

# Japan Expressway Holding and Debt Repayment Agency (Incorporated Administrative Agency)

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## 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 FY2021 FILP

(Unit: billion yen)

FY2021 FILP	Estimated outstanding amount of FILP lending at the end of FY2020
620.0	19,353.9

## 3. Estimated policy cost analysis of the project

### (1) Policy cost

(Unit: billion yen)

Category	FY2020	FY2021	Fluctuation
1. Government expenditure (subsidies, etc.)	31.6	41.7	+10.1
2. Government revenue (payments to the government, etc.)*1	-	-	-
3. Opportunity cost of capital investments, etc.	591.0	888.9	+297.9
<b>Total (1+2+3=policy cost(A))</b>	<b>622.7</b>	<b>930.6</b>	<b>+308.0</b>
Analysis period (years)	36 years	37 years	1 year

### (2) Breakdown of policy cost by the time of the provision of funds

(Unit: billion yen)

Category	FY2020	FY2021	Fluctuation
(A) Policy cost (previously cited)	622.7	930.6	+308.0
1) Opportunity cost of capital investments, etc. provided before the beginning of the analysis period	589.5	886.8	+297.3
2) Policy cost expected to be newly accrued during the analysis period	33.2	43.9	+10.7
Government expenditure (subsidies, etc.)	31.6	41.7	+10.1
Government revenue (payments to the government, etc.)*1	-	-	-
Opportunity cost of surplus, etc.	-	-	-
Opportunity cost of capital investments, etc.	1.6	2.1	+0.6

### (4) Sensitivity analysis (cases where assumptions change)

(Unit: billion yen)

(A) Policy cost (previously cited)	Case before the negative interest rate policy*2	Fluctuation	Fluctuation		
			1. Government expenditure (subsidies, etc.)	2. Government revenue (payments to the government, etc.)*1	3. Opportunity cost of capital investments, etc.
930.6	1,691.3	+760.7	-	-	+760.7

(A) Policy cost (previously cited)	Case of a 1% decrease in operating revenues	Fluctuation	Fluctuation		
			1. Government expenditure (subsidies, etc.)	2. Government revenue (payments to the government, etc.)*1	3. Opportunity cost of capital investments, etc.
930.6	961.8	+31.2	-	-	+31.2

### (3) Year-to-Year comparison analysis

(Computing any fluctuation from previous year)

(Unit: billion yen)

Policy cost		FY2020	FY2021	Simple fluctuation
		Simple comparison (before adjustment)	622.7	930.6
Past year comparison (after adjustment)	1) Adjusting initial years (Analysis results after adjusting initial year to that for FY2021 analysis)	613.7	641.3	+27.6
	2) Adjusting assumed interest rates (Analysis results of re-estimation using assumed interest rate for FY2020)			Real fluctuation (2-1)

#### 【Real fluctuation factor analysis】

##### ○Factors behind policy cost increase

- Increase in subsidies, etc. due to implementation of new operations, etc. (+19.1 billion yen)
- Increase in opportunity cost due to revision of redemption plans (+8.5 billion yen)

##### ○Factors behind policy cost decrease

- Decrease in opportunity cost due to a fall in accepted capital investments caused by the revision of project plans (-0.0 billion yen)

(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.

#### 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 FY2020) and years for redemption of debts planned to be assumed from expressway companies in or after FY2021.

(Unit: billion yen)

FY	Result				Estimated	Decision	Assumptions for calculation				Total
	2016	2017	2018	2019	2020	2021	2022-2028	2029-2038	2039-2048	2049-2054	2021-2054
Operational Revenue (lending fees)	2,228.8	2,133.2	2,216.7	2,278.8	2,129.5	1,627.7	14,553.8	20,921.9	18,469.2	10,645.0	66,217.6
Agency bonds	1,156.0	1,669.0	1,430.9	735.0	320.0	320.0	7,450.0	2,150.0	-	-	9,920.0
Borrowings	-	-	1,500.0	1,550.0	1,360.0	500.0	31.7	31.6	-	-	563.3
Debt repayment expense	3,215.8	3,732.3	3,734.3	3,347.1	3,462.8	3,814.5	22,656.6	21,128.8	12,757.4	11,463.4	71,820.7

(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 FY2019 can be estimated as follows.

