1 . Points of the FY2023 policy cost analysis

- The policy cost analysis based on FY2023 FILP Plan conducted 25 FILP agencies (compared with 25 FILP agencies for the previous analysis).

- Total policy cost: 3,564.5 billion yen (down 1,915.3 billion yen from the previous analysis)

  ⇒With the increase in the level of the assumed interest rate used in the analysis, (1) an increase in costs (up 5.5 trillion yen) due to an increase in opportunity cost arising from capital investment from the government, mainly attributable to a decrease in the discount rate used in calculating present value; and (2) a decrease in costs (down 3.4 trillion yen) due to an increase in national income mainly attributable to improved yields on surplus funds managed by FILP agencies.

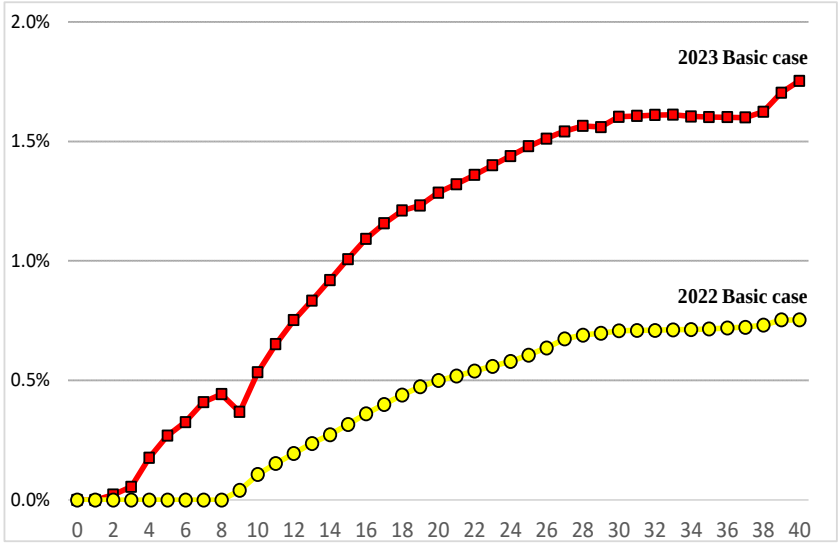
Policy cost analysis results (by component)

(Unit: billion yen)

	Number of agencies	Policy cost	① Government expenditure (Subsidies, etc.)	② Government revenue (Payments to the government, etc.)	③ Opportunity cost of government capital investments, etc.	Opportunity cost of investments, etc. provided before the beginning of the analysis period	Opportunity cost of surplus, etc. expected to be generated during the analysis period
FY2023 (A)	25	3,564.5	2,279.8	-8,836.1	10,120.8	13,675.4	-3,554.6
FY2022 (B)	25	1,649.2	2,390.0	-5,392.9	4,652.1	7,145.6	-2,493.5
Simple fluctuation (A-B)	—	+1,915.3	-110.2	-3,443.2	+5,468.7	+6,529.8	-1,061.1

*Considering that projects subject to the policy cost analysis differ by year, we excluded the effects of differences in analysis targets and assumptions and found the real policy cost fluctuation as a decrease of 727.8 billion yen.【⇒ Past year comparison analysis】

Assumed interest rate for policy cost analysis 【spot rate】



* Estimates are based on the market yield on Japanese government bonds on December 23, 2022, when the budget proposal for FY2023 was decided.
Negative rates are regarded as 0% for calculating the discount factor and future interest rates as common assumptions for all FILP agencies.

2. Breakdown of policy cost (by agency and time of provision of funds)

【Breakdown by FILP agency】

(Unit: billion yen)

	Institutions	Policy Cost (FY2023)	① Opportunity cost of investments, etc. provided before the beginning of the analysis period	② Policy cost expected to be newly accrued during the analysis period
Financing Institutions	Japan Finance Corporation	1,730.2	3,767.9	-2,037.7
	Account for Micro Business and Individual Operations	456.8	2,231.5	-1,774.7
	Account for SME Loan Programs and Securitization Support Programs [Guarantee-type Operations]	516.3	924.8	-408.4
	Account for Agriculture, Forestry, Fisheries and Food Business Operations	151.5	303.5	-152.0
	Account for Operations to Facilitate Crisis Responses	600.5	308.0	292.4
	Account for Operations to Facilitate Specific Businesses Promotion, etc.	5.1	0.1	5.0
	The Okinawa Development Finance Corporation	-17.1	69.9	-87.0
	Japan Bank for International Cooperation	109.9	709.2	-599.3
	Japan International Cooperation Agency (Incorporated Administrative Agency)	748.7	5,024.2	-4,275.5
	Japan Student Services Organization (Incorporated Administrative Agency)	57.8	0.0	57.8
	Welfare and Medical Service Agency (Incorporated Administrative Agency)	-15.7	70.8	-86.5
	Japan Housing Finance Agency (Incorporated Administrative Agency)	-173.7	233.4	-407.1
	Account for Housing Loans, etc.	34.0	12.8	21.3
	Account for Securitization Support	-207.8	220.6	-428.4
	Development Bank of Japan Inc.	-1,305.8	760.4	-2,066.2
	5 other agencies	-3.1	53.5	-56.6
Project Institutions	Special Account for Motor Vehicles Safety	-540.2	-	-540.2
	National Hospital Organization (Incorporated Administrative Agency)	259.0	105.2	153.9
	Japan Railway Construction, Transport and Technology Agency (Incorporated Administrative Agency) (Construction Account)	707.7	-	707.7
	Urban Renaissance Agency (Incorporated Administrative Agency)	-543.0	535.9	-1,079.0
	Japan Expressway Holding and Debt Repayment Agency (Incorporated Administrative Agency)	1,733.0	1,689.4	43.6
	Japan Water Agency (Incorporated Administrative Agency)	105.4	1.9	103.5
	Forest Research and Management Organization (National Research and Development Agency)	716.6	635.3	81.4
	Central Japan International Airport Co., Ltd.	-16.0	9.4	-25.4
	5 other agencies	10.8	9.0	1.8
Total		3,564.5	13,675.4	-10,111.0

