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STRATEGIC QUESTIONS FACING THE CZECH STATE FUND FOR THE ENVIRONMENT

ENVIRONMENTAL ACTION PROGRAMME SUPPORT PROJECT

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Lori Freer
Contracting Officer's Technical Representative

Prepared by:
Thomas Downing
Chemonics International Inc.

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EAPS Project • 1133 20th Street Northwest, Suite 600 • Washington, DC 20036 • Tel. (202) 955-3300 • Fax (202) 955-5574
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EXECUTIVE SUMMARY

In June and August 1995, the Environmental Action Program Support (EAPS) project commissioned a three-member team to assist the Czech State Fund for the Environment (the SFZP or the Fund) in strengthening its lending and financial-management practices. The team produced 14 separate reports, manuals, and models assessing long-range financial planning and modeling, credit analysis, collateral, cash forecasting, project financing, investment management, and training.

This report steps back from a detailed analysis of SFZP's management and administration and turns to several questions of strategy. Specifically:

- Could the SFZP, by reducing its subsidies, support a greater number of environmental improvements?
- Could a collaborative relationship with commercial banks help the SFZP to meet its environmental mandate more efficiently?
- How can the SFZP ensure that the investments it supports have economic, as well as environmental, merit?

Based on the above, this report concludes that:

- The SFZP could advance its environmental objectives by diminishing its subsidies and refining their form.
- The SFZP staff is probably too small to cope with the rising volume of loans, and collaboration with commercial banks could provide the needed extension of staff resources.
- A strategic alliance with commercial banks could accelerate the flow of capital to municipal infrastructure projects.
- Greater analytical focus on project economics (as distinct from the borrower's financial condition) could ensure the most efficient application of the SFZP's capital while enabling the SFZP to defend its funding decisions more effectively.

SECTION I

MOVING THE TERMS OF THE SFZP's ASSISTANCE TOWARD MARKET

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A. The Strategic Question

The financial support that the Czech State Fund for the Environment offers to municipalities, and to a lesser extent to businesses, is heavily subsidized. For each 100 crowns (Kc) the Fund disburses, it is repaid, on a present-value basis, only Kc 35. The remaining Kc 65 remains with the borrower or grantee as a subsidy.

This section addresses the question: *Could the SFZP, by reducing its subsidies, support a greater number of environmental improvements?*

We begin by describing the amount and the form of the subsidies the SFZP offers to its clients. We then explore the possible advantages of reducing these subsidies and offering assistance on terms more closely approximating market. Next, we provide guidelines on the effective delivery of subsidies. Finally, we explore several options for improving the form of the subsidies and reducing their amount.

Note that the question addressed here is whether a reduction in subsidies would advance the cause of environmental improvement, not whether it would benefit the SFZP. The objective of the SFPZ is not to conserve its own financial resources. Our question here is whether greater environmental improvement could be achieved by serving more clients and more projects, with each receiving a reduced level of subsidy.

B. The Subsidies Provided by the SFZP

B1. Forms of Subsidy

The SFZP's subsidy comes in a variety of forms:

Grants. Municipalities are offered outright grants for a portion of qualifying projects. In a typical case, the municipality receives a grant for 40 percent of the capital cost of the investment.

Interest-rate reduction. The Fund's loans to municipalities are typically interest-free.[1] For businesses, the interest rate is substantially below market (6 percent versus a market rate of 13 percent or more).

Grace period. A deferral of up to five years in repayment of the principal may be given to municipal borrowers. Three years is typical.

Accelerated disbursements. A considerable number of municipal borrowers are allowed to draw down their principal in advance of the dates scheduled.

Reschedulings. Borrowers with difficulty meeting repayment obligations are sometimes permitted to reschedule (i.e., delay) their payments.

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[1] The Fund does have the right to establish a nominal rate of interest.

Relaxation of credit standards. The Fund sometimes lends to municipalities that do not meet the SFZP's normal standards of creditworthiness. Willingness to lend under these conditions can be thought of as a subsidy in that it represents a bestowal of economic benefit.

B2. The Value of the SFZP's Subsidies

The value of the subsidies can be measured by the difference between the amount of money the SFZP disburses and the amount of money that clients repay it.

The subsidy in the SFZP's loans to businesses has a present value of about 19 percent of the principal value. That is, for every Kc 100 that businesses borrow, they repay the equivalent of Kc 81. Loans to municipalities bear a subsidy of approximately 46 percent of the principal value. For every Kc 100 the municipalities borrow, they repay the equivalent of Kc 54. Grants, of course, are not recovered at all. The subsidy transferred by a grant is therefore 100 percent of principal value.

