Honshu-Shikoku Bridge Authority (HSBA)

1. Summary of operations implemented using FILP funds

Toll road projects by Honshu-Shikoku Bridge Authority (HSBA) include the world-class long bridge arterial highway connecting Honshu and Shikoku and aim to support the regional development of Kinki, Chugoku and Shikoku, and to promote the balanced development of national land and national economy. The project cost is partly shared by direct users. The HSBA is responsible for construction, renovation, maintenance and management of general toll roads connecting the main island of Honshu to Shikoku.

Note: Major projects ineligible for FILP include projects to newly construct and repair roads closely associated with the Honshu-Shikoku Expressway upon commissioning of national or local governments.

2. Amount of lending under FY 2002 FILP

	(ont : binon yer)
FY 2002 FILP	Estimated outstanding amount of FILP lending at end of FY 2001
103.6	2,075.5

3. Outcome and social and economic benefits of operations

1) Traffic volume

- Total service kilometrage: 172.9 km
- Number of passing vehicles (FY 2001)

Akashi Kaikyo Bridge	22,659 cars/day
Ohnaruto Bridge	17,372 cars/day
Seto Ohashi Bridge	14,402 cars/day
Innoshima Bridge	11,505 cars/day
Tatara Bridge	3,888 cars/day
Kurushima Kaikyo Bridge	6,104 cars/day

More active exchange between Honshu and Shikoku

- Number of people going back and forth between Honshu and Shikoku was 50 million per year. The number has increased by 80% from 1984 to 1999 (60% nationwide). The Honshu-Shikoku Bridge accounts for two thirds of such traffic.
- Traffic volume of cars has increased by 150% from 1984 to 2000 (50% nationwide)

2) Benefits

Qualitative benefits:

Provision of rapid and stable traffic services

(e.g. Time reduction)

Between Kobe and Tokushima: 270 minutes \rightarrow 100 minutes Between Kurashiki and Sakaide: 120 minutes \rightarrow 40 minutes Between Onomichi and Imabari: 160 minutes \rightarrow 80 minutes Improved convenience of inhabitants living in related areas

- (e.g. more options of transportation and the expansion of the 3-hour traveling zone = increased convenience in commuting to work and school, improved transportation of wide area emergency medical treatment)
- Industrial development in related areas
- (e.g., Number of plants in Shikoku had increased by 30% for 12 years after the opening of Seto Ohashi bridge in comparison to 12 years before the opening (10% nationwide). Number of assembling companies has been steadily increased).
- Number of large retail stores in Shikoku increased by 220% for 12 years after the opening of Seto Ohashi Bridge in comparison to 12 years before the opening (90% nationwide)
- Number of track service operators increased by 60% and 50% in Okayama and Kagawa respectively (40% nationwide).
- Balanced development of national land

Quantitative benefits:

- Benefits generated by reduced traveling costs and time through the use of Honshu-Shikoku Bridges is estimated to be ¥250.0 billion a year (FY 2000), and after 40 years have passed since all three routes opened, total benefits will reach ¥8.7 trillion. Benefit and cost ratio is 1.7.
- Effects estimated by Macro Model
- Benefits on a basis of gross production value is estimated to be ¥1.2144 trillion nationwide, and ¥889.0 billion in areas affected by the Bridge (FY 2000).
- Affected areas now have 120,000 more jobs (FY 2000).

Note: Quantitative benefits were calculated by the Authority.

4. Estimated policy (subsidy) cost analysis of the project Outline of estimate

(Unit • hillion yon)

- An estimate has been made for toll road projects undertaken by the HSBA. (Projects commissioned and railway projects are excluded).
- An estimate has been made for the roads connecting Honshu to Shikoku (Planned service kilometrage: 185.7 km) in Basic Plans.

Project costs are estimated on Basic Plans (Total construction cost: about ¥2.84 trillion).

- 3) Traffic volume has been adjusted downward in the latest redemption plan and capital investment would be continuously granted. It is assumed that a new interest-free loan will be made in FY 2001 and the redemption period will be prolonged.
- An analysis has been made for a 56-year period during which all debts are to be redeemed (54 -year period for FY2001).
- Based on these assumptions, simulations were made for future operations and opportunity costs, such as capital investments required to carry out projects, were calculated.

