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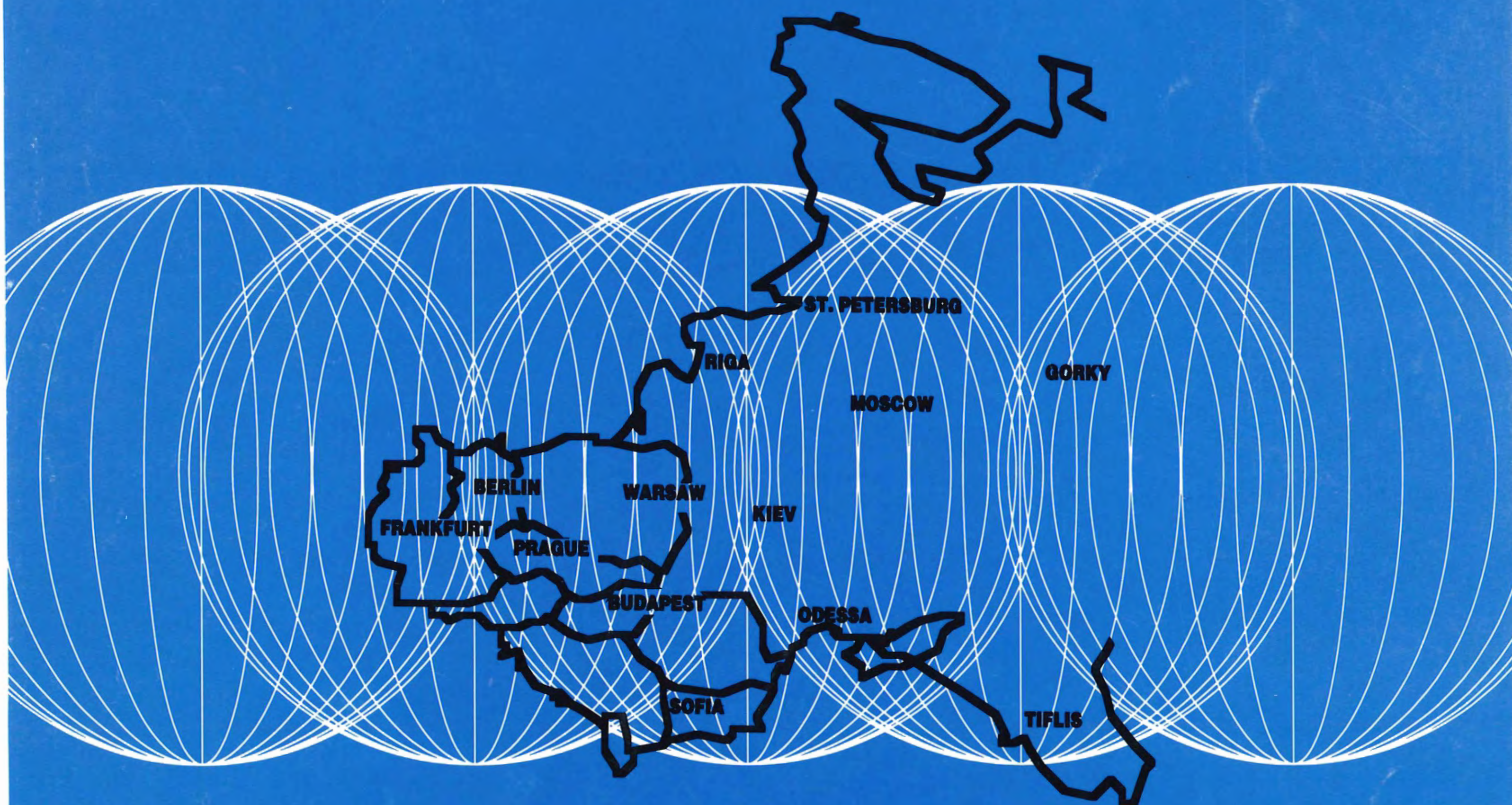
MUNICIPAL INFRASTRUCTURE FINANCE IN RUSSIA: ISSUES AND PROSPECTS



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MUNICIPAL INFRASTRUCTURE FINANCE IN RUSSIA: ISSUES AND PROSPECTS

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PREFACE

This document is presented as a discussion of issues and prospects to date concerning the infrastructure finance work which is being carried out as part of USAID's Housing Sector Reform Project (HSRP), under contract with the Urban Institute and Research Triangle Institute. It is less a progress report than an attempt to outline some of the substantive concerns that have emerged thus far in this work.

This paper was originally conceived as an analysis of the economic, fiscal, and institutional situations affecting infrastructure finance in Russia, presenting a qualitative and quantitative portrait of conditions facing municipal utility enterprises and their parent municipalities in early 1996. Such a review was to form an informational backdrop to our subsequent efforts to identify sources of long-term financing of the infrastructure investment needs of municipal enterprises. However, because of unexpected difficulties in acquiring even basic fiscal data from municipalities and their municipal enterprise, the paper unfortunately does not contain much of the quantitative analytic material that had initially been envisioned for this point in the process. Moreover, given the understandable reluctance of many local officials to devote the time needed to provide us with a clear understanding of the institutional relationships affecting municipal enterprise planning and financing, such knowledge of institutions and process must necessarily be accumulated gradually, as our work proceeds in individual communities.

This document still marks the departure from the formal quest for local information to the more active pursuit of financing opportunities in support of long-term infrastructure financing. Although we shall continue to explore local institutional, fiscal, and economic issues, our focus has shifted from learning to doing. Thus, the present paper might best be viewed as a record of accumulating knowledge, to be revised, as needed, in the course of our continuing work with local officials and the financial community.

MUNICIPAL INFRASTRUCTURE FINANCE IN RUSSIA: ISSUES AND PROSPECTS

INTRODUCTION

The need for major capital construction on municipal water, sewer, heating, and similar housing-related infrastructure in Russia is likely to grow in the years ahead. However, the needed infrastructure investment is not likely to be funded from the traditional budgetary sources. Direct infrastructure investment by the central government and indirect infrastructure subsidies from central and oblast governments will continue to shrink, and municipal budgets themselves are already hard-pressed to pay for a growing list of social services that were formerly supported by higher levels of government. Presently, in some municipal enterprises, buildings for high-priority new facilities may have been totally or partly finished, but there is no money to purchase and install the needed new equipment; in other cases, no utility capital improvements are being made at all for lack of funds.

