GPIF

ANNUAL REPORT

FISCAL YEAR 2022

Investment Principles

【1】 Our overarching goal is to contribute to the stability of the national pension system by securing the investment returns that it requires with minimal risk and from a long-term perspective, to the sole benefit of pension recipients.

【2】 Our primary investment strategy is diversification by asset class, region, and timeframe. While market prices may fluctuate in the short term, GPIF will take full advantage of our long-term investment horizon to achieve investment returns in a more stable and efficient manner, while simultaneously ensuring sufficient liquidity to pay pension benefits.

【3】 We formulate our overall policy asset mix and manage risks at the portfolio, asset class, and investment manager level. We utilize both passive and active management in order to achieve benchmark returns (i.e., average market returns) and seek untapped profitable investment opportunities.

【4】 We believe that sustainable growth of investee companies and the capital market as a whole are vital in enhancing long-term investment returns. In order to secure such returns for pension beneficiaries, therefore, we promote the incorporation of non-financial environmental, social, and governance (ESG) factors into the investment process in addition to financial factors.

【5】 In order to enhance long-term investment returns and fulfill our stewardship responsibilities, we shall advance various initiatives (including the consideration of ESG factors) that promote long-termism and the sustainable growth of investee companies and the capital market as a whole.

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- Investment results of Government Pension Investment Fund, including this annual report, are available on the website: https://www.gpif.go.jp/en/

Investment Result Summary in Fiscal 2022

For details, refer to pages 23-32.

Rate of return

	Fiscal 2022	Since Fiscal 2001
Rate of return	+1.50% [annual rate]	+3.59% [annual rate]

Returns
(Interest and dividend income)

Returns	+¥2,953.6 billion [annual returns]	+¥108,382.4 billion [cumulative returns]
(Interest and dividend income)	(+¥3,700.3 billion) [annual returns]	(+¥47,052.7 billion) [cumulative returns]

The excess rate of return
(over the compound benchmark)

	Fiscal 2022	Since 2020 (the beginning of the 4th Medium-term Plan (FY2020-FY2024)) [cumulative]
The excess rate of return	-0.06%	+0.18%

Asset size

As of the end of fiscal 2022

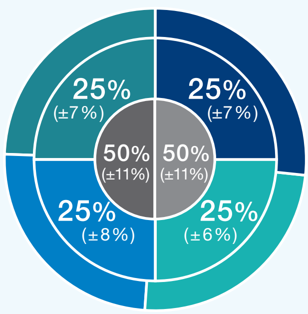
200,132.8 billion

Portfolio allocation
(Pension reserves managed by GPIF and the Pension Special Account)

Inside: policy asset mix (figures in parentheses indicate deviation limits)
Outside: at the end of March 2023

Foreign equities
24.32%
¥49,986.5 billion

Domestic equities
24.49%
¥50,333.7 billion



Domestic bonds
26.79%
¥55,062.2 billion

Foreign bonds
24.39%
¥50,122.5 billion

Allocation changes for each asset class due to rebalancing

(Unit: ¥billion)

Domestic bonds	Foreign bonds	Domestic equities	Foreign equities
+3,022.4	+1,502.1	−2,002.9	−1,914.5

(Note) Each figure shows the net rebalancing amount.

Total fees
(The average fee rate on the total investment assets)

30.2 billion
(0.02%)

Topics in Fiscal 2022

1 Managed portfolio stably in response to market fluctuations

In order to steadily implement investment management based on the policy asset mix, GPIF purchases and sells (rebalances) assets in a timely and appropriate manner so as not to deviate from the portfolio allocation specified in the policy asset mix, even when there occur rapid changes in the economic and market environments.

In fiscal 2022, although the market as a whole remained volatile throughout the fiscal year, we managed risk appropriately. To give one example, foreign stock index futures were newly utilized to reduce price fluctuation risk in rebalancing activities.

As a result, our rate of investment return in fiscal 2022 was +1.50%.

2 Diversified and sophisticated investment management to capture excess returns

In addition to steady management based on the policy asset mix, GPIF also aims to capture excess returns.

In fiscal 2022, we made efforts to expand sources of excess returns, including the selection of active funds for North American equities by using quantitative assessments based on the latest data science, and investment in limited partnerships (LPSs) for alternative assets in order to strengthen risk management and improve returns.

As a result, the cumulative excess rate of return for the three years since fiscal 2020, first year of our 4th Medium-term Plan period (fiscal 2020 to fiscal 2024), was +0.18%.

Since the establishment of GPIF (fiscal 2006 to fiscal 2022), the average excess rate of return has been -0.03%.

3 Started upgrading platform to refine and improve efficiency of investment management over the medium to long term

As a universal owner, GPIF accumulates vast amounts of trading and other data on a daily basis. By making effective use of such data, we expect further improvements in asset management and risk management.

In fiscal 2022, in order to make effective use of such data, we started a study to establish an information processing platform as a foundation for data management, and appointed a senior IT advisor to support this platform.

Message from the Chairperson of the Board of Governors

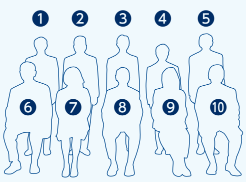
The Board of Governors aims at making GPIF trustworthy organization for the Japanese public by fully utilizing the expertise of the Governors with a wide range of knowledge and experiences.

The mission of GPIF is to manage pension reserves stably and efficiently from a long-term perspective, solely for the benefit of the national, thereby contributing to the stability of pension finance.

The Board of Governors comprises ten members: the President of GPIF and nine outside experts with a broad range of pertinent knowledge and experience. The Board of Governors makes decisions on important policies related to the management and investment of pension reserves including the formulation of the policy asset mix, as well as the management of the organization. In addition, the Board of Governors supervises the Executive Office's business executions in cooperation with the Audit Committee.

Looking back on economic and financial conditions over the past year, financial and capital markets continued to experience high levels of volatility as global inflation progressed and monetary tightening by major central banks continued. Under these circumstances, a major challenge for GPIF was how to minimize risks and secure stable returns; the Board of Governors has encouraged the Executive Office to diversify investment target and reduce risks appropriately, while always carefully checking consistency with laws and regulations. Of course, the Executive Office has also made every effort to secure stable investment income by earnestly implementing various reviews and countermeasures, including improving the efficiency of organizational management. As a result, the Board of Governors and the Executive Office have worked hand in hand while maintaining a relationship that has a healthy degree of tension, and we believe that GPIF is managed in a way that is trusted by the Japanese public.

In Japan, we are recovering our daily routines at the post-COVID-19 era, however the outlook for the economy and the commodity price remains uncertain. Overseas markets remain unpredictable, including systemic instability in finance in the U.S. and Europe. The Board of Governors is committed to devoting all of its energies for the benefit of the Japanese pubic, while taking these economic and financial conditions at home and overseas into consideration. We would sincerely appreciate your continuous understanding and support.



1 ITABA Ken
2 UCHIDA Takakazu
3 KATO Yasuyuki
4 OHMI Naoto
5 OZAKI Michiaki
6 ARAI Tomio
7 KOMIYAMA Sakae
8 YAMAGUCHI Hirohide
9 NEMOTO Naoko
10 MIYAZONO Masataka

Chairperson of the Board of Governors

山口廣秀

YAMAGUCHI Hirohide

Government Pension Investment Fund, Japan

Message from the President

We will fulfill our mission to contribute to the financial stability of the pension system and ultimately to the stability of people's lives through the management and investment of pension reserve funds.

The mandate of Government Pension Investment Fund is to contribute to the stability of the Employees' Pension Insurance and National Pension schemes by managing and investing the pension reserves entrusted to us by the Minister of Health, Labour and Welfare and by disbursing investment returns into the Pension Special Account.

The investment result for fiscal 2022 was a positive return of 1.50% due partly to the rise in the Japanese stock market and the depreciation of the yen.

Interest rate hikes by the Federal Reserve Board (FRB), the European Central Bank (ECB), and other central banks against the backdrop of record high inflation led to a significant rise in yields on government bonds in major economies, particularly in the U.S and Europe. On the other hand, in Japan, policy interest rates remained unchanged and a relatively accommodative monetary policy was maintained. As a result, interest rate differentials between Japan and overseas economies widened, and the yen weakened against the dollar and the euro. In addition, while the U.S. stock market declined, partly owing to concerns about a recession caused by the FRB's interest rate hike, European stock markets rose as the energy supply crisis receded. Domestic stocks rose on expectations of improved corporate earnings due to the weaker yen.

We also have passed the halfway point of our 4th Medium-term Objectives period, which began in fiscal 2020. During this period, the economic and financial environment in the world has seen a rapid recovery from the decline caused by the COVID-19 and Russia's invasion of Ukraine followed by the runaway inflation and rapid monetary tightening in response to it in fiscal 2022, with financial markets experiencing a series of major movements. As a result, when investing pension reserves, we have continued to face circumstances that make portfolio management difficult.

Through our efforts to manage risks while also ensuring stable investment, the pension reserves managed by GPIF amounted to approximately ¥200 trillion at the end of fiscal 2022. There is no comparable investor in the world that manages assets of this size as a single portfolio.

Based on the organization we cultivated to generate stable return, all GPIF executives and staff, together with its Board of Governors, will continue our tireless efforts to contribute to the financial stability of the pension system and ultimately to the stability of people's lives based on the organization we cultivated to generate stable return and by upgrading the investment capabilities commensurate with its size.

I would sincerely appreciate your continued understanding and support

President

宮園雅敬

MIYAZONO Masataka

Government Pension Investment Fund, Japan

1 About GPIF

Introduction

Public pension scheme is designed to support the future of Japan.
Here, we would like to explain the activities of GPIF which is managing and investing a part of this public pension, in simple and easy manners.

What is a public pension?

A public pension scheme is a system in which all citizens pay premiums to support each other in order for each citizen to prepare for potential risks in our lives, such as "becoming unable to work due to age," "living with disabilities resulting from illness or injury," and "losing main income source of a family." Particularly in Japan, the public pension scheme plays a very important role as life-long support for elderly people.

For details of GPIF's roles in the public pension scheme, refer to pages 79·80.

(Note) The information is partly simplified for easy understandings. All the images in this section are for illustrative purposes only.

Q1 Will I get my contributions back as pension benefits in the future?

A The public pension scheme in Japan adapts the concept of "intergenerational support," whereby pension benefits for elderly generations are paid from pension premiums collected from contemporary working generations. Therefore, the scheme is not designed to cover your pension benefits by your own premiums accumulated in advance.

For details, refer to page 8.

Q2 How will the pension system work as the declining birthrate and the aging population?

A Since there will be fewer contributions from the working generation to cover the pensions for the elderly generation, it will be necessary to make up the shortfall. The pension system reflects changes in the times, such as the growing number of working elderly people and women, in order to improve its sustainability. In addition, the system is designed to stabilize pension finance by utilizing pension reserves.

For details, refer to page 9.

Q3 What does GPIF do?

A GPIF is an organization managing and investing pension reserves to increase the source of pension benefits for future generations.

For details, refer to page 10.

Q4 Can the amount of benefits to be paid in the next year be affected by this year's investment performance?

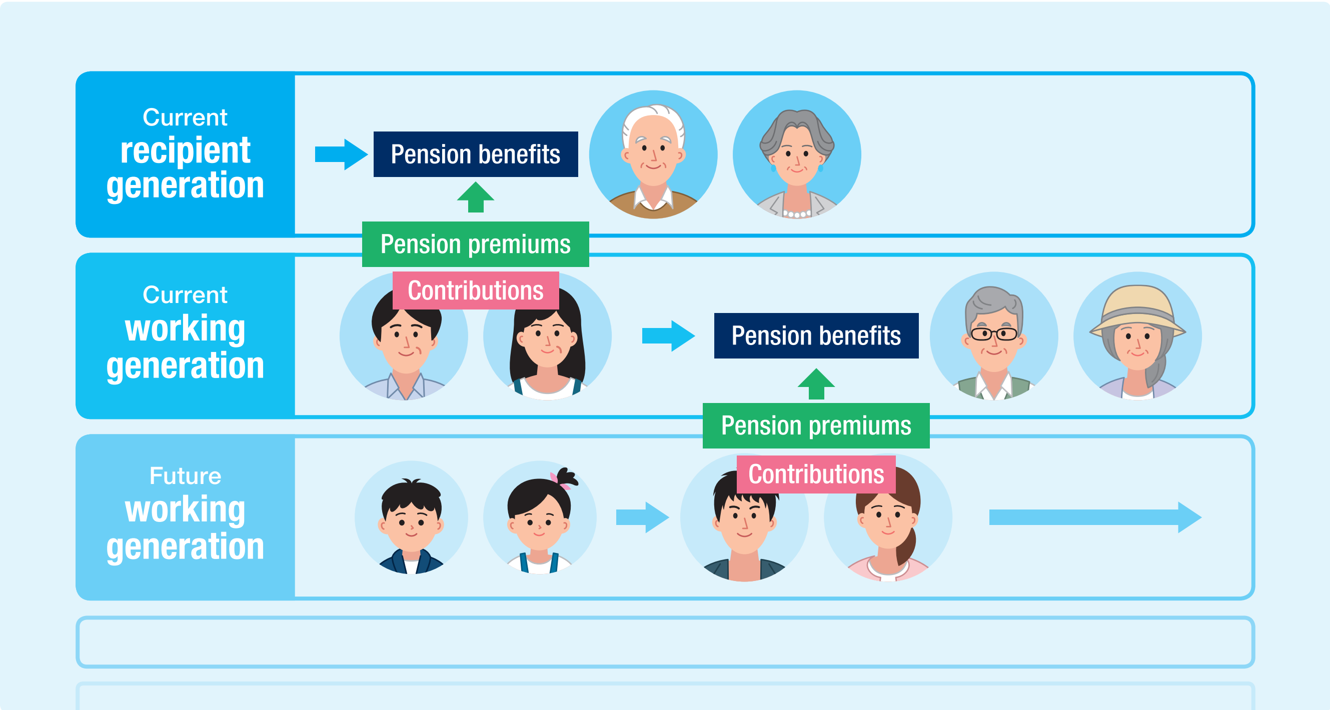
A What GPIF invests is the funds "reserved for future generations." Therefore, the amount of benefits to be received in the next year will not be affected regardless of whether the investment performance in this year is positive or not.

For details, refer to page 10.

CHECK 1

First, let's walk through Japan's pension system.

Japan adopts a system where working generations support the lives of the elderly generations.



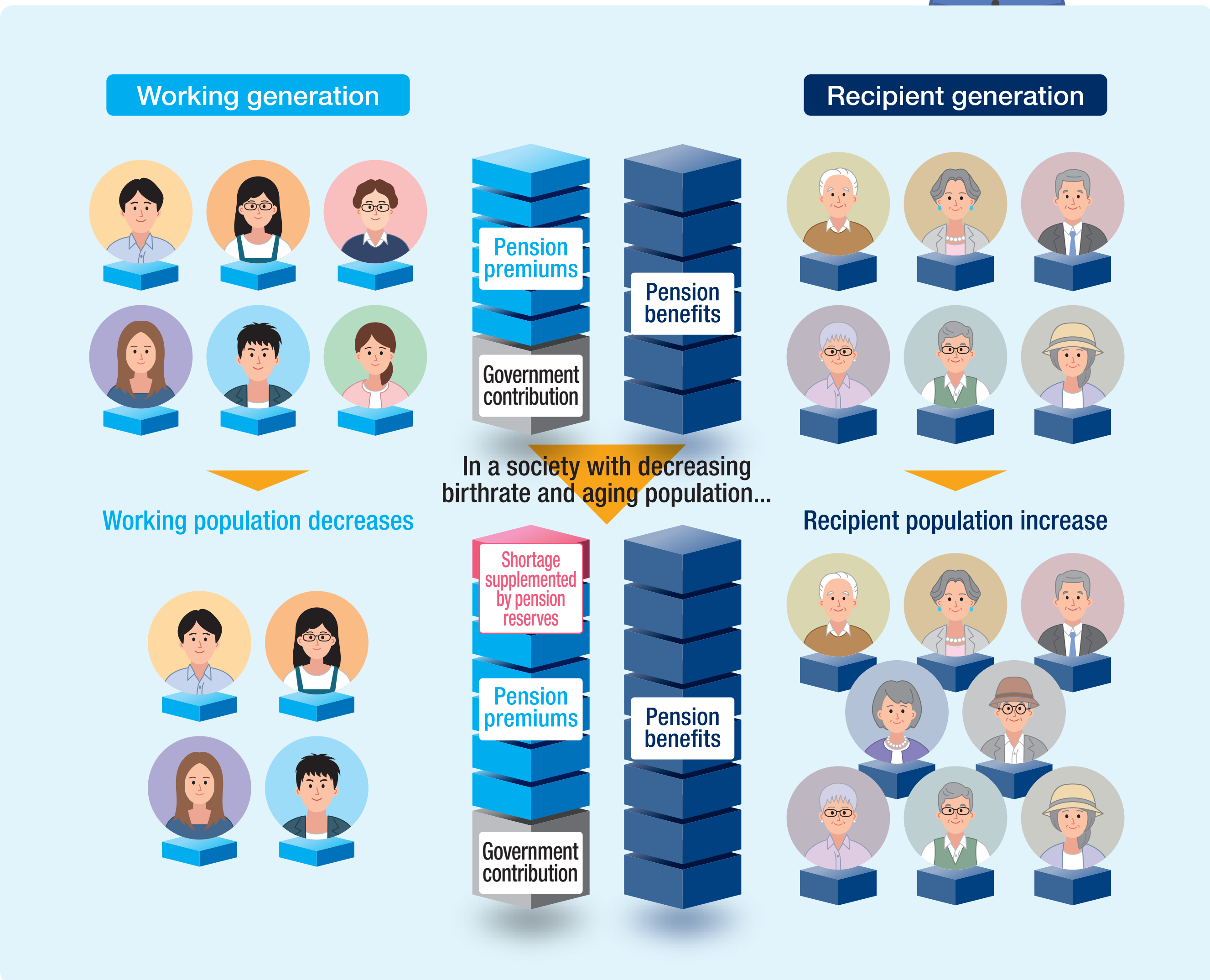
Under the public pension scheme in Japan, pension benefits for the elderly generations are paid by pension premiums collected from the contemporary working generations. In other words, pension benefits to be received in the future by the current working generations will be covered by the pension premiums paid in the future by generations of their children and grandchildren. The scheme is not designed to cover your pension benefits by your own premiums accumulated in advance.

What concerns do we have in the age of shrinking population in Japan?

CHECK 2

What would happen to the pension scheme as the population of Japan decreases?

If the declining birthrate and aging population continue, the burden on future working generations would become too heavy.



In recent years, while the population of the working generation has decreased, our society has changed as people work longer and in more diversified ways: e.g. the elderly workers have increased as people's healthy lifespan becomes longer and female employment rate has risen. By reflecting on these changes to the design of the scheme, the sustainability of the pension scheme has been improved.
In addition, pension reserves are planned to be used to supplement the potential shortage of pension funds for future benefit payments when necessary, so that we can ensure the stability of pension finance over a period of time in the future.

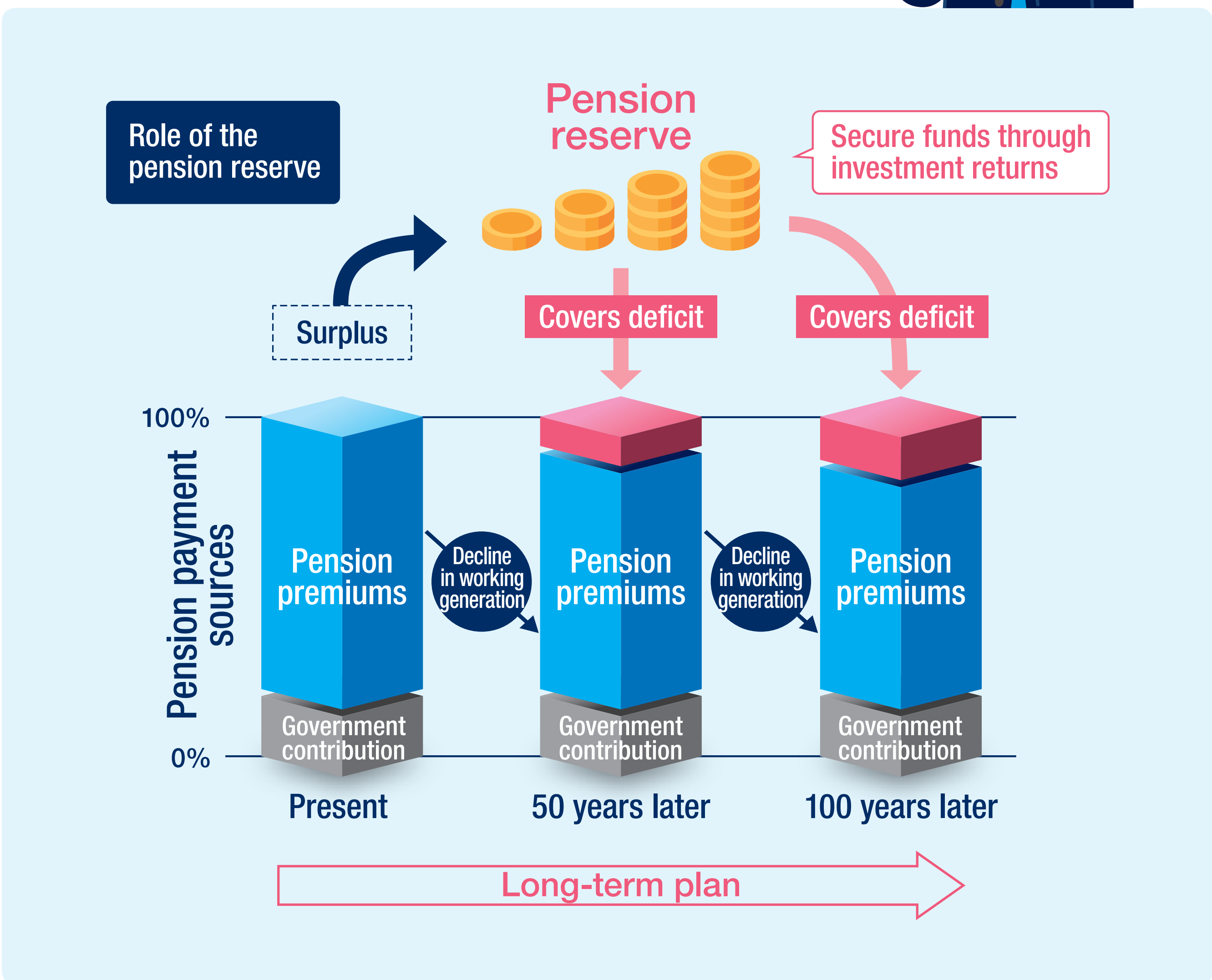
We will go into the role of pension reserves in detail.

CHECK
3

GPIF manages pension reserves for future generations.

What are pension reserves?

Out of pension premiums contributed by the working generation, those unused for current pension payments shall be reserved for future generations as pension reserves. In the long run, about 10 percent of the total pension funds are estimated to come from the pension reserves.



Will the next year's pension payment be affected by the investment result of this year?

The pension reserve fund managed by GPIF is used to prevent the burden on future generations from becoming too heavy. Therefore, even if the investment result of this year is positive, the amount of pension benefit payment of the next year will not increase. Likewise, even if the investment result of this year is negative, the amount of pension benefit payment of the next year will not be reduced.

2 About investments of the pension reserves

To ensure stable earnings from its investments,
GPIF keeps in mind as follows.

POINT 1 GPIF employs long-term investment and diversified investment as our principle investment strategies

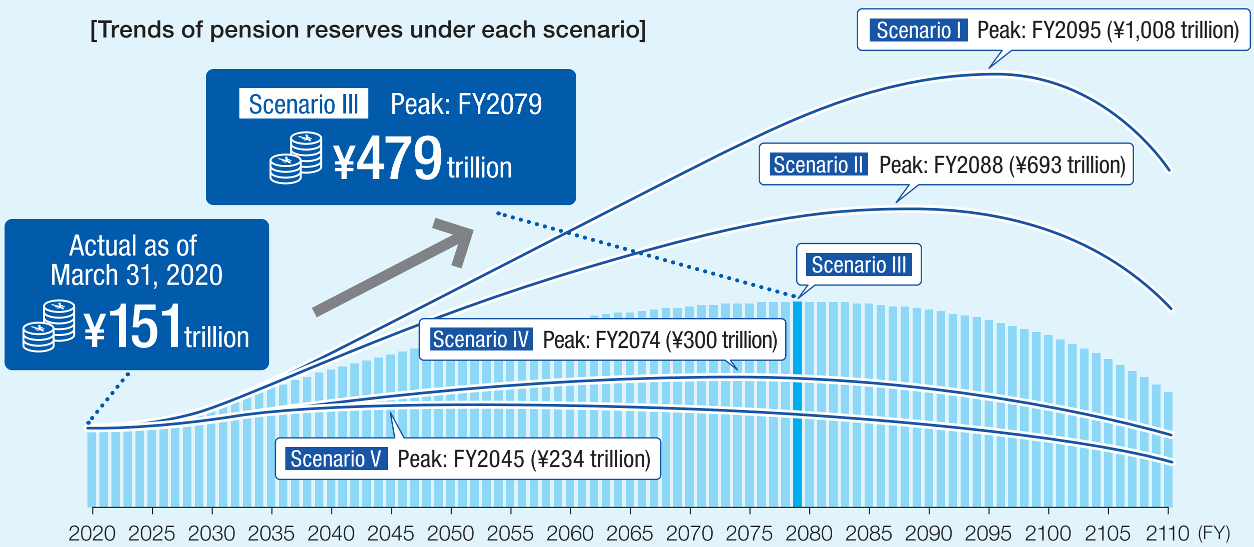
1 GPIF carries out long-term investment.

Although investment performance in the short term can fluctuate in a large scale in either positive or negative direction, as investment horizon becomes longer, the range of fluctuation is expected to be smaller, because positive results and negative results would be offset with each other in the long run.

The pension reserve fund managed by GPIF is projected not to be used for benefit payments for about the next 50 years or so. Therefore, GPIF adopts a long-term investment strategy that aims to gain stable returns by holding various types of assets over the long term without being too concerned with temporary market fluctuations.

Financial verification results (projections for pension reserves over approximately 100 years)

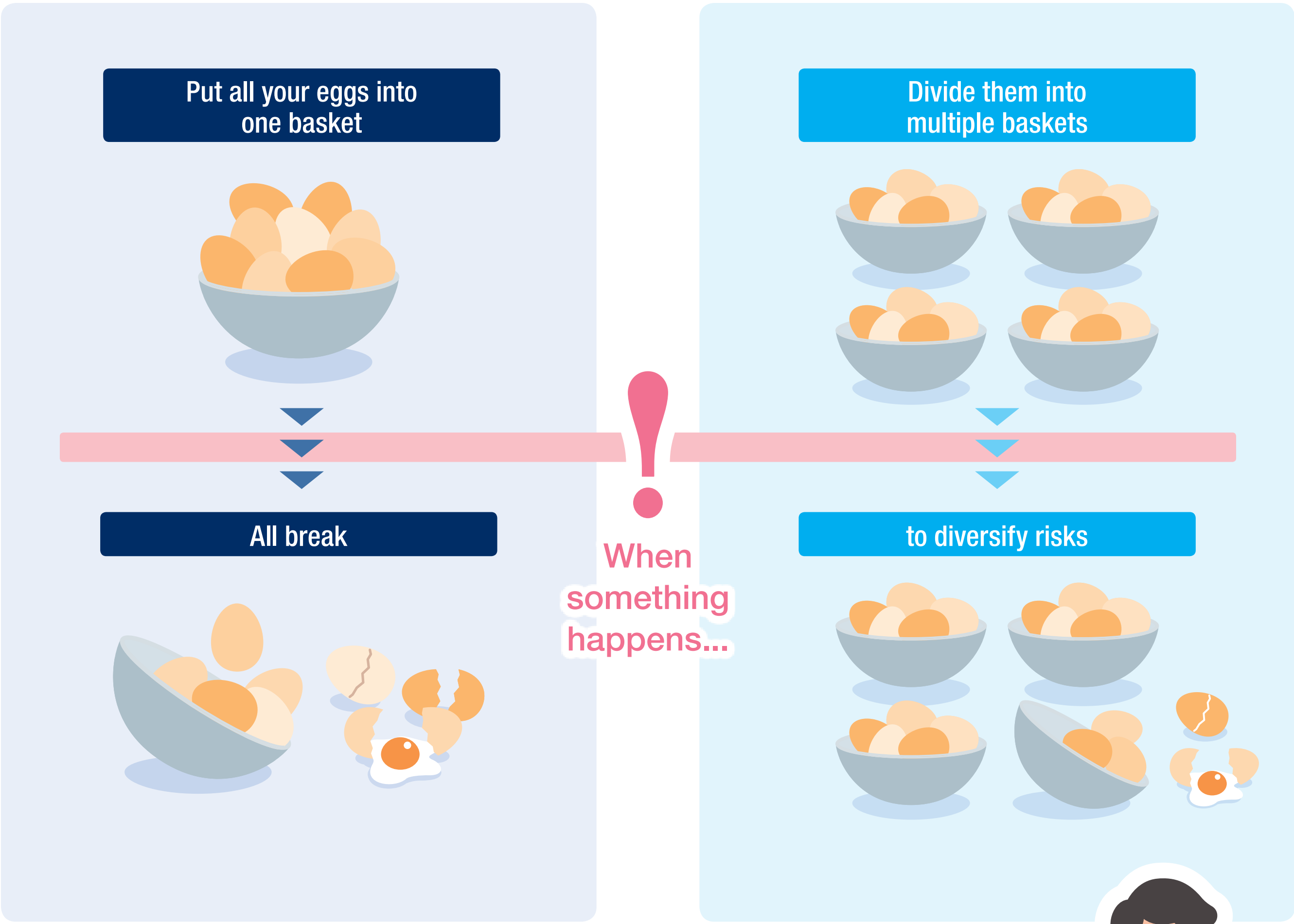
[Trends of pension reserves under each scenario]

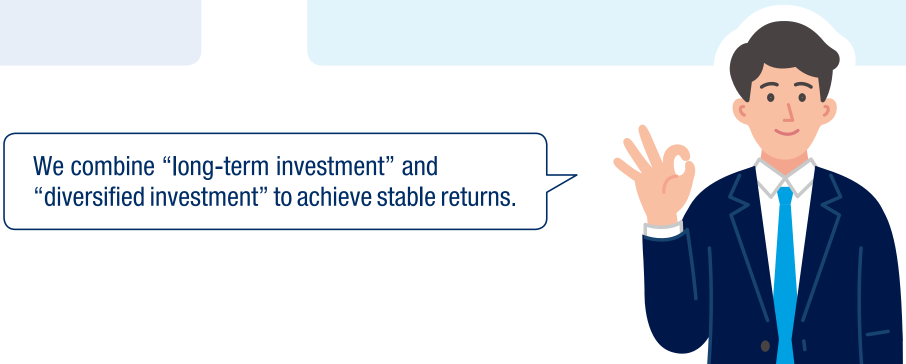


(Note) For details of Scenario I through Scenario V, refer to page 33.

2 GPIF carries out diversified investment.

The amount of pension reserves managed by GPIF is huge, being about ¥200 trillion. In the asset management industry, there is a saying “Don’t put all your eggs into one basket.” GPIF aims to achieve stable investment returns by diversifying our investments in multiple types of assets in Japan and overseas, that have different characteristics and price movements.





POINT 2

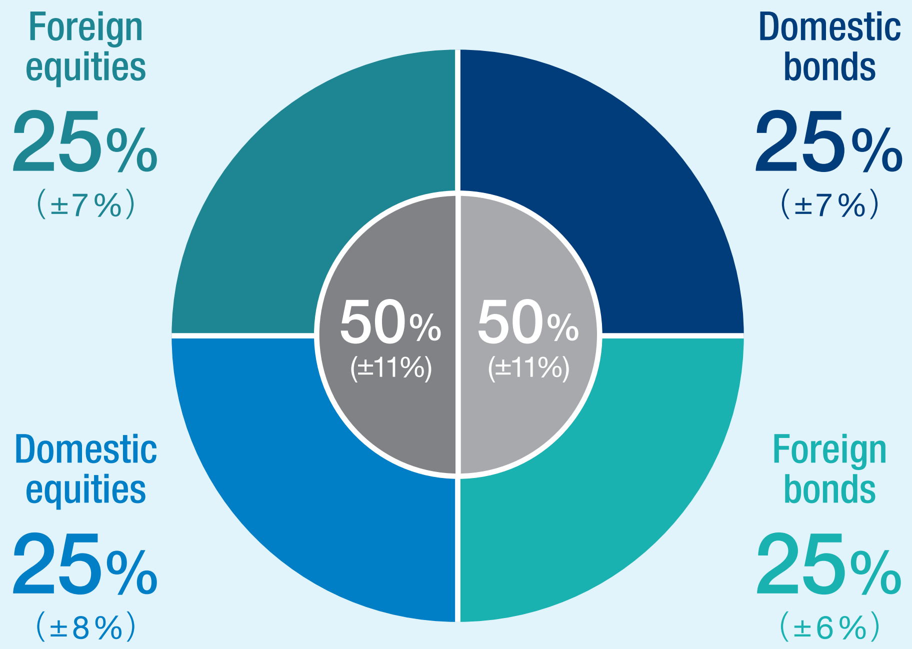
GPIF makes investments based on the policy asset mix (the principle asset allocation policy)

It is commonly known that, in a long-term investment, maintaining portfolio (a policy asset mix) over the long term yields a better result effectively, rather than changing the portfolio in response to short-term market fluctuations.

At GPIF, pension reserves shall be managed in line with the principle asset allocation policy (the policy asset mix) from a long-term perspective.

Current policy asset mix

(Since April 2020)



(Note) figures in parentheses indicate deviation limits.

However, when it comes to actual investment management, because of the constant market fluctuation, it is essential to establish a framework that enables timely and flexible allocation adjustments within reasonably appropriate ranges, while principally following the policy asset mix.

Therefore, GPIF defines the ranges of allowable deviations from the policy asset mix (deviation limits).

Since long-term investment results shall be mostly attributable to a policy asset mix, we believe that the policy asset mix is the core of our pension reserve fund management and investment. When the asset allocation ratios of actual investments deviate from those of the policy asset mix, GPIF timely and flexibly executes rebalances in order to assure that the actual allocations are within the deviation limits.

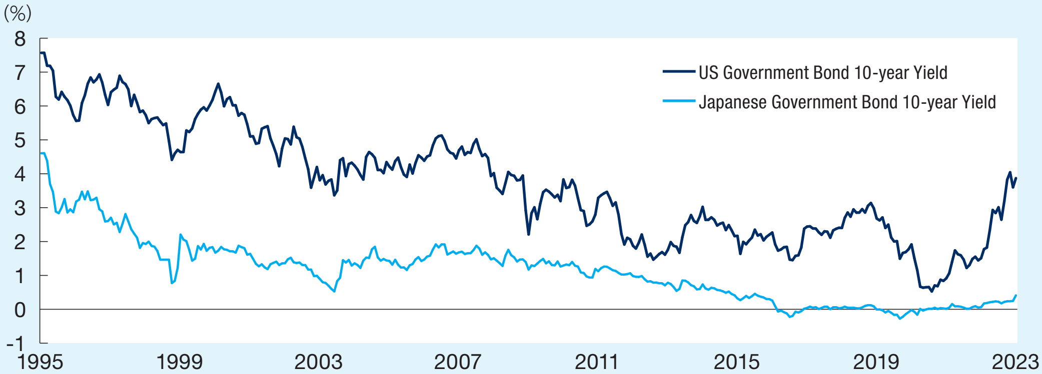
POINT
3

GPIF allocates its investments appropriately, not only to bonds but also to equities

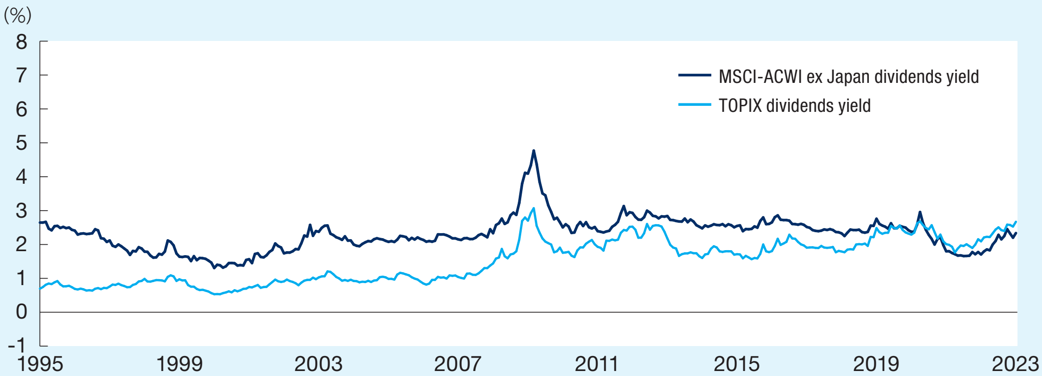
In recent years, the interest rate of 10-year Japanese government bonds has been around 0%. Under the condition that the consumer price and wages are expected to rise with the changing economic and investment environment over the long term, it is difficult to secure the investment returns required for pension finance by investing mainlyin domestic bonds.

Equities are exposed to greater price fluctuation risks than bonds in the short term, but could yield a higher return from a longer perspective. At GPIF, we appropriately incorporate equities in our portfolio, so that we aim to secure the investment returns required for pension finance with minimal risks by reaping the fruits of domestic and foreign corporations' activities and the resulting economic growths in the form of "dividends" and "capital gains."

10-years yields, U.S. & Japan



Dividends yields, Japan & Global



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Would future withdrawals from the pension reserves (which leads to dispositions of its equity holdings in the portfolio) negatively affect stock prices, given the vast amount of GPIF's equity holdings?

The pension reserves managed by GPIF are projected not to be withdrawn for the next 50 years or so. (However, part of the investment gains may be used for the payments of pension benefits).

Even after the withdrawals start in the future, the pension reserves shall be withdrawn gradually over several decades, rather than at one time. GPIF shall pay adequately attention to minimize the potential market impacts of these dispositions associated with the withdrawals, while carefully assessing global market trends.

POINT 4

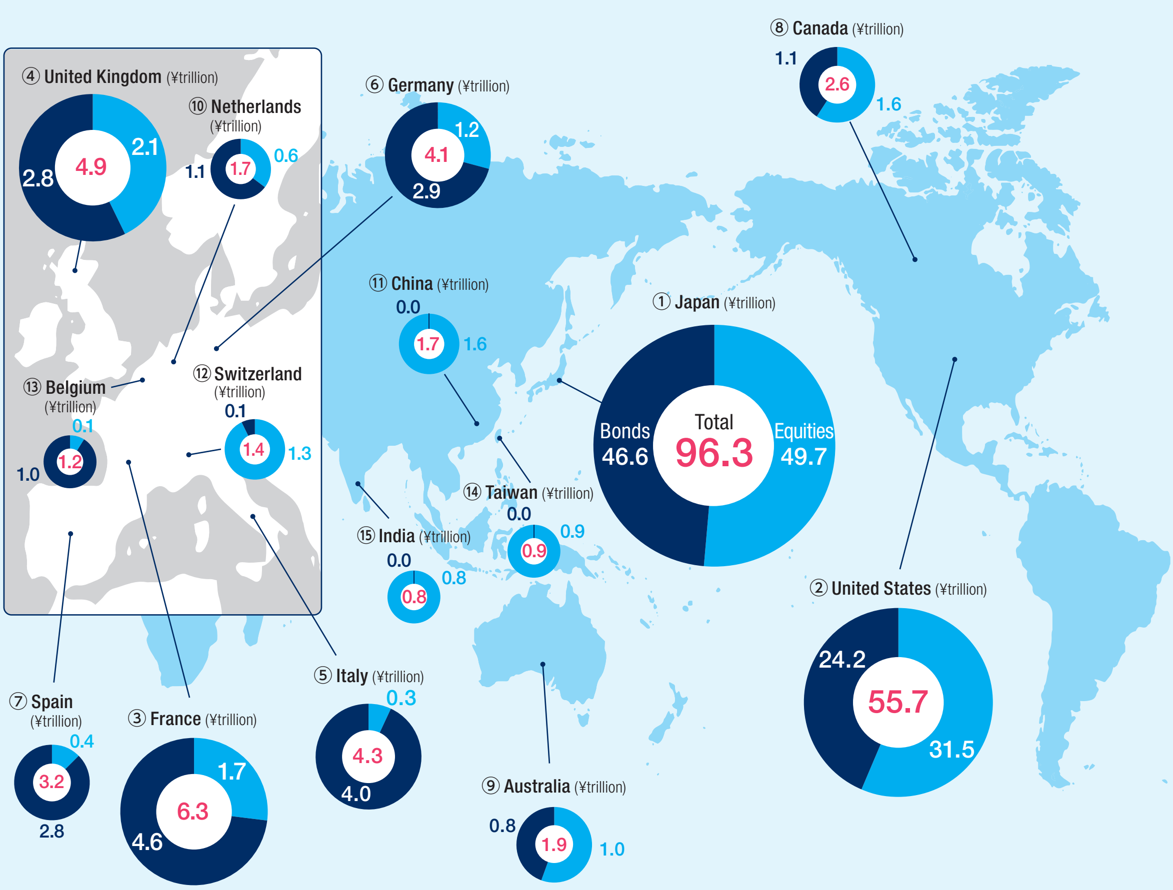
GPIF invests in various types of assets not only in Japan but also in foreign countries.

For instance, a temporary fall in asset prices due to market fluctuations could be offset by a subsequent rebound, leaving the value of a portfolio unaffected in the long run. However, in some cases, a downward trend of asset prices could continue longer than initially assumed. In other cases, on the contrary, if the portfolio does not hold a specific asset whose price is on the rise, the portfolio would miss an opportunity of taking profit.

By investing in various types of assets not only in Japan but also in foreign countries, GPIF has conducted its investment with an aim to increase opportunities for profits generated from global economic activities, and simultaneously to mitigate the risk of material losses by controlling fluctuations in the overall value of assets under management thanks to the diversification.

Investment amount by country / region

Top 15 countries/regions by amount invested as of the end of March 2023 are as follows.



(Note 1) Equities are compiled mainly based on the company's country of incorporation and the primary listing of its securities (Country Classification for MSCI indexes), while bonds are compiled mainly based on the country where the issuer or the parent company of the issuer is headquartered (Country Classification for Bloomberg indexes).
(Note 2) Cash and other assets temporarily remaining in the fund are excluded.
(Note 3) Investment amount includes alternative assets. Infrastructure and PE investments are classified into "countries where the portfolio company mainly operates," and real estate investments are classified into "countries where the portfolio property is registered."
(Note 4) Due to rounding off, the sum of each item does not necessarily match the total number.

POINT 5

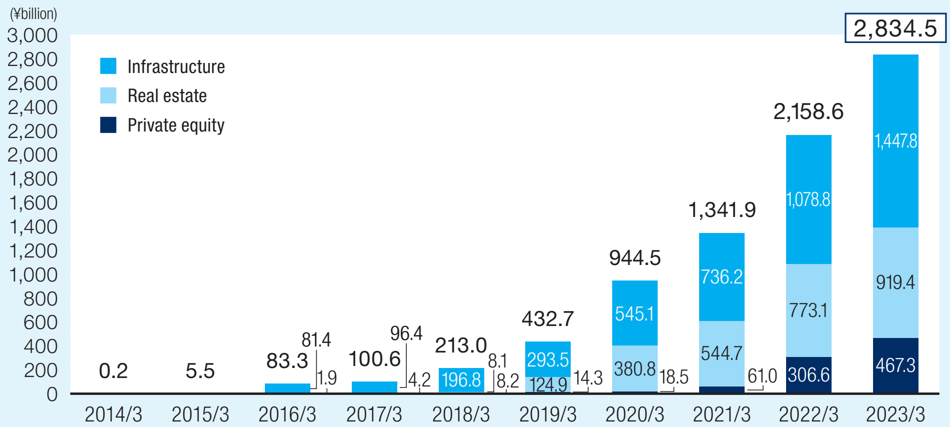
In addition to equities and bonds, GPIF also invests in alternative assets.

Alternative assets are the generic term for investment assets that are "alternatives" to traditional investment assets including listed equities and bonds. Among a variety of alternative assets, GPIF invests in infrastructure (investments in infrastructure projects, such as renewable energy), private equity (investments in equities of private companies), and real estate (investments in real estate such as logistics).

Since alternative assets have different risk-return profiles from equities and bonds, holding them alongside these traditional assets can be expected to reduce the volatility of the overall returns on assets. While they have lower liquidity in terms of buying and selling, they produce higher investment returns for this reason.

Overseas pension funds have been promoting diversification by investing in alternative assets for the aforementioned characteristics and effects. As a super-long-term investor, GPIF aims to improve investment efficiency by holding equities and bonds that can be bought and sold quickly, while steadily accumulating high-quality alternative assets with due attention to the market environment and investment risks.

Total value of alternative assets up until fiscal 2022



POINT 6

GPIF is undertaking stewardship activities and ESG investment.

From the perspective of increasing long-term investment returns, GPIF pursues activities to fulfill our stewardship responsibilities and promotes ESG initiatives.

In accordance with laws and regulations, GPIF's ESG investments are not aimed at contributing to the solution of social problems, but are promoted based on the concept of ensuring the economic benefits of pension recipients from a long-term perspective by reducing the negative impact of environmental and social problems on capital markets.

Stewardship responsibility refers to the responsibility of institutional investors to seek to increase long-term investment returns by adopting a long-term orientation and looking for sustainable growth among the companies in their portfolios and markets on the whole. GPIF has been fully engaged in stewardship activities since adopting Japan's Stewardship Code in May 2014.

Since GPIF does not directly hold stocks but invests through external asset managers, as part of its stewardship activities, GPIF has established the Stewardship Principles and the Proxy Voting Principles, which require external asset managers to engage in "constructive dialogue" (engagement) with portfolio companies, in consideration of ESG factors that contributes to sustainable growth.

ESG is an acronym for Environmental, Social, and Governance.

ESG investment incorporates environmental, social, and corporate governance perspectives into investment decisions with the expectation of improving long-term returns.

GPIF, both as a "universal owner" (broadly diversified investor in capital markets worldwide) and a "cross-generational investor" (a super-long-term investor), must ensure the sustainable and stable growth of capital markets as a whole to earn stable returns over the long term. Based on this idea, GPIF promotes ESG investment.