【Breakdown by time of provision of funds】

(Unit: billion yen)

Category	FY2023 (A)	FY2022 (B)	Fluctuation (A)-(B)
Policy cost (1)+(2)	3,564.5	1,649.2	+1,915.3
(1) Opportunity cost of investments, etc. provided before the beginning of the analysis period	13,675.4	7,145.6	+6,529.8
(2) Policy cost expected to be newly accrued during the analysis period	-10,111.0	-5,496.4	-4,614.6
(a) Government expenditure (subsidies, etc.)	2,279.8	2,390.0	-110.2
(b) Government revenue (payments to the government, etc.)	-8,836.1	-5,392.9	-3,443.2
(c) Opportunity cost of surpluses, etc.	-3,690.8	-2,576.2	-1,114.6
(d) Opportunity cost of capital investments, etc.	136.1	82.7	+53.4

【FILP agencies' example uses of policy cost analysis】

- Considering fund plans and budget requests
- Considering how to improve financial and business efficiency
- Considering how to utilize funds on hand
- Policy cost analysis is written on prospectuses for FILP agencies' bond issuance (Use for investor relations activities)

【Notes】

◆It must be noted that the policy cost estimate is based on analysis periods, project outlooks and individual assumptions that differ by FILP agency and could change considerably depending on the assumptions.

◆The policy cost amount does not indicate any fiscal burden that would accrue from the implementation of FILP projects and be accompanied by future fund transfers.

◆The policy cost should be assessed not simply according to its size but integrally along with social and economic benefits of relevant projects.

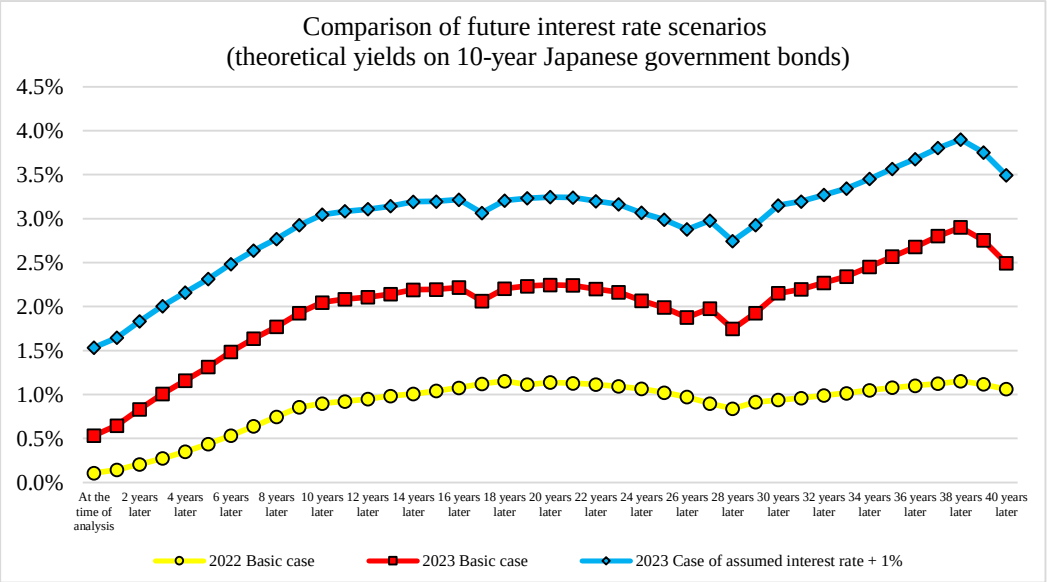
3. Sensitivity analysis (① Case of assumed interest rate + 1%)

(Unit: billion yen)

