Fund	Collective investment	Luxembourg	December, 31	-	71.87	
	Mirae Asset Global Long Short Fund, Ltd.	Collective investment	Cayman Islands	December, 31	100.00	-	
	MAPS Location (Singapore) Pte. Ltd.	Investment	Singapore	December, 31	90.00	-	
	<b>Overseas subsidiaries:</b>						
Mirae Asset Securities (HK) Limited	Mirae Asset Securities (Vietnam) LLC	Securities brokerage and investment	Vietnam	December, 31	100.00	100.00	
	Mirae Asset Wealth Management (Brazil) CCTVM	Securities brokerage and investment	Brazil	December, 31	100.00	100.00	
	Mirae Asset Securities (UK) Ltd.	General	UK	December, 31	100.00	100.00	
	Mirae Asset (Shanghai) Investment Consulting Co. Ltd.	Investment consulting	China	December, 31	-	100.00	
	Mirae Asset Investment Advisory (Beijing) Co., Ltd.	Investment and investment consulting	China	December, 31	100.00	100.00	
	Mirae Asset Securities (Singapore) Pte. Ltd.	Securities brokerage	Singapore	December, 31	100.00	100.00	
	Mirae Asset Securities Mongolia UTsk LLC	Investment and investment consulting	Mongolia	December, 31	83.16	83.16	
	PT. Mirae Asset Sekuritas Indonesia	Securities brokerage	Indonesia	December, 31	99.00	99.00	
	Mirae Asset Investment Asia Limited	Investment	Hong Kong	December, 31	100.00	100.00	
	South Mountain Asset Management Ltd.	Collective investment	Hong Kong	December, 31	-	100.00	
	Mirae Asset Capital Markets (India) Private Limited	Securities brokerage and investment	India	December, 31	100.00	100.00	
	Mirae Asset Securities Holdings (USA) Inc.	Mirae Asset Securities (USA) Inc.	Securities brokerage and investment	USA	December, 31	100.00	100.00
		Mirae Asset Wealth Management (USA) Inc.	Securities brokerage and investment	USA	December, 31	100.00	100.00
	<b>Overseas subsidiaries:</b>						
	Mirae Asset Wealth Management (USA) Inc.	Mirae Asset Securities & Investments (USA), LLC	Investment	USA	December, 31	100.00	-
HGX (USA), LLC		Investment	USA	December, 31	100.00	-	
Mirae Asset Global Long Short Fund, LP		Collective investment	USA	December, 31	96.15	-	
Mirae Asset Properties I, DST		Investment	USA	December, 31	100.00	-	

Investor	Subsidiaries	Main business	Location	Reporting date	Percentage of ownership and voting rights (%)	
					2018	2017
Mirae Asset Capital Markets (India) Private Limited	Mirae Asset Credit Opportunities Fund	Collective investment	India	December, 31	65.89	-
	MAPS HAWAII TWO, LLC.	Real estate investment and rent	USA	December, 31	100.00	100.00
	MAPS WAIKIKI HOTEL, LLC.	Real estate investment and rent	USA	December, 31	100.00	100.00
	MAPS HOTELS AND RESORTS HAWAII 2, LLC.	Real estate investment and rent	USA	December, 31	100.00	100.00
Mirae Asset Maps Frontier US Private Real Estate Investment Trust 7	MAPS ROYAL GROVE, LLC.	Real estate investment and rent	USA	December, 31	100.00	100.00
	MAGBI Fund Limited	Investment	Hong Kong	December, 31	100.00	100.00
Mirae Asset Global Bio Investment Fund I						
LK GHC Specialized Privately Placed Investment Trust No.1	Super Delta Pte. Ltd.	Investment	Singapore	December, 31	99.12	99.12
Mirae Asset Global Unicorn PEF	MAC Global Unicorn Investment Limited	Investment	Cayman Islands	December, 31	100.00	-
Mirae Asset Daewoo Global I Private Equity Fund	Mirae Asset Daewoo Global I, LLC	Investment	USA	December, 31	100.00	-
Multi Asset Global Private Equity Professional Private Investment Trust 1st	Alpha Assai Fund SP	Investment	Cayman Islands	December, 31	100.00	-
Hana Alternative Investment US Power Plant Professional Private Special Asset Investment Trust 1st	HPUS1 LLC	Investment	USA	December, 31	99.91	-

(\*1) Although the Group's ownership is less than 50 percent, the Group has substantial power to influence related decisions of the entity and is exposed to significant changes in profit in which the Group can also influence, and therefore, the entity was classified as a subsidiary.

(\*2) The entity is a structured entity for assets securitization and although the Group's ownership is less than 50 percent, the Group has substantial power to influence related decisions of the entity, and is exposed to significant changes in profit in which the Group can also influence, and therefore, the entity was classified as a subsidiary.

(\*3) During this year, Mirae Asset Securities Holdings (USA) Inc. is established by in-kind contribution of Mirae Asset Securities (USA) Inc. stocks held by the Group.

(\*4) Daewoo Securities (Hong Kong) Ltd. Merged with Mirae Asset Securities (HK) Limited in March 1, 2017.

(\*5) Five of the collective investment securities that the Group has substantial power are excluded because they are not material to the Group's consolidated financial information. The Group recognized the collective investment securities in the amount of ₩27,020 million as financial assets measured at fair value through profit or loss.



**(2) Changes in subsidiaries**

1) Subsidiaries newly included in the scope of consolidation for year ended December 31, 2018 are as follows:

Subsidiaries	Reason
Mirae Asset Securities Holdings (USA) Inc.	Obtained controls by investing 100% on its total shares
Mirae Asset Securities & Investments (USA), LLC	
HGX (USA), LLC	
MAC Global Unicorn Investment Limited	
Mirae Asset Global Long Short Fund, Ltd.	
Alpha Assai Fund SP	
Mirae Asset Daewoo Global I , LLC	
Mirae Asset Properties I , DST	
Ssi Aat Multi- <sub>인</sub> Professional Private Investment Trust	
Mirae Asset MAPS Professional Private Investment Trust 63th	
Mirae Asset Global Unicorn PEF	
Mirae Asset Smart Q Global Hedge Focus Professional Private Investment Trust 1st	
Mirae Asset Patriot Professional Private Investment Trust 1st	
JB Power Professional Private Investment Trust 9th	
Shinhan BNPP US Frontera Gas Development Professional Private Investment Trust(H)[Loan]	
NH-Amundi Global Infra Professional Private Investment Trust 4th	
NH-Amundi Global Infra Professional Private Investment Trust 5th	
JB Infra Build-up Professional Private Investment Trust 3rd	
Multi Asset Global Private Debt Professional Private Investment Trust 4th	
Mirae Asset Global Long Short Fund, LP	
MIRAE ASSET Good Company Secondary Investment Fund#18-1	
Multi Asset Global Private Equity Professional Private Investment Trust 1st	
INMARK US Professional Private Real Estate Investment Trust 16th	
Hana Alternative Investment US Power Plant Professional Private Special Asset Investment Trust 1st	
Hyundai YouFirst Private Real Estate Investment Trust No. 23-1	
Mirae Asset Balance Long Short Securities Investment Trust 1st	
Midas Global Debt Professional Private Real Estate Investment Trust 6th	
Mirae Asset Daewoo Global I Private Equity Fund	
MAPS Location (Singapore) Pte. Ltd.	
HPUS1 LLC	
INMARK UK Professional Private Real Estate Investment Trust 19th	
Mirae Asset Smart ELS Selection Professional Private Investment Trust 1st	
MIRAE ASSET Young Start-UP Investment Fund	
Mirae Asset Daewoo Korea II Private Equity Fund	
Mirae Asset Credit Opportunities Fund	
HC Hybrid 1st Co.,Ltd	
HC Hybrid 2nd Co.,Ltd	
MD Series 1st Co.,Ltd	
MD Flight Co.,Ltd	
MD Flight 2nd Co.,Ltd	
MD GlobalS Co.,Ltd	
MD Flyhigh Co.,Ltd	
Fly High 1st Co.,Ltd	
Fly High 2nd Co.,Ltd	
MS Paju 1st Co.,Ltd	
MS Paju 2nd Co.,Ltd	
MASG 1st Co.,Ltd	
MASG 2nd Co.,Ltd	
Landfill Management 1st Co.,Ltd	

They are newly acquired investment trusts and structured entities for the year ended December 31, 2018 on which the Group has control.

2) Subsidiaries excluded from the scope of consolidation for the year ended December 31, 2018 are as follows:

Subsidiaries	Reason
South Mountain Asset Management Ltd.	Lost control due to the disposal of all shares in the current period
Mirae Asset (Shanghai) Investment Consulting Co.	
Mirae Asset Dividend High Equity Focus 30 Private Balanced Investment Trust 1st	
Richmond Private Gangnam Hotel Investment Trust	
Asia Opportunity Arbitrage Fund	
JB Power Professional Private Investment Trust 9th	
Mirae Asset Securities PEF I Green Growth 2009	
Hyundai Private Real Estate Investment Trust 17th	
Heungkuk Balance Investment Private Investment Trust 1st	
INMARK US Professional Private Investment Trust 8th	
Multi Asset Foreign Real Estate Professional Private Investment Trust 3rd	Reclassified as financial assets measured at fair value through profit or loss as a result of losing control after partial disposal of interest in subsidiary
MiraeAsset Solomon Short-Term Gov't and Agency Bond Investment Trust (Fixed Income) Class I	
MiraeAsset Corporate Emerging Dollar Prime Gov't and Agency Bond Monthly Payment Investment Trust	
Mirae Asset MAPS Professional Private Investment Trust 63th	
Multi Asset Gateway Global Prime Convertible Bond Professional Private Investment Trust 1st	
NH-Amundi Global Infra Professional Private Investment Trust 4th	
NH-Amundi Global Infra Professional Private Investment Trust 5th	
INMARK US Professional Private Real Estate Investment Trust 16th	
Hyundai YouFirst Private Real Estate Investment Trust No. 23-1	
Mirae Asset Balance Long Short Securities Investment Trust 1st	
Mirae Asset China Growth Equity Fund	Reclassified as financial assets measured at fair value through profit or loss as a result of losing control after the decrease of its portion of shares
Samsung H Club Global Muti-Strategy Professional Investment Private Investment Trust 1st	
My First Asset First Gift Professional Investment Private Investment Trust 3rd	
Ssi Aat Multi- <sub>인</sub> Professional Private Investment Trust	
Shinhan BNPP US Frontera Gas Development Professional Private Investment Trust(H)[Loan]	
Midas Global Debt Professional Private Real Estate Investment Trust 6th	

**(3) Financial information of subsidiaries**

1) Financial information of subsidiaries as of and for the year ended December 31, 2018 is as follows:

	Assets	Liabilities	Equity	Operating revenue	Profit (loss) for the year	2018 Total comprehensive income
Mirae Asset Venture Investment	W 120,819	3,549	117,270	39,034	19,218	19,218
Mirae Asset MAPS India Frontier Private Real Estate Investment Trust 1st	27,193	568	26,625	-	(27,777)	(27,777)
School Infrastructure Private Investment Trust	19,079	19	19,060	759	446	446
Hyundai CVC CLO Private Equity Investment Trust 2nd	5,711	2	5,709	8,843	(24)	(24)
DB Together Private Equity Investment Trust 67th	22,510	2	22,508	1,338	1,300	1,300
Hyundai ING CLO Private Special Asset Investment Trust 1st	6,206	3	6,203	940	630	630
Multiasset DW – 2nd Fund	79	-	79	26	26	26
Hyundai Private Real Estate Investment Trust 13th	21	17	4	1,110	7,577	7,577
Richmond Private Multiflex Real Estate Investment Trust 1st	5,740	3,018	2,722	489	262	262
Richmond Private Multiflex Real Estate Investment Trust 3rd	14,275	7,892	6,383	963	309	309

							2018
	Assets	Liabilities	Equity	Operating revenue	Profit (loss) for the year	Total comprehensive income	
Richmond Private Multiflex Real Estate Investment Trust 4th	₩ 9,837	5,124	4,713	732	364	364	
Hana Landchip Private Real Estate Investment Trust No.67	42,080	30,779	11,301	2,542	791	791	
Richmond Private Multiflex Real Estate Investment Trust 5th	7,063	4,157	2,906	514	219	219	
Mirae Asset Daewoo Global K Growth Private Equity Fund	35,333	339	34,994	831	(1,075)	(1,075)	
Mirae Asset MAPS Frontier US Private Real Estate Investment Trust 6-2	137,393	9	137,384	15,671	3,791	3,791	
Mirae Asset Maps Frontier US Private Real Estate Investment Trust 7th	343,899	21	343,878	44,273	6,485	6,485	
MAPS US Professional Investment Private Real Estate Investment Trust 9-1	121,496	5	121,491	16,529	6,820	6,820	
LKGHC Specialized Privately Placed Investment Trust No.1	45,126	13	45,113	9	(387)	(387)	
Mirae Asset Smart Q Global Hedge Focus Professional Private Investment Trust 1st	114,809	1,096	113,713	40,140	(10,664)	(10,664)	
Mirae Asset Patriot Professional Private Investment Trust 1st	141,477	24,125	117,352	2,808	(7,789)	(7,789)	
JB Infra Build-up Professional Private Investment Trust 3rd	877	-	877	2	(43)	(43)	
Multi Asset Global Private Debt Professional Private Investment Trust 4th	43,658	9	43,649	15,280	6,064	6,064	
Multi Asset Global Private Equity Professional Private Investment Trust 1st	128,478	510	127,968	55	(2,032)	(2,032)	
Hana Alternative Investment US Power Plant Professional Private Special Asset Investment Trust 1st	108,698	579	108,119	3,730	2,640	2,640	
INMARK UK Professional Private Real Estate Investment Trust 19th	106,592	31	106,561	1,671	(220)	(220)	
Mirae Asset Smart ELS Selection Professional Private Investment Trust 1st	48,611	7	48,604	134	(1,496)	(1,496)	
MADW EP Co. Ltd	3,546	1,286	2,260	-	-	-	
Good Aiming 1st Co., Ltd.	25,202	25,300	(98)	2,426	423	423	
Good Aiming 2nd Co., Ltd.	46,641	45,700	941	2,653	497	497	
Good Chance 1st Co., Ltd.	187	187	-	1,598	890	890	
Good Chance 2nd Co., Ltd.	108	108	-	5,049	(107)	(107)	
Deogi Dream M.S. Co.,Ltd.	17,887	18,557	(670)	-	-	-	
Good Chance 4th Co., Ltd.	486	-	486	143	113	113	
Good Chance 5th Co., Ltd.	101,129	102,500	(1,371)	1,769	(383)	(383)	
Good Chance 6th Co., Ltd.	50,095	50,101	(6)	948	202	202	
HC Hybrid 1st Co.,Ltd	20,090	19,984	106	1,811	107	107	
HC Hybrid 2nd Co.,Ltd	10,132	10,165	(33)	410	(34)	(34)	
MD Series 1st Co.,Ltd	49,952	50,511	(559)	2,363	(559)	(559)	
MD Flight Co.,Ltd	30,588	30,512	76	2,924	76	76	
MD Flight 2nd Co.,Ltd	20,263	20,404	(141)	972	(141)	(141)	
MD GlobalS Co.,Ltd	20,297	20,297	-	84	-	-	
MD Flyhigh Co.,Ltd	30,351	30,545	(194)	160	(194)	(194)	
Fly High 1st Co.,Ltd	25,483	25,533	(50)	2,996	(50)	(50)	
Fly High 2nd Co.,Ltd	30,639	30,562	77	2,999	77	77	
MS Paju 1st Co.,Ltd	35,113	35,113	-	833	-	-	
MS Paju 2nd Co.,Ltd	10,293	10,293	-	368	-	-	
MASG 1st Co.,Ltd	15,100	15,142	(42)	82	(41)	(41)	