Table 1. SFZP Subsidies by Type of Financial Support

Type of Support	Form of Subsidy	Value of Subsidy as Percentage of Principal Amount (in Present Value)	Cumulative Total Support, 1996-2005 (in Billions of Kc)
Business Loans	Reduction in interest rate	19	6
Municipal Loans	Zero interest, grace period, accelerated disbursements, etc.	46	16
Municipal Grants	No repayment required	100	16

The subsidies embedded in loans to municipalities bear a closer look since they come in several forms. The interest-rate subsidy is the most significant. For the typical municipal loan of Kc 100, the waiver on interest charges reduces the present value of repayments by Kc 24. The subsidy represented by the grace period is also substantial: it reduces repayments by a further Kc 17. Anticipated defaults[2] bring down the value of repayment, on average, by another Kc 4. Accelerated disbursement of principal and the rescheduling of repayments cut another Kc 1. The sum of these subsidies is Kc 46. The complement—Kc 54—is repaid by the borrower to the SFZP.

C. The Case for Reducing Subsidies

Three arguments can be advanced in favor of trimming SFZP subsidies:

- With lower subsidies, more clients would be served and more projects financed as funds are recycled.
- With demand for SFZP assistance far outstripping supply, the SFZP does not need to offer such stimulative terms to generate the desired level of investment.

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[2] Default is estimated at 10 percent of borrowers in the SFZP's long-range plan.

- The high subsidies have distorting effects on the behavior of those involved in the construction, operation, and financing of municipal infrastructure.

It is worth emphasizing here that the SFPZ is not a profit-seeking organization, and its objective is not to minimize the support it gives its clients. Instead, its objective is to stimulate environmental investment. In arguing for a reduction of subsidies, we do not advocate conservation of financial resources for the benefit of the SFZP. Rather, we believe that lower subsidies would advance the cause of environmental improvement.

C1. The Recycling of SFZP Resources

Subsidies consume and deplete SFZP resources, reducing the funds that can be used for the benefit of future clients. The higher the level of subsidy, the fewer clients that the SFZP serves.

Table 2, below, shows, in gross terms, the degree to which the SFZP could extend its reach to new clients and new projects by recovering and recycling a greater portion of its assistance. The SFZP expects to offer grants and loans totaling Kc 38 billion ($1.5 billion) over the next ten years. If the subsidy were eliminated from business loans (i.e., if interest rates were raised to market), the SFZP could increase total loans and grants to Kc 40 billion ($1.6 billion). If the SFZP, in addition, eliminated the grace period in municipal loans, it could increase its support to Kc 47 billion ($1.9 billion). And so forth, as set out in Table 2. These actions, along with the others listed in the table, are not intended as recommendations. Instead, they are meant to illustrate the degree to which the SFZP's generous subsidies consume its resources and, conversely, the degree to which a trimming of subsidies would allow the SFZP to extend its reach.

C2. Balancing Supply and Demand

For each application the SFZP approves, it rejects two. Others are held in queue for considerable periods. With sound proposals going unserved, the SFZP does not need to offer such stimulative terms to receive a sufficient volume of acceptable applications to place all of its funds.

C3. Curbing Distortions

Subsidies of the magnitude offered by the SFZP are bound to have marked, and in some cases undesirable, effects on the behavior of entities that build, finance, operate, and use municipal infrastructure. Below, we assess three such effects: over-design of infrastructure projects, over-indebtedness by municipalities, and deterrence of commercial-banks from entering the municipal market. These distortions can be mitigated both by reducing the amount of the subsidies and by changing their form.

Table 2. Trade-offs Between Subsidies and Funds Available for Support

SFZP Terms	Funds Made Available (Kc billions)	Total Funds Available to Provide Support, 1995-2005 (Kc billions)
Current terms	--	38
...raise interest rate on business loans to market	2	40
...plus, eliminate the grace period in municipal loans	7	47
...plus, raise interest rates on municipal loans to 6 percent	3	50
...plus, convert half the grants to loans	2	52
...plus, eliminate all remaining subsidies	27	79

C3a. Over-design of Infrastructure

The purpose of the subsidies is, of course, to encourage the rapid expansion of environmental facilities. One wonders, however, if the rush to invest has not overtaken the capacity of the SFZP and its borrowers to ensure that the money is wisely spent.

The expansion of municipal infrastructure is extraordinarily rapid. Nearly 40 percent of municipal spending is of a capital nature. With this volume of activity, lender and borrowers alike have difficulty assessing the economic and technical merits of alternative investments. The SFZP's heavy subsidies complicate the task, as they dull the municipalities' incentives to weigh alternatives, balance priorities, and economize. The Fund itself cannot fully compensate for the diminished selectivity of the applicants, since it has only limited means of screening the projects, to say nothing of molding and improving them.

While all subsidies blunt the incentive to economize, those of the SFZP do so with particular force. The SFZP's subsidies are heavily front-loaded. All of the subsidies apply to capital spending and none to the project's subsequent operation. While a gas-penetration network or a wastewater treatment plant may operate for 50 years or more, the SFZP delivers the bulk of its subsidies during the construction phase. The remainder comes in the early years of the project's life. The grace period on repayment pushes the consequences of borrowing into the future. By front-loading benefits and deferring costs, the SFZP's subsidies encourage excess use of capital. Experts report that more than a few municipal projects are over-designed for their market.