	Institutions	Fluctuation (Compared with the basic case)	
		Case for the assumed interest rate for FY2022	Case of assumed interest rate + 1%
Financing Institutions	Japan Finance Corporation	-132.6	+75.2
	Account for Micro Business and Individual Operations	+44.6	-99.8
	Account for SME Loan Programs and Securitization Support Programs [Guarantee-type Operations]	-47.9	+150.0
	Account for Agriculture, Forestry, Fisheries and Food Business Operations	-60.6	+44.5
	Account for Operations to Facilitate Crisis Responses	-68.9	-19.2
	Account for Operations to Facilitate Specific Businesses Promotion, etc.	+0.0	-0.2
	The Okinawa Development Finance Corporation	-1.0	+9.1
	Japan Bank for International Cooperation	-136.9	+131.7
	Japan International Cooperation Agency (Incorporated Administrative Agency)	-655.7	+1,014.8
	Japan Student Services Organization (Incorporated Administrative Agency)	+59.4	-69.8
	Welfare and Medical Service Agency (Incorporated Administrative Agency)	-17.0	+16.2
	Japan Housing Finance Agency (Incorporated Administrative Agency)	-215.7	+57.0
	Account for Housing Loans, etc.	-0.1	-2.3
	Account for Securitization Support	-215.6	+59.3
	Development Bank of Japan Inc.	-166.3	+370.0
	5 other agencies	-6.1	+11.5
Project Institutions	Special Account for Motor Vehicles Safety	-207.3	+243.1
	National Hospital Organization (Incorporated Administrative Agency)	-126.3	+68.6
	Japan Railway Construction, Transport and Technology Agency (Incorporated Administrative Agency) (Construction Account)	+9.1	-30.6
	Urban Renaissance Agency (Incorporated Administrative Agency)	-835.6	+814.1
	Japan Expressway Holding and Debt Repayment Agency (Incorporated Administrative Agency)	-814.7	+825.5
	Japan Water Agency (Incorporated Administrative Agency)	+2.2	-3.2
	Forest Research and Management Organization (National Research and Development Agency)	-50.3	+15.8
	Central Japan International Airport Co., Ltd.	-19.1	+21.4
	5 other agencies	-6.5	+7.1
Total		-3,320.5	+3,577.7

- The scenario analysis measures policy cost fluctuations on changes in specific assumptions for the time for estimating future cash flow.
- This time, we changed the sensitivity analysis based on the “Case before the negative interest rate policy,” which had been in use until last year, and set out an interest rate scenario of an additional 1% on the interest rate in the basic case.
- Policy cost increases by 3,577.7 billion yen to 7,142.1 billion yen from 3,564.5 billion yen in the basic case where the current interest rate environment (JGB market yields) is assumed.

It is important to continuously ascertain policy cost trends under multiple assumptions while keeping in mind that risks regarding future interest rate changes are still high.



4. Sensitivity analysis (② Case for 1% changes in loan write-off, business revenue, etc. (individual assumptions))

【Loan write-off: +1%】 (Unit: billion yen)

Institutions	Fluctuation (Compared with the basic case)
Japan Finance Corporation	+21.1
Account for Micro Business and Individual Operations	+11.1
Account for SME Loan Programs and Securitization Support Programs [Guarantee-type Operations]	+9.7
Account for Agriculture, Forestry, Fisheries and Food Business Operations	+0.3
The Okinawa Development Finance Corporation	+0.1
Japan Bank for International Cooperation	+6.2
The Promotion and Mutual Aid Corporation for Private Schools of Japan	+0.1
Japan Student Services Organization (Incorporated Administrative Agency)	+1.1
Welfare and Medical Service Agency (Incorporated Administrative Agency)	+0.8
Japan Railway Construction, Transport and Technology Agency (Incorporated Administrative Agency) (Maritime Affairs Account)	+0.0
Japan Housing Finance Agency (Incorporated Administrative Agency)	+4.4
Account for Housing Loans, etc.	+0.3
Account for Securitization Support	+4.1
Development Bank of Japan Inc.	+0.8
Organization for Promoting Urban Development (General Incorporated Foundation)	+0.0

【Others】 (Unit: billion yen)

Institutions	Fluctuation (Compared with the basic case)
Japan Finance Corporation	+3.2
Account for Operations to Facilitate Crisis Responses [Compensation/loss coverage reserves: +1%]	+3.2
Account for Operations to Facilitate Specific Businesses Promotion, etc. [Interest subsidy: +1%]	+0.0
National Institution for Academic Degrees and Quality Enhancement of Higher Education (Incorporated Administrative Agency) [Borrowings: +1%]	+0.0

【Business Revenue: -1%】 (Unit: billion yen)

Institutions	Fluctuation (Compared with the basic case)
Special Account for Motor Vehicles Safety	+40.9
National Hospital Organization (Incorporated Administrative Agency)	+30.1
National Center for Child Health and Development (National Research and Development Agency)	+3.3
National Center for Geriatrics and Gerontology (National Research and Development Agency)	+1.1
Japan Railway Construction, Transport and Technology Agency (Incorporated Administrative Agency) (Construction Account)	-
Urban Renaissance Agency (Incorporated Administrative Agency)	+86.4
Japan Expressway Holding and Debt Repayment Agency (Incorporated Administrative Agency)	+73.4
Forest Research and Management Organization (National Research and Development Agency)	+1.5
Central Japan International Airport Co., Ltd.	+3.0

*Business revenue: operational revenue, medical service revenue, rent revenue, etc.

