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A WORKING GUIDE FOR THE ISSUANCE OF MUNICIPAL BONDS FOR THE MUNICIPALITY OF VLADIVOSTOK, RUSSIA

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A Working Guide for the Issuance of Municipal Bonds

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Introduction

The Municipality of Vladivostok has undertaken a farsighted and bold step in the resolution signed by the Mayor on August 23, 1994, to issue its first municipal bond. The use of municipal bonds can become an integral part of Vladivostok's capital investment and fiscal management and can enhance the ability of the Municipality to develop much needed infrastructure to support an industrial-commercial center over the remainder of this decade and into the 21st century. It is crucial to the development of municipal bond financing that the first issue be formulated on sound credit principles and be successfully marketed. This will enable future issues to be replicated and expanded, not only in Vladivostok, but in other Russian cities, as well.

It is necessary to formulate the schedule of actions adopted in an addendum to the Municipal Resolution into substantive concepts and a logical process that will produce a sound and successful bond issue. This Working Guide attempts to augment and implement the initiative taken to issue a bond and emphasizes the basic foundation on which successful municipal finance can be built. The Municipality needs to develop a knowledge and expertise in debt management which corresponds to that which it is undertaking in current fiscal management.

The ability to issue long-term bonds to finance capital projects in the present Russian monetary and fiscal situation is restricted by conditions outside the control of the Municipality. The high inflation rate which translates into even higher interest rates, the shortage of long-term capital funds in the market place, and the inability to charge fees for utility services in order to recover operating and finance costs make it most difficult at present to issue a substantial amount of municipal bonds. Hopefully, these inhibiting circumstances will change as the monetary position stabilizes and a market economy takes hold, which will reduce interest rates and make longer-term capital available. The present conditions do not mean that Russian municipalities should not begin to issue bonds at this time. It does mean that the first issues will have to have short maturities and be used to finance capital projects that can generate revenue to retire the debt in a short time frame. In the interim, the Municipality can develop creditability in the market place and position itself to issue longer and more capital intensive projects as conditions change.

It is recommended that the first effort be directed to a short-term pilot issue that will build the fundamental steps to inaugurate and manage bond issuance and repayment, thereby demonstrating the Municipality's creditability. Thereafter, the Municipality can move forward with the issuance of longer-term bonds aimed at infrastructure development.

The importance of developing bond financing as an integral part of municipal fiscal management dictates that the responsibility and authority for bond finance be assigned to a senior municipal officer. While bond financing planning and execution require the coordination of the Economic Planning, Capital Construction, and Finance Departments (as recognized in the original resolution), it is recommended that the primary responsibility be delegated to the Director of Finance. No doubt, this will require the organization of a separate section within the Finance Department as bond financing increases.

This Working Guide is directed to establishing bond financing as a continuing financial instrument to assist the Municipality in its fiscal management. A guideline to issue a series of pilot bonds will be set out as an addendum to the Working Guide.

Basic Concepts

Municipal bond financing has become an integral factor in the development of infrastructure in market economies through the world. The techniques and markets have become highly developed and sophisticated. In fact, in the United States the mechanism has become so complex and bureaucratic that the ability to understand and invest in municipal bonds requires an in-depth knowledge of instruments and markets. Investment bankers who specialize in municipal financing have become financial advisors and underwriters of the large majority of municipal bond issues.

It is not suggested that the United States system be copied intact. The basic principles of the system, however, can be adapted and transferred to the Russian financial structure and can become an effective mechanism to finance local government capital investments.

As the concepts of municipal bond financing have been developed and shaped, the system has evolved its own vocabulary and definitions. Municipal bonds have been categorized into two basic types, based on the sources and securities pledged to repay the bond indebtedness.

In the first instance, the municipality pledges its "full faith and credit" to repay the bond. The generic term used to define this type is "General Obligation Bonds."

In the second instance, the municipality limits the source of repayment to specific revenues, fees, or taxes that are pledged to repay the debt. These are called "Revenue Bonds."

There may also be combinations of the two sources of repayment, where the municipality pledges specific revenues but also stipulates that it will use all its revenue sources, as necessary, to repay the debt if there are not sufficient revenues from the specified sources. These are sometimes called "Double Barrel Bonds."

The "full faith and credit" pledge is an obligation of the municipality that it will use all its revenues and assets to repay the bondholder and as necessary will use its taxing power to increase revenues to insure the principal and interest are paid. The municipality undertakes to organize and budget its finances to provide funds to repay the indebtedness and assures the bondholder it will increase taxes as necessary to make timely payments. All general obligation bondholders are on an equal basis. Thus, the municipality has pledged its full faith, credit, and taxing power.

In the United States and other democratic countries, a municipality, under the Constitution of the county or state, has the right, within limits, to tax both personal and real properties at the local government level. The "ad valoreum" taxing power, as it is called, can and will be used to generate sufficient funds to repay the bonds. The ad valoreum tax has a priority over all other liens on the property. This means that under a general obligation bond, the holder of the bond has a lien on all the privately owned property in the municipality. This is a powerful instrument, and its pledge has become the basis of the major portion of outstanding local municipal bonds in the United States.

In Russia, there is at present little private ownership of property and little incentive for private ownership to increase rapidly in the near future. There is also limited power to create property taxes, and therefore little property tax revenue. Thus the pledge of the full faith and credit is limited to the current tax revenues shared by various levels of government. A different method to provide assurances to the bondholders will need to be developed. There is the basic question of the strengths of the legal recoveries of the bondholder if the municipality's fiscal position weakens or there is a default in payment.

The problem, however, is not different from the status of the U.S. State Governments (Krie or Oblast), who generally do not use property taxes as revenue sources for their budgets. The states' general obligations are secured by a pledge of their full faith and credit. In this instance, income and sales taxes are the main source of revenues, as in the Russian system.

It is important to note that the municipal finance system of market economics is built on developing sources of revenues *that may be pledged to secure the bonds. Their creditability and the incentive of buyers to purchase them depend upon the reliability of those revenue sources, not the pledge of specific assets to secure the bonds. The basic question for a prospective bondholder is how the bond will be repaid, not what physical assets he will have a claim upon if there is a default in payment.*

A mortgage in itself does not assure the holder of a flow of funds which will repay the debt, and foreclosure is a long and difficult process, particularly when there is a government entity involved. Moreover, the physical assets that are foreclosed upon in the event of default will have to be sold or leased to generate the cash to repay the amount of the bond. But if the municipality cannot make the principal and interest payments, it cannot make a lease payment, which removes the opportunity to recoup the debt owed by leasing the foreclosed assets back to the municipality.

The pledge of specific property also establishes priorities among the bondholders. In a well functioning bond system, all the holders of a general obligation bonds are on the same credit basis and have the same rights in case of default. By pledging or mortgaging assets, it becomes increasingly difficult to issue additional bonds.

The goal in establishing a municipal bond financing mechanism is to develop a system under which the municipality can issue successive bond issues for various needs that will be equitable and meet the market's demands.

A process and procedure needs to be established and followed that meets the criteria of creditability and marketability.

The process follows a logical sequence of inquiry, analysis, and actions that form the initial recognition for financing to the issuance of the bond. The steps may be organized as follows:

Identification of the uses and purposes of the bond issue
- What are the infrastructure segments that need to be financed?
- How can the generation of funds assist in fiscal management?

Economic and financial analysis
- What are the costs and benefits of the proposed projects?
- What are the financial implications of the proposed projects?
- Can the projects produce revenues on which financing can be structured?

Identification of repayment sources and credit analysis
- What are the sources of repayment which might be used and pledged?
- How secure are the repayment sources and what will their effect be on the municipality's fiscal status?

Identification of fiscal impacts and management of priorities
- How will bond financing affect the general budget?
- What projects are judged to have more urgency and significance?

Analysis of financial markets
- Is there a demand for bonds?
- What are comparative interest rates?
- What is the availability of long-term capital?

What are the credit requirements?

Bond design, structure, terms, and conditions
- How large is the issue?
- What will be the interest rate?
- What will be the maturity?
- What sources of funds will be offered for repayment?
- What are the stipulations and conditions?

Negotiation of bond agency agreements
- Who will be the agency to sell the bonds?
- Who will be the trustee, registrar, and paying agent?
- What fees will be levied for services?

Legal and municipal authority
- What are the laws which permit issue and conditions?
- How will the resolution of the municipal administration to issue bonds be framed and enacted?

Marketing program
- How will the bond issue be announced?
- How will the bond issue be advertised?
- How will buyers be attracted?

Issuing prospectus
- Set out general information on municipality
- Disclose essential financial information
- Describe terms and conditions of the bond
- Set out administration of the bond

Administration of bond sales and repayment
- Carry out required actions
- Market and credit transactions.

Uses and Purposes of a Bond Issue

Bond financing is used primarily to obtain financing to make capital investments in infrastructure and services whose development requires larger sums of money than can be budgeted out of current revenues.