To reduce the temptation to over-design and overbuild, the SFZP could lower the amount of its subsidies, making them less stimulative. Paying a greater portion of the costs themselves, the borrowers would, out of self-interest, scrutinize proposed investments and spend capital more judiciously. The SFZP could reshape the form of its subsidies as well, jettisoning those features that delay the day of reckoning. (This is described in more detail below.)

C3b. Over-indebtedness of Municipalities

Over-indebtedness mirrors the problem of over-investment and arises from the same causes.

The highly concessional terms of the SFZP's loans have proven irresistible to some municipalities. More than a few have taken on greater financial obligations than they can safely bear. The SFZP's estimates of future defaults begin at 10 percent of borrowers. More will need to have their loans rescheduled.

Over-design compounds the problem, not only inducing higher borrowing to meet higher capital requirements, but also driving up operating costs.

A lender's credit-review process normally offers a safeguard against over-indebtedness. Out of prudence, a commercial lender will not allow a client to borrow more than it can safely service. Though certainly standards have been elevated in the past year and a half, the high anticipated default rate suggests that the SFZP's credit review affords less than adequate protection.

An additional word on the grace period is warranted. The grace period is intended to increase the borrowers' financial well-being by deferring repayment until well after the new facility is operating and earning revenue. Its actual effect may be, however, to increase the incidence of problem loans. The early years of a loan are a time for the lender and the client to build a relationship. During this period, habits and expectations are formed and the discipline of periodic payment is established. The grace period delays this process, allowing the SFZP and its client to remain apart at a time when they need to interact the most. Periodic repayments from the inception of the loans, even if token in amount, would promote communication between borrower and lender and would give the SFZP early warning of looming difficulties. This information would be particularly valuable to the SFZP, since, unlike a commercial lender, it does not have the staff to visit clients, make site inspections, and regularly review client financial statements. The grace period, then, cuts off one of the SFZP's few dependable channels of information.

As before, lower subsidies and a reshaping of their form would reduce some of these distortions.

C3c. Deterring Commercial Banks

In the long run, commercial banks will finance a greater portion of environmental improvements than the SFZP. Thus, the expansion of commercial-bank lending to municipalities advances the country's broader environmental objectives. The SFZP's subsidies, however, probably retard the banks' penetration of the municipal market, for two reasons:

- The subsidies give the SFZP an insurmountable price advantage over commercial banks.
- To the extent the subsidies contribute to over-indebtedness and consequent difficulty in meeting repayment obligations, they will sour the market. No Czech municipality has ever defaulted on a loan. Should any considerable number do so in the future, commercial lenders may retreat from the market, depriving municipalities and environmental projects of much-needed capital.

- The SFZP today holds a larger portfolio of municipal loans (excluding bonded debt) than any commercial bank. This is not a position in which the SFZP wants to remain for long.

(The role of commercial banks is assessed in more detail in Section II.)

D. Guidelines for Effective Subsidies

The discussion above suggests several guidelines for the SFZP to consider in reevaluating and possibly shrinking its subsidies.

Loans should be made only to creditworthy entities. The relaxation of credit standards should not be seen as an acceptable form of subsidy, but as an invitation to trouble. Extending a loan that is likely to end in default has the most serious and undesirable consequences. A default contributes to, or reflects, every one of the distortions cited above: it implies faulty project analysis, it consumes and wastes capital, it scares commercial lenders away, and it may place the borrower in financial difficulty for years to come. The SFZP should extend a loan only if it is reasonably assured of being repaid.

What should the SFZP do when the project sponsor is not creditworthy?

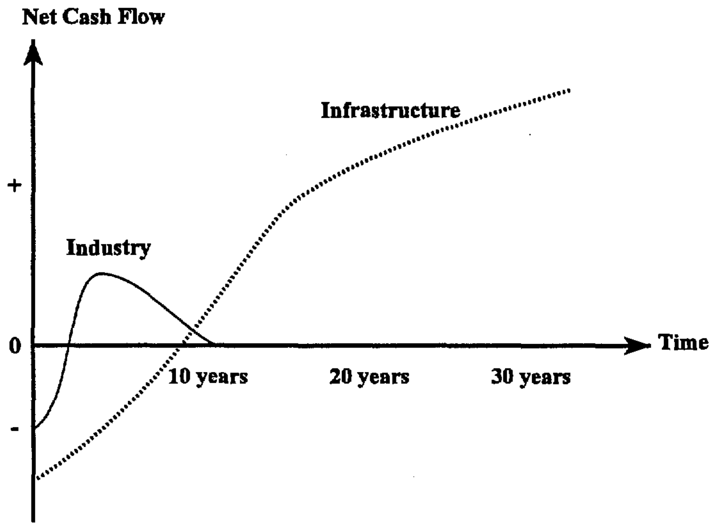
Strong projects sponsored by weak entities should be financed by grants. The SFZP may well wish to support a project sponsored by an entity that is not creditworthy. The support should not, in such a case, take the form of a loan. It should be offered as a grant. The SFZP's current practice is to offer grants only in combination with loans. To accommodate worthy projects with weak sponsors, however, it should separate the two forms of assistance.

