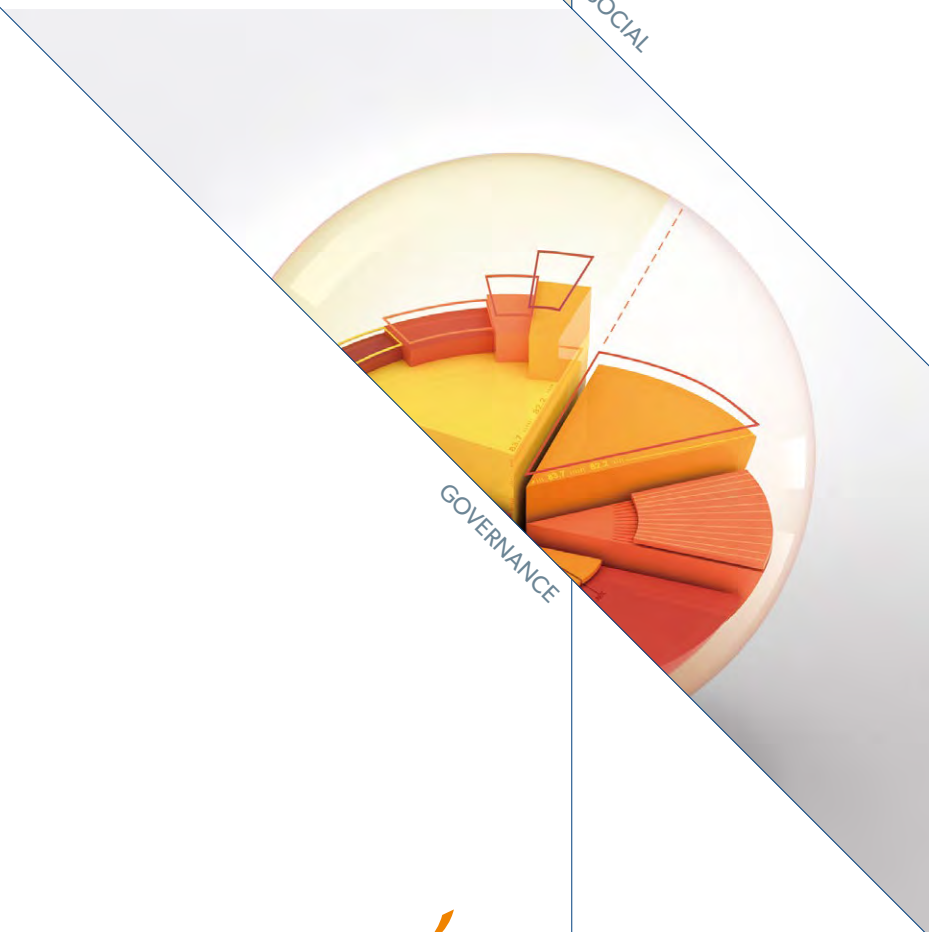




SOCIAL



MIRAE ASSET SECURITIES 2021 INTEGRATED REPORT

About This Report

The 2021 Mirae Asset Securities Integrated Report was created with an aim of reviewing our sustainability management activities and achievements, and thus providing stakeholders with information in a transparent manner.

Reporting Status

This report is the 10th report since we published a sustainability report for the first time in the industry in 2006 and is the fifth after the merger with former 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 Methodology 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, the framework of the International Integrated Reporting Council (IIRC), and the Sustainability Accounting Standards Board (SASB) Standards. It is also aligned with the Ten Principles of the UN Global Compact, which the company has been upholding since 2006.

The reporting period of this report is from January 1st 2020 to December 31st 2020, and some topics disclose three-year data from 2018 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 does not fit such criteria has footnotes added.

Reporting Scope

The scope of information in this report encompasses the company headquarters, client center, domestic branch network, overseas subsidiaries and representative offices, and other areas where Mirae Asset Securities 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 representative offices, the scope of reporting includes business performance only since data collection is difficult due to physical limitations in terms of material management and assessment.

Independent Assurance

This report has been assured by an independent assurance service provider, to enhance its internal and external credibility. Also, the integrity of the reporting processes as well as the accuracy and credibility of its contents have been ensured by developing this report in accordance with international standards including International Standard on Assurance Engagements (ISAE) 3000. The Independent Assurance Statement is attached in the ESG Performance section (P. 116-117).

Information

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Mirae Asset Securities at a Glance

Global Location

Domestic Network

77

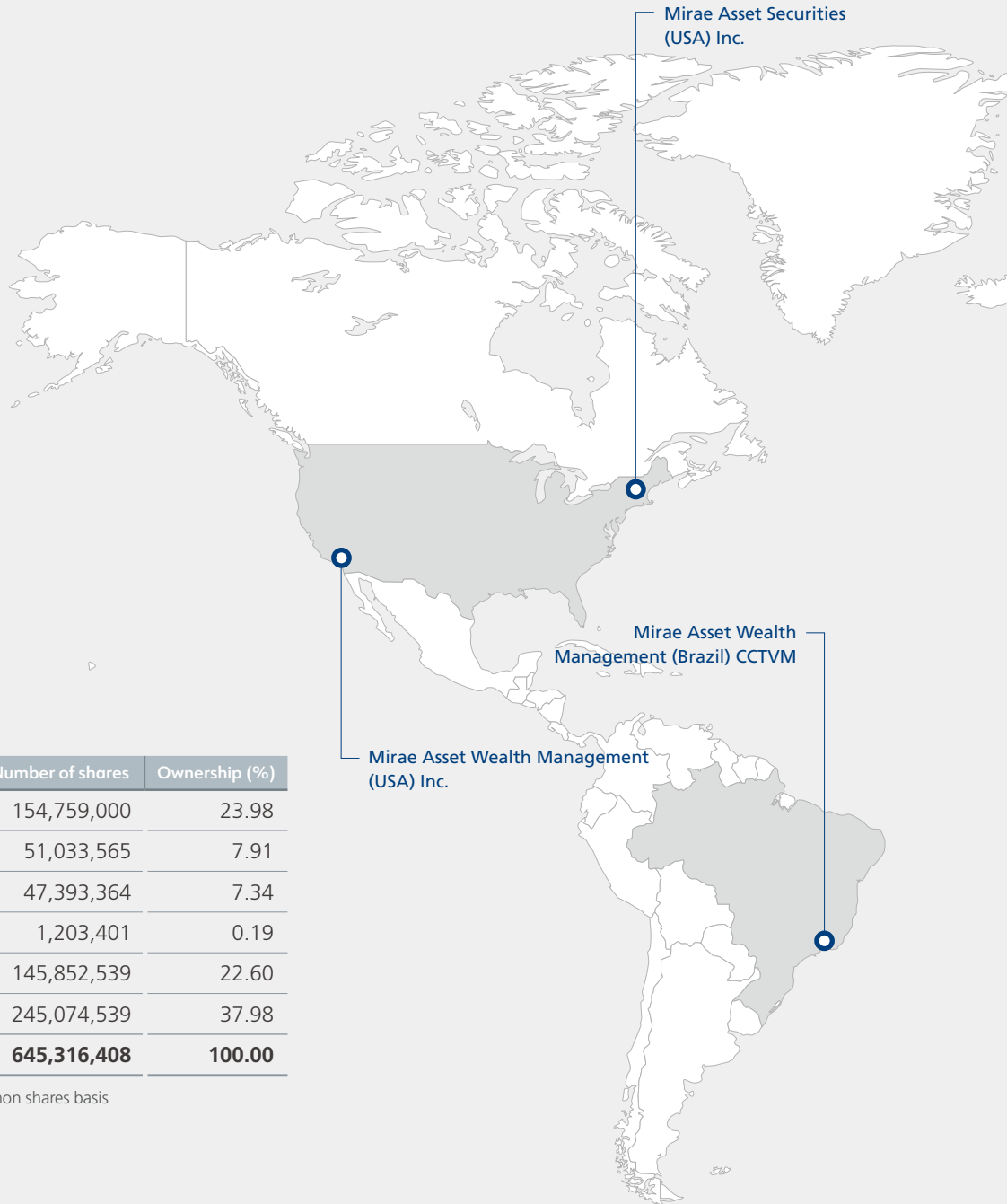
Overseas Subsidiaries

11

Overseas Representative Offices

3

* As of December 31st, 2020



Shareholder Composition

Shareholder's name	Number of shares	Ownership (%)
Mirae Asset Capital Co., Ltd.	154,759,000	23.98
National Pension Service	51,033,565	7.91
NAVER Corporation	47,393,364	7.34
Employee Stock Ownership Plan	1,203,401	0.19
Treasury Shares	145,852,539	22.60
Others	245,074,539	37.98
Total	645,316,408	100.00

* As of March 31st, 2021, issued total common shares basis

Total Assets



130.9 KRW trillion

Equity Capital



9.3 KRW trillion

Total Client Assets



336.1 KRW trillion

Market Share in Brokerage Commissions of Equity Securities



10.6%

* As of December 31st, 2020, consolidated basis

Global Investment Partner, Mirae Asset Securities

As a Korea's leading financial institution, Mirae Asset Securities is making relentless endeavor to make a leap forward into becoming a global top-tier investment bank by continuously expanding our global business.



1) Hong Kong Special Administrative Region of the People's Republic of China

Credit Ratings

Bonds

AA

Commercial paper

A1

Korea Ratings, Korea Investors Service, NICE Investors Service

Foreign bonds*

Baa2 (stable)

Moody's

BBB (stable)

S&P

* As of May 11th, 2021

CEO Message

Dear clients, shareholders, and all other stakeholders of Mirae Asset Securities,

It is my great pleasure to have this opportunity to share our financial and non-financial achievements in the past year through this 2021 Integrated Report.

Despite the unprecedented disruption caused by the COVID-19 pandemic, Mirae Asset Securities has continued on its journey of sustainable growth, exceeding KRW 1 trillion in income before tax for the first time in Korea's securities industry. In a bid to further solidify our execution competencies on the ESG management, which has been continuously put into practice since the company's establishment based on the belief in social responsibilities as one of our core values, we have established the ESG Committee in the first half of 2021. We have also laid the ground towards becoming a global top-tier IB based on the strategy of G.R.O.W.T.H – Globalization, Risk management, Opportunity, Wealth management, Technology, High Quality – intended to create synergy by sharpening our competitive edge. Moreover, at the annual general meeting convened in the first half of 2021, the decision was made to change the company name to Mirae Asset Securities, in order to clearly deliver the unified corporate identity of Mirae Asset to our clients.

Mirae Asset Securities always strives to discover prime assets around the globe, thereby providing stable return to the clients through various investment opportunities and creating national wealth through financial export. To this end, we have made utmost efforts in executing the “localization” strategy of the overseas subsidiaries for the past 20 years and hence became the first Korean securities company to exceed KRW 200 billion in pre-tax income for overseas subsidiaries.

We were able to achieve the record-high performance and stabilization of returns in 2020 on the back of stringent risk management system and investment business capabilities based on the risk management. Mirae Asset Securities has long been making sincere efforts in enhancing the risk management capabilities to the highest level by bolstering the risk management and internal control system for corporate sales activities and client assets. In particular, we enacted the 「Environmental & Social Policy Statement」 for the first time in the industry, and then thoroughly apply the principle across the entire investment and advisory domains so that non-financial risks based on ESG management principles are preemptively identified alongside financial risks.

Since its establishment, Mirae Asset Securities has relentlessly explored opportunities to create new businesses through disruptive innovation. With the prolonged untact era, we have launched the NAVER Bankbook, the first tech-fin product connecting finance with commerce, in alliance with NAVER FINANCIAL as part of our digitalization strategy.

In addition, Mirae Asset Securities focused on leading the wealth management market based on the prime investment portfolio both in Korea and abroad such as overseas equity and pension. As a result of these efforts, our asset under management exceeded KRW 330 trillion as of the end of 2020, for the first time in the industry, contributing to more affluent and secure retirement for our clients.

With the declaration of the digital transformation vision in 2020, Mirae Asset Securities has been making continuous efforts to secure future growth engine by accelerating the digital transformation and introducing various contents and services leveraging digital technologies. We are also making continuous investment into business infrastructure and work innovation to enable easier and more convenient financial accessibility for our clients. TO this end, we are facilitating hyper-personalized big data-based services based on the MyData business license that we have acquired for the first time in Korea's financial industry and providing global simple payment services through payment gateway (PG) business registration.

Mirae Asset Securities has been making sustained efforts to deliver the optimal level of services to clients, shareholders, and all stakeholders across the entire business areas. The business management paradigm taking a root in the post-pandemic era requires ESG management that considers the society and environment and pursues an inclusive growth, which in turn is leading to growing attention and importance put on professional investment companies to fulfill its roles and responsibilities. In response, Mirae Asset Securities is committed to practicing the ESG management with eager to respond to the call of the society and fulfilling its role of addressing issues through sustainable finance. In particular, we will focus on improving our governance on business principles of accountability, transparency, and ethics; providing finance and advisory services in good faith aimed at helping the nation achieve carbon neutrality by 2050; and fulfilling our social responsibility by offering inclusive finance and services for the financial minorities.

In recognition of Mirae Asset Securities' achievement in enhancing non-financial values, we were listed on the renowned Dow Jones Sustainability Index (DJSI) World for nine consecutive years, which ranked us the top 10 among 162 global financial companies evaluated. We also received grade A by Korea's prominent ESG analytics company KCGS and Sustainvest, which is the highest grade among Korean securities companies.

Mirae Asset Securities has implemented the policy of enhancing shareholder returns so that we can jointly grow with our shareholders based on the spirit of client alliance. Last year a total of 50 million treasury stocks were acquired of which 13 million were retired, demonstrating our active execution of shareholder return policy. We are committed to reviewing and carrying out diversified ways of enhancing shareholder values in the future as a way to respond to the shareholders' keen support.

Under the ESG management mission of "pioneering a sustainable future through finance with a clear understanding of our social roles and responsibilities", we will make strides in taking the lead in enhancing the wealth of clients, shareholders, and all of our stakeholders and develop a healthy social environment based on a stable business model backed by new opportunities and thorough risk management. I would like to extend my heartfelt gratitude to all clients, shareholders, and other stakeholders for unwavering support and trust that you have extended to Mirae Asset Securities.

Hyun Man Choi

Executive Vice Chairman and Chief Executive Officer,
Mirae Asset Securities



Company Profile

Mirae Asset Securities has been taking a step forward with sincerity to grow into a global investment bank. To this end, we have been leveraging our global network to identify assets of high quality and seize investment opportunities across the globe, thereby taking the lead in providing products with distinctive values.

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

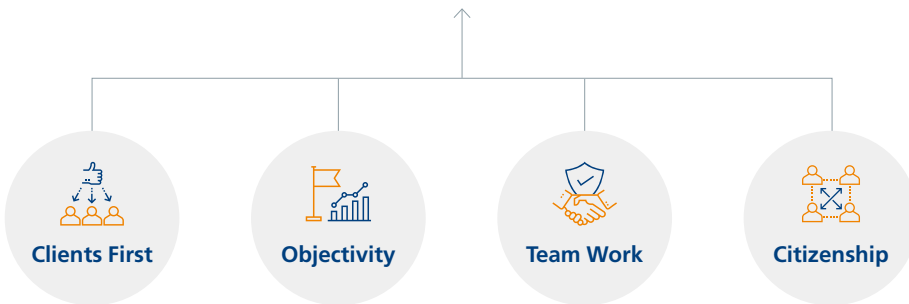
As a global financial group, we pursue excellence in investment management to help our clients achieve their long-term objectives.

Mirae Asset has grown from an emerging market specialist into a global financial group. Over the past 20 years, our strategic direction has always been aligned with our vision to "help our clients achieve their long-term objectives".



Core Values

Our four core values should be the key decision-making criteria for all Mirae Asset employees.



Clients First

Our clients' success is paramount – their success is our success.

We build and nurture long-term relationships with our clients by using our proven investment strategies.

Objectivity

We assess every investment opportunity objectively and with total impartiality.

Our independence sets us apart and helps ensure that our decisions are aligned with the needs of our clients.

Team Work

Mirae Asset's success is built on respect for each individual.

It is our aim to create a true meritocracy in which talent and achievement are rewarded and opportunity is equally available to all.

Citizenship

At Mirae Asset, we are profoundly aware of our responsibilities.

As a good corporate citizen, we aim to give back to the communities in which we live and actively support and participate in a range of initiatives within them.



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We want our company to display a unique and forward-looking philosophy that provides solutions for all of our stakeholders

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Founder of Global Investment Strategy Officer (GISO) of
Mirae Asset Financial Group

Hyeon Joo Park



Corporate Profile

Company name	Mirae Asset Securities Co., Ltd.
Headquarters	Mirae Asset CENTER 1 Bldg., 26, Eulji-ro 5-gil, Jung-gu, Seoul 04539, Korea
CEOs	Hyun Man Choi, Jae Sik Kim
Business type	Financial investment
Global network	United States, United Kingdom, Brazil, China, Hong Kong, Singapore, Indonesia, Vietnam, etc.

* As of March 31st, 2021

Major Affiliates and Subsidiaries

Company name	Location	Equity capital (KRW billion)	Main business	Ownership (%)
Mirae Asset Venture Investments Co., Ltd.	Korea	180.6	SMEs and start-ups investments	61.6
Mirae Asset Life Insurance Co., Ltd.	Korea	2,285.1	Insurance business	19.7
Mirae Asset Securities (HK) Ltd.	Hong Kong	2,665.6	Brokerage and investment banking	100
Mirae Asset Securities (UK) Ltd.	UK	337.3	Brokerage, investment banking and investment consulting	100
Mirae Asset Securities Holdings (USA) Inc.	US	620.3	Brokerage and investment banking	100

* As of December 31st, 2020; consolidated basis; and ownership is based on total number of shares issued

Investment Principles

As a 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 with a competitive advantage in market share, business model, corporate governance and earnings growth. 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 an 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.

Mirae Asset firmly adheres to above investment principles.

Value Chain

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



G.R.O.W.T.H Strategy



Key achievements in 2020

201 KRW billion

First Korean securities company to exceed KRW 200 billion in pre-tax income for overseas subsidiaries

15 KRW trillion

First Korean securities company to exceed KRW 15 trillion in global equity brokerage balance

Plans for 2021

With a devotion to enhance national wealth through financial export, Mirae Asset Securities will strengthen the growth momentum of its global business. On the back of the distinctive global network competitiveness, we will further expand synergy between overseas subsidiaries and HQ.



Key achievements in 2020

Proclaimed the Financial Consumer Protection Charter

Awarded 2020 Grand Prize in Compliance by Korea Exchange

Plans for 2021

Mirae Asset Securities will roll out its business based on thorough risk management. Risks are always looked after alongside profits to ensure risks on the client assets are fully managed. Moreover, we will further solidify our risk management system while making concentrated efforts in strengthening internal controls.



Key achievements in 2020

Launched NAVER CMA

The first tech-fin product developed in partnership with NAVER

Launched an open banking service

Plans for 2021

We will make continuous efforts to create new growth opportunities. Leveraging our competitiveness, we will proactively explore new growth opportunities and make bold challenges in various areas.

The Permanent Innovator

Mirae Asset Securities has made relentless challenges and innovations with its “G.R.O.W.T.H” strategy, which stands for Globalization, Risk management, Opportunity, Wealth management, Technology and High quality, taking a big leap forward to become a global top-tier IB.



Key achievements in 2020

336.1 KRW trillion

First Korean securities company to exceed KRW 330 trillion in client assets under management

* KRW 400.5 trillion as of June 2021

15 KRW trillion

First Korean securities company to exceed KRW 15 trillion in pension assets under management

Plans for 2021

As the ultra low interest rate continues, the money starts to move from bank savings accounts towards investment assets. As a well-equipped investment expert, Mirae Asset Securities will broaden the global asset allocation service by providing overseas stocks, ETFs, and REITs. We will also dramatically improve the quality of our VIP business and fortify consulting-based asset management business model.



Key achievements in 2020

Announced the digital transformation vision

Fractional share investing mobile platform for global stocks

WeChat Pay

Designated as the innovative financial service by the Financial Supervisory Committee

Partnered with Tencent to provide settlement service in CNY

Plans for 2021

Digital finance based on such technologies as big data, artificial intelligence, and block chain has been penetrating into our daily lives, evolving into the core of a digital ecosystem. We would like to, therefore, declare 2021 as a baseline year of a “Digital Mirae Asset” and accelerate the pace of our digital transformation.



Key achievements in 2020

Triple Crown in ESG management accomplishments

Obtained Grade A in the ESG Evaluation by Korea Corporate Governance Service (KCGS)

Listed on Dow Jones Sustainability (DJSI) World Index for 9 consecutive years

Obtained Grade A in the ESG Evaluation by Sustainvest

Plans for 2021

We will strive to pursue the highest quality in all aspects from client services to ESG management. Quality service offered to clients under the philosophy of client alliance will lead to client delight. We will also boost ESG management practices, and thus continue to pursue social values and faithfully practice caring capitalism.

Business Overview

Wealth Management

With the client success as our highest priority, Mirae Asset Securities is leading the wealth management market based on diversified investment portfolio.

Overview

Customized consulting service

Mirae Asset Securities delivers an investment portfolio tailored to clients' investment propensity and purpose thereby contributing to achieving a stable return for them. Furthermore, we provide comprehensive consulting services giving solutions to clients for complicated issues by our experts in tax, real estate, legal, investment, and insurance.

Enhanced global asset allocation competency

Mirae Asset Securities provides differentiated investment information by leveraging Korea's top-tier research center and the global network, assisting clients to experience high quality services in overseas stock brokerage. In addition, all our branches offer asset allocation strategy recommendations optimized for clients' investment propensity and asset plans as well as professional consulting services on promising investment destinations both at home and abroad.

Innovative VIP service

Mirae Asset Securities operates "Mirae Asset Sage Club Membership", an exclusive service for VIP clients who pursue values beyond wealth and honor. The service provides deluxe leisure programs and optimal services such as private culture and art programs, and luxurious premium lifestyle services in addition to the wealth management.



Pension

We provide high quality products by fully leveraging our distinctive global network, and offer consulting services aimed for efficient management of pension assets, in an effort to help our clients prepare for a stable retirement.

Overview

The leading organization with experienced pension experts in Korea

Mirae Asset Securities runs several pension-dedicated organizations, such as Pension Solution Department (Pension Marketing Team, Pension Consulting Team, Pension Service Team, Pension Admin Service Team, and Pension Asset Management Center), Corporate RM Center, Investment and Pension Center, Pension Asset Management Team, and Wrap Investment Solution Team, where Korea's largest pool of over 200 pension experts offer the highest-quality pension solutions. Diverse efforts such as the adoption of corporate pension schemes, one-stop tailored service for retail customers including labor, accounting, actuary, and taxation services, management of returns, and dedicated pension education services will support successful pension asset management of our clients.

Vast product line-up based on distinctive global network

On the ground of our global network and advanced IT infrastructure, Mirae Asset Securities analyzes the global market and offers an outstanding asset management portfolio. Differentiated products and service offerings, such as Korea's largest Fund-ETF line-up and the industry's first trading service for listed REITs, have earned the company leadership in Korea's pension market. In addition, leveraging our advanced IT infrastructure, we are enhancing client convenience and helping our clients successfully manage their pension assets, thereby contributing to a stable post-retirement life. Under the newly-created slogan of "I manage my pension", Mirae Asset Securities will put in diverse efforts to establish a culture of pension investment.



Investment Bank

We provide corporate clients with growth opportunities through financial solutions, and investors with a business model to share our growth outcome, in our efforts to pursue joint growth with clients.

Overview

IB Division1

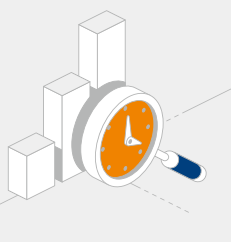
Mirae Asset Securities provides tailored financial solutions that meet the needs of corporate clients by offering various corporate financing solutions such as full range of services for initial public offerings (IPO), pre-IPO investments, rights offerings, issuance of equity linked notes (ETN), corporate bonds, and global bonds. We also provide top-tier private equity fund (PEF) management services where we usually participate as a general partner (GP), and offer such diverse financial services as structured finance and credit offerings.

IB Division2

Mirae Asset Securities offers advisory services for real estate project financing (PF) in Korea and overseas where large-scale financing is required. In addition, we utilize our equity capital, finance, and management service in promising alternative investment projects, including publicly-traded REITs, real assets, aircrafts, power & energy, and infrastructure projects.

Total Financial Solution

In a bid to ensure professional and responsible management of our IB business, Mirae Asset Securities has categorized investment bank business into two divisions, based on which we offer customized services in such wide range of areas as corporate financing, real estate, alternative investment, and acquisition financing. We also offer comprehensive solutions based on our rich experiences and extensive network both in Korea and overseas.



Trading

As an investment expert, 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

Trading Division1

Experts with ample industry experiences are in charge of sales and trading of equity and fixed income, currency, commodity (FICC) derivative products. We offer investment opportunities through our in-house developed derivative instruments with such various underlying assets as stocks, indices, foreign currencies, credit, and commodities. These financial products are linked to our hedging investments as well.

Trading Division2

We utilize our distinguished investment process in managing product-linked trading and proprietary trading for bonds denominated in KRW and foreign currencies. We also supply bonds denominated in KRW and foreign currencies to retail clients and offer bond brokerage services for institutional investors at home and abroad.

S&T Division

Based on professional talent pool and infrastructure, S&T Division is engaged in such roles as foreign exchange trading, liquidity provider (LP) for ETF and OTC derivatives products both in Korea and overseas, market creator, institutional investor executing passive strategies, sales and order execution, arbitrage trading for OTC derivatives products. In addition, by investing in and trading such various assets as domestic and global stocks, mezzanine investment, unlisted securities brokerage and collaboration with the sales, we create synergy effects and offer distinctive services and brokerages to corporate clients.



Corporate Solution

We provide institutional investors and corporations in Korea with a wide range of investment products and solutions, including equity, derivative instruments, alternative investment products, and financial products, suited to their fund management.

Global

We are growing into a global IB by identifying and investing in prime assets across the globe and establishing specialized business models through localization based on our long-standing global business operations and a highly-competitive global network.

Overview

Investment product sales

For Korean institutional investors and corporations, we offer customized investment solutions including trusts, wrap accounts, mutual funds, and derivative instruments such as ELS and DLS. We also provide such alternative investment products as domestic and overseas real estate and overseas blind funds to meet client requirements.

Investment partner for institutional investors

Mirae Asset Securities offers diverse solutions aimed at ensuring secure and efficient asset management for institutional investors and corporate clients. Based on mutual trust, we are committed to serving as an ideal investment partner that delivers latest trend of the global capital market in a rapid and accurate manner and offers optimal investment assets aligned with evolving market situation.

Differentiated services

We are developing competitive financial products by joining hands with major asset managers both in Korea and overseas to launch products that cater to varying needs of institutional clients 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 portfolio to include hedge funds, PEFs, debt funds, and real estate funds.



Overview

Most extensive global network in Korea

We have built a global network with 11 overseas subsidiaries and three representative offices in ten countries across the U.S., Europe, South America, and Asia. As of the end of 2020, there are around 1,000 professionals fully engaged in such business areas as IB, global brokerage, trading, WM, and prime brokerage.

Overseas business model with tailored localization

Instead of one-fits-all overseas business models, we are focused on building sustainable overseas business models tailored to the unique circumstances of each region through thorough localization process based on our long-standing overseas business experiences.

Strategy for developed markets

In developed markets, we have been making continuous efforts to identify and invest in prime assets. Such as new growth businesses, while also taking a step further in productizing such investment assets for global clients, thereby laying the ground for an efficient investment environment.

Strategy for emerging markets

In emerging markets, we are expanding our business to include WM, IB, and trading based on brokerage services for retail and institutional clients. In addition, we have been establishing ourselves as a full-service local securities firm through a customized localization strategy that takes local circumstances into consideration.



Digital

We offer “easy investment and convenient financial services” to clients by introducing new contents and services based on digital transformation and technologies, which will also enable us to advance into new business areas and thus develop growth drivers for the future.

Overview

UI & UX

We continue to improve user convenience of financial investments through digital transformation. We are also offering diverse services and experiences aimed at making investment easier such as AI-based online investment information service, integrated management of assets managed by other financial institutions, and increased digital communications via YouTube channel.

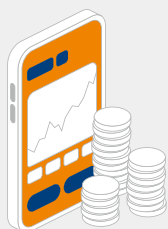
Data Platform

We have been delivering and expanding services which combines AI and big data with investment information, such as real-time “Choice of Chogosu¹⁾” and “Dr. Big’s Investment Diagnostics” through the m.Club channel. Furthermore, leveraging the MyData business license and converged data set, we plan to run a systematic customer analysis to deliver hyper-personalized and customized services.

1) Korean word meaning a master

New Business

Mirae Asset Securities became the first securities company in Korea to register for the payment gateway (PG) business, based on which we began to offer a global simplified payment service and overseas micro-remittance service in alliance with Tencent, and launched “NAVER CMA”, the first tech-fin product in collaboration with NAVER FINANCIAL Corp. In addition, our fintech partnership enabled us to develop and deliver new and innovative financial services and spam news filtering services.

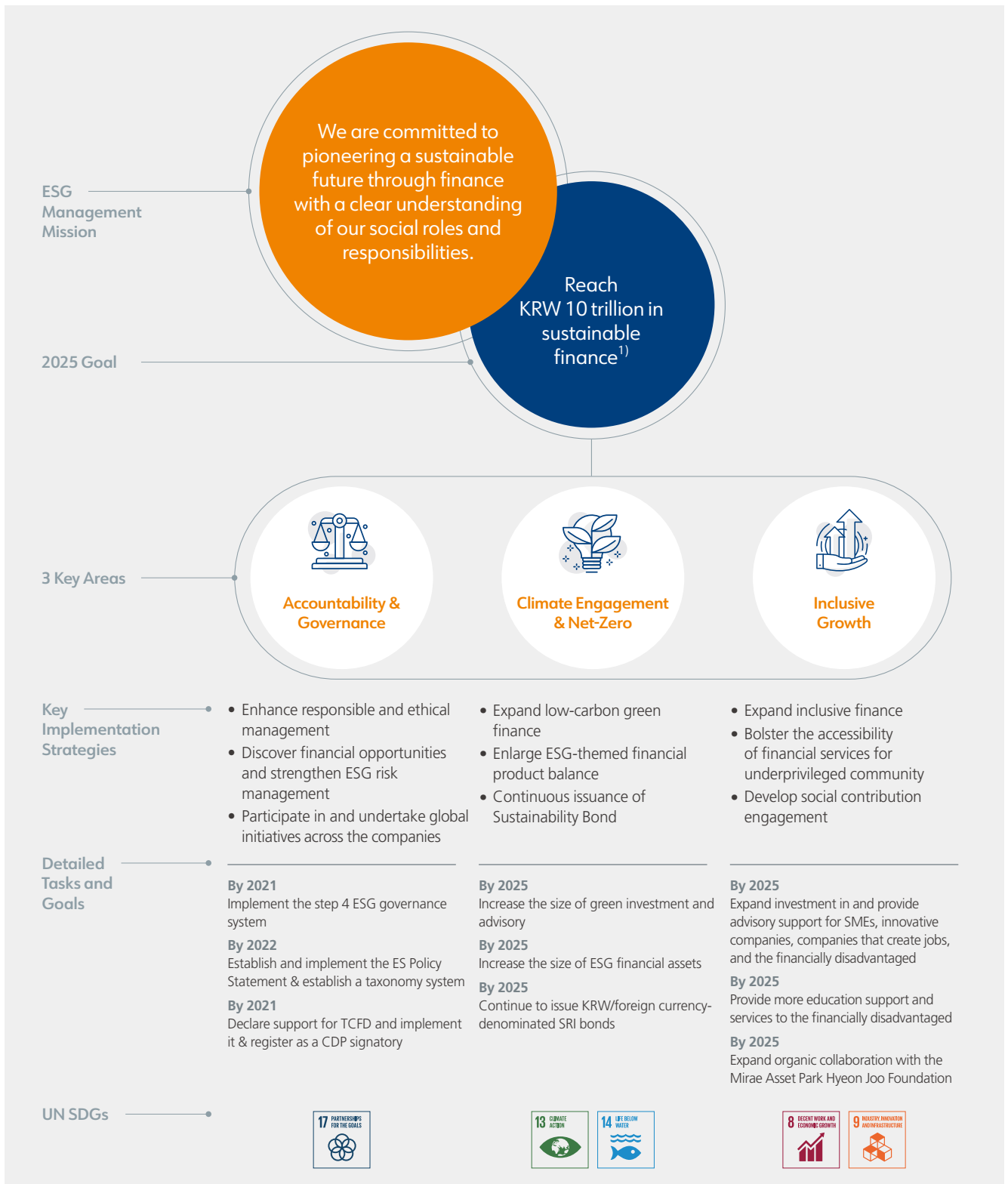


The background is a solid, vibrant orange. Scattered across the page are several 3D wireframe cubes, some of which are semi-transparent, creating a sense of depth and perspective. The cubes are rendered in various sizes and orientations, with some appearing to recede into the distance. The overall aesthetic is modern and minimalist.

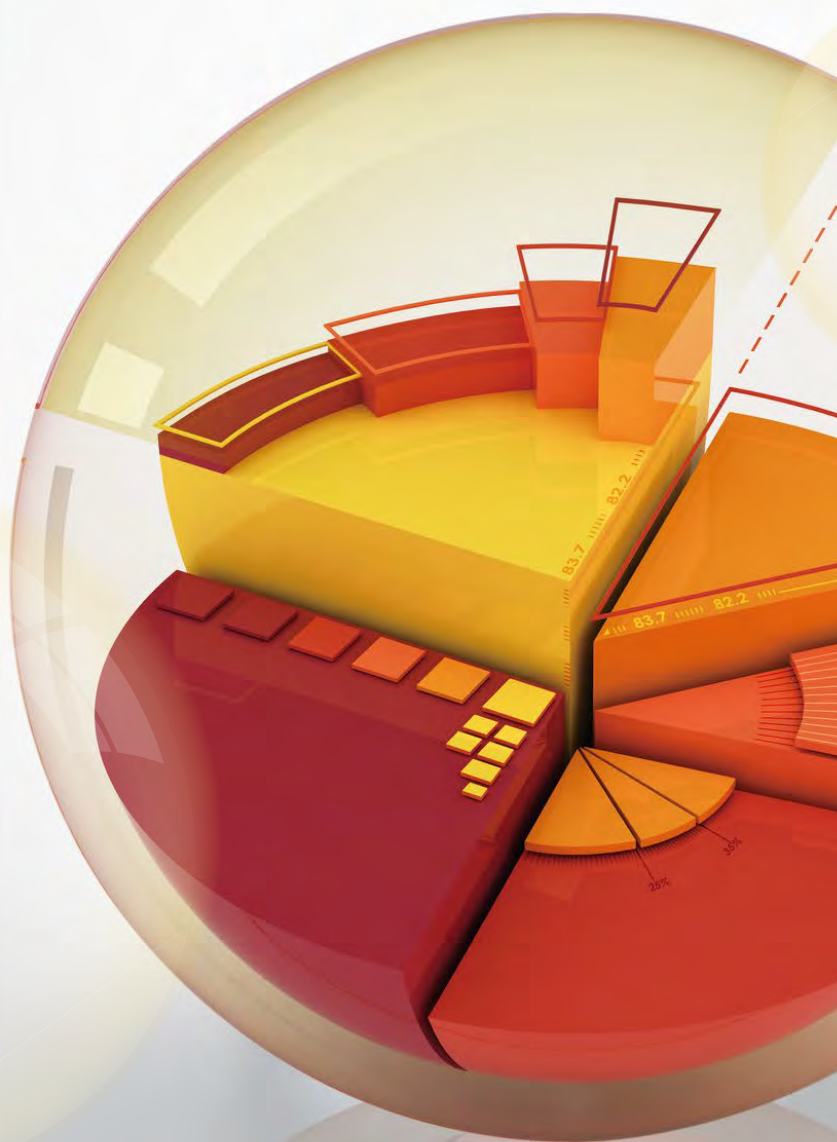
ESG STRATEGY

Mid-to Long-term Strategic Direction for ESG Management

Mirae Asset Securities established mid-to long-term strategic direction for ESG management in March 2021 in order to establish ourselves as a company fulfilling our duties for stakeholders through ESG management. We are devoted to internalize ESG practices into our business to achieve KRW 10 trillion in sustainable finance by 2025 and carry out key tasks to contribute to accomplishing the UN SDGs, the commitment of a global society towards a sustainable future.



1) 2020 baseline applied; cumulative amount for i) ESG investment and ii) advisory services, balance amount for iii) ESG bonds and iv) ESG financial products



- Enhance responsible and ethical management
- Discover financial opportunities and strengthen ESG risk management
- Participate in and undertake global initiatives across the companies

STRATEGY 01



Accountability & Governance

Mirae Asset Securities adheres to its business management principles of responsibility, transparency and ethics, and has strengthened its decision-making framework by managing and supervising ESG agenda at the Board of Directors level, the top decision-making body of the company. Moreover, we are participating in global initiatives and campaigns to deliver our responsibilities, and as the first step, we have declared to support Task force on Climate-related Financial Disclosures (TCFD) and planning on joining other global initiatives.

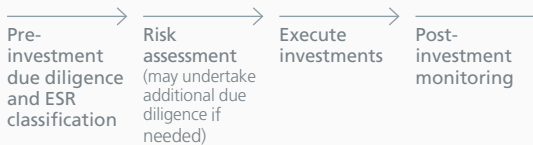
ESG Governance

In March 2021, Mirae Asset Securities established ESG Committee under its Board of Directors as a way to develop a framework to deliberate on and decide ESG agenda at its highest decision-making body, and to transparently disclose related information, thereby fulfilling its social responsibilities. Under the guidance of the ESG Committee, we aim to develop an ESG governance that reviews and approves ESG related policies to embed ESG business management in our organization. The governance composes of four components which are ESG Committee, ESG Executive Council, ESG Working Council, and ESG Implementation Team to effectively promote, implement, and manage ESG management initiatives.

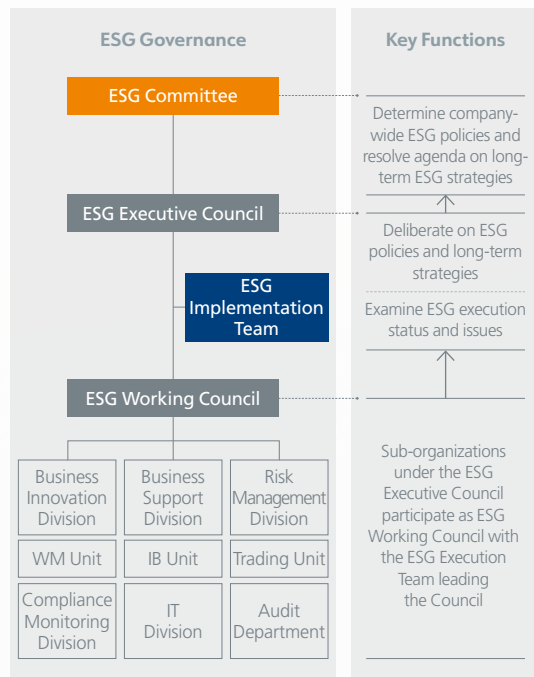
ESG Risk Management

Mirae Asset Securities is the first securities company in Korea to establish the Environmental & Social Policy (ESP) Statement to enhance ESG management. We have been developing a process based on which we build a system to manage environmental and social risks, identify non-financial risks in timely and preemptive manner. Such processes will enable us to manage the risks and opportunities of our investment portfolio by building and clarifying the exclusion criteria based on non-financial factors, thereby fulfilling responsible investments for individuals and local communities as well as the investment targets.

Our ESP applies to all investment activities including underwriting, advisory and financing, and is accomplished by classifying environmental and social risk (ESR), taking assessment, executing investment, and post-monitoring of those investments.



We define scope of classification either restricted or excluded from investment in light of ESR risks complying with International Finance Cooperation (IFC) standards and thoroughly manage the risks across all business activities.



Excluded or restricted activities under ESR



Environmental Risks

- Environmental (air, land, water, etc.) pollution
- Carbon emissions and climate change
- Deforestation
- Preservation of biodiversity and ecosystem management
- Depletion of natural resources, etc.



Social Risks

- Exploitation of child labor
- Forced labor
- Harsh working conditions
- Preservation, public health, safety, and security of local communities
- Protection of indigenous people and natives
- Protection of cultural heritages



- Expand low-carbon green finance
- Enlarge ESG-themed financial product balance
- Continuous issuance of Sustainability Bond



Climate Engagement & Net-Zero

Global stakeholders' growing interest on climate change is driving financial institutions to take proactive and practical response to fight climate change. Recognizing the importance of climate-related financing, Mirae Asset Securities actively participates in achieving the Net-Zero climate target until 2050, and thus has been expanding green financial products and services.

Financing, Advisory and Underwriting for Green Projects

Mirae Asset Securities selects and distributes financial products which are focused on Socially Responsible Investments and directly, finances and provides advisory & underwriting services for green projects. In particular, we strictly focus on reviewing the how much non-financial impacts of the project affect to the society in the decision-making process. We also provide financing solutions for renewable energy projects to address climate change. Our project experience in this area includes providing financial advisory and underwriting for the 105MW solar energy project in Chile, 25MW solar energy project in Geogeuemdo in Korea, the Adani Rugby Run Solar Farm in Queensland in Australia in 2019 and etc.

Expanding Socially Responsible Investments

SRI bond issuance in support of environmental and social projects

Mirae Asset Securities aims to make investments that can bring positive impact to social and environment as well as the stable returns, in order to deliver on sustainable finance. To this end, we execute Socially Responsible Investments as a responsible corporate citizen. In April 2019, we successfully issued three-year USD-denominated Sustainability Bond, becoming the world's first securities company to issue Sustainability Bond. USD 300 million was raised and has been invested in green buildings, renewable energy, affordable housing projects. On the back of this success, we issued our first five-year KRW-denominated Sustainability Bond in February 2021. In attracting investors, investment demands far exceeded the initial offering size of KRW 100 billion to raise KRW 390 billion. In particular, we became the first securities company in Korea to receive SB1 rating, the highest grade, from Korea Investors Service (KIS) Rating, thereby further boosting credibility with investors. We will continue to expand Socially Responsible Investments, thereby solidifying our stance as a leading securities company in ESG investments.

Book Runner of Sustainability Bonds Issuance

Book runner of KEPCO's KRW-denominated ESG bonds issuance

Mirae Asset Securities has been selected as a book runner in the issuance of KEPCO's KRW-denominated ESG bonds, successfully issuing the bonds in November 2020, following the KEPCO's first KRW-denominated ESG bond issued in 2019 for the first time as Korea's energy company. Mirae Asset Securities therefore become the first securities company in Korea to issue Sustainability Bonds for two consecutive years for a Korean energy company and the amount raised will be actively used as funding for new and renewable energy in Korea and abroad, expanding the infrastructure related to the new and renewable energy, and energy efficiency projects.

Creating Value through Sustainable Investments



We provide an array of ESG investment funds, including the Mirae Asset Global Innovative Company ESG Fund, Mirae Asset Sustainable ESG Fund (bond-type), and Multi-Asset Clean Energy Focus Fund, to fulfill our social responsibilities.



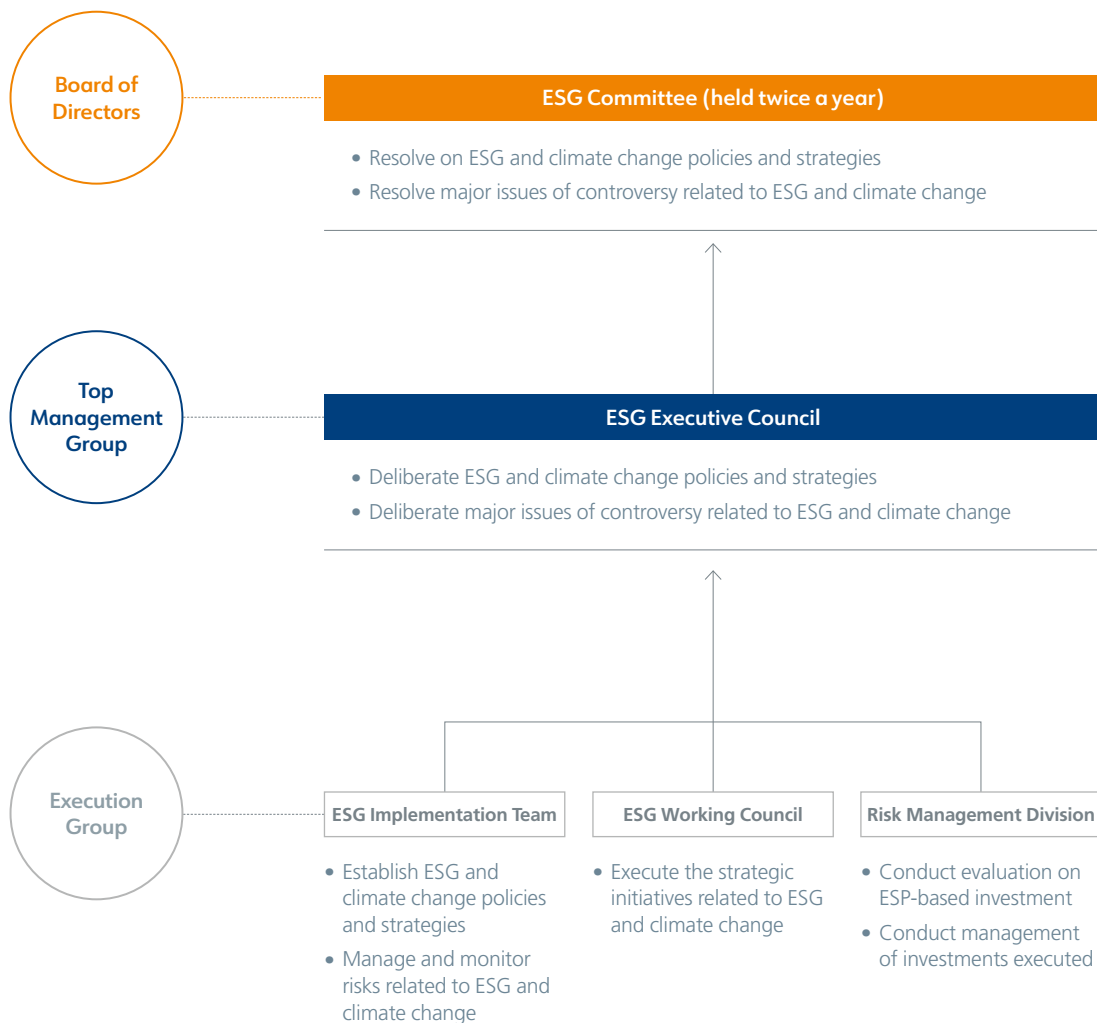
Investing in green industries facilitates to boost social capabilities to better respond to environmental risks and climate change and encourage development of green industries to create new values.

TCFD

Governance

To establish a governance system to proactively respond to the mid-to long-term climate-related risks, Mirae Asset Securities established the ESG Committee under the BOD in March 2021. The Committee is in charge of determining policies and strategies and key issues related to ESG and climate change. It makes final decisions related to climate change and strives to hold regular meetings at least twice a year. The first ESG Committee meeting was convened on March 24, 2021 to decide on the ESG Policy Framework based on our ESG management mission and mid-to long-term objectives and our Environmental & Social Policy Statement devised under the purpose of embed climate change risks in our investments.

Mirae Asset Securities' first female independent director, Gemma Lee, has been appointed to Chair of the ESG Committee, consisting of three directors including the CEO. The ESG Executive Council, consisting of members in positions above department heads, deliberates company-wide policies and strategies related to ESG and climate change. In the meanwhile, we incorporate ESG and climate-related achievements into the CEO's annual performance evaluation and remuneration. The ESG Working Council is in charge of company-wide execution of strategic initiatives related to climate change whereas the ESG Execution Team is in charge of establishing the ESG and climate change-related policies and strategies as well as managing the risks related to climate-change. In terms of risk management, investments are assessed based on the ESP statement and risks are thoroughly monitored and managed after investment is executed.



Strategy

The financial risks and opportunities that may take place across Mirae Asset Securities' business due to climate change are as follows. Physical risks are economic cost and financial loss in the real assets such as real estate and investment asset. Transition risks that may occur in the course of shifting into low-carbon economy are impacts caused by introduction of related policies and regulations and changing perception in the market and stakeholders, which may trigger severe impact on the real economy.

Opportunities that may arise from climate change, on the other hands, is expanding into new business areas that can be created as a result of climate change. In particular, we issued Korea's first USD-denominated Sustainability Bond of USD 300 million in 2019, thereby fully completing the investment into areas of new and renewable energy, eco-friendly building, and housing for the youth that comply with our ESP statement. Going forward, we plan to proactively seek new opportunities to better respond to climate change by issuing such bonds.

Risks

Classification	Risks	Details
Physical Risks	Natural disaster	Short-term Mirae Asset Securities perceives the occurrence of natural disasters caused by extreme weather conditions such as cyclone and flood as physical risks. The severity of such disasters caused by climate change and increased frequency will bring about damages to our business and loss in the investment assets, and incur recovery and redemption costs.
	Carbon pricing	Mid-to Long-term Rising price on carbon emission rights may increase the operating expenses of assets invested by Mirae Asset Securities. Such increased expenses of the invested assets may in turn create financial losses to Mirae Asset Securities as well as increasing the cost of achieving Net-Zero.
Transitional Risks	Reputational risk	Short-term Stakeholders' rising interest in climate change and the ESG engagement by investors generally contribute to positive impact on Mirae Asset Securities' reputation. Failure to properly manage climate change risks will hamper our brand value, leading to diminishing demand of our products and services and eventually causing subsequent financial losses.
	Investment portfolio	Mid-to Long-term Industries generating high carbon emissions such as steel manufacturing, cement, and coal power plant may experience reduced enterprise value due to the rising carbon price in the future. Enterprises with high GHG emission or higher probability of having negative climate impact will be exposed to the risks of a drop in its value in accordance with high volatility.

Opportunities

Classification	Description	Case (As of 2020 year-end)
Investment Banking	We offer a variety of services customized to meet varying needs such as corporate financing, real estate, alternative investment, and leveraged financing, all under the principle of making investments in compliance with our ESG Policy Framework and Environmental & Social Policy Statement based on our experiences accumulated both at home and abroad.	We have accumulated KRW 1,656.0 billion amount in underwriting and advisory services complying with ESG investment principle such as financing and investing in Morgan Stanley Office in Glasgow, UK, Wells Fargo refinancing in the US, project financing for youth housing development, bridge loan refinancing for public rental housing development, financial advisory to build-transfer-operate (BTO) project of municipal solid waste in Korea.
Principal Investment	Leveraging largest global network among Korean securities firms, we are investing in competitive ESG related assets around the world from mid-to long-term perspective.	We have invested in the Aoyama building, an eco-friendly building in Tokyo, Japan and the youth housing development projects in Korea and etc., accumulating KRW 203.5 billion of ESG assets.
Fixed Income	Mirae Asset Securities is vigorously managing sustainability, green, social, and SRI bonds which fulfill the ESG purposes, and we strive to gradually expand the asset under management in this category.	We carefully manage in a selective basis considering the use of proceeds of issuers both at home and abroad. The balance of the bond that fulfills the ESG purposes of green, social, and others reached KRW 1,165.2 billion.
Wealth Management	We offer a variety of ESG product lineups aimed at tackling climate change and achieving sustainable society to our clients to turn the climate change risks into investment opportunities and contribute to deterring the adverse climate trend through finance.	We offer various funds and ETF products serving the purpose of creating ESG values to our clients to transit climate change risks into opportunities. The balance of WM balance the fulfills the ESG purposes reached KRW 627.9 billion.

Risk Management

As a global investment specialist, Mirae Asset Securities recognizes the severity posed by climate change. We are therefore actively participating in Net-Zero campaign which aims to reach carbon neutrality by 2050, and managing our risks accordingly.

To this end, we have set up detailed targets of making green investment and providing advisory services in good faith, increasing the size of sustainable financial assets, issuing Sustainability Bonds, and gradually increasing asset investment in line with the ESG Policy Framework and Environmental & Social Policy Statement to reach KRW 10 trillion by 2025.

As a Corporate Entity

01

In order to proactively handle the issue of climate change, Mirae Asset Securities carries out collaboration among related organizations. The ESG Execution Team, ESG Working Council, and Risk Management Department conduct comprehensive environmental impact analysis of opportunities and risks caused by climate change and devise policies to be submitted to the ESG Committee, which will then make the final decision considering the climate change and its impacts.

02

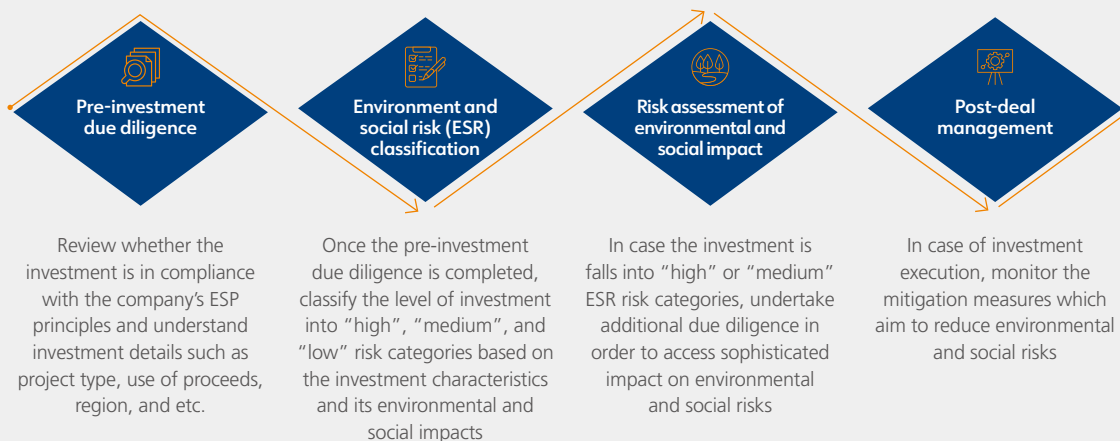
Mirae Asset Securities is rolling out various eco-friendly initiatives ranging from green office initiative, eco-friendly purchase system, use of recycled goods, and purchase of eco-friendly hybrid vehicle, and etc.

As an Asset Manager

01

Mirae Asset Securities established the Environmental & Social Policy (ESP) Statement for the first time among Korean securities companies, and thus set clear standards for the investment exclusion criteria that is based on non-financial risk categories. The ESP principle is applied to all the investment, underwriting and arrangement, and advisory services of Mirae Asset Securities and is also utilized when making comprehensive investment evaluations to reflect on the purpose of financing, investment target, and business partner analysis in addition to the industry, business, and financial analysis.

ESP Execution Procedure



02

Mirae Asset Securities is committed to securing future climate changing risks and opportunities in accordance with the environmental and social risk classification (ESR) criteria, and fulfilling Socially Responsible Investments encompassing the communities that we live in. In particular, we have announced to stop financing and investing in thermal coal power generation in March 2021 confronting climate crisis and accelerating decarbonization and transition from unabated coal from home to abroad. As of 2020 year-end, the thermal coal exposure of Mirae Asset Securities is 0%.

03

Mirae Asset Securities analyzes the transition risk in accordance with the climate change. In order to minimize the negative effect of climate-related risk financially, we have classified high carbon emission industries and then analyzed their exposure to climate-related risk by each selected industry within our investment portfolio. As a result of analysis on such high carbon emission industries as oil, steel, and petrochemical¹⁾, their exposure is identified as 2.28% of the investment portfolio.

Mirae Asset Securities designates areas with relatively sensitive exposure to environmental and social risks as classified to be “sensitive areas” whose risks are categorized as “high” or “medium” as stated below. If the investment target falls under the below criteria, the investment decision is carefully executed requiring external expert’s assurance on environmental and social impact.

Areas	Description
Energy	<ul style="list-style-type: none"> • If the investee companies generate more than 30% of total revenue from coal power generation, the decision will be deliberated based on their commitment to scale back exposure to coal power generation and detailed action for low-carbon transition • Nuclear power generation that carries environmental and social risks related to radioactive waste management and the consequences of a nuclear accidents • Building new hydropower plant and related infrastructure that accompany complex environmental and social risks on the local community and ecosystem
Oil & Gas	<ul style="list-style-type: none"> • Investments related to the development of oil sands • Projects accompanying hydraulic fracturing to extract shale gas and oil
Mining & Steel	<ul style="list-style-type: none"> • Investments related to mining steel and mineral (under conflict) resources in disputed regions and exposed to issues such as endangering biodiversity, air pollution, safety management, and impact on the local community • If the investee companies generate more than 25% of total revenue from coal mining, the decision will be deliberated based on commitment to reduce their revenue exposure to coal mining and detailed actions on low-carbon transition
Biodiversity & ecosystem	<ul style="list-style-type: none"> • Businesses related to projects where reckless development and deforestation are expected • Industrial farming that may cause environmental and social issues such as damaging the ecosystem, labor abuse, conflict with the local communities during the agricultural process mostly in the developing countries located in the tropical and subtropical zones which mainly produce soft commodities such as palm oil, natural rubber, tobacco, bean, cacao, tea, sugar cane, cotton, coffee, banana, and timber • Businesses related to projects that may damage the natural ecosystem, biodiversity, and cultural and natural heritage sites in the form of environmental degradation, natural resources depletion, or local community pollution

1) Selected based on the “sensitive areas” as stipulated in Environmental and Social Policy Statement (ESP) of Mirae Asset Securities and high carbon sectors set by TCFD, such as energy; transportation; materials and buildings; and agriculture food, and forest products

04

Physical risks under which extreme weather conditions such as heavy rain, severe heat, typhoon, and rising sea level place direct damage into buildings, plants, and other infrastructure will undermine the productivity of the capital and labor. Mirae Asset Securities will identify our investment assets’ exposure to climate change risk based on the location of owned assets, and examine the impact of physical risks on how it will affect our investment portfolio financially.

Indices and goals

Mirae Asset Securities is actively participating in the new climate target of “2050 Net-Zero”. Detailed execution plan to achieve the climate change goals are being developed in 2021, and our mid-to long-term climate change goals will be announced

by 2022. Furthermore, we will proactively communicate with our stakeholders on our endeavor to reduce and offset carbon emissions across our investment assets and company-wide value chain.

GHG Emissions in 2020

(Unit: tCO₂eq)



* Detailed information on the GHG emissions and goals is available in page 113 of this integrated report.



- Expand inclusive finance
- Bolster the accessibility of financial services for underprivileged community
- Develop social contribution engagement

STRATEGY 03



Inclusive Growth

Mirae Asset Securities is taking an inclusive approach to address social issues such as super-aged society, low birth rate, and employment crisis as well as enhancing the level of customized support for the financial minorities. We are paying keen attention to providing support to small and medium-sized enterprises (SMEs) and venture companies hit by COVID-19 while rolling out CSR activities in our areas of expertise such as financial education and increased services for the financial minorities.

Inclusive Financial Products

SRI funds and investments

Mirae Asset Securities selects and offers eco-friendly financial products developed to support social enterprises that pursue a sustainable society and to respond to climate change. We are taking part in the nation's development of a better future by financing SMEs and venture companies that are in new growth industries, such as renewable energy development business, fintech, and new nano technology. We have financed "Mirae Asset New Growth Venture Investment Corp. Trust" since 2016 to make co-investments with Mirae Asset Venture Investment and Mirae Asset Capital with the goal of providing individual customers opportunities to make investments in SMEs or startups with growth potential while opening up financing opportunities for them as well.

Education for the Financial Minorities

Financial products for super-aged society

Mirae Asset Securities offers "Mirae Asset TDF (Target Date Fund) Series" which automatically rebalances the ratio between conservative assets and risky assets through glide-path as the target retirement date nears. Target Date Fund (TDF) is a pension fund structured to glide down to a more conservative mix of investment from risky assets as the pension participants approach their retirement. Unlike most of the TDF funds available in Korea, which are jointly managed with global asset management company, and their products, Mirae Asset Strategic Allocation TDF Series are managed solely by a dedicated team, fully incorporating the cultural behavior of Korean investors. The Fund was created for the Korean investors, allowing allocation based on diverse return strategies and therefore has outstanding risk management capabilities.

Financial consumer protection

Mirae Asset Securities has appointed a Chief Customer Officer (CCO) and set the Financial Consumer Protection Team and Financial Dispute Settlement Team in place.

In June 2020, we published "easy-to-read product prospectus" which displays visualized infographics on risk grades for each product and potential loss of the principal so that consumers can easily understand the product features in order to facilitate financial consumer protection. Such prospectus will not only inform our clients of major risks but also allow our sales staff to fully explain about the product using the images.

We make thorough preventive measures against financial incidents caused by non-compliance of the product selling protocol as seen with the Derivative-Linked Fund (DLF) and Lime Asset Investment scandals erupted since 2019. In this regard, we will continuously consider adoption of digital solutions based on AI technology to protect consumers including post-sales confirmation calls.

Size of Sustainable Finance



* Cumulative amount for i) ESG investment and ii) advisory services, balance amount for iii) ESG Bonds and iv) ESG financial products as of 2020 year-end

Confirmation on Product Explanation (risk notification)

Product Risk Grade Grade 3 Medium risk	Potential Loss of Principal 	No Depositor Protection Product under depositor protection scheme Up to KRW 50 million per person	Principle of Self-liability
Private Equity Product Weak in investor protection	Mid-term Termination Not Allowed 	Returns Not Guaranteed 	

* Above symbols only represent key risks associated with the product. Please refer to the product manual for the list of full risks and their explanations

“One Company, One School” financial education

Mirae Asset Securities carries out various financial education programs to help the adolescents understand finance and choose their career path and is expanding education programs for the financial minorities in order to help the underprivileged under the slogan of “warm-hearted, caring capitalism”.

In particular, we have expanded the “One Company, One School” financial education program by the Financial Supervisory Service (FSS) since 2015 through 2020, in alliance with 390 schools around the nation, the largest scale in the financial industry, and provided financial educations to 81,803 students. In recognition of our efforts to invigorate the financial education for the youth, we won the Outstanding Institution Award in One Company, One School Financial Education from the FSS Governor in 2016 and 2017, and also received the Outstanding Staff Award in One Company, One School Financial Education from the FSS Governor in 2019 for four consecutive years. In addition, we are carrying out many hands-on programs for elementary, middle, and high school students by inviting them to Mirae Asset Securities headquarters for financial education, and joining with Korea Exchange and Korea Financial Investment Association for hands-on experience of the financial industry, in our efforts to assist the young students in growing into financial experts. From 2020, we have provided 390 sisterhood schools with financial education videos and materials to continue our efforts to help the youth grow into wise financial consumers.

In addition, we provide intuitions for the financial minorities with videos containing information to prevent financial frauds in a sustained support to ensure the financial minorities can maintain a stable financial life. Going forward, we will make continuous efforts not only to enhance the financial competencies and protect the rights of those financially underprivileged as well as the youth but also to develop and distribute untact education programs tailored for the senior citizens and the disabled.

Services customized for the financial minorities

In order to provide assistance to those with hearing and speaking disabilities, Mirae Asset Securities has put in place the ARS voice support system and conversation-based voice recognition service and introduced the Smart ARS system to roll out the Visual ARS service to increase customer convenience. 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. We are also planning to launch customized services for the financial minorities to ensure those financially underprivileged such as the disabled and senior citizens can access and use the service without inconveniences under any circumstances. To this end, we are providing leaflets introducing the clients’ rights stipulated under the Act on Financial Consumer Protection and investment precautions and are reviewing to create financial education videos in the sign language.

Stakeholder Cooperation for Digital Finance

Industry-academia cooperation

Since 2017, Mirae Asset Securities has been executing projects aimed at developing algorithms for AI-based investment information service through the industry-academic cooperation on big data that we have formed with Seoul National University. Such tie led to developing various financial products recommendation models. Through this cooperation, we developed a wide array of product recommendation models, including domestic stocks, overseas stocks, pension, and ETF, and recommend customized products on mobile media by analyzing client’s investment propensity. We developed an investment preference prediction model using big data analysis in 2020, and are offering investments contents that are customized to individual clients. In addition, we are researching a project to enable AI-based automatic classification of customer queries by applying machine learning techniques to the counseling conversations at our customer centers in a form of speech to text (STT). We are also working on a project under which big data from both internal and external sources are consolidated to make assumptions on clients’ asset management propensity, available assets for investment, consumption details. Going forward, we will make continuous efforts to converge securities companies’ big data with the deep learning algorithm of Seoul National University and analyze them, in order to offer quality digital asset management services.

Financial Big Data Festival

Mirae Asset Securities and Mirae Asset Insurance co-hosted “2020 Financial Big Data Festival” which offered an opportunity for the talents of the future to fully leverage the financial data and participate in an internship program. Given the pandemic situation, untact communication channels were mobilized to promote the event which attracted 495 participating teams across 92 universities.

In 2021, such exchanges and cooperative ties between Mirae Asset affiliates will be strengthened to provide more students with diverse opportunities to utilize quality data sets and explore creative ideas by continuously communicating through untact channels. In addition, mentoring programs from professional financial analysts will continue to assist students to develop practical financial analytics models and students who demonstrated their competencies will be given an internship opportunity excluding resume screening when career offering, all offered as part of the festival to contribute to nurturing highly-capable talents.

The Third Fintech Partnership Program

Mirae Asset Securities runs the “Fintech Partnership Program” in order to develop innovative services through cooperation with fintech companies and to provide promising fintech companies with a wide variety of growth opportunities, such as cost support, business alliance, technical support, and investment review. In 2020, we chose two fintech companies-FnGuide and Allink-as the third participants of the program, and developed and opened services which facilitates such supports to SMEs.

Participation in the Korea Fintech Week 2020

Mirae Asset Securities participated in the “Korea Fintech Week 2020” which was held on line in May, 2020. At the event, organized by the financial authorities to facilitate the Korea’s fintech industry, we publicized our advanced digital technologies by demonstrating our AI-based stock recommendation service of “m.Club”, overseas simplified payment service, and fintech partnership program.

Mirae Asset New Growth Venture Investment Corp. Trust Product

In collaboration with Mirae Asset Venture Investment and Mirae Asset Capital within the Group, we have every year released a series of the “Mirae Asset New Growth Venture Investment Corp. Trust” since 2016 in order to finance venture capitals. Such products’ stability was strengthened by forming an investment corp. with Mirae Asset Venture Investment and Mirae Asset Capital, which have years of successful investment records ranging from startup venture companies to global unicorns, and making joint investments with clients. The Mirae Asset New Growth Venture Investment Corp. Trust is designed to lead the joint growth of our society by providing investors with investment opportunities in venture capital while also financing venture capital funds to innovative companies and SMEs as a part of “innovative finance”. On the strength of the high rate of returns, we were able to release additional series of “Mirae Asset Innovative Growth New Technology Business Investment Corp.,” in April 2021 and “Mirae Asset New Growth Good Company Investment Corp. Trust” in May 2021. We plan to expand the product series along with KOSDAQ venture funds and will actively communicate the investment performance of the series with clients.

Fintech Partnership Program

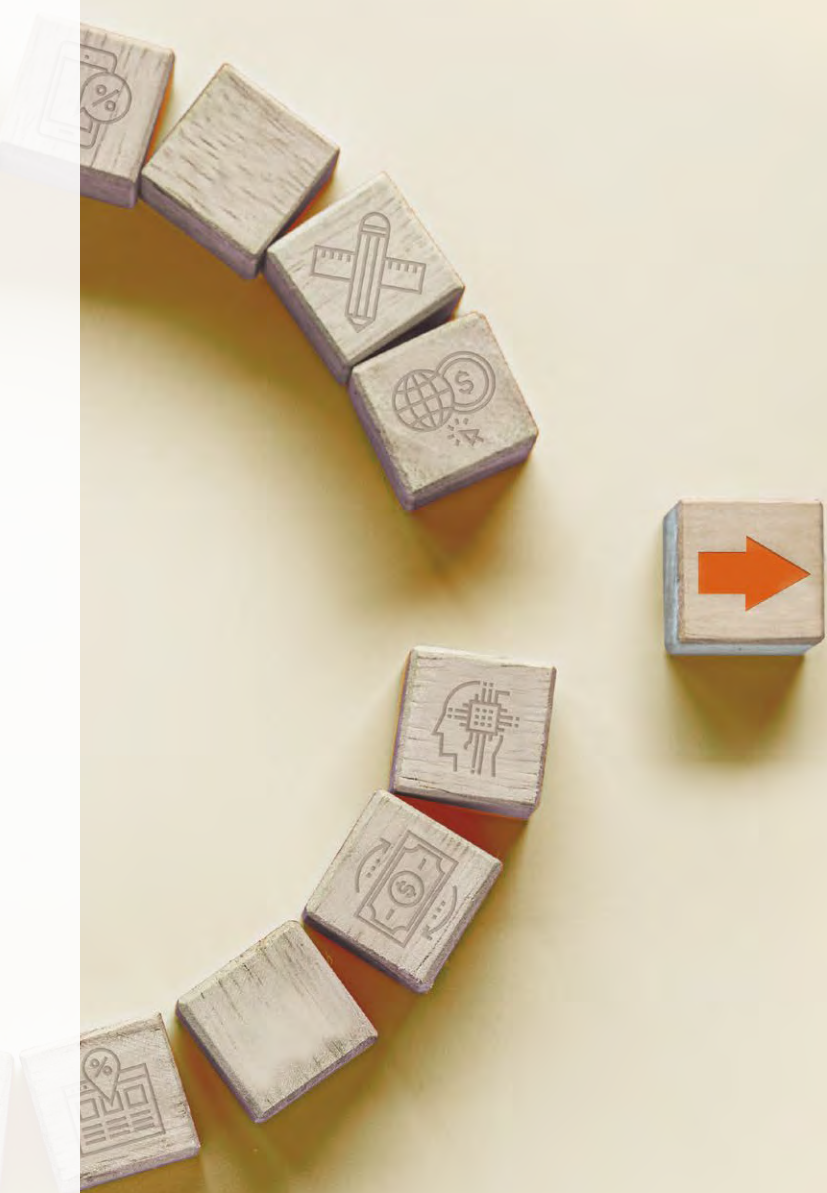
FnGuide: global news verification and management tool

FnGuide leverages Mirae Asset Securities AI technology to commercialize technologies such as spam news filtering and global news translation and developed a global news management tool based on news monitoring, statistics, and learning data management. AI technologies were offered by Mirae Asset Securities while FnGuide was in charge of UI design, design of API and database, and service development, and the developed solutions was contracted to be sold to Samsung Securities and has been in service.