							2018
	Assets	Liabilities	Equity	Operating revenue	Profit (loss) for the year	Total comprehensive income	
MASG 2nd Co.,Ltd	₩ -	-	-	-	-	-	
Landfill Management 1st Co.,Ltd	7,503	8,190	(687)	-	(686)	(686)	
Mirae Asset Global Bio Investment Fund	79,518	-	79,518	1,845	(59)	139	
Mirae Asset Global Unicorn PEF	256,645	1,929	254,716	46	(3,184)	(3,184)	
Mirae Asset Daewoo Global Private Equity Fund	114,832	-	114,832	3	(1,168)	(1,168)	
Mirae Asset Daewoo Korea Private Equity Fund	145,600	36	145,564	-	(36)	(36)	
2010 KIF-Mirae Asset IT Investment Fund	14,451	4	14,447	7,719	4,516	4,516	
Mirae Asset Social Corporate Investment Fund	143	5	138	191	(348)	(348)	
Mirae Asset Agro Project Fund	9,013	1,363	7,650	2,603	1,716	1,716	
KoFC-Mirae Asset Pioneer Champ 2011-3rd Investment Fund	19,794	2,053	17,741	10,151	1,891	1,891	
Mirae Asset Social Corporate Investment Fund 2nd	4,161	27	4,134	136	(94)	(94)	
Noroo-Mirae Asset Agrostar Project Venture Fund	6,646	217	6,429	1,474	(2,727)	(2,727)	
Mirae Asset Good Corporate Secondary Investment Fund	8,096	1	8,095	2,084	(2,681)	(2,681)	
MAVI Good Company Investment Fund #1	5,746	131	5,615	2,464	2,133	2,133	
MAVI Good Company Investment Fund #2	4,930	117	4,813	2,279	1,832	1,832	
MIRAE ASSET Global Investment Fund	28,377	350	28,027	6,884	2,530	2,530	
Koscom-Mirae Asset Fintech Company Investment Fund #1	2,353	12	2,341	496	445	445	
MIRAE ASSET Young Start-Up Investment Fund	13,248	94	13,154	218	(144)	(144)	
Mirae Asset Good Corporate Secondary Investment Fund #2	19,975	133	19,842	11,570	5,333	5,333	
2016 KIF-MIRAE ASSET ICT Venture Fund	21,928	157	21,771	325	(520)	(520)	
MIRAE ASSET Good Company Investment Fund#16-1	12,517	58	12,459	7,305	4,567	4,567	
MIRAE ASSET Good Company Investment Fund#17-1	16,880	68	16,812	7,106	5,648	5,648	
Mirae Asset Hi-Tech Frontier Investment Fund	20,443	163	20,280	1,599	454	454	
MIRAE ASSET Young Start-Up Investment Fund #2	14,540	160	14,380	18	(612)	(612)	
MIRAE ASSET Good Company Secondary Investment Fund#18-1	15,066	62	15,004	148	4	4	
MIRAE ASSET Young Start-Up Investment Fund #3	5,003	61	4,942	3	(58)	(58)	
Mirae Asset Securities (UK) Ltd.	685,188	7,235	677,953	24,860	993	58,108	
Mirae Asset Securities Holdings (USA) Inc.	637,404	25	637,379	-	-	8,507	
Mirae Asset Securities (HK) Limited	1,669,690	210,735	1,458,955	64,416	40,016	55,890	
Mirae Asset Realty (Singapore) PTE.	200	45	155	-	(8)	(1)	
Mirae Asset Global Long Short Fund, Ltd.	335,660	-	335,660	-	(31,727)	(23,455)	
MAPS Location (Singapore) Pte. Ltd.	7,538	126	7,412	-	(408)	(440)	
Mirae Asset Securities (Vietnam) LLC	344,940	122,608	222,332	26,821	9,681	12,059	
Mirae Asset Wealth Management (Brazil) CCTVM	134,176	60,369	73,807	20,737	3,362	(10,627)	
Mirae Asset Securities (UK) Ltd.	-	-	-	-	-	-	

	2018					
	Assets	Liabilities	Equity	Operating revenue	Profit (loss) for the year	Total comprehensive income
Mirae Asset Investment Advisory (BEIJING) Co., Ltd.	₩ 3,967	201	3,766	1,319	297	245
Mirae Asset Securities (Singapore) Pte. Ltd.	7,100	293	6,807	1,136	6	175
Mirae Asset Securities Mongolia UTsK LLC	1,745	33	1,712	562	201	127
PT. Mirae Asset Sekuritas Indonesia	153,113	59,946	93,167	31,181	9,888	9,123
Mirae Asset Investment Asia Limited	-	-	-	-	-	-
Mirae Asset Capital Markets (India) Private Limited	323,981	1,417	322,564	18,339	10,238	2,709
Mirae Asset Securities (USA) Inc.	49,479,072	49,219,719	259,353	1,296,420	3,602	14,339
Mirae Asset Wealth Management (USA) Inc.	369,310	1,085	368,225	38,331	8,887	23,567
Mirae Asset Securities & Investments (USA), LLC	323,863	323	323,540	4,196	2,245	25,889
HGX (USA), LLC	102,187	1	102,186	1,531	1,530	2,688
Mirae Asset Properties I , DST	85,880	47,073	38,807	190	(442)	(439)
Mirae Asset Global Long Short Fund, LP	52,939	-	52,939	-	(5,119)	(3,814)
Mirae Asset Credit Opportunities Fund	8,292	42	8,250	312	(149)	205
MAPS HAWAII TWO, LLC.	389,471	164,031	225,440	-	(11,314)	(661)
MAPS WAIKIKI HOTEL, LLC.	853,620	453,578	400,042	72,361	(3,170)	13,720
MAPS HOTELS AND RESORTS HAWAII 2, LLC.	17,691	13,516	4,175	152,333	160	308
MAPS ROYAL GROVE, LLC.	15	1	14	169	(38)	(36)
MAGBI Fund Limited	76,547	17,250	59,297	97	278	(103)
Super Delta Pte. Ltd.	28,459	11	28,448	908	(8,171)	(9,244)
MAC Global Unicorn Investment Limited	265,549	26	265,523	-	(26)	1,938
Mirae Asset Daewoo Global I , LLC	111,280	-	111,280	-	-	-
Alpha Assai Fund SP	167,790	75	167,715	-	-	(3,310)
HPUS1 LLC	104,538	75,346	29,192	-	(4,130)	(4,033)
16 Money Market Trust	595,221	77	595,144	11,612	(1,654)	(2,605)

(\*) The financial statements of some subsidiaries are adjusted to conform to the accounting policies of the Controlling Company.

2) Financial information of subsidiaries as of and for the year ended December 31, 2017 is as follows:

	2017					
	Assets	Liabilities	Equity	Operating revenue	Profit (loss) for the year	Total comprehensive income
Mirae Asset Venture Investment	₩ 97,928	6,362	91,566	18,033	6,774	5,486
Mirae Asset MAPS India Frontier Private Real Estate Investment Trust 1st	54,813	411	54,402	-	(22)	(3,037)
School Infrastructure Private Investment Trust	21,075	23	21,052	895	559	559
Mirae Asset Securities PEF I Green Growth 2009	71	7	64	-	(25)	(296)
Hyundai CVC CLO Private Equity Investment Trust 2nd	5,735	2	5,733	382	(431)	(1,595)
DB Together Private Equity Investment Trust 67th	22,141	2	22,139	945	534	496
Hyundai ING CLO Private Special Asset Investment Trust 1st	6,241	3	6,238	1,262	350	(556)
Multiasset DW – 2nd Fund	53	-	53	4	4	4
Hyundai Private Real Estate Investment Trust 13th	15,547	12,667	2,880	1,214	467	467

	2017					
	Assets	Liabilities	Equity	Operating revenue	Profit (loss) for the year	Total comprehensive income
Hyundai Private Real Estate Investment Trust 17th	₩ 22,265	14,648	7,617	1,409	480	480
Richmond Private Multiflex Real Estate Investment Trust 1st	5,819	3,022	2,797	479	252	252
Richmond Private Multiflex Real Estate Investment Trust 3rd	14,493	7,900	6,593	963	304	304
Richmond Private Multiflex Real Estate Investment Trust 4th	9,952	5,130	4,822	723	356	356
Hana Landchip Private Real Estate Investment Trust No.67	42,455	30,755	11,700	2,522	749	749
Richmond Private Multiflex Real Estate Investment Trust 5th	7,160	4,165	2,995	508	221	221
Mirae Asset Daewoo Global K Growth Private Equity Fund	35,107	448	34,659	2,974	1,882	1,882
Mirae Asset MAPS Frontier US Private Real Estate Investment Trust 6-2	141,099	2,662	138,437	31,362	17,581	3,928
Mirae Asset Dividend High Equity Focus 30 Private Balanced Investment Trust 1	6,823	4	6,819	543	427	427
Mirae Asset Maps Frontier US Private Real Estate Investment Trust 7	366,465	22	366,443	71,708	14,084	33,150
Multi Asset Gateway Global Prime Convertible Bond Professional Private Investment Trust 1st	70,439	265	70,174	23,239	3,599	3,599
MAPS US Professional Investment Private Real Estate Investment Trust 9-1	118,949	5	118,944	27,756	13,202	13,202
Richmond Private Gangnam Hotel Investment Trust	25,468	526	24,942	464	495	495
Samsung H Club Global Multi-Strategy Professional Investment Private Investment Trust 1st	10,306	-	10,306	874	414	115
INMARK US Professional Private Investment Trust 8	104,692	7	104,685	-	-	-
Multi Asset Foreign Real Estate Investment Trust 3	142,440	107	142,333	-	-	-
Heungkuk Balance Investment Private Investment Trust 1st	6,495	1,020	5,475	-	-	-
My First Asset First Gift Professional Investment Private Investment Trust 3rd	4,111	888	3,223	-	-	-
LK GHC Specialized Privately Placed Investment Trust No.1	45,370	13	45,357	-	-	-
MiraeAsset Solomon Short-Term Gov't and Agency Bond Investment Trust (Fixed Income) Class I	31,236	16	31,220	-	-	-
MiraeAsset Corporate Emerging Dollar Prime Gov't and Agency Bond Monthly Payment Investment Trust	41,402	13	41,389	-	-	-
Mirae Asset Global Bio Investment Fund I	83,318	228	83,090	4	(877)	(877)
MADW EP Co. Ltd	3,546	1,286	2,260	7,061	4,306	1,476
Good Aiming 1st Co., Ltd.	46,679	47,200	(521)	2,008	(14)	(14)
Good Aiming 2nd Co., Ltd.	46,645	46,200	445	1,306	2,976	2,976
Good Chance 1st Co., Ltd.	121,210	122,100	(890)	3,964	(578)	(578)
Good Chance 2nd Co., Ltd.	107	-	107	4,189	393	393
Deogi Dream M.S. Co.,Ltd.	30,945	31,454	(509)	-	-	-
Good Chance 4th Co., Ltd.	27,373	27,000	373	4,438	565	565
Good Chance 5th Co., Ltd.	100,813	101,800	(987)	-	(898)	(898)
Good Chance 6th Co., Ltd.	50,093	50,301	(208)	-	-	-

							2017
	Assets	Liabilities	Equity	Operating revenue	Profit (loss) for the year	Total comprehensive income	
2010 KIF-Mirae Asset IT Investment Fund 4th	₩ 16,283	5	16,278	5,325	1,729	909	
Mirae Asset Social Corporate Investment Fund	1,827	14	1,813	80	(151)	(151)	
Mirae Asset Agro Project Fund	10,108	1,189	8,919	971	(844)	(3,151)	
KoFC-Mirae Asset Pioneer Champ 2011-3rd Investment Fund	22,362	2,118	20,244	2,061	(1,837)	(3,510)	
Mirae Asset Social Corporate Investment Fund 2nd	4,323	40	4,283	347	(132)	1,960	
Noroo-Mirae Asset Agrostar Project Venture Fund	13,252	244	13,008	1,475	(239)	1,530	
Mirae Asset Good Corporate Secondary Investment Fund	13,721	280	13,441	1,710	1,256	2,213	
MAVI Good Company Investment Fund #1	5,825	53	5,772	288	(361)	(711)	
MAVI Good Company Investment Fund #2	5,309	47	5,262	228	(280)	(777)	
MIRAE ASSET Global Investment Fund	35,328	251	35,077	2,030	(2,850)	(1,723)	
Koscom-Mirae Asset Fintech Company Investment Fund #1	1,961	15	1,946	79	16	217	
MIRAE ASSET Young Start-Up Investment Fund	10,249	94	10,155	158	(323)	(33)	
Mirae Asset Good Corporate Secondary Investment Fund #2	19,242	132	19,110	207	(762)	4,427	
2016 KIF-MIRAE ASSET ICT Venture Fund	11,380	155	11,225	218	(845)	(703)	
MIRAE ASSET Good Company Investment Fund #16-1	14,137	58	14,079	76	(581)	87	
MIRAE ASSET Good Company Investment Fund #17-1	16,696	68	16,628	31	(206)	128	
Mirae Asset Hi-Tech Frontier Investment Fund	4,986	160	4,826	7	(174)	(174)	
MIRAE ASSET Young Start-Up Investment Fund #2	5,000	7	4,993	-	(7)	(7)	
Mirae Asset Securities (UK) Ltd.	92,735	8,639	84,096	6,885	2,047	(8,573)	
Mirae Asset Securities (USA) Inc.	32,085,303	31,840,289	245,014	240,335	(22,776)	(55,693)	
Mirae Asset Securities (HK) Limited	1,135,718	86,014	1,049,704	162,764	31,585	15,764	
Mirae Asset Realty (Singapore) PTE.	191	35	156	-	(8)	(8)	
Asia Opportunity Arbitrage Fund	112,595	67,486	45,109	12,749	(794)	(8,055)	
Mirae Asset China Growth Equity Fund	74,466	68	74,398	-	-	-	
Mirae Asset Securities (Vietnam) LLC	130,934	31,541	99,393	11,712	5,515	(2,673)	
Mirae Asset Wealth Management (Brazil) CCTVM	124,854	45,601	79,253	26,285	8,199	14,748	
Mirae Asset Securities (UK) Ltd.	-	-	-	-	-	-	
Mirae Asset Wealth Management (USA) Inc.	345,998	1,806	344,192	12,005	7,768	8,611	
Mirae Asset (Shanghai) Investment Consulting Co. Ltd.	930	-	930	6	(1)	19	
Mirae Asset Investment Advisory (BEIJING) Co., Ltd.	3,647	126	3,521	1,066	(59)	191	
Mirae Asset Securities (Singapore) Pte. Ltd.	7,482	849	6,633	1,629	328	906	
Mirae Asset Securities Mongolia UTsK LLC	1,595	10	1,585	253	26	158	
PT. Mirae Asset Sekuritas Indonesia	182,335	129,214	53,121	23,825	5,799	6,879	
Mirae Asset Investment Asia Limited	3,339	6	3,333	11,471	(497)	(651)	

							2017
	Assets	Liabilities	Equity	Operating revenue	Profit (loss) for the year	Total comprehensive income	
South Mountain Asset Management Ltd.	₩ 970	9	961	9	(14)	(13)	
Mirae Asset Capital Markets (India) Private Limited	967	25	942	4	(153)	(153)	
MAPS HAWAII TWO, LLC.	419,757	158,046	261,711	-	(9,711)	(45,558)	
MAPS WAIKIKI HOTEL, LLC.	856,293	438,232	418,061	71,455	2,876	(53,002)	
MAPS HOTELS AND RESORTS HAWAII 2, LLC.	21,981	11,279	10,702	153,505	(1,014)	(1,424)	
MAPS ROYAL GROVE, LLC.	28	(1)	29	166	20	17	
MAGBI Fund Limited	80,699	-	80,699	-	-	-	
Super Delta Pte. Ltd.	44,634	-	44,634	-	-	-	
32 Money Market Trust	1,907,116	2,547	1,904,569	12,148	749	749	

(\*) The financial statements of some subsidiaries are adjusted to conform to the accounting policies of the Company.

## 17. Investments in associates

### (1) Details of investments in associates as of December 31, 2018 are as follows:

Associates	Main business	Location	2018		
			Percentage of ownership (%)	Acquisition cost	Carrying amount
Mirae Asset Life Insurance Co., Ltd (*1)	Insurance	Korea	17.11	₩ 326,729	426,095
Pantos Logistics Co., Ltd (*2)	Shipping and transport	Korea	19.99	145,000	145,000
SMC RMB Investors II Limited	Investment	China	30.73	245	4,968
Cassava Investment Korea Pte. Ltd.	Investment	Singapore	24.53	280	-
Transwestern Corporate Properties I LLC	Investment	USA	27.40	121,215	122,911
Traphaco Joint Stock Company	Manufacturing	Vietnam	40.00	108,283	112,402
HPJV1 LLC (*3)	Manufacturing	USA	80.00	82,847	78,907
Mirae Asset-NAVER New Growth Fund I	Investment	Korea	45.00	17,100	16,356
Mirae Asset-GS Retail New Growth Fund I (*3)	Investment	Korea	50.00	20,000	18,487
Mirae Asset-Celltrion New Growth Fund I	Investment	Korea	45.00	22,500	22,126
Hancom-Miraeasset 4IR Fund	Investment	Korea	32.26	5,000	4,948
Mirae Asset Partners PEF 4th (*4)	Investment	Korea	3.97	6,087	1,511
New Growth Engine Green Future PEF (*4)	Investment	Korea	9.99	1,223	1,102
Lotte KDB Mirae Asset Daewoo Global Investment Partnership PEF (*4)	Investment	Korea	11.00	10	7
Mirae Asset Naver Asia Growth PEF (*3)	Investment	Korea	83.17	98,129	94,101
Mirae Asset 5th SPAC (*2)	SPAC	Korea	0.29	14	27
Mirae Asset Daewoo 1st SPAC (*2)	SPAC	Korea	0.83	40	73
Mirae Asset Daewoo 2nd SPAC (*2)	SPAC	Korea	0.33	10	19
				₩ 954,712	1,049,040

(\*1) The Group's ownership is 21.60 and 26.28 percent as of December 31, 2018 and 2017, considering the treasury stocks held by Mirae Asset Life Insurance Co., Ltd.

(\*2) Although the Group's ownership is less than 20 percent as of December 31, 2018, the Controlling Company has significant influence because it has voting power over the financial and operating policies of the investee and thus was included as associate.

(\*3) Although the Group's ownership is more than 50 percent as of December 31, 2018, the Group does not have control since the Group is not the General Partner.

(\*4) Since the Controlling Company is the General Partner, the Controlling Company has significant influence over those associates.