As noted, the SFZP forecasts that some 10 percent of borrowers will default and that an equal number will require rescheduling. This entire class of clients, to the extent that they can be identified in advance, should be considered ineligible for loans and eligible only for grants. Thus, upwards of 20 percent of SFZP clients should receive grants without loans.

No grace period should be offered. We have noted above how a grace period on repayments can encourage excess borrowing while depriving the SFZP of valuable interaction and communication with the client. The grace period should be eliminated, with repayments, at least at a nominal level, beginning after construction.

Subsidies should not be so heavily front-loaded. Along with elimination of the grace period, the SFZP should consider lengthening the term of its loans, extending its subsidies over a longer period. A 20- or 30-year term would have several advantages over current arrangements. In the early years, the borrower would develop a discipline of meeting obligations and the SFZP would monitor the client's financial condition. The relatively high cash requirements of a compressed, four-year repayment would be spread out and lowered. In contrast to many industrial investments, environmental investments often begin to produce cash surpluses only after a decade. Thereafter they may continue to operate profitably for several decades (see Figure 1). A long-term loan would match this cash-flow pattern than the short maturities available today from commercial lenders and the SFZP.

Figure 1. Time Profile of Cash Flows for Typical Infrastructure Investments [3]



The magnitude of the SFZP's subsidies should be commensurate to its ability to control and channel client demand. The higher the subsidies, the lower the client's incentive to economize, and the greater the need for the SFZP to control and channel demand. The lower the subsidies, on the other hand, the more the SFZP can depend on borrowers to discipline themselves. The SFZP's primary tools for controlling and channeling demand are its credit analysis and its technical project evaluations. Credit reviews should prevent clients from borrowing too aggressively. Technical project evaluations should prevent clients from over-building. At present, these mechanisms are not fully effective. They should be strengthened. At the same time, a reduction in the level of subsidies would supplement these mechanisms with the self-discipline of the client.

E. Options

As a means of giving these guidelines concrete expression and to stimulate discussion, Table 3, below, looks at several different subsidy packages. The first column is the SFZP's current practices. Options #1 through #3 incorporate the modifications recommended above, but each delivers a different amount of subsidy. Option #1 delivers the same amount of subsidy as current SFZP plans; Option #2, somewhat less; and Option #3, substantially less.

[3] From Ismail Serageldin, *Water Supply, Sanitation, and Environmental Sustainability: The Financing Challenge*, The World Bank, Washington, D.C., 1994, p. 30. Serageldin adapts the figure from L. Davezies, and Remy Prud'homme, "The Economics of Public-Private Partnership in Infrastructure," in Claude Martin and, ed., *Private Financing of Public Infrastructure: The French Experience*, Paris, Ministry of Public Works, Transportation and Tourism.

Table 3. Alternative Subsidy Packages

	Current Plan	Option #1	Option #2	Option #3
Amount of Subsidy (present value as a percentage of principal value of support)	65%	65%	50%	35%
Loan Terms				
Interest Rate (municipal)	0%	0%	2%	6%
Interest Rate (business)	6%	6%	8%	8%
Repayment period (average)	4 yrs	10 yrs	10 yrs	10 yrs
Grace period (average municipal)	3 yrs	none	none	none
Accelerated disbursement	10% of clients	none	none	none
Mix of Instruments				
Loans of businesses	15%	15%	15%	15%
Loans to municipalities	42.5%	42.5%	55%	65%
Grants to municipalities				
...accompanied by loans	42.5%	22.5%	10%	0%
...not accompanied by loans	0%	20%	20%	20%
Total Funds Disbursed, 1995-2005 (Kc billions)	38	38	44	55

Option #1: Current Amount of Subsidy, Improved Form. This option preserves the current amount of subsidy (on a present-value basis) and produces the same total disbursements over the next ten years. It differs from current practice in four ways: the grace period is eliminated, accelerated disbursements are eliminated, the repayment period is extended to ten years, and the weakest municipalities are offered grants alone rather than a mix of grants and loans. These changes shift some of the subsidies from the early to the later years. The effect on clients would be to increase their sensitivity to capital costs and their incentives to economize. Discipline would be fostered by having annual repayments start at the inception of the project. Spreading payments over ten years also eases the pinch of the high payments under the four-year repayment schedule. Prospects for default are further diminished by giving grants only, unaccompanied by loans, to the weakest borrowers.

Option #2: Somewhat Lower Amount of Subsidy, Improved Form. This option shows a reduction of the level of the subsidy as well as an alteration in form. The portion of funds offered as grants is reduced and the portion offered as loans is correspondingly increased. The improvements incorporated in Option #1 are retained. Interest is charged on municipal loans, albeit at a highly concessional rate, and the rate of interest on business loans is nudged upward. Compared to Option #1, these changes offer two advantages:

- The reduction in the present value of the subsidy would diminish the stimulative effect of the package. By increasing the client's share of costs, the SFZP would heighten the incentives to economize. The self-interest of the client would encourage more efficient project design and lower borrowing.