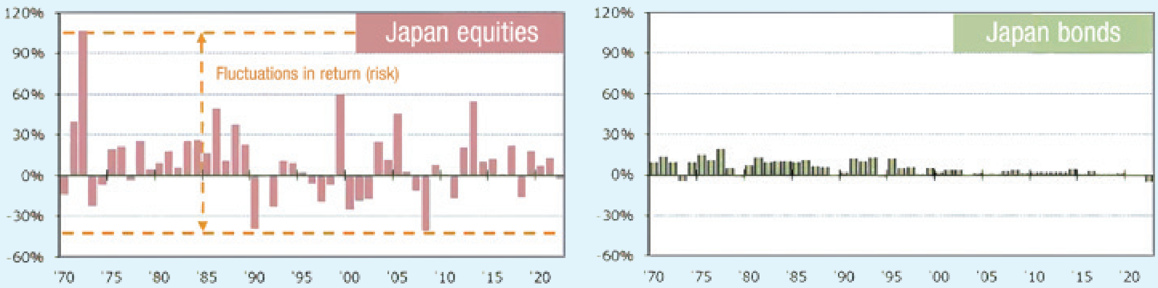
POINT 7

Risks are controlled appropriately to ensure a long-term profitability.

The word “risk” is used in the sense of “danger” or “possibility that an unfavorable situation will happen.” However, in the field of investment management, the word “risk” generally means “fluctuations in return,” or the “range of change in return.”

Future return on equities and bonds is not fixed and certain. The following diagrams show fluctuations in the return of both assets, suggesting that the greater the fluctuation, the higher the risk.

Annual return on Japan Equities and Japan Bonds from 1970 to 2022



* The average fee rates against externally managed assets (annual rates) for each asset class are assumed to have been charged throughout the entire simulation period.
Japan Equities: 0.01%, Japan Bonds: 0.01%
* No transaction costs in rebalancing nor taxes are assumed.

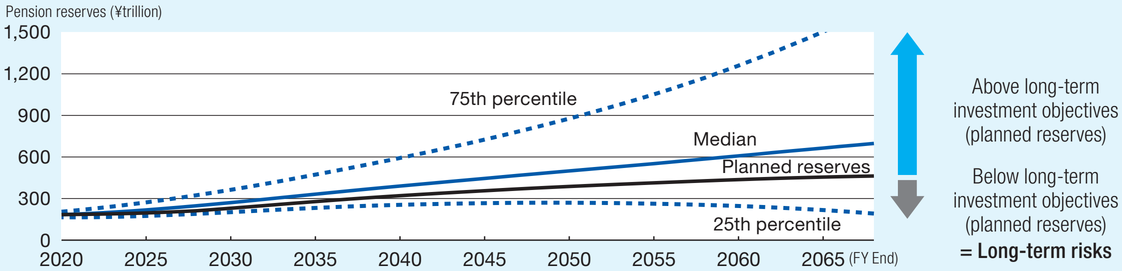
Assumes reinvestments of interest income and dividend.
* Past performance is no guarantee of future results.
<Source> Japan Equities: Tokyo Stock Exchange 1st section weighted average return of market capitalization, Japan Bonds: Nomura-BPI Overall.

It is legally prescribed that the pension reserve shall be managed safely and efficiently from a long-term perspective. The Medium-term Objectives prescribed by the Minister of Health Labour and Welfare (“MHLW”) stipulate that a pension reserve fund must achieve a long-term real return (net investment yield on the pension reserve fund less the nominal wage growth rate) of 1.7% with minimal risks.

A risk emphasized by GPIF is not “short-term fluctuations in returns due to temporary market fluctuations.” but “a risk of failing to achieve a long-term investment return required for the pension finance.” In order to manage pension reserve fund safely and efficiently from a long-term perspective, GPIF is conducting its investment with an aim to mitigate the risk of failing to achieve the long-term investment return, by professionally analyzing various indicators, while taking into consideration short-term fluctuations in returns due to temporary market fluctuations.

(Note) Out of the six long-term real investment yield assumptions stipulated in the 2019 fiscal verification, the largest value of 1.7% has been set as the long-term investment target.

Comparison with planned reserves (long-term risk)



Overview of Fiscal 2022

Investment Results

For details, refer to pages 23·24.

Rate of return
(Returns)

	Fiscal 2022	Since Fiscal 2001
Rate of return [annual rate]	+1.50%	+3.59%
Returns	(+¥2,953.6 billion) [annual returns]	(+¥108,382.4 billion) [Cumulative returns]

Asset size

As of the end of fiscal 2022

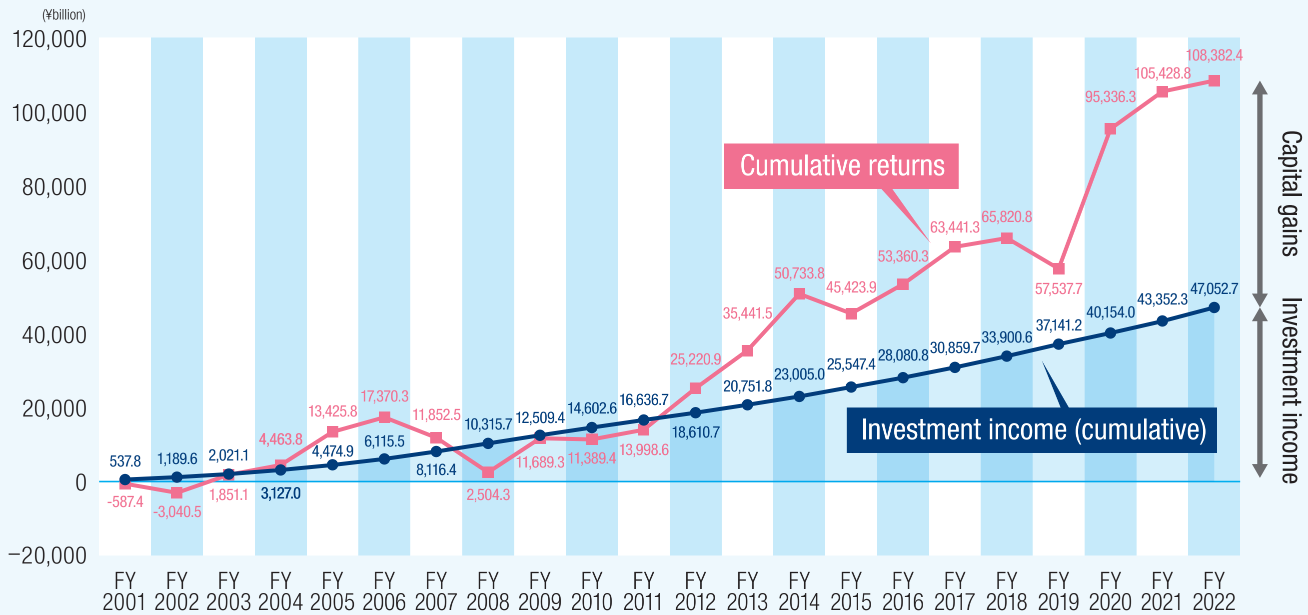
¥200,132.8 billion

(Note) Rate of return and returns are marked to market as of the end of fiscal 2022, and include unrealized gains and losses.

GPIF manages pension reserve fund with a long-term perspective. While short-term portfolio returns are influenced by the current market trends, investment results should be monitored with a long-term horizon.

Regarding investment of pension reserves, while market fluctuations may cause capital losses (realized and unrealized losses due to price fluctuations) in the short term, investment income (interest and dividend income) is relatively immune to such volatility and has been generated steadily since fiscal 2001.

Cumulative returns since fiscal 2001



Contribution to Public Pension Finance

For details, refer to pages 25.

Real return on investment for the whole pension reserves

(cumulative)

3.59%

[annual rate]

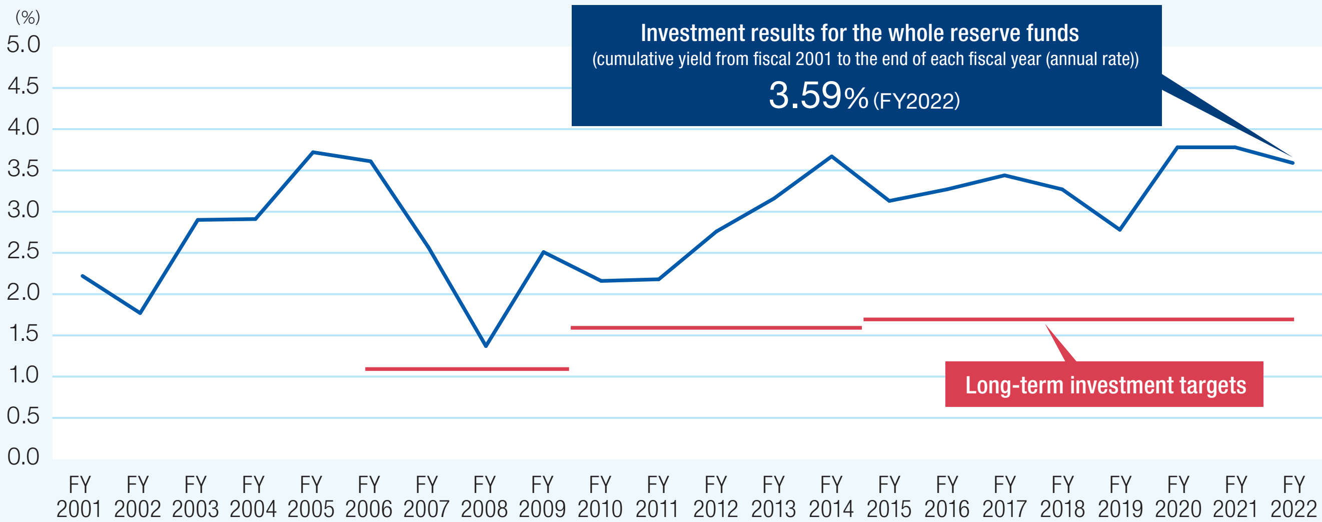
Under the Medium-term Objectives established by the Minister of Health, Labour and Welfare (MHLW), the investment target for the whole pension reserves(Note1) is to secure a long-term real return (net investment yield on the pension reserve fund less the nominal wage growth rate) of 1.7% with minimal risks. (Please note that this investment target is on a long-term basis, so not required to be achieved each year in the period.)

(Note 1) The whole pension reserves include pension reserve fund managed by GPIF and fund managed by the Pension Special Account.

(Note 2) The amount of public pension benefits is designed to increase roughly in tandem with the nominal wage growth rate in the long run. Therefore, investment return for the whole pension reserves that exceeds the contribution from the nominal wage growth rate is the real investment return in the sense that it contributes positively to pension finance. Accordingly, an evaluation of the impact of investment results on pension finance shall be carried out on the basis of "the actual rate of investment return," which is the rate of investment return (nominal investment return) for the whole pension reserves minus the nominal wage growth rate.

For the roles of pension reserve fund in pension finance, refer to pages 79-80.

Real return for the whole pension reserves on investment (cumulative) since fiscal 2001



(Note 1) Real investment return is calculated as {(1 + nominal investment return / 100) / (1 + nominal wage growth rate / 100)} × 100 - 100.

(Note 2) Nominal investment return, as stated in (Note 1), is the rate of return after deducting investment management fees, etc. (the figures include interest expenses on borrowings in the succeeded fund investment account up to fiscal 2010), calculated by the following formula: the amount of return for the whole pension reserves divided by the average balance of investment principals for the whole pension reserves "{Assets at the end of the previous fiscal year + (Assets minus return at the end of the current fiscal year)}/2."

(Note 3) Long-term investment targets are +1.1% from fiscal 2006 to fiscal 2009, +1.6% from fiscal 2010 to fiscal 2014, and +1.7% after fiscal 2015, above the nominal wage growth rate, respectively.

(Note 4) Figures represent the geometric mean of cumulative yield from fiscal 2001 to the end of each fiscal year (annualized).

Review of Fiscal 2022 Investment Activities

In fiscal 2022, unlike fiscal 2020 and 2021, market volatility remained high throughout the year, making it difficult to determine the direction of the market. In this sense, it was a year of challenges that the robustness of the management system for the public pension reserves of Japan based on the policy asset mix, and the risk management capabilities of GPIF were both tested. In such a market environment, we were able to secure a return of +1.5% (approximately ¥3 trillion) this fiscal year, equivalent to the policy asset mix return (Composite Benchmark Return). We regard this as a significant milestone.

Amid acceleration of market volatility, our rate of investment return remained negative for three consecutive quarters, at -3.71% over the first to third quarters of fiscal 2022. Including the fourth quarter of fiscal 2021, we recorded a negative rate of investment return for four consecutive quarters (-4.78%) in 2022 calendar year, for the first time since the establishment of the GPIF.

These negative numbers may be concerning. However, looking back investment management throughout fiscal 2022, we believe that the diversification effect of the GPIF policy asset mix worked well, and the robustness of the policy asset mix was proven both in a short and long-term perspective.

In a short-term perspective, leading public asset owners around the world also show negative returns this 2022 calendar year. Although a direct comparison is quite difficult because the target rates of investment return and portfolios of each asset owner are different, and there are differences in interest rates, foreign exchange rates, and stock market conditions in each country, it can be inferred that the overall negative impact was mitigated, partly because the performance of Japanese equities, which comprise a large proportion of the policy asset mix of GPIF, was relatively good, and the impact of declines in overseas assets was softened by the depreciation of the yen. [Table 1]

In a long-term perspective, looking at the rate of investment return since October 2014, when the portfolio allocation of the GPIF policy asset mix was changed to 50% for equities, our excess return over the 10 year Japanese government bonds (as of October 2014) is approximately 4%. This excess return is comparable to CalPERS in the U.S., whose asset allocation ratio toward stocks and real assets exceeds 70%. This analysis indicates that GPIF's current policy asset mix, consisting of 50% foreign assets, is well designed as a long-term diversified investment portfolio, assessing the return/risk profile of each asset, including foreign exchange risk. [Table 2]

GPIF has been conducting long-term diversified investment based on the policy asset mix, in order to secure levels of yield required for pension finance with minimal risk. Over the past 22 years, GPIF has generated more than 100 trillion yen in cumulative returns, and it is a stable portfolio that has never experienced negative cumulative returns over any consecutive 7-year period, and our portfolio achieved a positive return (+1.5%) fiscal 2022.

However, there is a risk that returns turn negative approximately once every three years, as in the case of 2022

Table 1 Rates of investment return of the world's leading public asset owners
(2022 calendar year, in local currency denominated)

GPIF	-4.78%
GPFG, the Kingdom of Norway *Based on "Annual report 2022"	-7.93%
CalPERS, the United States of America *Based on CalPERS Investment Committee (March 13, 2023) Materials	-11.2%
NPS, the Republic of Korea *Based on NPS Press Release (March 2, 2023)	-8.28%

Table 2 Rate of investment return since October 2014, when the policy asset mix of GPIF was changed

	Policy asset mix as of October 2014			A.Return (From October 1, 2014 to December 31, 2022)	B. Long-term risk-free rate as of October 1, 2014 (10-year government bond yield as of October 1, 2014)	Excess return from risk-free rate (A-B)
	Equities	Bonds	Real assets (Alternative assets)			
GPIF	50.0%	50.0%	0.0%	4.43%	0.53%	3.90%
CalPERS	64.0%	25.0%	11.0%	5.91%	2.42%	3.49%

(Note 1) All returns are annualized. (Note 2) For CalPERS, the current year target as of June 2014 is shown.
(Note 3) CalPERS returns from October 1, 2014, to December 31, 2022, are calculated by GPIF based on materials from CalPERS Investment Committee, etc.

Table 3 **Returns during the 4th Medium-term Objectives period** (from FY2020)

Medium-term Objectives periods	Fiscal year	Returns (billion) <annual>	Returns (billion) <cumulative for the Medium-term Objectives period>	Excess rates of return over the compound benchmark <annual>	Excess rates of return over the compound benchmark <cumulative for the Medium-term Objectives period>
	FY2020	37,798.6		0.32%	
4th	FY2021	10,092.5	50,844.7	-0.06%	0.18%
	FY2022	2,953.6		-0.06%	
(Reference) 3rd	FY2015-2019	—	6,803.9	—	-1.42%

calendar year. In other words, while long-term diversified investment can stabilize returns, there is a possibility of negative returns in the short term, and we would highly appreciate if this characteristic is fully understood.

Regarding initiatives for sophisticating investment management, I introduced several risk reduction measures for the policy asset mix (detail is described in the fiscal 2021 report). Considering the market instability in the fourth quarter of fiscal 2022, we believe that these measures were quite appropriate.

There is no other asset owner in the world that manages assets on the scale of ¥200 trillion. The size of our portfolio makes it quite challenging to secure the level of the policy asset mix return (Composite Benchmark Return), our target return which our 4th Medium-term Objectives newly designates. Over the past three years, we have strengthened our risk management system and upgraded our asset management, and we have established systems to achieve the Composite Benchmark Return. [Table 3]

We have passed the halfway in our 4th Medium-term Objectives period, leaving only two more years. As mentioned, we have established systems that enable us to achieve the level of the policy asset mix return. Therefore, we will further strive to improve the risk-return profile of our portfolio in the remaining two years and will focus on how much we can improve the rate of investment return without highly increasing risk which is a deviation from the policy asset mix. It is indeed impossible to exceed the policy asset mix return by 1% or 2% without increasing risk, however, even an increase of 0.1% excess returns would amount to approximately ¥200 billion, based on the asset size of GPIF. Accordingly, efforts to achieve excess returns are very important.

While GPIF faces difficulties related to our portfolio management due to the scale of our assets, we have a distinctive advantage in terms of our ability to acquire diverse data that can be utilized in the market. In our previous fiscal year's report, we reported that we were going to select active funds in the North American stock market. We actually selected 19 funds out of many candidates and entrusted them with the management of approximately ¥2 trillion in total. At the same time, in order to adjust the style risk of the portfolio constructed by these selected funds, we adopted several new indexes and invested approximately ¥1 trillion as a passive fund. In the process of selecting active funds, we obtained data from each manager and also used extensive simulations to calculate the returns of alternate scenarios that these managers did not choose. Based on this information and analysis, we performed quantitative assessments of these managers' investment capabilities. In the future, we will extend the same approach to active equity funds in other regions and other asset class, and our ability to acquire data and our analytical capabilities will lead to improving the risk-return profile of our portfolio.

In fiscal 2022, we also developed a platform to generate returns from the data science mentioned above. We appointed a senior IT advisor to rebuild our IT systems to be cutting-edge among global investment peers, and changed the rules on remuneration to attract highly skilled talent. We will continue to diversify and sophisticate our asset management, promote ESG investments, and strengthen our organizational human resources and system infrastructure, as well as our portfolio risk management technologies, so that we would achieve the targets set forth in our Medium-term Objectives, by making long-term diversified investment under a consistent policy, and thus secure stable returns over the long term. We would like to sincerely ask the pension beneficiaries and the Japanese public at large for their understanding and support.

Executive Managing Director
(Management and
Investment Operations) / CIO

UEDA Eiji

Chapter 1 Investment Results in Fiscal 2022

1 | Investment Results

[1] Rate of investment return / Amount of investment returns, etc.

① Rate of investment return / Amount of investment returns

The rate of investment return for fiscal 2022 is **+1.50%.**

The amount of investment returns for fiscal 2022 is **+¥2,953.6 billion.**

		1Q	2Q	3Q	4Q	Total
Total		-1.91%	-0.88%	-0.97%	5.41%	1.50%
		-¥3,750.1 billion	-¥1,722.0 billion	-¥1,853.0 billion	¥10,278.8 billion	¥2,953.6 billion
	Domestic bonds	-1.31%	-0.79%	-1.73%	2.12%	-1.74%
		-¥638.2 billion	-¥398.2 billion	-¥847.5 billion	¥1,032.3 billion	-¥851.7 billion
	Foreign bonds	2.71%	-1.54%	-5.33%	4.33%	-0.12%
		¥1,315.0 billion	-¥764.4 billion	-¥2,665.1 billion	¥2,058.2 billion	-¥56.2 billion
	Domestic equities	-3.68%	-0.84%	3.24%	7.03%	5.54%
		-¥1,812.0 billion	-¥367.9 billion	¥1,567.0 billion	¥3,341.7 billion	¥2,728.8 billion
	Foreign equities	-5.36%	-0.49%	-0.05%	8.19%	1.84%
		-¥2,614.9 billion	-¥191.6 billion	¥92.6 billion	¥3,846.6 billion	¥1,132.7 billion

(Note 1) GPIF manages and invests its assets at the market value. The rate of return within total assets and each asset class is time-weighted, and is gross of fees (the same shall apply hereinafter).

(Note 2) Investment returns are gross of fees (the same shall apply hereinafter).

(Note 3) JPY hedged foreign bonds and yen-denominated short-term assets are classified as Domestic bonds, and foreign currency-denominated short-term assets are classified as Foreign bonds.

(Note 4) Alternative asset funds contain a mixture of asset classes, and the investment returns of such funds are allocated to each asset on a pro-rata basis according to the targeted asset composition ratio in the investment plan at the start of investment of such funds (the same shall apply hereinafter).

(Note 5) The rate of time-weighted investment return on total alternative assets for fiscal 2022 is 9.45% (infrastructure at 8.84%, private equity at 14.13%, and real estate at 8.32%).

(Note 6) Due to rounding off, the sum of each item in individual quarters does not necessarily match the total number for the fiscal year.

(Note 7) Fiscal 2022 runs from April 1, 2022 to March 31, 2023.

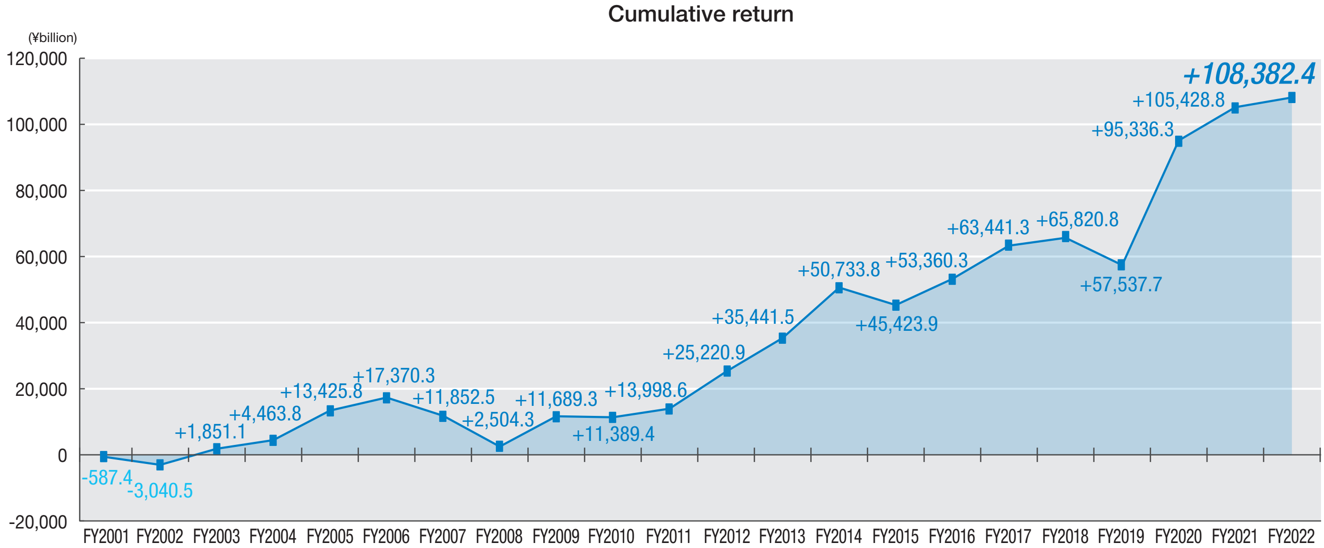
② Cumulative returns and asset size since fiscal 2001

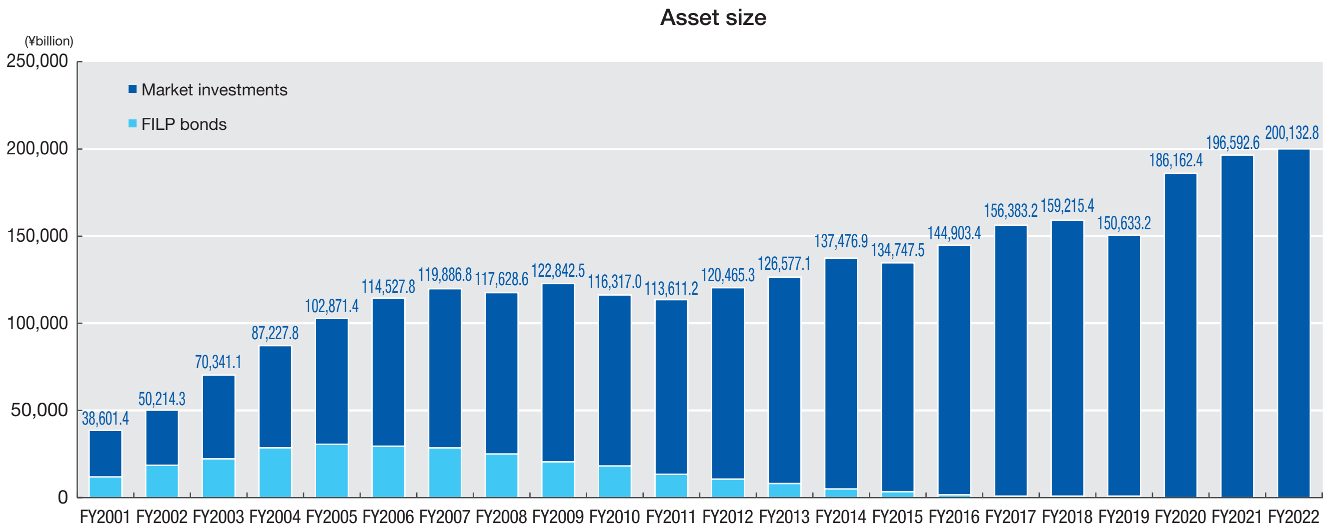
Cumulative returns from fiscal 2001 to fiscal 2022 are

+¥108,382.4 billion

and the value of investment assets at the end of fiscal 2022 is

¥200,132.8 billion.





(Note) Investments using FILP bonds were terminated during fiscal 2020.

③ Comparison to long-term investment targets

"The average real investment return (Note2)" for the whole pension reserves (Note1) is

3.59%

for the 22 years since fiscal 2001.

Long-term investment target after fiscal 2015 is

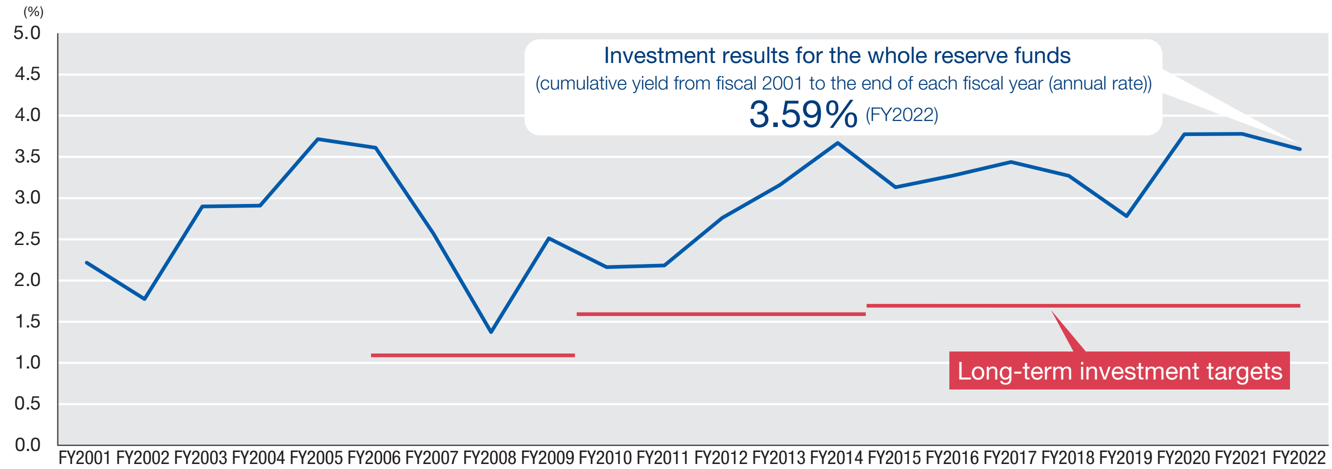
+1.7%

above the nominal wage growth rate.

The average real investment return is higher than the long-term investment targets.
For the roles of pension reserve fund in pension finance, refer to pages 79·80.

(Note 1) The whole pension reserves include pension reserve fund managed by GPIF and fund managed by the Pension Special Account.
(Note 2) The amount of public pension benefits is designed to increase roughly in tandem with the nominal wage growth rate in the long run. Therefore, investment return for the whole pension reserves that exceeds the contribution from the nominal wage growth rate is the real investment return in the sense that it contributes positively to pension finance. The long-term investment objective is +1.1% from fiscal 2006 to fiscal 2009, +1.6% from fiscal 2010 to fiscal 2014, and +1.7% after fiscal 2015, above the nominal wage growth rate, respectively. Note that these are required as long-term investment targets, and are not necessarily required to be fulfilled on an annual or during a specified time period (such as five years for the Medium-term Plan).

Real return for the whole pension reserves on investment (cumulative) since fiscal 2001



Investment performance for the whole pension reserves

(Unit:%)

		FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	Last 22 years (annualized)
Performance	Nominal investment return	1.94	0.17	4.90	2.73	6.83	3.10	–3.53	–6.86	7.54	–0.26	2.17	9.56	8.23	11.62	–3.64	5.48	6.52	1.43	–5.00	23.98	5.17	1.42	3.60
	Nominal wage growth rate	–0.27	–1.15	–0.27	–0.20	–0.17	0.01	–0.07	–0.26	–4.06	0.68	–0.21	0.21	0.13	0.99	0.50	0.03	0.41	0.95	0.70	–0.51	1.26	1.67	0.01
	Real investment return	2.22	1.34	5.18	2.94	7.01	3.09	–3.46	–6.62	12.09	–0.93	2.39	9.33	8.09	10.53	–4.12	5.45	6.09	0.48	–5.66	24.62	3.86	–0.25	3.59

(Note 1) Real investment return is calculated as {(1 + nominal investment return / 100) / (1 + nominal wage growth rate / 100)} × 100 - 100.
(Note 2) Nominal investment return is the rate of return after investment management fees, etc. (the figures include interest expenses on borrowings in the succeeded fund investment account up to fiscal 2010), calculated by the following formula: the amount of return for the whole pension reserves divided by the average balance of investment principals for the whole pension reserves "{Assets at the end of the previous fiscal year + (Assets minus return at the end of the current fiscal year)}/2."
(Note 3) Long-term investment targets are +1.1% from fiscal 2006 to fiscal 2009, +1.6% from fiscal 2010 to fiscal 2014, and +1.7% after fiscal 2015, above the nominal wage growth rate, respectively.
(Note 4) Long-term investment targets are the geometric means of cumulative yield from fiscal 2001 to the end of each fiscal year (annualized).

④ Investment income

Returns on investment assets are valued at market prices and can be classified into investment income (interest and dividend income) and capital gains and losses (realized and unrealized gains or losses due to price fluctuations).

The breakdown of investment income shows that investment income from domestic and foreign equities has been increasing while that from domestic bonds has been decreasing in recent years. This is due to the fact in recent years that (i) the bond yields have fallen significantly, well below the equity dividend yields; and (ii) GPIF has lowered the allocation of bonds and raised the allocation of equities in the policy asset mix since fiscal 2014.

Because long-term investors are allowed to enjoy greater compounding effects over time by reinvesting investment income, GPIF reinvests investment income from the assets held, instead of holding them in cash.

In fiscal 2022, the total amount of investment income is

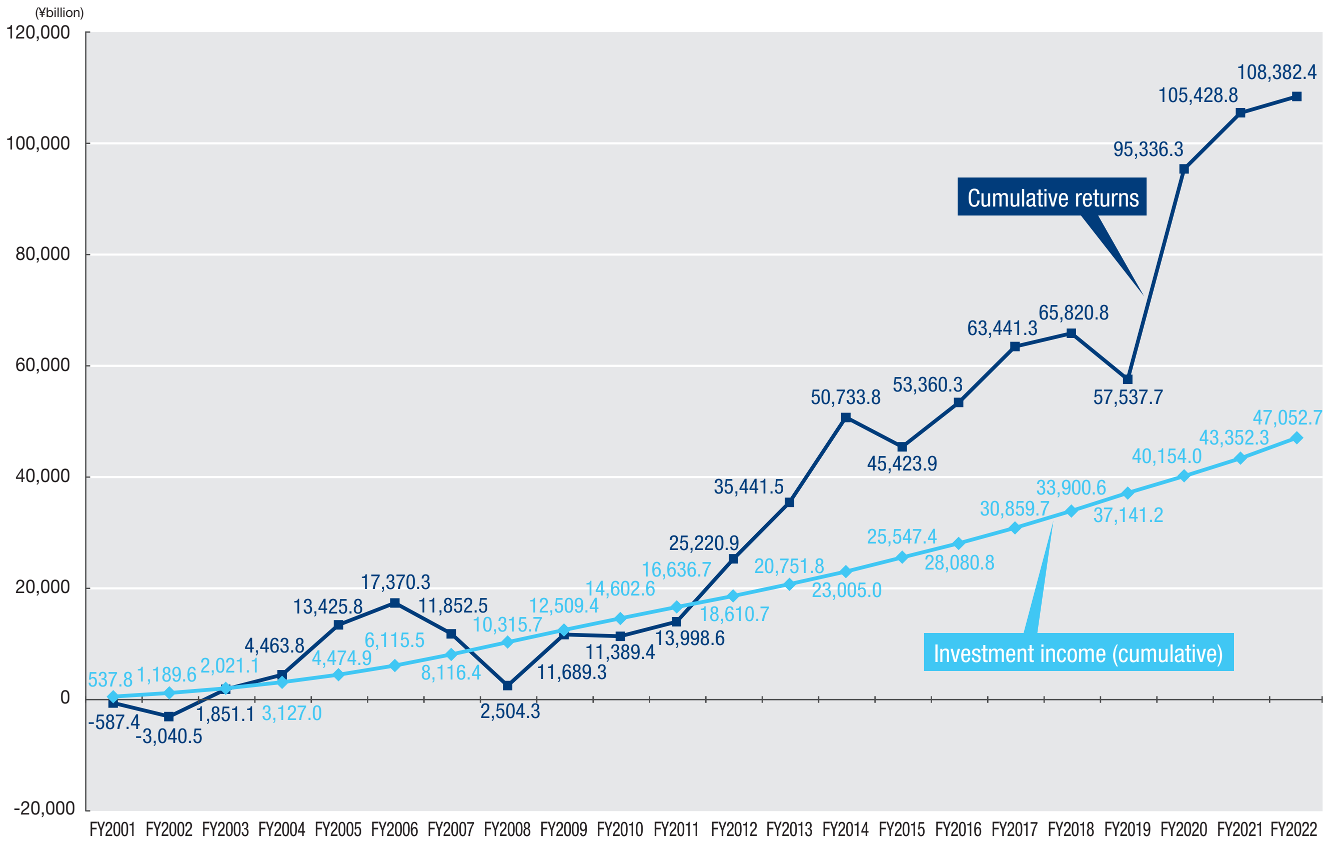
¥3,700.3 billion (rate of return: +1.85%),

and the cumulative amount of investment income for the 22 years since fiscal 2001, when GPIF started managing pension reserves, is

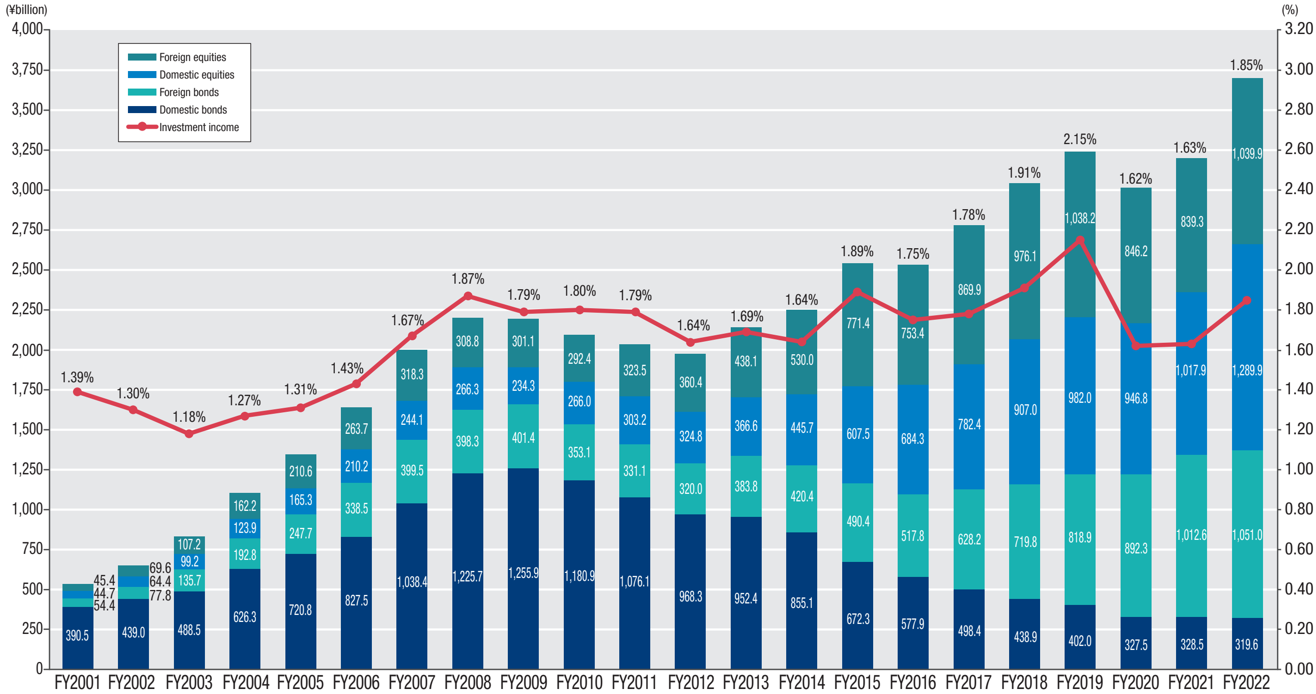
¥47,052.7 billion (rate of return: +1.65% [annual rate])

accounting more than 40% of the cumulative returns.

Cumulative returns and investment income since fiscal 2001



Investment income



(Unit: ¥billion)

	Cumulative	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
Domestic bonds	15,610.5 (1.19%)	390.5 (1.49%)	439.0 (1.26%)	488.5 (1.03%)	626.3 (1.03%)	720.8 (1.10%)	827.5 (1.12%)	1,038.4 (1.21%)	1,225.7 (1.41%)	1,255.9 (1.51%)	1,180.9 (1.52%)	1,076.1 (1.50%)
Foreign bonds	10,185.5 (3.02%)	54.4 (4.04%)	77.8 (3.06%)	135.7 (3.43%)	192.8 (3.33%)	247.7 (3.28%)	338.5 (3.73%)	399.5 (4.13%)	398.3 (3.98%)	401.4 (3.96%)	353.1 (3.75%)	331.1 (3.33%)
Domestic equities	10,376.6 (1.72%)	44.7 (0.65%)	64.4 (0.87%)	99.2 (0.83%)	123.9 (1.00%)	165.3 (0.87%)	210.2 (1.10%)	244.1 (1.77%)	266.3 (2.34%)	234.3 (1.59%)	266.0 (1.98%)	303.2 (2.14%)
Foreign equities	10,865.5 (2.17%)	45.4 (1.19%)	69.6 (1.56%)	107.2 (1.81%)	162.2 (1.99%)	210.6 (1.96%)	263.7 (2.09%)	318.3 (2.92%)	308.8 (3.40%)	301.1 (2.27%)	292.4 (2.23%)	323.5 (2.48%)
Total	47,052.7 (1.65%)	537.8 (1.39%)	651.8 (1.30%)	831.4 (1.18%)	1,106.0 (1.27%)	1,347.9 (1.31%)	1,640.7 (1.43%)	2,000.8 (1.67%)	2,199.4 (1.87%)	2,193.7 (1.79%)	2,093.2 (1.80%)	2,034.1 (1.79%)

	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Domestic bonds	968.3 (1.30%)	952.4 (1.36%)	855.1 (1.51%)	672.3 (1.27%)	577.9 (1.21%)	498.4 (1.12%)	438.9 (1.02%)	402.0 (1.08%)	327.5 (0.75%)	328.5 (0.69%)	319.6 (0.64%)
Foreign bonds	320.0 (2.71%)	383.8 (2.74%)	420.4 (2.31%)	490.4 (2.59%)	517.8 (2.63%)	628.2 (2.63%)	719.8 (2.59%)	818.9 (2.25%)	892.3 (1.89%)	1,012.6 (2.08%)	1,051.0 (2.10%)
Domestic equities	324.8 (1.85%)	366.6 (1.76%)	445.7 (1.41%)	607.5 (1.99%)	684.3 (1.95%)	782.4 (1.92%)	907.0 (2.35%)	982.0 (2.76%)	946.8 (2.00%)	1,017.9 (2.06%)	1,289.9 (2.56%)
Foreign equities	360.4 (2.42%)	438.1 (2.22%)	530.0 (1.76%)	771.4 (2.48%)	753.4 (2.16%)	869.9 (2.25%)	976.1 (2.33%)	1,038.2 (2.79%)	846.2 (1.77%)	839.3 (1.65%)	1,039.9 (2.08%)
Total	1,973.9 (1.64%)	2,141.1 (1.69%)	2,253.2 (1.64%)	2,542.4 (1.89%)	2,533.4 (1.75%)	2,778.9 (1.78%)	3,040.9 (1.91%)	3,240.6 (2.15%)	3,012.8 (1.62%)	3,198.3 (1.63%)	3,700.3 (1.85%)

(Note 1) Due to rounding off, the sum of the figures for each individual fiscal year does not necessarily match the cumulative amount of investment income.

(Note 2) The amount of income earned on short-term assets (income gain) is included in the total by fiscal 2019; from fiscal 2020 onward, the yen-denominated portion is included in domestic bonds and the foreign currency-denominated portion in foreign bonds.

(Note 3) The amount of income earned on currency-hedged foreign bonds (income gain) is included in domestic bonds from fiscal 2020 onward.

(Note 4) The amount of income earned on FILP bonds (income gain) is included in domestic bonds by fiscal 2020, the year to which FILP bonds were held.

(Note 5) The amount of income earned on convertible bonds (income gain) is included in domestic bonds for fiscal 2001.

(Note 6) The rate of return for each fiscal year is calculated by dividing the amount of return (income gain) for each asset by the amount of that asset under management.

(Note 7) The annual rate of return (cumulative) represents the geometric mean of the rates of return for individual fiscal years (annualized).

⑤ Factor analysis of difference from compound benchmark return

In fiscal 2022, the total rate of return on all investment assets was **1.50%** while the compound benchmark return was **1.57%** The excess rate of return was **–0.06%**.

The average of the annual rate of return for the 17 years since the GPIF's establishment in fiscal 2006 on all investment assets was **3.81%** while the compound benchmark return was **3.84%** The excess rate of return was **–0.03%**.

The cumulative rate of return for the 3 years since the beginning of the 4th Medium-term Plan in fiscal 2020 on all investment assets was **33.91%**, while the compound benchmark return was **33.73%**. The excess rate of return was **+0.18%**.

The "compound benchmark return," representing the benchmark return rate for the overall assets (including domestic bonds, foreign bonds, domestic equities, and foreign equities), is used as a standard to evaluate the investment performance of the overall assets managed by GPIF. The "compound benchmark return" is expressed in terms of an annualized rate calculated on the basis of the "compound benchmark return (monthly basis)," which was obtained by weight-averaging the benchmark rates of return on individual assets according to the shares in the policy asset mix (domestic bonds: 25%; foreign bonds: 25%; domestic equities: 25%; foreign equities: 25%).

The 4th Medium-term Plan covering a five-year target period from fiscal 2020 to fiscal 2024 calls for securing the respective benchmark rates of return (average market rates of return) for all assets as well as for each asset.

Factor analysis of the difference from the compound benchmark return in fiscal 2022

(Unit: %)

	Rate of return			Factor analysis of excess rate of return				
	Return of GPIF ❶	Benchmark return ❷	Excess rate of return ❶−❷	Asset allocation factor ①	Benchmark factor ②	Fund factor ③	Other factors (including error) ④	①+②+③+④
Total	+1.50	+1.57	-0.06	-0.06	-0.11	+0.11	-0.00	-0.06
Domestic bonds	-1.74	-1.65	-0.09	-0.02	-0.05	+0.02	+0.00	-0.04
Foreign bonds	-0.12	-0.56	+0.44	-0.02	+0.03	+0.07	-0.00	+0.09
Domestic equities	+5.54	+5.81	-0.27	-0.01	-0.07	+0.01	-0.00	-0.08
Foreign equities	+1.84	+1.88	-0.05	-0.01	-0.02	+0.00	-0.00	-0.03

(Note 1) JPY hedged foreign bonds and yen-denominated short-term assets are classified as Domestic bonds, and foreign currency-denominated short-term assets are classified as Foreign bonds.

(Note 2) "Asset allocation factor" refers to a factor resulting from differences between the actual asset mix and the policy asset mix. "Benchmark factor" refers to a factor resulting from differences in rates of return between the policy benchmark and the manager benchmarks for each asset class. "Fund factor" refers to a factor resulting from differences in rates of return between individual funds and manager benchmarks. For the policy benchmark on each asset class, refer to page 36.

(Note 3) The contribution to the excess rate of return by the overall alternative investments is +0.07%. For details of investment in alternative assets, refer to pages 49-59.

(Note 4) While the rate of investment return of GPIF is after taxes on both interest payments on foreign bonds and dividends on foreign equities, the benchmark return is before taxes. Therefore, the excess rates of return are negatively affected by differences in taxes treatments in these two calculations.

Factor analysis of the difference from the compound benchmark return【FY2006-FY2022】

(Unit: %)

	Rate of return			Factor analysis of excess rate of return				
	Return of GPIF ❶	Benchmark return ❷	Excess rate of return ❶−❷	Asset allocation factor ①	Benchmark factor ②	Fund factor ③	Other factors (including error) ④	①+②+③+④
FY2006~FY2022	3.81	3.84	-0.03	-0.03	+0.01		-0.01	-0.03
FY2006	4.56	4.64	-0.08	-0.06	-0.00		-0.02	-0.08
FY2007	-6.10	-6.23	+0.13	+0.17	-0.02		-0.02	+0.13
FY2008	-7.57	-8.45	+0.88	+0.90	-0.12		+0.11	+0.88
FY2009	7.91	8.54	-0.63	-0.70	+0.08		-0.01	-0.63
FY2010	-0.25	-0.02	-0.23	-0.26	+0.12		-0.09	-0.23
FY2011	2.32	2.59	-0.27	-0.19	-0.01		-0.07	-0.27
FY2012	10.23	9.00	+1.24	+1.40	+0.03		-0.19	+1.24
FY2013	8.64	7.74	+0.90	+0.92	-0.06		+0.04	+0.90
FY2014 from Apr.1 to Oct.30	3.97	3.50	+0.46	+0.47	-0.03		+0.02	+0.46
FY2014 from Oct.31 to Mar.31, 2015	8.19	9.98	-1.78	-1.99	+0.01		+0.19	-1.78
FY2015	-3.81	-3.81	+0.00	+0.21	-0.15		-0.06	+0.00
FY2016	5.86	6.22	-0.37	-0.66	+0.33		-0.04	-0.37
FY2017	6.90	7.26	-0.37	-0.36	+0.00		-0.01	-0.37
FY2018	1.52	1.92	-0.40	-0.38	+0.02		-0.04	-0.40
FY2019	-5.20	-4.94	-0.25	-0.20	-0.05		-0.00	-0.25
FY2020	25.15	24.83	+0.32	+0.15	-0.17	+0.37	-0.03	+0.32
FY2021	5.42	5.47	-0.06	-0.05	+0.06	-0.07	-0.00	-0.06
FY2022	1.50	1.57	-0.06	-0.06	-0.11	+0.11	-0.00	-0.06

(Note 1) The annual rate of return of GPIF's investment and benchmark rate of return represent the geometric mean of the rates of return in individual fiscal years (an annualize rate).

