

Government Pension Investment Fund Commissioned Research Project

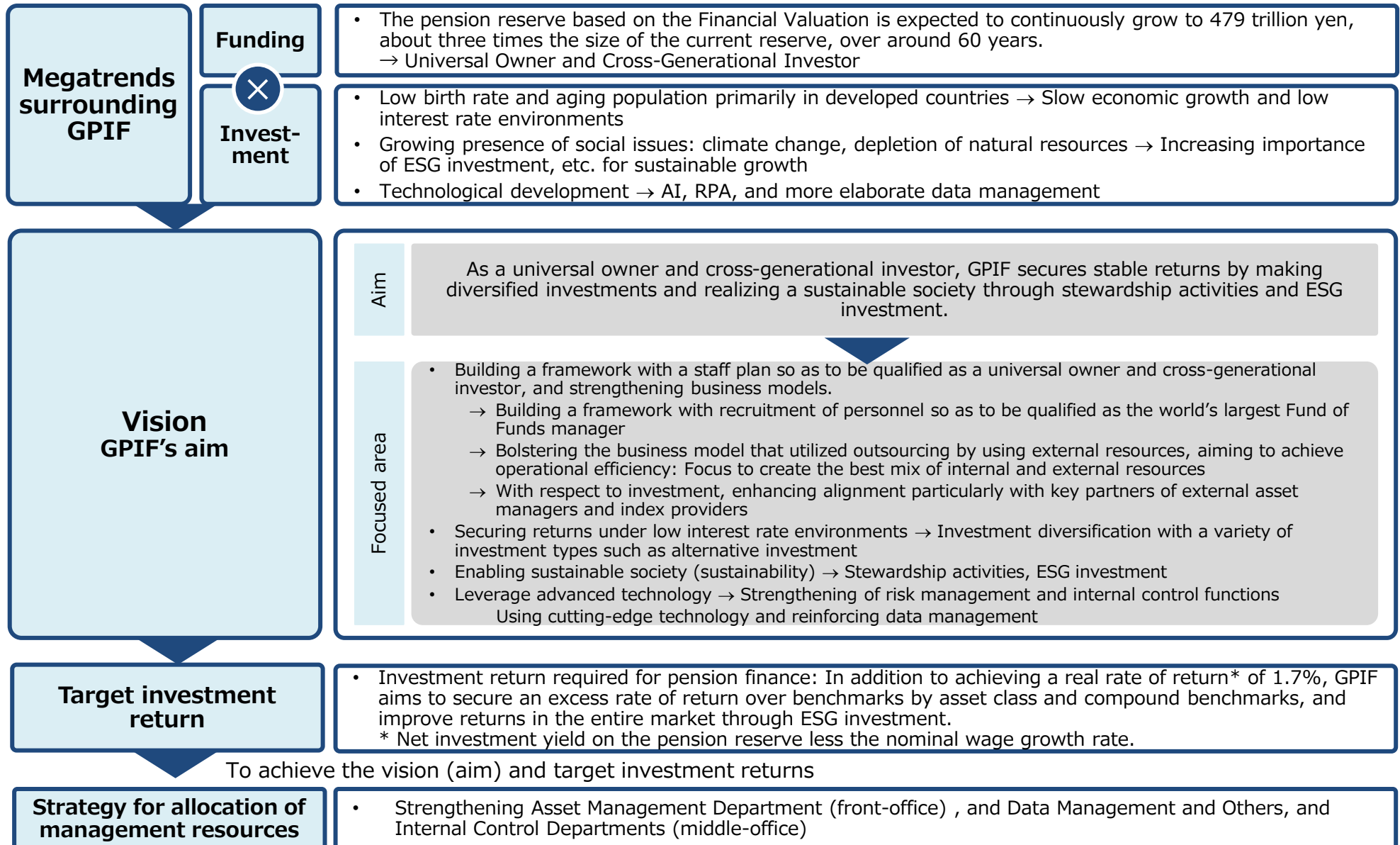
Final Report (Outline): Research Project to Contribute to Preparation of the Next Medium-Term Plan

GPIF's Aim (Vision) as Foundation of the Medium-term Plan

March 2020

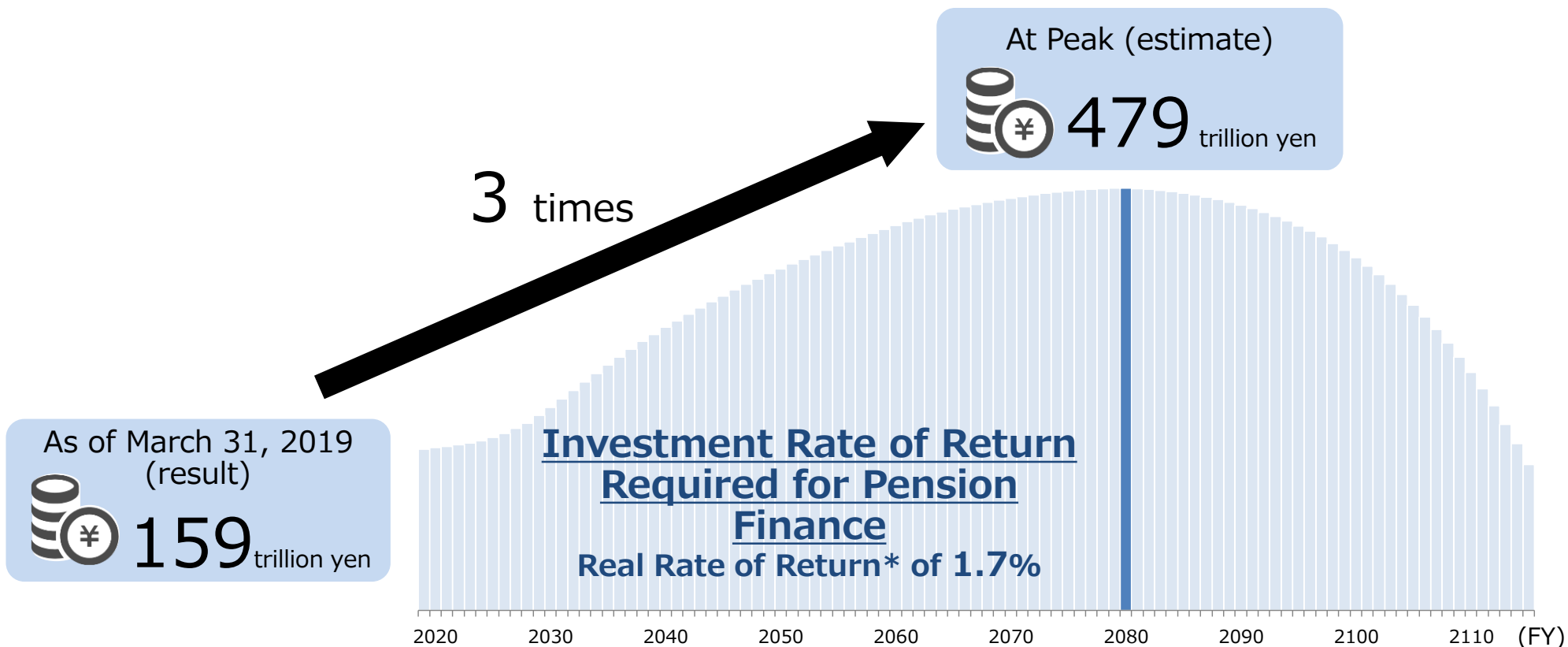
Mizuho Research Institute

Key Statements to Be Delivered in the 4th Medium-Term Plan



Outlook for Pension Reserve Over the Next 100 Years, Based on the Financial Valuation

