

1. Summary of operations implemented using FILP funds

- Holding of expressway assets and their lending to expressway companies (East Nippon Expressway Company Limited, Central Nippon Expressway Company Limited, West Nippon Expressway Company Limited, Metropolitan Expressway Company Limited, Hanshin Expressway Company Limited and Honshu-Shikoku Bridge Expressway Company Limited)
- Speedy and sure repayment of debts inherited from the four former Japan Highway Public Corporations as well as the ones related to such operations as construction and reconstruction of expressways
- Supporting smooth operations related to expressways by the expressway companies

2. Amount of lending under FY2022 FILP

(Unit: billion yen)

FY2022 FILP	Estimated outstanding amount of FILP lending at the end of FY2021
320.0	18,893.1

3. Estimated policy cost analysis of the project

(1) Policy cost (Unit: billion yen)

Category	FY2021	FY2022	Fluctuation
1. Government expenditure (subsidies, etc.)	41.7	43.1	+1.4
2. Government revenue (payments to the government, etc.)*1	-	-	-
3. Opportunity cost of capital investments, etc.	888.9	899.6	+10.8
<b>Total (1+2+3=policy cost(A))</b>	<b>930.6</b>	<b>942.8</b>	<b>+12.2</b>
Analysis period (years)	37 years	37 years	-

(2) Breakdown of policy cost by the time of the provision of funds (Unit: billion yen)

Category	FY2021	FY2022	Fluctuation
(A) Policy cost (previously cited)	930.6	942.8	+12.2
1) Opportunity cost of capital investments, etc. provided before the beginning of the analysis period	886.8	899.1	+12.4
2) Policy cost expected to be newly accrued during the analysis period	43.9	43.7	-0.2
Government expenditure (subsidies, etc.)	41.7	43.1	+1.4
Government revenue (payments to the government, etc.)*1	-	-	-
Opportunity cost of surplus, etc.	-	-	-
Opportunity cost of capital investments, etc.	2.1	0.5	-1.6

(4) Sensitivity analysis (cases where assumptions change)

(Unit: billion yen)

(A) Policy cost (previously cited)	Case before the negative interest rate policy*2	Fluctuation	1. Government expenditure (subsidies, etc.)	2. Government revenue (payments to the government, etc.)*1	3. Opportunity cost of capital investments, etc.
			942.8	1,732.5	+789.7
(A) Policy cost (previously cited)	Case of a 1% decrease in operating revenues	Fluctuation	1. Government expenditure (subsidies, etc.)	2. Government revenue (payments to the government, etc.)*1	3. Opportunity cost of capital investments, etc.
			942.8	1,007.6	+64.8

(Note) Components in each column may not add up to the total because of rounding.

\*1 Government revenue (payments to the government, etc.) is booked as a negative amount. Example: -10 b. yen for 10 b. yen in payments to government, etc.

\*2 Assumed interest rates (discount factor and future interest rate) are based on the market yield on Japanese government bonds on January 28, 2016, before the introduction of the negative interest rate policy.

(3) Year-to-Year comparison analysis

(Computing any fluctuation from previous year)

(Unit: billion yen)

Policy cost		FY2021	FY2022	Simple fluctuation
		Simple comparison (before adjustment)	930.6	942.8
Past year comparison (after adjustment)	1) Adjusting initial years (Analysis results after adjusting initial year to that for FY2022 analysis)	920.5	916.1	-4.4
	2) Adjusting assumed interest rates (Analysis results of re-estimation using assumed interest rate for FY2021)			Real fluctuation (2-1)

[Real fluctuation factor analysis]

○Factors behind policy cost increase

- Increase in opportunity cost due to revision of redemption plans (+15.5 billion yen)

- Increase in subsidies, etc. due to implementation of new operations, etc. (+11.5 billion yen)

○Factors behind policy cost decrease

- Decrease in opportunity cost due to a fall in capital investments at the beginning of the analysis period, etc. (-24.6 billion yen)

- Decrease in opportunity cost due to a fall in accepted capital investments caused by the revision of project plans (-6.8 billion yen)

#### 4. Outline of estimation and project prospect employed in the analysis

Estimates in the analysis and future operations are based on agreements signed with the expressway companies.