(Unit • billi

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Policy (subsidy) cost

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Category	FY2001	FY2002	Increase/Decrease
1. Subsidies from the national treasury	—	_	_
2. Opportunity cost of capital investment and interest-free loan from the national treasury	1,299.5	1,372.7	73.2
Subtotal (1+2)	1,299.5	1,372.7	73.2
3. Money transfer to the national treasury	_	_	_
Subtotal (1+2+3)	1,299.5	1,372.7	73.2
4. Decreased cost of loss	- 668.9	- 711.5	- 42.6
Total (1+2+3+4=policy cost)	630.6	661.2	30.6
Analysis period (years)	54	56	2

Compared with FY2001 (\notin 630.6 billion), policy cost increased and the analysis period (54 years) was extended because the income estimation was revised downward based on current conditions. As a result, the repayment period of capital investment will be delayed.

The case if assumption is changed

	(onit • billion yen)
Changed assumption and extent of change	Increase / decrease in policy cost
Toll revenue –10%	192.9

(Reference)

Budgeted amount of subsidies and capital investment in FY 2002 Subsidies: —

Capital investment and interest-free loan: ¥233.3 billion

5. Projections in the analysis

The Honshu-Shikoku Bridge Authority (HSBA) will construct and manage bridge roads (185.7 km) as directed in the Basic Plans. Loans for construction will be redeemed by toll revenues by FY 2057.

- 1) The Nishi-Seto Expressway opened in 1999, and three routes have been completed. The HSBA will now operate and manage sections in service.
- 2) It is assumed that operating costs in the existing redemption plan will be further reduced.
- 3) Future toll revenue was calculated on the traffic volume estimated with a downward adjustment of traffic volume in the existing redemption plan, after all three routes become fully accessible, and also with consideration to recent economic trends (approximately 1.4% until 2005 and approximately 3.3% for 10 years after 2006, not 4% assuming traffic volume growth until 2010).
- Project costs subject to the analysis are estimated on Basic Plans (Total construction cost : about ¥2.84 trillion). In addition, no new projects were adopted in the FY2002 budget.

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		Re	sult		Estimated	Planned				Trial ass	umption			
FY	1997	1998	1999	2000	2001	2002	2003	2004	2005 ~2014	2015 ~2024	2025 ~2034	2035 ~2044	2045 ~2054	2055 ~2057
Toll revenue	49.7	81.5	86.9	86.5	87.0	84.3	85.6	86.8	1,122.7	1,503.0	1,717.7	1,802.2	1,802.2	487.5

6. Reasons for granting of subsidies, mechanism and underlying laws

(Reasons)

The national and local governments provide capital investments for the HSBA to facilitate the construction and/or improvement of general toll roads connecting Honshu to Shikoku in a planned manner based on adequate fares. Since roads connecting Honshu to Shikoku are toll roads, it was decided that expenses needed for the construction and operation of roads should be financed by bonds and borrowing, while the principal and interest of such debts should be redeemed by toll revenues.

In FY 2001, the national government will offer interest-free loans to facilitate the reduction of interest-bearing debts and further ensure the redemption.

(Mechanism)

Calculation was made for less than 50 years of the redemption period of interest-bearing debts.

- Continuous implementation of capital investment of ¥80.0 billion/year (National/Local=2:1)
- Interest-free loans of ¥80.0 billion/year (for approximately 10 years) until FY2001. In the FY2002 budget the amount was increased to ¥180.0 billion through new measures to alleviate the public burden in the future by compressing interest-bearing debt in the preceding manner within the limits of the current scheme.