【Business costs: +1%】 (Unit: billion yen)

Institutions	Fluctuation (Compared with the basic case)
Special Account for Stable Supply of Food	+0.0
Special Account for Energy Measures	-
Japan International Cooperation Agency (Incorporated Administrative Agency)	+1.7
National Federation of Land Improvement Associations	+0.0
Japan Railway Construction, Transport and Technology Agency (Incorporated Administrative Agency) (Local Public Transportation Account)	+0.0
Japan Water Agency (Incorporated Administrative Agency)	+1.0
Japan Organization for Metals and Energy Security (Incorporated Administrative Agency)	+0.0
General Account for Metal Mining	+0.0
Account for Oil, natural gas, etc.	+0.0

*Business costs: business expenses, etc.

- Scenario analysis to measure the impact of changes in specific assumptions on policy cost when estimating future cash flow.
- Each agency may measure policy cost changes when changing specific assumptions by ±1% according to its business details.
- Given that the impact of COVID-19 differs by agency, each agency uses the minimum change of 1% in specific assumptions to estimate policy cost changes according to the degrees of changes (±x% in individual assumptions).

Example: +20 % change = +1% change × 20

It is important to verify risk scenarios in sensitivity analysis while continuously watching policy cost's secular changes through the realization of the COVID-19 impact.

5. Past year comparison analysis/Analysis by causative factor

【Past year comparison analysis】

(Unit: billion yen)

	Institutions	Real fluctuation
Financing Institutions	Japan Finance Corporation	-823.2
	Account for Micro Business and Individual Operations	-42.2
	Account for SME Loan Programs and Securitization Support Programs [Guarantee-type Operations]	+386.6
	Account for Agriculture, Forestry, Fisheries and Food Business Operations	+28.0
	Account for Operations to Facilitate Crisis Responses	-1,194.9
	Account for Operations to Facilitate Specific Businesses Promotion, etc.	-0.6
	The Okinawa Development Finance Corporation	+1.5
	Japan Bank for International Cooperation	-126.2
	Japan International Cooperation Agency (Incorporated Administrative Agency)	+190.1
	Japan Student Services Organization (Incorporated Administrative Agency)	-19.9
	Welfare and Medical Service Agency (Incorporated Administrative Agency)	-88.5
	Japan Housing Finance Agency (Incorporated Administrative Agency)	-55.5
	Account for Housing Loans, etc.	-1.4
	Account for Securitization Support	-54.1
	Development Bank of Japan Inc.	-127.1
	5 other agencies	+0.6
Project Institutions	Special Account for Motor Vehicles Safety	-217.9
	National Hospital Organization (Incorporated Administrative Agency)	+85.2
	Japan Railway Construction, Transport and Technology Agency (Incorporated Administrative Agency) (Construction Account)	+113.1
	Urban Renaissance Agency (Incorporated Administrative Agency)	+382.7
	Japan Expressway Holding and Debt Repayment Agency (Incorporated Administrative Agency)	-15.1
	Japan Water Agency (Incorporated Administrative Agency)	+46.3
	Forest Research and Management Organization (National Research and Development Agency)	-55.6
	Central Japan International Airport Co., Ltd.	+1.2
	5 other agencies	-19.5
Total		-727.8

【Analysis by causative factor】(Financing institutions)】

(Unit: billion yen)

Institutions	Policy Cost (1)+(2)+(3)	(1) Effect of prepayments	(2) Effect of loan losses	(3) Effect of the others (profit margin, etc.)
Japan Finance Corporation	1,730.2	123.8	1,967.7	-361.3
Account for Micro Business and Individual Operations	456.8	33.8	966.1	-543.0
Account for SME Loan Programs and Securitization Support Programs [Guarantee-type Operations]	516.3	101.9	1,007.8	-593.3
Account for Agriculture, Forestry, Fisheries and Food Business Operations	151.5	-11.8	-6.1	169.5
Account for Operations to Facilitate Crisis Responses	600.5	-	-	600.5
Account for Operations to Facilitate Specific Businesses Promotion, etc.	5.1	-	-	5.1
The Okinawa Development Finance Corporation	-17.1	1.8	-4.3	-14.7
Japan Bank for International Cooperation	109.9	46.4	676.5	-612.9
Japan International Cooperation Agency (Incorporated Administrative Agency)	748.7	-	-337.4	1,086.1
Japan Student Services Organization (Incorporated Administrative Agency)	57.8	-0.3	28.2	29.9
Welfare And Medical Service Agency (Incorporated Administrative Agency)	-15.7	0.5	27.3	-43.5
Japan Housing Finance Agency (Incorporated Administrative Agency)	-173.7	301.7	332.6	-808.0
Account for Housing Loans, etc.	34.0	-15.5	27.8	21.8
Account for Securitization Support	-207.8	317.2	304.9	-829.8
Development Bank of Japan Inc.	-1,305.8	7.1	75.7	-1,388.6
5 other agencies	-3.1	0.2	4.4	-7.6

