

Japan Science and Technology Agency (JST)

FY2022 Annual Report

– Japan University Fund Investment Status, etc. –

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[1] Message from the Chair of the JST Investment Advisory Committee



Hiroshi Nakaso Chair of the IST Investment Advisory Committee

The Japan University Fund began operating in March 2022, with a mission to secure financial resources for the long-term and stable support of universities recognized as universities for international research excellence and doctoral students across the country. It set sail into a historically difficult market environment, with Russia's invasion of Ukraine, inflation in America and Europe and the resultant monetary tightening by central banks. On this voyage that started against rough waves we strive for a Japan that has regained its sparkle as a leading nation of science and technology. This is also necessary to build a rich economy and society where the next generation can live with peace of mind.

The potential growth rate, said to be the real power of Japan's economy, was around 4% in the second half of the 1980s, but in the 30 or so years since then it has been on a declining trend and is currently estimated to be in the range of 0.0-0.5%. The decreasing population is one reason for this. I also believe that in the long period of economic sluggishness after the collapse of the bubble economy, companies moved away from risk-taking, and universities' creation of basic research infrastructure stagnated resulting in reduced capacity for technological innovation.

We strive for a Japan that has regained its sparkle as a leading nation of science and technology.

The Japan University Fund is planned to foster world-class research universities as a starting point to launch a virtuous cycle of human resources and knowledge from the financial side to generate new knowledge and innovation. There is no doubt that this is an unprecedented initiative, but to add momentum to Japan's increasing economic competitiveness and capacity for growth, we must dare to take on such bold and difficult challenges.

The role of the JST Investment Advisory Committee is, by using the knowledge of five members with expertise, to deliberate on key matters concerning the management of the Japan University Fund based on reports from executives, and monitor the status of investments. The Japan University Fund sees a group of powerful experts with whom the Fund's aims resonate come together for both fund management and risk management. Together with numerous supporting employees they are united in the singleness of purpose to contribute to future generations in executing their daily operation with a sense of duty and tension at managing national funds. We strive to combine our abilities to ensure that the Japan University Fund's designated mission is achieved.

We hope for your understanding and support.

Hiroshi Nakaso

[·] Appointed Chair of the JST Investment Advisory Committee in 2021.

He has been Chairman of the Institute, Daiwa Institute of Research Ltd. since 2018. Prior to that, he served as Director of the Financial Systems Division and Director-General of the Financial Markets Department of the Bank of Japan, Chairman of the Markets Committee of the Bank for International Settlements (BIS), Executive Director and Deputy Governor of the Bank of Japan.
 Graduated from the University of Tokyo, Faculty of Economics

[2] Greeting from the Vice President/ Chief Investment Officer



Masakazu Kita Japan Science and Technology Agency Vice President/ Chief Investment Officer

Our members come together and further enhance investment as we strive to support universities for international research excellence, etc.

Thank you all for viewing the Annual Report for FY2022.

In this fiscal year, under the supervision of the JST Investment Advisory Committee, we have enthusiastically gone ahead with building a system to make sound grant fund management possible, including establishing regulations and developing a framework, as well as securing human resources with expert knowledge of investment and selecting professional management companies to outsource investment, based on the "Basic Guidelines to Ensure that Grant Fund Management is Conducted Safely and Efficiently from a Long-term Perspective" and the "Basic Policy for Grant Fund Management."

In terms of actual investment, the time-weighted rate of return for this fiscal year was –2.2%, and the amount of profit was –60.4 billion yen. However, since 5.1 trillion yen was invested in March 2022, immediately after Russia's invasion of Ukraine, global inflation has progressed and central banks in different countries have implemented drastic monetary tightening; this has led to violent fluctuations in the financial markets, and it was in this context that we carefully built a portfolio.

More specifically, after calculating the long-term macro-economic forecast and the assumed risk/expected return on assets, we determined a transition plan based on a financing structure and Policy Portfolio that maximizes return within the scope of risk tolerance, and began investment based on the asset allocation policy for the fiscal year. Under this policy, we endeavored to maintain a balance of portfolio risks in the ramp-up period by lessening the weight of equities compared to the reference portfolio composition ratio of global equities 65% and global fixed income 35%, and controlling the foreign exchange risk within a certain range. Moreover, we are maintaining a high ratio of short-term assets from the perspective of diversification of investment timing and to ensure it is possible to respond to the greatly changing market environment. In addition to bonds and equities, we have also started to commit to alternative investment such as private equity and real estate after selecting organizations to entrust these to, so as to improve future returns.

FY2023 is the first fiscal year of operation with funds of 10 trillion yen. With regard to the continuing high inflation and effects of monetary tightening on the economy and financial market, prospects for market participants are greatly divided, and it is assumed that this unstable environment will continue. Our members will continue to come together and further enhance investment, as we strive to provide grants for internationally excellent research universities and to support our doctoral students, in accordance with the aims of the Japan University Fund.

Masakazu Kita

- Graduated from the Faculty of Economics, Kyoto University.

⁻ Appointed Vice President/ Chief Investment Officer in June 2021. Before this, he worked at the Norinchukin Bank as head of the Credit Risk Management Division and the Alternative Investment Division, and as a Managing Executive Officer.

[3] Economic and Financial Market Conditions

In FY2022, the main themes in the economic and financial markets were "accelerated monetary policy tightening by major foreign central banks against global inflation" and "growing concerns of an economic slowdown due to an accelerated pace of interest rate hikes," and asset prices, both global equities and global fixed income (denominated in US dollars), fell.

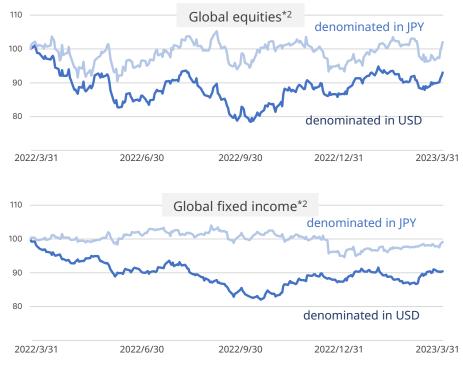
In "Equities," Russia's invasion of Ukraine and China's lockdown due to the spread of COVID-19 caused prices to fall for more than half of the financial year, with US equities leading the way. The market then rallied as indicators showed that inflation had peaked and fears of excessive monetary tightening eased. In "Bonds," interest rates rose sharply (bond prices fell) as a result of aggressive interest rate hikes by major foreign central banks in an attempt to control inflation. Although interest rates subsequently declined globally at the end of the fiscal year due to concerns about financial system instability and economic deterioration, FY2022 was a year of rising interest rates.

In "Foreign Exchange," the Japanese yen depreciated significantly, with USD/JPY reaching 150 in October, reflecting the widening of the interest rate differential between the US and Japan. Thereafter, the USD/JPY declined in response to heightened expectations of ending rate hikes in the US, while the Japanese yen has depreciated in the period of FY2022.

Assets	Index	Base Currency	Rate of Change/ Yield Change ^{*1}	Value at end of FY2022
	Global equities*2	JPY	2.0%	_
	Global equilies	USD	-7.0%	1,447.67pt
Equities	S&P500	USD	-9.3%	4,109.31pt
	Euro STOXX	EUR	5.1%	457.15pt
	ΤΟΡΙΧ	JPY	2.9%	2,003.50pt
	Global fixed income*2	JPY	-0.8%	_
	Global fixed filcoffie -	USD	-9.6%	864.67pt
Bonds/ Rates	US 10 years yield	_	+1.16%	3.48%
Rates	German 10 years yield	_	+1.78%	2.35%
	Japan 10 years yield	_	+0.17%	0.39%
Foreign	USD/JPY	_	9.1%	133.53 yen
Exchange	EUR/JPY	_	6.6%	457.15pt 2,003.50pt — 864.67pt 3.48% 2.35% 0.39%

[Major Indices in FY2022]





*1 End of FY2021 = 100

*2 Global equities : MSCI ACWI Index Gross, Global fixed income : FTSE World Government Bond Index

the yield change from the value at the end of FY2021 to that of FY2022. *2 Global equities : MSCI ACWI Index Gross. Global fixed income : FTSE World Government Bond Index.

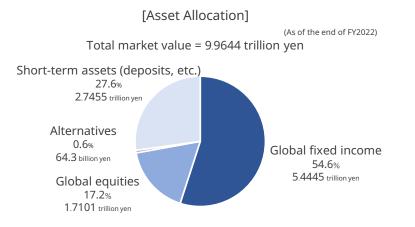
*1 It is the rate of index of the value at the end of FY2022 compared to that of FY2021: otherwise, the yield from bonds/rates is

[4] Overview of Investment Results

- The total market value was 9.9644 trillion yen at the end of FY2022, and the "amount of profit (= total amount of profit^{*1})" for FY2022 was -60.4 billion yen (-0.6% compared to capital). "Gross income" on the income statement was +74.2 billion yen,^{*2} and the valuation difference from the valuation of owned assets ("valuation differences on other securities" on the balance sheet) was -125.9 billion yen.^{*2} The "rate of return (= time-weighted rate of return)^{*3})" was -2.2%.
- The amount that will serve as the source^{*4} of Grants for Universities for International Research Excellence, etc. will be decided separately from the amount of gross income on the income statement of FY2022 (74.2 billion yen) deducting operating loss carried forward from the previous fiscal year (6.2 billion yen), taking into account the financial condition of the Japan University Fund. A government committee will decide the total grants for each fiscal year within the scope of the fund source based on the Basic Policy for Grants.^{*5}

*1 The total amount of profit is the amount of profit (before deduction of investment management fees, etc.), taking into account the amount of realized income (book value basis) and fluctuations in valuation profit/loss (market value basis).

