

**Policy (Subsidy) Cost Analysis on
Fiscal Investment and Loan Program Projects
(Estimates)**

1. Based on the recommendations included in the “Summary of the Discussions of the Sub-Committee of the Trust Fund Council (November 1997),” this paper compiles the trial results of policy (subsidy) cost analysis for five institutions (The Government Housing Loan Corporation, People’s Finance Corporation, The Export-Import Bank of Japan, Japan Highway Public Corporation and Central Japan International Airport Company, Ltd.), which were studied and examined at the Cost Analysis and Evaluation Committee over the course of several meetings. ‘Policy (Subsidy) Cost’ here means subsidies, etc. to be provided in the future from the national treasury (general account, etc.) with the implementation of Fiscal Investment and Loan Program (FILP) projects.
2. In this analysis, in order to obtain the current discounted value of subsidies, etc. to be granted in the future, estimations were made based on certain assumptions. Therefore, care should be taken, depending on such assumptions, as the figures obtained may vary greatly.

1. Definition of the Policy (Subsidy) Cost under This Analysis

The “policy (subsidy) cost” under this analysis refers to the estimated total amount of subsidies, etc., which is to be provided from the national treasury (general account, etc.) with the implementation of a project under the Fiscal Investment and Loan Program (FILP) until the project is completed. The estimation was made based on certain assumptions to obtain figures at the current discounted value. Specifically, the estimated amount includes the followings:

For subsidies, financial assistance, and grant-in-aid from the national treasury (general account, etc.), the annual amount to be granted was converted at the current discounted value.

It was assumed that capital and non-interest loans from the national treasury (general account, etc.) would be repaid by the last year of this analysis. The opportunity costs (the amount of benefit that could have been obtained if the capital and non-interest loans were used for other purposes) to be incurred until the last year of this analysis were converted at the current discounted value, since they have the equivalent economic effects to those of subsidies, etc. from the national treasury. In cases where there is a reserve from surplus, it was assumed that capital would increase accordingly, while, in cases where there is a loss, capital would decrease.

Since payments and dividends, etc. to the national treasury (general account, etc.) are money transfers to the national treasury, they are regarded as a reduction in subsidies, etc., and are converted to the current discounted amount.

(Note) Because the “policy (subsidy) cost” is an estimate based on certain assumptions, depending on the assumptions, the estimated amount may vary.

2. Outline of the Analysis Method

This analysis was made with regard to the projects to be carried out under the FILP for FY 1999. Hence, in cases where each organization carries out a project which is not within the FILP for FY 1999, even if subsidies, etc. were provided from the national treasury (general account, etc.), such a project was excluded from this analysis.

This analysis deals with the projects that have been continued in FY 1999, and those that have already been decided to start after FY 1999.

This analysis includes the estimation based on the figures at the point when the FY 1999 draft budget was determined.

With regard to future interest rates of the Fiscal Investment and Loan as well as discount rates for the purpose of obtaining figures at the current discounted value, the same assumptions were adopted for estimation for each organization. Other assumptions were adopted individually by each organization, based on the situation at each organization.

According to the assumptions, the amount of subsidies, etc. to be provided from the national treasury (general account, etc.) for the project concerned during the analysis period (from FY 1999 to the year

when the project is completed) was estimated.

The estimated subsidies for each fiscal year were converted at the current discounted value by multiplying the discount rate, and by totaling these, the policy (subsidy) cost (converted into the current discounted value) was obtained.

3. Definitions

The “major purposes of projects carried out using FILP Funds” includes a brief statement of the policy purposes of the projects carried out by using the FILP, which are studied in this analysis.

The “reasons for granting of subsidies, etc.” includes a brief statement of policy reasons for which subsidies, etc. are granted to the project concerned.

“FY 1999 FILP plan” is the amount of lending under the FY 1999 FILP plan relating to the projects studied in this analysis.