With the gradual disappearance of current budgetary funds for municipal infrastructure investment, the appropriate way to pay for major capital construction needs is long-term debt financing. In a variety of forms, long-term borrowing is the standard market-oriented approach to financing major capital construction.

The infrastructure finance program seeks to demonstrate a systematic approach to long-term debt financing, linked to tariff reform, in providing housing-related infrastructure services in Russian municipalities. Multi-year financing can provide money for the timely completion of an infrastructure project, and tariff reform can generate increased revenue that will constitute both the collateral needed to attract long-term financing and the basis for its repayment. The municipalities of Ryazan, Vladimir, Nizhni Novgorod (in collaboration with the oblast) and Moscow will participate in the first year of the program, which is to be extended to additional cities during the second year.

LONG-TERM FINANCING AND TARIFF REFORM

Long-term financing of urban infrastructure is needed as an alternative to the former dependence upon subsidies from higher levels of government or from the parent municipality. Central government budgetary support for construction of housing-related infrastructure is unlikely to satisfy the backlog of unmet local needs. Similarly, municipal governments cannot realistically assume major subsidy support of utility capital construction, since local governments themselves are likely to inherit growing responsibilities for other social service spending. In Ryazan, for example, with a month remaining in 1995, the city had provided only 46 billion rubles of a planned 72 billion ruble subsidy to the heating company and only 6.5 billion rubles of a planned 14.5 billion ruble subsidy to the water-and-sewer company.

Long-term financing of urban infrastructure is a key element in moving municipalities from subsidy dependence toward self-sustaining financial independence in infrastructure capital development. Long-term financing can quickly generate the funds needed to carry out a capital development project, by-passing the former dependence upon grants from the state. Since long-term financing must be repaid over several years, potential lenders will want assurance that the accompanying tariff structure can generate sufficient revenue to meet the regular principal and interest payments that result from any long-term loan or bond issue. In that process, long-term financing will also improve the fairness of new project financing, since future (as well as present) utility customers will help pay for the project benefits that they will receive.

Tariff reform can significantly improve cost recovery, discourage wasteful consumption, and thereby lead to much more efficient use of resources in the provision of public services. Tariff reform is especially desirable, and can be particularly effective, in the delivery of those public services where the major beneficiaries of improved service are the recognized users of the service -- the utility customers themselves. If the price of water (and, implicitly, sewer) service is increased toward the full cost of actually providing the service, then customers will reduce wasteful consumption of water. This diminished demand for water will cut the long-term need for additional water-and-sewer treatment capacity, thereby reducing any amount of long-term financing for that purpose. Thus, both the required costs and the necessary financing of future infrastructure development may be substantially reduced. Moreover, the enhanced revenue streams generated by improved cost recovery and more rational tariff structures (linking revenue requirements to cost of service) can constitute both the collateral to attract long-term financing and basis for its repayment.

Tariff reform will promote improved cost recovery by seeking progress toward, not necessary the achievement of, full-cost pricing of housing-related infrastructure services. Russian Government Decree Number 935 originally mandated that tariffs for communal services be increased to full-cost level by 1998, though perhaps not until 2003. Few of the officials interviewed appeared much concerned either about the decree itself or its target deadline. With revenues of some communal services now often running at only about 20 percent of costs, the achievement of true full cost recovery must therefore remain a distant goal. Thus, in the proposed pilot projects, a tariff schedule might be introduced that would incorporate an increasing share of cost recovery over the period of the project.

ISSUES IN LONG-TERM FINANCING

Sources of Long-Term Financing

Municipalities indicate interest in the possibilities of long-term financing of housing-related infrastructure, and municipal enterprises providing local water-and-sewer and heating services especially hope that HSRP may help them arrange for such support. Nonetheless, both municipal enterprises and their parent municipalities are very concerned about the debt service costs of any such financing in light of increasing pressure on local finances.

Of the two sources of municipal enterprise financing that were envisioned at the beginning of this project, municipal bonds presently appear to offer more promise than bank loans as potential souses of long-term financing for housing-related infrastructure projects. Bank interest rates are presently viewed as too high by most municipalities, and banks currently show little interest in considering loans to municipalities or municipal enterprises except short-term loans for cash-flow purposes. Despite the uncertain economic climate at the moment, prospects still may be good for successfully issuing municipal bonds to finance municipal infrastructure.

Municipal Bonds

Initially, the HSRP infrastructure finance program had anticipated that most of the projects to be suggested by the participating cities would generate additional revenues from which some portion of the financing could be repaid. Accordingly, revenue bonds had been expected to be the likely form of any municipal bond issue. Nonetheless, the very few of the projects suggested by the participating municipalities for which HSRP has chosen to seek financing contain any revenue-generating potential that is related to the provision of the service. Rather, most of the locally-suggested projects are aimed primarily at improving existing facilities in order to reduce leakage or cut costs. Thus, any municipal bonds would be issued as general obligation bonds of the municipal enterprise (or of its parent municipality or the oblast, on behalf of these entities) rather than as revenue bonds.

At present, municipal bonds appear to be the best source of long-term financing for housing-related infrastructure in Russian municipalities. Although municipal bonds presently account for less than five percent of Russia's capital market, knowledgeable observers continue to believe there to be both:

— Substantial need for long-term infrastructure borrowing; and
— Sufficient funds for municipal bonds to be supplied by individuals, domestic banks, and other financial institutions.

■ **Regular municipal bonds.** Russian experience with municipal bonds began in 1992 with the Kharbarovsk Krai's unsuccessful attempt to issue municipal bonds, only 1 percent of which were actually sold. A subsequent offering by Nizhni Novgorod was more successful, stimulating growing interest in municipal bond offerings throughout 1994 and 1995. Municipal bonds have now been issued in roughly 100 offerings within more than half of Russia's oblasts, including several of the larger cities. Most issues thus far have been for short-term current budgetary financing, which is sometimes repaid with further issuance of similar short-term debt. For instance, St. Petersburg issued roughly half-a-billion rubles of 3-month, 6-month, and 12-month municipal short-term bonds (MKOs) in 1995-1996, most of which were 3-month bonds, purchased largely by legal entities.