- Operation revenues: Covering rent revenues(\*) from expressway companies, etc.  
\* Gap between toll revenues and planned management expenses calculated by expressway companies based on traffic demand forecasts.
- Agency bonds: Covering government-guaranteed and FILP agency bond amounts out of the required fundraising amount calculated in line with a projected balance sheet for each year, etc.
- Borrowings: Covering borrowings from the private sector and the FILP program as calculated in line with a projected balance sheet for each year, etc.
- Debt repayment expense: Calculated based on agency-held debts (at the end of FY2021) and years for redemption of debts planned to be assumed from expressway companies in or after FY2022.

(Unit: billion yen)

FY	Result				Estimated 2021	Planned 2022	Assumptions for calculation				Total
	2017	2018	2019	2020			2023-2028	2029-2038	2039-2048	2049-2058	
Operational Revenue (lending fees)	2,133.2	2,216.7	2,278.8	2,129.5	1,675.4	1,950.0	12,205.6	21,085.2	19,168.6	12,034.7	66,444.2
Agency bonds	1,669.0	1,430.9	735.0	320.0	320.0	420.0	7,760.0	6,368.8	-	-	14,548.8
Borrowings	-	1,500.0	1,550.0	1,360.0	800.0	200.0	0.4	0.3	-	-	200.7
Debt repayment expense	3,732.3	3,734.3	3,347.1	3,462.8	3,804.8	4,025.3	19,706.8	25,889.1	13,197.7	11,581.3	74,400.2

(Note) Components in each column may not add up to the total because of rounding.

#### 5. Reasons for granting of subsidies, mechanism and underlying laws

Capital investment: Required for expressway construction or reconstruction for Metropolitan Expressway Company Limited and Hanshin Expressway Company Limited

(Underlying laws and regulations)

Article 6 of the Act on Japan Expressway Holding and Debt Repayment Agency: Capital

1. The Agency's capital shall be a total of investments provided from national and local governments under provisions of Article 15, Paragraph 11 of the Enforcement Act.
2. The Agency may, if necessary, increase its capital upon obtaining the approval from the Minister of Land, Infrastructure, Transport and Tourism.
3. The national government or local governments stipulated by cabinet order may invest in the Agency within the limit specified in the budget when the Agency increases its capital under the above provision.

Subsidies: Required for development of smart interchange systems, post-disaster restoration, etc.

(Underlying laws and regulations)

Article 25 of the Act on Japan Expressway Holding and Debt Repayment Agency: Subsidies

1. The government may subsidize the Agency for the expenses necessary for the operations under the provisions of Article 12, Paragraph 1, Item 5 and 6 within the limit specified in the budget.
2. The local governments specified in Article 12, Paragraph 1, Item 7 may subsidize the Agency for the expenses necessary for the operations under the provisions of the Item within the limit specified in the budget.

The national treasury payment

(Underlying laws and regulations)

Article 31 of the Act on Japan Expressway Holding and Debt Repayment Agency: Dissolution of Agency

1. The Agency shall be dissolved no later than September 30, 2065, as specified separately by an act.
2. The Agency shall complete the repayment of the inherited debt in the road account by the day of its dissolution as provided in the previous paragraph and have residual assets equivalent to at least the capital.
3. The Agency, if dissolved, shall distribute residual assets that involve the road account to investors involved with the road account according to their respective investment amounts.
4. If the Agency has any residual assets consisting of non-road accounts after repaying debt that involves those accounts, it shall distribute the residual assets to investors involved with those accounts according to their respective investment amounts.

#### 6. Special remarks

- 1) The road assets related to expressways will be opened to public at no charge after the completion of the debt redemption and restored to the national or local governments. However, the policy cost analysis does not consider their residual value.
- 2) The increase in assets and debts through constructions of expressways by the expressway companies will be inherited by the Agency, and the Agency will lend assets of expressways to the expressway companies, then receive the revenues from road lending fee from the expressway companies. The Agency will return the capital investment to the government by this road lending fee during the redemption period, so the opportunity cost as the capital investment during the period will be the policy cost.
- 3) The interest rate used in the analysis is set as a common precondition in the analysis and is not the same as the future interest rate used by the Agency and Companies in the preparation of recoupment plans.