- The pension reserve over the next 100 years, based on the Financial Valuation conducted in 2019, is projected to approximately triple from 159 trillion yen as of March 31, 2019 to 479 trillion yen at the peak with a continued increase over a 60-year period.
 - Universal Owner(an investor with a very large fund size and a widely diversified portfolio)and Cross-Generational Investor(responsible for supporting pension finance with an investment horizon of as long as 100 years)



Note: The above data indicate the sum of the former Employees' Pension reserve and the National Pension reserve. (Scenario III of the Financial Valuation in 2019)

* Net investment yield on the pension reserve less the nominal wage growth rate.

Low Interest Rate Environments, Increasing Importance of ESG Investment, etc., and Use of Technology

Megatrend
(Investment)

Low birth rate and aging population seen primarily in developed countries
Slowing economic growth, and other factors



Worldwide low interest rate environments

Growing presence of social issues (climate change, depletion of natural resources, etc.)



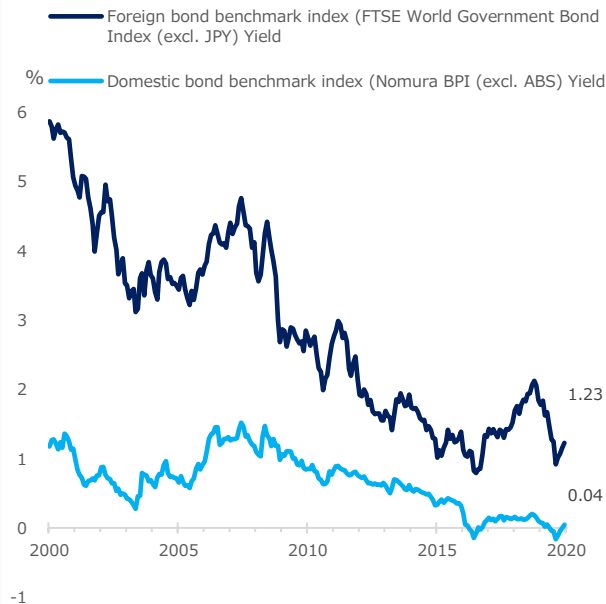
Increasing importance of ESG investment, etc.

Technological development

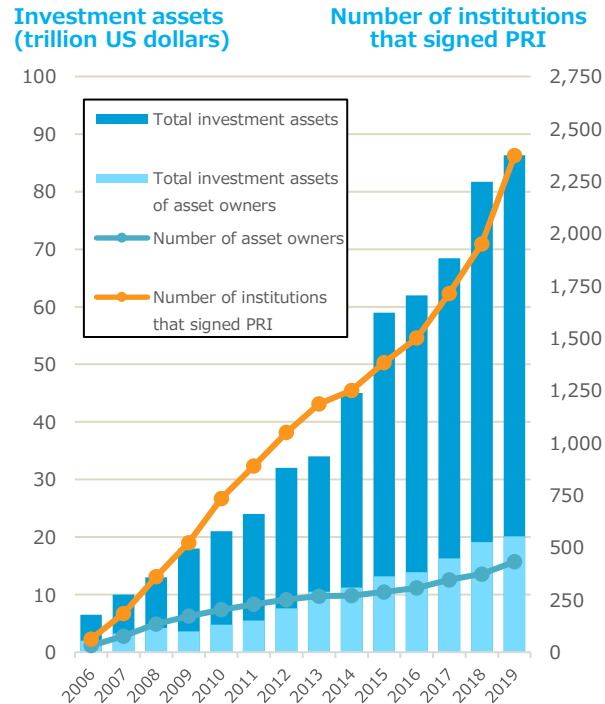


AI, RPA and more elaborate data management

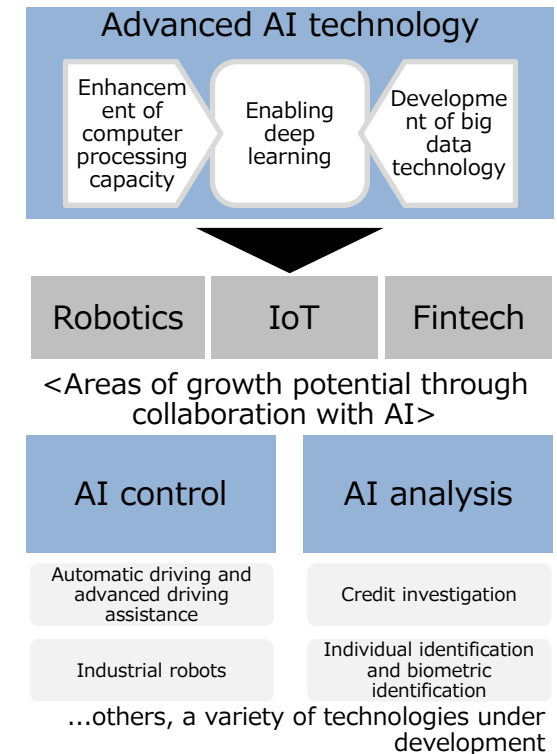
Benchmarks of domestic bonds and foreign bonds