(Underlying laws and regulations)

<Capital investment>

- The Honshu-Shikoku Bridge Authority Act (Law No. 81 of 1970)
- Article 4 Capital of the Authority shall be the sum of ¥200 million and the investments by local governments specified by an applicable government ordinance at the time of Authority establishment.
- 2 The national government shall invest ¥200 million for the establishment of the Authority.
- 3 The Authority may increase its capital with the approval of the Minister of Land, Infrastructure and Transport if necessary.
- 4 National government and local governments as specified by an applicable government ordinance may invest the Authority when the Authority increases its capital under the aforementioned provision.
- Ordinance specifying local governments as referred to in Clause 1, Article 4 of the Honshu-Shikoku Bridge Authority Act (Ordinance No. 152 of 1970) Local governments specified in the above ordinance shall be Osaka, Hyogo, Okayama, Hiroshima, Tokushima, Kagawa, Ehime, Kochi, Osaka-City and Kobe-City.

<Interest-free loans>

(Capital loan)

Supplementary Provisions to the Honshu-Shikoku Bridge Authority Act (Law No. 81 of 1970)
Article 14 The national government, for a time being, may offer interest-free loans to the Authority, from part of the funds appropriated to expenses of projects specified in Clause 1-1, Article 29 and within the budgeted limit.

(Redemption method)

Supplementary Provisions of the Regulations for the execution of the Honshu-Shikoku Bridge Authority Act (Ordinance No. 209 of 1970)
Article 3 The redemption period of loans as specified in Clause 1, Article 14 of the Schedule shall be less than 20 years (Incl. the period of deferment up to 5 years). Redemption shall be made on an equal semi-annual installment basis.

7. Special remarks

- The HSBA's toll road construction projects, which are a set of government projects and road improvement projects, have brought about both social and economic effects by reducing traffic congestion, increasing convenience, and promoting the growth of industries.
- 2) The interest rate used here is the rate commonly adopted in this policy (subsidy) cost analysis. Therefore, it should be noted that the interest rate used here is different from assumed interest rates usually used by the HSBA when preparing a redemption plan.
- 3) The assessed value of road assets (about ¥4 trillion) is not reflected in this policy (subsidy) cost analysis.
- 4) It should be noted in the cost analysis that retained loss at the beginning of the term is treated as a negative retained surplus, and a reduction in retained loss during the term subject to this analysis is treated as an increase in retained surplus, thus decreasing policy (subsidy) cost.
- 5) Capital investment from local governments is excluded in this cost analysis.
- 6) In accordance with the Reorganization and Rationalization Plan for Special Public Corporation, based on the policy that "a new organization based on the assumption of privatization will be established as early as possible and by FY2005", although a new organization and the securing of its profitability will be examined and accurate descriptions will be compiled during FY2002 by a "third-party organization" established in the cabinet, for the time being, since detailed descriptions have not yet been decided, the analysis was implemented assuming existing institutional form.

Honshu-Shikoku Bridge Authority (HSBA)