Bond financing may also be used to a limited extent to manage current fiscal operations when there is a timing differential in the inflow and outflow of funds. This financing is defined as "tax anticipation notes or bonds" or "revenue anticipation debt."

There are occasions when there is a delay in the receipt of funds or revenues and expenditures must be financed to bridge the gap. There can also be situations in which fuels or supplies must be acquired and stocked before user fees are received, which will require the municipality to borrow funds in the marketplace or from banks.

Bond financing at the municipal level, however, is *not* used to finance current operating deficits. The use of long-term financing to finance operating short falls is a very dangerous method for the municipality. The ideal financing method is to pay for a project over the period of its use, so that users of the service pay for their *pro rata* share as they receive the benefits. In bond terminology, this is called the "pay as you use" method.

The opposite approach is to pay for the investment up front as the expenditure is made. This is called "pay as you go (or acquire)." This is, obviously, a very restrictive method, and, unfortunately, it is the situation in which Vladivostok and other Russian municipalities find themselves as the national government can no longer make grants or undertake projects out of state revenues. The situation is worsened in that current operating budget pressures are so great that it is very difficult to save and accumulate funds for capital expenditures. The municipalities thus require, out of necessity and a desire to meet the vast amount of capital investments, a financing mechanism which will allow them to expand services as the demand for them arises and to pay for them over the period for which they will be utilized.

Over the last two years, Vladivostok Municipality has budgeted for capital expenditures but has been able to make only a small percentage of the planned investments. Bond financing planning and implementation will require a disciplined and dedicated effort to set aside funding for debt services, including interest and principal payments, in budget preparation and adoption. Vladivostok

Municipality has developed an extensive list of capital projects which need to be undertaken currently, as well as over the next decade ending in 2005. The preliminary figure for 1995 calls for expenditures by the Municipality of 217.7 billion roubles ($68 million US), with a similar amount to be expended by the Krie within Vladivostok during the fiscal year 1995. The ten-year projection of needed infrastructure expenditures by the Municipality from 1996 through 2005 calls for an investment of 948 billion roubles ($296 million US). These expenditures call for investment in health and hospitals, water supply and distribution, sewer, solid waste, electrical power, schools, roads, housing, heating, transport, and other public facilities.

Each of these desired expenditures could be considered for financing through municipal bonds. This provides the opportunity to extend the period over which the investment is paid for. The interest incurred is the cost of having the use of the service while it is being paid for.

Even if the financial markets permitted the use of bonds to finance the needed projects, however, there are not sufficient resources within the budget to service debt of this magnitude. This is the classic problem of governments which must somehow allocate limited resources to fulfill greater wants than can be satisfied. The task is to determine how much of this needed infrastructure development can be financed over what period of time.

The first step in this process is to categorize the investments by the sources which will be used to pay for them. Many of these capital projects will produce income through user fees which can be used to repay the borrowed funds used to construct the facilities. Some projects, however, will not produce revenues, in which case support from the general budget will be required to pay for the investment. At this point in time, most of the Municipality's envisioned projects fall between these two extremes, since they will provide some revenues but not sufficient to amortize the debt incurred to build them.

Investments in services and facilities such as education, health care, municipal offices, street improvements, jails, parks, and recreation generally do not produce revenue, and investment in these will require support from general revenues. Bond financing for them will fall under the "General Obligation Bond" category.

Other expenditures in such capital investments as power, water, sewer, transportation, housing, and commercial facilities will produce revenues and user fees. The investment in these capital intensive facilities is usually large, and their economic life is long. If bond financing for them can be structured to be repaid over a 10, 15, or 20-year period, the net revenues from their operations can be dedicated to repayment of the debt incurred to build them. The opportunity thus exists to use "Revenue Bonds" to finance these investment categories.

Two prerequisites which cannot currently be met must be achieved for these investments to be self-financing. First, user fees must be priced to cover operating and maintenance costs and debt amortization. Second, the financial markets must be convinced to accept bonds with maturities of 10 to 20 years, which equates to the economic life of the investment.

There are, however, certain investments which will produce relatively large revenues in a short period of time and can, accordingly, be financed by revenue bonds under current market conditions. Among the categories which might be considered for revenue bond financing are: housing construction, where revenues will be produced from unit sales; commercial facilities which will be sold or leased; solid waste facilities which require relatively small capital costs; toll roads or bridges which will produce high volumes of traffic. As the Municipality plans its capital investment program, each proposed investment can be labeled by the type of financing required and the length of time needed to recapture the initial capital costs. A financial and economic feasibility analysis should be made on each proposed capital investment to assist the Municipality in establishing priorities and financing programs.

Economic and Financial Analysis

Economic and financial analysis is an integral part of capital investment planning and is a necessary step in the process of determining fiscal impacts and the feasibility of specific projects. The findings of this analysis provide a body of information which allows various proposed investments to be evaluated using a common methodology in order to set priorities and determine the financiability of projects.

At this point in time, the Municipality has compiled lists of capital projects which are needed annually and over a ten-year period. These lists include estimates of capital costs, but the investments are proposed without any financial constraints.

The next necessary step in the development of capital investment planning is to begin a program of economic and financial analysis. The inclusion of such analysis will aid significantly in the selection of capital investment projects, the timing of expenditures, the financing mechanism, and the fiscal impact of projects on annual operating budgets. The end result will be to use the Municipality's limited resources to provide the more efficient and worthwhile investment projects.

Each capital project which is considered for financing with municipal bonds needs to be reviewed and studied through a series of analytical modeling procedures.

(1) The first step is presently being undertaken and consists of developing the total capital costs of the project in present day values.

(2) The second step is to estimate a pro forma operating statement that will indicate cash flows over the life of the project. This process also includes the compilation of a financial feasibility analysis to determine the fiscal impacts of the project.

(3) The third step is to conduct an economic benefits-costs analysis to study all the benefits and costs, direct and indirect (spillover), which the project will bring to the Municipality. The flow of these benefits and costs is projected at their present value.

These studies build on the previous analysis, and in the end, both the financial and economic benefits are compared to the costs. The extent to which benefits equal or exceed costs is a measure of whether or not the project is worthwhile.

The development of these analytical capabilities is a project in itself and will be addressed in a separate paper. Each participant in the decision-making process needs to understand both the value and the limitations of these analytical tools. The capacity to complete these studies should be installed within the Finance, Capital Construction, and Economic Planning Departments. Economic Planning, in particular, should develop an in-depth knowledge of benefit-cost analysis.

From a municipal bond issuance standpoint, the analysis answers the questions of how large the bond issue must be, how much a project's net revenues will contribute to the repayment of the bond, and what the fiscal impact on the annual municipal operating budgets will be.

A brief description of these analytical tools will suffice for the purpose of this working guide:

(1) Developing Capital Costs Estimates

The Capital Construction Department now develops an estimate of a project's capital costs and allocates the expenditure by the Municipality, Krie, and State. The estimates are updated annually, based on inflation rates. To formulate the total investment, the capacity of the service, the area, and the number of units served is estimated. Depreciation schedules also need to be estimated in order to determine the life of the project. These base assumptions provide the information for further study and analysis.

(2) Pro Forma Operating Cash Flow Statements and Feasibility Analysis

Operating statements over the life of the project can be developed based on user fees and revenue projections obtained from the provider or delivery agency. Using the base assumptions, gross revenues, operating costs, and maintenance expenses can be determined. Cash flows can be determined before debt service and depreciation costs. The amount of potential borrowing capacity can then be determined, based on the available annual cash flow. The amount of needed investment in excess of that amount which can be recaptured from cash flow, as determined, will have to be paid or financed from the general budget. This analysis gives the decision makers an estimate of the fiscal impact of each project and helps to determine its feasibility.

(3) The Benefits-Costs Analysis

The benefits-costs analysis has developed over the last 40 to 50 years as an analytical tool to allow both governments and private enterprises to rationally determine whether or not the economic benefits anticipated from a project in the future are worth the capital investment and operating costs incurred over its life.

Both the direct and indirect benefits and costs are included to insure that spillover factors (externalities) are included in the resulting equation. The analysis recognizes what is called the time value of money and benefits--that is, the fact that the value of receiving a benefit now is worth more than receiving it in the future. The difference in present and future value is defined in terms of an interest rate that expresses the time value.

Since the capital is invested immediately and the benefits and operating costs extend over the life of the project, the analysis discounts (at a determined interest rate) the future benefits and operating costs back to the present value of the investment. The project is deemed worthwhile if the present value of the benefits is greater than the present value of the costs.

Another approach is to determine the return of the net benefits receives as expressed as an annual percentage rate of the original cost of the investment. If the rate of return (IRR) is greater than the established social interest cost, the project is considered acceptable.

The benefits and costs can be limited to a financial analysis using the real interest rates in the marketplace (not nominal interest rates). The financial analysis becomes a highly significant factor in determining the viability of a proposed project.