Associates	Main business	Location	2017			
			Percentage of ownership (%)	Acquisition cost	Carrying amount	
Mirae Asset Life Insurance Co., Ltd (*1)	Insurance	Korea	19.87	₩ 320,296	394,770	
SMC RMB Investors II Limited	Investment	China	30.73	245	5,517	
Cassava Investment Korea Pte. Ltd.	Investment	Singapore	24.53	280	-	
Transwestern Corporate Properties I LLC	Investment	USA	26.88	120,745	106,610	
Traphaco Joint Stock Company	Manufacturing	Vietnam	40.00	125,332	125,332	
Mirae Asset-NAVER New Growth Fund I	Investment	Korea	45.00	18,000	17,601	
Mirae Asset-GS Retail New Growth Fund I (*3)	Investment	Korea	50.00	10,000	9,685	
Mirae Asset-Celltrion New Growth Fund I	Investment	Korea	45.00	11,250	10,764	
Mirae Asset Partners PEF 4th (*4)	Investment	Korea	3.97	6,087	1,333	
New Growth Engine Green Future PEF (*4)	Investment	Korea	9.99	1,223	1,259	
Lotte KDB Mirae Asset Daewoo Global Investment Partnership PEF (*4)	Investment	Korea	11.00	10	8	
Mirae Asset 3rd SPAC (*2)	SPAC	Korea	0.31	19	37	
Mirae Asset 5th SPAC (*2)	SPAC	Korea	0.29	14	27	
Daewoo Special Purpose Acquisition 3 Co., Ltd (*2)	SPAC	Korea	0.37	39	39	
Mirae Asset Daewoo 1st SPAC (*2)	SPAC	Korea	0.83	40	73	
				₩ 613,580	673,055	

(\*1) The Group's ownership is 21.60 and 26.28 percent as of December 31, 2018 and 2017 considering the treasury stocks Mirae Asset Life Insurance Co., Ltd hold.

(\*2) Although the Group's ownership is less than 20 percent as of December 31, 2018, the Controlling Company has significant influence because it has voting power over the financial and operating policies of the investee and thus was included as associate.

(\*3) Although the Group's ownership is more than 50 percent as of December 31, 2018, the Group does not have control since the Group is not the General Partner.

(\*4) Since the Controlling Company is the General Partner, the Controlling Company has significant influence over those associates.

**(2) Details of changes in the carrying amounts of investments in associates for the year ended December 31, 2018 are as follows:**

	2018							
	Beginning balance	Acquisition	Disposal	Reclassification	Dividend received	Share of profits (losses)	Effect on change in equity	Ending balance
Mirae Asset Life Insurance Co., Ltd	₩ 394,770	6,433	-	-	(4,903)	29,340	455	426,095
Pantos Logistics Co., Ltd	-	145,000	-	-	-	-	-	145,000
SMC RMB Investors II Limited	5,517	-	-	-	-	(594)	45	4,968
Cassava Investment Korea Pte. Ltd.	-	-	-	-	-	-	-	-
Transwestern Corporate Properties I LLC	106,610	2,171	-	-	(4,590)	6,960	11,760	122,911
Traphaco Joint Stock Company	125,332	-	-	(9,867)	(2,074)	3,499	(4,488)	112,402
HPJV1 LLC	-	82,847	-	-	-	(3,940)	-	78,907
Mirae Asset-NAVER New Growth Fund I	17,601	-	(900)	-	-	(345)	-	16,356
Mirae Asset-GS Retail New Growth Fund I	9,685	10,000	-	-	-	(1,198)	-	18,487
Mirae Asset-Celltrion New Growth Fund I	10,764	11,250	-	-	-	112	-	22,126
Hancom-Miraeasset 4IR Fund	-	5,000	-	-	-	(52)	-	4,948
Mirae Asset Partners PEF 4th	1,333	-	-	-	-	130	48	1,511
New Growth Engine Green Future PEF	1,259	-	-	-	-	(157)	-	1,102

	2018							
	Beginning balance	Acquisition	Disposal	Reclassification	Dividend received	Share of profits (losses)	Effect on change in equity	Ending balance
Lotte KDB Mirae Asset Daewoo Global Investment Partnership PEF	8	-	-	-	-	(1)	-	7
Mirae Asset Naver Asia Growth PEF	-	98,129	-	-	-	(3,404)	(624)	94,101
Mirae Asset 3rd SPAC	37	-	(37)	-	-	-	-	-
Mirae Asset 5th SPAC	27	-	-	-	-	-	-	27
Daewoo Special Purpose Acquisition 3 Co., Ltd	39	-	(39)	-	-	-	-	-
Mirae Asset Daewoo 1st SPAC	73	-	-	-	-	-	-	73
Mirae Asset Daewoo 2nd SPAC	-	10	-	-	-	-	9	19
	₩ 673,055	360,840	(976)	(9,867)	(11,567)	30,350	7,205	1,049,040

**Details of changes in the carrying amounts of investments in associates for the year ended December 31, 2017 are as follows:**

	2017							
	Beginning balance	Acquisition	Disposal	Reclassification	Dividend received	Share of profits (losses)	Effect on change in equity	Ending balance
Mirae Asset Life Insurance Co., Ltd	₩ 360,177	-	-	-	(1,586)	37,427	(1,248)	394,770
SMC RMB Investors II Limited	6,368	-	-	-	(2,671)	1,975	(155)	5,517
Daewoo Global Development Pte. Ltd.	21,143	-	(19,499)	-	-	-	(1,644)	-
Transwestern Corporate Properties I LLC	9,449	116,673	(1,283)	-	(10,058)	5,781	(13,952)	106,610
Traphaco Joint Stock Company	-	125,332	-	-	-	-	-	125,332
Mirae Asset-NAVER New Growth Fund I	9,000	9,000	-	-	-	(399)	-	17,601
Mirae Asset-GS Retail New Growth Fund I	-	10,000	-	-	-	(315)	-	9,685
Mirae Asset-Celltrion New Growth Fund I	-	11,250	-	-	-	(486)	-	10,764
Mirae Asset Partners PEF 4th	1,072	-	-	-	-	(2)	263	1,333
Renaissance 1st PEF	5,497	-	(8,942)	-	-	3,445	-	-
New Growth Engine Green Future PEF	2,227	-	(1,080)	-	-	112	-	1,259
Lotte KDB Mirae Asset Daewoo Global Investment Partnership PEF	10	-	-	-	-	(2)	-	8
Mirae Asset 3rd SPAC	37	-	-	-	-	-	-	37
Mirae Asset 5th SPAC	27	-	-	-	-	-	-	27
Daewoo SBI Special Purpose Acquisition 1 Co., Ltd	62	-	-	(62)	-	-	-	-
Daewoo Special Purpose Acquisition 2 Co., Ltd	46	-	(46)	-	-	-	-	-
Daewoo Special Purpose Acquisition 3 Co., Ltd	39	-	-	-	-	-	-	39
Mirae Asset Daewoo 1st SPAC	-	40	-	-	-	27	6	73
	₩ 415,154	272,295	(30,850)	(62)	(14,315)	47,563	(16,730)	673,055

**(3) Financial information of investments in associates as of December 31, 2018 is as follows:**

						2018
	Assets	Liabilities	Equity	Operating revenue	Profit (loss) for the year	Total comprehensive income
Mirae Asset Life Insurance Co., Ltd	₩ 34,640,500	32,580,300	2,060,200	3,781,253	101,821	40,199
Pantos Logistics Co., Ltd	145,000	-	145,000	-	-	-
SMC RMB Investors II Limited	17,629	1,465	16,164	(2,276)	(1,932)	(1,790)
Cassava Investment Korea Pte. Ltd.	2	11,295	(11,293)	-	-	-
Transwestern Corporate Properties I LLC	403,756	4	403,752	17,052	30,828	28,182
Traphaco Joint Stock Company	56,629	7,997	48,632	20,914	1,733	(723)
HPJV1 LLC	102,740	-	102,740	1,065	1,065	1,301
Mirae Asset-NAVER New Growth Fund I	36,348	-	36,348	250	(767)	(767)
Mirae Asset-GS Retail New Growth Fund I	36,975	-	36,975	143	(2,395)	(2,395)
Mirae Asset-Celltrion New Growth Fund I	49,168	-	49,168	1,428	(99)	(99)
Hancom-Miraeasset 4IR Fund	15,343	4	15,339	33	(161)	(161)
Mirae Asset Partners PEF 4th	72,131	28	72,103	-	(2)	(2)
New Growth Engine Green Future PEF	11,034	1	11,033	848	(1,572)	(1,572)
Lotte KDB Mirae Asset Daewoo Global Investment Partnership PEF	77	-	77	1	(2)	(2)
Mirae Asset Naver Asia Growth PEF	202,835	13,186	189,649	(4,413)	(6,268)	(7,019)
Mirae Asset 5th SPAC	10,429	1,067	9,362	153	21	21
Mirae Asset Daewoo 1st SPAC	9,976	1,115	8,861	-	38	38
Mirae Asset Daewoo 2nd SPAC	6,968	1,164	5,804	-	(12)	(12)

**Financial information of investments in associates as of December 31, 2017 is as follows:**

						2017
	Assets	Liabilities	Equity	Operating revenue	Profit (loss) for the year	Total comprehensive income
Mirae Asset Life Insurance Co., Ltd	₩35,527,597	33,474,018	2,053,579	4,321,774	220,684	218,782
SMC RMB Investors II Limited.	19,611	1,657	17,954	7,009	6,428	5,923
Cassava Investment Korea Pte. Ltd.	2	11,295	(11,293)	-	-	-
Transwestern Corporate Properties I LLC	396,661	19	396,642	21,509	21,509	(17,661)
Traphaco Joint Stock Company	57,180	13,978	43,202	-	-	-
Mirae Asset-NAVER New Growth Fund I	39,368	254	39,114	141	(875)	(875)
Mirae Asset-GS Retail New Growth Fund I	19,623	254	19,369	136	(631)	(631)
Mirae Asset-Celltrion New Growth Fund I	24,299	379	23,920	58	(1,080)	(1,080)
Mirae Asset Partners PEF 4th	72,134	28	72,106	-	(57)	(57)
New Growth Engine Green Future PEF	12,605	-	12,605	365	1,456	1,456
Lotte KDB Mirae Asset Daewoo Global Investment Partnership PEF	84	-	84	1	(4)	(4)
Mirae Asset 3rd SPAC	12,995	1,206	11,789	-	14	14
Mirae Asset 5th SPAC	10,405	1,057	9,348	-	64	64
Daewoo Special Purpose Acquisition 3 Co., Ltd	12,067	1,541	10,526	-	5	5
Mirae Asset Daewoo 1st SPAC	9,900	1,077	8,823	-	19	19

**18. Property and equipment**

**(1) Details of property and equipment as of December 31, 2018 and 2017 are as follows:**

									2018
	Land	Structu-re	Vehicles	Furniture and fixtures	Data processing equipment	Leasehold facilities	Construc-tion in progress	Others	Total
Acquisition cost	₩ 80,760	19,769	1,302	114,340	97,958	8,181	54,356	4,354	381,020
Accumulated depreciation	-	(4,504)	(1,010)	(57,254)	(77,869)	(6,608)	-	(1,623)	(148,868)
The carrying amount, net	₩ 80,760	15,265	292	57,086	20,089	1,573	54,356	2,731	232,152

									2017
	Land	Structu-re	Vehicles	Furniture and fixtures	Data processing equipment	Leasehold facilities	Construc-tion in progress	Others	Total
Acquisition cost	₩ 84,291	22,191	1,772	133,657	87,461	8,592	19,029	3,673	360,666
Accumulated depreciation	-	(2,778)	(1,498)	(81,401)	(68,441)	(6,631)	-	(1,341)	(162,090)
The carrying amount, net	₩ 84,291	19,413	274	52,256	19,020	1,961	19,029	2,332	198,576

**(2) The Group did not recognized any impairment loss in property and equipment as of December 31, 2018 and 2017.**

**(3) Details of changes in property and equipment for the years ended December 31, 2018 and 2017 are as follows:**

							2018
	Beginning balance	Acquisition	Disposal	Depreciation	Reclassification (*1)	Others (*2)	Ending balance
Land	₩ 84,291	-	(3,118)	-	(413)	-	80,760
Structure	19,413	2,283	(1,315)	(2,196)	(2,920)	-	15,265
Vehicles	274	104	-	(132)	-	46	292
Furniture and fixtures	52,256	15,313	(612)	(11,167)	(36)	1,332	57,086
Data processing equipment	19,020	10,497	-	(9,431)	-	3	20,089
Leasehold facilities(*3)	1,961	356	-	(744)	-	-	1,573
Construction in progress	19,029	35,327	-	-	-	-	54,356
Others	2,332	628	(11)	(354)	36	100	2,731
	₩ 198,576	64,508	(5,056)	(24,024)	(3,333)	1,481	232,152

(\*1) Reclassification to Investment properties by changes of leasable area.

(\*2) Changes in scope of consolidation and fluctuation of foreign exchange rate.

(\*3) ₩356 million acquired from leasehold facilities through a transfer of provision of restoration incurred in relation to new lease contract.

							2017
	Beginning balance	Acquisition	Disposal	Depreciat-ion	Reclassification (*1)	Others (*2)	Ending balance
Land	₩ 228,262	-	(4,115)	-	(139,856)	-	84,291
Structure	47,132	-	(221)	(3,251)	(24,247)	-	19,413
Vehicles	485	-	(72)	(181)	-	42	274
Furniture and fixtures	45,508	20,435	(4,494)	(9,265)	(66)	138	52,256
Data processing equipment	22,816	5,058	(5)	(8,828)	61	(82)	19,020
Leasehold facilities(*3)	2,643	808	-	(827)	(663)	-	1,961
Construction in progress	-	19,029	-	-	-	-	19,029
Others	910	2,025	(53)	(366)	-	(184)	2,332
	₩ 347,756	47,355	(8,960)	(22,718)	(164,771)	(86)	198,576

(\*1) Reclassification to Investment properties by changes of leasable area.

(\*2) Changes in scope of consolidation and fluctuation of foreign exchange rate.

(\*3) ₩808 million acquired from leasehold facilities through a transfer of provision of restoration incurred in relation to new lease contract.

(4) The Group is leasing a portion of the buildings, including the Yeouido office building, etc., to Standard Chartered Bank Korea Limited, etc., and therefore, it established the right to collateral security of ₩14,136 million and ₩17,077 million as of December 31, 2018 and 2017 and the right to lease on a deposit basis of ₩3,916 million and ₩3,989 million related to the lease respectively.

## 19. Investment properties

(1) Details of investment properties as of December 31, 2018 and 2017 are as follows:

		2018		
		Land	Structures	Total
Acquisition cost	₩	148,512	1,007,527	1,156,039
Accumulated depreciation		-	(69,859)	(69,859)
The carrying amount, net	₩	148,512	937,668	1,086,180

		2017		
		Land	Structures	Total
Acquisition cost	₩	260,113	920,433	1,180,546
Accumulated depreciation		-	(39,946)	(39,946)
The carrying amount, net	₩	260,113	880,487	1,140,600

(2) The Group has not recognized any impairment loss in investment properties as of December 31, 2018 and 2017.

(3) Details of changes in investment properties for the years ended December 31, 2018 and 2017 are as follows:

	2018						
	Beginning balance	Acquisiti-on	Disposal	Depreciation	Reclassification (*1)	Others (*2)	Ending balance
Land	₩ 260,113	-	(91,751)	-	413	(20,263)	148,512
Structures	880,487	85,596	(54,905)	(29,866)	2,920	53,436	937,668
	₩ 1,140,600	85,596	(146,656)	(29,866)	3,333	33,173	1,086,180

	2017				
	Beginning balance	Depreciation	Reclassification (*1)	Others (*2)	Ending balance
Land	₩ 120,257	-	139,856	-	260,113
Structures	994,829	(29,116)	24,247	(109,473)	880,487
	₩ 1,115,086	(29,116)	164,103	(109,473)	1,140,600

(\*1) Reclassification from properties by changes of leasable area.

(\*2) Effects from changes of foreign currency exchange rates and scope of consolidation.

(4) Details of gain (loss) on investment properties for the years ended December 31, 2018 and 2017 are as follows:

	2018	2017
Rental income	₩ 143,810	147,303
Direct operating expenses for investment properties that generated rental income	(101,759)	(70,244)

(5) Fair value of investment properties as of December 31, 2018 and 2017 are as follows:

	2018	2017
Land	₩ 132,745	217,598
Structures	1,095,059	1,008,418
	₩ 1,227,804	1,226,016

(\*) Valuation was conducted by professional independent appraisers who have evaluated similar properties in the past. Valuation was based on inputs used in valuation technique and fair values is classified to Level 3.

(6) Valuation methods of investment property and input factor are as follows:

	Valuation technique	Inputs
Land	Transaction comparison approach	Transaction price
Structures	Discounted cash flow analysis	Future cash flows (deposits, rental income, expenses, vacancy rate and others), discount rates

## 20. Intangible assets

(1) Details of changes in intangible assets for the years ended December 31, 2018 and 2017 are as follows:

	2018				
	Goodwill	Development cost	Software	Others	Total
Beginning balance, net	₩ 397,777	29,993	8,245	214,039	650,054
Acquisition	-	32,947	2,800	570	36,317
Transfers (*)	-	10,300	384	-	10,684
Amortization	-	(14,388)	(3,759)	(23,698)	(41,845)
Disposal	-	-	-	(968)	(968)
Fluctuation of foreign exchange rate	-	(10)	(23)	616	583
Ending balance, net	₩ 397,777	58,842	7,647	190,559	654,825

(\*) It is transferred from advance payments for the year ended December 31, 2018.

