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2 Paying for the FILP

Takero Doi and Takeo Hoshi

The Fiscal Investment and Loan Program (FILP) in Japan collects funds through government financial institutions (most notably postal savings) and uses the funds to finance public projects undertaken by government-affiliated corporations or to finance government loans to borrowers in targeted areas (targeted industries, small firms, mortgage borrowers, etc.). Many countries have government-sponsored loan programs: The Japanese program is distinguished by its size. At the end of fiscal 2000 (March 2001), the FILP involved ¥418 trillion, equal to some 82 percent of gross domestic product (GDP), and the program's uses of funds statement totaled more than the GDP. The postal savings system, the most important source of funds for the FILP is the world's largest financial institution. It held ¥250 trillion in deposits (35 percent of total household deposits) at the end of fiscal 2000.

The FILP may promote welfare and economic growth by financing projects that have such large externalities that private institutions would not undertake them. It also may be an impediment to welfare and growth by allowing the government to pursue wasteful projects. Historically the program has ignored market information, and its sheer size makes the cost

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of resource misallocation enormous. This chapter examines the financial condition of the FILP and analyzes reforms begun in April 2001.

The goal of examining the FILP's financial condition is to see if it constitutes a serious impediment to the recovery of the Japanese economy. The FILP's accounts are notoriously opaque. We scrutinize the balance sheets of recipients of FILP funds, including special public corporations (SPCs), central government accounts, and local governments. Through this exercise, we can estimate the amount of financial losses of the FILP either buried in current balance sheets or expected to emerge in the near future.

The data show that existing losses and expected transfers to cover future losses are enormous. These losses are implicit claims on the government (and hence on taxpayers). Together with other implicit claims, such as the cost of cleaning up the financial sector (see chap. 1 of this volume), FILP losses can seriously impede economic recovery.

Because the FILP is supposed to finance socially useful projects that private institutions are unwilling to undertake, it is natural for there to be losses. And, in fact, the central government has been transferring funds from its accounts to numerous FILP agencies in the form of explicit subsidies and capital contributions. The losses may be a result of insufficient past subsidies for social-welfare-increasing (but high-externality) projects. However, any argument that stresses the welfare-enhancing aspects of the FILP must be weighed against the substantial cost. That so little has been done until recently—even by the government—to explore the cost and benefit of projects using FILP funds is telling.

Our second purpose is to describe the reform of the FILP introduced in April 2001 and to evaluate its likely impact. The main stated goal of the reform is the introduction of market discipline in the allocation of funds. Thus, we examine whether reform can be expected to reduce FILP losses in the future.

The work presented here updates and expands that of a number of researchers (primarily available only in Japanese), as outlined in the appendix. The chapter is organized as follows. After briefly describing how the FILP is structured and its size, we begin our investigation of the financial health of FILP agencies. This involves performing a close examination of the balance sheets of the major FILP recipients, correcting for various accounting problems. The financial conditions of local governments, which are also important borrowers of the FILP, are then taken up. This is a topic not covered extensively by other researchers. We then discuss the essence of the FILP reform introduced in April 2001, and evaluate the effects that are observable so far. We conclude by pointing out the direction for future research.

2.1 Background

The FILP is a government-sponsored program that finances government financial institutions and other government-related agencies. It is not just a system of simple financial intermediation because the government and FILP agencies are also linked through flows of direct grants and subsidies. This section presents a brief overview of the structure, size, and history of the FILP.

2.1.1 Structure and Size

Figure 2.1 diagrams the structure of the FILP before the 2001 reform, paying particular attention to the inter-relations between financial intermediation and fiscal transfers. The magnitude of the sums involved is given in table 2.1, sources of funds, and table 2.2, uses of funds.

The Trust Fund Bureau (TFB) Fund is by far the most important source, providing some 83 percent of funds as of the end of March 2001. The majority of the TFB Fund comes from postal savings. Its other major source is pension reserves, which are the difference between the premium receipts

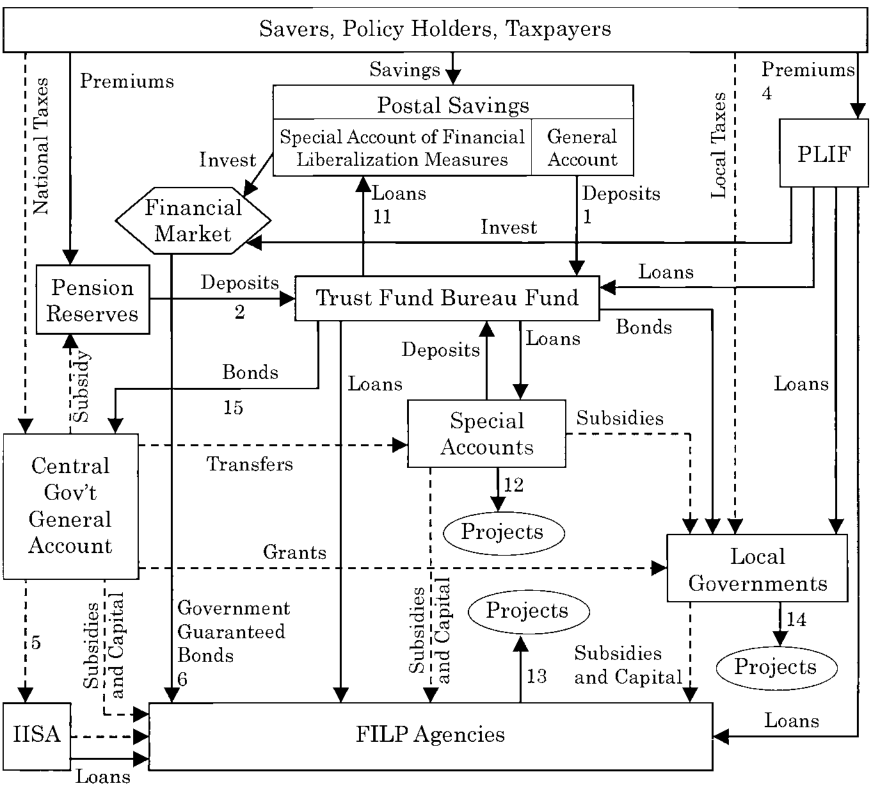

Fig. 2.1 Structure of the FILP before April 2001

Note: IISA = Industrial Investment Special Account. PLIF = Postal Life Insurance Fund. A box represents a sector or an institution involved in the FILP. The arrows indicate the direction of the movement of funds, with solid lines indicating financial transactions and broken lines being fiscal transfers. Numbers next to the lines refer to entries in tables 2.1 and 2.2, which provide the yen amounts represented by the lines.

Table 2.1 **Sources of FILP Funds, March 2001 (¥ billions and %)**

Line	Amount	Share	Source
n.a.	439,663	83.1	TFB fund
4	61,658	11.6	Postal life insurance fund
5	3,383	0.6	Industrial investment SA
6	24,579	4.6	Government-guaranteed bonds
	529,283	100.0	Total
		Components of the TFB Fund[a]	
1	247,008	46.7 (56.2)	Postal savings
2	142,593	26.9 (32.4)	Pension reserves
n.a.	50,062	9.5 (11.4)	Others[b]

Source: Ministry of Finance (2002a).

Note: Line numbers refer to figure 2.1. SA = Special Account. n.a. = not applicable.

[a]Numbers in the parentheses show the shares within the TFB.

[b]Includes postal life insurance premiums collected during the fiscal year (which are deposited into the TFB) and short-term deposits by some special accounts, as well as profits and reserves at the TFB.

Table 2.2 **Uses of FILP Funds, March 2001 (¥ billions and %)**

Line	Amount	Share	Use
10	7,279	1.4	General account (JNR loans)[a]
11	57,350	10.8	Postal savings SA[b]
12	6,298	1.2	Other special accounts
13	259,617	49.0	FILP agencies[c]
14	87,270	16.5	Local government
n.a.	417,814	78.9	FILP Plan total
15	72,682	13.7	Central government bonds[d]
n.a.	38,787	7.3	Other[e]
n.a.	529,283	100.0	Total uses
n.a.	471,993	n.a.	Total excluding Postal Savings SA

Source: Ministry of Finance (2002a).

Note: Line numbers refer to figure 2.1. n.a. = not applicable.

[a]TFB loans to the former JNR and former JNR Settlement Corp (JNRSC), which the government assumed (see box 2.1). Unlike other loans to the general account, these are included in the formal FILP Plan.

[b]Funds the TFB has loaned back to the postal savings system for it to invest directly. These are excluded from the net total.

[c]Includes ¥3,352 billion in contributed capital and ¥256,265 billion in loans.

[d]Including JNR loans (see note a) the central government total is ¥79,961 billion.

[e]Includes short-term loans (mainly to the SA for Grants of Allocation Tax and Transfer Taxes [to local governments]) and certain financial investments with a maturity of less than five years.