- The total funds disbursed over a ten-year period would rise, reflecting the recycling of a greater portion of the SFZP's resources. More environmental projects would be financed.

Option #3: Substantially Lower Amount of Subsidy, Improved Form. The amount of the subsidy, on a present-value basis, is just over half of that offered today. The reduction is achieved primarily by increasing municipal interest rates to 6 percent and by restricting grants to 20 percent of disbursements. The advantages of Option #2 are carried forward and strengthened. The self-discipline of borrowers is more fully engaged, and the amount of funds to be recycled for additional environmental projects is substantially increased.

Of all the options, this one would be most attractive to the commercial banks. Loan terms would be closest to commercial standards, reducing the SFZP's competitive advantage. The more commercial terms would promote the maturation of the borrowers, gradually weaning them from the expectation of government subsidies and preparing them to bear the full cost of their capital.

F. Conclusion

The degree to which the SFZP subsidizes its financial support and the particular forms the subsidies take have a marked impact on the behavior of all parties involved in municipal infrastructure. A reduction in the overall level of subsidies as well as a refinement in form could mitigate some of the distortions and ill effects. Further, with lower subsidies, the SFZP could recycle more of its funds, serving more clients.

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SECTION II

THE SFZP's RELATIONSHIP WITH COMMERCIAL BANKS

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THE SFZP's RELATIONSHIP WITH COMMERCIAL BANKS

A. The Strategic Question

This section addresses the question: *Could a collaborative relationship with commercial banks help the SFZP to meet its environmental mandate more efficiently?* We argue that cooperation and collaboration would benefit the SFZP, commercial banks, and borrowers alike, with beneficial effects for the environment.

In advancing our argument, we first describe the way in which the SFZP and commercial banks interact today. Next, we make the case for greater cooperation. Finally, we outline opportunities to work toward that goal.

B. Statement of the Problem

The SFZP and the commercial banks engage one another primarily as competitors, both seeking to place loans with municipalities. If their competition spurred ever-higher levels of service to their shared municipal market, the borrowers and the environment would be the better for it.

In reality, however, their competition is not altogether productive. The SFZP holds a dramatic cost advantage, paying nothing for its funds. It offers loans on terms that no commercial bank can come close to matching. Thus, where the SFZP lends, banks cannot compete at all; they are simply preempted. This presents a problem to commercial banks trying to break into the municipal market. The SFZP today holds a portfolio of municipal debt larger than that any commercial bank (excluding bonds).

Worse, commercial banks fear that the SFZP could contaminate the entire municipal credit market if, though unsound lending practices, it precipitated default by more than a handful of borrowers.

C. A More Productive Relationship

C1. On the Strategic Plane

The interests of both parties dictate a considerably different relationship, that of partner. The SFZP cannot supply all of the funds that municipalities require for environmental investments; the needs exceed the SFZP's limited resources. The government's environmental objectives can be met only if additional lenders (principally commercial banks) supplement the capital of the SFZP. Rather than impeding the entrance of the commercial banks into the municipal credit markets, the SFZP should be paving the way.

C2. At the Operating Level

Tactical requirements argue for a partnership with commercial banks as well.

The SFZP staff is too small for its large and growing loan portfolio.[1] Its skills are not sufficiently specialized. A point of reference: Ceska Sporitelna has 100 loan officers, credit analysts, and administrators servicing a municipal loan portfolio somewhat smaller than that of the SFZP.[2] These 100 people perform the functions for which the SFZP's Finance Section is responsible. With such a small staff, the SFZP cannot be expected to possess the experience, technical knowledge, and, most critically, time to meet the diverse demands of sound credit determination and loan administration.

The imbalance between resources available and resources necessary is further illustrated by a recent EAPS report. Written by a former bank president, the study recommended heightened attention to a long list of tasks:

- Gathering additional information to assess creditworthiness of applicants.
- Making credit assessments more quickly so as not to delay other steps in the application process.
- Evaluating the purpose of the loan to ensure that money is being sought for qualifying environmental investments.
- Assessing the source of repayment.
- Visiting the construction site periodically to ensure that funds are applied as planned.
- Inspecting collateral initially for valuation purposes and, periodically, to assess its condition.
- Regularly reviewing the borrowers' financial statements.
- Periodically visiting the borrower to gather insights and information into its financial condition.

How is the SFZP to acquire the needed skills and resources? Through training the staff? Recruiting specialists? Dramatically expanding staff size? None of these options seems fully satisfactory. No amount of training can substitute for the years of experience that loan officers and administrators in commercial banks are expected to possess before taking on management of a large portfolio. New staff members with substantial banking experience would be hard to hold, with their opportunities to earn high salaries in the private sector. Furthermore, expanding the staff substantially would require a great increase in the SFZP's administrative budget, not likely to be a popular move.

An alternative to building staff is an alliance with commercial banks. Commercial banks have more experience in credit analysis and loan administration than the SFZP can ever accumulate. They have larger and more specialized staff. Rather than going it alone, the SFZP should consider tapping these resources through a collaborative arrangement that serves the interests of both parties.