<Reference> Real fluctuations for each fiscal year in the past year comparison analysis (FY2014-2023)

(Unit: trillion yen)

	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023
Assumed interest rate (spot rate： 10-Year bonds)	0.7%	0.3%	0.3%	0.1%	0.1%	0.1%	0.03%	0.03%	0.1%	0.5%
Policy cost in previous fiscal year	3.1	1.6	- 0.6	0.2	- 1.4	- 0.8	- 1.0	- 1.4	3.7	1.6
(1) After adjusting initial years of analysis periods	3.1	1.5	- 0.5	0.3	- 1.5	- 0.8	- 0.6	- 1.2	2.6	1.0
Policy cost in current fiscal year	1.6	- 0.6	0.2	- 1.4	- 0.8	- 1.0	- 1.4	3.7	1.6	3.6
(2) After adjusting assumed interest rates	3.3	2.7	- 0.4	0.5	- 1.5	- 0.5	1.1	3.1	1.5	0.2
Real fluctuation (2)-(1)	+ 0.2	+ 1.1	+ 0.0	+ 0.3	+ 0.0	+ 0.3	+ 1.7	+ 4.3	- 1.0	- 0.7

(Note) The above data represent real fluctuations in each fiscal year that are not suitable for year-by-year comparison because of differences in agencies and projects subject to analysis.

(Reference) Overview of policy cost analysis

【Objective and significance】

Policy cost analysis is an initiative to estimate [future burdens on taxpayers] accompanying FILP projects under specific assumptions and publish the estimates to promote the disclosure of FILP information.

【History of policy cost analysis introduction】

The policy cost analysis was recommended in a report on fundamental FILP reform by the Fund Management Council in November 1997 to secure disclosure of future burdens on citizens and fiscal soundness. The test policy cost analysis was launched by 5 agencies including the then Housing Loan Corporation in FY1999 before the policy cost analysis was fully introduced by 33 agencies including all special corporations in FY2001, when the FILP reform was implemented.

【Policy cost calculation method】

Each FILP agency estimates future cash flow for FILP-using projects on certain preconditions (interest rates, project sizes, etc.).
Based on such estimation, each FILP agency calculates **the policy cost** according the following formula.

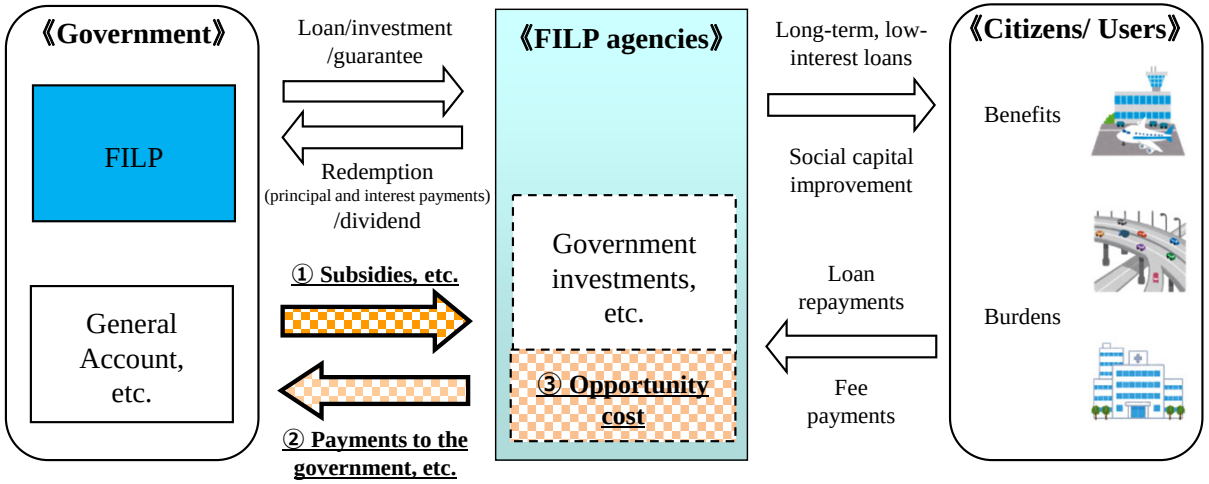
Policy cost = ① − ② + ③
(Note) Estimates ① to ③ are given in present value

① Subsidies, etc..
・・・ Total amount of subsidies, etc. expected to be paid by the government in the future

② Payments to the government, etc.
・・・ Total amount of corporation tax and other payments to the government expected in the future

③ Opportunity cost
・・・ Amount of opportunity cost* for the government attributable to past investments, etc.

*Opportunity cost
If the government uses funds for investments, etc., the action may be interpreted as losing profit that could be gained on investment of the funds in government bonds. The opportunity cost of such investments (an interest alleviation effect through government investments in FILP agencies) is handled as a component of the policy cost.