Box 2.1 FILP Loan to the General Account

The ¥7.3 trillion FILP loan to the general account relate to privatization of the former JNR. The JNR started to run deficits in 1964, but was allowed to continue operation and to add to its debt. When JNR was privatized in 1987, ¥25.5 trillion of its debt and some JNR assets were transferred to a newly created JNRSC. The remaining debt was assumed by the central government and creditors (including the TFB) received newly issued Japanese government bonds. The JNRSC was supposed to pay down its debt over ten years using proceeds from sales of the assets it received. Assets sales stalled and the amount of liabilities actually increased. When the statute establishing JNRSC expired in 1997, the government assumed almost all of its ¥28.3 trillion debt. Thus, the ¥7.3 trillion loan from the FILP should be considered a loan to these already-failed corporations.

and pension payouts of the public pension system during the current fiscal year.

Uses of FILP funds are grouped into seven categories, as shown in table 2.2. Box 2.1 explains the FILP loan to the general account.

The first five uses are formally put in the FILP Plan every year and submitted to the Diet as an attachment to the budget bill. Thus, the size of the FILP Plan (¥418 trillion for the end of March 2001) is smaller than the total size of the FILP. This is because the total program includes the TFB's holding of government bonds and other financial assets.

The FILP Plan disburses funds to many local governments, which account for 24 percent of net FILP loans, and fifty-seven other entities. Of the latter, eleven are central government accounts (Postal Savings Special Account, nine other special accounts, and Japan National Railroads [JNR] loans) and forty-six are FILP agencies (eight government financial institutions, twenty-seven SPCs, and eleven special firms).

Table 2.3 summarizes data on the fifty-eight entities that had outstanding FILP loans or government-guaranteed bonds (which are held by the public but considered a part of the FILP) at the end of March 2001. The total was ¥414 trillion, or ¥357 trillion net of ¥57 trillion loaned back to the postal savings system.

2.1.2 Historical Development

When the FILP started in the 1950s, financing economic recovery was the most important goal. Hence, the FILP heavily targeted industrial fi-

Table 2.3 FILP Loans and Bond Guarantees, 31 March 2001 (¥ billions)

Number of Recipients[a]	Amount	Originating Lending Source
47	270,844	Trust Fund Bureau[b]
32	61,658	Postal Life Insurance
3	31	Industrial Investment SA
51	332,533	Net total FILP loans[b]
24	24,579	Government-guaranteed bonds
57	357,112	Total
1	57,350	Postal Savings SA loans
58	414,462	Total FILP funds[c]

Source: This table is the column totals of supplemental table 1, which provides data (from Ministry of Finance 2002a) on each of the fifty-eight recipients. It is available on our web site (http://www.econ.keio.ac.jp/staff/tdoi/ and http://www2-irps.ucsd.edu/faculty/thoshi/) and the NBER web site (http://www.nber.org/data/).

[a]Number of recipients, counting local governments (which have TFB and Postal Life Insurance [PLI] loans) as one. Not counting local governments and the Postal Savings SA (see note [b]), there are fifty recipients of FILP loans and an additional six have bond guarantees but no loans.

[b]Excludes funds the TFB has loaned back to the postal savings system for it to invest directly. With them, loans from the TFB total ¥328,194 and total loans are ¥389,883.

[c]Adding ¥3,352 in capital contributions to this yields the ¥417,814 FILP Plan total in table 2.2.

nancing through the Japan Development Bank (JDB; predecessor of the present Development Bank of Japan) and other government financial institutions. When the economy recovered and started to grow rapidly, the focus gradually shifted to housing (including mortgage lending) and projects to improve living standards (such as building sewer systems). Providing assistance to small businesses also became an important goal. Financing industrial development does not constitute a large area for the FILP Plan any more: Only 1 percent of new funds are used for this purpose. Table 2.4 provides a breakdown of the FILP Plan for fiscal 2001 by target areas.

2.2 Financial Condition of FILP Agencies

In this and the next five sections, we examine the financial condition of the FILP recipients other than the local governments, which collectively receive 76 percent of the total net FILP loans. The financial condition of the local governments is examined in section 2.8.

The first step in analyzing the financial condition of the FILP recipients is to look at the self-reported accounting information. By their own accounts, nine recipients of FILP funds are insolvent. That is only a very partial picture, however. The publicly disclosed accounting statements of FILP recipients exhibit serious problems, which make it hard to assess their financial conditions.

To provide a more accurate list of insolvent agencies and estimate the

Table 2.4 **Distribution of FILP Plan by Target Area, Fiscal 2001**

Percents	Target Areas
29.9	Housing
19.9	Living environment
16.1	Small and medium businesses
11.2	Road construction
4.8	Trade and economic cooperation
3.9	Social welfare
3.4	Regional development
2.8	Education
2.4	Agriculture[a]
2.3	National land preservation[b]
2.3	Transport and communication
1.0	Industry and technology

Source: Ministry of Finance (2002a).

Note: The FILP plan total for the year was ¥32.5 trillion. For further information, see Cargill and Yoshino (2000, table 8.3), who show the uses of FILP funds by target areas from 1955 to 1998.

[a]Includes forestry and fisheries.

[b]Includes reconstruction in the event of disaster.

cost to taxpayers of the FILP, in each of the next four sections we look at a problem area and make adjustments to provide a more accurate assessment. The first three areas involve financial losses already accumulated. The losses already made come from two principal sources: underreserving for bad loans and overvaluing assets. In addition, other adjustments need to be made to the stated capital (reserves) of many FILP participants. Our analysis of these areas involves examining the balance sheets of FILP participants.[1] The fourth area is the present value of the cost of covering expected future losses that will arise if FILP agencies continue to operate. To estimate this, we rely on projections made by the agencies themselves.

2.3 Capital (Reserves)

In assessing financial condition, we have paid special attention to the amount of capital (usually called reserves in public corporation accounting). The amount of capital measures how much loss the entity can sustain without requiring additional resources from the government. Negative capital means de facto insolvency. Because the government is both a large

1. Five special accounts and one special firm do not publish balance sheets regularly, so they are excluded from our analysis. Fortunately, the ¥4.5 trillion in FILP loans to them amounts to just 1.3 percent of net FILP loans. The six are noted on supplemental table 1, which is available on our web sites and the NBER web site (see note 2). Also available on our web sites are the balance sheets and income statements included in the administrative cost statements compiled by the SPCs studied here.

creditor and the equity holder of public corporations, insolvency implies future losses for the government, and hence for taxpayers. If the capital is positive but very small, taxpayers are risk for providing more money if even small losses occur. We will see that this is a pervasive problem.

The amount of capital falls for many corporations when they restate their balance sheets based on accounting standards for the private sector. By their own accounts, nine agencies are insolvent—that is, they have negative capital ratios. (As an example of how labyrinthine FILP accounting is, a tenth agency is insolvent on its original balance sheet but manages to become solvent using private sector standards!)

Data on capital are included in table 2.5 as column (5). Supplemental table 2[2] lists the amount of capital for each government account and public corporation as reported on its original balance sheet (that is, using accounting standards for public corporations) and on its administrative cost statement (using standards for private sector firms), as well as the capital ratio.

There is a quite serious accounting problem regarding the largest recipient of FILP funds, Government Housing Loan Corporation (GHLC), and two small special accounts. Their balance sheets list cumulative losses on the *asset* side. The losses are to be paid off over time by gradually reducing capital. Because the losses have been identified already and are not likely to be eliminated (without a corresponding reduction of the capital or infusion of new capital), it is necessary to subtract these items from capital immediately to get an unbiased picture of their current financial condition. In our analysis, the cumulative losses are subtracted from assets in calculating these agencies' capital. Such losses amount to ¥518.6 billion in total.

2.4 Nonperforming Loans

Disclosed nonperforming loans totaled ¥5.6 trillion in March 2001, which is 3.2 percent of total loans made by the institutions. This is a lower bound for the level of bad loans. Although reporting of nonperforming loans may be better than before, the small loan-loss reserves of many institutions suggest serious underreserving. Table 2.6, column (1), summarizes the amount of bad loans disclosed in the administrative cost statements. (Supplemental table 3[3] has data for each agency.)

Bad loans on the administrative cost statements of government financial institutions are risk management loans, defined in the same way as for private sector banks. These are loans to failed enterprises, loans more than

2. See our websites (http://www.econ.keio.ac.jp/staff/tdoi/ and http://www2-irps.ucsd.edu/faculty/thoshi/) and the NBER website (http://www.nber.org/data/).