Such an alliance would help the SFZP to solve pressing operational problems while reinforcing its effort to draw commercial banks into the municipal market.

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[1] See Richard Lewis, *Review of the Credit-Analysis Practices of the Czech State Fund for the Environment, with Recommendations*, EAPS, 1995.

[2] These staff are not occupied exclusively with municipal clients; many handle other markets as well.

D. Actions

This section describes seven actions for the SFZP's consideration. It begins with lending policies to address the strategic objective of encouraging commercial banks to enter the municipal market. It then describes modifications to management and administrative practices to address the SFZP's shortage of resources. The actions are all mutually compatible and reinforcing.

D1. Take All Steps Necessary to Avoid Defaults

Defaults by SFZP borrowers would jeopardize the expansion of commercial-bank lending to municipalities. The banks, perceiving heightened risk, would turn more cautious, and the flow of capital to finance environmental improvements would be stanched.

The SFZP has a strong interest in and has shown a commitment to ensuring that its borrowers meet their financial obligations. The proposal here, then, is neither controversial nor new. (Specific steps to control defaults are discussed in Section I and need not be repeated here.)

D2. Reduce the Overall Level of Subsidy

Commercial banks cannot match the bargain prices of the SFZP's financial support. To open more competitive opportunities for the banks, the SFZP could increase the price of its support. Specifically (and again as discussed in Section I) it could reduce the grants, increase interest rates, and eliminate the grace period.

D3. Invite Commercial Banks to Lend Alongside the SFZP

The SFZP's typical assistance package for a municipal client now consists of a grant for 40 percent of project cost, an SFZP loan for another 40 percent, with the remaining 20 percent coming from the municipality's own funds. This arrangement leaves little room for commercial banks. Alternative mixes of funds could open opportunities. At the same time, they would allow the SFZP to stretch its own resources to serve more clients. Table 4 illustrates such alternatives, each delivering to the client the same level of subsidy (on a present-value basis).

Table 4: Alternative Mixes of Funding, Each Delivering the Same Subsidy (in percent)

	SFZP Grant	SFZP Loan	Own Funds	Commercial Bank Loan	Total Financing
Current Practice	40	40	20	0	100
Alt. #1	45	30	10	15	100
Alt. #2	50	20	10	20	100
Alt. #3	55	10	5	30	100

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D4. Contract with Commercial Banks to Perform Credit Analysis[3]

The major commercial banks have a depth of experience in credit analysis, with tested procedures, controls, and skilled staff. The SFZP could contract with one or more banks to perform the analysis on its behalf. The SFZP would have to make the determination as to whether the applicant met environmental criteria; the bank would assess creditworthiness. Clients not meeting credit standards could be offered grants if their projects were particularly strong.

Banks would derive two benefits from such an arrangement. They would be compensated by fee and, perhaps more valuable to them, they would be exposed to a large class of borrowers.

The SFZP would derive a number of benefits as well. The banks would supplement the SFZP's scarce resources, freeing them to perform other important tasks. With their experience and established methods, they might also be expected to produce more discerning credit analyses, leading to better decisions. Even if their credit recommendations were precisely the same as those of the SFZP analysts, however, their analyses and findings would be valuable. They would place the decision to accept or reject a loan application on a technical and objective foundation. A finding by a respected commercial bank that an applicant was not creditworthy would strengthen the hand of the SFZP and the Ministry in resisting pressure to approve risky loans.

D5. Contract with Commercial Banks to Perform Loan Administration

The tasks here involve control over disbursements, field inspections, billings, accounting, collections, client visits, review of financial statements, and other time-consuming activities. Again, the commercial banks have a depth of experience. Performing the SFZP's loan administration would hold the same appeal as performing the credit analysis, i.e., fee income and exposure to the market. The SFZP would benefit by overcoming the limits on its staff size and would advance its goal of drawing the commercial banks into the municipal arena.

D6. Engage Commercial Banks to Provide the Capital to SFZP Borrowers, with the SFZP Guaranteeing the Credit

Beyond engaging the banks to provide service in exchange for fees, the SFZP might arrange for commercial banks to use their own capital to provide financial support to SFZP clients. The commercial bank would lend to clients on subsidized terms dictated by the SFZP (e.g., at zero interest). The SFZP would make up to the bank the difference between the amount repaid by the SFZP client and the amount normally repaid in an unsubsidized, commercial transaction. The SFZP would guarantee repayment.

Such an arrangement would quickly bring commercial banks to the center of municipal lending. It would allow the SFZP to conserve capital, enabling it to finance a greater number of environmental projects. In addition, the benefits of shifting responsibility for credit analysis and loan administration cited above would accrue.

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[3] See Richard Lewis, *Review of the Credit-Analysis Practices of the Czech State Fund for the Environment, with Recommendations*, EAPS, 1995.

D7. Have Commercial Banks Provide Capital and Bear the Credit Risk, Too

The SFZP would call on the commercial banks to bear credit risk themselves, not offering a guarantee.