#### (Reference) Outcome and social and economic benefits of operations

(Effects of expressway development)

The construction and/or improvement of expressways generates various social and economic effects, as well as direct effects for road users, including shorter traveling times.

Specific effects include

- Enhanced associations and exchanges among regions and local cities
- Development or creation of industries
- Increased employment opportunities
- Increased asset value
- Reduced price of products and services
- Maintaining of alternative routes in the event of disaster
- Improvement of urban environment due to smoother transportation.

Among the beneficial effects of such expressway construction and/or improvement, direct effects of the new services in and after FY2022 can be estimated as follows.

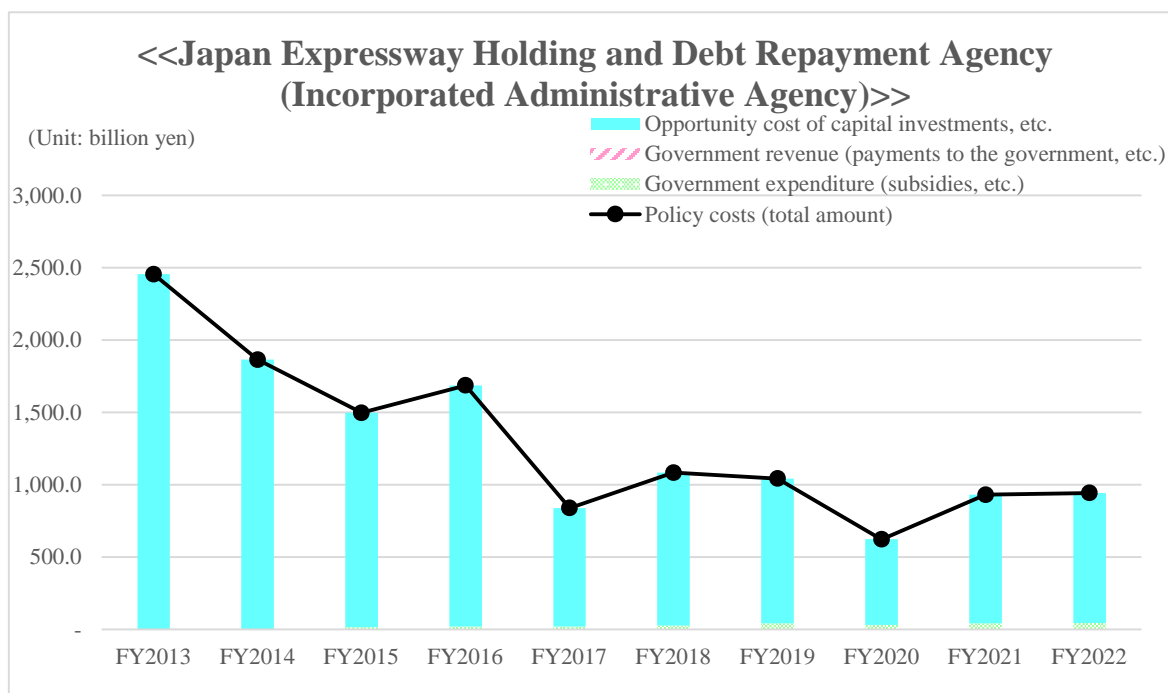
- in the case where the social discount rate is set to 4%; 8.6274 trillion yen
- in the case where the social discount rate is set to that of the policy cost analysis; 14.5400 trillion yen

(Note 1) Quantitative benefits were estimated by each expressway company according to the benefit estimation method and basic unit in the "Cost-Benefit Analysis Manual (February 2018, Road Bureaus and City Bureaus, Ministry of Land, Infrastructure, Transport and Tourism)"

(Note 2) Subject to direct effects are benefits from FY2022.

# Overview of policy cost analysis results

## [Changes in policy costs]



Note: Policy costs for each fiscal year differ in assumptions including interest rates applied to estimates.