Repayment Sources and Credit Analysis

The strength and reliability of the source of repayment are the primary criteria in appraising the credit risk of a municipal bond. A mortgage on a physical asset does not produce funds to repay the principal and interest. It is only of value if the planned or dedicated flow of funds does not generate sufficient revenue to repay the bond. It is equally important for both the Municipality and the bond buyers to have confidence that there is a manageable source of revenues which can be used over the maturity of the issue to pay principal and interest.

As has been described, there are two basic sources of debt service: the allocation of funds from the general budget (General Obligation Bonds) and the use of dedicated revenues generated from the financed project or other sources (Revenue Bonds). In addition, the two basic sources can be combined (Double Barreled Bonds).

At the present time, the allowable use charges for utilities and services--water, sewer, power, transportation, solid waste, etc.--do not permit the Municipality to charge user fees sufficient to cover operating expenses, maintenance costs, and debt service. As a result, it is impossible to use revenue financing as a sole financing method. Even when possibilities to service the debt from the projects exist, the present creditability of the Municipality is insufficient to permit it to issue pure revenue bonds. As the Municipality gains experience and demonstrates it capacity to retire bonds, and as user fees are increased to cover all costs, the use of "pure" revenue bonds can become an ever increasing financing mechanism.

In the interim, however, the use of revenues generated out of new investments can offset the burden of servicing the debt from the general budget.

Even without the capacity to charge fees which obtain full cost recovery, there is the opportunity to add some incremental fees which could be used to service debt incurred to make capital improvements in utilities (water, sewage, and power).

The municipality appears to have the authority through the "Laws on Self-Management" passed in 1991 to initiate "special assessments" on utility services that can be used to make capital expenditures.

For example, if a fee of 10% of the monthly utility charge was added to the billings each month, some 300 million roubles could be generated. This amount of funds can amortize a bond totaling 15 billion roubles (10 years at 10% real interest rate) which can be invested in capital projects,

Other special assessment taxes and fees might be explored. The rate of growth of automobiles in Vladivostok has generated additional road and street maintenance costs and increased the need for additional roads and bridges. A local tax on gas is one possible revenue source. The gasoline sales tax has become an important source of government revenues around the world. Taxes account for more than 50% of the gas prices in most European countries. A value or personal property tax (surtax) also could be imposed on automobiles, which would generate significant amounts of money. The citizens owning automobiles would be contributing to the capital costs incurred by the Municipality to facilitate the use of their vehicles.

The greatest source of additional revenues will come from increasing user fees over the next five to ten years to a level which will cover all costs of service delivery and debt amortization.

In the interim, the Municipality will have to rely on management of its general budget to allocate funds on an annual basis for debt amortization and investments in capital projects. A forthright policy decision to provide adequate funding to invest in its capital investment program is essential to gain the confidence of potential bond buyers.

From a credit analysis perspective, there is virtually no opportunity to assure the bond buyer that the Municipality can raise local property tax revenues to provide additional funds to service the bonded debt if for some reason extraordinary fiscal demands were placed on the general budget. This requires an approach to general obligation bonds which is different from that found in countries where there is a greater dependence on property taxes and the local government has a legal rate to raise tax rates across the full spectrum of property owners.

Tax revenues in municipalities in Russia are based on obtaining a share of individual and enterprise income taxes, various other taxes based on expenditures, and the added value tax. While this poses disadvantages for traditional bond financing techniques, it does mean that as wages and prices increase there is a general increase in tax revenues. In a highly inflationary economy, the impact on the municipal budget is based on how quickly wages are raised to compensate for higher prices.

Where there is a high dependency on property taxes, an increase in tax revenues tends to be slower during inflationary periods, since a reassessment of property values is required to adjust for inflation.

The final thought of this discussion is that while tax revenues may rise to follow inflation, very agile and responsive fiscal management is required to maintain a balanced budget.

In budgeting debt servicing in the general budget, the Municipality will have to commit to give priority to payment of bond amortization obligations. This commitment must be made as a stipulation in the bond contractual agreement. If the bond buyer can be assured of the Municipality's pledge and contractual agreement to do so, then the intent to pay has been established and the credit analysis moves to the *ability* of the Municipality to make the debt payments.

In most well developed bond markets around the world, there are specialized agencies which complete credit analyses of municipal bonds. A sophisticated rating system, ranging from a high of AAA to a low of CC, has been created to measure the credit risk of bond issues. This gives the potential bond buyer an assessment of the issuing municipality's ability to pay the principal and interest payments.

While this rating system is not available in Russia, a bond buyer must make the same basic judgments of the credit worthiness of the issuer of the bond. The information will be less detailed and the judgment less experienced than that made by the various rating services, but there must be sufficient published data to permit the buyers or their advisors to make an assessment. This information will be developed and published by the Municipality in the "Official Statement or Prospectus."

The basic criteria for making an assessment of the capacity and willingness of a municipal government to repay its general obligation debt is based on its:

Economic Vitality
Financial Management
Municipal Revenue Sources
Debt Structure

Economic Vitality

Municipal revenues generated from income taxes, value added taxes, and service income are dependent upon the Municipality's level of economic activity or vitality. It is important to measure economic vitality in terms of the level and changes in the amounts of goods and services produced, employment totals, and personal incomes. Population growth rates, housing demand and construction, automobile registrations, and retail sales are other measures of economic trends. Employment composition and military personnel levels are important measures in Vladivostok.

Financial Management

A municipality's financial health is a key factor for bond buyers to consider. The ability of the Municipality to operate within its revenues can be judged by reviewing it financial statements over the last three years of its operations. The composition of expenditures, particularly in terms of the amount of capital investments, is an important consideration. An analysis of the balance sheet will indicate the reserves available for current operations and to cover emergencies. The level of collection of service charges is a measure of financial management.

Municipal Revenue Sources

A review of the various sources of revenues and a comparative analysis of the growth of each source will point out the strength of the Municipality's revenue flows. The amount of revenues uncollected from the population and other enterprises will show where weaknesses exist. The rate of past growth of various revenue sources will give some sense of future growth patterns and trends.

Debt Structure

While this factor is presently not significant, the amount of debt service burden will become an important consideration in the longer term. The level of annual debt service burden within the general budget is an indication of the vulnerability of the budget to economic and revenue downturns. A measure of the debt per capita gives some indication of the overall debt payment capacity. The balance between expenditures for debt repayment and current operations needs to be manageable. The debt service payments are fixed and need to be relatively small to provide security against downturns.

In summary, the creditability of a general obligation bond depends on the ability of the issuing municipality's revenues to generate the debt service payments and to finance regular current expenditures.

The measure of the credit risk of a revenue bond is directed to the specific source of repayment. A "pure" revenue bond repayment is limited to a specific source of repayment. Even if there is a further pledge of the Municipality's general credit, the *primary* source of repayment is a pledge of the net revenues generated from the delivery of a service such as power, water, or transportation, or from a specific fee or tax applied to the user fees. The credit analysis is an assessment of the level and stability of the flow of funds generated from the net revenues after the operating and maintenance costs have been paid.

The analysis first measures the potential gross revenues, which are a function of the number of potential users within a given service area, demand for the service, and the user fee rate structure. An estimate of future revenue growth and volume over the maturity dates of the bond also needs to be made.

The operating and maintenance costs need to be determined and projected over the length of the financing period. The net funds available for debt service can then be determined and compared to the annual debt service requirements. A measure of the debt coverage (that is, the ratio of net funds available divided by the debt service) can be estimated. A minimum coverage rate of approximately 1.25 would be expected in order to provide some allowances for changes in economic conditions and unexpected costs. Depending on the nature of the service provided, a higher ratio, up to 2.0, might be appropriate.

When specific assessment fees or taxes are pledged, the analysis is limited to a determination of the aggregate amount of revenues generated and an estimate of the growth of fees over the life of the bond. The total amount of fees is then compared to debt service requirements.

A further analysis of the covenants and requirements would indicate other protective stipulations for the bondholder. Maintenance or replacement reserve funds may be required. Reserve funds for future debt payments may be established out of surpluses generated from operations. Covenants may be established to require a minimum user fee level or service rates. Additional debt or bond issues may be limited to insure ample debt coverage. Mortgages may be placed on the facility to protect the bondholders and establish first lien to identify the bondholders' rights.

In both general obligation and revenue bonds, the credit risk is determined by the sources of repayment, the margin of coverage of debt service, and the reliability and security of the flow of funds.

Fiscal Impacts and the Management of Priorities

Municipal financial management is a task not only of managing current financial inflows and outflows, but also of developing a long-term financial strategy that balances the expenditure of municipal resources to fund capital investment with demands to fund current operations. The issuance of a municipal bond has a fiscal impact on the current budget for the length of time the bond is outstanding. A bond not only establishes payment of principal and interest but also injects an inflexible fixed cost into future budgets for the life of the bond.