Allink: POS for mobile simplified payment service

Allink developed a data solution to verify the validity of mobile simplified payment details upon transfer to the POS of the stores based on the NFC tags. We have adopted such service to develop the mini POS, which is unique to “Mirae Asset Pay” payment gateway service.



SPECIAL REPORT

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Digital

Mirae Asset Securities has been very active in digital finance centered on the digital execution organization, the first of its kind among Korean securities firms, and is making relentless efforts to create synergy to overcome shortcomings based on cross-industry convergence and alliance.

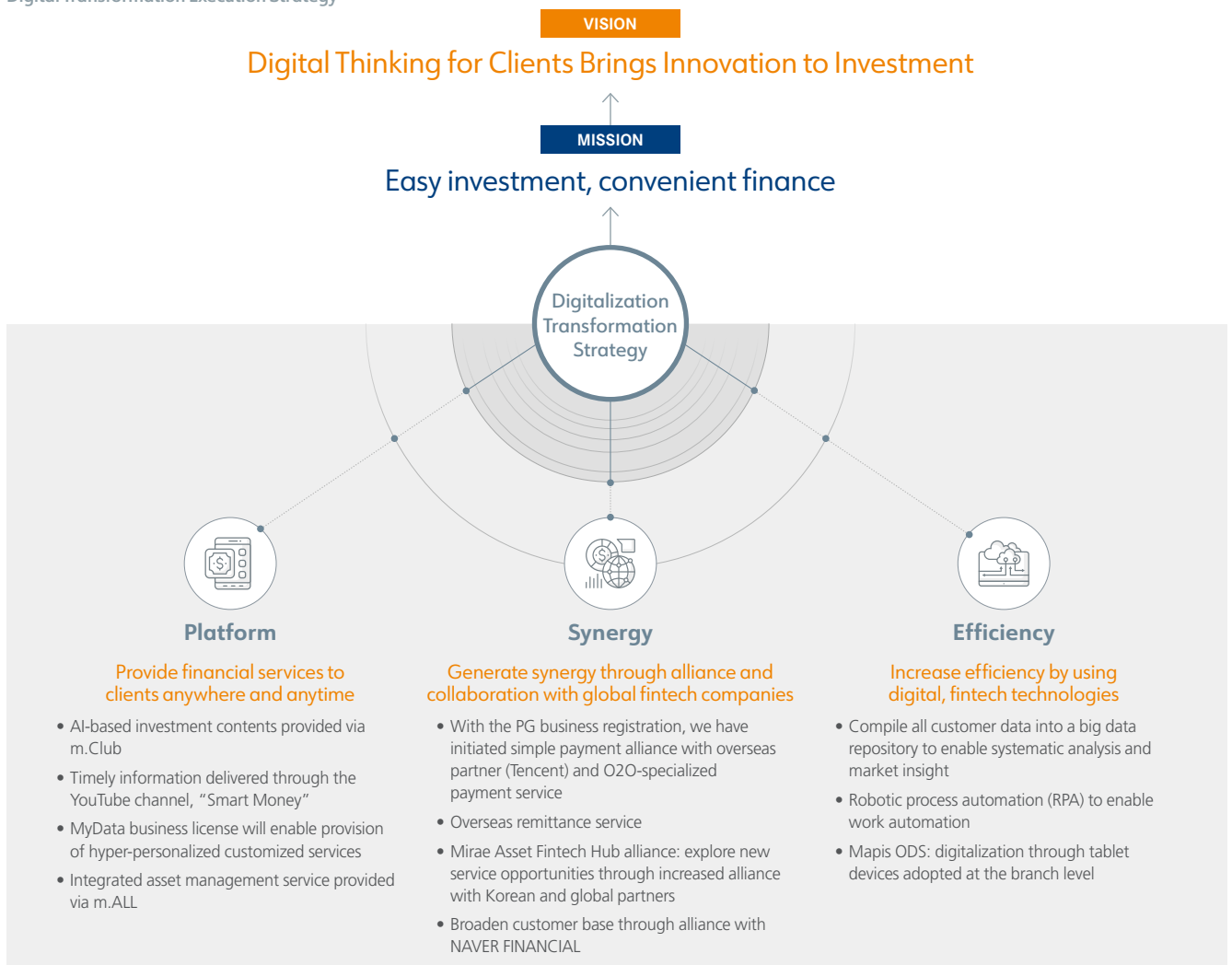
Digital Transformation Execution System

Digital transformation execution organization

In 2017, Mirae Asset Securities became the first securities firm in Korea to open a digital finance unit, and since then has continuously expanded the organization. Digital Division consists of three departments – Digital Innovation Department which pursues digital innovation by identifying new business, adopting new fintech solutions, analyzing big data, building platforms, and executing digital transformation; Digital Biz Department which promotes existing online-based businesses, such as domestic and overseas stocks, financial products, and asset management, and provides them to customers; and Client Care Department which is responsible for identifying client needs and communicating with them at various contact points.

Digital Transformation Execution Strategy

Digital Thinking for Clients Brings Innovation to Investment



Company-wide digital transformation

Mirae Asset Securities has declared the “Digital Transformation Vision” in July 2020 under the purpose of enhancing client convenience and employee work efficiency through a company-wide digital transformation. The slogan for the digital transformation vision, which goes “Digital thinking for clients brings innovation to investment” was chosen through internal contest and indicates our will to carry out innovation by shifting to a client-centric digital thinking. In order to promote the digital transformation and diffuse the culture of digital across the company, we have in place Digital Innovation Committee, Digital Leader, and Junior Board and has hosted an open contest, “Digital Idea Challenge” where both clients and employees participated in. In 2021, we plan to introduce “Digital Competency Point System” to strengthen employees’ digital competencies and continuously accelerate digital transformation.

Expanding digital communication

We have expanded our communication channels to go beyond existing social media channels in NAVER blog and Facebook page to include Instagram and YouTube channels to bring more digital audience. In particular, “Mirae Asset Smart Money”, our YouTube channel, attracted 100,000 subscribers as of November 2020 and exceeded one million subscribers as of the end of March, 2021, taking a lead in the digital communication. There are live broadcasts air twice every morning and afternoon to stay up to date in providing timely information and introduce various financial products with ease and fun, making investment more accessible.

m.Club – AI-based online investment hub

Mirae Asset Securities launched the “m.Club”, an online financial service platform, in November 2017 so that clients can invest with greater ease. The m.Club is our flagship investment service that is used by 500,000 clients as of December 2020. A total 12 contents are offered through the mobile trading system (MTS), including “Choice of Chogosu¹⁾” which share real-time information on stocks that have been traded the most by Mirae Asset Securities clients with top 1% rate of return; the “Weekly Top 10 Products” that shows the list of products that have been traded the most by Mirae Asset Securities clients during a week; and “Dr. Big’s Investment Diagnostics” which diagnoses one’s investment capabilities and presents investment alternatives. We have expanded AI-based content in 2020, such as “Dr. Big’s Power Ranking” which introduces the Top 5 stocks by product type that is chosen by AI, and “Dr. Big’s Signal” which captures and informs clients of public notices or changes in supply and demand that they should take interest in through AI. Going forward in 2021, we will further expand AI-based content of the m.Club to provide our clients with useful information such as “Qara’s market forecast”, “Overseas ETF Trend”, “Dr. Big’s Supply and Demand Capture”.

Non-face-to-face account opening for corporate clients, first of its kind in Korea

Non-face-to-face account opening service, only offered to individual clients, was made available to corporate clients, so that they can now open securities and CMA accounts via the mobile platform and engage in online transactions at a low commission for the first time among Korean securities companies. We plan to further enhance our process to allow non-face-to-face account opening for gold investment in 2021.

Expanding digital services

Reflecting the needs for direct overseas investment, Mirae Asset Securities became the first Korean securities company to provide overseas stock market information including real-time asking price and transaction volumes for US stocks and overseas index service for major countries (Dow Jones Index, Nasdaq Composite, S&P500, Hanseng Composite, Hanseng China H, etc.) for free of charge. Furthermore, we have upgraded our search function by adding a “Smart Search for Overseas Stock Name”, a service based on sophisticated search function where users can easily find the overseas stock by product name, service name, sector, Chinese character sounds, Chinese pronunciation, and English pronunciation. In addition, our open banking service enables users to easily check for accounts managed by different financial institutions and make investment for stocks and financial products via a one-stop service. Robo-Pick service offers stock recommendation and market dynamics based on AI algorithm big data analysis so that clients can choose products and services that fit one’s investment propensity, and as of the end of 2020 we have 12 services (11 for domestic stocks and 1 for overseas stock) in operation. Catering to the increasing interest in overseas stocks, we will continue adding such services as trading overseas stocks in decimal points and Robo-Pick for overseas stock service.

1) Korean word meaning a master

m.Connect – personalized marketing solution

We have developed a solution to manage marketing activities by event through process automation ranging from extracting marketing targets to customer contact and performance analysis. Online and mobile customer contact points such as SMS and MMS messages, email, tele-marketing, and personalized popups inside the applications are now integrated to build a marketing-related database and analysis of personalized marketing performance enables identification and provision of information relevant to the clients to reinforce client care.

NAVER Bankbook

In June 2020, Mirae Asset Securities launched the NAVER Bankbook as the first tech-fin product in alliance with NAVER FINANCIAL. NAVER Bankbook guarantees returns on a daily basis and clients can accrue points by linking the account to the NAVER Pay and making purchases on NAVER Shopping. This product, based on a completely new concept, connects finance to commerce and is focused on simple and convenient user experience. Clients using the product can not only open a CMA account but also make financial transactions for domestic stocks, overseas stocks, and funds.

AI-based Investment Information Services

Dr. Big's Investment Diagnostics

Mirae Asset Securities began to offer an AI-based investment management service that is optimized for client's investment propensity in 2019. Through the "Dr. Big's Investment Diagnostics" service which reviews client's investment patterns and owned stocks for the last six months, we offer tailored investment management services, thus contributing to successful wealth management of our clients.

Dr. Big's Power Ranking

AI analyzes products that can be traded via digital media, including funds and pension products, domestic stocks, overseas stocks, and ETF, and then suggests optimal products to clients. In 2020, we improved user experience (UX) of "Dr. Big's Power Ranking" to increase user convenience, expanded client's investment portfolio by adding overseas-listed ETF, and focused more on big data analysis and AI, all in our efforts to help clients make successful investments.

Dr. Big's Supply and Demand Capture

"Dr. Big's Supply and Demand Capture" enables clients to stay up to date with changing market trends by analyzing purchase volume of foreigners and institutional investors on a real-time basis, capturing top-traded sectors and stocks, and then providing information. In addition, clients can configure to filter and identify unique stocks traded by foreigners and institutional investors on the previous day.

Qara's Market Forecast

Based on the AI deep learning algorithm, "Markedreamer", developed by Qara Soft, this service provides the forecast change rate for the week and month as well as stocks with top change rates.

Digital Services

Mirae Asset Pay – first NFC-based simple service for iPhone in Korea

Mirae Asset Securities will soon launch the "Mirae Asset PAY" service which enables tag and pay service (for credit care and remittance) with user's mobile phones. After launching a beta service in November 2020, the service was recognized for its effectiveness as the only simple payment service that can replace the Apple Pay and will be officially launched in August 2021 as the first NFC-based simple payment service for iPhone. The service is expected to evolve into an open platform where clients can interact with Mirae Asset Securities in daily lives and enjoy all integrated financial services which will be offered by Mirae Asset Securities in the future.

Work Efficiency Improvement through Digital Transformation

Payment gateway (PG) service

Mirae Asset Securititas opened services using the global PG service in alliance with Tencent. Over 3,000 franchise stores were mobilized where the Chinese visiting Korea can receive simple payment services by using their WeChat Pay, and we also opened the online shopping mall, where cross-border payment can be made between Korea and China, using the WeChat Mini program for the first time in Korea as a way to prepare for the post-COVID era. A number of online mini programs have either been opened or will be introduced soon across the fields of fashion, culture, contents, and foods, including Dongdaemun Jeongseon, Seoul Fashion Week, and YUUL YIE. Furthermore, we were designated as the sole service provider for domestic and overseas payment in the Smart Tourism City, a project run by Korea Tourism Office to establish an online PG infrastructure and implemented an on-and off-line smart payment service in the open port area of Incheon, scheduled to launch in June 2021.

Robotic process automation (RPA)

The RPA system established in 2019 contributed to enhancing the work efficiency of employees by enabling 52-hour work week system and automating repetitive tasks. The scope of RPA, which was initially 15 tasks, was broadened to 27 in 2020 and will further increase to cover over 50 tasks including pension, payment, HR, marketing, sales and compliance, which is expected to reduce over 20,000 work hours.

Auto calling system (ACS) in branches

In order to improve the efficiency of client notification task over the phone, which is conducted by branch staff, we have introduced the automated calling system in December 2019 to deliver notifications on credit loan maturity and insufficient security account to clients holding direct accounts that were opened online. In 2020, the ACS program was expanded to include notification delivered to clients without WM managers assigned to boost work efficiency and will be further expanded to managed WM accounts.

Speech to text (STT) & text analysis (TA) services

STT technology converts calls made via contact centers into texts. In April 2019, Mirae Asset Securities adopted the TA system through which we analyze big data of calls converted through the STT technology and thus identify clients' needs, which was followed by an additional adoption of NAVER STT aimed at further improving the quality of client calls earlier this year. The voice recognition rate is as high as 91% and analysis and classification of calls made are done automatically. We plan to expand the service scope to apply STT to enable keyword-based classification which can then be used for target marketing and providing customized information.

Upgrading MAPIS ODS for branch digitalization

Mirae Asset Securities has upgraded the MAPIS ODS, which is a system that supports account opening, client management, and product information so that sales staff can engage in more efficient sales activities. MAPIS can be used to place overseas stock orders, request for pension transfer, and register foreign currency securities and overseas stock trading and the service is made available on tablet PCs to provide the most appropriate financial services anytime and anywhere, no matter where our clients are.



BUSINESS CASE

Became the first securities company in Korea to acquire MyData license

Based on the "m.ALL", an integrated asset management service application launched in August 2019, Mirae Asset Securities became the first securities company in Korea to acquire MyData license in January 2021 according to the revised Act on Use and Protection of Credit Information. The digital asset management app, m.ALL, provides clients with information not only on their financial assets managed by Mirae Asset Securities but also on asset and transaction record for 20 banks, 27 securities companies, 43 insurers, and 16 credit card companies as well as the national pension fund. Mirae Asset Securities is preparing to revamp the m.ALL services in line with the launch of MyData service scheduled for August 2021, with expectations to reinforce services to manage clients' financial and pension asset through the MyData business.





Client-centric Finance

Mirae Asset Securities strives for client-centric finance. To stay in line with strengthened policies towards financial consumer protection, we make continuous efforts to revamp related rules, policies, and systems while also planning and improving services tailored to the financial minorities.

Client-centric Product Development

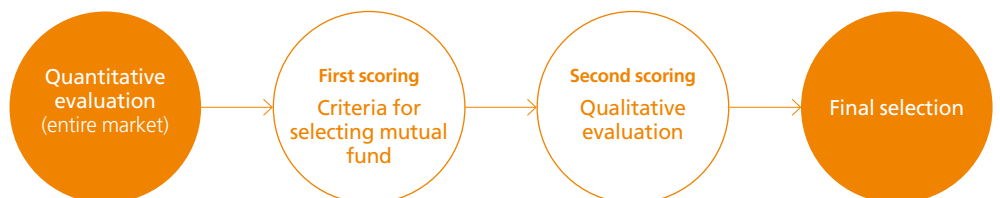
Product selection process

Mirae Asset Securities has put an excellent product selection process in place that is suited for long-term client needs and the global investment environment. The product selection process is as follows – we conduct the first scoring process by applying internal selection criteria on funds ranked high according to the result of quantitative evaluation on all available funds in the market; and the second scoring process will then finalize a new and recommended product line-up.

Product Strategy Council for higher client returns

The Product Strategy Council establishes product strategies that are aimed at enhancing client’s investment performance, and is participated in by at least 16 leads from relevant teams, including product-related departments, marketing-related departments, and risk management teams. A council meeting is held every other month in order to analyze key issues related to client returns and establish the optimal product strategies. The Council also collects opinions of the sales organization to enhance transparency in product strategies and achieve one of our core values – “Clients First”.

Product Selection Process



Product Development Process



Monitoring Process of Product Management



Enhancing Client Satisfaction

Upgrading the CS system

Mirae Asset Securities has established our own customer satisfaction (CS) system upholding the spirit of client alliance. In order to identify and further improve the satisfaction level of clients who visited our WM branches we have been continuously conducting customer satisfaction index (CSI) survey. In 2020, we have revisited the survey questionnaires to have a better-structured customer satisfaction evaluation system by putting in more weight on the staff kindness as well as client care. Furthermore, online training for CS leaders were conducted to strengthen the customer-centric mindset of employees and motivation programs such as prizes and trainings for outstanding CS leader are in place to foster an environment where employees can fulfill customer satisfaction in a more voluntary manner.

CS System Operation Process 3-stage program to raise employee’s CS mindset



Client-centric Services

m.ALL – mobile app for integrated asset management services “m.All” is a mobile app of Mirae Asset Securities based on which the company seeks to offer comprehensive asset management services which go beyond the boundaries of a financial investment company. With one-time initial authentication information alone, a user can check hidden assets without having to install apps for each financial company, and can use this integrated asset management service for integrated asset inquiry for all financial companies, easy search of financial companies that the user conducts transactions with, consumption & expenditure management, market price inquiry of owned real estate, and product recommendation using big data. It also provides a function that allows a client to bring together all of his/her financial assets and real estate all at once as it enables user inquiry of National Tax Service cash receipt registration details and actual real estate transaction prices posted by the Ministry of Land, Infrastructure and Transport, in addition to asset and transaction information of all financial institutions. Furthermore, new functions were added to allow users to check whether credit card usage condition to be eligible for receiving benefits is met, compare checking account and savings account products, receive notifications on maturity dates and payment dates for checking and savings accounts, insurance, and loans, and receive personal health data. Going forward, we plan to further expand the m.ALL app as a platform business with life-long finance services by incorporating the My data, My Payment, Mirae Asset PAY services and new alliance services with open API-based fintech companies.

Published easy-to-understand product leaflet, first in the industry Previous product leaflets, typically printed in small letters and hard for consumers to comprehend, are now replaced with “easy-to-understand product leaflets” which deliver key information such as risk grade per product and potential loss of principal fund in visualized images similar to traffic signals. This earned the company Grand Prize in the Financial Accident Prevention category at the “2020 Financial Consumer Protection Content Awards” hosted by Consumer News and sponsored by Financial Services Commission and Financial Supervision Service.

O2O service for greater convenience for clients visiting branches Mirae Asset Securities is gearing up to launch an online to offline(O2O) platform infrastructure which connects IT infrastructure to the client mobile platform to enable customer service, work process, and asset management. Once the O2O platform is introduced, clients visiting the branches can receive virtual queuing service which allows staff the time to prepare for servicing the client, increasing the speed of work process as well as convenience of branch operation.

CSI Score
(Unit: Point)



Consumer Protection

Consumer protection system

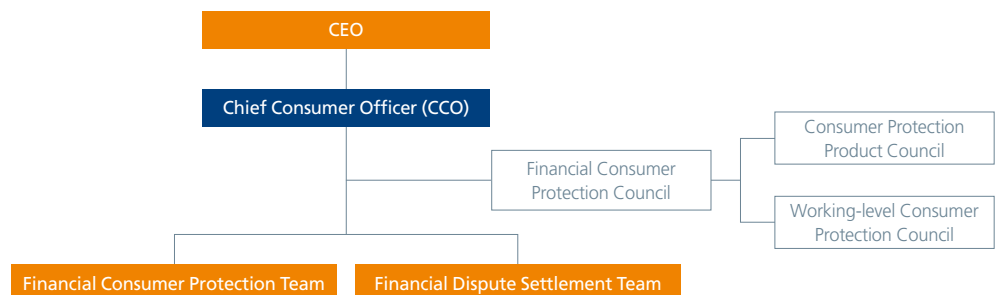
In order for the Act on the Protection of Financial Consumers to take a firm root, Mirae Asset Securities has a working-level council in place in early 2021 to ensure prompt adoption of the act and regularly examine whether the act is smoothly incorporated into each relevant organization. Moreover, we will establish and operate a system under which consumer protection managers and business owners are designated to identify complaints and cases where consumers are adversely impacted and take proper response measures in a timely manner. Before the act goes into effect, we are carrying out a number of projects¹⁾ aimed at fostering a culture of consumer protection from 2020 and onwards. We plan to host another series of events in 2021 to nurture a culture of responsible management, beginning with the CEO’s declaration to eradicate incomplete sales practices and employees’ oath to practice consumer protection (February), video conference calls with heads of field organizations and sales branches (March–April), and branch events to promote the consumer protection practice (April).

- 1) Projects executed in 2020:
- Proclamation ceremony for the Financial Consumer Protection Charter (held in January 2020 attended by around 200 employees and CEO)
 - Employee survey (July–September 2020, identified 1,200 new ideas for consumer protection culture with execution outcome by departments)
 - CEO video message distributed (October 2020)

Financial consumer protection governance

Based on the philosophy of “our existence is for our clients”, Mirae Asset Securities has set protection of financial consumer rights and interests as our top-priority principle in our financial consumer protection policy. Since the appointment of a Chief Customer Officer (CCO) and creation of the Financial Consumer Protection Department at the end of 2019 in a bid to establish the foundation for financial consumer protection, we have established a company-wide coordinating body in 2020 to incorporate consumer protection policies across the organization.

Chaired by the CCO, the Financial Consumer Protection Council holds regular meetings with departmental heads at least once a quarter. Its functions were greatly enlarged to embrace not only examining consumer protection issues throughout the sales cycle but also discussing measures to prevent and respond to damages facing financial consumers. The meeting results are reported to the BOD, in a move to place greater responsibility on the executives. Furthermore, we have newly established a Consumer Protection Product Council and a Working-level Consumer Protection Council consisting of team leads to ensure items related to consumer protection can be reviewed and executed in details. The Consumer Protection Product Council, consisting of sales staff, external advisor, and clients as well as those from the product development group, holds meetings as need arises before launching products and is operated to ensure issues are looked after from consumers’ viewpoint.



Innovations in financial consumer protection system

As digitalization and contactless trend spur rapid changes in the way we make financial transactions, client touch points are becoming diversified with rising demand for faster and more convenient financial transactions. The pursuit of simplicity, however, carries the risk of undermining the processes and functions intended for consumer protection whereas applying the strict consumer protection processes that are equivalent to those for face-to-face transactions may hamper the convenience of non-face-to-face channels. Mirae Asset Securities therefore determined that establishing an innovative consumer protection system is key to sustained growth of the financial industry. Furthermore, we also acknowledge the importance of trainings to ensure employees are fully aware of the sales protocol and having a system in place under which incomplete sales practices can be avoided in advance. It is in this regard that we have overhauled our system including the popup for the pre-sales checklist and we plan to apply AI technologies such as text-to-speech (TTS) to digitalize our consumer protection activities through collaboration with IT and other relevant departments.

We are also reviewing the non-face-to-face sales processes for products and services while considering options to better inform clients of key clauses in investment precautions, which can be easily neglected given the characteristics of the contactless channels. In particular, as clients on the contactless channels may receive relatively insufficient product explanation than clients visiting the branches, we have created training videos on high-risk investment product and posted them on the YouTube channel, which will be sent to the investors' mobile phones prior to signing the contract so that clients can be adequately informed of necessary clauses.

Operating the client panel

In order to carry out our core value of "Client First", we choose and operate client panels each year. A total of 42 panels were selected in 2020 from across the region and age groups to ensure voices of diverse groups are heard of. Their opinions, collected on complaints and areas for improvement in product terms and conditions, leaflets, product purchase process, and other contactless ways of engagement, are passed to related departments and over 83% of their ideas were selected as action items. In particular, the idea of improving the leaflets that are hard to understand served as a trigger for us to introduce the "easy-to-understand product leaflets" for the first time in the industry. The newly introduced leaflets visualize the key characteristics and risks of financial products to enhance the comprehension of clients. In 2021, the panel activities are conducted online with 19 panel members chosen for their active engagement such as clients with outstanding VOC suggestions. We plan to continue efficient communication with these online client panel to make sure our services are improved in line with the market changes such as ways to protect consumers in a contactless world.

Independent expert panel

Mirae Asset Securities has formed an independent expert panel consisting of three outside experts including professors to timely capture the policy directions of developed countries and financial authorities and make preemptive responses. The panel has performed critical roles by providing guidance to execute the consumer protection policies such as improvement areas to invigorate private equity market and responses against the enactment of the Act on Financial Consumer Protection and also by appearing in internal training videos introducing the Act on Financial Consumer Protection. In 2021, we will have an in-depth discussion on ways to protect consumers in a contactless era and to empower the socially underprivileged, based on which we aim to develop more practical measures.

Improving Client Communication

Enhancing customer complaints management

In order to protect the rights of financial consumers and handle complaints in a professional manner, we have set in place Financial Dispute Settlement Team dedicated to handling customer complaints and managing voice of customer (VOC) under the Chief Customer Officer (CCO). The Team serves as a control tower by identifying complaints captured through the complaints management system and internal communication channels and ensuring response measures are taken in a timely manner. It also submits major issues to the Financial Consumer Protection Council to define measures and reports the results to the CEO and BOD. Besides, the team also provides guidance through the "complaint prevention guideline" which includes information on complaints and dispute cases and how to prevent complaints, conducts mandatory annual training on complaints prevention, provides monthly updates on major complaints with case studies for easy understanding, and examines and analyzes complaints data by types. In addition, the "complaints early alert" system calls for enterprise-wide attention for issues that undermine consumer rights, preventive measures to contain the spread of consumer rights breaches, and other diversified activities are actively carried out by the team to raise employees' awareness of complaints, and prevents occurrence of similar complaints.

Expanding a Culture of Financial Consumer Protection

Customer Service Improvement Council

Mirae Asset Securities customer management begins with practicing “Clients First”, which involves listening attentively to customer opinions on inconveniences and making improvements. Client opinions collected via a range of contact points and channels are passed to the related departments to be reviewed and improved and opinions that were not adopted by departments go through another round of deliberation by the Customer Service Improvement Council.

Complaint prevention proposal system

We operate a complaint prevention proposal system through which branch staff can identify various cases causing inconvenience to clients and unfair practices on the field and propose ideas to prevent complaints. Any proposals can be submitted via the intranet and those with effective proposals and most participation are given prizes (74 employees were awarded in 2020) to ensure the workforce is motivated not to underestimate complaints and to bring about service improvement.

Evaluation by the Financial Supervisory Service

Mirae Asset Securities is making endeavor to build systems needed for consumer protection and reinforce related functions based on the outcome of the annual evaluation conducted by the Financial Supervisory Service on the actual state of financial consumer protection. Being recognized for appointing the Chief Consumer Officer (CCO) and mobilizing a pool of dedicated consumer protection resources which is the largest in the industry, we were given “good” grades for both consumer protection governance structure and product development and sales process in the 2020 evaluation. Such results are reported to the CEO and BOD to ensure our consumer protection system can be effectively upgraded. With the Act on Financial Consumer Protection going into effect in 2021, we will make thorough preparations for future evaluations by establishing internal control standards for consumer protection and financial consumer protection standards.

Financial consumer protection evaluation

Mirae Asset Securities has diverse evaluation items to see the status of employees’ financial consumer protection practices in quantitative and qualitative manner and the evaluation criteria is improved each year in consideration of the practical opinions at the field and the company’s policy directions. The evaluation results for headquarters and sales branches are reflected into each organization’s KPI, which will in turn influence their evaluation grade and incentive to empower the control function of the evaluation. In 2021, in order to establish a collaborative culture between branches and encourage proposals for consumer protection, we will enforce the reward system including additional points for branches with active participations so that we can lay a foundation on which complaints can be resolved promptly and control and rewards can be provided in a balanced manner.

Financial education for financial minorities

The outbreak of COVID-19 in 2020 posed significant challenges to our education programs for the underprivileged including the One Company, One School financial education which was one of our representative programs. As a response, we developed contactless financial education programs to be utilized not only to protect investors but also to provide employee trainings. In addition, beginning from early 2021, we have created videos on product information to be posted in the company’s YouTube channel to enhance clients’ understanding. Moving forward, we plan to develop and distribute contactless education programs customized for the senior citizens and the disabled aimed at enhancing the financial competencies and protect the rights of financial minorities.



Pursuing Complete Selling

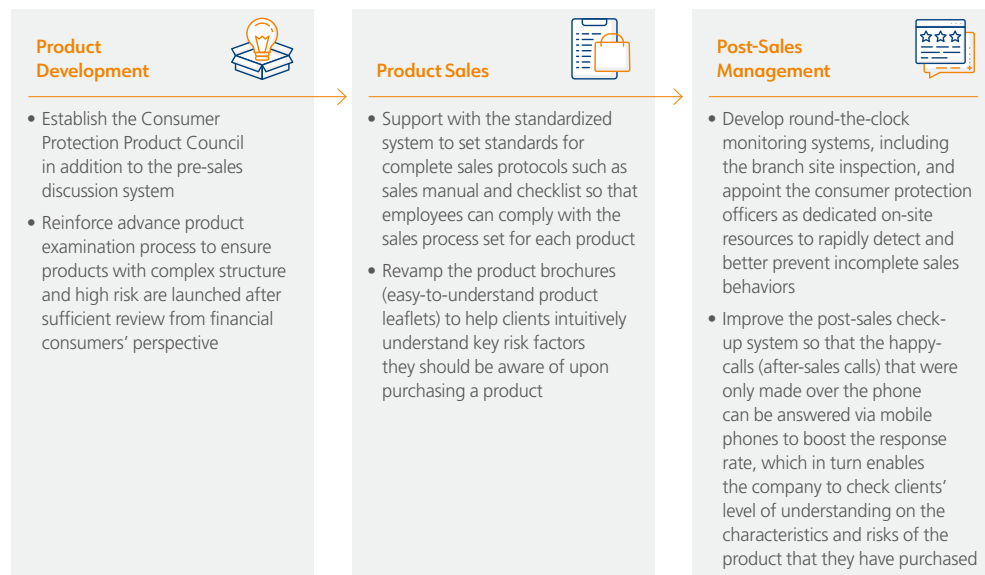
Training to prevent incomplete sales

Mirae Asset Securities provides various types of employee training including on-site training, in-class training, and online training to enhance the sales protocol compliance. In particular, non-face-to-face trainings were offered in 2020 with the outbreak of COVID-19, whereas competency-building trainings such as intensive courses from external experts were carried out. In addition, internal mystery shopping and role-playing activities for sales offices are regularly held to ensure all the standard sales protocols are firmly adhered to and employees are adequately familiarized with the processes. Details for the mystery shopping program including how the monitoring is conducted and evaluation criteria are in line with the guideline of the FSS so that there be no discrepancy between the evaluations from FSS mystery shopping and our internal program. Stricter evaluation standards for the mystery shopping are applied and branches with poor scores are given more trainings and check-ups, all as part of our stringent evaluation and training efforts to prevent mis-selling practices.

On-site inspection and self-assessment

Mirae Asset Securities conducts intensive examinations throughout the sales lifecycle via site inspections to monitor whether sales processes are properly adhered to. Improper sales practices, once identified, are given immediate corrective measures and reflected into the KPI evaluation according to the severity of the case. At the same time, trainings to prevent mis-selling behaviors are conducted in parallel to prevent recurrence of such behavior. In 2020, we developed a "round-the-clock monitoring system" to examine branches with high sales records for products whose return dropped dramatically or that has high probability of incomplete sales. In 2021, we will upgrade the system into a real-time contactless examination system to inspect documents stored at the branches to enable more rapid monitoring. In addition, branches conduct self-evaluation based on the incomplete sales criteria such as the ratio of high risk products sold, the ratio of products sold to ineligible clients, the ratio of products sold to the senior investors, in an effort to early identify symptoms of inadequate sales and prevent incomplete sales practices. The consumer protection officers, introduced in late 2020 to be in charge of the field sales operation as part of preparation for the Act on Financial Consumer Protection, are at the frontline to aid the sales resources through trainings on the Act and sales protocol as well as random monitoring.

Complete Sales Protocol throughout Product Lifecycle



Financial Consumer Protection Activities

Classification		Unit	2018	2019	2020
Education on complete selling process and financial consumer protection	Education hour	Hours	14	15	17
	Q1		82	96	87
	Q2		95	90	89
	Q3		91	89	89
	Q4		91	95	94
Result of mystery shopping		Points			
Receiving and handling of VOCs	VOC handling rate	%	100	100	100



Corporate Culture of Respect

Mirae Asset Securities hires outstanding talents through diverse recruitment processes and provides ongoing training to enhance employees' financial expertise. We respect their human rights and build a creative corporate culture in which our employees unlock their full potential.

Human Rights Statement

Since joining the UN Global Compact (UNGC) in June 2006, Mirae Asset Securities has fulfilled its social responsibilities by adhering to the UNGC's 10 principles in the areas of human rights, labor, the environment, and anti-corruption. Accordingly, Mirae Asset Securities established human rights principles consistent with global standards¹⁾ and applies them across its operations to protect the human rights of all stakeholders, including employees, clients, shareholders, investors, transaction counterparties, partners, local communities, governments, & capital markets. Moreover, Mirae Asset Securities periodically reviews its compliance with human rights principles and has an internal process to ensure that any violations of human rights or discrimination issues that may arise are handled in accordance with established procedures.

1) Universal Declaration of Human Rights, UN Guiding Principles on Business and Human Rights, International Bill of Rights

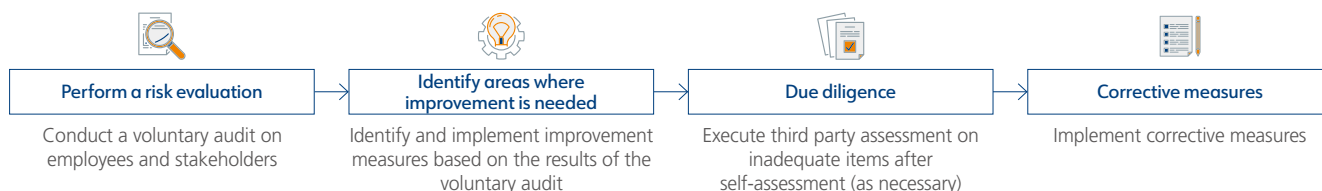
Stakeholders	Human Rights Principles
Clients	<ul style="list-style-type: none"> Putting client success at the center of how it conducts business, Mirae Asset Securities continuously develops high-quality financial products and services that meet the demands and expectations of clients. Mirae Asset Securities does not discriminate against clients on the basis of gender, religion, race, or political leaning and does not engage in immoral and unethical behaviors that might infringe on the rights of clients that it serves. Mirae Asset Securities has administrative, technical, and physical measures in place to protect clients from the loss, theft, breach, alteration, or damage of personal information.
Employees	<ul style="list-style-type: none"> Mirae Asset Securities respects the free will and creativity of employees and does not discriminate against them on the basis of regional origin, family relations, academic background, gender, religion, age, disability, or marital status. Mirae Asset Securities provides equal opportunities to employees according to their abilities and qualifications and implements fair performance evaluations and reasonable compensation policies. Mirae Asset Securities creates a safe and pleasant workplace environment for employees and strives to provide a high-quality welfare system for work-life balance. Mirae Asset Securities guarantees the freedom of association and the right to collective bargaining and does not treat employees unfavorably on the basis of union status, union activities, or the creation of a union.
Shareholders & Investors	<ul style="list-style-type: none"> Mirae Asset Securities implements reasonable decision-making processes and management activities based on a responsible, transparent, and ethical management system and does its best to maximize shareholder and investor value. Mirae Asset Securities treats all shareholders and investors equitably and fairly to prevent undue violations of their interests and rights. Mirae Asset Securities maintains mutual trust with shareholders and investors by disclosing management information transparently and accurately.
Transaction Counterparties & Partners	<ul style="list-style-type: none"> Mirae Asset Securities does not abuse its dominant position to make undue demands for the purpose of selling financial products and services, does not grant unfair favors to particular companies, and enters into and enforces contracts with integrity. In its dealings with transaction counterparties and partners, Mirae Asset Securities conducts business fairly and in a spirit of mutual respect and win-win cooperation, thus helping to uphold the order of the market economy. Mirae Asset Securities strictly protects and controls information obtained during the course of business with transaction counterparties and partners.
Local Communities	<ul style="list-style-type: none"> Based on respect for the culture and values of local communities, Mirae Asset Securities fulfills its social roles and responsibilities by undertaking CSR activities such as financial literacy programs for the socially marginalized, donations, and volunteer activities. Mirae Asset Securities takes environmental protection into account as a key factor when establishing policies and procedures and contributes to environmental preservation by strictly complying with environmental regulations in Korea and abroad. As part of its efforts to build a healthy society, Mirae Asset Securities strictly monitors and prohibits any exposure to situations that may lead to social problems such as child labor, forced labor, and human trafficking.
Governments & Capital markets	<ul style="list-style-type: none"> Mirae Asset Securities fulfills its basic responsibilities as a member of society, contributing to the development of the nation and capital markets through responsible management, job creation, and the faithful fulfillment of tax obligations. Mirae Asset Securities contributes to the formation of a fair market economy by guarding against the use of undisclosed internal information for market manipulation, illegal money laundering, and bribery. Mirae Asset Securities does not undermine its political neutrality by voicing support or campaigning for a particular political party or candidate.

Human Rights Impact Assessment

Human rights impact assessment process

Mirae Asset Securities identifies potential human rights issues across overall business management activities including business operation, value chain and new business relations and takes corrective measures as necessary. We consider previous human rights violation history, frequency of occurrence, and financial and non-financial severity and manage the identified weaknesses by issue type. Related matters are rigorously managed by designated teams.

Human Rights Risk Analysis Process



Results of human rights impact assessment

Self-assessments are run by employees and stakeholders on our compliance with the Labor Standards Act, compensation, non-discriminatory principles, implementation of labor and human rights. Particularly we endeavor to check on human rights violations of women, third party contract workers, migrated workers, and of local communities.

Stakeholders	Potential human right issues	Measure required for improvement	Scope of human rights impact assessment
Clients	Violation of interests of financial consumers and financial accidents	<ul style="list-style-type: none"> Formed the Financial Consumer Protection Council, an internal coordinating body for financial consumer protection, to reflect and run related policies across the organization Created "easy-to-understand product leaflets" which depict key financial information in images to improve understanding on key risks for financial products and prevent financial accidents 	All business operations (100%)
	Unfair treatment and satisfaction level check	<ul style="list-style-type: none"> Updated customer satisfaction index (CSI) survey items to strengthen our customer satisfaction assessment system Provided online training sessions for CS leaders of each branch to increase sales staff awareness 	
	Personal information leakage	<ul style="list-style-type: none"> Build information protection strategies and set top three implementation tasks to reinforce information protection activities, with the Information Protection Committee taking the lead Developed personal information management system to prevent leakage of personal information and internal documents and reinforced digital rights management (DRM) for internal documents 	
Employees	Deteriorating safety and health conditions	<ul style="list-style-type: none"> Provided paid leave to keep employees safe from COVID-19 infection and supported working from home Offered stronger protection measures for employees with health risks such as reduced working hours and remote work options Plan to strengthen health management programs by expanding scope and eligibility for regular health examination 	All business partners and collaborating institutions (100%)
	Work-life imbalance	<ul style="list-style-type: none"> Create a healthy work environment by implementing flexible working hours and flexible lunch hours, and encouraging employees to take annual leave Ensure maternity and parental leave that exceeds legally required standards, subsidies for medical expenses related to child birth, expansion of reduced working hours during pregnancy, etc. to contribute to solving the low-childbirth problems 	
	Violation of freedom for collective bargaining and association	<ul style="list-style-type: none"> Build trust between labor-management by respecting employees' participation in labor union & engaging in its activities In 2020, more than 20 rounds of wage negotiations were held, thereby raising base-up, receiving personal pension benefits, and improving other employee welfare benefits 	
Business Partners & Collaborating Institutions	Unfair transactions	<ul style="list-style-type: none"> Revamped Code of Ethics to encourage free competition with business partners and collaborating institutions, fair transactions (ban on anti-monopoly and anti-competition practices) to keep the orders of free market economy 	All business partners and collaborating institutions (100%)
Local Communities	Increasing financial minorities	<ul style="list-style-type: none"> Expanded financial training at schools for One Company One School program, armed forces and university students Develop accessibility of financial users with hearing and speaking disabilities by introducing easy-to-use fashioned services, voice-based ARS service, Smart ARS system and screen reading proxy programs 	All local communities (100%)
	Negative social and environmental impact (human trafficking, child labor, environmental destruction, etc.)	<ul style="list-style-type: none"> Developed ESG business management principles such as "ESG Policy Framework" and "Declaration on Environmental and Social Policies" to help us identify and preemptively respond to global environmental/social risks and impacts to play a leading role in building a sustainable society 	

Talent Acquisition

Principles of fair recruitment

Mirae Asset Securities hires talent based on its principles of fair recruitment that do not place a restriction on academic background, gender, age, etc. From the interview stage, we run verification processes such as coding test or work-related interviews depending on the job characteristics to evaluate the candidates' competencies. We also run contactless, video interviews around the year as a response to the changing circumstances caused by COVID-19 in a continued attempt to improve our hiring process to select the top talent.

Strengthening overseas recruitment

Mirae Asset Securities places its highest priority on attracting global top talent with investment experiences in the U.S., Europe, Vietnam, India, Singapore, and Hong Kong with the goal of securing diverse overseas investment opportunities. Going forward, we will recruit more overseas talent to form networks with global top-tier universities and expand acquiring more talents from abroad to secure global talent pool with outstanding qualifications.

Performance Evaluation

Performance evaluation principle

Mirae Asset Securities has a mission statement of becoming a "company that evaluates according to performance and compensates according to performance." We are therefore impartially evaluating employees' achievement and competency based on a transparent process and reasonable grounds.

Fair promotion and compensation

We have improved the promotion system to adopt the "selective promotion" under which employees are qualified for promotion only when they pass the performance criteria for certain period, replacing the past "graduation-type promotion" where employees automatically become promotion candidates for the next job grade after a certain period of tenure. Such change has enabled us to establish a system where employees' continuous achievement becomes recognized irrespective of age, gender, and background.

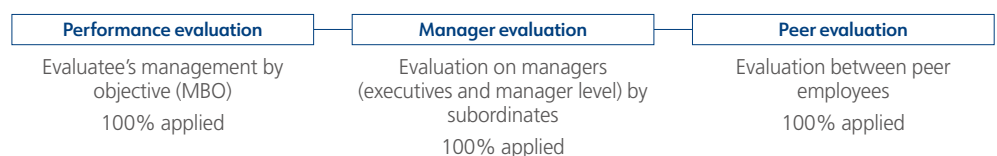
Employee evaluation is based on the achievement rate of individual management by objective (MBO), organizational contribution rate, and improvement in competency building and such evaluation outcome will determine the salary increase rate for the next year. In the beginning of every year, the evaluator (team head) and evaluatees (team members) agree on the desired level of achievement and evaluation criteria, based on which the evaluator will provide mid-term feedback, and if necessary, goals can be adjusted as agreed. At the year-end, the evaluator and evaluatee will conduct one-on-one performance review and the evaluator will provide feedback on final evaluation grade and supporting data. In case the evaluator is deemed to have violated the process or the evaluation result is ill-grounded, the evaluatee can raise an objection. Our fair evaluation and compensation system under which evaluation criteria is agreed upon beforehand and salary is decided according to the feedback with just ground forms the foundation of our competitiveness. We also run additional performance evaluation programs such as manager review by subordinates and peer review which are run once a year.

Fostering-type performance evaluation process

Our evaluation system of the past was focused on grading employee performance once at the year-end aimed at determining the compensation for the next year. Evaluation conducted on an annual basis, however, ended up as a tool for compensation such as promotion and salary increase and carried the risk of hampering the purpose of fair evaluation. Mirae Asset Securities has therefore decided that it is necessary and important to run the evaluation in a semi-annual or occasional manner to provide employees with ongoing feedback on areas of excellence and improvement so that the evaluation can serve as a tool for fostering talents. Hence, we are conducting fostering-type evaluation system backed by smooth communication between the evaluator and the evaluatee.

Regular communications for fostering-type evaluation are made three times a year – first in February to set the goal (evaluator and evaluatee will agree on evaluation criteria), second in July for mid-term evaluation (feedback for first half of the year), and third in December for comprehensive evaluation (annual feedback) and the evaluators are encouraged to provide occasional coaching.

Evaluation System



Nurturing Talents

Human resources development programs

Mirae Asset Securities runs diverse training programs aimed at boosting the company's global IB expertise. These programs are designed based on case studies and thus are immediately applicable to the job execution. Systematic curriculum enables the organization as well as individuals to strengthen their competencies that are required for becoming a global IB powerhouse.

Classification	Course	Details	Performance in 2020
Globalization	Global comprehensive asset manager course	<ul style="list-style-type: none"> Provide education on global asset allocation and various consulting work required for comprehensive consulting services 	38 persons (380 hours)
	WM Academy	<ul style="list-style-type: none"> Enhance analytics competency in the global economy and financial markets; consulting competency in tax, real estate, and pension; and analysis of overseas equity 	3,188 persons (3,497 hours)
Investment	Fundamental analysis and Global ETF investment	<ul style="list-style-type: none"> Analyze economic indices and economic cycles; and develop understanding on the FX, stock, bond, raw material markets Analyze fundamentals of major countries, and make investment in global ETF 	301 persons (5,117 hours)
	IB Deal Case Study	<ul style="list-style-type: none"> Share case study for real estate project financing through structured financing and IPO Share corporate financing methods and cases, acquisition financing and other syndication cases 	71 persons (1,136 hours)
IB	Analysis of financial statement for corporate valuation and financing	<ul style="list-style-type: none"> Understand financial statement and corporate valuation methods, and conduct in-depth analysis Understand the nature of non-controlling shares and issues with corporate financing methods 	267 persons (1,949 hours)
Digital	Digital Convergence for Financial Studies Course at Korea University	<ul style="list-style-type: none"> Provide education on understanding of digital finance, latest financing technologies and business model, digital strategy and marketing, in-depth digital technologies, project design and implementation 	39 persons (9,360 hours)

Strengthening global competencies

Global Innovation Challenge This is a course to develop innovative and creative talent and share innovative ideas across the company. Under this program, participants develop and propose research ideas for the company's new business initiation. Those whose proposals are selected will visit overseas countries for two weeks according to their proposed research areas. After the overseas training, reports are shared across the company. This program was suspended in 2020 due to COVID-19.

Global expert nurturing program This program is aimed to foster junior staff equipped with global investment competencies. To this end, we are dispatching junior staff to overseas subsidiaries for two months to give opportunities experiencing local markets. Those selected will take trainings to develop knowledge in areas of analysis of global economic indices and capital market, PF, FX, and interest market, learn from the overseas subsidiaries, and share their experiences after they return to Korea. This program was suspended in 2020 due to COVID-19.

Program to sharpen global IB competitiveness We conducted four rounds of global IB basic course training with the goal of strengthening our competencies as a global IB. The training, held under the topics of IB deal case study, PEF and M&A, and analyzing financial statement for valuation and financing (basics/intensive) was open not only to IB staff but also to WM and RM staff to enable them build sales competitiveness. The training was delivered for 37 hours last year and participated by 413 employees.

Strengthening financial expertise

Global comprehensive asset manager course This course is intended to develop and learn global asset allocation and various consulting work experiences to meet diverse needs of high-net-worth individual (HNWI) clients. As a highest-level course consisting of top notch lecturers in each field, only WM resources selected through strict screening process are eligible to attend the course which help participants boost all areas of competencies required for asset management such as global asset allocation, consulting on legal, taxation, and real estate, IB, and VIP management. Furthermore, course participants are able to acquire the competencies required to deliver professional asset management services, enjoying a compelling competitive advantage as a most qualified WM. In 2020, a total of 38 employees completed the course run online due to COVID-19.

WM Academy Created to foster global investment experts, WM Academy is an intensive training program targeting the entire WM employees and was conducted in 2020 with focus on global investment. Contents are developed to reflect timely topics and delivered through diverse lecturers and in 2020, a total of 3,188 employees completed the course. WM Academy is Mirae Asset Securities' most renowned course representing WM trainings drawing over 2,000 participants each year.

Introduction to global equity analysis This is a course that helps develop key knowledge and investment mindset and philosophy towards global investment. This course was conducted under two subjects of Key to Equity Investment Strategies and Industry Analysis and Valuation. Employees who have completed the course will be able to make investment strategies centered on the key changes to industry and businesses. A total of 188 employees completed this course in 2020.

Intensive course on analysis for new-growth industries This course is designed to enhance analytical skills for new growth industries by offering in-depth studies from industry-based perspective. Providing guidance on deep dive analysis on newly emerging industries with a focus on next-generation energy and mobility innovation, it helps employees build professional knowledge and strengthen investing capabilities. In 2020, 71 WM staff took the course, with plans underway to expand and diversify the scope of new growth industries.

Fundamental analysis and Global ETF investment It is a course designed to enhance the expertise of junior WM staff through the analysis of fundamentals on the global financial market. In 2020, a total of 301 employees have participated in the course which was mandatory for retail salesforce with less than three years of experience. Intensive courses offered on financial assets, economic cycle and global ETF to raise overall investment capabilities for junior wealth managers.

(Unit: Persons)

Classification	2018	2019	2020
AFP ¹⁾	1,582	1,524	1,457
CFP ²⁾	300	282	269
Certified Investment Manager (integrated)	1,285	1,462	1,488

1) AFPK: Associate Financial Planner Korea

2) CFP: Chartered Financial Planner

Strengthening digital competencies

Professional financial data analysis course We select candidates from employees across the entire organization, not just the IT team, to provide intensive training to develop financial data professionals with expertise in data analysis and algorithm and enhance digital capabilities across the company. In 2020, we expanded our online program, which was completed by 270 employees which was around 8.5 times higher than the number for 2019. We are planning to run online training as a basic course for beginners and the offline channel as intermediate-advanced course, which will help build the firm's capabilities for digital transformation.

Digital Convergence for Financial Studies Course at Korea University Since 2018, we have been collaborating with Graduate School for Computer and Information Technology at Korea University to run a master's course on Digital Convergence for Financial Studies (outsourced course) to develop internal resources to lead digital transformation at Mirae Asset Securities. Every year, we hold a graduation project presentation to share academic achievements over the last two years and encourage graduates to apply their knowledge to job execution. As of 2020, we have two graduation classes (36 graduates) and currently the third class (21 students) is studying in their second year.

Communication Culture in the Workplace

Corporate culture of innovation and investment

Innovation School Innovation School is a course intended to encourage our employees to think outside the box and adopt new perspectives and viewpoints and thoroughly reconsider the need for global asset allocation, in a bid to promote the mindset of transformation and innovation for achieving client alliance. This course applies to the entire Mirae Asset Group and a total of 1,855 employees of Mirae Asset Securities undertook the course since 2018.

Book Square Book Square 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. A book meeting, where all employees are invited, is held every year and 3,913 employees participated in 2020.

Building trust between labor and management

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 2020, over 20 wage negotiations under the Labor Management Council were conducted, resulting in improved company welfare benefits such as wage increase and subsidies for pensions. We also value and respect employees' participation and activities in trade unions. As of end 2020, the union membership totaled 2,535 as of end 2020 based on check-off figures.

Grievance handling program Mirae Asset Securities has been assigning staffs to support employees' emotional grievance to address employees' complaints or resentment, 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. We have developed a prevention, reporting, and response system, and are offering psychotherapy and counselling programs. In 2020, we developed and distributed a self-inspection checklist for ethical compliance to prevent any grievance from occurrence.

Family-friendly Corporate Culture

Work-life balance

Establishment of healthy work conditions Mirae Asset Securities is committed to enhancing work efficiency and reducing over working hours through flexible working and lunch hours. We encourage employees to take annual leave as they wish and provide regular leave, paid menstrual leave and family caring leave to help achieve better work-life balance.

Telecommuting had not been feasible for financial institutions due to information security policies enforced by financial authorities. With the amendment of the regulations on electronic financial supervision in the aftermath of COVID-19, however, employees are now allowed to work from home. We leverage our IT infrastructure to encourage employees to work remotely and are planning to diversify flexible working schemes that includes remote working and selective working hours.

Maternity protection policies Mirae Asset Securities has maternity protection policies in place to promote childbirth and parent protection to address the social issue of low birth rates. We have childbirth and parental leave that exceeds legally required periods of 90 days, provide medical care costs for childbirth and subsidies in addition to government sponsored ones. As of 2020, 141 employees were on parental leave, with 93% returning to work. Since 2011, we have been running workplace daycare facilities to share child-rearing responsibilities and achieve work-life balance. Employees can also opt to work reduced hours for childcare, which has been enforced since 2019. As preventive measures for COVID-19, pregnant employees can opt for reduced working hours up to four hours per day for the full term of pregnancy.

Health & Safety Culture

Improving welfare benefits Mirae Asset Securities operates a sound benefit program which encompasses various allowances such as expenses for congratulations and condolences, marriage voucher, and wedding anniversary and other aids such as scholarship, medical expenses, and housing support. To achieve high level of employee welfare, we provide short-term commute buses connecting nearby subway stations and the office and the cafeteria at our office building in Yeouido has been offering lunch boxes since March 2020 to keep employees safe from the risks of COVID-19. Any improvements on the benefit system are made based on mutual understanding and agreement with the labor union. For 2021, we have preparations underway to sign a new collective bargaining agreement between the labor union and management. As such, Mirae Asset Securities is dedicated to running the benefit system in a sincere manner so as to employees can enjoy enhanced economic and social status.

Building a healthy workplace

Employee health management program Mirae Asset Securities helps and encourages employees to receive regular health-check programs every year while also supporting flu vaccinations. In 2021, we will expand the scope of medical examinations as well as eligible employees (including employees under the age of 35) to strengthen health management programs for our entire workforce.

Mental health care Mental health care programs are in place to address issues and psychological stress caused by work or daily life. We have a professional counsellor that helps employees recognize, control and alleviate their emotional stress and boost work satisfaction. The program is outsourced to Dain Counselling Inc and all counselling sessions are kept private. In 2020, 66 employees had been received the counselling services for 205 sessions.

Responses to COVID-19 Mirae Asset Securities has been making its utmost to keep its employees safe from COVID-19 since the outbreak in early 2020. Business continuity plan (BCP) was established to build systematic response framework and we encourage paid leave and telecommuting to prevent potential infections. We have also strengthened protective measures for pregnant employees and other employees susceptible to health risks by reducing work hours and working from home. We will continue to build on safety/health plans to prevent industrial accidents and improve employee health and work environments.

ESG FACTBOOK





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Business Performance

Mirae Asset Securities is successfully creating differentiated values in well-diversified business areas. Through our relentless innovation and transformation, we seek new opportunities and continue to generate economic growth, contributing to advancing Korea's financial market.



Market Review and Outlook

Stock Market

In 2020, the global securities market experienced an extremely high volatility due to the COVID-19 pandemic. The stock market plummeted in March to a level similar to the plunge right after Lehman Brothers' bankruptcy in 2008 but quickly turned around on the back of a large-scale stimulus measures around the world. In the second half of 2020, the stock market was even more bullish mainly attributable to the vaccine potential with the US S&P Index rising by 16.3% and the Shanghai Composite Index went up by 13.9% and KOSPI by 30.8%. In 2021, on the back of strong stimulus packages and promising expectations for economic normalization, the global stock market is forecast to maintain an upward trend. However, as countries are likely to demonstrate varying levels of economic stimulus capabilities and speed of vaccination, the gap in the economic recovery will lurk as a potential reason for uncertainty.

Bond Market

Since the outbreak of COVID-19, central banks across the globe have made coordinated effort for quantitative easing, leading to a sharp interest rate cut, however, it was turned around in the second half of 2020 due to increased expectation for economic recovery and burden in national bond supply. In early 2021, expectation for economic normalization coupled with concerns for inflation led to sharp increase in the national bond interest rate for large economies. Although current anticipation for economic normalization is limited to a few countries including the U.S., such recovery is expected to spread across the globe and concerns for monetary contradiction is likely to be eased gradually, thus the interest rate is expected to increase throughout the year.

Foreign Exchange Market

In early 2020, the value of the US dollar (USD) showed a sharp rise due to the spread of the preference for safe assets as an impact of the COVID-19 pandemic, but the large-scale liquidity supply of the Federal Reserve Bank (FRB) proved to be effective and the weakening of the dollar since May is expected to continue in 2021. However, the forecast for a weaker dollar have declined in early 2021 as US economic growth has stood out relatively and the US inflation and interest rate hikes were influential. In addition, as the FRB's active liquidity supply continues, the strengthening of the dollar is considered to be challenging. USD is expected to move stably until the FRB implements an exit strategy. However, if the US-China conflict intensifies in the future, the Chinese yuan is likely to weaken against the dollar, and the Korean won is likely to remain highly synchronized with the yuan and weaken as a consequence.

Changes in Laws and Regulations for the Financial Market

Business Model Change and Product Diversification

Amid rapid changes in the financial market, 2020 witnessed securities companies return back to the traditional business models and investors turning their eyes into the overseas market for direct investment. A number of factors such as global low-interest rate and stricter regulations for the real estate, in addition to the breakout of COVID-19 in early 2020, contributed to the rapid flow of the market liquidity into the stock market, which in turn generated huge profit for securities companies from conventional businesses, brokerage commission. On the other hand, however, continued limitations on in-person sales due to COVID-19 have rather slowed down the global IB market in such areas as alternative investment and underwriting at home and abroad, whereas ample market liquid funds increased the corporate's financing need for IPO, ECM, and DCM.

Furthermore, as platform service providers, such as Kakao and Toss, enter the securities market, traditional securities companies are required to strengthen their digital competitiveness to establish and broaden non-face-to-face financial services in such areas as payment, loan, and remittance.

At the same time, low-growth and low-interest rate structure have taken a firm root in the Korean economy while investors are requesting for more diversified financial product portfolio especially in the overseas market. Hence, securities companies are engaged in an intensified competition to provide distinctive financial services such as an infrastructure for direct overseas stock investment and broad financial product portfolio to include derivatives and ETF based on overseas underlying asset.

Government Initiatives to Innovate the Capital Market

The Korean government, in 2020, has put forward four capital market policies which are efficient response to the risk factors both at home and abroad, improving investor’s utility in practice, establishing a capital market brokerage structure that fits the changing economic paradigm, and increasing corporate’s long-term values. Mirae Asset Securities is making sincere efforts to formulate measures for each of these initiatives and execute them properly.

Generating Economic Values

Business Performance and Plan

As a repercussion of the COVID-19 pandemic which broke out in the first quarter of 2020, the year saw a truly unprecedented global market crisis but was able to witness a quick turnaround owing to the V-shaped recovery. Mirae Asset Securities achieved a breakthrough by exceeding KRW 1 trillion in income before tax for the first time in Korea’s securities industry with KRW 1,140.2 billion in consolidated net income before tax and KRW 834.3 billion in net income. By expanding the amount of consolidated controlling equity capital and the amount of investment assets in and outside Korea to KRW 9.2 trillion and KRW 8 trillion, respectively, we have established ourselves as an unrivalled mega-sized IB in Korea. By fully leveraging such investment competencies, we were able to equip ourselves with distinctive growth engine in respective areas of IB, PI, and Trading. Furthermore, our overseas subsidiaries were the first to record KRW 200 billion in annualized income before tax, thus laying the ground to further jump into a true global investment house.

In 2021, Mirae Asset Securities has established the mid-to long-term strategy of G.R.O.W.T.H (Globalization, Risk Management, Opportunity, Wealth Management, Technology, High Quality) to reinforce the global business growth momentum, differentiated risk management, and digital finance competencies as well as pursue creation of new businesses for disruptive innovation and high-quality ESG management. By doing so, we will generate balanced profit and ensure clear shareholder return policy, thereby sharpening our competitive edge amid challenging market environment.

Distributing Economic Values

Distribution of Values

Mirae Asset Securities pursues a fair and transparent distribution of values we have generated to enhance client value and promote sound social growth. In 2020, a total of KRW 2,198.1 billion was distributed to our key stakeholders, such as retail and corporate clients, shareholders & investors, employees, and local communities, while supporting their values.

(Unit: KRW billion)



Fulfillment of Tax Payment Obligations

Mirae Asset Securities 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, we clarify the vague from external tax experts 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 complying with 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.

WM

Spearheading the trend of overseas stock investment

As the interest of individual investors in direct investment of the overseas stocks has been increasing, market balance and transaction volume recorded significant increase in 2020. As of the end of 2020, Mirae Asset Securities maintains the largest balance of overseas stock asset under management at KRW 15.7 trillion (inclusive of online-opening account), proving the lead position for overseas stock brokerage. From the initial phase, Mirae Asset Securities has preemptively established the infrastructure and system for direct overseas stock investment, now enabling direct investment into 33 countries and was the first in the industry to introduce the integrated FX deposit system so that clients can make direct investments without prior currency exchanges. Furthermore, we were able to enhance the client convenience by providing NASDAQ real-time market data with free of charge for the first time in Korea and developing sophisticated order system such as pre-market order, and introduction of pre-markets has greatly enhanced the client convenience.

Pension

Efforts to improve pension returns

As of the end of 2020, the reserve in Korea's retirement pension market has increased by approximately KRW 34 trillion (+15.5%) compared to the previous year, exceeding KRW 255 trillion in total. Contrary to the rapidly increasing amount of reserves, the return on investment is 2.58% per year, and the annualized returns for 5 and 10 years remains flat at 1.85% and 2.56%, respectively. While the KOSPI Index rose sharply last year, the annuity yield was very low. Accordingly, various discussions are underway to improve the annuity returns, such adopting performance-based product as the "default option (pre-designated product scheme)".

Of late, the "Superannuation for SMEs" and "obligatory investment policy statement (IPS)" bills were endorsed at the plenary session of the National Assembly. The "Superannuation for SMEs" is a system to create a retirement pension fund for small and medium-sized enterprises (SMEs) with 30 or less employees and improve pension returns through direct management of the Korea Workers' Compensation and Welfare Service or Outsourced Chief Investment Officer (OCIO). Yet enforced, Mirae Asset Securities is making preemptive effort to be selected as OCIO by the Korea Workers' Compensation and Welfare Service based on its know-how in retirement pension asset management accumulated over time, such as strengthening the management infrastructure and developing a reserve management strategy specialized for the pension fund. In the meanwhile, the mandatory adoption of IPS is expected to serve as a good opportunity for Mirae Asset Securities, which has strong reserve management capabilities.

IB

Preemptive responses to volatile market

IB Division1

Economic and business environments in Korea and abroad have been changing due to the prolonged COVID-19 pandemic, and corporations are proactively responding to improve their governance, business, and finance structures. Such trend is expected to boost up business opportunities in the consulting services and acquisition financing deals driven by M&As. In addition, global trends, such as an easing monetary policy of central banks around the world, expanded economic stimulus measures, and growing capital market liquidity, have brought flourishing stock market and initial public offering (IPO) market globally. Amid such circumstances, Mirae Asset Securities will stay focused on discovering prime large-scale IPOs and unicorns in new growth industries and plans to preemptively discover investment opportunities in such infrastructure deals in new and renewable energy, data center, and smart city as ESG and Korea New Deal businesses-related are expected to be highlighted.

IB Division2

In 2020, the real estate project financing (PF) market underwent a sluggish growth as real estate PF exposure increased due to COVID-19 and subsequent crisis in the real economy, shrinking business environments coupled by challenges in on-site due diligence, and the financial authorities' announcement to control the soundness of the real estate PF. Prolonged economic downturn called for the need for continuous risk management by responding to market changes and tightened regulations. At the same time, domestic real estate PF market is expected to grow with construction projects for public housing and rental homes in major cities around the nation in collaboration with the public entities. Development projects for large-scale data centers and fulfillments in line with the Korean New Deal policy will jumpstart while deals related to the ESG, the new global business trend, is likely to boom.

Trading

Trading Division1

Work process innovation and new profit-making opportunities by leveraging new technologies

IT technology advancement is bringing drastic change in the financial industry. The convergence between technology and finance and subsequent innovation are not only major tasks imposed on us but also significant challenges. In particular, derivatives trading and sales are at the forefront of the transformation. We are therefore making continued endeavor to expand our global business competencies and create new business opportunities by developing a trading system which runs on new technologies such as in-house algorithm to make inroads into new overseas markets beyond the Korean market.

Trading Division2

Contribution to environmental and social value creation

The importance of ESG investment has been growing in the fixed income market at home and abroad. Investments are being made in a highly-selective manner by taking into consideration of issuer's use of proceeds while fulfilling our investment responsibilities.

Sales & Trading Division

Securing future growth engines using AI technology

Algorithm-based trading using AI technology has settled as a mega-trend in asset management. We have built a trading system that automatically handles management, liquidity provision and arbitrage trading of securities, ETF, foreign exchange and derivatives products. Against the low-interest rate, interest into various investment assets is on the rise, demonstrated in diverse investment opportunities in foreign exchange and overseas equity-related products in addition to greater sales opportunities. Furthermore, as interest into the ESG investment grows, we are proactively approaching related investment and sales services.

Corporate Solution

Increasing domestic and overseas alternative investments as an alternative in the low-interest-rate environment

The need for alternative investments at home and abroad and Outsourced Chief Information Officer (OCIO) is on the rise as an alternative amid persistent low interest rate environment, and the weight and amount are expected to further increase. Based on our distinctive global network, Mirae Asset Securities discovers high-quality alternative investment assets and suggests them to institutional investors and corporate clients. In particular, as the COVID-19 pandemic made it difficult to conduct due diligence on alternative investment assets, we are discovering and expanding the outstanding blind fund as product line-up, which is superior to project investments. In addition, we are providing investment assets that are adequate for client needs based on our experienced knowledge on financial products and highly-capable experts.

Global

Digital transformation to better respond to untact society

Due to the impact of COVID-19 social distancing, contactless commerce has become normal, and now we are entering into the New Normal Era of a "contactless society". In addition, prolonged ultra-low interest rate around the world and increased volatility of the global stock market have accelerated the move for individual investors towards the stock market both in Korea and around the world. To stay up to date with the changing market trend, our overseas subsidiaries are making utmost efforts to apply our advanced IT infrastructure to the overseas local market and drive the digital transformation by expanding the online channels to offer differentiated digital financial services. In addition, we are committed to offering quality investment products by proactively investing in such global new growth areas as big data, AI, bio, and telemedicine, which are core to the 4th Industrial Revolution distinctively characterized by "hyper-connectivity" and "hyper-intelligence."

Digital

Digital transformation and increasing use of untact financial services

Competition further intensifies between the big tech players, such as Kakao and Toss, and traditional financial institutions over customer touch points, customer experience, and retaining customer relationship amid changes in payment, loans, and remittance following the emergence of crypto currency, fin-tech, and big tech players. Recently, with the continued social distancing due to COVID-19, the number of customers using contactless financial services are on the rise while open, innovative infrastructure such as open banking and My Data is in the making. In order to secure competitiveness in the rapidly changing financial landscape, the industry is expanding the platform business through digital transformation. Mirae Asset Securities, the largest securities company in Korea, will take the lead in the digital transformation trend by establishing a stable platform most desired by customers and enhancing expertise.

Wealth Management

2020 Performance

On the back of bullish Korean and global stock market and increasing stock trading amounts, we achieved sharp growth in both assets and profits in 2020. Our wealth management business cemented its no.1 position in Korea, with a net operating income of KRW 959.2 billion which is driven by brokerage commission income of KRW 653.0 billion (compared with KRW 277.2 billion of 2019). By aggressively responding to global investment paradigm shift, we posted a foreign brokerage income of KRW 145.9 billion.

Total Client Assets in WM

As of the end of 2020, total client assets in our WM business reached KRW 219.2 trillion, an increase of KRW 76.6 trillion year-on-year. Brokerage assets increased by KRW 71.7 trillion, of which KRW 7 trillion is attributable to an increase in overseas brokerage assets. In addition, our asset quality notably improved, with an increase in WRAP balance of KRW 1.9 trillion, pension assets of KRW 2.6 trillion, and global assets of KRW 6.4 trillion, respectively.