*2 The monetary amount published on the income statement and balance sheet of the FY2022 financial statements. When this annual report was made public, the financial statements had not yet been approved by Minister of Education, Culture, Sports, Science and Technology (thereinafter referred to as "MEXT"), so the approved figures of the financial statements will be published separately on the JST website after being approved by MEXT.



[Amount of Profit] (FY2022; billion yen)			[Rate of Return] (FY2022)		
Assets A		Amount of profit*1		Assets	Rate of return*1
Total assets		-60.4	-	Total assets	-2.2 %
	Global fixed income*2,*3	-126.3		Global fixed income*2,*3	-3.6 %
Global equities ^{*3} Alternatives		65.5		Global equities*3	1.7 %
		0.5		Alternatives	-4.5 %
 *1 Amount of profit is the total amount of profit (before deduction of investment management fees, etc.). *2 Global fixed income includes short-term assets (deposits, etc.) 				*1 Rate of return is the time-weighted rate deduction of investment management fr *2 Global fixed income includes short-term	ees, etc.)

*3 The time-weighted rate of return is the rate of return (before deduction of investment management fees, etc.) calculated basi cash flow (inflow and outflow of investment principal, etc.). JST uses the daily valuation method of time-weighted rate of retur

*4 The Japan University Fund aims to ensure financial resources for the long-term and stable support (grant administration) needed to establish worl

*5 Official name: "Basic policy to promote the strengthening of systems for leveraging the research and research results of universities for international determined November 15, 2022.

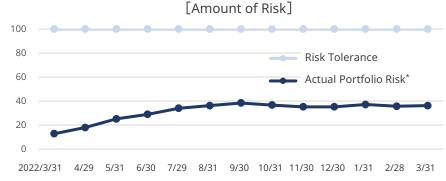
*3 Global fixed income and global equities include domestic bonds and domestic equities respectively.

For more details, see "2 | About the Japan University Fund,"

*3 Global fixed income and global equities include domestic bonds and domestic equities respectively.

• Through FY2022, JST managed the portfolio within the risk tolerance.

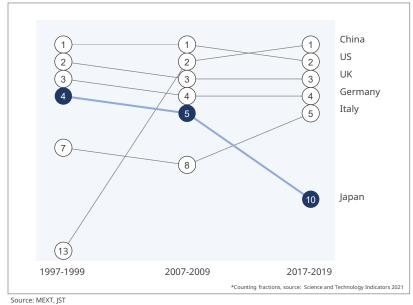
The Japan University Fund is managed (for more details see "3 | About Fund Management [1] Basic Framework for Fund Management") with the aim of maximizing the rate of return on investment as much as possible within the range of the standard deviation ('risk tolerance') calculated based on a predetermined reference portfolio (an asset composition ratio used for risk management). As is seen in the figure to the right, the actual portfolio risk was prudently controlled in relation to the risk tolerance through the year.



* The Actual Portfolio Risk ratio to the Risk Tolerance (%)

[1] Background to the Establishment of the Japan University Fund

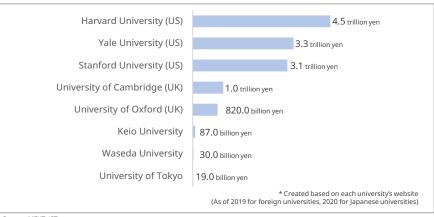
In recent years, Japanese universities have stagnated for a long time in terms of the number of research papers, etc., and a problem with financial infrastructure is thought as a reason. The key universities in the US and Europe countries make use of financial investment gains from their own funds of several-trillion yen, enriching investment in research infrastructure and young researchers and leading to the creation of new academic fields and innovation. In contrast, Japanese universities have few funds to invest and inadequate systems for management, so it is difficult for them to obtain adequate investment income.



[Countries Ranked by the Number of Top 10% Most Cited Papers]

To mitigate this difference in financial power through initiatives that make use of national funds rather than just the power of each university in Japan, the "Comprehensive Economic Measures to Secure People's Lives and Livelihoods toward Relief and Hope" (Cabinet Decision December 8, 2020) stated that "the Government will establish the Japan University Fund with a scale of 10 trillion yen and apply gains resulting from the investment of the fund to develop common facilities and data linkage infrastructure for universities that conduct research and development on a world-class level and to foster young human resources such as doctoral students, thereby building our country's innovation ecosystem*"; in January 2021, the Act Partially Amending the Act on Japan Science and Technology Agency, National Research and Development Agency was established, and the Japan University Fund was set up in JST.

* A system to accelerate autonomously innovative creation with the mutual involvement of each player, like an ecosystem



[Fund Size of Key Universities]

Source: MEXT, JST

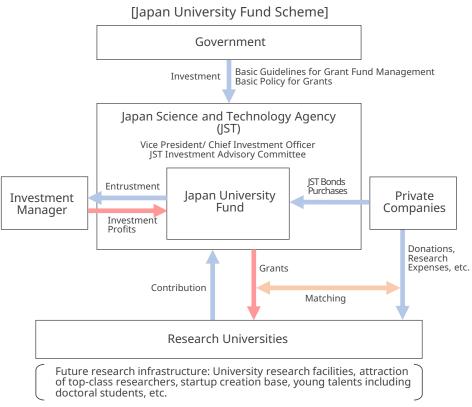
In April 2021, the government's Council for Science, Technology and Innovation established a "Specialist investigative committee for worldclass research universities/working group for Japan University Fund management" and discussions concerning the form of the fund went ahead.

During the discussions, it was noted that to realize world-class research universities, support of around 300 billion yen (in real terms) is needed per year from a long-term perspective, and basic approaches regarding fund management were summarized from expert perspectives; in August 2021, "Basic Approaches to fund management for the Japan University Fund to realize world-class research universities" (hereinafter "Basic approaches to fund management for the Japan University Fund") was determined.

In light of this, in January 2022, Minister of MEXT informed JST of the Basic Guidelines to Ensure that Grant Fund Management is Conducted Safely and Efficiently from a Long-term Perspective ("Basic Guidelines for Grant Fund Management"); the Basic Policy for Grant Fund Management created in light of the Guidelines by JST was then approved by Minister of MEXT.

Based on the above Basic Guidelines for Grant Fund Management and Basic Policy for Grant Fund Management, JST started operating the Japan University Fund in March 2022 with the aim of ensuring financial resources needed for long-term and stable support to establish worldclass research universities.

In May 2022, the act on strengthening systems for leveraging research and research results of universities for international research excellence was established, and in November 2022, Minister of MEXT determined a basic policy to promote the strengthening of systems for leveraging the research and research results of universities for international research excellence. This sets out the significance of a system based on this act, as well as basic matters concerning the certification of universities eligible for support from the Japan University Fund.



Source: MEXT, JST

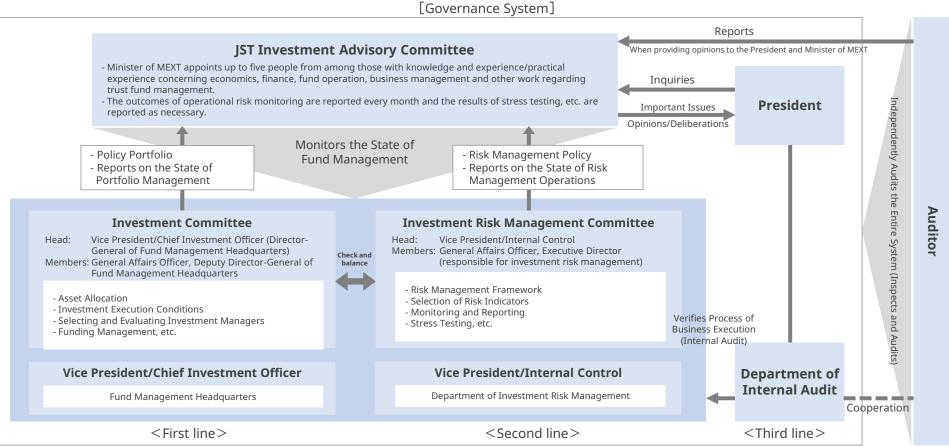
Minister of MEXT is certifying universities as "universities for international research excellence." These are universities for which it has considerable expectations, such as developing internationally excellent research and making use of research results that engender social and economic change. The Japan University Fund assists plans to strengthen the research systems of universities for international research excellence, created by the universities in question. As of July 2023, the public call for and selection of universities for international research excellence is underway, with the aim of starting to provide grants in FY2024. See the MEXT website* for more details.

* MEXT website: https://www.mext.go.jp/a_menu/kagaku/daigakukenkyuryoku/kokusaitakuetsu_koubo.html

[2] Governance System

JST has built a governance system with three lines of defense: the Fund Management Headquarters (First line), the Department of Investment Risk Management (Second line), and the Department of Internal Audit (Third line).

The "JST Investment Advisory Committee" is composed of external experts who are appointed by Minister of MEXT, and deliberates on key matters such as the policy portfolio, supervises implementation conditions for fund management, and provides opinions concerning important matters in response to requests from the President. It also makes recommendations on necessary matters to the President. In addition, the "Investment Committee" and the "Investment Risk Management Committee", made up of the Vice President/Chief Investment Officer and Vice President/Internal Control, deliberate on necessary matters concerning investment and risk management respectively, and make appropriate reports about this to the JST Investment Advisory Committee. The independent Audit Office (Department of Internal Audit) verifies the appropriateness of their process of execution (internal audit), thus strengthening the previously mentioned three lines of defense. Moreover, an Auditor appointed by Minister of MEXT audits all JST business, including the Japan University Fund, from a position independent of the President.



* In addition to the Auditor's audit and an internal audit, an accounting auditor also carries out an audit (a three-fold audit). There is also an accounting inspection.