(Note 2) From fiscal 2006 to fiscal 2007, an analysis was conducted on the difference between the rate of return (time-weighted rate of return) on the funds invested in the markets (hereinafter "market investment") and the compound benchmark return rate. From fiscal 2008 to fiscal 2019, an analysis has been conducted on the difference between the rate of return on overall invested assets (market investment and investments in Fiscal Investment and Loan Program (FILP) Bonds) (modified total return rate) and the compound benchmark return rate. Since fiscal 2020, an analysis has been conducted on the difference between the rate of return on overall invested assets (market investment and investments in FILP bonds) (time-weighted rate of return) and the compound benchmark return rate. Investments in FILP bonds were terminated during fiscal 2020.

(Column) Investment environment in fiscal 2022

Since fiscal 2020, when the 4th Medium-term Plan period began, there has been a series of major events for the global economy, such as the COVID-19 pandemic in fiscal 2020, the Russian invasion of Ukraine in fiscal 2021, and rapid rate hikes by the U.S. Federal Reserve Board (FRB) in fiscal 2022.

As a result of the outbreak of the global pandemic, production activities stagnated for a long time, resulting in supply shortages of various goods and other items. This, combined with higher energy prices caused by elevated geopolitical risks, led to global price increases in fiscal 2022. For example, the increase in the consumer price index (CPI) in the U.S. exceeded 9% at its peak in June, and 10% in Europe in October and November. In Japan, CPI also reached 4.3% in January 2023.

In order to address the inflation which was the highest within forty or fifty years, the FRB started to raise rates by 0.25% in March 2022, then by 0.5% in May, followed by four consecutive hikes of 0.75% in June, July, September, and November, until the upper limit of the policy target rate reached 5% in March 2023. The European Central Bank (ECB) has also raised interest rates six times in a row since July 2022.

Reflecting these hikes in policy interest rates, the yields on the 2-year Treasury notes briefly exceeded 5% in early March 2023. On the other hand, the yields on 10-year Treasury notes, which are reflecting the nominal potential growth rate, remained at around 4% during the same period. As the inverted yield curve took hold, it acted as the headwind for financial institutions' earnings.

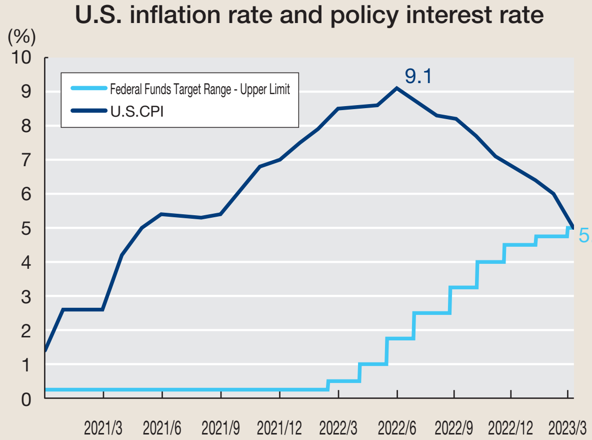
Under these stressful circumstances, faced with a rapid outflow of deposits, Silicon Valley Bank filed for the application of chapter 11 of the U.S. Bankruptcy Code which is equivalent to the Civil Rehabilitation Act of Japan on March 10th 2022, which is equivalent to the Civil Rehabilitation Act of Japan. Following this second largest bank's failure in the U.S. history (approximately ¥28 trillion in total assets), the Federal Deposit Insurance Corporation (FDIC) immediately decided to protect the full amount of deposits with Silicon Valley Bank. On March 12th, Signature Bank collapsed, and the FDIC similarly protected the full amount of its deposits. In addition, as attention focused on the financial soundness of banks, concerns also mounted over the credit of Credit Suisse in Europe, leading to a rescue takeover by UBS through the mediation of the Swiss government on March 19th. In both cases, swift responses by policymakers prevented the development of major instability in financial systems, but these events once again highlighted the importance of risk management.

In Japan, policy interest rates remained unchanged, but volatility temporarily increased in December 2022 when the Bank of Japan expanded the range of long-term interest rate fluctuations from around ±0.25% to ±0.50% in order to improve market functioning. In addition, volatility in the foreign exchange markets also increased as a result of large fluctuations in interest rates spreads between Japan and overseas. The range of fluctuations in the yen's value against the dollar during fiscal 2022 was nearly 30 yen.

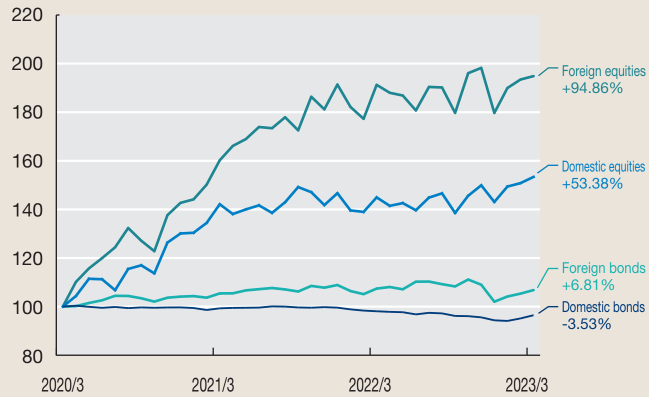
As described above, the investment environment in fiscal 2022 was extremely difficult for investors. Severe market fluctuations continued throughout the fiscal year, and the simultaneous fall of prices of fixed income and equities occurred several times.

For a review of investment in fiscal 2022, see pages 21·22.

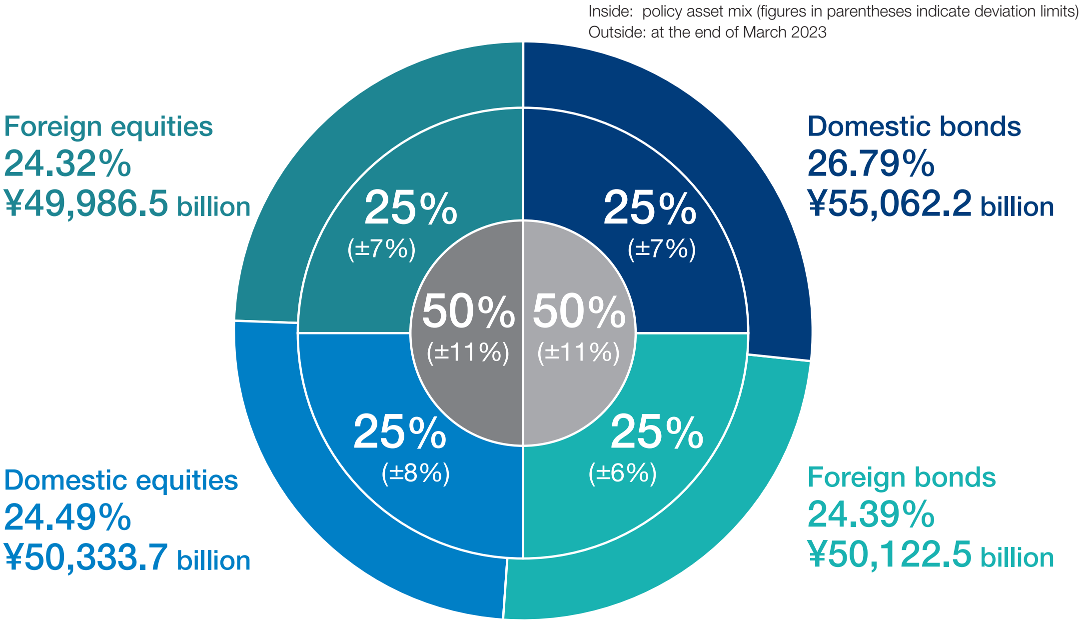
U.S. inflation rate and policy interest rate



Benchmark Indexes (from 31st March 2020 to 31st March 2023)



⑥ Investment assets and portfolio allocation (Pension reserves managed by GPIF and the Pension Special Account)



	Market value (¥billion)	Allocation of Pension Reserve (1)	Allocation of Pension Reserve (2)
Domestic bonds	55,062.2	26.79%	51.18%
Foreign bonds	50,122.5	24.39%	
Domestic equities	50,333.7	24.49%	48.82%
Foreign equities	49,986.5	24.32%	
Total	205,504.8	100.00%	100.00%

(Note 1) The figures above are rounded off, so the sum of each item does not necessarily match the total number.
(Note 2) The amounts in the Market value column include accrued income and accrued expenses.
(Note 3) While the pension reserve as a whole includes reserves managed under the pension special account as of the end of fiscal 2022 (about ¥5.4 trillion), this amount is prior to the adjustment for revenues and expenditures and differs from the amount in the final settlement of accounts.
(Note 4) JPY hedged foreign bonds and yen-denominated short-term assets are classified as Domestic bonds, and foreign currency-denominated short-term assets are classified as Foreign bonds.
(Note 5) The percentage of the alternative investments: 1.38% (within maximum 5% of total portfolio)

⑦ Allocation changes for each asset class due to rebalancing

(Unit: ¥billion)

	Domestic bonds	Foreign bonds	Domestic equities	Foreign equities
Allocated/withdrawn	+3,022.4	+1,502.1	-2,002.9	-1,914.5

(Note) Each figure shows the net rebalancing amount.

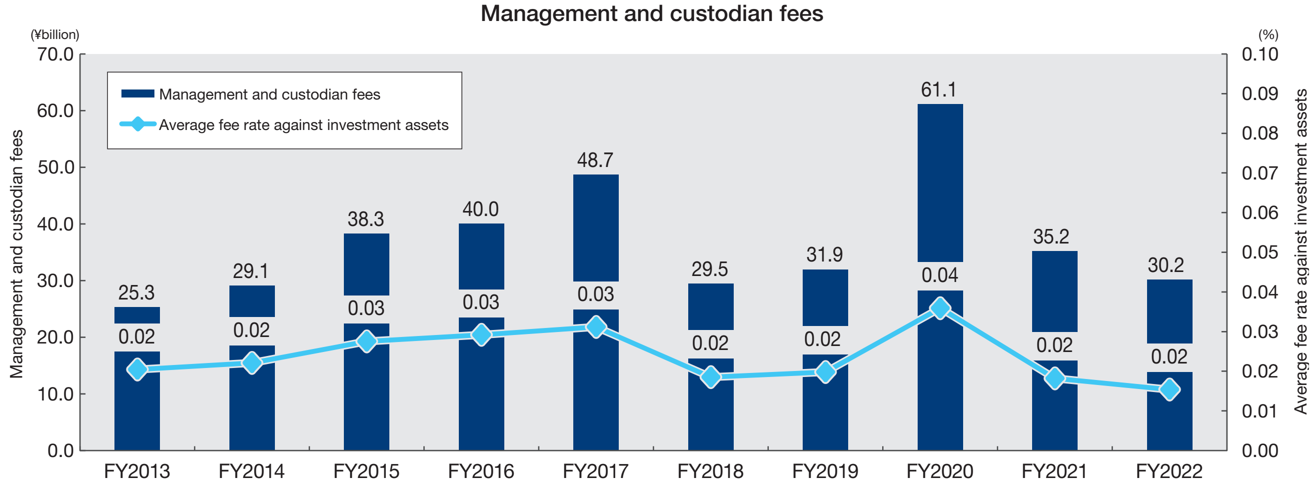
⑧ Management and custodian fees

In fiscal 2022, total fees were **¥30.2 billion.**

The average fee rate on the total investment assets for fiscal 2022 was **0.02%.**

Management and custodian fees decreased by ¥5 billion from the previous fiscal year as a result of a fall in the average balance for active management during the investment period, which has a higher fee rate than passive management, despite an increase in the balance of assets under management.

Management and custodian fees



Management and custodian fees by asset class

(Unit: ¥billion)

	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Total	25.3	29.1	38.3	40.0	48.7	29.5	31.9	61.1	35.2	30.2
Domestic bonds	3.6	3.8	3.8	3.9	4.0	1.6	2.0	3.0	3.4	3.1
Foreign bonds	6.8	8.5	9.1	12.5	17.2	9.2	7.1	25.4	18.6	13.6
Domestic equities	7.8	5.7	8.3	8.8	10.6	7.5	6.5	12.7	6.0	5.2
Foreign equities	7.2	11.2	17.0	14.9	16.9	10.7	15.5	18.8	5.3	5.7
Alternative assets	—	—	—	0.0	0.0	0.3	0.7	1.0	1.4	1.8

(Note 1) Management and custodian fees are rounded off to the nearest ¥100 million.
(Note 2) The total includes fees related to short-term assets and index licensing fees.
(Note 3) Fees paid to custodians exclude certain fees that are deducted from the entrusted assets, such as custody fees and attorney fees.
(Note 4) Foreign bonds include JPY hedged foreign bonds.

Average fee rate against externally managed assets

(Unit: %)

	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Total	0.02	0.02	0.03	0.03	0.03	0.02	0.02	0.04	0.02	0.02
Domestic bonds	0.01	0.01	0.02	0.03	0.03	0.01	0.01	0.02	0.01	0.01
Foreign bonds	0.05	0.05	0.05	0.07	0.08	0.04	0.02	0.06	0.04	0.03
Domestic equities	0.04	0.02	0.03	0.03	0.03	0.02	0.02	0.03	0.01	0.01
Foreign equities	0.04	0.05	0.05	0.05	0.04	0.03	0.04	0.04	0.01	0.01
Alternative assets	—	—	—	—	0.14	0.23	0.14	0.11	0.09	0.07
Average balance (¥trillion)	123.9	131.9	139.0	137.3	155.7	158.9	161.4	170.2	193.1	196.3

(Note 1) Total includes in-house investment assets and index licensing fees.
(Note 2) The average balance includes in-house investment assets. For investments in FILP funds held until fiscal 2020 and managed in-house, average monthly book values calculated by the amortized cost method are used.
(Note 3) Foreign bonds include JPY hedged foreign bonds.

2 | Overview of the Policy Asset Mix

[1] What is the policy asset mix?

In a long-term investment, it has been found that maintaining portfolio (a policy asset mix) over the long term yields a better result effectively, rather than changing the portfolio in response to short-term market fluctuations. In this regard, most of the long-term investment results are determined by the policy asset mix.

GPIF manages assets based on a predetermined policy asset mix, with the aim of securing levels of yield required for pension finance with minimal risks over the long term. Since the market is constantly fluctuating, however, we have established a permissible range of deviation from the policy asset mix, as a mechanism to enable flexible investment within a reasonable range while still following the policy asset mix.

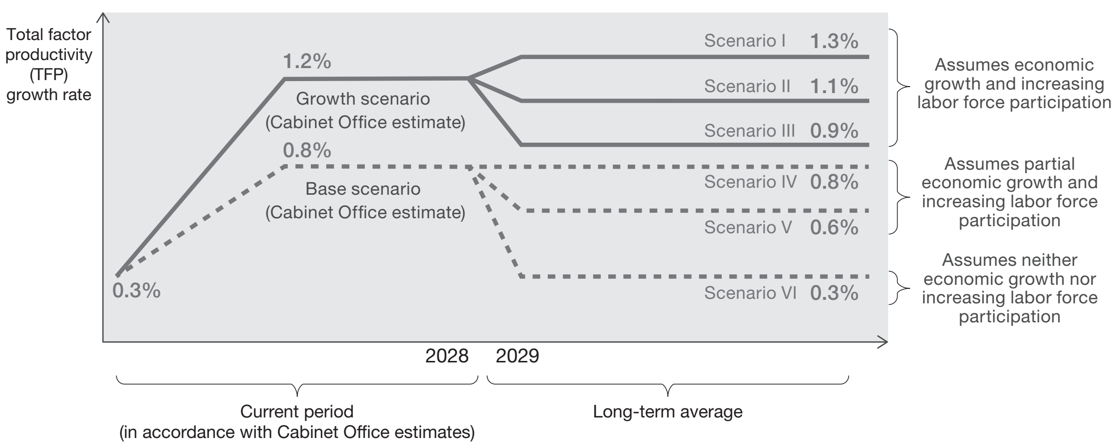
When establishing the policy asset mix, first, it is necessary to determine the asset classes that will meet our investment objectives. It is common to categorize assets from perspectives such as different sources of returns, different risk characteristics, and low correlation between assets. The current GPIF policy asset mix consists of four asset classes: domestic bonds, foreign bonds, domestic equities, and foreign equities. After determining asset classes, it is common to use the expected returns and risks of each asset to define a policy asset mix that meets the investment objectives and risk constraints. After determining asset classes, GPIF estimates the expected return and risk of each asset based on generally accepted expertise related to asset management and investment, then sets investment objectives and risk constraints for a policy asset mix that “achieves the return on investment necessary for pension finance with minimal risks over the long term.”

[2] Background of the formulation of the policy asset mix

Japanese public pension scheme (Employees’ Pension Insurance and National Pension) is a pay-as-you-go system in which pension premiums collected from working generations support elderly generations. Given the declining birthrates and aging populations in Japan, funding pension benefits solely by contribution from working generations would place an unduly excessive burden on this group. The pension reserve fund managed by GPIF will therefore be used to supplement payouts to future generations.

Under this framework, the Ministry of Health, Labour and Welfare (MHLW) carries out a financial verification at least every five years based on the outlook for population and economic trends. The most recent verification conducted in 2019 included an analysis of six broad scenarios. The verification focused particularly on Total Factor Productivity (e.g. technological advances or productivity improvements), which is a critical factor in making long-term economic assumptions. Target return on investments of the reserve fund was built upon this result.

Economic assumptions in the financial verification



		Assumed future state of the economy		Economic assumptions				(Reference)
		Labor force participation rate	Total factor productivity (TFP) growth rate	CPI increase rate	Real wage growth rate (adjusted for CPI)	Rate of return on investment		Real economic growth rate from FY2029 20–30 years
						Real (adjusted for CPI)	Spread (adjusted for wages)	
Scenario I	Cabinet Office estimate for the growth scenario	Economic growth and increasing labor force participation scenario	1.3%	2.0%	1.6%	3.0%	1.4%	0.9%
Scenario II			1.1%	1.6%	1.4%	2.9%	1.5%	0.6%
Scenario III			0.9%	1.2%	1.1%	2.8%	**1.7%**	0.4%
Scenario IV	Cabinet Office estimate for the base scenario	Partial economic growth and increasing labor force participation scenario	0.8%	1.1%	1.0%	2.1%	1.1%	0.2%
Scenario V			0.6%	0.8%	0.8%	2.0%	1.2%	0.0%
Scenario VI		Neither economic growth nor increasing labor force participation	0.3%	0.5%	0.4%	0.8%	0.4%	–0.5%

(Note) Details of 2019 financial verification are posted on the MHLW website:
https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/nenkin/nenkin/zaisei-kensyo/index.html.

[3] Current policy asset mix (From April 2020)

GPIF establishes the policy asset mix formed by the target allocation to each asset class, and manages portfolio within deviation limits.

The current policy asset mix, which started in April 2020, shall meet the investment objective, a real investment return (net investment yields on the pension reserve fund less the nominal wage growth rate) of 1.7% with minimal risks. In addition to the four deviation limits set for each asset class, new deviation limits for total bonds and total equities have been established in order to strengthen risk management on the equities.

(Note) For details of the current policy asset mix and previous policy asset mix, refer to the website: https://www.gpif.go.jp/gpif/portfolio.html. (Japanese only)

【Current policy asset mix】

(From April 2020)

(Unit: %)

		Domestic bonds	Foreign bonds	Domestic equities	Foreign equities
Target allocation		25	25	25	25
Deviation limits	Asset class	±7	±6	±8	±7
	Bonds/Equities	±11		±11	

(Note 1) Alternative assets (infrastructures, private equities, real estates, and other assets determined through resolutions at the Board of Governors) are classified into domestic bonds, domestic equities, foreign bonds, and foreign equities based on their risk and return profiles, and are capped to 5% of total assets. However, if economic and market conditions prevent compliance with the 5% ceiling rule, this limit may be raised after deliberation and resolution by the Board of Governors.

(Note 2) JPY hedged foreign bonds and yen-denominated short-term assets are classified as domestic bonds, while foreign currency-denominated short-term assets are classified as foreign bonds.

(Note 3) In light of recent extreme economic and market volatility, GPIF may be allowed to flexibly manage investments based on an appropriate, reasonably grounded outlook for the market environments and within the deviation limits for the policy asset mix.

【Previous policy asset mix】

(April 2006–June 2013)

(Unit: %)

	Domestic bonds	Domestic equities	Foreign bonds	Foreign equities	Short-term assets
Target allocation	67	11	8	9	5
Deviation limits	±8	±6	±5	±5	—

(June 2013–October 2014)

(Unit: %)

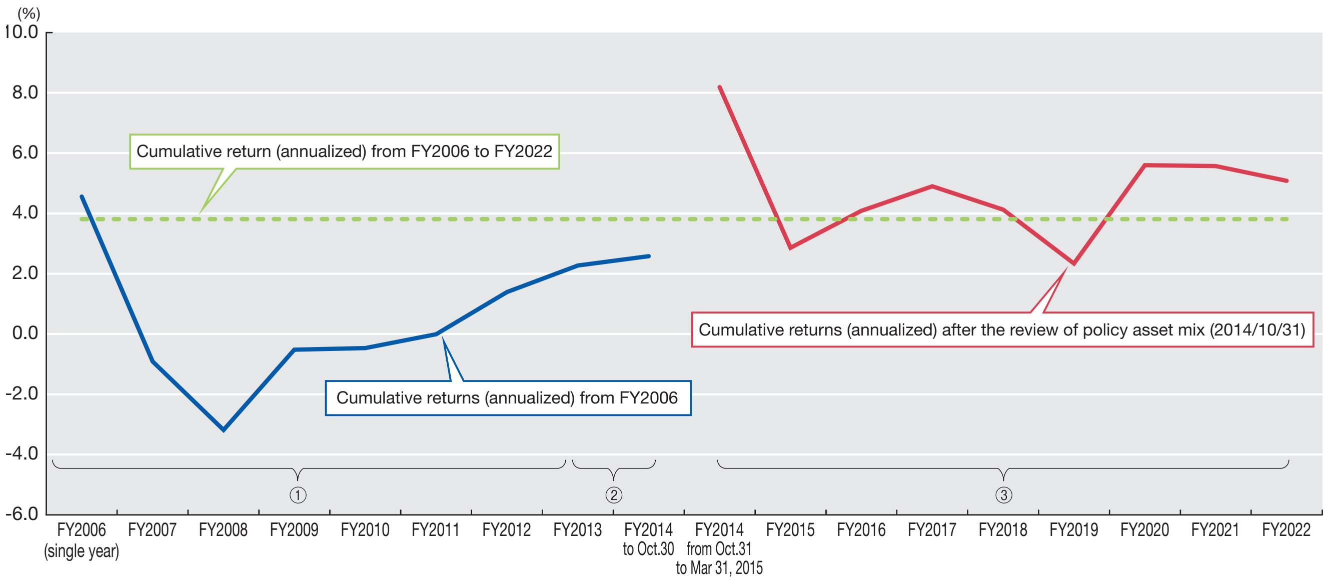
	Domestic bonds	Domestic equities	Foreign bonds	Foreign equities	Short-term assets
Target allocation	60	12	11	12	5
Deviation limits	±8	±6	±5	±5	—

(October 2014–March 2020)

(Unit: %)

	Domestic bonds	Domestic equities	Foreign bonds	Foreign equities
Target allocation	35	25	15	25
Deviation limits	±10	±9	±4	±8

Comparison of cumulative returns (annualized)



(Note 1) In fiscal 2014, the ratio of bonds to equities was revised to 50:50 in a review of the Policy Asset Mix. From the viewpoint of continuity, the average from fiscal 2006 and the average from October 31, 2014 are presented separately.
(Note 2) The numbers (① to ③) correspond to the following periods: ① 20% equities (April 2006 to June 2013); ② 24% equities (June 2013 to October 2014); and ③ 50% equities (October 2014 onward).
(Note 3) For a review of rates of investment return on a single fiscal year basis, refer to page 29.

[4] Details of policy asset mix formulation

① Considerations in the Medium-term Objectives

The 4th Medium-term Objectives for the five-year period from fiscal 2020 to fiscal 2024 established by the MHLW include the following investment objectives of reserve fund:

- Based on the results of the financial verification, GPIF formulates and manages the policy asset mix with the objective of achieving a long-term real return of 1.7% (net investment yield on the pension reserve fund less the nominal wage growth rate) on reserve assets with minimal risks.
- The policy asset mix must be formulated from a long-term perspective and it should incorporate generally recognized investment expertise as well as domestic and overseas economic trends, in light of forward-looking risk analysis.
- The downside risks of underperforming the nominal wage growth rate cannot exceed that of the portfolio comprised solely of domestic bonds, and appropriate consideration should be given to the fact that the downside risks for equities may be larger than expected.
- The probability that planned reserves may become smaller than originally anticipated should be properly accounted for and a thorough analysis of multiple risk scenarios should be conducted.

② Policy asset mix formulation process

Based on the results of the financial verification, the Medium-term Objectives, and recent economic conditions, GPIF decided on the following policies when formulating the policy asset mix.

A. GPIF used multiple methods to estimate expected returns rather than a single method in order to enhance estimate precision. In addition to the previous method, GPIF has also taken into account the equilibrium return deemed intrinsic to market capitalization.
B. Current policy benchmarks (Note) were used to estimate expected returns, as well as correlations between risks and returns. Since GPIF refers to the assumptions made within the financial verification during the portfolio optimization process, the estimation period for expected returns was set at 25 years, considering the models used within the financial verification to formulate long-term economic assumptions generally use a period of 25 years.
C. Given that the return target set within the Medium-term Objectives is a real return of 1.7%, that is, the return target set under Scenario III, GPIF used Scenario III as the economic scenario for the basis for wage increase assumptions when setting wage-adjusted expected returns.
D. The improved estimation method for expected returns enhances the accuracy of the optimization and is likely to result in a better target allocation. Therefore, GPIF decided to eliminate constraints (such as relative asset class size, etc.), except for return requirements.
E. The risk constraint used in the optimization included the requirement that the risks of the policy asset mix falling below the nominal wage growth rate (lower partial probability) does not exceed those of a portfolio comprised solely of domestic bonds, just the same as before. GPIF also used the average short fall rate in case the return is below the nominal wage increase (conditional average shortfall rate) in order to measure the risks when optimizing the portfolio.
F. Looking at the reserve assets' nominal accumulation trends within the financial verification, while asset sizes will peak out at different points in different scenarios, GPIF expects that the investment policy can be maintained without reducing the reserve principals for the next 50 years or so. The peak of the size of nominal reserve assets is a critical point in investment operations, as it means that investment returns alone will not be able to cover cash payouts. Given that, GPIF analyzed reserve assets trends based on the policy asset mix over the next 50 years, and compared them with planned reserve assets within the financial verification.
G. Furthermore, in light of the current low interest rates, yen-denominated short-term assets and JPY hedged foreign bonds are all classified as domestic bonds throughout the policy asset mix formulation process, as these assets are considered to have similar risk and return profiles to that of domestic bonds. In addition, foreign currency-denominated short-term assets are counted as foreign bonds.

Asset class	Policy benchmark
Domestic bonds	NOMURA-BPI (excluding ABS)
Foreign bonds	FTSE World Government Bond Index (not incl. JPY, no hedge/JPY basis)
Domestic equities	TOPIX (incl. dividends)
Foreign equities	MSCI ACWI (not incl. JPY, JPY basis, incl. dividends)

(Note) GPIF refers to a benchmark used for the policy asset mix formulation as a policy benchmark. The policy benchmarks used for each asset class are as shown. Please note that, however, although the Chinese government bonds have been gradually included in the FTSE World Government Bond Index from October 2021, GPIF has decided not to invest in Chinese government bonds for the time being, based on reasons such as the fact that settlement with international settlement systems is not possible. Accordingly, GPIF currently uses the index that excludes Chinese government bonds as its policy benchmark for foreign bonds.

③ Expected return of each asset class and assumption for the wage growth rate

GPIF projected the expected return of domestic bonds by the average rate of return calculated from the simulation of bond investment (which assumes future long-term interest rates scenarios) combined with the equilibrium rate of return (Note1) deemed intrinsic to market capitalization. To estimate expected returns on domestic equities, foreign bonds, and foreign equities, GPIF used a building block method (Note2) for each asset that adds a risk premium to short-term interest rates, and combined this with the equilibrium return rate deemed intrinsic to market capitalization. The expected return for short-term interest rates which forms the basis for calculations is estimated using the market yield curve.

The nominal wage growth rate used to convert nominal expected return to wage-adjusted real return was 2.3%, which is the average future nominal wage increase used in the economic assumptions within the financial verification (in Scenario III).

(Note 1) The equilibrium return rate is the implied market return derived by observing current indicators such as global market capitalization and risk and correlations for each asset class.

(Note 2) The building block method estimates the expected return for each asset class by adding together estimates for expected short-term interest rates and the risk premium (i.e. compensation for taking risk) for each individual asset class. Historical data for policy benchmarks were used to estimate risk premiums.

【Expected return for each asset class and the wage growth rate】

(Unit: %)

Short-term interest rate	Domestic bonds	Foreign bonds	Domestic equities	Foreign equities	Wage growth rate
–1.7	–1.6	0.3	3.3	4.9	(2.3)
(0.6)	(0.7)	(2.6)	(5.6)	(7.2)	

(Note) The numbers on the upper row indicate real returns, those in brackets on the lower row indicate nominal returns with wage growth rate.

④ Standard deviation and correlation of each asset class

GPIF estimated the risks and correlations of each asset class by using the annual data of the policy benchmarks for the 25 years after the bubble economy collapsed in Japan (i.e. the period from 1994 to 2018).

【Risk (Standard deviation)】

(Unit: %)

	Domestic bonds	Foreign bonds	Domestic equities	Foreign equities	Wage growth rate
Standard deviation	2.56	11.87	23.14	24.85	1.62

【Correlation】

	Domestic bonds	Foreign bonds	Domestic equities	Foreign equities	Wage growth rate
Domestic bonds	1.00				
Foreign bonds	0.290	1.00			
Domestic equities	–0.158	0.060	1.00		
Foreign equities	0.105	0.585	0.643	1.00	
Wage growth rate	0.042	–0.010	0.113	0.099	1.00

(Note) The expected return of a portfolio in combining several different assets with different risk-return profiles is the weighted average of the expected returns of individual assets, while the risk (standard deviation) of the portfolio can be lower than the weighted average of those of the individual assets. This is called the “diversified effect.” GPIF aims to achieve a stable investment result by diversifying the investments into multiple types of assets having different characteristics and price movements. For details, refer to the website: https://www.gpif.go.jp/gpif/ (Japanese only).

⑤ Selection of policy asset mix

We selected the policy asset mix from the following perspectives.

A. Based on the returns, risks, and other factors of the four asset classes, GPIF identified a variety of portfolios and estimated its projected returns, risks (standard deviations), probability in which portfolio return will short of nominal wage growth rate ("lower partial probability") and the average rate of shortages when return cannot meet the nominal wage growth rate ("conditional average shortfall rate").

B. Among a variety of portfolios simulated, we selected a portfolio that meets the investment objective (nominal wage growth rate plus 1.7%) with 'the lower partial probability' smaller than that of the reference portfolio where all are invested in domestic bonds, and the smallest "conditional average shortfall rate."

We continued to apply the currently used 5% interval to compose the policy asset mix. GPIF has also confirmed that the policy asset mix should fall within the range of the reference asset mix.

[Current policy asset mix profile]

(Unit: %)

Real return	Nominal return	Standard deviation	Lower partial probability	Conditional average shortfall rate	
				Normal distribution	Empirical distribution (Note)
1.7	4.0	12.32	44.4	9.2	10.9

(Reference) Profiles of all-domestic-bond portfolio

(Unit: %)

–1.6	0.7	2.56	70.7	3.0	3.0

(Note) We also conducted a simulation for the conditional average shortfall rate by using the empirical distribution, in addition to the normal distribution, with consideration that equities may have a larger downside probability (tail risk). The empirical distribution is a projection based on real returns over the 25-year period from 1994 to 2018.

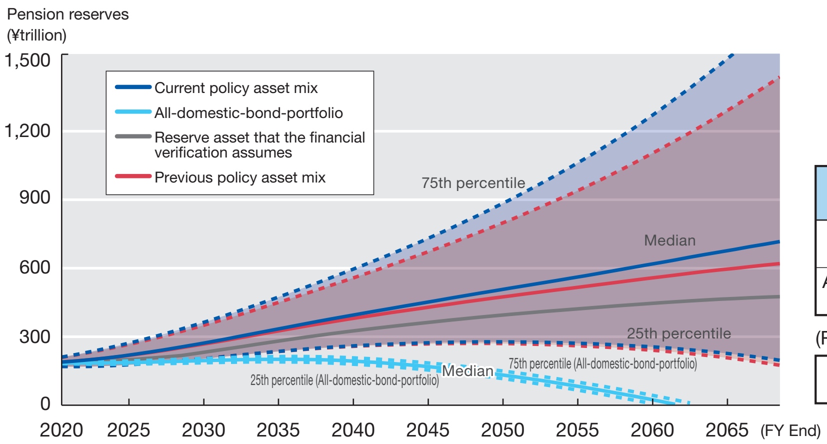
⑥ Risk verification for formulating the current policy asset mix

In order to verify the magnitude of the risk where reserve assets fall below the size of planned reserves under pension finance, we conducted a Monte-Carlo simulation over one million times using the expected returns, standard deviations, and correlations for each asset to generate a distribution of such trends, and examined results compared to planned reserves on the financial verification (Scenario III), in a bid to test and verify the current policy asset mix.

Results indicate that the probability where fund size falls below the planned level has declined compared to the former policy asset mix. Meanwhile, a simulation shows that the amount of pension reserves with an all-domestic-bond portfolio resulted in always smaller than the amount of the planned reserve assets.

From the above-mentioned overall perspectives with the aspects of lower partial probability and conditional average shortfall rate, this policy asset mix is the most efficient portfolio to meet the investment objective while minimizing downside risk.

Comparison with planned reserve



Probability (risk) of falling below planned reserves

(Unit: %)

	In 25 years (As of the end of FY2043)	In 50 years (As of the end of FY2068)
Current policy asset mix	38.1	39.8
All-domestic-bond-portfolio	100.0	100.0

(Reference)

(Unit: %)

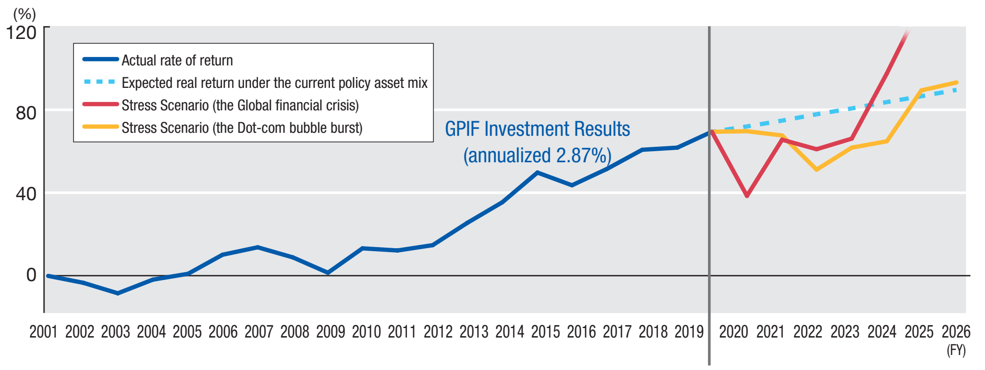
Previous policy asset mix	40.0	43.0

⑦ Implementation of stress tests in fiscal 2019 for formulating the current policy asset mix.

GPIF conducted multiple stress tests under the assumption of the occurrence of a financial crisis. The stress tests were conducted based on the respective scenarios using actual market data of the global financial crisis in 2008 and the dot-com bubble burst in 2000.

Results in both scenarios indicate that the cumulative value of real return temporarily falls, but turns upward to the level of expected return following a subsequent market rebound several years later.

[Actual and estimated real return (cumulative)]



- The negative returns with the largest annual loss over the test periods were -19.4% in the scenario of the global financial crisis and -11.4% in the scenario of the dot-com bubble burst.
- We also observed the probability of the occurrence through the empirical distribution in the stress scenario. We assessed that a loss equivalent to the global financial crisis would occur once every 70 years, while that similar to the dot-com bubble burst would be observed once every seven years.

(Note 1) GPIF's investment results (annualized return of 2.87%) are based on the figures as of the end of fiscal 2018.
(Note 2) The figure for fiscal 2019 represents the result as of December 31, 2019.

(Column) Reference asset mix

Since the integration of the Employee's Pension Schemes in October 2015, four asset management entities-GPIF, the Federation of National Public Service Personnel Mutual Aid Associations, the Pension Fund Association for Local Government Officials, and the Promotion and Mutual Aid Corporation for Private Schools of Japan-are assumed to jointly formulate a reference asset mix. When formulating the policy asset mix, each of the four entities shall take into consideration the reference asset mix.

The reference asset mix shall be reviewed upon a financial verification by the government and revised accordingly. After the 2019 financial verification, the four entities discussed and formulated a new reference asset mix as follows:

(Unit: %)

Asset class	Domestic bonds	Domestic equities	Foreign bonds	Foreign equities
Reference asset mix	25	25	25	25
The range of median	±4	±4	±4	±4

[5] Policy asset mix verification

① Verification policy stipulated in the Medium-term Plan

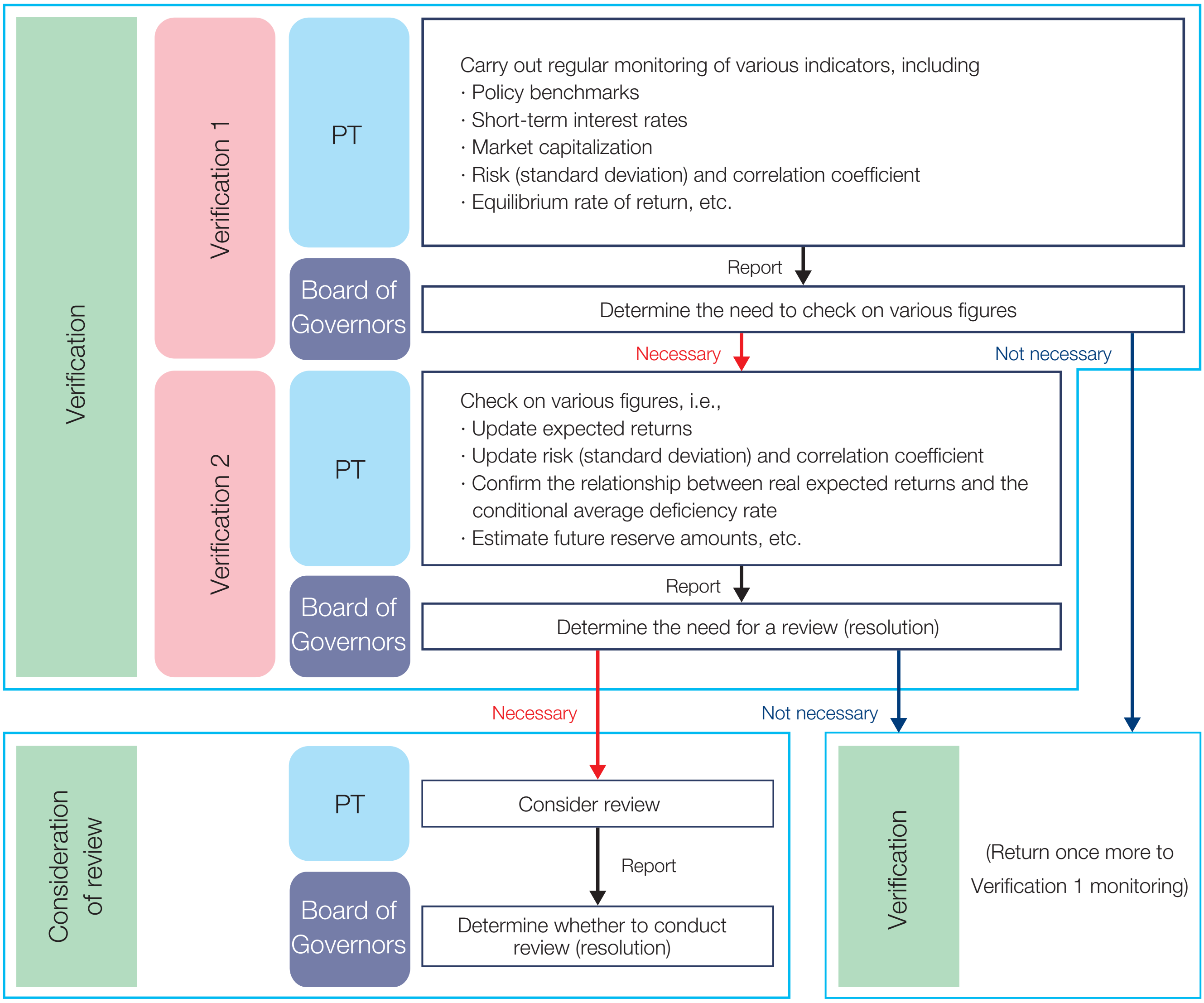
Verification of the policy asset mix at GPIF will be conducted in a timely and appropriate manner during the period of the 4th Medium-Term Plan and, when deemed necessary by the Board of Governors (e.g., if there is possibility of significant changes in the investment environment), a review will be considered and revisions will be promptly implemented as necessary.

② Verification system

To verify the policy asset mix at GPIF in a timely and appropriate manner, a Project Team (PT) for Policy Asset Mix Verification, etc., has been established under the Board of Governors to carry out practical tasks pertaining to policy asset mix verification. The PT comprises members of the Board of Governors who have expertise in finance and economics.

③ Verification method

Verification is performed in two stages: Verification 1 and Verification 2, as illustrated below.



*The PT in the figure above is the “Project Team for Policy Asset Mix Verification, etc.”

a. Verification 1

- GPIF's policy asset mix is formulated from a long-term perspective and is based on the twenty five years of data including (1) policy benchmark return, (2) short-term interest rates, (3) the most recent market capitalization at the time the policy asset mix is formulated, and (4) the risk (standard deviation), correlation coefficient, and the equilibrium rate of return, all of which are calculated from these (1) (2) (3). The PT regularly monitors these various indicators that were used as the basis for formulating this policy asset mix.
- If changes are observed in these indicators in the course of periodic monitoring and it appears the investment environment may have changed significantly from which has been presumed when the portfolio was formulated, the PT will report such changes to the Board of Governors.

b. Verification 2

- If the PT reports the changes in various indicators and that the investment environment may have changed significantly from which has been presumed when the portfolio was formulated, the Board of Governors shall determine whether to conduct a Verification 2 with checking the updated expected return, the risk (standard deviation) and correlation coefficient, confirming the relationship between real expected return and the conditional average deficiency rate, and estimating future reserves, etc.
- If it is determined that a Verification 2 should be conducted, the PT will carry out the Verification 2 tasks and report the results to the Board of Governors.
- The Board of Governors will determine whether to consider a review of the policy asset mix based on the report by the PT.
- Based on the Board of Governors' determination, if determined to be necessary, the PT will consider whether to review the policy asset mix, and the PT reports the outcome of its consideration to the Board of Governors.
- The Board of Governors will promptly revise the policy asset mix as necessary based on the results of the review consideration by the PT.
- Even if the regular monitoring (Verification 1) does not reveal any significant changes in the investment environment from which has been presumed when the policy asset mix was formulated, the PT will report the status of monitoring to the Board of Governors at least once a year.

④ Outcome of Verification in fiscal 2022

Verification 1 conducted in fiscal 2022 concluded that the investment environment had not necessarily changed significantly from which had been presumed when the policy asset mix was formulated, so it was determined that neither Verification 2 (checking various figures such as updating expected returns), nor a review of the policy asset mix were necessary.

3 | Basic Policy of Portfolio Risk Management

[1] Basic policy

The purpose of investing the pension reserves is to contribute to the future stability of the management of the public pension scheme by safe and efficient management from a long-term perspective solely for the beneficiaries. The Medium-term Objectives approved by the Minister of Health, Labour and Welfare (MHLW) stipulate that GPIF is required to achieve a long-term real return (net investment yield on the pension reserve fund less the nominal wage growth rate) of 1.7% with the minimal risk.

Amid heightened uncertainties about the recent market and economic environments, the risk GPIF focuses on refers not to "a risk caused by short-term fluctuations in market prices" but to "a risk of failing to achieve a long-term investment return required for the pension finance."

In a long-term investment, it has been found that maintaining portfolio (a policy asset mix) over the long term yields a better result effectively, rather than changing the portfolio in response to short-term market fluctuations. GPIF adopted the new policy asset mix in fiscal 2020. Since long-term investment results shall be mostly attributable to a policy asset mix, we believe that the policy asset mix is the core of portfolio risk management.

GPIF manages the policy asset mix in an appropriate manner, invests in diversified assets, and carries out risk management at the level of the entire portfolio, individual asset classes, and individual asset managers, respectively. At the same time, we ensure the achievements of the benchmark rates of return for the entire portfolio as well as for each asset class by monitoring various indicators from multilateral perspectives. In cases when it is considered necessary to take a certain measure, GPIF carries out an appropriate measure in line with a predetermined rule.

The basic policy of the above-mentioned portfolio risk management is expressly described in the "Basic Policy" of the "Portfolio Risk Management Policy" established by the Board of Governors. In accordance with this Basic Policy, GPIF manages market risks, liquidity risks, credit risks, and country risks in an appropriate manner. We also perform risk monitoring based on domestic and overseas economic trends, financial market conditions, geopolitical risks, as well as various risk management indicators including tracking errors, Value at Risk (VaR) and stress tests. GPIF does so in a timely manner, so that risks can be discussed at the Investment Committee and the Portfolio Risk Management Committee and periodically be reported to the Board of Governors. As such, we implement appropriate measures considering long-term risk-return profiles.

<"Basic Policy" of GPIF's portfolio risk management>

(1) GPIF formulates a policy asset mix and appropriately manages it to ensure the achievement of the investment return required for the pension finance with the minimum risk.

(2) GPIF adopts a basic principle for risk management of diversifying investment portfolios across multiple asset classes having different risk-return profiles, etc.