	2017				
	Goodwill	Development cost	Software	Others	Total
Beginning balance, net	₩ 397,777	23,330	12,102	222,672	655,881
Acquisition	-	18,946	1,922	20,789	41,657
Transfers	-	1,061	(1,061)	-	-
Amortization	-	(13,228)	(4,720)	(24,954)	(42,902)
Impairment	-	-	-	(153)	(153)
Disposal	-	-	-	(1,841)	(1,841)
Fluctuation of foreign exchange rate	-	(116)	2	(2,474)	(2,588)
Ending balance, net	₩ 397,777	29,993	8,245	214,039	650,054

(2) Impairment test of intangible assets

1) Details of intangible assets tested for impairment as of December 31, 2018 and 2017 are as follows:

	2018	2017
Goodwill	₩ 397,777	397,777
Brand	56,614	56,614
	₩ 454,391	454,391

2) The recoverable amount of the assets was evaluated based upon their respective value in use. The value was calculated using DCF method with consideration of special aspects of financial institution.

i) Measurement date and projection period

Measurement date for the calculation of recoverable amount is September 30, 2018 and its projection period for cash flow estimates is adjusted to 5.25 years. Terminal growth rate used in measuring the periods beyond the projection period.

ii) Discount rate and terminal growth rate

The required rates of return expected by shareholders were applied to the discount rates by calculating the cost of capital which comprises a risk-free interest rate, a market risk premium and a systemic risk (beta factor). Expected terminal growth rate after the projection period is estimated to be 1%.

iii) The main assumptions used in estimating future cash flow are the rate of GDP growth and Consumer Price Index (CPI).

3) As a result of an impairment test, the recoverable amount of the intangible assets exceeds its book value by ₩531,651 million, therefore no impairment was recognized.

## 21. Other assets

Details of other assets as of December 31, 2018 and 2017 are as follows:

		2018	2017
Advance payments	₩	24,764	80,693
Prepaid expenses		37,485	25,071
Others		7,775	8,147
	₩	70,024	113,911

## 22. Pledged assets

Details of pledged assets as of December 31, 2018 and 2017 are as follows:

	2018	2017	Purpose
Cash and cash equivalent	₩ -	394,487	Securities lending and borrowing
Financial assets at fair value through profit or loss	-	20,112,781	Securities sold under repurchase agreements(*1), securities borrowing, trading with collateral on derivatives(*2), etc.
Financial assets measured at fair value through profit or loss	22,199,657	-	Securities sold under repurchase agreements(*1), securities borrowing, trading with collateral on derivatives(*2), etc.
Available-for-sale financial assets	-	4,660,612	Securities sold under repurchase agreements(*1), BTL (Build-Transfer-Lease)(*3), etc.
Financial assets measured at fair value through other comprehensive income	6,478,173	-	Securities sold under repurchase agreements(*1), etc.
Loans and receivables	-	31,489,442	Derivatives-linked securities, payments and settlements etc.
Financial assets at amortized cost	52,107,489	-	Derivatives-linked securities, payments and settlements etc.
	₩ 80,785,319	56,657,322	

(\*1) The Group has a contract to repurchase the transferred assets at predetermined price or selling price, plus a certain rate of return, and therefore, financial assets derecognized are provided as collaterals and the transferee can sell or practice rehypothecation. After transfer, the Group recognizes securities sold under repurchase agreements as liabilities since the transferred asset is continuously recognized.

(\*2) The Group provides securities or bonds as collateral that correspond to a certain percentage of amount of securities borrowed during loan transaction, and also provides collateral for the margin call arising due to the decline in valuation of derivative in OTC derivative transactions.

(\*3) In connection with BTL business, 52,227 shares of Hwsoon Education Corp., which is the operating company of the BTL business are provided to the National Federation of Fisheries Cooperatives as collateral.

(\*4) Aside from the items that were separately described in note 4-(1)-3-iii), financial assets designated at fair value through profit or loss, available-for-sale financial assets and loans and receivables as of December 31, 2017 were reclassified as financial assets designated as measured at fair value through profit or loss, financial assets measured at fair value through other comprehensive income and financial assets measured at amortized cost as of December 31, 2018, respectively.

## 23. Financial liabilities at financial assets measured at fair value through profit or loss

The Group's financial liabilities at fair value through profit or loss are classified as financial liabilities at fair value through profit or loss held for trading and financial liabilities designated at fair value through profit or loss.

### (1) Details of the financial liabilities at fair value through profit or loss held for trading as of December 31, 2018 and 2017 are as follows:

		2018(*)	2017
Securities in short position	₩	-	816,883
Derivative liabilities		-	1,320,154
	₩	-	2,137,037

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), the above items were reclassified as financial liabilities measured at fair value through profit or loss as of December 31, 2018, and are included in note 24-(1).

### (2) Details of the securities in short position as of December 31, 2018 and 2017 are as follows:

		2018	2017	Valuation
Equity securities	₩	-	598,486	Fair value
Bonds		-	218,314	Fair value
Others (ETF sold)		-	83	Fair value
	₩	-	816,883	

(\*) The Group treats securities lending and borrowing, manages memorandum account for the securities borrowed from the Korea Securities Depository and recognizes them as financial liabilities at fair value through profit or loss when the Group sells securities borrowed. In addition, the Group also recognizes as financial liabilities at fair value through profit or loss for short selling of securities without performing securities lending and borrowing.

### (3) Details of the financial liabilities designated at fair value through profit or loss as of December 31, 2018 and 2017 are as follows:

		2018	2017
Hybrid financial instruments			
Equity-linked securities	₩	-	12,144,915
Other derivatives combine securities sold		-	3,150,509
	₩	-	15,295,424

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), the above items were reclassified as financial liabilities designated as measured at fair value through profit or loss as of December 31, 2018, and are included in note 24-(2).

## 24. Financial liabilities measured at fair value through profit or loss

The Group's financial liabilities measured at fair value through profit or loss is classified with financial liabilities measured at fair value through profit or loss and financial liabilities designated as measured at fair value through profit or loss.

### (1) Financial liabilities measured at fair value through profit or loss

i) Details of the financial liabilities measured at fair value through profit or loss as of December 31, 2018 and 2017 are as follows:

		2018	2017(*)
Securities in short position	₩	569,076	-
Derivative liabilities		1,711,362	-
	₩	2,280,438	-

(\*) The above items were classified as financial liabilities held for trading as of December 31, 2017 and are included in note 23.

ii) Details of the securities in short position as of December 31, 2018 and 2017 are as follows:

	Description(*)	2018	2017	Valuation
Securities in short position	Equity securities	₩ 275,775	-	Fair value
	Bonds	293,261	-	Fair value
	Others (ETF sold)	40	-	Fair value
	₩	569,076	-	

(\*) The Group treats securities lending and borrowing, manages memorandum account for the securities borrowed from the Korea Securities Depository and recognizes them as financial liabilities at fair value through profit or loss when the Group sells securities borrowed. In addition, the Group also recognizes as financial liabilities at fair value through profit or loss for short selling of securities without performing securities lending and borrowing.

### (2) Financial liabilities designated as measured at fair value through profit or loss

i) Details of the financial liabilities at fair value through profit or loss as of December 31, 2018 and 2017 are as follows:

Reason for designation	Description	2018	2017(*)
Hybrid financial assets	Equity-linked securities sold	₩ 12,029,041	-
	Other derivatives combine securities sold	3,430,529	-
	₩	15,459,570	-

(\*) The above items were classified as financial liabilities held for trading as of December 31, 2017 and are included in note 23.



ii) Details of changes in fair value by credit risk fluctuation of financial liabilities designated as measured at fair value through profit or loss for the year ended December 31, 2018 are as follows:

		2018
Beginning balance	₩	2,485
Credit risk increase recognized in other comprehensive income		7,696
Credit risk decrease recognized in other comprehensive income		(342)
Disposal		(3,799)
Income tax effect		(978)
Ending balance	₩	5,062

iii) Differences of contractual payment due at maturity and the carrying amount of financial liabilities designated as measured at fair value through profit or loss as of December 31, 2018 are as follows:

		Contractual payment at maturity	Book value	Difference
Equity-linked securities sold	₩	11,852,267	12,029,041	(176,774)
Other derivatives combine securities sold		3,368,876	3,430,529	(61,653)
	₩	15,221,143	15,459,570	(238,427)

## 25. Deposits due to customers (“Deposits”)

Details of the deposits due to customers as of December 31, 2018 and 2017 are as follows:

		2018	2017
Customers’ deposits			
Customers’ deposits for brokerage	₩	4,736,347	4,408,358
Customers’ deposits for exchange traded derivatives trading		338,691	440,557
Customers’ deposits for savings		44,714	62,078
Customers’ deposits for collective investment securities		281,319	168,391
Others		1,967	12,402
		5,403,038	5,091,786
Guarantee for credit account		-	3,160
Others		62,500	23,931
	₩	5,465,538	5,118,877

## 26. Borrowings

(1) Details of the borrowings as of December 31, 2018 and 2017 are as follows:

		2018	2017
	Lender	Interest rate (%)	Amount
Borrowings	Korea Securities Finance Corp. and others	1.89~2.28	₩ 3,570,447
	KEB Hana Bank and others	3.40~5.50	47,872
	KDB Bank and others	2.80~7.90	587,676
Call money	KB Kookmin bank and others	1.87~2.01	1,810,000
Securities sold under repurchase agreements	Others	0.30~7.01	62,648,535
Others		0.13~2.30	3,698,870
			₩ 72,363,400

		2018	2017
	Lender	Interest rate (%)	Amount
Borrowings	Korea Securities Finance Corp. and others	1.50~1.73	₩ 2,300,000
	Dongbu Insurance Co., Ltd. and others	3.40~5.50	69,231
	KDB Bank and others	1.75~6.80	842,866
Call money	Woori bank and others	1.62~1.72	600,000
Securities sold under repurchase agreements	Others	0.10~3.20	43,132,859
Others		0.10~1.75	2,445,240
			₩ 49,390,196

(2) Details of changes of cash flow in borrowings for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Beginning balance	₩	49,390,196	18,946,894
Changes from financing cash flow			
Changes of borrowings, net		6,274,498	3,040,699
Effect from fluctuations in exchange rate		1,313,271	(67,810)
Others		15,385,435	27,470,413
Ending balance	₩	72,363,400	49,390,196

## 27. Debentures

Details of the debentures as of December 31, 2018 and 2017 are as follows:

(1) General bonds

	Issued date	Due date	Interest rate (%)	2018	2017
The 4th public offering subordinated Debenture	2013.02.21	2018.08.21	4.100	₩ -	200,000
The 5th public offering subordinated Debenture	2016.07.28	2022.01.28	3.500	300,000	300,000
The 38-3rd public offering Debenture	2012.11.20	2019.11.20	3.370	50,000	50,000
The 39-1st public offering Debenture	2015.05.28	2018.05.28	2.098	-	250,000
The 39-2nd public offering Debenture	2015.05.28	2020.05.28	2.387	50,000	50,000
The 40th public offering Debenture	2016.06.03	2019.06.03	1.857	250,000	250,000
The 41th public offering Debenture	2016.06.29	2021.06.29	1.833	80,000	80,000
The 42th public offering Debenture	2016.07.22	2021.07.22	1.768	170,000	170,000
The 43th public offering subordinated Debenture	2016.12.08	2022.06.08	4.000	40,000	40,000
The 44th public offering subordinated Debenture	2016.12.15	2022.06.15	4.000	210,000	210,000
The 45th public offering subordinated Debenture	2016.12.20	2022.06.20	4.000	150,000	150,000
The 46th public offering subordinated Debenture	2017.01.20	2022.07.20	3.700	220,000	220,000
The 47-1st public offering subordinated Debenture	2018.04.26	2021.04.26	2.707	260,000	-
The 47-2nd public offering subordinated Debenture	2018.04.26	2023.04.26	3.005	240,000	-
The 48-1st public offering subordinated Debenture	2018.09.12	2021.09.12	2.287	110,000	-
The 48-2nd public offering subordinated Debenture	2018.09.12	2023.09.12	2.505	260,000	-
The 48-3rd public offering subordinated Debenture	2018.09.12	2025.09.12	2.691	130,000	-
Unsecured Reg S Senior Bond	2018.11.07	2021.11.06	4.125	335,220	-
MAPS HAWAII TWO LLC Mezzanine Loan	2016.09.12	2021.09.22	5.400	162,125	155,353
MAS/2018/CNSHTP-01	2018.04.16	2019.04.16	7.900	2,412	-
MAS/2018/CNSHTP-02	2018.04.16	2019.04.16	7.900	2,412	-
MAS/2018/CNSHTP-03	2018.04.16	2020.04.16	7.900	2,412	-
MAS/2/2018/CNSHTP-01	2018.07.09	2019.07.09	7.900	772	-
MAS/2/2018/CNSHTP-02	2018.07.09	2019.07.09	7.900	5,018	-

	Issued date	Due date	Interest rate (%)	2018	2017
Face Value				3,030,371	2,125,353
Discount on Debentures				(6,349)	(157)
Book Value				₩ 3,024,022	2,125,196

## (2) Asset backed short-term bond

		Lender	Interest rate (%)	2018	Amount
Asset backed short-term bond		Samsung Investment Trust Management Co., Ltd and others	1.99 ~ 2.75	₩	1,225,183

		Lender	Interest rate (%)	2017	Amount
Asset backed short-term bond		Samsung Investment Trust Management Co., Ltd and others	1.70 ~ 2.07	₩	960,301

## (3) Details of changes in debentures for the years ended December 31, 2018 and 2017 are as follows:

	2018	2017
Beginning balance	₩ 3,085,497	2,725,625
Changes from financing cash flow		
Changes of debentures, net	1,159,392	382,541
Amortization of discount on debentures	(885)	(2,937)
Effect from fluctuations in exchange rate	5,201	(19,732)
Ending balance	₩ 4,249,205	3,085,497

## 28. Provisions

### (1) Details of provisions as of December 31, 2018 and 2017 are as follows:

	2018	2017
Provisions:		
Provision of restoration(*)	₩ 9,288	9,751
Provision of litigations	7,314	9,993
Provision of off-balance items	5,170	-
Others	1,154	633
	₩ 22,926	20,377

(\*) Provision of restoration represents the estimated costs to restore the existing leased properties, which are discounted to the present value using the appropriate discount rate at the end of the reporting period. Disbursements of such costs are expected to occur at the end of the lease contract. Such costs are reasonably estimated using the average lease year from initial contract date to the end of the contract as of December 31, 2018. The average restoration expense is calculated based on the actual costs incurred for the past five years using the five-year average inflation rate.

### (2) Details of changes in provisions(except for provisions of off-balance items) for the years ended December 31, 2018 and 2017 are as follows:

	2018	2017
Beginning balance	₩ 9,751	9,993
Provisions provided(*)	485	4,500
Reversal of unused amount	(948)	(7,150)
Others	-	(29)
Ending balance	₩ 9,288	7,314

(\*) Provisions provided for the year ended December 31, 2018 consist of provision of restoration of ₩485 million which occurred in relation to new lease contracts and interest expenses, provision of allowance for litigations ₩4,500 million and provisions related to point provided to customers ₩804 million.

	2017
Beginning balance	₩ 15,152
Provisions provided(*)	13,703
Reversal of unused amount	(3,404)
Provisions used	(5,074)
Ending balance	₩ 20,377

(\*) Provisions provided for the year ended December 31, 2017 consist of provision of restoration of ₩954 million which occurred in relation to new lease contracts and interest expenses, provision of allowance for litigations ₩12,403 million and provisions related to point provided to customers ₩346 million.

### (3) Details of changes in expected credit loss of off-balance items as of December 31, 2018 are as follows:

	Purchase Agreement		Financial guarantee		Unused credit line		Total
	12-month ECL	Lifetime ECL	12-month ECL	Lifetime ECL	12-month ECL	Lifetime ECL	
Beginning Balance	₩ 413	-	1,940	-	116	-	2,469
Replace to Lifetime ECL	-	-	-	-	-	-	-
Replace to 12-month ECL	-	-	-	-	-	-	-
Provision allowances (Reversal)	91	-	696	-	1,896	-	2,683
Other changes	18	-	-	-	-	-	18
Ending Balance	522	-	2,636	-	2,012	-	5,170
Financial guarantee liabilities	-	-	65,412	-	-	-	65,412
Provision(*)	522	-	2,636	-	2,012	-	5,170

(\*) When amount of expected credit losses exceeds amount of financial guarantee liabilities, the excess amount is recognized as provisions(described in note 29).