The “estimated outstanding amount of FILP lending at end of FY 1998” is the estimated outstanding amount of FILP lending as of the end of FY1998 when the FY 1999 draft budget was determined.

The “results and social and economic benefits, etc. of projects” includes both quantitative and qualitative results as well as social and economic benefits that have been, and will be, brought about by the project concerned.

The “analysis period” is the period starting from FY 1999 to the fiscal year in which the project studied in this analysis is to be completed.

The “budgeted amount of subsidies, etc. in FY 1999 budget” means, of the subsidies, etc. to be provided from the national treasury (general account, etc.) to each organization, the amount stated in the FY 1999 budget for the projects concerned in this analysis.

The “Policy (Subsidy) Cost in loans where private-sector financing is available” means the estimated policy (subsidy) cost on the assumption that the necessary funds for FILP during the analysis period (from FY 1999 until the analysis is completed) is entirely financed from the private sector. The interest rate on financing from the private sector varies for each organization according to their conditions.

The “reduced amount of Policy (Subsidy) Cost with the FILP” means the reduced amount of policy (subsidy) cost by using the FILP system, compared to the amount in cases where the necessary funds are entirely financed from the private sector during the analysis period (from FY 1999 to the year when the project concerned is completed) (the amount to be obtained by subtracting the policy (subsidy) cost of the project concerned from the policy (subsidy) cost in cases where financing from the private sector is available).

“Special remarks, etc.” includes the matters which particularly need to be mentioned in addition to the above-mentioned items.

The Government Housing Loan Corporation

1. Major purposes of projects carried out using FILP Funds

In order to support people in obtaining good quality houses in a sound and secured manner, and also to ensure the effective use of residential stocks, financing (housing loan programs) is provided to every class people for the necessary funds to build, purchase or renovate, etc. of housing in cases where financing of ordinary financial institutions including banks is difficult.

2. Reasons for granting of subsidies, etc.

In order to contribute to the improvement of the ability to obtain housing for people in every class, the necessary funds to compensate for expenses, including the balance between the interest on financing the necessary funds for the Government's long-term and low-interest housing loans and the interest on loaning, is granted as financial assistance from the general account of the national treasury.

Moreover, the necessary funds to compensate for financial assistance which was carried over and settled as particular loss in the past, are granted as subsidy from the general account in latter fiscal year.

3. Amount of lending under FY 1999 FILP, etc. (In hundred millions of yen)

| | |
|-------------------|--|
| FY 1999 FILP plan | Estimated outstanding amount of FILP lending at end of FY 1998 |
| 101.176 | 735.317 |

4. Results and social and economic benefits, etc. of projects

Financing

(for the contracts made from FY 1950 to 1998)

17.32 million houses ¥151.695 trillion

Improvements of the ability to obtain housing

By setting lower limit on annual income required for housing loan, financing of the Government Housing Loan Corporation (GHLC) has improved the ability of the people to obtain housing and encouraged them to own their housing.

Required annual income for housing loan

(estimates by GHLC)

| | |
|--------------------------------|----------------|
| Required annual income | |
| GHLC | ¥5.8 million |
| Private financial institutions | ¥ 6.21 million |

(Note) When a condominium (price ¥36.951 million, down payment ¥8.371 million; according to the FY 1997 survey) is purchased.

Stimulating improvement of the level and quality of housing

Improvement of the level of housing as a result of using the GHLC loan

(new owner built house: FY 1997)

| | |
|--|---|
| <div style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px;"> Average floor area before moving into a new house: 90.1m² </div> | <div style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px;"> Average floor area after constructing a new house by using the GHLC loan: 146.4 m² </div> |
|--|---|

Improvement of the quality of housing as a result of lower interest on loans for better housing.