(Reference) Financial Statements

Balance Sheet

Balance Sheet						(Ur	it : million yen)
ltem	End of FY 2000 (Result)	End of FY 2001 (Estimated)	End of FY 2002 (Planned)	ltem	End of FY 2000 (Result)	End of FY 2001 (Estimated)	End of FY 2002 (Planned)
(Assets)				(Liabilities and capital)			
Current assets	8,076	4,486	2,773	Current liabilities	23,378	18,005	14,090
Cash and deposits	5,509	2,272	626	Accounts payable	2,543	767	859
Prepaid expenses	6	6	6	Accrued expenses	20,638	17,239	13,232
Accrued revenue	2,201	2,179	2,113	Deposits reserved	197	0	0
Uncollected balance	329	0	0	Fixed liabilities	4,203,398	4,187,938	4,150,377
Other current assets	32	29	28	Honshu-Shikoku Bridge bonds	3,406,098	3,197,503	2,878,631
Fixed assets	3,983,522	3,981,210	3,972,611	Long-term loans payable	439,263	644,507	936,337
Business assets	3,889,982	3,890,329	3,881,406	Subletting loans payable	122	180	239
Roads	3,552,620	3,563,487	3,565,144	Fund for contracting the security to pay	1,432	0	0
Railway facilities	337,363	326,842	316,262	retirement benefits			
Construction in progress (business assets)	55,592	56,393	57,401	Reserves for retirement benefits	5,404	5,494	5,730
Road construction in progress	22,484	23,285	24,293	Collateral debts for railway facility construction	351,079	340,254	329,440
Railway facility construction in progress	33,108	33,108	33,108	Reserves under special laws			
Tangible fixed assets	24,756	23,587	22,814	Reserves for railway facilities	11,459	12,184	12,403
Buildings	15,001	14,276	13,762	(Total liabilities)	4,238,235	4,218,128	4,176,871
Structures	616	574	532	Capital	765,516	845,516	925,516
Machinery and equipment	590	410	375	Government investments	516,910	570,243	623,576
Vehicles and transportation	309	225	141	Local government investments	248,606	275,273	301,940
Tools, furniture and fixtures	392	286	188	Deficit	- 999,024	- 1,067,343	- 1,118,639
Land	7,848	7,817	7,817	Deferred deficit	- 923,177	- 999,024	- 1,067,343
Intangible assets	15	15	15	Net loss	- 75,847	- 68,319	- 51,297
Investment and other assets	13,178	10,886	10,975	(Total capital)	- 233,508	- 221,827	- 193,124
Funded deposits	1,432	0	0				
Subletting loans	122	180	239				
Social capital improvement facilities Principal repaid by developer on an installment basis	69	57	46				
Principal repaid by the Japan Railway Construction Public Corporations on an installment basis	1,605	—	—				
Security deposits	397	371	371				
Other assets	9,553	10,277	10,319				
Deferred assets							
Discounts on bonds payable	13,128	10,604	8,363				
Total assets	4,004,726	3,996,300	3,983,747	Total liabilities and capital	4,004,726	3,996,300	3,983,747

Income Statement

Item	FY 2000 (Result)	FY 2001 (Estimated)	FY 2002 (Planned)	ltem	FY 2000 (Result)	FY 2001 (Estimated)	FY 2002 (Planned)
(Expenses)				(Revenues)			
Ordinary expenses	175,802	169,806	148,175	Ordinary profits	99,955	101,487	96,879
Operating expenses for business assets	15,403	16,682	15,215	Business profits	88,329	89,030	85,776
Expressway maintenance	14,703	15,836	14,486	Toll revenues from expressways	85,998	86,557	83,843
Railway facility maintenance	701	846	729	Revenues from railway facility usage charges	1,788	2,055	1,447
General administrative expenses	10,664	11,707	11,159	Miscellaneous business profits	543	418	486
General administrative expenses	9,266	9,799	9,279	Revenues from commissioned business	28	0	0
Reserves for retirement benefits transferred	333	984	1,110	Return of collateral debts for railway	10,755	10,826	10,818
Depreciation	1,065	924	770	facility construction			
Provision for reserves				Revenues from business of contracting security	71	0	0
Provision for reserves for railway facility	510	725	219	to pay retirement benefits			
maintenance				Income from premiums	68	0	0
Depreciation of business assets				Interest received	3	0	0
Depreciation of railway facility	10,827	10,839	10,851	Return of funds for contracting security	413	1,432	0
Provision of funds for contracting security	71	0	0	to pay retirement benefits			
to pay retirement benefits				Non-operating revenue	359	198	285
Expenses for contracting security	413	1,432	0	Interest received	68	43	51
to pay retirement benefits				Miscellaneous income	290	155	234
Contracted benefits	152	46	0				
Refund of contract cancelled	261	1,385	0	Net loss	75,847	68,319	51,297
Other operational expenses	0	1	0				
Non-operating expenses	137,913	128,419	110,731				
Interest on bonds	127,427	113,976	96,687				
Interest on borrowings	6,941	11,017	10,990				
Discount on bonds payable	2,984	2,814	2,474				
Bond business expenses	334	312	448				
Miscellaneous losses	228	299	132				
Total	175,802	169,806	148,175	Total	175,802	169,806	148,175

Note: 1. Figures are the sum of projects undertaken by the Authority, and include both roads and railroad projects. 2. Totals may not correspond due to rounding off.

(Unit : million yen)