(Unit: billion yen)

	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Policy costs (total amount)	2,455.2	1,865.0	1,497.0	1,686.7	838.7	1,084.1	1,042.5	622.7	930.6	942.8
Government expenditure (subsidies, etc.)	-	-	16.0	19.2	19.1	26.4	40.8	31.6	41.7	43.1
Government revenue (payments to the government, etc.)	-	-	-	-	-	-	-	-	-	-
Opportunity cost of capital investments, etc.	2,455.2	1,865.0	1,480.9	1,667.5	819.7	1,057.7	1,001.7	591.0	888.9	899.6

### 【Explanation of policy cost trends】

- Policy cost of the Agency until FY2014 only consisted of opportunity cost of capital investments, etc. from the government, but after FY2015 analysis, cost of subsidies was added due to the acceptance of subsidies, etc. from the government.
- In FY2022, the opportunity cost increases on a rise in the assumed interest rate.

### 【FILP agency's self-assessment of policy cost analysis results (FY2022)】

•In the basic case, the policy cost in FY2022 came to 942.8 billion yen including 43.1 billion yen in subsidies, etc. and 899.6 billion yen in the opportunity cost of capital investments, etc. The FY2022 policy cost increased by 12.2 billion yen from 930.6 billion yen for the basic case in FY2021. Given a total of -16.6 billion yen, including -26.7 billion yen from changes in the assumed interest rates and 10.1 billion yen as part of the FY2021 policy cost, is taken into account, however, the policy cost effectively decreased by 4.4 billion yen.

•Major factors behind the effective decrease of 4.4 billion yen include an 15.5 billion yen opportunity cost increase through the revision of the redemption plan based on the agreements with the expressway companies, a 11.5 billion yen increase in subsidies due mainly to the implementation of new projects, a 24.6 billion yen opportunity cost decrease due to a decline in capital investments, etc. at the beginning of the period, and a 6.8 billion yen opportunity cost decrease due to a decline in accepted capital investments accompanying the revision of the operational plan.

•In the case where the assumed interest rates (the discount factor and future interest rate) are replaced with those before the negative interest rate policy introduction, the policy cost came to 1,732.5 billion yen, up 789.7 billion yen from the basic case. This is because the interest rate hike led the redemption period for capital investments, etc. to be extended to boost the opportunity cost, greatly affecting financial soundness.

•Under the assumption of a 1% decrease in operating revenues, the policy cost came to 1,007.6 billion yen, an increase of 64.8 billion yen compared with the basic case. This is attributable to an increase in opportunity cost due to the extension of the redemption period for capital investments, etc. caused by a decrease in operating revenues.

## (Reference) Financial Statements

## Balance Sheet (Road Account)

(Unit: million yen)