A part of the decision making process when issuing bonds is to establish a policy that determines the capacity of the Municipality to allocate a certain portion of its annual revenues to capital investments, which includes both current capital expenditures and debt repayments.

It is almost beyond debate that a portion of the Municipality's resources should be budgeted for capital expenditures. Additional capacity and greater efficiency are produced only through investment in infrastructure and capital programs, and without expanding capacity and efficiency, a municipality cannot prosper. Capital expenditures produce water, sewer, power, transportation, communications, and services that are vital to making a municipality function and grow. The issuance of bonds to finance the development of infrastructure provides the opportunity to leverage the annual allocation for debt service into capital expenditures equal to 7 to 10 times the annual debt amortization, depending on the bonds' term and interest rate. Bond finance permits the project itself, in many cases, to produce revenues to repay the debt and extends the debt burden over the life of the project, thus providing for those who use the project's services to pay for them.

There are limits to the amount that can be budgeted from current revenues for debt service. The question is how much of current expenditure can be dedicated to debt retirement and interest payments. It is not an easy question to answer, particularly when there are heavy demands on current revenues. In 1993, some 90 billion roubles were budgeted for capital expenditures, yet less than 20 billion roubles were actually expended. As this demonstrates, capital investments tend to be pushed back to future years, since the large sums needed and the long life of infrastructure projects make them easier to postpone.

The former funding methods, under which the National Government provided the bulk of the required investment for capital projects, has made it more difficult to face up to the reality that it will be the responsibility of the Municipality, now and in the future, to plan, finance, and develop its infrastructure.

The municipalities will have to make a hard policy decision and provide for a certain portion of their revenues and resources to be allocated for investment in capital projects. While each municipality faces different conditions and constraints, some portion of the current budgets needs to be set aside for capital investment which includes debt service. Based on experience in other countries, an allocation ranging from 10% to 20% appears to be an appropriate amount to consider. It will require a tough and disciplined management to enforce the policy.

As capital projects are considered for financing through municipal bonds, it is essential to approach them through an analysis of the fiscal impact of the annual debt service and of the capacity of the Municipality to fund the amortization of the bonds within the stated policy.

Analysis of Financial Markets

With the utilization of municipal bond financing established as an effective financial mechanism, the next step is to review and assess current economic conditions to determine whether or not municipal bonds can be marketed successfully and what provisions in terms of maturities, interest rates, and security will be required to attract buyers.

At the present time, there would appear to be little opportunity to sell bonds outside the local financial market. The ability to determine investment risks is limited, and the exchange rate risks restrict entry into the international marketplace.

Within the local regional market, it will be necessary to find potential investors who have funds to invest in fixed investments. There is a shortage of long-term capital funds available for investment. The amount of individual savings which can be channeled into longer term investments is very limited. Moreover, there are strong demands for investment funds which are competing for the small supply available.

The newly privatized enterprises have accumulated very little in the way of liquid assets and need to replace old production equipment and add new capacity. There have been a number of new capital stock offerings through the Stock Exchange to attract the additional capital required for these purposes, and others are being planned. These issues appear to be selling, which would indicate there is money available for investment in equity offerings.

The availability of funds to purchase fixed investments (that is, debt and capital indentures that will be returned to the investor at maturity as a certain sum) appears to be limited. Long-term fixed investments are vulnerable to the loss of a significant portion of their value through inflation. As a consequence, investors are seeking shorter-term investments which are priced to maintain their value through interest rates that exceed the rate of inflation. Under current high inflation rates, most investors are not willing to invest at fixed rates beyond six months or a year.

Inflation rates are difficult to predict, and neither the issuer nor the investor wants to take on a long-term risk of substantial changes in monetary conditions. Interest rates are established by setting a nominal rate of interest, which includes the rate of inflation plus the real rate of return expected by the investor. In a long-term issue, the portion of the interest that reflects the rate of inflation is the amount required to return to the investor the amount of depreciation in purchasing power (or parity loss) over the life of the investment. It is a return of capital.

Fixed rate long-term bonds thus require a very stable monetary condition, which does not presently exist in Russia. There is an opportunity, however, to protect the investor in a longer-term bond by establishing a variable rate of interest, adjusted quarterly or semiannually to reflect the current rate of inflation. As inflation rates decline, longer maturities can be considered.

At present, the market for bonds appears to be restricted to individuals, enterprises, and financial institutions who are holding funds on a short-term basis and would like to invest in liquid and safe instruments that will return their value and produce positive interest earnings. The opportunities to achieve that result are limited.

There are individuals and enterprises who have accumulated cash holdings through trading goods or securities. No one wishes to hold demand deposits or cash for any period of time with the value of currency depreciating at over 12% per month.

Enterprises, both private and state-owned, which are accumulating funds in designated reserves such as capital investment, social infrastructure, dividends, or taxes, may be potential investors in municipal bonds.

Insurance companies which are holding loss reserves are also potential buyers.

Banks are potential investors in municipal bonds. The Central Bank of Russia has allowed municipal bonds to serve as reserves against deposits. There are other business incentives to purchase local bond issues if their net yields are competitive with State bond yields, as it helps support local investment and attracts new deposits.

State bonds are issued periodically by the Ministry of Finance with maturities of 90 to 180 days at yields of 125% to 150%. These bonds are similar to United States Treasury Bills that are auctioned on a discount basis with maturities of less than a year.

The Central Bank refinancing rate has recently been set in the range of 180% per annum. The current rates for time deposits offered by the banks range from 90% to 120% for 90 to 180 days, which produced negative interest earnings. Municipal bonds could be offered as alternatives to time deposits. The development of a secondary market for municipal bonds that would allow the sale of bonds to generate cash as required would widen the market substantially. There are a small number of examples of municipal bonds issued by oblasts and municipalities. The first issues appeared in 1992, and since that date, six additional local governments have issued bonds. Nizhni Novgorod, Perm, and Kanti Mansiisk

Autonomous Area have issued general obligation bonds and housing finance bonds. St. Petersburg and Moscow are planning housing finance bonds under which the bonds can be exchanged for a certain amount of square meters of housing or redeemed in cash.

The general obligation bonds have been issued with short maturities (6 months to a year) and at interest rates of 67% to 70% of the refinancing rate of the Central Bank. Some are being issued with variable rates of interest adjusted quarterly.

The Oblast of Perm is issuing short-term bonds much like the State bonds. The auctions have set rates of about 20% interest points above the national bonds.

Municipal bonds have been defined as "State" issues and the interest is not taxable under existing Russian legislation. The bonds also can be pledged as reserved for deposits by banks.

While a market for the sale of bonds may be limited, one does appear to exist. A sales agency which knows the local financial marketplace will be needed to identify the potential purchasers. The banks appear to be the logical choice to sell the bond issues on a commissioned sales agreement under which they will make their best effort to sell the bonds.

Bond Design: Structure, Terms, and Conditions

The design of specific bond issues is formulated by the objectives and uses the Municipality desires to achieve but is constrained by what the investment market will finance and the terms it requires. The options available to the Municipality under current economic conditions are severely limited, as has been described, by the availability of investable funds, high interest rates, and the unknown creditability of a municipal bond.

In response to these conditions, it would appear prudent to initiate the bond financing process by designing a series of bond issues that begin with a short-term general obligation bond issue that will introduce this type of financial instrument and establish its creditability. This issue would be followed by intermediate-term bond issues to finance projects that will generate funds to repay the bonds in the range of 30 to 60 months. After these issues are accepted in the market place, the Municipality can begin issuing longer-term bonds to finance larger infrastructure projects and other capital investments that can be repaid from special fee or tax assessments and from user fees as service charges are increased to a level that fully covers operating and capital costs.

These later-stage financial building blocks can be constructed as financial markets will permit longer-term bond issues and sufficient creditability has been attained. In the interim, the Municipality will develop technical knowledge and the administrative skills to design and market bond issues from practical experience with the initial stages of the multi-tiered program. These skills will allow the Municipality to act swiftly and effectively as conditions to permit longer-term bonds emerge in years immediately ahead.

There are basic principles which must be observed in designing all bond issues, irrespective of their maturities, size, types, or purposes. These elements comprise the essential prerequisites to produce a creditable and marketable financial instrument. The basic elements are:

(1) The bond size and purpose
(2) The bond type
(3) The bond maturity rate and repayment schedule
(4) The bond interest rate structure
(5) The bond security
(6) The bond sales method
(7) The bond form

(1) The Bond Size and Purpose

The Municipality Administration executes a resolution authorizing a specific bond issue. The resolution sets forth the amount of the issue and its purpose and use. This is based on the recommendation of the Municipal Bond Committee within the overall debt financing policy of the Municipality.