ESG investments worldwide



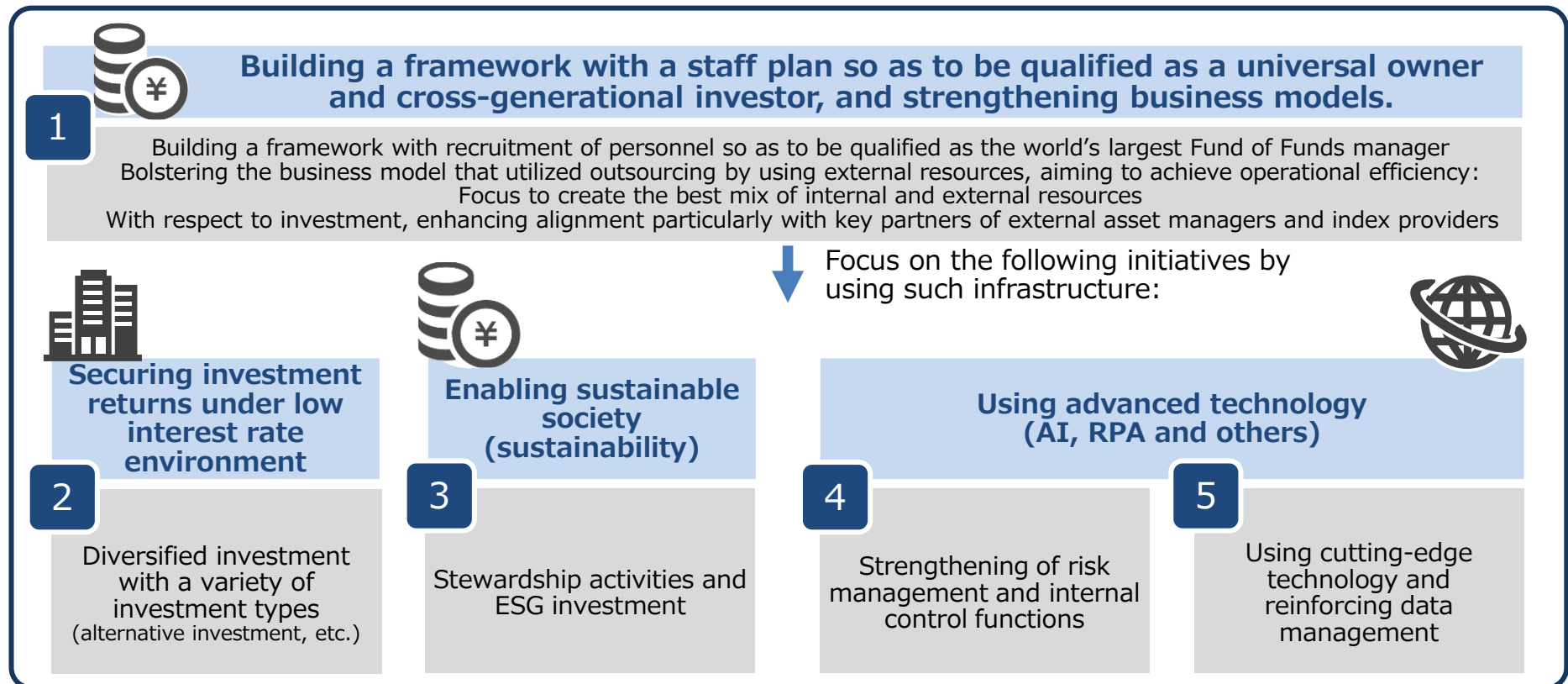
Influence from evolving AI



GPIF's aim

As a universal owner and cross-generational investor, GPIF secures stable returns by making diversified investments and realizing a sustainable society through stewardship activities and ESG investment.

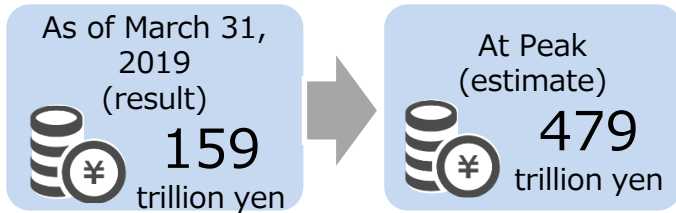
Key focused areas to achieve the aim



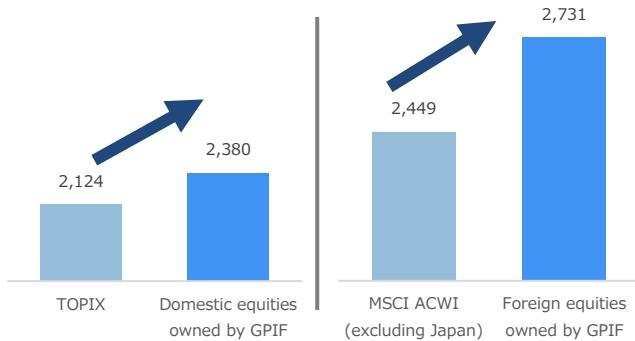
Framework to Be Qualified as the World's Largest Fund of Funds Manager

Projected pension reserve based on the 2019

Financial Valuation



Number of constituents in major indices, and number of equities owned by GPIF (As of March 31, 2019)



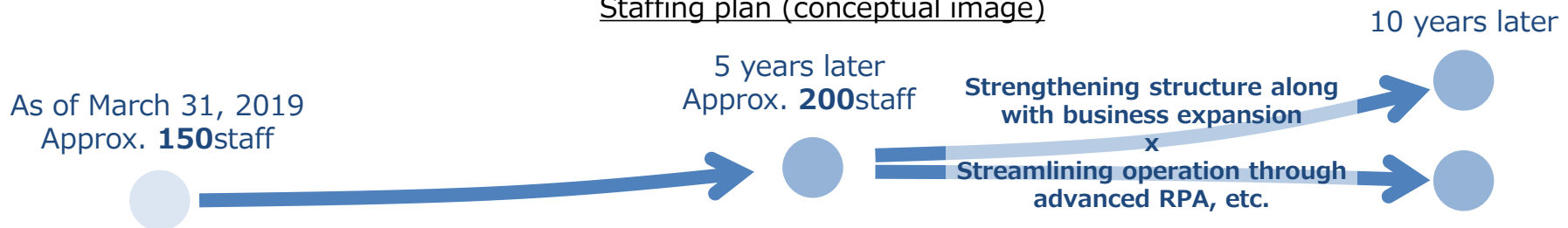
(Reference) Comparison of assets, personnel, and business expenses in major pension funds