3. See note 2.

Table 2.5 **Total Financial losses of the FILP and Net Capital of FILP Agencies, 31 March 2001 (¥ billions)**

Underreserved Loans [a]	Overvalued Assets[b]	Policy Costs[c]	Total Losses[d]	Gross Capital[e]	Net Capital[f]	Agency
				Government Financial Institutions		
1,356.7	n.a.	–154.9	1,201.8	–188.8	–1,390.6	Government Housing Loan Corp.
500.9	n.a.	43.6	544.5	–180.1	–724.6	National Life Finance Corp.
179.3	n.a.	88.7	268.0	155.2	–112.8	Japan Finance Corp. for Small Business
149.5	n.a.	499.0	648.5	244.8	–403.7	Agriculture Forestry & Fisheries Finance Corp.
5,072.5	n.a.	9.3	5,081.8	1,324.7	–3,757.1	Japan Finance Corp. for Municipal Enterprises
134.5	n.a.	5.0	139.5	49.3	–90.2	Okinawa Development Finance Corp.
273.3	n.a.	128.2	401.5	1,616.2	1,214.7	Development Bank of Japan
281.2	n.a.	723.1	1,004.3	7,338.2	6,333.9	Japan Bank for International Cooperation
				Special Public Corporations		
40.3	1,199.4	1,234.2	2,473.9	417.4	–2,056.5	Urban Development Corp.
29.6	n.a.	325.7	355.3	–819.8	–1,175.1	Pension Welfare Service Public Corp.
10.1	n.a.	n.a.	10.1	1,508.9	1,498.8	Employment & Human Resources Development Org.
0.0	165.2	36.5	201.7	–15.8	–217.5	Japan Environment Corp.
n.a.	43.1	–10.7	32.4	107.7	75.3	Teito Rapid Transit Authority
5.3	n.a.	78.7	84.0	134.8	50.8	Japan Regional Development Corp.
n.a.	37.0	74.7	111.7	–7.4	–119.1	Japan Sewage Works Agency
16.2	n.a.	69.6	85.8	297.8	212.0	Social Welfare & Medical Service Corp.
5.4	n.a.	4.9	10.3	3,315.2	3,304.9	Promotion & Mutual Aid Corp. for Private Schools of Japan
9.7	n.a.	104.9	114.6	–77.8	–192.4	Japan Scholarship Foundation
0.1	n.a.	1,374.3	1,374.4	686.1	–688.3	Japan Green Resources Corp.
4.7	n.a.	n.a.	4.7	107.4	102.7	Japan International Cooperation Agency
n.a.	4,445.1	3,461.5	7,906.6	6,109.1	–1,797.5	Japan Highway Public Corp.
n.a.	1,107.2	371.2	1,478.4	994.8	–483.6	Metropolitan Expressway Public Corp.
n.a.	475.6	270.9	746.5	187.1	–559.4	Hanshin Expressway Public Corp.

(*continued*)

Table 2.5 (continued)

Underreserved Loans[a]	Overvalued Assets[b]	Policy Costs[c]	Total Losses[d]	Gross Capital[e]	Net Capital[f]	Agency
n.a.	648.4	630.6	1,279.0	–623.0	–1,902.0	Honshu-Shikoku Bridge Authority
0.0	2,553.4	2.0	2,555.4	–645.8	–3,201.2	Japan Railway Construction Public Corp.
n.a.	218.6	–62.0	156.6	282.9	126.3	New Tokyo International Airport Authority
6.7	n.a.	3.3	10.0	962.8	952.8	Corp. for Advanced Transport & Technology
n.a.	464.0	235.4	699.4	42.3	–657.1	Water Resources Development Public Corp.
4.2	n.a.	n.a.	4.2	10.9	6.7	Fund for the Promotion & Development of the Amami Isles
1.5	n.a.	0.6	2.1	25.5	23.4	Metal Mining Agency of Japan
100.2	n.a.	1,824.2	1,924.4	1,474.9	–449.5	Japan National Oil Corp.
n.a.	n.a.	n.a.	n.a.	–3,489.0	–3,489.0	Postal Life Insurance Welfare Corp.
				Special Firms		
69.3	n.a.	53.2	122.5	608.5	486.0	Shoko Chukin Bank
n.a.	n.a.	2.2	2.2	419.1	416.9	Kansai International Airport Co. Ltd.
n.a.	n.a.	1.3	1.3	26.3	25.0	Org. for Promoting Urban Development
8,251.3	11,357.0	11,429.2[g]	31,037.4	—	—	Total
—	—	—	—	–6,047.5	–23,467.2	Total for negative capital

Note: Five special accounts and one special firm do not publish balance sheets regularly, so they are excluded from our analysis. These are noted on supplement table 1. Supplemental Tables are available on our web sites (see table 2.3). n.a. = not available, and the dashes indicate "not applicable."

[a]Underreserved bad loans are from supplemental table 3, column (1) minus column (3). An entry of 0.0 means the agency's nonperforming loans were found by our analysis to be fully reserved.

[b]Over-valued assets are from supplemental table 4, column (2) minus column (3).

[c]Policy costs numbers are found in Ministry of Finance (2002b).

[d]Total losses are the sum of the first three columns.

[e]Gross capital is from the agency's administrative cost statement where available, otherwise from its original balance sheet. These are reported on supplemental table 2.

[f]Net capital is gross capital minus total losses.

[g]Composed of ¥11,656.8 in policy costs from twenty-eight agencies and ¥227.6 in policy benefits from three agencies.

Table 2.6 **Disclosed Bad Loans of FILP Agencies, 31 March 2001**

Bad Loan		Loan Loss Reserve		
¥ Billions[a]	As % of All Loans[b]	¥ Billions	As % of Bad Loans[a]	Name or Type of Agency and Number of Agencies[d]
1,398	1.8	41	2.9	Government Housing Loan Corp
3,148	5.0	1,629	51.8	Other government financial institutions (6)
519	2.3	354	41.6	SPCs (18)
534	4.9	465	87.0	Shoko Chukin Bank
5,599	3.2	2,489	44.5	Total for all agencies
5,441	3.2	2,262	41.6	Total for underreserved agencies (21)

Source: Summarized from supplemental table 3, which provides data specific to each agency. It is available on our web sites and the NBER web site (see table 2.3).

Note: The absolute amount of underreserving for each agency is included in table 2.5. Total underreserving (the difference between bad loans in column [1] and reserves in column [3]) is ¥3,179 billion for underreserved agencies. Including JFM (see box 2.2), the total is ¥8,251 billion.

[a]For government financial institutions and Shoko Chukin Bank, entries are for risk-management loans. SPCs are allowed to use a less strict definition. For them, the figures show amounts of loans past-due six months or more or loans to bankrupt entities that they report with their balance sheets.

[b]Bad loans as a percentage of total loans made.

[c]An entry under 100 percent means the agency is underreserved.

[d]Only agencies that disclose nonperforming loans are included.

three months past due, and restructured loans (i.e., loans that have relaxed conditions). Note that loans clearly headed for trouble, but technically still performing, do not need to be included. Nonfinancial SPCs must disclose only loans that are past due more than six months; They hold 6.4 percent of the bad loans in the table.

In determining underreserving, we assume 100 percent of reported bad loans will be lost eventually. The 100 percent loss rate may seem extreme, but the late 1990s experience of private sector banks shows this actually is a rather conservative assumption. At the end of March 1996, the first time that all banks in the private sector disclosed risk-management loans, the total was ¥28.5 trillion. Disposal of bad loans cost banks ¥34.7 trillion in the following three years. Despite writing off 122 percent of the starting level, total risk-management loans at the end of March 1999 stood at ¥29.6 trillion, slightly higher than the initial level! This suggests risk-management loans at the end of March 1996 were severely underreported. It seems reasonable to expect a similar magnitude of underreporting by FILP agencies.

Of the twenty-six agencies covered, only five have reserves equal to or in excess of their bad loans. For the twenty-one agencies that are underreserved, estimated underreserving is ¥3.2 trillion. One agency, Japan Finance Corporation for Municipal Enterprises (JFM), does not have any loan loss reserves on its balance sheet, but it should (box 2.2). Total un-

Box 2.2

Table 2.6 and supplemental table 3 do not list JFM, which raises fund by issuing government-guaranteed bonds and lends to local governments and public corporations owned by local governments, because it claims to have no risk management loans. Because we have budget data for local governments, we could estimate JFM underreservation in the same way we estimate expected losses on FILP funds lent to local governments. The details are reported later, but the calculation suggests that ¥5,072.5 billion of JFM loans is likely to be uncollectible, and thus the amount of underreservation also is ¥5,072.5 billion.

derreserving including JFM reaches ¥8.3 trillion. Table 2.6 summarizes loan loss reserves and reserves as a percentage of bad loans.

2.5 Valuation of Physical Assets

The value of physical assets reported on balance sheets of SPCs may not reflect the true value of the assets, primarily because they are not properly depreciated, and also because assets are not marked-to-market.

When book value (original cost) is used for land purchased a long time ago, its actual value can be significantly understated. On the other hand, if a corporation has assets that have lost value (such as land purchased in the late 1980s), book value may overstate the true value.

Improper depreciation of physical assets is a more serious problem and it tends to overstate the level of existing assets. For example, Iwamoto (1998a, 166) reports that Japan Highway Public Corporation is allowed to (and actually does) accumulate reserves for depreciation out of profits whenever it feels it is convenient, rather than charging depreciation every year. Hence the assets figures on its balance sheet are gross capital numbers, which include past depreciation. To get net numbers, one has to subtract cumulative reserves (for future redemption of loans) from the capital. Capital calculated in this way still suffers from the problem of underreporting of depreciation, because the corporation charges depreciation only when a sufficient amount of profit is realized.