(2) The Bond Type

The bond type is defined by the repayment source and security. A bond paid from the general budget from all revenue sources is a General Obligation Bond, which is based on the full faith and credit of the Municipality. A Bond whose repayment is based on specific revenue sources and which limits the obligation of the Municipality to a pledge of those specified funds is defines as a Revenue Bond, A bond whose repayment is based on a pledge that combines specific revenue sources and the full faith and credit of the Municipality has been termed a Double Barrel Bond.

(3) Maturity and Repayment Schedule

The maturity of a bond is the period of time over which the bond is repaid. It is designed to correspond to the flow of funds dedicated to retire the bond. It is logical that the maturity of debt should not exceed the life of the project or use for which the debt was incurred.

If the debt service is structured beyond the useful life of the financed project, then tax payers are paying for a service they are no longer receiving. The opposite is also true, in that if capital expenditures are paid out of current funds, then current tax payers are not yet receiving the service whereas users who will receive it in the future are *not* paying for the capital cost of supplying the service to them. The difference here is that between the principle of "pay-as-you-use" as opposed to "pay as you acquire."

The pay-as-you-use principle also applies to the use of bonds to finance current operations or deficits. It is not only financially dangerous but inequitable, as well, for future tax payers to pay for consumption and services used in past years.

The maturity of a bond, however, is restricted by the acceptability of its term in the market place. Under present monetary conditions, it would be most difficult to market a bond beyond a short maturity rate.

A bond may be constructed as a term or a serial bond.

A term bond is an issue in which the entire issue has the same maturity date and will be paid simultaneously unless there is a "call option." (A call option is a provision under which the Municipality may pay the bonds prior to their specified maturity date.) A term bond may have a "sinking fund," in which case funds are periodically placed in a dedicated account in order to accumulate sufficient amounts (together with interim interest earned) to retire the bond at maturity. There may also be a requirement under a term bond for the issuer to pay portions of the bond at specific dates from the sinking fund.

A serial bond is divided into parts which are repaid each year. There may be an equal principal payment each year. Another and more frequent design is to establish an amortization plan under which there is an equal total payment each year, consisting of interest and principal. Under an equal amortization pattern, interest payments are high and principal payments are low. As interest payments reduce, principal payments increase in the later years to maintain an even flow of debt service.

Term bonds with longer scheduled maturities carry a greater investor risk because of the risks associated with unknown economic conditions as well as the risk that the issuer will not make sufficient payments into a sinking fund. Over the last quarter of a century, the serial bond has become the more accepted design in well established bond markets around the world.

In a high inflationary period such as presently exists in Russia, a large portion of the debt service of a bond is required to compensate the bondholder for the decrease in value (depreciation of value of the rouble) over the life of the bond. The common practice is to adjust the interest rate to reflect the rate of inflation, thus including a return of principal to the bondholder in the issuer's semi-annual payments to him. A nominal interest rate, for example, may be 180%, of which 170% may represent the depreciated value and only 10% represents the real rate of interest.

An unexplored approach to the problem of compensating the bondholder for loss of purchasing power--or to maintain "parity," in monetary terms--is to adjust the principal or face value of the bond on a periodic basis to reflect the amount of inflation. These semi-annual or quarterly adjustments would be "booked" on the bound accounting records, and the issuer would be required to pay an equal amount into a sinking fund. real rate of return, which might be 10%, would be paid based on the adjusted book value of the bond at the interest (semi-annual) payment date. Under these conditions, the bondholder will have maintained the value of his original investment amount (parity) and received an effective real rate of interest.

The advantage to the issuer (the Municipality) is that the periodic payments are invested at current interest rates during the life of the bond, which permits the issuer to reduce its interest costs by the amount of compounded interest earned on the sinking fund. At the same time, the additional periodic payments to the sinking fund discipline the issuer. The amount of the current face value of the bond is adjusted periodically by an indexed amount, possibly based on changes in the Consumer Price Index (CPI).

It would appear that such a method might be workable for bonds issued with maturities of up to approximately two years. The difficulty is that it might face initial buyer skepticism, since the higher interest rate payment is the accepted method in the market place. Certainly the first issue by the Municipality should be simple and structured so not to stretch its creditability in the eyes of potential bond buyers.

In long-term bond financing--5, 10, 15 years, or longer--the use of a serial principal payments appears to be the most conservative and acceptable method. As an operating policy, it would appear wise to amortize any issue with a maturity beyond two years on a serial basis except when there is a specific repayment from a reliable source.

In summary, the period over which debt is retired is based on the life of the financed improvements, the projected revenue available to service the debt, and the market conditions which apply at the time the bond is sold.

Other considerations which may be considered in the future are the characteristics of other debt service already outstanding, the allowance for additional financing during the life of the bond, and the debt limits established by the policy of the Municipality.

(4) Interest Rate Structure

Under more stable market conditions, bond interest rates increase as maturity is lengthened. Time is a risk for the investor, and the rate of interest is a function of the risk. Throughout the experience of municipal bond financing in market economies, the interest rates have moved upward as maturities are extended.

Some government bond rates, however, have had an inverse yield curve during times of high inflation. During the early 1980s, United States Government bond rates were significantly lower in the 20-year maturity range than the rates of bonds in the short-term (under five years) range. This reflected the market's opinion that the inflation rate would drop in the future, which influenced it to seek a higher rate of return only over a shorter time frame. Municipal bonds, however, while adjusting somewhat to a flatter yield curve, continued to have higher yields in longer maturities.

The present financial markets in the United States indicate an increase of 2% to 3% in interest rates between short-term bonds (one year) and long-term bonds (ten years). Current interest rates in Russia, however, reflect the fact that only short-term bonds with interest rates between 140% to 180% can be sold in the highly inflationary conditions which presently exist there.

The degree of credit risks associated with a bond issue do affect the interest rate significantly. A general obligation bond tends to have a lower interest rate than a revenue bond whose source of repayment is restricted to one source. An issue from a smaller, less substantial municipality will also have a higher rate of interest, and a municipality with a record of poor financial management will have to pay a substantially higher rate of interest to attract investors. The amount of debt service requirements and the burden on the general budget they reflect will also effect credit risks and thus the interest rate.

In well established bond markets where there are sophisticated rating agencies, the rating assigned (AAA to D) will affect a bond's marketability. A lower rating reflects the rating agency's judgment that the bond carries a greater credit risk and thus requires a higher interest rate to attract buyers. The spread in interest rates between the highest and lowest bond ratings will run from 2% to 3%.

Interest rates in the market place are set in competition for investors' funds, based on maturities and credit risks. The effective after-tax yield is the basis of competition, and interest rates will adjust, assuming equal credit risk, to reflect relative after-tax interest yields.

The nominal interest rate (that is, the gross stated interest rate) is a function of the amount of inflation expected in the future, plus (assuming all other conditions, maturities, and risk are the same) the amount of "real" interest the investor requires. The investor desires to have a return on his investment which is higher than the rate of inflation; thus the interest rate must reflect an amount that not only adjusts for loss in monetary value due to depreciation of the currency but also gives a positive return on the investment. The investor wants the same purchasing power (or parity) of the amount he invested in addition to a profit on the principal. Stated another way, the interest rate is a return of principal *and* earnings in an inflationary period.

In a highly volatile economy, neither the issuer nor the buyer wishes to assume the risk of a fixed interest rate for more than six months, or (at the maximum) one year. In this case, it may be more advisable to issue a bond with a variable rate of interest. The interest rate can be designed to reflect a real rate of interest based on an index of the inflation plus a fixed real interest rate. For example, an issuer might propose a bond with a quarterly (or semi-annual) adjustable rate which will equal the refinancing rate of the Russian Central Bank or, possibly, the State Bond rate plus or minus some fixed interest rate.

Another approach is to issue a bond with a nominal rate equal to the percentage change in the CPI plus a fixed real rate. For example, an interest rate can be established at the quarterly change (adjusted for an annual rate) in the CPI plus 10%. If the inflation rate was 140%, the interest rate would be 150% for the ensuing quarter; if the inflation rate fell to 130% in a following quarter, the interest rate would drop to 140%.

The adjustable variable rate has the distinct advantage of changing the rate based on an actual, measured change as opposed to setting a rate in anticipation of an unknown amount of inflation or speculating on which interest rates will be in the future.

The suggested approach of adjusting the principal on a quarterly basis to reflect the measured amount of inflation will reduce the speculative risk of future interest rates to both the issuer and the buyer.

In the more sophisticated bond markets, a distinction is made between the Net Interest Cost (NIC) and the True Interest Cost (TIC). The difference is that the NIC is based on the amount of interest paid irrespective of the time it is paid, while the TIC represents the time value of the money.

At the present time, it would appear that a rate of interest in the range of a comparable State Bond will be required to attract investors. This assumes that the interest on the municipal bond is tax free. A real after taxes rate of 140% equates to a taxable rate of 200%, based on a 30% tax rate. This compares to the Central Bank refinancing rate for its member banks of 200%.