Item	End of FY2020 (Result)	End of FY2021 (Estimated)	End of FY2022 (Planned)	Item	End of FY2020 (Result)	End of FY2021 (Estimated)	End of FY2022 (Planned)
(Assets)				(Liabilities and net assets)			
Current assets	2,837,488	1,920,779	493,409	Current liabilities	4,010,239	4,449,813	3,673,738
Cash and bank deposits	1,286,699	1,624,515	273,253	Deposited subsidies	1,875	4,267	3,609
Securities	1,348,000	25,016	37,931	Deposited donations	1,477	1,339	569
Accounts due for road assets lending fee, etc	173,787	248,314	154,304	Current portion of Japan Expressway Holding and Debt Repayment Agency bonds	3,043,451	3,398,686	3,106,000
Accounts receivable	18,693	13,176	61,958	Discount on bond (-)	- 330	- 12	-
Short-term loans receivable	7,057	6,784	13,223	Current portion of long-term borrowings	516,724	383,742	238,597
Inventory goods	2,714	2,714	2,714	Accrued payments	391,515	414,532	69,225
Other current assets	538	260	26	Accrued expenses	55,459	247,199	255,678
Fixed assets	41,298,538	41,688,567	41,995,376	Other current liabilities	68	60	60
Tangible fixed assets	40,689,847	41,296,043	41,656,460	Fixed liabilities	25,729,850	24,618,151	24,097,539
Buildings	376,171	380,991	422,955	Contra-accounts for assets	174,096	169,028	167,714
Structures	29,926,819	30,368,644	30,369,999	Long-term deposit of subsidies	2,135	3,176	7,304
Machinery and equipment	872,335	962,425	1,184,963	Long-term contributions received	8,713	7,738	7,169
Vehicles and transportation equipment	2	1	-	Japan Expressway Holding and Debt Repayment Agency bonds	20,077,558	18,315,121	17,442,822
Tools furniture and fixtures	2,592	2,615	3,386	Discount on bond (-)	- 60,446	- 57,028	- 53,631
Land	9,385,585	9,421,478	9,533,449	Long-term borrowings	5,096,151	5,811,725	6,220,435
Construction in progress	126,344	159,889	141,708	Long-term accrued liabilities	419,132	349,528	280,303
Intangible fixed assets	280,333	280,255	280,311	Long-term accrued expenses	12,502	18,857	25,417
Leasehold interests	278,472	278,472	278,472	Provisions	-	-	-
Other intangible fixed assets	1,862	1,784	1,839	Provision for retirement benefits	8	6	6
Investment and other assets	328,358	112,269	58,605	Provisions based on law	-	-	-
Investment securities	75,063	88,004	50,000	Provision for Highway Convenience Improvement Project	524,755	504,541	470,902
Long-term deposits	250,000	20,000	-	(Total liabilities)	30,264,844	29,572,505	28,242,179
Long-term loans receivable	3,279	4,250	8,590	Capital	5,617,879	5,618,773	5,619,005
Security deposit and guarantee	15	15	15	Government investment	4,086,976	4,087,423	4,087,539
Other assets	0	-	-	Local government investment	1,530,903	1,531,350	1,531,466
				Capital surplus	848,631	848,631	848,631
				Capital surplus	1,058	1,058	1,058
				Reserves under Article 15 of the Act for Enforcement of Acts Related to Privatization of the Japan Highway Public Corporation, etc.	847,573	847,573	847,573
				Retained earnings	7,404,672	7,569,437	7,778,970
				Reserve fund	7,128,208	7,404,672	7,569,437
				Unappropriated income for the current year	276,464	164,765	209,533
				(Of this, gross profit)	(276,464)	(164,765)	(209,533)
				(Total net assets)	13,871,182	14,036,841	14,246,606
Total assets	44,136,026	43,609,346	42,488,785	Total liabilities and net assets	44,136,026	43,609,346	42,488,785

Note: Components may not add up to the total because of rounding.

## Income Statement (Road Account)

(Unit: million yen)

Item	FY2020 (Result)	FY2021 (Estimated)	FY2022 (Planned)	Item	FY2020 (Result)	FY2021 (Estimated)	FY2022 (Planned)
(Ordinary expenses)				(Ordinary income)			
Ordinary expenses	1,399,613	1,627,773	1,522,692	Ordinary income	1,647,237	1,771,054	1,698,586
Operating expenses of road assets lending	1,086,789	1,112,411	1,181,191	Income from the road assets lending fees	1,622,177	1,744,539	1,683,321
Management effort aid expense	320	583	297	Other income	4,868	4,676	4,616
General and administrative expenses	2,020	1,443	1,753	Revenues from subsidies, etc	7,763	7,759	-
Finance expenses	263,227	449,738	252,043	Income from donations	3,139	1,113	1,339
Expenses related to acquisition of road assets	44,594	63,598	87,408	Reversal of contra-accounts for assets	8,880	9,077	9,192
Miscellaneous losses	2,663	-	-	Financial revenues	232	220	117
(Temporary losses)	-	-	-	Miscellaneous income	178	3,670	1
Temporary losses	321	3,863	-	(Temporary profits)	-	-	-
Provision for Highway Convenience Improvement Project	-	3,790	-	Temporary profits	29,162	25,347	33,639
Loss on retirement of fixed assets	0	-	-	Reversal of provision for Highway Convenience Improvement Project	26,929	24,004	33,639
Loss on sale of fixed assets	132	73	-	Gain on sales of fixed assets	2,231	1,343	-
Loss on transfer of fixed assets	189	-	-	Other temporary profits	2	-	-
Net profit	276,464	164,765	209,533				
Gross profit	276,464	164,765	209,533				
Total	1,676,399	1,796,401	1,732,225	Total	1,676,399	1,796,401	1,732,225

Note: Components may not add up to the total because of rounding.