E. Conclusion

Often, competition among organizations serving the same market redounds to the benefit of the customer. Here, however, the client is ill-served. By collaborating with the banks rather than competing, the SFZP could accelerate the extension of commercial-bank credit to municipalities. At the same time, it could tap the commercial banks' valuable management and administrative talents. Both the SFZP and the banks would benefit, and both the clients and the environment would be better served.

SECTION III

SUBJECTING INVESTMENT PROPOSALS TO A RIGOROUS TEST OF ECONOMIC SOUNDNESS

SECTION III
SUBJECTING INVESTMENT PROPOSALS TO A RIGOROUS TEST OF ECONOMIC SOUNDNESS[1]

A. The Strategic Question

The SFZP and its borrowers have a compelling interest in ensuring that the projects they support represent an economically sensible use of resources that costs are commensurate with environmental benefits and that the projects can be operated over their lifetime without unduly straining the financial resources of the sponsor. In determining which proposals to put forward and invest in, both parties would like an objective, clear, and fair means of comparing one project to another, of assessing economic strength as well as environmental merit, and of detecting proposals that are wasteful, costly, or inefficient. In short, both the SFZP and its borrowers would like to have processes, methods, and analytical tools to subject proposals to a rigorous testing of economic feasibility and soundness.[2]

This section addresses the question: *How can the SFZP ensure that the its investment not only have environmental merit, but economic merit as well?*

B. Obstacles

Several obstacles stand in the way.

A focus on the borrower, not on the project. In processing applications today, the SFZP's Finance Section does not perform a thorough financial analysis of the proposed project. In fact, it does not focus on the project at all; rather, it focuses on the borrower. The foremost question in the Finance Section's analysis is the ability of the borrower to repay the loan, not the economic rationale of the investment. The loan application, for example, calls for five-year cash-flow projections of the borrower but not of the treatment plant or the gas lines. SFZP staff analyze the balance sheet of the municipality or corporation, but they do not compare costs of water lines with fees from sale of water. Nowhere in the Fund's analysis is the net present value of the investment computed. The financial evaluation identifies borrowers who can service debt; it is not designed to identify projects that are efficient. It flags borrowers that will have trouble repaying; it is not designed to flag projects that perhaps should not be built in the first place.[3]

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1 This section is extracted, with little change, from another report. See Thomas Downing, *The Lessons of Project Finance: Principles and Techniques for Adaptation by the Czech State Fund for the Environment*, EAPS, 1995.

2 The World Bank referred to a similar goal in describing its own financing of infrastructure projects. "Providing funds to a project is an important objective in itself, but the financing process also serves another important end. Monitoring by financial markets and institutions complements regulation and competition.... Provides another mechanism for investors to impose discipline." *World Development Report 1994: Infrastructure for Development*, Oxford University Press, 1994, p. 94.

3 Conversations with commercial banks reveal that they too devote little attention to the economics of the project being financed.

Weak incentives for self-restraint. When a municipality or a company pays for an improvement with its own funds, it has powerful incentives to economize. Money is limited, and it has alternative uses. To choose one improvement means to forego others. Self-discipline is borne of the need to make choices.

Recipients of assistance from the Fund escape the full measure of this discipline since they rely on the resources of others. Their incentives to economize are weakened, as discussed above.

Missing filters. The purposes for which the Fund may lend are defined in the broadest of terms. *The Basic Criteria for the Choice of Actions in Particular Fields of the Environment/1994*, issued by the Ministry of the Environment, enumerates fully 30 such purposes. Written in such an inclusive manner, the criteria are of little help to the SFZP or to applicants in discriminating among investments.

Economic Analysis of Projects at the SFZP

The Finance Section of the Fund focuses on the financial strength of the *borrower,* not of the *project.*

The Technical Section of the Fund evaluates the capital efficiency of projects, judging them against standards that relate the volume of pollutant abated to capital cost. See *The Basic Criteria for the Choice of Actions in Particular Fields of the Environment, 1994,* which requires consideration of the "specific financial requirements calculated from the costs of implementing the provisions and required support from the Fund in relation to units of pollution eliminated."

The District Offices rank proposals and make recommendations to the Fund.

On the other hand, expert opinions required by the Fund specifically exclude analysis of project economics, looking only at the financial condition of the *applicant* and not of the *project.*

C. Consequences

With weak incentives for economizing, combined with weak filtering mechanisms, the result is predictable. The Fund receives three times as many applications as it can approve. Many have not been rigorously analyzed and tested from an economic perspective prior to submission. The SFZP's Finance Section does not have the tools or the staff make up for the applicants' lack of analysis. Thus, no doubt, some projects are approved at costs that are not economically justifiable. Others may be approved despite being over-designed.[4]

Without an objective and technically rigorous means of evaluating and ranking proposals, the SFZP has a difficult time defending its decisions. The applicants who are rejected are sometimes uncertain as to the cause of their failure, wondering about the objectivity of the decision-making process.

[4] Interviews with observers. On a distinct but related note, see also G. Thomas Kingsley, International City/County Management Association Consortium, *Working Paper: Candidate Infrastructure Projects Proposed by Czech Municipalities*, April 1994, p. 5. In evaluating demand for the Municipal Credit Fund, his team found "a large share of the initial project proposals ... were considered to be over-designed in relation to real needs and/or unaffordable to the municipalities proposing them."