2.5.1 Revaluing Assets

For twelve corporations that carry large amounts of physical assets on their books, we have revalued their assets to reflect market value changes and proper depreciation. All are involved in urban development or providing infrastructure.

Comparing the amounts reported on their original balance sheets to those reported in their administrative cost statements, some public corporations adjusted their assets figures substantially downward. Still, our calculations suggest the official numbers remain overstated for many agencies, and the level of misvaluation varies significantly. For the eleven with overvaluations, the total is ¥11.4 trillion.[4]

2.6 Future Losses

In addition to the losses already incurred, some FILP agencies are expected to generate more financial losses if they continue to operate. Carefully estimating the size of such future losses is beyond the scope of this chapter. Instead, we rely on the policy cost analysis conducted by each FILP agency.

The analysis, which calculates a present discounted value of estimated government subsidies needed to cover the difference between revenues from FILP projects and their costs, started in fiscal 1999. That year, the analysis was applied to five agencies. In fiscal 2000, coverage was extended to fourteen agencies, and with fiscal 2001, all thirty-three agencies that receive new funds from the FILP were required to publish a policy cost analysis. Kikkawa, Sakai, and Miyagawa (2000) have found that the published policy cost analyses often seriously overestimate future revenues, and hence underestimate the policy cost. Thus, the published data should be taken as a lower bound for expected future losses.

Projects are expected to generate more revenue than costs at five agencies. For the twenty-eight agencies expecting policy costs, the total as of March 2001 is ¥11.7 trillion; for all thirty-three agencies the projected cost is ¥11.4 trillion. (The estimate made by each agency is in table 2.5 column [3].)

2.7 FILP Agency Losses

Table 2.8 summarizes and totals the financial losses revealed by our analysis in the previous sections. At March 2001, for the thirty-four FILP agencies for which we estimate losses the total was ¥31.0 trillion. These losses reduce the agencies' net capital, in some cases giving them negative net capital.

Our analysis finds twenty FILP agencies that are insolvent (have negative net capital) including projected policy costs. Of these, nine are admit-

4. The Supplemental Appendix A describes the revaluation method in detail and discusses the depreciation rates and land price series used for each corporation. Data are in supplemental table 4. These are available on our web sites and the NBER web site. Two other agencies report significant physical assets, but we are unable to revalue their assets because changes in accounting rules in 1986 prevent a consistent time series.

Table 2.7 **Government Capital and Public Funds Already Lost, 31 March 2001 (¥ billions)**

Government capital		Public loss of			
%[a]	¥[b]	Original Capital[c]	Other[d]	Total	Agency
			Government Financial Institutions		
100.0	166.2	166.2*	1,390.6	1,566.8	Government Housing Loan Corp.
100.0	321.9	321.9*	724.6	1,046.5	National Life Finance Corp.
100.0	410.9	410.9*	112.8	523.7	Japan Finance Corp. for Small Business
100.0	311.1	311.1*	403.7	714.8	Agriculture Forestry & Fisheries Finance Corp.
100.0	16.6	16.6*	3,757.1	3,773.7	Japan Finance Corp. for Municipal Enterprises
100.0	63.2	63.2*	90.2	153.4	Okinawa Development Finance Corp.
100.0	1,039.4	0.0	0.0	0.0	Development Bank of Japan
100.0	6,986.2	652.3	0.0	652.3	Japan Bank for International Cooperation
			Special Public Corporations		
99.3	683.0	683.0*	2,056.5	2,739.5	Urban Development Corp.
100.0	1,075.4	1,075.4*	1,175.1	2,250.5	Pension Welfare Service Public Corp.
100.0	2,118.4	620.2	0.0	620.2	Employment & Human Resources Development Org.
78.8	15.6	15.6*	217.5	233.1	Japan Environment Corp.
53.4	31.0	0.0	0.0	0.0	Teito Rapid Transit Authority
100.0	135.8	85.0	0.0	85.0	Japan Regional Development Corp.
55.4	1.5	1.5*	119.1	120.6	Japan Sewage Works Agency
100.0	292.6	80.6	0.0	80.6	Social Welfare & Medical Service Corp.
100.0	723.1	371.9	0.0	371.9	Labor Welfare Corp.
95.4	51.5	30.9	0.0	30.9	Org. for Pharmaceutical Safety & Research
100.0	48.7	0.0	0.0	0.0	Promotion & Mutual Aid Corp. for Private Schools of Japan
100.0	3.7	3.7*	192.4	196.1	Japan Scholarship Foundation
99.9	1,257.7	110.2	0.0	110.2	Japan Small & Medium Enterprise Corp.
100.0	675.9	675.9*	688.3	1,364.2	Japan Green Resources Corp.
100.0	132.6	29.9	0.0	29.9	Japan Intl Cooperation Agency
92.8	70.3	49.6	0.0	49.6	Bio-oriented Technology Research Advancement Institution
100.0	1,980.1	1,980.1*	1,797.5	3,777.6	Japan Highway Public Corp.
50.0	298.5	298.5*	483.6	782.1	Metropolitan Expressway Public Corp.
50.0	235.1	235.1*	559.4	794.5	Hanshin Expressway Public Corp.

67.5	516.9	516.9*	1,902.0	2,418.9	Honshu-Shikoku Bridge Authority
99.5	64.2	64.2*	3,201.2	3,265.4	Japan Railway Construction Public Corp.
100.0	284.7	158.4	0.0	158.4	New Tokyo International Airport Authority
88.1	20.8	0.0	0.0	0.0	Corp. for Advanced Transport & Technology
99.1	382.5	217.9	0.0	217.9	Telecommunications Advancement Org. of Japan
100.0	2.4	2.4*	657.1	659.5	Water Resources Development Public Corp.
63.1	7.2	3.0	0.0	3.0	Fund for Promotion & Development of the Amami Isles
100.0	23.7	0.3	0.0	0.3	Metal Mining Agency of Japan
84.9	1,636.8	1,636.8*	449.5	2,086.3	Japan National Oil Corp.
99.98	548.3	384.7	0.0	384.7	Japan Science & Technology Corp.
96.9	319.9	265.9	0.0	265.9	Information-Technology Promotion Agency
94.5	305.6	252.2	0.0	252.2	Japan Key Technology Center
56.7	57.6	1.0	0.0	1.0	Industrial Structure Improvement Fund
72.4	9.5	0.2	0.0	0.2	New Energy & Industrial Technology Development
100.0	442.2	442.2*	3,489.0	3,931.2	Postal Life Insurance Welfare Corp.
			Special Firms		
79.8	394.1	6.3	0.0	6.3	Shoko Chukin Bank
66.7	394.7	116.6	0.0	116.6	Kansai International Airport Co. Ltd.
		12,358.4	23,467.2	35,825.6	Totals

Note: Not all institutions with government capital contributions are FILP agencies. This table covers only FILP agencies.

[a]Government's percentage share of paid-in (contributed) capital.

[b]Amount of government contribution on the agency's balance sheet. This includes any contributions through the Industrial Investment Special Account (IISA), which are included in the formal FILP plan, as well as 95 contributions directly from the general account and from other special accounts, which are not included in the FILP plan.

[c]Government's loss of its original capital. If net capital (table 2.5, column [6]) is negative (as is the case for twenty agencies), all the government contribution to the corporation is considered lost. These cases are indicated by an *. If net capital is positive but smaller than the government contribution (as is the case for twenty agencies), the net loss is the amount by which the government's share of net capital is less than its contribution (column [4]). The government's share of net capital is column (1) (as a decimal) multiplied by table 2.5, column (6). In seven cases, the government did not provide 100 percent of capital.

[d]Government's share of losses that exceed its original capital contribution. The assumption is that all loans to insolvent FILP recipients eventually will be taken over by the government (as has already happened for the former JNR), while nongovernmental contributors of capital will lose no more than their original capital. For insolvent corporations (marked with *), the additional loss is the amount of negative net capital from table 2.5, column (6). For solvent corporations, it is zero.

Table 2.8 Total Financial Losses of FILP Agencies with Losses, 31 March 2001 (¥ billions)

Number of Agencies with Each type of Loss	Amount of Loss	Source of Loss
22	8,251	Underreserving of bad loans
11	11,357	Overvaluing of assets
28	11,657	Policy costs
3	–228	Policy gains offsetting other losses
34	31,037	Total

Source: Table 2.5, which gives data by agency.

Note: The total amount (¥31.0 trillion) is about 6 percent of GDP.

tedly insolvent (have negative capital on their administrative statements), and another eleven are shown to be insolvent after adjustments for the accounting problems we have outlined. Data are in table 2.5.

The twenty insolvent agencies represent more than 60 percent (¥217 trillion) of net FILP fund loans. Not all of the bad loans have been, or will be, truly lost to the FILP. Indeed, because the borrowers are all government or quasi-governmental institutions, we expect all FILP loans to be paid in full eventually. Taxpayer money will be used if necessary, as has already happened for the former JNR. That means the funds the agencies receive to pay back FILP loans should be considered a cost of the FILP, one that will be borne by future taxpayers.