Assets of WM Business





(Unit: KRW trillion)

Classification		Beginning of the year	End of the year	Change
WM assets	Funds	10.0	9.7	-0.3
	Others	41.9	47.7	+5.8
	Sub total	51.9	57.4	+5.5
Brokerage assets	Domestic brokerage	84.1	148.2	+64.2
	Overseas brokerage	6.6	13.6	+7.0
	Sub total	90.7	161.9	+71.1
Total client assets		142.6	219.2	+76.7
Strategic allocation	Pension assets	13.1	15.7	+2.6
	Global assets	10.1	16.5	+6.4
	Sub total	23.3	32.2	+8.9

2021 Plan and Strategy

Business Plan

We plan to build a sustainable WM business model aiming “client first & client satisfaction”.

<p>Improve global asset allocation</p>  <ul style="list-style-type: none"> Expand client base for global financial investment by actively encouraging investment transition 	<p>Enhance client return</p>  <ul style="list-style-type: none"> Provide competitive products and returns → Rebalancing and risk management Improve training and education for sales capabilities enhancement 	<p>Expand VIP sales</p>  <ul style="list-style-type: none"> Develop “Family Office” Vitalize value-sharing programs by utilizing group-wide infrastructure
<p>Differentiate branch-level competitiveness</p>  <ul style="list-style-type: none"> Continue enhancing digital sales capabilities by promoting mobility branch program, etc. Improve branch networks centering on VIP clients and high-growth commercial districts 	<p>High Touch, High Quality</p>  <ul style="list-style-type: none"> Expand and promote Mirae Asset Sage Club program Enhance consulting capabilities of sales staff 	

Pension

2020 Performance

“Pension for Investment”

We observed tremendous changes in the investment culture in 2020. The global securities market rally led individual investors to move from safe to risky assets by engaging in investment activities actively. In particular, “money-move” into a securities company offering investment options for various global asset portfolios was very active. This investment boom affected pension investment that tend to be managed conservatively, with investors leaning toward more active investment options such as equity funds and ETFs. With regard to pension, a field traditionally not regarded as a subject for investment, “preparing retirement by active pension investment” is becoming a new culture.

Key Performance Pension Assets (Reserve)

(Unit: KRW billion)

Classification		2018	2019	2020
Retirement pension	DB	4,588.2	5,360.0	6,051.9
	DC	2,962.4	3,525.4	4,456.9
	IRP	1,110.4	1,570.8	2,535.4
	Sub total	8,661.1	10,456.1	13,044.2
Individual pension		3,096.0	3,498.5	4,200.3
Total		11,757.1	13,954.7	17,244.5

* Recorded highest 1, 3, 5, 7, 10-year annual return, among top ten pension service providers in terms of pension reserves, return based on the weighted average of performance-based and principal & interest guaranteed products

Rate of Return On the back of favorable market condition and spreading trends of actively investing pension assets, our pension business saw a significant improvement in rate of return (ROR) with the rising of the proportion of active investment in performance-based products such as ETFs and equity fund. Backed by strategies focusing on global asset allocation and client return management, Mirae Asset Securities posted the highest RORs for DC and IRP pension products out of the top ten pension service providers with largest pension reserves.

Rate of Return

	DC	IRP
1-year ROR	7.90%	7.25%
3-year ROR	3.77%	3.31%
5-year ROR	3.34%	2.95%
7-year ROR	3.23%	2.87%
10-year ROR	3.11%	3.05%

* Based on combined system

** 1-year ROR of performance-based product – DC: 13.35%, IRP: 13.79%

Awarded Highest Rank in Retirement Pension Manager Assessment

In the assessment of pension fund managers for 2020 jointly conducted by the Ministry of Employment and Labor and the Korea Workers' Compensation & Welfare Service, Mirae Asset Securities was named a highest-ranked service provider. Across all assessment criteria, including product management capabilities, performance, and training capabilities, we received the highest ranks, and in the field of pension product developing capabilities, we were presented as a benchmark case. The consulting capabilities of our pension consulting experts and our diversified product offering capabilities spanning WRAP products, ETFs, and listed REITs (first company to offer REITs for pension investment) were also acknowledged.

Designated as Asset Custody for Korea Workers' Compensation & Welfare Service

Mirae Asset Securities was designated as an asset institution for the Korea Workers' Compensation & Welfare Service, thanks to its superb pension performance and strength in performance-based products for retirement pension. We are committed to providing optimal pension services for workers in vulnerable small companies that are ill prepared for post-retirement life by utilizing our asset management expertise that we accumulated as a pension market leader. Moreover, we will continue to engage in various public projects to contribute to the development of the financial industry and society.

Plan and Strategy

Business Plan

Expanding Client ROR We will intensively manage client ROR through specialized pension management services. The retirement pension WRAP program, whether professional support is rendered across all fields of asset management, and the individualized personal pension consulting service tailored to each client's investment propensity will ensure global asset allocation and thorough post-investment management. By doing so, we will pursue stable ROR performance for pension investment in a long run.

Improving Quality of Contactless Pension Content Mirae Asset Securities offers various investment information via its YouTube Channel – called “SMARTMONEY”. For pension investment, we recommend various investment options and introduce global asset allocation strategies and methods through such contents as “Talk with Her, Post-Pension Investment,” “Big Picture – Pension Investment Made Visible,” and “Pension Detectives.”

Investment Bank

2020 Performance

In 2020, despite a downturn of overseas business in the wake of the COVID-19 outbreak, our IB business made a solid achievement for the third consecutive year. We topped the IPO league table underwriting 20 deals in terms of numbers, and also maintained high rankings in the ECM and DCM league tables by posting stable profits from rights offerings and corporate bond issuance. We were also ranked high in the leveraged finance by successfully arranging 12 deals. In real estate finance and alternative finance segments, we successfully arranged a number of landmark projects, thereby manifesting our superior market position as a securities house with the highest equity capital.

Key Performance

IPO In 2020, we successfully arranged listings of 20 companies in KOSPI and KOSDAQ, including Big Hit Entertainment, Myungshin Industry, and Kyochon F&B. In particular, in the area of special listings based on business model and technology, we are building an remarkable track record with the special listings of NBT (business model-based listing) and Lemon, Gencurix, and QuantaMatrix (technology-based listings).

ECM & DCM Mirae Asset Securities acted as lead-underwriter in various landmark deals including issuance of foreign exchange stabilization bonds by the Korean government and corporate bonds for various Korean large enterprises. By preemptively introducing comprehensive corporate financing solutions, we successfully completed a number of transactions, thereby solidifying our market position.

Leveraged financing We continued to lead the leveraged finance market for the third consecutive year by successfully closing acquisition finance and/or refinance for Ssangyong C&E, Hugel, SK Broadband, and ESG.

Projected finance of real estate and infrastructure We participated, either as an investor or an advisor, in high valued projects of diverse nature including an apartment development project in Gwangyang Hwanggeum district, acquisition and exit of South Chuncheon Country Club, Moonjeong youth housing development project and Yongin residential condominium development project. By successfully carrying out highly sophisticated projects such as Daegu Namgu Daemyungdong residential complex project, Jangandong officetel project, we continue to maintain our leading position in the real estate PF segment.

2021 Plan and Strategy

Business Strategy

IB Division1 We will expand consulting solution business for business restructuring, corporate governance, and financial structure improvement, and explore new profit sources by offering innovative financing programs based on high-quality corporate assets. We will also expand our sales efforts into large-scale IPOs and promotions as well as pre-IPO supports for new-growth unicorn companies. Additionally, in line with latest trends of ESG and K-New Deal, we will focus on industry sectors such as renewable energy, data centers, and smart city business.

IB Division2 We will continue to identify high value deals by actively engaging in various markets, including policy, public, and municipal project. Leveraging our network with major construction companies and developers, we will expand our revenue sources by offering various financial products such as equity investment, bridge loans, and asset-backed financing. To keep up with recent ESG trends, we will expand investment projects of affordable housing, data centers, and medical facilities sectors.

Trading

2020 Performance

Key Performance

Trading Division1 Trading Division1 set risk management as its top priority in 2020 to cope with rising uncertainties triggered by COVID-19. Accordingly, an in-house elastic proprietary trading model was developed for derivative-linked securities (DLS) and our trading volume was managed to optimize trading margins. We have improved the competitiveness of structured products by making efforts to increase the efficiency in managing fixed income, currency, and commodity (FICC). Introduction of new products also led us to construct portfolios that can maintain stable profitability regardless of market conditions. We also continued our efforts to innovate work process and create new revenue sources by utilizing new technology by, for example, employing in-house proprietary algorithm trading platform "LPGO" for market making and arbitrage and thereby contributing to earnings.

Trading Division2 Due to the prolonged COVID-19 pandemic, governments adopted aggressive expansionary measures, which in turn led to large fluctuations in interest rates. Thanks to our preemptive reaction to market interest changes, we were able to achieve significant performance in domestic and overseas bond trading in both the first and second half of 2020. In particular, we became the first Korean securities company to trade in the bond market of mainland China, where we successfully secured a meaningful level of income. As we see an increasing volume of sales in the global market, we have secured new client bases by actively attending to investment demands of personal and institutional investors.

Sales & Trading Division Amid rising volatility resulting from COVID-19, we successfully secured stable profits in the areas of client service and proprietary asset management on the back of vigorous risk management and differentiated management strategy. We faithfully performed our role as a liquidity provider and market maker in the FX, multi strategy trading and ETF segments, while profiting from arbitrage. We contributed to the IPO of Global X ETF in global markets including Hong Kong and Japan, and undertook ESG-related investment by way of creation and sales and trading of ETF products and mezzanine financing. We received highest ranks from assessments of major pension funds and pension managers conducted by the National Pension Service and Korea Post. Our growth is most visible in brokerage of foreign stocks. By introducing the next-generation sales and trading platform with algorithm functionality, we successfully speeded up and diversified the order processing process, which enabled us to lay the ground towards maximizing customer services and profits.

2021 Plan and Strategy

Business Strategy

Trading Division1 We have established the global trading desk by developing global integrated management platform and carry out algorithm trading through our Hong Kong operation. We will continue our efforts to employ state-of-the-art technology to advance trading infrastructure, including developing proprietary trading system and improving trading services, aimed at reducing costs while improving return on equity (ROE). In addition, we will make continuous efforts to make preemptive moves to respond to LIBOR cessation and other external changes and to strengthen risk management and internal control.

Trading Division2 Even in challenging investment environment amid constrained monetary policies and issuance of large-volume bonds, we will seek stable profits through preemptive risk management and market-neutral trading strategy. By diversifying managed bonds pools and markets, we will diffuse risks, while continuing to tap into new business opportunities by leveraging the growth of ESG bond market.

Sales & Trading Division We will provide liquidity in the form of overseas ETFs and various foreign investment solutions by utilizing global network of Mirae Asset. We also plan to further upgrade our global FX trading strategies and trading system. Going forward, Sales & Trading Division will enhance Socially Responsible Investment targeting ESG companies, and secure stable profit sources through differentiated hedging strategies and stringent risk management. We will expand our client bases to cover all market players including pension fund, key institutional investors, venture capitalists, and general corporations. We will enhance our sales efforts for overseas equity, ETFs, mezzanine financing, non-listed stocks, pre-IPO, and block deals. Furthermore, we will develop next-generation trading systems and continue to improve them as a way to improve our performance and offer differentiated client services.

Corporate Solution

2020 Performance

Key Performance

Mirae Asset Securities' Multi Solution Department has provided institutional investors with competitive products through foreign asset managers and deal sourcing. In 2020 alone, we have attracted a total of 117 new corporate clients and KRW 1.6 trillion funds, and expanded the portfolio of financial products at offer, leading to a year-on-year increase of KRW 9.8 trillion in balance of financial products to record KRW 68.1 trillion as of 2020 year-end, thereby consolidating our leading position in the industry. In addition, sales of quality alternative investment products enabled us secure various profit channels and obtain outstanding achievements in the industry.

Balance of Financial Products Offered to Institutions

(Unit: KRW trillion)



2021 Plan and Strategy

Business Plan

The Multi Solution Department aims to diversify and expand its earning structure by developing a wide range of products based on close collaboration with other departments inside the company and expanding new institutional clients. In addition, we will focus more on increasing product sales by leveraging our global network in a bid to provide services that set us apart from other securities companies in Korea.

Business Strategy

The Department plans to continuously expand product investment organizations and discover competitive short-term investment products as well as strengthen customized sales competencies based on the pool of outstanding experts to attract ever-increasing liquid fund in the market. We aim to expand the PA contract with prominent overseas investor to continue to offer quality investment products to cater to the needs for overseas investment. Also planned is to raise more funds from universities, public institutions, and commercial corporates to cope with the growth of the OCIO market.



Global

2020 Performance

Key Performance

Increased profitability by establishing a balanced global portfolio Despite the impacts of COVID-19, we have managed to establish a stable and diversified profit portfolio across brokerage, PI, IB, and trading. As a result, the income before tax from our global business grew approximately by 23% compared to the previous year to record KRW 206 billion and went on to account for over 20% of the company's profit. Although our investment into the alternative asset saw a decline due to the pandemic, we were able to manage the risks in a preemptive manner through such measures as expanding investment into new growth industry in the global market, thus realizing stable profit.

Expanded dominance in the local brokerage market through digital transformation and localization Through continued endeavor towards digital transformation and localization, Mirae Asset Securities was able to further expand its presence in the local brokerage market. Our Indonesian subsidiary has sustained its unrivalled presence with largest market share since establishment and the Vietnamese subsidiary has made it to the top 6 out of 80 securities companies in the area showing steady growth.



2021 Plan and Strategy

Business Strategy

Accelerate digital transformation in overseas subsidiaries We plan to solidify our overseas market presence by bolstering the digital transformation in overseas subsidiaries. In particular, we will continue making IT infrastructure investment in the emerging markets with lessons from Korea's advanced digitalization so that we can establish and take the lead in equipping the local operation with optimal competitiveness in the respective market.

Develop sustainable sources of income We will overhaul our business growth engines and continue discovering new business with potential for stable revenue generation with the purpose of securing sustainable sources of income in our overseas business. We will establish a sustainable growth model through business diversification by aggressively identifying new businesses specialized for each region through proactive responses to the local market dynamics and regulations.

Continue making investments into innovative, emerging companies In line with the emergence of the New Normal Era triggered by the Fourth Industrial Revolution and COVID-19, we will continue making investment into global innovative emerging companies. By investing in global innovators who spearheads in making new attempts in areas of big data, AI, block chain and bio, we will strive to seek synergy effects in strategic business areas thereby proactively responding to the changes of the time.

Digital

2020 Performance

Key Performance

In 2020, a total of 10.5 million new direct accounts, year-on-year increase of 247%, were created through non-face-to-face account opening process that is available 24/7. In June 2020, we have launched “NAVER X Mirae Asset CMA” service in alliance with NAVER FINANCIAL, attracting 500,000 new accounts in 2020 alone.

Subscribers of our YouTube channel “Smart Money”, which offers investment information, exceeded one million whereas the “m.Club”, which offers investment diagnosis and recommendation services based on big data and AI, attracted over 500,000 subscribers, demonstrating our diversified channels through which investment services are being offered.

Accelerated digital transformation In order to establish and execute our digital transformation strategy, a DT Transformation Team was newly set up under Digital Division in June 2020, and Digital Innovation Council was launched. The Committee runs programs such as digital leadership and digital junior board to take the lead in discovering digital ideas to enhance the digital competencies of the entire workforce.

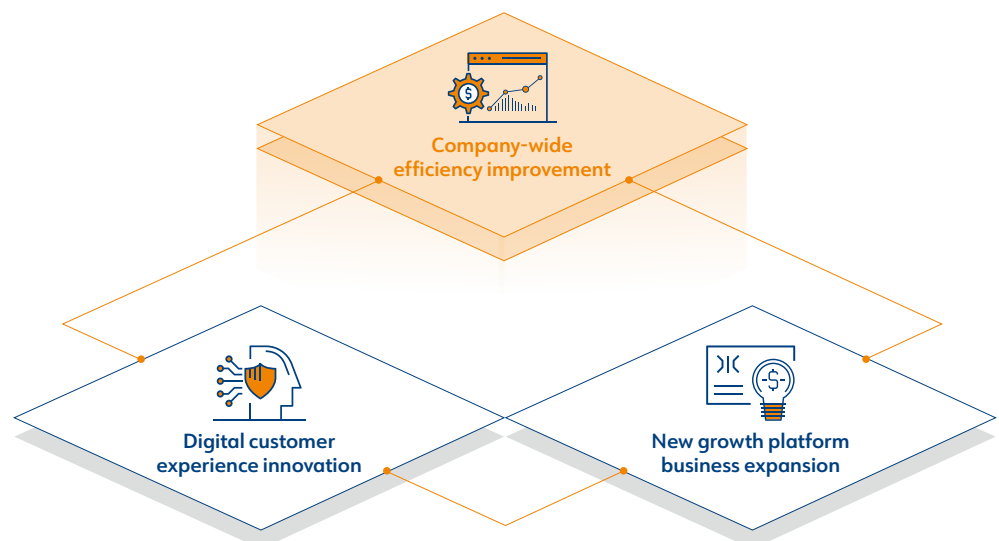
2021 Plan and Strategy

Business Strategy

Digital customer experience innovation We will offer hyper-personalized services and marketing based on big data-based target marketing and increase client proximity to provide the MZ generation with easy and convenient investment experiences. We will also help our clients make investment with ease by offering various contents through YouTube and other social media channels, thereby building trust with clients.

New growth platform business expansion After being granted MyData business license, we will use it to offer customized digital asset management services to our clients. We will also upgrade our digital innovation platform, in our continuous efforts to achieve joint growth with fin-tech companies. In addition, we will achieve one million in non-face-to-face clients by strengthening our PG business and moving forward with simplified payment business using the Mirae Asset Pay.

Company-wide efficiency improvement We aim to enhance employee competitiveness and work efficiency by using digital technologies and big data. AI will be widely adopted to boost the efficiency of research and consumer protection and digital culture and training will help us accelerate company-wide digital transformation.



Social Contributions

Based on the business philosophy of “We value our people and embrace the future with an open mind,” Mirae Asset has been carrying out corporate social responsibility (CSR) activities centered on nurturing talents. In a knowledge-driven society, talent development is a driving force behind a nation’s competitiveness and therefore it is crucial to provide ample opportunities for education and experiences. Mirae Asset has been running a global exchange scholarship program to enable the youth to unlock their potential alongside various education and experience programs to help children develop intellectually as well as broaden cultural and economic perspectives.



CSR Strategies

CSR Directions

With the Mirae Asset Park Hyeon Joo Foundation performing central roles, Mirae Asset is practicing its slogan “warm-hearted, caring capitalism” through cohesive cooperation among our affiliates. The two main areas of our philanthropy activities are “nurturing talent” and “social welfare”, under which scholarship and education support programs to nurture talent are systematically carried out. In the area of “culture of sharing”, our employees are proactively rolling out volunteering activities to create a society where we can grow with the underprivileged.

Major CSR Areas



CSR Milestones of Mirae Asset Financial Group

<p>Number of beneficiaries in Mirae Asset talent nurturing programs exceeded 320,000</p> <p>2020</p>	<p>Number of beneficiaries in Mirae Asset talent nurturing programs exceeded 100,000</p> <p>2014</p>	<p>Launched the “Mirae Asset 1% Hope Sharing” project with participation by executives</p> <p>2011</p>	<p>Expanded the scope of scholarship recipients in Korea and for the global exchange scholarship</p> <p>2009</p>	<p>Selected global exchange students, and conducted global cultural experience program</p> <p>2007</p>	<p>Mirae Asset Park Hyeon Joo Foundation was established, and implemented talent nurturing project</p> <p>2000</p>
<p>2017</p> <p>Number of beneficiaries in Mirae Asset talent nurturing programs exceeded 200,000</p>	<p>2012</p> <p>Launched the Mirae Asset matching grant program</p>	<p>2010</p> <p>Conducted the Mirae Asset Economic Class of My Kid’s School</p>	<p>2008</p> <p>Launched the Mirae Asset Volunteer Corp and “I Love You” donation campaign</p>	<p>2006</p> <p>Selected students for the global investment expert scholarship</p>	<p>1998</p> <p>Mirae Asset Hope Foundation was established, and implemented scholarship project</p>



BUSINESS CASE

Mirae Asset Securities’ HopeChain Volunteer Corp launched a series of contactless CSR campaigns following the social distancing measures from June 2020.

Our employees made a donation to sponsor the 17th concert of the Milal Welfare Foundation, “Let’s Cheer Up”, which was held to offer a helping hand to the disabled facing employment. Employees who participated in the donation were given a URL to access the online concert to enjoy the meaningful cultural event. The donation was used to pay for the work provided by women whose career was disrupted due to childcare, those with disabilities, and workers from multicultural families who work at the Milal Welfare Foundation’s Giving Plus stores.

In addition, the HopeChain Volunteer Corp purchased cookies from Panis, a vocational training store run by Seoul Community Rehabilitation Center, as a gift to the employees who participated in the CSR activity, leading the culture of consumption in good will. Panis is a vocational rehabilitation center to provide those with development disabilities who are not given equal chances of employment with a vocational rehabilitation opportunity in a stable work environment, thereby contributing to greater employment opportunities for the disabled, improvement in the quality of life, and stable work experience for a certain period of time.

Nurturing Talents

“Mirae Asset will serve as hope for the youth”

As a company sharpening its global competitive edge through relentless challenge and innovation, Mirae Asset is committed to running an overseas exchange scholarship program to nurture the youth to grow into global players by showcasing their passion and challenging spirits in the global stage.

The global exchange scholarship program, launched in 2007, has supported 5,817 students to study abroad in 50 countries including the U.S., Europe, and Asia. In addition, we also operate “Mirae Asset Global Correspondents” program to share scholarship recipients’ experiences so that their knowledge, experiences, and culture acquired from the time spent around the world will fuel the challenging spirits for other students preparing for the exchange program.

Due to the unexpected outbreak of COVID-19 in 2020, scholarship recipients selected for the program faced significant challenges. By putting safety first and foremost, we have suspended selection of new scholarship recipients and promptly set up guidelines on managing students already dispatched overseas and handling the scholarship which take into consideration the academic schedule and different class styles so that students can minimize inconveniences.

Mirae Asset Global Exchange Scholarship

Program overview

Eligibility Undergraduate students attending 4-year universities who have acquired the qualification for an exchange program from their respective school with certain level of academic achievements and economic conditions

Grant details Scholarship to cover tuition fees and living cost (amount varies by country)

Number of recipients 350 students each, twice a year

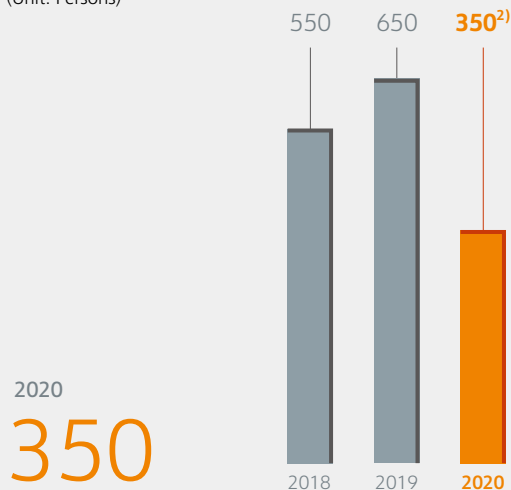
Accumulated number of scholarship recipients¹⁾

5,817

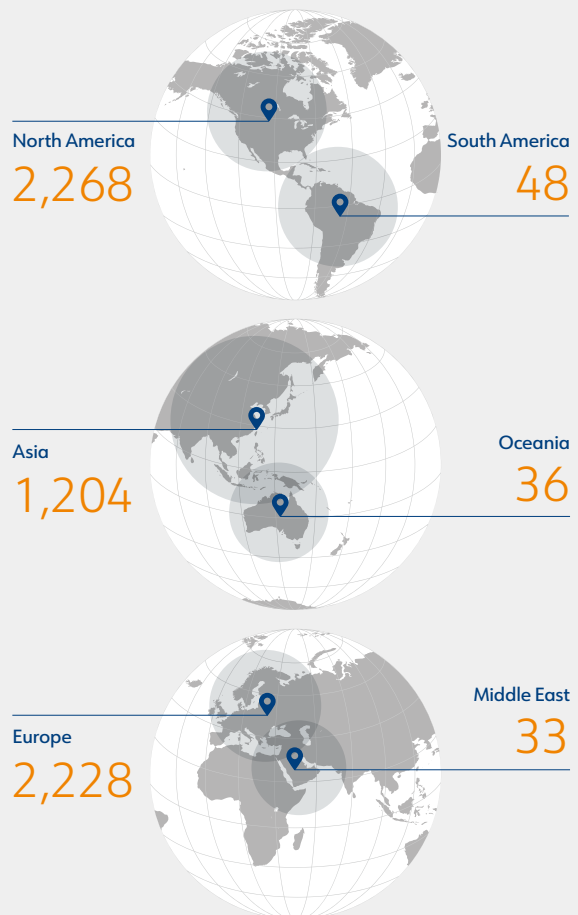
Number of countries¹⁾

50

Number of scholarship recipients
(Unit: Persons)



Number of scholarship recipients by region¹⁾
(Unit: Persons)



1) Accumulated number of scholarship recipients and countries as of 2020 year-end

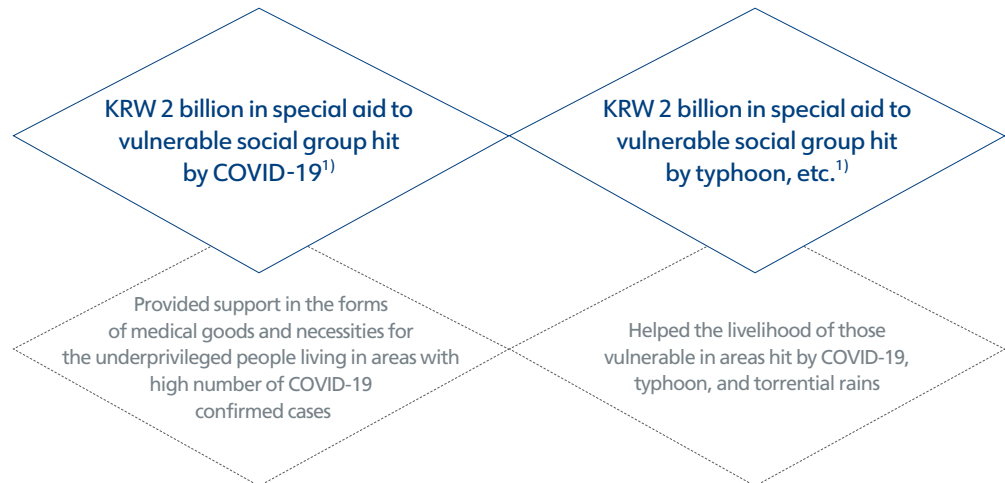
2) Scholarship recipients for the autumn semester in 2020 were not chosen due to COVID-19

Social Welfare

“Mirae Asset roots for dream and hope of future generation”

Based on the belief that diverse experiences will grow one’s thoughts which in turn will build a better future, Mirae Asset is making various efforts to provide children with greater learning opportunities and ample experiences through cultural experiences, creativity education, and book support.

In 2020, a large number of our neighbors faced great difficulties caused by COVID-19, torrential rain, and typhoons. In response, we have cancelled all planned programs that involve personal contacts, large gatherings, and movement of large groups of people and instead rolled out special support campaigns to promptly respond to the adverse situations of the local community. In 2021, as the COVID-19 pandemic is expected to continue, we will develop and run more diverse programs in a non-face-to-face manner so that we can secure the safety of the participants and effective operation. We will make thorough preparations to encourage participation from more children as the social distancing levels go down.



1) Total amount of donations made by Mirae Asset Securities, Mirae Asset Park Hyeon Joo Foundation, and other affiliates

Culture of Sharing

Hope Chain Program

We developed ten CSR campaign models through the Hope Chain Program workshop held in 2018, based on which we review social needs of each local community under such various themes as the youth and juvenile, the elderly, the disabled, multicultural families and global community, family and female, and the environment. We then submit plans for social contributions and conduct activities to build a culture of sharing. During the onboarding training for the new hires, we not only assist them to grow into a financial professional but also acknowledge the importance of CSR values so that the entire workforce can practice warm-hearted capitalism. New hires joining the company in 2020 have carried out a dumpling-making day with the children at the local childcare facility and made wood table for donation to the facility under the theme of “All children are happy when they play, grow, and dream”.

With the prolonged impact of COVID-19, we expanded contactless CSR activities and ran donation campaigns. The entire workforce was invited to make goods and book donations and supported to creating jobs for the disabled through good-will consumption. Other voluntary activities, such as making eco-friendly fertilizers and mask straps, were carried out as a way to continue our efforts to raise the awareness on the environment conduct activities for culture of sharing.

Online Wealth Management Concert

We successfully hosted an online wealth management concert through the collaboration between the HopeChain Volunteer Corp and WM Product Marketing Team. The concert reached the goal of 30,000 views thanks to banners distributed to our branches in advance and active promotion activities by WM staff. As of the end of August, the concert recorded 40,734 views and ten fundraising boxes were opened on NAVER Happy Bean which raised KRW 30 million of donation given to those suffering from COVID-19 across the country. Not only clients of Mirae Asset Securities but also general internet users have offered donations, bringing one step closer towards a culture of donation together with clients.



323,477

No. of participants in the talent nurturing programs

* Accumulated number of program participants including those from the Group's affiliates as of the end of 2020



Status of Talent Nurturing Program

With the Mirae Asset Park Hyeon Joo Foundation performing central roles, Mirae Asset is practicing its slogan "warm-hearted, caring capitalism" through cohesive cooperation among its affiliates and has nurtured 320,000 talents.



9,621

Scholarship program

- No. of global exchange student scholarship recipients: 5,817
- No. of domestic scholarship recipients: 3,558
- No. of global investment professional scholarship recipients: 122
- No. of global scholarship recipients: 124



14,974

Global Cultural Experience Program

- Global Leadership Discovery: 13,006
- Global Cultural Experience Camp: 1,968



298,882

Economics and career education

- Economic Class, School Tour, One Company, One School Financial Education: 286,405
- Youth Vision Project: 1,421
- Book with Hope Project: 11,056



Environmental Management

The concern over the global warming has been significantly increasing, as is the awareness that climate change risks will translate into corporate's financial risk and research results that show climate issues may have significant impact on the stability of a financial system. Mirae Asset Securities is therefore making sincere efforts to explore new business opportunities in line with the megatrend of moving toward a zero-carbon industry and nurturing healthy economy. We also strive to reduce GHG emissions, energy consumption, and waste discharge. Moreover, we will provide financial and advisory services aimed at making Korea's carbon footprint Net-Zero by 2050.



Environmental Management System

Environmental Management Practices

Mirae Asset Securities has raised employees' environmental awareness through a company-wide environmental management and practiced environmental pollution reduction activities for a sustainable development. To this end, we have established systematic management and reduction goals for environment-related data such as greenhouse gas (GHG) emission, waste disposal, and energy usage. In addition, our responses to climate changes are reported to the Carbon Disclosure Project (CDP) and we have defined a roadmap on governance, strategy, risk management, index, and reduction goals as recommended by the Task Force on Climate-related Financial Disclosure (TCFD) in pursuit of successful Net-Zero carbon emission execution. Furthermore, by joining and endorsing global initiatives we are making proactive attempts to participate in international counter-measures to tackle climate change.

GHG and Energy Management

Mirae Asset Securities is dedicated to reducing unnecessary energy consumption to lower energy consumption and GHG emissions. Given the nature of the financial business, our direct GHG emission is relatively lower than that of other industries and thus our GHG management is centered on Scope 2, which refers to the indirect emissions. We are also managing Scope 3 emissions by reducing paper use and waste disposals, and by increasing business trips efficiency. Furthermore, employees are encouraged to participate in GHG emission reduction in their daily work, including when they commute, carry out work, and provide client service. In addition, we 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 fulfilling our environmental responsibilities.

Management of Water, Resources and Waste

Mirae Asset Securities 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 negative 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.

Employees' Environmental Awareness and Green Office

By enacting the Article 23 Environmental Protection of the Code of Ethics which was revised in 2021, Mirae Asset Securities have raised employees' awareness on environmental consciousness and highlighted the importance of making efforts to reduce carbon emissions. At CENTER 1 Building where our headquarters is located, all fluorescent lamps that were deployed in the parking lots and common areas were replaced by energy efficient LED lamps and sensor-based dimmers were introduced to reduce the power usage while enhancing visual effects and eco-friendliness. In May 2021, ultra-high speed electronic vehicle charging stations was established, based on which we review the adoption of eco-friendly vehicles for business purposes. We have also allocated parking spaces to provide car-sharing services in pursuit of achieving the green office and eliminated the use of paper cups in all of our canteens, thereby proactively carrying out paperless activities.

GOVERNANCE



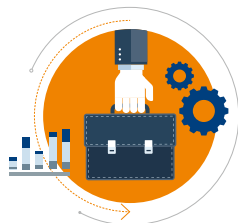


70
Corporate
Governance

74
Ethical
Management

78
Risk
Management

81
Information
Security



Corporate Governance

We believe it is essential for the corporate governance to be transparent and independent in order to oversee the development and execution of our robust governance practices and procedures to facilitate our growth of all stakeholders as well as our company.

Roles and Status of BOD

Mirae Asset Securities 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 are making continuous efforts to improve transparency in management and build a robust framework for responsible business management with the goal of improving our governance structure. As of April 2021, the 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.

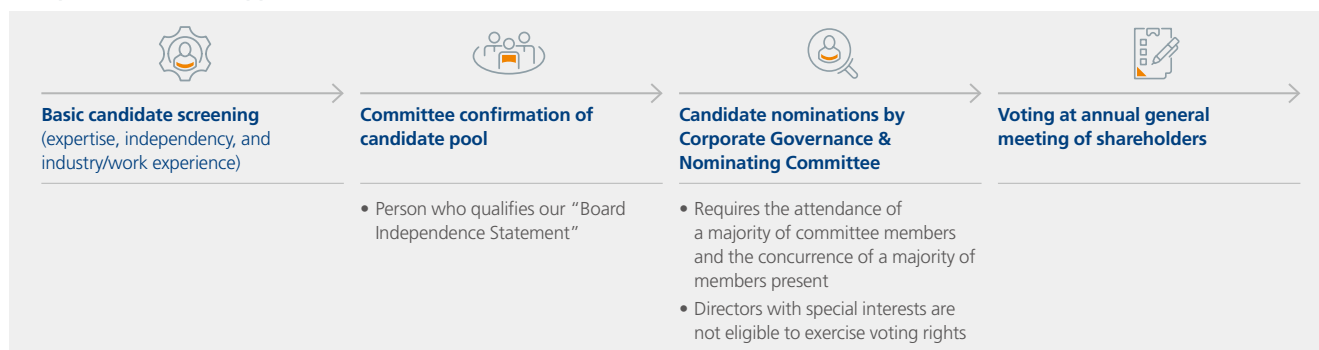
Appointment and Expertise of Directors

In constituting our Board of Directors, Mirae Asset Securities 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 background or certain job positions to ensure the BOD can represent directors with experiences and knowledge in various areas. As of April 2021, the BOD consists of three experts in financial investment, three in economics and business administration, two in financial accounting, and one in new growth industry.

Board of Directors

(As of April 30th, 2021)

Classification	Name	Gender	Expertise	Key profile	Tenure
Executive directors	Hyun Man Choi	Male	<ul style="list-style-type: none"> Financial investment Economics and business administration 	<ul style="list-style-type: none"> Executive Vice Chairman & CEO, Mirae Asset Life Insurance Currently Executive Vice Chairman & CEO, Mirae Asset Securities 	4 years 6 months
	Jae Sik Kim	Male	<ul style="list-style-type: none"> Financial investment Economics and business administration 	<ul style="list-style-type: none"> President & CEO, Mirae Asset Life Insurance Currently President & CEO, Mirae Asset Securities 	2 months
	Man Yeol Lee	Male	<ul style="list-style-type: none"> Financial investment 	<ul style="list-style-type: none"> Chief Risk Management Officer, Mirae Asset Securities Currently President & Head of Global Division, Mirae Asset Securities 	2 months
Independent directors	Sung Il Cho	Male	<ul style="list-style-type: none"> Economics and business administration 	<ul style="list-style-type: none"> Professor of International Graduate School in Chung Ang University & President of Chung Ang University Administration Currently Emeritus Professor, Chung Ang University 	2 years
	Yong Sun Jung	Male	<ul style="list-style-type: none"> Financial accounting 	<ul style="list-style-type: none"> Deputy Director of Securities Market Division, Financial Supervisory Service Currently Advisor of Korea Association of Real Estate Investment Trusts and HW Consulting 	2 years
	Seong Kon Kim	Male	<ul style="list-style-type: none"> New growth industry 	<ul style="list-style-type: none"> Research Specialist of Merck Currently Chief of New Drugs Research & Development Center, Chong Kun Dang 	1 year 2 months
	Gemma Lee	Female	<ul style="list-style-type: none"> Financial accounting 	<ul style="list-style-type: none"> Assistant Professor of Department of Finance, Business School of Seton Hall University in the U.S. Currently Associate Professor of College of International Studies, Kyunghee University 	1 year 2 months

Independent Director Appointment Process¹⁾

1) Independent directors of Mirae Asset Securities are appointed separately on an annual basis

Operation of BOD

The BOD and committees under the Board are Mirae Asset Securities' key decision-making entities and are faithfully performing their roles and responsibilities. Corporate Governance & Nominating Committee, Audit Committee, Risk Policy Committee, and Compensation Committee are in place in accordance with Article 16 Section 1 of Act on Corporate Governance of Financial Institution. Each committee holds a majority of its directors as independent directors (2/3 for the Audit Committee) and one of the independent directors serves as a Chair of the committee. Furthermore, in early 2021, the ESG Committee was newly established under the BOD to strengthen our ESG management.

In 2020, a total of 20 board meetings were held, with an attendance rate of 97%, and handled a total of 115 agenda for resolution and reports to discuss on major business-related matters such as fair transactions and risk management. Meeting agenda was distributed prior to the meetings, allowing the directors to review items in advance and if necessary, obtain details from working-level staff to enhance their understanding of the issues at hand. As such, directors from various professional backgrounds have actively taken part in the BOD meetings. Each director faithfully performed their role of providing advisory, checks, and supervision to ensure the company's growth and protect the rights of shareholders and financial consumers as well as fully understanding the corporate's ethical obligations and social responsibilities to reflect those in their decision-making activities.

Audit Committee

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

Board of Subcommittees

Classification	Roles & Responsibilities	Composition	Number of meetings held in 2020 (agendas handled)
Corporate Governance & Nominating Committee	<ul style="list-style-type: none"> Recommend candidates for independent directors, Audit Committee members, and CEO 	Executive director: 1 Independent directors: 3	2 times (4 agendas)
Audit Committee	<ul style="list-style-type: none"> Monitor and improve the feasibility of corporate-wide internal control system Establish and execute internal audit plans to evaluate and improve the company's business performance 	Independent directors: 3	9 times (36 agendas)
Risk Management Committee	<ul style="list-style-type: none"> Supervise and foster a controllable environment to enable efficient risk management and build an internal control framework Build integrated risk management policies and assign roles and responsibilities for supervision 	Executive director: 1 Independent directors: 2	6 times (21 agendas)
Compensation Committee	<ul style="list-style-type: none"> Determine compensation amount and payment method Develop and disclose an annual report on compensation payment 	Independent directors: 3	3 times (4 agendas)
ESG Committee	<ul style="list-style-type: none"> Decision-making body on matters related to the company's sustainability management Establish policies and strategies on matters related to environmental, social and governance (ESG) factors and manage execution details 	Executive directors: 2 Independent director: 1	1 time (3 agendas) ¹⁾

1) First ESG Committee meeting was held in March 2021

Independence and Diversity of BOD

Board Independence Statement

Based on the board independence statement which adheres to the Commercial Act and the Act on Corporate Governance of Financial Institution and complies with global best practices, Mirae Asset Securities regularly verifies the independence of independent director candidates and incumbent independent directors.

In addition, we abide by Article 6 on Qualification for Outside Directors and Article 10 on Restriction on Concurrent Office of the Act on Corporate Governance on Financial Institutions. Therefore, independent directors of Mirae Asset Securities BOD are banned from holding concurrent positions as outside director, non-executive director, or non-executive auditor and director of auditor of more than two companies other than Mirae Asset Securities. All independent directors of Mirae Asset Securities comply with the relevant laws.

Securing BOD Diversity

In order to make strategic decisions based on flexible and broad perspective as a global IB, Mirae Asset Securities obtains and maintains the diversity of the BOD by taking following principles into consideration.

- I. The BOD is consisted of directors that do not represent the interest of specific group without any biases towards any such common background as academic background, age, nationality, gender, religion, and place of birth or job positions.
- II. The BOD is consisted of directors who are equipped with sufficient field experience or expertise in such related areas as economics, business administration, law, finance, consumer protection, information technology, and new growth areas that are required to fulfill the duties as independent director or auditor of a global investment institution.
- III. The BOD has a dedicated organization to support its operations through which trainings for independent directors are conducted in an ad-hoc or regular basis to ensure the directors can maintain their expertise in the financial industry.
- IV. The BOD convenes meetings in a regular or ad-hoc basis to ensure the diversity and expertise of the BOD can be converged and complemented by free expression of opinions among the independent directors.
- V. The BOD conducts regular evaluation to monitor whether independent directors' diverse work experiences, expertise, and professional skills are converged in a balanced manner.



Preventing Conflict of Interest

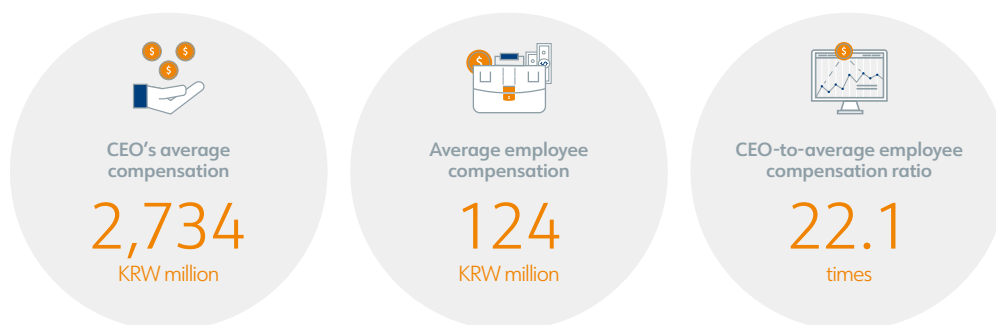
According to the Article 397 Chapter 2 of the Commercial Act, Mirae Asset Securities mandates prior approval from the BOD with votes from over 2/3 directors if any director wishes to use the company's business opportunities that may benefit the company now or in the future for the interest of themselves or third party. In addition, according to the Article 398 of the Commercial Act, directors or major shareholders wishing to engage in transactions with the company shall disclose such intention to the BOD in advance and obtain the BOD approval with votes from over 2/3 directors. Accordingly, the 3rd, 6th, 11th, and 16th board meetings held in 2020 deliberated on the fairness of transactions and unanimously voted on the "Comprehensive Approval of the Transactions with Key Shareholders" and "Comprehensive Approval on Mass Internal Transactions under the Fair Trade Act".

Article 11 Chapter 2 of the Fair Trade Act mandates prior approval from the BOD if affiliates or conglomerates banned from doing cross-investment among affiliates engage in such transactions as funds, securities, asset, products or services (large-scale internal transactions) exceeding KRW 5 billion or 5% of the larger between total equity capital and paid-in capital with affiliated persons. We have therefore obtained approval from the 2nd, 3rd, 4th, 6th, 9th, 10th, 11th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, and 20th board meetings held in 2020 on large-scale internal transactions of affiliates in accordance with the Fair Trade Act.

Evaluation and Compensation of BOD

Mirae Asset Securities reviews the composition and operation of the BOD and its internal committees more than once a year, prior to an annual general meeting (AGM). A comprehensive evaluation is carried out, assessing whether the BOD members have adequately performed their 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 from conflict of interests. This is initiated by the BOD, but specific duties are commissioned and independently performed by supporting departments. 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 the management level and specific positions are reasonably developed against risk structure, and monitors the correlation among compensation framework, financial status, and risk management on ad hoc basis. The Committee also conducts an independent assessment to monitor whether the compensation framework is adequately operated in accordance with the Act on Corporate Governance of Financial Institutions.

CEO and Average Employee Compensation



Compensation of Directors

(Unit: KRW million)

Classification	Headcount ¹⁾ (Persons)	Total amount paid ²⁾	Per capita
Executive Director	3	6,440	2,147
Independent Director	1	46	46
Audit Committee Member	3	192	64

1) Number of registered directors as of December 31st, 2020

2) Total compensation amount paid to directors of the BOD during 2020



Ethical Management

With the enactment of “Act on Financial Consumer Protection” in March 2021, we have established a well-structured financial product sales process as a way to effectively protect financial consumers. In addition, we are striving to internalize and increase employee awareness of complete selling process, with the goal of zero incomplete sales.

Ethical Management System

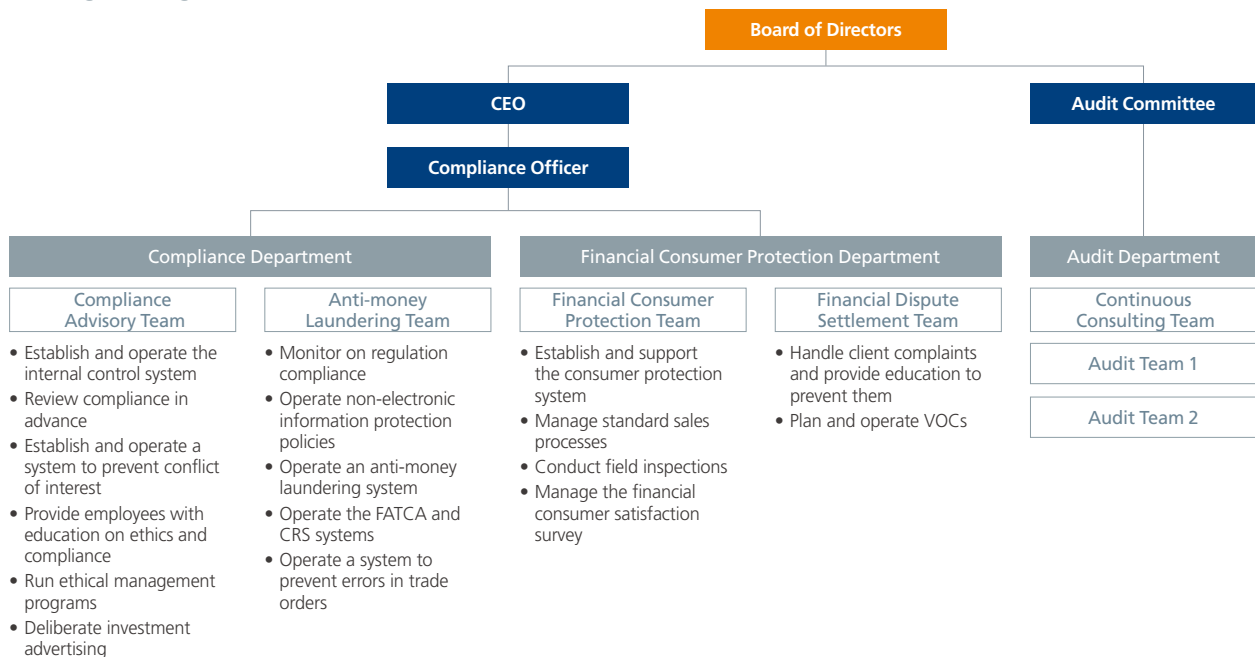
Rules of Ethics on Sales Practices

Mirae Asset Securities 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 prevent illegal practices and financial incidents that may arise in the course of our sales activities and to further enhance the rights and benefits of investors. The Rules of Ethics stipulate fair and accurate business processes and prevention of financial incidents, establishment of a system to prevent conflicts of interest, building a process to provide accurate information, efficient handling of complaints, and protection of investor information. Various efforts are underway to spread the Code of Conduct, that was newly enacted at the end of 2017 to practice ethical management, through internal communication and employee training.

Policies and Regulations on Ethical Management

 <p>Code of Ethics</p> <p>We have overhauled the Code of Ethics in line with international standards to put forward the standard on righteous sense of values for the entire employees to fulfill our roles and responsibilities in the society.</p>	 <p>Code of Conduct</p> <p>We have enacted the Code of Conduct to present clear guidelines to practice ethical management, such as fair execution of job duties, prohibition on obtaining unfair benefits, and fostering a healthy corporate culture.</p>	 <p>Rules of Ethics on Sales Practices</p> <p>We have established the Rules of Ethics on Sales Practices to stipulate our 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.</p>
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Ethical Management Organization



Culture of Ethics and Compliance

Mirae Asset Securities strives to enhance the value of employees' integrity and spread a culture of ethics and compliance through continuous training and self-assessment. In 2020, we made utmost efforts to practice ethics compliance that goes beyond legal compliance.

Activities to Spread a Culture of Ethics and Compliance

Environment to foster internal control compliance	<ul style="list-style-type: none"> • Monthly "Ethics and Compliance Day" • Revise and distribute a compliance guidebook to assist employees in practicing ethics and compliance
Endeavor to prevent financial incidents and protect customer asset	<ul style="list-style-type: none"> • Stipulate and operate employee checklist to prevent financial incidents and mandatory vacation system¹⁾ • Appoint one Compliance Manager at each branch to oversee compliance activities on a voluntary basis; and have expanded to two Compliance Managers since November 2020, aimed at improving the efficiency of supervision • Conduct "Ex-ante Questionnaires for Loan Approval" to prevent clients from voice phishing schemes in a proactive effort to protect client assets • Amended "Request for Advance Agreement" document to ensure no omissions taken place when new products or services are launched • Activities to prevent damages from online financial frauds • Enact and operate "Privacy Rules" • Inform clients of the risks of making transactions through employee's personal accounts (updated in the account opening request template, emails with customer notices, and announcements on the website, HTS, and MTS) • Make the approval on the accounts with large amount of remittance by the Anti-Money Laundering Team mandatory
Trainings on ethics and compliance	<ul style="list-style-type: none"> • Provide trainings on the ethics and compliance system, basic obligations for employees, hands-on compliance monitoring, and ethics and compliance issues • Visiting training to sales offices on ethics and compliance; in-class training for compliance managers; training on ethics and compliance for major sales activities, such as WM, IB, trading, sales & trading, and research; and training to prevent unfair transactions at the headquarters and branches
Review of the fairness on affiliates' transaction for products and services	<ul style="list-style-type: none"> • Conduct evaluation whether any transactions between affiliates are made in a fair manner in order to eliminate unfair transactions in products and services • 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
Written oath on ethical management practice	<ul style="list-style-type: none"> • Each year, the entire workforce at Mirae Asset Securities shall submit a written oath to practice ethical management which stipulates that all 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 corporate social responsibilities" • New hires as well as independent directors are required to submit the oath, in a bid to promote the ethics and compliance mindset across the entire workforce
Self-assessment on ethics and compliance	<ul style="list-style-type: none"> • The entire workforce is required to conduct self-assessment on their ethics and compliance practice on a regular basis, in order to establish a culture of ethics and compliance culture • Diagnose whether such ethical behavior criteria are met as the fair execution of duties and ban on receipt of unlawful goods and gifts • Run a monthly "Ethics and Compliance Day" so that departments and branches meet to share and discuss key issues on ethics and compliance

1) Special vacation forced to take when a certain employee is deemed to be vulnerable to financial incidents or suspected of doing unlawful activities from internal reports so that proper investigation can be conducted

Ethics and Compliance Reporting

Mirae Asset Securities 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 whistleblowers is strictly banned in accordance with the company's internal control standards and rules of operation. In addition, whistleblowers are entitled to an incentive program to encourage employees' participation, thereby creating a culture of ethics which is trusted across the company.

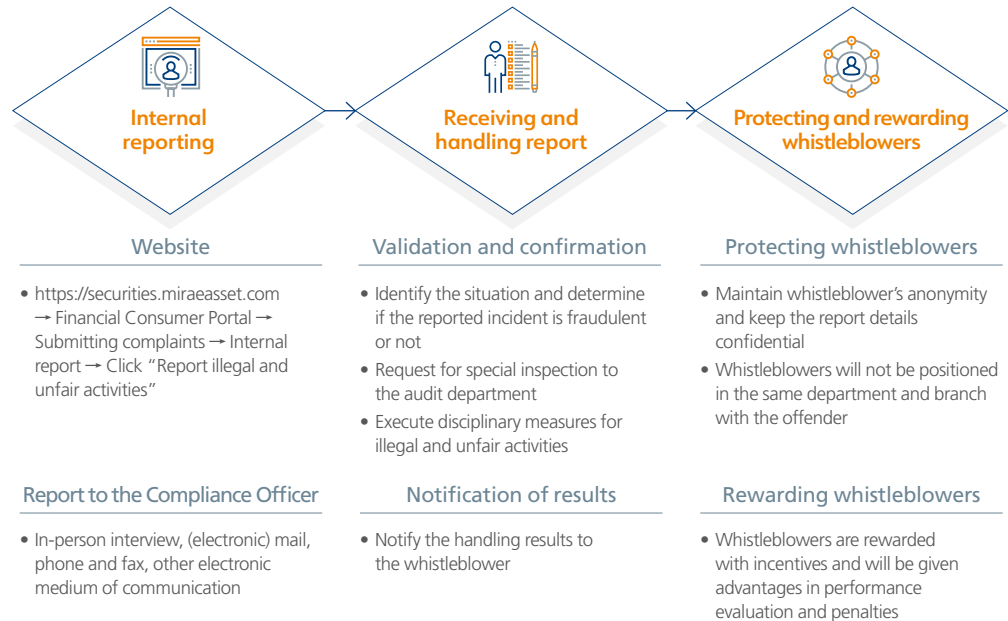
Financial Incidents Report

We operate various channels, such as the voice of customer (VOC) system, Financial Dispute Settlement Team, and complaints section on our website, in order to ensure safe financial transactions for our customers. In addition, the Compliance Department operates an internal reporting system and various programs through which efforts are made to prevent financial incidents and to contribute to eradicating corruption. The internal reporting system has several measures in place such as protecting whistleblowers, reducing their liability, and offering rewards and is rolled out across the enterprise.

Ethics and Compliance Reporting and Handling Status

Classification	2018	2019	2020
No. of reports	7	2	0
No. of effective reports	3	0	0
No. of disciplinary actions	0	0	0

Ethics and Compliance Reporting Process



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 diagnosed for exposure to corruption, based on which we are growing into a company that fulfills its ethical responsibilities.

Internal Control Committee

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

Compliance Council

This internal council consists of 11 members, with the Compliance Officer as Chair of the Council, and holds meetings on a quarterly basis to fulfill the role of collecting opinions on the direction of the corporate-wide compliance policies, providing advisory and reviews on matters related to improving regulations both in and outside the company, and share compliance issues.



CASE



Won the Grand Prize for Compliance by Korea Exchange

Gaining recognition on various activities to proactively improve internal controls and protect financial consumers, Mirae Asset Securities was given the accolade of winning the Grand Prize for Compliance by Korea Exchange. In particular, our reinforced internal controls on unlawful request for goods and gifts, offering of unfair transactions, and front running, strengthened monitoring standards in the investment equity capital, and the introduction of "easy-to-understand product leaflet" were well received.

Achievement and Plan for the Internal Control System

Achievement
in 2020**Revamped the compliance system and improved the internal control system**

- Strengthened the prior review system and inspection practices by conducting prior review on the development of new products; and improving and integrating the advertisement and video provisioning process through online channels like YouTube in accordance with the internal control criteria
- Established the review criteria for internal controls and work procedures and improved the IT system related to major business operations such as prevention of unfair transactions, internal control checklist, floor trading, and provision of capital profits
- Mandatory vacation: 16 employees (HQ)
- Disciplinary actions on internal control violations: 9 cases classified as requiring attention by Compliance Officer, 10 cases as caution

Strengthened the financial consumer protection system

- Newly established the Investment Product Council to collect opinions of financial consumers and incorporate them into the product development stage in order to strengthen consumer protection
- Introduced "Easy-to-Understand Product Prospectus" by highlighting major risks (investment product grade, probability of losing the principal, etc.) in images so that consumers can intuitively recognize the risk grade for each product
- Introduced purchase forms in larger fonts to assist senior clients
- Provided the guidebook in braille to assist people with visual impairments

Plan for
2021**Strengthen internal controls through digitalization (to be launched in the second half of 2021)**

- Proactively seek ways to introduce "RegTech"¹⁾ to achieve digital transformation by applying big data analysis and machine learning for internal control purposes
- Fraud forecast and detection model: Developing models based on data analysis to identify and forecast financial frauds so that transactions whose risk scores are over certain threshold are detected and will be automatically suspended, preventing client loss
- Suspicious transaction identification model: Improving modeling methodology based on data analysis to identify money-laundering transactions where preliminary suspicious transaction reporting (STR) may be quicker and more efficient at the branch level first

Better respond to the policies on financial consumer protection

- Strengthen the inspection roles of the Investment Product Council prior to the launching of new products, in order to effectively fulfill the duties under the Act on Financial Consumer Protection
- During sales: Strengthen the prevention of incomplete sales and confront its obligation transition
- After sales: Establish an integrated consumer protection system where sales of the financial products are embedded with processes to promptly inspect sold products that are likely to have conflicts

1) Newly coined word combining "Regulation" and "Technology" to indicate the technology to boost efficiency in compliance, compliance monitoring, and internal controls

Ethical Management for Partner Companies

Ethics Training for Partner Companies

Mirae Asset Securities provides ethics trainings to employees of its partner companies in order to foster ethical practices within the supply chain. In particular, we include an agreement to have the partner company conduct personal information security training more than once a year in signing a consignment contract. In addition, the Information Security Team conducts a monthly training under the topic of information protection for employees of partner companies who work on-site at our business sites.

Support for Developing Partner Companies' Code of Ethics

We have announced details of our Code of Ethics on our website to help partner companies better understand 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 a partner company, 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 and transactions that intervene with partner company's business execution.



Risk Management

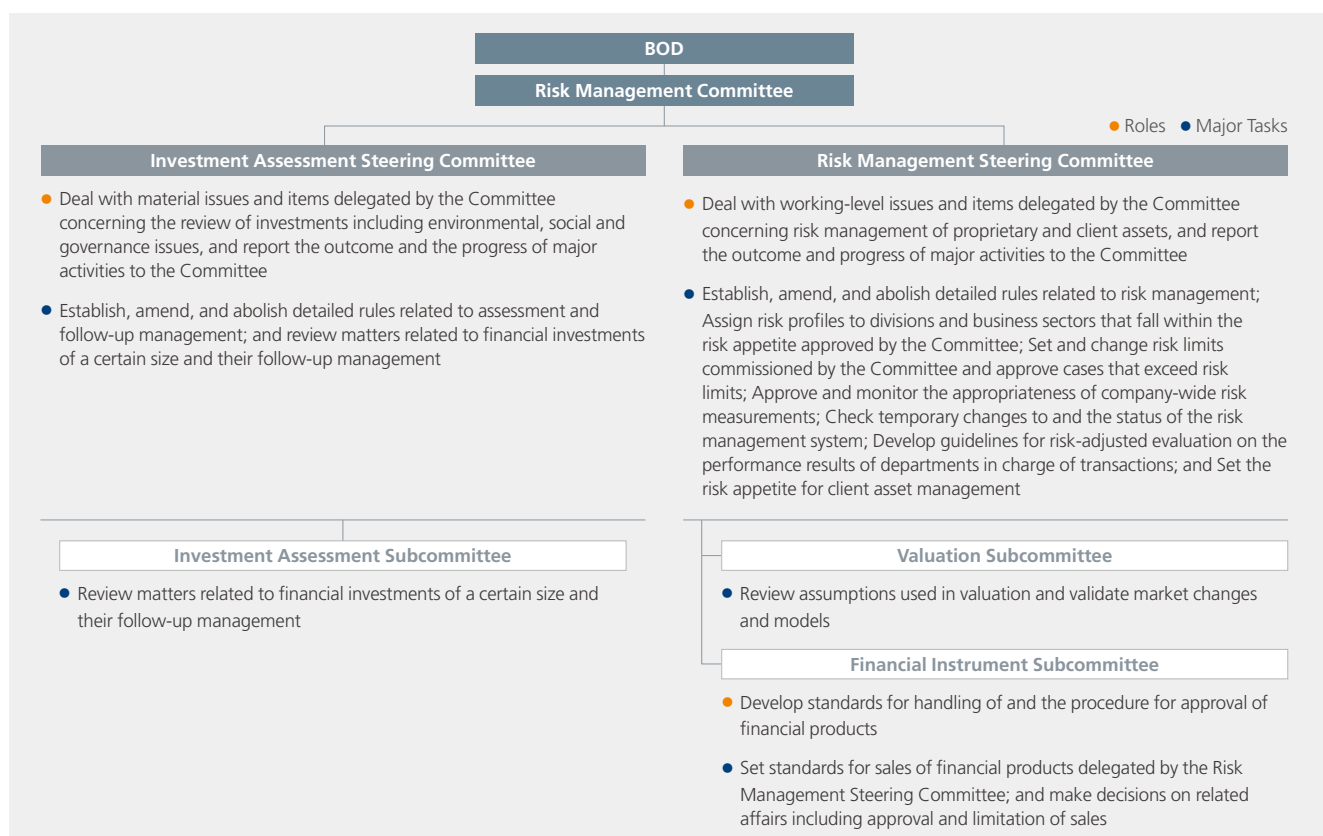
The importance of identifying and controlling environmental and social risks are gaining greater priority across the globe, requiring businesses to strengthen competencies in managing non-financial risk. In response, Mirae Asset Securities established the system and processes for management of environmental and social risks; defined the scope of management and exclusion; and reinforced risk assessment functions, through our Environmental & Social Policy Statement. We will further improve our resilience against environmental and social risks through proactive and timely responses to such non-financial risks.

Risk Management System

Risk Management Governance

Mirae Asset Securities 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 should be 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. We have also established such steering committees as the Investment Assessment Subcommittee and the Risk Management Steering Committee in order to assist the effective operation of the Risk Management Committee, making quick decisions within the authority granted. In addition, Subcommittees are set in place to ensure specialized risk management in various fields.

Risk Management Governance



Financial Instrument Subcommittee

Mirae Asset Securities 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. In 2020, the Subcommittee revised the standards for handling of and the procedures for approving financial products. The revision, in essence, is about expanding the scope of investors that are subject to risk assessment and strengthening the risk management standards by product. It is in this regards that we will further classify corporate investors into institutional investors and other corporate professional investors so that sales to the latter will be subject to preliminary risk assessment; and strengthen the evaluation criteria by putting in place more stringent credit rating standards and clarifying the definition of basic assets, in an effort to control risks regarding sales of financial products.

Risk Management System

Integrated Risk Management System Mirae Asset Securities has established an integrated risk management system to meet “Minimum Requirements for Risk Management at Securities Firms” recommended by the financial supervisory authorities, and to strengthen the total risk management system. We use this system for the calculation of total capital at risk, risk management, risk adjusted performance measurement (RAPM) and stress test.

Integrated Crisis Management System In response to increasing global market volatility, Mirae Asset Securities has established an integrated crisis management system for preemptive and timely response to crisis situations. 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 team and product, and reported monitoring results to the management. In addition, we have developed and are operating a business continuity plan (BCP) at the company level, in order to prevent risks that are caused by IT system failures as well as risks arising from natural disasters, such as fire, floods and earthquakes. We also have created an emergency manual to ensure continuity and stability of business operations by providing seamless business services in case of any other system failures.

Risk Management Framework

Mirae Asset Securities has categorized risks to be managed into market risk, credit risk, liquidity risk, and operational risk in order to ensure systematic management of risks we face. In addition, management system and standards are established that are appropriate for the characteristics of each risk to execute appropriate recognition, analysis, evaluation, and control of risks.

Market Risk	<ul style="list-style-type: none"> • We use standardized methods set in the Financial Investment Industry Regulations to measure market risks. • We calculate internal model Value at Risk (VaR) by adopting a SAS Market Risk Management.
Credit Risk	<ul style="list-style-type: none"> • 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. • We identify and closely manage counterparties in the high risk category through regular monitoring of credit risk status.
Liquidity Risk	<ul style="list-style-type: none"> • We use liquidity gaps¹⁾ 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. • 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 three 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.
Operational Risk	<ul style="list-style-type: none"> • We manage and control operational risks through risk & control self-assessment (RCSA)²⁾, key risk indicator (KRI)³⁾ management, loss data management, and calculation of operational VaR based on internal models. • 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.





1) The difference of current assets and current liabilities that are matured for each period

2) A series of activities of recognizing and evaluating, based on standards, operational risks involved and controlled by each department during their business operations

3) Indicators quantitatively showing changes of operational risks for monitoring of trends

Potential Risks

Mirae Asset Securities analyzes social and environmental changes on a regular basis, based on which we establish and execute measures that allow us to effectively respond to long-term risk factors that influence our overall business.

Potential Risks	Shrinking talent pool with the demographic change	Increasing information security risks with the digital transformation
<p>Business and Social Behavior</p> 	<ul style="list-style-type: none"> According to the Statistics Korea, the population growth rate of Korea is expected to show a steady decline (the negative growth rate) after reaching the peak in 2028. In 2065, the senior population aged over 65 will grow larger than the economically active population, causing concerns over the demographic change (the ratio of the economically active versus the senior in 2020: 72% and 16%, respectively). Attracting new talents who are skilled and professional and retaining the talent pool are essential for sustainable growth of the financial business. 	<ul style="list-style-type: none"> The Data Economy where personal information of businesses is used has emerged as the Three Data Privacy Laws were enacted in 2020. Even "pseudonymous information" was adopted, leading to higher security risks such as leakage or abuse of personal information, impersonation and cyber frauds. The number of reports related to leakage of personal information including resident registration numbers nearly tripled from over 50,000 cases in 2016 to over 130,000 cases in 2020, requiring businesses' establishment of information security systems and rigorous risk management and monitoring for secure financial services.
<p>Impacts Risk</p> 	<ul style="list-style-type: none"> As the talent pool shrinks, the competition to secure talents in technology and other industries may get fiercer. If a company fails to offer incentives to retain and attract talents, it may lose its growth momentum and reputation in the mid-to long-term. 	<ul style="list-style-type: none"> As the pace of digitalization in the financial industry has been accelerating through the IT revolution, risks of losing customer reliability also rise if a company fails to counter information security risks properly. Data breaches in financial services will increase financial risks of the company as it may face penalties and/or liabilities.
<p>Countermeasures</p> 	<ul style="list-style-type: none"> Establish a fair and diversified recruitment system by focusing on occupational competencies of applicants through blind interviews and coding tests; and attract global talents through overseas recruitment programs Improve capability in responding to global investment opportunities and promote workplace diversity by attracting talents in various foreign countries including the US, Europe and Vietnam 	<ul style="list-style-type: none"> Engage in information security activities by focusing on three major countermeasures of preventing hacking and intrusion, establishing an intelligent data leakage prevention system, and developing proactive security governance Revamp related systems, including establishing and evaluating strategic information security plans by operating the Information Security Committee; and ensure that all employees complete regular information security training, in order to protect financial consumers' rights and interests
<p>Future Plans</p> 	<ul style="list-style-type: none"> Continuously improve and reinforce systems to attract and retain talents through online interviews, expanded overseas recruitments and fairer performance evaluation (with three evaluations per year for HR development) 	<ul style="list-style-type: none"> Accelerate sustainable financial innovation by minimizing security threats and risks, including reinforcing the information security control system and improving awareness on information security across the organization



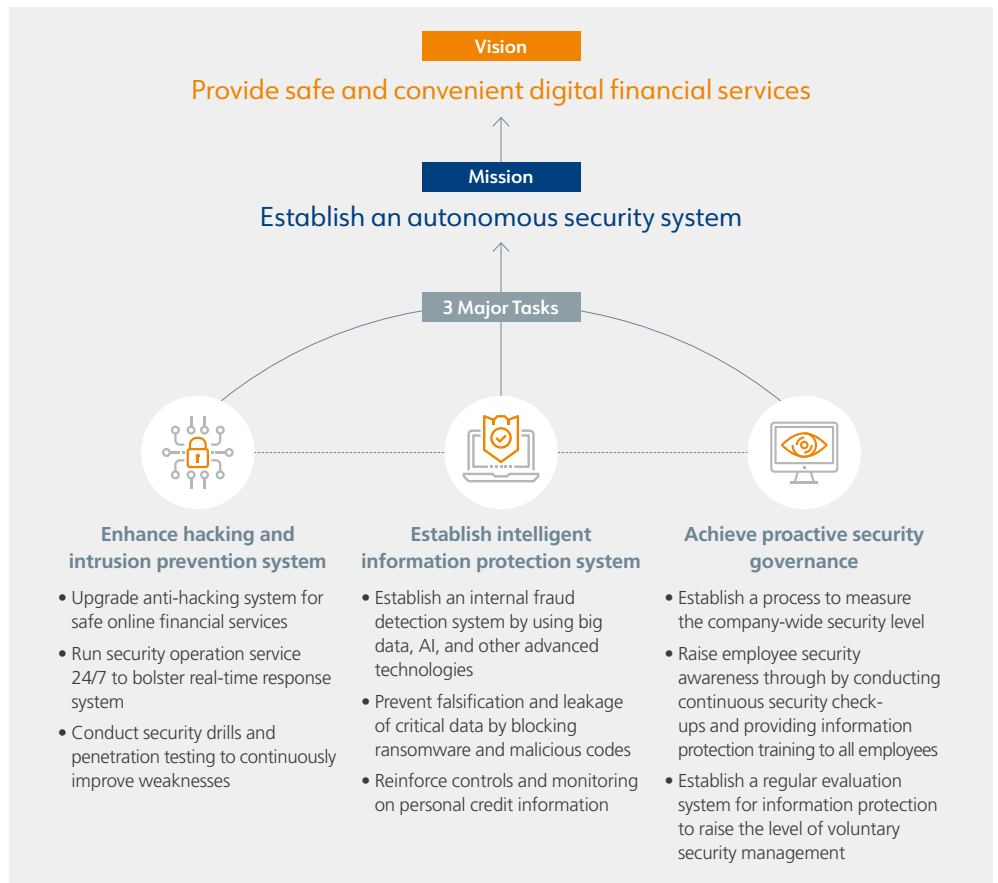
Information Security

With the expansion of digital finance, an information security strategy to better respond to security threats has emerged as a major agenda in the financial industry. Mirae Asset Securities therefore puts highest priority on establishing and fortifying an information security system at all aspects of its business activities while also rolling out information security activities for all of its stakeholders.