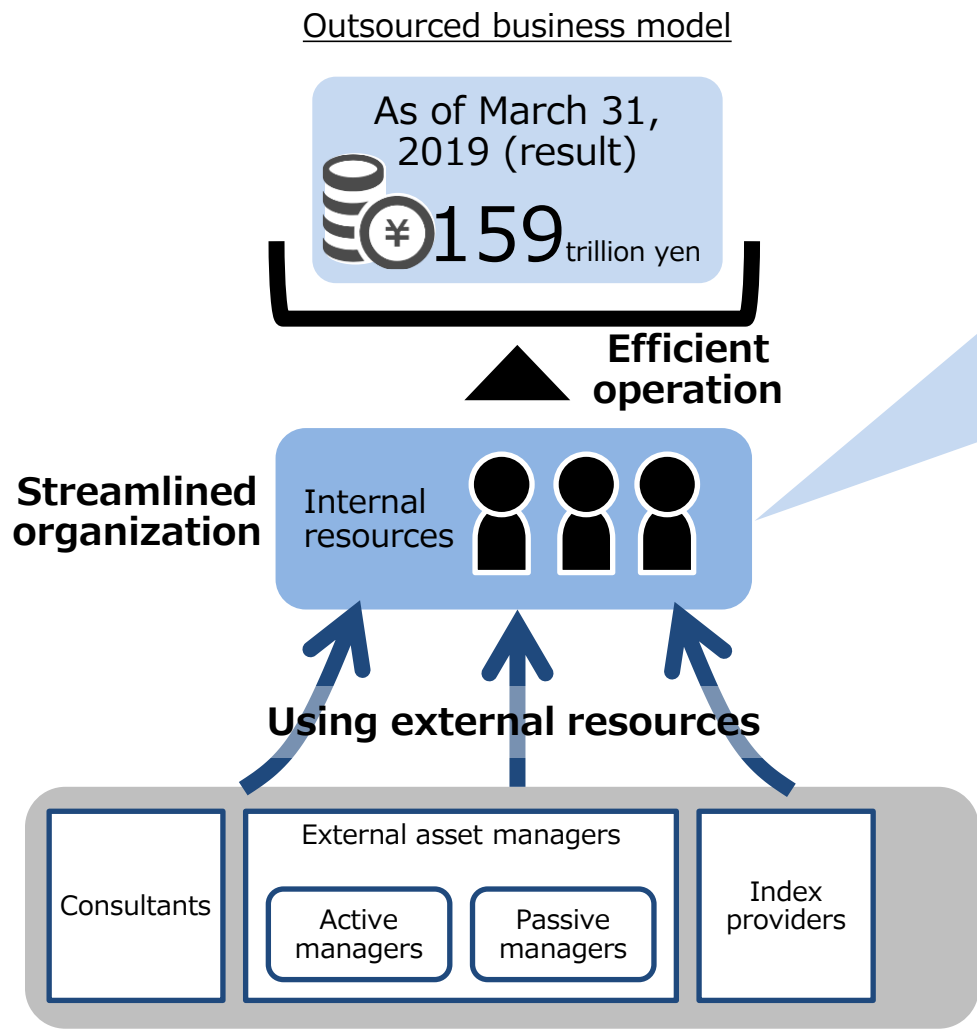
Fund name	Investment assets	Number of staff	Fees paid to external asset managers	In-house investment ratio to total investment assets
Government Pension Investment Fund (GPIF)	Approx. 161.8 trillion yen (As of Sept. 30, 2019)	148 staff of which, front-office department: 57 staff (Incl. executives. As of Sept. 30, 2019)	29.5 billion yen (0.02%) (Expenses for FY ended March 31, 2019)	22.0% (As of March 31, 2019)
California Public Employees' Retirement System (CalPERS: USA)	Approx. 41.6 trillion yen (As of Oct. 31, 2019)	2,875 staff (Incl. staff in charge of work related to pension payout) of which, front-office department: 238 staff (Number of staff planned for FY2018 and FY2019)	79.0 billion yen (0.20%) (Expenses for FY ended June 30, 2018)	73.3% (As of June 30, 2019)
Canada Pension Plan Investment Board (CPPIB: Canada)	Approx. 33.4 trillion yen (As of Sept. 30, 2019)	1,661 staff of which, front-office department: not disclosed (As of March 31, 2019)	131.7 billion yen (0.42%) (Expenses for FY ended March 31, 2019)	Executed investment through external asset managers for PE and part of the absolute return strategy (As of March 31, 2019)
The Government Pension Fund Global (GPF: Norway)	Approx. 115.8 trillion yen (As of Sept. 30, 2019)	601 staff of which, front-office department: 262 staff (As of Dec. 31, 2018)	17.7 billion yen (0.02%) (Expenses for FY ended Dec. 31, 2018)	96.1% (As of Dec. 31, 2018)

The ratios in brackets indicate ratios of expenses to the average balance of the investment assets at the end of the previous and current fiscal years.

Building a framework with recruitment of personnel so as to be qualified as the world's largest Fund of Funds manager

Staffing plan (conceptual image)





Bolstering outsourced business model aiming for operational efficiency

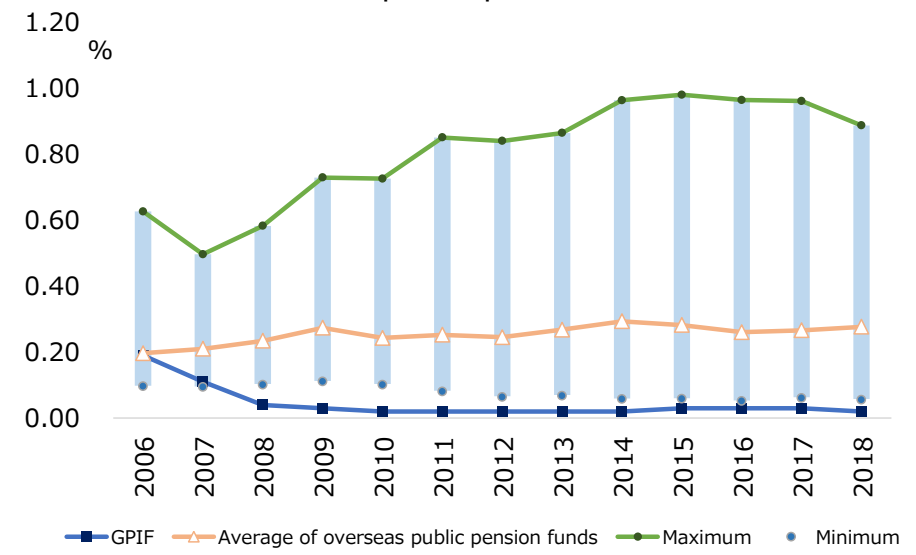
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Focus to create the best mix of internal and external resources

Maximizing use of internal resources at the minimum requirement

Using external resources

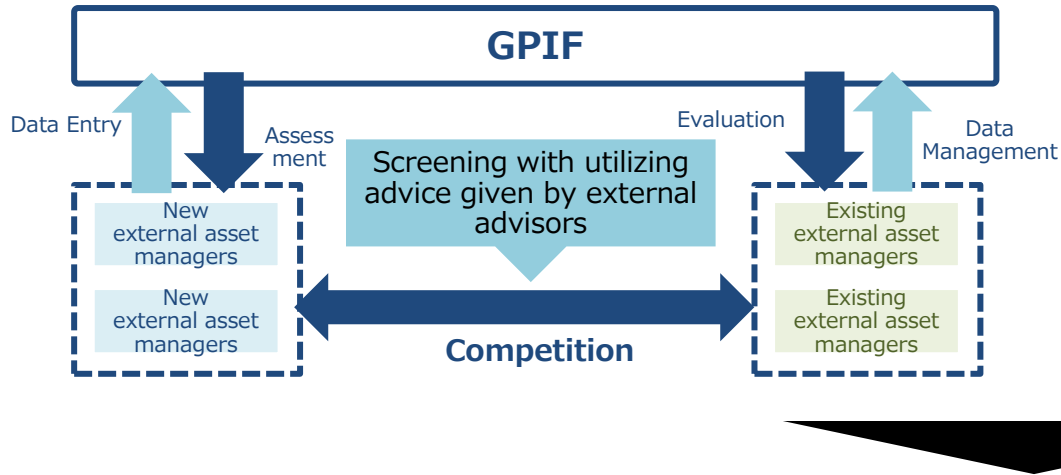
(Reference) Cost comparison between GPIF and overseas public pension funds