Local governments are beginning to recognize municipal bonds' potential for longer-term capital financing. Housing construction has been a popular objective of such offerings, the longest being the Tatarstan Republic's 20-year, 100 billion ruble state housing bonds. Success of individual offerings has often depended upon the granting of "privileges" of "state status" that exempt a bond's earnings from federal taxation (more on this below).

■ **Housing bonds.** Housing certificates, or so-called housing bonds, have also attracted wide attention, including in the cities of Moscow and Nizhni Novgorod. Specifically intended to support housing construction, housing bonds are generally zero-coupon bonds paying no interest until expiration, when they may be redeemed either for cash or for specified square-meter amounts of new housing. As a form of advanced purchase of housing assets, housing bonds have been in reportedly have been in demand both by individuals and by industrial enterprises, in the latter case either as investments or on behalf of employees' housing.

Extension of the housing bond concept to other public services such as water-and-sewer service ("water bonds") has been considered by such municipalities as Nizhni Novgorod. However, such an application now appears to be losing favor, since it would appear to be little more than an offering of future water-and-sewer service at today's much lower rates, boosting present revenues at the expense of future revenues.

- **Tax exemption.** Interest paid on municipal bonds is now exempt both from the 15 percent profits tax (for return on the investment of enterprises and organizations) and from the income tax (for return on the investment of physical persons).[1] First, the profits tax exemption for earnings paid on bonds issued by Subjects of Federation (oblasts, republics, and the central government) was extended on December 31, 1995, to cover bonds issued by municipalities as well.[2] Before that date, only income from oblast-issued "municipal" bonds had been exempt from federal profits taxes, since oblasts (and republics) are Subjects of Federation, while municipalities (with a few exceptions, such as Moscow) are not. Second, interest on "state treasury bills, state obligations, other state securities of the former USSR and the Russian Federation, Subjects of Russian Federation, and obligations and securities issued by local governments" is exempt from income taxation.[3]

The Ministry of Finance award of tax-exempt status was a vital goal of local bond issues that were offered between January 1992 and November 1995. During this period, each bond issue was registered individually with regard to its tax-exempt status. (As noted above, the tax exempt status of local bond issues was confirmed in December 1995.) Ministry of Finance withdrawal of tax-exempt status caused the City of Cherepovetz 10 billion ruble 1994-1995 bond issue to be halted following the first tranche of 1 billion rubles. Similarly, the first sale of Yaroslavl Oblast's 1995 5 billion ruble offering was severely undersubscribed after it lost it's tax exempt status.

- **Marketing advantage of oblast-issued bonds.** In general, bonds issued by oblasts would likely have a marketing advantage over similar financial instruments issued only by lower levels of government such as municipalities. This is true simply because potential bond-holders may well feel safer lending to oblasts, which are Subjects of Federation, than to local governments, which are not.

Beyond the status of the issuer, it had seemed initially that municipal bonds issued by oblasts (but not by municipalities) could be marketed to any of the Russian Federation's extrabudgetary funds (such as the Pension Fund, the Employment Fund, the Social Insurance Fund, and the Medical Insurance Fund—which are referred to as "foundations") as well as to other legal and physical persons. This would have opened a potentially larger market for solely oblast-issued bonds, the proceeds of which would have been on-lent to municipal utility enterprises under a carefully specified contract.

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[1] Without the tax exemption, interest earnings of an enterprise or organization would be subject to a 15 percent profits tax. This contrasts with the tax treatment of actual operating profits from the regular activities of an enterprise or organization, which are now subject to a 30 percent profits tax—allocated 8 percent to the Federation and 22 percent to sub-Federal units of government. Prior to 1996, the profits tax rate was 35 percent, with a higher (13 percent) Federal allocation.

[2] Profits Tax for Enterprises and Organizations (December 27, 1991, as amended through December 31, 1995).

[3] Law on Income Tax of Physical [natural] Entities (December 7, 1991, as amended through April 1, 1995), Article 3, Tax-Exempt Incomes (item n).

Even though their charters may permit these foundations to invest in sub-federal financial instruments, it is not clear that any of these foundations will actually do so. The Government's changing stance during 1995 on tax exemption for local bond issues fueled an uncertain policy climate that appears to have discouraged most foundations from making any purchases of local debt, at least for the time being. As a result, the potential "foundation" market for oblast-issued municipal bonds may not be realized in the foreseeable future.

Nonetheless, with proper safeguards against inappropriate investment practices, according to the World Bank, some state pension funds such as these can provide important sources of financing for long-term infrastructure investments.[4] While the theoretical financial role of these extrabudgetary funds should not be overlooked, this advantage may often be more apparent than real. A senior official of the Moscow Oblast office of the Federal Pension Fund stated that no Pension Fund investments are expected to occur for at least the next two years, because all available cash is needed for pension payments, which themselves are substantially in arrears.

- **Minimum costs and size of issue.** Although the basic transactions costs (exclusive of debt service) of issuing any municipal bond may yet prove to be a problem, conversations with Russian securities professionals thus far indicate otherwise. Various members of the financial community have estimated the costs of issuance of a Russian municipal bond for most of the projects recommended to HSRP (with an offering in the 10-to-50 billion ruble range) to be no more than 7-9 percent of the value of the issue.

Some preparation costs would fall, of course, as both issuing municipalities and their advisors accumulate experience. Moreover, competition may be expected to drive down the total expense of issuing a municipal bond. Such costs now equal only about 1 percent in the United States, down from 2.5 percent during much of 1970s and 1980s. Accordingly, a 7 percent cost of issuance (plus 3 percent to guarantee the issue—see below) is used in the empirical estimates of municipal bond financial outcomes.

The minimum amount below which it would be uneconomic to issue a municipal bond appears to be at least 10 billion rubles. Since nearly all of the proposed municipal enterprise projects examined by HSRP exceed this amount, they may well be candidates for municipal bond financing.