(3) GPIF performs risk management at the level of the entire portfolio, individual asset classes, and individual asset managers, respectively, while ensuring the achievement of the benchmark rate of returns for the entire portfolio as well as for each asset class.

(4) GPIF carries out flexible investment based on a proper outlook for the market environments, within a deviation limit for the policy asset mix, upon thorough analysis on the current trends marked by the fast-changing economic and market environments; provided, however, that the outlook must indicate reasonable grounds.

(5) Although there are short-term fluctuations in market prices, GPIF aims to earn investment returns more stably and efficiently by taking advantage of its long-term investment horizon and maintain the liquidity necessary for a pension payout. In order to assure liquidity, GPIF takes appropriate measures including selling assets in a smooth manner, while considering the market price formation as well as securing assets without shortages.

(6) Regarding investment and management of the pension reserves, GPIF constantly strives to enhance its expertise, clarify the system of accountability, and implement thorough compliance with the duty of care and fiduciary duty of a prudent expert.

[Types of portfolio risk]

Market risk	The risk of changes in the value of portfolio assets, including derivatives, due to fluctuations in various market risk factors such as interest rates, foreign exchange rates, equities, and alternative assets
Liquidity risk	The risk of facing a difficulty in securing the necessary funds or incurring losses due to being forced to raise funds at an interest rate significantly higher than normal, resulting from reasons such as an unexpected increase in cash outflow (cash management risk) and the risk of incurring losses resulting from the inability to conduct market transactions due to confusion in the market or being forced to conduct market transactions at prices significantly more disadvantageous than normal (market liquidity risk)
Credit risk	The risk of incurring losses due to reduction or elimination of the value of assets, including derivatives, caused by factors such as deterioration in the financial position of issuers of the portfolio assets, institutions entrusted with asset management or counterparties of derivatives transactions
Country risk	The risk of incurring losses in foreign assets due to foreign currency situations or political and economic conditions of countries relevant to the said assets

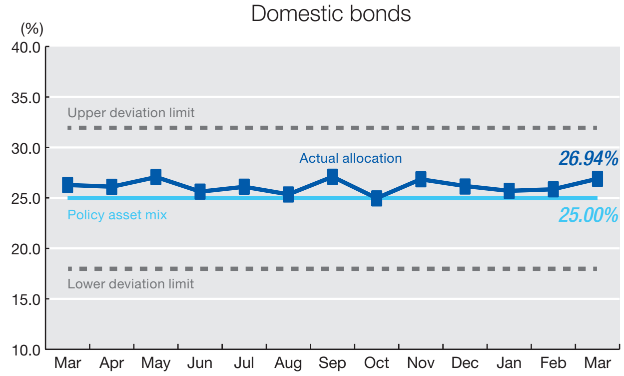
[2] Risk management based on a policy asset mix

GPIF believes that the most important aspect of portfolio risk management is a proper management of asset allocation based on a policy asset mix. Since the markets constantly change, it is essential to establish a framework that enables GPIF to manage investments flexibly within a reasonable range, while actual investments shall be carried out following the policy asset mix. Accordingly, GPIF flexibly manages the policy asset mix within deviation limits defined for each of four types of assets—domestic bonds, foreign bonds, domestic equities, and foreign equities—as well as overall bonds and overall equities. At the same time, GPIF establishes alarm points within deviation limits in order to smoothly and appropriately manage its asset allocations, and stipulates a responsive process in the event of exceeding the deviation limits or alarm points. While the upper limit for alternative assets is set as 5% of the total assets, we have also established alarm points for these assets and expressly specify a process for responding in the event that these limits are exceeded. During the fiscal 2022, no assets exceeded the deviation limits or alarm points.

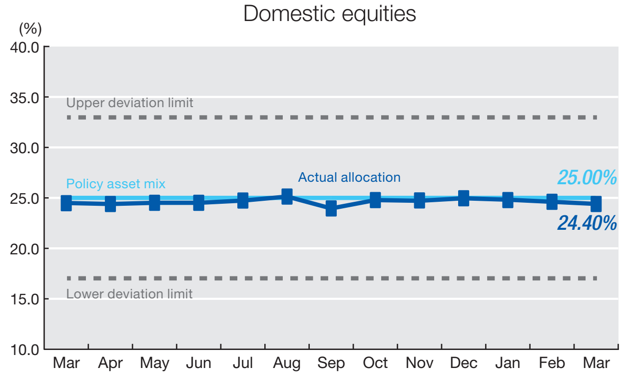
As part of our efforts to diversify and upgrade asset management related to risk management based on the policy asset mix, we began using stock index futures for foreign equities in fiscal 2022, having already introduced them for domestic equities in fiscal 2021. By using stock index futures, which can be traded quickly, we can compress the time from investment decision to execution, and therefore expect to reduce the price fluctuation risk in rebalancing, etc. In fiscal 2022, we also established a specialized portfolio management team to make it possible to rebalance in a more timely and appropriate manner than ever before, even with the advent of rapid changes in the economic and market environment.

【Management of deviation limits】

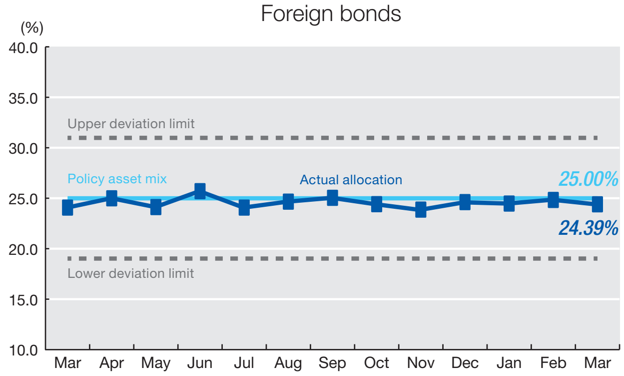
Domestic bonds



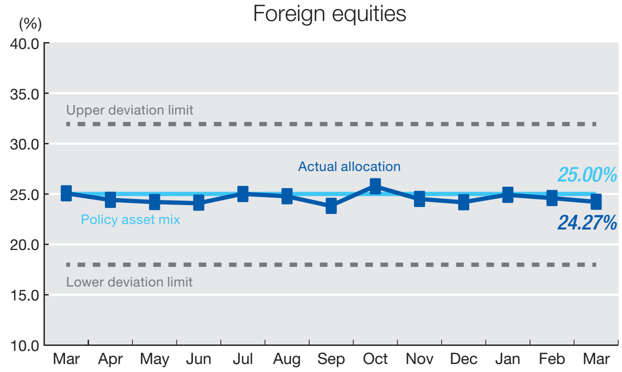
Domestic equities



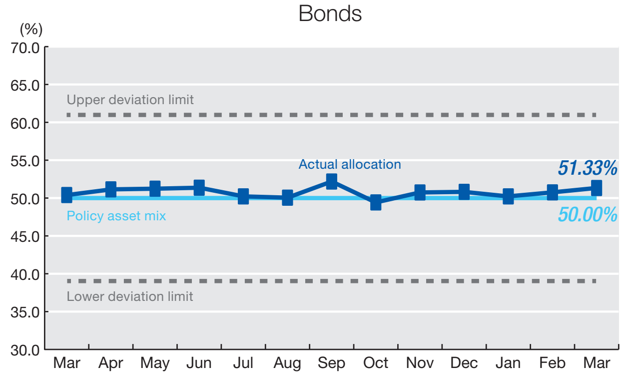
Foreign bonds



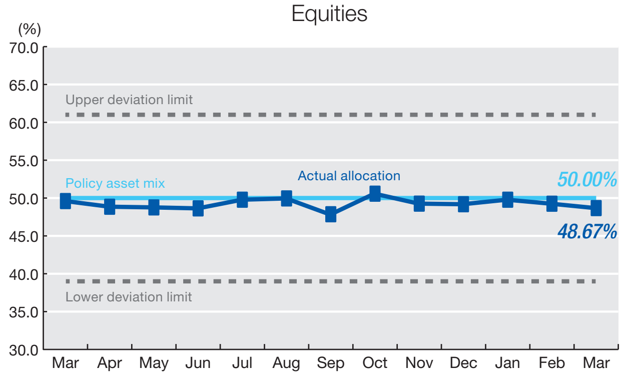
Foreign equities



Bonds



Equities



(Note 1) Asset allocation is calculated including reserves managed in the Pension Special Account. The notional amount of stock index futures and other factors are taken into account in the calculation.

(Note 2) The deviation limits under the 4th Medium-term Plan are ±7% for domestic bonds, ±6% for foreign bonds, ±8% for domestic equities, ±7% for foreign equities. ±11% for overall bonds, and ±11% for overall equities.

In addition to risk management with the above-mentioned deviation limits and upper limit established for alternative investment, we continue to monitor estimated tracking errors (Note1) of the overall assets and VaR ratio as indicators from a multitiered risk management perspective.

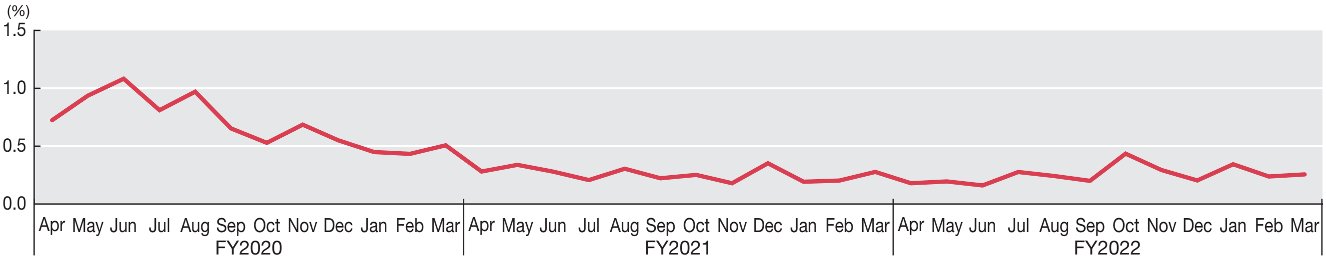
In fiscal 2022, while the volatility of various assets generally increased compared with fiscal 2021, we maintained a low rate of estimated tracking errors of the overall assets at 16-44bp (1bp refers to 0.01%), as a result of careful measures to ensure that we do not deviate from the compound benchmark return of the policy asset mix.

VaR ratio is obtained by dividing VaR (Note2) for the actual asset mix by VaR for the policy asset mix, an indicator for monitoring as to what extent the risk amount of the actual portfolio deviates from that of the policy asset mix.

In fiscal 2022, GPIF managed its asset allocation to ensure that the actual amount of risk in the portfolio did not deviate from the amount of risk that would have been taken had it been investing in the policy asset mix, regarding the amount of stock price risk, foreign exchange risk, and interest rates risk, which are the major market risks. In addition, the VaR ratio ranged between 1.00 and 1.04, as GPIF kept spread risk of corporate bonds, etc. and alternative risk, which are minute in the policy asset mix, relatively low.

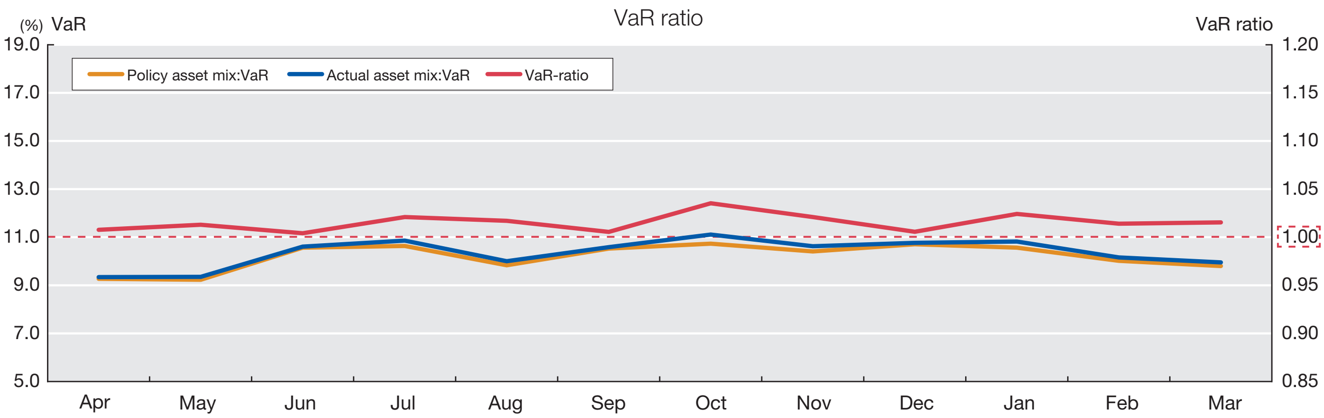
(Note 1) The estimated tracking errors are the ranges of returns that could be earned in the future at a given probability. These ranges are calculated with analysis tools, estimated by using statistically estimated mutual dependencies between securities in the portfolio.
(Note 2) VaR indicates the largest loss likely to be suffered for individual assets assuming a certain holding period with a given probability (confidence level).

【Estimated tracking error of the overall assets】

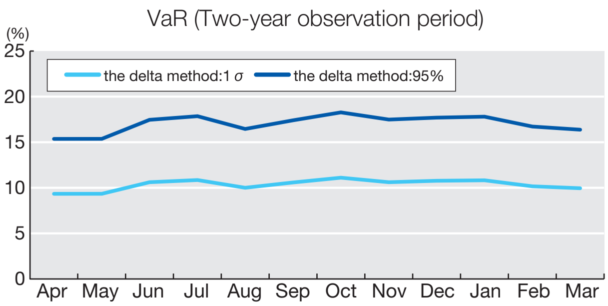


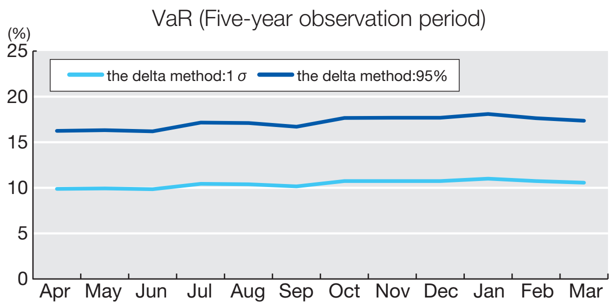
(Note) The notional amount of stock index futures and other factors are taken into account in the calculation.

【VaR ratio and VaR】



(Note 1) VaR is calculated using the delta method based on the 1σ confidence level over a one-year holding period and two-year observation period.
(Note 2) The notional amount of stock index futures and other factors are taken into account in the calculation.





(Note 1) VaR is calculated using the delta method based on the 1σ and 95% confidence level over a one-year holding period and two-year and five-year observation period (ratios are calculated on an actual asset mix basis for both periods).
(Note 2) The notional amount of stock index futures and other factors are taken into account in the calculation.

[3] Diversification effect and risk management of alternative assets

Alternative assets (including infrastructure, private equity, and real estate) have different risk-return profiles from traditional assets such as listed equities and bonds.

Considering these profiles, the inclusion of alternative assets in GPIF's portfolio is expected to generate diversification effects and improve the investment efficiency.

Accordingly, GPIF has increased investments in alternative assets since fiscal 2017. To fulfill the need for target asset-specific expertise, risk management in alternative assets covers assessment items specifically required for in alternative investments, in addition to those common to traditional assets.

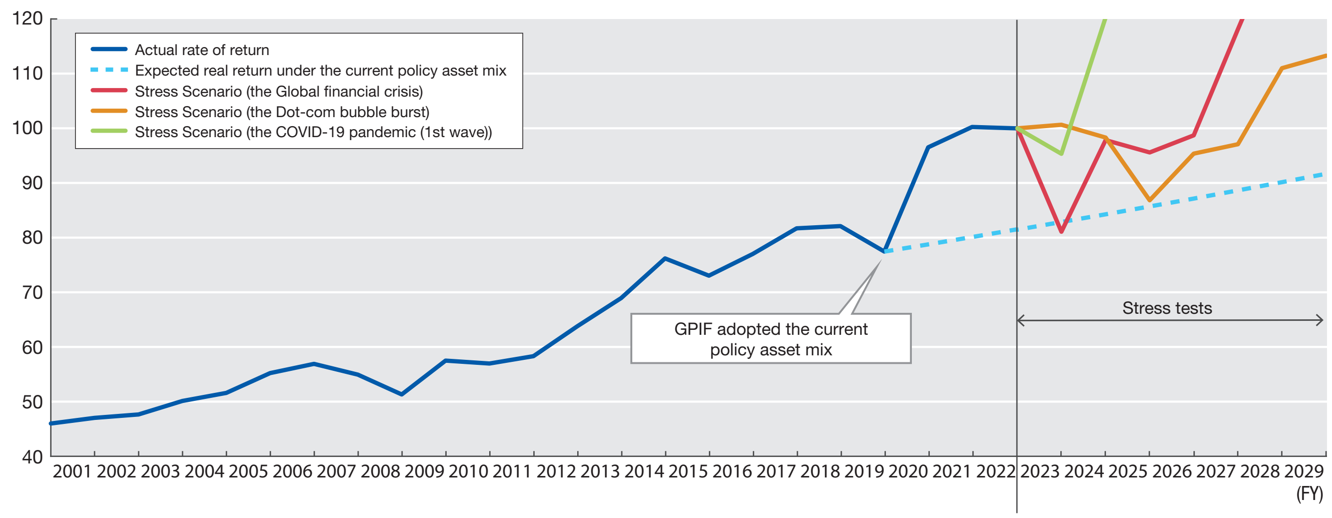
GPIF has established the necessary systems and is promoting initiatives aimed at comprehensive and detailed risk management. For details of these initiatives, see page 59.

[4] Risk management from a long-term perspective

① Stress tests

Stress tests are used as one of the approaches for measuring the impact on returns and capital in the event of a significant market movement, and determining a method to implement a proper measure accordingly.

It is essential that pension fund shall be managed safely and efficiently from a long-term perspective, and GPIF analyzes the impacts that might arise over the medium-to-long term. For a number of scenarios—the Global financial crisis scenario (2008-2009) in which the market fell sharply, the Dot-com bubble burst scenario (2001) in which the market was slow to recover, or a market decline scenario due to the COVID-19 pandemic (the first wave)—there were temporary impacts on the real investment yields obtained since the start of market investments, but the markets recovered thereafter and the expected level of investment yield was secured.

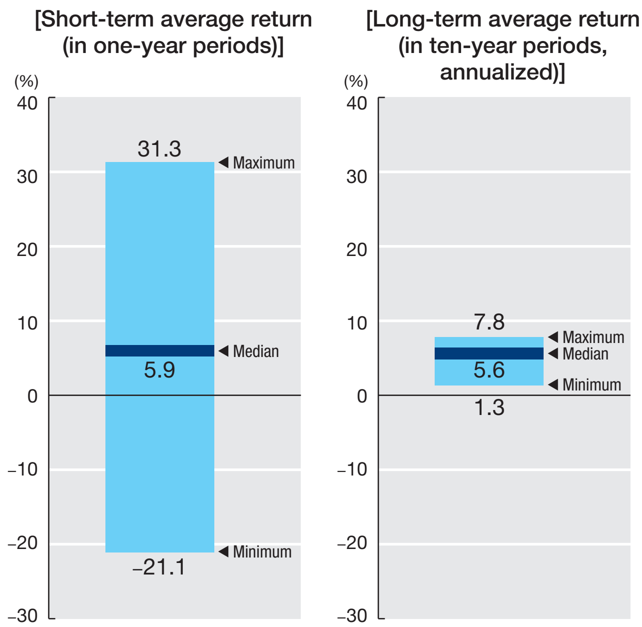


(Note 1) The investment results in the figure show a cumulative rate of investment return since 2001 {real return (net investment yield on the pension reserve fund less the nominal wage growth rate)}.

(Note 2) The vertical axis represents indexed numbers of a cumulative rate of return based on the starting point of the stress test (the actual rate of investment return as of Mar. 31, 2023) as 100.

② Risk reduction through long-term investment

In analyzing portfolio returns based on historical data, GPIF analyzed the distribution of returns by the current policy asset mix using the market's actual performance over the past 34 years. We found that, in the short term, there was a maximum single-year gain of over +30% and a maximum single-year loss of over -20%, suggesting the possibility of a temporary loss equivalent to the record-high earnings of fiscal 2020. However, returns are stable over the long term, and not a single ten-year period over the past 34 years has been negative. The policy asset mix was created to ensure 1.7% real return over the long term. We should not be overly preoccupied with market fluctuations. Nevertheless, GPIF envisions a variety of stresses that could occur in the near future and gives due consideration to such short-term risks in order to manage investment risks over the long term.



(Note 1) Average returns are calculated on the presumption of a rebalancing to the current policy asset mix at the end of each fiscal year.
(Note 2) The analyzed period spans 34 years from April 1985 to March 2019.

③ ESG investment expected to reduce risks from a long-term perspective

Given the fact that the law requires pension reserve fund should to be managed safely and efficiently from the long-term perspective, risk management based on the long-term perspective is further important for GPIF.

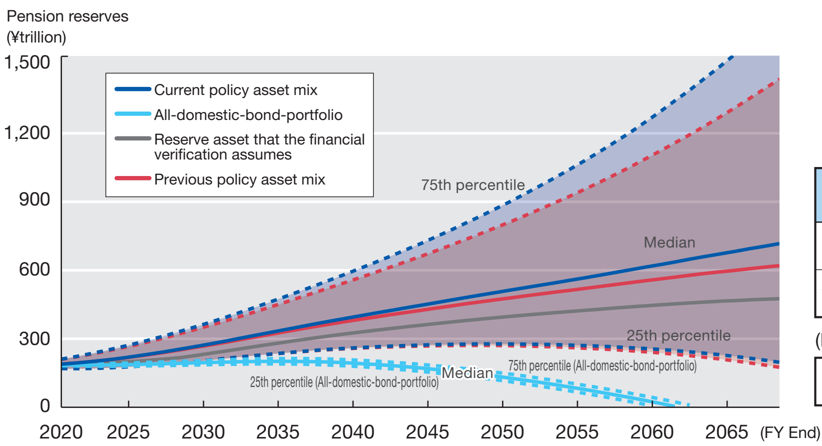
GPIF engages in ESG investment in order to reduce the negative externalities of environmental and social issues, etc., on capital markets, and thus improve the sustainable return from the whole assets, as GPIF is a "Universal owner" and "Cross-generational investor." We recognize that the longer the investment period, the more likely it is that ESG risks, such as climate change risks, will materialize. Accordingly, we believe that GPIF's focus on investment that takes ESG into consideration is highly meaningful.

④ Securing the amount of planned reserves

Another important issue is how to control risks that the amount of pension reserves falls below the amount of planned reserves in the long run. The current policy asset mix was formulated in fiscal 2019 through a process of simulation with a stochastic calculation using random numbers to confirm the risks of an inability to attain the amount of planned reserves on the financial verification. Thus, we managed to select the most efficient portfolio that seeks to minimize downside risks, while meeting investment objectives.

(Note) For details of the current policy asset mix, refer to pages 33-41.

Comparison with planned reserve



Probability (risk) of falling below planned reserves

(Unit: %)

	In 25 years (As of the end of FY2043)	In 50 years (As of the end of FY2068)
Current policy asset mix	38.1	39.8
All-domestic-bond-portfolio	100.0	100.0

(Reference) (Unit: %)

Previous policy asset mix	40.0	43.0

4 | Status of Investment in Each Asset Class

[1] Domestic bonds

① Excess rate of return

Concerning domestic bond investment, the excess rate of return over the benchmark (Note1) was -0.09%. The breakdown of the excess rate of return on domestic bond investment by factor is as follows: benchmark factors (Note2): -0.17%; fund factors (Note3): +0.09%; other factors (Note4): -0.00%.

(Unit: %)

Time-weighted rate of return ①	Benchmark ②	Excess rate of return ①−②	Benchmark factors	Fund factors	Other factors
-1.74	-1.65	-0.09	-0.17	+0.09	-0.00

(Note 1) The benchmark of domestic bonds is NOMURA–BPI (excluding ABS).
(Note 2) Benchmark factors refer to those resulting from differences in the rates of return between manager benchmarks and the benchmark (NOMURA–BPI (excluding ABS)).
(Note 3) Fund factors refer to those resulting from differences in rates of return between individual funds and manager benchmarks.
(Note 4) Other factors refer to calculation errors and such.

[2] Foreign bonds

① Excess rate of return

Concerning foreign bond investment, the excess rate of return over the benchmark (Note1) was +0.44%. The breakdown of the excess rate of return on foreign bond investment by factor is as follows: benchmark factors (Note2): +0.14%; fund factors (Note3): +0.30%; other factors (Note4): +0.00%.

(Unit: %)

Time-weighted rate of return ①	Benchmark ②	Excess rate of return ①−②	Benchmark factors	Fund factors	Other factors
-0.12	-0.56	+0.44	+0.14	+0.30	+0.00

(Note 1) The benchmark of foreign bonds is FTSE World Government Bond Index (not incl. JPY, CNY, no hedge/JPY basis).
(Note 2) Benchmark factors refer to those resulting from differences in rates of return between manager benchmarks and the benchmark (FTSE World Government Bond Index (not incl. JPY, CNY, no hedge/JPY basis)).
(Note 3) Fund factors refer to those resulting from differences in rates of return between individual funds and manager benchmarks.
(Note 4) Other factors refer to calculation errors and such.

[3] Domestic equities

① Excess rate of return

Concerning domestic equity investment, the excess rate of return over the benchmark (Note1) was -0.27%. The breakdown of the excess rate of return on domestic equity investment by factor is as follows: benchmark factors (Note2): -0.31%; fund factors (Note3): +0.05%; other factors (Note4): -0.01%.

(Unit: %)

Time-weighted rate of return ①	Benchmark ②	Excess rate of return ①−②	Benchmark factors	Fund factors	Other factors
5.54	5.81	-0.27	-0.31	+0.05	-0.01

(Note 1) The benchmark of domestic equities is TOPIX (incl. dividends).
(Note 2) Benchmark factors refer to those resulting from differences in rates of return between manager benchmarks and the benchmark (TOPIX (incl. dividends)).
(Note 3) Fund factors refer to those resulting from differences in rates of return between individual funds and manager benchmarks.
(Note 4) Other factors refer to calculation errors and such.

[4] Foreign equities

① Excess rate of return

Concerning foreign equity investment, the excess rate of return over the benchmark (Note1) was -0.05%. The breakdown of the excess rate of return on foreign equity investment by factor is as follows: benchmark factors (Note2): -0.08%; fund factors (Note3): +0.04%; other factors (Note4): -0.00%.

(Unit: %)

Time-weighted rate of return ①	Benchmark ②	Excess rate of return ①−②	Benchmark factors	Fund factors	Other factors
1.84	1.88	-0.05	-0.08	+0.04	-0.00

(Note 1) The benchmark of foreign equities is MSCI ACWI (not incl. JPY, JPY basis, incl. dividends, after taking into account GPIF dividend tax factors).
(Note 2) Benchmark factors refer to those resulting from differences in rates of return between manager benchmarks and the benchmark (MSCI ACWI (not incl. JPY, JPY basis, incl. dividends, after taking into account GPIF dividend tax factors)).
(Note 3) Fund factors refer to those resulting from differences in rates of return between individual funds and manager benchmarks.
(Note 4) Other factors refer to calculation errors and such.

5 | Investment in Alternative Assets

[1] Overview

Alternative assets are the generic term for investment assets that are "alternative" to traditional assets including listed equities and bonds. Among a variety of alternative assets, GPIF invests in infrastructure, private equity, and real estate. The 4th Medium-term Plan (from fiscal 2020 to fiscal 2024) stipulates alternative assets to be categorized into domestic bonds, foreign bonds, domestic equities, and foreign equities in accordance with risk-return profiles, and to be invested up to a cap of 5% of the total portfolio.

① Investment purpose

Alternative assets have different risk-return profiles from traditional assets such as listed equities and bonds.

Considering these profiles, the inclusion of alternative assets in GPIF's portfolio is expected to improve the investment efficiency and to contribute to the stability of overall pension finance. Also, alternative assets have lower liquidity while they produce higher investment return than so do traditional assets. As a long-term investor managing significant liquid assets, GPIF now strategically holds alternative assets with lower liquidity in the portfolio and aims to earn excess return with improving the investment efficiency of its portfolio.

Pension funds in other countries have been promoting diversification by investing in alternative assets for the aforementioned characteristics and effects. Prior to starting investment in alternative assets, GPIF carried out careful examinations in commissioned research projects. In particular, the research conducted in fiscal 2012 reported that the inclusion of alternative investments is expected to realize the investment premium for illiquidity and improve the efficiency of investment through diversification.

Alternative Assets

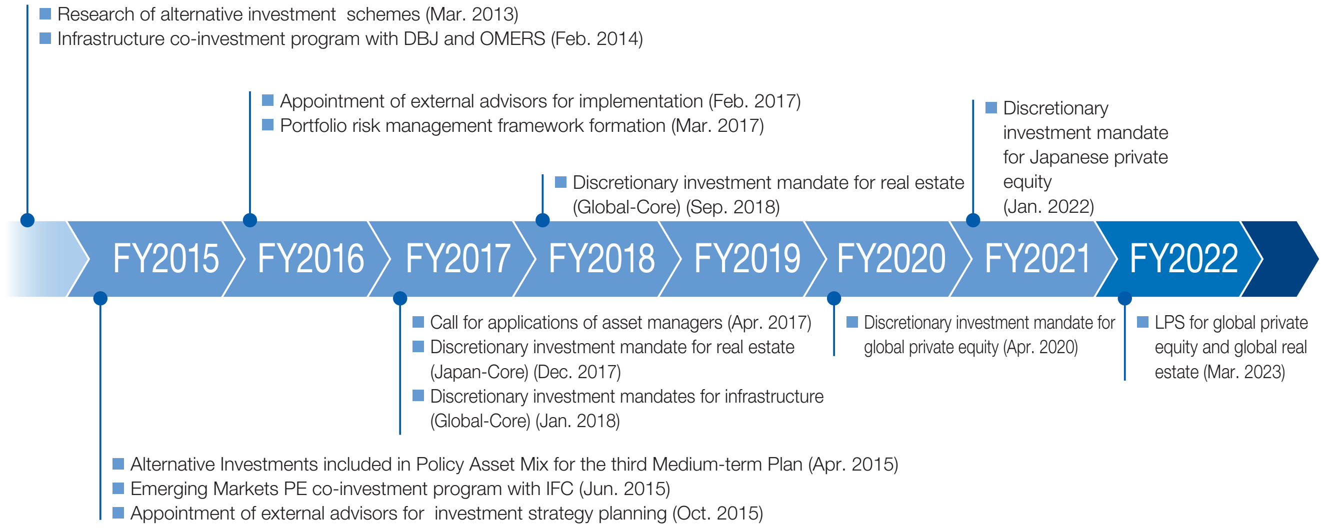
② Investment history

Based on the results of the above-mentioned commissioned research projects, GPIF has been investing in alternative assets through a co-investment platform with institutional investors since fiscal 2013 (in infrastructure since fiscal 2013 and in private equity since fiscal 2015).

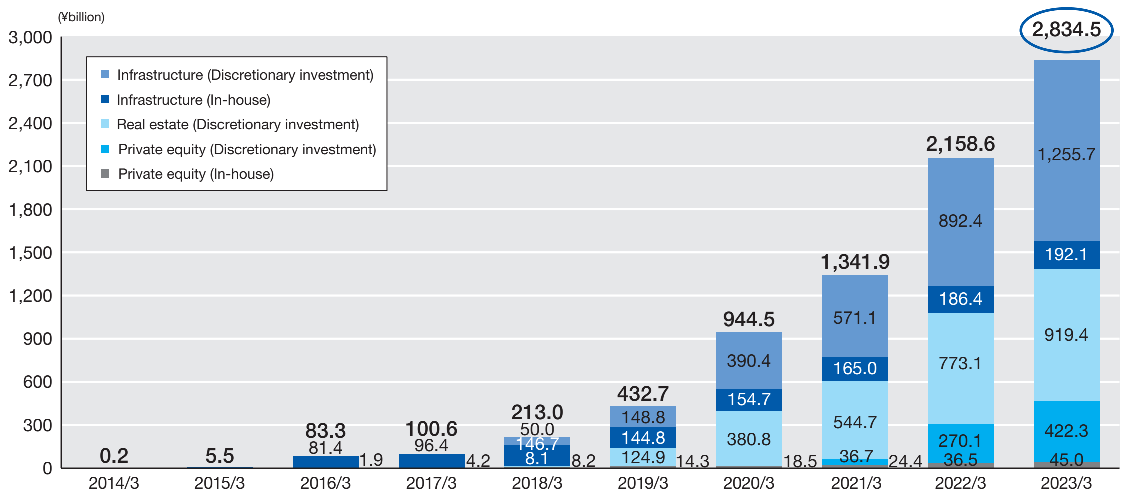
In fiscal 2017, GPIF started calling for applications from asset managers for alternative assets through the Asset Manager Registration System and went through the screening process for external asset managers (fund of funds managers who select multi-managers and gatekeepers who evaluate fund of funds managers' investment capabilities) for executing customized multimanager strategies* for GPIF.

GPIF has worked continuously to develop the organization for investing in alternative assets by various measures, such as establishing a specialized unit (Private Market Investment Department), employing experts, examining investment strategy by external advisors (since fiscal 2015), and developing a risk management framework. Considering the individuality of the investment performance and the low liquidity of alternative assets, risk management at the time of investment evaluation and after execution of investment is an important issue. GPIF will strive continually to enhance the framework for investing in alternative assets, including risk management.

* A multi-manager strategy is an investment approach to diversify the investment into multiple funds. A multi-manager strategy also called as a fund-of-funds, an investment vehicle where a fund invests in a portfolio composed of multiple other funds. GPIF selects external asset managers that execute multi-manager strategies for each investment style of alternative assets of GPIF, and gives discretion to the appointed external asset managers to make individual investment decisions.



Total value of alternative assets up until fiscal 2022



(Note) Please refer to the website (https://www.gpif.go.jp/investment/alternative/) for specific examples of investments in alternative assets (Japanese only).

Since we began investing in alternative assets, GPIF has been steadily building up our assets under management while developing our investment capabilities. The total value of GPIF's investment in alternative assets as of the end of March 2023 is ¥2,834.5 billion (1.38% of the total value of the pension reserve fund).

③ Activities in fiscal 2022

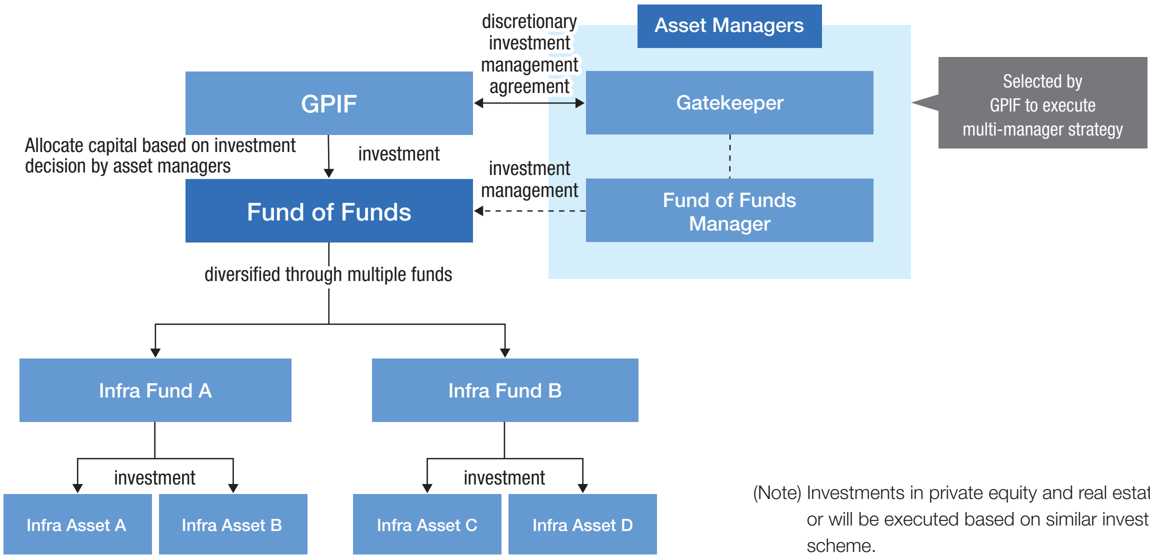
A. Call for application, selection of Gatekeepers and Fund of Funds managers

Following on from last year, GPIF called for applications from external asset managers in alternative assets by utilizing the Asset Manager Registration System and went through the screening process to select external asset managers that execute customized multi-manager strategies for GPIF.

We have started investments with newly selected global-core outsourced investment managers in the real estate field.

To select asset managers, a GPIF team conducts several rounds of screening, including application documents check, interviews, and on-site visits with external advisors to carefully examine the capabilities, investment strategies, investment track record, and risk management system, etc. of the prospective managers.

(Example) Infrastructure investment scheme



(Note) Investments in private equity and real estate are or will be executed based on similar investment scheme.

Investments are conducted based on a discretionary investment management agreement. Appointed asset managers set up a fund-of-funds solely for GPIF and invest in funds in accordance with the pre-agreed guidelines that define investment objectives, strategies, and certain restrictions, etc.

Each fund will then invest in individual alternative assets. However, it takes a certain amount of time from identifying investment opportunities to the completion of various investigations (due diligence). It is also important to diversify the timing of investment over multiple years for optimal portfolio time diversification. Therefore, it takes a long time to invest in alternative assets.

GPIF receives a periodic report on the status of portfolio assets and monitors the performance and risks. In addition, GPIF conducts annual comprehensive evaluation of external asset managers, and properly manages investment by confirming that their fund management team composition has not changed and by monitoring the progress of their investment plans.

B. Commencement of investment in limited partnerships (LPS)

By revising Ordinance for Enforcement of the GPIF Act in September 2017, interests in limited partnerships (LPS) as limited partners were added to the securities in which GPIF may invest directly. The expected benefits of directly investing in LPS include faster access to information on investees, improvement of net returns and enhancing risk management through simplified investment scheme with fewer intermediaries involved between investors and investees. Therefore, such investments in LPS have been generally adopted by institutional investors including pension funds in other countries to invest in alternative assets.

Following this revision of the Ordinance, GPIF has been preparing systems for initiating investments via LPS since fiscal 2017. In fiscal 2022, we concluded contracts for two private equity investments and one real estate investment.

C. Investment status of alternative assets

Investment status as of the end of March 2023

	Total of alternative assets	Infrastructure	Real estate	Private equity
Commitment amount (¥billion) (Note2)	5,123.2	2,040.3	1,913.6	1,169.3
Total value (¥billion)	2,834.5	1,447.8	919.4	467.3
Internal rate of return (IRR) up until fiscal 2022 (in JPY terms)	9.97%	8.44%	11.12%	16.46%
Domestic assets (in JPY terms) (Note3)	6.83%	4.99%	7.29%	-4.80%
Foreign assets (in USD terms) (Note4)	4.81%	3.88%	6.11%	7.41%
(in JPY terms) (Note5)	10.42%	8.59%	13.01%	16.50%

(Note 1) Each field is based on the sum of the funds-of-funds and investment trusts.
(Note 2) The capital commitment refers to the sum of the amounts agreed on as the maximum amount of capital to be contributed by GPIF to individual external asset managers at the start of investment.
(Note 3) The rates are based on the sum of the assets invested in domestic assets (currency: JPY).
(Note 4) The rates are based on the sum of the assets invested in foreign assets (currency: USD).
(Note 5) The amount of foreign currency-denominated assets is calculated by converting the amount into JPY.

(Column) Analysis on changes in market value in fiscal 2022

During the year beginning from the end of March 2022, the market value of GPIF's alternative assets increased by ¥675.9 billion. The increase can be mainly divided into five factors:

① Capital contribution to new investments (+¥596.8 billion):
A fund makes a capital call (request making capital contribution) to investors for executing a new investment. An investor makes a capital contribution to the fund, which increases the market value of alternative assets of the investor. In fiscal 2022, investments have been executed in all three asset categories of alternative assets.

② Distributions received (-¥111.3 billion):
When a fund receives the returns from investees and paid out the income and capital realized to an investor, this decreases the market value of alternative assets of the investor. In fiscal 2022, GPIF received distributions, mainly dividends from its investees in infrastructure.

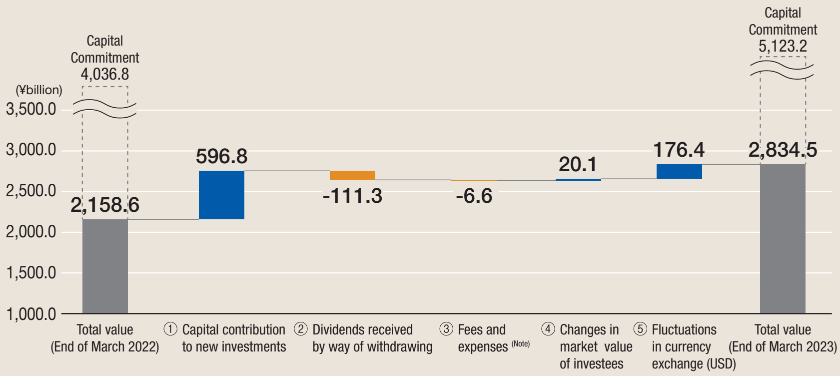
③ Fees and expenses (-¥6.6 billion):
The amount includes fees and expenses for acquisition and disposition incurred by fund-of-funds and investment trusts (equivalent to 0.25% of the average of outstanding amount of alternative assets in fiscal 2022).

(Note) The amount paid by investee funds-of-funds and investment trusts is added up by GPIF. The amount of investment trusts is a rough estimate.

④ Changes in market value of investees (+¥20.1 billion):
After a fund invested in alternative assets, the market value increases/decreases in accordance with unrealized gains or losses based on the valuation of the investee and realized gains or losses from the disposition of investees. In fiscal 2022, the overall increase was moderate.

⑤ Fluctuations in currency exchange (USD) (+¥176.4 billion):
In the event of foreign investment (currency: USD), the yen-equivalent market value may appreciate/depreciate due to a currency fluctuation between USD and JPY. It increased due to the depreciation of JPY in the first half of fiscal 2022.

Analysis on changes in the market value of alternative investments (from April 2022 to March 2023)



(Column) Method of measuring the rate of investment return on alternative assets

While the investment performance of listed assets such as equities and bonds instruments is often measured in the form of time-weighted rate of return, the investment performance of alternative assets is generally measured in the form of internal rate of return (IRR) since inception. The internal rate of return (IRR), also known as money-weighted rate of return, is a rate of investment return calculated with consideration of the timing and size of cash flow (including capital contribution and distributions) between investors and funds.

While traditional asset investment allows investors to specify the allocation of capital and the timing of withdrawals, alternative asset investment allows asset managers of the funds to specify the timing of acquisition and disposition of assets, request investors to contribute capital accordingly, and distribute the realized capital and income. Therefore, internal rate of return (IRR) is used based on the understanding that decision-making on the timing and the size of cash flows is part of the asset managers' investment capabilities. In GPIF's Annual Report, investment results of GPIF's overall assets including alternative assets are presented as time-weighted rate of return, while investment results of alternative assets are also presented as internal rate of return (IRR).

[2] Infrastructure

① Overview

Infrastructure investment means investing in assets such as power generation plants, electricity transmission grids, renewable energy, railways, and telecommunication infrastructure. Due to the stable revenues, which are expected to be derived from such infrastructure over the long term, infrastructure investment has become one of the important investment strategies for pension funds globally.

Currently, GPIF mainly focuses on investing in core infrastructure funds, which invest in assets essential for social and economic activities, under a well-established regulatory environment and is expected to generate stable revenues based on long-term contracts. Infrastructure assets invested through infrastructure funds will operate for a long time, generally more than 10 years, and invested capital shall be recovered as dividends funded by stable revenue as well as proceeds from sale of the assets to other investors.

② GPIF's investment

A. Investment approach

GPIF aims to earn stable returns from a diversified portfolio mainly as income gain through timely and efficient investment, in consideration of various market conditions.

B. Investment objectives and schemes

GPIF mainly invests in infrastructure funds which have equity stakes of infrastructure assets in operation.

(i) In-house investment in a unit trust

Based on the co-investment agreement with the Ontario Municipal Employees Retirement System (OMERS), a Canadian public pension fund with an extensive track record in infrastructure investment, and the Development Bank of Japan Inc. (DBJ), GPIF started investing in a unit trust that targets to invest in core infrastructure assets in operation in developed countries from February 2014.

(ii) Discretionary investment

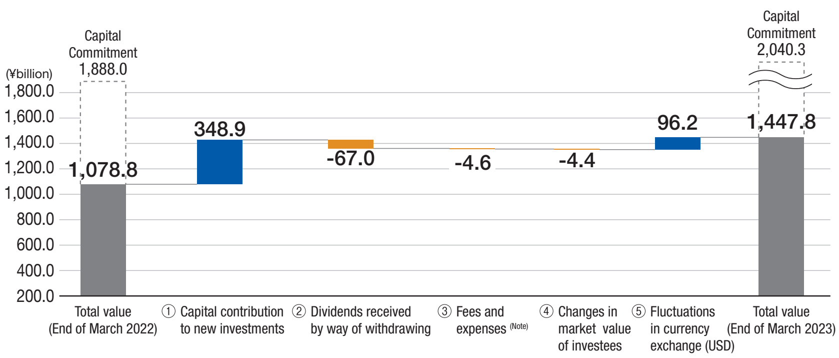
Throughout fiscal 2022, the following managers continued their investment activities and are constructing diversified investment portfolios focused on core infrastructure assets.

Asset manager name	Investment style	Start of investment
Gatekeeper: Sumitomo Mitsui DS Asset Management Company, Limited Fund of Funds Manager: StepStone Infrastructure & Real Assets	Global-Core	January 2018
Gatekeeper: Nomura Asset Management Co., Ltd. Fund of Funds Manager: Pantheon	Global-Core	February 2018
Gatekeeper and Fund of Funds Manager: DBJ Asset Management Co., Ltd.	Global infrastructure mandate focusing mainly on opportunities in Japan	March 2018

C. Investment status

The total value of GPIF's infrastructure investment as of the end of March 2023 was ¥1,447.8 billion, which increased by ¥369.0 billion from the end of March 2022. The total market capitalization of infrastructure assets increased mainly as a result of progress in new investments made through discretionary asset managers, as well as foreign exchange fluctuations. Dividends from our portfolio were also generated, as in the previous fiscal year.