### (4) Details of changes in balances of off-balance items as of December 31, 2018 are as follows:

	Purchase Agreement		Financial guarantee		Unused credit line		Total
	12-month ECL	Lifetime ECL	12-month ECL	Lifetime ECL	12-month ECL	Lifetime ECL	
Beginning Balance	₩ 1,438,500	-	1,769,876	-	369,714	-	3,578,090
Replace to Lifetime ECL	-	-	-	-	-	-	-
Replace to 12-month ECL	-	-	-	-	-	-	-
Increase (Decrease)	103,400	-	(482,632)	-	485,720	-	106,488
Ending Balance	₩ 1,541,900	-	1,287,244	-	855,434	-	3,684,578

## 29. Other liabilities

### (1) Details of other liabilities as of December 31, 2018 and 2017 are as follows:

		2018	2017
Other financial liabilities:			
Accounts payable	₩	7,546,316	6,173,968
Accrued expenses		287,994	272,232
Deposits received		20,102	22,709
Financial guarantee contract liabilities		65,412	83,663
Dividends payable		2	2
		<b>7,919,826</b>	6,552,574
Other liabilities:			
Deposits received		36,931	45,191
Advance received		7,609	140,668
Income in advance		20,224	16,807
Defined benefit liabilities		1,175	634
Others		1,818,578	1,415,262
		<b>1,884,517</b>	1,618,562
	₩	<b>9,804,343</b>	8,171,136

### (2) Defined benefit liabilities as of December 31, 2018 and 2017 are as follows:

		2018	2017
Defined benefit obligation	₩	1,246	717
Transfer from national pension		(71)	(83)
Defined benefit liabilities	₩	<b>1,175</b>	634

### (3) Details of changes in defined benefit obligation for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Beginning balance	₩	717	570
Current service cost		677	297
Salaries paid		(158)	(99)
Gain/loss on foreign exchange		10	(51)
Ending balance(*)	₩	<b>1,246</b>	717

(\*) The amount, which is for temporary employees was calculated using a simple method due to difficulty of reliable estimation.

### (4) Details of changes in plan assets for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Beginning balance	₩	83	97
Benefits paid by the plan		(12)	(14)
Ending balance	₩	<b>71</b>	83

### (5) Details of expenses recognized in profit or loss regarding retirement benefits for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Defined contribution	₩	34,250	34,821
Defined benefit		677	298
	₩	<b>34,927</b>	35,119

## 30. Derivatives for trading

### (1) Details of derivatives for trading as of December 31, 2018 and 2017 are as follows:

		2018			2017		
		Contracts	Assets	Liabilities	Contracts	Assets	Liabilities
Equity:							
Futures	₩	2,587,807	27,632	11,944	730,121	6,257	6,051
Option		13,610,056	52,865	474,834	18,371,016	161,338	360,723
Swaps		14,549,189	233,276	512,427	10,700,826	143,622	131,808
		<b>30,747,052</b>	<b>313,773</b>	<b>999,205</b>	29,801,963	311,217	498,582
Interest rate:							
Forwards		280,000	-	28,244	20,000	-	99
Futures		2,368,526	1,857	9,320	791,646	1,796	219
Option		2,419,528	25,933	84,438	2,102,619	22,226	75,159
Swaps		101,902,780	236,733	347,122	136,647,683	248,990	305,476
		<b>106,970,834</b>	<b>264,523</b>	<b>469,124</b>	139,561,948	273,012	380,953
Currency:							
Forwards		33,090,600	278,549	244,124	21,270,777	357,422	379,388
Futures		89,002	-	827	22,488	3,659	179
Option		-	-	-	77,034	1,766	-
Swaps		4,727,255	102,246	93,643	5,071,783	112,423	102,617
		<b>37,906,857</b>	<b>380,795</b>	<b>338,594</b>	26,442,082	475,270	482,184
Credit:							
Swaps		2,512,227	14,185	8,783	3,201,472	24,298	13,507
Commodity:							
Futures		162,583	2,602	4,355	25,866	670	768
Option		409,804	6,955	8,397	38,570	-	67
Swaps		16,351	2,168	208	152,940	1,547	9,590
		<b>588,738</b>	<b>11,725</b>	<b>12,960</b>	217,376	2,217	10,425
Others:							
Option		13,000	59	-	13,000	86	-
Swaps		351,511	-	17,666	417,925	1,150	19,735
ELW		-	-	13,688	-	-	11,648
Others		-	8,192	-	24,431	24,929	-
		<b>364,511</b>	<b>8,251</b>	<b>31,354</b>	455,356	26,165	31,383
Credit value adjustment		-	(4,254)	(1,966)	-	(5,019)	(2,319)
Day 1 profit or loss		-	(23,143)	(147,846)	-	3,466	(94,561)
		<b>₩ 179,090,219</b>	<b>965,855</b>	<b>1,710,208</b>	199,680,197	1,110,626	1,320,154

### (2) Details of gains or losses on valuation and transaction of derivatives for trading for the years ended December 31, 2018 and 2017 are as follows:

		2018		2017	
		Valuation	Transaction	Valuation	Transaction
Equity	₩	(288,844)	497,718	261,850	517,085
Interest rate		(82,644)	(29,287)	58,455	29,216
Currency		25,353	(50,338)	(31,109)	267,936
Credit		(532)	4,850	(4,452)	7,997
Commodity		4,908	(3,710)	30,524	(13,509)
Others		(2,512)	177,736	(17,993)	(19,413)
	₩	<b>(344,271)</b>	<b>596,969</b>	297,275	789,312

### 31. Derivatives for hedging

#### (1) Strategy of risk management

The Group has a foreign currency exposure arising from net investments in foreign operations whose functional currency differs from the Group's presentation currency. The Group uses forward exchange as a hedging instrument to hedge foreign currency risk.

Prospective effectiveness testing should be performed at the inception of the hedge and each reporting date. The hedge relationship is highly effective because the foreign currency gains and losses on the hedged item (net investment) that are attributable to the hedged risk (changes in spot exchange rates) are expected to be offset by the foreign currency gains and losses on the hedging instrument (forward exchange).

Because the critical terms of the hedging instrument perfectly match the critical terms of the hedged item and the foreign currency exposure of hedging instrument is designated as a hedge of the change in the same nominal amount of the hedged item, the relative weight of the nominal amount between the hedging instrument and the hedged item is 1:1.

The Group is exposed to credit risk of the hedging instrument which is not offset by credit risk of the hedged item in relation to the net investment risk of the foreign operation. Unsettled portions of the credit risk of the hedging instrument and the credit risk of the hedged item are the main sources of hedge ineffectiveness. However, the Group expects the credit risk does not significantly increase and there is no hedge ineffectiveness.

#### (2) Hedge instruments (Derivative assets and liabilities)

i) Details of Derivatives for hedging as of December 31, 2018 and 2017 are as follows:

	2018			2017		
	Contracts	Assets	Liabilities	Contracts	Assets	Liabilities
Hedges of a Net Investment in Foreign Operations						
Currency Forwards	₩ 334,856	2,260	1,154	374,440	11,950	-
Fair value hedges						
Currency Forwards(*)	-	-	-	123,621	2,654	-

(\*) The forward exchange designated for fair value hedging as of December 31, 2017 is no longer applied to hedge accounting as a result of the reclassification of the hedged foreign currency available for sale as mentioned in note 4-(1)-3-iii).

ii) Maturity and Nominal amounts of Derivatives for hedging as of December 31, 2018 are as follows:

	Maturity				Total
	Less than 1 month	1 month ~ 3 months	3 months ~ 1 year	More than 5 years	
Hedges of a Net Investment in Foreign Operations					
Currency Forwards					
Nominal Amount(*)	₩ -	223,620	111,236	-	334,856
Average foreign currency exchange rate (KRW/Dollar)	-	1,120.52	1,088.70	-	

(\*) If the nominal amount of the won and foreign currency basis exists at the same time, such as a currency swap, the nominal amount of the foreign currency basis was converted using the exchange rate at the year end.

#### (3) Ineffective portion of hedging

i) Details of changes in fair value used on the basis of recognition of hedge ineffectiveness for the year ended December 31, 2018 are as follows:

	Fair value fluctuation for testing hedge effectiveness		Effective portion	Reserves of foreign exchange translation
	Hedging instruments	Hedged item		
Hedges of a Net Investment in Foreign Operations				
Currency rate fluctuation risk	₩ (16,743)	16,743	(11,731)	869

ii) There is no hedge ineffectiveness recognised in profit or loss in relation to net investment hedge in foreign operations for the year ended December 31, 2018.

### 32. Capital stock

(1) Authorized shares of capital stock for the Group as of December 31, 2018 are 1,000,000,000 shares.

(2) Details of the capital stock for the Group as of December 31, 2018 and 2017 are as follows:

	2018	2017
Issued shares of capital stock	₩ 658,316,408 shares	666,316,408 shares
Issued shares of capital stock (preferred stock)	14,075,750 shares	14,075,750 shares
Issued shares of capital stock (2 preferred stock)	140,000,000 shares	-
Par value per share (in Korean won)	5,000	5,000
Capital stock(*)	₩ 4,101,961	3,401,961

(\*) Due to retirement of stock during the year, the amount of capital stock does not correspond to total face value of the Group's issued shares.

### 33. Capital surplus

Details of capital surplus as of December 31, 2018 and 2017 are as follows:

	2018	2017
Additional paid-in capital	₩ 1,795,980	1,809,156
Gain on sales of treasury stocks	353,786	351,446
Consideration of convertible bonds	2,623	2,623
Others	1,523	1,424
	₩ 2,153,912	2,164,649

### 34. Retained earnings and dividends

#### (1) The Group's legal reserve and other reserves as of December 31, 2018 and 2017 are as follows:

		2018	2017
Legal reserve(*1)	₩	121,513	109,044
Reserve for loss on future transactions(*2)		67	67
Other regulatory reserve		1,448	-
Regulatory reserve for loan losses		88,581	50,849
Unappropriated retained earnings		2,038,533	1,715,023
	₩	2,250,142	1,874,983

(\*1) The Commercial Law of the Republic of Korea requires the Company to appropriate an amount equal to a minimum of 10% of cash dividends paid as a legal reserve, until such reserve equals 50% of its issued capital stock. This reserve is not available for the payment of cash dividends, but may be transferred to capital stock, or used to reduce accumulated deficit, if any, with the ratification of the Group's majority shareholders.

(\*2) Pursuant to Article 50 of the Korean Futures Trading Act and Article 13-10 of the Enforcement Decree of the same Act, the Group reserved for loss on futures. The additional reserve for loss on futures transactions is not required according to enactment of the Act on Indirect Investment Asset Management Business and is classified as voluntary reserves.

#### (2) Details of changes in unappropriated retained earnings for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Beginning balance	₩	1,715,023	1,284,667
Adoption effect of K-IFRS No.1109		120,150	-
Net income attributable to equity holder of the Controlling Company		456,565	503,176
Dividends		(124,692)	(25,941)
Provision for legal reserve		(12,469)	(78,136)
Reversal of (Provision for) regulatory reserve for loan losses		(37,732)	31,257
Regulatory reserve allowances		(1,448)	-
Retirement of treasury stock		(76,864)	-
Ending balance	₩	2,038,533	1,715,023

#### (3) Details of dividend for the year ended December 31, 2018, are as follows:

Description	Issued shares	Treasury stock (shares)	Shares outstanding	Cash dividend per share (in won)	Total cash dividend
Common stock	666,316,408	110,377,511	555,938,897	₩ 220	₩ 122,307
Preferred stock	14,075,750	4,219,960	9,855,790	242	2,385
2 preferred stock	140,000,000	-	140,000,000	-	-
	820,392,158	114,597,471	705,794,687		₩ 124,692

#### (4) Statements of appropriation of retained earnings of the Company for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
		Expected date of appropriation: March 27, 2019	Determined date of appropriation: March 27, 2018
<b>I. Unappropriated retained earnings</b>			
Unappropriated retained earning carried forward from the prior year	₩	1,430,271	1,180,736
Adoption effect of K-IFRS No.1109		84,586	-
Retirement in treasury stock		(76,864)	-
Net income for the year		434,085	424,428
		1,872,078	1,605,164

		2018	2017
		Expected date of appropriation: March 27, 2019	Determined date of appropriation: March 27, 2018
<b>II. Transfer from voluntary reserves, etc.</b>			
Transfer from regulatory reserve for loan losses		13,120	-
		13,120	-
<b>III. Appropriation of retained earnings</b>			
Legal reserve		15,391	12,469
Regulatory reserve for loan losses		-	37,732
Cash dividends			
Dividends per share in won			
Common stock			
Current year: ₩220 (4.4%)			
Previous year: ₩220 (4.4%)			
Preferred stock		153,907	124,692
Current year: ₩242(4.84%)			
Previous year: ₩242(4.84%)			
2 Preferred stock			
Current year: ₩220(4.4%)			
Previous year: -			
		169,298	174,893
<b>IV. Unappropriated retained earnings to be carried over to subsequent year</b>	₩	1,715,900	1,430,271

### 35. Capital adjustment and accumulated other comprehensive income

#### (1) Details of capital adjustment as of December 31, 2018 and 2017 are as follows:

		2018	2017
Treasury stock	₩	(62,000)	(62,463)
Stock options		1,836	1,836
Others(*)		53,317	52,913
	₩	(6,847)	(7,714)

(\*) It is the stock options and others endowed applying financial investment company compensation system framework by financial supervisory service.

#### (2) Details of accumulated other comprehensive income as of December 31, 2018 and 2017 are as follows:

		2018	2017
Gain on valuation of available-for-sale financial assets	₩	-	111,810
Loss on valuation of financial assets measured at fair value through other comprehensive income(*)		(59,740)	-
Gain on valuation of financial liabilities measured at fair value through profit or loss		5,062	-
Gain on valuation of derivatives		869	12,600
Gain on valuation of investments in associates		22,578	16,677
Loss on foreign currency translation adjustment		(154,383)	(218,293)
	₩	(185,614)	(77,206)

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), the items that were separately described in note 4-(1)-3-iii), net changes in unrealized valuation of available-for-sale financial assets as of December 31, 2017 were reclassified as net changes in unrealized valuation of financial assets at fair value through other comprehensive income as of December 31, 2018.

### 36. Regulatory reserve for loan losses

(1) According to the Regulation on Financial Investment Business 3-8, if the allowances for loan losses reserved for the accounting purpose in accordance with K-IFRS are less than the amount of the allowances for loan losses reserving with the supervision purpose, the differences are disclosed as regulatory reserve for loan losses.

(2) Details of the ending balance of regulatory reserve for loan losses as of December 31, 2018 and 2017 are as follows:

		2018	2017
Regulatory reserve for loan losses	₩	88,581	50,849
Estimated regulatory reserve for loan losses(*)		(13,120)	37,732
	₩	75,461	88,581

(\*) On estimated regulatory reserve for loan losses, ₩5,410 million for the decrease effect of regulatory reserve by the adoption of K-IFRS No. 1109 are included.

(3) Details of net income and earnings per share adjusted for regulatory reserve for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Net income	₩	456,565	503,176
Provision for (Reversal of) regulatory reserve for loan losses		13,120	(37,732)
Net income adjusted for regulatory reserve	₩	469,685	465,444
Earnings per share adjusted for regulatory reserve (in Korean won)			
EPS for Common stock		679	874
EPS for 2 Preferred stock		679	-

### 37. Fee income and expense

(1) Fee income for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Brokerage commissions	₩	504,421	432,314
Underwriting commissions		120,425	85,335
Handling fee of collective investments		86,217	89,056
Management fee on asset management		35,511	26,795
Advisory fee		472	5,070
Trust fee		51,938	40,657
Others		260,098	216,012
	₩	1,059,082	895,239

(2) Fee expenses incurred for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Trading commissions	₩	55,075	47,717
Investment solicitor fee		4,486	4,075
Others		144,252	109,251
	₩	203,813	161,043

### 38. Gains (Losses) on financial instruments at fair value through profit or loss

(1) Details of gains on change in value of and disposal of financial instruments at fair value through profit or loss for the years ended December 31, 2018 and 2017 are as follows:

		2018(*)	2017
Gain on disposal of financial assets held for trading	₩	-	604,229
Gain on valuation of financial assets held for trading		-	161,133
Gain on disposal of financial liabilities held for trading		-	76,691
Gain on valuation of financial liabilities held for trading		-	7,955
Gain on transaction of derivatives		-	4,123,010
Gain on valuation of derivatives		-	1,349,772
Gain on disposal of financial assets designated at fair value through profit or loss		-	187,104
Gain on valuation of financial assets designated at fair value through profit or loss		-	57,235
Gain on disposal of financial liabilities designated at fair value through profit or loss		-	226,576
Gain on valuation of financial liabilities designated at fair value through profit or loss		-	208,981
	₩	-	7,002,686

(2) Details of losses on change in value of and disposal of financial instruments at fair value through profit or loss for the years ended December 31, 2018 and 2017 are as follows:

		2018(*)	2017
Loss on disposal of financial assets held for trading	₩	-	398,814
Loss on valuation of financial assets held for trading		-	111,301
Loss on disposal of financial liabilities held for trading		-	104,066
Loss on valuation of financial liabilities held for trading		-	21,512
Loss on transaction of derivatives		-	3,333,698
Loss on valuation of derivatives		-	1,052,497
Loss on disposal of financial assets designated at fair value through profit or loss		-	45,346
Loss on valuation of financial assets designated at fair value through profit or loss		-	47,561
Loss on disposal of financial liabilities designated at fair value through profit or loss		-	1,306,255
Loss on valuation of financial liabilities designated at fair value through profit or loss		-	435,803
	₩	-	6,856,853

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), the above items were reclassified as gains (losses) on financial instruments at fair value through profit or loss for the year ended December 31, 2018 and are included in note 39.