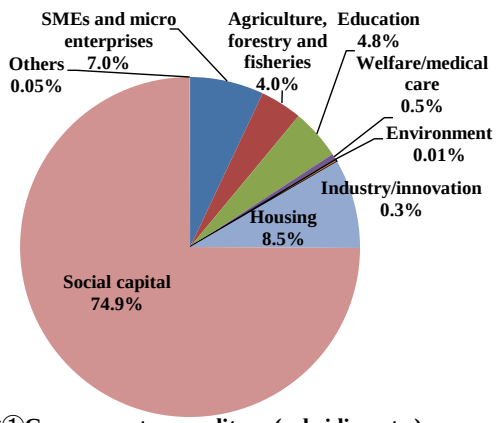


【Reference: Current policy cost analysis status】
Since the policy cost analysis introduction, the Asset-Liability Management Office has conducted the basic case analysis as well as various analyses as shown below to enhance analysis methods and published analysis results.

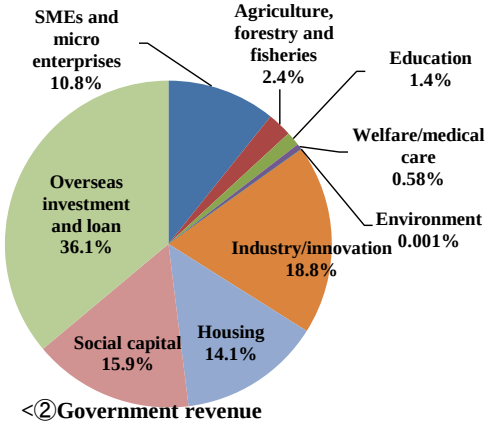
◆ Past year comparison analysis (real fluctuation analysis)
Policy cost estimates made for the previous and current fiscal years under equal assumption are compared to find a real change.
◆ Sensitivity analysis
This analysis estimates policy cost fluctuations on changes in some assumptions to find the effects of the changes.
(Example: Case of assumed interest rate＋1%、including a 1% rise in loan write-off and a 1% drop in business revenue)
◆ Analysis by causative factor
This analysis finds causative factors (prepayments, loan losses, etc.) for a financing institution's policy cost.

(Reference 1-1) Breakdown of FY2023 policy cost by investment field (by component)

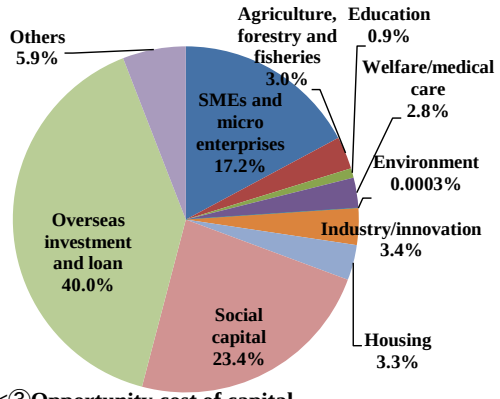
Broken down the FY2023 policy cost in line with the FY2023 FILP Classification Table by Purpose.
【Note】For agencies falling under multiple classification categories, their policy cost for FY2023 is prorated in accordance with the ratios appropriated at the time of preparing the abovementioned classification table.