Thus, a comprehensive approach to the FILP's cost to the public is to estimate what it would take to bail-out all FILP agencies. This involves computing the amount of capital originally contributed by the government that has already been lost and the cumulative losses that exceed the government's original capital. Data for forty-four agencies are in table 2.7.

The government has lost all or part of its capital in forty agencies, a total of almost ¥12.4 trillion. Losses that exceed original capital add another ¥23.4 trillion, for a total loss of ¥35.8 trillion.

2.8 Local Governments

Of ¥357 trillion of net FILP funds outstanding at the end of March 2001, ¥87 trillion (24.4 percent) were loans directly to local governments and public enterprises owned by local governments. These entities also borrow from the JFM, which is a large recipient of FILP funds. Thus, the solvency of local governments is an important determinant of the financial health of the FILP.

The amount of FILP loans to local governments each year is determined in a process that is led by the Ministry of Public Management, Home Affairs, Posts and Telecommunications (Ministry of Home Affairs before the government restructuring in January 2001). The process requires any local government planning a bond issue to obtain the Ministry's permission in advance. When permission is granted, the Ministry also decides how much of the bonds will be bought by the TFB Fund and Postal Life Insurance Fund.

There is no mechanism ensuring FILP loans go only to financially healthy entities. Indeed, loans are routinely used by the Ministry to distribute funds to financially troubled local governments and may even be skewed toward such governments. Doi (2002) found that a local government that depends heavily on FILP loans tends to have low tax revenues and a large amount of local-allocation tax grants (lump-sum grants distributed by the central government to make up for shortages in local tax revenues.)

Thus, one would suspect that many local governments with high debts are servicing the debts using funds provided by the central government. If this is the case, we would find a substantial amount of nonperforming FILP loans to local governments.

Local governments are not required to prepare balance sheets, which prevents us from applying the approach used for FILP agencies. So, in this section, we focus on the ability for a local government to pay off its current outstanding bonds.

2.8.1 Local Government Solvency and Losses

For each local government, we calculate debt capacity defined as the present discounted value of future expected primary surpluses (revenues minus noninterest expenditures). If the current local government debt exceeds the calculated debt capacity, we conclude the local government is de facto insolvent.

Budget data for fiscal 1997 through 2000 are used. A lack of budget data prevents including public enterprises owned by local governments. Thus, the estimates reported are a lower bound for the losses expected in FILP loans to local governments and local public enterprises. We start by estimating future primary surpluses for each local government, using six different scenarios.

Estimating Procedure

Letting S_i denote the expected primary surplus for the local government i, we can calculate the debt capacity of the government, denoted by B_i^*, as

$$B_i^* = \max\left\{\frac{S_i}{r}, 0\right\}, \tag{1}$$

where r is the constant discount rate, assumed to be 4 percent. Note that we assume debt capacity cannot be below zero. Thus, if a local government runs a primary deficit, its debt capacity is defined as zero.

By comparing B_i^* to the outstanding debt as of the end of March 2001, denoted by $B_{i,2001}$, we can calculate the amount of debt that is not likely to be paid off. Let us define $DF_{i,2000}$ as

$$DF_{i,2001} = \max\{B_{i,2000} - B_i^*, 0\}. \tag{2}$$

If $DF_{i,2000}$ is strictly positive, we say the local government is de facto insolvent and the size of $DF_{i,2000}$ shows the magnitude of insolvency. The result, of course, depends critically on the estimated level of S_i.

The Scenarios

In the baseline case (scenario 1), we assume this is constant and equal to the simple average of the primary surpluses in fiscal 1997–2000.

Because we estimate the future primary surplus from data for four years when the economy was stagnating (April 1997 through March 2001), it might be lower than the long-run level after the economy recovers. To address this, we consider scenario 2, which assumes general revenue (tax revenue, local transfer taxes, and local-allocation tax) jumps 20 percent in the first year and stays there.

Another assumption in the baseline case is that the future primary surplus does not grow. Scenario 3 considers an alternative where the surplus grows 2 percent each year.

In the first three scenarios, we assume the local governments can continue to rely on local-allocation tax grants from the central government. That system, however, is likely to change in the near future. Its overhaul is an important part of the fiscal decentralization that the government has been deliberating since the mid 1990s.

A Decentralization Promotion Committee was created within the Prime Minister's Office in 1995, and started drafting a decentralization plan. The committee published its final report in June 2001. On the issue of local-allocation tax grants, the committee argues that there should be a transfer of tax bases from the central government to local governments to improve the fiscal condition of local governments and that the local-allocation tax grants should be reduced so that the transfer of tax bases is neutral to the total tax revenue of the central and local governments (see Decentralization Promotion Committee 2001, chap. 3, section 1).

In scenarios 4, 5, and 6, we consider the case where the tax base for local-allocation tax grants is assumed to be transferred to local governments according to the current size of their own tax revenues, and local-allocation tax grants become zero. Scenario 4 assumes the expected future primary surplus is given by the average for fiscal 1997–2000. Scenario 5 assumes general tax revenue increases 20 percent in the first year and then stays constant. Scenario 6 assumes the future primary surplus grows 2 percent annually.

Results

Table 2.9 summarizes the results of our calculation. At the end of fiscal 2000, total debts outstanding for forty-seven prefectures, 693 cities (and wards in Tokyo), and 2,557 towns and villages amounted to ¥125.5 trillion, of which ¥55.0 trillion was owed to the FILP fund and ¥8.2 trillion was owed to the JFM. These are amounts in the ordinary accounts of local governments, and do not include debts in enterprise accounts and of public corporations owned by the local governments.

Table 2.9 Expected Insolvency of Local Governments, 31 March 2001 (¥ billions)

Source of Funds			Borrower, By Type			
JFM[a]	FILP	Total[b]	Prefectures	Cities & Wards	Towns & Villages	
n.a.	n.a.	n.a.	47	693	2,557	Number
8,246.4	54,999.5	n.a.	n.a.	n.a.	n.a.	Total loaned
n.a.	n.a.	124,760.7	72,326.3	41,831.4	10,603.0	Total debt[b]
			Loans to Insolvent Entities[c]			
						Scenario
6,160.4	42,331.1[d]	105,775.5	69,546.4	29,767.3	6,461.8	1
1,443.6	10,964.1	30,150.5	25,622.9	3,665.3	862.2	2
5,207.6	36,199.1	94,659.8	66,656.9	23,244.4	4,758.5	3
5,803.0	39,553.1	85,463.4	52,475.8	22,737.7	10,249.9	4
4,389.8	31,785.9	64,891.2	46,115.2	9,135.7	9,640.2	5
5,718.6	39,171.5	84,762.0	52,475.8	22,158.7	10,127.4	6
			Expected Default[e]			
5,072.5	35,201.8[f]	89,517.4	61,862.5	22,633.4	5,021.5	1
462.7	3,494.4	9,374.4	5,943.1	2,929.2	502.1	2
4,397.3	30,317.1	76,342.5	53,983.2	18,316.4	4,042.8	3
5,679.1	38,925.9	84,282.2	52,475.8	21,558.1	10,248.2	4
4,263.1	31,178.8	63,617.2	46,089.4	7,931.4	9,596.3	5
5,582.8	38,384.2	83,118.6	52,475.8	20,472.1	10,170.7	6

Source: Authors' calculations.

Note: The scenarios are explained in the text. The analysis excludes local public enterprises because of a lack of data. These enterprises have losses, so the estimates here are lower bounds. n.a. = not applicable.

[a]JFM is the Japan Finance Corporation for Municipal Enterprises.

[b]Total debt outstanding, defined as local bonds plus contract-authorized liabilities minus reserve minus net excess of revenue at the end of fiscal year 2000.

[c]Sum of the debts of insolvent local governments, where insolvency is defined as debts exceeding debt capacity. Debt capacity is the present discounted value of the expected level of primary surplus, as explained in the text. A 4 percent discount rate is assumed.

[d]Value for "Loans to Insolvent local goverments" used in table 2.10.

[e]Sum of the differences between total debts and debt capacities under each scenario. The seniority of FILP and JFM loans are assumed to be the same as other liabilities.

[f]Value for "Expected Default of local government debt" used in table 2.11.

If the current system of local-allocation tax grants continues and if the primary surpluses of local governments do not improve (scenario 1, the baseline case), the current level of local debts is estimated to exceed the debt capacity for all forty-seven prefectures, 326 out of 693 cities, and 1,240 of 2,557 towns and villages. The total size of the insolvency is ¥89.5 trillion. In other words, these entities have borrowed almost ¥90 trillion more than we expect them to be able to repay based on their current tax and spending patterns. Assuming that the insolvency is addressed by defaulting on the loans (rather than raising taxes or cutting spending) and that FILP loans and JFM loans have the same seniority as other debts, 64 percent (¥35.2 trillion) of the outstanding FILP loans to local governments and 62 percent (¥5.1 trillion) of the outstanding JFM loans to local governments will be defaulted.