[3] JST Investment Advisory Committee

The JST Investment Advisory Committee is made up of members with academic or practical experience in fields concerning economics, finance, fund operation, business management and other work regarding trust fund management (appointed by Minister of MEXT on October 1, 2021). The next page summarizes the agenda of the Committee in FY2021 and FY2022. See the JST website* for more details. * JST website (Japan University Fund): https://www.jst.go.jp/fund/

What is the JST Investment Advisory Committee?

The JST Investment Advisory Committee is a committee comprised of members appointed by Minister of MEXT on October 1, 2021, based on the Act on Japan Science and Technology Agency, National Research and Development Agency. The following provisions apply in accordance with this law.

[The Authority of the JST Investment Advisory Committee] The JST Investment Advisory Committee deliberates on matters concerning investment management operations and monitors the implementation status of those operations to ensure that the investment management operations are appropriate.

[The Composition of the JST Investment Advisory Committee] The JST Investment Advisory Committee consists of no more than five people. The members of the JST Investment Advisory Committee are appointed by Minister of MEXT from among people with academic or practical experience in fields concerning economics, finance, fund operation, business management and other work regarding trust fund management. Their membership term is two years.

[JST Investment Advisory Committee Members]



Chair Hiroshi Nakaso Chairman of the Institute, Daiwa Institute of Research Ltd.



Masaharu Usuki Professor Emeritus, Nagoya City University



Hisae Sato Trustee, International Christian University



Landis Zimmerman Former Vice President & CIO, Howard Hughes Medical Institute

Takuei Maruyama

Executive Officer and Managing Partner, PricewaterhouseCoopers Aarata LLC, Representative Executive Officer and COO, PwC Business Assurance LLC

Term: October 1, 2021 to September 30, 2023 Titles are as of April 1, 2023.

Date of session Agenda Date of session Agenda Session 5 [Deliberation] Statement of Operational Procedures (Draft) Session 1 [Deliberation] Investment Guidelines for PD/PE Gatekeepers/FoFs (First Draft)* July 21, 2022 [Deliberation] Basic Policy for Grant Fund Management (Draft)* November 2, 2021 [Deliberation] Investment Guidelines for Real Estate/Infrastructure Gatekeepers/FoFs [Deliberation] Operating policy (Draft) * (First Draft) [Deliberation] Selection Criteria (Draft) * [Deliberation] Global Fixed Income Active Investment Guidelines (First Draft) [Deliberation] Investment risk management basic policy (Draft) * [Deliberation] Global Equity Passive Investment Guidelines (partially modified) * Deliberations on the final draft took place via email between January 7 and January 13, [Deliberation] In-House Investment Guidelines (Short-Term Assets) (Draft) 2022, based on Article 7 of the JST Investment Advisory Committee regulations. [Report] About the Japanese University Fund Investment Result FY2021 [Report] Evaluation of Grant Fund Management by [ST Session 2 [Deliberation] Policy Portfolio and transition plan (Draft) [Report] Investment Summary for April-JuneFY2022 (Preliminary) [Deliberation] Selection Criteria for Investment Managers (Global Fixed Income and January 21, 2022 [Report] Risk Management Status Report (as of June 30, 2022) Global Equity) (Draft) [Report] Selection Status of PE, PD, Real Estate and Infrastructure Investment Managers - About Selection [Report] Reconsideration of points allocation in selection criteria for Gatekeeper/FoFs of - Selection Schedule alternative investment - Selection Criteria [Report] Report on the Selection Results of Custodian for Global Fixed Income Investment [Deliberation] Investment Manager's Guidelines (Draft) /Global Equity Investment (Foreign currency) and Custodian for Alternative Investment - Investment Manager's Guidelines [Report] Operational Trial to Strengthen the Market Monitoring System - Global Equity Passive Investment Manager's Guidelines * Deliberations on the final draft took place via email between October 3 and October 11, - Securities Custody Guidelines 2022, based on Article 7 of the JST Investment Advisory Committee regulations. [Deliberation] Changes to the Mid-long Term Plan for the current term (Draft), Mid-long Session 6 [Deliberation] Handling of Government Agency Bonds under the In-house Investment Term Plan for the next term (Draft) October 26, 2022 Guidelines (Draft) [Deliberation] Preparation of minutes and publication of Committee materials (Draft) [Deliberation] The supplemental proposal to the deliberation process of Investment [Report] Report on the Results of Public Offering Selection Guidelines (Draft) - Custodians [Report] Investment Summary for July-September 2022 (Preliminary) - The Master Trust [Report] Risk Management Status Report for July-September 2022 - Investment managers [Report] Selection Results of Real Estate/Infrastructure Investment Managers Session 3 [Deliberation] Amendment to the FY2021 Annual Plan (Draft), FY2022 Annual Plan (Draft) [Report] Selection Results of Active Investment Manager for Global Fixed Income [Deliberation] Policy Portfolio and transition plan (Draft) Investment March 2, 2022 [Report] Asset Allocation Plan (Draft) (US Investment Grade Corporate Bonds) [Deliberation] Crisis Playbook (Draft): Code of Conduct in the Event of Rapid Market [Report] Addition of Market Monitoring Indicator (MaMI) [Report] Report on Selection Process for Gatekeepers/FoFs of PE/PD Changes [Deliberation] In-house guidelines (Draft) [Report] Report on Internal Conversion Method of Commitment Amounts from Foreign [Deliberation] Selection Criteria (Draft) Currency into JPY in Alternative Investments - Investment managers for alternative assets (gatekeeper/fund of funds) [Report] Stress Testing (Trial) - Custodians for alternative assets Session 7 [Deliberation] Fifth Mid-long Term Plan (Proposed Amendments) Annual Plan for FY2022 - Additional matters of investment managers and custodians for traditional assets January 31, 2023 (Proposed Amendments) * [Report]Investment Risk Management Methods [Report] Investment Summary for October-December 2022 (Preliminary) [Report]Publication of Policies for Fulfilling Stewardship Responsibilities, etc. [Report] Risk Management Status Report for October-December 2022 Session 4 [Deliberation] Management Guidelines (Passive for Domestic Listed REITs) (Draft) [Report] Selection Results of Active Investment Manager for Global Fixed Income [Deliberation] Draft criteria for selection of Multi-Asset Investment (Draft) Investment April 21, 2022 [Report] Status of investment and other activities in fiscal year 2021 (Japanese Bonds) [Report] Monthly Investment Risk Management Monitoring Report (as of March 31, 2022) [Report] Introduction of Hedge Accounting [Report] Results of selection of investment managers (Passive for Domestic Listed REITs) [Report] Use of Foreign Unit Trust /Domestic Private Unit Trust [Report] Real Estate/Infrastructure Investment Guidelines (Final Draft) [Report] Addition of Custodians for Global Equities * Deliberations on the final draft took place via email between February 22 and March 1, [Report] Supplements and revisions to the 3rd JST Investment Advisory Committee [Report] Public Offering of Real Estate and Infrastructure 2023, based on Article 7 of the JST Investment Advisory Committee regulations. Session 8 March 17, 2023 [Deliberation] Annual Plan for FY2023 (Draft) [Deliberation] Basic Policies for Grant Fund Management (Revision Proposal) [Deliberation] Operating Policy (Revision Proposal) [Deliberation] Changes (Draft) in the Template of Investment Manager's Guidelines [Deliberation] Global Fixed Income Active Investment Guidelines (Final Draft) [Deliberation] Verification of the Policy Portfolio [Report] Asset Allocation Plan

[JST Investment Advisory Committee Agenda]

[Report] Commitment Allocation Plan for Private Equity (PE) and Private Debt (PD)/Real

[Report] Review of frameworks for investment risk management

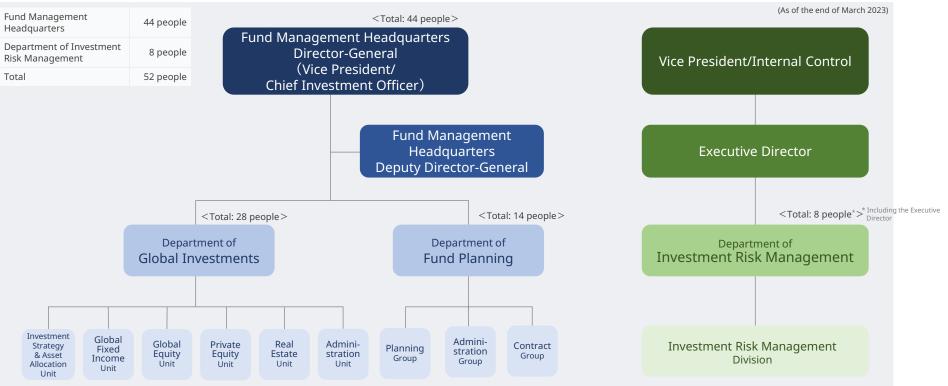
Estate and Infrastructure in FY2023 [Report] Stress Test on Asset Allocation Plan

[4] Investment Organization

JST established the Department of Global Investments in March 2021 in readiness for launching the Japan University Fund. Later, in August 2021, the department was divided into the Fund Management Headquarters and Department of Investment Risk Management.

The Department of Global Investments of the Fund Management Headquarters comprises the Investment Strategy & Asset Allocation Unit, Global Fixed Income Unit, Global Equity Unit, Private Equity (PE) Unit, Real Estate Unit and Administration Unit, each of which includes employees familiar with the relevant fields to ensure long-term and stable fund management. Additionally, the Department of Fund Planning of the Fund Management Headquarters, which includes a Planning Group, Administration Group and Contract Group, is tasked with managing the Japan University Fund smoothly and efficiently through the Investment Committee, including external adjustment, budget execution management, publicity and information disclosure and contract work, etc.