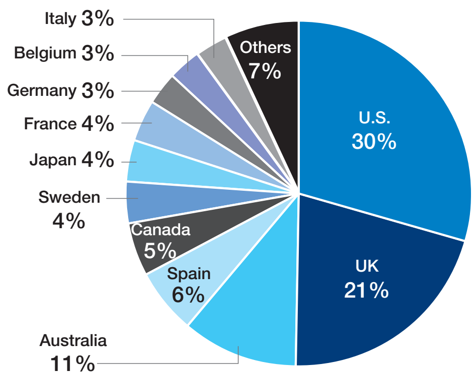
Analysis on changes in the market value of infrastructure (From April 2022 to March 2023)



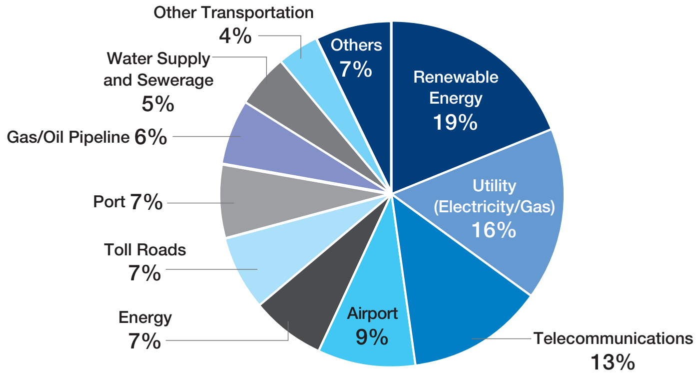
(Note) The amount paid by investee funds-of-funds and investment trusts is added up by GPIF. The amount of investment trusts is an estimate.

The breakdown of our infrastructure portfolio by country shows the U.S. with the largest share at 30%, followed by the UK at 21% and Australia at 11%. As for the breakdown by sector, the largest share went to renewable energy at 19%, followed by utility (electricity/gas) at 16% and telecommunications at 13%. GPIF expects stable revenue to be generated mainly from its diversified core infrastructure portfolio. Internal rate of return (IRR) from foreign infrastructure investment stood at 3.88% in USD terms (8.59% in JPY terms), and IRR from domestic infrastructure investment stood at 4.99% in JPY terms since its inception in February 2014. The total dividend (excluding repayment of principal) received from the unit trust and fund of funds during fiscal 2022 was ¥38.3 billion.

Value by country



Value by sector



[3] Private equity

① Overview

In private equity, GPIF invests primarily in funds with focus on equities of private companies (private equity, or "PE" funds). PE funds generally seek investment opportunities in companies at various development stages while diversifying investment timing. Types of PE funds include Buyout funds (seeking to create enterprise value of investee companies by improving post-investment management practices and corporate governance), Growth equity funds (providing capital for growth and expansion of companies), Venture capital funds (investing in start-up and early stage companies, etc. for growth potential), and Turnaround funds (seeking opportunities to turn around companies facing financial challenges through balance sheet restructuring, etc.). GPIF makes diversified investments in PE funds of these types.

② GPIF's investments

A. Investment approach

GPIF makes diversified investment in PE funds that primarily invest in equities of private companies at various stages of corporate development, such as start-up, growth, expansion, and turnaround, with the aim of acquiring relatively higher investment returns driven mainly by enterprise value creation, and contributing to the improvement of GPIF's overall portfolio returns.

B. Investment objectives and schemes

GPIF will invest in PE funds that invest in equities (private equity) of private companies.

(i) In–house investment in a unit trust

Based on the co-investment agreement with DBJ and the International Finance Corporation (IFC), a member of the World Bank Group, GPIF has held a unit trust that invests in PE of consumer-related companies, etc. in emerging markets since June 2015.

(ii) Discretionary investment

In fiscal 2022, the following asset managers continue to invest in diversified portfolio of multiple PE funds, mainly in developed countries.

Asset manager name	Investment style	Start of investment
Gatekeeper: Neuberger Berman East Asia Limited Fund of Funds Manager: NB Alternatives Advisers LLC	Global-Diversified Strategy	April 2020
Gatekeeper: Mitsubishi UFJ Trust and Banking Corporation Fund of Funds Manager: Hamilton Lane Advisors, L.L.C.	Global-Diversified Strategy	January 2021
Gatekeeper and Fund of Funds Manager: Mitsubishi UFJ Trust and Banking Corporation Investment Advisor to FoF Manager: Alternative Investment Capital Limited	Japan-Focused Strategy	January 2022

(iii) Investing in LPS with in-house investment

In fiscal 2022, GPIF entered into agreements to invest in PE funds with the method of investing in LPS.

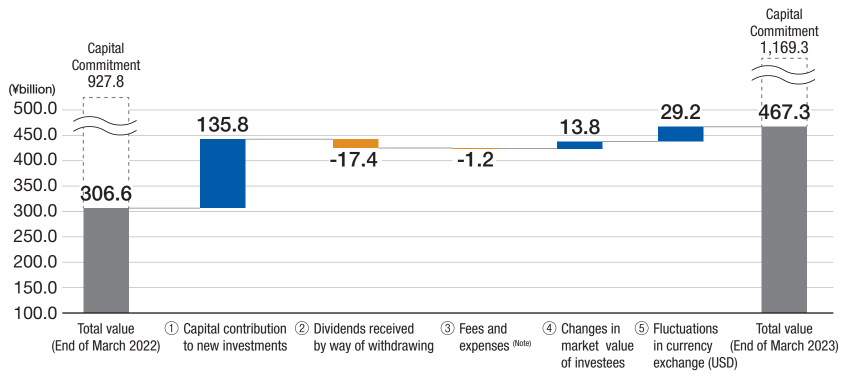
LPS name	Investment period (Note)	Start of investment
TA XV-B, L.P.	10 years	March 2023
Hellman & Friedman Capital Partners XI (Parallel), L.P.	10 years	March 2023

(Note) The period during which LPS is managed. It may be extended.

C. Investment status

The total value of GPIF's private equity investment as of the end of March 2023 was ¥467.3 billion. Those increased by ¥160.7 billion from the end of March 2022. The market value of the entire private equity portfolio increased due to new investments made mainly through discretionary asset managers as well as market value appreciation of portfolio companies and foreign exchange fluctuations.

Analysis on changes in the market value of private equity (From April 2022 to March 2023)

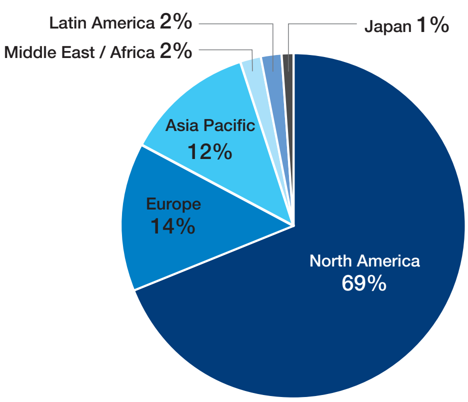


(Note) The amount paid by investee funds-of-funds and investment trusts is added up by GPIF. The amount of investment trusts is a rough estimate.

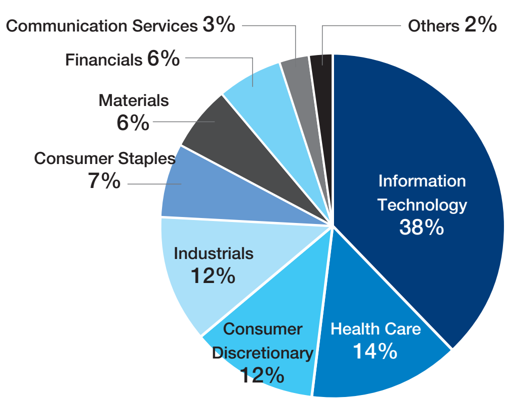
The breakdown of portfolio by region shows North America with the largest share at 69%, followed by Europe and Asia Pacific. By sector, information technology accounted for the largest share (38%), while other investments were diversified across a wide range of industries, including health care and consumer discretionary.

Since June 2015, when we began in-house investment in investment trusts, the internal rate of investment return (IRR, as of March 31, 2023) across all non-Japanese PE investments has been +7.41% in USD terms (+16.50% in yen), and the internal rate of investment return (IRR, as of March 31, 2023) across all Japanese PE investments has been -4.80% in yen terms.

Value by region



Value by sector



(Note) The data is broken down by region, as PE investments span a wide range of countries.

[4] Real estate

① Overview

GPIF's real estate investment focuses on real estate funds that hold properties such as logistics, offices, residential properties and retails.

GPIF mainly implements "core-style" investment strategy, which is expected to generate stable rental income from tenants, and this strategy has been adopted as the major investment strategy by pension funds in other countries as well. In the meantime, it is important to diversify the timing of investment and the type of investment products, considering the fact that the real estate market has cycles (prices fluctuate according to supply and demand and the financial market, etc.) and each investment amount/units tends to be relatively large. At the same time, it is necessary to engage asset managers and/or property managers, etc. to sustain asset value over the long term. GPIF promotes investments in a careful and strategic manner, taking into account the above-mentioned profiles of real estate investment.

② GPIF's investments

A. Investment approach

GPIF mainly targets stable returns in a timely and efficient manner, in consideration of various market conditions with the focus on diversified core real estate funds.

B. Investment objectives and scheme

GPIF will mainly invest in private real estate equities backed by the income stream from invested real estate assets.

(i) Discretionary investment

With an investment manager for domestic market appointed in 2017 and investment managers for foreign markets appointed in 2018 and after, GPIF has been building a global and diversified investment portfolio focused on its core-style investment strategy throughout fiscal 2022. We also selected new outsourced investment managers in the global-core JV/club type investments.

Asset manager name	Investment style	Start of investment
Gatekeeper and Fund of Funds Manager: Mitsubishi UFJ Trust and Banking Corporation	Japan-Core	December 2017
Gatekeeper: Asset Management One Co., Ltd. Fund of Funds Manager: CBRE Investment Management Indirect Limited	Global-Core Commingled Fund Investments	September 2018
Gatekeeper: Asset Management One Co., Ltd. Fund of Funds Manager: CBRE Investment Management Indirect Limited	Global-Core JV/Club Type Investments	February 2021
Gatekeeper: Mizuho Trust & Banking Co., Ltd. Fund of Funds Manager: LaSalle Investment Management, Inc.	Global-Core JV/Club Type Investments	September 2022

(ii) Investing in LPS with in-house investment

In fiscal 2022, we entered into an agreement to invest in a real estate fund with the method of investing in LPS.

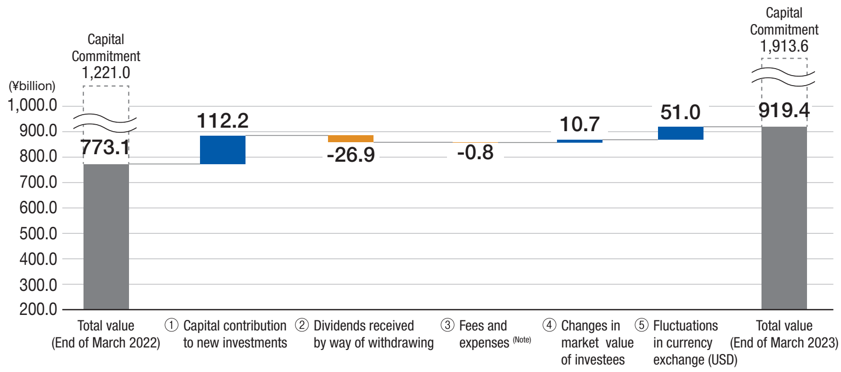
LPS name	Investment period (Note)	Start of investment
Blackstone Real Estate Partners X.F L.P.	10 years	March 2023

(Note) The period during which LPS is managed. It may be extended.

C. Investment status

The total value of real estate investment as of the end of March 2023 was ¥919.4 billion. It increased by 146.2 billion from the end of March 2022. The total market capitalization of real estate assets increased mainly as a result of progress in new investments made through discretionary asset managers, as well as foreign exchange fluctuations.

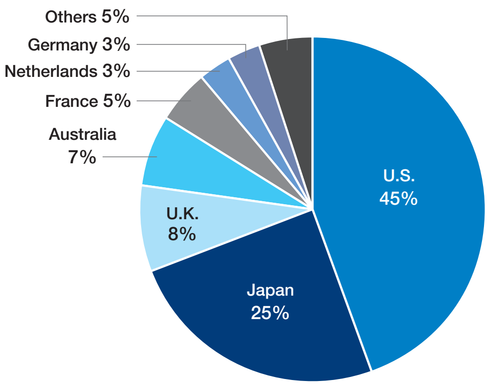
Analysis on changes in the market value of real estate (From April 2022 to March 2023)



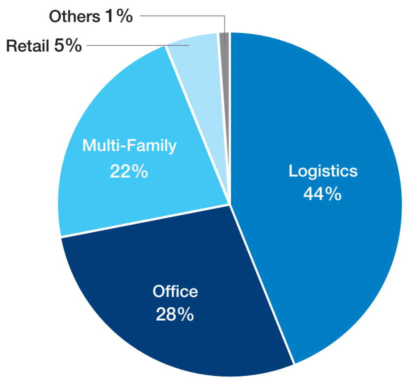
(Note) The amount paid by investee funds-of-funds and investment trusts is added up by GPIF. The amount of investment trusts is a rough estimate.

The breakdown of portfolio by country shows the U.S. with the largest share at 45%, followed by Japan (25%), UK (8%), and Australia (7%). As for the breakdown of the sector, logistics sector comprised the largest share at 44% of the total portfolio, followed by office at 28%, residential properties at 22%, and retail at 5%. The investment is diversified and focused on core-style real estate funds in advanced countries. Internal Rate of Return (IRR) of domestic real estate investment since December 2017 inception is 7.29% (yen-denominated), while that of foreign real estate investment since September 2018 inception is 6.11% (USD-denominated) (13.01%(yen-denominated)). Dividend received from the fund of funds in fiscal 2022 (excluding repayment of principal) was ¥22.5 billion in total. We will continue investing in real estate funds, while paying attention to the market circumstances, advised by external consultants.

Value by country



Value by sector

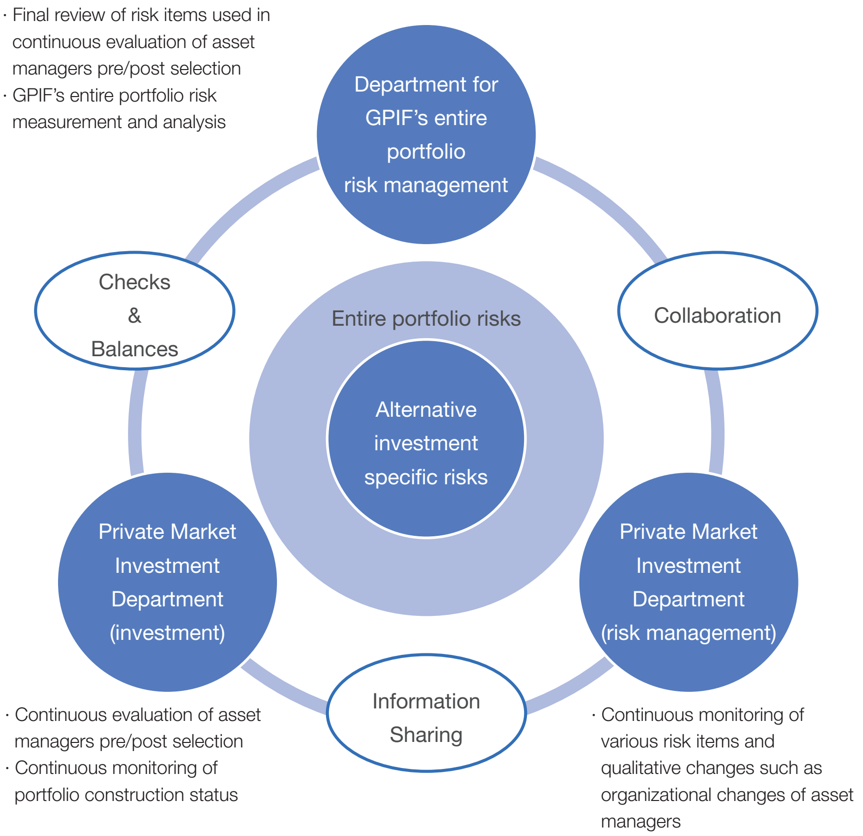


[5] Portfolio risk management of alternative assets

In fiscal 2022, GPIF further developed and strengthened its management system and pursued better risk management for alternative assets. It has enhanced dialogue and information sharing with external asset managers so that GPIF could understand more about portfolio companies for which there are concerns about worsening performance, it has also sought to gain a more in-depth understanding of their valuations, the factors causing their market valuations to fluctuate, including the background external environment, and measures to improve these factors. In addition to enhancing the existing monitoring system, we continue to conduct quantitative analysis to compare the investment performance of funds-of-funds managed by external asset managers with available market data, as part of our endeavor to improve the accuracy of our assessment of external asset managers, including traditional qualitative assessments.

For highly individualized alternative investments, it is extremely important to carefully examine and confirm the provisions of domestic and foreign laws, regulations, and contracts relevant to these investments, for which the Legal Department is conducting legal checks and taking other necessary steps.

<Portfolio risk management system for alternative investments>



Typical items common to traditional assets

- Market risk
- Liquidity risk
- Credit risk
- Country risk, etc.

For details, refer to page 42 "3 Basic Policy of Portfolio Risk Management"

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Typical items specific to alternative assets

- Expertise of asset managers specific to asset class
  (Changes in managers' expertise on investment decision-making)
- Organizational stability suitable for long-term investment
  (Revision of management organization and deviation from predetermined investment process)
- Validity of fair value measurement, etc.
  (Changes in investee's valuation and verification methods)
- Continuity of the business environment
  (Changes in legal and regulatory frameworks that could affect future cash flows of assets held)

Examples of risk events are shown in parentheses.

(Note) Above items are especially critical for alternative investments with lower liquidity.

(Note) With respect to the basic policy of GPIF's entire portfolio risk managements including alternative assets, refer to pages 42-46.

6 | Stewardship Responsibilities

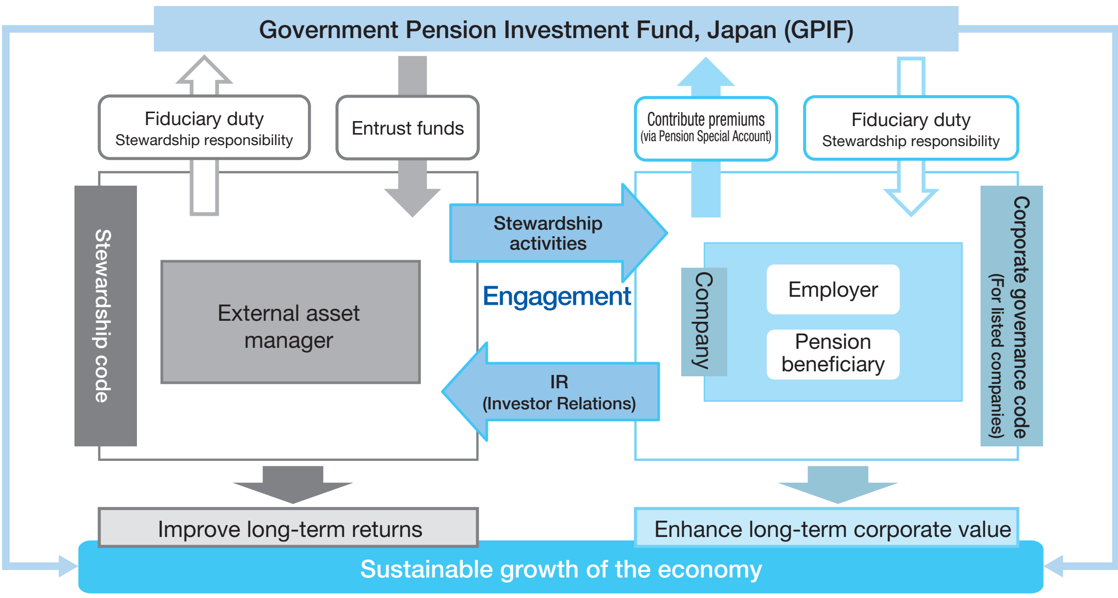
[1] Objectives and significance of stewardship activities

In the Investment Principles and the Code of Conduct, GPIF stipulates that we promote activities to fulfill our stewardship responsibilities(Note) (hereinafter "stewardship activities") with the objectives of appropriately fulfilling our responsibilities to pension beneficiaries as their fiduciary, and increasing investment returns over the long term. The Investment Principles were partially amended in October 2017 to stipulate that ESG (environmental, social, and governance) factors should be taken into consideration in stewardship activities.

As illustrated below, GPIF assumes stewardship responsibilities to pension beneficiaries, while external asset managers entrusted with investment by GPIF assume stewardship responsibilities to GPIF.

"Universal owner" and "cross-generational investor" are the key terms for GPIF to fulfill our stewardship responsibilities appropriately. As a "universal owner" (an investor with a very large fund size and a widely diversified portfolio) and a "cross-generational investor" (responsible for supporting pension finance with an investment horizon of as long as 100 years) to bridge the intergenerational gap of contribution, it is essential for GPIF to minimize negative externalities of corporate activities (environmental and social issues, etc.) and to promote steady and sustainable growth of the overall capital market as well as its underlying society. Except for some assets, GPIF makes daily transactions and investments, and exercises voting rights, via external asset managers. For this reason, GPIF encourages external asset managers to engage in "constructive dialogue" (engagement) with portfolio companies and issuers that also takes into account ESG, a non-financial factor. Through these efforts, we aim to build a virtuous cycle that will lead to the "growth of the overall economy" and "enhancement of investment returns over the long term" by promoting the "long-term enhancement of corporate value." In this way, GPIF shall continue to fulfill our stewardship responsibilities.

(Note) Institutional investors have stewardship responsibilities to enhance the medium- to long-term return on investments for their clients and beneficiaries by improving and fostering investee companies' corporate value and sustainable growth. They can do this through constructive engagement, or purposeful dialogue, based on in-depth knowledge of the companies and their business environment and consideration of sustainability (medium- to long-term sustainability including ESG factors) consistent with their investment management strategies.



[2] Stewardship activities fundamentals and progress

GPIF implemented stewardship activities on a full-scale basis following the adoption of Japan's Stewardship Code in May 2014. In March 2015, GPIF formulated the Investment Principles, which lay down its guiding principle that GPIF is committed to increasing investment returns over the long term for pension beneficiaries by conducting various activities to fulfill its stewardship responsibilities in equity investment. In September 2015, GPIF signed the Principles for Responsible Investment (PRI) introduced by the United Nations, as part of GPIF's efforts to enhance ESG implementation. In October 2017, GPIF revised the Investment Principles to expand the scope of stewardship activities to cover all asset classes, as it had been focused on equity investment, and made it clear that ESG factors should be considered in conducting stewardship activities. Following the revision of "the basic policy meant to ensure that the reserves are managed and invested safely and efficiently from a long-term perspective" ("Basic Policy of Reserves") and the 4th Medium-term Plan, the Investment Principles were revised again in April 2020. GPIF's stewardship activities are conducted in line with the Investment Principles and the Policy to Fulfill Stewardship Responsibilities, and they require external asset managers to comply with Stewardship Principles and Proxy Voting Principles.

① Policy to Fulfill Stewardship Responsibilities

On March 24, 2020, Japan's Stewardship Code was re-revised (hereinafter referred to as "re-revised Code"). The revision adds consideration of sustainability issues (medium- to long-term sustainability including ESG factors) in accordance with investment strategies to the definitions of stewardship responsibilities, while allowing application to a wider range of assets in addition to domestic listed equities. Following the revision, GPIF expressed our support for the re-revised Code, and partially revised the Policy to Fulfill Stewardship Responsibilities in June 2020. As a major change in the Policy in line with the Investment Principles, GPIF expanded the scope of investment target from equities to all types of assets. In addition, as a response to individual principles of the re-revised Code, GPIF clarified ESG considerations. GPIF will continue to fulfill responsibilities as an asset owner in line with the Stewardship Code in all asset classes.

② Stewardship Principles and the Proxy Voting Principles

In June 2017, GPIF established the Stewardship Principles and the Proxy Voting Principles. The objective of these two principles is to clarify the requirements and principles that external asset managers should observe in conducting stewardship activities, including the exercising of voting rights, which is a responsibility of a super long-term asset owner. GPIF requires external asset managers to comply with these principles, and if an asset manager should decide not to comply with any of them due to circumstances of their own, the said manager is required to explain to GPIF the rationale behind the non-compliance. In order to fulfill our own stewardship responsibilities, GPIF appropriately monitors the stewardship activities of external asset managers, including the exercise of voting rights, and proactively conducts dialogue (engagement) with them. The Stewardship Principles are comprised of the following five items.

<Stewardship Principles>

1 Corporate Governance Structure of Asset Managers
2 Management of Conflicts of Interest by Asset Managers
3 Policy for Stewardship Activities, including Engagement
4 ESG Integration into the Investment Process
5 Exercise of Voting Rights

In February 2020, GPIF revised the Stewardship Principles for the first time to expand the scope of stewardship activities, covering all asset classes, as it had been focused on the equity investment, and newly call for a collaboration of stewardship division and investment division at asset managers, a constructive dialogue (engagement) with a wide range of stakeholders such as index providers, and active participation in various ESG initiatives. Meanwhile, the Proxy Voting Principles made a reminder that an exercise of voting rights shall be made as part of a constructive dialogue throughout the year.

GPIF is founded on the Investment Principles, the Policy to Fulfill Stewardship Responsibilities, the abovementioned Stewardship Principles, and the Proxy Voting Principles. We will continuously examine appropriate stewardship responsibilities as a public pension fund and promote activities to fulfill our stewardship responsibilities.

③ Participation in global initiatives

Starting with the signing up of PRI in September 2015, GPIF has been participating in multiple global initiatives as follows. Through joining these initiatives, we broaden our knowledge on ESG issues and utilize such expertise for evaluating the stewardship activities of external asset managers.

Climate Action 100+

Joined in October 2018

A five-year initiative led by investors, established in September 2017. Via dialogues with companies that are significantly influential in formulating possible solutions to global environmental issues, it focuses on the improvement of climate change-related governance, initiatives for the reduction of greenhouse gas emissions, the enhancement of information disclosure, etc.

GPIF, as an asset owner, has also joined its Asia Advisory Group, which provides the steering committee with advice on the characteristics of the Asian region.

Signatory of: PRI Principles for Responsible Investment

Signed in September 2015

Six principles advocated in 2006 by the late Mr. Annan, then Secretary General of the United Nations. It demands institutional investors to include ESG in the investment process.

GPIF has joined the Asset Owner Technical Advisory Committee (until December 2022), the Global Policy Reference Group, the Japan Network Advisory Committee, etc. In the recent assessment, we were awarded ★★★★ ratings for Investment & Stewardship Policy.

30% Club GROWTH THROUGH DIVERSITY / THIRTY PERCENT COALITION

Joined the 30% Club in the UK, and the Thirty Percent Coalition of the U.S. in November 2016. Joined the 30% Club in Japan in December 2019.

Established to seek diversity in boards of directors, with the aim of achieving 30% female directors.

TCFD TASK FORCE on CLIMATE-RELATED FINANCIAL DISCLOSURES

Supported in December 2018

Established by the FSB (Financial Stability Board) at the request of the G20 Finance Ministers and Central Bank Governors Meeting. In June 2017, the TCFD published voluntary recommendations to encourage information disclosure on the financial impact of climate-related risks and opportunities to enable appropriate investment decisions by investors.

Council of Institutional Investors® The voice of corporate governance

Joined August 2019

Established by a U.S. public pension fund with the aim of promoting shareholders' rights and corporate governance and collaborating in the U.S.

ICGN International Corporate Governance Network

Joined in August 2019

An industry association established by institutional investors, focusing on improvement of corporate governance and encouragement of stewardship activities with the aim of promoting efficient markets and sustainable economy.

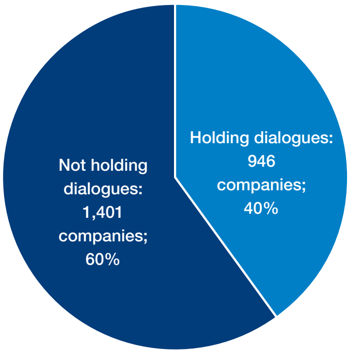
[3] Promotion of activities aimed at fulfilling stewardship responsibilities

① Initiatives for the sustainable growth of the whole capital markets

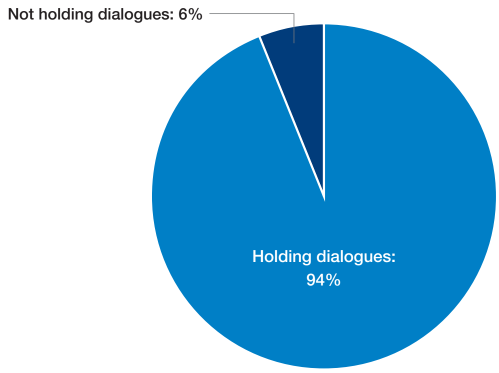
A. Engagement by external asset managers for domestic equities

GPIF emphasizes "constructive dialogue" (engagement) between external asset managers and portfolio companies/issuers, taking into account ESG, which are non-financial factors. The charts below show the status of engagement in relation to domestic equities by external asset managers for domestic equities (January to December 2022). GPIF's external asset managers for domestic equities conducted engagement with 946 companies between January and December 2022. In terms of the number of companies, engagement activities were performed with 40% of portfolio companies, and in terms of market capitalization, with companies equivalent to 94% of the total market capitalization.

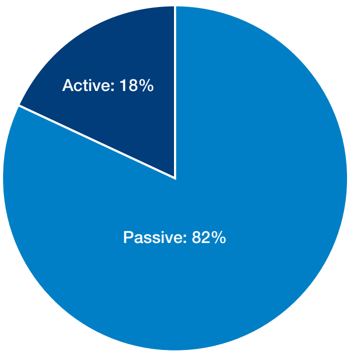
Number of companies that held dialogues



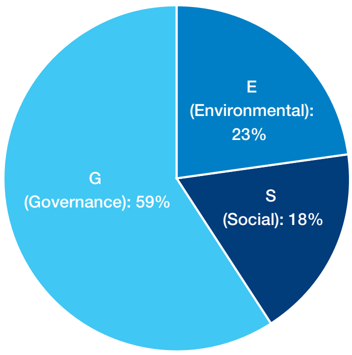
Ratio of companies that held dialogues (on a market capitalization basis)



Number of dialogues held (passive and active ratios)



Number of dialogues held (by theme)



B. Engagement-enhanced passive investment funds

(i) Status of adoption

GPIF has adopted "engagement-enhanced passive investment" funds as one of our passive investment models focusing on stewardship, and we have outsourced asset management to the four managers below. The themes of engagement and the range of target companies are also expanding, and we are making steady progress on engagement that utilizes the unique characteristics of each company.

Asset Management One Co., Ltd. (since fiscal 2018)
FIL Investments (Japan) Limited (since fiscal 2018)
Sumitomo Mitsui Trust Asset Management Co., Ltd. (since fiscal 2021)
Resona Asset Management Co., Ltd. (since fiscal 2021)

(ii) Purpose

About 90% of GPIF's equity is passively invested in a wide range of listed companies. Since long-term growth of the overall capital market is essential for GPIF to secure further investment returns, we believe that, in passive management, it is important to increase long-term corporate value of investee companies and, in particular, to conduct engagement in order to promote sustainable growth of the overall capital market from a long-term perspective. GPIF itself is not allowed to engage with investee companies, and needs equity passive managers to conduct the engagement, taking the above purpose into account. GPIF has come to the conclusion that domestic equity passive managers need to have an environment that allows them to continue conducting stewardship activities and conducting engagement with companies in a deeper and more sophisticated way. For this reason, GPIF has introduced a passive management model that focuses on stewardship. When appointing asset managers, we assess the extent to which their business models unify the investment process and a policy of stewardship activities, together with their organizational structure and fee levels employed to put these principles into practice. Since the fee level for these asset managers is different from that for a general passive manager, GPIF monitors the status of their achievement of KPIs to measure the success of engagement plans and verify and evaluate their milestones for the next fiscal year in order to determine whether to renew their asset management contract on an annual basis.

The re-revised Stewardship Code points out that both institutional investors and clients/beneficiaries should share the view that reasonable costs associated with the implementation of stewardship activities are a necessary cost of investment. It indicates that passive managers should implement engagement more actively from a medium-to long-term perspective as it is critical for them to encourage investee companies to improve their corporate value given their limited options for selling shares. GPIF fulfills its responsibilities as an asset owner, including the adoption of these funds.

C. Assessment of stewardship activities by external asset managers for fixed income investment

The re-revised Code clearly states that the Code can be applied to investments in assets other than equities. Accordingly, GPIF had considered assessment of stewardship activities by external asset managers for bond investment. Subsequently GPIF determined that stewardship activities by external asset managers for bond investment would be assessed, in terms of their contribution to encouraging sustainable growth of investee companies and thus reducing credit risks, and started the assessment in FY2022.

At this stage, it cannot be said that there is an established evaluation method for individual engagement activities related to fixed income. Accordingly, our assessment is based on whether organizations and human resources for conducting stewardship activities have been developed, such as stewardship policies and policies and systems for managing conflicts of interest. Specifically, we will confirm the following points.

- ✓ Framework (organizations, management of conflicts of interest)
- ✓ Endorsement status of Japan's Stewardship Code and the Principles for Responsible Investment (PRI)
- ✓ Policy for stewardship activities
- ✓ Response to the GPIF's Stewardship Principles (applicable items), etc.

② Other activities for enhancing investment chain

To further invigorate the investment chain, GPIF started conducting a survey of listed companies on external asset managers' stewardship activities. As part of efforts to promote dialogues between asset managers and investee companies, GPIF also publishes "excellent disclosures" selected by GPIF's external asset managers, and participates in organizations that promote disclosure in Japan. In support of the intent of the JPX ESG Knowledge Hub, we have participated as a supporter since its launch in November 2020. In February 2023, we also joined the ESG Disclosure Study Group.

A. Conducting a Survey of Listed Companies regarding Institutional Investors' Stewardship Activities

<Objective of the survey>

As GPIF entrusts domestic equity investment to external asset managers, we request them to enhance their stewardship activities. To ascertain how investee companies receive asset managers' stewardship activities, including engagement, GPIF conducted the first "Survey of Listed Companies regarding Institutional Investors' Stewardship Activities" in fiscal 2015, of JPX-Nikkei Index 400 companies. The purpose of this survey to listed companies is to examine the validity of the stewardship activities of asset managers by directly surveying listed companies that are the target of external asset managers' stewardship activities and to strengthen the investment chain by publishing the survey results. In fiscal 2022, GPIF conducted the eighth survey, by sending questionnaires to the First Section of the TOPIX constituent companies (2,162 companies*) for the purpose of assessing stewardship activities and "constructive dialogue (engagement)" of asset managers as well as understanding any changes during the year since the previous survey. 735 companies responded (accounting for 34.0%): 38.5% of Prime Market companies and 9.1% of Standard Market companies.

* The number of companies is as of December 23, 2022.

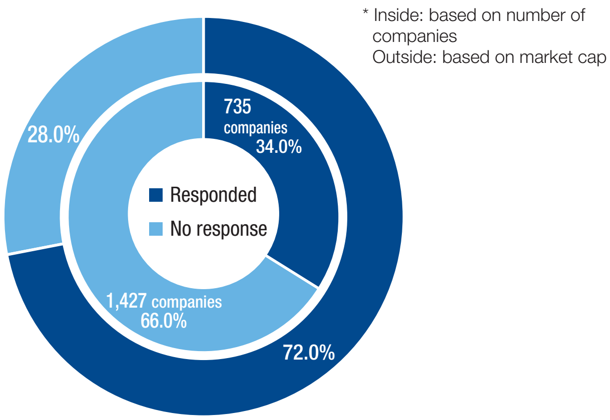
<Summary of the results of the survey>

The results of this survey confirm that engagement is growing in various ways. One-third of respondent companies have received requests for dialogue with non-executive directors and outside statutory auditors (hereinafter, NEDs), and dialogue with NEDs actually takes place at two-thirds of these companies. In addition, about 10% of companies received requests for collaborative engagement (constructive "purposeful dialogue" between multiple institutional investors and portfolio companies), and this proportion is likely to increase as both investors and companies prepare and develop suitable conditions for such engagement.

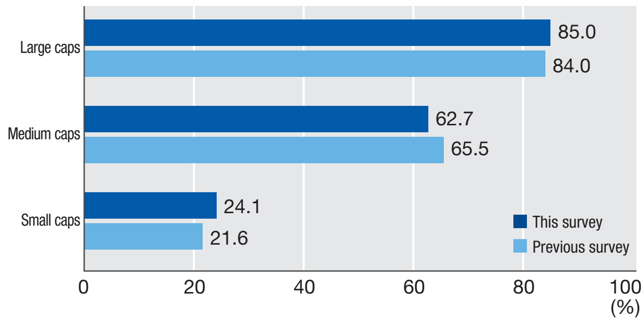
In terms of the important themes of ESG activities of companies, 82.3% (up 4.4% from the previous survey) answered "Climate Change," followed by 68.0% (down 3.7%) for "Corporate Governance," 57.0% (up 2.0%) for "Diversity," and 44.6% (up 1.4%) for "Human Rights and Community." In particular, regarding climate change, the Corporate Governance Code requires Prime Market companies to disclose information in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Accordingly, the number of companies with TCFD disclosure has increased, and there has also been progress in dialogue with institutional investors regarding the content of disclosure.

Many respondents stated that their expectations for GPIF included: (1) promotion of dialogue to improve corporate value over the medium to long term; (2) leadership and disclosure to upgrade the investment chain; and (3) the strengthening of ESG initiatives. For more details on the results, please refer to the website: https://www.gpif.go.jp/en/esg-stw/stewardship/

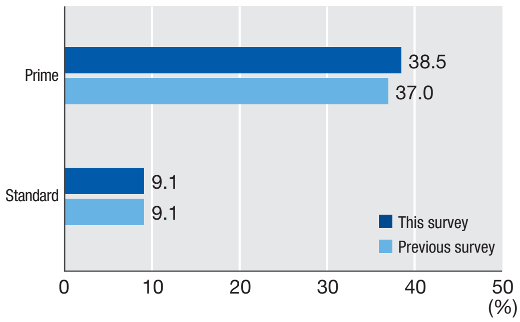
Response coverage rate



Response rate by company size



Response rate by market segment



B. Publication of “Excellent Disclosure” selected by GPIF’s asset managers

GPIF believes that disclosure is an extremely important element for investors engaging in dialogue with their investee. From this perspective, GPIF has asked our external asset managers to select excellent disclosure and published “excellent Integrated Reports,” “Most-improved Integrated Reports,” etc., to encourage companies to start creating and enhance voluntary disclosure such as integrated reports as well as to encourage investors to utilize such disclosure. In fiscal 2021, GPIF newly requested external asset managers for domestic and foreign equity investments to select excellent TCFD disclosure and published these selections.

[4] Material ESG issues recognized by external asset managers

In the Stewardship Principles, GPIF requires that our external asset managers should proactively engage with investee companies on material ESG issues. For this reason, each year GPIF asks our external asset managers to identify what they consider to be significant ESG issues. The results for fiscal 2022 were as follows. "Human Rights and Community" was newly identified as important ESG issues by all passive managers for domestic equities. All active managers for domestic equities newly chose "Climate Change" and "Capital Efficiency" as critical issues. This means that "Climate Change" is recognized as a critical issue by all asset managers for domestic equities. "Capital Efficiency" is also regarded as a critical issue by most asset managers for domestic equities. On March 31, 2023, the Tokyo Stock Exchange released its "Action to Implement Management that is Conscious of Cost of Capital and Stock Price," noting that about half of Prime Market companies have an ROE of less than 8% and a price/book ratio of less than 1x, which poses challenges in terms of capital profitability and growth potential. Based on these findings, Tokyo Stock Exchanges requested that listed companies analyze their current situation, formulate and disclose plans for improvement, and continue implementing initiatives. These requests are expected to result in an expansion of corporate initiatives and disclosure, and we believe they will further promote effective dialogue on "Capital Efficiency," which has long been cited as a critical issue by many outsourced investment managers for domestic equities.

<Passive managers of domestic equities>

Climate Change	**100%**
Supply Chain	**100%**
Disclosure	**100%**
Misconduct	**100%**
Corporate Governance	**100%**
Human Rights & Community	**100%**
Diversity	**100%**
Biodiversity	83%
Capital Efficiency	83%
Board Structure, Self-evaluation	83%
Minority Shareholder Rights	83%
Environmental Opportunities	67%
Waste Management	67%
Water Stress, Water Security	67%
Deforestation	67%
Anti-Corruption	67%
Labor Standards	67%
Health & Safety	67%
Others (Social)	67%
Product Liability	67%

<Active managers of domestic equities>

Climate Change	**100%**
Disclosure	**100%**
Minority Shareholder Rights	**100%**
Board Structure, Self-evaluation	**100%**
Capital Efficiency	**100%**
Misconduct	86%
Diversity	86%
Supply Chain	71%
Others (Governance)	71%
Corporate Governance	71%
Labor Standards	71%
Human Rights & Community	71%
Waste Management	57%
Biodiversity	57%
Environmental Opportunities	57%
Pollution & Resources	57%
Health & Safety	57%

<Passive managers of foreign equities>

Climate Change	**100%**
Disclosure	**100%**
Diversity	**100%**
Biodiversity	**100%**
Human Rights & Community	**100%**
Health & Safety	**100%**
Deforestation	**100%**
Others (Governance)	**100%**
Corporate Governance	75%
Board Structure, Self-evaluation	75%
Labor Standards	75%
Capital Efficiency	75%
Water Stress, Water Security	75%
Others	75%
Supply Chain	75%
Risk Management	75%
Minority Shareholder Rights	75%
Environmental Opportunities	75%
Others (Environment)	75%

<Active managers of foreign equities>

Climate Change	86%
Disclosure	71%
Corporate Governance	71%
Board Structure, Self-evaluation	71%
Diversity	67%
Biodiversity	57%
Human Rights & Community	57%
Health & Safety	57%
Labor Standards	52%

<Domestic bonds>

Disclosure	**100%**
Climate Change	93%
Corporate Governance	86%
Supply Chain	71%
Board Structure, Self-evaluation	71%
Human Rights & Community	71%
Misconduct	64%
Labor Standards	64%
Diversity	64%
Environmental Opportunities	57%

<Foreign bonds>

Climate Change	88%
Human Rights & Community	76%
Supply Chain	71%
Pollution & Resources	65%
Corporate Governance	65%
Diversity	65%
Waste Management	59%
Disclosure	59%
Anti-Corruption	59%
Deforestation	53%
Water Stress, Water Security	53%
Others	53%
Board Structure, Self-evaluation	53%
Health & Safety	53%
Product Liability	53%
Labor Standards	53%

…E (Environmental)
…S (Social)
…G (Governance)
…A multiple themes of ESG

(Note 1) A survey on external asset managers for equities and bonds was conducted in December 2022.

(Note 2) The ratios in the list above were obtained by dividing the number of external asset managers that selected the relevant issue as numerator by the number of external asset managers of each mandate (passive/active, domestic/foreign) as denominator.

(Note 3) "Material ESG issues" as pointed by more than 50% of the respondents are listed above. Items in red are issues pointed out by all of the respondents. When an asset manager is entrusted to both active and passive mandates, its answer is counted as the one with larger amount of mandate by GPIF.

[5] Exercise of voting rights

① Concept of the exercise of voting rights

The Medium-term Objectives established by the Minister of Health, Labour and Welfare stipulate that GPIF "should take appropriate measures including exercise of voting rights while giving due consideration to influence on corporate management." In this regard, GPIF in its Medium-term Plan states, "GPIF itself does not exercise voting rights and instead entrusts the external asset managers with the exercise of voting rights so as to avoid giving a direct influence on corporate management. However, from the viewpoint of further promoting its stewardship activities, GPIF shall conduct efficient engagement when entrusting an external asset manager, with an awareness of ESG (environmental, social, and governance) materiality that leads to long-term investment returns. When doing so, GPIF shall clarify that stewardship activities including the exercise of voting rights by our external asset managers aim to improve long-term investment returns solely for the pension beneficiaries."

External asset managers submit the guideline for voting and annually report voting results to GPIF. GPIF holds meetings with managers on the results, and evaluates the way in which a manager exercises voting rights in the annual assessment meeting, considering their exercise as an item of initiatives for fulfilling stewardship activities.

② Exercise of voting rights in fiscal 2022

GPIF held meetings based on the reports on the status of exercise of voting rights from April to June 2022. Based on these findings, we conducted an assessment from the viewpoints of "establishing of guidelines for the exercise of voting rights," "organizational framework," and "the status of exercise of voting rights." As a result, we confirmed that voting rights were appropriately exercised.

The status of exercise of voting rights by external asset managers for domestic equities (from April 2022 to March 2023)

Number of external asset managers who exercised voting rights: 31 funds

Number of external asset managers who did not exercise voting rights: none

(Unit: No. of proposals, percentage)

Proposal		Proposals pertaining to company organization					Proposals pertaining to director remuneration, etc.				Proposals pertaining to capital management (excluding items pertaining to amendment of the articles of incorporation)			Proposals pertaining to amendment of the articles of incorporation	Poison Pills (Rights plan)		Other proposals	Total
		Appointment of directors	External directors	Appointment of auditors	External auditors	Appointment of accounting auditors	Director remuneration	Director bonuses	Director retirement benefits	Granting of stock options	Dividends	Acquisition of treasury stock	Mergers, acquisition, etc.		Warning type	Trust–type		
Number of voting rights exercised		154,833	62,698	13,347	9,057	562	6,052	917	794	633	12,841	181	521	19,818	525	0	369	211,393
Management proposals	Total	154,365 (100.0%)	62,434 (100.0%)	13,285 (100.0%)	9,022 (100.0%)	562 (100.0%)	5,947 (100.0%)	917 (100.0%)	794 (100.0%)	633 (100.0%)	12,636 (100.0%)	0 (0.0%)	521 (100.0%)	17,898 (100.0%)	525 (100.0%)	0 (0.0%)	286 (100.0%)	208,369 (100.0%)
	Approved	136,319 (88.3%)	54,912 (88.0%)	11,884 (89.5%)	7,663 (84.9%)	562 (100.0%)	5,652 (95.0%)	781 (85.2%)	104 (13.1%)	485 (76.6%)	12,333 (97.6%)	0 (0.0%)	511 (98.1%)	17,617 (98.4%)	25 (4.8%)	0 (0.0%)	244 (85.3%)	186,517 (89.5%)
	Opposed	18,046 (11.7%)	7,522 (12.0%)	1,401 (10.5%)	1,359 (15.1%)	0 (0.0%)	295 (5.0%)	136 (14.8%)	690 (86.9%)	148 (23.4%)	303 (2.4%)	0 (0.0%)	10 (1.9%)	281 (1.6%)	500 (95.2%)	0 (0.0%)	42 (14.7%)	21,852 (10.5%)
Shareholder proposals	Total	468 (100.0%)	264 (100.0%)	62 (100.0%)	35 (100.0%)	0 (0.0%)	105 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	205 (100.0%)	181 (100.0%)	0 (0.0%)	1,920 (100.0%)	0 (0.0%)	0 (0.0%)	83 (100.0%)	3,024 (100.0%)
	Approved	83 (17.7%)	80 (30.3%)	16 (25.8%)	15 (42.9%)	0 (0.0%)	23 (21.9%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	44 (21.5%)	33 (18.2%)	0 (0.0%)	195 (10.2%)	0 (0.0%)	0 (0.0%)	21 (25.3%)	415 (13.7%)
	Opposed	385 (82.3%)	184 (69.7%)	46 (74.2%)	20 (57.1%)	0 (0.0%)	82 (78.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	161 (78.5%)	148 (81.8%)	0 (0.0%)	1,725 (89.8%)	0 (0.0%)	0 (0.0%)	62 (74.7%)	2,609 (86.3%)

(Note 1) If a proposal has multiple items to exercise, the number of votes exercised for each item is shown.
(Note 2) The figures in parentheses are percentages to the total number of votes exercised for each proposal.
(Note 3) The negative votes include 0 abstentions.