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[4] "Contractual savings institutions, such pension funds and life insurance companies, are particularly suited to making long-term investments. These institutions levy fixed premiums, have steady and predictable cash inflow, and incur long-term liabilities, making them ideal suppliers of term finance for infrastructure projects."

"In the past, government-sponsored pension funds have often suffered from mismanagement and misuse. For such funds to play a significant role in domestic capital markets, they need greater autonomy and more professional management. Experience from Latin America shows that, even when they are technically autonomous, pension funds within the public sector often come under pressure to finance government consumption spending and low-yielding investments." The World Bank, *World Development Report 1994, Infrastructure for Development*, page 107.

- **Secondary market for municipal bonds.** Beyond their tax advantages, municipal bonds in the West enjoy the important advantage of a ready secondary market in which most issues can be easily traded. In Russia, this function can be provided by arranging for a guarantor of the issue, usually a bank that would agree to purchase bonds at a specified discount. The general fee for such a guarantee of an issue appears to be 3 percent. (This is in addition to the 7-9 percent that is mentioned above as the minimum cost of issue.)

- **Maximum period of bond financing.** One of the most serious problems with municipal bond financing is the likely three-year upper limit on the term of any potential offering. Three-year financing periods are the best that have been mentioned to us. However, a three-year period is generally too short to be supported by the flows of new revenues or operating-cost savings that derive from most infrastructure projects. Because these new revenues and/or savings generate project benefits over the entire life of the project, infrastructure projects are accordingly often financed over periods of 15 or 20 years, thereby using these accumulating new revenues and savings to repay the loan.

- **Practical problems of issuance and administration.** One of the greatest disadvantages of doing a municipal bond issue, as opposed to seeking a bank loan, is the time required to complete the entire process. Several experts have estimated that, once the decision has been made to proceed with a municipal bond issue, as long as a full year might well be required to arrange the offering. More time will be needed before that process can even begin, of course, since HSRP has yet to receive assurance from any participating city that it will seek financing for a proposed infrastructure project. Moreover, it is clear that no municipality will commit to any multi-year infrastructure debt until after the forthcoming Presidential election.

Nonetheless, conversations with members of the financial community indicate that various institutions stand ready to act as placement agents, financial advisors, legal counsels, etc., in pursuit of a bond issue. These include several banks, especially local banks in each of the project's three cities outside of Moscow, as well as other organizations having previous experience in this area. Although these institutions are surely not as capable as their Western counterparts, Russia's municipal bond experience to date demonstrates the capability to carry out basic issuance services and post-issuance administrative functions.

For the near term, this means that municipal issuers themselves can probably arrange for the fundamental activities of launching and servicing the municipal bonds that arise from the work of HSRP. For the longer term, however, project efforts to improve financial advisory services and other services related to municipal borrowing would surely be useful—for lenders, perhaps, as well as borrowers. The more efficient are the providers of these services, the lower should be their fees, and the more economical the overall costs of issuing municipal debt.

Bank Loans

Russian domestic banking is in an uncertain period, and profits have fallen since last summer's banking crisis, amidst the establishment of the ruble corridor and the accompanying shrinkage of interbank lending. The level of bank lending is now reportedly quite low. Many of the more marginal banks are expected to fail during 1996, in an anticipated shake-out toward a more efficient domestic banking sector.

Russian bank lending to municipalities generally has been for short-term budgetary support (less than one year). The short-term perspective also dominates in the current economic environment leading up to the Presidential election in June. Discussions with several Russian banks regarding potential infrastructure lending to municipalities have underscored limited-term lending horizons amidst caution about capital lending to municipalities. Whereas a few banks have showed scant interest in any ruble-based lending to municipalities, others have indicated some willingness to consider it. Likely term limits appear to be no more than 2-3 years, with interest rates ranging upwards from the 90-to-100 percent level.[5]

Despite the banks' mixed response so far to prospective lending for municipal infrastructure, recent drops in Russian interest rates should ease bank loan terms and may improve the climate for bank lending for municipal infrastructure projects. These lower interest rates have come in the wake of continued good performance on the inflation front (although some observers attribute lower interest rates to pre-election political factors as well). From 17.8 percent per month in January 1995, the consumer price index settled to around 4.5-4.7 percent per month late in the year, following imposition of the ruble corridor last summer (Table 1). Accordingly, the interest rate on 3-month treasury bills (GKOs) fell from about 120 percent in mid-January 1996 to 55 percent in early March, during which time the Central Bank refinancing rate also dropped from 160 percent to less than 110 percent. If future bank interest rates follow this trend, new opportunities may arise for municipal infrastructure borrowing.

Table 1
Average Monthly Inflation Rates in Russia, 1995

January	17.8	July	5.4
February	11.0	August	4.6
March	8.9	September	4.5
April	8.5	October	4.7
May	7.9	November	4.5
June	6.7	December	n.a.

While further discussions are anticipated with a number of banks, Table 2 on the next page illustrates some selected information that has been provided thus far on possible bank lending terms.

Municipal Bonds Versus Bank Loans

Thus, at present, municipal bonds appear to the be most promising mechanism for long-term infrastructure financing. Although the current environment is a difficult one for any sort of municipal borrowing, municipal bond funding appears to be more readily available than bank funding. Bonds

[5] Officials of one bank stated that interest rates on 2-year ruble-based municipal loans would never fall below 130-140 percent—rates that were clearly inconsistent with those of the same bank's dollar-based loans. Nonetheless, the dollar-based rates clearly represented current bank quotes, while the ruble-based figures were more in the nature of possible rates on a hypothetical loan in which the respondents indicated the bank was not much interested in the first place.