Information Security Strategy and System

Information Security Strategy

As an endeavor to deliver digital financial services in a secure and convenient manner, Mirae Asset Securities has established information protection strategy and is carrying out information protection activities based on three key major tasks.



Information Security System

Information Security Committee Mirae Asset Securities has set the Information Protection Committee in place with the goal of strengthening information protection. Chaired by the Chief Information Security Officer (CISO), the Committee is composed of department heads responsible for IT system operation, development and compliance, and three committee meetings were convened in 2020.

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

Spreading the Culture of Information Protection

Strengthening information security infrastructure Client’s personal information is more than a means to identify a client in that it is a part of client assets that companies should protect with a sense of responsibility. To strengthen the safety of client information protection, we received and have been maintaining 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. In addition, we aim to further improve our company-wide level of personal information protection, and to this end, we are making preparations to obtain ISMS-P (Personal Information and Information Management System) certification. We also strive to protect information and prevent privacy violation through such measures as encryption of key data of clients in accordance with the Personal Information Protection Act. Information security professionals are conducting security monitoring activities 24/7 to enable prompt response in case security breaches occur.

Strengthening planning and strategic operation on information protection Mirae Asset Securities is making continuous efforts in terms of information protection planning and strategy in a bid to establish a company-wide security governance and a security risk management system. We also have clearly defined the roles and responsibilities for information protection to create a virtuous cycle of protecting information while rolling out diverse internal and external activities aimed at solidifying our information protection management system and spreading the culture of information security. A number of preparatory activities are enhanced such as security reviews, mock-up hackings, and vulnerability checks to minimize security risks while R&D activities are carried out in various areas to better respond to newly emerging technologies.

Activities to Spread Information Protection Culture

Mirae Asset Securities is carrying out diverse activities to spread the culture of information protection across the company such as information protection and prevention of data leakage.



Share security issues

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



Raise security awareness

Help employees independently enhance their awareness of the importance of security by conducting “Information Security Self-Inspection Day” to have all employees and partner companies conduct a security inspection



Monitor excessive access to personal information

Prevent data leakage and misuse/abuse in advance by conducting a monthly monitoring to find out whether any employees have excessively searched for client’s personal information such as account information, balance, and transaction history, and engage in other activities aimed at restricting the use of personal information for other purposes except business

Information Security Training

Mirae Asset Securities conducts online and offline information protection trainings that are customized by participants that consist of the entire workforce, including IT staff and staff in charge of information protection, as well as employees of partner companies. We also offer optimized security trainings that are above the level required by supervisory agencies. In particular, by having IT developers with relatively high security risks attend offline trainings delivered by 3rd party education agencies specializing in information protection, we are making continuous efforts to help our employees increase their awareness and understanding on information protection.

In addition, we strive to further boost the competencies in responding to security threats emerging from new online financial transaction services such as the Fourth Industrial Revolution and cyber incidents gradually becoming more intelligent and sophisticated. At the same time, efforts are put in place to enhance the control of security threat factors by analyzing security issues based on big data.

	2018	2019	2020
Number of employees participated in information security training (persons)	4,253	4,050	3,881

Activities to Protect Stakeholder Information

Mirae Asset Securities

- Operate prevention measures against DDOS attacks and intrusion detection systems and conduct biannual regular inspection 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, such as resident registration numbers, phone number and email address, and encrypt documents automatically through digital rights management (DRM) in order to block external viewing of information in case of document leakage
- 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 both international standard (ISO 27001) and domestic standard (ISMS) for information protection and management system and completed the continual evaluation to maintain them as part of our continued endeavor for information security
 - ISO 27001: Assessment on 114 control items in 14 areas such as information protection management and operation
 - ISMS: Assessment on 80 detailed items in 16 areas such as establishing the foundation for management system, risk management, etc.
- Operate an anti-APT system to block malicious attacks, such as ransomware, and to prevent subsequent Internal information leakage
- 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
- Analyze various events within the company to detect security risks imposed by employees before they arise, and operate an anomaly-based intrusion detection system to identify security anomalies based on risk level

Clients

- Detect and analyze client's login information in real time by establishing the fraud detection system (FDS) for e-financial transactions; and establish a system to contact clients immediately if deemed fraudulent, identify the situation, and register the incident through an integrated system where internal information security unit, Client Support Center, and other financial institutions are linked
- Inform and publicize precautions against online financial fraud to protect clients' financial assets

Partner Companies

- Provide training on information protection for all employees 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 replace them
- Expand field check-ups for external resources to minimize risks associated with outsourcing

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Independent Auditor's Report



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

English Translation of a Report Originally Issued in Korean

Opinion

We have audited the accompanying consolidated financial statements of Mirae Asset Daewoo Co., Ltd. and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated statement of financial position as of December 31, 2020, and the consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at December 31, 2020, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the Republic of Korea (K-IFRS).

Basis for Opinion

We conducted our audits in accordance with Korean Standards on Auditing(KSA). Our responsibilities under those standards are further described in the Auditor's 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 financial statements as of and for the year ended December 31, 2020. 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) Assessment of measurement of over-the-counter derivatives classified under level 2 and 3

Reasons determined as key audit matters

The Group calculates the fair value of most over-the-counter derivatives through its own evaluation system. The Group's evaluation of over-the-counter derivatives was selected as a key audit matter in consideration of the complex evaluation technique and the inclusion of management's estimation and judgment in input variables and assumptions. The Group's over-the-counter derivatives are derivative assets classified as Level 2 or 3, equity-linked securities and other derivative combined securities (see Note 9), derivative liabilities, equity-linked-securities in short position and other equity-linked-securities in short position (see Note 20), and the amount is ₩17,665,739 million.

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

We obtained an understanding and evaluated the fair value assessment process and control of over-the-counter derivatives established by management. In particular, we paid attention to whether the change in the over-the-counter derivatives evaluation model and input is appropriate and whether the over-the-counter derivatives' evaluation amount is accurately calculated.

We tested the appropriateness of control and authorization to enter transaction information to ensure that transaction information and input are accurately reflected in the management's evaluation system in order to verify that the transaction information and input are accurate. In addition, we tested the transaction data used in the valuation by examining supporting evidence including contracts.

We tested the appropriateness of management's control over the review of the evaluation model and the change of the input used for the evaluation of over-the-counter derivatives and the authorization to make such changes.

In order to verify the accuracy of the over-the-counter derivatives valuation, we tested the management's control to periodically verify the price calculated in the derivatives evaluation system, and used derivatives assessment experts to independently estimate the derivatives' fair value using the independent models and input developed by the experts.

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

Reasons determined as key audit matters

K-IFRS 15 (Revenue from Contracts with Customers) requires judgement of the timing of revenue recognition and the amount recognised. The timing of revenue recognition and the amount of recognition of non-standard commission income recognised in the financial statements were selected as key audit matters considering that related transactions are complex and include significant accounting judgements by management. The Group recognized commission revenues of KRW 1,343,019 million for the year ended December 31, 2020, which includes revenues derived from non-standard transactions of KRW 284,522 million (refer to Note 33).

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

We obtained an understanding and evaluated the process and control of revenue recognition timing and recognition amount of non-standard commission established by management.

We evaluated the control of the management to identify the performance obligation of the contract with the customer, review the timing of the revenue recognition and review the recognized amount of non-standard commission by using the revenue recognition checklist.

We tested the appropriateness of the timing of revenue recognition and the recognized revenue amount and validated the occurrence of the revenue and relating amount through the review of the relevant evidence, such as contract, on a sampling basis.

Emphasis of Matters

Without modifying our opinion, we draw attention to Note 2 to the consolidated financial statements of the Group. As discussed in Note 2 to the consolidated financial statements, management explains the significant accounting estimates and assumptions may be adjusted by changes in uncertainty resulted from the spread of Coronavirus disease 2019 (COVID-19).

Other matters

The consolidated financial statements of the Group for the year ended December 31, 2019 were audited by KPMG Samjong Accounting Corporation in accordance with the Korean Standards on Auditing, and an unqualified opinion was expressed in the auditor's audit report of March 12, 2020.

Auditing standards and their application in practice vary among countries. The procedures and practices used in the Republic of Korea to audit such consolidated financial statements may differ from those generally accepted and applied in other countries.

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 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.

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

Auditor's 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 auditor's 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 entity'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 auditor's 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 auditor's 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 financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's 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 auditor's report is Yeob Yu, Certified Public Accountant.

Samit PricewaterhouseCoopers

Seoul, Korea
March 12, 2021

This report is effective as of March 12, 2021, 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, 2020 and 2019

Mirae Asset Securities Co., Ltd. and its subsidiaries

(In Korean won)

	Notes	2020	2019
Assets			
Cash and cash equivalents	38,40	₩ 1,690,792,379,421	2,092,290,039,058
Financial assets measured at fair value through profit or loss	5,6,9,12,19,26,38,40	41,957,313,110,675	40,895,590,961,792
Financial assets measured at fair value through other comprehensive income	5,6,10,12,19,38,40	11,170,591,537,277	9,566,397,953,879
Financial assets measured at amortized cost	5,8,11,12,19,38,40,49	70,796,589,402,755	75,276,085,785,872
Investments in associates	14	1,576,061,213,362	1,488,917,850,724
Property and equipment	15	411,792,987,179	456,277,790,870
Investment properties	16	2,305,526,690,961	2,166,871,237,058
Intangible assets	17	586,596,059,745	621,019,206,622
Other assets	18	117,456,833,580	131,884,690,308
Current tax asset	45	2,087,444,219	9,548,720,563
Deferred tax assets	45	332,122,250,899	444,913,089,084
Total assets		₩ 130,946,929,910,073	133,149,797,325,830
Liabilities			
Financial liabilities measured at fair value through profit or loss	5,12,20,26,38,40	₩ 16,598,030,329,004	16,916,388,384,908
Deposits due to customers	5,12,21,38,40	12,335,973,381,822	5,955,595,596,060
Borrowings	5,6,12,22,38,40	69,066,073,670,910	86,453,161,150,066
Debentures	5,12,23,38,40,49	7,949,973,290,904	6,215,225,733,694
Provisions	24	60,222,320,386	19,787,146,553
Other liabilities	5,12,25,38,40,49	15,463,424,638,324	8,392,588,038,762
Current tax liability	45	114,973,608,787	3,415,528,637
Deferred tax liabilities	45	11,979,159,990	-
Total liabilities		121,600,650,400,127	123,956,161,578,680
Equity			
Capital stock	28	4,101,960,790,000	4,101,960,790,000
Capital surplus	29	2,160,200,243,552	2,157,228,128,344
Retained earnings	30,32		
(Regulatory reserve for credit losses of ₩70,623,007,559 and ₩75,460,938,641 as of December 31, 2020 and 2019, respectively)		3,326,873,590,651	2,755,232,802,959
(Estimated reversal(provision) of regulatory reserve for credit losses of ₩49,695,927,307 and ₩(-)4,837,931,082 as of December 31, 2020 and 2019, respectively)			
Capital adjustment	31,48	(317,927,404,833)	(10,414,222,044)
Accumulated other comprehensive income (loss)	10,31	(2,234,421,026)	123,766,092,559
Non-controlling interests		77,406,711,602	65,862,155,332
Total equity		9,346,279,509,946	9,193,635,747,150
Total liabilities and equity		₩ 130,946,929,910,073	133,149,797,325,830

See accompanying notes to the consolidated financial statements.

Consolidated Statements of Comprehensive Income

For the years ended December 31, 2020 and 2019

Mirae Asset Securities Co., Ltd. and its subsidiaries

(In Korean won)

	Notes	2020	2019
Operating revenue			
Commissions	33,49	₩ 1,343,018,735,631	998,372,289,872
Gains on financial instruments measured at fair value through profit or loss	26,34	11,423,762,688,453	9,295,081,275,231
Gains on financial instruments measured at fair value through other comprehensive income	35	60,374,412,949	40,932,439,914
Interest income	7,36		
Financial assets measured at amortized cost		983,277,620,404	2,489,089,357,615
Financial assets measured at fair value through other comprehensive income		116,978,975,365	163,053,139,739
Financial assets measured at fair value through profit or loss		448,133,088,159	483,029,724,444
Gains on financial instruments measured at amortized cost	11,40	-	2,112,222,812
Reversal of allowances on credit loss	37	7,837,336,471	7,174,190,245
Gains on foreign currency transactions	38	2,044,319,997,858	1,460,385,782,116
Others	39,49	413,967,507,592	497,685,662,953
		16,841,670,362,882	15,436,916,084,941
Operating expenses			
Commissions expense	33,49	201,011,229,273	214,973,230,604
Losses on financial instruments measured at fair value through profit or loss	26,34	11,111,516,413,217	9,128,793,869,993
Losses on financial instruments measured at fair value through other comprehensive income	35	2,722,842,304	5,420,255,118
Interest expense	7,36	946,747,840,239	2,578,043,182,392
Provision of allowance on credit loss	37	33,884,440,689	44,096,975,278
Losses on foreign currency transactions	38	1,955,121,814,485	1,432,015,771,338
Employee costs	41	812,637,729,936	738,705,560,027
Selling and administrative expense	42	543,750,027,538	512,062,570,741
Others	39,49	117,158,971,340	54,850,095,626
		15,724,551,309,021	14,708,961,511,117
Operating profit		₩ 1,117,119,053,861	727,954,573,824
Non-operating income, net			
Non-operating income	7,43	₩ 99,842,421,046	246,106,597,620
Non-operating expense	7,44	76,743,274,808	80,339,468,972
		23,099,146,238	165,767,128,648
Profit before income tax expense		1,140,218,200,099	893,721,702,472

See accompanying notes to the consolidated financial statements.

For the years ended December 31, 2020 and 2019

Mirae Asset Securities Co., Ltd. and its subsidiaries

(In Korean won)

	Notes	2020	2019
Income tax expense	7,45	305,895,363,249	229,471,869,672
Profit for the year			
Equity holders of the Company		821,834,124,437	658,998,055,643
Non-controlling interests		12,488,712,413	5,251,777,157
		₩ 834,322,836,850	664,249,832,800
Other comprehensive income for the year			
Items that may be subsequently reclassified to profit or loss:			
Valuation gain(loss) on financial asset measured at fair value through other comprehensive income	10	1,832,374,465	29,943,452,285
Equity in other comprehensive income of associates	14	(38,470,499,071)	49,978,043,205
Hedges of net investment in foreign operations	27	18,319,728,241	(3,023,329,610)
Foreign currency translation adjustments for foreign operations		(269,889,682,962)	90,170,863,431
Items that will not be reclassified to profit or loss:			
Valuation gain on financial asset designated as measured at fair value through other comprehensive income	10	169,635,961,178	145,675,159,099
Changes in own credit risk on financial liabilities designated as measured at fair value through profit or loss	20	(2,039,537,744)	(7,794,994)
Remeasurement of the defined benefit liabilities	25	(5,515,474,245)	(3,283,922,322)
		126,127,130,138)	309,452,471,094
Total comprehensive income for the year			
Equity holders of the Company		695,833,610,852	968,378,660,381
Non-controlling interests		12,362,095,860	5,323,643,513
		₩ 708,195,706,712	973,702,303,894
Earnings per share			
Basic and diluted earnings per share	46		
Common stock		1,213	956
2 preferred stock		1,213	956

See accompanying notes to the consolidated financial statements.

Consolidated Statements of Changes in Equity

Mirae Asset Securities Co., Ltd. and its subsidiaries

(In Korean won)

	Attributable to equity holders of the Company						Non-controlling interests	Total
	Capital stock	Capital surplus	Capital adjustment	Accumulated other comprehensive income(loss)	Retained earnings	Sub-Total		
Balance at January 1, 2019	₩ 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
Total comprehensive income for the year:								
Profit for the year	-	-	-	-	658,998,055,643	658,998,055,643	5,251,777,157	664,249,832,800
Valuation of financial assets measured at fair value through other comprehensive income	-	-	-	175,618,611,384	-	175,618,611,384	-	175,618,611,384
Equity in other comprehensive income of associates	-	-	-	49,978,043,205	-	49,978,043,205	-	49,978,043,205
Changes in own credit risk on financial liabilities designated as measured at fair value through profit or loss	-	-	-	(7,794,994)	-	(7,794,994)	-	(7,794,994)
Hedges of net investment in foreign operations	-	-	-	(3,023,329,610)	-	(3,023,329,610)	-	(3,023,329,610)
Foreign currency translation adjustments for foreign operations	-	-	-	90,098,997,075	-	90,098,997,075	71,866,356	90,170,863,431
Remeasurement of the defined benefit liabilities	-	-	-	(3,283,922,322)	-	(3,283,922,322)	-	(3,283,922,322)
Transaction with owners, etc.:								
Dividends paid	-	-	-	-	(153,906,749,480)	(153,906,749,480)	-	(153,906,749,480)
Capital increase with consideration	-	(483,927,366)	-	-	-	(483,927,366)	20,745,251,866	20,261,324,500
Changes in treasury stocks	-	3,799,697,691	484,726,438	-	-	4,284,424,129	-	4,284,424,129
Stock option	-	-	-	-	-	-	979,529,432	979,529,432
Others	-	-	(4,051,853,545)	-	-	(4,051,853,545)	-	(4,051,853,545)
Balance at December 31, 2019	₩ 4,101,960,790,000	2,157,228,128,344	(10,414,222,044)	123,766,092,559	2,755,232,802,959	9,127,773,591,818	65,862,155,332	9,193,635,747,150
Balance at January 1, 2020	₩ 4,101,960,790,000	2,157,228,128,344	(10,414,222,044)	123,766,092,559	2,755,232,802,959	9,127,773,591,818	65,862,155,332	9,193,635,747,150
Total comprehensive income for the year:								
Profit for the year	-	-	-	-	821,834,124,437	821,834,124,437	12,488,712,413	834,322,836,850
Valuation of financial assets measured at fair value through other comprehensive income	-	-	-	171,468,335,643	-	171,468,335,643	-	171,468,335,643
Equity in other comprehensive income of associates	-	-	-	(38,470,499,071)	-	(38,470,499,071)	-	(38,470,499,071)
Changes in own credit risk on financial liabilities designated as measured at fair value through profit or loss	-	-	-	(2,039,537,744)	-	(2,039,537,744)	-	(2,039,537,744)
Hedges of net investment in foreign operations	-	-	-	18,319,728,241	-	18,319,728,241	-	18,319,728,241
Foreign currency translation adjustments for foreign operations	-	-	-	(269,763,066,409)	-	(269,763,066,409)	(126,616,553)	(269,889,682,962)
Remeasurements of the net defined benefit liability	-	-	-	(5,515,474,245)	-	(5,515,474,245)	-	(5,515,474,245)
Transaction with owners, etc.:								
Dividends paid	-	-	-	-	(182,112,885,500)	(182,112,885,500)	(2,177,557,610)	(184,290,443,110)
Changes in treasury stocks	-	1,301,309,738	(372,616,005,699)	-	-	(371,314,695,961)	-	(371,314,695,961)
Retirement in treasury stocks	-	-	68,080,451,245	-	(68,080,451,245)	-	-	-
Stock option	-	-	-	-	-	-	1,364,886,875	1,364,886,875
Retirement in stock option	-	1,677,563,000	(1,677,563,000)	-	-	-	-	-
Others	-	(6,757,530)	(1,300,065,335)	-	-	(1,306,822,865)	(4,868,855)	(1,311,691,720)
Balance at December 31, 2020	₩ 4,101,960,790,000	2,160,200,243,552	(317,927,404,833)	(2,234,421,026)	3,326,873,590,651	9,268,872,798,344	77,406,711,602	9,346,279,509,946

See accompanying notes to the consolidated financial statements.

Consolidated Statements of Cash Flows

For the years ended December 31, 2020 and 2019

Mirae Asset Securities Co., Ltd. and its subsidiaries

(In Korean won)

	2020	2019
Cash flows from operating activities		
Profit for the year	₩ 834,322,836,850	664,249,832,800
Adjustments:		
Interest income	(1,548,389,683,928)	(3,135,172,221,798)
Dividend income	(112,212,451,557)	(130,528,831,618)
Interest expense	946,747,840,239	2,578,043,182,392
Income tax expense	305,895,363,249	229,471,869,672
Loss on valuation of financial assets measured at fair value through profit or loss	503,007,636,974	176,393,359,523
Loss on valuation of financial liabilities measured at fair value through profit or loss	72,481,589,345	16,755,625,157
Loss on valuation of financial liabilities designated as measured at fair value through profit or loss	431,357,500,304	642,945,795,219
Loss on valuation of derivatives	1,741,940,009,048	1,104,645,357,700
Loss on disposal of financial assets measured at fair value through other comprehensive income	2,722,842,304	5,420,255,118
Impairment loss on financial assets measured at fair value through other comprehensive income	1,555,113,247	3,234,395,294
Loss on valuation of investments in associates	9,546,343,492	3,198,523,477
Loss on disposal of investments in associates	48,128,781	24,962,232
Impairment loss on investments in associates	-	1,128,978,111
Loss on disposal of investments in subsidiaries	10,443,354,166	3,227,042,735
Depreciation	71,432,949,390	72,124,084,980
Depreciation on investment properties	55,647,094,334	44,282,557,516
Loss on disposal of property and equipment	269,176,370	2,035,869,617
Amortization	40,618,603,835	48,039,207,204
Loss on disposal of intangible assets	55,111,988	20,612,210
Loss on impairment of intangible assets	45,187,000	-
Stock option expense	752,696,468	593,375,785
Provision of allowances on credit losses	29,379,696,236	15,332,015,981
Provision of allowances on credit losses of other financial assets	2,944,392,051	24,653,006,128
Loss on foreign currency translation	322,339,281,463	161,618,680,008
Allowance of provisions	39,991,826,014	983,248,526
Other operating expenses	90,059,588,569	90,826,562,753
Other non-operating expenses	41,355,367	684,613,572
Gain on valuation of financial assets measured at fair value through profit or loss	(1,590,042,647,996)	(811,897,667,657)
Gain on valuation of financial liabilities measured at fair value through profit or loss	(9,779,394,698)	(14,018,255,031)

See accompanying notes to the consolidated financial statements.

For the years ended December 31, 2020 and 2019

Mirae Asset Securities Co., Ltd. and its subsidiaries

(In Korean won)

	2020	2019
Gain on valuation of financial liabilities designated as measured at fair value through profit or loss	₩ (505,656,875,927)	(393,622,513,010)
Gain on valuation of derivatives	(1,425,456,585,134)	(1,184,173,548,466)
Gain on disposal of financial assets measured at fair value through other comprehensive income	(60,374,412,949)	(40,932,439,914)
Gain on valuation of investments in associates	(67,026,850,389)	(148,908,783,357)
Gain on disposal of investments in associates	(1,217,109,161)	(1,214,276,261)
Gain on disposal of investments in subsidiaries	(20,710,415,788)	(38,299,152,672)
Gain on disposal of property and equipment	(80,179,850)	(84,656,091)
Gain on disposal of investment properties	(7,653,781,912)	(1,352,752,216)
Reversal of credit loss allowance	(5,835,807,673)	(5,025,750,362)
Reversal of provision on credit losses of other financial assets	(29,895,133)	(12,405,810)
Gain on foreign currency translation	(332,988,126,911)	(132,429,735,408)
Reversal of provisions	(1,971,633,665)	(2,136,034,073)
Other operating income	(273,872,711)	(341,084,565)
Other non-operating income	(334,036,329)	(2,328,644,614)
	(176,388,244,627)	(152,545,739,213)
Changes in:		
Deposit	(2,230,295,370,783)	633,851,331,668
Financial assets measured at fair value through profit or loss	(565,757,378,264)	(5,386,709,070,547)
Financial assets measured at amortized cost	(10,124,683,555,910)	3,565,220,266,105
Other assets	(47,977,814,783)	(62,886,966,977)
Financial liabilities measured at fair value through profit or loss	520,331,751,194	(338,073,797,074)
Financial liabilities designated as measured at fair value through profit of loss	(803,744,859,935)	(740,544,016,142)
Deposits due to customers	6,423,867,010,286	494,290,337,135
Other liabilities	7,155,166,813,724	(1,898,449,148,700)
Provisions	1,067,175,095	(4,727,227,912)
	327,973,770,624	(3,738,028,292,444)
Interest received	1,620,723,494,936	3,147,259,595,653
Interest paid	(950,325,994,245)	(2,540,642,844,624)
Dividends received	142,338,801,443	141,863,893,471
Income taxes paid	(120,392,792,726)	(233,172,264,011)
Net cash inflow(outflow) from operating activities	₩ 843,929,035,405	(3,375,265,651,168)

See accompanying notes to the consolidated financial statements.

For the years ended December 31, 2020 and 2019

Mirae Asset Securities Co., Ltd. and its subsidiaries

(In Korean won)

	2020	2019
Cash flows from investing activities		
Decrease in financial assets measured at fair value through other comprehensive income	₩ 10,991,455,144,071	8,960,209,386,771
Decrease in investments in subsidiaries	44,534,665,519	508,847,253,512
Decrease in investments in associates	74,642,716,544	2,270,085,000
Proceeds from disposal of property and equipment	3,298,675,003	137,146,473
Proceeds from disposal of investment properties	15,908,716,059	10,510,000,000
Proceeds from disposal of intangible assets	700,630,431	510,180,937
Decrease in leasehold deposits provided	8,277,284,153	43,682,500,655
Increase in leasehold deposits received	1,166,314,900	3,606,409,176
Increase in financial assets measured at fair value through other comprehensive income	(12,332,526,633,647)	(10,065,423,727,336)
Increase in investments in associates	(208,103,183,292)	(330,124,595,848)
Acquisition of property and equipment	(25,450,066,865)	(82,688,873,552)
Acquisition of investment properties	(268,248,255,615)	(1,186,392,949,632)
Acquisition of intangible assets	(4,328,559,348)	(14,236,492,812)
Increase in leasehold deposits provided	(3,548,533,003)	(6,931,175,262)
Decrease in leasehold deposits received	(477,347,500)	(4,026,836,408)
Net cash outflow from investing activities	(1,702,698,432,590)	(2,160,051,688,326)
Cash flows from financing activities		
Increase in borrowings, net	-	3,694,021,622,237
Increase in debentures, net	2,235,385,438,218	1,731,310,828,523
Increase in electronic short-term bonds, net	-	612,394,958,348
Proceeds from capital stock	-	20,261,324,500
Increase in other liabilities	76,321,889,372	383,625,868,362
Decrease in borrowings, net	(782,542,392,536)	-
Repayment of debentures	(83,952,200,000)	(313,419,000,000)
Decrease in electronic short-term bonds, net	(277,290,696,733)	-
Decrease in lease liabilities, net	(51,985,994,277)	(47,312,386,387)
Dividends paid	(184,290,443,110)	(153,906,749,480)
Acquisition of treasury stock	(372,715,907,915)	-
Decrease in other liabilities	(53,136,605,871)	(11,154,044,821)
Net cash inflow from financing activities	505,793,087,148	5,915,822,421,282
Effect of exchange rate fluctuations on cash and cash equivalents held	₩ (48,521,349,600)	(6,055,208,464)
Net increase (decrease) in cash and cash equivalents	(401,497,659,637)	374,449,873,324
Cash and cash equivalents at the beginning of the year	2,092,290,039,058	1,717,840,165,734
Cash and cash equivalents at the end of the year	₩ 1,690,792,379,421	2,092,290,039,058

See accompanying notes to the consolidated financial statements.

Independent Auditor's Report



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

English Translation of a Report Originally Issued in Korean

Opinion

We have audited the accompanying separate financial statements of Mirae Asset Daewoo Co., Ltd. (the "Company"), which comprise the separate statement of financial position as of December 31, 2020, and the separate statement of comprehensive income, separate statement of changes in equity and separate statement of cash flows for the year then ended, and notes to the separate financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying separate financial statements present fairly, in all material respects, the separate financial position of the Company as at December 31, 2020, and its separate financial performance and its separate cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the Republic of Korea (K-IFRS).

We also have audited, in accordance with Korean Standards on Auditing, the Company's Internal Control over Financial Reporting as of December 31, 2020, based on Conceptual Framework for Designing and Operating Internal Control over Financial Reporting, and our report dated March 12, 2021 expressed an unqualified opinion.

Basis for Opinion

We conducted our audits in accordance with Korean Standards on Auditing(KSA). Our responsibilities under those standards are further described in the Auditor's 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 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 financial statements as of and for the year ended December 31, 2020. 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) Assessment of measurement of over-the-counter derivatives classified under level 2 and 3

Reasons determined as key audit matters

The company calculates the fair value of most over-the-counter derivatives through its own evaluation system. The Company's evaluation of over-the-counter derivatives was selected as a key audit matter in consideration of the complex evaluation technique and the inclusion of management's estimation and judgment in input variables and assumptions. The Company's over-the-counter derivatives are derivative assets classified as Level 2 or 3, equity-linked securities and other derivative combined securities (see Note 9), derivative liabilities, equity-linked-securities in short position and other equity-linked-securities in short position (see Note 20), and the amount is ₩ 17,592,356 million.

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

We obtained an understanding and evaluated the fair value assessment process and control of over-the-counter derivatives established by management. In particular, we paid attention to whether the change in the over-the-counter derivatives evaluation model and input is appropriate and whether the over-the-counter derivatives' evaluation amount is accurately calculated.

We tested the appropriateness of control and authorization to enter transaction information to ensure that transaction information and input are accurately reflected in the management's evaluation system in order to verify that the transaction information and input are accurate. In addition, we tested the transaction data used in the valuation by examining supporting evidence including contracts.

We tested the appropriateness of management's control over the review of the evaluation model and the change of the input used for the evaluation of over-the-counter derivatives and the authorization to make such changes.

In order to verify the accuracy of the over-the-counter derivatives valuation, we tested the management's control to periodically verify the price calculated in the derivatives evaluation system, and used derivatives assessment experts to independently estimate the derivatives' fair value using the independent models and input developed by the experts.

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

Reasons determined as key audit matters

K-IFRS 15 (Revenue from Contracts with Customers) requires judgement of the timing of revenue recognition and the amount recognised. The timing of revenue recognition and the amount of recognition of non-standard commission income recognised in the financial statements were selected as key audit matters considering that related transactions are complex and include significant accounting judgements by management. The Company recognized commission revenues of KRW 1,249,496 million for the year ended December 31, 2020, which includes revenues derived from non-standard transactions of KRW 280,913 million (refer to Note 32).

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

We obtained an understanding and evaluated the process and control of revenue recognition timing and recognition amount of non-standard commission established by management.

We evaluated the control of the management to identify the performance obligation of the contract with the customer, review the timing of the revenue recognition and review the recognized amount of non-standard commission by using the revenue recognition checklist.

We tested the appropriateness of the timing of revenue recognition and the recognized revenue amount and validated the occurrence of the revenue and relating amount through the review of the relevant evidence, such as contract, on a sampling basis.

Emphasis of Matters

Without modifying our opinion, we draw attention to Note 2 to the financial statements of the Company. As discussed in Note 2 to the financial statements, management explains the significant accounting estimates and assumptions may be adjusted by changes in uncertainty resulted from the spread of Coronavirus disease 2019 (COVID-19).

Other matters

The financial statements of the Company for the year ended December 31, 2019 were audited by KPMG Samjong Accounting Corporation in accordance with Korean Standards on Auditing, and an unqualified opinion was expressed in the auditor's audit report of March 12, 2020.

Auditing standards and their application in practice vary among countries. The procedures and practices used in the Republic of Korea to audit such financial statements may differ from those generally accepted and applied in other countries.

Responsibilities of Management and Those Charged with Governance for the 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 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.

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

Auditor's Responsibilities for the Audit of the Separate Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's 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.
- 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 auditor's 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 auditor's 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 financial statements, including the disclosures, and whether the 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 financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's 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 auditor's report is Yeob Yu, Certified Public Accountant.

Samil PricewaterhouseCoopers

Seoul, Korea
March 12, 2021

This report is effective as of March 12, 2021, 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 Statements of Financial Position

Separate Statements of Financial Position

As of December 31, 2020 and 2019

Mirae Asset Securities Co., Ltd.

(In Korean won)

	Notes	2020	2019
Assets			
Cash and cash equivalents	37,39	₩ 679,681,429,368	763,316,958,915
Financial assets measured at fair value through profit or loss	5,6,8,9,12,19,26,37,39	38,156,001,465,997	36,433,999,273,509
Financial assets measured at fair value through other comprehensive income	5,10,12,19,37,39	10,770,748,897,006	9,199,567,448,784
Financial assets measured at amortized cost	5,8,11,19,37,39,48	24,661,569,767,441	13,683,757,664,553
Investments in subsidiaries	13	6,966,224,109,892	6,908,229,752,555
Investments in associates	14	870,240,122,921	809,312,009,641
Property and equipment	15	177,626,346,868	200,881,018,051
Investment properties	16, 19	251,496,999,146	242,394,152,364
Intangible assets	17	578,972,037,917	612,697,913,298
Other assets	18	30,982,145,353	92,239,249,343
Current tax asset	44	-	6,788,499,406
Deferred tax asset	44	337,457,947,282	458,171,198,481
Total assets		₩ 83,481,001,269,191	69,411,355,138,900
Liabilities			
Financial liabilities measured at fair value through profit or loss	5,12,20,26,37,39	₩ 16,576,242,136,461	16,820,460,100,701
Deposits due to customers	5,12,21,37,39	12,247,252,454,769	5,935,141,939,349
Borrowings	5,12,22,37,39	24,409,208,726,329	25,620,483,654,965
Debentures	5,12,23,37,39,48	7,397,390,226,325	5,351,242,809,418
Provisions	24	60,120,816,494	19,899,839,183
Other liabilities	5,12,25,37,39,48	13,719,202,519,737	6,965,961,974,644
Current tax liability	44	99,891,607,852	-
Total liabilities		₩ 74,509,308,487,967	60,713,190,318,260
Equity			
Capital stock	27	4,101,960,790,000	4,101,960,790,000
Capital surplus	28	2,159,168,289,718	2,156,189,416,980
Retained earnings	29,31		
(Regulatory reserve for credit losses of ₩70,623,007,559 and ₩75,460,938,641 as of December 31, 2020 and 2019, respectively)		2,717,562,401,089	2,377,024,316,388
(Estimated reversal(provision) of regulatory reserve for credit losses of ₩49,695,927,307 and ₩(-)4,837,931,082 as of December 31, 2020 and 2019, respectively)			
Capital adjustment	30,47	(308,847,354,170)	(1,334,171,381)
Accumulated other comprehensive income	10,30	301,848,654,587	64,324,468,653
Total equity		8,971,692,781,224	8,698,164,820,640
Total liabilities and equity		₩ 83,481,001,269,191	69,411,355,138,900

See accompanying notes to the separate financial statements.

Separate Statements of Comprehensive Income

For the years ended December 31, 2020 and 2019

Mirae Asset Securities Co., Ltd.

(In Korean won)

	Notes	2020	2019
Operating revenue			
Commissions	32,48	₩ 1,249,496,360,981	948,742,258,659
Gains on financial instruments measured at fair value through profit or loss	33	10,714,589,088,110	8,998,628,781,399
Gains on financial instruments measured at fair value through other comprehensive income	34	60,153,382,716	40,859,473,197
Interest income	7,35		
Financial assets measured at amortized cost		398,667,175,387	433,138,880,800
Financial assets measured at fair value through other comprehensive income		115,963,280,758	162,533,379,318
Financial assets measured at fair value through profit or loss		384,820,807,806	461,662,798,631
Gains on financial instruments measured at amortized cost	11	-	2,044,059,886
Reversal of allowances on credit loss	36	2,239,126,817	5,788,609,592
Gains on foreign currency transactions	37	1,976,540,491,555	1,393,953,042,843
Others	38,48	292,965,051,217	314,928,041,296
		15,195,434,765,347	12,762,279,325,621
Operating expenses			
Commissions expense	32,48	159,793,212,440	164,953,892,538
Losses on financial instruments measured at fair value through profit or loss	33	10,494,379,357,179	8,950,689,542,400
Losses on financial instruments measured at fair value through other comprehensive income	34	2,468,058,476	5,420,255,118
Interest expense	7,35	443,434,990,113	617,182,849,578
Provision of allowance on credit loss	36	19,275,399,220	28,825,806,305
Losses on foreign currency transactions	37	1,892,885,445,394	1,367,150,714,904
Employee costs	40	705,958,555,098	657,780,462,371
Selling and administrative expense	41	359,050,628,626	360,407,988,745
Others	38,48	8,059,958,988	7,603,808,827
		14,085,305,605,534	12,160,015,320,786
Operating profit		₩ 1,110,129,159,813	602,264,004,835
Non-operating income, net			
Non-operating income	42	₩ 26,553,415,571	44,407,206,496
Non-operating expense	43	311,003,826,106	16,427,959,332
		(284,450,410,535)	27,979,247,164
Profit before income tax expense		825,678,749,278	630,243,251,999

See accompanying notes to the separate financial statements.

For the years ended December 31, 2020 and 2019

Mirae Asset Securities Co., Ltd.

(In Korean won)

	Notes	2020	2019
Income tax expense	7,44	234,947,327,832	181,522,058,465
Profit for the year		₩ 590,731,421,446	448,721,193,534
Other comprehensive income for the year			
Items that may be subsequently reclassified to profit or loss:			
Valuation gain(loss) on financial asset measured at fair value through other comprehensive income	10	1,888,120,168	29,311,165,215
Items that will not be reclassified to profit or loss:			
Valuation gain(loss) on financial asset measured at fair value through other comprehensive income	10	243,192,794,737	142,093,174,586
Changes in own credit risk on financial liabilities designated as measured at fair value through profit or loss	26	(2,041,254,726)	(250,211,421)
Remeasurement of the defined benefit liabilities	25	(5,515,474,245)	(3,283,922,322)
		237,524,185,934	167,870,206,058
Total comprehensive income for the year		₩ 828,255,607,380	616,591,399,592
Earnings per share			
Basic and diluted earnings per share			
Common stock	45	872	651
2 preferred stock		872	651

See accompanying notes to the separate financial statements.

Separate Statements of Changes in Equity

Mirae Asset Securities Co., Ltd.

(In Korean won)

	Capital stock	Capital surplus	Capital adjustment	Accumulated other comprehensive income(loss)	Retained earnings	Total
Balance at January 1, 2019	₩ 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
Total comprehensive income for the year:						
Profit for the year	-	-	-	-	448,721,193,534	448,721,193,534
Valuation of financial assets measured at fair value through other comprehensive income	-	-	-	171,404,339,801	-	171,404,339,801
Changes in own credit risk on financial liabilities designated as measured at fair value through profit or loss	-	-	-	(250,211,421)	-	(250,211,421)
Remeasurement factors of defined benefit liabilities	-	-	-	(3,283,922,322)	-	(3,283,922,322)
Transaction with owners, etc.:						
Dividends paid	-	-	-	-	(153,906,749,480)	(153,906,749,480)
Changes in treasury stocks	-	3,799,697,691	484,726,438	-	-	4,284,424,129
Others	-	-	(4,051,853,545)	-	-	(4,051,853,545)
Balance at December 31, 2019	₩ 4,101,960,790,000	2,156,189,416,980	(1,334,171,381)	64,324,468,653	2,377,024,316,388	8,698,164,820,640
Balance at January 1, 2020	₩ 4,101,960,790,000	2,156,189,416,980	(1,334,171,381)	64,324,468,653	2,377,024,316,388	8,698,164,820,640
Total comprehensive income for the year:						
Profit for the year	-	-	-	-	590,731,421,446	590,731,421,446
Valuation of financial assets measured at fair value through other comprehensive income	-	-	-	245,080,914,905	-	245,080,914,905
Changes in own credit risk on financial liabilities designated as measured at fair value through profit or loss	-	-	-	(2,041,254,726)	-	(2,041,254,726)
Remeasurement factors of defined benefit liabilities	-	-	-	(5,515,474,245)	-	(5,515,474,245)
Transaction with owners, etc.:						
Dividends paid	-	-	-	-	(182,112,885,500)	(182,112,885,500)
Changes in treasury stocks	-	1,301,309,738	(372,616,005,699)	-	-	(371,314,695,961)
Retirement in treasury stocks	-	-	68,080,451,245	-	(68,080,451,245)	-
Retirement in stock options	-	1,677,563,000	(1,677,563,000)	-	-	-
Others	-	-	(1,300,065,335)	-	-	(1,300,065,335)
Balance at December 31, 2020	₩ 4,101,960,790,000	2,159,168,289,718	(308,847,354,170)	301,848,654,587	2,717,562,401,089	8,971,692,781,224

See accompanying notes to the separate financial statements.

Separate Statements of Cash Flows

For the years ended December 31, 2020 and 2019

Mirae Asset Securities Co., Ltd.

(In Korean won)

	2020	2019
Cash flows from operating activities		
Profit for the period	₩ 590,731,421,446	448,721,193,534
Adjustments:		
Interest income	(899,451,263,951)	(1,057,335,058,749)
Dividend income	(97,840,398,003)	(96,903,555,973)
Interest expense	443,434,990,113	617,182,849,578
Income tax expense	234,947,327,832	181,522,058,465
Loss on valuation of financial assets measured at fair value through profit or loss	274,975,715,247	128,571,461,756
Loss on valuation of financial liabilities measured at fair value through profit or loss	69,157,589,345	13,452,929,692
Loss on valuation of financial liabilities designated as measured at fair value through profit or loss	431,357,500,304	643,226,832,897
Loss on valuation of derivatives	1,617,445,008,967	1,037,431,138,862
Loss on disposal of financial assets measured at fair value through other comprehensive income	2,468,058,476	5,420,255,118
Impairment loss on financial assets measured at fair value through other comprehensive income	1,555,113,247	3,123,622,047
Impairment loss of investments in subsidiaries	256,497,667,967	3,645,645,956
Loss on disposal of investments in subsidiaries	4,259,875,047	2,733,842,368
Loss on disposal of investments in associates	5,287,217	24,962,232
Depreciation on property and equipment	58,270,848,277	60,200,207,150
Depreciation on investment properties	5,078,126,254	3,724,857,118
Loss on disposal of property and equipment	269,175,370	1,975,509,901
Amortization	39,323,245,293	42,041,410,714
Loss on disposal of intangible assets	55,111,988	20,612,210
Stock option expense	-	593,375,785
Provisions of allowances on credit losses	15,578,638,090	-
Provisions of allowances on credit losses of other financial assets	2,141,647,883	24,690,242,127
Loss on foreign currency translation	280,031,855,829	108,255,529,589
Allowances of provisions	-	1,011,942,131
Other operating expenses	14,827,314,499	51,594,829,096
Other non-operating expenses	40,027,318,251	684,613,572
Gain on valuation of financial assets measured at fair value through profit or loss	(1,228,789,636,339)	(682,114,565,162)
Gain on valuation of financial liabilities measured at fair value through profit or loss	(9,779,394,698)	(13,622,817,760)
Gain on valuation of financial liabilities designated as measured at fair value through profit or loss	(505,656,875,927)	(393,645,595,310)
Gain on valuation of derivatives	(1,371,535,590,404)	(1,138,125,472,165)

See accompanying notes to the separate financial statements.

For the years ended December 31, 2020 and 2019

Mirae Asset Securities Co., Ltd.

(In Korean won)

	2020	2019
Gain on disposal of financial assets measured at fair value through other comprehensive income	₩ (60,153,382,716)	(40,859,473,197)
Gain on disposal of investments in subsidiaries	(16,437,500,295)	(36,451,535,953)
Gain on disposal of investments in associates	(78,712,000)	(1,274,257,154)
Gain on disposal of property and equipment	(72,361,566)	(56,465,000)
Gain on disposal of investment properties	(7,653,781,912)	(1,352,752,216)
Reversal of allowance on credit losses	(133,526,802)	(3,640,602,818)
Reversal of allowances on credit losses of other financial assets	(2,957,719)	(11,972,701)
Gain on foreign currency translation	(281,684,362,058)	(95,371,846,018)
Reversal of provisions	(2,102,642,296)	(2,136,034,073)
Other operating incomes	(273,872,711)	(341,084,565)
Other non-operating incomes	(334,036,329)	(2,328,644,614)
	(99,541,458,784)	(185,721,811,530)
Changes in:		
Deposit	₩ (2,055,400,809,234)	1,268,427,306,830
Financial assets measured at fair value through profit or loss	(1,167,395,981,129)	(3,971,159,978,946)
Financial assets measured at amortized cost	(9,038,498,403,243)	3,730,542,341,086
Other assets	7,688,833,749	(45,310,214,818)
Financial liabilities measured at fair value through profit or loss	621,590,508,290	(477,220,116,712)
Financial liabilities designated as measured at fair value through profit of loss	(853,702,815,313)	(913,187,930,662)
Deposits due to customers	6,347,397,257,046	571,115,273,890
Other liabilities	6,891,770,126,751	(1,980,805,502,712)
Provisions	988,968,832	(4,097,647,175)
	754,437,685,749	(1,821,696,469,219)
Interest received	922,889,598,567	1,085,587,144,706
Interest paid	(428,884,794,925)	(612,227,204,064)
Dividends received	97,823,942,963	101,244,707,450
Income tax paid	(97,548,203,628)	(198,643,435,940)
Net cash inflow(outflow) from operating activities	₩ 1,149,176,769,942	(1,631,457,068,597)

See accompanying notes to the separate financial statements.

For the years ended December 31, 2020 and 2019

Mirae Asset Securities Co., Ltd.

(In Korean won)

	2020	2019
Cash flows from investing activities		
Decrease in financial assets measured at fair value through other comprehensive income	₩ 10,797,972,202,275	8,943,339,310,716
Decrease in investments in subsidiaries	737,845,737,051	1,223,586,320,899
Decrease in investments in associates	71,415,759,883	2,270,085,000
Proceeds from disposal of property and equipment	3,292,780,338	60,560,000
Proceeds from disposal of investment properties	15,908,716,059	10,510,000,000
Proceeds from disposal of intangible assets	700,000,000	200,587,790
Decrease in leasehold deposits provided	8,273,184,043	42,712,193,406
Increase in leasehold deposits received	1,166,314,900	1,062,143,420
Increase in financial assets measured at fair value through other comprehensive income	(12,041,299,969,520)	(10,065,423,727,336)
Increase in investments in subsidiaries	(1,013,939,201,497)	(2,932,759,438,795)
Increase in investments in associates	(161,415,148,380)	(320,116,594,848)
Acquisition of property and equipment	(21,648,988,039)	(79,143,080,956)
Acquisition of intangible assets	(3,931,631,900)	(6,806,693,299)
Acquisition of investment properties	(20,812,731,090)	-
Increase in leasehold deposits provided	(2,149,448,000)	(6,312,656,042)
Decrease in leasehold deposits received	(477,347,500)	(4,026,836,408)
Net cash outflow from investing activities	₩ (1,629,099,771,377)	(3,190,847,826,453)
Cash flows from financing activities		
Proceeds from borrowings, net	₩ -	2,902,191,759,431
Increase in debentures	2,207,104,507,404	1,693,892,895,916
Increase in electronic short-term bonds, net	10,000,000,000	300,000,000,000
Increase in other liabilities	-	230,000,000,000
Decrease in borrowings, net	(1,185,439,158,352)	-
Repayment of debentures	(50,000,000,000)	(300,000,000,000)
Decrease in lease liabilities, net	(29,244,485,913)	(31,842,171,671)
Dividends paid	(182,112,885,500)	(153,906,749,480)
Acquisition of treasury stocks	(372,715,907,915)	-
Net cash inflow from financing activities	₩ 397,592,069,724	4,640,335,734,196
Effect of exchange rate fluctuations on cash and cash equivalents	₩ (1,304,597,836)	218,866,175
Net decrease in cash and cash equivalents	(83,635,529,547)	(181,750,294,679)
Cash and cash equivalents at the beginning of the period	763,316,958,915	945,067,253,594
Cash and cash equivalents at the end of the period	₩ 679,681,429,368	763,316,958,915

See accompanying notes to the separate financial statements.



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Mirae Asset Financial Group

Group Overview

Since its foundation in 1997, Mirae Asset has relentlessly pursued financial innovation and global business expansion based on strong entrepreneurship, establishing itself as Asia's representative global investment powerhouse. Mirae Asset is dedicated to diversifying the revenue structure through aggressive investment into various global prime assets that go beyond the national boundary into the overseas market and beyond traditional investment asset into the natural environment and the infrastructure. Our mission is to make contributions 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.

Affiliates and Subsidiaries

Asset Under Management and Equity Capital of the Group

On the strengths of distinctive expertise of subsidiaries, Mirae Asset is managing an asset of KRW 603 trillion as of 2020 year-end, while expanding our presence in the global investment market based on stable capital position of all subsidiaries.

Mirae Asset is a global investment group consisting of asset management, financial investment, life insurance, venture capital & financing, and other financial businesses. Beginning with the establishment of Hong Kong subsidiary of Mirae Asset Global Investments in 2003, for the past 18 years, we have built a global network of around 30 overseas subsidiaries and representative offices in 15 countries as of the first half of 2021.

Korea	Mirae Asset Global Investments, Mirae Asset Securities, Mirae Asset Life Insurance, Multi Asset Global Investments, Mirae Asset Financial Service, 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, Brand Moove, YK Development
Mongolia	Mirae Asset Securities
United States	Mirae Asset Global Investments, Mirae Asset Securities (LA), Mirae Asset Securities (New York), Global X
Vietnam	Mirae Asset Global Investments, Mirae Asset Securities, Mirae Asset Finance Company, Mirae Asset Prevoir Life Insurance, Mirae Asset Capital Vietnam, Vina Digital Finance Platform, Grooo International
Brazil	Mirae Asset Global Investments, Mirae Asset Securities
Singapore	Mirae Asset Securities
United Kingdom	Mirae Asset Global Investments, Mirae Asset Securities
India	Mirae Asset Global Investments, Mirae Asset Securities, Mirae Asset Venture Investment, Mirae Asset Financial Service
Indonesia	Mirae Asset Securities
Japan	Global X
China	Mirae Asset Global Investments (Shanghai), Mirae Asset Huachen Fund Management, Mirae Asset Investment Advisory (Beijing)
Canada	Horizons ETFs
Colombia	Global X
Australia	Mirae Asset Global Investments
Hong Kong	Mirae Asset Global Investments, Mirae Asset Securities

Mirae Asset Financial Group Organization

All subsidiaries of Mirae Asset Financial Group strive to gain independent competitive edge based on thorough risk management. As of the end of 2020, there are 12,451 employees working for around 10 companies.



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 launched as Korea's largest securities company. In 2018, Mirae Asset Life Insurance acquired the Korean subsidiary of PCA Life Insurance, a UK-based insurer, and settled itself as an insurer specializing in variable insurance and pension. Our global business expansion is underway with the acquisition of Global X ETFs, an ETF provider of the U.S. in 2018 and the establishment of Global X Japan in Japan as a joint venture in 2019. 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" in 2017.

1997-2007

1997

- 07 Founds Mirae Asset Venture Capital
- 08 Founds Mirae Asset Investment Advisory

1998

- 12 Founds Mirae Asset Global Investments
Launches Park Hyeon Joo Fund #1,
Korea's first close-ended mutual fund

1999

- 12 Founds Mirae Asset Securities

2000

- 03 Establishes the Mirae Asset Park Hyeon Joo Foundation

2001

- 02 Launches Korea's first open-ended mutual fund, Mirae Asset Independence Fund
Launches Korea's first wrap account service

2003

- 12 Establishes Mirae Asset Global Investments (HK), Korea's first global investment firm

2004

- 02 Establishes Mirae Asset Investment Education & Research Center

2005

- 02 Launches first overseas investment fund, the Mirae Asset Asia Pacific Star Equity Fund
- 06 Founds Mirae Asset Life Insurance

2006

- 02 Mirae Asset Securities listed on KOSPI
- 11 Establishes Mirae Asset Global Investments (India)

2007

- 01 Establishes Mirae Asset Global Investments (India)
- 03 Establishes Mirae Asset Global Investments (UK)
- 07 Opens Mirae Asset Securities (Beijing representative office)
- 12 Establishes Mirae Asset Securities (Vietnam)

2008-2016

2008

- 02 Establishes Mirae Asset YiCai Investment Consulting
- 04 Establishes Mirae Asset Global Investments (USA) and Mirae Asset Global Investments (Brazil)
- 07 Receives Korea's first Qualified Foreign Institutional Investor License from China Securities Regulatory Commission
- 08 Launches Mirae Asset's first offshore fund in Luxembourg
Establishes Mirae Asset Securities (USA)

2010

- 02 Releases first mobile trading service (MTS) in Korea
- 04 Harvard Business School selects Mirae Asset for case study
- 08 Launches Korea's first SICAV fund
- 09 Establishes Mirae Asset Securities (Brazil)
Launches Mirae Asset Discovery Fund (USA)

2011

- 01 Becomes Korea's first directly listed ETF on the HKEX
- 11 Acquires top-tier Canadian ETF, Horizons ETFs

2012

- 03 Mirae Asset Global Investments merges with Mirae Asset MAPS Global Investments
- 07 Establishes Mirae Asset Huachen Fund Management

2013

- 01 Founds Mirae Asset Retirement Institute
- 06 Launches first US-listed ETF on the NYSE

2014

- 04 Founds Mirae Asset Financial Service

2015

- 07 Mirae Asset Life Insurance is listed on KOSPI

2016

- 12 Acquires KDB Daewoo Securities and rebrands as Mirae Asset Daewoo

2017-2021

2017

- 01 Invests in the Gyeongdo Marine Tourism Complex in Yeosu
- 07 Mirae Asset Daewoo signs MOU with NAVER
- 09 The Case Centre publishes case study on Mirae Asset's disruptive innovation
- 10 Founds Mirae Asset Capital Markets (India)
- 12 Invests in development of Pangyo Alpha Dome City

2018

- 03 Launches Mirae Asset Life Insurance after merger with PCA Life Insurance
- 05 Launches Mirae Asset Previor Life Insurance (Vietnam)
- 07 Acquires Global X, an American ETF management company
- 11 Receives private fund management (PFM) license in China

2019

- 03 Mirae Asset Venture Investment is listed on KOSDAQ
- 07 Mirae Asset Financial Service merges with Mirae Asset Mobile
Establishes Vina Digital Finance Platform (Vietnam)
- 09 Establishes Global X Japan, a JV ETF Provider
- 12 Mirae Asset Daewoo receives presidential award at Corporate Innovation Awards

2020

- 01 Makes strategic investment of KRW 800 billion in NAVER FINANCIAL
- 09 Mirae Asset wins in the Corporate Category at the KOREA-National Brand Awards

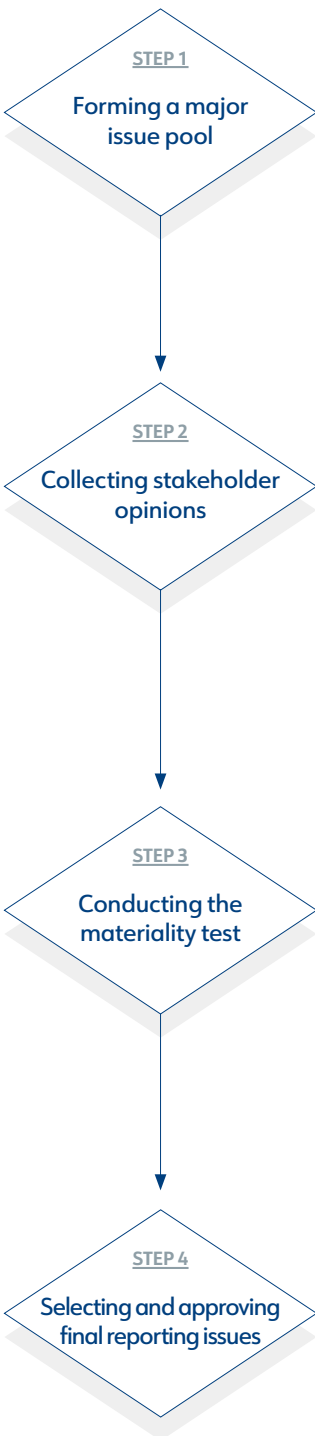
2021

- 01 Mirae Asset Global Investments, designated as lead manager for pension fund investment pool by the Ministry of Economy and Finance
- 03 Mirae Asset Daewoo changes its name to Mirae Asset Securities
Mirae Asset Insurance becomes the first insurer to distinguish product development from sales
Founds Mirae Asset Financial Service
- 04 Mirae Asset Securities ranks No. 1 in the National Brand Competitiveness Index at the National Brand Awards ceremony

Materiality Test

Materiality Test Process

Mirae Asset Securities conducts a materiality test in order to identify core issues to be managed with high priority in our efforts to achieve sustainability. The materiality test was carried out in a comprehensive manner based on various methods, such as the methodology of AccountAbility and Global Reporting Initiative (GRI) standards, with the 2021 pool of issues organized in consideration of analysis into both internal and external environment such as analysis of international standards, benchmark result of leading companies, and media research outcome. The core issues were chosen after considering the business relevance as well as impact of the company on its stakeholders.



A total of 32 issues with a strong relevance to Mirae Asset Securities were identified as a result of analysis into international standards, global benchmark studies, media research, and stakeholder survey.

Identifying Internal Issues

- Analyzed the existing pool of issues on sustainable management of Mirae Asset Securities, and collected internal issues
- Reviewed business strategies and risk issues

Identifying External Issues

- Analyzed major issues and activities found in leading companies in the industry in terms of sustainable management
- Analyzed new issues raised under international standards and latest trends
- Conducted media research

According to the stakeholder survey results, stakeholders have a high level of interest in such areas as expansion of Socially Responsible Investment (SRI) and balance between work and life.

Collecting Opinions of Internal and External Stakeholders

- Conducted surveys to employees, clients, partner companies and CSR experts

Evidence of Relevance

- Analyzed the results of the survey conducted to employees
- Identified common issues across the industry, such as laying the foundation for future growth such as overseas business, strengthening wealth management capabilities, enhancing market dominance and creating economic values, taking a leadership in the digital finance, sound governance structure, keeping an eye on and responding to governmental policies, and ethics and compliance, through the benchmark study on six financial companies renowned for outstanding sustainable management

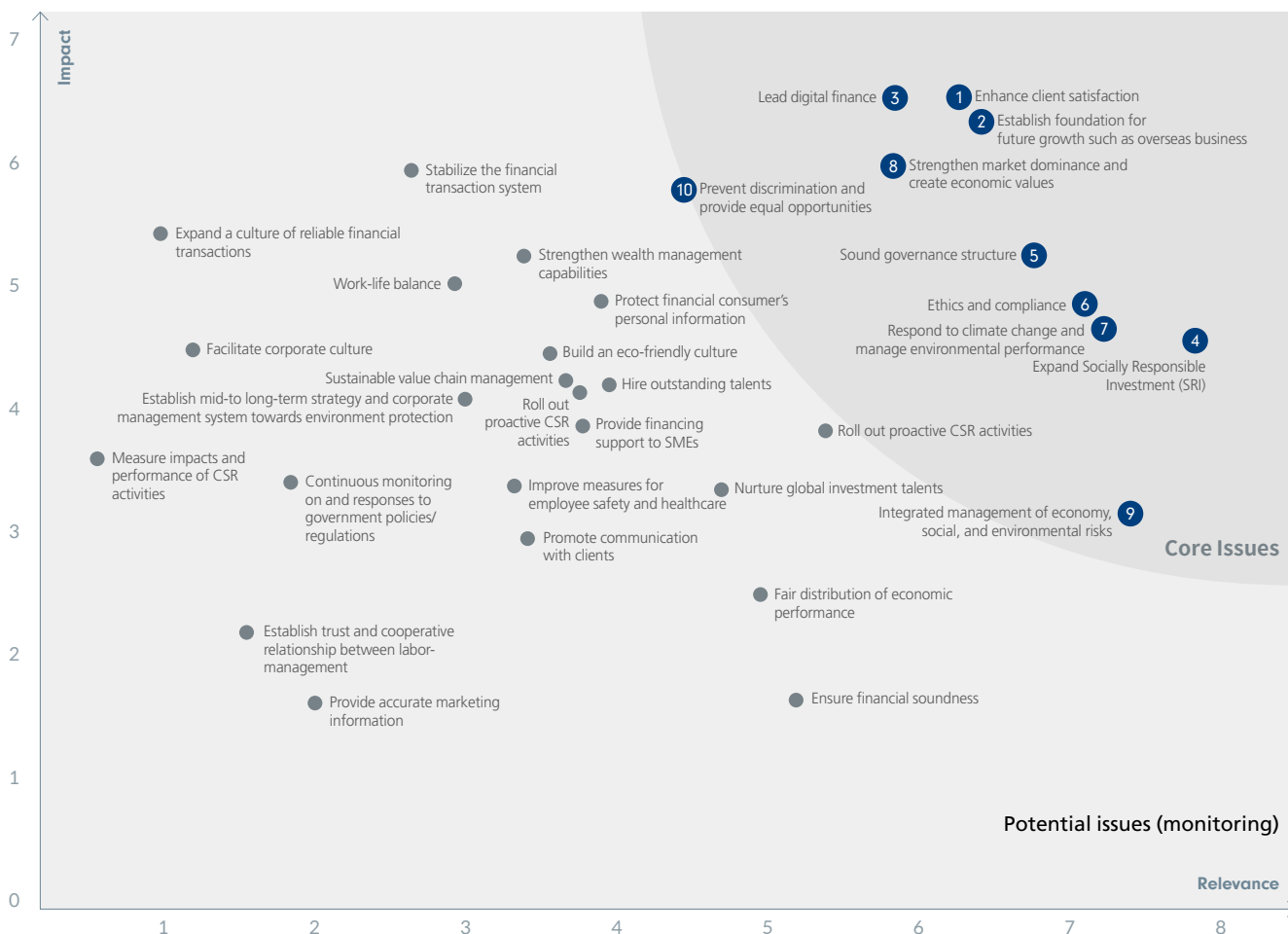
Evidence of Impact

- Reviewed the GRI Standards, SASB, DJSI, ISO26000, and TCFD
- Analyzed the results of the survey conducted to major stakeholders, such as clients, partner companies, local community, NGOs, shareholders, and the government
- Analyzed some 1,787 media articles published from January 2020 to February 2021 to find that the areas most covered included reinforcement of market dominance, leading the digital finance, and ethics and compliance

- Evaluated and weighted the level of impact from financial, operational and reputational perspectives
- Prioritized the materiality level to separately highlight key issues and categorized issues to be managed on a continuous basis

Selecting and approving final reporting issues

Mirae Asset Securities conducted the materiality test in comprehensive consideration of business relevance and direct and indirect impacts of the company on the stakeholders. As a result of the test, 10 out of 32 issues were selected as core issues. Our business activities related to such issues are outlined in pages marked in the table below.