- Percentage of the units of the highly durable, energy-saving or barrier-free house of residence which have been financed with the GHLC loan

(new owner built house: FY1997) 68.2%

Contributing to the upturn of the economy due to the economic effect of housing investment

Rippling economic effect of the GHLC loan (estimated by the Ministry of Construction and GHLC: FY1997)

- Housing investment using the GHLC loan
Approx. ¥9 trillion.
- Its inducement to production
Approx. ¥17 trillion.
- Its rippling effect on consumer durables, etc.
Approx. ¥1 trillion.

5. Estimated Policy (Subsidy) Cost of project

[Outline of estimates]

Housing loan programs were estimated (housing loan insurance business are excluded).

Estimates were made on the housing loans including those already made (over ¥70 trillion by the end of FY 1998) and those to be made according to FY 1998 plan (550,000 houses, ¥11 trillion).

The analysis was made for a 31-year period over which repayment of the housing loans that were already made and those are to be made according to FY 1999 plan are to be completed.

The advanced repayment was estimated by using the econometric model, which can calculate the rate of advanced repayment according to the years passed since the loan was made, and also the difference between interests of the GHLC housing loans already made and those of the housing loans provided by private financial institutions. The rate of dead loan is estimated at 7.7/1 million, the average rate for the past five years.

Based on the above points and assumptions, which were previously determined, the necessary financial assistance for the implementation of projects was calculated. It should be noted that a surplus is expected to be generated and paid to the national treasury in the future due to the progressive interest system for the loan (interests rate is to be raised after 10 years from the beginning of the loans).

(In hundred millions of yen / year)

| | |
|--------------------------------------|-----------------|
| Policy (Subsidy) Cost of project (A) | Analysis period |
| 12,383 | 31 |

(cf.)

Budgeted amount of subsidies, etc. in FY 1999 budget:

¥435 billion

(cf.-2)

Policy (Subsidy) Cost in loans where private-sector financing is available (B):

¥2,127.9 billion

Reduced amount of Policy (Subsidy) Cost with the FILP (B) - (A):

¥889.6 billion

6. Special remarks, etc.

Most of the policy (subsidy) cost of the GHLC is incurred due to the government policies of keeping the interest rate on housing loans lower. In other words, through the GHLC, efforts are made to increase the ability to obtain housing, improve the level and quality of housing, and expand housing investment.

In this analysis, with regard to the housing loan programs, calculation was made to obtain a total amount of policy (subsidy) costs to be incurred for 31 years in which all the repayment will be completed for the loans which were already made amounting to over ¥70 trillion at the end of FY 1998, and which are to be made according to FY 1999 plan, based on the assumption that loans will not be newly made in and after FY 2000.

People's Finance Corporation

1. Major purposes of projects carried out using FILP Funds

To provide business and other loans to those people and firms who have faced the difficulty of being financed from private financial institutions.

2. Reasons for granting subsidies, etc.

For the purpose of providing business and other long-term loans with low and fixed interest rates for the general public who have faced the difficulty of being financed from private financial institutions including banks, subsidies and non-interest loans are provided from the General Account of the national budget.

3. Amount of lending under FY 1999 FILP, etc. (In hundred millions of yen)

| FY 1999 FILP plan | Estimated outstanding amount of FILP lending at end of FY 1998 |
|-------------------|--|
| 37,900 | 90,541 |

(Note) The merger with Environmental Sanitation Business Finance Corporation. has not been taken into account for the FY 1999 figure.

4. Results and social and economic benefits, etc. of projects

Financing, etc.

Total loans (FY 1998)

For business 480,000 loans ¥3,427 billion

For education 300,000 loans ¥352.9 billion

Total 790,000 loans ¥3,780 billion

Total financing amount (accumulated from FY 1949 to FY 1998)

For business 24.62 mil. loans ¥72.826 trillion

For education 9.27 mil. loans ¥5.51 trillion

Total 33.9 mil. loans ¥77.877 trillion

Loans have been provided to every one out of four small corporations.