The Department of Investment Risk Management handles the operation of the JST Investment Advisory Committee, Investment Risk Management Committee and other committees, measurement of market, credibility and liquidity risks, etc., evaluates and analyzes performance, inspects and scrutinizes contracts executed by the Fund Management Headquarters and has established a risk management system for suitable fund management.



[Organization Structure]

The following is an overview of each unit of the Department of Global Investments, which is responsible for practical fund management.

[Overview of Each Unit]

Unit name	Overview
Investment Strategy & Asset Allocation Unit	Establishing economic outlook, reviewing the Policy Portfolio, and managing asset allocation
Global Fixed Income Unit	In-house investment in global fixed income and foreign exchange (direct investment/ETF/investment trusts) and outsourced investments
Global Equity Unit	In-house investment in global equities (ETF/investment trusts) and outsourced investments
Private Equity (PE) Unit	Outsourced investments in private equity, etc.
Real Estate Unit	Outsourced investments in real estate and infrastructure, etc.
Administration Unit [*]	Administration related to investment management, such as investment method instructions, principal transfer instructions, fund establishment, etc.

* The head of Department of Global Investments is also the head of Administration Unit.



The Department of Global Investments is made up of experts with diverse experience and skills. The key previous experiences of the Department head, Chief Economist and Unit heads are as follows.

[Biographies of Senior Leadership]

Naoya Sugimoto

(Deputy Director-General of Fund Management Headquarters / Head of Department of Global Investments / Managing Director)

- He is the Co-Chief Investment Officer of Japan University Fund. Prior to joining JST in March 2022, he provided portfolio solutions through all asset classes to institutional investors at Goldman Sachs Asset Management. Prior to that, he headed Japan Strategy Team and Japan Executive Office at PIMCO Japan Ltd. leading portfolio solutions business, and worked for PIMCO headquarter office in US in charge of developing portfolio and risk management models. Prior to that, he served as a quant analyst at Credit Suisse Securities. He also served as the CSO/CFO for Forbes JAPAN, and worked at NTT Data on cryptography R&D in his career. - He holds an MSc in Computer Science (AI) from the University of Tokyo Graduate School and a BEng from the University of Tokyo. - He is a Chartered Financial Analyst (CFA) charterholder and holds the Chartered Alternative Investment Analyst (CAIA), the Financial Risk Manager (FRM), and the Certified Member Analyst of the Securities Analysts Association of Japan (CMA).

Hiroshi Ugai

(Chief Economist / Managing Director)

- He joined JST since September 2022. Before that, he had built a 30 year career at the Bank of Japan where he was a Deputy-Director General. He served in planning and research related to the policies at key departments such as the Monetary Affairs, Research and Statistics, Financial System and Bank Examination, and International Departments. He was a Japan's original delegates of Financial Stability Board during 2009-13, and was seconded to the School of International and Public Policy, Hitotsubashi University as a professor of Asian Public Policy. Since then, he had over 6 years of leadership as Chief Japan Economist (Managing Director) of J.P. Morgan, responsible for outlining the firm's official view on Japanese economy and macroeconomic policies.

- He wrote many papers on monetary policy including misunderstanding and miscalculation of Japan's money, banking and financial markets as an author and co-editor, effects of the quantitative easing policy, transmission channels and welfare implications of the unconventional monetary easing policy in Japan, and Japan's deflation, problems in the financial system and monetary policy. - He has a Doctor of Economics from Saitama University, studied at the University of Chicago Booth School of Business, and has a BA in Economics from the University of Tokyo.

Masakazu Ikeda

(Head of Investment Strategy & Asset Allocation Unit / Managing Director, responsible for investment planning)

- He joined JST in January 2022. He previously worked at Nomura Asset Management, where he served in various positions including multi-asset portfolio management, Japanese equity portfolio management, and corporate business planning. He also worked at Sompo Japan Insurance Inc., and managed portfolios ranging from global fixed income & equity to hedge funds.

- He graduated with MBA degree from New York University Stern School of Business, and received a Bachelor degree in Economics from the University of Tokyo.

- He is a charterholder of both CFA and CMA (Certified Member Analyst of the Securities Analysts Association of Japan).

Yasushi Kobayashi

(Head of Global Fixed Income Unit and Global Equity Unit / Managing Director, responsible for global market management)

- He joined JST in May 2022. Before this, he joined the Sanwa Bank, Limited (now the MUFG Bank, Ltd.), serving as head of European Financial Markets, head of the Financial Market Department (special mission), head of the Market Sales Department (special mission), and head of the Foreign Currency Funds and Securities Department concurrently (in London); he had served as head of Investment Management, head of the Yen Funds and Securities Department, head of the Funds and Securities Department, and Senior Fellow. After this, he worked as an advisor to Central Tanshi Co., Ltd., Director of CENTRAL TOTAN SECURITIES Co., Ltd., advisor to Sanshin, and Representative Director and President of CENTRAL TOTAN SECURITIES Co., Ltd. - He graduated from the Faculty of Economics, the Keio University.

Tadasu Matsuo

(Head of Private Equity (PE) Unit and Real Estate Unit / Managing Director, responsible for alternative investment management)

- He joined JST in January 2022. Before joining JST, he led HarbourVest Partners Japan as a managing director and co-head from April, 2020. As a head of alternative investment, he oversaw Japan Post Insurance's alternative investment, ranging from private equity and infrastructure funds to real estate and hedge funds since September 2016. Before joining IP Insurance, he headed Daido Life's alternative investment.
- Served as Senior Managing Director, he also engaged in private equity fund investment and headed a business development of Alternative Investment Capital (AIC), a leading private equity FOF manager and gatekeeper in Japan.
- Prior to joining Daido Life, Mr. Matsuo served as an M&A advisor to various insurers' transactions at PwC Financial Advisory Services Japan from 1999 to 2002. Earlier in his career, he worked for Nippon Life Insurance Company for 13 years, where he managed overseas sovereign credit loans and investments.

- He received his MBA from Duke University and BA in Economics from the University of Tokyo. - He passed the US CPA exams.

(From left to right: Yasushi Kobayashi, Hiroshi Ugai, Naoya Sugimoto, Masakazu Kita, Masakazu Ikeda, Tadasu Matsuo)

[1] Basic Framework for Fund Management

Grant fund management is based on the Policy Portfolio in principle and be in compliance with the investment discipline, and rebalancing (selling and buying assets to make the actual asset allocation as intended in the annual asset allocation plan) is to be appropriately implemented within the allowable deviation range.

The Policy Portfolio is determined by JST within the range of the reference portfolio "risk tolerance" set by the government.

① Overview of Reference Portfolio

To achieve world-class research universities, support of around 300 billion yen (real) is needed per year from a long-term perspective; this is noted in the "Basic approaches to fund management for the Japan University Fund" by the Council for Science, Technology and Innovation. At the same time, this also provides a reference portfolio that has a global equities : global fixed income ratio of 65 : 35 as an asset composition ratio to determine the risks the Japan University Fund can take ("risk tolerance") to ensure this long-term and stable support.

When determining this reference portfolio, the following points were comprehensively considered.

Perspective on the Target Rate of Return on Investment

The ability to secure grant funds needed to strengthen research capabilities in the long term in order to achieve world-class research universities (more than target payout ratio 3% + long-term inflation rate).

Perspective on Risks and Returns

The level of return and risk that can be expected in the long term, based on the investment environment of the global market, to monetize overall economic growth in Japan and overseas.

Perspective on Financial Soundness

The formation of financial base that properly takes into account the expansion of equity capital, including securing a buffer for continuing support, in a specified timeframe until a portfolio is built to meet the long-term investment targets.

② Relationship Between Reference Portfolio and Policy Portfolio

As stated previously, the Reference Portfolio (global equities : global fixed income = 65 : 35) is used to determine the "risk tolerance" (standard deviation). JST defines the asset allocation (Policy Portfolio) that serves as the foundation to achieve investment targets with the aim of maximizing the rate of return on investment as much as possible within the risk tolerance, and management and investment are carried out based on this.

[Relationship Between Reference Portfolio and Policy Portfolio]



* The target assets and asset allocation, etc. are images. Images for illustration purpose only.

We used 25 years of historical monthly market data on indices* (equities: the MSCI ACWI Index (including dividends); fixed income: the FTSE World Government Bond Index) showing changes in the value of global equities and global fixed income to calculate risk tolerance.

* In accordance with the March 15, 2023 partial revision of the Basic Guidelines for Grant Fund Management , these indices have been changed from four (equities: composite of the MSCI ACWI Index (excluding Japan, including dividends) and TOPIX (including dividends) (component percentages based on the aggregate market value with floating stocks adjusted by country); fixed income: composite of the FTSE World Government Bond Index (excluding Japan) and NOMURA-BPI total (excluding ABS) (component percentages based on the aggregate market value by country)) to the above two. See the MEXT website for more details.

MEXT website: https://www.mext.go.jp/b_menu/shingi/chousa/shinkou/069/siryo/000027779_00001.html

③ Management Based on the Policy Portfolio

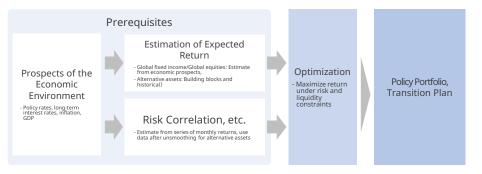
The Policy Portfolio was formulated from a long-term perspective according to risk analysis based on rational future forecasts, considering generally accepted expertise in asset management and investment, as well as domestic and foreign economic and market trends.

At that time, we confirmed that the standard deviation of the Policy Portfolio was within the risk tolerance and verified it using the assumed risks.