No.	Core Issues	Major Stakeholders	Impact Evaluation	Page
1	Enhance client satisfaction	Client	Brand reputation impact	37-42
2	Establish foundation for future growth such as overseas business	Client, Shareholder & Investor	Business profit impact	12-13
3	Lead digital finance	Client, Shareholder & Investor, Local Community	Business operational impact	33-36
4	Expand Socially Responsible Investment (SRI)	Client, Shareholder & Investor, Local Community	Business operational impact Brand reputation impact	28-31
5	Sound governance structure	Employee, Shareholder & Investor	Brand reputation impact	20-21, 70-73
6	Ethics and compliance	Employee, Partner Company & Collaborating Institution, Local Community	Brand reputation impact	74-77
7	Respond to climate change and manage environmental performance	Local Community	Brand reputation impact	22-27
8	Strengthen market dominance and create economic values	Employee, Shareholder & Investor, Partner Company & Collaborating Institution	Business profit impact	52-62
9	Integrated management of economy, social, and environmental risks	Client, Shareholder & Investor, Local Community	Business operational impact	20-21
10	Prevent discrimination and provide equal opportunities	Employee	Business operational impact	43-49

Stakeholder Engagement

Stakeholder Management System

Definition of Stakeholders

Mirae Asset Securities 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 Securities are categorized based on their role, level of impact, and relations. We have designated clients, employees, shareholders & investors, business partners & collaborating institutions, local communities, and the government and capital market as key stakeholders, and 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 Channels

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

Stakeholder Communication Activities and Channels

Stakeholder	Communication Activities	Communication Channels
Clients (Retail clients, Consumer organizations) 	These stakeholders purchase and use Mirae Asset Securities' financial products and services through transactions with the company. We do our utmost to leverage our expertise in which financial consumers can undertake convenient and safe transactions.	<ul style="list-style-type: none"> • Client panel • Customer Service Improvement Council • Voice of Customers (VOC) • Website • Investment forums
Employees 	Earning trust from clients requires complete integrity and expertise from our employees. Mirae Asset Securities is therefore strengthening employee competencies, and engages in diverse activities to build a healthy corporate culture.	<ul style="list-style-type: none"> • Labor-management Council • WM Community
Shareholders & Investors (Stockholders, Evaluation organizations) 	These stakeholders own shares of Mirae Asset Securities and take part in the company's decision-making process. We strive to maximize shareholder and investor value by generating competitive financial returns.	<ul style="list-style-type: none"> • Annual general meeting • Public disclosure • Company briefing • Investor relations
Business Partners & Collaborating Institutions 	Mirae Asset Securities considers our partners as companions for mutual growth. In order to listen to and reflect on the pain points and voices of partners, we are expanding the communication channels and adhere to fair trade principles, thus contributing to creating a healthy ecosystem.	<ul style="list-style-type: none"> • Regular partner council • Partner satisfaction survey
Local Communities 	Mirae Asset Securities conducts its social contributions by collaborating with various organizations, including NGOs, and thus strives to fulfill its role as a member of local communities and deliver positive social impacts.	<ul style="list-style-type: none"> • Social contribution activities • Partner institutions • Website

Economic, Social, and Environmental Performance

Economic Performance

Tax Payment by Region

(Unit: KRW)

Region	Income tax payment	Portion
Korea ¹⁾	274,855,433,911	89.9
Asia	30,173,480,009	9.9
Europe	2,996,807,365	1.0
Americas ²⁾	-2,130,358,036	-0.7

1) Based on income tax of headquarters in Korea reported in the consolidated financial statements

2) Recorded net loss in 2020

Social Performance

Classification	Unit	2018	2019	2020		Total
				Male	Female	
Total number of employees ¹⁾	Persons	4,564	4,231	2,249	1,787	4,036
By region	Korea	4,544	4,214	2,235	1,787	4,022
	Overseas	20	17	14	-	14
By title	Executive officer	290	275	227	24	251
	Private banker executive	46	56	45	16	61
	General manager	770	791	664	115	779
	Senior manager	1,533	1,513	951	508	1,459
	Manager	1,502	1,235	284	866	1,150
	Assistant manager	394	317	21	254	275
	Others ²⁾	38	44	57	4	61
By employment type	Full-time	3,914	3,500	1,685	1,690	3,375
	Part-time	650	731	564	97	661
By age	Under 30	493	398	98	223	321
	30-50	3,559	3,449	1,729	1,518	3,247
	50 and above	326	384	422	46	468
By nationality	Korea	4,356	4,202	2,231	1,781	4,012
	Canada	11	7	5	1	6
	U.S.	5	6	5	1	6
	France	-	5	4	-	4
	Others	6	11	4	4	8

1) Number of employees including board members

2) Securities advisors + Professional officers

Classification	Unit	2018	2019	2020
Employment and retirement	No. of newly hired employees	276	174	82
	No. of newly hired female employees	114	34	24
	Total turnover rate	8.0	12.4	6.0
	Voluntary turnover rate ³⁾	7.1	11.0	5.0
By gender	Male	2,543	2,418	2,249
	Female	2,021	1,813	1,787
Minority	Person with disability	23	21	21
	Foreigner	23	29	24

3) Voluntary termination + Dispatch + Early retirement

Classification		Unit	2018	2019	2020
Parental leave	Number of employees who returned to work after maternity and parental leave	Persons	174	185	179
	Percentage of people staying at work for 12 months since returning to work after parental leave	%	82.9	79.0	92.0
Labor union membership percentage ⁴⁾		%	63	61	62
Occupational injury	Number of absentees due to injuries or illness ⁵⁾	Persons	50	36	22
	Lost work days	Days	4,658	2,846	5,113
	Number of injuries	Persons	0	0	2

4) All employees are eligible for collective bargaining

5) Major and minor sick leave + Accidental leave caused during work or personal leave

Classification		Unit	2018	2019	2020
Entry level wage / local minimum wage		%	232.7	232.7	230.7
Performance evaluated employees / eligible employees			91.7	92.4	94.0

Classification		Unit	2018	2019	2020
Employee Training					
Total training hours		Hours	210,524	224,083	218,105
Number of employees who completed training		Persons	18,234	22,194	27,815
Total training expenses		KRW billion	7.2	6.6	2.8
Education on Human Rights and Ethics					
Ethical management training		Occasions	253	216	38 ⁶⁾
Number of employees who participated in education programs on ethics and compliance			4,277	3,981	3,971
Number of employees who participated in education programs on sexual harassment prevention		Persons	4,915	4,344	4,255
Number of employees who participated in education programs on information protection			4,253	4,050	3,881
Social Contribution Expenditures and Participants					
Expenditures in social contributions ⁷⁾		KRW billion	4.2	5.2	2.7
Hours for volunteer activities		Hours	733	1,408	680
Participants in volunteer activities ⁸⁾		Persons	349	748	555

6) Face-to-face trainings were limited due to COVID-19

7) CSR expenditures consist of cash donation, goods donation, and operating expenses from employees' voluntary activities. The expense from voluntary activities per employee is calculated by total hours of participation x average hourly wage per person

8) Data from 2017 is based on the number of volunteers and hours for volunteer activities conducted on weekdays only

Major Association Expenses in 2020⁹⁾

Classification	Unit	Korea Financial Investment Association	Bank of Korea	Financial Security Institute	Korea Capital Market Institute	Korea Financial Telecommunications and Clearings Institute	Others	Total ¹⁰⁾
Expense amount	KRW million	4,224	1,076	772	385	367	941	7,765

9) Mirae Asset Securities strictly bans any forms of donation or aid towards political campaigns and election funds, political parties and political entities, politicians, and lobbying organizations and lobbyists

10) Total Association Expenses: KRW 5,968 million in 2018, KRW 7,084 million in 2019

Environmental Performance

Classification	Unit	Scope	2018	2019	2020
Energy¹⁾					
Energy consumption	GJ	Headquarters, Company building	265,900	226,658	117,692
		Lease, Data center, Mobile combustion	-	-	174,472
Fuel (LNG, diesel, Kerosene)		Headquarters, Company building	20,173	17,823	8,995⁴⁾
Fuel for vehicles (gasoline) ²⁾		All	-	-	7,855
Electricity	GJ	Headquarters, Company building	242,064	208,835	108,697⁴⁾
		Lease, Data center	-	-	150,450
District heating	GJ	Headquarters, Company building	3,663	0	0
		Lease, Data center	-	-	16,167
Renewable energy consumption	GJ	-	-	-	173
Greenhouse Gas (GHG) Emissions¹⁾					
Direct GHG emissions (Scope 1) ³⁾	tonCO ₂ eq	Headquarters, Company building	1,033	904	455
		All (Mobile combustion)	-	-	524
Indirect GHG emissions (Scope 2)	tonCO ₂ eq	Headquarters, Company building	11,757	10,143	5,279
		Lease, Data center	-	-	7,862
Other indirect GHG emissions (Scope 3)	tonCO ₂ eq	All ⁵⁾	1,018	1,057	315⁶⁾
Water Consumption					
Waterworks	m ³	Headquarters, Company building	76,794	100,667	57,754
Volume of Waste					
General waste	kg	Headquarters, Company building	245,978	267,829	301,724

1) Scope of data measurement expanded: scope of measurement was expanded from HQ and office buildings in 2018 and 2019 to HQ, office buildings, leased buildings, and data center in 2020

2) Scope of data measurement expanded: energy consumption for mobility are measured from 2020

3) Scope of data measurement maintained: the scope of data measured for direct emission (Scope 1) remains the same as previous year

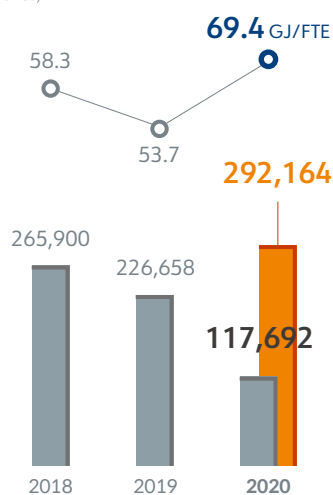
4) Usage declined due to the remote work adopted due to COVID-19

5) Paper usage and remittance from domestic and overseas business trips are based on the entire business premises (entire workforce) and remittance of waste disposal and water usage are based on HQ and office buildings

6) Data decreased due to reduced overseas business trip due to COVID-19

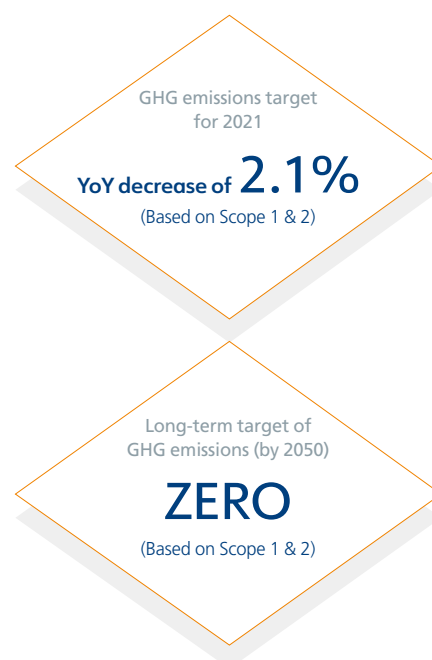
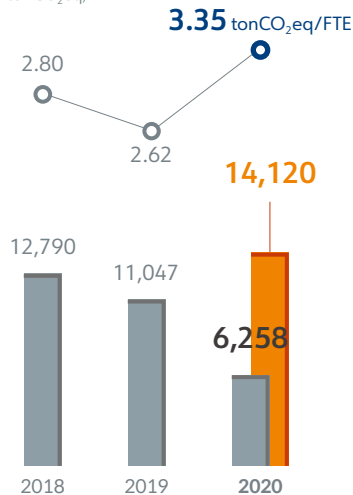
Energy Consumption

(Unit: GJ)



GHG Emissions

(Unit: tonCO₂eq)



● Energy consumption intensity ■ Headquarters, Company building Total
 ■ Headquarters, Company building, Lease, Data center, Mobile combustion Total

Tax Policy

Mirae Asset Securities 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 in transactions with persons with special relationship.
- We avoid use of tax structures for the purpose of avoiding taxes, and do not manage a legal entity at tax havens 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.

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 Integrated Report and Audited Financial Statement, 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.

Tax Management Organization

Tax issues are monitored on a regular basis at the working level across all businesses. When an issue is identified, an additional review is conducted by a financial team with expertise for a CFO report process. For significant tax issues, we apply a prudent review process that goes through an outside expert's advice, and submit an issue to the BOD if decision-making is needed.

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, pretax profits and losses, and other such information by country for affiliated companies within the multinational company group. Mirae Asset Securities is faithfully fulfilling this obligation.

Verification of GHG Emissions Data Report

Introduction

Korea Productivity Center Quality Assurance (hereinafter 'KPCQA') has been engaged by MIRAE ASSET Securities (hereinafter the 'Company') to independently verify its 2020 Greenhouse Gas Emission Report (hereinafter 'Inventory Report') under limited assurance. It is the responsibility of the Company to compile the 'Inventory Report' according to the 'Greenhouse Gas and Energy Target Management Scheme (Notification No. 2021-47 of Ministry of Environment)' and ISO 14064-1. KPCQA has responsibility to conduct verification based on the ISO 14064-3 to provide verification opinion on compliance of the 'Inventory Report' against verification criteria.

Verification Scope

The following are included in the scope of this Verification.

- 1) Scope 1, 2: All of the domestic subsidiaries under operational control of the Company (Including rented building emissions of scope 2 that can be monitored).
- 2) Scope 3: Other indirect emissions in relation to business trip, waste treatment, water use and paper use.

Conclusion/Opinion

Based on verification process according to the ISO 14064-3, KPCQA obtained reasonable basis to express the following conclusion on the 2020 MIRAE ASSET Securities' Inventory Report.

- 1) The Inventory Report was prepared against 'Greenhouse Gas and Energy Target Management Scheme' run by Korea Government.
- 2) As a result of materiality assessment on 2020 Greenhouse Gas Emission of entire domestic subsidiaries, material discrepancy is less than the criteria of 5% for the organization who emits less than 500,000 tCO₂-eq/y in accordance with the requirements of the 'Greenhouse Gas and Energy Target Management Scheme'

Reporting period		2020.1.1-2020.12.31	
Total Annual Emissions (tCO ₂ -eq)	Total Emissions (Scope 1, 2)	14,120	
	Direct Emissions (Scope 1)	979	
	Indirect Emissions (Scope 2)	13,131	
	Other Indirect Emissions (Scope 3)	Business Trip	167
		Waste Treatment	98
		Water Use	19
Paper Use		31	

May 21st, 2021
Korea Productivity Center Quality Assurance

CEO Jeong Eui Sik



Independent Assurance Statement

To Management and Stakeholders of Mirae Asset Securities

Korea Sustainability Investing Forum (hereinafter "KoSIF") was commissioned by Mirae Asset Securities (hereinafter the "Company") to provide an independent assurance statement for its "Mirae Asset Securities Integrated Report 2021 (hereinafter the "Report")" and hereby presents the following third-party assurance statement.

Responsibility and Independence

Other than providing the independent assurance statement, KoSIF does not hold any interest in the Company that may affect the independence and fairness of the verification. Although this assurance statement is written for the management and stakeholders of the Company, KoSIF expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this assurance statement.

Assurance Criteria and Principles

This assurance statement is based on AA1000AS(2008), an internationally recognized standard on sustainability assurance. Detailed verification criteria are as follows.

1. Type 1, some performance indicators (Direct greenhouse gas emissions (Scope 1), Indirect greenhouse gas emissions (Scope 2), Emissions from business travel, energy use, water use, waste disposal, gender(equal) wages, absentee rate, financial accessibility) were verified by Type 2 moderate level of AA1000AS(2008).
2. The three accountability principles (Inclusivity, Materiality, Responsiveness) in AA1000AS(2008).
3. Core option of GRI Standard Guidelines.

Assurance Process and Limitations

KoSIF carried out an initial review based on publicly available IR materials and supporting data obtained directly from the Company.

Through an on-site visit to the headquarter of the Company, KoSIF verified the materiality assessment process and methods, engagement activities through stakeholder communication channels, and sustainability management strategy and goals adopted by the Company. Through the sampling process, KoSIF checked the coherence and supporting material for economic, social, and environmental data and relevant assertions made in the Report. A thorough review was conducted for some performance indicators by reviewing supporting documents and records. The on-site audit process involved an interview with a representative from the Company responsible for writing the Report. KoSIF confirmed that the financial data were appropriately retrieved from financial statements in the annual report listed in Data Analysis, Retrieval and Transfer System (DART). Data and information stretching outside the reporting boundary of the Company (suppliers, contractors, etc) are not included in the verification scope. The result of the assurance may differ if the scope of the assessment changes.

Assurance Result and Opinion

KoSIF confirmed that amendment requests after the initial review of the Report were reflected in the final version. As a result, nothing has come to KoSIF's attention that causes KoSIF to believe the information and data provided were misplaced or misleading. KoSIF could also not find anything that may provide a basis that the Report was not prepared under the core option of GRI Standard Guidelines.

KoSIF's opinion regarding the principles of AA1000AS(2008) is as follows:

- **Inclusivity**

The Company identifies customers, employees, central and local government, shareholders, investors, business partners, and local communities as its stakeholders. The Company has established communication channels for each stakeholder group and collects feedback, expectations, and opinions of the respective stakeholder groups. In addition, the Company reflects the interests and expectations of stakeholders through the annual survey for materiality assessment. As a result of checking the operation and performance of major communication channels for each stakeholder, and surveys, KoSIF could not find any evidence that important stakeholders were omitted from the process,

- **Materiality**

The Company conducted a materiality assessment to identify important issues related to sustainability management. Based on issue pool of 32 topics the Company created through international standard analysis (including GRI, ISO26000, DJSI, and SASB), benchmarking 6 industry peers, media analysis, and review of past issues, the Company selected 10 core issues (3 customer/product issues, 1 employee issues, 2 local community issues, 1 environmental issue, 1 governance issue, and 2 business performance issue) by reflecting interest level of stakeholders and business impacts. An annual survey has also been conducted to evaluate the level of stakeholder interest. KoSIF has reviewed the documents related to the materiality assessment process of the Company, and has found no evidence that material issues were omitted during the process.

- **Responsiveness**

The Company reports response activities and performance for 10 core issues identified as having a significant impact on stakeholders, as well as issues that are not included in the core issues but deemed important. KoSIF has not found any evidence that Company's activities and performance to important stakeholder issues were inappropriately reported.

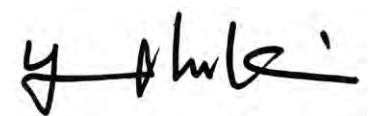
Recommendations

In anticipation that the Company will advance its sustainability management and respond on timely manner to current sustainability issues, and contribute to enhancing the sustainability of stakeholders, KoSIF recommends the following:

- KoSIF recommends that the Company integrates ESG risk management into its existing risk management system.
- Given that institutional pressures and demand of stakeholders for climate change mitigation are rapidly increasing, KoSIF recommends that the company enhances its climate-related risk management and establishes a concrete roadmap and plan to reduce financed emission toward net zero.

July 1st, 2021
Korea Sustainability Investing Forum

Chairman Kim, Young Ho



GRI Index

Classification	Disclosure	Indicators	Page	Note
Universal Standards (GRI 100)				
Organizational Profile	102-1	Name of the organization	9	
	102-2	Activities, brands, products, and services	9, 14-17	
	102-3	Location of headquarters	2, 9	
	102-4	Location of operations	4-5	
	102-5	Ownership and legal form	4	
	102-6	Markets served	4-5, 14-17	
	102-7	Scale of the organization	52-62	
	102-8	Information on employees and other workers	111	
	102-9	Supply chain	11	
	102-10	Significant changes to the organization and its supply chain	-	No significant change
	102-11	Precautionary Principle or approach	78-80	
	102-12	External initiatives	121-123	
	102-13	Membership of associations	125	
Strategy	102-14	Statement from senior decision-maker	6-7	
	102-15	Key impacts, risks, and opportunities	24-27, 78-80	
Ethics and Integrity	102-16	Values, principles, standards, and norms of behavior	8	
	102-17	Mechanisms for advice and concerns about ethics	64-67	
Governance	102-18	Governance structure	70-73	
Stakeholder Engagement	102-40	List of stakeholder groups	110	
	102-41	Collective bargaining agreements	48, 112	
	102-42	Identifying and selecting stakeholders	110	
	102-43	Approach to stakeholder engagement	110	
	102-44	Key topics and concerns raised	108-109	
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	21, 23, 29, 108-109	
	102-47	List of material topics	109	
	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	About This Report	
	102-51	Date of most recent report	About This Report	
	102-52	Reporting cycle	About This Report	
	102-53	Contact point for questions regarding the report	About This Report	
	102-54	Claims of reporting in accordance with the GRI Standards	About This Report	
Management Approach	102-55	GRI content index	118-120	
	102-56	External assurance	116-117	
	103-1	Explanation of the material topic and its Boundary	21, 23, 29, 33, 37, 43	
	103-2	The management approach and its components	21, 23, 29, 33, 37, 43	
	103-3	Evaluation of the management approach	21, 23, 29, 33, 37, 43	

Classification	Disclosure	Indicators	Page	Note
Economic Performance (GRI 200)				
Economic Performance	201-1	Direct economic value generated and distributed	52-62	
	201-2	Financial implications and other risks and opportunities due to climate change	24-27	
Market Presence	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	112	
Indirect Economic Impacts	203-1	Infrastructure investments and services supported	63-66	
	203-2	Significant indirect economic impacts	23	
Anti-corruption	205-1	Operations assessed for risks related to corruption	76-77	100%
	205-2	Communication and training about anti-corruption policies and procedures	74-77	
	205-3	Confirmed incidents of corruption and actions taken	74-77	No incident when contracts with business partners were terminated due to violations related to corruption
Anti-competitive Behavior	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	-	No such case

Classification	Disclosure	Indicators	Page	Note
Environmental Performance (GRI 300)				
Energy	302-1	Energy consumption within the organization	113	
	302-2	Energy consumption outside of the organization	113	
	302-3	Energy intensity	113	
	302-4	Reduction of energy consumption	67, 113	
Water	303-1	Water withdrawal by source	113	
	303-2	Water sources significantly affected by withdrawal of water	-	All from tap water and sewage
Biodiversity	305-1	Direct (Scope 1) GHG emissions	113	
	305-2	Energy indirect (Scope 2) GHG emissions	113	
	305-3	Other indirect (Scope 3) GHG emissions	113	
	305-4	GHG emissions intensity	113	
	305-5	Reduction of GHG emissions	67, 113	
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	113	
Environmental Compliance	307-1	Non-compliance with environmental laws and regulations	-	No such case

Classification	Disclosure	Indicators	Page	Note
Social Performance (GRI 400)				
Employment	401-1	New employee hires and employee turnover	111	
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	45-47	
	401-3	Parental leave	48, 112	
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	112	
	404-1	Average hours of training per year per employee	45-47	Provide fair training opportunity regardless of gender and position
Training and Education	404-2	Programs for upgrading employee skills and transition assistance programs	46-47	
	404-3	Percentage of employees receiving regular performance and career development reviews	112	
	405-1	Diversity of governance bodies and employees	70-73	
Diversity and Equal Opportunity	405-2	Ratio of basic salary and remuneration of women to men	Refer to page 628 in the business report	
	406-1	Incidents of discrimination and corrective actions taken	44	No such case
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	44	No such case
Child Labor	408-1	Operations and suppliers at significant risk for incidents of child labor	44	No such case
Forced or Compulsory Labor	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	44	No such case
Rights of Indigenous Peoples	411-1	Incidents of violations involving rights of indigenous peoples	44	No such case
	412-1	Operations that have been subject to human rights reviews or impact assessments	44	
	412-2	Employee training on human rights policies or procedures	44, 112	
Human Rights Assessment	412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	44	
	413-2	Operations with significant actual and potential negative impacts on local communities	-	No such case
Local Communities	417-2	Incidents of non-compliance concerning product and service information and labeling	-	No such case
	417-3	Incidents of non-compliance concerning marketing communications	-	No such case
Marketing and Labeling	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	-	No such case
Customer Privacy	419-1	Non-compliance with laws and regulations in the social and economic area	-	No such case
Socioeconomic Compliance				

Classification	Disclosure	Indicators	Page	Note
FS Index				
Marketing and Labeling	FS15	Policies for the fair design and sale of financial products and services	37-42	
	FS16	Initiatives to enhance financial literacy by type of beneficiary	29-30	
Product Portfolio	FS7	Monetary value of products and services designed to deliver social benefits for each business line	23	
	FS8	Monetary value of products and services designed to deliver environmental benefits for each business line	23	

UNGC & UN SDGs

UNGC

Mirae Asset Securities 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 Securities	Page
Human Rights	Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and	<ul style="list-style-type: none"> Establish principles for human rights protection, identify human rights issues across the business activities through the human rights impact evaluation, and carry out corrective measures 	43-44
	Principle 2: make sure that they are not complicit in human rights abuses.		
Labour	Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;	<ul style="list-style-type: none"> Build trust between labor and business by operating the Labor Management Council 	43-49
	Principle 4: the elimination of all forms of forced and compulsory labour;	<ul style="list-style-type: none"> Strictly ban and control child labor and forced labor across the business activities 	
	Principle 5: the effective abolition of child labour; and		
Environment	Principle 6: the elimination of discrimination in respect of employment and occupation.	<ul style="list-style-type: none"> Respect freedom and creativity of employees and no discrimination based on academic background, gender, religion, and age 	67, 113
	Principle 7: Businesses should support a precautionary approach to environmental challenges;	<ul style="list-style-type: none"> Provide direct investment, financial advisory, and arrangement services on eco-friendly projects and underwrite the ESG bonds to be issued 	
	Principle 8: undertake initiatives to promote greater environmental responsibility; and	<ul style="list-style-type: none"> Run sewage disposal system within the Mirae Asset Center One building to purify and reuse the waste water used inside the building to minimize environmental impact 	
Anti-corruption	Principle 9: encourage the development and diffusion of environmentally friendly technologies.	<ul style="list-style-type: none"> Activities aimed at reducing energy level and establish green office 	
	Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.	<ul style="list-style-type: none"> Operate internal control system and carry out ethics management activities in order to manage ethics and compliance process. 	74-77

UN SDGs

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

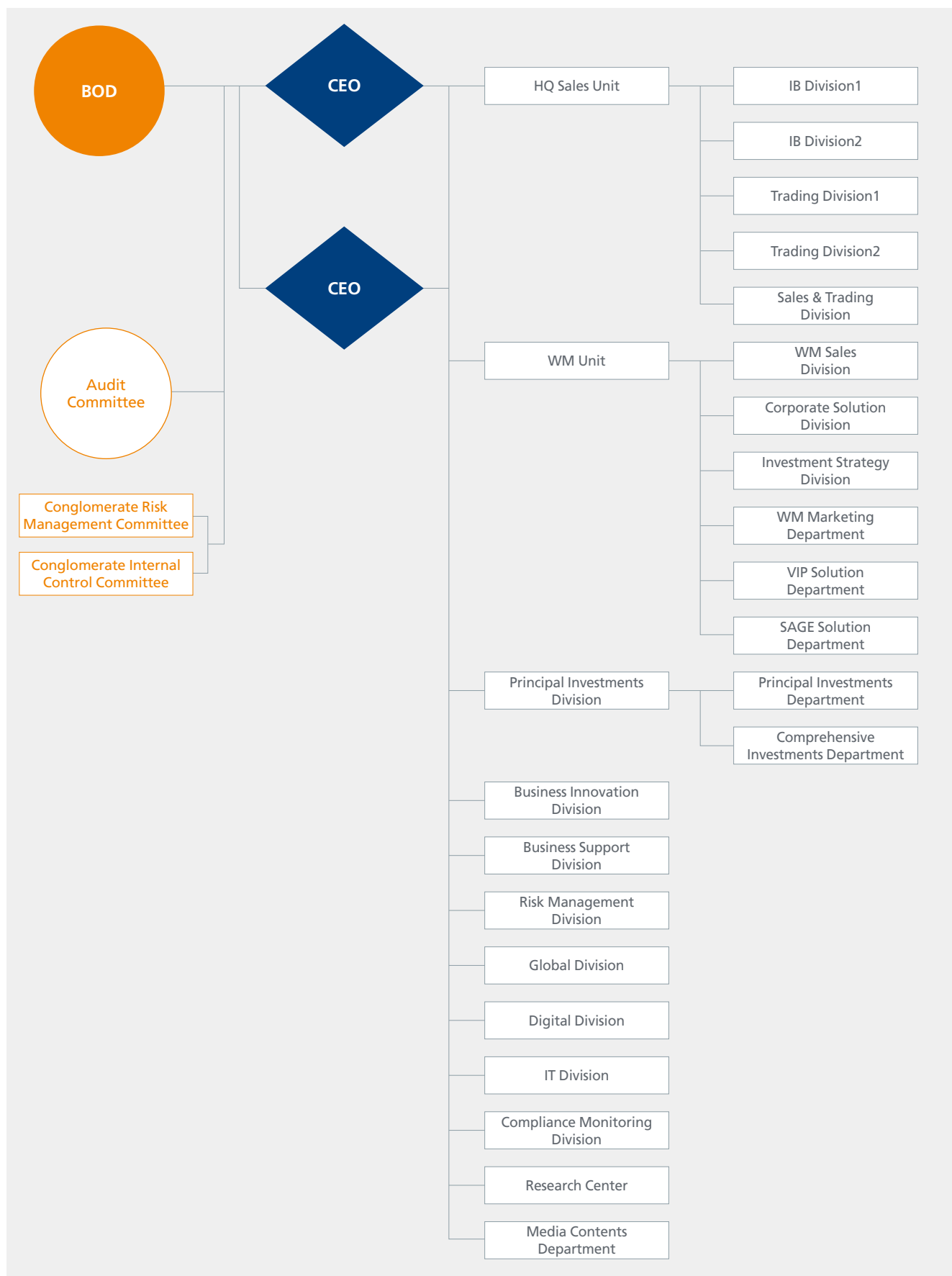
Classification	Goals	Activities of Mirae Asset Securities	Page
Goal 04	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	<ul style="list-style-type: none"> Provide financial education to the financially vulnerable and offering scholarship 	64
Goal 05	Achieve gender equality and empower all women and girls	<ul style="list-style-type: none"> Operate female human rights promotion system and hire women with disrupted career 	43-49
Goal 07	Ensure access to affordable, reliable, sustainable and modern energy for all	<ul style="list-style-type: none"> Participate in renewable energy power generation projects and reducing energy consumption 	23-27
Goal 08	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	<ul style="list-style-type: none"> Socially responsible investment and funds 	23-27
Goal 09	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	<ul style="list-style-type: none"> Invest in SMEs and ventures in the new growth industry 	29-31
Goal 10	Reduce inequality within and among countries	<ul style="list-style-type: none"> Fair employment and performance evaluation 	45
Goal 13	Take urgent action to combat climate change and its impacts	<ul style="list-style-type: none"> Activities to reduce energy consumption and greenhouse gas emissions 	23-27
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	<ul style="list-style-type: none"> Strictly ban and control issues of child and forced labor and human trafficking 	43-44

SASB Index

Asset Management & Custody Activities			
Topic	Code	Accounting METRIC	Response
Transparent Information & Fair Advice for Customers	FN-AC-270a.1	(1) Number and (2) percentage of covered employees with a record of investment-related investigations, consumer-initiated complaints, private civil litigations, or other regulatory proceedings	<ul style="list-style-type: none"> For information related to measures taken on employees, refer to page 682-684 of the 2020 business report.
	FN-AC-270a.2	Total amount of monetary losses as a result of legal proceedings associated with marketing and communication of financial product-related information to new and returning customers ³	<ul style="list-style-type: none"> For information related to major litigations, refer to page 682-684 of the 2020 business report.
	FN-AC-270a.3	Description of approach to informing customers about products and services	<ul style="list-style-type: none"> For information related to financial consumer protection, refer to page 37-42 of this report.
Employee Diversity & Inclusion	FN-AC-330a.1	Percentage of gender and racial/ethnic group representation for (1) executive management, (2) non-executive management, (3) professionals, and (4) all other employees ⁴	<ul style="list-style-type: none"> For information related to employee diversity, refer to page 111 of this report.
Incorporation of Environmental, Social, and Governance Factors in Investment Management & Advisory	FN-AC-410a.1	Amount of assets under management, by asset class, that employ (1) integration of environmental, social, and governance (ESG) issues, (2) sustainability themed investing, and (3) screening	<ul style="list-style-type: none"> For information related to the size of ESG financial positions, refer to page 25 of this report.
	FN-AC-410a.2	Description of approach to incorporation of environmental, social, and governance (ESG) factors in investment and/or wealth management processes and strategies	<ul style="list-style-type: none"> Mirae Asset Securities was the first Korean securities company to establish the Environmental and Social Principles to ensure ESG elements are reflected across the investment practices and identifies non-financial risks including environment, society, and governance in advance. For detailed information, refer to page 21 of this report.
Business Ethics	FN-AC-510a.1	Total amount of monetary losses as a result of legal proceedings associated with fraud, insider trading, anti-trust, anti-competitive behavior, market manipulation, malpractice, or other related financial industry laws or regulations	<ul style="list-style-type: none"> For information related to major litigations, refer to page 682-684 of the 2020 business report.
	FN-AC-510a.2	Description of whistleblower policies and procedures	<ul style="list-style-type: none"> For information on whistleblowers, refer to page 75-76 of this report.

Investment Banking & Brokerage			
Topic	Code	Accounting METRIC	Response
Employee Diversity & Inclusion	FN-IB-330a.1	Percentage of gender and racial/ethnic group representation for (1) executive management, (2) non-executive management, (3) professionals, and (4) all other employees	<ul style="list-style-type: none"> For information related to employee diversity, refer to page 111 of this report.
Incorporation of Environmental, Social, and Governance Factors in Investment Banking & Brokerage Activities	FN-IB-410a.1	Revenue from (1) underwriting, (2) advisory, and (3) securitization transactions incorporating integration of environmental, social, and governance (ESG) factors, by industry	<ul style="list-style-type: none"> Mirae Asset Securities' ESP is applied to all underwriting, arrangement, advisory, investment, and loan activities. For detailed information, refer to page 21 of this report and for the size of ESG financial positions, refer to page 25 of this report.
	FN-IB-410a.2	(1) Number and (2) total value of investments and loans incorporating integration of environmental, social, and governance (ESG) factors, by industry	
	FN-IB-410a.3	Description of approach to incorporation of environmental, social, and governance (ESG) factors in investment banking and brokerage activities	
Business Ethics	FN-IB-510a.1	Total amount of monetary losses as a result of legal proceedings associated with fraud, insider trading, anti-trust, anti-competitive behavior, market manipulation, malpractice, or other related financial industry laws or regulations	<ul style="list-style-type: none"> For information related to major litigations, refer to page 682-684 of the 2020 business report.
	FN-IB-510a.2	Description of whistleblower policies and procedures	<ul style="list-style-type: none"> For information on whistleblowers, refer to page 75-76 of this report.
Professional Integrity	FN-IB-510b.1	(1) Number and (2) percentage of covered employees with a record of investment-related investigations, consumer-initiated complaints, private civil litigations, or other regulatory proceedings	<ul style="list-style-type: none"> For information on employer sanctions, refer to page 682-684 of the 2020 business report.
	FN-IB-510b.2	Number of mediation and arbitration cases associated with professional integrity, including duty of care, by party	<ul style="list-style-type: none"> Any matters related to mediation or settlement in terms of work ethics did not occur in the year covered under this report.
	FN-IB-510b.3	Total amount of monetary losses as a result of legal proceedings associated with professional integrity, including duty of care	<ul style="list-style-type: none"> For information related to major litigations, refer to page 682-684 of the 2020 business report.
Activity Metrics	FN-IB-000.A	(1) Number and (2) value of (a) underwriting, (b) advisory, and (c) securitization transactions * For syndicate transactions, the entity shall include only the value for which it was accountable	<ul style="list-style-type: none"> IPO underwriting: 20 cases, KRW 1,183 billion Lead underwriter for domestic bonds: 84 cases, KRW 8,097 billion Underwriter for rights offering deals: 8 cases, KRW 462 billion Lead underwriter for ABS, 7 cases, KRW 1,299 billion Financial advisory on corporate acquisition and sales: 3 cases, KRW 799 billion

Organization Chart



Membership & Awards

Membership

ISDA	Seoul IB Forum	Korea Economic Research Institute
UN Global Compact	Seoul Financial Forum	Korea Financial Investment Association
Korea Center for International Finance	Capital Market Association of Securities Companies	Korea Money and Finance Association
Korea Financial Telecommunications and Clearings Institute	Korea Federation of Banks	Korea Association of Real Estate Investment Trusts
Financial Security Institute	Association of Compliance Officers	Korea Listed Companies Association
Financial Security Forum	Financial Information Security Council	Korean Pension Association
Financial Security Institute	Korea Association for Chief Financial Officers	Korean Finance Association
Financial Information Business Council	The Institute of Internal Auditors	Korean Securities Association
Korea Chamber of Commerce & Industry	Korea Enterprises Federation	Korea Derivatives Association

Awards

Awards	Category	Date
Yonhap Media Group Finance Awards	IPO	Jan. 01
thebell 2020 Korea Capital Markets the bell League Table Awards	The Best Innovative Bond House of the Year and 5 Other Awards	Jan. 29
Korea Fund Awards by Korea Economy	Best Selling Award	Feb. 04
Korea IB Awards Sponsored by Money Today	The Best M&A Underwriter	Feb. 11
Korea Retirement Pension Awards by Korea Economy	Excellence Award in Securities Sector	Feb. 18
Korea Investment Banking Awards by Korea Economy	Alternative Investment Award	Feb. 25
Thebell 2020 Korea Wealth Management Awards	DLS of the Year, PBS of the Year	Feb. 26
MK Economy, 2020 Securities Awards	M&A Leader Award	Feb. 27
8th Capital Market Awards, Newspim	Best Global Wealth Management	Feb. 27
13th Herald Biz Capital Market Award	Grand Prize in Wealth Management	Apr. 29
Money Today Network, Korea Analyst Awards	Special Award in Global Research	Jun. 11
2020 Best Securities Company & Analyst by Magazine Hankyung	Best Analyst in holdings companies	Jul. 06
2020 Korea Brand Awards	Grand Prize in Enterprises	Sep. 16
AsiaToday, Financial Awards	FSC Governor Award	Sep. 25
Asia Economy, Smart Finance Awards	Grand Prize (FSC Governor Award)	Oct. 14
MTN, 100-Year-Old-Era Finance Awards	Excellence Prize (FSC Governor Award)	Oct. 27
Wow TV, 2020 Global Financial Awards	Kofia Governor Award in Overseas Stock	Oct. 28
Newsis, Securities IT Awards	Securities Company of the Year, for Research	Nov. 24
Seoul Economy, 2020 Korea Securities Awards	Grand Prize (FSC Governor Award)	Nov. 26
Monday Today, Best MTS Awards	Design	Nov. 26
Asia Economy, Capital Investment Grand Prize	Grand Prize (FSC Governor Award)	Dec. 09
EToday, Market Leader of the Year	Grand Prize (Chairman of FSS)	Dec. 10
DJSI Sustainability World Index, Korea Productivity Center	Listed for 9 consecutive years	Dec. 10
12th Aju News, Financial Securities Awards	Grand Prize	Dec. 15
Money Today, 2020 Korea Fund Awards	Best Selling Award	Dec. 15
Hankyung, Financial Consumer Protection Awards	Grand Prize	Dec. 23



APPENDIX

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 77 domestic branches, 3 overseas liaison offices, 12 overseas subsidiaries and 1 overseas investment consulting company as of December 31, 2020.

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, 2020, amounted to ₩4,101,961 million, and major shareholders of the Company as of December 31, 2020, are as follows:

Name of shareholder	Number of Shares	Percentage of ownership (%)
Mirae Asset Capital Co., Ltd.	154,759,000	23.98%
Treasury stock	145,535,874	22.55%
Employee stock ownership association	1,195,278	0.19%
Others	343,826,256	53.28%
	645,316,408	100.00

(2) Subsidiaries

1) Mirae Asset Venture Investment Co., Ltd.

Mirae Asset Venture Investment Co., Ltd. was founded on June 8, 1999, to primarily support the establishment of smaller businesses and registered as an Investment Company for the Establishment of Small and Medium Enterprise 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 company was listed on the Korea Exchange in March 2019. The entity had ₩10,000 million as capital at the time of establishment, and with issuances of new stocks, the entity has ₩46,001 million of common stocks and ₩500 million of preferred stocks of paid-in capital, as of December 31, 2020.

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 permission 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 Brazil 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 on September 21, 2015. The company holds its equity in the amount of ₩127,823 million (book value) which is 99.92% of equity interest as of December 31, 2020.

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 on May 30, 2016. The company holds its equity in the amount of ₩290,783 million (book value) which is correspond to 99.83% of its total shares as of December 31, 2020.

2. Basis of preparation

(1) The application of the accounting standard

The Company and its subsidiaries (the "Group") maintains its accounting records in Korea won and prepares statutory financial statements in the Korean language (Hangul) in accordance with International Financial Reporting Standards as adopted by the Republic of Korea (K-IFRS). The accompanying consolidated financial statement have been condensed, restructured and translated into English from the Korean language financial statements.

Certain information attached to the Korean language financial statements, but not required for a fair presentation of the Group's financial position, financial performance or cash flows, is not presented in the accompanying consolidated financial statements.

The consolidated financial statements of the Group have been prepared in accordance with K-IFRS as prescribed in the Act on External Audits of Stock Companies in Republic of Korea. These are the standards, subsequent amendments and related interpretations issued by the International Accounting Standards Board (IASB) that have been adopted by the Republic of Korea.

The consolidated financial statements were authorized for issue by the Board of Directors on January 28, 2021, which will be submitted for approval to the stockholder's meeting to be held on March 24, 2021.

(2) Basis of measurement

The financial statements have been prepared on a historical cost basis, except for the following:

- Derivative financial instruments
- Financial instruments 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
- Defined benefit liabilities – the net amount of defined benefit obligation

(3) Functional and presentation currency

The Group's consolidated financial statements are presented in Korean won ("₩"), which is also the Company's functional.

(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. If estimates and assumptions based on management's best judgment as of the end of the reporting period differ from the actual environment, these estimates and actual results may differ.

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 and Hedge accounting
- Note 3. (9) – Fair value of financial instruments
- Note 3. (10) – Impairment of financial assets
- Note 3. (14) – Investment property
- Note 3. (18) – Hybrid financial instruments
- Note 3. (20) – Employee benefits
- Note 3. (22) – Provisions
- Note 3. (28) – 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. (20): Employee benefits
- Note 3. (28): Income tax
- Note 11: Financial assets measured at amortized cost
- Note 12: Fair value of financial asset and liability
- Notes 24 and 47: Provisions, commitments and contingencies
- Note 48: Share-based payment

The spread of COVID-19 during 2020 is having a significant impact on domestic and foreign economies. This may have a negative impact on the Group's financial position and financial performance. Significant accounting estimates and assumptions used in preparing consolidated financial statements during the annual reporting period may be adjusted according to changes in uncertainty caused by the COVID-19, and the ultimate impact of the COVID-19 on the Group's business, financial status, and business performance is unpredictable as of December 31, 2020.

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, 2020, the accounting policies applied by the Group in preparing the 2020 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 company 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 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 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 company 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 company.

If the company 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 the company loses control of a subsidiary, the company 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 company 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 No. 1012 Income Taxes* and *K-IFRS No. 1019 Employee Benefits* respectively;
- Liabilities or equity instruments related to 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 No. 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. All other components of non-controlling interests are measured at the fair value at the acquisition date, unless other required by 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 net profit or loss 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; no impairment loss recognized is allocated to any assets forming 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 the Group 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 translation

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 translated into the functional currency at the exchange rate at the reporting date. Non-monetary assets and liabilities that are measured at fair value in a foreign currency are translated into the functional currency at the exchange rate when the fair value was determined. Non-monetary items that are measured based on historical cost in a foreign currency are translated at 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 using the exchange rates at the dates of the transactions. 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 which is recognized as other comprehensive income is transferred to profit or loss as part of the profit or loss on disposal.

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 income in the financial statement, and reclassified to profit or loss at the disposal point 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. 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

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

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 management, as follows:

- The account policy and purpose stated for the portfolio, and operation of these policies 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 is management's compensation determined (e.g., whether 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 assessing 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

Non-derivative financial assets are measured at fair value at initial recognition, and transaction costs directly related to the acquisition of financial assets are added to fair value at initial recognition unless they are measured at fair value through profit or loss.

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 using the effective interest method, 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 election is made at individual financial instruments level. 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 including derivatives 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.

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. When the Group neither transfers nor retains substantially all the risks and rewards of ownership of the financial asset, if the Group does not retain control, the financial asset is derecognised. If the Group retains control, the financial asset is recognised to the extent of its continuing involvement in it and the associated liability is also recognised.

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 and hedging accounting

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 an unrecognized firm commitment, or a component of any such item, that is attributable to 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 the foreign currency risk arising from the foreign operating, the net investment hedge is applied. 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.

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 designated as 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.

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 inputs.

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, such as listed stocks. If quoted prices are not available, fair values determined by specialized external evaluation agency are applied. The fair values determined by valuation techniques are applied to hybrid financial instruments and loans.
Derivatives	The quoted prices are applied to exchange-traded derivatives. And, for the over-the-counter derivatives, fair values determined by external or internal evaluation methods are applied.
Financial assets measured at fair value through other comprehensive income	The quoted prices are applied to securities traded in active markets, such as listed stocks, and if quoted prices are not available, fair values determined by specialized external evaluation agency are applied.
Financial assets measured at amortized cost	The carrying amount is determined to be the fair value. However, as of the end of the reporting period, the fair value measured using the DCF model is applied to large loans with a maturity of one year or more.
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 measured 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

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 whether there is a 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: the expected credit losses that result from default events on a financial instrument that are possible within the 12 months after the end of the reporting period.
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 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 end of the reporting period.

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 evidence for a significant increase in credit risk since initial recognition.

i) Loans

- Loans classified as precautionary of the Financial Supervisory Service's asset soundness classification.
- Loans whose level of default risk exceeds absolute or relative rating due to significant changes in internal credit rating as of the end of the reporting period 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

ii) Write-off of Loans

- Where the inability to recover bonds is objectively proven due to bankruptcy, default, forced execution, abolition of projects, death or disappearance of debtors.
- Where a lawsuit is lost or the legal right to claim (the completed bond of the statute of limitations) is extinguished.
- Where an external institution specializing in bond recovery notifies that it is impossible to recover it.
- Loans for which the principal or interest is overdue for more than 30 days

iii) Debt securities

- Debt securities whose level of default risk exceeds absolutely or relatively high due to significant changes in external credit rating of the end of the reporting period after initial recognition(12-month expected credit losses are recognized if external credit rating corresponding to internal credit rating is qualified investment rating)
- Debt securities 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 A0 or higher to have low credit risk.

The Group defines that a default has occurred if the following situations occur:

- 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 inputs used by the Group for measuring expected credit losses are as follows. These credit risk measurement factors were applied to the default rate by period and the loss given default rate defined in the supervisory regulations, and were adjusted through the reflection of forward-looking information.

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

2) Reflection of forward-looking information

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

(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 period to maturity.

(12) Property and equipment

Property and equipment are initially measured at cost and after initial recognition. 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 except for land 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.

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 Group 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) Lease

The Group assesses whether the contract is, or contains, a lease at the initial contract date. If a contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration, the contract is, or contains, a lease. In determining whether a contract transfers control of the use of the identified asset, the Group uses the definition in *K-IFRS No. 1116 Leases*.

1) Lessee

At the commencement or effective date of the contract that includes the lease element, the Group shall allocate the consideration in the contract to each lease component on the basis of the relative stand-alone price of the lease component and the aggregate stand-alone price of the non-lease component. However, the Company accounts for non-lease elements related to real estate leases as a single lease element by applying a practical simplification that does not separate non-lease elements.

The Group is leasing assets including structures and IT assets, and the terms of the lease are negotiated separately and include various terms and conditions.

The Group recognizes a right-of-use asset and a lease liability at the commencement date. The right-of-use asset is measured at cost at the commencement date, and is measured at cost less any accumulated depreciation, any accumulated impairment losses and adjusted for any remeasurement of the lease liability subsequent to initial recognition. The right-of-use asset that meet the definition of investment property is presented as investment property. The right-of-use asset presented as investment property is measured at cost at the initial recognition date, and is measured according to a cost model same way as the accounting policies the Group is applying to investment property subsequent to initial recognition.

A lease liability is measured at the present value of the lease payments that are not paid at the commencement date at the initial recognition using the interest rate implicit in the lease. If the interest rate cannot be readily determined, the present value use the lessee's incremental borrowing rate. The Group generally uses the Group's incremental borrowing rate.

The lease payments included in the measurement of the lease liability consist of the following amounts:

- Fixed lease payments (including actual fixed lease payments, less incentive to receive)
- Variable lease payments that vary according to an index or a rate (interest rate)
- Amounts expected to be paid by the lessee under a residual value guarantee
- The exercise price under a purchase option that the Group is reasonably certain to exercise
- Amount borne to terminate the lease if the lease period reflects the exercise of the lessee's option to terminate the lease.

After the commencement date, the lease liability increases to reflect interest on the lease liability and reduces to reflect the lease payments made. The lease liability is remeasured, if there is a change in future lease payments resulting from change in an index or a rate, change in the amounts expected to be payable under a residual value guarantee, change in assessment whether the lessee is reasonably certain to exercise an option to extend the lease or to purchase the underlying asset, or not to exercise an option to terminate the lease.

The right-of-use asset is measured at cost comprised of the following items.

- Initial measurement amount of the lease liability
- Lease paid on or before the commencement date of the lease (excluding the lease incentive received)
- Initial direct costs incurred by the lessee
- Estimated costs incurred by the lessee when dismantling and removing the underlying asset, restoring the existing leased properties where the underlying asset is located, or restoring the underlying asset itself

The Group presents right-of-use asset that does not meet the definition of investment property in the consolidated financial statement as property, plant and equipment, and lease liabilities as borrowings.

The Group has elected not to recognize low-value leases as right-of-use assets and lease liabilities. The Group recognizes the cost associated with those leases expense as lease expense on a straight-line basis for the period of a lease.

2) Lessor

The accounting policies applied by the Group as a lessor are not different from those applied before January 1, 2019. The Group applies *K-IFRS No. 1115 Revenue from Contracts with Customers* when allocating the consideration in the contract to the lease component and non-lease component.

(14) 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 its costs less any accumulated depreciated cost and 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. In addition, the Group replaces the investment property with another account or another account with the investment property only if the purpose of use of the asset has changed.

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

Descriptions	Useful lives (years)
Buildings	20 ~ 78

(15) 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 for some intangible assets, 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
Participation fee of open banking	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.

(16) 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.

A previously recognized impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognized. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognized for the asset in prior years. Such reversal is recognized in the statement of profit or loss.

(17) 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 liabilities 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
- For derivatives (except for derivative that is a financial guarantee contract or a designated and effective 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, unless recognizing the effect of change in credit risk in other comprehensive income causes or expands 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

Non-derivative financial liabilities that are not classified as fair value through profit or loss measurement financial liabilities are classified as amortised cost measurement financial liabilities, including Jesus liabilities, borrowing liabilities, bonds, etc. The amortised cost measurement financial liability is measured at fair value less transaction costs directly related to the issue at initial recognition. Subsequently, other financial liabilities are measured at amortised cost using the effective interest method, and interest costs are recognised using the effective interest 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.

(18) 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 without convertible right 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.

(19) 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*

(20) Employee benefits

1) Short-term employee benefits

Short-term employee benefits to be settled within 12 months from the end of the reporting period when the employee provides the relevant services are recognized in profit or loss as the expected amount of payment in exchange for the services. Short-term employee benefits are measured at an amount that is not discounted. If the Group has a legal or constructive obligation to pay as a result of past service and can reliably estimate the amount of the liability, the Group recognises the expected amount of the benefit distribution and bonus as a liability.

2) Retirement benefits

i) **Defined contribution retirement benefit plan** The Group operates a defined contribution retirement benefit plan for employees who meet the qualification requirements. When an employee has rendered service to the entity during a period, the entity 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 entity 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.

ii) **Salary peak system** The Group operates a salary peak system for employees with certain conditions. Employees may choose voluntary retirement instead of the salary peak system, in which case, a certain amount will be paid as an honorary retirement allowance. The Group recognizes the present value at the end of the reporting period as a defined benefit obligation, considering the probability that the employee subject to the salary peak system chooses voluntary retirement instead of the salary peak system. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rate of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms approximating to the terms of the related obligation. Remeasurement gains and losses arising from experience adjustments and changes in actuarial assumptions are recognized in the period in which they occur, directly in other comprehensive income.

Changes in the present value of the defined benefit obligation result from plan amendments or curtailments are recognized immediately in profit or loss as past service costs. The Group recognizes the gain or loss from settlement when settlement of the defined benefit plan occurs.

iii) The Group recognizes the amount to be paid at retirement to part-time employees who are not eligible for retirement pension and the expected amount to be paid related to the salary peak system as defined benefit obligations. As of the end of the reporting period, the defined benefit liability is recognized by deducting the fair value of the plan assets from the present value of the defined benefit obligation.

3) Termination benefits

The Group recognises termination benefits in profit or loss at the earliest date of recognition of costs for restructuring involving payment of termination benefits and when it explicitly confirms that employees will be laid off prior to the usual time of retirement. If an employee is offered voluntary retirement, termination benefits are measured and recognized in profit or loss based on the number of employees who have accepted the offer. If the termination benefit is not settled within twelve months after the end of reporting period, it is discounted.

(21) Share-based payments

The Group indirectly measure the fair value of a good or service on the basis of the fair value of the equity instrument granted, and recognize that amount as an employee benefit expense and equity during the vesting period, if it is not possible to reliably measure the fair value of the good or service. If the vesting condition of the share option is a vesting condition rather than a service or market condition, the recognized employee cost is adjusted to be determined based on the actual quantity of the share option that is ultimately vesting.

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 as employ benefits for the period.

(22) 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.

(23) 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 Group'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.

(24) 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 of financial liability.

When calculating the effective interest rate, the Group 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.

(25) 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 (① Identifying the contract → ② Identifying performance obligations → ③ Determine the transaction price → ④ Allocating the transaction price to performance obligations → ⑤ Recognize revenue upon satisfaction of performance obligation)

(26) 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 hedge accounting)

(27) Dividends

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

(28) Income tax

Income tax expense comprises current and deferred tax. It is recognised in profit or loss except to the extent that it relates to a business combination, or items recognised 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 the Group 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.

(29) 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.

(30) 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 Group 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.

(31) 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 Group recognizes trust fees earned from the trust accounts as income from trust operations.

(32) 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.

(33) 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.

(34) Temporary exemption from the specific requirements of K-IFRS No. 1028

The Group applies *K-IFRS No. 1109*, but its affiliated company Mirae Asset Life Insurance Co., Ltd. applies a temporary exemption from *K-IFRS No. 1109*.

In accordance with *K-IFRS 1028 'Investment in Associates and Joint Ventures'*, when using for the application of the equity method of associates in the consolidated financial statements, requires the use of the financial statements of associate that uses same accounting policies for like transactions and events in similar circumstances. However, when the Group applies the equity method in its consolidated financial statements to Mirae Asset Life Insurance, the Group provide temporary exemption for specific requirement from *K-IFRS 1028 of K-IFRS 1104 'Insurance Contracts'*. As a result, the Group applies *K-IFRS 1109*, but the associate applies the temporary exemption from *K-IFRS 1109*.

1) Mirae Asset Life Insurance Co., Ltd., a associate of the group, shall, in principle, apply *K-IFRS No. 1109 'Financial Instruments'* established on September 25, 2015 for annual periods beginning on or after January 1, 2018. However, if *K-IFRS No. 1104 'Insurance Contracts'* is revised and published to temporarily exempt from *K-IFRS No. 1109*, it will be exempted from *K-IFRS No. 1109 by 2021*.

Mirae Asset Life Insurance Co., Ltd. expects to apply *K-IFRS No. 1109* for annual periods beginning on or after 1 January 2022 as the proportion of insurance-related liabilities exceeds 80% of total liabilities and is not significantly involved in insurance-related activities. However, in response to the International Accounting Standards Commission's resolution in March 2020, the initial application date of *IFRS 17* was postponed to January 1 2023, extending the temporary exemption of *K-IFRS No. 1109* by one year. Consequently, when *K-IFRS No. 1104* is amended, *K-IFRS No. 1109* is expected to be applied for annual periods beginning on or after January 1 2023.

2) Information that can compare entities applying *K-IFRS No. 1109* with insurers applying temporary exemptions

i) The fair value of each financial asset group at the end of the December 31, 2020 and 2019 and the amount of changes in fair value during the reporting period are as follows:

	2020	2019	amount of changes
Financial assets that have a contractual condition in which cash flows consist solely of principal and interest payments on the balance of principal.	₩ 18,176,280	18,499,441	(323,161)
Other Financial Assets	4,000,630	3,544,518	456,112
	₩ 22,176,910	22,043,959	132,951

4. Change in accounting policies

(1) New standards and interpretations adopted

The Group applied the following new accounting standards from January 1, 2020.

1) Amendments to K-IFRS 1103 Business Combination – Definition of a Business

The amendment to KIFRS 1103 Business Combinations clarifies that to be considered a business, an integrated set of activities and assets must include, at a minimum, an input and a substantive process that, together, significantly contribute to the ability to create output. Furthermore, it clarifies that a business can exist without including all of the inputs and processes needed to create outputs. These amendments had no impact on the consolidated financial statements of the Company, but may impact future periods should the Company enter into any business combinations.

2) Amendment of to K-IFRS 1109 Financial Instruments, K-IFRS 1039 Financial Instruments: Recognition and Measurement and K-IFRS 1107 Financial Instruments: Disclosure – Interest Rate Benchmark Reform

The amendments to K-IFRS 1109 and 1039 provide a number of exemptions that apply to all hedging relationships directly affected by interest rate index reform. Hedge relationships shall be affected if the interest rate index reform creates uncertainty about the timing or amount of cash flows based on the hedged item or hedging instrument's interest rate index. Because the Group does not have an interest rate hedging relationship, there is no effect of this amendment on financial statements.

3) Amendments to K-IFRS 1001 Presentation of Financial Statements and K-IFRS 1008 Accounting policies, changes in accounting estimates and errors – Definition of Materiality

The amendments provide a new definition of materiality that states, "information is material if omitting, misstating or obscuring it could reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements, which provide financial information about a specific reporting entity." The amendments made it clear that materiality depends on the nature or scale of the information in financial statements, either individually or in combination with other information. Errors in that information are important if it is reasonably predictable that it will affect the decisions of key financial information users. There is no effect of this amendment on our financial statements.

(2) Statement of non-applied enactment, amendment

A summary of enactment, amendment, which has been enacted or amended, but the effective date is for fiscal year beginning after January 1, 2020, and has not been applied early by the Group, is as follows:

1) Amendments to K-IFRS 1103 Business Combination – Reference to the Conceptual Framework

The objective of these amendments is to ensure that there is no significant change in requirements when changing the Conceptual Framework for Financial Reporting issued in 1989 to a reference to the Conceptual Framework for Financial Reporting issued in 2018. An exception was added to the recognition principle in K-IFRS No.1103 to prevent day 2 gains or losses from liabilities and contingent liabilities that are within the scope of K-IFRS No. 1037 Provisions, Contingent Liabilities, Contingent Liabilities and Contingent Assets or K-IFRS No.2121 Levies. In addition, the guidance on contingent assets in K-IFRS No.1103 was clarified to ensure that the conceptual framework for financial reporting was not affected. The amendments should be applied for annual periods beginning on or after January 1, 2022, and prospective application. The Group does not expect that these amendments have a significant impact on the financial statements.

2) Amendments to K-IFRS 1016 Property, Plant and Equipment - Proceeds before intended use

The purpose of these amendments is to ensure that the net disposal proceeds of goods generated during the period of time to the location and condition required by management to operate the asset in the intended manner is not deducted from the cost. Instead, the entity recognizes in profit or loss the revenue from selling those items and the cost of producing them, respectively.

The amendments should be applied for annual periods beginning on or after January 1 2022 and should be applied retrospectively to property, plant and equipment that may be operated in the earliest period or later by management in the intended manner. The Group does not expect that these amendments have a significant impact on the financial statements.

3) Amendments to K-IFRS 1037 Provisions, Contingent Liabilities and Contingent Assets - Onerous Contracts : Cost of Fulfilling a Contract

This amendment clarifies the costs that an entity should include when assessing whether a contract is a loss-bearing contract or a contract that generates a loss.

The revised Standard applies a "directly related cost approach". Costs directly related to contracts that provide goods or services include both incremental costs and the cost allocation directly related to contract activities. General administrative costs are excluded if they are not directly related to the contract and cannot be explicitly imposed on the counterparty under the contract.

This amendment is applied for the first fiscal year beginning on or after January 1, 2022. The Group will apply all obligations to contracts that have not yet been fulfilled at the beginning of the annual reporting period in which this amended Standard is applied for the first time. The Group does not expect that these amendments have a significant impact on the financial statements.

4) Annual improvements to K-IFRS 2018-2020

i) K-IFRS 1101 First time Adoption of Korean International Financial Reporting Standards – Subsidiaries that are first-time adopters

The revised Standard permits a subsidiary to measure cumulative conversion differences using amounts reported by the parent based on the parent's transition date to IFRSs if the subsidiary chooses to apply paragraph D16(1) of IAS 1. This amendment also applies to associates or joint ventures that choose to apply paragraph D16(1) of the Standard. This amendment should be applied for the first fiscal year beginning on or after January 1, 2022, and earlier application is permitted. The Group does not expect that these amendments have a significant impact on the financial statements.

ii) K-IFRS 1109 Financial Instruments – Fees related to the 10% test for derecognition of financial liabilities The amendments clarify the fees that an entity includes when assessing whether the terms of a new or modified financial liability are substantially different from those of an existing financial liability. These fees only include fees paid or received between creditors and debtors and fees paid or received by creditors and debtors on behalf of each other. The entity applies the amendments to financial liabilities that are changed or exchanged after the annual period in which the amendments are first applied. These amendments shall be applied for annual periods beginning on or after January 1, 2022, and earlier application is permitted. The Group will apply this amendment to financial liabilities that are changed or exchanged after the first annual period beginning after the effective date. The Group does not expect that these amendments have a significant impact on the financial statements.

5) Amendments to K-IFRS 1116 Lease – Practical expedient for COVID-19 - Related Rent Exemption, Concessions, Suspension

On 28 May 2020, the International Accounting Standards Board (IASB) issued a rental agreement relating to IFRS 16 _Leases_ - Coronavirus Infectious Diseases-19. The amendments eased the lessee's application of lease change accounting for lease changes in IFRS 16 _Leases_ for rent discounts, etc. as a direct result of the Covid-19 pandemic. As a practical expedient, the lessee may not evaluate whether the rent discount incurred in connection with Covid-19 is a lease change. The lessee who makes this choice should account for changes in lease payments due to rent discounts, etc. consistent with the way the IFRS sets out if those changes are not lease changes. This amendment will be applied for annual periods beginning on or after June 1, 2020, and earlier application is permitted. The Group does not expect that these amendments have a significant impact on the financial statements.

6) Amendments to K-IFRS 1109 Financial Instruments, K-IFRS 1039 Financial Instruments: Recognition and Measurement, K-IFRS 1107 Financial Instruments: Disclosure, K-IFRS 1104 Insurance Contracts and K-IFRS 1116 Lease – Interest Rate Benchmark Reform

When replacing an interest rate indicator for a financial instrument that is measured at amortized cost in relation to the reform of the interest rate index.

It includes exceptions, such as adjusting the effective interest rate rather than the carrying amount and allowing hedge accounting to continue uninterrupted even if an interest rate indicator replacement occurs in the hedging relationship. This amendment shall take effect for annual periods beginning on or after January 1 2021, and earlier application is permitted. The Group is analyzing the impact of the amendments on the financial statements.

5. Risk management

(1) Risk management organizations and its policies

The Group established and implemented the Risk Management Regulations and General Regulations for Risk Management in order to establish an enterprise-wide and comprehensive risk management system. For a more thorough risk management, the Group implemented Inherent Asset Management Rules, Customer Asset Management Rules, Credit Offer Risk Management Rules for Customers, Management Guidelines and Issuance for Derivatives Combined Securities and Derivative Combined Bonds, Real-estate PF Risk Management Guidelines, and Risk Management Guidelines for Overseas Local Subsidiaries. In addition, for the purpose of ensuring the stability of investment and credit offer and the efficiency of post-management, the Group implemented Regulations for General Evaluation, Rules for Evaluation, Rules for Post-management, and Guidelines for Estimating of Loan Collection.

The Risk Management Regulations stipulate the composition, meetings, and decisions of the Risk Management Committee, the highest decision-making body related to risk management of the Group. They also stipulate the composition, progress and operation of the Risk Management Committee and Investment Review Committee, which are set up to handle details and mandates of the Risk Management Committee's resolutions. The General Rules for Risk Management were enacted to ensure asset soundness and management stability through compliance with the Financial Services Commission's Financial Investment Business Regulations and effective management of risks of the Group and efficient allocation of investment resources held by the Group. The General Regulations for Review were established to manage the investment position of the Group in a stable manner by setting necessary procedures for matters related to equity investment, acquisition and credit offer, and follow-up management.

The General Regulations for Risk Management established for practical application of the matters set out in the risk management related regulations stipulate the management procedures for the risk management policies of the Group to be implemented smoothly for market risks, credit risks, liquidity risks, and operational risks. In addition, inherent Asset Management Rules, Customer Asset Management Rules, Management Guidelines and Issuance for Derivatives Combined Securities and Derivative Combined Bonds, Real-estate PF Risk Management Guidelines, and Risk Management Guidelines for Overseas Local Subsidiaries specify details of risk management practices not included in the Risk Management Regulations. Moreover, for the purpose of ensuring the stability of investment position, the Post-management Rules and Guidelines for Calculating the Estimates for Collection that are implemented for practical application of matters set out in the General Regulations for Review, specify the details of review and post-management measures.

1) Risk Management Committee (the "Committee")

The Committee, comprised of three or more members of the Board of Directors including more than half of outside directors, heads the Group's risk management structure. The Committee sets up 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 General Regulations for Risk management, 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 and the Committee chairman is selected from among outside directors of the Committee members. The chairman 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) Risk Management Operating Committee

The Risk Management Operating Committee handles practical agendas and mandates in relation to risk management of unique and customer assets, and reports the results and major status to the Committee. The Risk Management Operating Committee is held on a regular basis (if necessary, frequently) at least once every quarter, and the Risk Management Operating Committee members are separately selected by the Committee from among the key positions in the Group, including the Risk Management Officer (CRO).

3) Investment Review Committee

The Investment Review Committee is responsible for handling important matters and mandates in relation to the investment proposal review, and reporting the results and major status to the Committee. The Investment Review Committee is held at least once every quarter (if necessary, frequently), and members of the Investment Review Committee are separately selected by the Committee from among the major positions in the Group, including the Risk Management Officer (CRO).

4) Chief Risk Officer ("CRO")

Chief Risk Officer (CRO) acts as the risk management officer under the Governance Act and oversees risk management across the enterprise. In addition, it performs roles such as enforcing risk management policy, reviewing resource allocation, and strengthening risk management capabilities, and conducts tasks delegated by the Committee or the Operating Committee.

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 Operating Committee through appropriate procedures and systems, plans and controls all risk management-related issues and supports the operation of the Risk Management Committee or the Operating Committee. In addition, the Group's asset management status and overall risk management are monitored and regularly reported to the Committee, the Operating Committee and management.

(2) Credit risk management

Credit risk refers to the possibility of asset management losses that the counterparty suffers from failure to meet its obligation to pay or repay principal and interest. 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.

Risk Management Operating Committee sets appropriate level of credit exposure limit considering counterparty's credit rate depending on the type of business. In addition, the Investment Review Headquarters, which specializes in assessment, manages risks to our investment position by operating a preliminary assessment process for investment-related transactions, and the Investment Management Team monitors the overall execution and recovery of investments.

The Risk Management Department reports total exposure of the Group's credit risk to the management on a regular basis reports. 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 concentrations.

1) Maximum exposure to credit risk

The maximum exposure to credit risk as of December 31, 2020 and 2019 is as follows:

		2020	2019
Financial assets measured at fair value through profit or loss	Debt securities and other financial instruments (*1)	₩ 26,910,090	33,908,090
	Derivative assets	1,409,698	986,399
	Hybrid financial instruments	655,717	602,400
		28,975,505	35,496,889
Financial assets measured at fair value through other comprehensive income	Financial assets measured at fair value through other comprehensive income(*1)	9,708,282	8,475,709
Financial assets measured at amortized cost	Deposits	7,721,146	5,618,936
	Loans and receivables(*2)	51,337,348	64,711,340
	Other financial assets(*2)	11,738,095	4,945,810
		70,796,589	75,276,086
		109,480,376	119,248,684
Guarantees and commitments	Purchase agreement	1,360,489	1,341,218
	Payment guarantees	446,410	946,292
	Unused credit line and etc.	1,965,374	1,548,986
		3,772,273	3,836,496
		₩ 113,252,649	123,085,180

(*1) Equity securities are excluded.

(*2) Deferred loan originated costs, fees, present value discounts and allowance for credit loss are considered.

2) 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, 2020 and 2019 is as follows:

Grade	2020				
	Financial assets measured at fair value through profit or loss		Financial assets measured at fair value through other comprehensive income	Total	
	Financial assets measured at fair value through profit or loss(*1)	Financial assets designated as measured at fair value through profit or loss			
(1) AAA ~ A	₩	17,246,938	-	9,532,162	26,779,100
(2) A- ~ BBB		148,923	-	176,120	325,043
(3) Lower than BBB-		61,639	-	-	61,639
(4) Unrated		721,671	-	-	721,671
	₩	18,179,171	-	9,708,282	27,887,453

(*1) Amounts of financial assets measured at fair value through profit or loss excluded from credit quality disclosure are other debt instruments ₩8,730,918 million, derivative assets ₩1,409,698 million, and hybrid financial instruments ₩655,717 million as of December 31, 2020.

Grade	2019				
	Financial assets measured at fair value through profit or loss		Financial assets measured at fair value through other comprehensive income	Total	
	Financial assets measured at fair value through profit or loss(*1)	Financial assets designated as measured at fair value through profit or loss			
(1) AAA ~ A	₩	19,612,192	-	8,208,044	27,820,236
(2) A- ~ BBB		240,186	-	267,665	507,851
(3) Lower than BBB-		33,215	-	-	33,215
(4) Unrated		475,038	-	-	475,038
	₩	20,360,631	-	8,475,709	28,836,340

(*1) Amounts of financial assets measured at fair value through profit or loss excluded from credit quality disclosure are other debt instruments ₩13,547,459 million, derivative assets ₩986,399 million, and hybrid financial instruments ₩602,400 million as of December 31, 2019.

ii) Credit quality of debt securities based on external credit rating agencies' evaluation results as of December 31, 2020 and 2019 are as follows:

<Grade Classification>

Domestic NICE P&I	Global		
	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.

3) Credit ratings of Loan and receivables as of December 31, 2020 and 2019 are as follow:

Grade	2020				
	12-month ECL	Lifetime ECL		Total	
		Not Impaired	Impaired		
(1) AAA ~ A	₩	143,782	-	-	143,782
(2) A- ~ BBB		457,987	-	-	457,987
(3) Lower than BBB-		227,635	67,075	25,297	320,007
(4) D		-	-	75,630	75,630
	₩	829,404	67,075	100,927	997,406

Amounts of loans and receivables excluded from credit quality are call loans of ₩405 million, broker's loans of ₩11,530,496 million, securities purchased under resale agreements of ₩38,830,191 million, and receivables of ₩55,924 million as of December 31, 2020. Credit quality is based on internal credit ratings, which were applied to external credit ratings of external credit rating agencies.

Grade	2019			
	12-month ECL	Lifetime ECL		Total
		Not Impaired	Impaired	
(1) AAA ~ A	₩ 226,551	-	-	226,551
(2) A- ~ BBB	710,535	-	-	710,535
(3) Lower than BBB-	290,733	-	-	290,733
(4) D	-	-	41,656	41,656
	₩ 1,227,819	-	41,656	1,269,475

Amounts of loans and receivables excluded from credit quality are call loans of ₩1,417 million, broker's loans of ₩9,021,795 million, securities purchased under resale agreements of ₩54,420,500 million, and receivables of ₩56,758 million as of December 31, 2019. Credit quality is based on internal credit ratings, which were applied to external credit ratings of external credit rating agencies.

4) Credit ratings of debt securities measured at fair value through other comprehensive income as of December 31, 2020 and 2019 are as follow:

Grade	2020			
	12-month ECL	Lifetime ECL		Total
		Not Impaired	Impaired	
(1) AAA ~ A	₩ 9,532,162	-	-	9,532,162
(2) A- ~ BBB	150,075	26,045	-	176,120
(3) Lower than BBB-	-	-	-	-
(4) Unrated	-	-	-	-
	₩ 9,682,237	26,045	-	9,708,282

Grade	2019			
	12-month ECL	Lifetime ECL		Total
		Not Impaired	Impaired	
(1) AAA ~ A	₩ 8,208,044	-	-	8,208,044
(2) A- ~ BBB	267,665	-	-	267,665
(3) Lower than BBB-	-	-	-	-
(4) Unrated	-	-	-	-
	₩ 8,475,709	-	-	8,475,709

5) Credit ratings of financial guarantees, other guarantees and unused credit line as of December 31, 2020 and 2019 are as follow:

Grade	2020		
	12-month ECL	Lifetime ECL	Total
<Purchase agreement>			
(1) AAA ~ A	₩ 1,360,489	-	1,360,489
(2) A- ~ BBB	-	-	-
(3) Lower than BBB-	-	-	-
(4) Unrated	-	-	-
	₩ 1,360,489	-	1,360,489
<Guarantee(including loan commitment)>			
(1) AAA ~ A	₩ 126,963	-	126,963
(2) A- ~ BBB	180,944	10,000	190,944
(3) Lower than BBB-	74,103	54,400	128,503
(4) Unrated	-	-	-
	₩ 382,010	64,400	446,410

Grade	2020		
	12-month ECL	Lifetime ECL	Total
<Unused credit lines and etc.>			
(1) AAA ~ A	₩ 58,489	-	58,489
(2) A- ~ BBB	105,679	-	105,679
(3) Lower than BBB-	84,940	19,110	104,050
(4) Unrated	1,697,156	-	1,697,156
	₩ 1,946,264	19,110	1,965,374

(*) No financial guarantees, other guarantees and unused credit line were impaired as of December 31, 2020.