1.74 million corporations ÷ 6.43 million corporations = 27.1%

Financing for the small businesses with less than 20 employees accounts for 95% of the total (number of loans). The average amount of loans is rather small at ¥7.01 million.

| Number of employees | | Amount of loans | |
|---------------------|-------|--------------------|-------|
| 4 or less | 63.5% | ¥3 million or less | 33.6% |
| 5-9 | 21.6% | ¥3-5 mil. | 25.8% |
| 10-19 | 9.6% | ¥5-8 mil. | 17.1% |
| 20 or more | 5.3% | Over ¥8 mil. | 23.4% |

Non-collateral loans account for 89% of the total number of loans and 79% of the total amount of loans.

| | Number of cases of financing | Amount of loans |
|----------------------|------------------------------|-----------------|
| | 488,701 | 34,277 |
| Non-collateral loan | 434,728 | 26,917 |
| Loan with collateral | 53,973 | 7,360 |

5. Estimated Policy (Subsidy) Cost of project

[Outline of estimates]

All loans programs were estimated.

Estimates were made on the financing programs, including those already provided (estimated at ¥10.145 trillion) and those to be provided according to FY1999 plan.

Analysis was made for a 21-year period over which repayments of the existing loans as well as those to be provided according to FY1999 plan are to be completed.

The amount of advanced repayment was expected at 1.2% of total loans, the average figure for the past five years; and the rate of carry-over of the allowance for loan losses was at 3/1000, the average figure for the past 20 years.

Based on the above points and assumptions, the necessary subsidies, etc. for the implementation of the projects were calculated. It should be noted that payment to the national treasury was expected on and after FY 2002.

(In hundred millions of yen / year)

| Policy (Subsidy) Cost of project (A) | Analysis period |
|--------------------------------------|-----------------|
| 846 | 21 |

(cf.)

Budgeted amount of subsidies, etc. in FY 1999 budget:

¥42.6 billion

(cf.-2)

Policy (Subsidy) Cost in loans where private-sector financing is available (B):

¥193.4 billion

Reduced amount of Policy (Subsidy) Cost with the FILP (B) - (A):

¥108.8 billion

6. Special remarks, etc.

The necessary Policy (Subsidy) Cost to ensure the stable provision of long-term financing with low and fixed interest rates for small businesses, which have faced the difficulty in receiving financing from private financial institutions, is calculated above.

The merger with Environmental Sanitation Business Corporation. has not been taken into account in this analysis.

The Export-Import Bank of Japan

1. Major purposes of projects carried out using FILP Funds

In order to address the issues concerning Japan's external economic policies including promotion of exports, securing of resources of energy, encouragement of direct overseas investment and rectification of Japan's trade imbalance, various loan programs are provided to supply the necessary funds for the export of facilities and equipment, import of essential merchandise, and the projects carried out in foreign countries by Japanese corporations or foreign government, etc.

2. Reasons for granting subsidies, etc.

In order to strengthen the necessary management base for maintaining a balance of accounts and profits of The Export-Import Bank of Japan (hereafter the "Bank"), and also for executing the duties provided under the Export-Import Bank of Japan Law, investments are received from the national treasury through the industrial investments special accounts.

3. Amount of lending under FY 1999 FILP, etc. (In hundred millions of yen)

| FY 1999 FILP plan | Estimated outstanding amount of FILP lending at end of FY 1998 |
|-------------------|--|
| 19,100 | 83,548 |

(Note) The figure for FY 1999 is the annual budget of the Bank, including ¥783 million for the Japan Bank for International Cooperation (accounts for international finance, etc.) after the merger with the Overseas Economic Cooperation Fund.

4. Results and social and economic benefits, etc. of projects

Financing (accumulation of the authorized amount for financing from FY 1950 to FY 1998)

23,336 loans / ¥39.854 trillion

Export loans support for plant engineering industries and the related small corporations which are facing fierce international competition. While, for developing countries, various economic benefits will be brought about, for example, establishment of industrial infrastructure, increase of job opportunity and technology transfer through guidance on operation.