In March 2022, JST determined the investment assets, asset allocation ratio and allowable deviations of the Policy Portfolio after deliberation by the JST Investment Advisory Committee, taking into account the properties of the component assets so as to smoothly ensure liquidity while aiming to maximize return on investments as much as possible within the risk tolerance.

When determining the Policy Portfolio, we first identified the prerequisites (prospects of the economic environment, estimation of expected return from each asset, risk correlation, etc.), then used this to optimize the portfolio.

[Policy Portfolio Construction Flow]



Allowable Deviation and Dealing with Rapid Market Changes

Grant fund management will be based on the Policy Portfolio in principle, and an allowable deviation has been determined to conduct flexible investment while observing investment discipline.

Rebalancing, etc. is to be appropriately implemented within the allowable deviation range based on current trends in the turbulent economic and market environments, rather than constantly securing assets in the same ratio as the Policy Portfolio.

Moreover, a Code of Conduct in the Event of Rapid Market Changes (Crisis Playbook) has been determined following deliberations by the JST Investment Advisory Committee before the start of grant fund management, and investment behavior will be actioned based on this code in case of market turmoil.

Review of the Policy Portfolio

In addition to regularly reviewing the Policy Portfolio on an annual basis, JST will carry out a review after deliberation by the JST Investment Advisory Committee should it be deemed necessary, such as if the investment environment assumed when the Policy Portfolio was determined deviates from reality as a result of appropriate risk analysis taking into account changes in the reference portfolio, changes in the risk tolerance, and on economic and market trends. If the Policy Portfolio changes, an appropriate transition period will be set as necessary.

④ Points to Note During the Ramp-up Period of Investment

The Basic Guidelines for Grant Fund Management note that during the ramp-up period of investment, the aim is to take appropriate risks based on the risk tolerance and to realize the asset allocation in line with the Policy Portfolio at the earliest stage within 10 years of the startup period of investment, with consideration for the characteristics of assets that require time for investment execution.

This is because around 90% of the investment principal for the Japan University Fund is borrowed from fiscal loan funds, leading to the financial structure with low equity capital ratio. Thus in order to ensure the stable redemption of the fiscal loan funds and long-term stable grants for universities for international research excellence, it should be avoided to make immediate risk-taking at the same level as the risk tolerance.

Moreover, we also take into account appropriate amounts of time for alternative assets such as private equity and real estate.

Therefore, during the ramp-up period of investment, we will endeavor to accumulate appropriate equity capital while shifting asset allocation in a methodical manner based on the transition plan for the Policy Portfolio, and achieve the asset allocation in accordance with the Policy Portfolio as early as possible by using allowable deviation.

(5) Management Methods

With regard to grant fund management, global investments (in countries worldwide) will be proactively adopted to link overseas and domestic economic growth with investment profits in a long-term and stable manner by taking advantage of diversification effects among assets (e.g. diversification of investment assets, regions and sectors, etc. and investments in the funds with investments in multiple assets, etc.).

Moreover, in principle, both passive management (aiming for investment results that closely track the designated benchmark) and active management (intended for obtaining profits exceeding the benchmark of the targeted investment) will be used, and alternative investments, which encompass investment targets and strategies beyond traditional investment products, will be strategically promoted from the perspective of diversifying risks and ensuring medium-to long-term profits.



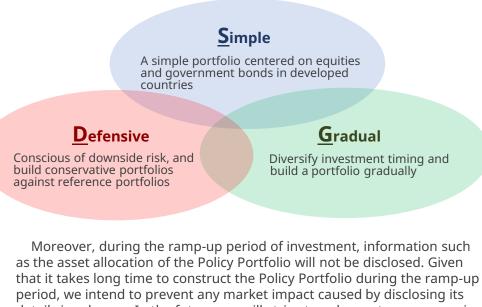
[Images of Change in Asset Allocation]

[2] Current Investment Policies and Schedule

The period from FY2021 to FY2023 is the Japan University Fund "initial investment period," and JST is paying attention to developing and enhancing the investment and risk management infrastructure.

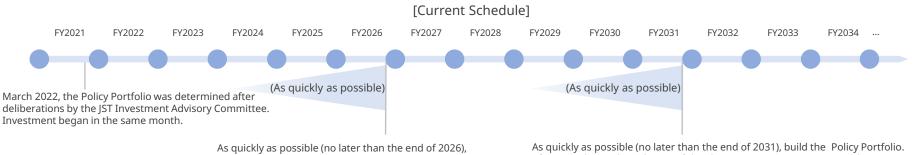
In the early stages, IST put weight on the three points shown in the right chart. While being aware of the reference portfolio, the Policy Portfolio, and the transition plan, JST will comprehensively consider the situation surrounding the Japan University Fund (status of investment organization and market environment), and manage the fund from the perspective of overall optimization, giving consideration to absolute returns and downside risk control.

The current schedule for the Japan University Fund is shown below. The aim is to succeed in obtaining investment profits of 300 billion yen as quickly as possible (no later than the end of 2026), and to build a policy portfolio as quickly as possible (no later than the end of 2031). Until the policy portfolio is constructed (ramp-up period of investment), the investment target of "more than target payout rate of 3% + inflation rate" will not apply.



[Investment Policy for Initial Investment Period]

details in advance. In the future, we will strive to enhance transparency in our investments by enriching the disclosure content including other relevant information, while remaining attentive to market influence.



succeed in obtaining investment profits of 300 billion yen.

After completing the Policy Portfolio, the investment target is "more than target payout rate of 3% + inflation rate."

[3] Risk Management

① Basic Policies for Risk Management

One of the important risks to consider when managing grant funds is the inability to pay necessary expenses due to the failure to secure financial resources for long-term and stable support to build the research infrastructure necessary for realizing world-class research universities. Accordingly, the JST Investment Advisory Committee has deliberated on and established a basic policy for managing risks appropriately while ensuring the redemption of fiscal loan funds.

2 Basic Framework for Risk Management

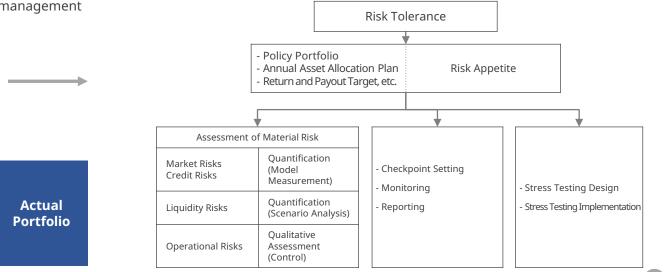
To implement appropriate risk management, JST works to always understand the degree of influence of certain risks on the JST operations and determines risks to be managed by JST (assessment of material risk). It also determines the category and level of risks to be accepted (risk appetite). JST controls risk-taking in accordance with portfolio management within the risk tolerance specified by Minister of MEXT (quantification and integrated management) and reports the status thereof in a timely manner (reports on risks). This framework and process is documented, and a structure including the risk management system that assures the steady risk management operation is in place.

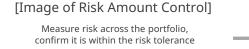
③ Various Processes Concerning Risk Management

- Assessment of material risk : Gains a comprehensive understanding of the risks faced and determines policies to deal with them based on the importance and characteristics of the risk.
- Risk appetite: Determines what risks to take and to what extent so as to optimize risk returns. This enables disciplined risk-taking to achieve investment targets based on risk tolerance.
- Checkpoint system: To implement appropriate risk-taking in accordance with risk appetite, based on policies to handle each risk through the risk assessment above, this system determines the level of standard deviation and asset value at which it is necessary to confirm the internal and external investment circumstance and verify whether a review of the annual plan is required.
- Stress testing: To supplement quantitative risk management, this assumes a notable stress scenarios based on the current state of the portfolio and the annual asset allocation plan, and evaluates the financial impact in such a case.

[Basic Framework for Risk Management]

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Risk
Tolerance
(Reference
Portfolio)Policy
Portfolio
(Transition Plan
in Ramp-Up
Period of
Investment)Actual
Portfolio

(4) Risk Management Operation

In accordance with the framework explained in the previous page, monitoring such as risk measurement is carried out daily or monthly, and the results are reported to a predetermined committee, etc. If any excess risk is confirmed through the monitoring, the necessity to review asset allocation will be considered in view of the market environment and in compliance with investment discipline. In the case that changes in the market value of assets reach a certain level,* it will be reported to the JST Investment Advisory Committee, and, after the necessary measures have been deliberated, will also be reported to Minister of MEXT.

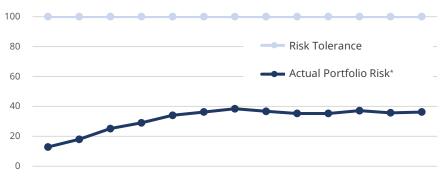
In addition, stress testing, etc. will be carried out when the Policy Portfolio is formulated, verified or changed, or when the annual asset allocation plan is formulated or changed. This process facilitates the appropriate management of the risks of not achieving investment targets, considering the necessary period to recover from the decline in the asset value due to the deterioration of the market environment. The results will be confirmed at the Investment Risk Management Committee and reported to the JST Investment Advisory Committee.

Furthermore, a basic risk management policy and associated frameworks were established to cope with various risks including market risks, credit risks, liquidity risks, and operational risks from the perspective of overall portfolio, investment asset classes, and investment methods. These risks are managed appropriately through multi-layered monitoring according to individual risk characteristics.

(5) Status of Risk Management in FY2022

As portfolio construction began in an environment with extremely high uncertainty (i.e. the effects of the COVID-19 pandemic, the Russian invasion of Ukraine, rising global inflation, the tightening of monetary policy in Europe and the US, etc.), JST has proceeded with risk-taking in a cautious manner in FY2022.