Grade	2019		
	12-month ECL	Lifetime ECL	Total
<Purchase agreement>			
(1) AAA ~ A	₩ 1,341,218	-	1,341,218
(2) A- ~ BBB	-	-	-
(3) Lower than BBB-	-	-	-
(4) Unrated	-	-	-
	₩ 1,341,218	-	1,341,218
<Guarantee(including loan commitment)>			
(1) AAA ~ A	₩ 375,136	-	375,136
(2) A- ~ BBB	350,770	-	350,770
(3) Lower than BBB-	195,386	25,000	220,386
(4) Unrated	-	-	-
	₩ 921,292	25,000	946,292
<Unused credit lines and etc.>			
(1) AAA ~ A	₩ 138,929	-	138,929
(2) A- ~ BBB	586,405	-	586,405
(3) Lower than BBB-	168,359	-	168,359
(4) Unrated	655,293	-	655,293
	₩ 1,548,986	-	1,548,986

(*) No financial guarantees, other guarantees and unused credit line were impaired as of December 31, 2019.

(3) Market risk management

Market risk refers to the possibility of losses 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 Group 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 Group 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 regular 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, 2020 and 2019 are as follows:

Factors	2020	2019
Foreign currencies	₩ 297,954	239,521
Interest rates	428,594	502,124
Stock prices	1,230,825	813,396
Commodities	21,367	7,890
Collective investment securities	1,496,496	1,441,882
Options	114,048	141,972
Total risk	₩ 3,589,284	3,146,785

(4) Liquidity risk management

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 Group operates a liquidity risk management system and uses liquidity gap and liquidity ratios as key indicators. The Group reports the liquidity risk status on regular 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, 2020 and 2019 are as follows:

	2020						
	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 measured at fair value through profit or loss	₩ 773,179	-	-	-	-	-	773,179
Deposits due to customers	12,335,973	-	-	-	-	-	12,335,973
Borrowings(*1)	66,379,149	203,004	601,109	652,761	296,118	689,907	68,822,048
Lease liabilities	13,050	15,767	11,926	10,417	89,202	991,512	1,131,874
Debentures(*2)	1,491,908	393,905	483,224	372,565	5,033,785	655,669	8,431,056
Other financial liabilities(*3)	11,786,723	1,072	469	2,547	8,043	5,050	11,803,904
	₩92,779,982	613,748	1,096,728	1,038,290	5,427,148	2,342,138	103,298,034

	2019						
	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 measured at fair value through profit or loss	₩ 795,898	-	-	-	-	-	795,898
Deposits due to customers	5,955,596	-	-	-	-	-	5,955,596
Borrowings(*1)	82,864,823	1,701,155	67,296	266,359	605,776	671,148	86,176,557
Lease liabilities	13,515	12,938	11,877	11,653	110,524	1,073,407	1,233,914
Debentures(*2)	1,789,588	107,950	26,774	45,227	3,944,155	740,135	6,653,829
Other financial liabilities(*3)	4,818,831	3,194	565	1,281	234,925	50	5,058,846
	₩96,238,251	1,825,237	106,512	324,520	4,895,380	2,484,740	105,874,640

(*1) The cash flow of interest is excluded because it cannot be reliably estimated.

(*2) Amounts with maturity of more than three months include cash flows of both the principal and interests.

(*3) Financial guarantee liabilities are excluded in other financial liabilities.

ii) The Group's off-balance sheet items by residual contractual maturity classified as of December 31, 2020 and 2019 are as follows:

	2020		
	Within 3 months	Over 3 months	Total
Asset-backed commercial paper and asset backed short-term bond purchase agreement	₩ 1,360,489	-	1,360,489
Guarantees(including loan commitment)	446,410	-	446,410
Unused credit line and etc.	1,965,374	-	1,965,374
	₩ 3,772,273	-	3,772,273

	2019		
	Within 3 months	Over 3 months	Total
Asset-backed commercial paper and asset backed short-term bond purchase agreement	₩ 1,341,218	-	1,341,218
Guarantees(including loan commitment)	946,292	-	946,292
Unused credit line and etc.	1,548,986	-	1,548,986
	₩ 3,836,496	-	3,836,496

The balances of purchase agreements, guarantee(including loan commitment) 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 payment 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.

A purchase agreement is when an asset securitization special purpose company (Asset-Backed Securitization Act and companies under the Commercial Law) purchases assets subject to securitization such as securities and loans, and issues or refund commercial papers and electronic short-term bonds based on these purchases. This is a purchase agreement to guarantee that the Group will purchase the commercial papers and electronic short-term bonds of the issuer in case all or part of them are not sold on 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, 2020 and 2019 are as follows:

	2020						
	Within 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 to 5 years	Over 5 years	Total
Stock	₩ 476,607	40,373	3,664	97,624	20,855	-	639,123
Interest rate	30,374	33,841	6,196	7,374	181,419	170,261	429,465
Currency	225,509	107,902	89,069	29,629	143,474	-	595,583
Credit	-	79	-	-	154	-	233
Commodity	-	-	-	-	1,637	-	1,637
Others	726	94	248	-	9,853	8,707	19,628
Derivative-linked securities in short position	552,853	531,530	374,522	5,789,105	5,702,434	1,007,636	13,958,080
	₩ 1,286,069	713,819	473,699	5,923,732	6,059,826	1,186,604	15,643,749

	2019						
	Within 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 to 5 years	Over 5 years	Total
Stock	₩ 176,948	16,630	68,271	67,305	19,074	-	348,228
Interest rate	8,572	4,636	5,437	9,723	195,947	175,393	399,708
Currency	154,473	52,706	38,354	10,942	71,126	-	327,601
Credit	-	291	521	2,049	3,957	-	6,818
Commodity	380	-	-	-	251	-	631
Others	-	-	-	-	6,236	14,440	20,676
Derivative-linked securities in short position	234,444	600,628	137,347	4,976,765	7,054,782	1,818,277	14,822,243
	₩ 574,817	674,891	249,930	5,066,784	7,351,373	2,008,110	15,925,905

(*1) Exchange-traded derivative is excluded because the settlement of the transactions takes place by means of the trading margins within a few days.

(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 Group 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.

Risk control self-evaluation is regularly performed to check the level of risk subject to management by department, and to prepare countermeasures to focus on risk subject to assessment, and to collect all financial loss data from the company. In addition, the Group establishes and operates an operational risk management system to calculate the operation VaR based on the internal model.

(6) Capital management

The Group calculates the net capital ratio, an indicator of capital adequacy, based on financial statements according to the Financial Investment Business Regulations. In order to maintain the net capital ratio required by the Financial Investment Business Regulations, the Group manages net capital for operations, including total risk and equity capital, and complies with the net capital ratio (100% or more) required by the Financial Investment Business Regulations.

The Group's Net Capital Ratio (NCR) as of December 31, 2020 and 2019 are 2,034.07% and 1,728.11%, respectively, exceeding the standard for management improvement measures.

(7) Offsetting financial assets and financial liabilities

The Group applies master netting agreements of similar agreement to derivatives and repurchase agreement transactions.

1) Categories of financial assets that netting agreements of similar agreement apply to as of December 31, 2020 and 2019 are as follows:

Types of financial assets	2020					
	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 instruments	Financial collaterals (cash collateral included)	
Derivative financial assets (*2)	₩ 1,313,859	-	1,313,859	854,595	188,316	270,948
Accounts receivable (*3)(*4)	20,133,561	9,513,422	10,620,139	727,880	-	9,892,259
Securities sold under repurchase agreements (*4)	18,246,941	-	18,246,941	17,142,358	-	1,104,583
Securities purchased under resale agreements (*4)	60,494,629	21,664,438	38,830,191	1,207,522	37,622,669	-
Assets pledged as collateral for securities lending and borrowing (*4)	17,261,066	-	17,261,066	1,251,789	4,190,964	11,818,313
	₩ 117,450,056	31,177,860	86,272,196	21,184,144	42,001,949	23,086,103

Types of financial assets	2019					
	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 instruments	Financial collaterals (cash collateral included)	
Derivative financial assets (*2)	₩ 905,844	-	905,844	673,333	42,125	190,386
Accounts receivable (*3)(*4)	7,565,110	3,549,318	4,015,792	907,567	-	3,108,225
Securities sold under repurchase agreements (*4)	19,997,826	-	19,997,826	18,906,095	-	1,091,731
Securities purchased under resale agreements (*4)	80,102,962	25,682,462	54,420,500	-	54,420,500	-
Assets pledged as collateral for securities lending and borrowing (*4)	16,802,746	-	16,802,746	1,679,393	3,950,444	11,172,909
	₩ 125,374,488	29,231,781	96,142,707	22,166,388	58,413,069	15,563,251

(*1) The Group has the right of offsetting only in case of default, insolvency and bankruptcy. Accordingly, transactions that do not meet the offset criteria are presented separately without offsetting in the consolidated statement of financial position.

(*2) Some of the over-the-counter derivatives are traded in accordance with the collective offset agreement of ISDA(International Swaps and Derivatives Association). Under the agreement, in the event of a credit event, such as a bankruptcy of a counterparty, all derivatives transactions with that counterparty will be terminated. At the time of termination, the parties will offset the amount paid or payable for each transaction, and one party will pay a single amount to the other party.

(*3) The gross amount was recognised as trade receivables and payables in relation to transactions between the exchange, clients and other financial institutions. However, among the trade receivables and payables related to the exchange and the central counter party, of transactions of the same kind of products meet the offsetting requirements under K-IFRS are included in the statement of consolidated financial position as net amounts.

(*4) The Group is subject to an master netting agreement similar to the ISDA collective offsetting agreement. In the case of the transaction of repurchase agreements (RP) of some subsidiaries, securities purchased and sold under repurchase agreements under RP incurred in relation to the Exchange and Central Counterparty are presented in net amounts in the consolidated statement of financial position if the offsetting criteria are met under K-IFRS such as transaction with common counterparty etc.

2) Categories of financial liabilities that master netting agreements of similar agreement apply to as of December 31, 2020 and 2019 are as follows:

Types of financial liabilities	2020					
	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 instruments	Financial collaterals received (cash collateral included)	
Derivative financial liabilities (*2)	₩ 1,622,587	-	1,622,587	854,595	593,992	174,000
Accounts payables (*3),(*4)	20,003,117	9,513,422	10,489,695	727,880	-	9,761,815
Securities sold under repurchase agreements (*4)	77,603,629	21,664,438	55,939,190	17,945,089	37,994,101	-
liabilities pledged as collateral for securities lending and borrowing (*4)	3,968,766	-	3,968,766	478,610	3,490,156	-
Securities sold (*4)	773,179	-	773,179	773,179	-	-
	₩ 103,971,278	31,177,860	72,793,417	20,779,353	42,078,249	9,935,815

Types of financial liabilities	2019					
	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 instruments	Financial collaterals received (cash collateral included)	
Derivative financial liabilities (*2)	₩ 1,037,096	-	1,037,096	673,333	249,908	113,855
Accounts payables (*3)(*4)	7,564,642	3,549,318	4,015,324	907,567	-	3,107,757
Securities sold under repurchase agreements (*4)	99,309,893	25,682,461	73,627,432	18,906,095	54,721,337	-
liabilities pledged as collateral for securities lending and borrowing (*4)	4,478,129	-	4,478,129	1,019,966	3,458,163	-
Securities sold (*4)	795,898	-	795,898	795,898	-	-
	₩ 113,185,658	29,231,779	83,953,879	22,302,859	58,429,408	3,221,612

(*1) The Group has the right of offsetting only in case of default, insolvency and bankruptcy. Accordingly, transactions that do not meet the offset criteria are presented separately without offsetting in the consolidated statement of financial position.

(*2) Some of the over-the-counter derivatives are traded in accordance with the collective offset agreement of ISDA(International Swaps and Derivatives Association). Under the agreement, in the event of a credit event, such as a bankruptcy of a counterparty, all derivatives transactions with that counterparty will be terminated. At the time of termination, the parties will offset the amount paid or payable for each transaction, and one party will pay a single amount to the other party.

(*3) The gross amount was recognised as trade receivables and payables in relation to transactions between the exchange, clients and other financial institutions. However, among the trade receivables and payables related to the exchange and the central counter party, of transactions of the same kind of products meet the offsetting requirements under K-IFRS are included in the statement of consolidated financial position as net amounts.

(*4) The Group is subject to a master netting agreement similar to the ISDA collective offsetting agreement. In the case of the transaction of repurchase agreements (RP) of some subsidiaries, securities purchased and sold under repurchase agreements under RP incurred in relation to the Exchange and Central Counterparty are presented in net amounts in the consolidated statement of financial position if the offsetting criteria are met under K-IFRS such as transaction with common counterparty etc.

6. Transfers of financial assets

(1) Transfers of financial assets that are not derecognized entirely, because those securities are to be buy-back at a fixed price, as of December 31, 2020 and 2019 are as follows:

Description	2020	2019
Transferred financial assets		
Financial assets measured at fair value through profit or loss	₩ 9,514,515	14,234,654
Financial assets measured at fair value through other comprehensive income	6,854,540	5,763,172
	₩ 16,369,055	19,997,826
Related liabilities		
Securities sold under repurchase agreements	₩ 15,326,757	18,906,095

(2) The ownership of the securities is transferred when the Group lends securities held by the Group, however, the securities are returned at the expiration of the period of the loan, hence the Group continues to recognize the entire loaned securities as most of the risks and rewards of the securities are retained. Details of transferred financial assets whose total loaned securities are not derecognized are stated in Note 47.

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 and corporate customers or 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
PI & 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, 2020 are as follows:

	2020					
	WM	IB	Sales & Trading	PI & others	Intersegment eliminations	Total
Operating revenue	₩ 1,429,184	795,761	14,109,163	588,376	(80,814)	16,841,670
Interest revenue	361,490	100,508	1,236,789	(158,162)	7,765	1,548,390
Non-interest revenue	1,067,694	695,253	12,872,374	746,538	(88,579)	15,293,280
Operating expense	(838,219)	(658,981)	(13,551,186)	(674,176)	(1,989)	(15,724,551)
Interest expense	(98,168)	(155,583)	(906,581)	210,150	3,434	(946,748)
Non-interest expense	(740,051)	(503,398)	(12,644,605)	(884,326)	(5,423)	(14,777,803)
Operating profit(loss)	590,965	136,780	557,977	(85,800)	(82,803)	1,117,119
Non-operating income(loss), net	(295)	(46,031)	242	(183,208)	252,391	23,099
Profit before tax expense	590,670	90,749	558,219	(269,008)	169,588	1,140,218
Income tax expense	(158,464)	(24,346)	(149,758)	72,169	(45,496)	(305,895)
Profit (Loss) for the year	₩ 432,206	66,403	408,461	(196,839)	124,092	834,323

Details of the operating results of reportable segments for the year ended December 31, 2019 are as follows:

	2019					
	WM	IB	Sales & Trading	PI & others	Intersegment eliminations	Total
Operating revenue	₩ 933,732	892,894	15,755,726	(2,036,206)	(109,230)	15,436,916
Interest revenue	309,483	158,270	3,028,655	(361,754)	518	3,135,172
Non-interest revenue	624,249	734,624	12,727,071	(1,674,452)	(109,748)	12,301,744
Operating expense	(826,106)	(541,852)	(15,450,929)	2,075,054	34,871	14,708,962)
Interest expense	(129,411)	(114,704)	(2,725,962)	391,026	1,008	(2,578,043)
Non-interest expense	(696,695)	(427,148)	(12,724,967)	1,684,028	33,863	12,130,919)
Operating profit(loss)	107,626	351,042	304,797	38,848	(74,359)	727,954
Non-operating income(loss), net	(477)	5,295	485	156,890	3,575	165,768
Profit before tax expense	107,149	356,337	305,282	195,738	(70,784)	893,722
Income tax expense	(27,512)	(91,493)	(78,384)	(50,258)	18,175	(229,472)
Profit (Loss) for the year	₩ 79,637	264,844	226,898	145,480	(52,609)	664,250

(*) Due to the reorganization of the Company in 2020, the segment information items of the previous period has been restated

(3) Assets and liabilities of reportable segments

Details of the assets and liabilities of reportable segments as of December 31, 2020 and 2019 are as follows:

	2020					
	WM	IB	Sales & Trading	PI & others	Intersegment eliminations	Total
Assets	₩ 7,610,848	6,607,068	84,992,674	40,655,972	(8,919,632)	130,946,930
Liabilities	12,587,102	1,460,940	77,095,861	30,209,602	247,145	121,600,650

	2019					
	WM	IB	Sales & Trading	PI & others	Intersegment eliminations	Total
Assets	₩ 4,232,375	7,172,845	96,699,968	33,868,059	(8,823,450)	133,149,797
Liabilities	5,827,623	1,485,686	88,387,877	28,016,340	238,636	123,956,162

(*) Due to the reorganization of the Company in 2020, the segment information items of the previous period has been restated

(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, 2020 and 2019.

(5) Geographical information

Of the Group's revenue (interest income and non-interest income) from domestic customers for the years ended December 31, 2020 and 2019 amounted to ₩15,313,094 million and ₩12,820,473 million, respectively, and revenue from foreign customers amounted to ₩1,528,576 million and ₩2,616,443 million, respectively. The Group's non-current assets (investment in associates, investment properties, property and equipment and intangible assets) as of December 31, 2020 and 2019 are ₩2,355,132 million and ₩2,348,679 million, respectively, for the Company and domestic subsidiaries, and ₩2,524,845 million and ₩2,384,408 million, respectively, for foreign subsidiaries.

8. Restricted use of financial assets

Details of restricted use of financial assets as of December 31, 2020 and 2019 are as follows:

	2020	2019	Descriptions
Financial assets measured at fair value through profit or loss			
Reserve for claims of customers' deposits (trust)(*)	₩ 8,399,152	4,195,048	Regulation on Financial Investment Business
Financial assets measured at amortized cost			
Reserve for claims of customers' deposits(*)	2,511,660	1,234,101	Regulation on Financial Investment Business
Deposits for exchange- traded derivatives	475,620	312,559	Margin on derivative transaction and others, etc.
Guarantee deposit for account opening	42	42	Guarantee deposit for account opening
Time deposit, etc	4,398,191	3,722,428	Derivatives and collateral on payment and settlement, etc.
	7,385,513	5,269,130	
	₩ 15,784,665	9,464,178	

(*) 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.

9. Financial assets measured at fair value through profit or loss

The Group's financial assets measured at fair value through profit or loss 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, 2020 and 2019 are as follows:

Details	2020	2019
Equity securities	₩ 2,384,537	2,967,666
Investments in partnerships	402,273	265,752
Government and public bonds	2,919,005	2,426,025
Special bonds	5,311,111	6,138,431
Corporate bonds	6,556,435	5,919,040
Short-term bonds	46,688	716,598
Collective investment securities	5,831,498	6,787,472
Securities in foreign currencies	4,971,505	4,943,734
Other securities	1,474,484	2,985,646
Reserve for claims of customers' deposits (trust)	8,399,152	4,195,048
Loan and receivables	1,595,211	1,961,380
Derivative financial assets	1,409,698	986,399
Equity-linked securities	458,674	241,966
Other derivative-linked securities	197,042	360,434
	₩ 41,957,313	40,895,591

(2) There are no financial assets designated as measured at fair value through profit or loss as of December 31, 2020 and 2019.

10. 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 as financial assets (debt securities) measured at fair value through other comprehensive income, by its contractual cash flow characteristics and its business model of the instruments and equity securities designated as measured at fair value through other comprehensive income items at initial recognition.

(1) Details of financial assets measured at fair value through other comprehensive income as of December 31, 2020 and 2019 are as follows:

		2020	2019
Equity securities	₩	1,095,038	723,858
Equity securities in foreign currencies		367,272	366,831
Government and public bonds		163,238	70,391
Special bonds		4,268,634	2,245,103
Corporate bonds		4,190,354	4,279,639
Bonds in foreign currencies		1,086,056	1,880,576
	₩	11,170,592	9,566,398

(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:

		2020		2019	
		Acquisition cost	Book value	Acquisition cost	Book value
Equity securities	₩	702,311	1,095,038	666,570	723,858
Equity securities in foreign currencies		386,490	367,272	314,077	366,831
	₩	1,088,801	1,462,310	980,647	1,090,689

(*) They are held for financial business purposes and strategic purposes, not for trading purposes.

There are no dividends recognized from equity securities derecognized during the periods of the year ended 2020 and 2019. The amount of dividends related to equity securities as of December 31, 2020 and 2019 are ₩20,054 million and ₩26,185 million.

ii) In the current term, some of the equity instruments designated as fair value through other comprehensive income measurement items were disposed of due to paid-in capital reduction of the issuing company. The disposal amount is ₩116,109 million and there is no accumulated profit or loss.

(3) Debt securities

i) Debt securities classified as financial assets measured at fair value through other comprehensive income as of December 31, 2020 and 2019 are as follows:

		2020		
		Face value	Amortized Cost	Book Value
Government and public bonds	₩	165,000	164,905	163,238
Special bonds		4,258,743	4,265,975	4,268,634
Corporate bonds		4,175,703	4,183,903	4,190,354
Bonds in foreign currencies		1,045,677	1,060,197	1,086,056
	₩	9,645,123	9,674,980	9,708,282

		2019		
		Face value	Amortized Cost	Book Value
Government and public bonds	₩	70,000	71,392	70,391
Special bonds		2,237,963	2,241,670	2,245,103
Corporate bonds		4,265,350	4,270,158	4,279,639
Bonds in foreign currencies		1,825,801	1,860,670	1,880,576
	₩	8,399,114	8,443,890	8,475,709

ii) Details of changes in loss allowance of debt securities measured at fair value through other comprehensive income for the years ended December 31, 2020 and 2019 are as follows:

	2020			
	12-month ECL	Lifetime ECL		Total
		Not Impaired	Impaired	
Beginning Balance	₩ 3,686	-	-	3,686
Transfers				
Transfer to Lifetime ECL(Not Impaired)	(106)	106	-	-
Transfer to Lifetime ECL(Impaired)	-	-	-	-
Transfer to 12-month ECL	-	-	-	-
provision	1,506	49	-	1,555
Derecognition	(2,606)	(73)	-	(2,679)
Other changes	16	-	-	16
Ending Balance	₩ 2,496	82	-	2,578

	2019			
	12-month ECL	Lifetime ECL		Total
		Not Impaired	Impaired	
Beginning Balance	₩ 3,278	-	-	3,278
Transfers				
Transfer to Lifetime ECL(Not Impaired)	-	-	-	-
Transfer to Lifetime ECL(Impaired)	-	-	-	-
Transfer to 12-month ECL	-	-	-	-
provision	3,234	-	-	3,234
Derecognition	(2,826)	-	-	(2,826)
Ending Balance	₩ 3,686	-	-	3,686

iii) Details of changes in total carrying amount of debt securities measured at fair value through other comprehensive income for the years ended December 31, 2020 and 2019 are as follows:

	2020			
	12-month ECL	Lifetime ECL		Total
		Not Impaired	Impaired	
Beginning Balance	₩ 8,475,709	-	-	8,475,709
Transfers				
Transfer to Lifetime ECL(Not Impaired)	(54,136)	54,136	-	-
Transfer to Lifetime ECL(Impaired)	-	-	-	-
Transfer to 12-month ECL	-	-	-	-
Acquisition	12,156,221	-	-	12,156,221
Derecognition	(10,877,598)	(26,928)	-	(10,904,526)
Evaluation	60,008	193	-	60,201
Foreign currency fluctuation and others	(77,967)	(1,356)	-	(79,323)
Ending Balance	₩ 9,682,237	26,045	-	9,708,282

	2019			
	12-month ECL	Lifetime ECL		Total
		Not Impaired	Impaired	
Beginning Balance	₩ 7,312,634	-	-	7,312,634
Transfers				
Transfer to Lifetime ECL(Not Impaired)	-	-	-	-
Transfer to Lifetime ECL(Impaired)	-	-	-	-
Transfer to 12-month ECL	-	-	-	-
Acquisition	9,985,493	-	-	9,985,493
Derecognition	(8,893,780)	-	-	(8,893,780)
Evaluation	40,654	-	-	40,654
Foreign currency fluctuation and others	30,708	-	-	30,708
Ending Balance	₩ 8,475,709	-	-	8,475,709

(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 years ended December 31, 2020 and 2019 are as follows:

	2020				
	Beginning Balance	Evaluation	Disposals	Tax effect	Ending Balance
Equity securities	₩ 90,137	262,915	-	(93,279)	259,773
Government and public bonds	(715)	1,266	(1,920)	180	(1,189)
Special bonds	2,800	10,349	(10,948)	165	2,366
Corporate bonds	7,942	10,563	(13,933)	927	5,499
Bonds in foreign currencies	15,715	38,023	(30,853)	(1,987)	20,898
	₩ 115,879	323,116	(57,654)	(93,994)	287,347

	2019				
	Beginning Balance	Evaluation	Disposals	Tax effect	Ending Balance
Equity securities	₩ (55,539)	199,573	-	(53,897)	90,137
Government and public bonds	(143)	(799)	10	217	(715)
Special bonds	76	3,483	275	(1,034)	2,800
Corporate bonds	4,501	4,549	(62)	(1,046)	7,942
Bonds in foreign currencies	(8,635)	33,421	184	(9,255)	15,715
	₩ (59,740)	240,227	407	(65,015)	115,879

11 Financial assets measured at amortized cost

(1) Details of financial assets measured at amortized cost as of December 31, 2020 and 2019 are as follows:

	2020	2019
Deposit		
Reserve for claims of customers' deposits	₩ 2,511,660	1,234,101
Trading margin of derivatives	475,620	312,559
Long-term deposits	3,137,505	2,608,991
Restricted deposits and others	42	42
Others	1,596,319	1,463,243
	7,721,146	5,618,936
Loan and receivables		
Call loan	405	1,417
Broker's loan	11,530,496	9,021,795
Securities purchased under repurchase agreements	38,830,191	54,420,500
Loans	718,674	818,703
Receivables	55,924	56,758
Loans purchased	80,077	83,188
Advances for customers	1,310	1,310
Privately placed bonds	197,223	366,152
Dishonored bills receivable	122	122
Deferred loan originated cost and fee	(3,287)	(3,857)
	51,411,135	64,766,088
Other financial assets		
Accounts receivable	11,406,543	4,508,340
Accrued income	254,733	346,425
Advance payments	55,738	61,766
Deposits provided	73,993	79,267
Present value discount	(6,029)	(5,638)
	11,784,978	4,990,160
Allowance for credit loss(Loans and receivables)	(73,787)	(54,748)
Allowance for credit loss(Other financial assets)	(46,883)	(44,350)
	₩ 70,796,589	75,276,086

(2) Details of changes in allowance for credit loss of financial assets measured at amortized cost for the years ended December 31, 2020 and 2019 are as follows:

i) Details of changes in allowances for credit loss of loans and receivables

	2020			
	12-month ECL	Lifetime ECL		Total
		Not Impaired	Impaired	
Beginning Balance	₩ 9,657	-	45,091	54,748
Transfers				
Transfer to 12-month ECL	-	-	-	-
Transfer to Lifetime ECL(Not Impaired)	(875)	875	-	-
Transfer to Lifetime ECL(Impaired)	(13,832)	-	13,832	-
Write-off	-	-	(2,517)	(2,517)
Provision	15,090	1,671	6,785	23,546
Other	(2,122)	-	132	(1,990)
Ending Balance	₩ 7,918	2,546	63,323	73,787

	2019			
	12-month ECL	Lifetime ECL		Total
		Not Impaired	Impaired	
Beginning Balance	₩ 12,174	-	62,966	75,140
Transfers				
Transfer to 12-month ECL	-	-	-	-
Transfer to Lifetime ECL(Not Impaired)	-	-	-	-
Transfer to Lifetime ECL(Impaired)	-	-	-	-
Write-off	-	-	(15,476)	(15,476)
Disposal	-	-	(14,705)	(14,705)
Provision (reversal)	(2,517)	-	12,823	10,306
Other	-	-	(517)	(517)
Ending Balance	₩ 9,657	-	45,091	54,748

ii) Details of changes of the allowances for credit loss of other financial assets

	2020			
	12-month ECL	Lifetime ECL		Total
		Not Impaired	Impaired	
Beginning Balance	₩ 296	-	44,054	44,350
Transfers				
Transfer to Lifetime ECL(Not Impaired)	-	-	-	-
Transfer to Lifetime ECL(Impaired)	(19)	19	-	-
Transfer to 12-month ECL	-	-	-	-
Write-off	-	-	(234)	(234)
Disposal	(10)	-	-	(10)
Provision (reversal)	(222)	38	3,098	2,914
Other	(140)	-	3	(137)
Ending Balance	₩ (95)	57	46,921	46,883

	2019			
	12-month ECL	Lifetime ECL		Total
		Not Impaired	Impaired	
Beginning Balance	₩ 739	-	25,528	26,267
Transfers				
Transfer to Lifetime ECL(Not Impaired)	-	-	-	-
Transfer to Lifetime ECL(Impaired)	-	-	-	-
Transfer to 12-month ECL	-	-	-	-
Disposal	(6)	-	(6,674)	(6,680)
Provision (reversal)	(437)	-	25,077	24,640
Other	-	-	123	123
Ending Balance	₩ 296	-	44,054	44,350

(3) Details of changes in carrying amount of financial assets measured at amortized cost for the years ended December 31, 2020 and 2019 are as follows:

Description(*1)	2020				
	12-month ECL	Lifetime ECL		Total	
		Not Impaired	Impaired		
Beginning Balance(*3)	₩	1,227,819	-	41,656	1,269,475
Transfers					
Transfer to 12-month ECL		-	-	-	-
Transfer to Lifetime ECL(Not Impaired)		(72,589)	72,589	-	-
Transfer to Lifetime ECL(Impaired)		(68,564)	-	68,564	-
Execution		682,694	-	-	682,694
Repayment		(844,287)	(10,169)	(2,441)	(856,897)
Write-off		-	-	(2,517)	(2,517)
Disposal		(87,950)	(189)	-	(88,139)
Others		(7,719)	4,844	(4,335)	(7,210)
Ending Balance(*2)	₩	829,404	67,075	100,927	997,406

(*1) Amounts of loan and receivables excluded from changes in carrying amount are call loans of ₩405 million, broker's loans of ₩11,530,496 million, securities purchased under repurchase agreements of ₩38,830,191 million(The amount classified as a credit-impaired financial asset is ₩73,010 million), and receivables of ₩55,924 million as of December 31, 2020. Amounts of allowances for credit loss are broker's loans of ₩1,832 million, receivables of ₩217 million, and securities purchased under repurchase agreements of ₩7,902 million as of December 31, 2020. Call loans are excluded. The group establishes securities collateral for broker's loans and securities purchased under repurchase agreement. Real estate (land, building) is set as collateral for financial assets that have been damaged.

(*2) The loan was disposed for smooth implementation of capital investment for the year ended December 31, 2020, and there is no profit or loss effect on the disposal.

(*3) Deferred loan origination fees and costs were excluded from the total carrying amount.

Description(*1)	2019				
	12-month ECL	Lifetime ECL		Total	
		Not Impaired	Impaired		
Beginning Balance	₩	1,414,831	-	81,090	1,495,921
Transfers					
Transfer to 12-month ECL		-	-	-	-
Transfer to Lifetime ECL(Not Impaired)		-	-	-	-
Transfer to Lifetime ECL(Impaired)		-	-	-	-
Execution		1,030,854	-	-	1,030,854
Repayment		(1,057,747)	-	(953)	(1,058,700)
Write-off		-	-	(15,476)	(15,476)
Disposal(*2)		(165,026)	-	(20,000)	(185,026)
Others		4,907	-	(3,005)	1,902
Ending Balance(*3)	₩	1,227,819	-	41,656	1,269,475

(*1) Amounts of loan and receivables excluded from changes in carrying amount are call loans of ₩1,417 million, broker's loans of ₩9,021,795 million, securities purchased under resale agreements of ₩54,420,500 million(The amount classified as a credit-impaired financial asset is ₩100,972 million), and receivables of ₩56,758 million as of December 31, 2019. Amounts of allowances for credit loss are broker's loans of ₩1,607 million, receivables of ₩123 million and securities purchased under repurchase agreements of ₩13,628 million as of December 31, 2019. Call loans are excluded.

(*2) The loan was disposed for smooth implementation of capital investment for the year ended December 31, 2020, and there is no profit or loss effect on the disposal.

(*3) Deferred loan origination fees and costs were excluded from the total carrying amount.

(4) Details of changes in deferred loan origination fees and costs for the years ended December 31, 2020 and 2019 are as follows:

	2020	2019	
Beginning Balance	₩	(3,857)	(1,941)
Increase		(3,099)	(5,996)
Amortization		3,670	4,080
Ending balance	₩	(3,286)	(3,857)

12. 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, 2020 and 2019 are as follows:

	2020		2019	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets				
Deposits	₩ 7,721,147	7,721,147	5,618,936	5,618,936
Financial assets measured at fair value through profit or loss(*1)	41,957,312	41,957,312	40,895,591	40,895,591
Financial assets measured at fair value through other comprehensive income	11,170,592	11,170,592	9,566,398	9,566,398
Loans(*2)	51,337,348	51,337,963	64,711,340	64,711,340
Other financial assets(*2),(*3)	11,738,095	11,738,095	4,945,810	4,945,810
	₩ 123,924,494	123,925,109	125,738,075	125,738,075
Financial liabilities				
Financial liabilities measured at fair value through profit or loss(*1)	₩ 2,504,902	2,504,902	1,948,029	1,948,029
Financial liabilities designated as measured at fair value through profit of loss(*1)	14,093,129	14,093,129	14,968,359	14,968,359
Deposits due to customers(*2)	12,335,973	12,335,973	5,955,596	5,955,596
Borrowings(*2)	69,066,074	69,066,074	86,453,161	86,453,161
Debentures	7,949,973	8,084,406	6,215,226	6,308,344
Other financial liabilities(*2),(*3)	11,820,190	11,820,190	5,091,895	5,091,895
	₩ 117,770,241	117,904,674	120,632,266	120,725,384

(*1) Day 1 profit or loss is reflected in the carrying amount and fair value of derivatives, etc.

(*2) As loans, deposits and borrowings are due in one year as of December 31, 2020 and 2019, and due to other reasons, the Group regards book value is similar to the fair value. However, for large loans with maturities of more than one year as of the end of the reporting period, the fair value is measured using the DCF model.

(*3) 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, 2020 and 2019 is as follows:

Description	2020			
	Level 1	Level 2	Level 3	Total
Financial assets				
Financial assets measured at fair value through profit or loss	₩ 10,924,788	23,484,830	7,547,694	41,957,312
Financial assets measured at fair value through other comprehensive income	1,539,125	9,121,328	510,139	11,170,592
	₩ 12,463,913	32,606,158	8,057,833	53,127,904
Financial liabilities				
Financial liabilities measured at fair value through profit or loss	₩ 889,092	1,532,452	83,358	2,504,902
Financial liabilities designated as measured at fair value through profit of loss	26,986	843,005	13,223,138	14,093,129
	₩ 916,078	2,375,457	13,306,496	16,598,031

Description	2019			
	Level 1	Level 2	Level 3	Total
Financial assets				
Financial assets measured at fair value through profit or loss	₩ 16,125,494	17,727,564	7,042,533	40,895,591
Financial assets measured at fair value through other comprehensive income	685,769	8,314,996	565,633	9,566,398
	₩ 16,811,263	26,042,560	7,608,166	50,461,989

Description	2019			
	Level 1	Level 2	Level 3	Total
Financial liabilities				
Financial liabilities measured at fair value through profit or loss	₩ 939,184	924,675	84,170	1,948,029
Financial liabilities designated as measured at fair value through profit of loss	8,651	1,676,756	13,282,952	14,968,359
	₩ 947,835	2,601,431	13,367,122	16,916,388

2) Details of changes in financial assets and liabilities measured at fair value classified into Level 3 for the years ended December 31, 2020 and 2019 are as follows:

	2020							
	Beginning balance	Transfer(*)	Profit (Loss)	Other comprehensive income	Purchase/ issuance	Disposal/ settlement	Others	Ending balance
Financial assets:								
Financial assets measured at fair value through profit or loss	₩ 7,042,533	(1,789)	191,816	-	4,725,994	(4,362,901)	(47,959)	7,547,694
Financial assets measured at fair value through other comprehensive income	565,633	-	-	84,639	-	(118,306)	(21,827)	510,139
	₩ 7,608,166	(1,789)	191,816	84,639	4,725,994	(4,481,207)	(69,786)	8,057,833
Financial liabilities:								
Financial liabilities measured at fair value through profit or loss	₩ 84,170	-	(86,772)	-	163,838	(77,878)	-	83,358
Financial liabilities designated as measured at fair value through profit of loss	13,282,952	-	193,563	1,319	12,783,561	(13,038,257)	-	13,223,138
	₩ 13,367,122	-	106,791	1,319	12,947,399	(13,116,135)	-	13,306,496

(*) Transfer between levels occurred in change of market observable data availability.

The Group recognizes the transfer of level at the end of the reporting period in which the events or changes in circumstances that may cause the transfer of level occur.

	2019							
	Beginning balance	Transfer(*)	Profit (Loss)	Other comprehensive income	Purchase/ issuance	Disposal/ settlement	Others	Ending balance
Financial assets:								
Financial assets measured at fair value through profit or loss	₩ 4,874,874	(8,307)	230,917	-	7,752,010	(5,837,744)	30,783	7,042,533
Financial assets measured at fair value through other comprehensive income	546,971	-	-	18,662	-	-	-	565,633
	₩ 5,421,845	(8,307)	230,917	18,662	7,752,010	(5,837,744)	30,783	7,608,166

	2019							
	Beginning balance	Transfer(*)	Profit (Loss)	Other comprehensive income	Purchase/ issuance	Disposal/ settlement	Others	Ending balance
Financial liabilities:								
Financial liabilities measured at fair value through profit or loss	₩ 363,622	-	(190,150)	-	192,348	(281,650)	-	84,170
Financial liabilities designated as measured at fair value through profit or loss	9,324,965	-	568,469	(337)	14,413,515	(11,023,660)	-	13,282,952
	₩9,688,587	-	378,319	(337)	14,605,863	(11,305,310)	-	13,367,122

(*) Transfer between levels occurred in change of market observable data availability.

The Group recognizes the transfer of level at the end of the reporting period in which the events or changes in circumstances that may cause the transfer of level occur.

3) Valuation techniques and inputs for financial assets and liabilities measured at fair value classified into Level 2 as of December 31, 2020 and 2019 are as follows:

	2020	2019	Valuation techniques	Inputs
Financial assets				
Financial assets measured at fair value through profit or loss	₩ 23,484,830	17,727,564	DCF, Net asset value, Black-Scholes	Discount rates, Interest rates, Volatility, Underlying asset price
Financial assets measured at fair value through other comprehensive income	9,121,328	8,314,996	DCF, Net asset value	Discount rates Exchange rate
	₩ 32,606,158	26,042,560		
Financial liabilities				
Financial liabilities measured at fair value through profit or loss	₩ 1,532,452	924,675	Black-Scholes, DCF	Interest rates, Volatility, Discount rates
Financial liabilities designated as measured at fair value through profit or loss	843,005	1,676,756	Black-Scholes, DCF	Interest rates, Volatility, Discount rates
	₩ 2,375,457	2,601,431		

4) Quantitative details regarding the valuation techniques and unobservable inputs for financial assets and liabilities measured at fair value classified into Level 3 as of December 31, 2020 and 2019 are as follows:

	2020			
	Fair value	Valuation techniques	Inputs	Range
Financial assets				
Financial assets measured at fair value through profit or loss	₩ 7,547,694	Black-Scholes, DCF, Probability model, Net asset value, etc	Volatility, Correlation coefficient, Discount rates, Growth rate	(Stock) Volatility: 0.11% ~ 103.05% Correlation coefficient: -75.40% ~ 99.91% (Others) Correlation coefficient: -40.62% ~ 96.40% Discount rates: 3.00% ~ 13.68% Growth rate : 1% ~ 1.7%
Financial assets measured at fair value through other comprehensive income	510,139	DCF and others	Discount rates, Growth rate	Discount rates: 10.58% ~ 14.10% Growth rate : 1%
	₩ 8,057,833			
Financial liabilities				
Financial liabilities measured at fair value through profit or loss	₩ 83,358	Black-Scholes, DCF, Probability model	Volatility, Correlation coefficient	(Stock) Volatility: 0.11% ~ 103.05% Correlation coefficient: -75.40% ~ 99.91% (Others) Correlation coefficient: -40.62% ~ 96.40%
Financial liabilities designated as measured at fair value through profit or loss	13,223,138	Black-Scholes, DCF, Probability model	Volatility, Correlation coefficient	(Stock) Volatility: 0.11% ~ 103.05% Correlation coefficient: -75.40% ~ 99.91% (Others) Correlation coefficient: -40.62% ~ 96.40%
	₩ 13,306,496			

	2019			
	Fair value	Valuation techniques	Inputs	Range
Financial assets				
Financial assets measured at fair value through profit or loss	₩ 7,042,533	Black-Scholes, DCF, Probability model, Net asset value	Volatility, Correlation coefficient, Discount rates	(Stock) Volatility: 0.31% ~ 55.12% Correlation coefficient: -60.24% ~ 99.99% (Others) Correlation coefficient: -33.06% ~ 94.56% Discount rates: 2.46% ~ 16.73% Growth rate : 1%
Financial assets measured at fair value through other comprehensive income	565,633	DCF and others	Discount rates	Discount rates: 10.40% ~ 12.00%
	₩ 7,608,166			
Financial liabilities				
Financial liabilities measured at fair value through profit or loss	₩ 84,170	Black-Scholes, DCF, Probability model	Volatility, Correlation coefficient	(Stock) Volatility: 0.31% ~ 55.12% Correlation coefficient: -60.24% ~ 99.99% (Others) Correlation coefficient: -33.06% ~ 94.56%
Financial liabilities designated as measured at fair value through profit or loss	13,282,952	Black-Scholes, DCF, Probability model	Volatility, Correlation coefficient	(Stock) Volatility: 0.31% ~ 55.12% Correlation coefficient: -60.24% ~ 99.99% (Others) Correlation coefficient: -33.06% ~ 94.56%
	₩ 13,367,122			

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 Company's financial assets and liabilities measured at fair value classified into Level 3 as of December 31, 2020 and 2019 are as follows:

Description	2020			
	Profit (Loss)		Other comprehensive income (loss)	
	Favorable changes	Unfavorable changes	Favorable changes	Unfavorable changes
Derivatives linked securities sold and related hedging assets(*1)	₩ 19,504	(22,151)	-	-
Financial assets measured at fair value through other comprehensive income(*3)	-	-	47,882	(35,188)
Financial assets measured at fair value through profit or loss (*2),(*3),(*4)	219,131	(205,933)	-	-

Description	2019			
	Profit (Loss)		Other comprehensive income (loss)	
	Favorable changes	Unfavorable changes	Favorable changes	Unfavorable changes
Derivatives linked securities sold and related hedging assets(*1)	₩ 19,279	(19,012)	-	-
Financial assets measured at fair value through other comprehensive income(*3)	-	-	66,336	(44,185)
Financial assets measured at fair value through profit or loss (*2),(*3),(*4)	26,689	(22,875)	-	-

(*1) Change in fair value is calculated by increasing or decreasing the volatility and the correlation coefficient of underlying asset that is a major unobservable inputs by 10%

(*2) Change in fair value is calculated by increasing or decreasing the volatility of underlying asset that is a major are impossible to observe.

(*3) Change in fair value is calculated by adjusting the growth rate and discount rate each by -1~1%, inputs that are impossible to observe.

(*4) Hedging assets for derivatives linked securities in short position are excluded.

6) Details of changes in deferred day 1 profit or loss for the years ended December 31, 2020 and 2019 are as follows:

		2020	2019
Beginning balance	₩	(165,418)	(131,758)
New transactions		(142,545)	(237,677)
Recognized in profit or loss		234,913	204,017
Ending balance	₩	(73,050)	(165,418)

(*) 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 not measured at fair value, but for which the fair value is disclosed

1) Fair value hierarchy of financial instruments not measured at fair value, but for which the fair value is disclosed as of December 31, 2020 and 2019 is as follows:

Description	2020			
	Level 1	Level 2	Level 3	Total
Financial assets				
Deposits	₩ -	-	7,721,147	7,721,147
Loans	-	405	51,337,558	51,337,963
Other financial assets	728,554	-	11,009,541	11,738,095
	₩ 728,554	405	70,068,246	70,797,205
Financial liabilities				
Deposits due to customers	₩ -	-	12,335,973	12,335,973
Borrowings	-	2,210,000	66,856,074	69,066,074
Debentures	-	8,084,406	-	8,084,406
Other financial liabilities	727,948	-	11,092,242	11,820,190
	₩ 727,948	10,294,406	90,284,289	101,306,643

Description	2019			
	Level 1	Level 2	Level 3	Total
Financial assets				
Deposits	₩ -	-	5,618,936	5,618,936
Loans	-	1,417	64,709,923	64,711,340
Other financial assets	907,751	-	4,038,059	4,945,810
	₩ 907,751	1,417	74,366,918	75,276,086
Financial liabilities				
Deposits due to customers	₩ -	-	5,955,596	5,955,596
Borrowings	-	1,390,000	85,063,161	86,453,161
Debentures	-	6,308,344	-	6,308,344
Other financial liabilities	907,830	-	4,184,065	5,091,895
	₩ 907,830	7,698,344	95,202,822	103,808,996

2) Valuation techniques and inputs for fair value hierarchy of financial instruments not measured at fair value, but for which the fair value is disclosed classified into Level 2 as of December 31, 2020 and 2019 are as follows:

	2020	2019	Valuation techniques	Inputs
Financial assets				
Loans	₩ 405	1,417	DCF	Discount rates
Financial liabilities				
Borrowings	2,210,000	1,390,000	DCF	Discount rates
Debentures	8,084,406	6,308,344	DCF	Discount rates
	₩ 10,294,406	7,698,344		

13. The Group's subsidiaries

(1) The Group's subsidiaries

Details of subsidiaries as of December 31, 2020 and 2019 are as follows:

Investor	Subsidiaries	Main business	Location	Reporting date	Percentage of ownership and voting rights (%)	
					2020	2019
	Domestic subsidiaries:					
	Mirae Asset Venture Investment	Small- and medium-sized enterprise venture capital	Korea	December, 31	61.59	61.59
	Mirae Asset MAPS India Frontier Private Real Estate Investment Trust 1st	Collective investment	Korea	December, 31	61.98	62.50
	School Infrastructure Private Investment Trust	Collective investment	Korea	December, 31	100.00	100.00
	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
	Hana Landchip Private Real Estate Investment Trust 67	Collective investment	Korea	December, 31	-	81.91
	Mirae Asset MAPS Frontier US Private Real Estate Investment Trust 6-2	Collective investment	Korea	December, 31	99.92	99.92
	Mirae Asset MAPS Frontier US Private Real Estate Investment Trust 7th	Collective investment	Korea	December, 31	99.83	99.83
	MAPS US Professional Investment Private Real Estate Investment Trust 9-1	Collective investment	Korea	December, 31	98.33	98.33
	LK GHC Specialized Privately Placed Investment Trust No.1	Collective investment	Korea	December, 31	78.90	78.90
	Mirae Asset Smart Q Global Hedge Focus Professional Private Investment Trust 1st	Collective investment	Korea	December, 31	98.37	83.22
Mirae Asset Daewoo Co., Ltd.	Mirae Asset Patriot Professional Private Investment Trust 1st	Collective investment	Korea	December, 31	81.28	99.25
	JB Infra Build-up Professional Private Investment Trust 3rd	Collective investment	Korea	December, 31	97.78	96.68
	Multi Asset Global Private Debt Professional Private Investment Trust No.4	Collective investment	Korea	December, 31	56.09	56.09
	Multi Asset Global Private Equity Professional Private Investment Trust No. 1	Collective investment	Korea	December, 31	92.31	92.31
	Mirae Asset Smart ELS Selection Professional Private Investment Trust 1 st	Collective investment	Korea	December, 31	-	99.06
	AIP Energy Midstream Professional Private Special Asset 1st	Collective investment	Korea	December, 31	99.91	99.91
	Multi Asset Overseas Real Estate Professional Private Investment Trust No. 6th	Collective investment	Korea	December, 31	71.10	76.70
	Multi Asset Overseas Real Estate Professional Private Investment Trust 6-1	Collective investment	Korea	December, 31	99.91	99.91
	Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-1	Collective investment	Korea	December, 31	98.85	98.85
	Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-2	Collective investment	Korea	December, 31	55.75	55.75
	Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-3	Collective investment	Korea	December, 31	99.54	99.54
	Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-4(*4)	Collective investment	Korea	December, 31	0.60	0.60
	Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-5	Collective investment	Korea	December, 31	68.34	68.34
	Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-6	Collective investment	Korea	December, 31	99.68	99.68

Investor	Subsidiaries	Main business	Location	Reporting date	Percentage of ownership and voting rights (%)		
					2020	2019	
Mirae Asset Daewoo Co., Ltd.	Mirae Asset MAPS distribution Professional Real Estate Investment Trust 7th	Collective investment	Korea	December, 31	-	92.86	
	Hanwha Debt Strategy Professional Private Real Estate Investment Trust 22nd	Collective investment	Korea	December, 31	99.90	99.90	
	Mirae Asset Smart Q Asia Hedge Focus Professional Private Investment 1st	Collective investment	Korea	December, 31	99.90	-	
	Mirae Asset MAPS distribution Professional Private Real Estate Investment Trust 17-2	Collective investment	Korea	December, 31	60.24	-	
	LB Professional Private Real Estate Investment Trust 1st	Collective investment	Korea	December, 31	97.22	-	
	Mirae Asset Daewoo Global K-Growth Private Investment Professional company(*1)	Investment	Korea	December, 31	30.30	30.30	
	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	86.79	
	Mirae Asset Daewoo Global I Private Equity Fund (*1)	Investment	Korea	December, 31	26.12	26.12	
	Mirae Asset Daewoo Korea II Private Equity Fund (*1)	Investment	Korea	December, 31	29.27	29.27	
	Good Aiming 1st Co., Ltd.	Other financial service	Korea	December, 31	-	-	
	Good Aiming 2nd Co., Ltd.	Other financial service	Korea	December, 31	-	-	
	Good Chance 5th Co., Ltd.	Other financial service	Korea	December, 31	-	-	
	Good Chance 6th Co., Ltd.	Other financial service	Korea	December, 31	-	-	
	Renewable PG Limited Liability Company(*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	Other financial service	Korea	December, 31	-	-	
	MD Flight Co., Ltd	Other financial service	Korea	December, 31	-	-	
	MD Flight 2nd Co., Ltd (*2)	Other financial service	Korea	December, 31	-	-	
	MD Flyhigh Co., Ltd	Other financial service	Korea	December, 31	-	-	
	Fly High 2nd Co., Ltd	Other financial service	Korea	December, 31	-	-	
	MS Paju 1st Co., Ltd	Other financial service	Korea	December, 31	-	-	
	MD Petro 1st Co., Ltd (*2)	Other financial service	Korea	December, 31	-	-	
	No Brand Yellow Co., Ltd (*2)	Other financial service	Korea	December, 31	-	-	
	MD Brand Green Co., Ltd (*2)	Other financial service	Korea	December, 31	-	-	
	MD Dragon 2nd Co., Ltd (*2)	Other financial service	Korea	December, 31	-	-	
	MD Prime 3th Co., Ltd (*2)	Other financial service	Korea	December, 31	-	-	
	MAMisacluster CO., LTD (*2)	Other financial service	Korea	December, 31	-	-	
	Money Market Trust (2020: 3, 2019: 25)	Trust asset management	Korea	December, 31	100.00	100.00	
	Mirae Asset Venture Investment	Domestic subsidiaries:					
		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	
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	
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 (*1)		Investment	Korea	December, 31	44.50	44.50	
2016 KIF-MIRAE ASSET ICT Venture Fund (*1)		Investment	Korea	December, 31	30.00	30.00	

Investor	Subsidiaries	Main business	Location	Reporting date	Percentage of ownership and voting rights (%)	
					2020	2019
Mirae Asset Venture Investment	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	22.25
	MIRAE ASSET Young Start-UP Investment Fund #3 (*1)	Investment	Korea	December, 31	40.10	40.10
	MIRAE ASSET Good Company Investment Fund #19-1 (*1)	Investment	Korea	December, 31	14.92	14.92
	MIRAE ASSET Green Frog Investment Fund (*1)	Investment	Korea	December, 31	10.00	10.00
	MIRAE ASSET Good Company Investment Fund #19-2(*1)	Investment	Korea	December, 31	9.62	9.62
	MIRAE ASSET Next Korea Intelligence Information Venture Investment Fund(*1)	Investment	Korea	December, 31	17.78	17.78
	MIRAE ASSET Innovative Growth Investment Fund(*1)	Investment	Korea	December, 31	25.96	-
Overseas subsidiaries:						
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	Other financial service	USA	December, 31	100.00	100.00
	Mirae Asset Securities (HK) Limited	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
	Mirae Asset Global Long Short Fund, Ltd.	Collective investment	Cayman Islands	December, 31	100.00	100.00
	MAPS Location (Singapore) Pte. Ltd.	Real estate investment and rent	Singapore	December, 31	-	90.00
	Mirae Asset Disruptive technologies Fund I , LP	Collective investment	USA	December, 31	97.92	97.92
	Mirae Asset Project Planet Fund I, LP	Collective investment	USA	December, 31	73.32	-
Overseas subsidiaries:						
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 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 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
	Mirae Asset Securities & Investments (USA), LLC	Investment	USA	December, 31	100.00	100.00
Mirae Asset Securities & Investments (USA), LLC	HGX (USA), LLC	Investment	USA	December, 31	100.00	100.00
	Mirae Asset Multifamily Properties I, LP	Investment	USA	December, 31	100.00	-
Mirae Asset Capital Markets (India) Private Limited	Mirae Asset Credit Opportunities Fund	Collective investment	India	December, 31	65.97	65.97
	MACM India Growth Fund	Collective investment	India	December, 31	99.60	-
Mirae Asset Maps Frontier US Private Real Estate Investment Trust 7	MAPS HAWAII TWO, LLC.	Real estate investment and rent	USA	December, 31	100.00	100.00

Investor	Subsidiaries	Main business	Location	Reporting date	Percentage of ownership and voting rights (%)	
					2020	2019
MAPS HAWAII TWO, LLC.	MAPS WAIKIKI HOTEL, LLC.	Real estate investment and rent	USA	December, 31	100.00	100.00
	MAPS ROYAL GROVE, LLC.	Real estate investment and rent	USA	December, 31	100.00	100.00
MAPS WAIKIKI HOTEL, LLC.	MAPS HOTELS AND RESORTS HAWAII 2, LLC.	Real estate investment and rent	USA	December, 31	100.00	100.00
	Overseas subsidiaries:					
Mirae Asset Global Bio Investment Fund I	MAGBI Fund Limited	Investment	Hong Kong	December, 31	100.00	100.00
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	100.00
Mirae Asset Daewoo Global I Private Equity Fund	Mirae Asset Daewoo Global I , LLC	Investment	USA	December, 31	100.00	100.00
Multi Asset Global Private Equity Professional Private Investment Trust 1 st	Alpha Assai Fund SP	Investment	Cayman Islands	December, 31	100.00	100.00
Mirae Asset Global Long Short Fund, Ltd	Mirae Asset Global Long Short Fund	Investment	USA	December, 31	99.36	98.97
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-1						
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-2						
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-3	Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15th	Collective investment	Korea	December, 31	69.60	69.60
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-4						
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-5						
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-6						
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15th	MAPS HOTELS AND RESORTS ONE, LLC.	Collective investment	Korea	December, 31	100.00	100.00
Multi Asset Overseas Real Estate Professional Private Investment Trust 6th	OPPCI Mahajunga Holding	Real estate investment and rent	France	December, 31	97.46	97.46
Multi Asset Overseas Real Estate Professional Private Investment Trust 6-1						
OPPCI Mahajunga Holding	SCI Mahajunga	Real estate investment and rent	France	December, 31	85.00	85.00

Investor	Subsidiaries	Main business	Location	Reporting date	Percentage of ownership and voting rights (%)	
					2020	2019
Mirae Asset Multifamily Properties I, LP	Cityfront Holdings LP	Real estate investment and rent	USA	December, 31	89.80	-
Cityfront Holding LP	Cityfront Place Trust LLC	Real estate investment and rent	USA	December, 31	100.00	-
Cityfront Place Trust LLC	MAS Cityfront Place Property Company LLC	Real estate investment and rent	USA	December, 31	100.00	-

(*1) Although the Group's ownership is less than 50 percent, the Group as General Partner or Collective investor, 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) Eight 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 ₩21,616 million as financial assets measured at fair value through profit or loss.

(*4) Although the Groups ownership is less than 50 percent, the entity was included in the subsidiary.

(2) Changes in subsidiaries

1) Subsidiaries newly included in the scope of consolidation for year ended December 31, 2020 are as follows:

Subsidiaries	Reason
Multi Asset Gateway Global Prime Convertible Bond Professional Private Investment Trust 1st	They are newly acquired investment trusts and structured entities for the year ended December 31, 2020 on which the Group has control.
Mirae Asset Smart Q Asia Hedge Focus Professional Private Investment 1st	
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 17-2	
LB Professional Private Real Estate Investment Trust 1	
MS Gamsan 1st Co.,Ltd	
MD Unicorn 1st Co., Ltd	
The Great Oil 1st Co., Ltd.	
Mirae Asset Innovative Growth Investment Fund	
Mirae Asset Multifamily Properties I, LP	
MACM India Growth Fund	
Mirae Asset Project Planet Fund I, LP	
Cityfront Holdings LP	
Cityfront Place Trust LLC	
MAS Cityfront Place Property Company LLC	

2) Subsidiaries excluded from the scope of consolidation for the year ended December 31, 2020 are as follows:

Subsidiaries	Reason
Hana Landchip Private Real Estate Investment Trust 67th	Lost control due to the disposal of all shares in the current period
Mirae Asset Smart ELS Selection Professional Private Investment Trust 1st	
Multi Asset Gateway Global Prime Convertible Bond Professional Private Investment Trust No. 1st	
Good Aiming 1st Co., Ltd.	
Good Aiming 2nd Co., Ltd.	
Good Chance 5th Co., Ltd.	
Good Chance 6th Co., Ltd.	
MD Series 1st Co., Ltd.	
MD Flight Co., Ltd.	
MD Fly High Co., Ltd.	
Fly High 2nd Co., Ltd .	
MS Paju 1st Co.,Ltd	
MS Gamsan 1st Co.,Ltd	
MD Unicorn 1st Co., Ltd.	
The Great Oil 1st Co., Ltd.	
Mirae Asset MAPS Distribution Professional Private Real Estate Investment Trust 7	
MAPS Location (Singapore) Pte. Ltd.	
Mirae Asset Good Corporate Secondary Investment Fund	

(3) Financial information of subsidiaries

1) Financial information of subsidiaries as of and for the year ended December 31, 2020 is as follows:

	2020						Total comprehensive income
	Assets	Liabilities	Equity	Operating revenue	Profit (loss) for the year		
Mirae Asset Venture Investment	₩ 191,139	12,817	178,322	51,922	30,229	30,229	
Mirae Asset MAPS India Frontier Private Real Estate Investment Trust 1st	17,053	634	16,419	-	(5,613)	(5,613)	
School Infrastructure Private Investment Trust	15,106	15	15,091	612	281	281	
Hyundai CVC CLO Private Equity Investment Trust 2nd	574	-	574	-	(364)	(364)	
DB Together Private Equity Investment Trust 67th	22,321	2	22,319	936	683	683	
Hyundai ING CLO Private Special Asset Investment Trust 1st	3,687	2	3,685	519	(2,502)	(2,502)	
Multiasset DW – 2nd Fund	76	-	76	-	-	-	
Mirae Asset Daewoo Global K Growth Private Equity Fund	8,188	39	8,149	8,735	4,889	4,889	
Mirae Asset MAPS Frontier US Private Real Estate Investment Trust 6-2	127,936	6	127,930	1,151	(76,367)	(76,367)	
Mirae Asset Maps Frontier US Private Real Estate Investment Trust 7th	291,304	18	291,286	19,436	(144,821)	(144,821)	
MAPS US Professional Investment Private Real Estate Investment Trust 9-1	141,723	6	141,717	34,846	12,696	12,696	
LK GHC Specialized Privately Placed Investment Trust No.1	44,944	13	44,931	2	(93)	(93)	
Mirae Asset Smart Q Global Hedge Focus Professional Private Investment Trust 1st	192,385	1,735	190,650	105,777	20,614	20,614	
Mirae Asset Patriot Professional Private Investment Trust 1st	1,504	-	1,504	2,218	(1,265)	(1,265)	
JB Infra Build-up Professional Private Investment Trust 3rd	4,499	3	4,496	149	139	139	
Multi Asset Global Private Debt Professional Private Investment Trust 4th	11,964	193	11,771	1,292	897	897	
Multi Asset Global Private Equity Professional Private Investment Trust 1st	124,382	2,638	121,744	58	(9,247)	(9,247)	
AIP Energy Midstream Professional Private Special Asset 1st	68,858	66	68,792	40,846	(51,544)	(51,544)	
Multi Asset Overseas Real Estate Professional Private Investment Trust 6th	332,982	81	332,901	15,860	4,642	4,642	
Multi Asset Overseas Real Estate Professional Private Investment Trust 6-1	96,552	23	96,529	7,857	1,582	1,582	
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-1	45,208	-	45,208	17	(5,848)	(5,848)	
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-2	253,245	1	253,244	1,166	(31,366)	(15,054)	
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-3	62,207	-	62,207	-	(3,927)	(8,062)	
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-4	56,812	-	56,812	247	(7,047)	(3,377)	
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-5	162,416	-	162,416	61	(21,009)	(21,009)	
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-6	124,241	-	124,241	-	(7,843)	(16,101)	
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15th	708,179	-	708,179	-	-	(47,925)	
MAPS HOTELS AND RESORTS ONE, LLC.	674,500	2	674,498	30	(36,529)	(81,605)	

	2020					
	Assets	Liabilities	Equity	Operating revenue	Profit (loss) for the year	Total comprehensive income
Hanwha Debt Strategy Professional Private Real Estate Investment Trust 22th	23,733	33	23,700	1,732	253	253
Mirae Asset Smart Q Asia Hedge Focus Professional Private Investment 1st	107,213	895	106,318	20,862	6,218	6,218
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 17-2nd	40,629	185	40,444	211	(1,056)	(1,056)
LB Professional Private Real Estate Investment Trust 1 st	55,982	36,404	19,578	-	-	-
Renewable PG LLC	-	-	-	-	-	-
HC Hybrid 1st Co., Ltd.	20,211	20,347	(136)	880	(503)	(503)
HC Hybrid 2nd Co., Ltd.	10,392	10,313	79	450	(168)	(168)
MD Flight 2nd Co.,Ltd	20,302	20,444	(142)	1,000	54	54
MD Petro 1st Co.,Ltd	51,721	51,077	644	4,212	(800)	(800)
No Brand Yellow Co.,Ltd	101,518	101,248	270	4,624	(514)	(514)
MD Brand Green Co.,Ltd	49,879	50,493	(614)	1,944	(16)	(16)
MD Dragon 2nd Co.,Ltd	205,395	196,713	8,682	20,676	8,471	8,471
MD Prime 3th Co.,Ltd	30,727	30,334	393	1,735	454	454
MAMisacluster CO.,LTD	13,247	13,390	(143)	472	(143)	(143)
Mirae Asset Global Bio Investment Fund I	78,967	-	78,967	952	(830)	(830)
Mirae Asset Global Unicorn PEF	253,499	1,924	251,575	15	(3,890)	(3,890)
Mirae Asset Daewoo Global I Private Equity Fund	114,637	1,271	113,366	7	(597)	(597)
Mirae Asset Daewoo Korea II Private Equity Fund	145,613	12	145,601	4,679	3,461	3,461
Mirae Asset Agro Project Fund	13,428	16	13,412	12,488	12,094	12,094
KoFC-Mirae Asset Pioneer Champ 2011-3rd Investment Fund	10,901	-	10,901	8,511	6,252	6,252
Mirae Asset Social Corporate Investment Fund 2nd	1,832	-	1,832	67	(52)	(52)
Noroo-Mirae Asset Agrostar Project Venture Fund	7,657	121	7,536	3,682	3,114	3,114
MAVI Good Company Investment Fund #1	8,110	140	7,970	4,512	3,110	3,110
MAVI Good Company Investment Fund #2	6,390	120	6,270	884	(699)	(699)
MIRAE ASSET Global Investment Fund	30,131	471	29,660	17,269	15,172	15,172
Koscom-Mirae Asset Fintech Company Investment Fund #1	1,990	46	1,944	2	(45)	(45)
MIRAE ASSET Young Start-Up Investment Fund	12,110	303	11,807	735	(1,338)	(1,338)
Mirae Asset Good Corporate Secondary Investment Fund #2	13,521	382	13,139	795	(566)	(566)
2016 KIF-MIRAE ASSET ICT Venture Fund	26,359	491	25,868	1,511	(275)	(275)
MIRAE ASSET Good Company Investment Fund#16-1	16,123	167	15,956	7,922	5,294	5,294
MIRAE ASSET Good Company Investment Fund#17-1	19,808	130	19,678	9,173	7,059	7,059
Mirae Asset Hi-Tech Frontier Investment Fund	29,379	141	29,238	4,031	3,064	3,064
MIRAE ASSET Young Start-Up Investment Fund #2	25,602	165	25,437	2,497	1,459	1,459
MIRAE ASSET Good Company Secondary Investment Fund#18-1	17,441	62	17,379	3,664	3,032	3,032
MIRAE ASSET Young Start-UP Investment Fund #3	20,371	147	20,224	2,000	1,151	1,151
MIRAE ASSET Good Company Investment Fund #19-1	20,904	90	20,814	128	(970)	(970)

	2020					
	Assets	Liabilities	Equity	Operating revenue	Profit (loss) for the year	Total comprehensive income
MIRAE ASSET Green Frog Investment Fund	8,459	28	8,431	644	497	497
MIRAE ASSET Good Company Investment Fund #19-2	17,615	74	17,541	42	(433)	(433)
MIRAE ASSET Next Korea Intelligence Information Venture Investment Fund	59,588	525	59,063	1,286	(919)	(919)
MIRAE ASSET Innovative Growth Investment Fund	15,022	220	14,802	2	(218)	(218)
Mirae Asset Securities (UK) Ltd.	355,001	17,669	337,332	23,608	12,674	(24,128)
Mirae Asset Securities Holding (USA) Inc.	620,309	24	620,285	205	15	(39,779)
Mirae Asset Securities (USA) Inc.	44,887,015	44,605,564	281,451	513,199	31,442	12,792
Mirae Asset Wealth Management (USA) Inc.	13,958	3,702	10,256	2,339	(3,296)	(11,307)
Mirae Asset Securities & Investments (USA), LLC	342,889	828	342,061	18,209	(13,693)	(34,356)
HGX (USA), LLC	125,903	6,179	119,724	6,378	6,355	384
Mirae asset Multifamily Properties I, LP	38,745	121	38,624	1,645	1,487	(3,301)
Cityfront Holding LP	45,810	-	45,810	2,183	2,183	(3,383)
Cityfront Place Trust LLC	45,810	-	45,810	2,183	2,183	(3,383)
MAS Cityfront Place Property Company LLC	181,267	112,118	69,149	10,770	480	(7,975)
Mirae Asset Securities (HK) Limited	2,947,517	281,902	2,665,615	354,387	79,216	(97,532)
Mirae Asset Securities (Vietnam) LLC	727,187	414,716	312,471	74,042	25,565	6,167
Mirae Asset Wealth Management(Brazil) CCTVM	145,453	88,503	56,950	14,665	858	(20,142)
Mirae Asset Investment Advisory (BEIJING) Co., Ltd.	4,221	16	4,205	306	(58)	(38)
Mirae Asset securities(Singapore) Pte., Ltd.	39,750	1,160	38,590	7,596	(514)	(3,341)
Mirae Asset Securities Mongolia UTsk LLC	1,774	3	1,771	418	79	(126)
PT. Mirae Asset Sekuritas Indonesia	427,761	302,087	125,674	57,967	21,837	12,612
Mirae Asset Capital Markets (India) Private Limited	334,728	7,421	327,307	32,071	18,606	(10,281)
Mirae Asset Credit Opportunities Fund	5,019	84	4,935	19	(2,872)	(3,377)
MACM India Growth Fund	2,164	21	2,143	872	667	(1,194)
Mirae Asset Realty (Singapore) PTE.	194	60	134	-	(9)	(18)
Mirae Asset Global Long Short Fund, Ltd.	351,057	-	351,057	54,568	54,568	10,439
Mirae Asset Global Long Short Fund	358,373	5,131	353,242	106,070	41,457	10,664
Mirae Asset Disruptive Technologies Fund I , LP	14,957	1,147	13,810	-	(2,469)	(3,940)
Mirae Asset Project Planet Fund I , LP	51,602	365	51,237	-	(831)	(6,518)
MAPS HAWAII TWO, LLC.	435,876	158,488	277,388	-	(12,207)	(28,723)
MAPS WAIKIKI HOTEL, LLC.	764,776	441,130	323,646	25,400	(52,279)	(72,405)
MAPS HOTELS AND RESORTS HAWAII 2, LLC.	1,163	16,340	(15,177)	48,405	(12,037)	(10,852)
MAPS ROYAL GROVE, LLC.	-	111	(111)	61	(104)	(95)
MAGBI Fund Limited	73,867	16,738	57,129	63	(357)	(3,895)
Super Delta Pte. Ltd.	20,005	10	19,995	957	(724)	(1,993)
MAC Global Unicorn Investment Limited	258,599	305	258,294	-	(44)	(16,614)
Mirae Asset Daewoo Global I , LLC	119,716	-	119,716	11,801	11,749	3,862
Alpha Assai Fund SP	163,273	73	163,200	-	-	(10,470)
OPPCI Mahajunga Holding	461,600	137,838	323,762	36,533	30,465	46,021
SCI Mahajunga	1,169,195	982,213	186,982	57,447	5,913	12,400
3 Money Market Trust	₩ 575,393	64	575,329	23,597	12,314	12,314

(*) The financial statements of some subsidiaries are adjusted to conform to the accounting policies of the Group.