Table 2
Selected Information from Discussions with Russian Banks Regarding Potential Municipal Loans for Infrastructure Development

Topic	Less favorable response*	More favorable response
Willingness to lend to municipalities	Probably not at this time	Willing to consider it
Ruble-based lending to municipalities	No ruble-based lending; only dollar-based lending	Willing to consider it
Term of loan	No longer than 2 years	Up to 3 years
Interest rate keyed to ...	Central Bank refinancing rate (an administratively-set rate)	GKO rate (the closest thing to a market-determined rate)
Annual interest rate (ruble loan)	130-140 percent	90-100 percent
Annual interest rate (dollar loan)	20-35 percent	23 percent
Amount in required reserve account, if any	More than twice the quarterly payment	Twice the quarterly payment
Collateral	N.a.	A negotiated share of annual municipal enterprise revenue collections, keyed to the size of the regular debt service payment

Note
* The less attractive terms outlined here may present an unnecessarily gloomy picture of downside lending prospects. On the basis of this very limited sample, the terms mentioned by banks showing little or no interest in municipal lending were clearly less attractive than those from banks indicating some interest in municipal lending. Also, the more attractive terms from the more interested banks were generally provided by bank staff who appeared to be more senior than those interviewed in the less interested banks. These more junior representatives from the less interested banks may well have been authorized to do no more than cite the least attractive terms then available.

appear to be flexible enough to finance any of the municipal enterprise projects that have been proposed by HSRP participating cities. Despite their undesirably high costs of issuance at this moment, competition and expanded experience with these financial instruments will drive down their costs of issuance and improve their acceptability to a wider range of potential investors.

At present, banks appear to be less likely sources of longer-term lending to municipalities. In the proper economic climate, of course, bank loans could be arranged much more quickly than municipal bonds, greatly reducing the period of uncertainty (in comparison to a municipal bond offering) as to whether sufficient funds would be obtainable at all. Nonetheless, since bank loans may still be appropriate for a few smaller municipal enterprise projects (up to 10 billion rubles), the infrastructure team will continue to pursue bank lending possibilities for such smaller-sized projects.

Potential Limits to Local Government Borrowing

Recent Draft Law that May Limit Local Government Borrowing

Another potential problem is the recent Draft Law on Finance Principles of Local Self-Government, that would appear to limit local government borrowing to no more than 20 percent of budgeted expenditure in any given year. If enacted into law, such legislation could severely constrain local government borrowing potential.

Specifically, clause 23 of the draft law reads, "The maximum sum of the loans, credits, other liabilities made by the local government is the subject of the laws of Subjects of Federations and should not exceed 20 percent of the total local budgetary expenditure." The imprecise language of the draft law may suggest an intent merely to protect local finances from the burden of excessive borrowing. Accordingly, this language seems to imply that expenditure on repayment of principle and interest should not exceed 20 percent of a jurisdiction's budgeted expenditure for that year. Alternatively, however, more strict readings could impose the 20 percent limit either:

- On the amount of *principal* that may be borrowed during any given year (a potentially large amount); or
- Only on the amount of *interest* spending that may be made in any given year (a potentially more modest amount).

The more broadly-defined is this limit, the greater the overall borrowing constraint.

This legislation has been passed in the Duma (lower house of Parliament) but has failed to pass in the Council of Federation (upper house). If it were modified enough to pass the Council of Federation, it would then likely be signed into law by the President.

Reported Limit to Local Government Borrowing in the Recent IMF Loan Agreement

In addition to the above prospective draft law, it is reliably reported that the IMF loan agreement that was recently negotiated with the government contains a stipulation that may also constrain the borrowing abilities of local governments. No details have been announced regarding any such limits, however.

ISSUES IN TARIFF REFORM

Tariff reform in the communal services presently appears to face an uncertain future. Virtually all local officials interviewed discouraged the pursuit of either tariff reform or higher tariffs to cover even part of the costs of long-term financing. Additionally, some aspects of the tariff-setting process itself could reduce the effectiveness of any tariff hike linked to the repayment of financing. Nonetheless, some prospects for progress toward tariff reform remain to be explored.

Municipal Responses to the Suggestion of Tariff Reform

Reluctance to Embrace Tariff Reform, If Only at the Present Moment

In virtually every conversation about tariffs, both in Moscow municipality and in the three other participating municipalities and their municipal enterprises, local officials at present are largely unreceptive to the idea that future repayments of long-term lending be made from incremental increases in utility rates intended specifically for that purpose. Even those officials who understand the need to move toward full cost recovery in the communal services are reluctant to consider this concept at this time. Respondents frequently stated that the weak local economy and the relatively low incomes of many residents—the high proportion of pensioners is often cited—would preclude any tariff increases at a pace exceeding those of the past two years.

Real Tariff Increases, and Some Tariff Reform, Despite the Anti-reform Rhetoric

Although reluctant to consider tariff reform as such, in recent years local officials have still been forced to raise tariffs substantially—even dramatically—in real terms, primarily in response to unavoidable cost increases. In many cities, overall utility rates have grown at more than twice the rate of inflation. This pattern is exemplified by Vladimir's water and sewer rates (Table 3), which roughly trebled or more during less than nine months in 1995 alone. Over the past three years, even sharper tariff increases appeared in Nizhni Novgorod (Table 3) in 1995, particularly after having held off any changes for residential customers during the previous year.

Table 3
Water and Sewer Tariffs for Tenants and Other Customers
(rubles per m^3)

Effective Date of Tariff	Tenants		Industry and Others	
	Water	Sewer	Water	Sewer
Vladimir, 1995				
February 1	114.3	51.8	599.5	281.1
March 1	114.3	51.8	707.3	377.2
April 1	130.5	70.8	742.3	534.5
June 1	130.5	70.8	1,134.0	639.0
July 3	261.0	04.0	1,448.0	729.0
October 10	309.0	125.0	1,695.0	1,061.0
Nizhni Novgorod, 1993-1995				
1993	1.1	1.1	246.0	56.0
1994	1.1	1.1	960.0	192.0
1995	145.0	32.0	2,061.0	467.0

Table 4
Heating Tariffs in Nizhni Novgorod, 1993-1995 for the General Public and Other Users
(Rubles per gigacalorie)

Period	Tenants	Industry and Others
1993: First quarter	24.6	1,508
Fourth quarter	147.6	10,058
1994: First quarter	147.6	12,842
Fourth quarter	526.0	40,136
1995: First quarter	5,174.0	73,456
Fourth quarter	5,174.0	143,483

Recent increases in heating tariffs have been even more dramatic, implicitly constituting tariff reform in spite of the anti-tariff-reform rhetoric. Tariff hikes for heating are being fueled by cost recovery rates that have risen to as much as 80 percent in some cities—versus water-sewer cost recovery that still languishes in the 20-to-30 percent range. Nizhni Novgorod, for instance, posted breathtaking increases in heating tariffs between early 1993 and late 1995 (Table 4), with tenants paying roughly 200-fold more for heating by the end of the period. (Though also shown here, heating tariffs for non-residential customers can be misleadingly high. These statistics may apply only to small base of diverse users, since individual large industrial enterprises often generate heat from their own sources rather than purchasing it from the municipal enterprise.)