Merchandise import loans contribute to the solution of Japan's trade imbalance. Also, by importing high-performance equipment and devices, they support Japanese industries to improve their technological level.

Natural resources development and import loans promote stable import of essential resources to Japan for its scarcity in land and resources.

Overseas investment loans support Japanese corporations to strengthen their competitiveness by expanding operation abroad. Also, they promote transfers of capital, technology and management "know-how," etc. to developing countries.

Looking at the recent examples, the assistance of the Bank through its investment loans in FY 1998 strongly supported Japanese affiliates abroad in financing, who were suffering from a severe credit crunch due to Japanese banks' downsizing of overseas operations. Subsequently, an estimated \$18.4 billion (\$2.9 billion for Japan) worth of production was induced and centered on Asia (estimated by the Bank).

Untied loans contribute to the solution and improvement of economic problems of developing countries, etc. In addition, improvement in their economic infrastructure will indirectly stimulate Japanese corporations to increase investment and export plants.

5. Estimated Policy (Subsidy) Cost of project

[Outline of estimates]

All the general accounts for investment and financing (general account of the account for international finance, etc. after the merger into the Japan Bank for International Cooperation) were estimated.

Estimates were made on the investments and financing, including those already implemented (estimated at ¥11.791 trillion by the end of FY 1998) and those to be implemented according to the FY 1999 investment and financing plan.

(¥2.026 trillion)

Analysis was made for a 26-year period over which repayment of the existing loans and those planned for FY 1999 are to be completed.

Based on the above points and the assumptions, the necessary funds for the projects concerned were estimated, and if there was a surplus, it should be paid to the national treasury. Also, the outstanding capital and reserve was around ¥1.5 trillion at the beginning of a period, and its opportunity cost was estimated.

(In hundred millions of yen / year)

| Policy (Subsidy) Cost of the project (A) | Analysis period |
|--|-----------------|
| 1,881 | 26 |

(cf.)

Budgeted amount of subsidies, etc. in FY 1999 budget: Nil

(cf.-2)

Policy (Subsidy) Cost in loans where private-sector financing is available (B): ¥284.1 billion

Reduced amount of Policy (Subsidy) Cost with the FILP (B) - (A): ¥96 billion

6. Special remarks, etc.

Default risks have been taken into account for this analysis into the policy (subsidy) costs of the Bank. Because the Bank has never experienced default of loans, it is difficult to estimate the amount of future default based on the in-house data, and thus, by using the statistical data of external credit ratings companies, which is often used by private financial institutions, credit risk was automatically calculated. It should be noted that, for the purpose of quantifying credit risks, despite the fact that analysis by rating based on the reliable statistical data is one of the major methods adopted by the private sector, in consideration of the length of period that needs to be analyzed, it cannot be said that the estimated figures are likely to be realized in the future.

The merger with Overseas Economic Cooperation Fund has not been taken into consideration in this analysis.

Japan Highway Public Corporation

1. Major purposes of projects carried out using FILP Funds

As a part of road improvement projects, the toll road construction projects by Japan Highway Public Corporation (hereafter referred to the "Corporation") as well as by the Government promote the construction of the high standard arterial expressways that mainly from the nationwide road network by charging the toll road users.

To be more specific, the following works are being carried out under the project:

- Construction, renovation, maintenance and repair of national expressways and ordinary toll road
- Construction and operation of toll parking facilities
- Construction and operation of rest areas, gas stations and other facilities on expressways
- Construction and operation of associated facilities for the expressways (truck terminals, etc)

2. Reasons for granting subsidies, etc.

It has been determined that, for the toll road construction project, the costs for construction and operation shall be raised through bonds and borrowings, and that the principal and interest on them shall be repaid with the tolls corrected from road users. As for the interest, in order to reduce the burden of tolls on the users, limits have been set on the amounts to be repaid with the tolls, and the excess amounts have been covered with funds from the Road Improvement Special Account of the national treasury.