The status of exercise of voting rights by external asset managers for foreign equities (from April 2022 to March 2023)

Number of external asset managers who exercised voting rights: 47 funds

Number of external asset managers who did not exercise voting rights: none

(Unit: No. of proposals, percentage)

Proposal		Proposals pertaining to company organization			Proposals pertaining to director remuneration, etc.				Proposals pertaining to capital management (excluding items pertaining to amendment of the articles of incorporation)			Proposals pertaining to amendment of the articles of incorporation	Poison Pills for warning type	Other proposals		Total
		Appointment of directors	Appointment of auditors	Appointment of accounting auditors	Director remuneration	Director bonuses	Director retirement benefits	Granting of stock options	Dividends	Acquisition of treasury stock	Mergers, acquisition, etc.			Approval of financial statement, etc.	Other proposals	
Number of voting rights exercised		133,346	5,394	14,912	31,255	175	176	7,219	11,407	6,910	11,338	10,292	246	14,244	64,569	311,483
Management proposals	Total	132,058 (100.0%)	4,742 (100.0%)	14,855 (100.0%)	31,055 (100.0%)	175 (100.0%)	146 (100.0%)	7,192 (100.0%)	11,357 (100.0%)	6,908 (100.0%)	11,321 (100.0%)	9,568 (100.0%)	245 (100.0%)	14,244 (100.0%)	58,278 (100.0%)	302,144 (100.0%)
	Approved	106,579 (80.7%)	4,103 (86.5%)	12,692 (85.4%)	23,272 (74.9%)	146 (83.4%)	120 (82.2%)	4,448 (61.8%)	11,088 (97.6%)	6,627 (95.9%)	9,423 (83.2%)	8,284 (86.6%)	214 (87.3%)	13,571 (95.3%)	49,441 (84.8%)	250,008 (82.7%)
	Opposed	25,479 (19.3%)	639 (13.5%)	2,163 (14.6%)	7,783 (25.1%)	29 (16.6%)	26 (17.8%)	2,744 (38.2%)	269 (2.4%)	281 (4.1%)	1,898 (16.8%)	1,284 (13.4%)	31 (12.7%)	673 (4.7%)	8,837 (15.2%)	52,136 (17.3%)
Shareholder proposals	Total	1,288 (100.0%)	652 (100.0%)	57 (100.0%)	200 (100.0%)	0 (0.0%)	30 (100.0%)	27 (100.0%)	50 (100.0%)	2 (100.0%)	17 (100.0%)	724 (100.0%)	1 (100.0%)	0 (0.0%)	6,291 (100.0%)	9,339 (100.0%)
	Approved	883 (68.6%)	520 (79.8%)	46 (80.7%)	43 (21.5%)	0 (0.0%)	3 (10.0%)	18 (66.7%)	7 (14.0%)	1 (50.0%)	5 (29.4%)	283 (39.1%)	1 (100.0%)	0 (0.0%)	2,896 (46.0%)	4,706 (50.4%)
	Opposed	405 (31.4%)	132 (20.2%)	11 (19.3%)	157 (78.5%)	0 (0.0%)	27 (90.0%)	9 (33.3%)	43 (86.0%)	1 (50.0%)	12 (70.6%)	441 (60.9%)	0 (0.0%)	0 (0.0%)	3,395 (54.0%)	4,633 (49.6%)

(Note 1) Total number of votes exercised does not include the number of voting rights that were not exercised.
(Note 2) If a proposal has multiple items to exercise, the number of votes exercised for each item is shown.
(Note 3) The figures in parentheses are percentages to the total number of votes exercised for each proposal.
(Note 4) The negative votes include 5,633 abstentions.

7 | ESG Activities

[1] Basic approach

Universal owner

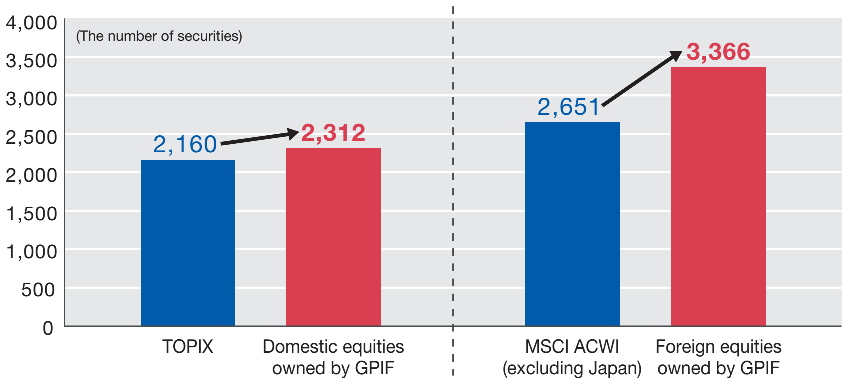
- GPIF is an investor with a very large fund size and a widely diversified portfolio.

Cross-generational investor

- GPIF is responsible for supporting pension finance with an investment horizon of as long as 100 years, over several generations.

As a "Universal owner" and "Cross-generational investor," GPIF is committed to promoting ESG investment in order to reduce negative externalities such as environmental and social issues, to improve the long term return of the portfolio across all assets. "Universal owner" is a term often used in relation to pension management and ESG investment, referring to an investor with a well-diversified portfolio that largely represents the world's capital market. GPIF is a typical "universal owner" with a broadly diversified portfolio comprised of equities and bonds of the majorities of Japanese listed companies and major foreign companies.

The number of securities owned by GPIF (as of the end of March 2023)



For instance, if the share prices of some portfolio companies increase as a result of conducting business activities without paying attention to their large impacts on the environment and society for the sake of shortterm revenue expansion, and society and the economy as a whole, including other companies, are negatively affected by such activities, the overall portfolio of a universal owner will be significantly impaired. In other words, the sustainability of the capital market and society is a prerequisite for the sustainability of universal owners' portfolios. The "universal ownership," the concept that universal owners conduct ESG activities proactively to control and minimize such negative externalities—lies at the core of GPIF's ESG investment. In addition, the longer the ESG risks persist, the more likely it is that they will materialize. Therefore, we consider that it has great benefits for GPIF to integrate ESG factors into its investment process as a cross-generational investor responsible for supporting pension finance designed with time horizon of as long as 100 years. In other words, conducting ESG activities that is expected to improve risk-adjusted returns of the portfolio over the long term by reducing the impact of negative externalities such as environmental and social issues in capital markets is consistent with the objective of the Employees' Pension Insurance Act and the National Pension Act to "manage pension reserves safely and efficiently from a long-term perspective solely for the pension beneficiaries." GPIF will continue to promote ESG in its investment.

GPIF conducts ESG activities not only for equities but also for other asset classes, including bonds and alternative assets.

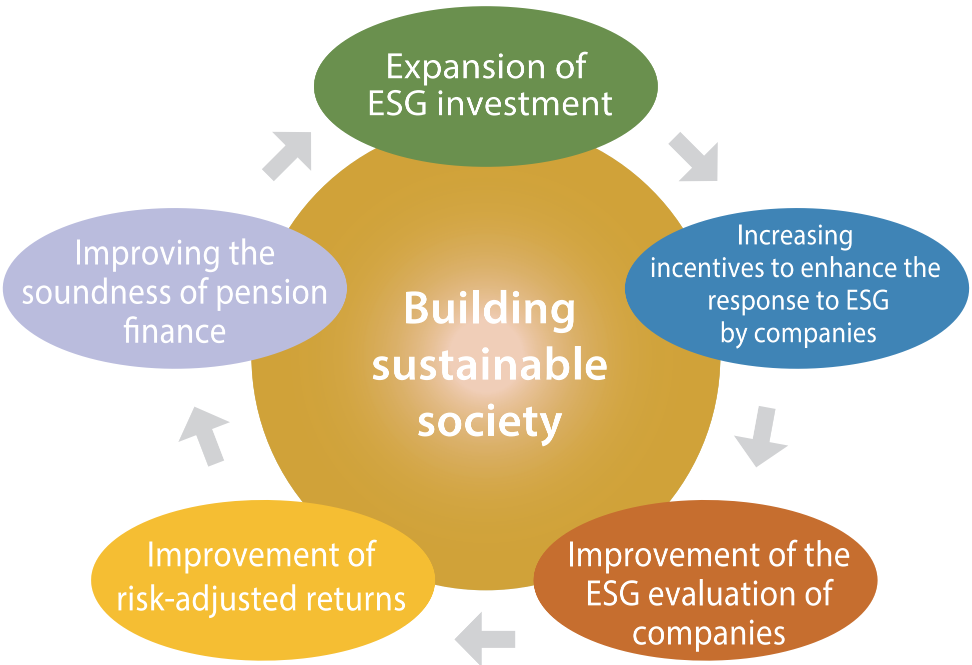
GPIF shall manage pension reserves in line with the basic policy that is meant to ensure that the reserves are managed and invested safely and efficiently from a long-term perspective (hereinafter referred to as the "Basic Policy of Reserves") announced in accordance with the Employees' Pension Insurance Act. The Basic Policy of Reserves was revised in February 2020, stipulating that the sustainability of investee companies and the overall markets will be critical for the improvement of long-term investment returns in the management of pension reserves. It also stipulates that the reserve funds shall implement the necessary initiatives by individually examining the promotion of investments that consider ESG (environmental, social, and governance) as nonfinancial factors in addition to financial factors, from the viewpoint of securing long-term investment returns for the interest of pension beneficiaries, adding provisions on specific ESG considerations (applicable from April 2020).

Evaluation of ESG promotion activities requires the following perspectives: (1) it takes a long period of time for the effects of ESG investment to materialize; and (2) ESG investment is also aimed at improving the sustainability of the entire capital market. These perspectives are different from general investment evaluation of how much investment returns are generated over a certain period.

In order to evaluate these ESG initiatives to confirm the effect of investment while ensuring the transparency, GPIF has published the ESG Report since fiscal 2018. In fiscal 2022, we published ESG Report 2021, the 5th issue. GPIF expressed our support for the declaration of the Task Force on Climate-Related Financial Disclosures (TCFD) in 2018, and has published the disclosure in line with the TCFD recommendations, starting from ESG Report 2018. ESG Report 2021 presents not only the performance of ESG indexes and other direct investment results, but also quantitative analyses of trends in ESG ratings of portfolios and Japanese companies, etc. A wide range of analysis of climate change risks and opportunities are provided in the "ESG Report" as well as in the "FY2021 Analysis of Climate Change- Related Risks and Opportunities in the GPIF Portfolio."

GPIF will continue verifying the effect of ESG initiatives to improve ESG related activities. Recently, among climate change related risks and opportunities and governance themes, investors and companies have been showing interest in initiatives and information disclosure related to natural capital and human capital. GPIF will continue to keep a watchful eye on these new movements, especially from the perspective of effects on GPIF's portfolio.

FY2021 Analysis of Climate Change-Related Risks and Opportunities in the GPIF Portfolio



[2] Passive investment based on ESG indexes

In fiscal 2017, GPIF selected two comprehensive indexes and one thematic index focused on gender diversity for domestic equities, and commenced passive investment tracking those indexes. The selection criteria for the ESG indexes included economic rationality based on the riskreturn profile of each index and the possibility of these indexes to boost the equity market in Japan through improvement of ESG evaluation.

In fiscal 2018, with climate change increasingly becoming serious, GPIF selected the S&P/JPX Carbon Efficient Index for domestic equities and the S&P Global Ex-Japan Large Midcap Carbon Efficient Index for foreign equities. These are equity indexes designed to measure the carbon efficiency of companies (greenhouse gas emissions divided by revenues) in the indexes and GPIF commenced passive investment tracking those indexes.

Moreover, in fiscal 2019, GPIF announced the launch of the “Index Posting System” (IPS)–a new framework for collecting index information on a continuous basis–in order to efficiently gather various index information for the purpose of enhancing our overall fund management.

In fiscal 2020, the Board of Governors passed a resolution on “Practical Guidelines for the Selection of ESG indexes” setting forth basic policies for selecting ESG indexes and, in accordance with these guidelines, GPIF began passive investment in foreign stocks tracking the MSCI ACWI ESG Universal Index and the Morningstar Gender Diversity Index (“GenDi”). In fiscal 2021, we began passive investment in domestic equities based on the FTSE Blossom Japan Sector Relative Index, a comprehensive ESG index for domestic equities.

In fiscal 2022, after a review of thematic indexes for domestic equities, we selected the following index and began passive investment of domestic equities based on this index, while also rebalancing within passive investment tracking the ESG indexes.

As of the end of fiscal 2022, total ESG index-based investments have grown to approximately ¥12.5 trillion.

Theme	Index Name
Thematic	Morningstar Japan ex-REIT Gender Diversity Tilt Index

<Characteristics of the Index>

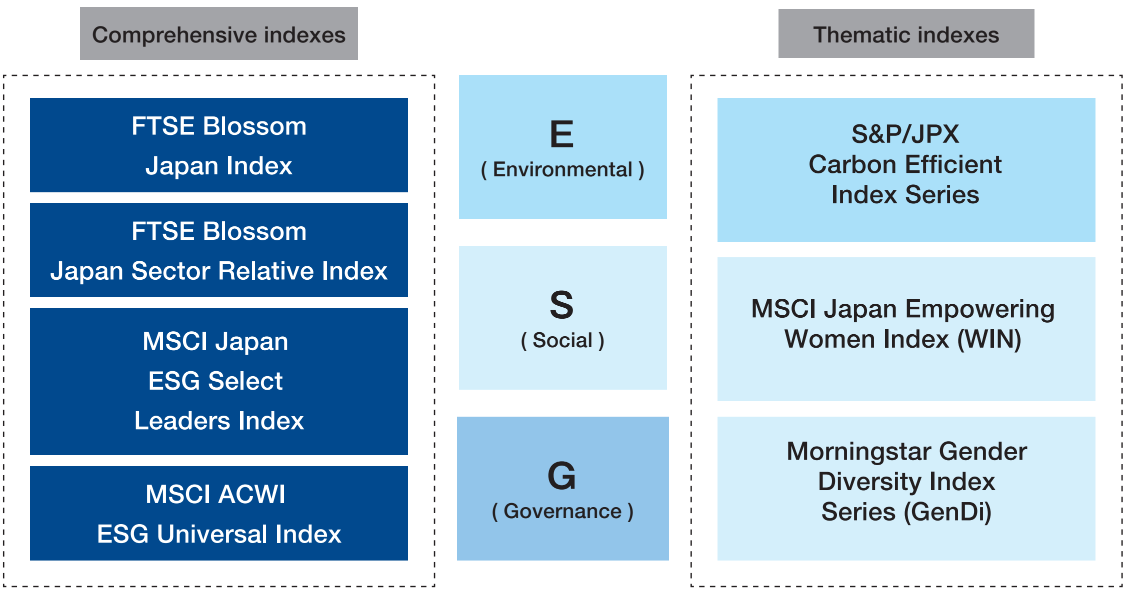
① The weighting of constituent stocks is adjusted based on the Equileap assessment of companies’ commitment to gender diversity.

② 928 companies are eligible for the index, covering a broad spectrum of domestic equities.

③ Industry sectors are neutrally weighted, achieving low tracking error and a low portfolio turnover rate.

We hope that these ESG indexes will serve as an incentive for various companies to introduce ESG into corporate management, and eventually improve corporate value in the long run.

List of selected ESG indexes



Domestic Equities: Comprehensive Indexes

	FTSE Blossom Japan Index	FTSE Blossom Japan Sector Relative Index	MSCI Japan ESG Select Leaders Index
Concept and characteristics of index	· This index uses the ESG assessment scheme used in the FTSE4Good Japan Index Series, which has one of the longest track records globally for ESG Russell indexes. · It is a comprehensive ESG index that selects stocks with high absolute ESG scores and adjusts industry weights to neutral at the industry level.	· Assessments are performed based on FTSE Russell's ESG rating which FTSE Blossom Japan Index also uses. For the companies with high carbon intensity (greenhouse gas emissions/ sales), management attitude toward climate-change risks/opportunities is also assessed. · The index selects stocks with relatively high ESG ratings within each industry, and adjusts industry weights to neutral.	· The MSCI Japan ESG Select Leaders Index is a comprehensive ESG index that integrates various ESG risks into today's portfolio. The index is based on MSCI ESG Research used globally by more than 1,000 clients. · The index is comprised of stocks with relatively high ESG scores in each industry.
Index Construction	Best-in-class	Best-in-class	Best-in-class
Constituent universe (parent index)	FTSE JAPAN ALL CAP INDEX [1,423 stocks]	FTSE JAPAN ALL CAP INDEX [1,423 stocks]	MSCI JAPAN IMI [1,083 stocks]
Number of index constituents	255	530	249
Assets under management	¥1,030.5 billion	¥1,001.6 billion	¥2,056.2 billion

Domestic Equities: ESG Thematic Indexes (women's advancement/climate change)

	MSCI Japan Empowering Women Index (WIN)	Morningstar Japan ex-REIT Gender Diversity Tilt Index ("GenDi J")	S&P/JPX Carbon Efficient Index
Concept and characteristics of index	· MSCI calculates the gender-diversity scores based on information disclosed under the Act on Promotion of Women's Participation and Advancement in the Workplace and selects companies with higher gender diversity scores from each sector. · The first index designed to cover a broad range of factors related to gender diversity.	· Domestic equities index that determines investment weighting based on assessment of companies' commitment to gender equality, using the Equileap Gender Equality Scorecard. · Ratings are conducted in four categories: (1) gender balance in leadership and workforce; (2) equal compensation and work-life balance; (3) policies promoting gender equality; and (4) commitment, transparency, and accountability.	· Constructed by S&P Dow Jones Indices based on carbon data provided by Trucost, a pioneer in environmental assessment. · This index is designed to overweight companies that have lower carbon footprints (annual greenhouse gas emissions divided by annual revenues) and that actively disclose their carbon emission information.
Index Construction	Best-in-class	Tilted	Tilted
Constituent universe (parent index)	MSCI JAPAN IMI TOP 700 [699 stocks]	Morningstar Japan ex-REIT Index [928 stocks]	TOPIX [2,160 stocks]
Number of index constituents	374	928	1,832
Assets under management	¥649.2 billion	¥520.6 billion	¥1,643.4 billion

Foreign Equities: Comprehensive Indexes and ESG Thematic Indexes (women's advancement/climate change)

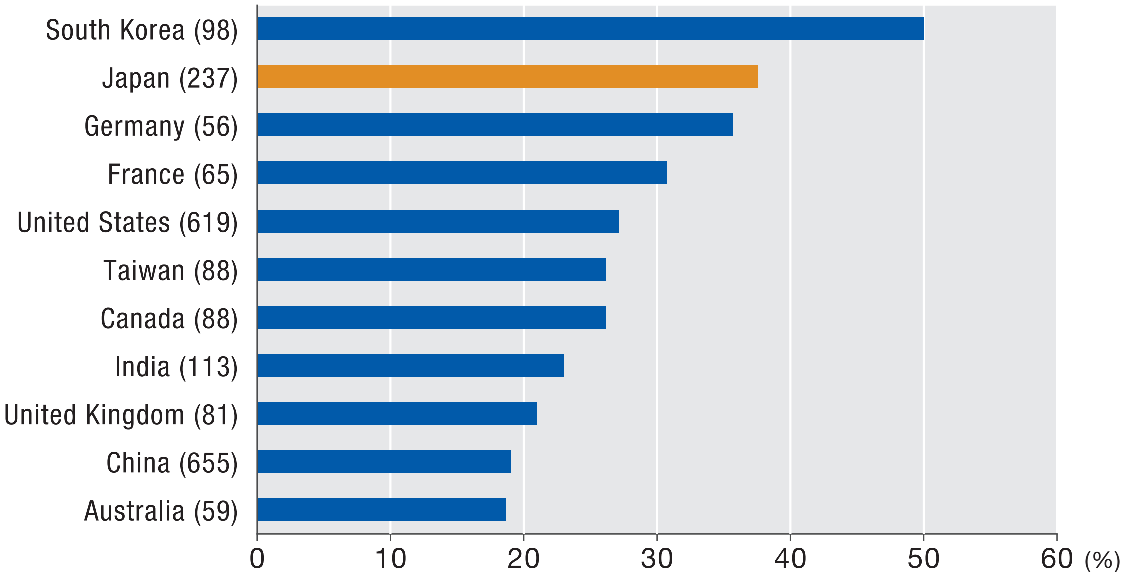
	MSCI ACWI ESG Universal Index	Morningstar Gender Diversity Index ("GenDi")	S&P Global Ex-Japan LargeMidCap Carbon Efficient Index
Concept and characteristics of index	· One of MSCI's flagship ESG indexes, this comprehensive index adjusts the weight of constituents based on each issuer's current ESG rating and ESG trends to elevate the ESG metrics of the index overall. · The index was developed for large investors seeking to enhance ESG integration while achieving the same level of investment opportunity and risk exposure as the parent index.	· Foreign equities index that determines investment weighting based on assessment of companies' commitment to gender equality, using the Equileap Gender Equality Scorecard. · Ratings are conducted in four categories: (1) gender balance in leadership and workforce; (2) equal compensation and work-life balance; (3) policies promoting gender equality; and (4) commitment, transparency, and accountability.	· Constructed by S&P Dow Jones Indices based on carbon data provided by Trucost, a pioneer in environmental assessment. · This index is designed to overweight companies that have lower carbon footprints (annual greenhouse gas emissions divided by annual revenues) and that actively disclose their carbon emission information.
Index Construction	Tilted	Tilted	Tilted
Constituent universe (parent index)	MSCI ACWI ex Japan ex China A ESG Universal with Special Taxes Index [2,148 stocks]	Morningstar® Developed Markets Ex-Japan Large-Mid [1,965 stocks]	S&P Global Ex-Japan LargeMidCap [3,174 stocks]
Number of index constituents	2,087	1,938	2,136
Assets under management	¥1,655.0 billion	¥488.4 billion	¥3,477.0 billion

(Source) Prepared by GPIF based on FactSet, etc.

(Note) Number of index constituents and assets under management are as of March 31, 2023.

GPIF believes that in order to encourage companies to address ESG issues and disclose information proactively, it is important to help them deepen their understanding of the principles of ESG evaluation and index construction. To promote such understanding, GPIF requests for index providers to publicly disclose ways in which they conduct ESG evaluation and construction of indexes, and to proactively engage with companies. It is hoped that this will lead to improvement in responses to ESG issues and information disclosure by Japanese companies.

Data Verification Rate of Companies by Countries in the ESG Evaluation Process



(Note) Universe is MSCI ACWI constituent companies. The above graph shows only the major countries with 50 or more MSCI ACWI constituent companies. The percentages are calculated using the number of companies that submitted data for verification on the Issuer Communication Portal (ICP) in 2022 and the number of constituents in the index as of the end of December 2022. The number of constituents is shown in parentheses.

(Column) “Measuring the Effects of Stewardship Activities and ESG Investment Project”

It takes a long time for stewardship activities and ESG investment to produce tangible results such as improving the sustainability of financial markets and boosting risk-adjusted returns. Therefore, to appropriately implement the PDCA cycle (Plan → Do → Check → Act) for stewardship activities and ESG investment, it is crucial to examine issues such as whether GPIF’s activities are connected with companies’ behavioral changes and higher ESG ratings, including causal effect between the two as a first step, without waiting for eventual outcomes such as more sustainable financial markets and higher boosting of risk-adjusted returns.

After the elapse of an appropriate period for data accumulation since the start of our stewardship activities and ESG investment, we have decided to collaborate with external consultants and researchers from academia to implement a review of the effects of these initiatives using statistical methods such as causal inference. The project is planned to launch in or after fiscal 2023. Through the appropriate implementation of the PDCA cycle, we will continue to improve and revise our stewardship and ESG investment initiatives.

	Project Themes	Details (Examples)
Measuring the effects of stewardship activities	Verification of the effects of engagement	Research into causal effect on ESG ratings and improvement of corporate value, caused by engagement
	Verification of the exercise of voting rights by asset managers	Trend analysis in voting behavior differences for companies with which they have a potential conflict of interest and other investee companies
Measuring the effects of ESG investment	Verification of the effects of passive equity investment based on ESG indexes	Analysis of the effects of ESG investment on corporate behavior
	Research into ESG factors that contribute to improving corporate value and investment returns	Research into the causal effect between ESG factors and corporate value/ investment returns

* Project themes and the timing of project implementation are subject to change

[3] ESG integration in fixed income investment

GPIF has established an investment platform which provides asset managers with an opportunity to invest in green, social, and sustainability bonds issued by multilateral development banks including the World Bank Group and government finance agencies of individual countries, which provide external asset managers with an opportunity for ESG integration in fixed income investment and obtaining excess returns. This initiative started with entering into a partnership with the International Bank for Reconstruction and Development (IBRD) and the International Finance Corporation (IFC) in April 2019, both members of the World Bank Group, and then expanded to major multilateral development banks including the European Investment Bank (EIB) and the Asian Development Bank (ADB). In addition to this, in 2019, GPIF also established partnerships with government finance agencies. As of March 31, 2023, we have built investment platforms with ten multilateral development banks and six government finance agencies. The investment in green bonds, social bonds (including COVID-19 bonds issued to finance solutions to the challenges from COVID-19) and sustainability bonds through these platforms reached ¥1.9 trillion as of the end of March 2023 (calculated by GPIF based on Bloomberg data for bonds in compliance with principles, etc. of International Capital Market Association (ICMA)).

GPIF promotes ESG integration not only in equity investment but also fixed income and other asset classes in order to reduce the negative impacts of environmental and social issues on capital markets, and improve long-term returns of our entire investment assets.

8 | Other Major Initiatives

[1] Call for applications for external asset managers and their management

① Call for applications through the Asset Manager Registration System

A. Status of registration from the Asset Manager Registration System

GPIF introduced the Asset Manager Registration System that covers all four traditional asset classes in February 2018. The status of registration of external asset managers as of the end of fiscal 2022 is as listed in the table.

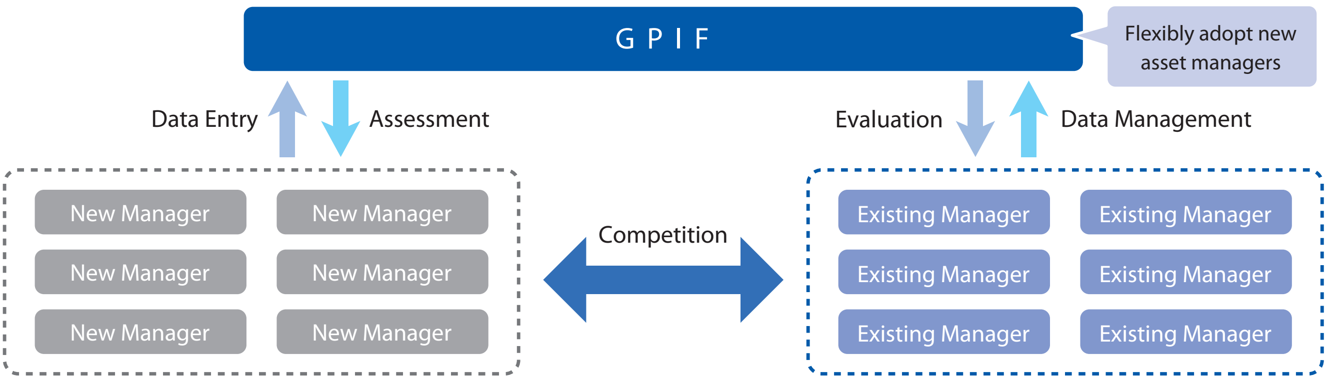
	The number of entries	The number of information provided
Domestic bonds	5	6
Foreign bonds	284	16
Domestic equities	44	4
Foreign equities	392	35
Public REITs	16	2

B. Selection of asset managers for four traditional asset classes

With the aim to improve the long-term return from the overall assets under management, we selected three passive domestic bond funds, four passive foreign bond funds, and 19 active foreign equity funds in fiscal 2022.

C. Call for applications for managers of alternative assets

GPIF has been calling for applications for asset managers who will implement multi-manager investment strategies for alternative assets (infrastructure, private equity, and real estate) since April 2017, with the aim of improving efficiency through investment diversification. Following the selection of one external asset manager for a domestic real estate mandate and three external asset managers for an infrastructure mandate in fiscal 2017, GPIF selected one external asset manager for a foreign real estate mandate in fiscal 2018, one external asset manager for a global PE mandate in fiscal 2019, one external asset manager for a global PE mandate and one external asset manager for a foreign real estate mandate in fiscal 2020, one external asset manager for a domestic PE mandate in fiscal 2021, and one external asset manager for a foreign real estate mandate in fiscal 2022. We have started investing in those assets.



② The selection process and screening criteria for external asset managers

A. In order to conduct each selection quickly and effectively, GPIF shall specify the profiles and investment capabilities of products and managers to select. In the first screening process, we check necessary qualification conditions of the applying managers. Then, in the second screening process, we examine the content of the application materials. Then, candidates are narrowed down to the third screening process, where we do thorough investigation for the final decision of selection. We used to finalize comprehensive assessment and adoption simultaneously, but has started to finalize only an assessment in the third screening process, and then make a final decision by considering the composition of external asset managers, so that we could improve the consistency of assessment.

B. In accordance with Stewardship Principles with a provision of "ESG Integration into Investment Process" requesting ESG integration to external asset managers, GPIF shall assess whether they integrate ESG in investment analysis and investment decisions explicitly and systematically on "Investment process," which is one of assessment criteria.

Selection Process for Asset Managers

Calling for applications through the Asset Manager Registration System

↓

Decision on selection criteria

- Investment Committee decides on the profiles and investment capabilities required for products and managers.

↓

First screening

- Based on the documents submitted by asset managers that applied for the Assert Management Registration System, asset managers subject to the second screening will be selected.
  - Requirements for public invitation, such as approval under relevant laws and regulations
  - Investment performance, etc.

↓

Second screening

- Based on carefully examined documents submitted by asset managers and information from an external database, as well as the results of interviews, if necessary, and screening to check if the profiles and investment capabilities meet the requirements, asset managers subject to the third screening will be selected.

↓

Third screening

- Interview will be conducted at the applicants' office to assess their investment system, capabilities, and the adequacy of their investment management fees to finalize the comprehensive score.

↓

Assignment of asset manager

- Based on the composition of external asset managers from the perspective of appropriate investment size and diversification of risk styles, asset managers will be assigned.
- The results of selection will be reported to the Board of Governors.

Assessment criteria

Qualitative assessment that takes into account quantitative performance

- Investment policies
- Investment process (including ESG integration)
- Organization and human resources
- Internal control
- Stewardship activities
- Administrative operation system
- Information security measures
- Information provision, etc.
- Investment management fees

③ Management and assessment of external asset managers, etc.

A. Management and assessment of external asset managers

For the management of external asset managers, GPIF requires the periodic submission of reports on the status of investment results and risks, confirms the status of compliance with investment guidelines and others, and holds meetings and receives explanations as necessary.

We conduct annual overall assessments as well. In fiscal 2022, we took appropriate measures, including requesting improvements to one active fund for foreign bonds whose assessment was below a certain level, and confirming improvements of one passive fund for domestic equities, whose assessment was low in the previous fiscal year, and raising its assessment accordingly.

In addition to the overall assessment, we also canceled one active fund for domestic bonds, three active funds for foreign bonds, and one active fund for foreign equities, owing to management and investment reasons. In addition, we cancelled one existing fund in accordance with our selection passive funds for domestic bonds.

Oversight of transition managers among the external asset managers is carried out by requesting submission of reports related to transactions when carrying out transitions, checking on transaction costs and compliance with investment guidelines, holding meetings as necessary to receive explanations, and so forth.

The remuneration system for active managers is based on a remuneration rate proportional to excess return (i.e., performance-linked remuneration), and remuneration is on par with that for passive managers (i.e., base remuneration) if excess return is not earned.

B. Management and assessment of custody service providers

GPIF manages custody service providers by conducting regular meetings, including online meetings, at which explanations are received on the progress of operations and such topics, and holding other meetings as needed to address specific issues. In addition, GPIF requests the submission of materials pertinent to custody services once a year to ascertain the custody service providers' organizations, human resources, operational structures, internal controls, asset management systems, global custody, and information security measures. Based on the information received, we conduct comprehensive evaluations of each custody service provider based on operational policies with an understanding of each custody service provider's strengths and issues.

C. Reviewing our asset management activities

In recent years, as GPIF's investment activities has become more diversified and sophisticated, the approaches taken by custody service providers has become more complicated. Facing this trend, GPIF has been optimizing our use of custody service providers (including the ones for global custody services) to accommodate further diversification and sophistication in our investments, based on comprehensive evaluations of the custody service providers and other factors including management costs and business continuity plans (BCP).

To precisely manage risks associated with the further diversification and sophistication of our investments and to enhance the effectiveness of our communications with external asset managers, it is necessary to collect transaction data more promptly than ever for risk analysis and other purposes. For this reason, we have established systems to collect data for investment decision, aside from accounting data collected from custody services providers, and we will continue studying how to approach operations related to the acquisition of data.

(Note) For the list of external asset managers, refer to pages 90·91.

[2] Promoting research and study

① Research

GPIF believes it necessary to conduct research and amass the know-how gained for safely and efficiently managing and investing pension reserves for the future.

In fiscal 2022, GPIF conducted the following two studies.

(Note) For the details of researches, refer to the website: https://www.gpif.go.jp/en/investment/research/.

A. Research related to quantitative analysis of the market impact of stock lending

In order to fulfill our stewardship responsibilities, GPIF requires external asset managers to work for the enhancement of long-term corporate value by appropriately exercising voting rights in all of their shareholdings and engaging in constructive dialogue (engagement) with portfolio companies not just at General Meetings of Shareholders, but throughout the year.

Owing to issues such as the transfer of ownership to borrowers and the lack of consistency with stewardship responsibilities, we suspended the lending of foreign equities in December 2019, following multiple discussions by the Board of Governors. Subsequently, as a result of discussions by the Board of Governors, we decided to quantitatively verify the impact of suspending stock lending on the market based on data.

In light of this background, we conducted research related to a quantitative analysis of the market impact of the suspension of stock lending, as well as qualitative analysis of the consistency of stock lending with ESG and stewardship responsibilities.

We analyzed the quantitative impact on the stock market and the stock lending market using statistical methods like a difference-in-difference analysis (DID method). With regards to the qualitative aspects, we surveyed the literature and conducted interviews with stakeholders.

We will consider our approach to stock lending based on the results of this research.

Commissioned to: EY Strategy and Consulting Co., Ltd.

B. Research related to the consideration of ESG and SDGs in investment

GPIF has promoted ESG (Environmental, Social, and Governance) factors – non-financial factors – incorporated investments with a thought that a sustainable growth of investees and the entire market is essential to achieve long-term expansion of investment return for the pension reserve investment management.

Sustainability-related fields such as ESG and SDGs are connected with a diverse range of research fields: not only conventional fields such as economics, finance, and financial engineering but also new areas such as environmental economics, climate science, and urban engineering. Active efforts are also being made to leverage data science to quantify non-financial information, which has been difficult to quantify so far.

In fiscal 2022, given this situation, GPIF embarked on a High-Level Study on the Integration of ESG and SDGs in Investment. In this high-level study, we conducted a wide-ranging survey of current academic research on the performance of investments in the sustainability field, including ESG and SDGs, to gain an understanding of the outline of representative papers published in Japan and overseas, and ascertain trends in analytical methods, etc. We also reviewed representative academic papers from Japan and overseas related to the following themes (1) to (3), which GPIF considers particularly important for promoting ESG investments and stewardship activities. Through this review, we developed an understanding of the details of analysis methods and research results, etc.

(1) Verifying whether ESG investments generate excess returns
(2) Verifying the risk mitigation effects of ESG investments
(3) Verifying the effectiveness of engagement

We also separately collected information on other interesting topics as necessary.

As a result, we learned the fact that many studies have shown positive relationship between ESG and investment performance, forming a consensus (in particular on the risk mitigation effects and the effects of engagement, more than 90% of the papers showed positive results).

This high-level study also suggested that research results are likely to vary due to different approaches (region of analysis, data period, author affiliation, etc.).

In addition, we were able to gain useful insights for future studies and analyses at GPIF. These include examples of research using causal analysis for engagement impact, as well as prior research considering spillover effect and market risk control effect, as ways of measuring market raising effects of ESG investments.

GPIF will refer to these results as we consider the promotion of ESG investments and stewardship activities.

Commissioned to: Mizuho–DL Financial Technology Co., Ltd.

Chapter 2 Roles and Organizational Operation of Government Pension Investment Fund

1 | GPIF's Roles in the Public Pension Scheme

[1] GPIF's position

① The pension finance system and GPIF

Japan's public pension scheme is fundamentally managed as a pay-as-you-go system that incorporates the concept of intergenerational support, whereby pension premiums collected from working generations support elderly generations, instead of the advance funding method whereby funds required to cover pension benefits are accumulated in advance.

Under the pay-as-you-go pension system, it is not generally necessary to hold a large amount of reserve funds, aside from a payment reserve. However, to respond to changes in the population and economy appropriately, and to prepare for further declining birthrate and aging population expected in the future, GPIF holds certain amount of reserve funds in the public pension scheme, while being managed under a pay-as-you-go system. It is stipulated that the portion of pension premiums not allocated to benefits will be invested as reserve funds to stabilize pension finance.

Japan's declining birthrate and aging population are progressing faster than in any other country. Under the pension system revision implemented in 2004 (hereinafter the "revision of 2004"), the pension premium level will remain fixed into the future and the finite period of financial equilibrium is set to be approximately 100 years, covering the period until the current population would finish receiving the pension premium. This measure was implemented in order to balance the pension finance over 100 years (the finite financial equilibrium method). However, the fixing of a funding source for future pension benefits also makes the amount of fund fixed. Therefore, a mechanism to automatically adjust the pension benefit and premium contribution (Macro-Economic Slide Formula) was also adopted in the revision of 2004. Through these measures, the sustainability of the public pension system is designed to be improved [(Note)].

There are three laws relevant to investment of pension reserve: the Employees' Pension Insurance Act; the National Pension Act; and the Act on the Government Pension Investment Fund as an Incorporated Administrative Agency (hereinafter the "Act on the Government Pension Investment Fund"). These laws provide that "the pension reserve shall be managed safely and efficiently from a long-term perspective solely for the pension beneficiaries" (Employees' Pension Insurance Act and National Pension Act) and "the pension reserve shall be managed safely and efficiently" (Act on the Government Pension Investment Fund). Accordingly, the most fundamental legal requirement for management of the pension reserve is "safe and efficient management of pension reserve from a long-term perspective."

As is the case in other incorporated administrative agencies (Act on General Rules for Incorporated Administrative Agencies), the relevant minister lays out the objectives of GPIF for a set period of time. "Objectives to be achieved by GPIF" (hereinafter the "Medium-term Objectives"), established by the Minister of Health, Labour and Welfare, stipulates that "GPIF is required to achieve a long-term real return (net investment yield on the pension reserve fund less the nominal wage growth rate) of 1.7% with minimal risks based on the current status and outlook for pension finance." In light of these requirements, GPIF, in its Medium-term Plan, established the asset allocation (policy asset mix) from a long-term perspective, on the premise of portfolio diversification, and carries out investment and management of pension reserve based on the policy asset mix.

(Note) For the revision of 2004 and the details of public pension scheme, refer to the website of the Ministry of Health, Labour and Welfare: https://www.mhlw.go.jp/index.html.

② Roles of reserve fund in pension finance

The reserve fund is to be used to stabilize pension finance. In the current system that aims at balancing pension finance in about 100 years, as mentioned above, a fiscal plan is drawn up to use the pension reserve. Under this plan, investment returns on the reserve fund should be paid as part of pension benefits initially. In addition to investment returns, the accumulated fund will be gradually withdrawn, after a set period of time. Ultimately, after 100 years or so, it is expected to maintain a reserve fund equivalent to one year of pension benefits. About 90 percent of the financial source of pension benefits (the average of approximately 100 years based on the assumption of financial verification) is funded by pension premiums and government contributions for the year, while the financial source obtained from the pension reserve (repayment of trust money or payment to national treasury) accounts for about 10 percent. The reserve fund may not be reduced for about the next 50 years or so. Moreover, GPIF owns a sufficient reserve fund necessary for the payment of pension benefits, and therefore short-term market fluctuations associated with the investment of pension reserve do not affect payments for beneficiaries. In other words, an unrealized gain or loss in a specific year may not be reflected in the amount of pension benefits in the following year.

[2] Regulatory requirements for pension reserve management and outline of Medium-term Objectives and Medium-term Plans

① Basic Policy for Investment Management

The Employees' Pension Insurance Act stipulates that the pension reserve fund, part of the premium collected from the pension beneficiaries, is a valuable source of funding for future pension benefits, and the purpose of investing the reserve funds is to contribute to the future stability of the public pension scheme through stable and efficient management from a long-term perspective solely for the beneficiaries. The Act on the Government Pension Investment Fund provides that GPIF must consider the impact of the management of the reserve fund on the markets and activities by other private sectors. The Medium-term Objectives of GPIF also stipulate that GPIF is not allowed to select individual stocks in equity investment.

○ Article 79–2 of the Employees' Pension Insurance Act (the same philosophy is stipulated in Article 75 of the National Pension Act)

"... the pension reserve, a part of the premiums collected from the pension beneficiaries, is a valuable source of funding for future pension benefits and... the purpose of the fund is to contribute to the future stability of management of the Employees' Pension Insurance through stable and efficient management from a long-term perspective solely for the pension beneficiaries of the Employees' Pension Insurance."

○ Article 20, Paragraph 2 of the Act on the Government Pension Investment Fund

"... GPIF must consider generally recognized expertise and domestic and overseas macroeconomic trends, as well as the impact of the pension reserve on the markets and other private sector activities, while avoiding concentration on any particular style of investment. GPIF's investment management should also satisfy the objectives under Article 79–2 of the Employees' Pension Insurance Act and Article 75 of the National Pension Act."

In light of these requirements, GPIF establishes the policy asset mix in the 4th Medium-term Plan for the five years from fiscal 2020 to fiscal 2024 from a long-term perspective, based on the philosophy of diversified investment. It is regarded that GPIF should take into consideration the reference portfolio jointly established by GPIF, the Federation of National Public Service Personnel Mutual Aid Associations, the Pension Fund Association for Local Government Officials, and the Promotion and Mutual Aid Corporation for Private Schools of Japan.

In addition to the formulation and publication of the specific policies on the management and investment of its pension reserve fund (Operation Policy), the Medium-term Plan requires GPIF to review the Operation Policy in a timely and proper manner in light of changes in the economic environment and revise it promptly as required.

② Investment objectives, risk management, ensuring transparency and others

In the 4th Medium-term Objectives for the period from fiscal 2020 to fiscal 2024 stipulate that the pension reserve must achieve a long-term real return (net investment yield on the pension reserve fund less the nominal wage growth rate) of 1.7% with minimal risks based on the financial verification. The 4th Medium-term Objectives also require GPIF to make efforts to pay close attention not to affect market pricing or investment activities by private sectors, and to achieve the benchmark rate of return (market average rate of return) for the total portfolio and each asset class during the period for the Medium-term Objectives.

Regarding risk management for the pension reserve, it stipulates that GPIF shall maintain the diversified portfolio, and manage and control risks of the overall portfolio, each asset class, each asset manager, and each custodian.

The 4th Medium-term Objectives stipulate that GPIF shall combine passive and active investments, implement active investment based on the strong conviction of the excess return, taking historical performance into account, and GPIF shall follow the concept that the sustainability of investee companies and the overall markets will be critical for the expansion of long-term investment returns in the management of pension reserves. Accordingly, GPIF shall promote investments that consider ESG (environmental, social, and governance) as non-financial factors, while paying attention to the fundamental policies on the management and investment of its pension reserve fund mentioning that the pension reserve shall be managed and invested for the purpose of securing long-term returns for the pension beneficiaries.

In addition, important matters regarding the introduction of new investment methods and investment targets, among others, shall be resolved upon the deliberation of the Board of Governors.

An outline of the deliberations at the Board of Governors is promptly published upon obtaining approval of the Board, so as to help ensure the transparency of GPIF's organizational operation.

③ Other important matters for pension reserve management

The 4th Medium-term Objectives call for thorough compliance with the duty of care and fiduciary duty of prudent experts.

When managing the pension reserve, GPIF is required to consider the market size, pay close attention to prevent exposure to unfavorable market impact, and avoid the extreme concentration of investing and/or withdrawing at one time.

GPIF is also required to take appropriate measures regarding the exercise of voting rights, and not to select individual stocks by itself, in due consideration of the impact on corporate management and others.

It also sets forth that GPIF should secure the liquidity necessary for pension payouts by taking into consideration the outlook for the pension finance and the status of revenue and expenditure. At the same time, GPIF is expected to enhance the functions necessary for assuring liquidity without shortages, including selling assets in a smooth manner while giving consideration to market price formation and other factors.

④ Enhancement of investment capabilities, improvement of operational efficiency

In the 4th Medium-term Objectives, GPIF is expected to clarify the area of operations requiring highly skilled professionals, while developing an environment for attracting such talent, to provide training by highly skilled professionals to improve the operational capabilities of our staff, and to formulate a policy to secure and foster human resources strategically. Regarding the validity of the remuneration level for highly skilled professionals, it also stipulates that GPIF shall explain clearly to the public the appropriateness by referring to comparable ones in the private sector.

Moreover, GPIF is expected to conduct more sophisticated risk management by performing a forward-looking risk analysis as well as a long-term analysis, and the Board of Governors shall monitor the management status of individual portfolio risks properly.

With regard to improvements in operational efficiency, the Objectives stipulate that the average cost savings during the Medium-term Objectives period should be at least 1.24% per annum compared to the previous fiscal year, based on the fiscal 2019 level. The cost-saving target includes general administrative expenses (excluding expenses related to computer systems and personnel expenses) and operational expenses (excluding expenses related to computer systems, fees for external asset managers, index fees, personnel expenses, and expenses related to short-term borrowing). Costs added or expanded pursuant to the December 2013 Cabinet Office decision and similar factors are excluded from the cost-saving target. Except for this additions or expansions, however, over 1.24% efficiency (annually by average) from the previous year is required, and the additions and expansions are ultimately included in the 1.24% cost-saving target from the following fiscal year onward.

⑤ Review of the Medium-Term Plan in relation to changes in Medium-term Objectives

In October 2022, changes were made to our 4th Medium-term Objectives. Our revised Medium-term Objectives newly indicate that the appropriate development and management of information systems will be carried out in accordance with the "Basic Policy on Development and Management of Information Systems" formulated by the Digital Agency (determined by the Minister for Digital Transformation on December 24, 2021).