• in the case where the social discount rate is set to 4%; 9.7285 trillion yen

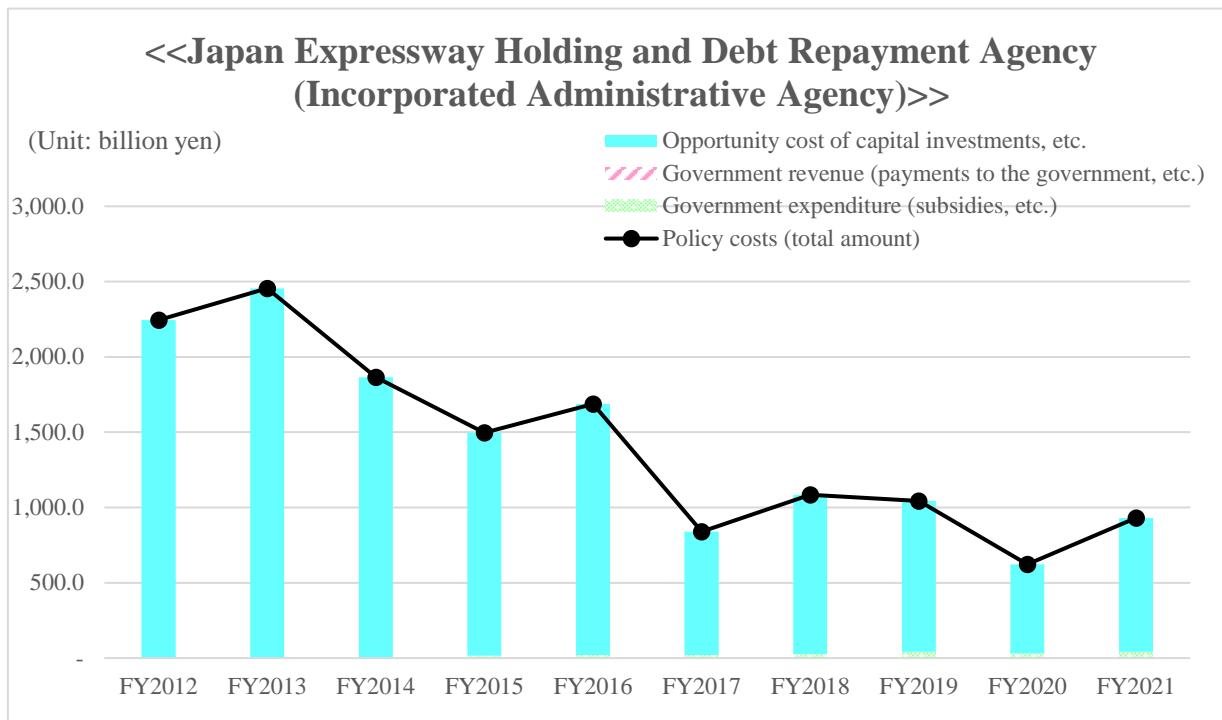
• in the case where the social discount rate is set to that of the policy cost analysis; 17.1746 trillion yen

(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 FY2021.

# 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

(Unit: billion yen)

	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021
Policy costs (total amount)	2,243.4	2,455.2	1,865.0	1,497.0	1,686.7	838.7	1,084.1	1,042.5	622.7	930.6
Government expenditure (subsidies, etc.)	-	-	-	16.0	19.2	19.1	26.4	40.8	31.6	41.7
Government revenue (payments to the government, etc.)	-	-	-	-	-	-	-	-	-	-
Opportunity cost of capital investments, etc.	2,243.4	2,455.2	1,865.0	1,480.9	1,667.5	819.7	1,057.7	1,001.7	591.0	888.9

## 【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 FY2021, the opportunity cost increases on a rise in the assumed interest rate.

## 【FILP agency's self-assessment of policy cost analysis results (FY2021)】

- In the basic case, the policy cost in FY2021 came to 930.6 billion yen including 41.7 billion yen in subsidies, etc. and 888.9 billion yen in the opportunity cost of capital investments, etc. The FY2021 policy cost increased by 308.0 billion yen from 622.7 billion yen for the basic case in FY2020. Given a total of -280.4 billion yen, including -289.3 billion yen from changes in the assumed interest rates and 9.0 billion yen as part of the FY2020 policy cost, is taken into account, however, the policy cost effectively increased by 27.6 billion yen.

- The effective increase included 19.1 billion yen in subsidy growth through implementation of new projects and 8.5 billion yen in an opportunity cost increase through revision of a redemption plans based on JEHDRA's agreement with the expressway companies, meaning that financial soundness remained unaffected.