### 39. Gains (Losses) on financial assets measured at fair value through profit or loss

#### (1) Details of gains on change in value of and disposal of financial assets measured at fair value through profit or loss for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017(*)
Gain on disposal of financial assets at fair value through profit or loss	₩	666,040	-
Gain on valuation of financial assets at fair value through profit or loss		403,760	-
Gain on disposal of financial liabilities at fair value through profit or loss		86,670	-
Gain on valuation of financial liabilities at fair value through profit or loss		29,658	-
Gain on transaction of derivatives		5,484,272	-
Gain on valuation of derivatives		851,210	-
Gain on disposal of financial liabilities designated as measured at fair value through profit or loss		274,707	-
Gain on valuation of financial liabilities designated as measured at fair value through profit or loss		477,367	-
	₩	8,273,684	-

#### (2) Details of losses on change in value of and disposal of financial instruments at fair value through profit or loss for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017(*)
Loss on disposal of financial assets at fair value through profit or loss	₩	817,340	-
Loss on valuation of financial assets at fair value through profit or loss		527,756	-
Loss on disposal of financial liabilities at fair value through profit or loss		89,060	-
Loss on valuation of financial liabilities at fair value through profit or loss		19,482	-
Loss on transaction of derivatives		4,887,303	-
Loss on valuation of derivatives		1,195,481	-
Loss on disposal of financial liabilities designated as measured at fair value through profit or loss		625,892	-
Loss on valuation of financial liabilities designated as measured at fair value through profit or loss		216,067	-
	₩	8,378,381	-

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), the above items were reclassified as gains (losses) on financial instruments at fair value through profit or loss for the year ended December 31, 2017 and are included in note 38.

### 40. Gains and losses on valuation and disposal of available-for-sale financial assets

#### (1) Details of gains on available-for-sale financial assets recognized for the years ended December 31, 2018 and 2017 are as follows:

		2018(*)	2017
Disposal of available-for-sale financial assets	₩	-	114,487

#### (2) Details of losses on available-for-sale financial assets recognized for the years ended December 31, 2018 and 2017 are as follows:

		2018(*)	2017
Disposal of available-for-sale financial assets	₩	-	25,058
Impairment of available-for-sale financial assets		-	27,168
	₩	-	52,226

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), the above items were reclassified as gains and losses on valuation and disposal of financial assets measured at fair value through other comprehensive income for the year ended December 30, 2018 and are included in note 41.

### 41. Gains and losses on valuation and disposal of financial assets measured at fair value through other comprehensive income

#### (1) Details of gains on financial assets measured at fair value through other comprehensive income recognized for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017(*)
Gain on disposal of financial assets at fair value through other comprehensive income	₩	4,885	-

#### (2) Details of losses on financial assets at fair value through other comprehensive income recognized for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017(*)
Loss on disposal of financial assets at fair value through other comprehensive income	₩	4,082	-

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), the above items were reclassified as gains and losses on valuation and disposal of available-for-sale financial assets for the year ended December 31, 2017 and are included in note 40.

### 42. Interest income and expense

#### (1) Details of interest income for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Financial assets at fair value through profit and loss			
Interest on securities	₩	-	422,197
Interest on derivatives		-	4,944
		-	427,141
Financial assets measured at fair value through profit and loss			
Interest on securities		461,184	-
Interest on derivatives		6,840	-
Interest on loans		16,363	-
		484,387	-
Available-for-sale financial assets			
Interest on securities		-	123,542
Financial assets measured at fair value through other comprehensive income			
Interest on securities		130,349	-
Loans and receivables			
Interest on deposits		-	76,510
Interest on loans		-	500,164
Interest on other assets		-	25,411
		-	602,085
Financial assets measured at amortized cost			
Interest on deposits		98,866	-
Interest on loans		1,553,804	-
Interest on other assets		140,967	-
		1,793,637	-
Total	₩	2,408,373	1,152,768

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), loans and receivables, financial assets at fair value through profit or loss and available-for-sale financial assets as of December 31, 2017 were reclassified as financial assets measured at amortized cost, financial assets measured at fair value through profit or loss and financial assets measured at fair value through other comprehensive income as of December 31, 2018, respectively.

(2) Details of interest expenses for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Interest on derivatives	₩	7,001	5,977
Interest on deposits due to customers		45,637	28,869
Interest on borrowings		1,451,105	436,522
Interest on debentures		100,853	70,975
Others		149,616	39,110
	₩	1,754,212	581,453

43. Gains and losses on loans

Details of gains and losses on loans for the years ended December 31, 2018 and 2017 is as follows:

		2018(*)	2017
Gain on sales of loan	₩	-	3,553
Reversal of allowances for loan losses		-	1,478
Loss on sales of loan		-	(175)
Bad debt expense		-	(1,967)
	₩	-	2,889

(\*) Bad debt expense (reversal) of loans was reclassified as allowances (reversals) of provision on expected credit losses in note 44.

44. Allowances (Reversals) of provision on expected credit losses

Details of allowances (reversals) of provision on expected credit losses recognized for the year ended December 31, 2018 are as follows:

		2018
Financial assets measured at fair value through other comprehensive income (Note 12)	₩	2,269
Financial assets at amortized cost (Note 14)		10,695
Provision for off-balance items (Note 28)		2,683
	₩	15,647

45. Gains and losses on foreign transaction

(1) Details of the assets and liabilities denominated in foreign currency as of December 31, 2018 and 2017 are as follows:

(In thousands of dollar, in millions of won)

	2018		2017	
	Foreign Currency	Won	Foreign Currency	Won
<b>Assets</b>				
Cash and cash equivalent	1,088,198	₩ 1,216,714	677,938	₩ 726,342
Financial assets at fair value through profit or loss	-	-	3,712,558	3,977,635
Financial assets measured at fair value through profit or loss	5,400,190	6,037,952	-	-
Available-for-sale financial assets	-	-	1,156,144	1,238,693
Financial assets measured at fair value through other comprehensive income	1,892,826	2,116,369	-	-
Loans and receivables	-	-	29,101,292	31,179,124
Financial assets measured at amortized cost	48,171,188	53,860,205	-	-
Other financial assets	944	1,056	2,914,710	3,122,820
	56,553,346	₩ 63,232,296	37,562,642	₩ 40,244,614

	2018		2017	
	Foreign Currency	Won	Foreign Currency	Won
<b>Liabilities</b>				
Financial liabilities at fair value through profit or loss	-	₩ -	2,333,147	₩ 2,499,734
Financial liabilities measured at fair value through profit or loss	2,471,322	2,763,185	-	-
Deposits due to customers	844,785	944,555	502,509	538,388
Borrowings	46,482,899	51,972,529	29,061,466	31,136,454
Other financial liabilities	2,987,787	3,340,645	3,036,420	3,253,221
	52,786,793	₩ 59,020,914	34,933,542	₩ 37,427,797

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), financial assets at fair value through profit or loss, available-for-sale financial assets, loans and receivables and financial liabilities at fair value through profit or loss as of December 31, 2017 were reclassified as financial assets measured at fair value through profit or loss, financial assets measured at fair value through other comprehensive income, financial assets measured at amortized cost and as financial liabilities measured at fair value through profit or loss as of December 31, 2018, respectively.

(2) Details of gains and losses on foreign currency transactions for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Gains on foreign currency transactions	₩	1,051,562	675,181
Gains on foreign currency translations		130,333	67,478
Losses on foreign currency transactions		(1,215,447)	(662,328)
Losses on foreign currency translations		(77,297)	(235,981)
	₩	(110,849)	(155,650)

46. Other operating income and expense

(1) Details of other operating income for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Dividend income	₩	81,374	165,327
Distribution income		144,892	54,986
Rental income from investment property		143,810	147,303
Reversal of other bad debt allowances		-	715
Gain on hedged item		-	1,569
Gain on hedging instrument		-	7,327
Reversal of allowances for litigation		7,150	2,736
Others		16,777	5,817
	₩	394,003	385,780

(2) Details of other operating expenses for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Other bad debt expense	₩	-	1,653
Provision of allowances for litigation		4,500	12,403
Loss on hedged item		-	7,327
Loss on hedging instrument		-	1,569
Others		41,516	11,728
	₩	46,016	34,680



## 47. Classification of financial instruments by category

### (1) Details of categories of financial assets as of December 31, 2018 and 2017 are as follows:

	2018			
	Financial assets measured at amortized cost	Financial assets measured at fair value through profit or loss	Financial assets measured at fair value through other comprehensive income	Total
Cash and cash equivalents	₩ 1,717,840	-	-	1,717,840
Financial assets measured at fair value through profit or loss	-	35,064,492	-	35,064,492
Financial assets measured at fair value through other comprehensive income	-	-	8,203,073	8,203,073
Financial assets at amortized cost	69,385,395	-	-	69,385,395
	₩ 71,103,235	35,064,492	8,203,073	114,370,800

	2017				
	Loans and receivables	Financial assets held for trading	Financial assets designated at fair value through profit or loss	Available-for-sale financial assets	Total
Cash and cash equivalents	₩ 1,374,449	-	-	-	1,374,449
Financial assets held for trading	-	28,199,027	-	-	28,199,027
Financial assets designated at fair value through profit or loss	-	-	2,068,506	-	2,068,506
Available-for-sale financial assets	-	-	-	8,838,520	8,838,520
Loans and receivables	46,923,425	-	-	-	46,923,425
	₩ 48,297,874	28,199,027	2,068,506	8,838,520	87,403,927

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), financial assets held for trading, available-for-sale financial assets, loans and receivables and financial liabilities at fair value through profit or loss as of December 31, 2017 were reclassified as financial assets measured at fair value through profit or loss, financial assets measured at fair value through other comprehensive income, financial assets measured at amortized cost and as financial liabilities measured at fair value through profit or loss as of December 31, 2018, respectively.

### (2) Details of categories of financial liabilities as of December 31, 2018 and 2017 are as follows:

	2018			
	Financial liabilities measured at fair value through profit or loss	Financial liabilities designated as measured at fair value through profit or loss	Financial liabilities measured at amortized cost	Total
Financial liabilities measured at fair value through profit or loss	₩ 2,280,438	-	-	2,280,438
Financial liabilities designated as measured at fair value through profit or loss	-	15,459,570	-	15,459,570
Deposits due to customers	-	-	5,465,538	5,465,538
Borrowings	-	-	72,363,400	72,363,400
Debentures	-	-	4,249,205	4,249,205
Other financial liabilities	-	-	7,919,826	7,919,826
	₩ 2,280,438	15,459,570	89,997,969	107,737,977

	2017			
	Financial liabilities held for trading	Financial liabilities designated at fair value through profit or loss	Other financial liabilities	Total
Financial liabilities held for trading	₩ 2,137,037	-	-	2,137,037
Financial liabilities designated at fair value through profit or loss	-	15,295,424	-	15,295,424
Deposits due to customers	-	-	5,118,877	5,118,877
Borrowings	-	-	49,390,196	49,390,196

	2017			Total
	Financial liabilities held for trading	Financial liabilities designated at fair value through profit or loss	Other financial liabilities	
Debentures	-	-	3,085,497	3,085,497
Other financial liabilities	-	-	6,552,574	6,552,574
	₩ 2,137,037	15,295,424	64,147,144	81,579,605

(\*) Aside from the items that were separately described in note 4-(1)-3-iii), financial assets held for trading, available-for-sale financial assets, loans and receivables and financial liabilities at fair value through profit or loss as of December 31, 2017 were reclassified as financial assets measured at fair value through profit or loss, financial assets measured at fair value through other comprehensive income, financial assets measured at amortized cost and as financial liabilities measured at fair value through profit or loss as of December 31, 2018, respectively.

### (3) Details of gains (losses) on the financial instruments classified into the categories above for the year ended December 31, 2018 are as follows:

	2018						
	Dividend income and distribution income	Interest income (expense)	Gain on valuation	Loss on valuation	Gain on transaction and redemption	Loss on transaction and redemption	Allowances of provision on expected credit losses(*4)
<b>Financial assets:</b>							
Financial assets measured at fair value through profit or loss (except for derivatives)	₩ 194,187	477,547	403,760	(527,756)	666,040	(817,340)	-
Financial assets measured at fair value through other comprehensive income(*1)	12,237	130,349	-	-	4,885	(4,082)	(2,269)
Financial assets measured at amortized cost	-	1,793,637	-	-	-	-	(10,695)
	206,424	2,401,533	403,760	(527,756)	670,925	(821,422)	(12,964)
<b>Financial liabilities:</b>							
Financial liabilities measured at fair value through profit or loss (except for derivatives)	-	-	29,658	(19,482)	86,670	(89,060)	-
Financial liabilities designated as measured at fair value through profit or loss(*2)	-	-	477,367	(216,067)	274,707	(625,892)	-
Deposits due to customers	-	(45,637)	-	-	-	-	-
Borrowings	-	(1,451,105)	-	-	-	-	-
Debentures	-	(100,853)	-	-	-	-	-
Other financial liabilities	-	(149,616)	-	-	-	-	-
	-	(1,747,211)	507,025	(235,549)	361,377	(714,952)	-
<b>Derivatives(*3)</b>	-	(161)	851,210	(1,195,481)	5,484,272	(4,887,303)	-
	₩ 206,424	654,161	1,761,995	(1,958,786)	6,516,574	(6,423,677)	(12,965)

(\*1) Gains and losses on valuation and disposal of equity securities designated as measured at fair value through other comprehensive income are excluded because they are recognized to equity (details described in Note 12).

(\*2) The above items were excluded, as changes in fair value by credit risk fluctuation is recognized as other comprehensive income (details described in Note 24).

(\*3) Except for the designation of the derivative financial assets to effective hedge instrument, the Group classifies it with financial instruments measured at fair value through profit or loss or designated at fair value through profit or loss.

(\*4) ₩2,683 million for recovery of allowances for provisions of expected credit loss of off-balance sheet items are excluded (details described in Note 44).

**Details of gains (losses) on the financial instruments classified into the categories above for the year ended December 31, 2017 are as follows:**

	2017							2017
	Dividend income and distribution income	Interest income (expense)	Gain on valuation	Loss on valuation	Gain on transaction and redemption	Loss on transaction and redemption	Impairment loss	
<b>Financial assets:</b>								
Financial assets held for trading (except for derivatives)	₩ 96,719	390,114	161,133	(111,301)	604,229	(398,814)	-	
Financial assets designated at fair value through profit or loss	8,836	32,083	57,235	(47,561)	187,104	(45,346)	-	
Available-for-sale financial assets	91,840	123,542	-	-	114,487	(25,058)	(27,168)	
Loans and receivables	-	602,085	-	-	3,553	(175)	(1,427)	
	197,395	1,147,824	218,368	(158,862)	909,373	(469,393)	(28,595)	
<b>Financial liabilities:</b>								
Financial liabilities held for trading (except for derivatives)	-	-	7,955	(21,512)	76,691	(104,066)	-	
Financial liabilities designated at fair value through profit or loss	-	-	208,981	(435,803)	226,576	(1,306,255)	-	
Deposits due to customers	-	(28,869)	-	-	-	-	-	
Borrowings	-	(436,522)	-	-	-	-	-	
Debentures	-	(70,975)	-	-	-	-	-	
Other financial liabilities	-	(39,110)	-	-	-	-	-	
	-	(575,476)	216,936	(457,315)	303,267	(1,410,321)	-	
<b>Derivatives(*)</b>	-	(1,033)	1,349,772	(1,052,497)	4,123,010	(3,333,698)	-	
	₩ 197,395	571,315	1,785,076	(1,668,674)	5,335,650	(5,213,412)	(28,595)	

(\*) The Group's derivatives are classified as financial assets or liabilities held for trading except for derivatives that are not designated at effective hedging instrument.