Utility rate increases have been driven primarily by surging prices for energy, the largest single cost item for most utilities. The recent sharp increases in utility tariffs should therefore abate as Russian energy prices approach world levels. For example, average electricity prices to all consumers in Russia hit 60 percent of world levels in January 1996, up from only 17 percent in December 1994. Once energy prices stabilize, local officials may well adopt more sanguine views of tariff reform.

Tariff Reform as a Potential Precondition for HSRP Future Work with Municipalities

Beyond the relatively immediate political reasons to shy away from tariff reform—including uncertainty about the aftermath of the June 1996 Presidential election—some thoughtful local officials recognize the role for tariff reform in any longer-term solution of the problem of infrastructure financing. Several local leaders acknowledged as much at the Capital Finance Seminar sponsored by USAID's Municipal Finance and Management Project at Golitsino in early March. In so doing, they and others also indicated interest in exploring long-term financing options centered around the issuance of municipal bonds.

The HSRP infrastructure team hopes to meet with some of these municipal leaders in the near future to explore potential collaboration with their municipalities. Such conversations should provide the basis for extending the infrastructure finance program to additional municipalities. Specifically, the prospects of successful intervention could be strengthened by looking for municipalities whose leaders understand the importance of utility tariff reform and are willing to work seriously toward that end. Such municipalities—such as Dzerzhinski, Krasnodar, Petrozavodsk, and others—could first be identified through conversations with some of their local officials. HSRP should begin now to line up potential participating municipalities for the second year of the project, since the process of arranging for a municipal bond issue can be lengthy. In so doing, it may be desirable to plan visits to several potential municipalities to present HSRP's concept of infrastructure finance and tariff reform and to elicit specific interest in both these objectives. Once agreement is obtained from the local authorities on both these points, HSRP may then move quickly to select local projects for financing and to link the municipalities with some of the project's growing contacts in the financial community.

Cross Subsidies and Arrears

A common theme in the defense of low tariffs for tenants is the widespread argument that cross-subsidies from industrial enterprises support the continuation of low rates for tenants. Official tariffs for industrial enterprises can be many times higher than for tenants, as in Vladimir and in Nizhni Novgorod (Table 3).

The intended cross-subsidy of tenants by local industry would be diluted, perhaps substantially, if industrial enterprises were in arrears for all, or a major portion, of their utility bills. Anecdotal evidence from each of the participating non-Moscow cities suggests that industrial enterprises do indeed have significant outstanding obligations to municipal utilities. Despite repeated inquiries, however, no hard evidence was found that industrial arrears exceed those of tenants. On the contrary, for 1995 in Vladimir, the only one of the three non-Moscow cities to provide data on arrears by user class, tenants reportedly paid 95 percent of their billings for water-and-sewer service, and other consumers (primarily industrial enterprises, but including government organizations) paid 66 percent (up from 50 percent at the end of October). Although arrears for industrial customers were apparently substantially higher than for tenants, the much higher tariffs for industry still far outweigh the comparisons in unpaid billings. If this pattern applies elsewhere, there is indeed substantial cross-subsidy of tenants by industrial enterprises, with each of these major user classes meeting a significant portion of its tariff obligations.[6]

Another HSRP project has shown that, in Moscow, most tenant utility bills that are unpaid after two months have been settled within six months. This indicates a problem only of late payments by housing maintenance organizations, not one of significant and continuing payment arrears. If this pattern holds for most municipalities, particularly through the substantial recent rate increases, tenant reaction to tariff reform may not be nearly as adverse as local officials often imply.

Moreover, it is apparently not uncommon for some industrial enterprises to illegally sell unmetered water to other users by diverting water before it passes through the company's own meter. This may well occur even while the offending industrial enterprise accumulates growing arrears by claiming an inability to pay its own water bill. In one of the HSRP cities, one official speculated that illegal users may continue to steal as much as 20 percent of produced water in this manner.

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[6] One municipal enterprise reported that their records permitted retrieval of payments-versus-billings data on individual customers, but not on all customers in a user class.

Costs and Profitability in the Rate-setting Process

Under the Law on Local Self-Government,[7] individual municipalities are now exclusively responsible for setting water-and-sewer rates: the municipal utility enterprise recommends the tariff to the city, and the city approves or modifies it. This procedure applies to tariffs on industrial customers as well as tenants. Previously, an oblast-level (regional) tariff commission was responsible for setting water-and-sewer tariffs. This regional commission still sets tariffs for all other utilities: electricity, hot water, and heating, including both "wholesale" prices (those paid by the heating company for any heat purchased from another source) and "retail" prices (those paid to the heating company by its individual customers).

A municipal enterprise's tariff (the price per unit of service) is the sum of anticipated values of specified elements of primary cost (as prescribed by decree) plus the calculated profit.[8] The prescribed elements of primary cost include projected expenditures for salary, social insurance, unemployment contributions, materials, maintenance, depreciation, energy, etc. For each municipal enterprise, profit is calculated by multiplying the total primary costs by the *preselected* target profitability rate (up to the maximum of 25 percent), which itself has been negotiated among the municipal enterprise, the municipality, and perhaps other interested parties. The tariff for each class of customer (principally tenants and industry, but in some communities including several subclasses of each) is then derived from this total per-unit price.

If revenues fall short of, or expenditures exceed, the planned levels, the actual level of profitability can—and reportedly often does—fall well short of the target profitability level. Nizhni Novgorod's water-and-sewer company, for example, had only a 5 percent actual profitability rate in 1995, instead of its planned profitability rate of 25 percent.

The negotiability of the planned profitability rates means that planned profitability of some municipal enterprises may be increased as others are reduced.[9] This accommodation apparently seeks to shelter the community from excessive "tariff shock" among the various public utilities. By extending this concept across the several municipal enterprises, of course, this profitability-rate accommodation might seriously undermine tariff reform in the delivery of any particular communal service.