Strengthening Alignment with External Asset Managers and Index Providers

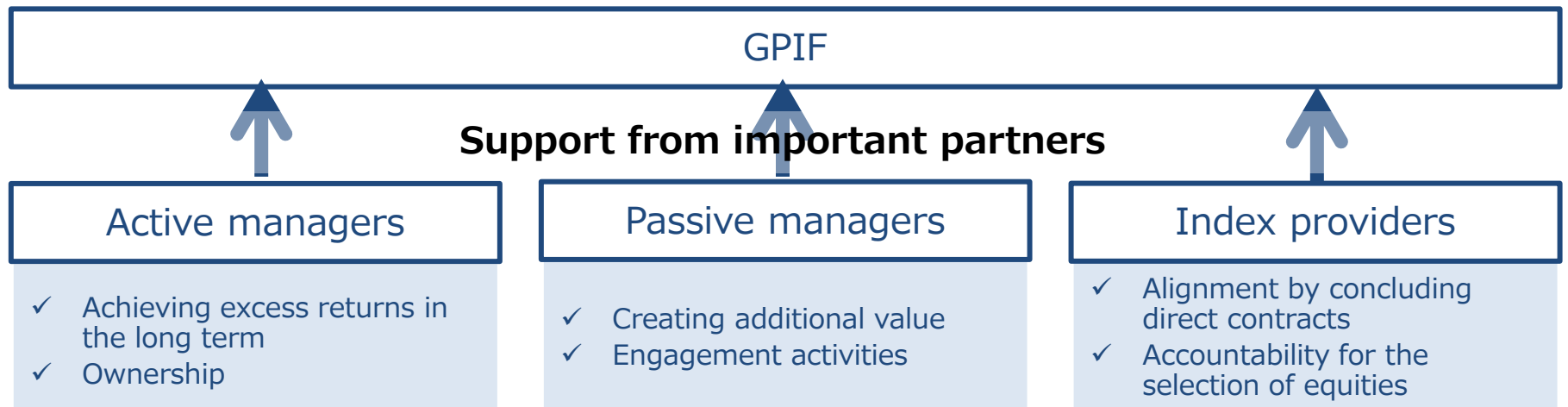
Introduction of Asset Manager Registration System:
February 2018

Introduction of New Performance-Based Fee Structure:
April 2018



- Investment fees should be linked to excess returns (i.e., performance-based fees), while active managers that do not deliver excess returns will only receive fees on a par with those paid to passive managers (i.e., basic fees).
- The fee scheme is structured so that the fee rate applied to funds that achieved target excess return rate is assumed to be the same level as former performance-based fee structure.
- In exchange for applying fees linked to long-term investment results to some external asset managers, a multi-year contract is concluded with some external asset managers based on market cycles.

Strengthening alignment with external asset managers and index providers serving as important partners

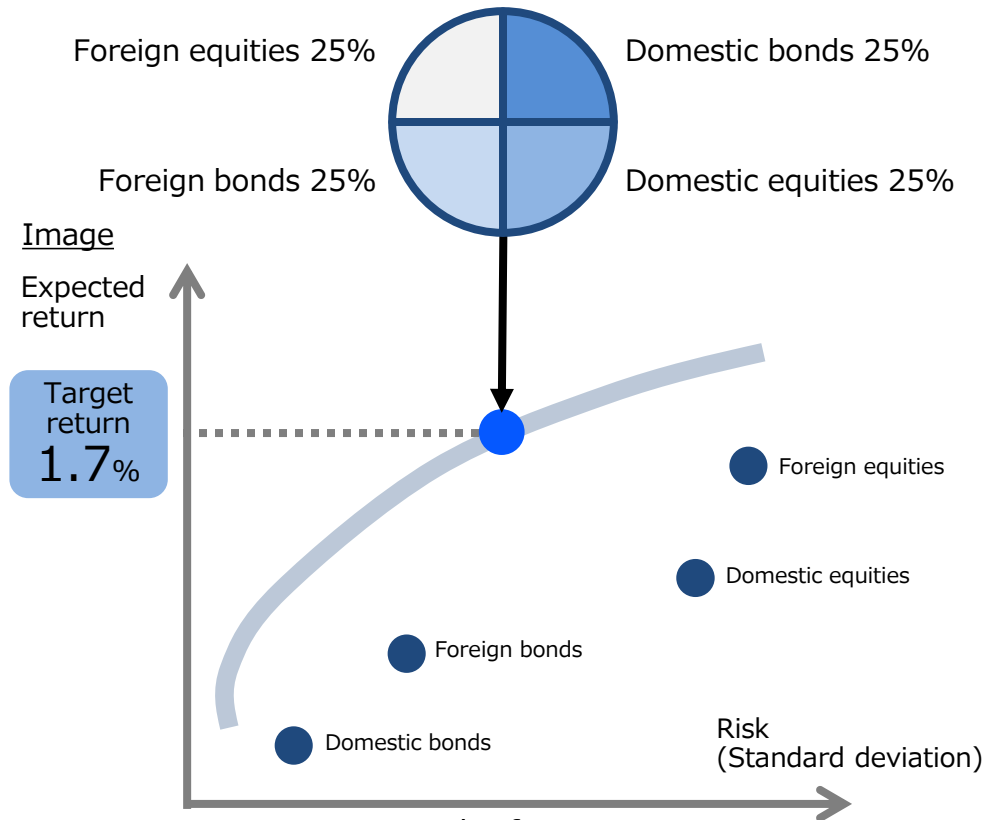


- Given low interest rate environments worldwide, GPIF aims to maintain and improve the profitability of portfolios by strengthening globally diversified investment and alternative investment.
- GPIF promotes building an appropriate framework and system to bolster globally diversified investment and alternative investment.

Investment Rate of Return Required for Pension Finance: Real Rate of Return* of 1.7%

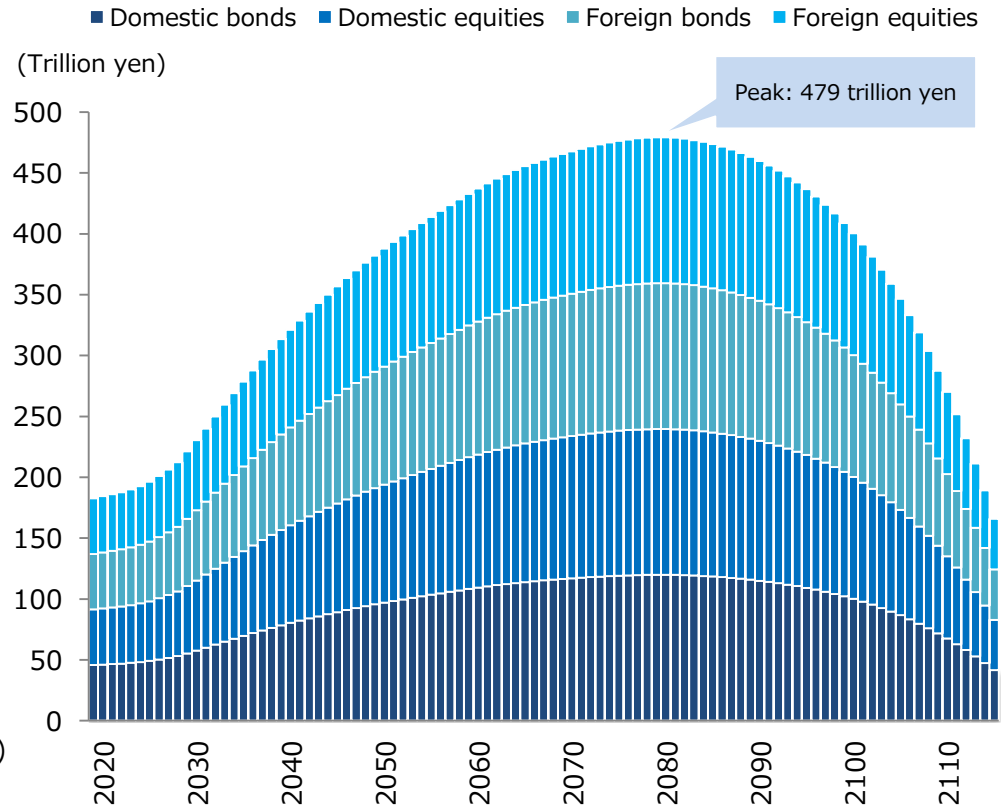
* Net investment yield on the pension reserve less the nominal wage growth rate.