2) Financial information of subsidiaries as of and for the year ended December 31, 2019 is as follows:

							2019
		Assets	Liabilities	Equity	Operating revenue	Profit (loss) for the year	Total comprehensive income
Mirae Asset Venture Investment	₩	154,991	3,145	151,846	38,957	11,979	11,979
Mirae Asset MAPS India Frontier Private Real Estate Investment Trust 1st		22,497	614	21,883	898	(4,743)	(4,743)
School Infrastructure Private Investment Trust		17,154	17	17,137	690	401	401
Hyundai CVC CLO Private Equity Investment Trust 2nd		939	-	939	392	(68)	(68)
DB Together Private Equity Investment Trust 67th		22,557	2	22,555	1,029	980	980
Hyundai ING CLO Private Special Asset Investment Trust 1st		6,694	3	6,691	1,361	1,227	1,227
Multiasset DW – 2nd Fund		75	-	75	27	(4)	(4)
Hana Landchip Private Real Estate Investment Trust No.67		41,697	30,783	10,914	2,681	888	888
Mirae Asset Daewoo Global K Growth Private Equity Fund		36,233	165	36,068	8,154	7,589	7,589
Mirae Asset MAPS Frontier US Private Real Estate Investment Trust 6-2		134,768	311	134,457	15,563	(1,903)	(1,903)
Mirae Asset Maps Frontier US Private Real Estate Investment Trust 7th		341,253	19	341,234	52,722	(1,349)	(1,349)
MAPS US Professional Investment Private Real Estate Investment Trust 9-1		123,461	4,919	118,542	61	972	(1,070)
LK GHC Specialized Privately Placed Investment Trust No.1		45,039	14	45,025	6	94	94
Mirae Asset Smart Q Global Hedge Focus Professional Private Investment Trust 1st		88,579	4,789	83,790	26,447	10,199	10,199
Mirae Asset Patriot Professional Private Investment Trust 1st		39,784	4	39,780	12,134	6,856	6,856
JB Infra Build-up Professional Private Investment Trust 3rd		2,908	2	2,906	153	39	39
Multi Asset Global Private Debt Professional Private Investment Trust 4th		11,774	2	11,772	2,532	1,659	1,659
Multi Asset Global Private Equity Professional Private Investment Trust 1st		132,564	1,572	130,992	5,619	3,024	3,024
Mirae Asset Smart ELS Selection Professional Private Investment Trust 1st		12,808	2	12,806	5,019	4,867	4,867
AIP Energy Midstream Professional Private Special Asset 1st		82,140	45	82,095	19,819	9,456	9,456
Multi Asset Overseas Real Estate Professional Private Investment Trust 6th		341,452	49	341,403	11,467	(8,899)	(8,899)
Multi Asset Overseas Real Estate Professional Private Investment Trust 6-1		105,445	15	105,430	3,586	(2,394)	(2,394)
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-1		46,282	-	46,282	40	(1,406)	(1,406)
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-2		244,894	1,141	243,753	204	(8,374)	(1,454)
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-3		63,605	-	63,605	1	1	(2,147)
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-4		54,943	261	54,682	46	(1,883)	(326)
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-5		166,275	-	166,275	143	(5,051)	(5,051)
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15-6		127,032	-	127,032	3	2	(4,287)

	2019					
	Assets	Liabilities	Equity	Operating revenue	Profit (loss) for the year	Total comprehensive income
Mirae Asset MAPS USA Professional Private Real Estate Investment Trust 15	684,144	-	684,144	-	-	(21,569)
MAPS HOTELS AND RESORTS ONE, LLC	684,143	-	684,143	-	(1)	(21,570)
Mirae Asset MAPS distribution Professional Real Estate Investment Trust 7th	2,802	2	2,800	2	-	-
Hanwha Debt Strategy Professional Private Real Estate Investment Trust 22nd	279	-	279	775	(3)	(3)
Good Aiming 1st Co., Ltd.	-	-	-	1,467	98	98
Good Aiming 2nd Co., Ltd.	1,115	-	1,115	2,755	174	174
Good Chance 5th Co., Ltd.	-	-	-	2,397	1,371	1,371
Good Chance 6th Co., Ltd.	50,100	50,101	(1)	1,214	4	4
Renewable PG Limited Liability Company	-	-	-	-	-	-
HC Hybrid 1st Co.,Ltd	20,541	20,174	367	1,346	260	260
HC Hybrid 2nd Co.,Ltd	10,497	10,249	248	816	281	281
MD Series 1st Co.,Ltd	49,899	50,444	(545)	2,274	14	62
MD Flight Co.,Ltd	30,575	30,679	(104)	1,548	(180)	(127)
MD Flight 2nd Co.,Ltd	20,249	20,480	(231)	958	(90)	(55)
MD Flyhigh Co.,Ltd	31,358	30,741	617	2,493	811	811
Fly High 2nd Co.,Ltd	30,338	30,475	(137)	1,745	(214)	(85)
MS Paju 1st Co.,Ltd	52,440	52,576	(136)	2,223	(136)	1
MD Petro 1st Co.,Ltd	103,423	101,979	1,444	6,186	1,444	1,444
No Brand Yellow Co., Ltd	102,222	101,438	784	4,119	784	784
MD Brand Green Co., Ltd	50,219	50,455	(236)	1,499	(236)	(598)
MD Dragon 2nd Co., Ltd	195,899	195,688	211	4,005	211	211
MD Prime 3rd Co., Ltd	30,238	30,300	(62)	339	(62)	(62)
MAMisacluster CO., LTD	13,234	13,290	(56)	145	(56)	-
Mirae Asset Global Bio Investment Fund I	82,864	-	82,864	2,275	556	2,791
Mirae Asset Global Unicorn PEF	255,644	1,929	253,715	40	(3,801)	(3,801)
Mirae Asset Daewoo Global I Private Equity Fund	114,678	714	113,964	18	(868)	(868)
Mirae Asset Daewoo Korea II Private Equity Fund	146,829	12	146,817	4,175	2,385	2,385
Mirae Asset Agro Project Fund	4,391	1,238	3,153	1,010	(898)	(898)
KoFC-Mirae Asset Pioneer Champ 2011-3rd Investment Fund	14,949	224	14,725	2,682	(446)	(446)
Mirae Asset Social Corporate Investment Fund 2nd	3,898	14	3,884	43	(1)	(1)
Noroo-Mirae Asset Agrostar Project Venture Fund	4,539	117	4,422	1,091	(726)	(726)
Mirae Asset Good Corporate Secondary Investment Fund	7,000	6	6,994	1,911	916	916
MAVI Good Company Investment Fund #1	9,000	156	8,844	3,657	3,229	3,229
MAVI Good Company Investment Fund #2	7,104	134	6,970	2,845	2,157	2,157
MIRAE ASSET Global Investment Fund	30,626	501	30,125	7,146	2,204	2,204
Koscom-Mirae Asset Fintech Company Investment Fund #1	3,018	29	2,989	700	648	648
MIRAE ASSET Young Start-Up Investment Fund	13,394	240	13,154	1,599	47	47
Mirae Asset Good Corporate Secondary Investment Fund #2	18,231	191	18,040	252	(1,136)	(1,136)

	2019					
	Assets	Liabilities	Equity	Operating revenue	Profit (loss) for the year	Total comprehensive income
2016 KIF-MIRAE ASSET ICT Venture Fund	26,235	149	26,086	1,346	(1,637)	(1,637)
MIRAE ASSET Good Company Investment Fund#16-1	20,103	58	20,045	12,512	11,402	11,402
MIRAE ASSET Good Company Investment Fund#17-1	19,331	67	19,264	7,757	6,748	6,748
Mirae Asset Hi-Tech Frontier Investment Fund	21,340	166	21,174	2,205	1,552	1,552
MIRAE ASSET Young Start-Up Investment Fund #2	23,636	164	23,472	884	(907)	(907)
MIRAE ASSET Good Company Secondary Investment Fund#18-1	14,409	62	14,347	406	(649)	(649)
MIRAE ASSET Young Start-Up Investment Fund #3	19,219	146	19,073	24	(869)	(869)
MIRAE ASSET Good Company Investment Fund#19-1	21,877	90	21,787	70	(213)	(213)
MIRAE ASSET Green Frog Investment Fund	3,962	27	3,935	4	(65)	(65)
MIRAE ASSET Good Company Investment Fund #19-2	18,009	35	17,974	9	(26)	(26)
MIRAE ASSET Next Korea Intelligence Information Venture Investment Fund	3,962	27	3,935	4	(65)	(65)
Mirae Asset Securities (UK) Ltd.	385,343	23,883	361,460	25,928	14,638	9,469
Mirae Asset Securities Holdings (USA) Inc.	660,090	26	660,064	54	54	24,178
Mirae Asset Securities (USA) Inc.	59,879,219	59,610,560	268,659	1,942,078	98	9,306
Mirae Asset Wealth Management (USA) Inc.	381,853	4,998	376,855	4,570	(4,473)	8,631
Mirae Asset Securities & Investments (USA), LLC	331,623	4,283	327,340	16,534	12,454	23,170
HGX (USA), LLC	125,526	16	125,510	7,884	7,866	7,136
Mirae Asset Securities (HK) Limited	2,586,629	156,000	2,430,629	201,268	66,882	123,625
Mirae Asset Securities (Vietnam) LLC	512,982	206,678	306,304	48,368	18,403	25,020
Mirae Asset Wealth Management (Brazil) CCTVM	159,026	81,937	77,089	21,840	3,586	3,281
Mirae Asset Investment Advisory (BEIJING) Co., Ltd.	4,638	1,325	3,313	252	(546)	(452)
Mirae Asset Securities (Singapore) Pte. Ltd.	42,251	320	41,931	1,943	30	1,041
Mirae Asset Securities Mongolia UTK LLC	1,928	32	1,896	475	180	184
PT. Mirae Asset Sekuritas Indonesia	200,502	87,440	113,062	38,725	12,775	19,895
Mirae Asset Capital Markets (India) Private Limite	341,108	3,520	337,588	24,385	11,340	15,024
Mirae Asset Credit Opportunities Fund	8,571	259	8,312	(284)	(457)	(354)
Mirae Asset Realty (Singapore) PTE.	207	54	153	-	(8)	(3)
Mirae Asset Global Long Short Fund, Ltd.	159,598	-	159,598	-	(5,548)	10,803
Mirae Asset Global Long Short Fund	297,851	136,292	161,559	15,559	(3,289)	16,064
Mirae Asset Disruptive Technologies Fund I, LP	2,163	617	1,546	-	(1,053)	(1,099)
MAPS Location (Singapore) Pte. Ltd	7,736	14	7,722	117	46	277
MAPS HAWAII TWO, LLC.	380,500	169,050	211,450	-	(11,966)	(3,812)
MAPS WAIKIKI HOTEL, LLC.	847,001	478,936	368,065	77,391	(2,717)	11,801
MAPS HOTELS AND RESORTS HAWAII 2, LLC.	7,652	12,795	(5,143)	165,639	(1,692)	(1,480)
MAPS ROYAL GROVE, LLC.	-	16	(16)	182	(31)	(31)
MAGBI Fund Limited	78,835	17,810	61,025	150	(758)	1,728
Super Delta Pte. Ltd.	21,999	11	21,988	1,259	(7,521)	(6,460)
MAC Global Unicorn Investment Limited	275,217	309	274,908	-	(43)	9,385

	2019					
	Assets	Liabilities	Equity	Operating revenue	Profit (loss) for the year	Total comprehensive income
Mirae Asset Daewoo Global I , LLC	115,854	-	115,854	-	(42)	4,460
Alpha Assai Fund SP	173,747	77	173,670	-	-	5,955
OPPCI Mahajunga Holding	444,247	158,889	285,358	-	6,879	3,329
SCI Mahajunga	1,152,395	946,725	205,670	38,867	2,306	46
25 Money Market Trust	₩ 1,141,524	121	1,141,403	14,370	9,546	12,499

(*) The financial statements of some subsidiaries are adjusted to conform to the accounting policies of the Group.

14. Investments in associates

(1) Details of investments in associates as of December 31, 2020 and 2019 are as follows:

Associates	Main business	Location	2020		
			Percentage of ownership (%)	Acquisition cost	Carrying amount
Mirae Asset Life Insurance Co., Ltd (*1)	Insurance	Korea	22.01	₩ 370,295	647,570
Pantos Logistics Co., Ltd (*2)	Shipping and transport	Korea	19.90	145,000	171,569
Mirae Asset-NAVER New Growth Fund I	Investment	Korea	45.00	44,100	39,713
Mirae Asset-GS Retail New Growth Fund I(*3)	Investment	Korea	50.00	38,039	35,977
Mirae Asset-Celltrion New Growth Fund I	Investment	Korea	45.00	38,250	41,491
Hancom-Miraeasset 4IR Fund	Investment	Korea	32.26	4,415	4,512
Curious Mirae Asset SUTT Corporate Financial Stability PEF(*4)	Investment	Korea	-	-	-
SKS Mirae Asset Corporate Financial Stability PEF(*5)	Investment	Korea	4.83	10,000	9,986
Mirae Asset Partners PEF 4th (*5)	Investment	Korea	3.97	4,587	3
New Growth Engine Green Futur PEF (*5)	Investment	Korea	9.99	45	114
Mirae Asset Naver Asia Growth PEF (*3)	Investment	Korea	83.17	311,757	295,297
Daejo PFV Co., Ltd (*2)(*6)	Real estate investment	Korea	39.99	3,200	4,479
Suwon Galleria Station Area Complex Development PFV Co., Ltd(*2)	Real estate investment	Korea	19.90	995	-
Yangjae PFV Co., Ltd (*2)(*6)	Real estate investment	Korea	39.99	2,400	2,326
2019 PCC New Technology Fund	Investment	Korea	31.75	1,000	1,239
Cheongdam Complex PFV Co., Ltd(*2)	Real estate investment	Korea	15.00	750	711
IMM Global PEF	Investment	Korea	-	-	-
Godeok Gangil 10 PFV Co., Ltd(*2)	Real estate investment	Korea	19.90	995	-
Moonjung Station Maestro Project Financing Vehicle Co. Ltd. (*2)	Real estate investment	Korea	19.98	999	989
Mirae Asset Curious Corporate Recovery Private Equity Fund	Investment	Korea	28.15	10,800	10,322
MTV Bandalseom C1 Development PFV Co., Ltd(*2)	Real estate investment	Korea	6.68	334	-
Wirye Active Senior House Co. Ltd(*2)	Real estate investment	Korea	5.00	250	248
KJ Logis Co., Ltd. (*2)	Other financial service	Korea	0.40	2	1
Seolleung Maestro Station Influence Area Public Housing Project Financial Investment Co., Ltd. (*2)	Real estate investment	Korea	19.98	999	989

Associates	Main business	Location	2020		
			Percentage of ownership (%)	Acquisition cost	Carrying amount
Amnam Distribution Logistics Development Co., Ltd. (*2)	Real estate investment	Korea	15.00	45	42
Mirae Asset Daewoo Special Purpose Acquisition 1 Co., Ltd. (*2)	SPAC	Korea	-	-	-
Mirae Asset Daewoo Special Purpose Acquisition 2 Co., Ltd. (*2)	SPAC	Korea	-	-	-
Mirae Asset Daewoo Special Purpose Acquisition 3 Co., Ltd. (*2)	SPAC	Korea	0.25	16	24
Mirae Asset Daewoo Special Purpose Acquisition 4 Co., Ltd. (*2)	SPAC	Korea	0.34	15	29
Mirae Asset Daewoo Special Purpose Acquisition 5 Co., Ltd. (*2)	SPAC	Korea	0.34	17	33
All Together Korea Korea Investment Private Investment Pool Professional Private Investment Trust 10th	Collective investment	Korea	21.05	5,400	5,412
SMC RMB Investors II Limited	Investment	China	30.73	245	6,076
Transwestern Corporate Properties I LLC	Investment	USA	27.40	121,215	111,455
Traphaco Joint Stock Company	Manufacturing	Vietnam	40.00	108,283	109,525
Nabou Green Energy Limited(*7)	Manufacturing	Fiji	60.00	707	-
Asia Cinema Group Ltd.	Investment	Cayman Islands	30.00	38,105	31,650
Mirae Asset Venture Investments (India) Private Limited	Investment	India	40.00	4,586	4,517
MAPS Indianapolis One LLC	Investment	USA	45.44	39,762	39,762
Total				1,307,608	1,576,061

(*1) The Group's percentage of voting right is 29.19 and 28.14 percent as of December 31, 2020 and 2019, 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, 2020, the Group has significant influence because it has voting power over the financial and operating policies of the investee by sending director and thus was included as associate.

(*3) Although the Group's ownership is more than 50 percent as of December 31, 2020, considering subsidiaries of investment companies due to joint investment with other investment companies, it was determined that the consolidation entity does not have control over the investment companies.

(*4) Since the Group has registered as the General Partner during the year ended December 31, 2019, the Group has significant influence over those associates, and thus reclassified them from financial assets measured at fair value through profit or loss to investments in associates.

(*5) The Group has significant influence since the Group is a General Partner.

(*6) The Group's percentage of voting right is 15.99 percent as of December 31, 2020.

(*7) Although the Group's ownership is more than 50 percent, it was determined that it does not have sole control over the investment company due to joint investment with other investment companies.

Associates	Main business	Location	2019		
			Percentage of ownership (%)	Acquisition cost	Carrying amount
Mirae Asset Life Insurance Co., Ltd (*1)	Insurance	Korea	22.01	₩ 370,296	642,635
Pantos Logistics Co., Ltd (*2)	Shipping and transport	Korea	19.90	145,000	155,788
Mirae Asset-NAVER New Growth Fund I	Investment	Korea	45.00	35,100	33,957
Mirae Asset-GS Retail New Growth Fund I(*3)	Investment	Korea	50.00	30,000	28,310
Mirae Asset-Celltrion New Growth Fund I	Investment	Korea	45.00	39,375	39,963
Hancom-Miraeasset 4IR Fund	Investment	Korea	32.26	5,000	4,905
Curious Mirae Asset SUTT Corporate Financial Stability PEF(*4)	Investment	Korea	9.95	1,978	2,013
SKS Mirae Asset Corporate Financial Stability PEF(*5)	Investment	Korea	4.83	10,000	9,973
Mirae Asset Partners PEF 4th (*5)	Investment	Korea	3.97	4,587	4
New Growth Engine Green Future PEF (*5)	Investment	Korea	9.99	454	330
Mirae Asset Naver Asia Growth PEF (*3)	Investment	Korea	83.17	254,191	254,114
Daejo PFV Co., Ltd (*6)	Investment	Korea	39.99	3,200	3,448
Suwon Galleria Station Area Complex Development PFV Co., Ltd(*2)	Real estate investment	Korea	19.90	995	995
Yangjae PFV Co., Ltd (*6)	Real estate investment	Korea	39.99	2,400	2,363
2019 PCC New Technology Fund	Investment	Korea	31.75	1,000	999
Cheongdam Complex PFV Co., Ltd(*2)	Real estate investment	Korea	15.00	750	749
IMM Global PEF	Investment	Korea	32.05	29,124	28,221
Godeok Gangil 10 PFV Co., Ltd(*2)	Real estate investment	Korea	-	-	-

Associates	Main business	Location	2019		
			Percentage of ownership (%)	Acquisition cost	Carrying amount
Moonjung Station Maestro Project Financing Vehicle Co. Ltd. (*2)	Real estate investment	Korea	-	-	-
Mirae Asset Curious Corporate Recovery Private Equity Fund	Investment	Korea	-	-	-
MTV Bandalseom C1 Development PFV Co., Ltd(*2)	Real estate investment	Korea	-	-	-
Wirye Active Senior House Co. Ltd(*2)	Real estate investment	Korea	-	-	-
KJ Logis Co., Ltd.	Other financial service	Korea	-	-	-
Seolleung Maestro Station Influence Area Public Housing Project Financial Investment Co., Ltd.	Real estate investment	Korea	-	-	-
Amnam Distribution Logistics Development Co., Ltd.	Real estate investment	Korea	-	-	-
Mirae Asset Daewoo Special Purpose Acquisition 1 Co., Ltd. (*3)	SPAC	Korea	0.83	40	73
Mirae Asset Daewoo Special Purpose Acquisition 2 Co., Ltd. (*3)	SPAC	Korea	0.33	10	19
Mirae Asset Daewoo Special Purpose Acquisition 3 Co., Ltd. (*3)	SPAC	Korea	0.25	16	24
Mirae Asset Daewoo Special Purpose Acquisition 4 Co., Ltd. (*3)	SPAC	Korea	4.76	15	16
Mirae Asset Daewoo Special Purpose Acquisition 5 Co., Ltd. (*3)	SPAC	Korea	-	-	-
All Together Korea Korea Investment Private Investment Pool Professional Private Investment Trust 10th	Collective investment	Korea	-	-	-
SMC RMB Investors II Limited	Investment	China	30.73	245	5,891
Transwestern Corporate Properties I LLC	Investment	USA	27.40	121,215	121,299
Traphaco Joint Stock Company	Manufacturing	Vietnam	40.00	108,283	116,273
Nabou Green Energy Limited(*7)	Manufacturing	Fiji	60.00	707	-
Asia Cinema Group Ltd.	Investment	Cayman Islands	30.00	38,105	36,556
Mirae Asset Venture Investments (India) Private Limited	Investment	India	-	-	-
MAPS Indianapolis One LLC	Investment	USA	-	-	-
Total				1,202,086	1,488,918

(*1) The Group's percentage of voting right is 29.19 and 28.14 percent as of December 31, 2020 and 2019, 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, 2020, the Group has significant influence because it has voting power over the financial and operating policies of the investee by sending director and thus was included as associate.

(*3) Although the Group's ownership is more than 50 percent as of December 31, 2020, considering subsidiaries of investment companies due to joint investment with other investment companies, it was determined that the consolidation entity does not have control over the investment companies.

(*4) Since the Group has registered as the General Partner during the year ended December 31, 2019, the Group has significant influence over those associates, and thus reclassified them from financial assets measured at fair value through profit or loss to investments in associates.

(*5) The Group has significant influence since the Group is a General Partner.

(*6) The Group's percentage of voting is 15.99 percent as of December 31, 2020.

(*7) Although the Group's ownership is more than 50 percent, it was determined that it does not have sole control over the investment company due to joint investment with other investment companies.

(2) Details of changes in the carrying amounts of investments in associates for the years ended December 31, 2020 and 2019 are as follows:

	2020							
	Beginning balance	Acquisition	Disposal	Reclassification	Dividend received	Share of profits (losses)	Effect on change in equity	Ending balance
Mirae Asset Life Insurance Co., Ltd	₩ 642,635	-	-	-	(6,625)	27,225	(15,665)	647,570
Pantos Logistics Co., Ltd	155,788	-	-	-	(4,677)	22,664	(2,206)	171,569
Mirae Asset-NAVER New Growth Fund I	33,957	9,000	-	-	-	(3,244)	-	39,713
Mirae Asset-GS Retail New Growth Fund I	28,310	10,000	(1,961)	-	-	(372)	-	35,977
Mirae Asset-Celltrion New Growth Fund I	39,963	5,625	(6,750)	-	-	2,653	-	41,491
Hancom-Miraeasset 4IR Fund	4,905	-	(585)	-	-	192	-	4,512

	2020							
	Beginning balance	Acquisition	Disposal	Reclassification	Dividend received	Share of profits (losses)	Effect on change in equity	Ending balance
Curious Mirae Asset SUTT Corporate Financial Stability PEF	2,013	-	(1,971)	-	(42)	-	-	-
SKS Mirae Asset Corporate Financial Stability PEF	9,973	-	-	-	(48)	61	-	9,986
Mirae Asset Partners PEF 4th	4	-	-	-	-	(1)	-	3
New Growth Engine Green Future PEF	330	-	(410)	-	-	194	-	114
Mirae Asset Naver Asia Growth PEF	254,114	70,689	(13,124)	-	-	2,588	(18,970)	295,297
Daejo PFV Co., Ltd	3,448	-	-	-	-	1,045	(14)	4,479
Suwon Galleria Station Area Complex Development PFV Co., Ltd	995	-	-	-	-	(995)	-	-
Yangjae PFV Co., Ltd	2,363	-	-	-	-	(37)	-	2,326
2019 PCC New Technology Fund	999	-	-	-	-	240	-	1,239
Cheongdam Complex PFV Co., Ltd	749	-	-	-	-	(38)	-	711
IMM Global PEF	28,221	-	-	(29,125)	-	524	380	-
Godeok Gangil 10 PFV Co., Ltd	-	995	-	-	-	(995)	-	-
Moonjung Station Maestro Project Financing Vehicle Co. Ltd.	-	999	-	-	-	(10)	-	989
Mirae Asset Curious Corporate Recovery Private Equity Fun	-	10,800	-	-	-	(478)	-	10,322
MTV Bandalseom C1 Development PFV Co., Ltd	-	334	-	-	-	(334)	-	-
Wirye Active Senior House Co. Ltd	-	250	-	-	-	(2)	-	248
KJ Logis Co., Ltd.	-	2	-	-	-	(1)	-	1
Seolleung Maestro Station Influence Area Public Housing Project Financial Investment Co., Ltd.	-	999	-	-	-	(10)	-	989
Amnam Distribution Logistics Development Co., Ltd.	-	45	-	-	-	(3)	-	42
Mirae Asset Daewoo SPAC 1st Co., Ltd.	73	-	(73)	-	-	-	-	-
Mirae Asset Daewoo SPAC 2nd Co., Ltd.	19	-	-	(19)	-	-	-	-
Mirae Asset Daewoo SPAC 3rd Co., Ltd.	24	-	-	-	-	-	-	24
Mirae Asset Daewoo SPAC 4th Co., Ltd.	16	-	-	-	-	13	-	29
Mirae Asset Daewoo SPAC 5th Co., Ltd.	-	17	-	-	-	6	10	33
All Together Korea Korea Investment Private Investment Pool Professional Private Investment Trust 10th	-	54,000	(48,600)	-	-	12	-	5,412
SMC RMB Investors II Limited	5,891	-	-	-	-	330	(145)	6,076
Transwestern Corporate Properties I LLC	121,299	-	-	-	(10,037)	6,673	(6,480)	111,455
Traphaco Joint Stock Compan	116,273	-	-	-	(2,520)	2,608	(6,836)	109,525
Nabou Green Energy Limited	-	-	-	-	-	-	-	-
Asia Cinema Group Ltd.	36,556	-	-	-	-	(2,953)	(1,953)	31,650
Mirae Asset Venture Investments (India) Private Limited	-	4,586	-	-	-	(74)	5	4,517
MAPS Indianapolis One LLC	-	39,762	-	-	-	-	-	39,762
Total	₩ 1,488,918	208,103	(73,474)	(29,144)	(23,949)	57,481	(51,874)	1,576,061

	2019							
	Beginning balance	Acquisition	Disposal	Reclassification	Dividend received	Share of profits (losses)	Effect on change in equity	Ending balance
Mirae Asset Life Insurance Co., Ltd	₩ 426,095	43,567	-	-	(4,966)	127,334	50,605	642,635
Pantos Logistics Co., Ltd	145,000	-	-	-	(4,099)	13,408	1,479	155,788
Mirae Asset-NAVER New Growth Fund I	16,356	18,000	-	-	-	(399)	-	33,957
Mirae Asset-GS Retail New Growth Fund I	18,487	10,000	-	-	-	(177)	-	28,310
Mirae Asset-Celltrion New Growth Fund I	22,126	16,875	-	-	-	962	-	39,963
Hancom-Miraeasset 4IR Fund	4,948	-	-	-	-	(43)	-	4,905
Curious Mirae Asset SUTT Corporate Financial Stability PEF	-	-	-	1,978	(170)	205	-	2,013
SKS Mirae Asset Corporate Financial Stability PEF	-	10,000	-	-	-	(27)	-	9,973
Mirae Asset Partners PEF 4th	1,511	-	(359)	-	-	(1,135)	(13)	4
New Growth Engine Green Future PEF	1,102	-	(769)	-	-	(3)	-	330
Lotte KDB Mirae Asset Daewoo Global Investment Partnership PEF	7	15	(6)	-	-	(16)	-	-
Mirae Asset Naver Asia Growth PEF	94,101	156,062	-	-	-	(439)	4,390	254,114
Mirae Asset Daewoo SPAC 5th Co., Ltd.	27	-	-	(12)	-	-	(15)	-
Mirae Asset Daewoo SPAC 1st Co., Ltd.	73	-	-	-	-	-	-	73
Mirae Asset Daewoo SPAC 2nd Co., Ltd.	19	-	-	-	-	-	-	19
Mirae Asset Daewoo SPAC 3rd Co., Ltd.	-	16	-	-	-	-	8	24
Mirae Asset Daewoo SPAC 4th Co., Ltd.	-	15	-	-	-	(1)	2	16
Daejo PFV Co., Ltd	-	3,200	-	-	-	91	157	3,448
Suwon Galleria Station Area Complex Development PFV Co., Ltd	-	995	-	-	-	-	-	995
Yangjae PFV Co., Ltd	-	2,400	-	-	-	(37)	-	2,363
2019 PCC New Technology Fund	-	1,000	-	-	-	(1)	-	999
Cheongdam Complex PFV Co., Ltd	-	750	-	-	-	(1)	-	749
IMM Global PEF	-	29,125	-	-	-	(524)	(380)	28,221
SMC RMB Investors II Limited	4,968	-	-	-	-	915	8	5,891
Cassava Investment Korea Pte. Ltd.	-	-	-	-	-	-	-	-
Transwestern Corporate Properties I LLC	122,911	-	-	-	(9,583)	3,995	3,976	121,299
Traphaco Joint Stock Company	112,402	-	-	-	(2,455)	1,783	4,543	116,273
HPJV1 LLC	78,907	-	-	(78,907)	-	-	-	-
Nabou Green Energy Limited	-	-	-	-	-	-	-	-
Asia Cinema Group Ltd.	-	38,105	-	-	-	(1,309)	(240)	36,556
	₩ 1,049,040	330,125	(1,134)	(76,941)	(21,273)	144,581	64,520	1,488,918

(3) Financial information of investments in associates as of December 31, 2020 and 2019 is as follows:

	2020					
	Assets	Liabilities	Equity	Operating revenue	Profit (loss) for the year	Total comprehensive income
Mirae Asset Life Insurance Co., Ltd	₩ 40,629,763	38,347,236	2,282,527	3,628,734	77,230	2,818
Pantos Logistics Co., Ltd	1,684,575	1,039,236	645,339	4,763,367	118,260	107,252
Mirae Asset-NAVER New Growth Fund I	88,251	-	88,251	1,575	(7,209)	(7,209)
Mirae Asset-GS Retail New Growth Fund I	71,955	-	71,955	1,622	(745)	(745)
Mirae Asset-Celltrion New Growth Fund I	92,202	-	92,202	10,953	5,896	5,896
Hancom-Miraeasset 4IR Fund	13,989	3	13,986	953	556	556
SKS Mirae Asset Corporate Financial Stability PEF	207,028	309	206,719	1,271	1,271	1,271
Mirae Asset Partners PEF 4th	100	28	72	-	(29)	(29)
New Growth Engine Green Future PEF	1,145	-	1,145	1,970	1,946	1,946
Mirae Asset Naver Asia Growth PEF	632,470	32,898	599,572	14,327	8,137	(14,672)
Daejo PFV Co., Ltd	131,026	119,825	11,201	17,785	2,885	2,885
Suwon Galleria Station Area Complex Development PFV Co., Ltd	115,665	127,358	(11,693)	43,694	(16,691)	(16,691)
Yangjae PFV Co., Ltd	32,831	27,014	5,817	-	(85)	(85)
2019 PCC New Technology Fund	3,904	1	3,903	808	757	757
Cheongdam Complex PFV Co., Ltd	51,390	46,641	4,749	-	(248)	(248)
Godeok Gangil 10 PFV Co., Ltd	245,302	247,139	(1,837)	-	(6,837)	(6,837)
Moonjung Station Maestro Project Financing Vehicle Co. Ltd.	62,483	57,535	4,948	-	(52)	(52)
MiraeassetCurious Corporate Recovery Private Equity Fund	36,810	302	36,508	165	(1,075)	(1,075)
MTV Bandalseom C1 Development PFV Co., Ltd.	170,594	172,386	(1,792)	-	(6,792)	(6,792)
Wirye Active Senior House Co. Ltd.	6,095	1,136	4,959	-	(42)	(42)
KJ Logis Co., Ltd.	4,352	4,122	230	-	(274)	(274)
Seolleung Maestro Station Influence Area Public Housing Project Financial Investment Co., Ltd.	4,950	-	4,950	-	(50)	(50)
Amnam Distribution Logistics Development Co., Ltd.	4,025	3,745	280	-	(20)	(20)
Mirae Asset Daewoo 3rd SPAC	14,909	2,276	12,633	130	42	42
Mirae Asset Daewoo 4th SPAC	10,930	2,412	8,518	119	26	26
Mirae Asset Daewoo 5th SPAC	11,680	1,962	9,718	29	(44)	(44)
All Together Korea Korea Investment Private Investment Pool Professional Private Investment Trust 10th	25,711	3	25,708	479	385	385
SMC RMB Investors II Limited	21,654	1,883	19,771	1,277	1,071	600
Transwestern Corporate Properties I LLC	362,035	1	362,034	55,560	24,352	1,696
Traphaco Joint Stock Company	73,767	17,130	56,637	93,781	10,370	6,294
Asia Cinema Group Ltd.	316,153	210,653	105,500	-	(13,808)	(20,321)
Mirae Asset Venture Investments (India) Private Limited	11,349	79	11,270	441	(11)	(297)
MAPS Indianapolis One LLC	85,595	-	85,595	-	-	-

(*) The summary financial information of the affiliated companies that cannot obtain financial information as of the end of the current term has been excluded.

	2019					
	Assets	Liabilities	Equity	Operating revenue	Profit (loss) for the year	Total comprehensive income
Mirae Asset Life Insurance Co., Ltd	₩ 38,011,129	35,678,410	2,332,719	3,491,615	105,737	306,242
Pantos Logistics Co., Ltd	1,417,163	856,157	561,006	4,199,815	74,613	80,183
Mirae Asset-NAVER New Growth Fund I	75,472	12	75,460	154	(887)	(887)
Mirae Asset-GS Retail New Growth Fund I	56,621	-	56,621	701	(354)	(354)
Mirae Asset-Celltrion New Growth Fund I	88,806	-	88,806	6,930	2,138	2,138
Hancom-Miraeasset 4IR Fund	15,198	-	15,198	256	(142)	(142)
Curious Mirae Asset SUTT Corporate Financial Stability PEF	20,413	81	20,332	795	795	795
SKS Mirae Asset Corporate Financial Stability PEF	206,806	358	206,448	(552)	(552)	(552)
Mirae Asset Partners PEF 4th	128	28	100	28	(139)	(139)
New Growth Engine Green Future PEF	3,300	-	3,300	3	(26)	(26)
Mirae Asset Naver Asia Growth PEF	526,520	14,239	512,281	7,778	1,764	6,744
Mirae Asset Daewoo 1st SPAC	10,065	1,147	8,918	-	56	56
Mirae Asset Daewoo 2nd SPAC	6,826	1,089	5,737	-	(67)	(67)
Mirae Asset Daewoo 3rd SPAC	14,827	2,235	12,592	-	12	12
Mirae Asset Daewoo 4th SPAC	2,705	2,379	326	-	(31)	(31)
Daejo PFV Co., Ltd	97,082	88,462	8,620	709	227	227
Suwon Galleria Station Area Complex Development PFV Co., Ltd	5,024	25	4,999	-	(1)	(1)
Yangjae PFV Co., Ltd	32,908	27,000	5,908	-	(92)	(92)
2019 PCC New Technology Fund	3,146	-	3,146	-	(4)	(4)
Cheongdam Complex PFV Co., Ltd	32,968	27,972	4,996	-	(4)	(4)
IMM Global PEF	506,556	418,508	88,048	345	(1,636)	(2,822)
SMC RMB Investors II Limited	20,977	1,806	19,171	3,356	2,977	3,007
Transwestern Corporate Properties I LLC	396,970	-	396,970	56,256	14,635	28,869
Traphaco Joint Stock Company	80,946	23,057	57,889	83,160	4,559	4,673
Nabou Green Energy Limited	100,821	97,349	3,472	-	(6,989)	(7,002)
Asia Cinema Group Ltd.	337,206	215,351	121,855	-	(4,362)	(5,163)

(4) Unrecognized share of losses and cumulatively, because the Group has stopped recognizing its share of losses of the associated when applying the equity method, are ₩2,812 million and ₩2,812 million, respectively.

(5) As of December 31, 2020, the fair value of marketable associated investment assets is as follows:

	Market value	Book value
Mirae Asset Life Insurance Co., Ltd	₩ 150,027	647,570
Mirae Asset Daewoo 3rd SPAC	33	24
Mirae Asset Daewoo 4th SPAC	31	29
Mirae Asset Daewoo 5th SPAC	36	33
Traphaco Joint Stock Company	56,078	109,525
	₩ 206,205	757,181

15. Property and equipment

(1) Details of property and equipment as of December 31, 2020 and 2019 are as follows:

	2020		
	Acquisition cost	Accumulated depreciation	Carrying amount, net
Land	₩ 77,751	-	77,751
Structure	18,413	(8,600)	9,813
Vehicles	1,266	(786)	480
Furniture and fixtures	126,300	(63,103)	63,197
Data processing equipment	100,293	(86,805)	13,488
Leasehold facilities	898	(351)	547
Others	4,845	(2,306)	2,539
Right-of-use asset:			
Real estate	307,753	(72,013)	235,740
IT Asset	7,697	(4,136)	3,561
Vehicles	6,161	(1,943)	4,218
Others	1,389	(930)	459
Total	₩ 652,766	(240,973)	411,793

	2019		
	Acquisition cost	Accumulated depreciation	Carrying amount, net
Land	₩ 81,139	-	81,139
Structure	20,032	(6,669)	13,363
Vehicles	1,738	(1,033)	705
Furniture and fixtures	116,255	(51,631)	64,624
Data processing equipment	97,917	(83,646)	14,271
Leasehold facilities	311	(291)	20
Others	5,266	(1,986)	3,280
Right-of-use asset:			
Real estate	310,439	(39,410)	271,029
IT Asset	7,551	(2,030)	5,521
Vehicles	4,654	(2,455)	2,199
Others	544	(417)	127
Total	₩ 645,846	(189,568)	456,278

(2) The Group has not recognized any impairment loss in property and equipment as of December 31, 2020 and 2019.

(3) Details of changes in property and equipment other than right-of-use asset for the years ended December 31, 2020 and 2019 are as follows:

	2020						
	Beginning balance	Acquisition	Disposal	Depreciation	Reclassification(*1)	Others (*2)	Ending balance
Land	₩ 81,139	-	(3,388)	-	-	-	77,751
Structure	13,363	7	167	(2,101)	(1,623)	-	9,813
Vehicles	705	-	-	(195)	-	(30)	480
Furniture and fixtures	64,624	17,513	(269)	(16,763)	-	(1,908)	63,197
Data processing equipment	14,271	7,166	-	(7,879)	-	(70)	13,488
Leasehold facilities	20	587	-	(60)	-	-	547
Others	3,280	177	-	(500)	-	(418)	2,539
	₩ 177,402	25,450	(3,490)	(27,498)	(1,623)	(2,426)	167,815

(*1) Reclassification between investment properties and property and equipment due to changes of leasable area.

(*2) Changes in scope of consolidation and fluctuation of foreign exchange rate.

	2019							
	Beginning balance	Adoption effect of K-IFRS No.1116	Acquisition	Disposal	Depreciation	Reclassification(*1)	Others(*2)	Ending balance
Land	₩ 80,760	-	379	-	-	-	-	81,139
Structure	15,265	-	1,572	(2,283)	(2,164)	973	-	13,363
Vehicles	292	-	593	(23)	(159)	-	2	705
Furniture and fixtures	57,086	-	18,891	(1,596)	(14,666)	2,581	2,328	64,624
Data processing equipment	20,089	-	3,652	7	(9,484)	-	7	14,271
Leasehold facilities	1,573	(1,545)	6	-	(30)	-	16	20
Construction in progress	54,356	-	56,610	-	-	(110,966)	-	-
Others	2,731	-	985	(39)	(440)	-	43	3,280
	₩ 232,152	(1,545)	82,688	(3,934)	(26,943)	(107,412)	2,396	177,402

(*1) Reclassification of construction in progress and reclassification between investment properties and property and equipment due to changes of leasable area.

(*2) Changes in scope of consolidation and fluctuation of foreign exchange rate.

(4) Details of changes in right-of-use asset for the year ended December 31, 2020 and 2019 are as follows:

	2020					
	Beginning balance	Increase	Decrease	Depreciation	Fluctuation of exchange rate	Ending balance
Right-of-use asset						
Real estate(*)	₩ 271,029	19,755	(3,537)	(38,563)	(12,944)	235,740
IT asset	5,521	147	-	(2,107)	-	3,561
Vehicles	2,199	4,871	(524)	(2,354)	26	4,218
Others	127	1,242	-	(911)	1	459
	₩ 278,876	26,015	(4,061)	(43,935)	(12,917)	243,978

(*) ₩1,818 million of increase in right-of-use asset real estate was recognized as provision of restoration in relation to new lease contract.

	2019						
	Beginning balance	Adoption effect of K-IFRS No. 1116	Increase	Decrease	Depreciation	Fluctuation of exchange rate	Ending balance
Right-of-use asset							
Real estate(*)	₩ -	283,947	28,785	(9,085)	(39,685)	7,067	271,029
IT asset	-	7,578	252	(279)	(2,030)	-	5,521
Vehicles	-	3,440	1,834	(481)	(2,600)	6	2,199
Others	-	700	297	(4)	(866)	-	127
	₩ -	295,665	31,168	(9,849)	(45,181)	7,073	278,876

(*) ₩2,252 million of increase in right-of-use asset real estate was recognized as provision of restoration in relation to new lease contract.

(5) 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 ₩12,202 million and ₩12,047 million as of December 31, 2020 and 2019 and the right to lease on a deposit basis of ₩1,794 million and ₩3,444 million related to the lease respectively.

16. Investment properties

(1) Details of investment properties as of December 31, 2020 and 2019 are as follows:

	2020		
	Land	Structures	Total
Acquisition cost	₩ 830,797	1,632,445	2,463,242
Accumulated depreciation	-	(157,715)	(157,715)
The carrying amount, net	₩ 830,797	1,474,730	2,305,527

	2019		
	Land	Structures	Total
Acquisition cost	₩ 744,897	1,533,998	2,278,895
Accumulated depreciation	-	(112,024)	(112,024)
The carrying amount, net	₩ 744,897	1,421,974	2,166,871

(2) The Group has not recognized any impairment loss in investment properties as of December 31, 2020 and 2019.

(3) Details of changes in investment properties for the years ended December 31, 2020 and 2019 are as follows:

	2020						
	Beginning balance	Acquisition	Depreciation	Disposal	Reclassification(*1)	Others (*2)	Ending balance
Land	₩ 744,897	69,111	-	(6,769)	-	23,558	830,797
Structures	1,421,974	199,138	(55,647)	(1,486)	1,623	(90,872)	1,474,730
	₩ 2,166,871	268,249	(55,647)	(8,255)	1,623	(67,314)	2,305,527

(*1) Reclassification between investment properties and property and equipment due to changes of leasable area.

(*2) Effects from changes of foreign currency exchange rates and scope of consolidation.

	2019						
	Beginning balance	Acquisition	Depreciation	Disposal	Reclassification(*1)	Others (*2)	Ending balance
Land	₩ 148,512	622,029	-	(8,347)	22,733	(40,030)	744,897
Structures	937,668	564,364	(44,283)	(810)	84,679	(119,644)	1,421,974
	₩ 1,086,180	1,186,393	(44,283)	(9,157)	107,412	(159,674)	2,166,871

(*1) Reclassification between investment properties and property and equipment due to 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, 2020 and 2019 are as follows:

	2020	2019
Rental income	₩ 119,252	184,513
Direct operating expenses arising from investment properties that generated rental income	(107,320)	(113,019)

(5) Fair value of investment properties as of December 31, 2020 and 2019 are as follows:

	2020	2019
Land	₩ 797,762	755,038
Structures	1,585,670	1,572,825
	₩ 2,383,432	2,327,863

(*1) Valuation was conducted by professional independent appraisers who have evaluated similar properties in the past. Fair values is classified to Level 3 considering the inputs are used.

(6) Valuation methods of investment property and input factor are as follows:

	Valuation technique	Inputs
Land	Transaction comparison approach	Transaction price, correction factor
Structures	Discounted cash flow analysis	Future cash flows (deposits, rental income, expenses, vacancy rate and others), discount rates

(7) Operating lease

1) The Group offer investment properties are leased to tenants under operating lease. It is classified as operating leases because most of the risks and rewards of the investment properties are retained.

2) The following is a maturity analysis table for operating leases, and the lease fees to be received after the end of the reporting period are calculated as non-discounted amounts.

Operating lease	2020	
Within one year	₩	89,625
1 to 2 years		109,484
2 to 3 years		109,253
3 to 4 years		94,120
4 to 5 years		56,909
5 to 6 years		12,515
	₩	471,906

17. Intangible assets

(1) Details of changes in intangible assets for the years ended December 31, 2020 and 2019 are as follows:

	2020					Total
	Goodwill	Development cost	Software	Others		
Beginning balance, net	₩ 397,777	42,699	6,494	174,049	621,019	
Acquisition	-	436	3,314	578	4,328	
Transfers (*)	-	2,390	31	-	2,421	
Amortization	-	(18,993)	(3,423)	(18,203)	(40,619)	
Impairment loss	-	-	-	(45)	(45)	
Disposal	-	-	(1)	(755)	(756)	
Fluctuation of foreign exchange rate	-	152	(339)	435	248	
Ending balance, net	₩ 397,777	26,684	6,076	156,059	586,596	

(*) It is transferred from advance payments to intangible assets for the year ended December 31, 2020.

	2019					Total
	Goodwill	Development cost	Software	Others		
Beginning balance, net	₩ 397,777	58,842	7,647	190,559	654,825	
Acquisition	-	5,505	2,324	6,407	14,236	
Amortization	-	(21,623)	(3,479)	(22,937)	(48,039)	
Disposal	-	-	(1)	(530)	(531)	
Fluctuation of foreign exchange rate	-	(25)	3	550	528	
Ending balance, net	₩ 397,777	42,699	6,494	174,049	621,019	

(2) Impairment test of intangible assets

1) Details of intangible assets tested for impairment as of December 31, 2020 and 2019 are as follows:

	2020	2019
Goodwill	₩ 397,777	397,777
Brand	56,614	56,614
	₩ 454,391	454,391

2) The recoverable amount was evaluated based upon their value in use. The value in use 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, 2020 and its projection period for cash flow estimates is 5.25 years. Terminal growth rate is used in measuring the periods beyond the projection period.

ii) **Discount rate and terminal growth rate** The required rate of return of shareholders and the cost of capital were applied to the discount rates. Expected terminal growth rate after the projection period is estimated to be 1%.

iii) The main assumptions used in estimating future cash flows are about GDP growth rate, incremental CPI rate.

- 3) As a result of an impairment test, the recoverable amount exceeds its book value by ₩1,295,097 million, therefore no impairment was recognized.

18. Other assets

Details of other assets as of December 31, 2020 and 2019 are as follows:

		2020	2019
Advance payments	₩	89,065	79,870
Prepaid expenses		18,539	35,950
Others		9,853	16,065
	₩	117,457	131,885

19. Pledged assets

Details of pledged assets as of December 31, 2020 and 2019 are as follows:

		2020	2019	Purpose
Financial assets measured at fair value through profit or loss(*1)	₩	22,103,681	25,082,727	Securities sold under repurchase agreements(*2), securities borrowing, trading with collateral on derivatives(*3), etc.
Financial assets measured at fair value through other comprehensive income		8,710,582	7,515,029	Securities sold under repurchase agreements(*2), etc.
Financial assets at amortized cost (*1)(*2)		46,761,752	62,373,748	Derivatives-linked securities, payments and settlements etc.
Investment properties		2,181,293	2,056,972	Right to collateral security, right to lease on a deposit, etc.
	₩	79,757,308	97,028,476	

(*1) Although it is not recognized in the financial statements as of the end of the current term and the prior term, the amount provided as collateral for loan transactions is ₩4,051,374 million and ₩5,454,533 million, respectively.

(*2) An agreement to repurchase a transferred asset at a pre-set price or selling price plus a certain rate of return after the sale includes transactions provided as collateral for the financial asset. In addition, financial assets acquired through repurchase agreements exist and are not recognized in the Group's financial statements. The consolidation entity used these acquired financial assets for securities sold under repurchase agreement. As of December 31, 2020 and 2019, the amount that can be provided for repledged is ₩43,161,733 million and ₩59,708,597 million, respectively, while the amount provided for repledged is ₩43,030,515 million and ₩59,566,039 million, respectively.

(*3) The Group provides collateral for the margin call arising due to the decline in valuation of derivative in OTC derivative transactions.

20. 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, 2020 and 2019 are as follows:

		2020	2019
Securities in short position	₩	773,179	795,898
Derivative liabilities		1,731,723	1,152,131
	₩	2,504,902	1,948,029

ii) Details of the securities in short position as of December 31, 2020 and 2019 are as follows:

Description(*)		2020	2019	Valuation	
Securities in short position	Equity securities	₩	392,227	430,797	Fair value
	Bonds		380,759	311,357	Fair value
	Others (ETF sold)		193	53,744	Fair value
	₩	773,179	795,898		

(*) 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 Group sells securities borrowed.

(2) Financial liabilities designated as measured at fair value through profit or loss

i) Details of the financial liabilities designated as measured at fair value through profit or loss as of December 31, 2020 and 2019 are as follows:

Reason for designation	Description		2020	2019
Hybrid financial assets	Equity-linked securities sold	₩	11,840,690	11,489,608
	Other derivatives combined securities sold		2,252,439	3,478,751
		₩	14,093,129	14,968,359

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 years ended December 31, 2020 and 2019 are as follows:

		2020	2019
Beginning balance	₩	5,054	5,062
Credit risk increase recognized in other comprehensive income		3,924	6,350
Credit risk decrease recognized in other comprehensive income		(2,084)	(211)
Disposal		(4,653)	(6,149)
Income tax effect		774	2
Ending balance	₩	3,015	5,054

iii) Differences between 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, 2020 and 2019 are as follows:

		2020		
		Contractual payment at maturity	Book value	Difference
Equity-linked securities sold	₩	11,624,656	11,840,690	(216,034)
Other derivatives combined securities sold		2,225,811	2,252,439	(26,628)
	₩	13,850,467	14,093,129	(242,662)

		2019		
		Contractual payment at maturity	Book value	Difference
Equity-linked securities sold	₩	11,396,352	11,489,608	(93,256)
Other derivatives combined securities sold		3,425,891	3,478,751	(52,860)
	₩	14,822,243	14,968,359	(146,116)

21. Deposits due to customers

Details of the deposits due to customers as of December 31, 2020 and 2019 are as follows:

		2020	2019
Customers' deposits			
Customers' deposits for brokerage	₩	11,520,571	5,428,262
Customers' deposits for exchange traded derivatives		380,287	355,288
Customers' deposits for savings		58,963	55,112
Customers' deposits for collective investment securities		375,171	111,994
Others		750	2,053
		12,335,742	5,952,709
Others		231	2,887
	₩	12,335,973	5,955,596

22. Borrowings

(1) Details of the borrowings as of December 31, 2020 and 2019 are as follows:

	2020		
	Lender	Interest rate (%)	Amount
Borrowings	Korea Securities Finance Corp. and others	0.85 ~ 1.80	₩ 5,017,576
	KEB Hana Bank and other	3.50 ~ 3.60	80,067
	KDB Bank and others	1.18 ~ 7.60	1,552,206
Call money	KB Kookmin bank and others	0.69 ~ 0.90	2,210,000
Securities sold under repurchase agreements		0.01 ~ 3.00	55,939,190
Lease liabilities	Others	-	244,027
Others		0.02 ~ 3.60	4,023,008
			₩ 69,066,074

	2019		
	Lender	Interest rate (%)	Amount
Borrowings	Korea Securities Finance Corp. and others	1.45 ~ 2.04	₩ 5,269,204
	KEB Hana Bank and others	3.40 ~ 5.50	108,510
	KDB Bank and others	2.50 ~ 4.43	1,250,003
Call money	KB Kookmin bank and others	1.38 ~ 1.44	1,390,000
Securities sold under repurchase agreements		0.05 ~ 4.75	73,627,432
Lease liabilities	Others	-	276,604
Others		0.20 ~ 3.60	4,531,408
			₩ 86,453,161

(2) Details of changes of cash flow in borrowings for the years ended December 31, 2020 and 2019 are as follows:

	2020	2019
Beginning balance	₩ 86,453,161	72,363,400
Changes from financing cash flow		
Changes of borrowings, net	(782,542)	3,694,022
Changes of lease liabilities, net	(51,986)	(47,312)
Effect from fluctuations in exchange rate	(2,595,987)	1,679,397
Interest expense on lease liabilities	16,322	16,354
Others	(13,972,894)	8,747,300
Ending balance	₩ 69,066,074	86,453,161

(3) Total amount of cash outflow in lease is ₩ 54,301 million and ₩ 49,733 million, respectively, for the years ended December 31, 2020 and 2019.

23. Debentures

Details of the debentures as of December 31, 2020 and 2019 are as follows:

(1) General bonds

	Issued date	Maturity date	Interest rate (%)		2020	2019
The 5th public offering subordinated Debenture	2016.07.28	2022.01.28	3.500	₩	300,000	300,000
The 39-2nd public offering Debenture	2015.05.28	2020.05.28	2.387		-	50,000
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 Debenture	2018.04.26	2021.04.26	2.707		260,000	260,000
The 47-2nd public offering Debenture	2018.04.26	2023.04.26	3.005		240,000	240,000
The 48-1st public offering Debenture	2018.09.12	2021.09.12	2.287		110,000	110,000
The 48-2nd public offering Debenture	2018.09.12	2023.09.12	2.505		260,000	260,000
The 48-3rd public offering Debenture	2018.09.12	2025.09.12	2.691		130,000	130,000
The 49-1st public offering Debenture	2019.01.18	2022.01.18	2.160		240,000	240,000
The 49-2nd public offering Debenture	2019.01.18	2024.01.18	2.341		160,000	160,000
The 49-3rd public offering Debenture	2019.01.18	2026.01.28	2.459		100,000	100,000
The 50th public offering subordinated Debenture	2019.03.21	2025.03.21	3.550		500,000	500,000
The 51-1st public offering Debenture	2020.01.28	2023.01.27	1.798		350,000	-
The 51-2nd public offering Debenture	2020.01.28	2025.01.27	1.970		100,000	-
The 51-3rd public offering Debenture	2020.01.28	2027.01.28	2.087		50,000	-
The 52th public offering subordinated Debenture	2020.02.25	2026.02.25	3.000		500,000	-
The 53-1st public offering Debenture	2020.06.19	2022.06.17	1.527		130,000	-
The 53-2nd public offering Debenture	2020.06.19	2023.06.19	1.648		140,000	-
The 54-1st public offering Debenture	2020.09.25	2023.09.25	1.527		110,000	-
The 54-2nd public offering Debenture	2020.09.25	2025.09.25	1.735		20,000	-
The 55th public offering Debenture	2020.10.21	2025.10.21	1.774		100,000	-
Unsecured Reg S Senior Bond #1	2018.11.07	2021.11.06	4.125		326,400	347,340
Unsecured Reg S Senior Bond #2	2019.05.07	2022.05.09	3.125		326,400	347,340
Unsecured Reg S Senior Bond #3	2019.05.07	2024.05.07	3.375		326,400	347,340
Unsecured Reg S Senior Bond #4	2020.07.30	2023.07.30	2.125		326,400	-
Unsecured Reg S Senior Bond #5	2020.07.30	2025.07.30	2.625		326,400	-
MAPS HAWAII TWO LLC Mezzanine Loan	2016.09.12	2021.09.22	6.900		157,760	167,881
MAS/01-2019/1Y-01	2019.02.27	2020.02.27	8.000		-	4,996
MAS/01-2019/1Y-02	2019.02.27	2020.02.27	8.000		-	2,498
MAS/01-2019/1Y-03	2019.02.27	2020.02.27	8.000		-	12,491
MAS/02-2019/1Y-01	2019.05.13	2020.05.13	8.000		-	9,993
MAS/02-2019/1Y-02	2019.05.13	2020.05.13	8.000		-	250
MAS/02-2019/1Y-03	2019.05.13	2020.05.13	8.000		-	1,999
MAS/02-2019/1Y-04	2019.05.13	2020.05.13	8.000		-	100
MAS/03-2019/2Y-01	2019.08.20	2021.08.20	8.000		4,711	4,996
MAS/03-2019/2Y-02	2019.08.20	2021.08.20	8.000		141	150
MAS/03-2019/2Y-03	2019.08.20	2021.08.20	8.000		94	100
MAS/01-2020/2Y-01	2020.02.28	2022.02.28	8.000		4,710	-
MAS/01-2020/2Y-02	2020.02.28	2022.02.28	8.000		18,842	-
MAS/02-2020/1Y-01	2020.05.12	2021.05.12	7.800		942	-
MAS/02-2020/1Y-02	2020.05.12	2021.05.12	7.800		236	-

	Issued date	Maturity date	Interest rate (%)	2020	2019
MAS/02-2020/1Y-03	2020.05.12	2021.05.12	7.800	141	-
MAS/02-2020/1Y-04	2020.05.12	2021.05.12	7.800	94	-
Face Value				6,489,671	4,467,474
Discount on Debentures				(14,807)	(11,248)
Book Value				₩ 6,474,864	4,456,226

(2) Asset backed short-term bond

	2020		
	Lender	Interest rate (%)	Amount
Asset backed short-term bond	BNK Securities Co., Ltd and others	0.61 ~ 3.40	₩ 1,475,109

	2019		
	Lender	Interest rate (%)	Amount
Asset backed short-term bond	Samsung Investment Trust Management Co., Ltd and others	1.42 ~ 2.16	₩ 1,759,000

(3) Details of changes of cashflow in debentures for the years ended December 31, 2020 and 2019 are as follows:

	2020	2019
Beginning balance	₩ 6,215,226	4,249,205
Changes from financing cash flow		
Issuance of debentures	2,235,385	1,731,311
Repayment of debentures	(83,952)	(313,419)
Changes of asset backed short-term bond, net	(277,291)	612,395
Amortization of discount on debentures	5,393	2,617
Effect from fluctuations in exchange rate	(138,188)	11,695
Effect from changes in scope of consolidation	(6,600)	(78,578)
Ending balance	₩ 7,949,973	6,215,226

24. Provisions

(1) Details of provisions as of December 31, 2020 and 2019 are as follows:

	2020	2019
Provisions:		
Provision of restoration(*)	₩ 8,515	7,442
Provision of litigations	6,803	6,809
Provision of off-balance items	1,945	3,912
Others	42,959	1,624
	₩ 60,222	19,787

(*) 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, 2020. The average restoration expense is calculated based on the actual costs incurred for the past five years and 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, 2020 and 2019 are as follows:

	2020			
	Provision of restoration	Provision of litigations	Others	Total
Beginning balance	₩ 7,442	6,809	1,624	15,875
Additional provisions (*1)	84	1	41,971	42,056
Provision used (*2)	1,818	-	-	1,818
Others	(829)	(7)	(636)	(1,472)
Ending balance	₩ 8,515	6,803	42,959	58,277

(*1) Additional provisions for the year ended December 31, 2020 consist of provisions of restoration of ₩84 million which occurred in relation to interest expenses, provisions of allowance for litigations ₩ 1 million, provisions related to point provided to customers ₩ 1,985 million and provisions of allowance for others ₩ 39,986 million.

(*2) Provision used in relation to new lease contracts.

	2019			
	Provision of restoration	Provision of litigations	Others	Total
Beginning balance	₩ 9,288	7,314	1,154	17,756
Additional provisions (*1)	130	106	987	1,223
Provision used (*2)	2,252	-	-	2,252
Others	(4,228)	(611)	(517)	(5,356)
Ending balance	₩ 7,442	6,809	1,624	15,875

(*1) Additional provisions for the year ended December 31, 2019 consist of provisions of restoration of ₩130 million which occurred in relation to interest expenses, provisions of allowance for litigations ₩106 million and provisions related to point provided to customers ₩987 million.

(*2) Provision used in relation to new lease contracts.

(3) Details of changes in expected credit loss of off-balance items as of December 31, 2020 and 2019 are as follows:

	2020						
	Purchase agreement		Guarantee (including loan commitment)		Unused credit line		Total
	12-month ECL	Lifetime ECL	12-month ECL	Lifetime ECL	12-month ECL	Lifetime ECL	
Beginning Balance	₩ 349	-	1,170	-	2,393	-	3,912
Reclassification to Lifetime ECL	-	-	(4)	4	(152)	152	-
Reclassification to 12-month ECL	-	-	-	-	-	-	-
Provision allowances (Reversal)	(82)	-	(841)	(4)	(1,228)	188	(1,967)
Ending Balance	₩ 267	-	325	-	1,013	340	1,945
Financial guarantee liabilities	₩ -	-	12,766	3,857	-	-	16,623
Provision(*)	267	-	325	-	1,013	340	1,945

(*) When amount of expected credit losses exceeds amount of financial guarantee liabilities, the excess amount is recognized as provisions(described in note 25).

	2019						
	Purchase agreement		Guarantee (including loan commitment)		Unused credit line		Total
	12-month ECL	Lifetime ECL	12-month ECL	Lifetime ECL	12-month ECL	Lifetime ECL	
Beginning Balance	₩ 522	-	2,636	-	2,012	-	5,170
Reclassification to Lifetime ECL	-	-	-	-	-	-	-
Reclassification to 12-month ECL	-	-	-	-	-	-	-
Provision allowances (Reversal)	(173)	-	(1,466)	-	381	-	(1,258)
Ending Balance	₩ 349	-	1,170	-	2,393	-	3,912
Financial guarantee liabilities	₩ -	-	32,414	978	-	-	33,392
Provision(*)	349	-	1,170	-	2,393	-	3,912

(*) When amount of expected credit losses exceeds amount of financial guarantee liabilities, the excess amount is recognized as provisions(described in note 25).

(4) Details of changes in balances of off-balance items as of December 31, 2020 and 2019 are as follows:

							2020
	Purchase agreement		Guarantee (including loan commitment)		Unused credit line		Total
	12-month ECL	Lifetime ECL	12-month ECL	Lifetime ECL	12-month ECL	Lifetime ECL	
Beginning Balance	₩ 1,341,218	-	921,292	25,000	1,548,986	-	3,836,496
Reclassification to Lifetime ECL	-	-	(62,800)	62,800	(32,338)	32,338	-
Reclassification to 12-month ECL	-	-	-	-	-	-	-
Increase (Decrease)	19,271	-	(476,482)	(23,400)	429,616	(13,228)	(64,223)
Ending Balance	₩ 1,360,489	-	382,010	64,400	1,946,264	19,110	3,772,273

							2019
	Purchase agreement		Guarantee (including loan commitment)		Unused credit line		Total
	12-month ECL	Lifetime ECL	12-month ECL	Lifetime ECL	12-month ECL	Lifetime ECL	
Beginning Balance	₩ 1,541,900	-	1,287,244	-	855,434	-	3,684,578
Reclassification to Lifetime ECL	-	-	(25,000)	25,000	-	-	-
Reclassification to 12-month ECL	-	-	-	-	-	-	-
Increase (Decrease)	(200,682)	-	(340,952)	-	693,552	-	151,918
Ending Balance	₩ 1,341,218	-	921,292	25,000	1,548,986	-	3,836,496

25. Other liabilities

(1) Details of other liabilities as of December 31, 2020 and 2019 are as follows:

	2020	2019
Other financial liabilities:		
Accounts payable	₩ 11,373,012	4,676,755
Accrued expenses	412,598	365,531
Deposits received	17,931	16,215
Financial guarantee contract liabilities	16,623	33,392
Dividends payable	26	2
	11,820,190	5,091,895
Other liabilities:		
Deposits received withholding value-added tax and other taxes	46,764	45,163
Income in advance	32,119	27,572
Defined benefit liabilities	36,443	27,454
Other long-term employee benefit liabilities	6,831	6,911
Others	3,521,077	3,193,593
	3,643,234	3,300,693
	₩ 15,463,424	8,392,588

(2) Defined benefit liabilities as of December 31, 2020 and 2019 are as follows:

	2020	2019
Defined benefit obligation	₩ 36,517	27,531
plan assets	(74)	(77)
Defined benefit liabilities	₩ 36,443	27,454

(3) Details of changes in Present Value of defined benefit obligation for the years ended December 31, 2020 and 2019 are as follows:

		2020	2019
Beginning balance	₩	27,531	1,246
Current service cost		2,536	1,797
Past service cost		-	20,917
Interest expense		899	542
Remeasurements of the defined benefit obligation		7,608	4,529
Paid		(1,882)	(1,546)
Gain (losses) on foreign exchange		(175)	46
Ending balance	₩	36,517	27,531

(4) Details of changes in plan assets for the years ended December 31, 2020 and 2019 are as follows:

		2020	2019
Beginning balance	₩	77	71
Increase (decrease)		(3)	6
Ending balance	₩	74	77

(5) Details of expenses recognized in profit or loss regarding retirement benefits for the years ended December 31, 2020 and 2019 are as follows:

		2020	2019
Defined contribution	₩	36,483	36,367
Current service cost (Defined benefit)		2,536	1,797
Past service cost (Defined benefit)		-	20,917
Interest expense (Defined benefit)		899	542
	₩	39,918	59,623

(6) Details of main assumptions for actuarial evaluation for the year ended December 31, 2020 are as follows:

	Ratio(%)	Remarks
Demographic assumptions		
Mortality rate	0.002~ 0.099	Korea Insurance Development Institute's expected death rate
Quit rate	6.58~29.79	
Financial assumptions		
Salary increase rate	3.60	Overall weighted average
Discount rate	3.21 ~ 3.60	The yield on high-quality corporate bonds (AA-)

(7) The sensitivity of the defined benefit obligation to change in the principal assumptions is as follows:

	Defined benefit obligation	1% increase	1% decrease
Discount rate	₩ 36,517	33,610	39,832
Salary increase rate	36,517	39,785	33,594

(8) The expected maturity analysis of undiscounted pension benefits as of December 31, 2020, is as follows:

	Within one year	1 to 2 years	2 to 5 years	5 to 10 years	Over 10 years	Total
Pension benefit	₩ 1,537	1,344	8,592	14,779	20,854	47,106

As of December 31, 2020, the weighted average duration of the defined benefit obligation is 8.85 years.

26. Derivatives for trading

(1) Details of derivatives for trading as of December 31, 2020 and 2019 are as follows:

	2020			2019		
	Contracts	Assets	Liabilities	Contracts	Assets	Liabilities
Equity:						
Forwards	₩ -	-	-	1,037,148	32,606	-
Futures	2,973,450	10,907	14,270	2,460,192	8,987	16,609
Option	11,385,293	65,537	399,493	13,796,049	169,928	176,681
Swaps	11,682,993	205,966	330,550	13,921,988	134,947	262,451
	26,041,736	282,410	744,313	31,215,377	346,468	455,741
Interest rate:						
Forwards	320,000	1,478	31,473	280,000	-	41,874
Futures	1,516,392	153	1,146	1,971,536	3,082	756
Option	1,679,400	19,352	53,512	2,106,084	40,209	66,985
Swaps	101,778,309	390,227	344,480	101,620,338	291,767	290,850
	105,294,101	411,210	430,611	105,977,958	335,058	400,465
Currency:						
Forwards	18,197,173	364,366	387,245	26,248,763	256,738	253,995
Futures	418,722	115	558	393,675	-	551
Option	-	-	-	57,890	8	-
Swaps	5,733,381	217,139	208,338	6,154,668	76,777	73,606
	24,349,276	581,620	596,141	32,854,996	333,523	328,152
Credit:						
Swaps	619,616	1,459	232	1,801,790	9,931	6,818
Commodity:						
Futures	113,426	8,529	442	69,239	1,201	1,516
Option	27,744	-	2,524	235,623	1	4,698
Swaps	18,291	-	1,637	15,257	112	631
	159,461	8,529	4,603	320,119	1,314	6,845
Others:						
Option	13,000	25	-	13,000	40	-
Swaps	437,804	1,358	18,903	811,472	12,478	20,676
Others	1,060,319	76,466	-	360,229	9,195	-
	1,511,123	77,849	18,903	1,184,701	21,713	20,676
Credit value adjustment	-	(3,331)	(1,529)	-	(5,614)	(1,725)
Day 1 profit or loss	-	12,787	(61,552)	-	(65,456)	(64,841)
	₩ 157,975,313	1,372,533	1,731,722	173,354,941	976,937	1,152,131

(2) Details of gains or losses on valuation and transaction of derivatives for trading for the years ended December 31, 2020 and 2019 are as follows:

	2020		2019	
	Valuation	Transaction	Valuation	Transaction
Equity	₩ (274,996)	567,382	149,362	437,137
Interest rate	34,351	(51,287)	46,294	(51,791)
Currency	(65,882)	(111,286)	(5,680)	(41,918)
Credit	(3,210)	2,038	(1,320)	2,252
Commodity	6,133	(21,959)	7,133	16,294
Others	31,404	(9,680)	26,911	19,518
	₩ (272,200)	375,208	222,700	381,492

27. 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 contract as a hedging instrument to hedge net investments in foreign operations.