A question quickly arises as to whether or not the Municipality can afford to pay this rate of interest. The answer is determined by estimating, based on experience, whether or not current revenues are going to increase at the rate of inflation. Current revenues are based on the incomes of the Municipality's tax payers. Will incomes adjust to inflation? Another way to examine the question is to ask if the expenditure contemplated from the bond issue will increase in price at the same rate as the bond's interest rate. If there is a reasonable correlation between the rate of inflation and the interest rate, it will be prudent to use bond financing.

(5) The Security

It is necessary to identify and pledge a specific source of revenues to secure the repayment of the bond.

In a general obligation bond, a pledge is made of the Municipality's full faith and credit and the Municipality agrees to allocate a sufficient portion of its general revenues from the current budget to pay the bond's interest and principal. This agreement is stipulated in the bond instrument. Non-budget revenues also are allocated under a "full faith" pledge.

Since there is little opportunity to increase revenues specifically to pay debt service, the pledge actually represents a promise to prioritize the debt servicing obligations, and the Municipality agrees to make a full faith effort to pay these claims in full, irrespective of their effect on other budget and non-budget expenditures.

Revenue bonds, by definition, contain a pledge to repay the bond out of specific revenues generated from the project financed by the bond and other specific revenues, such as special assessments. An indenture agreement under which the revenues are pledged and set aside in a reserve account and controlled by a trustee is made a part of the bond instrument. Normally, the net revenues after operating and maintenance expenditures are dedicated to debt service.

While there is little opportunity at present to generate funds over operating costs, the structure offers an effective mechanism for future debt services and the capacity to substantially increase the ability to finance future infrastructure investment.

In the interim, however, specific revenues can be used for partial securement of payments, with the remainder of the needed debt service allocated from the general budget. It would appear that, at present, a general pledge of the Municipality to cover any shortfall from the budget will be necessary under all revenue financing arrangements. As the Municipality demonstrates more experience, the market place will feel a greater confidence in it. In this respect, the pledge of specific revenues gives the Municipality an internal discipline in managing the debt services and insuring dedicated cash flows are being properly allocated.

As previously noted, there may be a perception that a pledge that specific properties owned by the Municipality will be mortgaged as security may be required for the Municipality to market bonds. Again, it should be emphasized that the mortgage of payments *does not* promise payment. It is a pledge of revenues, of a flow of funds to repay the debt, which actually secures the bond. The pledge of assets is a secondary source which will be used only if the primary source plus the funds from the general budget are insufficient to repay the principal and interest. Any attempt to rely upon it as a primary repayment source will thus be seen as evidence that the Municipality lacks confidence in its ability to service the debt out of the pledged revenues and its general budget. In addition, mortgages establish priorities among bondholders by giving earlier purchasers priority over later investors, which will make it progressively more difficult to market successive bond issues.

The Municipality will be in a far stronger position in successive bond issues if it uses solely measured revenue sources to secure the debt and the amount of total debt is limited to a manageable level. This should be adopted as a matter of municipal bond policy from the outset, as if the first bonds are secured by a mortgage, it will set a precedent that will be difficult to change.

A mortgage may be advisable under certain, specific circumstances, as when a source of payment is limited to the flow of funds generated out of the financing. Such projects as housing construction, commercial real estate, or similar projects which may be sold in their entirety and as separate entities could be secured through a mortgage.

Additional security can be given to the bondholders through the establishment of covenants or indentures within the bond instrument. The covenants are contractual obligations that require the Municipality to perform in a certain way or to refrain from certain actions.

These covenants may include the establishment of debt service funds under trustees or the establishment of maintenance or replacement funds. The creation of sinking funds in which funds are placed to retire debt are one example of the use of covenants to protect the bondholder.

Other stipulations in revenue bonds may require the Municipality to set user fees or service rates at levels sufficient to cover operating and maintenance costs plus debt service. It could be required to set fees at a level that give a margin of safety to the bondholders. Most revenue bonds require that a debt coverage of 125% of debt sources be maintained.

Other covenants may limit additional debt to certain levels. The percentage of budget allocations for debt service may be limited, or a specified amount may be required.

Other stipulations may prohibit the issuer from placing any mortgages on its property to ensure that all debtors are treated equally. Some debt sources could be subordinated or limited to specific revenue flows.

(6) Sale Methods

The determination as to how the bond issue will be sold is an essential element in the bond design process.

In well established bond markets, the issuer is able to sell the entire bond to an investment banker or bank who "underwrites" the issue and then sells the bonds to individual investors. The investment banker or bank may form an underwriting syndicate with others to whom it allocates a portion of the bond issue for resale.

The general form of the bond--including its amount, type, maturity, security, and any applicable covenants--is established. The issuer asks for sealed bids on the price and interest costs of the bond from the investment bankers or banks. The winning bid is awarded to the underwriter who offers the lowest net interest costs (NIC) or the lowest true interest cost (TIC). The bidder has the flexibility to structure the interest coupons to respond to the market's demands within general parameters set out in the bid documents.

The winning underwriter pays the Municipality and "reoffers" the bonds in the market place. The underwriter makes a profit on the "spread" between his bid price and the reoffering price of the issue. In return, he takes the full risk of reselling the bond.

The nascent bond market in Russia has not attained the breadth or sophistication to permit bonds to be underwritten or sold through a bidding process. A number of years of building experience will be required before these abilities become available.

The present sale methods available to the Municipality are through negotiated sales or through a selling agent who will make a "Best Effort" attempt to sell the bond. No guarantee that the bond will be sold will be given to the Municipality.

Under either method (negotiated sales or sale agency), the bond type, security, maturity, interest coupons, and conditions will be designed and established before the issue is offered in the market place. The sales agent will receive a commission on the sale of the bonds.

It will be necessary to select a sales agent who had knowledge of and access to potential investors as well as financial acuity. Without a well established investment banking trade, the banks appear to be logical candidates to act as sales agents.

The banks are also potential buyers of municipal bonds. A negotiated sale of a bond issue might be accomplished through a syndicate of banks, each of which might take a portion of the issue. A syndicate also might include insurance companies.

The sales agent would no doubt make sub-agreements with other institutions, both banks and investment bankers or brokers who may have clients who are potential buyers. The syndicate thus formed would divide the sales commissions based on the amount of bonds sold, with the syndicate manager receiving an over-ride commission on sales by other members.

Under a best effort sales method, a specific and limited time will be established to sell the bond issue. A subscription period will be established to introduce the issue. An established sales date will be announced, at which time the bond subscription will be offered. The Municipality will want to establish a minimum amount of bonds to be subscribed or purchased before it will call for the payment of the subscription. The Municipality also will want to secure the right to cancel the bond issue if a minimum amount is not sold. If a stipulated amount to fund the fund the intended uses of the bond is not available, the Municipality will not wish to proceed with the project and does not want to hold funds it cannot use for the purposes intended.

(7) The Bond Form

The structure of the bond must be designed, setting out the denomination of each bond, the interest coupon period, the annual maturities, and the call features.

The denomination of each bond making up the issue will be dictated by the size of the issue, the market demand for the bonds, and the numbers of estimated bondholders. The administrative costs of administering the issue also plays a part in the design.

The lowest denomination is formulated by the need to reach smaller investors while not creating an enormous administrative burden. A denomination in the range of 5 to 10 million roubles ($1,300 to $2,600 US) will enable smaller investors to buy.

The chance to achieve a higher yield than that from certificates of deposit and to capture the highest yields available should attract smaller buyers.

Some of the denominations may be set at 100, 50, and 20 million roubles to accommodate larger investors.

The interest coupons for the various maturities must be set to establish some differentiation based on maturities in order to make the longer-term bonds more attractive. While the current market will not permit the issuance of long-term bonds, longer maturities, when possible, will require higher coupons than bonds with early maturities.

At present, the very high and volatile interest rates make the establishment of fixed rates a very speculative undertaking in any but the shortest maturities. Variable rates can be pegged to national rates or state bonds and adjusted quarterly or semi-annually. Rates may be established as a function of the rate of inflation, expressed by changes in the CPI (consumer prices index), with a fixed real rate added.

Limits also can be established so that interest rates will not rise or decline outside certain ranges, or "collars."

The use of a call feature in the design of a bond is an attempt to achieve two purposes. One is to protect the issuer against having a bond with high interest rates outstanding after interest rates drop significantly before the coupon rates. The second purpose is to be able to retire a bond if the issuer accumulates surplus funds and cannot invest them at rates higher than the coupon interest rate.

Bond Agency Agreements

In designing, implementing, marketing, and administering a bond issue, the Municipality will need to seek advisory and administrative services over the normal staff functions. There are also functions whose performance requires an independent party in order to protect both the bondholder and the issuer.