In addition, in the 4th Medium-term Plan period, from the perspective of portfolio risk management, we are promoting initiatives such as flexible rebalancing and the use of stock index futures trading, while also diversifying and sophisticating our investments. However, as the frequency of rebalancing and the number of funds has increased, there has been a significant increase in data transfer with external asset managers, custody services providers, and other institutions. We face pressing issues such as improving data coordination between GPIF and external parties, in order to more accurately and efficiently transfer these enormous amounts of data.

In response to this, in January 2023, we revised our 4th Medium-term Plan to enable us to respond to new requirements indicated as a result of the aforementioned changes to the Medium-Term Objectives and provided additional budget for the development of necessary information systems and others.

We will promote initiatives such as developing infrastructure for data utilization, under our revised Medium-term Plan.

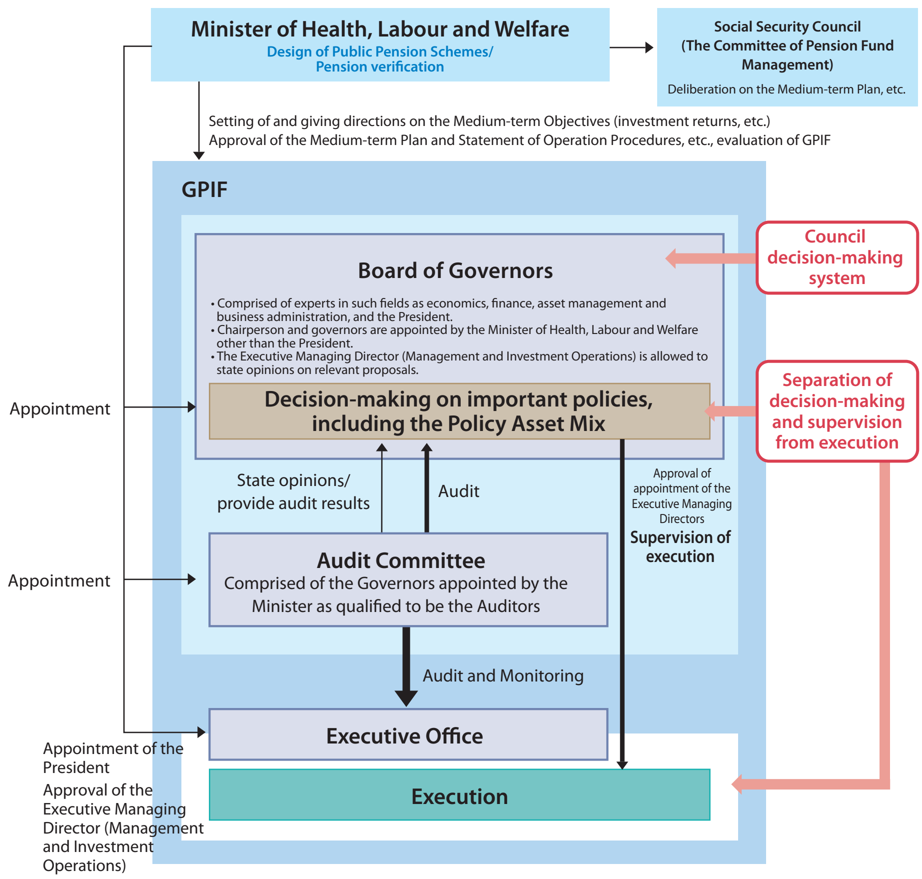
2 | Organization and Internal Control System

[1] Governance framework

GPIF has adopted a governance framework in which the Board of Governors, established in October 2017, operates on a majority vote decision-making system and has supervisory powers to determine whether decisions are properly executed. Three Governors concurrently serve as Auditors and form the Audit Committee, of which one is a full-time member. The Audit Committee carries out audits of GPIF's operations. In addition, the Audit Committee is entrusted by the Board of Governors with the authority to supervise the status of GPIF's operations executed by the President or Executive Managing Directors. The President presides over GPIF's operations in accordance with the provisions of Article 7, Paragraph 1 of the Act on the Government Pension Investment Fund. This governance system, including the majority vote decision-making system, ensures the separation of decision-making and supervision from the execution or implementation of said decisions.

The Board of Governors consists of 10 members: the President and nine professionals with an academic background or practical experience in economics, finance, asset management, business administration, and other fields relevant to GPIF's operations. Important decision-making carried out by the Board of Governors includes development of the policy asset mix and the Medium-term Plan, preparation of annual plans and annual reports, and decisions on important matters related to the organization such as staff size. It also includes the important matters relevant to the operation of GPIF, such as the formulation of basic policies of portfolio risk management and internal control, the establishment of organization rules, as well as the appointment of the executive directors.

It has been five years and a half since our governance system shifted from individual decision-making by the President to a majority voting at the Board. The root of the word "governance" is a Greek word meaning "steering." It is essential in the practice of governance to go beyond pro-forma development to promote substantive reforms of governance, and to carry out appropriate "steering" of the organization in an effort to make GPIF an organization worthy of greater trust from Japanese public.



[2] Board of Governors

At meetings of the Board of Governors, experts in various fields, such as economics, finance, asset management, and business administration, discuss a broad range of agenda items related to GPIF's investment and operation management from a multidimensional perspective and make timely and appropriate decision-making. The Board of Governors held a total of 13 meetings in fiscal 2022. An outline of the meetings is as described in the following table.

In fiscal 2022, the Board of Governors made resolutions on matters such as expanding the scope of research by external investment advisors who provide quantitative analysis and evaluation, and verification of the policy asset mix. The Board also received reports from the President or other executives on the asset allocation ratio and the status of portfolio risk management for active discussion. The details of discussion by the Board of Governors are published later on the GPIF website of as a summary of agenda items.

Outline of meetings of the Board of Governors

(fiscal 2022)

	Date of meeting	Main agenda items (only matters for resolution/deliberation are recorded)
67th meeting	April 21, 2022	—
68th meeting	May 27, 2022	(Resolution) Verification of the policy asset mix in fiscal 2021
69th meeting	June 10, 2022	(Resolution) Changes to the Statement of Operational Procedure in line with revisions to the Act on the Protection of Personal Information(draft) (Deliberation) (i) Annual Report fiscal year 2021 (draft), (ii) Review of operations in fiscal 2021 (draft), (iii) Preparation of the financial statements, business report, and financial report for fiscal 2021, appropriation of profit and loss and other important matters related to accounting (draft)
70th meeting	June 27, 2022	(Resolution) Annual Report fiscal year 2021(draft), (ii) Disclosure of portfolio holdings by asset category as of the end of March 2022, (iii) Review of operations in fiscal 2021 (draft), (iv) Preparation of the financial statements, business report, and financial report for fiscal 2021, appropriation of profit and loss and other important matters related to accounting (draft)
71st meeting	July 14, 2022	(Resolution) Expansion in the scope of research by external investment advisors who provide quantitative analysis and evaluation
72nd meeting	September 5, 2022	(Resolution) Establishment of regulations related to senior IT advisors (Deliberation) Matters for resolution at the Board of Governors, etc.
73rd meeting	October 11, 2022	(Resolution) (i) Partial revisions, etc., to the "Regulations on the Establishment, etc., of Regulations, etc." (related to matters to be resolved by the Board of Governors), (ii) Revisions to guidelines concerning the establishment of Project Team (PT) for Policy Asset Mix Verification, etc.
74th meeting	November 8, 2022	(Resolution) Revision of Regulation for Salaries of Employees (wage proper matrix for regular employees) (Deliberation) Change of the Medium-term Plan
75th meeting	December 12, 2022	(Resolution) Change of the Medium-term Plan
76th meeting	January 16, 2023	—
77th meeting	February 21, 2023	—
78th meeting	March 6, 2023	(Deliberation · Resolution) (i) Revision of the organizational rules, (ii) Revision of Regulation for Salaries of Employees, etc., (iii) Annual Plan for fiscal 2023 (draft)
79th meeting	March 30, 2023	—

Chapter 2

[3] Audit Committee

The Audit Committee executes its duties through staff members on the Secretariat for the Audit Committee, who assist the duties of the Audit Committee and are independent from the President and Executive Managing Directors. The Audit Committee also coordinates closely with the Internal Audit Department and the Account Auditor (Deloitte Touche Tohmatsu LLC).

The Audit Committee held 15 meetings in fiscal 2022. The Committee performed audits primarily from five perspectives: the status of achievement of the Medium-term Objectives; the status of execution of duties by the Board of Governors and Governors; the status of execution of duties by the President, other executives, and staff members; the status of the internal control system; and the status of accounting.

The Audit Committee, as part of the monitoring operation entrusted by the Board of Governors, attends committee meetings organized by the Executive Office, including the Investment Committee, the Portfolio Risk Management Committee, the Management and Planning Committee, the Procurement Committee, etc. as needed. The Audit Committee also assesses and analyzes the status and appropriateness of GPIF's operations through interviews with the person in charge of each department, the President, and Executive Managing Directors, as well as investigations at times. Then the Audit Committee reports and shares information obtained through these activities with the Board of Governors as appropriate, and gives opinions to the Board and the President on organizational management issues in order to further strengthen internal controls.

The results of these audits are published as the Audit Report on GPIF website.

[4] Execution system

① Organization

As of April 1, 2023, GPIF has 12 executives, consisting of the Chairperson of the Board of Governors, eight Governors (including three Governors concurrently serving as Auditors), the President, and two Executive Managing Directors (one for Planning and General Affairs and the other for Management and Investment Operations who is serving as the CIO), as well as 160 staff members (including 35 female staff members (excepting part-time staffs)).

To diversify our investment and improve risk management, GPIF strives to secure and train highly qualified and specialized personnel. We have promoted the recruitment of qualified experts in various fields, including securities analysts, attorneys, MBAs, and real estate appraisers.

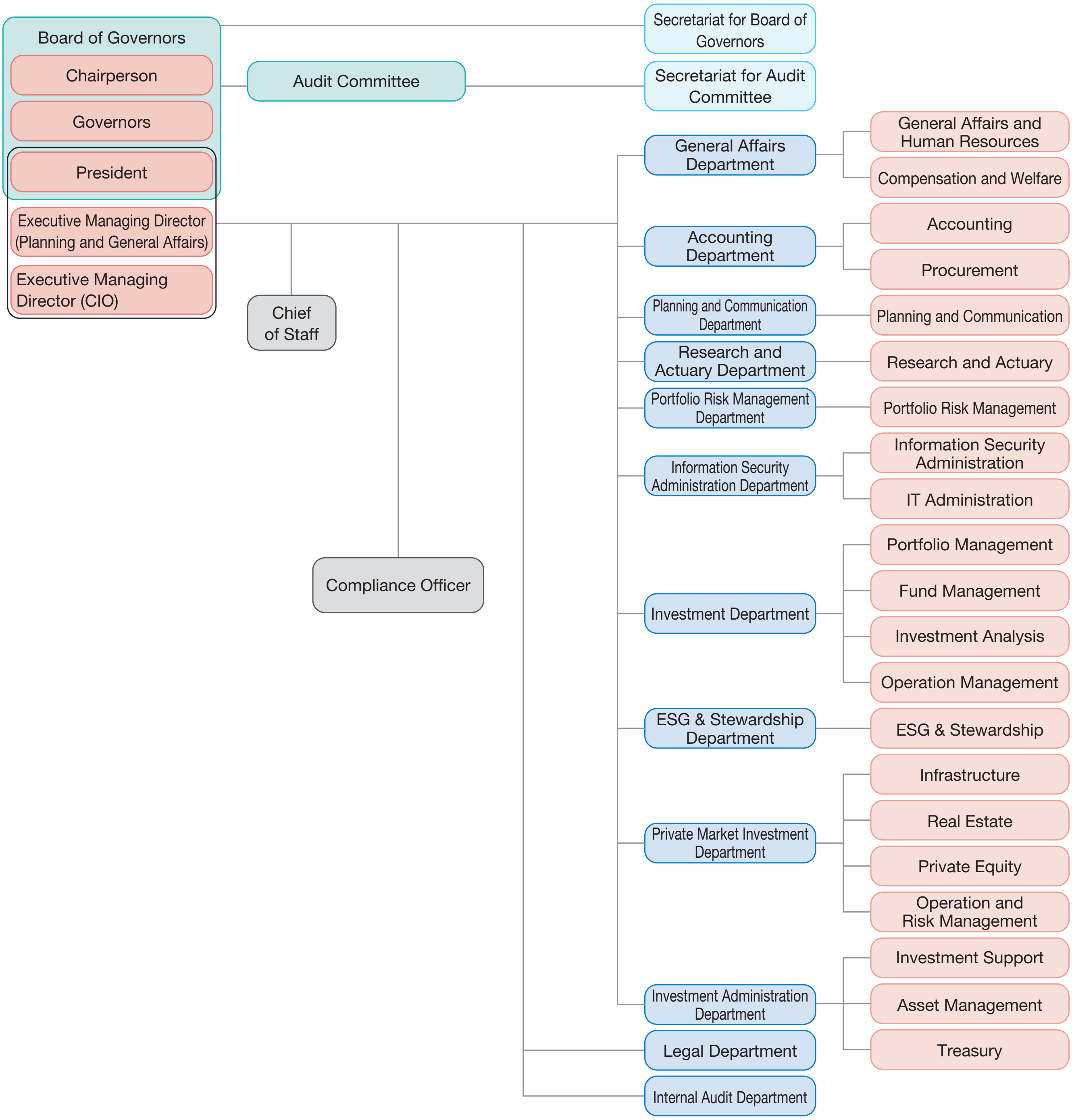
GPIF manages a very large amount of assets, at approximately ¥200 trillion, which is expected to continue to increase gradually in the future. The investment environment is constantly changing, and advances in areas such as data science and financial engineering continue to result in enhancements to asset management techniques. In order for GPIF to continue investing in a long-term and stable manner, we believe that further diversification and sophistication to our asset management are necessary. To support these efforts, we are further recruiting specialist personnel. At the same time, we have also appointed a senior IT advisor who is well-versed in asset management operations and also has technical knowledge and experiences related to information systems. With this appointment, we are considering the development of an information processing platform.

GPIF is also working to improve the working environment to enable a diverse range of human resources to work with a sense of job satisfaction. We promote the active take-up of childcare leave and enable the flexible use of early and late-start work systems as well as telecommuting systems, as part of efforts to create a work-friendly environment for employees in childcare or nursing care.

The organization consists of the Secretariat for Board of Governors, the Secretariat for Audit Committee, the General Affairs Department (General Affairs and Human Resources Division, Compensation and Welfare Division), Accounting Department (Accounting Division, Procurement Division), the Planning and Communication Department (Planning and Communication Division), the Research and Actuary Department (Research and Actuary Division), the Portfolio Risk Management Department (Portfolio Risk Management Division), the Information Security Administration Department (Information Security Administration Division, IT Administration Division), the Investment Department (Portfolio Management Group, Fund Management Group, Investment Analysis Group, Operation Management Division), the ESG & Stewardship Department (ESG & Stewardship Division), the Private Market Investment Department (Infrastructure Group, Real Estate Group, Private Equity Group, Operation and Risk Management Division), the Investment Administration Department (Investment Support Division, Asset Management Division, Treasury Division), the Legal Department, and the Internal Audit Department (the last two Departments report directly to the President).

59 Securities Analysts	20 holders of MBA, etc.
3 Attorneys	3 Certified Public Accountants
1 Certified Public Tax Accountant	3 Real Estate Appraisers
3 holders of Ph.D., etc.	※As of April 1, 2023 There is overlap in the number of people

Organization chart (as of April 1, 2023)



② Internal control system

GPIF has put an internal control system in place in accordance with the Basic Policies of Internal Control established by the Board of Governors.

Specifically, regarding the system to ensure that the execution of duties by the President, Executive Managing Directors, and staff members comply with laws and regulations, the Internal Control Committee is established to promote internal control. In addition, the Compliance Committee is established under the Internal Control Committee to ensure compliance with laws and regulations as well as fiduciary responsibility, etc., and the Compliance Officer is appointed. All executives and staff members are informed of the necessity to comply with the Investment Principles and the Code of Conduct and act as an organization worthy of the trust of the public. A whistle-blowing system is also in place, and corrective actions and preventive measures shall be taken according to our internal rules whenever an illegal or inappropriate activity is (or is expected to be) perpetrated by executives or staff members of GPIF. In addition, the Internal Audit Department is established to conduct internal auditing of GPIF's operations and related responsibilities.

GPIF's 4th Medium-term Plan provides for the expansion and strengthening of GPIF's legal function. To address this requirement, on March 1, 2021, GPIF established the Legal Department. With this establishment, GPIF has become able to better manage its highly individualized alternative investments in a timely manner, further strengthen internal control and ensure stricter compliance with applicable laws and regulations.

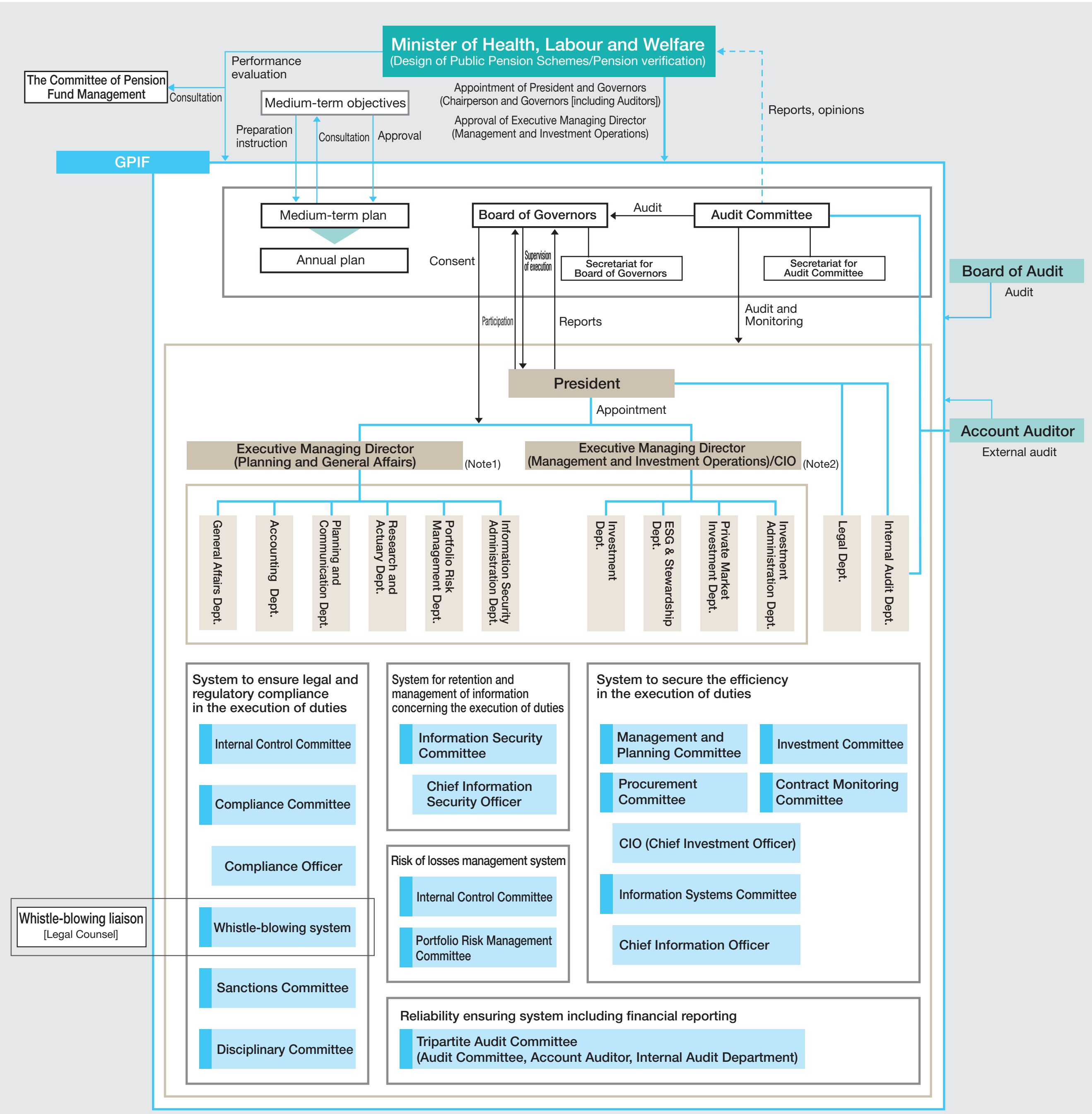
Regarding the management of the risk of losses of other related systems, the Portfolio Risk Management Committee has been established to appropriately monitor and handle various risks (portfolio risks) caused during the pension management. The Internal Control Committee has been established to identify, analyze, and assess operational risks (include reputation risks) that could impede GPIF's day-to-day operations as well as to take measures against those risks. The Internal Control Committee also conducts risk management by drawing up and promoting measures necessary to be constantly aware of risk factors, prevent risks, and minimize losses in the event of risk occurrence.

With regard to operational and other risk, the new rules and regulations relating to operational and other risk management were established, including the rules for operational and other risk management established by the Board of Governors held in July 2019. Based on the new operational and other risk management process set forth by the above new rules and regulations, GPIF goes through a potential risk identification, analysis, and assessment process on an annual basis. In addition, these rules and regulations stipulate that each department is required to promptly take appropriate measures to deal with any risks that occur, and to report on an identified risk to the department responsible for supervising operational and other risk management and Internal Audit Department for each time of risk occurrence. The operational and other risk management execution status of GPIF is reported to the Board of Governors once a year. In addition, the occurrence of a significant operational and other risk is to be promptly reported to the Board of Governors.

Specifically, regarding the system to ensure the efficiency of the execution of duties, the Investment Committee has been established to carry out prior deliberation to make decisions on important matters related to the execution of management operations, and holds careful discussions from a multidimensional perspective under the supervision of the CIO.

In addition to the above, the Information Security Committee promotes GPIF's information security measures, the Management and Planning Committee carries out prior deliberation to make decisions on important matters related to execution of GPIF's operations, and the Procurement Committee ensures the proper state of procurement and subcontracting processes (excluding contracts with external asset managers), and the Contract Monitoring Committee including external experts conducts procurement-related inspections. By these committees, GPIF is committed to establish its internal control system.

Concept of internal control



(Note 1) The Executive Managing Director (Planning and General Affairs) is responsible for matters related to the General Affairs Department, the Accounting Department, the Planning and Communication Department, the Research and Actuary Department, the Portfolio Risk Management Department, and the Information Security Administration Department.

(Note 2) The Executive Managing Director (Management and Investment Operations)/CIO is responsible for matters related to the Investment Department, the ESG & Stewardship Department, the Private Market Investment Department, and the Investment Administration Department.

Chapter 3 Reference Data

1 | Investment Assets by Investment Method and by Manager, Etc.

[1] Investment assets by investment method and by asset class (the market value at the end of fiscal 2022)

	Market value (¥billion)	Portfolio allocation (%)
Total (Investment assets)	200,132.8	100.00
Passive investments	165,741.4	82.82
Active investments	32,267.3	16.12
Others	2,124.2	1.06

		Market value (¥billion)	Portfolio allocation (%)
Total (Investment assets)		200,132.8	100.00
Domestic bonds	Total	49,690.2	24.83
	Passive investments	28,882.1	14.43
	Active investments	18,743.6	9.37
	Others	2,064.5	1.03
Foreign bonds	Total	50,122.5	25.04
	Passive investments	43,245.5	21.61
	Active investments	6,817.3	3.41
	Others	59.7	0.03
Domestic equities	Total	50,333.7	25.15
	Passive investments	46,841.3	23.41
	Active investments	3,492.4	1.75
Foreign equities	Total	49,986.5	24.98
	Passive investments	46,772.5	23.37
	Active investments	3,214.0	1.61

(Note 1) The figures above are rounded, so the sum of each item does not necessarily match the total number.
(Note 2) Others in domestic bonds refer to yen-denominated short-term assets. Others in foreign bonds refer to foreign currency-denominated short-term assets.

[2] Changes in the ratios of passive and active investment

(Unit: %)

		FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Domestic bonds	Passive	90.13	86.10	82.50	79.38	77.03	75.54	71.45	72.93	76.60	58.12
	Active	9.87	13.90	17.50	20.62	22.97	24.46	28.55	27.07	23.40	41.88
Foreign bonds	Passive	71.70	69.85	64.94	60.89	61.98	66.24	73.81	76.12	79.22	86.28
	Active	28.30	30.15	35.06	39.11	38.02	33.76	26.19	23.88	20.78	13.72
Domestic equities	Passive	87.69	86.71	81.52	90.62	90.44	90.58	90.93	92.97	93.65	93.06
	Active	12.31	13.29	18.48	9.38	9.56	9.42	9.07	7.03	6.35	6.94
Foreign equities	Passive	89.37	88.05	84.15	86.45	86.32	90.50	90.17	87.99	90.82	93.57
	Active	10.63	11.95	15.85	13.55	13.68	9.50	9.83	12.01	9.18	6.43
Total	Passive	86.00	83.91	79.28	77.31	76.28	77.87	79.21	82.69	85.21	82.82
	Active	14.00	16.09	20.72	22.69	23.72	22.13	20.79	17.31	14.79	17.18

(Note 1) The amount until fiscal 2019 does not include short-term assets and FILP bonds. There are no FILP bonds outstanding since fiscal 2020.
(Note 2) The amount of domestic bonds (active) and total (active) since fiscal 2020 includes yen-denominated short-term assets. The amount of foreign bonds (active) and total (active) since fiscal 2020 includes foreign currency denominated short-term assets.
(Note 3) JPY hedged foreign bonds are classified as foreign bonds (passive) until fiscal 2019 and as domestic bonds (passive) since fiscal 2020.

[3] Investment assets by manager, etc. (the market value at the end of fiscal 2022)

(Unit: ¥billion)

Investment method	Asset manager name (Subcontractor, etc.)	Custodians	Manager benchmark	Market value
Domestic bonds passive investment	Asset Management One Co., Ltd. Ⅰ (former Mizuho Trust & Banking)	MTBJ	BPI	1,116.2
	Asset Management One Co., Ltd. Ⅱ	MTBJ	BPI-G	6,026.6
	AllianceBernstein Japan Ltd. (AllianceBernstein L.P., etc.)	MTBJ	USMBS-H	355.6
	BlackRock Japan Co., Ltd. Ⅰ	MTBJ	USGOV-H	289.9
	BlackRock Japan Co., Ltd. Ⅱ	MTBJ	EGBI-H	207.0
	BlackRock Japan Co., Ltd. Ⅲ (BlackRock Financial Management, Inc.)	MTBJ	USMBS-H	369.7
	Sumitomo Mitsui Trust Asset Management Co., Ltd. Ⅰ	MTBJ	BPI	1,249.6
	Sumitomo Mitsui Trust Asset Management Co., Ltd. Ⅱ	MTBJ	BPI-G	6,239.6
	Mitsubishi UFJ Trust and Banking Corporation Ⅰ	MTBJ	BPI	624.6
	Mitsubishi UFJ Trust and Banking Corporation Ⅱ	MTBJ	BPI-G	5,974.7
	Resona Asset Management Co., Ltd. Ⅰ	MTBJ	BPI	624.5
	Resona Asset Management Co., Ltd. Ⅱ	MTBJ	BPI-G	5,308.1
	Resona Asset Management Co., Ltd. Ⅲ	SSTB	USGOV-H	196.7
	Resona Asset Management Co., Ltd. Ⅳ	SSTB	EGBI-H	299.5
Domestic bonds active investment	Asset Management One Co., Ltd. Ⅲ (former Mizuho Trust & Banking)	MTBJ	BPI	918.3
	Amundi Japan Ltd Ⅰ	MTBJ	BPI	243.2
	MU Investments Co., Ltd.	MTBJ	BPI	681.3
	Tokio Marine Asset Management Co., Ltd. Ⅰ	MTBJ	BPI	902.8
	Nikko Asset Management Co., Ltd. Ⅰ	MTBJ	BPI	242.0
	Nissay Asset Management Corporation Ⅰ	MTBJ	BPI	244.3
	Nomura Asset Management Co., Ltd. Ⅰ	MTBJ	BPI	242.4
	PGIM Japan Co., Ltd. Ⅰ	MTBJ	BPI	619.9
	PIMCO Japan Ltd Ⅰ (Pacific Investment Management Company LLC (PIMCO), etc.)	MTBJ	BPI	534.8
	Manulife Investment Management (Japan) Limited Ⅰ	MTBJ	BPI	418.3
	Sumitomo Mitsui DS Asset Management Company, Limited Ⅰ	MTBJ	BPI	242.5
	Sumitomo Mitsui Trust Asset Management Co., Ltd. Ⅲ	MTBJ	BPI	673.4
	Mitsubishi UFJ Trust and Banking Corporation Ⅲ	MTBJ	BPI	917.1
	In-house investment Ⅰ	MTBJ	BPI	9,080.3
	In-house investment Ⅱ	MTBJ	—	2,525.1
Domestic bonds others	In-house investment Ⅲ	MTBJ	—	2,064.5
Foreign bonds passive investment	Asset Management One Co., Ltd. Ⅳ (former Mizuho Trust & Banking)	SSTB	WGBI-EXC	3,490.8
	State Street Global Advisors (Japan) Co., Ltd. Ⅰ (State Street Global Advisors Limited)	SSTB	WGBI-EXC	4,270.1
	State Street Global Advisors (Japan) Co., Ltd. Ⅱ (State Street Global Advisors Trust Company, etc.)	SSTB	USIG	78.0
	State Street Global Advisors (Japan) Co., Ltd. Ⅲ (State Street Global Advisors Limited, etc.)	SSTB	EUROIG	13.9
	Nomura Asset Management Co., Ltd. Ⅱ	MTBJ	WGBI-EXC	3,340.0
	BlackRock Japan Co., Ltd. Ⅳ	MTBJ	WGBI-EXC	4,769.2
	BlackRock Japan Co., Ltd. Ⅴ	MTBJ	WGBI-O-EXC	1,690.2
	BlackRock Japan Co., Ltd. Ⅵ	MTBJ	USGOV	3,534.6
	BlackRock Japan Co., Ltd. Ⅶ	MTBJ	USGOV 1-3Y	119.4
	BlackRock Japan Co., Ltd. Ⅷ	MTBJ	EGBI	3,553.6
	BlackRock Japan Co., Ltd. Ⅸ	MTBJ	EGBI 1-3Y	121.3
	BlackRock Japan Co., Ltd. Ⅹ (BlackRock Financial Management, Inc., etc.)	MTBJ	USIG	328.6
	BlackRock Japan Co., Ltd. Ⅺ (BlackRock Financial Management, Inc., etc.)	MTBJ	EUROIG	206.8
	BlackRock Japan Co., Ltd. Ⅻ (BlackRock Financial Management, Inc., etc.)	MTBJ	USHY2%	28.2
	BlackRock Japan Co., Ltd. ⅩⅢ (BlackRock Financial Management, Inc., etc.)	MTBJ	EUROHY 2%	32.2
	Sumitomo Mitsui Trust Asset Management Co., Ltd. Ⅳ	SSTB	WGBI-EXC	4,455.8
	Resona Asset Management Co., Ltd. Ⅴ	SSTB	WGBI-EXC	4,326.8
	Resona Asset Management Co., Ltd. Ⅵ	SSTB	WGBI-O-EXC	1,251.9
	Resona Asset Management Co., Ltd. Ⅶ	SSTB	USGOV	3,786.3
	Resona Asset Management Co., Ltd. Ⅷ	SSTB	USGOV 1-3Y	330.5
	Resona Asset Management Co., Ltd. Ⅸ	SSTB	EGBI	3,414.1
	Resona Asset Management Co., Ltd. Ⅹ	SSTB	EGBI 1-3Y	103.2
Foreign bonds active investment	Asset Management One Co., Ltd. Ⅴ (former Mizuho Asset Management) (Loomis, Sayles & Company, L.P.)	SSTB	G-AGG-EXC	354.0
	Ashmore Japan Co., Ltd (Ashmore Investment Management Limited)	SSTB	GBI-EMGD-EXC	51.3
	Sompo Asset Management Co., LTD. (Colchester Global Investors Limited)	SSTB	G-AGG-EXC	628.3
	T.Rowe Price Japan, Inc. Ⅰ (T.Rowe Price International Ltd.)	MTBJ	EUROHY2%	61.9
	PineBridge Investments Japan Co., Ltd. (PineBridge Investments LLC)	MTBJ	USHY2%	67.0
	BNY Mellon Investment Management Japan Limited Ⅰ (Insight Investment Management (Global) Limited)	SSTB	EUROAGG	600.7
	PGIM Japan Co., Ltd. Ⅱ (PGIM, Inc. etc.)	SSTB	G-AGG-EXC	763.2
	PIMCO Japan Ltd Ⅱ (Pacific Investment Management Company LLC (PIMCO), etc.)	SSTB	G-AGG-EXC	715.7
	FIL Investments (Japan) Limited Ⅰ (Fidelity Institutional Asset Management (FIAM))	SSTB	USAGG	937.8
	Franklin Templeton Japan Co., Ltd. Ⅰ (Brandywine Global Investment Management, LLC.)	SSTB	G-AGG-EXC	129.8

(Unit: ¥billion)

Investment method	Asset manager name (Subcontractor, etc.)	Custodians	Manager benchmark	Market value
Foreign bonds active investment	Barings Japan Limited(Barings LLC, etc.)	MTBJ	USHY2%	68.2
	Morgan Stanley Investment Management (Japan) Co., Ltd. Ⅰ (Morgan Stanley Investment Management Inc., etc.)	SSTB	G-AGG-EXC	658.8
	Morgan Stanley Investment Management (Japan) Co., Ltd. Ⅱ (Morgan Stanley Investment Management Inc.)	MTBJ	USHY2%	64.9
	UBS Asset Management (Japan) Ltd Ⅰ (UBS Asset Management (UK) Ltd)	SSTB	EUROHY2%	99.8
Foreign bonds others	In-house investment Ⅳ	SSTB	—	59.7
Domestic equities passive investment	Asset Management One Co., Ltd. Ⅵ (former DIAM)	MTBJ	TOPIX	7,507.6
	Asset Management One Co., Ltd. Ⅶ (former Mizuho Trust & Banking)	MTBJ	RN-P	2,188.2
	Asset Management One Co., Ltd. Ⅷ	MTBJ	FTSE-BL	1,030.5
	Nomura Asset Management Co., Ltd. Ⅲ	MTBJ	MSCI-IR	123.8
	Nomura Asset Management Co., Ltd. Ⅳ	MTBJ	RAFI	312.7
	FIL Investments (Japan) Limited Ⅱ (Geode Capital Management, LLC)	MTBJ	TOPIX	244.9
	BlackRock Japan Co., Ltd. ⅩⅣ	MTBJ	TOPIX	7,789.0
	BlackRock Japan Co., Ltd. ⅩⅤ	MTBJ	FTSE-BLSR	1,001.6
	Sumitomo Mitsui Trust Asset Management Co., Ltd. Ⅴ	MTBJ	TOPIX	8,061.5
	Sumitomo Mitsui Trust Asset Management Co., Ltd. Ⅵ	MTBJ	SP-C	1,643.4
	Mitsubishi UFJ Trust and Banking Corporation Ⅳ	MTBJ	TOPIX	5,044.0
	Mitsubishi UFJ Trust and Banking Corporation Ⅴ	MTBJ	MSCI-ESG	2,056.2
	Mitsubishi UFJ Trust and Banking Corporation Ⅵ	MTBJ	MSCI-WIN	649.2
	Resona Asset Management Co., Ltd. Ⅺ	MTBJ	TOPIX	8,668.1
	Resona Asset Management Co., Ltd. Ⅻ	MTBJ	MO-GD-J	520.6
Domestic equities active investment	Asset Management One Co., Ltd. Ⅸ	MTBJ	TOPIX	289.7
	Asset Management One Co., Ltd. Ⅹ (former Mizuho Asset Management)	MTBJ	RN-SG	117.1
	Invesco Asset Management (Japan) Limited Ⅰ	MTBJ	TOPIX	304.2
	Invesco Asset Management (Japan) Limited Ⅱ	MTBJ	TOPIX	144.6
	Capital International K.K. (Capital International, Inc., etc.)	MTBJ	TOPIX	447.1
	Schroder Investment Management (Japan) Limited Ⅰ	MTBJ	TOPIX	382.1
	Nomura Asset Management Co., Ltd. Ⅴ	MTBJ	RN-S	118.8
	FIL Investments (Japan) Limited Ⅲ	MTBJ	RN-TG	526.5
	Sumitomo Mitsui DS Asset Management Company, Limited Ⅱ	MTBJ	RN-V	396.9
	Lazard Japan Asset Management K.K. Ⅰ	MTBJ	TOPIX	272.3
	Russell Investments Japan Co., Ltd. Ⅰ (Russell Investments Implementation Services, LLC.)	MTBJ	TOPIX	239.8
Foreign equities passive investment	State Street Global Advisors (Japan) Co., Ltd. Ⅳ	MTBJ	MSCI-A-EXC	5,518.9
	State Street Global Advisors (Japan) Co., Ltd. Ⅴ	MTBJ	MSCI-N	1,180.4
	State Street Global Advisors (Japan) Co., Ltd. Ⅵ	MTBJ	MSCI-EU	253.2
	State Street Global Advisors (Japan) Co., Ltd. Ⅶ	MTBJ	MSCI-P	70.8
	State Street Global Advisors (Japan) Co., Ltd. Ⅷ	MTBJ	MSCI-EXC	843.5
	State Street Global Advisors (Japan) Co., Ltd. Ⅸ	MTBJ	SP-GC	3,477.0
	BlackRock Japan Co., Ltd. ⅩⅥ	MTBJ	MSCI-A-EXC	8,864.2
	BlackRock Japan Co., Ltd. ⅩⅦ	MTBJ	MSCI-K	1,762.6
	BlackRock Japan Co., Ltd. ⅩⅧ	MTBJ	MSCI-N	1,173.8
	BlackRock Japan Co., Ltd. ⅩⅨ	MTBJ	MSCI-US100	795.7
	BlackRock Japan Co., Ltd. ⅩⅩ	MTBJ	MSCI-USLG	87.4
	BlackRock Japan Co., Ltd. ⅩⅪ	MTBJ	MSCI-USLV	65.0
	BlackRock Japan Co., Ltd. ⅩⅫ	MTBJ	MSCI-CA	57.4
	BlackRock Japan Co., Ltd. ⅩⅩⅢ	MTBJ	MSCI-EU	438.7
	Sumitomo Mitsui Trust Asset Management Co., Ltd. Ⅶ	MTBJ	MSCI-A-EXC	9,576.7
	Legal & General Investment Management Japan KK Ⅰ (Legal & General Investment Management Limited)	MTBJ	MSCI-A-EXC	8,336.8
	Legal & General Investment Management Japan KK Ⅱ (Legal & General Investment Management Limited)	MTBJ	MSCI-KV	0.8
	Legal & General Investment Management Japan KK Ⅲ (Legal & General Investment Management Limited)	MTBJ	MSCI-N	638.1
	Legal & General Investment Management Japan KK Ⅳ (Legal & General Investment Management Limited)	MTBJ	MSCI-EU	743.7
	Legal & General Investment Management Japan KK Ⅴ (Legal & General Investment Management Limited)	MTBJ	MSCI-P	211.5
	Legal & General Investment Management Japan KK Ⅵ (Legal & General Investment Management Limited)	MTBJ	MSCI-EXC	532.8
	Legal & General Investment Management Japan KK Ⅶ (Legal & General Investment Management Limited)	MTBJ	MSCI-A-ESG	1,655.0
	Legal & General Investment Management Japan KK Ⅷ (Legal & General Investment Management Limited)	MTBJ	MO-GD	488.4
Foreign equities active investment	Asset Management One Co., Ltd. Ⅺ (former Mizuho Asset Management) (Allspring Global Investments,LLC.)	MTBJ	MSCI-E	129.6
	Amundi Japan Ltd Ⅱ (Amundi Asset Management US, Inc)	MTBJ	SP-500	196.7
	Wellington Management Japan Pte Ltd. (Wellington Management Company LLP)	MTBJ	SP-500	88.8
	JPMorgan Asset Management (Japan) Limited Ⅰ (J.P. Morgan Investment Management Inc.)	MTBJ	SP-500	29.9
	JPMorgan Asset Management (Japan) Limited Ⅱ (J.P. Morgan Investment Management Inc.)	MTBJ	FR-3000G	110.7
	T.Rowe Price Japan, Inc. Ⅱ (T.Rowe Price Associates, Inc.)	MTBJ	SP-500	281.6

(Unit: ¥billion)

Investment method	Asset manager name (Subcontractor, etc.)	Custodians	Manager benchmark	Market value
Foreign equities active investment	T.Rowe Price Japan, Inc. Ⅲ (T.Rowe Price Associates, Inc.)	MTBJ	FR-3000	101.5
	Tokio Marine Asset Management Co., Ltd. Ⅱ (DuPont Capital Management Corporation)	MTBJ	SP-500	80.7
	Tokio Marine Asset Management Co., Ltd. Ⅲ (Applied Finance Capital Management, LLC)	MTBJ	FR-1000V	91.2
	Tokio Marine Asset Management Co., Ltd. Ⅳ (Jacobs Levy Equity Management, Inc.)	MTBJ	FR-T200	207.5
	Tokio Marine Asset Management Co., Ltd. Ⅴ (Columbia Management Investment Advisors, LLC)	MTBJ	FR-MV	87.7
	Nikko Asset Management Co., Ltd. Ⅱ (INTECH Investment Management LLC)	MTBJ	MSCI-K	1.9
	Nissay Asset Management Corporation Ⅱ (The Putnam Advisory Company, LLC)	MTBJ	FR-1000V	141.5
	Neuberger Berman East Asia Limited Ⅰ (Neuberger Berman Investment Advisers LLC)	MTBJ	FR-1000G	53.5
	Nomura Asset Management Co., Ltd. Ⅵ (CIBC Asset Management Inc.)	MTBJ	MSCI-CA	84.2
	BNP Paribas Asset Management Japan Limited (Impax Asset Management LLC)	MTBJ	SP-500	98.4
	BNY Mellon Investment Management Japan Limited Ⅱ (Walter Scott & Partners Limited)	MTBJ	MSCI-K	0.9
	FIL Investments (Japan) Limited Ⅳ (Fidelity Institutional Asset Management (FIAM))	MTBJ	FR-1000G	20.0
	BlackRock Japan Co., Ltd. ⅩⅩⅣ (BlackRock Institutional Trust Company, N.A., etc.)	MTBJ	FR-1000	152.5
	BlackRock Japan Co., Ltd. ⅩⅩⅤ (BlackRock Financial Management, Inc.)	MTBJ	FR-1000V	19.2
	Franklin Templeton Japan Co., Ltd. Ⅱ (Brandywine Global Investment Management, LLC.)	MTBJ	FR-1000V	119.0
	Manulife Investment Management (Japan) Limited Ⅱ (Manulife Investment Management (US) LLC)	MTBJ	FR-3000	31.1
	Mitsubishi UFJ Trust and Banking Corporation Ⅶ (Baillie Gifford Overseas Limited)	MTBJ	MSCI-AG-EXC	0.7
	UBS Asset Management (Japan) Ltd Ⅱ (UBS Asset Management (UK) Ltd)	MTBJ	MSCI-K	0.5
	Lazard Japan Asset Management K.K. Ⅱ (Lazard Asset Management LLC)	MTBJ	MSCI-E	77.0
Alternative infrastructure	DBJ Asset Management Co., Ltd.	SSTB	–	124.4
	Gatekeeper : Nomura Asset Management Co., Ltd. Ⅶ Fund of Funds Manager : Pantheon	SSTB	–	326.9
	Gatekeeper : Nomura Asset Management Co., Ltd. Ⅷ Fund of Funds Manager : Pantheon	SSTB	–	121.3
	Gatekeeper : Sumitomo Mitsui DS Asset Management Company, Limited Ⅲ Fund of Funds Manager : StepStone Infrastructure & Real Assets	SSTB	–	490.3
	Gatekeeper : Sumitomo Mitsui DS Asset Management Company, Limited Ⅳ Fund of Funds Manager: StepStone Infrastructure & Real Assets	SSTB	–	192.8
	In-house investment Ⅴ (Unit Trust Manager : Nissay Asset Management Corporation)	SSTB	–	192.1
Alternative private equity	Gatekeeper : Neuberger Berman East Asia Limited Ⅱ Fund of Funds Manager : NB Alternatives Advisers LLC	SSTB	–	247.3
	Gatekeeper : Mitsubishi UFJ Trust and Banking Corporation Ⅷ Fund of Funds Manager: Hamilton Lane Advisors, L.L.C.	SSTB	–	171.4
	Gatekeeper and Fund of Funds Manager: Mitsubishi UFJ Trust and Banking Corporation Ⅸ Investment Advisor: Alternative Investment Capital Limited	SSTB	–	3.6
	In-house investment Ⅵ (Unit Trust Manager : Nissay Asset Management Corporation)	SSTB	–	45.0
Alternative real estate	Gatekeeper : Asset Management One Co., Ltd. Ⅻ Fund of Funds Manager : CBRE Investment Management Indirect Limited	SSTB	–	674.5
	Gatekeeper : Asset Management One Co., Ltd. ⅩⅢ Fund of Funds Manager : CBRE Investment Management Indirect Limited	SSTB	–	29.1
	Gatekeeper : Mitsubishi UFJ Trust and Banking Corporation Ⅹ	SSTB	–	215.7
Total	38 asset managers, 154 Funds			199,832.1

(Unit: ¥billion)

Investment method	Custodian, etc. name		Market value
Custody	State Street Trust and Banking Co., Ltd.	SSTB	33,851.1
	The Master Trust Bank of Japan, Ltd.	MTBJ	166,279.0
Total			200,130.1

(Unit: ¥billion)

	Fund name	Custodians	Market value
Stock Index Futures	Domestic Stock Index Futures	MTBJ	197.4
	Foreign Stock Index Futures	MTBJ	100.6
Total			298.0

(Note 1) While the 38 asset managers in the total column do not include in-house investment, the 154 funds in the total column include 6 in-house investment funds.

(Note 2) The figure in the total market value column for funds managed by asset managers (154 funds managed by 38 asset managers) does not include accrued dividend income from closed funds (statutory trust accounts).

(Note 3) Figures in the market value column for custodians do not include accrued dividend income (foreign equities: ¥2.7 billion) from closed funds (statutory trust accounts).

(Note 4) Returns from stock index futures transactions are treated as reference data because they are offset with the lost returns from the corresponding funds. In fiscal 2022, the amount of returns was negative ¥4.7 billion for domestic stock index futures funds and around ¥0.6 billion for foreign stock index futures funds.

(Note 5) Manager benchmarks are shown in the following table and the sources of those benchmarks are as listed in the right-hand column of the following table.