<①Government expenditure (subsidies, etc.): 2,279.8 billion yen>



<②Government revenue (payments to the government, etc.): -8,836.1 billion yen>

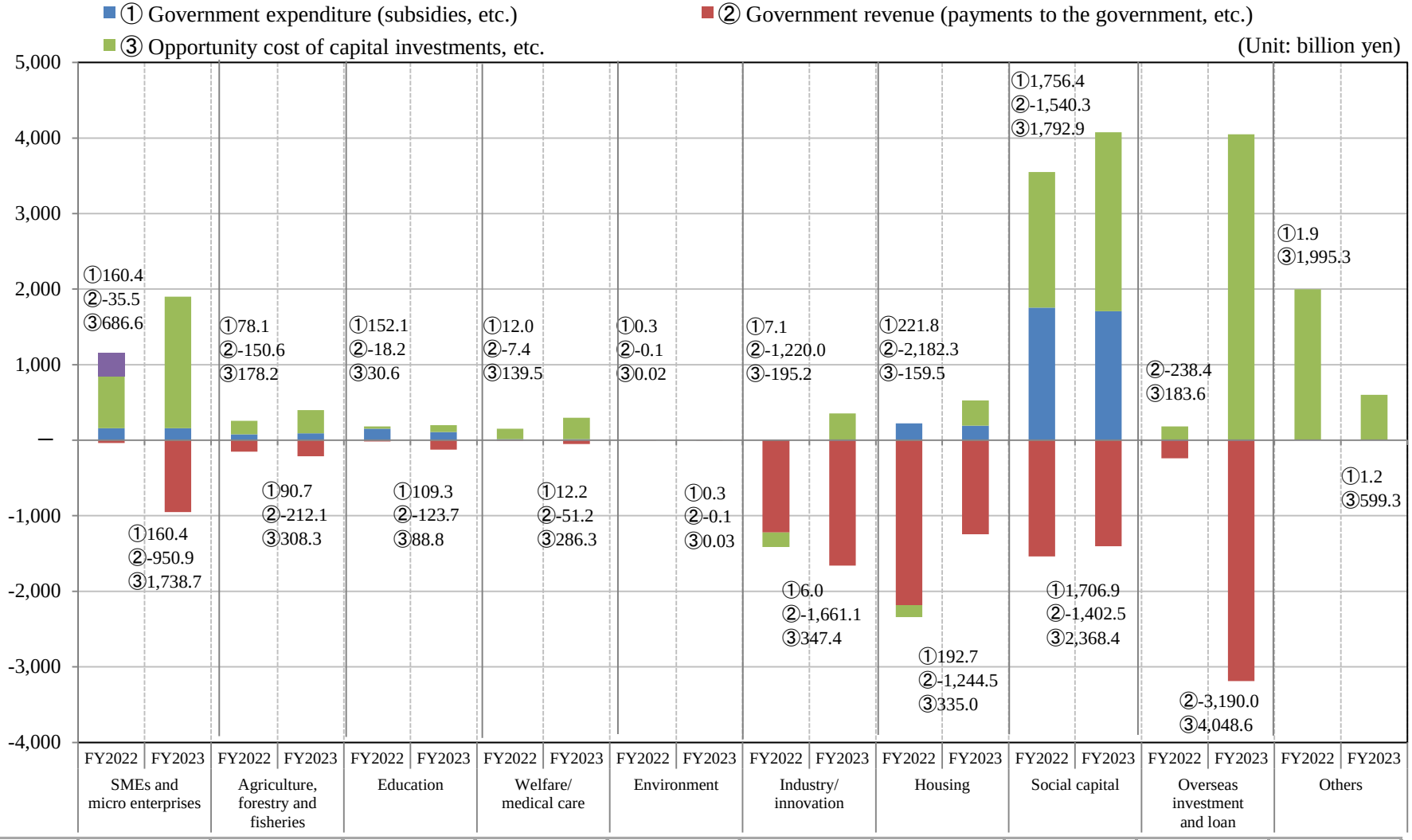


<③Opportunity cost of capital investments, etc.: 10,120.8 billion yen>

○The main classification of 25 agencies that aggregate the FY2023 policy cost

Classification	Institutions
SMEs and micro enterprises	Japan Finance Corporation (Account for Micro Business and Individual Operations, Account for SME Loan Programs and Securitization Support Programs), The Okinawa Development Finance Corporation
Agriculture, forestry and fisheries	Special Account for Stable Supply of Food, Japan Finance Corporation (Account for Agriculture, Forestry, Fisheries and Food Business Operations), The Okinawa Development Finance Corporation, National Federation of Land Improvement Associations, Japan Water Agency
Education	Japan Finance Corporation (Account for Micro Business and Individual Operations), The Okinawa Development Finance Corporation, The Promotion and Mutual Aid Corporation for Private Schools of Japan, Japan Student Services Organization
Welfare/medical care	The Okinawa Development Finance Corporation, The Promotion and Mutual Aid Corporation for Private Schools of Japan, Welfare and Medical Service Agency, National Hospital Organization, National Center for Child Health and Development, National Center for Geriatrics and Gerontology, National Institution for Academic Degrees and Quality Enhancement of Higher Education
Environment	Japan Organization for Metals and Energy Security (General Account for Metal Mining)
Industry/innovation	Special Account for Energy Measures, Japan Finance Corporation (Account for Operations to Facilitate Specific Business Promotion, etc.), The Okinawa Development Finance Corporation, Japan Railway Construction, Transport and Technology Agency (Maritime Affairs Account), Japan Organization for Metals and Energy Security (Account for Oil, Natural Gas, etc.), Development Bank of Japan Inc.
Housing	Japan Housing Finance Agency (Account for Housing Loans, etc., Account for Securitization Support), Urban Renaissance Agency
Social capital	Japan Railway Construction, Transport and Technology Agency (Construction Account, Local Public Transportation Account), Japan Expressway Holding and Debt Repayment Agency, Japan Water Agency, Forest Research and Management Organization, Organization for Promoting Urban Development, Central Japan International Airport Co., Ltd., Special Account for Motor Vehicles Safety (Airport improvement Account)
Overseas investment and loans	Japan Bank for International Cooperation (Ordinary Operations, Special Operations), Japan International Cooperation Agency
Others	Japan Finance Corporation (Account for Operations to Facilitate Crisis Responses)

(Reference 1-2) Breakdown of policy cost by investment field (FY2022-2023)



	SMEs and micro enterprises	Agriculture, forestry and fisheries	Education	Welfare/ medical care	Environment	Industry/ innovation	Housing	Social capital	Overseas investment and loan	Others
FY2022 cost	811.5	105.6	164.5	144.1	0.3	- 1,408.2	- 2,120.0	2,009.0	- 54.8	1,997.2
FY2023 cost	948.2	186.9	74.4	247.3	0.3	- 1,307.7	- 716.8	2,672.8	858.6	600.5

(Reference 2) Estimation of social and economic benefits

Given that the policy cost represents public financial burdens of FILP projects that are estimated under certain assumptions, it is important to integrally assess the policy cost and these projects' financial benefits for citizens and society. However, it is very difficult to assess benefits of characteristically different projects uniformly and quantitatively. Furthermore, some FILP projects bring about various benefits that cannot be converted into monetary values, including lives saved through the promotion of highly advanced medical treatments and the expansion of educational opportunities through scholarships.