D. Solutions

D1. Adopting a Project Perspective

The SFZP should consider complementing today's focus on the borrower with an equal focus on the project. Such a project orientation would bring about a shift in the Fund's perspective, sharpening its ability to distinguish sound and unsound proposals. A project perspective isolates, in an analytical sense, the project's cash flows from those of its sponsor, laying bare the strengths and weaknesses of the proposed investment. It forces a comparison of capital costs with benefits, of annual revenues with costs. Focusing on recurring as well as initial costs, a project perspective invites the analyst to study the economics of the project over its entire lifetime, and to determine whether the project earns its own way, generates economic surpluses, or, alternatively, requires subsidies that might drain the resources of the sponsor.

Often, the two perspectives, one focusing on the sponsor, the other on the project, result in the same judgment about proposed investments; where they differ, the project perspective often offers valuable insight. Table 5, below, illustrates.

Table 5. Alternative Perspectives in Evaluating Applications for Support

		PROJECT	
		Weak	Strong
BORROWER	Weak	A	B
	Strong	C	D

In two of four combinations, the two perspectives yield the same conclusion:

- Cell A, where both borrower and project are weak.
- Cell D, where both are strong.

In the other two combinations, the conclusions differ:

- In Cell C, a project orientation would discourage investment. Even though the borrower could repay a loan, the benefits may not warrant the cost. Here, both the SFZP and the sponsor should save their capital.

- In Cell B, the project perspective would lead to a more favorable view. Though the sponsor may have limited financial means, the proposed investment has economic merit. With a strong project but a weak sponsor, the Fund may be able to lend against the cash flows of the project itself, not being dependent on the cash flows of the sponsor. Or it may choose to support the meritorious project through a grant.

Not only does the project analysis produce good investment decisions, it enables the SFZP to defend its decisions on an objective basis. The analyses can strengthen the hand of the Fund in defending its decisions against unhappy applicants and against those who want the Fund to support uneconomical projects.

Beyond producing better investment decisions, the project perspective encourages efficient design and operation. By forcing comparison of cash inflows and outflows, the analysis draws attention both to capital costs, encouraging adoption of least-cost technologies, and to operating margins, encouraging cost controls as well as adequate rate structures.

D2. Project Finance

In addition to adopting a project orientation, the SFZP might consider encouraging some of its clients to borrow through a project-finance structure.

In such a structure, the investment project is funded and operated separately from its sponsor. Financially, the project must be very largely self-sufficient. Its own revenues must cover costs, including debt service. This requirement imposes a strict discipline on the project, the sponsor, and the lender. Project economics must be sound, since the project itself must generate most of the cash flow to cover operations and service debt. Risks must be well understood, because the project's failure to perform as expected may cause financial and other harm to the sponsor and the lender. As one guide to project finance notes:

> "... those providing the senior debt place a substantial degree of reliance on the performance of the project itself. As a result, they will need to concern themselves closely with the feasibility of the project and its sensitivity to the impact of potentially adverse factors."[5]

Project finance is more fully described in a separate document produced by EAPS.[6] Suffice to say here that, under the right circumstances, project finance can help the SFZP foster discipline in the design of infrastructure projects and in the control of their costs.

E. Conclusion

In judging applications for support, the SFZP's Finance Section looks most closely at the financial condition of the sponsor and not at the economics of the project itself. Greater focus on project economics would instill a discipline in project design and project selection. The SFZP

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[5] Manual by Clifford Chance, quoted in "Project Finance: Make Them Pay," *The Banker*, January 1994, p. 68.

[6] Thomas Downing, *The Lessons of Project Finance: Principles and Techniques for Adaptation by the Czech State Fund for the Environment*, EAPS, 1995. For a concise description of the project-finance structure and application, see Larry Wynant, "Essential Elements of Project Financing," *Harvard Business Review*, May-June 1980, pp. 165-173. For a listing of the largest project financings currently underway, see "Where, When and How Much," *Euromoney*, March 1995, pp. 116-120. The figures on the volume of financing are from a survey reported in Public Works Financing, October 1993, as cited in The World Bank, *World Development Report 1994*, Oxford University Press, Oxford, 1994, p. 95.

would be more confident that its scarce capital was being put to good use, and it would have an easier time defending its investment decisions.

SECTION IV

CONCLUSION

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In this paper we have examined three strategic questions facing the SFZP. The facts and the analysis we have presented suggest that serious consideration of the following propositions would be productive:

- The SFZP could advance its environmental objectives by diminishing its subsidies and refining their form.

- The SFZP staff is probably too small to cope with the rising volume of loans, and collaboration with commercial banks could provide the needed extension of staff resources.

- A strategic alliance with commercial banks could accelerate the flow of capital to municipal infrastructure projects.

- Greater focus on project economics could ensure the most efficient application of the SFZP's capital while enabling the SFZP to defend its funding decisions more effectively.