New policy asset mix (composition ratio)



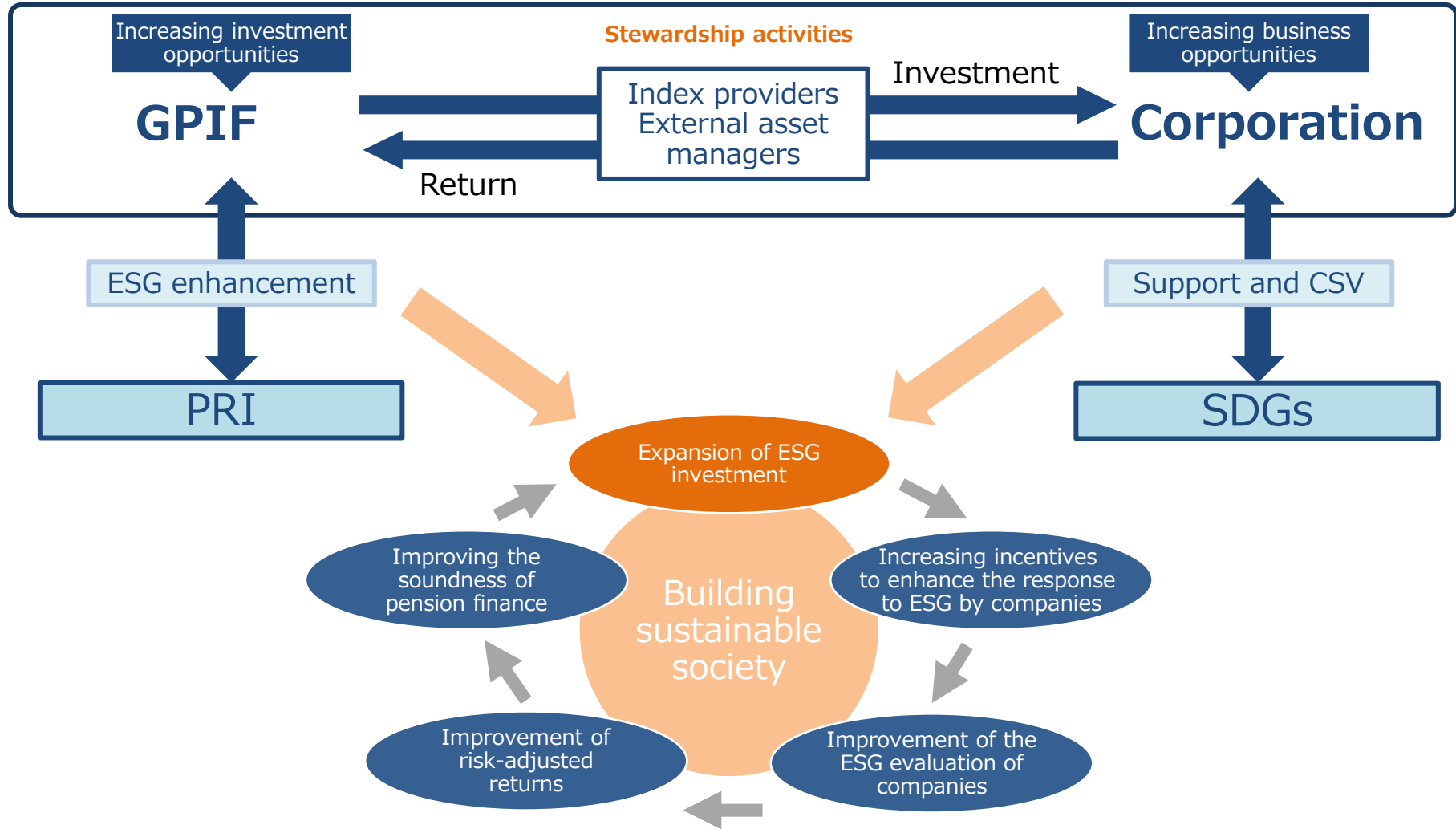
* The figure is an image.

Trends of asset size based on new policy asset mix



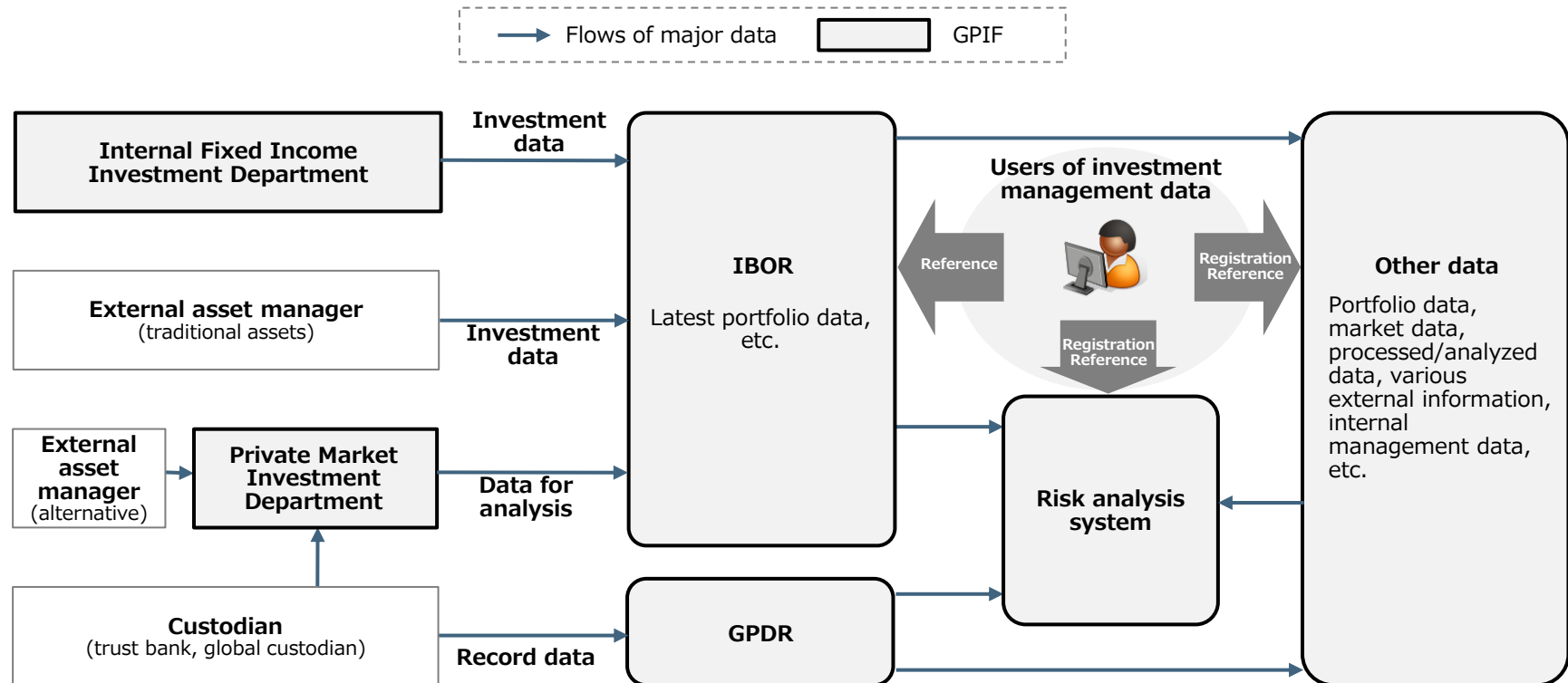
* The figure is an image.