Therefore, the policy cost analysis tries to explain how projects subject to analysis contribute to national life and society as specifically as possible, using quantitative social and economic benefits that each agency estimates on its own.

As the Cost-Benefit Analysis Manual and other guidelines prepared by the relevant government agencies can be utilized to quantitatively estimate social and economic benefits of public works projects under generally unified standards, policy cost analysis assumptions (including the discount factor and analysis period) are applied for their re-estimation and their comparison with the policy cost.

(Unit: billion yen, years)

Institutions (Project name)	Social and economic benefits		(Reference) Estimation based on the same discount factor and analysis period as those for the policy cost analysis	
		Analysis period		Analysis period
Japan Railway Construction, Transport and Technology Agency (Incorporated Administrative Agency)				
Construction Account (Shinkansen project)	3,946.4	After commercial operation launching: 50	3,330.6	22
Urban Renaissance Agency (Incorporated Administrative Agency)	999.1		1,890.8	
Projects to renew urban functions (land readjustment)	319.5	After replotting disposition 50	623.8	After replotting disposition 50
Projects to renew urban functions (urban renewal)	367.8	After redeveloped buildings' entry into service 50	691.9	After redeveloped buildings' entry into service 50
Residential environment development project	311.7	After buildings' entry into service 47	575.1	After buildings' entry into service 47
Japan Expressway Holding and Debt Repayment Agency (Incorporated Administrative Agency)				
The Expressway project	8,016.4	36	12,033.5	36
Japan Water Agency (Incorporated Administrative Agency)				
Construction of canals	15,232.8	50	20,953.1	32
Forest Research and Management Organization (National Research and Development Agency)				
Forestation for water conservation	1,754.0	60	2,448.0	60
Central Japan International Airport Co., Ltd.				
Airport improvement project	1,990.9	32	1,928.6	19

(Note 1) The Cost-Benefit Analysis Manual and other guidelines fix the social discount factor to convert social benefits into present value. Based on the past average yield on long-term government bonds, or the average fundraising cost for social infrastructure development, the factor is set at 4% for the immediate future

Here are estimates using the social discount factor (4%) and the same discount factor as used for the policy cost analysis.

Estimates are made for the analysis period (service period) chosen in consideration of the project implementation period specified in the Cost-Benefit Analysis Manual and other guidelines and the project's service life and for the policy cost analysis period (redemption period)

(Note 2) It should be noted that these social and economic benefits were estimated separately by each agency based on different business forecasts and other preconditions for different analysis periods and that calculation results vary considerably depending on the used discount factor.

(Note 3) Financing institutions do not calculate these benefits in the absence of uniform assumptions established for them.

<Reference> Manuals and items for estimation

Institutions	Project name	Manual	Item for estimation
Japan Railway Construction, Transport and Technology Agency (Incorporated Administrative Agency)	Shinkansen project	Railway project assessment manual 2012	User benefits from shortening of travel time, reduction of transportation costs and improvement of transfer convenience through Shinkansen development
Urban Renaissance Agency (Incorporated Administrative Agency)	Projects to renew urban functions (land renewal)	Cost-benefit analysis manual for land readjustment projects	Benefits from land price changes through improvement of profit for owners of redeveloped office buildings, and convenience and comfort for residents under land readjustment, urban redevelopment or resident land development projects in major urban regions
	Projects to renew urban functions (urban renewal)	Cost-benefit analysis manual for urban redevelopment projects	
	Residential environment development projects	Cost-benefit analysis manual for residential development projects	
Japan Expressway Holding and Debt Repayment Agency (Incorporated Administrative Agency)	Expressway projects	Cost-benefit analysis manual	User benefits from shortening of travel time, savings of fuel and other transportation costs and reduction of traffic accidents through use of expressways and other toll roads
Japan Water Agency (Incorporated Administrative Agency)	Construction of canals (for agricultural water)	Basic data required for cost-benefit analysis for land improvement projects, etc.	Farming cost savings, crop production effects, etc. through construction of canals (for agricultural water)
	Construction of canals (for city water)	Cost-benefit analysis for water supply projects	Reduction of water supply decline/disruption damage from drought and other disasters through construction of canals (for city water)
	Construction of canals (for industrial water)	Guidelines for policy assessment involving industrial water supply projects, etc.	Reduction of industrial water procurement costs through construction of canals (for industrial water) and avoidance of facility destruction risks through enhancement of earthquake resistance
Forest Research and Management Organization (National Research and Development Agency)	Forestation for water conservation	Project assessment manual for forestry public works projects	Reservoir recharging benefits, mountain conservation benefits, environmental conservation benefits and timber production benefits through forestation at water source forests
Central Japan International Airport Co., Ltd.	Airport improvement project	Cost-benefit analysis manual for airport development projects, Ver. 4	User benefits, supplier benefits, regional business and resident benefits