These services include financial advice in designing the bond issue, legal advice, selling agents, printing services, marketing expertise, and administrative services. The function of a trustee who represents the bondholder must also be established. While the staff within the municipal government need to become very knowledgeable in the entire process, relying solely on government staff at this stage in the process would be both inefficient and risky. At this time, municipal staff personnel lack both the skills and knowledge which can be developed only through training and experience, which makes it particularly necessary for the Municipality to seek the advice of bankers and investment bankers to obtain detailed current information on the local markets and national monetary conditions. These services can be obtained by paying fees as opposed to having full-time staff.

Understanding of the market place is vital to the success of the design. If the bond issue were sold to an underwriter, the interest rate would be set by the lowest bid and the bond issue resale would become a risk of the underwriter. This would relieve the Municipality both of the need to establish an interest rate and of the sales effort and risk.

A bond issue which is sold on a best efforts basis through a selling agent, however, becomes the responsibility of the issuer, as does all the associated risk. Thus the Municipality must take great care to meet the market requirements and manage the selling effort.

During the design stage, a "financial advisor" is needed to assess the market, establish acceptable terms, evaluate the credit risks, and formulate the features of the bond.

The "fiscal agent" is the term assigned to the firm which completes the administrative functions, including preparation of the bond format, supervision of its printing, the setting up of the registrar, preparation of transfer and paying records, and the physical issue of the bond.

The role of actually selling the bond is carried out by the "selling agent," with compensation made on a commission basis, based on a percentage of the sales amount. The sales agent would probably enlist others to assist in this effort in return for a share of the commission. A primary function of the sales agent is to identify potential investors and solicit a subscription from the buyer. Fees for selling the bonds vary from 2% to 5% of the issue, based on the difficulty and effort required.

As the bond market grows and becomes more creditable, the commission rate would no doubt drop as new consultants entered the field. As the market progresses further, underwriters may emerge and bidding may become the norm.

In well established markets elsewhere, the underwriting fees may be as low as 1% to 2% of the total issue. The spread between the bid and reoffering price has decreased to the present level from 3% to 5% over the last two decades.

The "trustee" is assigned the fiduciary role of representing the bondholders and acting as their agent to monitor compliance with the terms and compliances of the bond agreement. The trustee manages the transactions and reserve accounts and supervises the registrar's paying and transfer agents. The transfer agent may perform these duties or contract with others to perform them. The trustee, as the bondholders' representative, is concerned with the legal issues and authorizations, and may employ legal counsel to advise on legal matters.

The trustee holds all funds required by the bond agreement, such as debt service reserves and sinking funds. In the case of revenue bonds, indentures may be established to control revenues, disbursements of operating and maintenance fees, and debt services which the trustee manages.

The trustee will administer the "closing" of the bond issue and disburse the proceeds. Likewise, the trustee will administer the repayment and retirement of the bond issue at maturity.

In a revenue bond, the trustee will advance funds as construction is completed and maintain all financial records, which will be audited by an outside auditing firm.

The trustee also represents the bondholders if there is a default and attempts to "cure" the default or bring legal action, as appropriate.

The registrar of the bond issue maintains all records concerning bond holdings and records all transfers of ownership. The bonds may be issued in "bearer" or "registered" form. The bearer form is not registered by the owners, who hold it as a negotiable instrument which belongs to its bearer and may be transferred from bearer to another. At maturity, it is returned to the registrar by its present bearer.

Registered bonds are registered in the name of the bondholder. As they are sold in the market place, the transfer agent handles the transaction as the bond is canceled and reissued to another listed bondholder.

In recent years, automation has made the issuance of bonds and their transfer more efficient. A "Book Entry" system has been devised in which no physical distribution of bonds is made. One bond is issued to a nominee who acts as a security depository. The individual purchasers receive a beneficiary certificate or receipt from the nominee which certifies that the nominee is holding a certain amount of bonds for the purchaser. The nominee will forward all interest payments and principal repayment to the beneficiary bond bolder.

The "paying agent" takes on the administration of disbursing all interest payments and principal repayments. The trustee may be the paying agent or may delegate the function to other banks or institutions.

If there is a call provision which has been exercised, the trustee will notify the holder of the called bonds, and the paying agent will disburse the funds.

The compensation paid to the trustee is normally a flat fee based on the responsibility and functions performed. The fee may vary from 5 to 10 million roubles per year.

The registrar receives a fee based on the volume of transactions and the number of bondholders. Each transaction will generate a cost in the range of 20,000 roubles. The base fee for the responsibility and administration of an issue may be in the range of 7 to 10 million roubles per year. The paying agent receives a base fee plus a fee in the range of 2,000 roubles for each transaction.

These fee levels would appear large enough to reward the efforts and responsibilities of those receiving them but not overwhelming to the issuer, who pays all fees.

Legal and Municipal Authorities

The legal foundation on which municipal bonds are issued is fundamental to entering into a binding contract and carrying out the actions required to administer and repay the indebtedness. Not only must the bond issue be a legal obligation, but its issue must be properly authorized and will require the Municipal Administration to carry out the terms under the bond instrument in the future.

In addition to a legal basis which establishes the right to issue the debt, there must be legal means to enforce the pledge of the full faith and credit of the issuing Municipality. The enforcement of this pledge includes the legal basis for the issue, the specification of the duties and prerogatives of the Municipal Administration, and the willingness of the Courts to maintain and police these rights.

In addition to the statutory authority to issue the obligation, there must be compliance with the procedural requirements for the authorization and issue of the bond.

In more established markets, municipal obligations are accompanied by legal opinions from recognized legal attorneys which state the validity of the obligations and the legal ability to enforce the terms of bond issues.

The authority to issue a municipal bond in Russia is based on "The Law of the Russian Federation Concerning Local Self Management," signed and issued on July 6, 1991. This law gives the local administration, among other powers, the right to issue local bonds. It also gives the Municipality control of the local budget, non-budget and current funds. It further allows the local government to pledge and sell properties belonging to the Municipality. Additional provisions to allow the issue of securities are provided for in a decree adopted by the Government on December 25, 1992.

These laws and decrees have been cited as the legal basis on which municipal bonds have been issued in other oblasts and municipalities. The law concerning municipal bonds is in its infancy and is built on a few statutes, without the benefit of the long legal histories and court tests found in well established markets. As the use of municipal bonds in Russia increases, additional laws will no doubt be adopted to further clarify the various legal issues involved in municipal bond finance.

In the interim, the issuer and purchaser will have to rely on broader statues and precedents to make a judgment of their mutual rights and obligations. An attorney can cite the basic authorities, but the details of the contract have not been tested in the courts.

A pledge of the full faith and credit of a municipality means that the issuer acknowledges the debt and obligates itself to do all things in its power to make timely payments of the obligation. This pledge is made recognizing the power and ability of the issuer to pay within the framework of other demands on its resources. In addition to being a debtor, the municipality is a public body with sovereign powers to provide many services, like water, sewer, electrical power, police, fire fighters, education, transportation, and many other services. A municipal bondholder has a claim on the municipality's resources, but so do its employees and other claimants.

If there is a default in payment of the bond principal or interest, the bondholder is not dealing with a private entity. The municipality is a public body which cannot go out of business, and the process of proceeding against the property of a municipality is filled with obstacles. A bondholder must accept the fact that the essential municipal services must be provided by paid employees. A bondholder must accept the inherent concept of sovereignty.

A pledge of full faith is a declaration of an intent by the municipality's administration to manage its resources and revenues to provide funds to service the debt and the essential municipal services.

The municipality also has a very pragmatic incentive to make timely payments of its debt to insure its continued future access to bond financing. A default, or even untimely payments, impair the creditability of the municipality and will close the door to further use of bond financing.

It is this same rationale which prompted the Russian Government in recent months to forego asking for relief and forgiveness of a portion of its international debt. This same incentive has also kept the World Bank's repayment record almost perfect.

In case of default, the municipality's most likely course of action is to restructure the debt schedule based on current cash flows. These issues need further research and study.

The legal recourse on a revenue bond is limited to the specific revenues pledged to the bond's repayment. In the case of default, it would appear that the attachment of the flow of funds would provide a more straightforward legal option. Since bond agreements normally call for revenues to be deposited into specific trust accounts, the disbursement of the required payments is under the control of the trustee.

Under any circumstances, however, the provision of public services must continue, and payments for required supplies and to employees must be made.

Revenues, if any, which remain after meeting the operating costs of the facility financed by the revenue bond are available for debt service and are not in competition with other disbursements in the budget.

The secondary pledge by the Municipality of its overall credit provides additional protection to the bondholder. Again, the Municipality's strong desire to retain an undamaged credit standing is a powerful incentive for it to fund shortfalls in debt service.

The legal authority to issue bonds whose interest income is tax free is a very important consideration in the marketability of its bonds. With a tax rate of approximately 30% and extremely high interest rates, the absence of taxes translates into an attractive advantage.

All reported municipal and oblast bonds to date have been issued on a tax free basis. According to the Ministry of Finance, legislation has been enacted which gives all municipal bonds the status of State Bonds and thus makes the interest upon them not subject to profit taxes.