#### 48. Employee costs

Details of employee costs for the years ended December 31, 2018 and 2017 are as follows:

	2018	2017
Salaries	₩ 553,391	538,513
Severance benefits	34,927	35,119
Employee benefits	69,950	73,640
	₩ 658,268	647,272

#### 49. Selling and administrative expenses

Details of selling and administrative expenses for the years ended December 31, 2018 and 2017 are as follows:

	2018	2017
Electronic data processing	₩ 55,282	42,091
Rental	77,637	70,598
Commission	33,805	29,509
Entertainment	20,855	16,911
Advertisement	32,323	20,762
Depreciation	24,024	22,718
Depreciation on investment property	29,866	29,116
Training	6,213	6,426
Amortization	41,845	42,902
Taxes and dues	41,826	41,337
Others	92,755	114,549
	₩ 456,431	436,919

#### 50. Non-operating income

Details of non-operating income for the years ended December 31, 2018 and 2017 are as follows:

	2018	2017
Gain on disposal of property and equipment	₩ 2,416	1,805
Gain on disposal of investment properties	48,083	-
Gain on disposal of intangible assets	150	89
Gain on disposal of investments in subsidiaries	15,773	8,404
Gain on disposal of investments in associates	-	80
Gain on valuation of investments in associates	40,040	50,787
Others	47,833	50,459
	₩ 154,295	111,624

#### 51. Non-operating expense

Details of non-operating expense for the years ended December 31, 2018 and 2017 are as follows:

	2018	2017
Loss on disposal of property and equipment	₩ 629	289
Loss on disposal of investment properties	7	-
Loss on disposal of intangible assets	8	17
Impairment on intangible assets	-	153
Loss on disposal of investments in subsidiaries	8,588	6,791
Loss on disposal of investments in associates	38	28
Loss on valuation of investments in associates	9,689	3,224
Donations	4,193	4,033
Others	58,463	60,093
	₩ 81,615	74,628

## 52. Income tax expense

### (1) Details of income tax expenses for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Current income tax payable	₩	205,088	150,243
Changes in deferred income tax due to temporary differences		(175,275)	33,866
Changes in other prepaid income tax, etc.		60,839	28,901
Income tax expense regarding to items recognized as other comprehensive income		32,348	(53,195)
Income tax expense for the Group	₩	123,000	159,815

### (2) Profit before income taxes and income tax expense for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Profit before income tax	₩	585,010	664,749
Tax calculated at statutory tax rate		136,832	160,407
Adjustments:			
Non-deductible expense		4,382	3,910
Non-taxable income		-	(1,972)
Temporary differences not recognized		(36,850)	-
Effects of change in tax rate and other		18,636	(2,530)
Income tax expense for the Group	₩	123,000	159,815
Effective tax rate		21.03%	24.04%

### (3) Details of changes in temporary differences and the deferred tax assets and liabilities for the year ended December 31, 2018 are as follows:

	Beginning Balance	Adjustment due to K-IFRS No. 1109 adoption(*3)	Beginning Balance (Adjusted)	Addition (deduction)	Ending Balance
Financial assets at fair value through profit or loss(*1)	₩ 83,669	(83,669)	-	-	-
Financial assets measured at fair value through profit or loss(*1)	-	92,608	92,608	(42,539)	50,069
Investment on subsidiaries and associates	(63,853)	-	(63,853)	(238,852)	(302,705)
Accrued interest receivable	(110,694)	-	(110,694)	(12,387)	(123,081)
Impairment loss on available-for-sale financial assets(*2)	177,809	(177,809)	-	-	-
Impairment loss on financial assets measured at fair value through other comprehensive income(*2)	-	167,220	167,220	(2,536)	164,684
Gain (loss) on valuation of available-for-sale financial assets(*2)	(312,116)	312,116	-	-	-
Gain (loss) on valuation of financial assets measured at fair value through other comprehensive income(*2)	-	(310,133)	(310,133)	316,512	6,379
Available-for-sale financial assets	31,226	(31,226)	-	-	-
Financial assets measured at fair value through other comprehensive income(*1)	-	31,226	31,226	4,497	35,723
Gain (loss) on valuation of derivatives	(144,765)	(333)	(145,098)	547,260	402,162
Gain (loss) on valuation of derivative-linked securities	(22,449)	-	(22,449)	29,725	7,276
Gain (loss) on valuation of derivative-linked securities in short position	167,037	-	167,037	(408,070)	(241,033)
Gain (loss) on valuation of securities in short position	7,458	-	7,458	(20,067)	(12,609)
Incentive payables	125,671	-	125,671	4,119	129,790

	Beginning Balance	Adjustment due to K-IFRS No. 1109 adoption(*3)	Beginning Balance (Adjusted)	Addition (deduction)	Ending Balance
Provision of payment guarantees	77,955	-	77,955	(14,093)	63,862
Restoration liabilities	9,751	-	9,751	(463)	9,288
Gain (loss) on foreign currency translation	(18,625)	-	(18,625)	11,880	(6,745)
Tangible assets	(75,122)	-	(75,122)	80,602	5,480
Intangible assets	(550,377)	-	(550,377)	21,815	(528,562)
Treasury stocks	1,788,526	-	1,788,526	(45,460)	1,743,066
Others(*3)	12,668	5,248	17,916	48,163	66,079
	1,183,769	5,248	1,189,017	280,106	1,469,123
Not recognized as deferred tax assets (liabilities)	(438,243)				(753,682)
Recognized as deferred tax assets (liabilities)	1,622,012				2,222,805
Tax rate	27.50%, etc.				27.50%, etc.
Deferred tax assets (liabilities)	₩ 443,922				619,197

(\*1) Aside from the items that were separately described in note 4-(1)-3-iii), financial assets at fair value through profit or loss and available-for-sale financial assets as of December 31, 2017 were reclassified as financial assets measured at fair value through profit or loss, financial assets measured at fair value through other comprehensive income as of December 31, 2018, respectively.

(\*2) Aside from the items that were reclassified as financial assets measured at fair value through profit or loss described in note 4-(1)-3-iii), net changes in unrealized valuation of available-for-sale financial assets as of December 31, 2017 were reclassified as net changes in unrealized valuation of financial assets measured at fair value through other comprehensive income for the year ended December 31, 2018.

(\*3) Additional corporate tax reconciliations by adopting K-IFRS No. 1109 were considered.

### Details of changes in temporary differences and the deferred tax assets and liabilities for the year ended December 31, 2017 are as follows:

	Beginning balance	Addition (deduction)	Ending balance
Financial assets at fair value through profit or loss	₩ (74,914)	158,583	83,669
Investment on subsidiaries and associates	(196,516)	132,663	(63,853)
Accrued interest receivable	(117,211)	6,517	(110,694)
Impairment loss on available-for-sale financial assets	200,918	(23,109)	177,809
Gain (loss) on valuation of available-for-sale financial assets	(335,194)	23,078	(312,116)
Available-for-sale financial assets	9,250	21,976	31,226
Gain (loss) on valuation of derivatives	116,678	(261,443)	(144,765)
Gain (loss) on valuation of derivative-linked securities	(71,555)	49,106	(22,449)
Gain (loss) on valuation of derivative-linked securities in short position	(72,148)	239,185	167,037
Gain (loss) on valuation of securities in short position	(13,994)	21,452	7,458
Incentive payables	15,772	109,899	125,671
Provision of payment guarantees	16,159	61,796	77,955
Restoration liabilities	5,293	4,458	9,751
Gain (loss) on foreign currency translation	8,354	(26,979)	(18,625)
Tangible assets	(72,421)	(2,701)	(75,122)
Intangible assets	(563,466)	13,089	(550,377)
Treasury stocks	2,529,296	(740,770)	1,788,526
Others	41,668	(29,000)	12,668
	1,425,969	(242,200)	1,183,769
Not recognized as deferred tax assets (liabilities)	(529,351)		(438,243)
Recognized as deferred tax assets (liabilities)	1,955,320		1,622,012
Tax rate	24.20%, etc.		27.50%, etc.
Deferred tax assets (liabilities)	₩ 477,788		443,922

(4) Temporary differences that are not recognized as deferred tax liabilities as of December 31, 2018 and 2017 are as follows:

		2018	2017
Investment in subsidiaries	₩	355,905	40,466
Goodwill		397,777	397,777
	₩	753,682	438,243

(5) Details of deferred tax relating to items that are recognized directly in equity for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
<b>Deferred tax:</b>			
Gain (loss) on valuation of available-for-sale financial assets	₩	-	5,929
Gain (loss) on valuation of financial assets measured at fair value through other comprehensive income(*)		(35,280)	-
Gain (loss) on valuation of financial liabilities designated as measured at fair value through profit or loss		978	-
Changes in equity adjustments from equity-method valuation		2,014	(3,177)
Other		(23)	(65,300)
		(32,311)	(62,548)
<b>Current income tax:</b>			
Loss on disposition of treasury stock		888	114,160
Stock option		(925)	1,583
		(37)	115,743
<b>Income tax expense directly charged or credited to equity</b>	₩	<b>(32,348)</b>	53,195

(\*) Aside from the items that were reclassified as financial assets measured at fair value through profit or loss described in note 4-(1)-3-iii), net changes in unrealized valuation of available-for-sale financial assets as of December 31, 2017 were reclassified as net changes in unrealized valuation of financial assets measured at fair value through other comprehensive income as of January 1, 2018.

### 53. Earnings per share ("EPS")

(1) Basic EPS

		2018	
		Common stocks	2 preferred stocks
Net profit attributable equity holder of the Controlling Company	₩	364,104	92,461
Weighted-average number of common shares outstanding (shares)		551,310,375	140,000,000
Basic EPS (in Korean won)		660	660

		2017	
		Common stocks	
Net profit attributable equity holder of the Controlling Company	₩	503,176	
Weighted-average number of common shares outstanding (shares)		532,783,826	
Basic EPS (in Korean won)		944	

(2) Details of weighted-average number of shares of common stocks outstanding for the years ended December 31, 2018 and 2017 are as follows:

	2018			
	Common stocks		2 preferred stocks	
	Stocks outstanding	Cumulative shares	Stocks outstanding	Cumulative shares
Issued stock	658,316,408	241,485,488,920	140,000,000	51,100,000,000
Treasury stock	(109,581,643)	(40,257,202,100)	-	-
Shares outstanding	548,734,765	201,228,286,820	140,000,000	51,100,000,000
Days		365		365
Weighted-average number of shares of common stocks outstanding		551,310,375		140,000,000

	2017	
	Common stocks outstanding	Cumulative shares
Issued stock	666,316,408	243,205,488,920
Treasury stock	(110,377,511)	(48,739,392,365)
Shares outstanding	555,938,897	194,466,096,555
Days		365
Weighted-average number of shares of common stocks outstanding		532,783,826

(3) Diluted EPS

Diluted EPS is same as basic EPS for the years ended December 31, 2018 and 2017.

### 54. Commitments and contingencies

(1) The Group has entered into various agreements with various financial institutions as of December 31, 2018, and the details are as follows:

Description	Financial Institution		Contract amount
Collateral financial support borrowings	Korea Securities Finance Corp.	₩	2,000,000
Agency operation borrowings		₩	1,000,000
Agency operation borrowings (Reserve for claims of customer's deposits)		₩	within the range of amount of deposits
Notes discounting		₩	200,000
Notes discounting (Deposits for subscription)		₩	within the range of amount of deposits
Overdraft for operation (daily)		₩	200,000
Overdraft for operation (daily)	Shinhan Bank, etc.	₩	680,000
	KDB(London Branch)	USD	10,000,000
	Shinhan Bank(London Branch)	USD	5,000,000
Term loan	Shinhan Bank New York	USD	100,000,000
	Bank of Montreal Harris Bank	USD	200,000,000
	Texas Capital Bank	USD	25,000,000
	KDB(Singapore Branch)	USD	50,000,000
Overdraft	Bank of China (Hong Kong) Limited	USD	6,451,613
	Euroclear Bank SA/NV	USD	7
	Bank of China (Hong Kong) Limited	USD	38,709,677
Overdraft for operation (daily)	The Bank of New York Mellon	USD	100,000,000
	Bank of Montreal Harris Bank	USD	30,000,000
	Texas Capital Bank	USD	75,000,000

Description	Financial Institution	Contract amount
Overdraft for operation (Line of credit)	BIDV	VND 180,000,000,000
	Shinhan Bank(Vietnam)	VND 95,000,000,000
	Vietinbank	VND 200,000,000,000
	Woori Bank Vietnam	VND 227,000,000,000
	Hana Bank Viet Nam	VND 80,000,000,000
	Indovina	VND 220,000,000,000
	Techcombank	VND 250,000,000,000
Revolving Credit Facility	UOB Indonesia	IDR 100,000,000,000
	J Trust Indonesia	IDR 100,000,000,000
	CIMB Indonesia	IDR 100,000,000,000
	KEB Hana Indonesia	IDR 100,000,000,000
	Permata Bank	IDR 50,000,000,000
	KDB(Singapore Branch)	USD 10,000,000

(2) As of December 31, 2018, the Group is involved in 27 lawsuits as a defendant (lawsuit amount: ₩53,698 million) and in 15 lawsuits as a plaintiff (lawsuit amount: ₩158,853 million). Except for 8 lawsuits for which the Group has recognized provisions, the results of the litigations cannot be predicted at the moment.

(3) The Group has leased equipment under operating lease agreements. Future lease payments by periods under operating lease agreements are as follows:

Period	Amount
Within 1 year	₩ 52,941
1 ~ 5 years	135,225
Over 5 years	1,052,823
	₩ 1,240,989

(4) Details of liabilities related financial guarantee contracts as of December 31, 2018 are as follows:

	Guarantee amount	Financial guarantee contract liabilities
Fiji Nabou Green Energy Co., LTD	₩ 30,800	2016.01.18~2019.04.08
MDLD 2nd Co., Ltd	46,430	2017.04.28~2021.10.28
Paradisyeongjong the 1st Co., Ltd	50,000	2018.12.17~2023.12.17
DWS GangNam MICE Co., Ltd	40,000	2018.06.29~2021.02.26
DoubleSW Co., LTD	13,000	2015.10.20~2023.10.11
Madw Dt5-1 Co., Ltd.	20,000	2016.09.09~2020.03.08
Madw Green City 1st Co., Ltd.	18,800	2016.09.12~2019.09.11
Madw Seongsu Wcenter Co., Ltd.	30,000	2017.05.02~2020.08.02
Investship 1st Co., Ltd	22,700	2015.03.31~2021.07.03
Wingsky 1st Co., Ltd	18,100	2015.05.06~2021.05.06
Vision Blue Green 1st Co., Ltd.	20,000	2016.06.23~2019.06.24
Kwangkyo Triton 1st Co., Ltd.	16,538	2018.04.09~2021.04.09
Best Award 1st Co., Ltd.	25,000	2017.07.31~2020.07.31
Bredbury 1st Co., Ltd.	3,000	2016.05.31~2021.05.31
Mirae SF 1st Co.,Ltd	25,000	2017.06.20~2020.02.20
Mirae SF 2ho Co.,Ltd	10,000	2018.04.20~2021.04.13
Mirae SF 3ho Co.,Ltd	10,000	2018.07.12~2021.11.12
Mione gwangan 1st Co., Ltd.	13,800	2018.09.17~2020.12.15
Mione dongchen Co.,Ltd	20,000	2018.12.21~2022.05.21
MS Dongtan 1st Co.,Ltd	10,000	2016.04.28~2019.07.29
MS Gwangjoo Moollyu 1st Co.,Ltd	42,100	2017.05.31~2019.05.31
MS Songdo Retail 1st Co.,Ltd	5,000	2017.06.01~2022.06.01
MS Songdo Retail 2nd Co.,Ltd	36,200	2017.06.01~2022.06.01

	Guarantee amount	Financial guarantee contract liabilities
MD Samgakji Stay Co.,Ltd	50,000	2017.12.08~2021.08.09
MD Sadang Retail 1st Co.,Ltd	4,006	2017.11.28~2020.11.27
MS Wiryee 1st Co., LTD	14,250	2018.01.15~2021.01.15
Yeksam Best 1st Co.,Ltd	13,000	2016.06.30~2019.08.30
MS Hogye 1st Co.,Ltd	14,520	2017.11.30~2020.01.30
Madw Misa 1st Co., LTD	73,200	2018.04.11~2021.04.11
Madw Misa 2nd Co., LTD	20,000	2018.04.11~2021.04.11
MS Ansan 1st Co., LTD	25,000	2018.09.04~2021.03.04
Nexus Kyodong Co.,Ltd	15,250	2018.12.27~2023.03.27
Dalio Joongang Co.,Ltd	15,250	2018.12.27~2023.03.27
MJ 1st Co., LTD	10,000	2018.11.16~2022.11.16
MSSP 1st Co.,Ltd	27,500	2014.12.29~2020.12.29
VLM 1st Co.,Ltd	6,700	2018.11.16~2019.05.28
MS Highend 1st Co.,Ltd	35,000	2017.04.26~2019.04.26
MS Sejong 3rd Co.,Ltd	10,000	2017.08.24~2022.08.26
MS Myeongnyun 1st. Ltd	30,000	2018.12.28~2022.08.28
MA Alpha Co., Ltd.	50,000	2018.11.23~2023.01.24
MA Alpha 2nd Co., Ltd.	20,000	2018.11.23~2023.01.24
MASB 1st Co.,Ltd	29,000	2018.10.08~2021.09.09
MASB 2nd Co., Ltd.	7,500	2018.10.08~2021.09.09
Rostov1st Co.,Ltd	16,000	2018.12.21~2021.04.21
BL Energy 1st Co., Ltd.	113,700	2017.02.24~2020.02.25
CES 1st Co., Ltd.	23,600	2017.11.21~2019.11.20
IGIS Professional Investment Type Private Real Estate Investment Trust No.178	137,300	2018.07.26~2020.02.05
	₩ 1,287,244	

(5) As of December 31, 2018, the Group entered into an agreement to purchase a portion of the commercial paper and asset backed short-term bond when the commercial paper and asset backed short-term bond will not be purchased or paid until the issue date based on the purchase guarantee contract. The details of agreements are as follows:

Institution	Contract amount	Contract Period
Good Aiming 3rd Co., Ltd.	₩ 49,900	2015.09.23~2020.10.19
Good Aiming 4th Co., Ltd.	50,000	2016.04.25~2021.05.25
Good Aiming 5th Co., Ltd.	31,000	2016.09.29~2019.07.24
Able Maecheon 2nd Co., Ltd.	51,600	2016.08.30~2019.06.28
M-Square Mia 3rd Co., Ltd.	6,600	2015.10.23~2019.02.24
MD Prime 1st Co., Ltd	412,300	2017.11.16~2022.09.16
MDLFirst Co., LTD	80,000	2018.02.23~2022.11.23
Uiwang Parade Co., Ltd.	62,000	2016.12.26~2019.12.26
KDB Partners Co., Ltd.	20,200	2014.05.13~2019.05.13
Constellation 1st Co., Ltd.	30,100	2016.03.22~2020.12.21
Sangok The Seven Co., Ltd	23,000	2017.10.25~2021.01.26
ECO Future 1st Inc.	18,500	2016.09.30~2019.09.30
KimpoHangangPark 1st Co.,Ltd.	29,800	2017.09.11~2022.10.11
MS GADI Co.,Ltd	49,000	2017.11.29~2022.08.29
MSSP 2nd Inc.	50,000	2014.12.29~2020.12.29
MSSP 3rd Inc.	45,000	2014.12.29~2020.12.29
MS Sejong 1st Inc.	56,900	2014.02.27~2020.08.26
MS Dangjin 1st Inc.	34,000	2017.02.17~2019.02.18
MS Bonchon 1st Inc.	38,000	2017.03.23~2019.11.25
MS Misa 1st Inc.	40,000	2017.04.07~2020.10.07

Institution	Contract amount	Contract Period
MS Songjeong 1st Inc.	22,000	2017.10.25~2020.10.25
MS Beomeo 1st Inc.	62,000	2017.11.16~2021.02.16
MS Youngsin 1st. Ltd.	50,000	2018.06.28~2021.03.29
K1 Empo Co.,Ltd	30,000	2018.05.14~2020.02.21
Rebounce 8th Co., LTD	100,000	2018.06.27~2023.06.29
Hyundai Card Co., Ltd.	50,000	2017.08.16~2020.08.14
Hyundai Capital Co., Ltd.	50,000	2017.08.18~2020.08.18
	₩ 1,541,900	

(6) As of December 31, 2018, the amount of credit commitment from loan agreement, etc. are ₩855,434 million.