Tax Status of Municipal Enterprise Profits

Interest payments on capital financing of new construction, of major reconstruction, or of major modernization may not be counted as part of primary costs in the tariff calculation. The only

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[7] Law of General Principles of Organization of Local Self-Government in the Russian Federation (August 12, 1995).

[8] This procedure is based on Government Decree Number 661, Regulation on Cost Composition of Production and Realization of Products (Works, Services) included in Primary Cost of Products (Works, Services) and on Technique of Structuring of Financial Results included in Tax Base of Profit (July 1, 1995).

[9] This practice of negotiation is based on oblast instructions that probably derive from long-established practice.

interest payments that may be included in primary costs are those relating to borrowing for current expenditures such as maintenance or renovation (which, in Russian, is confusingly referred to as *capital remont*).

Tax-related aspects of bank financing for capital infrastructure improvement may substantially erode the putative advantage of bond financing over bank loans. In the taxation of municipal enterprise profits, a special stipulation reduces the amount of municipal enterprise profit subject to taxation ("taxable profit") *if* a bank loan (and only a bank loan) finances the capital investment *and if* all funds in the depreciation account are fully used during the reporting period.[10] In that event, taxable profit is calculated from "balance profit" (the difference between revenues and expenditures) by subtracting from balance profit interest payments on the capital loan from a bank and any capital expenditures made from the principal of that loan. All such reductions in the base of the profits tax ("privileges") may not reduce the profits tax by more than 50 percent from what it otherwise would have been. Nonetheless, under normal circumstances, a bank loan taken for capital purposes can significantly reduce the profits tax of a municipal enterprise.[11]

Municipal enterprise profits are taxed at a rate of 35 percent, with proceeds shared between the Federal Government (13 percent) and the oblast (22 percent). Some respondents indicated that, as a Subject of Federation, the oblast could waive its share of the profits tax on any particular activity so as to reduce the effective burden of said tax by 22 percent.

Regarding income taxation, the income earned by individual holders of state securities (paper issued by Subjects of Federation) is tax free. This confers an advantage to any municipal bond that is issued by the oblast on behalf of a municipality or its municipal enterprise. In contrast, a municipal bond issued by a municipality itself would not confer such tax-free status to individual bond holders.

Tariff Reform by Not Reducing the Tariff in the Face of Cost Savings

Some opportunities for tariff reform might emerge from borrowing to purchase cost-cutting new technologies. Many of the pilot projects being planned by these municipal enterprises seek to reduce—or at least to moderate the growth rates of—systemic operating costs caused by outdated equipment or deteriorated facilities or by explosive input cost increases (particularly for energy). The introduction of such cost savings may thus pose an opportunity for tariff reform, where at least a portion of the presumed cost savings could be allocated toward repayment of the long-term financing.

The objective of tariff reform would be set back, however, if rates were reduced following a new project's introduction of cost-saving technology. In early discussions in Vladimir in November 1995, for instance, the oblast-level tariff commission (which, until the end of 1995, had been responsible for setting water-and-sewer tariffs) had indicated that it would expect to cut tariffs or to

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[10] Depreciation accounts (which, in Russian, are confusingly called *amortizations*, which they are not) are normally fully spent during each year, since these are simply imputed depreciation amounts derived from the capital spending of earlier years.

[11] Law on Taxation of Profit of Enterprises and Organizations (with amendments and additions as of June 1, 1995).

reduce profitability if a new project led to lower costs. Subsequently, however, in March 1996 (*after* the City became responsible for water-and-sewer tariffs), municipal officials stated that they would at least retain the former tariff levels in the face of cost savings as a way to partially recoup financing costs through the tariff structure.

If a proposed capital project will not improve the quality or quantity of a given utility service that is delivered to most customers, a tariff increase would seem an unpopular way to pay off the long-term financing. An argument often made for benefit-related tariff increases is that people are willing to pay higher rates for improved service. As noted below, however, many of the pilot projects outlined by these municipal enterprises are not expected to directly improve either the quality or the quantity of a given utility service, as perceived by most individual customers. Rather, many of these projects seek to reduce the costs of providing these services, or to control more effectively their presently fast-rising costs. In such cost-cutting projects, tariff reform could be stymied if the rate were to be cut automatically in response to cost savings.

Each municipality's application of the traditional rate-setting methodology may nonetheless leave the door open for unusual efforts to achieve higher cost recovery. Aware of the municipality's rate-setting authority, officials in one city even suggested that post-project water-and-sewer rates might be calculated using the higher level of operating costs that had obtained before the completion of a new cost-saving project.

Tariff Reform as a Municipal Economic and Political Decision

Since water-and-sewer rates are set by the municipality—and tariffs for heating, hot water, etc., are still under the control of the oblast-level tariff commissions—then financing-with-tariff-reform efforts should focus *primarily* (but not necessarily entirely) on water and sewer services. Exceptions would be warranted where the oblast leadership is sufficiently progressive to countenance tariff reform in the oblast-priced services, or when the project is of compelling interest beyond the tariff reform issue.

Ultimately, any tariff reform for water-and-sewer services will be decided by municipal leaders—primarily on the basis of economic and political factors, rather than on the dictates of a formal rate-setting process that itself is a throw-back to a more centralized era. (Conceivably, of course, the influence of municipal leaders could well itself also carry the day within the regional tariff commission, despite the formal process whereby tariffs supposedly have been calculated until now.) Municipal leaders who understand the need for reform and are willing to undertake such a policy will do so on their own authority, even in the face of public opposition.

ASSURANCE OF REPAYMENT IF TARIFF REFORM IS INSUFFICIENT

Ideal Goals of Tariff Reform

The preferred means of assuring repayment of long-term financing is tariff reform—a dedicated incremental revenue stream from the new project that, alone, would be sufficient to fully repay all interest and principal obligations on time. This is the minimal standard financial criterion for assured repayment of long-term financing from a self-sufficient enterprise operating under the principle of full cost recovery.