When we assume the system of local-allocation tax grants is decentralized (scenario 4), debt capacity improves for some prefectures and cities, while the capacity of many towns and villages declines. This is because the current allocation of tax grants is skewed in favor of financially poor local governments, which include many towns and villages.

Scenarios 2 and 5, which assume an economic recovery that increases general revenue 20 percent, of course produce much smaller losses. Comparing scenarios 2 and 5 suggests that the increased debt capacity of local governments in scenario 2 mostly results from increased local-allocation tax grants at local governments already receiving disproportionately large allocations. When the system of grants is decentralized (scenario 5), these governments lose the extra-large allocations. The result suggests that many such local governments would not be able to meet the debt payments without redistribution through grants at the current level.

Scenarios 3 and 6, which have 2 percent annual growth in the primary surplus, see enhanced debt capacities of some local governments, but the expected amount of insolvency are not much different from the baselines (scenarios 1 and 4).

2.9 Overall Cost to Taxpayers

Table 2.10 summarizes total bad loans. Of the ¥357 trillion of net FILP funds, 75 percent (¥267 trillion) can be considered bad loans.

Our estimate of the total cost to taxpayers to bail-out and recapitalize public corporations, cover local-government defaults, and retire former JNR–related debt is ¥78.3 trillion, which amounts to over 15 percent of fiscal 2000 GDP (table 2.11). As discussed previously, we consider this a lower bound.

2.10 Fundamental Reform

A government study in the late 1990s found three shortcomings in the FILP that have motivated change (Ministry of Finance 2001, 24). First, the

Table 2.10 Bad Loans in the FILP, 31 March 2001 (¥ trillions)

Amount	Borrower
7.3	JNR-related debt (box 2.1)
217.0	Insolvent agencies[a]
42.3	Insolvent local governments (table 2.9)
266.6	Total

[a]Insolvent agencies (that is, agencies with negative net capital) are listed in table 2.5. Their debt is included with their entries in supplement table 1, which is available on our web sites and the NBER web site (see table 2.3).

Table 2.11 Expected Cost to Taxpayers, 31 March 2001 (¥ trillions)

Amount	Source
7.3	JNR-related debt (box 2.1)
35.8	Cost to restore capital of FILP agencies (table 2.7), composed of
12.4	Lost original capital
23.5	Cumulative operating losses in excess of original capital
35.2	Expected default of local government debt (table 2.9)
78.3	Total

Note: The cost to restore capital of FILP agencies (¥35.8 trillion) in this table differs from the total financial losses reported in table 5.8 (¥31.0 trillion) because the figure in this table includes the losses that are already reported on the agencies' original balance sheets even before we estimate the additional losses in table 2.8.

TFB, which handled all the deposits from postal savings and pension reserves, may have become too big to be efficient. Second, too much consideration for TFB depositors (that is, the pension funds and postal savings) may have been keeping the cost of FILP funds too high. Third, the opaque nature of the FILP's subsidy component may have been hiding substantial future burdens on taxpayers.

To address these issues, effective 1 April 2001, the FILP went through a fundamental reform. Figure 2.2 shows how the FILP system will look when the transition is complete.

The TFB has been abolished. Its personnel and assets have been inherited by the Fiscal Loan Fund (FLF). Postal savings and pension reserves are not automatically deposited into the FLF. Instead, the funds are invested in the financial market at the discretion of the postal savings and pension systems, as was the case already for a small share of the funds.

The way FILP agencies raise their funds also has changed. Under the new FILP, the agencies raise funds in three ways. The preferred way is for an agency to issue its own bonds in the financial market. The Framework of the Fundamental Reform declares that each agency should "make utmost effort to issue FILP agency bonds" (Ministry of Finance 2001, 28).

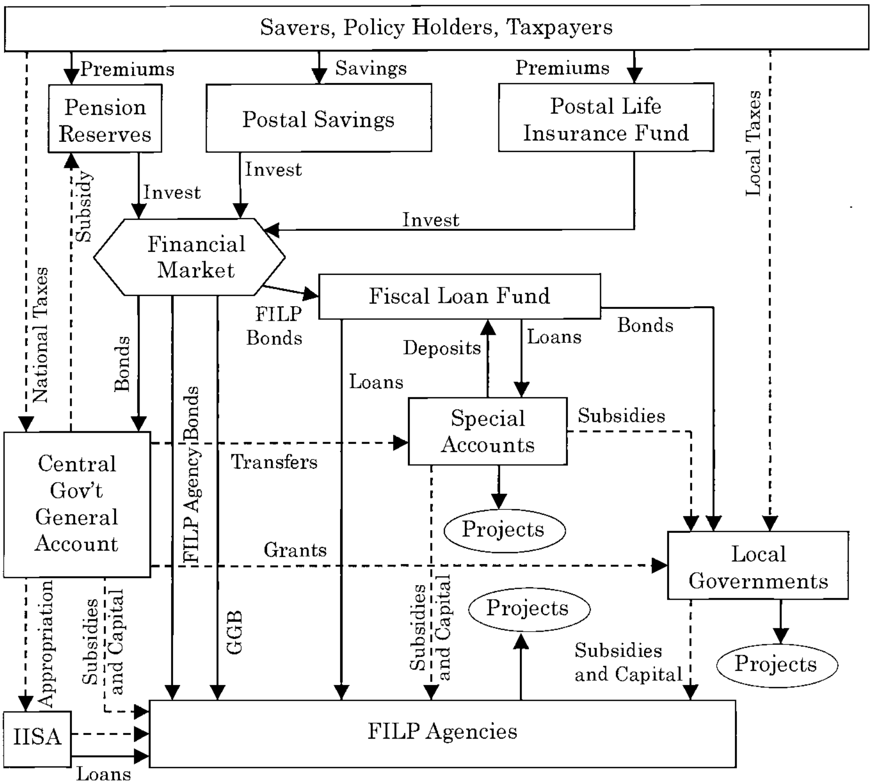

Fig. 2.2 Structure of the new FILP after April 2001

Note: A box represents a sector or an institution involved in the FILP. The arrows indicate the direction of the movement of funds, with solid lines indicating financial transactions and broken lines being fiscal transfers. The postal savings and the postal life insurance fund plan to buy bonds directly from local governments, because most of the local governments would have trouble floating their bonds in the market. The purchases of local bonds are not included in this figure.

Agencies not healthy enough to place bonds in the open market will be allowed to issue bonds with a government guarantee. Finally, agencies can tap funds raised collectively through the issuance of FILP bonds by the FLF.

2.10.1 Intended Results of the Reform

Use of FILP agency bonds rather than TFB funds can potentially eliminate the problem of fund costs, if some FILP agencies can issue bonds at lower yields than they have been paying the TFB for funds.

Nontransparency is addressed by requiring further disclosure of FILP agencies and the FILP system as a whole. Two specific measures have been implemented.

First, starting with fiscal 1999, the government began calculating the policy cost for each FILP agency and publishing the result. Policy cost is defined as the present discounted value of the stream of net transfers from the government to an agency. This measure reveals the expected cost to the government (thus, taxpayers) to sustaining operation of an agency.

Second, in June 2001, the Fiscal System Council of the Ministry of Finance came up with a recommendation on accounting disclosures for SPCs. As a result, all SPCs (many of which are FILP agencies) were required to publish "administrative cost statements" for fiscal 2000 by the end of September 2001. These are discussed in the next section.

2.10.2 Administrative Cost Statements

SPCs are required to publish balance sheets and income statements using the accounting standards of private sector firms beginning with the fiscal 2000 (which ended March 2001). The opportunity cost of government funds used as capital for the agency also is calculated. Adding that to the loss shown on the income statement yields the "administrative cost statement" (*gyosei cost keisansho*). (The importance of including the opportunity cost of government funds was first pointed out by Fukao 1998.)

The statements are supposed to be free from the accounting problems identified in earlier sections. For example, the Fiscal System Council's guideline requires SPCs to adjust depreciable assets for depreciation. They also require government financial institutions (but not SPCs) to disclose nonperforming loans using the same criteria as private sector financial institutions.

Although the reform was launched on 1 April 2001, implementation is planned to be gradual and many transitional measures are provided. For example, postal savings and the pension reserves are committed to buy a substantial amount of FILP bonds until the market for the bonds fully develops. Moreover, the postal savings and the postal life insurance fund plan to buy bonds directly from local governments, because most local governments would have trouble floating bonds in the market. Thus, the discretion that the postal savings and other funds are supposed to enjoy is seriously limited during the transition period.