3. Amount of lending under FY 1999 FILP, etc. (In hundred millions of yen)

| FY 1999 FILP plan | Estimated outstanding amount of FILP lending at end of FY 1998 |
|-------------------|--|
| 21,063 | 214,352 |

4. Results and social and economic benefits, etc. of projects

Creation of demand due to the expressway construction projects(effect on the flow of goods)

Investment (around ¥20 trillion) to be made after FY 1999 is expected to create demand of a rough total value of ¥35 trillion.

Benefits to the users of expressways (effect on asset stock)

Reductions in driving time, expenses (including those for gasoline) and the number of accidents after the network is completed and connects existing roads to those under construction are expected to bring about benefits worth about ¥10 trillion.

(Note) The quantity of the benefits was estimated by the Corporation.

5. Estimated Policy (Subsidy) Cost of project

[Outline of estimates]

The projects carried out by the Corporation, excluding outsourced works, have been included in the estimate.

The cost of estimates on the national expressways on which the order of implementation has already been given (9,006 km) and ordinary toll roads for which the project has been adopted (983 km) according to the FY 1999 project plan as well as the construction plans (total construction budget: around ¥49 trillion, of which around ¥20 trillion has been budgeted for after FY 1999), which was approved in April 1999.

The analysis was made for a 43-year period over which the ongoing projects and projects under the FY 1999 plan, as well as those under the construction plans, which were approved in April 1999, are to be completed.

The volume of traffic in the future was estimated based on data on the use of the existing expressways.

Based on the above points and assumptions, future implementation and necessary financial assistance were simulated for the project.

(In hundred millions of yen / year)

| Policy (Subsidy) Cost of project (A) | Analysis period |
|--------------------------------------|-----------------|
| 33,513 | 43 |

(cf.)

Budgeted amount of subsidies, etc. in FY 1999 budget: ¥288.4 billion

(cf.-2)

Policy (Subsidy) Cost in loans where private-sector financing is available (B): ¥4,093.1 billion

Reduced amount of Policy (Subsidy) Cost with FILP (B) - (A): ¥741.8 billion

6. Special remarks, etc.

As a part of Government projects and road improvement projects, the Corporation's toll road construction projects have brought about both social and economic effects by reducing traffic congestion, making people's lives more convenient, and promoting growth in industry. For example, it is estimated that, once completed, the economic benefit of the construction of a 9,006 km expressway network in terms of the shortening of the time required to reach a destination alone is estimated to be approximately ¥10 trillion.

For this Policy (Subsidy) Cost Analysis, 9,006 km expressways for which the orders for implementation of projects have already been given as well as 983 km of ordinary toll roads for which construction projects have been adopted were included.

In this analysis, a common interest rate has been set as an assumption, and thus it differs from interest rates predicted by the Corporation when it prepared the repayment schedule based on past regular results.

Consideration must be given to the fact that the Policy (Subsidy) Cost Analysis does not evaluate the value of the road assets (approximately ¥69 trillion).

6. Special remarks, etc.

The Central Japan International Airport Company, Ltd. was established on May 1, 1998. According to the “Chubu International Airport Construction and Administration Law”, the company was designated on July 1, 1998 by the Minister of Transport to establish and manage the Central Japan International Airport. The company is currently carrying on the project, with the intention of opening the airport in 2005.

For the construction projects of the Central Japan International Airport, the company has received non-interest financing including financial assistance as well as non-interest loan from the Government and local public organizations, and financial assistance from the private sector. In addition, as financing with interest, it has also issued the government-guaranteed bonds, financing from the Japan Development Bank and those from private financial institutions. The project is enthusiastically making use of private financing and management know-how, highlighted by the fact that 50% of the funding has come from private sources.