- Aiming to enable a sustainable society (sustainability), GPIF pursues long-term and sustainable value creation in the financial market by promoting stewardship activities and ESG investment.



- GPIF promotes strengthening of risk management and internal control functions across the entity, with the aim of achieving more elaborate and diversified investment and secure human resources for that purpose
 - ✓ Improving legal functions, reinforcing internal system of checks and balances, enabling more elaborate risk management, etc.
- Enhancing usage of cutting-edge technology and stricter data management
 - ✓ Installation of Data Management Office (DMO) and proactive use of information technology

Data Management Office (DMO)



Achieving Excess Returns and Improving the Entire Market Returns through ESG Investment

Target investment return

Achieving excess returns (a)

- ✓ GPIF primarily takes a passive investment approach, but out of a total of 160 trillion yen as its operational assets, it allocates approximately 20% to active investment to gain excess returns.
- ✓ With the assumption that an efficient capital market would help produce successful results in passive investment, GPIF recognizes that active investment is essential to bring about market efficiency.
- ✓ GPIF introduced a new performance-based fee structure to encourage external asset managers to achieve excess returns.

Periodic verification of effects of ESG investment

- ✓ Given that ESG investment aims to achieve long-term returns, periodically verifying the effects of ESG investment to ensure the appropriate direction for initiatives and obtaining understanding from the public are important.
- ✓ GPIF works on initiatives, such as releasing a wide range of information on multidimensional measurement of the effects of ESG investment and the result, and promoting information disclosure of corporations, and thus contributes to improving long-term returns of investment portfolios and sustainability of the financial market.

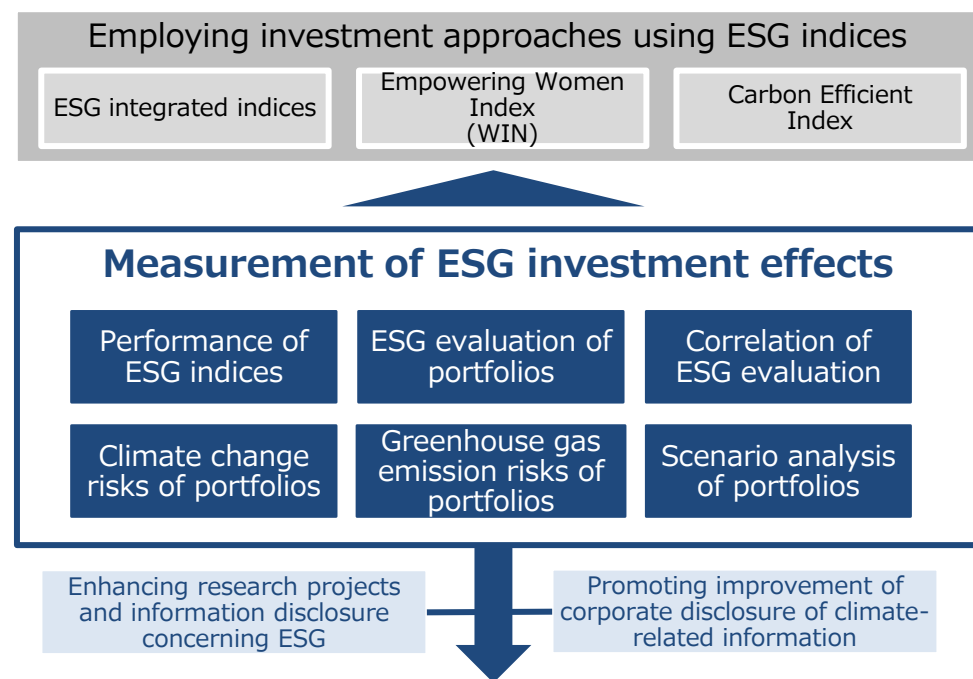
Rate of excess return from FY2014 to FY2018 (annualized rate)

		Time-weighted rate of return	Benchmark rate of return	Excess rate of return
Investment in domestic bonds	Passive investment	1.61%	1.60%	+0.01%
	Active investment	1.75%	1.92%	-0.17%
Domestic equities	Passive investment	7.92%	8.02%	-0.10%
	Active investment	8.55%	8.02%	+0.53%
Foreign bonds	Passive investment	2.00%	1.98%	+0.02%
	Active investment	3.17%	2.20%	+0.96%
Foreign equities	Passive investment	8.47%	8.47%	-0.00%
	Active investment	8.94%	8.69%	+0.25%