The effectiveness of the hedging relationship is reviewed at the time of designation and a periodic forward review of effectiveness confirms that there is an economic relationship between the hedging target and the hedging instrument. The consolidation entity establishes a hedging relationship so that the critical term of the risk recovery is consistent with the hedging target, resulting in a qualitative effectiveness review.

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, 2020 and 2019 are as follows:

	2020			2019		
	Contracts	Assets	Liabilities	Contracts	Assets	Liabilities ³
Hedges of a Net Investment in Foreign Operations						
Currency Forwards	₩ 391,136	37,166	-	398,847	9,462	-

ii) Timing of nominal amounts and the average price of derivatives for hedging as of December 31, 2020 and 2019 are as follows:

	2020				
	Maturity				
	Less than 1 month	1 month ~ 3 months	3 months ~ 1 year	More than 5 years	Total
Hedges of a Net Investment in Foreign Operations					
Currency Forwards					
Nominal Amount(*)	₩ -	293,216	97,920	-	391,136
Average foreign currency exchange rate (KRW/Dollar)	-	1,188.22	1,225.00	-	-

(*) If the nominal amount exists simultaneously based on won and foreign currency, such as currency swap, the nominal amount based on foreign currency was converted using the exchange rate at the end of the current term.

	2019				
	Maturity				
	Less than 1 month	1 month ~ 3 months	3 months ~ 1 year	More than 5 years	Total
Hedges of a Net Investment in Foreign Operations					
Currency Forwards					
Nominal Amount(*)	₩ -	-	398,847	-	398,847
Average foreign currency exchange rate (KRW/Dollar)	-	-	1,173.39	-	-

(*) If the nominal amount exists simultaneously based on won and foreign currency, such as currency swap, the nominal amount based on foreign currency was converted using the exchange rate at the end of the current term.

(3) Ineffective portion of hedging

i) Details of changes in fair value used on the basis of recognition of hedge ineffectiveness for the years ended December 31, 2020 and 2019 are as follows:

	2020				
	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	₩	22,296	(22,296)	25,269	-

	2019				
	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	₩	(2,972)	2,972	(4,170)	-

ii) Details of effect on consolidated statements of comprehensive income in relation to net investment hedge in foreign operations for the ended December 30, 2020 and 2019, are as follows:

		2020	2019
Other comprehensive income	₩	25,269	(4,170)
Income tax expense effects		(6,949)	1,147
Other comprehensive income after tax deduction	₩	18,320	(3,023)

28. Capital stock

(1) Authorized shares of capital stock for the Company as of December 31, 2020 are 1,000,000,000 shares.

(2) Details of the capital stock for the Company as of December 31, 2020 and 2019 are as follows:

	2020	2019
Issued shares of capital stock (common stock)	645,316,408 shares	658,316,408 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	140,000,000 shares
Par value per share (in Korean won)	5,000	5,000
Capital stock(*)	₩ 4,101,961	4,101,961

(*) Due to the retirement of shares out of profits during 2020 and 2018, the amount of capital stock does not correspond to total face value of the Group's issued shares.

(3) The details of the preferred stocks issued by us are as follows.

1) Preferred Stock

Type	content
Matters concerning profit allocation	(Old articles of incorporation) For preferred stock, 10/100 of the dividend rate on common stock shall be additionally allocated in cash based on the face value. Provided that where a dividend is not paid to a common stock, the amount equivalent to 1% per annum may be allocated to the preferred stock based on the face value.
	(New articles of incorporation) For class of shares, More than 1% of the face value per annum, which was determined by the Board of Directors when the shares were issued, is preferentially allocated in cash. If the dividend rate of common stock exceeds the dividend rate of class of shares, the excess shall be allocated at the same rate as common stock.
Matters concerning voting rights	Where there is a resolution not to make a prescribed dividend on preferred stocks, the voting rights shall be held from the next general meeting to the end of the general meeting where the resolution is made to pay the preferential dividend.

2) 2 Preferred Stock

Type	content	
	(New articles of incorporation) For class of shares, More than 1% of the face value per annum, which was determined by the Board of Directors when the shares were issued, is preferentially allocated in cash. If the dividend rate of common stock exceeds the dividend rate of class of shares, the excess shall be allocated at the same rate as common stock.	
	[Matters concerning profit dividend] - Preferred dividend: Preferred dividend shall be calculated by multiplying the face value by the preferential dividend rate, and the preferential dividend rate shall be as follows	
Matters concerning profit allocation	period	Preferred Dividend Rate
	2018.01.01 ~ 12.31	(Issue price per share/face value per share)x2.7%
	2019.01.01 ~	(Issue price per share/face value per share)x2.4%
	If the preferred dividend calculated according to the preferential dividend rate is less than the dividend per common stock, the dividend per common stock shall be the preferred dividend per new shares.	
	- Accumulated: If all or part of the above priority dividend is not allocated in fiscal year, the dividend in the subsequent fiscal year may be allocated in preference to the common stock until such undivided amount can be fully allocated.	
	- Participatory: can participate in additional distribution for common stocks	
Matters concerning voting rights	Where there is a resolution not to make a prescribed dividend on preferred stocks, the voting rights shall be held from the next general meeting to the end of the general meeting where the resolution is made to pay the preferential dividend.	

29. Capital surplus

Details of capital surplus as of December 31, 2020 and 2019 are as follows:

	2020	2019
Additional paid-in capital	₩ 1,795,980	1,795,980
Gain on sales of treasury stocks	358,887	357,586
Consideration of convertible right	2,623	2,623
Others	2,710	1,039
	₩ 2,160,200	2,157,228

30. Retained earnings and dividends

(1) The Group's retained earnings as of December 31, 2020 and 2019 are as follows:

	2020	2019
Legal reserve(*1)	₩ 155,115	136,904
Reserve for loss on future transactions(*2)	67	67
Other regulatory reserve	5,731	3,334
Regulatory reserve for loan losses	70,623	75,461
Unappropriated retained earnings	3,095,338	2,539,467
	₩ 3,326,874	2,755,233

(*1) The Commercial Law of the Republic of Korea requires the Group 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 a resolution of a general meeting of shareholder.

(*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. That 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, 2020 and 2019 are as follows:

	2020	2019
Beginning balance	₩ 2,539,467	2,038,533
Profit for the year	821,834	658,998
Dividends	(182,113)	(153,907)
Provision for legal reserve	(18,211)	(15,391)
Reversal of regulatory reserve for loan losses	4,838	13,120
Provisions for regulatory reserve	(2,397)	(1,886)
Retirement of treasury stock	(68,080)	-
Ending balance	₩ 3,095,338	2,539,467

(3) Details of dividends, which are paid in 2020, in respect of the year ended December 31, 2019 are as follows:

Description	Issued shares (in shares)	Treasury stock (in shares)	Shares outstanding (in shares)	Cash dividend per share (in won)	Total cash dividend
Common stock	658,316,408	108,723,602	549,592,806	₩ 260	₩ 142,894
Preferred stock	14,075,750	4,219,960	9,855,790	286	2,819
2 preferred stock	140,000,000	-	140,000,000	260	36,400
	812,392,158	112,943,562	699,448,596		₩ 182,113

(4) Statements of appropriation of retained earnings of the Company for the years ended December 31, 2020 and 2019 are as follows:

	2020 Expected date of appropriation: March 24, 2021	2019 Determined date of appropriation: March 25, 2020
I. Unappropriated retained earnings		
Unappropriated retained earning carried over from the prior year	₩ 1,969,135	1,715,900
Retirement in treasury stock	(68,080)	-
Net income for the year	590,731	448,721
	2,491,786	2,164,621
II. Transfer from voluntary reserves, etc.		
Transfer from regulatory reserve for loan losses	-	4,838
	-	4,838
III. Appropriation of retained earnings		
Legal reserve	13,012	18,211
Regulatory reserve for loan losses	49,696	-
Cash dividends		
Dividends per share in won		
Common stock		
Current year: ₩200 (4.0%)		
Previous year: ₩260 (5.2%)		
Preferred stock	130,124	182,113
Current year: ₩220(4.4%)		
Previous year: ₩286(5.72%)		
2 Preferred stock		
Current year: ₩200(4.0%)		
Previous year: ₩260(5.2%)		
IV. Unappropriated retained earnings to be carried over to subsequent year	₩ 2,298,954	1,969,135

31. Capital adjustment and accumulated other comprehensive income

(1) Details of capital adjustment as of December 31, 2020 and 2019 are as follows:

		2020	2019
Treasury stock	₩	(366,050)	(61,515)
Stock options		159	1,836
Others(*)		47,964	49,265
	₩	(317,927)	(10,414)

(*) It is the stock options and others endowed applying financial investment company compensation system framework.

(2) Details of accumulated other comprehensive income as of December 31, 2020 and 2019 are as follows:

		2020	2019
Gain on valuation of financial assets measured at fair value through other comprehensive income	₩	287,346	115,879
Gain on valuation of financial liabilities designated as measured at fair value through profit or loss		3,015	5,054
Gain(Loss) on valuation of derivatives		16,165	(2,155)
Change of equity of investments in associates		34,085	72,556
Foreign currency translation adjustments for foreign operations		(334,046)	(64,284)
Remeasurement of defined benefit obligation		(8,799)	(3,284)
	₩	(2,234)	123,766

32. 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 accumulated as regulatory reserve for loan losses.

(2) Details of the ending balance of regulatory reserve for loan losses as of December 31, 2020 and 2019 are as follows:

		2020	2019
Regulatory reserve for loan losses	₩	70,623	75,461
Estimated provision(reversal) of regulatory reserve for loan losses		49,696	(4,838)
	₩	120,319	70,623

(3) Details of net income and earnings per share adjusted for regulatory reserve for the years ended December 31, 2020 and 2019 are as follows:

		2020	2019
Profit attributable to equity holders of the Company	₩	821,834	658,998
Estimated reversal(provision) of regulatory reserve for loan losses		(49,696)	4,838
Profit adjusted for regulatory reserve	₩	772,138	663,836
Earnings per share adjusted for regulatory reserve (in Korean won)			
EPS for Common stock		1,140	963
EPS for 2 Preferred stock		1,140	963

33. Commission income and expense

(1) Commission income for the years ended December 31, 2020 and 2019 are as follows:

		2020	2019
Brokerage commissions	₩	840,042	395,401
Underwriting commissions		89,696	144,155
Fee of collective investments		80,996	79,813
Management fee on asset management		53,931	33,968
Trust fee		53,587	52,657
Debt guarantee commissions		36,208	55,208
Others		188,559	237,170
	₩	1,343,019	998,372

(2) Commission expenses incurred for the years ended December 31, 2020 and 2019 are as follows:

		2020	2019
Trading commissions	₩	68,075	57,360
Investment solicitor fee		4,475	3,456
Others		128,461	154,157
	₩	201,011	214,973

34. 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, 2020 and 2019 are as follows:

		2020	2019
Gain on disposal of financial assets measured at fair value through profit or loss	₩	1,313,036	1,082,162
Gain on valuation of financial assets measured at fair value through profit or loss		1,589,854	809,361
Gain on disposal of financial liabilities measured at fair value through profit or loss		155,863	146,319
Gain on valuation of financial liabilities measured at fair value through profit or loss		9,779	14,018
Gain on transaction of derivatives		6,472,649	5,671,136
Gain on valuation of derivatives		1,321,454	1,171,237
Gain on disposal of financial liabilities designated as measured at fair value through profit or loss		361,403	331,924
Gain on valuation of financial liabilities designated as measured at fair value through profit or loss		199,725	68,924
	₩	11,423,763	9,295,081

(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, 2020 and 2019 are as follows:

		2020	2019
Loss on disposal of financial assets measured at fair value through profit or loss	₩	1,339,690	530,813
Loss on valuation of financial assets measured at fair value through profit or loss		484,775	171,628
Loss on disposal of financial liabilities measured at fair value through profit or loss		530,356	156,357
Loss on valuation of financial liabilities measured at fair value through profit or loss		72,481	16,756
Loss on transaction of derivatives		6,097,441	5,289,644
Loss on valuation of derivatives		1,593,654	948,537
Loss on disposal of financial liabilities designated as measured at fair value through profit or loss		621,367	1,396,650
Loss on valuation of financial liabilities designated as measured at fair value through profit or loss		371,752	618,409
	₩	11,111,516	9,128,794

35. 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, 2020 and 2019 are as follows:

		2020	2019
Gain on disposal of financial assets measured at fair value through other comprehensive income	₩	60,374	40,932

(2) Details of losses on financial assets measured at fair value through other comprehensive income recognized for the years ended December 31, 2020 and 2019 are as follows:

		2020	2019
Loss on disposal of financial assets measured at fair value through other comprehensive income	₩	2,723	5,420

36. Interest income and expense

(1) Details of interest income for the years ended December 31, 2020 and 2019 are as follows:

		2020	2019
Financial assets measured at fair value through profit or loss			
Interest on securities	₩	363,706	419,351
Interest on derivatives		6,557	9,299
Interest on loans		77,870	54,380
		448,133	483,030
Financial assets measured at fair value through other comprehensive income			
Interest on securities		116,979	163,053
Financial assets measured at amortized cost			
Interest on deposits		89,003	150,593
Interest on loans		792,933	2,211,674
Interest on other assets		101,342	126,822
		983,278	2,489,089
Total	₩	1,548,390	3,135,172

(2) Details of interest expenses for the years ended December 31, 2020 and 2019 are as follows:

		2020	2019
Interest on derivatives	₩	5,992	8,216
Interest on deposits due to customers		20,367	41,191
Interest on borrowings		574,312	2,154,940
Interest on debentures		188,341	154,255
Others		157,736	219,441
	₩	946,748	2,578,043

37. Provisions (Reversals) of allowance on expected credit losses

Details of provisions (reversals) of allowance on expected credit losses recognized for the years ended December 31, 2020 and 2019 are as follows:

		2020	2019
Financial assets measured at fair value through other comprehensive income (Note 10)	₩	1,555	3,234
Financial assets measured at amortized cost (Note 11)		26,458	34,946
Provision for off-balance items (Note 24)		(1,967)	(1,258)
	₩	26,046	36,922

38. Gains and losses on foreign transaction

(1) Details of the assets and liabilities denominated in foreign currency as of December 31, 2020 and 2019 are as follows:

(In thousands of dollar, in millions of won)	2020		2019	
	Foreign Currency	Won	Foreign Currency	Won
Assets				
Cash and cash equivalent	1,180,551	₩ 1,284,440	1,252,440	₩ 1,450,075
Financial assets measured at fair value through profit or loss	6,217,883	6,765,056	5,725,754	6,629,277
Financial assets measured at fair value through other comprehensive income	1,335,778	1,453,326	1,941,101	2,247,406
Financial assets measured at amortized cost	45,580,059	49,591,105	54,113,604	62,652,733
	54,314,271	₩ 59,093,927	63,032,899	₩ 72,979,491
Liabilities				
Financial liabilities measured at fair value through profit or loss	1,606,735	₩ 1,748,127	2,166,243	₩ 2,508,076
Deposits due to customers	2,082,697	2,265,974	948,074	1,097,680
Borrowings	43,785,692	47,638,833	53,541,058	61,989,836
Debentures	1,663,625	1,810,024	1,071,064	1,240,078
Other financial liabilities	3,234,784	3,519,446	2,905,597	3,364,101
	52,373,533	₩ 56,982,404	60,632,036	₩ 70,199,771

(2) Details of gains and losses on foreign currency transactions for the years ended December 31, 2020 and 2019 are as follows:

	2020	2019
Gains on foreign currency transactions	₩ 1,711,332	1,327,956
Gains on foreign currency translations	332,988	132,430
Losses on foreign currency transactions	(1,632,783)	(1,270,397)
Losses on foreign currency translations	(322,339)	(161,619)
	₩ 89,198	28,370

39. Other operating income and expense

(1) Details of other operating income for the years ended December 31, 2020 and 2019 are as follows:

	2020	2019
Dividend income	₩ 112,212	130,529
Distribution income	146,224	169,492
Rental income from investment property	119,366	184,513
Others	36,166	13,152
	₩ 413,968	497,686

(2) Details of other operating expenses for the years ended December 31, 2020 and 2019 are as follows:

	2020	2019
Provision of allowances for litigation	₩ 1	106
Others	117,158	54,744
	₩ 117,159	54,850

40. Classification of financial instruments by category

(1) Details of categories of financial assets as of December 31, 2020 and 2019 are as follows:

	2020			
	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	₩ 1,690,792	-	-	1,690,792
Financial assets measured at fair value through profit or loss	-	41,957,313	-	41,957,313
Financial assets measured at fair value through other comprehensive income	-	-	11,170,592	11,170,592
Financial assets measured at amortized cost	70,796,589	-	-	70,796,589
	₩ 72,487,381	41,957,313	11,170,592	125,615,286

	2019			
	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	₩ 2,092,290	-	-	2,092,290
Financial assets measured at fair value through profit or loss	-	40,895,591	-	40,895,591
Financial assets measured at fair value through other comprehensive income	-	-	9,566,398	9,566,398
Financial assets measured at amortized cost	75,276,086	-	-	75,276,086
	₩ 77,368,376	40,895,591	9,566,398	127,830,365

(2) Details of categories of financial liabilities as of December 31, 2020 and 2019 are as follows:

	2020			
	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	₩ 2,504,902	-	-	2,504,902
Financial liabilities designated as measured at fair value through profit or loss	-	14,093,129	-	14,093,129
Deposits due to customers	-	-	12,335,973	12,335,973
Borrowings(*)	-	-	69,066,074	69,066,074
Debentures	-	-	7,949,974	7,949,974
Other financial liabilities	-	-	11,820,190	11,820,190
	₩ 2,504,902	14,093,129	101,172,211	117,770,242

(*) Lease liabilities of ₩ 244,027 million are included.

	2019			
	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	₩ 1,948,029	-	-	1,948,029
Financial liabilities designated as measured at fair value through profit or loss	-	14,968,359	-	14,968,359
Deposits due to customers	-	-	5,955,596	5,955,596
Borrowings(*)	-	-	86,453,161	86,453,161
Debentures	-	-	6,215,226	6,215,226
Other financial liabilities	-	-	5,091,895	5,091,895
	₩ 1,948,029	14,968,359	103,715,878	120,632,266

(*) Lease liabilities of ₩ 276,604 million are included.

(3) Details of gains (losses) on the financial instruments classified into the categories above for the years ended December 31, 2020 and 2019 are as follows:

	2020						
	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)
Financial assets:							
Financial assets measured at fair value through profit or loss (except for derivatives)	₩ 226,896	441,576	1,589,854	(484,775)	1,313,036	(1,339,690)	-
Financial assets measured at fair value through other comprehensive income(*1)	20,055	116,979	-	-	60,374	(2,723)	(1,555)
Financial assets measured at amortized cost	-	983,278	-	-	-	-	(26,458)
	₩ 246,951	1,541,833	1,589,854	(484,775)	1,373,410	(1,342,413)	(28,013)
Financial liabilities:							
Financial liabilities measured at fair value through profit or loss (except for derivatives)	₩ -	-	9,779	(72,481)	155,863	(530,356)	-
Financial liabilities designated as measured at fair value through profit or loss(*2)	-	-	199,725	(371,752)	361,403	(621,367)	-
Deposits due to customers	-	(20,367)	-	-	-	-	-
Borrowings	-	(574,312)	-	-	-	-	-
Debentures	-	(188,341)	-	-	-	-	-
Other financial liabilities	-	(157,736)	-	-	-	-	-
	-	(940,756)	209,504	(444,233)	517,266	(1,151,723)	-
Derivatives(*3)	-	565	1,321,454	(1,593,654)	6,472,649	(6,097,441)	-
	₩ 246,951	601,642	3,120,812	(2,522,662)	8,363,325	(8,591,577)	(28,013)

(*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 10).

(*2) The change of own credit risk on financial liabilities designated as measured at fair value through profit or loss were excluded, as changes in fair value by credit risk fluctuation is recognized as other comprehensive income (details described in Note 19).

(*3) Except for the designation of the derivative to effective hedge instrument, the Group classifies it with financial instruments measured at fair value through profit or loss or designated as measured at fair value through profit or loss.

(*4) ₩1,967 million for reversal of allowance on expected credit loss of off-balance sheet items is excluded (details described in Note 37).

	2019						
	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)
Financial assets:							
Financial assets measured at fair value through profit or loss (except for derivatives)	₩ 256,494	473,731	809,361	(171,628)	1,082,162	(530,813)	-
Financial assets measured at fair value through other comprehensive income(*1)	26,185	163,053	-	-	40,932	(5,420)	(3,234)
Financial assets measured at amortized cost	-	2,489,089	-	-	2,112	-	(34,947)
	₩ 282,679	3,125,873	809,361	(171,628)	1,125,206	(536,233)	(38,181)

	2019							
	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)	
Financial liabilities:								
Financial liabilities measured at fair value through profit or loss (except for derivatives)	₩	-	-	14,018	(16,756)	146,319	(156,357)	-
Financial liabilities designated as measured at fair value through profit or loss(*2)		-	-	68,924	(618,409)	331,924	(1,396,650)	-
Deposits due to customers		-	(41,191)	-	-	-	-	-
Borrowings		-	(2,154,940)	-	-	-	-	-
Debentures		-	(154,255)	-	-	-	-	-
Other financial liabilities		-	(219,441)	-	-	-	-	-
		-	(2,569,827)	82,942	(635,165)	478,243	(1,553,007)	-
Derivatives(*3)		-	1,083	1,171,237	(948,537)	5,671,136	(5,289,644)	-
	₩	282,679	557,129	2,063,540	(1,755,330)	7,274,585	(7,378,884)	(38,181)

(*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 10).

(*2) The change of own credit risk on financial liabilities designated as measured at fair value through profit or loss were excluded, as changes in fair value by credit risk fluctuation is recognized as other comprehensive income (details described in Note 19).

(*3) Except for the designation of the derivative to effective hedge instrument, the Group classifies it with financial instruments measured at fair value through profit or loss or designated as measured at fair value through profit or loss.

(*4) ₩1,258 million for reversal of allowance on expected credit loss of off-balance sheet items are excluded (details described in Note 37).

41. Employee costs

Details of employee costs for the years ended December 31, 2020 and 2019 are as follows:

	2020	2019
Salaries	₩ 690,129	556,342
Post-employment benefits of defined contribution plans	36,483	36,367
Post-employment benefits of defined benefit plans	3,434	23,256
Termination benefits	9,072	37,633
Employee benefits	72,325	77,303
Long-term employee benefits	1,195	7,804
	₩ 812,638	738,705

42. Selling and administrative expenses

Details of selling and administrative expenses for the years ended December 31, 2020 and 2019 are as follows:

	2020	2019
Electronic data processing	₩ 60,798	58,403
Rental	21,163	23,739
Commission	85,532	42,827
Entertainment	20,226	21,920
Advertisement	48,828	33,607
Depreciation on property and equipment	71,433	72,124
Depreciation on investment property	55,647	44,283
Training	3,581	6,542
Amortization	40,619	48,039
Taxes and dues	51,395	59,472
Lease of low-value asset	2,315	2,421
Others	82,213	98,686
	₩ 543,750	512,063

43. Non-operating income

Details of non-operating income for the years ended December 31, 2020 and 2019 are as follows:

		2020	2019
Gain on disposal of property and equipment	₩	80	85
Gain on disposal of investment properties		7,654	1,353
Gain on disposal of investments in subsidiaries		20,710	38,299
Gain on disposal of investments in associates		1,217	1,214
Gain on valuation of investments in associates		67,027	148,909
Others		3,154	56,247
	₩	99,842	246,107

44. Non-operating expense

Details of non-operating expense for the years ended December 31, 2020 and 2019 are as follows:

		2020	2019
Loss on disposal of property and equipment	₩	269	2,036
Loss on disposal of intangible assets		55	21
Impairment Loss on disposal of intangible assets		45	-
Loss on disposal of investments in subsidiaries		10,443	3,227
Impairment loss on investments in associates		-	1,129
Loss on disposal of investments in associates		48	25
Loss on valuation of investments in associates		9,546	3,199
Donations		2,726	5,192
Others		53,611	65,510
	₩	76,743	80,339

45. Income tax expense

(1) Details of income tax expenses for the years ended December 31, 2020 and 2019 are as follows:

		2020	2019
Current income tax payable	₩	240,302	139,221
Changes in deferred income tax due to temporary differences		124,770	174,284
Adjustments in respect of prior years		1,730	(543)
Income tax expense recognized as equity		(60,907)	(83,490)
Income tax expense	₩	305,895	229,472

(2) Reconciliation of profit before income taxes and income tax expense for the years ended December 31, 2020 and 2019 are as follows:

		2020	2019
Profit before income tax	₩	1,140,218	893,722
Tax at tax rates applicable to profits		303,198	235,411
Adjustments:			
Non-deductible expense		3,255	5,523
Non-taxable income		21	148
Temporary differences not recognized		4,562	(1,111)
tax credit		2	
Effects of change in tax rate and other		(5,143)	(10,499)
Income tax expense	₩	305,895	229,472
Effective tax rate		26.83%	25.68%

(3) Details of changes in accumulated temporary differences and the deferred tax assets and liabilities for the years ended December 31, 2020 and 2019 are as follows:

		2020		
		Beginning balance	Addition (deduction)	Ending balance
Financial assets measured at fair value through profit or loss	₩	(488,553)	(529,741)	(1,018,294)
Investment on subsidiaries and associates		(678,518)	371,510	(307,008)
Accrued interest receivable		(90,331)	11,999	(78,332)
Impairment loss on financial assets measured at fair value through other comprehensive income		84,274	(72,369)	11,905
Gain (loss) on valuation of financial assets measured at fair value through other comprehensive income		(221,529)	(299,020)	(520,549)
Financial assets measured at fair value through other comprehensive income		19,624	8,971	28,595
Gain (loss) on valuation of derivatives		(24,678)	261,100	236,422
Gain (loss) on valuation of derivative-linked securities		(42,538)	(2,199)	(44,737)
Gain (loss) on valuation of derivative-linked securities in short position		480,888	(171,652)	309,236
Gain (loss) on valuation of securities in short position		96	58,099	58,195
Incentive payables		155,170	80,408	235,578
Provision of financial guarantees		56,498	(35,256)	21,242
Provision of restoration		7,442	1,073	8,515
Gain (loss) on foreign currency translation		11,761	(176,699)	(164,938)
Property and equipment		(50,694)	13,058	(37,636)
Intangible assets		(511,110)	17,503	(493,607)
Treasury stocks		1,729,810	(1,897)	1,727,913
Others		132,824	122,830	255,654
		570,436	(342,282)	228,154
Not recognized as deferred tax assets		(952,256)		(802,841)
Recognized as deferred tax assets		1,522,692		1,030,995
Tax rate		27.50%, etc.		27.50% ,etc.
Deferred tax assets	₩	444,913		320,143

		2019		
		Beginning balance	Addition (deduction)	Ending balance
Financial assets measured at fair value through profit or loss	₩	50,069	(538,622)	(488,553)
Investment on subsidiaries and associates		(302,705)	(375,813)	(678,518)
Accrued interest receivable		(123,081)	32,750	(90,331)
Impairment loss on financial assets measured at fair value through other comprehensive income		164,684	(80,410)	84,274
Gain (loss) on valuation of financial assets measured at fair value through other comprehensive income		6,379	(227,908)	(221,529)
Financial assets measured at fair value through other comprehensive income		35,723	(16,099)	19,624
Gain (loss) on valuation of derivatives		402,162	(426,840)	(24,678)
Gain (loss) on valuation of derivative-linked securities		7,276	(49,814)	(42,538)
Gain (loss) on valuation of derivative-linked securities in short position		(241,033)	721,921	480,888
Gain (loss) on valuation of securities in short position		(12,609)	12,705	96
Incentive payables		129,790	25,380	155,170
Provision of financial guarantees		63,862	(7,364)	56,498
Provision of restoration		9,288	(1,846)	7,442
Gain (loss) on foreign currency translation		(6,745)	18,506	11,761
Property and equipment		5,480	(56,174)	(50,694)

	2019		
	Beginning balance	Addition (deduction)	Ending balance
Intangible assets	(528,562)	17,452	(511,110)
Treasury stocks	1,743,066	(13,256)	1,729,810
Others	66,079	66,745	132,824
	1,469,123	(898,687)	570,436
Not recognized as deferred tax assets	(753,682)		(952,256)
Recognized as deferred tax assets	2,222,805		1,522,692
Tax rate	27.50%, etc.		27.50%, etc.
Deferred tax assets	₩ 619,197		444,913

(4) Temporary differences that are not recognized as deferred tax assets and liabilities as of December 31, 2020 and 2019 are as follows:

	2020	2019
taxable temporary differences		
Investment in subsidiaries, etc	₩ (428,190)	(562,633)
Goodwill	(397,776)	(397,776)
	(825,966)	(960,409)
Deductible temporary differences		
Investment in subsidiaries, etc	23,125	8,153
	₩ (802,841)	(952,256)

(5) Details of deferred tax relating to items that are directly recognized in equity for the years ended December 31, 2020 and 2019 are as follows:

	2020	2019
Deferred tax:		
Gain (loss) on valuation of financial assets measured at fair value through other comprehensive income	₩ 93,995	65,015
Gain (loss) on valuation of financial liabilities designated as measured at fair value through profit or loss	(774)	(2)
Changes in equity adjustments from equity-method investment	(12,478)	12,960
Remeasurement of the defined benefit liabilities.	(2,092)	(1,246)
Other	(17,547)	6,839
	61,104	83,566
Current income tax:		
Gain on disposition of treasury stock	262	1,295
Stock option	(459)	(1,371)
	(197)	(76)
Income tax expense recognized directly in equity	₩ 60,907	83,490

46. Earnings per share ("EPS")

Earnings per share are earnings for one share of common stock (basic earnings per share) or earnings for one share of common stock and diluted potential common stock (diluted earnings per share), and the details are as follows.

(1) Basic EPS for the years ended December 31, 2020 and 2019 are as follows:

		2020	
		Common stocks	2 preferred stocks
Net profit attributable equity holder of the Company	₩	638,880	169,804
Weighted-average number of common shares outstanding (shares)		526,743,223	140,000,000
Basic EPS (in Korean won)		1,213	1,213

		2019	
		Common stocks	2 preferred stocks
Net profit attributable equity holder of the Company	₩	525,195	133,803
Weighted-average number of common shares outstanding (shares)		549,518,731	140,000,000
Basic EPS (in Korean won)		956	956

(2) Details of weighted-average number of shares of common stocks outstanding for the years ended December 31, 2020 and 2019 are as follows:

		2020			
		Common stocks		2 preferred stocks	
		Stocks outstanding	Cumulative shares	Stocks outstanding	Cumulative shares
Issued stock	₩	645,316,408	238,252,805,328	140,000,000	51,240,000,000
Treasury stock		(145,535,874)	(45,464,785,618)	-	-
Shares outstanding		499,780,534	192,788,019,710	140,000,000	51,240,000,000
Days		-	366	-	366
Weighted-average number of shares of common stocks outstanding		-	526,743,223	-	140,000,000

		2019			
		Common stocks		2 preferred stocks	
		Stocks outstanding	Cumulative shares	Stocks outstanding	Cumulative shares
Issued stock	₩	658,316,408	240,285,488,920	140,000,000	51,100,000,000
Treasury stock		(108,723,602)	(39,711,152,229)	-	-
Shares outstanding		549,592,806	200,574,336,691	140,000,000	51,100,000,000
Days		-	365	-	365
Weighted-average number of shares of common stocks outstanding		-	549,518,731	-	140,000,000

(3) Diluted EPS

Diluted EPS is same as basic EPS for the years ended December 31, 2020 and 2019.

47. Commitments and contingencies

(1) The Group has entered into various agreements with various financial institutions as of December 31, 2020 and 2019, and the details are as follows:

Description	Financial Institution	2020 Contract amount
Collateral financial support borrowings		₩ 2,000,000
Agency operation borrowings		₩ 1,800,000
Agency operation borrowings (Reserve for claims of customer's deposits)		₩ within the range of amount of deposits
Notes discounting	Korea Securities Finance Corp.	₩ 300,000
Notes discounting (Deposits for subscription)		₩ within the range of amount of deposits
Intraday loan commitment(daily)		₩ 200,000
Margin loans		₩ 1,200,000
Overdraft for operation (daily)	Shinhan Bank, etc.	₩ 1,000,000
	KDB(London Branch)	USD 20,000,000
	Shinhan Bank New York	USD 100,000,000
Term loan	Bank of Montreal Harris Bank	USD 200,000,000
	Texas Capital Bank	USD 75,000,000
	Woori Bank(HK Branch)	USD 40,000,000
	KDB Asia Limited	USD 20,000,000
	KDB(Singapore Branch)	USD 100,000,000
	Woori Bank Singapore	USD 40,000,000
	Shinhan Bank Hong Kong	USD 19,000,000
	Kookmin Bank(HK Branch)	USD 20,000,000
	DBS Bank Singapore	USD 20,000,000
Term loan	CTBC Bank (Taiwan) Chengde Branch	USD 8,000,000
	Woori Bank Viet Nam	VND 67,000,000,000
	Shinhan Bank Viet Nam	VND 214,000,000,000
	Kookmin Bank Viet Nam	VND 100,000,000,000
	BIDV	VND 77,100,000,000
	Vietinbank	VND 250,000,000,000
	Vietcombank	VND 171,000,000,000
Overdraft	Bank of China (Hong Kong) Limited	HKD 50,000,000
	Euroclear Bank SA/NV	USD 10,000,000
Overdraft for operation (Intra-day)	Bank of China (Hong Kong) Limited	HKD 400,000,000
	The Bank of New York Mellon	USD 100,000,000
	Bank of Montreal Harris Bank	USD 50,000,000
	Texas Capital Bank	USD 75,000,000
Overdraft for operation (Credit Facility)	Standard Chartered Bank	USD 1,000,000,000
	Korean Investment & Securities	USD 2,000,000,000
	Woori Bank(HK Branch)	USD 20,000,000
	KDB Asia Limited	USD 20,000,000
Revolving Credit Facility	UOB Indonesia	IDR 100,000,000,000
	CIMB Indonesia	IDR 100,000,000,000
	Permata Bank	IDR 50,000,000,000
	Bank BRI	IDR 100,000,000,000
	KEB Hana Bank Indonesia	IDR 100,000,000,000

Description	Financial Institution	2019 Contract amount
Collateral financial support borrowings		₩ 2,000,000
Agency operation borrowings		₩ 1,200,000
Agency operation borrowings (Reserve for claims of customer's deposits)		₩ within the range of amount of deposits
Notes discounting	Korea Securities Finance Corp.	₩ 300,000
Notes discounting (Deposits for subscription)		₩ within the range of amount of deposits
Intraday loan commitment(daily)		₩ 200,000
Margin loans		₩ 1,200,000
Overdraft for operation (daily)	Shinhan Bank, etc.	₩ 680,000
	KDB(London Branch)	USD 20,000,000
	Shinhan Bank(London Branch)	USD 20,000,000
	Shinhan Bank New York	USD 100,000,000
	Bank of Montreal Harris Bank	USD 200,000,000
	Texas Capital Bank	USD 75,000,000
	Woori Bank LA Branch	USD 10,000,000
Term loan	KDB(Singapore Branch)	USD 80,000,000
	Woori Bank Singapore	USD 20,000,000
	Shinhan Bank Hong Kong	USD 19,000,000
	Woori Bank Viet Nam	VND 491,500,000,000
	Vietinbank	VND 50,000,000,000
	Vietcombank	VND 50,000,000,000
	BIDV	VND 174,600,000,000
	Shinhan Bank Viet Nam	VND 212,000,000,000
Overdraft	Bank of China (Hong Kong) Limited	HKD 50,000,000
	Euroclear Bank SA/NV	USD 10,000,000
	Bank of China (Hong Kong) Limited	HKD 300,000,000
Overdraft for operation (Intra-day)	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
Overdraft for operation (Credit Facility)	Standard Chartered Bank	USD 1,000,000,000
	Korean Investment & Securities	USD 2,000,000,000
Overdraft for operation (Line of credit)	Woori Bank Viet Nam	VND 67,000,000,000
	Woori Bank(HK Branch)	USD 20,000,000
Revolving Credit Facility	UOB Indonesia	IDR 100,000,000,000
	CIMB Indonesia	IDR 100,000,000,000
	Permata Bank	IDR 50,000,000,000
	DBS Bank	IDR 100,000,000,000
	KEB Hana Indonesia	IDR 100,000,000,000

(2) As of December 31, 2020, the Group is involved in 38 lawsuits (December 31, 2019: 30 lawsuits) as a defendant with lawsuit amount of ₩ 6,496,359 million (December 31, 2019: ₩ 68,860 million). The above lawsuit amount includes \$ 5,817 million, which is the total acquisition cost in a contract performance claim lawsuit filed by AB STABLE VIII LLC., a subsidiary of Dajia Insurance Group Co., Ltd. (formerly, Anbang Insurance Group Co., Ltd.). Among the total acquisition cost, the Company's portion amounts to \$ 1,507 million, and related information is explained in Note 47.(10). In addition, as of December 31, 2020, the Group is involved in 22 lawsuits (December 31, 2019: 13 lawsuits) as a plaintiff with lawsuit amount of ₩ 155,042million (December 31, 2019: ₩ 233,099 million). Except for 6 lawsuits for which the Group has recognized provisions, the results of the litigations cannot be predicted at the end of the reporting period.

(3) Details of liabilities related financial guarantee contracts as of December 31, 2020 and 2019 are as follows:

	Guarantee receiver	2020	2019
Guarantee (including loan commitment)(*1)	Kwangkyo Triton 1st Co., Ltd. and others	446,410	946,292
Purchase agreement(*2)	Gimpo Han River Park 1st Co., Ltd. and others	1,360,489	1,341,218
		1,806,899	2,287,510

(*1) The Group provides a guarantee (including loan commitment) under the condition that compensates the holder for losses incurred in the event that a particular debtor (the warrantee) fails to pay at the due date.

(*2) At the date of issuance of commercial paper and electronic short-term bonds and at the date of roll-over of loans, in the event that part or all of the electronic short-term bonds are not sold in the market, the Group enters into a liquidity offering agreement under which the Group must purchase commercial paper and electronic short-term bonds if certain credit rating conditions, such as the guarantee agency, are met. As of December 31, 2020, the amount the agreement executed under the purchase guarantee agreement was ₩ 15,174 million (₩ 50,182 million as of December 31, 2019)

(4) As of December 31, 2020, the amount of unexecuted loan agreement and etc. are ₩ 1,965,374 million (₩ 1,548,986 million as of December 31, 2019), and the amount unsigned of loan agreements with submission of a letter of commitment is ₩ 50,000 million (₩ 1,181,296 million as of December 31, 2019).

(5) As of December 31, 2020 and 2019 the securities in custody on behalf of the Group's customers are as follows:

	2020	2019	Valuation method
Trust or securities in custody	₩ 217,528,275	139,630,742	Fair value
Saver securities in custody	993,505	323,572	Fair value
Collective investment securities	57,361,899	50,105,732	Standard sold price
	₩ 275,883,679	190,060,046	

(6) Details of loaned securities as of December 31, 2020 and 2019 are as follows:

	2020	2019	Valuation method
Equity securities	₩ 5,809,789	6,827,200	Fair value
Bonds	409,917	-	Fair value
Others (ETF)	907,256	1,250,582	Fair value
	₩ 7,126,962	8,077,782	

(7) Details of borrowed securities as of December 31, 2020 and 2019 are as follows:

	2020	2019	Valuation method
Equity securities	₩ 5,416,512	8,776,061	Fair value
Bonds	7,693,390	6,464,378	Fair value
Others (ETF)	885,380	362,787	Fair value
	₩ 13,995,282	15,603,226	

(*) 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 Company sells securities borrowed.

(8) Mirae Asset Securities (UK) Ltd., Mirae Asset Securities (USA) Inc., Mirae Asset Wealth Management (USA) Inc., Mirae Asset Securities & Investments (USA), LLC and others signed a \$2 million CREDIT LINE setup deal for electronic remittance transactions using SEPA and ACH networks with Citibank (Korea, London, New York). As the Company of the above corporations, Company recognized the establishment of the "Credit Line" and provided Letter of Support to make reasonable efforts ("Reasonable Effects") to repay when default is occurred. In addition, Mirae Asset Securities (Vietnam) LLC, PT. Mirae Asset Sekuritas Indonesia and others signed a loan agreement of \$ 207 million with the Singapore branch of the KDB Industrial Bank of Korea and others. Mirae Asset Securities (HK) Limited recognized that the Company is liable as the parent company of the above entities. Also the Company as the parent company of the above corporations has provided "Letter of Comfort" to make good-will efforts to repay the default ("Good Faith Effort"). Mirae Asset Securities (USA) Inc. entered into a repurchase agreement of \$ 5,538 million and \$ 18,864 million, respectively. However, the counterparty may cancel the agreement before it is executed.

(9) In December 27, 2019, the Group and HDC Hyundai Industrial Development Co., Ltd., a consortium partner of the Group, made an agreement to purchase old shares of Asiana Airlines Inc., with Kumho Industrial Co., Ltd. (Acquisition amount : ₩ 64,567 million) and to acquire new shares of Asiana Airlines Inc. (Acquisition amount: ₩ 425,313 million). On the same date, the Group made a shareholder agreement with HDC Hyundai Industrial Development Co., Ltd. regarding the acquisition of Asiana Airlines Co.'s old and new shares.

As of December 31, 2020, the deposit paid by the Group was ₩ 48,988 million, and evaluated at fair value by reflecting the uncertainty of collection considering related contracts, etc.

The Group and HDC Hyundai Industrial Development Co., Ltd. have faced a lawsuit by Kumho Industrial Co. and Asiana Airlines Co. to implement the necessary procedures for cancellation of contracts and termination of the pledge right to a down payment. In response, strategic investor HDC. Hyundai Industrial Development Co., Ltd. is planning to respond to this issue after reviewing it at a legal level, and the Group will respond as a financial investor according to future progress

(10) MAPS HOTELS & RESORTS ONE LLC., a subsidiary of the Company, entered into a Sale and Purchase Agreement (SPA) on September 10, 2019 with AB STABLE VIII LLC., a subsidiary of Dajia Insurance Group Co., Ltd. (formerly, Anbang Insurance Group Co., Ltd.) to acquire 15 hotels in the United States for \$ 5,817 million.

The total amount of mandatory payments made by investors under the Equity Commission Letter (ECL), an annex to the SPA, is \$2,165 million (applicable portion of the Company: \$ 1,507 million) out of the total amount of \$ 5,817 million. By the end of the year, MAPS HOTELS & RESORTS ONE LLC. received \$ 652 million as investment, of which \$ 582 million were deposit of contract regarding acquisition. Of the above investments, the amount of the Company's investment is \$ 454 million, of which \$ 405 million is the deposit of contract.

In this event, the Group notified AB STABLE VIII LLC. of the termination of the Sale and Purchase Agreement as of May 3, 2020, and refused to fulfill the agreement based on the related agreement for the Group's payment obligations.

The Group and other investors were sued by ABTABLE VIII LLC as of April 27, 2020 as a co-defendant in a lawsuit for the implementation of SPA contract payments, but as of December 1, 2020, the U.S. Court of Justice ruled that all claims for payment by ABTABLE VIII LLC. was dismissed. In response, the plaintiff filed an appeal (final hearing) on March 6, 2021.

48. Share-based payments

(1) Stock options

1) Details of the Group's share-based compensation as of December 31, 2020, is as follows:

	Mirae Asset Daewoo Co., Ltd.		Mirae Asset securities (HK) Limited	Mirae Asset Venture Investment Co., Ltd.	
Granted to	Executives	Executives	Executives	Executives and employees	Executives and employees
Grant date	2012.06.05	2014.07.15	2008.04.02	2015.03.31, 2015.07.08	2018.08.03
Granted shares	310,000 shares	15,000 shares	74,700,000 shares	1,920,000 shares	500,000 shares
Grant method	Issuance of treasury stock	Issuance of treasury stock	Issuance of treasury stock	Issuance of new shares	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	2 years of service from grant date	2 years of service from grant date
Exercise period	2015.06.05–2020.06.04	2017.07.15–2022.07.14	2008.07.02–2023.04.02	2017.03.31–2024.07.08	2020.08.04–2027.08.04
Exercise price (in KRW)	Type 1: 37,463 Type 2: 47,680	39,192	HKD 1.04	1,733	4,000
Granted shares	Type 1: 230,000 shares Type 2: 80,000 shares	15,000 shares	74,700,000 shares	1,920,000 shares	500,000 shares
Residual shares as of December 31, 2020	-	15,000 shares	49,800,000 shares	240,000 shares	480,000 shares

	Mirae Asset Daewoo Co., Ltd.	Mirae Asset securities (HK) Limited	Mirae Asset Venture Investment Co., Ltd.		
Exercisable shares as of December 31, 2020	-	15,000 shares	49,800,000 shares	240,000 shares	480,000 shares
<Inputs 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%	0.13%	2.09%, 2.41%	2.54%
Expected stock price volatility	46.19%, 39.59%, 48.11%	33.17%	41.20%	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 KRW)	30,850	49,450	-	1,614, 1,931	4,106
Fair value of stock option (in KRW)	Type 1: 8,444 Type 2: 6,758	14,575	HKD 0.7160	951.2, 1,203.7	3,554.4

2) Expenses recognized in relation to share-based payment arrangements are 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)	15,000	49,800,000	720,000
Total compensation cost	₩ 219	HKD 35,658,000	2,958
Amount recognized as stock option expenses for the year ended December 31, 2020	-	-	753
Balances of Stock Option as of December 31, 2020(*2)	159	-	-

(*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 35,658,000 and ₩2,308 million for the year ended December 31, 2020. These were adjusted and thus there is no balance of capital adjustment in the consolidated statement of financial position as of December 31, 2020.

3) Details of changes in granted shares for the years ended December 31, 2020 are as follows:

(In shares)		2020			
		Beginning	Grant	Expired	Ending
Mirae Asset Daewoo					
2012	Type 1	210,000	-	(210,000)	
	Type 2	80,000	-	(80,000)	
2014	Type 2	15,000	-	-	15,000
		305,000	-	(290,000)	15,000
Mirae Asset securities (HK) Limited					
2008	Equity Settled Share Option	49,800,000	-	-	49,800,000
Mirae Asset Venture Investment Co., Ltd.					
2015		240,000	-	-	240,000
2018		480,000	-	-	480,000
		720,000	-	-	720,000
		50,825,000	-	(290,000)	50,535,000

(2) Share-based Payments

1) In conformity with the Financial Investment Company Compensation Framework, the Group deferred portions of management incentives and divided payments across 3 to 6 years, and therefore recognized equity and liabilities as of December 31, 2020 and 2019 are as follows:

	2020	2019
Accrued expenses	₩ 80,149	28,936
Capital adjustment	8	1,218

(*) The Group recognized expenses of ₩33,290 million in relation to share price-linked share-based payments.

2) The changes in the quantity of share price-linked share-based compensation during the current term are as follows:

					2020
Grant date		Beginning	Grant	Payment, etc.	June 30, 2020
2016	4 th quarter	231,630	-	(231,630)	-
	2 nd quarter	59,283	-	(59,283)	-
2017	3 rd quarter	3,097	-	(3,097)	-
	4 th quarter	1,304,277	-	(558,951)	745,326
2018	1 st quarter	2,651	-	(1,135)	1,516
	2 nd quarter	123,260	-	(52,811)	70,449
	3 rd quarter	1,269	-	(543)	726
	4 th quarter	2,245,162	-	(678,251)	1,566,911
2019	1 st quarter	565	-	(169)	396
	2 nd quarter	48,269	-	(14,468)	33,801
	3 rd quarter	1,219	-	(363)	856
	4 th quarter	3,651,197	82,210	-	3,733,407
2020	1 st quarter	-	13,700	-	13,700
	2 nd quarter	-	246,484	-	246,484
	3 rd quarter	-	37,213	-	37,213
	4 th quarter	-	4,159,310	-	4,159,310
		7,671,879	4,538,917	(1,600,701)	10,610,095

(*) In accordance with share price-linked share-based payment, the amount of deferred grants is divided over three years and paid in cash. The fair value of the base price to be paid in the future is evaluated as the arithmetic average of the closing price for the past one year, and the fair value of the base price as of December 31, 2020, is ₩ 7,554.

49. Related-party transactions

(1) As of December 31, 2020, 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
	Pantos Logistics Co., Ltd(*1)
	Mirae Asset Daewoo 3rd SPAC
	Mirae Asset Daewoo 4th SPAC
	Mirae Asset Daewoo 5th SPAC
	Mirae Asset Partners PEF 4th
	New Growth Engine Green Future 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
	SKS Mirae Assets Corporate Recovery Private Equity Fund(*2)
	Mirae Asset Naver Asia Growth PEF
	Daejo PFV Co., Ltd.
	Suwon Galleria SIA Complex Development PFV
	Yangjae PFV Co., Ltd.

Type	Name of the related parties
Associates	2019 PCC PEF
	Cheongdam Complexity PFV Co., Ltd.
	Godeok Gangil 10 PFV Co., Ltd
	Moonjung Station Maestro Project Financing Vehicle Co. Ltd.
	Mirae Asset Curious Corporate Recovery Private Equity Fund
	MTV Bandalseom C1 Development PFV Co., Ltd
	Wirye Active Senior House Co. Ltd
	KJ Logis Co., Ltd.
	Seolleung Maestro Station Influence Area Public Housing
	Project Financial Investment Co., Ltd.
	Amnam Distribution Logistics Development Co., Ltd.
	All Together Korea Korea Investment Private Investment
	Pool Professional Private Investment Trust 10th
	SMC RMB Investors II Limited
	Transwestern Corporate Properties I LLC(*3)
	Traphaco Joint Stock Company(*4)
	Nabou Green Energy Limited(*5)
	Asia Cinema Group Ltd.
	Mirae Asset Venture Investments (India) Private Limited
	MAPS Indianapolis One 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

(*1) Pantos Logistics Co., Ltd is an associate of Mirae Asset Daewoo Korea II Private Equity Fund

(*2) SKS Mirae Assets Corporate Recovery Private Equity Fund is associates of Mirae Asset Venture Investment Co., Ltd.

(*3) Transwestern Corporate Properties I LLC is an associate of MAPS US Professional Investment Private Real Estate Investment Trust 9-1.

(*4) Traphaco Joint Stock Company is an associate to which MAGBI Fund Ltd and Super Delta Pte. Ltd. jointly invested.

(*5) Nabou Green Energy Limited is an associate to which the Company and Renewable PG Limited Liability Company, the subsidiary, jointly invested.

(2) Significant assets and liabilities from transactions with related parties as of December 31, 2020 and 2019 are as follows:

		2020				
		Receivables			Payables	
		Loans	Guarantees	Others	Debentures	Others
Associates						
Mirae Asset Life Insurance Co., Ltd.	₩	-	-	-	391,542	3,035
Daejo PFV Co., Ltd.		-	-	6,602	-	251
Suwon Galleria Station Area Complex Development PFV Co., Ltd		6,420	-	1	-	-
Moonjung Station Maestro Project Financing Vehicle Co. Ltd.		-	-	5,398	-	-
Asia Cinema Group Ltd.		13,366	-	4	-	-
Others		5,047	-	3,298	-	2,584
Other related parties						
Mirae Asset Capital Co., Ltd.,		-	-	-	50,230	50,035
Mirae Asset Global Investment Co., Ltd.		-	-	11,233	247	17,448
Others		-	15,813	15,561	-	27,221
	₩	24,833	15,813	42,097	442,019	100,574

		2019				
		Receivables			Payables	
		Loans	Guarantees	Others	Debentures	Others
Associates						
Mirae Asset Life Insurance Co., Ltd.	₩	-	-	-	391,517	5,450
Daejo PFV Co., Ltd.		39,000	-	6,000	-	489
Suwon Galleria Station Area Complex Development PFV Co., Ltd.		-	-	-	-	-
Moonjung Station Maestro Project Financing Vehicle Co. Ltd.		-	-	-	-	-
Asia Cinema Group Ltd.		122,727	-	241	-	-
Others		760	-	2,767	-	2,385
Other related parties						
Mirae Asset Capital Co., Ltd.,		-	-	12,375	60,324	50,034
Mirae Asset Global Investment Co., Ltd.		-	-	17,084	-	9,177
Others		-	15,481	29,325	-	31,334
	₩	162,487	15,481	67,792	451,841	98,869

(*) Loans, etc. are the amount after deducting the credit loss allowance. The amount of bad debt allowances is set at ₩ 839 million for the year ended December 31, 2020. The amount of bad debt allowances is set at ₩ 156 million for the year ended December 31, 2019. The amount of recognised impairment cost is ₩ 683 million for the year ended December 31, 2020 and ₩ 156 million for the year ended December 31, 2019.

(3) Significant transactions with related parties for the years ended December 31, 2020 and 2019 are as follows:

		2020					
		Profit transaction			Loss transaction		
		Dividends	Commissions	Others	Selling and administrative expense, etc	Commissions	Others
Associates							
Mirae Asset Life Insurance Co., Ltd.(*1)	₩	6,625	543	4,240	-	474	14,569
Daejo PFV Co., Ltd.		-	1,597	574	-	-	-
Suwon Galleria Station Area Complex Development PFV Co., Ltd		-	1,446	204	-	-	30
Godeok Gangil 10 PFV Co., Ltd		-	1,465	200	-	-	-
Moonjung Station Maestro Project Financing Vehicle Co. Ltd.		-	2,400	397	-	-	-
Asia Cinema Group Ltd.		-	18	2,440	-	-	568
Others		17,324	2,187	123	-	6	85
Other related parties							
Mirae Asset Capital Co., Ltd.(*2)		-	122	4	-	364	3,969
Mirae Asset Global Investment Co., Ltd.(*3)		15,111	794	1,190	-	38,559	13
Others(*4)(*5)		3,901	2,051	1,113	30,520	3,877	908
	₩	42,961	12,623	10,485	30,520	43,280	20,142

	2019						
	Profit transaction			Loss transaction			
	Dividends	Commissions	Others	Selling and administrative expense, etc	Commissions	Others	
Associates							
Mirae Asset Life Insurance Co., Ltd.(*1)	₩	5,590	1,663	4,940	33	1,321	14,184
Daejo PFV Co., Ltd.		-	2,969	573	-	1	-
Suwon Galleria Station Area Complex Development PFV Co., Ltd		-	-	-	-	-	-
Godeok Gangil 10 PFV Co., Ltd		-	-	-	-	-	-
Moonjung Station Maestro Project Financing Vehicle Co. Ltd.		-	-	-	-	-	-
Asia Cinema Group Ltd.		-	2,177	241	-	-	-
Others		-	827	-	-	12	-
Other related parties							
Mirae Asset Capital Co., Ltd(*2)		-	1,120	1,146	-	15	2,414
Mirae Asset Global Investment Co., Ltd.(*3)		23,455	1,213	1,297	-	33,611	-
Others(*4)(*5)		3,747	1,175	448	28,353	3,555	3,927
	₩	32,792	11,144	8,645	28,386	38,515	20,525

(*1) The amount of transactions sold of financial instruments including collective investment securities for the year ended December 31, 2020 is ₩15,584 million, and the amount of transaction purchased of real estate asset including land for the year ended December 31, 2020 is ₩4,531million. The amount of transaction purchased of real estate asset including land for the year ended December 31, 2019 is ₩13,661million.

(*2) The amount of transactions sold of financial instruments including bonds, for the year ended December 31, 2020 is ₩83,450 million, and the amount of transaction purchased of financial instruments including bonds for the year ended December 31, 2019 is ₩600 million The amount of transaction sold of financial instruments including bonds for the year ended December 31, 2019 is ₩50,200 million.

(*3) The amount of transaction purchased of real estate asset including land for the year ended December 31, 2020 is ₩820 million, and the amount of transaction sold of collective investment securities for the year ended December 31, 2020 is ₩637 million. The amount of transaction purchased of collective investment securities for the year ended December 31, 2019 is ₩3 million, and the amount of transaction sold of collective investment securities for the year ended December 31, 2019 is ₩4 million. The amount of transaction purchased of real estate asset including land for the year ended December 31, 2019 is ₩10,848 million

(*4)The amount of transactions sold of financial instruments including collective investment securities for the year ended December 31, 2020 is ₩163 million. The amount of transactions purchased of financial instruments including collective investment securities for the year ended December 31, 2019 is ₩9 million, the amount of transactions sold of financial instruments including collective investment securities for the year ended December 31, 2019 is ₩18 million

(*5) The amount of Lease liability repayment for the year ended December 31, 2020 is ₩ 14,196 million, and the amount of Lease liability repayment for the year ended December 31, 2019 is ₩ 14,535 million

(4) Significant borrowing transactions with related parties for the years ended December 31, 2020 and 2019 are as follows:

	2020			
	Beginning	Increase	Decrease	Ending
Associates				
Mirae Asset Life Insurance Co., Ltd	₩	390,000	-	390,000
Others relate parties				
Mirae Asset Capital Co., Ltd		100,000	-	100,000
	₩	490,000	-	490,000

	2019			
	Beginning	Increase	Decrease	Ending
Associates				
Mirae Asset Life Insurance Co., Ltd	₩	340,000	50,000	390,000
Others relate parties				
Mirae Asset Capital Co., Ltd		50,000	50,000	100,000
	₩	390,000	100,000	490,000

(*1) Transactions under agreement 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, 2020 and 2019 are as follows:

			2020			
			Beginning	Increase	Decrease	Ending
Associates						
Mirae Asset Daewoo 1st SPAC	Loans	₩	760	-	(760)	-
Mirae Asset Daewoo 2nd SPAC	Corporate bonds		490	-	(490)	-
Mirae Asset Daewoo 3rd SPAC	Corporate bonds		1,192	-	-	1,192
Mirae Asset Daewoo 4th SPAC	Corporate bonds		1,085	-	-	1,085
Mirae Asset Daewoo 5th SPAC	Corporate bonds		-	1,000	-	1,000
KJ Logis Co., Ltd.	Loans		-	2,011	-	2,011
Amnam Distribution Logistics Development Co., Ltd.	Loans		-	955	-	955
Daejo PFV Co., Ltd.	Loans		39,000	-	(39,000)	-
	Corporate bonds		6,000	600	-	6,600
Suwon Galleria Station Area Complex Development PFV Co., Ltd	Loans		-	6,450	-	6,450
Godeok Ganggil 10 PFV Co., Ltd	Loans		-	46,060	(46,060)	-
Moonjung Station Maestro Project Financing Vehicle Co. Ltd	Corporate bonds		-	5,001	-	5,001
MTV Bandalseom C1 Development PFV Co., Ltd	Loans		-	2,166	-	2,166
Asia Cinema Group Ltd.	Loans		122,727	18,150	(126,788)	14,089
		₩	171,254	82,393	(213,098)	40,549

			2019			
			Beginning	Increase	Decrease	Ending
Associates						
Mirae Asset 5th SPAC	Corporate bonds	₩	700	-	(700)	-
Mirae Asset Daewoo 1st SPAC	Loans		760	-	-	760
Mirae Asset Daewoo 2nd SPAC	Corporate bonds		490	-	-	490
Mirae Asset Daewoo 3rd SPAC	Corporate bonds		-	1,192	-	1,192
Mirae Asset Daewoo 4th SPAC	Corporate bonds		-	1,085	-	1,085
Daejo PFV Co., Ltd.	Loans		-	39,000	-	39,000
	Corporate bonds		-	6,000	-	6,000
Cassava Investment Korea Pte. Ltd.	Loans		2,751	-	(2,751)	-
Asia Cinema Group Ltd.	Loans		-	122,727	-	122,727
		₩	4,701	170,004	(3,451)	171,254

(6) Financial transactions with other related parties for the years ended are December 31, 2020 and 2019 as follows:

			2020	
Type	Name of the related parties	Contribution, etc	Collection, etc	
	KJ Logis Co., Ltd.	2	-	
	Amnam Distribution Logistics Development Co., Ltd.	45	-	
	Mirae Asset-NAVER New Growth Fund I	9,000	-	
	Mirae Asset-GS Retail New Growth Fund I	10,000	(1,961)	
	Mirae Asset-Celltrion New Growth Fund I	5,625	(6,750)	
Associates	Hancom-Miraeasset 4IR Fund	-	(585)	
	Curious Mirae Asset SUTT Corporate Financial Stability PEF	-	(3,110)	
	New Growth Engine Green Future PEF	-	(410)	
	Mirae Asset Naver Asia Growth PEF	70,689	(13,123)	
	Godeok Ganggil 10 PFV Co., Ltd	995	-	
	Moonjung Station Maestro Project Financing Vehicle Co. Ltd.	999	-	

			2020	
Type	Name of the related parties	Contribution, etc	Collection, etc	
Associates	Mirae Asset Curious Corporate Recovery Private Equity Fund	10,800	-	
	MTV Bandalseom C1 Development PFV Co., Ltd	334	-	
	Wirye Active Senior House Co. Ltd	250	-	
	Seolleung Maestro Station Influence Area Public Housing Project Financial Investment Co., Ltd.	999	-	
	Mirae Asset Daewoo 1st SPAC	-	(35)	
	Mirae Asset Daewoo 5th SPAC	17	-	
	All Together Korea Korea Investment Private Investment Pool Professional Private Investment Trust 10th	54,000	(48,669)	
	Mirae Asset Venture Investments (India) Private Limited	4,586	-	
	MAPS Indianapolis One LLC	39,762	-	
	Total	208,103	(74,643)	
Other Related Parties	Mirae Asset Partners No.9 PEF	11,896	-	
	Mirae Asset Global EMP Inc. Securities Investment Trust No.1 (UH) (Share Mix-Reindirect Type)	3,663	(5,803)	
	Total	15,559	(5,803)	
Grand Total		223,662	(80,446)	

			2019	
Type	Name of the related parties	Contribution, etc	Collection, etc	
Associates	Mirae Asset Life Insurance Co., Ltd	43,567	-	
	Mirae Asset-NAVER New Growth Fund I	18,000	-	
	Mirae Asset-GS Retail New Growth Fund I	10,000	-	
	Mirae Asset-Celltrion New Growth Fund I	16,875	-	
	SKS Mirae Asset Corporate Financial Stability PEF	10,000	-	
	Mirae Asset Partners PEF 4th	-	(1,500)	
	New Growth Engine Green Future PEF	-	(770)	
	Lotte KDB Mirae Asset Daewoo Global Investment Partnership PEF	15	-	
	Mirae Asset Naver Asia Growth PEF	156,062	-	
	Mirae Asset Daewoo 3rd SPAC	16	-	
	Mirae Asset Daewoo 4th SPAC	15	-	
	Daejo PFV Co., Ltd	3,200	-	
	Suwon Galleria Station Area Complex Development PFV Co., Ltd	995	-	
	Yangjae PFV Co., Ltd	2,400	-	
	2019 PCC New Technology Fund	1,000	-	
	Cheongdam Complex PFV Co., Ltd	750	-	
	IMM Global PEF	29,125	-	
	Asia Cinema Group Ltd.	38,105	-	
	Total	330,125	(2,270)	
	Other Related Parties	Mirae Asset Partners No.9th PEF	346	-
Mirae Asset Credit Opportunities Fund		-	(135)	
Mirae Asset Global Investment Co., Ltd.(*)		2,800	-	
		3,146	(135)	
Grand Total		333,271	(2,405)	

(*) Transaction with Mirae Asset Global EMP Income Distribution Securities Trust No.1 (UH)(share-mixed-re-indirect type),a subsidiary of Mirae Asset

(7) Payment guarantee contracts(including purchase commitment) with other related parties for the years ended are December 31, 2020 and 2019 as follows:

Type	Name of the related parties	2020	2019
Associates	Daejo PFV Co., Ltd	-	32,000

(8) Investment agreements entered with other related parties for the years ended are December 31, 2020 and 2019 as follows:

		2020	
Type	Name of the related parties		Cost
Associates	Mirae Asset-GS Retail New Growth Fund I	₩	10,000
	Mirae Asset-Celltrion New Growth Fund I		22,500
	Mirae Asset Naver Asia Growth PEF		174,120
	Mirae Asset Curious Corporate Recovery Private Equity Fund		15,640
	All Together Korea Korea Investment Private Investment Pool Professional Private Investment Trust 10th		534,600
	KJ Logis Co., Ltd.		4,000
	Suwon Galleria Station Area Complex Development PFV Co., Ltd		2,440
	Asia Cinema Group Ltd.		4,352
	Total		767,652
Other Related Parties	Mirae Asset Dawoo Korea No 1st PEF		85
	Grand Total	₩	767,737

		2019	
Type	Name of the related parties		Cost
Associates	Mirae Asset-NAVER New Growth Fund I	₩	9,000
	Mirae Asset-GS Retail New Growth Fund I		20,000
	Mirae Asset-Celltrion New Growth Fund I		28,125
	New Growth Engine Green Future PEF		5,165
	Mirae Asset Naver Asia Growth PEF		244,809
	Total		307,099
Other Related Parties	Mirae Asset Daewoo Hunters PEF		153
	Mirae Asset Daewoo Korea No. 1st PEF		104
	Mirae Asset Partners No.9th PEF		11,896
	Total		12,153
	Grand Total	₩	319,252

(9) Collateral pledged or received with related parties for the years ended are December 31, 2020 and 2019 as follows

Type	Name of the related parties	2020		2019	
		Collateral Pledged	Collateral Received	Collateral Pledged	Collateral Received
Other Related Parties	YK Development Co., Ltd.	-	39,600	-	-

(10) Dividends paid by the Group to related parties for the years ended December 31, 2020 and 2019 are as follows:

		2020	2019
Associates			
Mirae Asset Life Insurance Co., Ltd	Investment in partnerships	₩ 110	-
Other related parties			
Mirae Asset Capital Co., Ltd.	Stocks	36,268	29,256
	Investment in partnerships	392	24
Mirae Asset Global Investment Co., Ltd.	Beneficiary certificate	-	2
	Investment in partnerships	210	-
Others	Beneficiary certificate	-	12
		₩ 36,980	29,294

(11) The Group has entered into the discretionary investment service agreement for the Group's Wrap Account with Mirae Asset Global Investment Co., Ltd., a related party.

	2020	2019
Wrap Account		
Outstanding balance of the Wrap Account	₩ 420,963	261,036
Wrap Account		
Operating expenses	(3,152)	(1,641)

(12) Compensations for key management, which consists of officers and chief managers who have important duties and responsibilities over the planning, operating and control, for the years ended December 31, 2020 and 2019 are as follows:

	2020	2019
Salaries	15,826	13,472
Retirement benefits	2,567	1,723
Share-based Payment	₩ 8,295	7,372
Others	829	566
	₩ 27,517	23,133

50. Interests in unconsolidated structured entities

(1) Characteristics and scope of the interests in unconsolidated structured entities

Characteristics	Purpose	Main business	Financing method	Total Asset	
				2020	2019
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	₩ 17,857,017	2,277,303
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	51,173,665	7,470,333
Investment fund (*)	Generate revenue from investment in financial and non-financial instrument	- Managing and operating fund assets - Remuneration fund payment and distribution of operating revenue	- Sales of beneficiary certificates - General Partner and Limited Partner investments	415,146,988	31,209,668

(*) Beneficiary of certificate, PEF, etc.

(2) Carrying amounts and maximum exposure to loss of the interests related to unconsolidated structured entities as of December 31, 2020 and 2019 are as follows:

	2020			
	SPC	Financing SPC	Investment fund	Total
Assets				
Financial assets measured at fair value through profit or loss	₩ 1,856,508	249,814	7,509,544	9,615,866
Financial assets measured at fair value through other comprehensive income	606,351	-	-	606,351
Associates	-	9,786	637,526	647,312
Loans	57,161	1,838,936	19,033	1,915,130
Others	2,035	11,714	4,925	18,674
Total	2,522,055	2,110,250	8,171,028	12,803,333
Liabilities				
Other Liabilities	25	20,291	-	20,316
Purchasing commitments and guarantees	151	1,569,548	1,256,553	2,826,252
Maximum exposure amount of loss	₩ 2,522,206	3,679,798	9,427,581	15,629,585

				2019
	SPC	Financing SPC	Investment fund	Total
Assets				
Financial assets measured at fair value through profit or loss	₩ 17,608	26,017	2,845,891	2,889,516
Financial assets measured at fair value through other comprehensive income	-	74,467	393,495	467,962
Associates	663,632	1,679,838	7,500	2,350,970
Loans	681,240	1,780,322	3,246,886	5,708,448
Purchasing commitments and guarantees	1,093,486	1,883,082	233,630	3,210,198
Maximum exposure amount of loss	₩ 1,774,726	3,663,404	3,480,516	8,918,646

51. Supplemental cash flow information

Significant non-cash transactions for the years ended December 31, 2020 and 2019 are as follows:

	2020	2019
Gains on valuation of financial assets measured at fair value through other comprehensive income	₩ 266,571	240,227
Tax effect related with disposal of own stocks	(262)	(1,294)
Reclassification of properties to investment properties	1,623	107,412
Retirement of treasury stocks	68,080	-
Changes in equity method capital	(51,874)	64,524



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