As is shown below, the actual portfolio risk was prudently controlled in relation to the risk tolerance through the year.



[Amount of Risk]

2022/3/31 4/29 5/31 6/30 7/29 8/31 9/30 10/31 11/30 12/30 1/31 2/28 3/31 * The Actual Portfolio Risk ratio to the Risk Tolerance (%).

^{*} A report will be sent to Minister of MEXT when a loss due to short-term fluctuation in the market value of assets reaches the standard deviation in the Policy Portfolio or twice that deviation, or when the market value of assets is less than the balance in the Fiscal Loan Fund, or when the net realized loss exceeds the capital stock.

[4] Evaluation of Grant Fund Management

Every fiscal year, we assess whether grant fund management is conducted safely and efficiently from a long-term perspective and provide a report to the JST Investment Advisory Committee.

Considering that the management of grant funds is undertaken from a long-term perspective, it is considered fundamental to evaluate the achievement of investment objectives not on a single-year basis, but rather on longer periods (3 years, 5 years, 10 years).

During the ramp-up period of investment, management evaluation is carried out not only based on the achievement of the investment targets but also considering the methodical transition of asset allocation. The evaluation for FY2022 was reported to the JST Investment Advisory Committee on May 24, 2023.

[5] Other Investment Policies

Grant fund management works to secure resources for grant administration, so other considerations (managing funds for other policy aims or policy realization) are not implemented.

Given that the management of grant funds is conducted from a longterm perspective, the approach to investment focuses on adhering to investment disciplines such as long-term assets holding and diversification, without overly constrained by temporary fluctuations in markets, including equities and foreign exchange markets. Following the disciplines, we aim to generate returns in a long-term and stable manner, including dividends and income, derived from growth of both domestic and international economies.

Regarding investments, as a large-scale institutional investor with considerable market influence and a public profile, we pay proper attention not to distort market price formation or investment behavior of general market participants.

[6] Stewardship Activities

As the asset owner, JST has established a basic policy for fulfilling stewardship responsibility in the Japanese version of the Stewardship Code (established on March 2, 2022) and has committed to accepting every principle (including guidelines) of the code. Refer to the JST website* for details on the Stewardship Activity Principles and Voting Rights Exercise Principles, etc.

* JST website (Japan University Fund): https://www.jst.go.jp/fund/

To fulfill its own stewardship responsibility, JST will encourage investment managers to fulfill their stewardship responsibilities by appropriately determining and monitoring the implementation status of their stewardship activities and initiatives that take sustainability (in the medium to long term, including ESG factors) into account in their evaluations and actively engaging in dialog with external investment managers.

Basic Policy to Fulfill Stewardship Responsibility

[Approaches to Stewardship Responsibilities]

- JST aims to achieve investment targets while managing risks appropriately from a long-term perspective under the purpose of securing financial resources to provide long-term and stable support to establish the research infrastructure necessary to build world-class research universities.
- To increase long-term investment returns by encouraging investee companies to improve their corporate value and the sustainable growth of these companies and the market as a whole, JST will proactively work to manage conflicts of interest, engaging in constructive and purposeful dialog (engagement) with investee companies, stewardship activities, including the exercise of voting rights, and initiatives that take sustainability (in the medium- to long-term, including ESG factors, hereinafter "sustainability") into account according to the investment strategy, as well as ensuring an in-depth understanding of investee companies and their business environment.
- JST will help investee companies and the market as a whole grow sustainably via the following initiatives to obtain long-term investment returns.
- Via investments in individual companies through investment managers, JST has many opportunities to contact individual companies in our stewardship activities. This convinces us that we can effectively fulfill our stewardship responsibility by entrusting these activities to external investment managers with in-depth knowledge of corporate management.

- JST will fulfill its stewardship responsibility as the asset owner in the Stewardship Code by appropriately determining and monitoring the implementation status of investment managers' stewardship activities and initiatives that take sustainability into account in the evaluation of investment managers, actively engaging in dialog (engagement) with external investment managers and publishing the outline of activities in every fiscal year.

[Policies of Initiatives by Investment Managers]

- JST requires investment managers to comply with the "Stewardship Activity Principles" and "Voting Rights Exercise Principles." However, if there are any matters that are considered inappropriate to implement in light of individual circumstances such as the characteristics of assets under management or investment style, we request that the "reasons for not implementing" be explained.
- We will appropriately monitor the status of stewardship activities by investment managers (including the exercise of voting rights if applicable) and actively engage in dialog (engagement) with them.

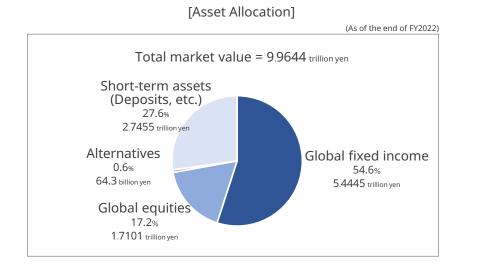
^{*} Refer to the JST website for "Response to principles in each code" and related matters. JST website (Japan University Fund): https://www.jst.go.jp/fund/

[1] Investment Assets

① Asset Allocation

The total market value at the end of FY2022 was 9.9644 trillion yen, and the asset allocation is shown below. Global fixed income was 54.6% (5.4445 trillion yen), global equities were 17.2% (1.7101 trillion yen), alternatives were 0.6% (64.3 billion yen), and short-term assets (deposits, etc.) were 27.6% (2.7455 trillion yen).

From the perspective of risk diversification and ensuring medium- to long-term profits, JST will strategically promote alternative investment. The assumed investment targets are the three fields of private equity/private debt, real estate, and infrastructure, and investment in private equity/private debt began in FY2022.



* Statistical data may not match the breakdown amounts due to rounding, etc.

2 Amount of Investment Assets by Investment Method

The amount of investment assets by investment method at the end of FY2022 is shown below.

Global fixed income passive investment was 11.1% (1.1039 trillion yen), global fixed income in-house investment was 43.6% (4.3406 trillion yen), global equities (passive investment) were 17.2% (1.7101 trillion yen), and alternatives (active investment) were 0.6% (64.3 billion yen).

[Amount of Investment Assets by Investment Method]

			(A	s of the end of FY2022)
	Assets/Invest	ment Method	Market Value (100 million yen)	Composition Ratio
Total assets			99,644	100.0 %
	Global fixed	Passive investment*2	11,039	11.1 %
	income ^{*1}	In-house investment	43,406	43.6 %
	Global equities ^{*1} Passive investment ^{*2}		17,101	17.2 %
	Alternatives Active investment		643	0.6 %
	Short-term assets (deposits, etc.)		27,455	27.6 %

*1 Global fixed income and global equities include domestic bonds and domestic equities respectively.

*2 Global fixed income and global equities "Passive investment" includes ETF.

About Asset Allocation

The current asset allocation has a high percentage of global fixed income and short-term assets. Alternative assets require a certain time to invest, and approximately 90% of the investment principal is borrowed from fiscal loan funds, resulting in a low equity capital ratio in the financial structure. In that context, we have taken measures to control risks at a lower level not to adversely affect the repayment of fiscal loan funds and long-term, stable grants to universities for international research excellence.

* Statistical data may not match the breakdown amounts due to rounding, etc.

③ Amount of Investment Assets by Country/Region

The top 15 countries/regions by market value of investment assets at the end of FY2022 are shown below.

[Amount of Investment Assets by Country/Region (in order of Market Value)]

(As of the end of FY2022; 100 million				of FY2022; 100 million yen)
Rank	Country/Region	Market Value	By As	sets ^{*1}
Kalik	Country/Region	IVIAI KEL VAIUE	Global Fixed Income	Global Equities
1	USA	43,803	34,440	9,363
2	Japan	10,621	6,416	4,205
3	French Republic	5,746	5,332	414
4	Australia	2,765	2,500	265
5	Canada	2,373	1,949	424
6	Kingdom of Spain	2,181	2,087	94
7	Federal Republic of Germany	1,274	967	307
8	UK ^{*2}	977	463	514
9	Swiss Confederation	459	68	392
10	Kingdom of the Netherlands	338	103	235
11	Ireland	286	71	215
12	Republic of Italy	131	67	64
13	Kingdom of Sweden	117	4	112
14	Kingdom of Denmark	113	3	110
15	Hong Kong Special Administrative Region	87	10	77

*1 Assets used for the total are global fixed income and global equities. Alternative investment has only just started and so is excluded. In principle, global fixed income is collected primarily based on their country of issue or the location of the issuer, while global equities are collected primarily based on the location of the issuer.

*2 UK = the United Kingdom of Great Britain and Northern Ireland

(4) Amounts Allocated to and Collected from Each Asset

The net amounts allocated to each asset (the amount allocated minus the amount collected) during FY2022 are as follows. Global fixed income: 2.7817 trillion yen, Global equities: 1.4588 trillion yen, and Alternatives: 63.9 billion yen.

It is currently the investment ramp-up period, and the portfolio construction has been gradually progressed using borrowings from the fiscal loan funds in FY2022. Consequently, the allocation to each asset is the main flow of funds, and the amount allocated/collected is positive for all assets.

[Amount Allocated to and Collected from Each Asset]

	(FY2022; 100 million yen)
Assets ^{*1}	Amount Allocated /Collected ^{*2}
Global fixed income	27,817
Global equities	14,588
Alternatives	639

*1 Does not include short-term assets (deposits, etc.).

*2 "Amount Allocated to and Collected from Each Asset" = when the amount recovered is taken from the amount allocated, and shows the amount of increase/decrease (based on book value) during the fiscal year due to the purchase and sale of each asset.