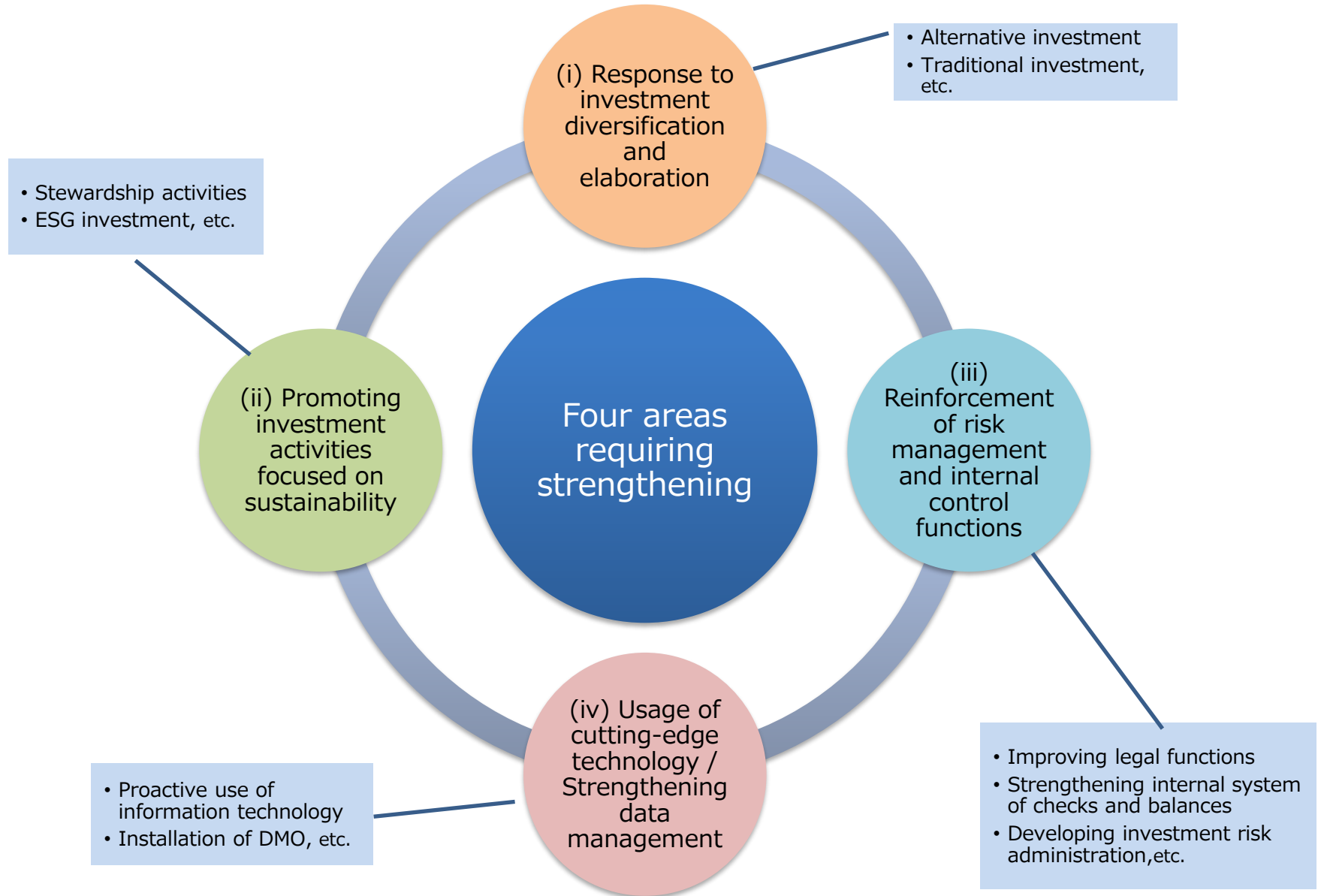
Implementation of initiatives to achieve excess returns for the entire assets as well as for each asset class

Conceptual image of measuring the effects of ESG investment

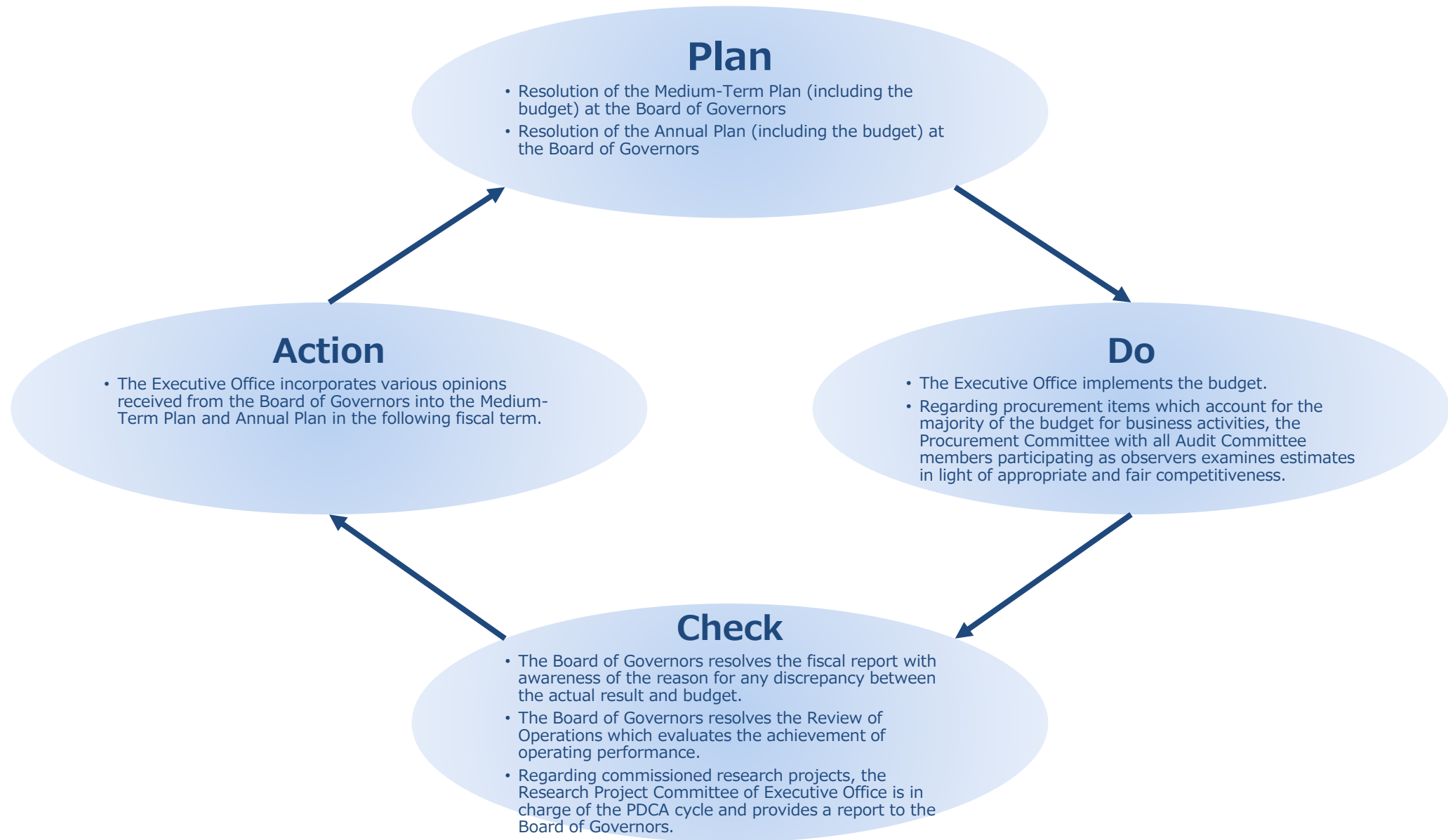


Contribution to boosting long-term returns of portfolios and improving sustainability of financial markets

Areas Requiring Strengthening



Major PDCA Cycles of Business Activities



This report describes the result of the research on the Research Project to Contribute to Preparation of the Next Medium-Term Plan, which Mizuho Research Institute Ltd. was entrusted to examine by the Government Pension Investment Fund.
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