		Manager benchmark	Source of benchmark
Domestic bonds	BPI	NOMURA-BPI (excluding ABS)	Nomura Research Institute, Ltd.
	BPI-G	NOMURA-BPI Government Bonds	Nomura Research Institute, Ltd.
	USGOV-H	FTSE US Government Bond Index (JPY hedged/JPY basis)	FTSE Fixed Income LLC
	EGBI-H	FTSE EMU Government Bond Index (JPY hedged/JPY basis)	FTSE Fixed Income LLC
	USMBS-H	Bloomberg US MBS Fixed Rate Index (JPY hedged/JPY basis)	Bloomberg Index Services Limited
Foreign bonds	WGBI-EXC	FTSE World Government Bond Index (not incl. JPY, CNY, no hedge/JPY basis)	FTSE Fixed Income LLC
	WGBI-O-EXC	FTSE World Government Bond Index (not incl. JPY, USD, EMU, CNY, no hedge/JPY basis)	FTSE Fixed Income LLC
	USGOV	FTSE US Government Bond Index (no hedge/JPY basis)	FTSE Fixed Income LLC
	USGOV 1-3Y	FTSE US Government Bond Index 1-3years (no hedge/JPY basis)	FTSE Fixed Income LLC
	EGBI	FTSE EMU Government Bond Index (no hedge/JPY basis)	FTSE Fixed Income LLC
	EGBI 1-3Y	FTSE EMU Government Bond Index 1-3years (no hedge/JPY basis)	FTSE Fixed Income LLC
	G-AGG-EXC	Bloomberg Global Aggregate Index (not incl. JPY, CNY, no hedge/JPY basis)	Bloomberg Index Services Limited
	USAGG	Bloomberg US Aggregate Index (no hedge/JPY basis)	Bloomberg Index Services Limited
	EUROAGG	Bloomberg EURO Aggregate Index (no hedge/JPY basis)	Bloomberg Index Services Limited
	USIG	Bloomberg US Corporate Bond Index (no hedge/JPY basis)	Bloomberg Index Services Limited
	EUROIG	Bloomberg EURO Corporate Bond Index (no hedge/JPY basis)	Bloomberg Index Services Limited
	USHY2%	Bloomberg US Corporate High Yield 2% Issuer Capped Bond Index (no hedge/JPY basis)	Bloomberg Index Services Limited
	EURO-HY2%	Bloomberg EURO Corporate High Yield 2% Issuer Capped Bond Index (no hedge/JPY basis)	Bloomberg Index Services Limited
	GBI-EMGD-EXC	J.P. Morgan Government Bond Index-Emerging Markets Global Diversified Index (not incl. China, no hedge/JPY basis)	J.P.Morgan Securities LLC
Domestic equities	TOPIX	TOPIX (incl. dividends)	Tokyo Stock Exchange, Inc.
	RN-P	RUSSELL/NOMURA Prime Index (incl. dividends)	Nomura Research Institute, Ltd.
	RN-TG	RUSSELL/NOMURA Total Market Growth Index (incl. dividends)	Nomura Research Institute, Ltd.
	RN-V	RUSSELL/NOMURA Large Cap Value Index (incl. dividends)	Nomura Research Institute, Ltd.
	RN-S	RUSSELL/NOMURA Small Cap Index (incl. dividends)	Nomura Research Institute, Ltd.
	RN-SG	RUSSELL/NOMURA Small Cap Growth Index (incl. dividends)	Nomura Research Institute, Ltd.
	MSCI-IR	MSCI Japan IMI Equity REITS Index (incl. dividends)	MSCI G.K.
	MSCI-ESG	MSCI Japan ESG Select Leaders Index	MSCI G.K.
	MSCI-WIN	MSCI Japan Empowering Women Index (WIN)	MSCI G.K.
	FTSE-BL	FTSE Blossom Japan Index	FTSE International Limited
	FTSE-BLSR	FTSE Blossom Japan Sector Relative Index	FTSE International Limited
	MO-GD-J	Morningstar Japan ex-REIT Gender Diversity Tilt Index	Ibbotson Associates Japan, Inc.
	SP-C	S&P/JPX Carbon Efficient Index	S&P Opco, LLC
	RAFI	Nomura RAFI Index	Nomura Asset Management Co., Ltd.
Foreign equities	MSCI-A-EXC	MSCI ACWI (not incl. JPY,China A, JPY basis, incl. dividends, after taking into account GPIF dividend tax factors)	MSCI G.K.
	MSCI-AG-EXC	MSCI ACWI Growth (not incl. JPY,China A, JPY basis, incl. dividends, after taking into account GPIF dividend tax factors)	MSCI G.K.
	MSCI-K	MSCI KOKUSAI (JPY basis, incl. dividends, after taking into account GPIF dividend tax factors)	MSCI G.K.
	MSCI-KV	MSCI KOKUSAI Value (JPY basis, incl. dividends, after taking into account GPIF dividend tax factors)	MSCI G.K.
	MSCI-N	MSCI North America (JPY basis, incl. dividends, after taking into account GPIF dividend tax factors)	MSCI G.K.
	MSCI-US100	MSCI USA100 (JPY basis, incl. dividends, after taking into account GPIF dividend tax factors)	MSCI G.K.
	MSCI-USLG	MSCI USA Large Cap Growth (JPY basis, incl. dividends, after taking into account GPIF dividend tax factors)	MSCI G.K.
	MSCI-USLV	MSCI USA Large Cap Value (JPY basis, incl. dividends, after taking into account GPIF dividend tax factors)	MSCI G.K.
	MSCI-CA	MSCI Canada (JPY basis, incl. dividends, after taking into account GPIF dividend tax factors)	MSCI G.K.
	MSCI-EU	MSCI Europe & Middle East (JPY basis, incl. dividends, after taking into account GPIF dividend tax factors)	MSCI G.K.
	MSCI-P	MSCI Pacific (not incl. JPY, JPY basis, incl. dividends, after taking into account GPIF dividend tax factors)	MSCI G.K.
	MSCI-E	MSCI EMERGING MARKETS (JPY basis, incl. dividends, after deducting taxes)	MSCI G.K.
	MSCI-EXC	MSCI EMERGING MARKETS (not incl. China A, JPY basis, incl. dividends, after deducting taxes)	MSCI G.K.
	MSCI-A-ESG	MSCI ACWI ESG Universal Index (not incl. China A, JPY basis, incl. dividends, after deducting taxes)	MSCI G.K.
	MO-GD	Morningstar Developed Markets (ex Japan) Gender Diversity Index(JPY basis, incl. dividends, after deducting taxes)	Ibbotson Associates Japan, Inc.
	SP-GC	S&P Global Ex-Japan LargeMidCap Carbon Efficient Index	S&P Opco, LLC
	SP-500	S&P500(JPY basis, incl. dividends)	S&P Opco,LLC
	FR-1000	RUSSELL 1000 Index(JPY basis, incl. dividends)	FRANK RUSSELL COMPANY
	FR-1000G	RUSSELL 1000 Growth Index(JPY basis, incl. dividends)	FRANK RUSSELL COMPANY
	FR-1000V	RUSSELL 1000 Value Index(JPY basis, incl. dividends)	FRANK RUSSELL COMPANY
	FR-3000	RUSSELL 3000 Index(JPY basis, incl. dividends)	FRANK RUSSELL COMPANY
	FR-3000G	RUSSELL 3000 Growth Index(JPY basis, incl. dividends)	FRANK RUSSELL COMPANY
	FR-T200	Russell Top 200 Index(JPY basis, incl. dividends)	FRANK RUSSELL COMPANY
	FR-MV	RUSSELL Midcap Value Index(JPY basis, incl. dividends)	FRANK RUSSELL COMPANY

[4] Investment performance by manager, etc.

① Investment performance (over the last year) (from April 2022 to March 2023)

Investment method	Asset manager name	Time-weighted return (A)	Benchmark return (B)	Excess rate of return (C)＝(A)－(B)	Remarks column
Domestic bonds passive investment	Asset Management One Co., Ltd. Ⅰ (former Mizuho Trust & Banking)	-1.61%	-1.65%	+0.04%	
	Asset Management One Co., Ltd. Ⅱ	-0.06%	-0.07%	+0.01%	○
	AllianceBernstein Japan Ltd.	-7.13%	-9.05%	+1.92%	
	BlackRock Japan Co., Ltd. Ⅰ	-8.12%	-8.41%	+0.29%	
	BlackRock Japan Co., Ltd. Ⅱ	-13.66%	-13.02%	-0.64%	
	BlackRock Japan Co., Ltd. Ⅲ	-7.07%	-9.05%	+1.98%	
	Sumitomo Mitsui Trust Asset Management Co., Ltd. Ⅰ	-1.64%	-1.65%	+0.01%	
	Sumitomo Mitsui Trust Asset Management Co., Ltd. Ⅱ	-1.69%	-1.67%	-0.02%	
	Mitsubishi UFJ Trust and Banking Corporation Ⅰ	-0.12%	-0.17%	+0.04%	○
	Mitsubishi UFJ Trust and Banking Corporation Ⅱ	-1.65%	-1.67%	+0.03%	
	Resona Asset Management Co., Ltd. Ⅰ	-0.14%	-0.17%	+0.02%	○
	Resona Asset Management Co., Ltd. Ⅱ	-0.08%	-0.07%	-0.01%	○
	Resona Asset Management Co., Ltd. Ⅲ	-8.42%	-8.41%	-0.00%	
	Resona Asset Management Co., Ltd. Ⅳ	-12.95%	-13.02%	+0.07%	
Domestic bonds active investment	Asset Management One Co., Ltd. Ⅲ (former Mizuho Trust & Banking)	-1.66%	-1.65%	-0.00%	
	Amundi Japan Ltd Ⅰ	-1.19%	-1.65%	+0.47%	
	MU Investments Co., Ltd.	-1.45%	-1.65%	+0.20%	
	Tokio Marine Asset Management Co., Ltd. Ⅰ	-2.15%	-1.65%	-0.49%	
	Nikko Asset Management Co., Ltd. Ⅰ	-1.98%	-1.65%	-0.32%	
	Nissay Asset Management Corporation Ⅰ	-0.99%	-1.65%	+0.66%	
	Nomura Asset Management Co., Ltd. Ⅰ	-1.60%	-1.65%	+0.06%	
	PGIM Japan Co., Ltd. Ⅰ	-1.40%	-1.65%	+0.25%	
	PIMCO Japan Ltd Ⅰ	-0.75%	-1.65%	+0.90%	
	Manulife Investment Management (Japan) Limited Ⅰ	-2.12%	-1.65%	-0.47%	
	Sumitomo Mitsui DS Asset Management Company, Limited Ⅰ	-1.65%	-1.65%	+0.00%	
	Sumitomo Mitsui Trust Asset Management Co., Ltd. Ⅲ	-2.17%	-1.65%	-0.51%	
	Mitsubishi UFJ Trust and Banking Corporation Ⅲ	-1.31%	-1.65%	+0.34%	
	In-house investment Ⅰ	-1.40%	-1.26%	-0.14%	○
	In-house investment Ⅱ	3.33%	3.26%	+0.08%	
Foreign bonds passive investment	Asset Management One Co., Ltd. Ⅳ (former Mizuho Trust & Banking)	-0.55%	-0.56%	+0.01%	
	State Street Global Advisors (Japan) Co., Ltd. Ⅰ	-0.52%	-0.56%	+0.05%	
	State Street Global Advisors (Japan) Co., Ltd. Ⅱ	-0.47%	0.40%	-0.87%	○
	State Street Global Advisors (Japan) Co., Ltd. Ⅲ	-1.25%	1.55%	-2.80%	○
	Nomura Asset Management Co., Ltd. Ⅱ	-0.39%	-0.56%	+0.17%	
	BlackRock Japan Co., Ltd. Ⅳ	-0.55%	-0.56%	+0.02%	
	BlackRock Japan Co., Ltd. Ⅴ	-5.57%	-5.56%	-0.01%	
	BlackRock Japan Co., Ltd. Ⅵ	4.68%	4.62%	+0.06%	
	BlackRock Japan Co., Ltd. Ⅶ	-2.13%	-2.65%	+0.53%	
	BlackRock Japan Co., Ltd. Ⅷ	-5.50%	-5.57%	+0.07%	
	BlackRock Japan Co., Ltd. Ⅸ	1.45%	1.08%	+0.36%	○
	BlackRock Japan Co., Ltd. Ⅹ	2.53%	3.56%	-1.03%	
	BlackRock Japan Co., Ltd. Ⅺ	-1.21%	-1.01%	-0.20%	
	BlackRock Japan Co., Ltd. Ⅻ	5.72%	5.97%	-0.25%	
	BlackRock Japan Co., Ltd. XIII	2.36%	2.52%	-0.16%	
	Sumitomo Mitsui Trust Asset Management Co., Ltd. Ⅳ	-0.68%	-0.56%	-0.11%	
	Resona Asset Management Co., Ltd. Ⅴ	-0.55%	-0.56%	+0.01%	
	Resona Asset Management Co., Ltd. Ⅵ	-5.52%	-5.56%	+0.04%	
	Resona Asset Management Co., Ltd. Ⅶ	4.66%	4.62%	+0.04%	
	Resona Asset Management Co., Ltd. Ⅷ	-7.70%	-7.70%	+0.00%	
	Resona Asset Management Co., Ltd. Ⅸ	-5.54%	-5.57%	+0.04%	
	Resona Asset Management Co., Ltd. Ⅹ	3.19%	2.46%	+0.73%	○
Foreign bonds active investment	Asset Management One Co., Ltd. Ⅴ (former Mizuho Asset Management)	0.41%	0.78%	-0.38%	
	Ashmore Japan Co., Ltd	4.46%	8.89%	-4.43%	
	Sompo Asset Management Co., LTD.	4.92%	0.78%	+4.14%	
	T.Rowe Price Japan, Inc. Ⅰ	0.85%	2.52%	-1.67%	
	PineBridge Investments Japan Co., Ltd.	6.32%	5.97%	+0.34%	
	BNY Mellon Investment Management Japan Limited Ⅰ	-3.66%	-4.29%	+0.63%	
	PGIM Japan Co., Ltd. Ⅱ	-0.34%	0.78%	-1.12%	
	PIMCO Japan Ltd Ⅱ	1.11%	0.78%	+0.33%	
	FIL Investments (Japan) Limited Ⅰ	4.23%	4.41%	-0.17%	
	Franklin Templeton Japan Co., Ltd. Ⅰ	3.33%	0.78%	+2.55%	
	Barings Japan Limited	5.31%	5.97%	-0.67%	
	Morgan Stanley Investment Management (Japan) Co., Ltd. Ⅰ	0.75%	0.78%	-0.03%	
	Morgan Stanley Investment Management (Japan) Co., Ltd. Ⅱ	5.19%	5.97%	-0.78%	
	UBS Asset Management (Japan) Ltd Ⅰ	3.97%	2.52%	+1.45%	

Investment method	Asset manager name	Time-weighted return (A)	Benchmark return (B)	Excess rate of return (C)＝(A)－(B)	Remarks column
Domestic equities passive investment	Asset Management One Co., Ltd. Ⅵ (former DIAM)	5.79%	5.81%	-0.02%	
	Asset Management One Co., Ltd. Ⅶ (former Mizuho Trust & Banking)	5.58%	5.56%	+0.01%	
	Asset Management One Co., Ltd. Ⅷ	4.84%	4.96%	-0.13%	
	Nomura Asset Management Co., Ltd. Ⅲ	-7.48%	-7.38%	-0.10%	
	Nomura Asset Management Co., Ltd. Ⅳ	8.96%	8.89%	+0.06%	
	FIL Investments (Japan) Limited Ⅱ	5.80%	5.81%	-0.01%	
	BlackRock Japan Co., Ltd. ⅩⅣ	5.74%	5.81%	-0.07%	
	BlackRock Japan Co., Ltd. ⅩⅤ	5.65%	5.73%	-0.08%	
	Sumitomo Mitsui Trust Asset Management Co., Ltd. Ⅴ	5.82%	5.81%	+0.00%	
	Sumitomo Mitsui Trust Asset Management Co., Ltd. Ⅵ	4.82%	4.89%	-0.06%	
	Mitsubishi UFJ Trust and Banking Corporation Ⅳ	5.78%	5.81%	-0.03%	
	Mitsubishi UFJ Trust and Banking Corporation Ⅴ	2.79%	2.80%	-0.01%	
	Mitsubishi UFJ Trust and Banking Corporation Ⅵ	0.07%	0.05%	+0.02%	
	Resona Asset Management Co., Ltd. Ⅺ	5.84%	5.81%	+0.02%	
	Resona Asset Management Co., Ltd. Ⅻ	2.78%	3.39%	-0.61%	○
Domestic equities active investment	Asset Management One Co., Ltd. Ⅸ	7.64%	5.81%	+1.82%	
	Asset Management One Co., Ltd. Ⅹ (former Mizuho Asset Management)	0.94%	2.54%	-1.60%	
	Invesco Asset Management (Japan) Limited Ⅰ	5.56%	5.81%	-0.25%	
	Invesco Asset Management (Japan) Limited Ⅱ	2.18%	5.81%	-3.63%	
	Capital International K.K.	7.71%	5.81%	+1.90%	
	Schroder Investment Management (Japan) Limited Ⅰ	5.58%	5.81%	-0.23%	
	Nomura Asset Management Co., Ltd. Ⅴ	7.44%	9.97%	-2.53%	
	FIL Investments (Japan) Limited Ⅲ	5.53%	1.48%	+4.04%	
	Sumitomo Mitsui DS Asset Management Company, Limited Ⅱ	11.39%	9.02%	+2.37%	
	Lazard Japan Asset Management K.K. Ⅰ	10.32%	5.81%	+4.51%	
	Russell Investments Japan Co., Ltd. Ⅰ	3.71%	5.81%	-2.10%	
Foreign equities passive investment	State Street Global Advisors (Japan) Co., Ltd. Ⅳ	1.48%	1.79%	-0.30%	
	State Street Global Advisors (Japan) Co., Ltd. Ⅴ	0.47%	0.13%	+0.34%	
	State Street Global Advisors (Japan) Co., Ltd. Ⅵ	10.61%	11.35%	-0.74%	
	State Street Global Advisors (Japan) Co., Ltd. Ⅶ	1.04%	1.59%	-0.55%	
	State Street Global Advisors (Japan) Co., Ltd. Ⅷ	-2.22%	-2.17%	-0.05%	
	State Street Global Advisors (Japan) Co., Ltd. Ⅸ	2.56%	2.65%	-0.09%	
	BlackRock Japan Co., Ltd. ⅩⅥ	1.68%	1.79%	-0.10%	
	BlackRock Japan Co., Ltd. ⅩⅦ	12.96%	13.88%	-0.92%	○
	BlackRock Japan Co., Ltd. ⅩⅧ	-0.34%	-1.52%	+1.17%	○
	BlackRock Japan Co., Ltd. ⅩⅨ	-2.39%	-2.79%	+0.39%	○
	BlackRock Japan Co., Ltd. ⅩⅩ	0.62%	1.16%	-0.54%	○
	BlackRock Japan Co., Ltd. ⅩⅪ	-1.47%	-1.50%	+0.02%	○
	BlackRock Japan Co., Ltd. ⅩⅫ	-2.58%	-2.47%	-0.11%	○
	BlackRock Japan Co., Ltd. ⅩⅩⅢ	9.65%	9.66%	-0.01%	○
	Sumitomo Mitsui Trust Asset Management Co., Ltd. Ⅶ	1.59%	1.79%	-0.19%	
	Legal & General Investment Management Japan KK Ⅰ	1.77%	1.79%	-0.02%	
	Legal & General Investment Management Japan KK Ⅱ	9.86%	10.18%	-0.32%	○
	Legal & General Investment Management Japan KK Ⅲ	0.18%	0.13%	+0.05%	
	Legal & General Investment Management Japan KK Ⅳ	11.32%	11.35%	-0.03%	
	Legal & General Investment Management Japan KK Ⅴ	1.55%	1.59%	-0.04%	
	Legal & General Investment Management Japan KK Ⅵ	-1.88%	-2.17%	+0.30%	
	Legal & General Investment Management Japan KK Ⅶ	2.24%	2.23%	+0.01%	
	Legal & General Investment Management Japan KK Ⅷ	2.77%	2.95%	-0.18%	
Foreign equities active investment	Asset Management One Co., Ltd. Ⅺ (former Mizuho Asset Management)	-1.15%	-5.09%	+3.94%	
	Amundi Japan Ltd Ⅱ	-3.80%	-2.41%	-1.39%	○
	Wellington Management Japan Pte Ltd.	-3.94%	-2.41%	-1.54%	○
	JPMorgan Asset Management (Japan) Limited Ⅰ	-3.53%	-2.41%	-1.12%	○
	JPMorgan Asset Management (Japan) Limited Ⅱ	-0.64%	-0.61%	-0.03%	○
	T.Rowe Price Japan, Inc. Ⅱ	-1.72%	-2.41%	+0.69%	○
	T.Rowe Price Japan, Inc. Ⅲ	-1.17%	-2.77%	+1.60%	○
	Tokio Marine Asset Management Co., Ltd. Ⅱ	-2.39%	-2.41%	+0.01%	○
	Tokio Marine Asset Management Co., Ltd. Ⅲ	-3.13%	-4.68%	+1.55%	○
	Tokio Marine Asset Management Co., Ltd. Ⅳ	-2.22%	-2.47%	+0.25%	○
	Tokio Marine Asset Management Co., Ltd. Ⅴ	-5.23%	-4.46%	-0.77%	○
	Nikko Asset Management Co., Ltd. Ⅱ	4.13%	3.22%	+0.91%	
	Nissay Asset Management Corporation Ⅱ	-3.46%	-4.68%	+1.22%	○
	Neuberger Berman East Asia Limited Ⅰ	3.08%	-0.34%	+3.42%	○
	Nomura Asset Management Co., Ltd. Ⅵ	-6.34%	-2.47%	-3.87%	○
	BNP Paribas Asset Management Japan Limited	-3.50%	-2.41%	-1.09%	○
	BNY Mellon Investment Management Japan Limited Ⅱ	7.03%	3.22%	+3.82%	
	FIL Investments (Japan) Limited Ⅳ	-0.73%	-0.34%	-0.39%	○
	BlackRock Japan Co., Ltd. ⅩⅩⅣ	-2.17%	-2.49%	+0.33%	○
	BlackRock Japan Co., Ltd. ⅩⅩⅤ	-2.52%	-4.68%	+2.16%	○
	Franklin Templeton Japan Co., Ltd. Ⅱ	-4.79%	-4.68%	-0.11%	○
	Manulife Investment Management (Japan) Limited Ⅱ	2.60%	-2.77%	+5.37%	○
	Mitsubishi UFJ Trust and Banking Corporation Ⅶ	-0.28%	0.27%	-0.55%	
	UBS Asset Management (Japan) Ltd Ⅱ	-3.55%	3.22%	-6.77%	
	Lazard Japan Asset Management K.K. Ⅱ	-0.12%	-2.08%	+1.96%	

② Investment performance (alternative assets)

Alternative assets	Investment style	Asset manager name	IRR (local currency)	IRR (JPY)	Local currency	Start of investment	Remarks column
Infrastructure	Global infrastructure mandate focusing mainly on opportunities in Japan (Note 8)	DBJ Asset Management Co., Ltd.	4.99%	4.99%	JPY	March 2018	
			-0.93%	5.63%	USD	April 2018	
	Global-Core	Nomura Asset Management Co., Ltd. Ⅶ	5.70%	12.61%	USD	February 2018	
	Global-Core	Nomura Asset Management Co., Ltd. Ⅷ	-0.96%	5.40%	USD	December 2021	
	Global-Core	Sumitomo Mitsui DS Asset Management Company, Limited Ⅲ	2.70%	8.41%	USD	January 2018	
	Global-Core	Sumitomo Mitsui DS Asset Management Company, Limited Ⅳ	8.13%	15.44%	USD	September 2021	
	Global-Core	In-house investment Ⅴ	4.38%	6.36%	USD	February 2014	
Private equity	Global-Diversified Strategy	Neuberger Berman East Asia Limited Ⅱ	6.97%	18.03%	USD	April 2020	
	Global-Diversified Strategy	Mitsubishi UFJ Trust and Banking Corporation Ⅷ	7.98%	18.77%	USD	January 2021	
	Japan-Focused Strategy	Mitsubishi UFJ Trust and Banking Corporation Ⅸ	-4.80%	-4.80%	JPY	January 2022	
	Emerging markets-Diversified	In-house investment Ⅵ	7.62%	12.14%	USD	June 2015	
Real estate	Global-Core Commingled Fund Investments	Asset Management One Co., Ltd. Ⅻ	6.20%	13.12%	USD	September 2018	
	Global-Core JV/Club Type Investments	Asset Management One Co., Ltd. XIII	-4.22%	0.71%	USD	February 2021	
	Global-Core JV/Club Type Investments	Mizuho Trust & Banking Co., Ltd.	—	—	USD	September 2022	○
	Japan-Core	Mitsubishi UFJ Trust and Banking Corporation Ⅹ	7.29%	7.29%	JPY	December 2017	

(Note 1) Funds are listed in the order of the Japanese syllabary.

(Note 2) Asset managers entrusted with investment for more than one contract are indicated in Roman numerals.

(Note 3) The time-weighted returns and the benchmark returns are annualized rates that exclude the effect of the trade suspended period for asset transfer.

(Note 4) Excess returns may not equal the value calculated using the figures in the table because the figures are rounded off to two decimal places.

(Note 5) Time-weighted returns do not include returns from securities lending investment.

(Note 6) Internal rate of return (IRR) is a rate of return calculated by taking into account the effects of the size and timing of cash flows of investment target funds during the investment period. The calculation period of IRR is from the start of investment to the end of the current fiscal year.

(Note 7) Actual investments in alternative assets are denominated in major investment currencies. IRR (yen-denominated funds) is calculated by converting cash flows denominated in major investment currencies into yen at the going market exchange rate as of the occurrence of the cash flow and is subject to exchange rate fluctuations throughout the investment period.

(Note 8) Domestic assets (major investment currency: JPY) are managed separately from foreign assets (major investment currency: USD).

(Note 9) A circle in the remarks column indicates an external asset manager whose investment period is less than one year. The rates of return for external asset managers with investment periods of less than one year are those for the investment periods. For alternative assets, however, rates of return are shown only for investments underway for at least one year for which investments in the portfolio companies have already been executed.

[5] Investment fees (3 year cumulative)

(Unit: ¥)

Investment method	Asset manager name	Custodians	Investment fees	Remarks column
Domestic bonds passive investment	Asset Management One Co., Ltd. Ⅰ (former Mizuho Trust & Banking)	MTBJ	163,339,977	
	AllianceBernstein Japan Ltd.	MTBJ	299,784,262	
	State Street Global Advisors (Japan) Co., Ltd. Ⅹ	MTBJ	109,895,191	○
	BlackRock Japan Co., Ltd. Ⅰ	MTBJ	44,287,613	
	BlackRock Japan Co., Ltd. Ⅱ	MTBJ	8,396,815	
	BlackRock Japan Co., Ltd. Ⅲ	MTBJ	156,472,134	
	Sumitomo Mitsui Trust Asset Management Co., Ltd. Ⅰ	MTBJ	264,026,479	
	Sumitomo Mitsui Trust Asset Management Co., Ltd. Ⅱ	MTBJ	39,355,895	
	Mitsubishi UFJ Trust and Banking Corporation Ⅱ	MTBJ	56,426,177	
	Resona Asset Management Co., Ltd. Ⅲ	SSTB	58,030,867	
	Resona Asset Management Co., Ltd. Ⅳ	SSTB	24,198,513	
Domestic bonds active investment	Asset Management One Co., Ltd. Ⅲ (former Mizuho Trust & Banking)	MTBJ	1,085,080,933	
	Asset Management One Co., Ltd. ⅩⅣ (former DIAM)	MTBJ	1,109,729,179	○
	MU Investments Co., Ltd.	MTBJ	437,502,487	
	Tokio Marine Asset Management Co., Ltd. Ⅰ	MTBJ	474,999,950	
	PGIM Japan Co., Ltd. Ⅰ	MTBJ	808,071,962	
	PIMCO Japan Ltd Ⅰ	MTBJ	1,005,351,479	
	Manulife Investment Management (Japan) Limited Ⅰ	MTBJ	1,203,045,737	
	Sumitomo Mitsui Trust Asset Management Co., Ltd. Ⅲ	MTBJ	670,208,214	
	Mitsubishi UFJ Trust and Banking Corporation Ⅲ	MTBJ	1,018,772,346	
Foreign bonds passive investment	Asset Management One Co., Ltd. Ⅳ (former Mizuho Trust & Banking)	SSTB	128,887,440	
	State Street Global Advisors (Japan) Co., Ltd. Ⅰ	SSTB	154,766,192	
	Nomura Asset Management Co., Ltd. Ⅱ	MTBJ	65,318,308	
	BlackRock Japan Co., Ltd. Ⅳ	MTBJ	331,974,843	
	BlackRock Japan Co., Ltd. Ⅴ	MTBJ	77,508,744	
	BlackRock Japan Co., Ltd. Ⅵ	MTBJ	212,414,194	
	BlackRock Japan Co., Ltd. Ⅶ	MTBJ	2,012,554	
	BlackRock Japan Co., Ltd. Ⅷ	MTBJ	219,965,234	
	BlackRock Japan Co., Ltd. Ⅻ	MTBJ	197,433,980	
	BlackRock Japan Co., Ltd. ⅩⅢ	MTBJ	76,064,346	
	Sumitomo Mitsui Trust Asset Management Co., Ltd. Ⅳ	SSTB	30,921,233	
	Resona Asset Management Co., Ltd. Ⅴ	SSTB	51,058,083	
	Resona Asset Management Co., Ltd. Ⅵ	SSTB	14,092,369	
	Resona Asset Management Co., Ltd. Ⅶ	SSTB	68,989,705	
	Resona Asset Management Co., Ltd. Ⅷ	SSTB	1,172,181	
	Resona Asset Management Co., Ltd. Ⅸ	SSTB	61,739,723	

(Unit: ¥)

Investment method	Asset manager name	Custodians	Investment fees	Remarks column
Foreign bonds active investment	Asset Management One Co., Ltd. Ⅴ (former Mizuho Asset Management)	SSTB	3,953,105,670	
	Ashmore Japan Co., Ltd	SSTB	913,352,541	
	Goldman Sachs Asset Management Co., Ltd.	SSTB	2,100,540,172	○
	Schroder Investment Management (Japan) Limited Ⅱ	SSTB	1,611,634,046	○
	Sompo Asset Management Co., LTD.	SSTB	3,185,348,796	
	T.Rowe Price Japan, Inc. Ⅰ	MTBJ	356,775,610	
	PineBridge Investments Japan Co., Ltd.	MTBJ	210,854,609	
	BNY Mellon Investment Management Japan Limited Ⅰ	SSTB	3,466,773,541	
	PGIM Japan Co., Ltd. Ⅱ	SSTB	2,666,628,794	
	PIMCO Japan Ltd Ⅱ	SSTB	4,622,055,463	
	FIL Investments (Japan) Limited Ⅰ	SSTB	15,984,003,177	
	BlackRock Japan Co., Ltd. ⅩⅩⅥ	SSTB	2,268,881,477	○
	Franklin Templeton Japan Co., Ltd. Ⅰ	SSTB	3,388,310,623	
	Barings Japan Limited	MTBJ	209,419,469	
	Morgan Stanley Investment Management (Japan) Co., Ltd. Ⅰ	SSTB	3,858,452,235	
	Morgan Stanley Investment Management (Japan) Co., Ltd. Ⅱ	MTBJ	260,733,067	
	UBS Asset Management (Japan) Ltd Ⅰ	SSTB	900,277,527	
Domestic equities passive investment	Asset Management One Co., Ltd. Ⅵ (former DIAM)	MTBJ	570,622,129	
	Asset Management One Co., Ltd. Ⅶ (former Mizuho Trust & Banking)	MTBJ	32,162,485	
	Asset Management One Co., Ltd. Ⅷ	MTBJ	111,606,425	
	Nomura Asset Management Co., Ltd. Ⅲ	MTBJ	184,467,890	
	Nomura Asset Management Co., Ltd. Ⅳ	MTBJ	1,196,833,328	
	FIL Investments (Japan) Limited Ⅱ	MTBJ	211,853,183	
	BlackRock Japan Co., Ltd. ⅩⅣ	MTBJ	65,930,733	
	BlackRock Japan Co., Ltd. ⅩⅤ	MTBJ	77,871,253	
	Sumitomo Mitsui Trust Asset Management Co., Ltd. Ⅴ	MTBJ	231,786,058	
	Sumitomo Mitsui Trust Asset Management Co., Ltd. Ⅵ	MTBJ	263,580,854	
	Mitsubishi UFJ Trust and Banking Corporation Ⅳ	MTBJ	143,027,369	
	Mitsubishi UFJ Trust and Banking Corporation Ⅴ	MTBJ	151,323,318	
	Mitsubishi UFJ Trust and Banking Corporation Ⅵ	MTBJ	118,270,127	
	Resona Asset Management Co., Ltd. Ⅺ	MTBJ	200,814,441	
Domestic equities active investment	Asset Management One Co., Ltd. Ⅸ	MTBJ	745,243,753	
	Asset Management One Co., Ltd. Ⅹ (former Mizuho Asset Management)	MTBJ	805,906,205	
	Invesco Asset Management (Japan) Limited Ⅰ	MTBJ	1,305,334,409	
	Invesco Asset Management (Japan) Limited Ⅱ	MTBJ	89,096,142	
	Capital International K.K.	MTBJ	7,064,287,057	
	Schroder Investment Management (Japan) Limited Ⅰ	MTBJ	688,546,135	
	Nomura Asset Management Co., Ltd. Ⅴ	MTBJ	608,412,708	
	FIL Investments (Japan) Limited Ⅲ	MTBJ	2,846,720,074	
	Sumitomo Mitsui DS Asset Management Company, Limited Ⅱ	MTBJ	335,284,571	
	Lazard Japan Asset Management K.K. Ⅰ	MTBJ	1,305,124,938	
	Russell Investments Japan Co., Ltd. Ⅰ	MTBJ	2,725,116,889	

(Unit: ¥)

Investment method	Asset manager name	Custodians	Investment fees	Remarks column
Foreign equities passive investment	State Street Global Advisors (Japan) Co., Ltd. Ⅳ	MTBJ	393,313,959	
	State Street Global Advisors (Japan) Co., Ltd. Ⅴ	MTBJ	154,445,870	
	State Street Global Advisors (Japan) Co., Ltd. Ⅵ	MTBJ	27,790,646	
	State Street Global Advisors (Japan) Co., Ltd. Ⅶ	MTBJ	6,528,363	
	State Street Global Advisors (Japan) Co., Ltd. Ⅷ	MTBJ	47,300,009	
	State Street Global Advisors (Japan) Co., Ltd. Ⅸ	MTBJ	774,898,217	
	BlackRock Japan Co., Ltd. XVI	MTBJ	528,956,318	
	Sumitomo Mitsui Trust Asset Management Co., Ltd. Ⅶ	MTBJ	339,505,236	
	Legal & General Investment Management Japan KK Ⅰ	MTBJ	695,907,911	
	Legal & General Investment Management Japan KK Ⅵ	MTBJ	17,433,772	
	Legal & General Investment Management Japan KK Ⅶ	MTBJ	115,084,470	
	Legal & General Investment Management Japan KK Ⅷ	MTBJ	129,624,449	
Foreign equities active investment	Asset Management One Co., Ltd. Ⅺ (former Mizuho Asset Management)	MTBJ	1,332,331,449	
	MFS Investment Management K.K.	MTBJ	585,782,551	○
	Nikko Asset Management Co., Ltd. Ⅱ	MTBJ	969,832,497	
	BNY Mellon Investment Management Japan Limited Ⅱ	MTBJ	582,630,713	
	Mitsubishi UFJ Trust and Banking Corporation Ⅶ	MTBJ	14,337,244,190	
	UBS Asset Management (Japan) Ltd Ⅱ	MTBJ	943,566,762	
	Lazard Japan Asset Management K.K. Ⅱ	MTBJ	632,580,651	

(Unit: ¥)

Investment method	Asset manager name	Custodians	Investment fees	Remarks column
Alternative infrastructure	DBJ Asset Management Co., Ltd.	SSTB	16,499,994	
	Nomura Asset Management Co., Ltd. Ⅶ	SSTB	582,300,518	
	Sumitomo Mitsui DS Asset Management Company, Limited Ⅲ	SSTB	670,755,560	
Alternative private equity	Neuberger Berman East Asia Limited Ⅱ	SSTB	115,606,342	
	Mitsubishi UFJ Trust and Banking Corporation Ⅷ	SSTB	399,625,666	
Alternative real estate	Asset Management One Co., Ltd. Ⅻ	SSTB	778,204,627	
	Asset Management One Co., Ltd. XIII	SSTB	115,370,009	
	Mitsubishi UFJ Trust and Banking Corporation Ⅹ	SSTB	744,549,164	

(Unit: ¥)

Investment method	Custodian, etc. name	Custodians	Investment fees
Custody	State Street Trust and Banking Co., Ltd.	SSTB	9,470,000,316
	Custody Bank of Japan, Ltd.	CBJ	1,525,023,029
	The Master Trust Bank of Japan, Ltd.	MTBJ	24,015,949,303

Transition management	BlackRock Japan Co., Ltd. XXVII (Foreign bonds)	SSTB	345,237
	Nomura Asset Management Co., Ltd. Ⅸ (Domestic equities)	MTBJ	1,100,000
	Russell Investments Japan Co., Ltd. Ⅱ (Domestic equities)	MTBJ	55,000

(Note 1) Funds are listed in the order of the Japanese syllabary.
(Note 2) Asset managers entrusted with investment for more than one contract are indicated in Roman numerals.
(Note 3) Fees include consumption tax.
(Note 4) A circle in the remarks column indicates an external asset manager closed in fiscal 2022 with less than three years of investment period since April 2020. The lists do not include funds, etc. that have less than three years investment history after the contract for these mandates, or those that have three years or longer investment history after the contracts but to which there was no fee payment during the last three years.
(Note 5) Fees paid to custodians include certain fees that are deducted from the entrusted assets, such as custody fees and attorney fees.
(Note 6) The investment fees of State Street Trust and Banking Co., Ltd., related to alternative assets is ¥565,569,796.

Investment returns and fees by securities lending investment. (3 year cumulative)

(Unit:¥)

Asset class	Investment returns	Investment fees
Domestic bonds	1,988,938,191	203,201,691
Foreign bonds	67,510,554,680	16,017,566,427
Foreign equities	417,316,109	78,545,012

(Note 1) Returns in the table represent premium charges excluding fees.
(Note 2) Fees indicate management fees and agent fees.

Index licensing fees (three-year cumulative)

(Unit:¥)

	Index companies	Index licensing fees
Index use	Ibbotson Associates Japan, Inc.	31,232,497
	MSCI G.K.	1,015,603,755

(Note 1) Index licensing fees are paid by GPIF based on direct contracts with index companies, in order to enable outsourced asset managers to use indexes. Index licensing fees include consumption tax.
(Note 2) The list does not include index companies that have less than three years history after the contract, or those that have three years or longer history after the contracts but to which there was no fee payment during the last three years.

2 | Portfolio Holdings by Asset Category as of Mar. 31, 2023

These are lists to summarize GPIF's top 10 portfolio holdings as of March 31, 2023 (as of the end of fiscal 2022), either indirectly through external asset managers or directly with GPIF's in-house capacity for bonds, by name for bonds and equities.

These do not purport to represent GPIF's evaluation of individual companies.

Russia-related assets including in market capitalization at the end of March 2023 are valued at zero in principle, due to situations such as trade restriction against foreign investors, difficulties in settlement and exchange transaction, and difficulties in access to sufficient information about trading.

◯ Domestic bonds holdings in order of market value

No.	Security name	Market value (¥100 million)
1	10-year Inflation-Indexed Bonds JGB #20	11,004
2	Fixed-rate Bonds JGB #156	6,718
3	10-year Inflation-Indexed Bonds JGB #21	6,647
4	10-year Inflation-Indexed Bonds JGB #19	5,772
5	Fixed-rate Bonds JGB #150	5,014
6	Fixed-rate Bonds JGB #149	4,428
7	Fixed-rate Bonds JGB #154	4,260
8	Fixed-rate Bonds JGB #145	4,245
9	Fixed-rate Bonds JGB #148	4,222
10	Fixed-rate Bonds JGB #363	4,033
Total	4,806 securities	465,203

◯ Domestic equities holdings in order of market value

No.	Security name	Shares	Market value (¥100 million)
1	TOYOTA MOTOR CORP.	946,680,300	18,063
2	SONY GROUP CORP.	123,618,700	14,865
3	KEYENCE CORP.	15,783,400	10,196
4	MITSUBISHI UFJ FINANCIAL GROUP,INC.	1,111,913,300	9,607
5	NIPPON TELEGRAPH AND TELEPHONE CORP.	202,569,800	8,147
6	DAIICHI SANKYO COMPANY LTD	154,609,600	7,478
7	SUMITOMO MITSUI FINANCIAL GROUP,INC.	126,330,700	6,838
8	HITACHI LTD.	91,308,600	6,686
9	TOKYO ELECTRON LTD.	40,998,100	6,676
10	SHIN-ETSU CHEMICAL CO.,LTD.	141,459,500	6,125
Total	2,312 securities		497,093

◯ Foreign bonds holdings in order of market value

No.	Security name	Market value (¥100 million)
1	US TREASURY N/B 4.125PCT 15NOV32	3,647
2	US TREASURY N/B 2.875PCT 15MAY32	2,297
3	US TREASURY N/B 1.875PCT 15FEB32	2,144
4	US TREASURY N/B 1.625PCT 15MAY31	1,885
5	US TREASURY N/B 1.375PCT 15NOV31	1,868
6	US TREASURY N/B 2.875PCT 15AUG28	1,737
7	US TREASURY N/B 2.75PCT 15AUG32	1,684
8	US TREASURY N/B 2.625PCT 15FEB29	1,653
9	US TREASURY N/B 1.25PCT 15AUG31	1,653
10	US TREASURY N/B 1.5PCT 15AUG26	1,578
Total	13,448 securities	498,664

◯ Foreign equities holdings in order of market value

No.	Security name	Shares	Market value (¥100 million)
1	APPLE INC	103,066,778	22,620
2	MICROSOFT CORP	46,051,878	17,670
3	AMAZON.COM INC	59,607,190	8,194
4	NVIDIA CORP	16,711,306	6,178
5	ALPHABET INC-CL A	37,898,125	5,232
6	ALPHABET INC-CL C	34,939,891	4,836
7	TESLA INC	16,621,852	4,589
8	META PLATFORMS INC-CLASS A	14,658,054	4,135
9	UNITEDHEALTH GROUP INC	6,192,063	3,895
10	EXXON MOBIL CORP	25,593,625	3,735
Total	3,366 securities		486,856

◯ Alternative Assets holdings in order of market value

No.	Alternative Assets	Security name	Market value (¥100 million)
1	Infrastructure	STEPSTONE G INFRASTRUCTURE OPPORTUNITIES, L.P.	4,903
2	Infrastructure	PANTHEON G INFRASTRUCTURE OPPORTUNITIES LP	3,269
3	Infrastructure	TORANOMON INFRASTRUCTURE 1, L.P.	1,928
4	Infrastructure	GLOBAL ALTERNATIVE CO-INVESTMENT FUND Ⅰ	1,921
5	Infrastructure	TORANOMON INFRASTRUCTURE 2 LP	1,213
6	Infrastructure	DG INFRASTRUCTURE OPPORTUNITIES L.P.	653
7	Infrastructure	DG INFRASTRUCTURE, ILP	590
1	Private Equity	TORANOMON PRIVATE EQUITY 1 AIV, L.P.	2,473
2	Private Equity	TORANOMON PRIVATE EQUITY 2 AIV, L.P.	1,714
3	Private Equity	GLOBAL ALTERNATIVE CO-INVESTMENT FUND Ⅱ	450
4	Private Equity	TORANOMON PRIVATE EQUITY 3, ILP	36
1	Real Estate	CBRE G REAL ESTATE INVESTMENTS, LP	6,745
2	Real Estate	MUTB G REAL ESTATE FUND	2,157
3	Real Estate	TORANOMON REAL ESTATE 1, LP	291

(Note) Security names are as of March 31, 2023.

Code of Conduct

【1】Social responsibility

◆ GPIF's mission is to contribute to the stability of the public pension system (Employees' Pension Insurance and National Pensions) by managing the reserve assets and distributing the proceeds to the government.

【2】Fiduciary duty

◆ We fully understand that the reserve assets are instrumental for future pension benefits payments, act solely for the benefit of pension recipients, and pledge to pay due attention as prudent experts in exercising our fiduciary responsibilities. The Chairperson and the member of the Board of Governors shall by no means be motivated by benefitting the organizations to which they belong.

【3】Compliance with laws and maintaining highest professional ethics and integrity

◆ We shall comply with laws and social norms, remain fully cognizant of our social responsibilities associated with pension reserve management, and act with the highest professional ethics and integrity to avoid any distrust or suspicion of the public.

【4】Duty of confidentiality and protecting GPIF's assets

◆ We shall strictly control confidential information that we come to access through our businesses, such as non-public information related to investment policies and investment activities, and never use such information privately or illegally.
◆ We shall effectively use GPIF's assets, both tangible and intangible (e.g., documents, proprietary information, system, and know-how), and protect and manage such assets properly.

【5】Prohibition of pursuing interests other than those of GPIF

◆ We shall never use our occupations or positions for the interests of ourselves, relatives, or third parties.
◆ We shall never seek undue profits at the expense of GPIF.

【6】Fairness of business transactions

◆ We shall respect fair business practices at home and abroad, and treat all counterparties impartially.
◆ We shall never make transactions with anti-social forces or bodies.

【7】Appropriate information disclosure

◆ We shall continue to improve our public information disclosure and public relations activities.
◆ We shall ensure the accuracy and appropriateness of our financial statements and other public documents that are required to be disclosed by laws and ordinances.
◆ We shall remain mindful that our outside activities, regardless of whether business or private (e.g., publications, speeches, interviews, or use of social media) affect the credibility of GPIF, and act accordingly.

【8】Developing human resources and respect in the workplace

◆ We are committed to GPIF's mission by improving our professional skills and expertise, promoting communication and teamwork and nurturing a diversity of talents and capabilities.
◆ We shall respect each person's personality, talents and capabilities, perspectives, well-being, and privacy to maintain a good work environment, and never allow discrimination or harassment.

【9】Self-surveillance of illegal or inappropriate activity

◆ Whenever an illegal or inappropriate activity is (or is expected to be) perpetrated by executives, staff, or other related personnel, such activity shall be immediately reported to GPIF through various channels including our whistleblowing system.
◆ When such a report is made, we shall conduct the necessary investigation and take corrective actions and preventive measures according to our internal rules.

For All Generations

Government Pension Investment Fund, Japan

Annual Report Fiscal Year 2022

This document has been prepared and released to the public in accordance with Article 26, Paragraph 1 of the Act on Government Pension Investment Fund and Article 79-8, Paragraph 1 of the Employees' Pension Insurance Act.

Contact

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