(7) As of December 31, 2018 and 2017 the securities in custody on behalf of the Group's customers are as follows:

	2018	2017	Valuation method
Trust or securities in custody	₩ 145,500,573	151,458,912	Fair value
Saver securities in custody	317,760	240,402	Fair value
Collective investment securities	42,005,751	34,425,167	Standard sold price
	₩ 187,824,084	186,124,481	

(8) Details of loaned securities as of December 31, 2018 and 2017 are as follows:

	2018	2017	Valuation method
Equity securities	₩ 2,346,183	985,955	Fair value
Others (ETF)	606,153	715,553	Fair value
	₩ 2,952,336	1,701,508	

(9) Details of borrowed securities as of December 31, 2018 and 2017 are as follows:

	2018	2017	Valuation method
Equity securities	₩ 2,772,448	1,653,019	Fair value
Bonds	5,225,831	3,795,507	Fair value
Others (ETF)	275,623	361,387	Fair value
	₩ 8,273,902	5,809,913	

(\*) The Group treats securities lending and borrowing, manages memorandum account for the securities borrowed from the Korea Securities Depository and recognizes them as financial liabilities measured at fair value through profit or loss when the Controlling Company sells securities borrowed. In addition, the Controlling Company also recognizes financial liabilities at fair value through profit or loss for short selling of securities without performing securities lending and borrowing.

## 55. Share-based payments

### (1) Stock options

1) Details of the Group's share-based compensation as of December 31, 2018, is as follows:

	Mirae Asset Daewoo Co., Ltd.	Mirae Asset Securities (HK) Limited	Mirae Asset Venture Investment Co., Ltd.		
Granted to	Executives	Executives	Executives and employees		
Grant date	2012.06.05	2014.07.15	2008.04.02		
Granted shares	310,000 shares	15,000 shares	74,700,000 shares		
Grant method	Issuance of treasury stock	Issuance of treasury stock	Issuance of new shares		
Vesting condition	2 years of service from grant date	2 years of service from grant date	3 months of service from grant date		
Exercise period	2015.06.05~2020.06.04	2017.07.15~2022.07.14	2008.07.02~2023.04.01		
Exercise price (in KRW)	Type 1: 37,463 Type 2: 47,680	39,192	HKD 1.10		
Granted shares	Type 1: 230,000 shares Type 2: 80,000 shares	15,000 shares	74,700,000 shares		
Residual shares as of December 31, 2018	210,000 shares 8,000 shares	15,000 shares	49,800,000 shares		
Exercisable shares as of December 31, 2018	210,000 shares 8,000 shares	15,000 shares	49,800,000 shares		
<Various factors for fair value measurements>					
Option pricing model	Binomial tree	Black-Scholes option pricing model	Black-Scholes option pricing model	DCF, Binomial tree	DCF, Binomial tree
Risk-free interest rate	3.6%, 3.34%	2.583%, 2.865%	1.90%	2.09%, 2.41%	2.54%
Expected stock price volatility	46.19%, 39.59%, 48.11%	33.17%	46.38%	52.03%, 62.13%	95.33%
Assumption for dividend	Assumed dividend payment of KRW 500 at the end of each year	Assumed dividend payment of KRW 350 at the end of each year	-	-	-
Stock price at grant date (in won)	30,850	49,450	-	2,420, 2,896	6,159
Fair value of stock option (in won)	Type 1: 8,444 Type 2: 6,758	14,575	HKD 0.6047	1,427, 1,806	5,332

2) The Group recognized costs and carrying amounts of equity related to share-based payments as follows:

	Mirae Asset Daewoo Co., Ltd.	Mirae Asset Securities (HK) Limited	Mirae Asset Venture Investment Co., Ltd.
Estimated amount of shares vested at settlement date (shares)(*1)	305,000	49,800,000	740,000
Total compensation cost	2,533	HKD 30,117,721	3,065
Amount recognized as stock option expenses for the year ended December 31, 2018	-	-	551
Balances of Stock Option as of December 31, 2018(*2)	1,836	-	-

(\*1) The Group assumed that the stock options are fully vested at the end of the service period as the Group could not make a reasonable assumption of the forfeiture rate.

(\*2) Mirae Asset Securities (HK) Ltd. and Mirae Asset Venture Investment Co., Ltd. recognized capital adjustment related to share-based payments of HKD 30,117,721 and ₩741 million for the year ended December 31, 2018. These were adjusted and thus there is no balance of capital adjustment in the Controlling Company's consolidated statement of financial position as of December 31, 2018.

3) Details of changes in granted shares for the years ended December 31, 2018 and 2017 are as follows:

					2018
		Beginning	Grant	Expired	Ending
Mirae Asset Daewoo					
2012 Grant	Type 1	210,000	-	-	210,000
	Type 2	80,000	-	-	80,000
2014 Grant		15,000	-	-	15,000
		305,000	-	-	305,000
Mirae Asset Securities (HK) Limited					
2008 Grant		49,800,000	-	-	49,800,000
Mirae Asset Venture Investment Co., Ltd.					
2015 Grant(*)		1,610,000	-	(1,370,000)	240,000
2018 Grant		-	500,000	-	500,000
		1,610,000	500,000	(1,370,000)	740,000
		51,715,000	500,000	(1,370,000)	50,845,000

(\*) The shares were split at the ratio of 5-for-1 for the year ended December 31, 2018.

				2017
		Beginning	Expired	Ending
Mirae Asset Daewoo				
2012 Grant	Type 1	210,000	-	210,000
	Type 2	80,000	-	80,000
2014 Grant		15,000	-	15,000
		305,000	-	305,000
Mirae Asset Securities (HK) Limited				
2008 Grant		49,800,000	-	49,800,000
Mirae Asset Venture Investment Co., Ltd.				
2015 Grant		384,000	(62,000)	322,000
		50,489,000	(62,000)	50,427,000

## (2) Share-based Payments

In conformity with the performance-based compensation system model for financial investment companies, the Group deferred portions of management incentives and divided payments across three years, and therefore recognized equity and liabilities as of December 31, 2018 and 2017 are as follows:

	2018		2017
Accrued expenses	₩	19,688	5,632
Capital adjustment		4,833	4,947

## 56. Related-party transactions

(1) As of December 31, 2018, the list of associates and other related parties of the Group are as follows:

Type	Name of the related parties	
Associates	Mirae Asset Life Insurance Co., Ltd	
	Mirae Asset 5th SPAC	
	Mirae Asset Daewoo 1st SPAC	
	Mirae Asset Daewoo 2nd SPAC	
	Mirae Asset Partners PEF 4th	
	New Growth Engine Green Future PEF	
	Lotte KDB Mirae Asset Daewoo Global Investment Partnership PEF	
	Mirae Asset-NAVER New Growth Fund I	
	Mirae Asset-GS Retail New Growth Fund I	
	Mirae Asset-Celltrion New Growth Fund I	
	Hancom-Miraeasset 4IR Fund	
	Mirae Asset Naver Asia Growth PEF	
	Pantos Logistics Co., Ltd	
	SMC RMB Investors II Limited	
	Cassava Investment Korea Pte. Ltd	
	Transwestern Corporate Properties I LLC	
	Traphaco Joint Stock Company	
	HPJV1 LLC	
	Other related parties	Mirae Asset Capital Co., Ltd.
		Mirae Asset Global Investment Co., Ltd.
Mirae Asset Consulting Co., Ltd.		
	Miraeasset fund services Co.,Ltd, and member firm in a Large Business Group	

(2) Significant assets and liabilities from transactions with related parties as of December 31, 2018 and 2017 are as follows:

	2018				
	Loans	Guarantees	Receivables Others	Debentures	Payables Others
<b>Associates</b>					
Mirae Asset Life Insurance Co., Ltd.	₩	-	-	341,446	3,309
Cassava Investment Korea Pte. Ltd.(*)		2,751	-	-	-
Mirae Asset 3rd SPAC		-	-	-	-
Mirae Asset 5th SPAC		-	700	-	-
Mirae Asset Daewoo 1st SPAC		760	-	-	-
Mirae Asset Daewoo 2nd SPAC		-	573	-	-
<b>Other related parties</b>					
Mirae Asset Capital Co., Ltd.,		-	-	50,223	860
Mirae Asset Global Investment Co., Ltd.		-	11,277	-	71,675
Others		-	15,085	18,204	12,200
	₩	3,511	15,085	30,754	88,044

	2017					
		Receivables			Payables	
		Loans	Guarantees	Others	Debentures	Others
<b>Associates</b>						
Mirae Asset Life Insurance Co., Ltd.	₩	-	-	3	361,510	3,398
Cassava Investment Korea Pte. Ltd.(*)		2,751	-	-	-	-
Mirae Asset 3rd SPAC		-	-	1,194	-	-
Mirae Asset 5th SPAC		-	-	700	-	-
Daewoo Special Purpose Acquisition 3 Co., Ltd		980	-	-	-	-
Mirae Asset Daewoo 1st SPAC		760	-	-	-	-
<b>Other related parties</b>						
Mirae Asset Capital Co., Ltd.,		-	-	-	50,220	71
Mirae Asset Global Investment Co., Ltd.		-	-	5,548	-	8,322
Others		-	15,085	11,770	-	11,739
	₩	4,491	15,085	19,215	411,730	23,530

(\*) Bad debt allowances set at 100% as of December 31, 2018 and 2017 due to business delays.

**(3) Significant transactions with related parties for the years ended December 31, 2018 and 2017 are as follows:**

	2018						
		Profit transaction			Loss transaction		
		Dividends	Commissions	Others	Rent	Commissions	Others
<b>Associates</b>							
Mirae Asset Life Insurance Co., Ltd	₩	4,903	2,951	4,850	-	2,385	13,311
Mirae Asset Daewoo 2nd SPAC		-	83	-	-	-	-
<b>Other related parties</b>							
Mirae Asset Capital Co., Ltd		-	523	4	-	19	2,100
Mirae Asset Global Investment Co., Ltd.		8,836	4,380	1,203	-	22,283	-
Others		3,393	1,632	1,478	20,987	7,129	3,092
	₩	17,132	9,569	7,535	20,987	31,816	18,503

	2017						
		Profit transaction			Loss transaction		
		Dividends	Commissions	Others	Rent	Commissions	Others
<b>Associates</b>							
Mirae Asset Life Insurance Co., Ltd.	₩	1,586	2,499	4,049	-	1,060	13,481
SMC RMB Investors II Limited		1,531	-	-	-	-	-
New Growth Engine Green Future PEF		-	45	-	-	-	-
Daewoo SBI Special Purpose Acquisition 1 Co., Ltd		-	383	-	-	-	-
Mirae Asset Daewoo 1st SPAC		-	120	-	-	-	-
<b>Other related parties</b>							
Mirae Asset Capital Co., Ltd		-	22	14	-	10	2,481
Mirae Asset Global Investment Co., Ltd.		4,347	4,328	1,128	-	14,145	-
Others		13,177	1,761	1,344	20,492	460	7,657
	₩	20,641	9,158	6,535	20,492	15,675	23,619

**(4) Significant borrowing transactions with related parties for the years ended December 31, 2018 and 2017 are as follows:**

	2018				
	Beginning	Increase	Decrease	Ending	
<b>Associates</b>					
Mirae Asset Life Insurance Co., Ltd	₩	360,000	-	(20,000)	340,000
<b>Others relate parties</b>					
Mirae Asset Capital Co., Ltd		50,000	-	-	50,000
	₩	410,000	-	(20,000)	390,000

	2017				
	Beginning	Increase	Decrease	Ending	
<b>Associates</b>					
Mirae Asset Life Insurance Co., Ltd	₩	290,000	70,000	-	360,000
<b>Others relate parties</b>					
Mirae Asset Capital Co., Ltd		40,000	10,000	-	50,000
	₩	330,000	80,000	-	410,000

(\*1) Transactions under formalized terms and conditions such as CMA, MMW and etc. are excluded.

(\*2) Discount on debentures is excluded.

**(5) Significant loan transactions with related parties for the years ended December 31, 2018 and 2017 are as follows:**

	2018				
	Beginning	Increase	Decrease	Ending	
<b>Associates</b>					
Daewoo Special Purpose Acquisition 3 Co., Ltd	₩	980	-	(980)	-
Mirae Asset Daewoo 1st SPAC		760	-	-	760
Cassava Investment Korea Pte. Ltd. (*1)		2,751	-	-	2,751
	₩	4,491	-	(980)	3,511

	2017				
	Beginning	Increase	Decrease	Ending	
<b>Associates</b>					
Daewoo SBI Special Purpose Acquisition 1 Co., Ltd	₩	715	-	(715)	-
Daewoo Special Purpose Acquisition 2 Co., Ltd		726	-	(726)	-
Daewoo Special Purpose Acquisition 3 Co., Ltd		980	-	-	980
Mirae Asset Daewoo 1st SPAC		-	760	-	760
Cassava Investment Korea Pte. Ltd. (*1)		2,751	-	-	2,751
	₩	5,172	760	(1,441)	4,491

(\*1) Bad debt allowances set at 100% as of December 31, 2018 and 217 due to business delays.



(6) Dividends paid by the Controlling Company to related parties for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Other related parties			
Mirae Asset Capital Co., Ltd.	₩	27,301	6,153
Mirae Asset Consulting Co., Ltd.		-	52
	₩	27,301	6,205

(7) The Group has entered into the entrusted investment service agreement for the Group's Wrap Account with Mirae Asset Global Investment Co., Ltd., a related party.

		2018	2017
Wrap Account			
Outstanding balance of the Wrap Account	₩	183,111	162,587
Wrap Account			
Operating expenses		(1,445)	(558)

(8) Compensations for key management, which consists of officers and chief managers who have important duties and responsibilities over the planning, operating and control of the Controlling Company, for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Short-term salaries	₩	12,967	12,491
Severance benefits		1,535	1,455
	₩	14,502	13,946

## 57. Interests in unconsolidated structured entities

### (1) Characteristics and scope of the interests in unconsolidated structured entities

Characteristics	Purpose	Main business	Financing method	Total Asset	
				2018	2017
Asset-backed SPC	Liquidity improvements for the asset holder through early liquidation of assets	- Execution of asset-backed plans - Transfer and collect liquidated assets - Issuance and redemption of ABS	Issuance of ABS	₩ 2,717,020	2,158,690
Project financing SPC	SOC, investing and financing for real estate development	- SOC for construction and real estate development	Investor investments and borrowing from financial institutions	4,736,004	5,384,534
Investment fund(*)	Generate revenue from investment in financial and non-financial instruments	- Managing and operating fund assets - Remuneration fund payment and distribution of operating revenue	- Sales of beneficiary certificates - General Partner and Limited Partner investments	20,147,949	20,390,024

(\*) Beneficiary of certificate, PEF, etc.

(2) Carrying amounts of the interests related to unconsolidated structured entities and maximum exposure to loss as of December 31, 2018 and 2017 are as follows:

		2018			2018
		Asset-backed SPC	Project financing SPC	Investment fund	Total
Assets					
Financial assets measured at fair value through profit or loss	₩	4	55,594	1,857,163	1,912,761
Associates		-	-	1,224	1,224
Loans		330,529	194,766	-	525,295
		330,533	250,360	1,858,387	2,439,280
Purchasing commitments and guarantees		1,495,174	1,316,500	645,393	3,457,067
Maximum exposure amount of loss	₩	1,825,707	1,566,860	2,503,780	5,896,347

		2017			2017
		Asset-backed SPC	Project financing SPC	Investment fund	Total
Assets					
Available-for-sale financial assets	₩	2	46,901	2,163,468	2,210,371
Associates		-	-	1,259	1,259
Loans		219,968	228,631	-	448,599
		219,970	275,532	2,164,727	2,660,229
Purchasing commitments and guarantees		1,835,100	1,295,276	283,686	3,414,062
Maximum exposure amount of loss	₩	2,055,070	1,570,808	2,448,413	6,074,291

## 58. Supplemental cash flow information

Significant non-cash transactions liabilities for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Gains on valuation of available-for-sale financial assets	₩	-	(27,213)
Gains on valuation of financial assets measured at fair value through other comprehensive income		(80,356)	-
Reclassification of properties to investment properties		3,333	164,121
Income tax effect of treasury stock disposal		(887)	(114,160)
Reclassification of deposits receivable to advanced payment		-	(5,027)
Retirement of treasury stocks		76,864	-



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