⁽⁵⁾ Portfolio Holdings by Asset Category

The names of the portfolio holdings at the end of FY2022, ranked by market value by assets, are as follows.

[Global Fixed Income (Top 20 by Market Value)]

	(As of the end of FY2022; 100 million				
Rank	Name	Market Value			
1	UNITED STATES TREASURY 4% 20421115	4,522			
2	UNITED STATES TREASURY 1.875% 20290228	2,895			
3	FRANCE, REPUBLIC OF (GOVERNMENT) 0% 20311125	2,289			
4	UNITED STATES TREASURY 1.875% 20320215	2,225			
5	UNITED STATES TREASURY 3.25% 20420515	2,116			
6	FRANCE, REPUBLIC OF (GOVERNMENT) 0% 20320525	1,816			
7	JAPAN (GOVERNMENT) 0.005% 20270320	1,699			
8	AUSTRALIA, COMMONWEALTH OF (GOVERNMENT) 1.25% 20320521	1,660			
9	UNITED STATES TREASURY 2.875% 20320515	1,652			
10	JAPAN (GOVERNMENT) 0.005% 20240501	1,602			
11	UNITED STATES TREASURY 3.375% 20420815	1,506			
12	JAPAN (GOVERNMENT) 0.1% 20270920	1,102			
13	UNITED STATES TREASURY 3.875% 20430215	1,078			
14	UNITED STATES TREASURY 2.375% 20420215	1,075			
15	UNITED STATES TREASURY 3.5% 20330215	1,071			
16	GOVERNMENT NATIONAL MORTGAGE ASSOCIATION 4.500% 20521001	1,011			
17	CANADA HOUSING TRUST NO 1 3.55% 20320915	989			
18	GOVERNMENT NATIONAL MORTGAGE ASSOCIATION 5.000% 20520901	930			
19	GOVERNMENT NATIONAL MORTGAGE ASSOCIATION 4.500% 20521101	921			
20	GERMANY, FEDERAL REPUBLIC OF (GOVERNMENT) 0% 20320215	831			

[Global	Equities	(Тор	20	by	Mar	ket	Value)]

(As of the end of FY2022; 100 million y				
Rank	Name*	Market Value		
1	APPLE INC	696		
2	MICROSOFT CORPORATION	550		
3	AMAZON COM INC	253		
4	NVIDIA CORPORATION	183		
5	ALPHABET INC-CL A	166		
6	ALPHABET INC-CL C	151		
7	TESLA INC	149		
8	TOYOTA MOTOR CORPORATION	147		
9	META PLATFORMS INC-A	127		
10	EXXON MOBIL CORPORATION	121		
11	UNITEDHEALTH GROUP INC	118		
12	BERKSHIRE HATHAWAY INC-CL B	113		
13	SONY GROUP CORPORATION	110		
14	JOHNSON AND JOHNSON	108		
15	JPMORGAN CHASE & CO	102		
16	VISA INC-CLASS A SHRS	98		
17	PROCTER AND GAMBLE COMPANY	94		
18	KEYENCE	91		
19	MASTERCARD INC-CLASS A	83		
20	HOME DEPOT INC	80		

* Global equities are indirectly owned through discretionary investment contracts, etc. with investment managers.

[Alternatives (Ranked by Market value)]

(As of the end of FY2022; 100 million yen)

Rank	Field	Fund Name*1	Market Value*2
1	Private equity /Private debt	JUNI TRUST N (USD) 25530	265
2	Private equity /Private debt	JUNI TRUST M (USD) 25535	165
3	Private equity /Private debt	JUNI TRUST S (USD) 25528	94
4	Private equity /Private debt	JUNI TRUST N (EUR) 25531	58
5	Private equity /Private debt	JUNI TRUST S (EUR) 25529	56
6	Private equity /Private debt	JUNI TRUST S (JPY) 25527	24

*1 This shows the specified money trusts with investment results in FY2022. *2 Including cash and deposits, etc. in the specified money trusts.

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The commitment amount of alternatives at the end of FY2022 are as follows.							
Reference: Commitment Amount of Alternatives >							
	(As of the end of FY2)	022; 100 million yen)					
	Field	Commitment Amount [*]					
	Private equity /Private debt	2,984					
	Real estate	1,309					
Infrastructure 703							
* Total	amount entrusted to e	each investment r	nanager.				

[2] Performance

(1) Rate of Return and Amount of Profit for FY2022

The rate of return for grant fund management was -2.2%, and the amount of profit was -60.4 billion yen. The breakdown is as follows. To avoid the risk of fluctuations when purchasing foreign bonds, etc., we hedged some foreign exchange exposures. Gains and losses resulting from this are reflected in global fixed income.

[Rate of Return]			[Amount of Profit] (FY2022; billion yen)		
	Assets	Rate of Return ^{*1}		Assets	Amount of Profit ^{*1}
Т	otal assets	-2.2 %	Т	otal assets	-60.4
	Global fixed income*2,*3	-3.6 %		Global fixed income*2,*3	-126.3
	Global equities*3	1.7 %		Global equities*3	65.5
	Alternatives	-4.5 %		Alternatives	0.5
*1	*1 Rate of return is the time-weighted rate of return (before deduction of investment management fees, etc.)			Amount of profit is the total amount of investment management fees, et	

*2 Global fixed income includes short-term assets (deposits, etc.) *3 Global fixed income and global equities include domestic

bonds and domestic equities respectively.

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bonds and domestic equities respectively.

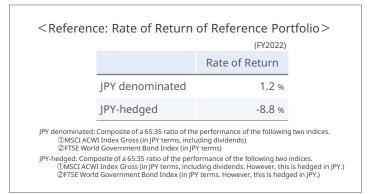
The main factors involved in the above rate of return and amount of profit are the negative factor of declining asset prices for global equities and global fixed income and the positive factor of foreign exchange contribution.

To control risks, we used forward exchange contract transactions, etc. to hedge some of the exchange risks associated with the acquisition of assets denominated in foreign currencies. Thus, the positive effect of foreign exchange when the yen depreciated was partly offset. Consequently, the positive contribution of a weak yen was smaller when compared to a situation in which we did not hedge foreign exchange risks at all.

2 Investment Management Fees, etc. and Income Gain

As investment management fees, etc.* were 6.3 billion yen, the rate of return after deducting investment management fees, etc. was -2.3%. The income gain for FY2022 (total assets) was 97.9 billion yen.

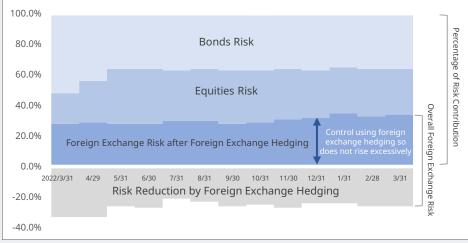
* "Investment Management Fees, etc." include not only management fees but also operational expenses, general and administrative expenses, and interest expenses on the fiscal loan fund.



Approach to Foreign Exchange Risks and Hedging during the Ramp-Up Period of Investment

Since the start of operations in FY2021, we have used forward exchange contract transactions, etc. to hedge some of the exchange risks associated with the acquisition of assets denominated in foreign currencies. During the ramp-up period of the investment, we control risks so that individual risks do not become excessively high, taking into consideration the overall risk balance.

[Percentage of Risk Contribution by Asset (Monthly Development)]



* The ratio of the risk amount of each factor when the total risk amount of risk factors (bonds risk, equities risk, foreign exchange risk after foreign exchange hedging) is set to 100.

Hedging Ratio of Foreign-Currency Denominated Assets by Currency

The hedging ratio for the foreign-currency denominated assets as a whole was 44.3% at the end of 2022. The market value, hedging amount, and hedging ratio by currency is as follows.

[Hedging Ratios of Foreign-Currency Denominated Assets by Currency]

		(As of the e	nd of FY2022; 100 million yen)
	Market Value	Hedging Amount	Hedging Ratio*
USD	47,320	-19,914	42.1%
EUR	9,487	-6,698	70.6%
Other	5,987	-1,182	19.7%
Total	62,794	-27,794	44.3%

* Statistical data may not match the breakdown amounts due to rounding, etc.

③ Gross Income and the Valuation Difference from the Valuation of Owned Assets

"Gross income" on the income statement for FY2022 was +74.2 billion yen, and the valuation difference from the valuation of owned assets ("valuation differences on other securities" on the balance sheet) was -125.9 billion yen.

These values were taken from the income statement and balance sheet of the FY2022 financial statements^{*1} submitted to MEXT at the end of June 2023. When this annual report was made public, the financial statements had not yet been approved by Minister of MEXT, so the approved figures of the financial statements may differ from the above values. The financial statements will be published separately on the JST website^{*2} after being approved by Minister of MEXT.

*2 JST website (financial statements): https://www.jst.go.jp/announce/zaimu/zaimu.html

Relationship between the Amount of Profit from Fund Management and the Gross Income on the Financial Statements

With regard to the Japan University Fund's accounting, the realized profit and loss from interest, dividend income, and the sale of owned assets is recorded in "Gross income" (or "Gross loss") on the income statement, and the valuation difference of owned assets is recorded in "Valuation differences on other securities" on the balance sheet.

The relationship between the amounts on the financial statements and the amount of profit that results from fund management (= total amount of profit) is roughly as follows.

Amount of profit (= total amount of profit) - Investment management fees, etc.

= "Gross profit" + Change in valuation difference for the period (valuation differences on other securities at the end of the period – Valuation differences on other securities at the end of the preceding period)

④ Grants for Universities for International Research Excellence, etc.

The Japan University Fund aims to ensure financial resources for the longterm and stable support (grant administration) needed to establish worldclass research universities.