2.10.3 Actual Substantive Change is Not Assured

A comparison of the old and new systems reveals the possibility that, the government's claim that the reform is fundamental notwithstanding, the new system may in practice not differ substantially from the old after all. It is possible for the new system to replicate the financial flows of the old system even after the transitional measures expire. For example, postal savings may continue to buy FILP bonds, and FILP agencies may continue to borrow from the FLF. Then, although the name of the intermediary is different, the flow of funds would be exactly the same as under the old system. Moreover, local governments will not be required to issue bonds in the financial market and can continue to depend on the FLF.[5]

The introduction of FILP agency bonds, which are supposed to be without government guarantees, may not change the situation much, either. The market may continue to believe FILP agency bonds are implicitly guaranteed by the government. Wallison (2001) makes an interesting comparison between FILP agency bonds and bonds issued by government-sponsored enterprises (GSEs), such as Federal National Mortgage Association (FNMA, or Fannie Mae) in the United States. He points out that even though U.S. legislation explicitly states that Fannie Mae securities are not government guaranteed, yields on its securities are only slightly higher than on U.S. Treasury bonds. Thus, he is skeptical of the idea of market discipline from FILP agency bonds.

2.11 Effects of Reform

Reform does not change losses that the FILP has already sustained, but it may prevent FILP agencies from accumulating further losses. After the reform, public corporations are supposed to raise funds from the financial market. The postal savings and pension reserve funds, which used to fund them automatically through the TFB now can invest in the financial market, without necessarily buying the FILP bonds or FILP agency bonds.

The changes are intended to expose public corporations to market monitoring. A loss-accumulating corporation may have difficulty raising funds and may be forced to restructure its operation. Or, the central government may be forced to subsidize a corporation explicitly so that it can continue its loss-making but socially beneficial activities.

Writing fourteen months from the start of the reform, we can examine some early data to see whether the reform looks promising. First, we look at how uses of postal savings funds and the sources of funds used by FILP agencies have changed. Second, we study the secondary market pricing of the limited number of FILP agency bonds being traded.

2.11.1 Flow of Funds

Financial flows in the FILP need to change substantially to make FILP agencies subject to the market discipline. However, the reform may not necessarily change the flow of funds: If the postal savings system chooses to buy FILP agency bonds, FILP bonds, and local government bonds, flows in the reformed FILP will replicate those of the old FILP.

Table 2.12 shows planned uses of postal savings funds for the first two

5. Several local governments—including Tokyo Metropolitan and Osaka City—were issuing bonds in the financial market before the reform. However, the amount of outstanding local bonds so issued is a little less than 10 percent of total local bonds outstanding. In the first year since the reform, the issuance amount has hardly changed.

Table 2.12 **Sources and Uses of New Postal Savings Funds (¥ billions)**

FY 2001[a]	FY 2002[b]	
		Sources of Funds
32,297	23,723	Matured TFB deposits
8,223	15,393	Other[c]
–16,019	–3,848	Reduction in deposits[d]
24,501	35,267	Total
		Uses of Funds
15,800	13,600	FILP bonds
1,200	7,950	Other JGB[e]
450	450	Public corporation bonds
550	550	Local government bonds
1,000	980	Local government loans
934	713	Loans to depositors
400	400	Corporate bonds
50	50	Foreign bonds
750	2,350	Money trust[f]
3,367	8,224	Short-term securities

Sources: Ministry of Posts and Telecommunications (2000) and Postal Services Agency (2001).
[a]Fiscal year ending 31 March 2002.
[b]Fiscal year ending 31 March 2003.
[c]Income from the investments made by postal savings on its own account.
[d]Expected net withdrawals by depositors in the postal savings system.
[e]Japanese government bonds.
[f]This relates to the Postal Life Insurance Welfare Corp.

Table 2.13 **Use of FILP Agency Bonds (¥ billions)**

FY 2001	FY 2002	
22,759	1,749	New FILP loans[a]
1,006	2,487	New issues of FILP agency bonds
4.4	14.3	Agency bonds as % of loans

Source: Ministry of Finance (2002a).
[a]Does not include loans to the central government or to local governments. FY = fiscal year.

years after the FILP reform (fiscal 2001 and 2002). There are no substantial changes: The majority of available funds are to be invested in the FILP and most of the rest is to be invested much as it was by the TFB. The optimistic interpretation is that the allocation of postal savings so far has been heavily constrained by transitional measures that require postal savings to absorb a substantial amount of FILP bonds.

The sources of funds for FILP agencies also show little change. Table 2.13 gives the amount of the FILP loans to public corporations in the FILP plans for fiscal 2001 and 2002 and compares those to the size of FILP agency bond issues. The introduction of FILP agency bonds is perhaps the most important aspect of the reform, but they have not become a major source of funds. Although for fiscal 2002 the ratio of bonds to loans is planned to slightly exceed 14 percent, it will take a long time for the total outstanding amount of bonds to approach the level of loans.

2.12 The Market's View of Agency Bonds

A key question is whether the market sees these bonds as having implicit government guarantees. If it does, market discipline will be absent, as there is no incentive to monitor and evaluate the agencies. To find the market's view, this section looks at ratings and spreads between agency bonds and JGBs.

2.12.1 Ratings

Table 2.14 shows the bond ratings for FILP agencies granted by major rating agencies. Tokyo-based R&I (Rating & Investment Information Inc.) has the most extensive coverage of the three major rating agencies, assessing bonds issued by fifteen FILP agencies. The Japanese branches of Moody's and Standard & Poors rate far fewer, and add only two. Thus, seventeen FILP agencies are rated by at least one rating agency.

The R&I seems to distinguish among FILP agencies, and this suggests it

Table 2.14 **Ratings of FILP Agency Bonds (May 2002)**

S&P	Moody	R&I	Agency
AA–	Aa1	AAA	Japanese government bonds (JGB)
AA–	Aa1	AAA	Japan Finance Corp. for Municipal Enterprises
AA–	Aa1	AAA	Development Bank of Japan
AA–	Aa1	AAA	Japan Bank for International Cooperation
A+	Aa1	n.a.	Japan Highway Public Corp.
n.a.	Aa3	n.a.	Hanshin Expressway Public Corp.
n.a.	n.a.	AA+	Japan Finance Corp. for Small Business
n.a.	n.a.	AA+	National Life Finance Corp.
n.a.	n.a.	AA	Agriculture, Forestry & Fisheries Finance Corp.
n.a.	n.a.	AA	Japan Railway Construction Public Corp.
n.a.	n.a.	AA	Metropolitan Expressway Public Corp.
n.a.	n.a.	AA	Promotion & Mutual Aid Corp. for Private Schools
n.a.	n.a.	AA	Social Welfare & Medical Service Corp.
n.a.	n.a.	AA	Water Resources Development Public Corp.
n.a.	n.a.	AA–	Corp. for Advanced Transport & Technology
n.a.	n.a.	AA–	Japan Scholarship Foundation
n.a.	n.a.	AA–	New Tokyo International Airport Authority
n.a.	n.a.	A+	Urban Development Corp.

Sources: Moody's Japan (http://www.moodys.co.jp), Standard & Poor's (http://www.standardpoors.com/japan). Rating & Investment Information (R&I; http://www.r-i.co.jp).

does not see all the bonds as government guaranteed. Three government financial institutions are rated as high as Japanese government bonds (JGBs) were in May 2002. Most of the fourteen others were one notch below. Moody's and S&P rank the same three agencies on par with JGBs, as does R&I. The numbers of FILP agencies that Moody's and S&P rate are so small that it is hard to judge if they are carefully distinguishing between FILP agency bonds issued by different agencies.

2.12.2 Spreads

By comparing yields on FILP agency bonds to those on JGBs or government-guaranteed bonds (also issued by public corporations), we can see if the market views FILP agency bonds as implicitly guaranteed. As of May 2002, twenty-eight bonds issued by seventeen FILP agencies have sufficient secondary-market data.

Figure 2.3 plots the yields of FILP agency bonds and JGBs against maturities. Agency bonds are all above the yield curve of JGBs, with the premium exceeding 80 basis points for some issues. Thus, the market seems to view FILP agency bonds as significantly more risky than JGBs.

Figure 2.4 compares FILP agency bonds to government-guaranteed bonds (many issued by the agencies). The market clearly distinguishes FILP agency bonds from government-guaranteed bonds issued by the same agencies.