Feasible Goals for Tariff Reform

At this point in Russia's transition toward a market economy, it is understood that full cost recovery does not exist for municipal enterprises, which also are not self-sufficient entities. Thus, the tariff reform that is addressed here is not expected to be sufficient to cover all necessary principal and interest cost of debt financing. The program goal, therefore, is to move toward tariff reform in the course of the anticipated long-term financing. This might mean, for example, that a municipal enterprise and its parent municipality would agree to advance the percent of cost recovery —over and above the rate of inflation—during each year of a multi-year financing effort, with the incremental tariff increases being dedicated to repayment of the financial obligation.

At a bare minimum, of course, all administrative and transactions costs of implementing the financing itself must be recovered through tariff increases; otherwise, the municipal budget would be put in the uneconomic position of having to subsidize even the act of financing itself.

Alternative Approaches to Lender Assurance of Repayment

Short of a dedicated incremental revenue stream from the new project itself, several potential arrangements might be considered by a municipality to provide some assurance to a lender of the timely repayment of financing. None of these alternative arrangements offers the economic advantages of a tariff increase for the repayment of financing. However, one or a combination of these approaches might be considered if there is utterly no possibility of linking an incremental tariff to repayment.

- **Dedication of a Share of Total Municipal Enterprise Revenues to Debt Repayment.** Short of the commitment of *incremental* revenue from a new project to the repayment of project-generated debt, a specified percentage of the *total* annual revenue of the municipal enterprise itself might be pledged to repayment of the obligation. As incentive for payment as well as assurance to the lender, moreover, the penalty for default might then be defined as a doubling or tripling of that percentage for the period of the default.

- **City Guarantee of the Loan to the Municipal Enterprise.** The municipality itself could guarantee the timely repayment of all or a portion of the financial obligations of the municipal enterprise. Although this approach could place significant limits on the municipality's financial options, it could be an important element in attracting capital in the absence of dedicated incremental revenues from the project itself.

- **Dedication of Municipal Revenues from Another Source.** The municipality could dedicate all or part of revenues from another, reliable municipal revenue source to the repayment of the financial obligations of the municipal enterprise. If these revenues were from a well-established revenue source, this approach could serve much the same function as a city guarantee, but without the formal obligation.

■ **Municipal Property (Other than Assets of the Utility) to Be Used as Collateral.** If utility assets are undesirable as collateral, and if incremental tariff increases are not sufficient to be treated as collateral, then other municipal property might be offered by the city as collateral on a loan to a municipal enterprise. Utility assets generally are not viable as collateral, since they have relatively little value other than in their function as utility property. Incremental tariff increases may not be large enough—nor their implementation sufficiently assured—to serve as formal collateral to a loan. In this situation, other city property, such as a cinema, might be offered as collateral on the loan.

CONCLUSIONS

The HSRP infrastructure finance program seeks to demonstrate techniques to improve urban infrastructure in Russia through long-term financing that is to be repaid in part through tariff reform. It was initially envisioned that suitable financing would be arranged, through bank loans or municipal bonds, in four participating cities during the first year of the project and in four additional cities during the second year.

The work during the past five months has taught the team much about infrastructure finance in Russia. With the focus now on the financing of specific projects, the project's initial work has highlighted the need for clarifications or changes in several areas.

First, work with three of the initial four participating cities will likely have to be continued into the second year of the project if successful financings are to be arranged in these three cities. If municipal bonds do indeed offer the most promising mechanism for long-term financing of municipal infrastructure projects, the long gestation period of a municipal bond offering will require continued work with Ryazan, Vladimir, and Nizhni Novgorod perhaps into 1997—at least in a monitoring role through the latter stages of the process. Any such continuing contacts in these cities should be formally approved.

Second, HSRP should begin this spring to establish future working arrangements with probably more than four additional participating cities. Discussions should be initiated in more than four potential cities, as there is no assurance that one or more of these potential partners will not drop out somewhere along the line. Consideration should be given to selecting additional participating cities on the basis of a municipality's expressed interest in municipal infrastructure financing. The team could begin some preliminary contacts during April and May, perhaps to include visits to prospective municipalities to explain the project, ascertain interest, and begin gathering information. HSRP has already received expressions of interest from Dzerzhinski, Krasnodar, and Petrozavodsk. An offering of the RTI Debt Finance Seminar (possibly in June, but more likely in the fall) would doubtless generate additional interest in HSRP's technical assistance.

Third, consideration might be given to pairing domestic-source infrastructure loans to much longer-term loans from an international donor such as the World Bank. Given the difficulties of repaying infrastructure loans within the three-year periods of available domestic loans, a mixed financing (such as a 3-year municipal bond and a 15-year World Bank loan) would enable the borrower to recoup project benefits over a suitably long period. Importantly, World Bank participation would surely attract significant additional attention to the municipal bond offering, thereby boosting its chances of success while still requiring the municipal (or municipal enterprise) borrower to demonstrate essential procedural discipline in issuing the municipal bond. It is unclear what the on-lending rate for such a World Bank loan would be—although municipal borrowers might hope for a concessionary interest rate, any on-lending through banks might well approach market rates. In any event, World Bank participation would visibly encourage the domestic financial sector to become involved in long-term financing of Russian municipal infrastructure.

Fourth, timely progress in HSRP's work with each participating city needs to be maintained. Toward that end, it should be determined soon if the City of Moscow should remain on the list of participating cities and, if so, how best to reinvigorate HSRP's efforts there. To date, there has been no discernible progress with Moscow, because the level of interest and cooperation from the City of Moscow has been minimal.

Fifth, the process of working with each potential participating city has become much more streamlined. With much of the learning phase completed, the infrastructure team may now concentrate more efficiently on the essentials of the task. As noted above, the project should look more broadly for potential participating jurisdictions, and should pursue most vigorously those localities whose leaders indicate strong commitment to tariff reform. Applying financial analysis much sooner to demonstrate financing alternatives should stimulate municipal action. The team is now able to do so as a result of the March visit of RTI financial management specialist Marfitsin, which equipped the infrastructure team with important additional capacity to do effective financial projections on prospective municipal enterprise projects. Moreover, the February/March visits of RTI consultants Lisenko and Cochran strengthened the team's capabilities to pursue, on its own, relevant technical issues of project design, size, and cost. This will enable the team to pursue potentially meaningful project alternatives almost from the start of discussions in each new city.

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