The amount that will serve as the source of grants for universities for international research excellence, etc. will be decided separately from the amount of gross income on the income statement (74.2 billion yen) excluding operating loss carried forward from the previous fiscal year (6.2 billion yen), based on the current financial circumstances of the Japan University Fund.

The total grants for each fiscal year will be decided within the scope of the fund source based on the Basic Policy for Grants^{*1} by a committee in which relevant ministries and agencies participate, taking into account the current status of the Japan University Fund's investment gains and securing its financial soundness. It is also stated that "in preparation for a situation in which the investment gains cannot cover the amount of support for each fiscal year, a buffer of 300 billion yen × two years will be secured." Consequently, the total grant amount for each fiscal year shall be around 1/3 of the possible grant amount for that fiscal year (buffer + investment gains) until the buffer reaches its upper limit.

For more information about the grant system for universities for international research excellence, see the MEXT website.^{*2}

*1 Official name: "Basic policy to promote the strengthening of systems for leveraging the research and research results of universities for international research excellence," determined November 15, 2022.

*2 MEXT website: https://www.mext.go.jp/a_menu/kagaku/daigakukenkyuryoku/kokusaitakuetsu_koubo.html

^{*1} The process concerning financial statements involves obtaining approval from Minister of MEXT after an audit by auditors and accounting auditors, in accordance with the Act on General Rules for Incorporated Administrative Agencies and the Act on Japan Science and Technology Agency, National Research and Development Agency.

[3] Investment Managers, etc.

① Amount of Investment Assets by Investment Manager

The amount of investment assets by investment manager at the end of FY2022 were as follows.

[Amount of Investment Assets by Investment Manager]

(As of the end of FY2022; 100 million yea		
Assets	Investment Manager*1	Market Value
Global fixed income	In-house investment*2	54,445
	Nomura Asset Management	280
	BlackRock Japan	7,959
Global equities	Sumitomo Mitsui Trust Bank	610
	Mitsubishi UFJ Trust and Banking	6,876
	In-house investment*3	1,375
	Neuberger Berman	323
Alternatives	Sumitomo Mitsui Trust Bank	155
	Mitsubishi UFJ Trust and Banking	165
Short-term assets (deposits, etc.)		27,455

*1 Names of investment manager within each asset are listed in Japanese alphabetical order.

*2 In-house investment of Global fixed income includes some ETFs.

*3 In-house investment of Global equities are ETFs.

2 Investment Management Fees / Investment Management Fee Rates

The investment management fees and investment management fee rates by assets for FY2022 were as follows.

[Investment Management Fees / Investment Management Fee Rates]

			(FY2022; million yen)
		Investment Management Fees	Investment Management Fee Rates*
Total assets		192	0.003%
	Global fixed income	96	0.002%
	Global equities	52	0.004%
	Alternatives	44	0.043%

* Investment management fee rates refers to the rate when the amount of investment management fees is divided by the average market value balance. However, in the case of alternative assets, with some exceptions, this is divided by the commitment amount (the total amount entrusted to each investment manager).

3 Custodians

The custodians for FY2022 were as follows.



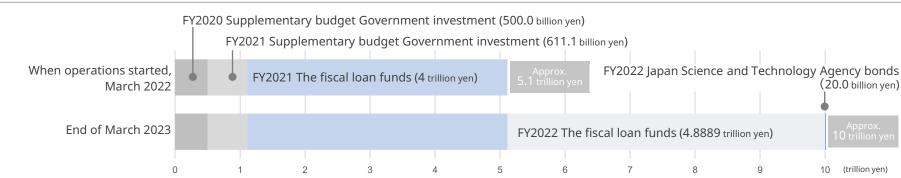
4 | Investment Results

[4] Other

1 Fundraising

The Japan University Fund's main investment principal comes from government investment and the fiscal loan funds. Around 5.1 trillion yen was provided up to FY2021 (government investment: around 1.1 trillion yen; the fiscal loan funds: 4 trillion yen), and around 4.9 trillion yen (the fiscal loan funds) was provided in FY2022. The fiscal loan funds, which are 40-year long-term loans (principal repayment will start in 20 years), will be redeemed sequentially from FY2041.

To ensure the certainty of redemption of the fiscal loan funds, we aim to form a stable financial base that can withstand the significant market fluctuations experienced to date during the redemption period.



[State of Fundraising]

The status of fiscal loan fund borrowing is shown on the right. The rate of interest is covered under the fiscal loan fund interest rates published by the Ministry of Finance each month, and will be reviewed every five years.

With the aim of increasing financial resources, Japan Science and Technology Agency bonds were issued based on Article 33 of the Act on Japan Science and Technology Agency, National Research and Development Agency (date of issue: February 20, 2023; amount issued: 20 billion yen). See the JST website* for more details.

* JST website (JST bonds): https://www.jst.go.jp/all/about/bond/index.html

[State of the Fiscal Loan Fund Borrowing]

Amount	Interest rate
4000.0 billion yen	0.05%
800.0 billion yen	0.09%
800.0 billion yen	0.20%
800.0 billion yen	0.08%
800.0 billion yen	0.30%
800.0 billion yen	0.20%
888.9 billion yen	0.30%
8888.9 billion yen	
	4000.0 billion yen 800.0 billion yen 800.0 billion yen 800.0 billion yen 800.0 billion yen 800.0 billion yen

4 | Investment Results

Information Sharing

JST publishes analysis and opinions that contribute to gaining a perspective for global economic and policy trends in a report called "Economic Perspectives" on the Japan University Fund website.* The following seven issues were released in FY2022.

* JST website (Japan University Fund): https://www.jst.go.jp/fund/

[Economic Perspectives]

Issue 1	"The possibility of the rise in NAIRU in the US and its implications for the monetary policy"
	(Published November 10, 2022)
Issue 2	"To what extent will the Fed raise the policy rate?: A theoretical approach of the monetary policy"
	(Published November 25, 2022)
Issue 3	"Will the Bank of Japan take the step of normalizing monetary policy in 2023?: Looking ahead to the revision of the Joint Statement"
	(Published December 23, 2022)
Issue 4	"US monetary policy anchors in the stormy sea"
15500 4	(Published January 24, 2023)
Issue 5	"Has Japan come to a turning point in its monetary policy?: Comparisons with the US" (Published February 16, 2023)
Issue 6	"The possibility of the rise in natural rate of interest in the US" (Published March 3, 2023)
Issue 7	"The relationship between the US monetary tightening and its financial system concerns, and the future"
1000007	(Published March 24, 2023)

[Economic Perspectives (Image)]

A学技術振興機構 経済を読む眼 日本は金融政策の転換期を迎えたのか?―米国との比較を交えて―1 2023 年 2 月 16 日 JST 資金運用本部 チーフエコノミスト 鵜飼博史 1. デフレ均衡から脱却しつつある日本経済 日本のコア CPI(除く生鮮食品)上昇率は 2022 年末に前年比 4.0%に届き、コアコア CPI(除く生鮮食品・エネルギー)も3.0%、更に今回のインフレの主因であるエネルギ ーと食料品を除いたグローバルコア CPI も 1.6%と物価安定目標に近付いている(図表 1)。日本銀行は日本経済がデフレ均衡に陥っていると考え、2013年以来、大規模緩和を 通じて大きな弾み (escape velocity) を付けることで、デフレ均衡からインフレ目標近傍 図表1:日本消費者物価 前年にN.消費用版の影響を為く の均衡へと日本経済を飛ばそうと試みた が²、叶わなかった。しかし、ロシア・ウ コアコア GPI (除く生酵食品・エネルギー) グローバルコア GPI (除く食料品・エネルギー) クライナ紛争に端を発した最近の外生的 な供給ショックを引き金としてインフレ 率は高まり、インフレ期待も企業が5年 先で2%を見込む状況となり、日本経済は デフレ均衡から漸く脱しつつあるように ダオダオダダダダダダダダダダダダ みられる。本稿は、このような状況を踏ま え、政策ルールを用いたシミュレーションによって日本銀行の金融政策姿勢を検証する ことを目的としている。 まず、このデフレ均衡とは、Benhabib, Schmitt-Grohé, and Uribe (2001)³が提唱した概念 で、積極的なテイラータイプの金融政策ルール――インフレが目標から乖離したら名目 金利をその乖離幅よりも大きく変更するというルール――が金利のゼロ下限制約と組 み合わさると、経済に2つの均衡点が生じ、片方は通常のインフレ目標近辺の均衡だが、 もう一つはデフレ下の均衡点になる。これを Bullard セントルイス連銀総裁に倣って視 覚的に示せば、テイラータイプの金融政策で動く名目政策金利とフィッシャー方程式 ¹本稿は、2月14日現在のデータに基づいている。 2 中曽宏 (2014)「日本経済と金融政策」を参照。 ³ Benhabib, J., Schmitt-Grohé, S., and M. Uribe (2001) "The Perils of Taylor Rules," Journal of Economic Theory 96(1-2) & # 昭. ⁴ Bullard, J. (2010) "Seven Faces of 'The Peril,'" Federal Reserve Bank of St. Louis Review 92(5)を参照。これは、あくまでも 概念図であって、実際に用いられる政策ルールではない 1 / 10

FY2022 Annual Report

Japan Science and Technology Agency (JST)

JST has created and published this annual report concerning the operational status of grant fund management in FY2022, based on Article 37 of the Ministerial Ordinance concerning JST.

Department of Fund Planning, Fund Management Headquarters Japan Science and Technology Agency (JST)

5-3 Yonbancho, Chiyoda-ku, Tokyo 102-8666, Japan URL https://www.jst.go.jp/fund/

* This report is made in Japanese and translated into English. In case of any difference in meaning between the original Japanese text and the English translation, Japanese text shall prevail.