Looking at the yield spreads between the twenty-eight bonds and comparable JGBs shows substantial differences from one agency to another. The spreads for bonds issued by Japan Bank for International Cooperation (JBIC) and Development Bank of Japan, which are healthier than

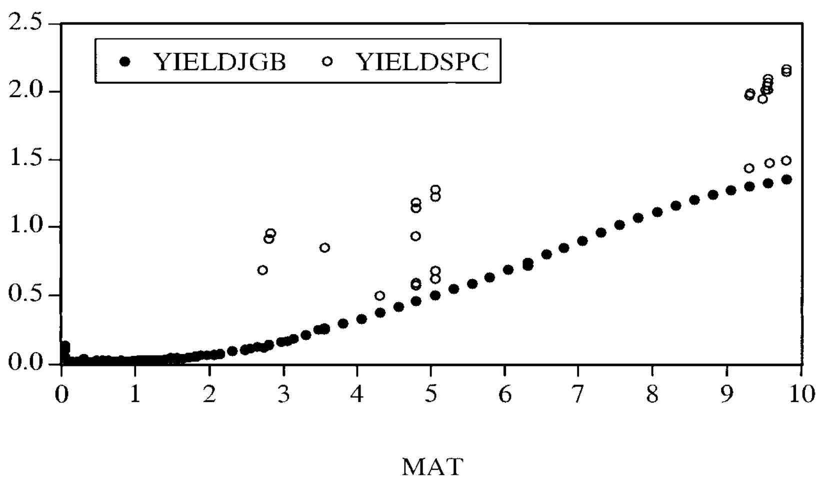

Fig. 2.3 Yields on FILP agency bonds and JGBs (%; 30 May 2002)

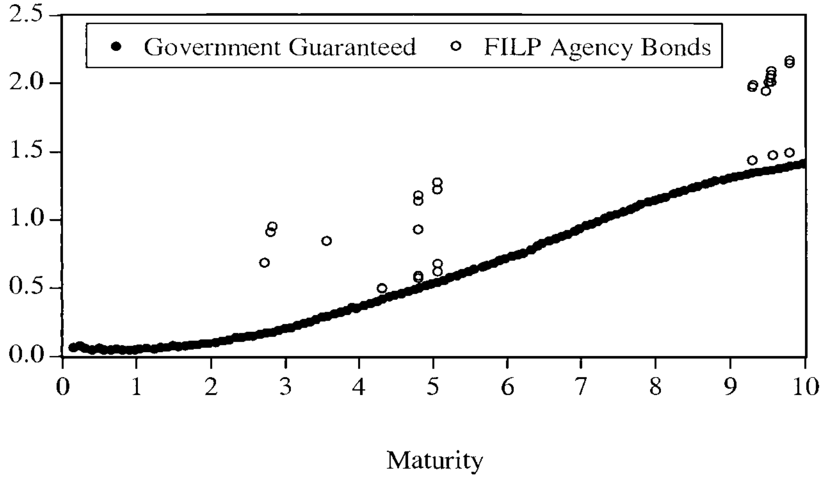

Fig. 2.4 Yields of FILP agency bonds and government-guaranteed public corporation bonds (%; 30 May 2002)

the other agencies in our analysis and are rated the same as JGBs by all three rating agencies, have been relatively small (11 to 14 basis points). Agencies with high estimated financial losses, tend to have high spreads (68 to 82 basis points). At 30 May 2002, Urban Development Corporation, lowest-rated of the agencies reviewed by R&I and de facto insolvent based on our accounting, had a spread of 77.7 basis points. The widest spread was 81.8 basis points for an unrated issue of Japan Regional Development Corporation, although it is solvent even after accounting adjustments.[6]

The gap between low-spread agencies and high-spread agencies seems to have widened after April 2002. This may suggest that the financial market for FILP agency bond is getting better at discriminating between bonds issued by different agencies.

Although the FILP reform talked about using FILP agency bonds as a device to apply market discipline on public corporations, it is not clear how that will work in the extreme. There is no transparent mechanism to deal with failures of public corporations and defaults of FILP agency bonds. Indeed, there is no legal procedure for closing a poorly performing public corporation.

Thus, although our review suggests an emergence of market signals on the quality of specific FILP agency bonds, it is not clear how useful this will be in improving the allocation of funds.

6. Supplemental table 5 provides data on the spreads of each issue. It is available on our web sites and the NBER web site. The Japan Securities Dealers Association our original source, posts secondary market quotes (in Japanese) on its web site: http://www.jsda.or.jp.

2.13 Conclusions

This chapter has examined the financial cost that FILP has imposed on taxpayers by studying the financial condition of recipients of FILP loans: mainly public corporations and local governments. Many FILP recipients are de facto insolvent. Of the ¥357 trillion of the net FILP funds, about ¥267 trillion is loaned to insolvent recipients. The cost to taxpayers to clean up the expected FILP loss is estimated to be at least ¥78 trillion, over 15 percent of 2001 GDP.

Together with the massive cost of cleaning up the financial sector (chap. 1 in this volume) and the increasing burden of the social security system (chap. 3 in this volume), the losses in the FILP constitute a serious impediment to recovery of the Japanese economy. To the extent that funds have been misallocated to projects with low returns or that losses have resulted from inefficient use of funds, this chapter provides evidence that the FILP has hurt economic growth, at least since the late 1990s.

Regarding the FILP reforms introduced in April 2001, we found the pattern of financial flows in the FILP has hardly changed. Some good news is that the financial market distinguishes FILP agency bonds from government-guaranteed bonds, which is essential if the use of FILP agency bonds is to introduce market discipline on their issuers. It is too early to tell, however, whether the bonds will be an effective disciplinary device.

2.13.1 Other Issues

There are four major issues about the FILP and its future that this chapter did not examine thoroughly. These are left for future research.

First, nothing is said about the welfare aspects of the FILP. If foregone opportunities from resource misallocation are taken into account, the welfare cost of the FILP might turn out to be even larger than our estimate of financial losses suggests. On the other hand, some loss-making agencies may be providing welfare-enhancing services that offset the financial losses. Examining welfare aspects of the FILP is an important future research topic.

Second, we relied on estimates of policy cost published by each FILP agency. As Kikkawa, Sakai, and Miyagawa (2000) show, for several FILP agencies, this most likely understates the true magnitude of the cost. Studies to improve the estimates of future losses are needed.

Third, empirical analysis of the new FILP is limited by the amount of data, because the new regime started just fourteen months ago. It is important to continue monitoring changes in the pattern of financial flows and development of the market for FILP agency bonds.

Finally, the lack of a clear mechanism to close down poorly performing public corporations is an important shortcoming of the 2001 FILP reform. Such a mechanism is a necessary condition for disciplining through FILP agency bonds. Absent a strong government commitment not to bail out public corporations, and a credible mechanism to prevent bail-outs, market discipline will not develop (see Iwamoto 1998b).

Such a mechanism is also necessary to deal with the losses that have already been incurred by the FILP. It is important to recognize the losses as soon as possible and to decide on the loss-sharing mechanism. Without a clear loss-sharing mechanism, negotiations between stakeholders will lead to delay. Delay increases the losses. Serious research on efficient closure rules for nonperforming FILP agencies is an urgent task.

Appendix

Literature Review

Good descriptions of the FILP and the postal savings system in English are Cargill and Yoshino (2000, 2003). Bayoumi (1998) is a nice introduction to the FILP and the Japanese fiscal system in general.

The FILP Report, an annual publication available on the Ministry of Finance's web site (http://www.mof.go.jp/english), is an official guide to the FILP. The description is often self-congratulatory, but it provides basic information.

Kikkawa, Sakai, and Miyagawa (2000) examine the financial health of selected FILP agencies. Their study focuses on the future expected cash flows of the agencies. They estimate the present value of the future losses (negative cash flows) of FILP agencies to be much higher than the estimates published by the Ministry of Finance. In this chapter, we do not estimate future cash flows for each agency. Instead, we use the Ministry of Finance estimates. The results in Kikkawa suggest that our estimates of total losses are most likely the lower bound of the true amount.

Wallison (2001) discusses the FILP reform of 2001 and argues that the attempt to rely on the market to discipline FILP agencies without privatizing them is likely to fail. Iwamoto (2002) argues that the reform has failed to force the government to reevaluate the role of SPCs and to close down the ones that have ceased to be useful.

In Japanese, a comprehensive survey of the huge body of research is provided by Iwamoto (2001). Most of it examines government financial institutions in the FILP, such as the JDB and the GHLC.

Matsuura (1990), Kono (1993), and Fukao (1998) are among several papers that seek to provide a comprehensive picture on how the FILP works. They carefully disentangle the complex flow of funds and subsidies among the central government, public corporations, and local governments in the FILP.

The work most closely related to this essay are Iwata (1998) and Doi and Mori (2003). Iwata finds serious undercapitalization, a substantial amount of bad loans, and significant underreporting of depreciation for selected FILP agencies. Doi and Mori find similar problems for a wider set of FILP agencies. This essay complements their analyses by using more recent data. Most importantly, we use the financial statements of public corporations based on private-sector accounting standards, which were first published 2001. The problems Iwata and Doi and Mori identified are still found even with supposedly better accounting.

Yoshida and Konishi (1996) was the first comprehensive analysis of the financial condition of the FILP agencies. Perhaps hindered by incomplete disclosure and improper accounting, they failed to recognize the serious financial problem hidden in the FILP. It is also possible that the magnitude of the problem was smaller then. In any case, using more recent data, we find much a larger problem than they did.

Higo (2001) provides a very useful description of the FILP reform of April 2001.

Noguchi and Sasaki (1999) examined yield spreads between government-guaranteed bonds and a few non–government-guaranteed bonds issued by FILP agencies before the 2001 FILP reform. They found the spreads were at most 15 basis points, suggesting the financial markets considered the bonds implicitly government-guaranteed. We find more substantial spreads between FILP agency bonds and government-guaranteed bonds since the FILP reform.

We go beyond a descriptive analysis of the reform and try to examine its impact empirically. This chapter also examines the financial health of local governments, something the works cited generally give little, if any, attention.

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