- In the case where the assumed interest rates (the discount factor and future interest rate) are replaced with those before the minus interest rate policy introduction, the policy cost came to 1,691.3 billion yen, up 760.7 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 961.8 billion yen, an increase of 31.2 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 FY2019 (Result)	End of FY2020 (Estimated)	End of FY2021 (Planned)	Item	End of FY2019 (Result)	End of FY2020 (Estimated)	End of FY2021 (Planned)
(Assets)				(Liabilities and equity)			
Current assets	2,667,871	2,889,128	1,703,957	Current liabilities	3,455,670	4,031,886	3,858,574
Cash and bank deposits	2,310,190	2,704,914	1,464,323	Deposited subsidies	1,663	3,180	3,150
Securities	-	-	24,716	Deposited donations	-	2,037	519
Accounts due for road assets lending fee, etc	342,418	173,782	151,928	Japan Expressway Holding and Debt Repayment Agency bonds to be repaid within one year	2,697,099	3,043,451	3,333,686
Accounts receivable	5,059	-	47,827	Discount on bond (-)	- 146	- 330	12
Short-term loans receivable	7,117	7,065	12,125	Long-term loans to be repaid within a year	507,467	516,724	383,742
Inventory goods	3,027	3,027	3,027	Accrued payments	188,300	402,531	69,604
Other current assets	60	340	11	Accrued expenses	61,222	64,231	67,799
Fixed assets	41,530,125	41,254,764	42,068,590	Other current liabilities	65	62	62
Tangible fixed assets	40,821,042	40,724,549	41,793,305	Fixed liabilities	26,597,530	25,747,332	25,367,851
Buildings	369,592	383,605	463,818	Asset collateral liabilities	174,243	171,051	191,041
Structures	30,113,491	29,924,477	30,483,055	Long-term deposit of subsidies	1,180	2,875	8,951
Machinery and equipment	852,333	886,364	1,112,317	Long-term contributions received	10,195	8,147	7,628
Vehicles and transportation equipment	3	2	1	Japan Expressway Holding and Debt Repayment Agency bonds	21,991,080	20,107,913	19,132,228
Tools furniture and fixtures	2,331	2,674	4,151	Discount on bond (-)	- 64,834	- 60,446	- 57,051
Land	9,363,185	9,406,413	9,614,442	Long-term loans payable	4,011,829	5,086,152	5,717,184
Construction in progress	120,107	121,014	115,521	Long-term accrued liabilities	466,409	419,132	349,528
Intangible fixed assets	272,622	272,557	273,477	Long-term accrued expenses	7,425	12,500	18,338
Leasehold interests	270,823	270,823	271,340	Reserves			
Other intangible fixed assets	1,800	1,735	2,137	Reserves for retirement pensions	5	8	4
Investment and other assets	436,461	257,658	1,808	Reserves based on law			
Investment securities	2,799	24,763	-	Reserve for Highway Convenience Improvement Project	551,684	524,755	496,988
Long-term deposits	430,000	230,000	-	(Total liabilities)	30,604,885	30,303,973	29,723,413
Long-term loan receivable	3,646	2,880	1,793	Capital	5,616,431	5,617,879	5,618,773
Security deposit and guarantee	15	15	15	Financing by the Government	4,086,252	4,086,976	4,087,423
Other assets	-	-	-	Local government investment	1,530,179	1,530,903	1,531,350
Total assets	44,197,997	44,143,892	43,772,547	Capital surplus	848,473	848,473	848,473
				Capital surplus	900	900	900
				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	7,128,208	7,373,567	7,581,888
				Reserve fund	6,423,810	7,128,209	7,373,567
				Unappropriated income for the current year	704,399	245,358	208,321
				(Of this, gross profit)	(704,399)	(245,358)	(208,321)
				(Total equity)	13,593,112	13,839,919	14,049,134
				Total liabilities and equity	44,197,997	44,143,892	43,772,547

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

## Income Statement (Road Account)

(Unit: million yen)

Item	FY2019 (Result)	FY2020 (Estimated)	FY2021 (Planned)	Item	FY2019 (Result)	FY2020 (Estimated)	FY2021 (Planned)
(Ordinary expenses)				(Ordinary income)			
Ordinary expenses	1,393,496	1,383,516	1,492,486	Ordinary income	2,072,005	1,600,028	1,673,040
Operating expenses of road assets lending	1,058,743	1,071,960	1,144,440	Income from the road assets lending fees	2,049,331	1,578,631	1,657,396
Management effort aid expense	244	331	398	Other income	4,898	4,863	4,824
General and administrative expenses	1,476	1,386	1,869	Revenues from subsidies, etc	8,321	7,762	-
Finance expenses	281,322	274,301	265,206	Income from donations	588	11	2,037
Expenses related to acquisition of road assets	50,572	35,538	80,574	Reversal of asset collateral liabilities	8,333	8,524	8,630
Miscellaneous losses	1,138	-	-	Financial revenues	118	186	152
(Temporary losses)				Miscellaneous income	415	51	1
Temporary losses	228	321	-	(Temporary profits)			
Loss on sale of fixed assets	228	321	-	Temporary profits	26,118	29,168	27,767
Net profit	704,399	245,359	208,321	Reversal of reserve for Highway Convenience Improvement Project	25,994	26,929	27,767
Gross profit	704,399	245,359	208,321	Gain on sales of fixed assets	107	2,235	-
Total	2,098,123	1,629,196	1,700,807	Other temporary profits	16	4	-
				Total	2,098,123	1,629,196	1,700,807

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