This provision needs further clarification but offers an opportunity to market bonds to smaller investors who can achieve higher after tax yields from them.

The legal actions and resolutions to authorize the issuance of a municipal bond need to be defined, documented, and approved by the Municipal Administration. An initial resolution should set out the legal authorization to issue a specific bond; the bond's type and purpose; its amount, maturity, interest rate, and any security to be pledged; and any other covenants included in the bond agreement. Once the instruments are drawn, the Municipal Attorney certifies their legality and a final resolution to seal the bond documents is approved and documented by the Municipality Administrator.

The authority of the current administration to commit the Municipality over a multi-year period and beyond the present administration's tenure is crucial to the municipal bond mechanism. The statutory authorization is based on the Law of Self-Management, which permits the issuance of bonds. The question to be answered is whether or not this authority implicitly obligates future administrations to make debt payments. The actions of other municipalities and oblasts which have issued long-term bonds would indicate there is legal authority to obligate future administrations.

While precedents are being established, there appears to be a need to draft specific enabling legislation to authorize and establish the rights of the issuer and bondholder and, in particular, the power of municipal administrations to obligate future administrations.

Marketing Program

At this point, no municipal bonds have been issued and sold in the local market of Vladivostok. Before a bond issue can succeed, the concept of municipal bonds must be introduced, and it will be necessary to convince the public that these new financial instruments are safe and that they offer attractive investment opportunities.

As has been pointed out, there is no underwriting mechanism through which bonds may be bid, purchased, and then resold to the public. The Municipality will have to sell the bonds directly to the public and needs to develop a marketing program if it is to achieve a successful issue.

Bond issues are established to finance specific projects or undertakings and require the total funding generated by the bond issue to achieve the objectives. A partially sold bond issue will not work; it must be all or nothing.

A successful marketing campaign requires an organization which understands and knows financial markets, can identify potential investors, can organize a sales effort, and has an organizational and administrative structure to carry out the sales. It is also crucial that the sales agency have creditability and the confidence of the prospective bond buyers.

The Municipality does not currently have the mechanism or expertise to develop a marketing campaign.

The selection of agents to sell the bonds and the agreement on the sales methods and efforts they will make is the next step in the marketing program. At this point, the banks appear to be logical agents to take the lead in the sales effort.

Banks have a broad range of customers which can be approached by mail and in person to purchase bonds. Banks also have a better capacity to understand and appraise the credit risks of municipal bonds. This expertise will give confidence to their customers, particularly if the bank, itself, will be purchasing bonds for its own investment portfolio.

Banks also have the administrative capacity and technology to serve as fiscal agents and perform the roles of registrars, transfer agents, and payment agents. The capacity to sell and administer bonds will logically lead to the banks assuming the role of underwriters for bonds in the future.

A particular bank can be selected to manage the sale and, in turn, solicit other banks as well as stockbrokers to participate in the sale. A syndicate which will participate in the commissions received from the sales can be formed. A commission ranging from 2% to 5% of sales appears to be an adequate level to attract a strong sales effort.

The banks and newly organized investment bankers have recognized bonds as a potential new market, not simply to sell them, but also to administer the third-party roles of trustees and fiscal agents. Banks have taken the lead in organizing municipal bond sales in the few issues already brought to market.

The Municipality needs to develop a marketing program that encompasses the introduction of municipal bond financing and a strategy to sell the bonds and inform the public when the bonds have been issued and repaid.

The first step is a public relations effort to introduce municipal bonds to the public through use of the media. Newspaper articles, television newscasts, and radio releases can be used to inform the public of this type of financing, make it aware of the ability of smaller investors to participate, and publicize the use of municipal bonds in other countries.

Longer-term bonds can be sold more readily if there is a secondary market in which bonds can be traded. The banks and investment bankers can be encouraged to establish a market and become dealers and traders in municipal bonds.

Development of this capacity requires a willingness by market makers to buy bonds and inventory them for resale. The banks, in particular, with a greater amount of liquidity can agree to purchase up to a specific amount of bonds in the secondary market as part of the overall sales agency agreement. The secondary market can function on a "bid" and "asked" basis in which the margin between the two prices offers a profit opportunity for the market makers.

As the market for municipal bonds expands, further techniques can be introduced and underwriting and bidding among competitive underwriters can begin. In this development, a syndicate would be formed to market the entire bond issue. The first underwriting will probably be negotiated at a certain interest rate yield and, as competition is generated, could be bid out.

The Prospectus

The prospectus is the official statement from the Municipality which contains the information the prospective buyer requires in order to make an informed decision to purchase a specific bond. The essential principle is that the buyer have an opportunity to make a judgment of the credit risk and the description of the issue. Even if the buyer cannot himself understand the technical information, that information is available for someone who does understand it to be able to advise the investor.

The prospectus in the United States is called an "official statement." In capital stock issues, a prospectus is reviewed by the Security Exchanges Commission (SEC) for large issues or at the state level for smaller issues. A municipal bond is not subject to review by the SEC but follows the standards established by the Municipal Securities Rule-making Board when issuing an official statement.

In Russia, the term "prospectus" is well known because of the stock purchases made during privatization. The early bond issuers used the same term for disclosure to their investors. The information in the prospectus indicates the issuer, the terms, the type, the features and characteristics, the legal authority, and the covenants of the issue. There is a general summary of the information at the front of the prospectus, followed by more detailed explanations

The prospectus includes the following detailed information:

1. The principal amount of securities being offered
2. The name of the issuer, identification of the issue, and the date of the prospectus
3. The type of issue offered (general obligation, revenue, etc.)
4. The dates of the obligations, interest payment dates, and the basis on which the interest rate is calculated
5. The denominations in which the bonds will be issued
6. The source of repayment and security
7. The names and addresses of the trustee, registrar, and paying agents
8. The sales method and sales agents
9. Descriptions of any call or redemption features
10. Maturity dates and principal payments by maturity in columnar form

11. A statement as to tax status
12. Registration of bonds (book entry of issue)
13. Covenants and indenture agreements
14. Conditions under which the bond issue may be withdrawn
15. Date, manner, and place of delivery
16. Secondary market and resale opportunities
17. A statement of the authority for the issue and supporting legal opinion
18. A statement of the purpose of the issue
19. Municipal governance and general information
20. A financial report, including three-year financial and operating statements, current budget and non-budget, outstanding debt, and capital investment program.

This information will vary depending on the type of issue and whether the bond is a revenue or general obligation instrument. There is no particular significance to the order in which the information is presented.

The Administration of Bond Sales and Repayments

The issuance of a specific bond might be initiated in a number of departments within the Municipality. The Capital Investment Program will no doubt generate the greatest number of bond proposals. Specific municipal operating enterprises, such as water, sewer, power, and transportation may recognize a capital investment requirement. Several other departments, such as Housing and Construction, Economic Planning, and Finance may see potential uses for bond financing.

In any circumstance, the Municipality requires planning and procedures which move the process forward and follow a path or flow chart from the initial idea for a bond to its issuance. The process can flow through any of several paths, but a definite procedure should be adopted as a policy by the Municipality Administration.

The following description demonstrates one example of how of how the process might be structured:

> An initial proposal which follows certain criteria is presented to the Capital Investments Program (CIP) Committee. The CIP analyzes the proposal and makes an initial recommendation based on needs, financial viability, priorities, and overall policies.
>
> The initial recommendation is taken to the Municipal Bond Committee, chaired by the Finance Department Head, which reviews the information. If the project is approved for further consideration, it is prioritized and, at the proper time, forwarded to a bond specialist within the Finance Department. The detailed planning and design of the bond is undertaken there, and a recommendation is formulated. It is returned to the Municipal Bond Committee, which approves the issue. It is then introduced to the Municipality Administration, who approve the issue in concert and adopt a resolution.
>
> The agency agreements are established with the issuing agent, and a marketing program is established. The bond trustee, registrar, and paying agent are selected, agreements are drawn, and a final Municipal Administration resolution is adopted.
>
> Once all the technical aspects of the bond are completed, the bond sales begin.. If the sale is on a best efforts basis, a subscription commitment which specifies when payment will be made is solicited. If a sufficient

amount of subscriptions are received, the payments are made to the trustee on a certain day. (If the issue lacks the minimum level of subscriptions, the issue is canceled.)

The bonds are then issued to the buyers. If coupons are used, they are "clipped" and sent to the paying agent at the interest payment dates, and the paying agent pays the holders. If the bonds are registered and held by book entry, the interest payments will be forwarded to the bondholders as set out in the registry.

If for any reason payments are not made or the terms of the bond or any covenants are not met by the issuer, the trustee shall act on behalf of the bondholders and take such legal action as appropriate to collect the amount owed and correct the default.

At maturity or upon call, the bonds will be redeemed by delivery to the paying agent, or by notification if in book entry form.

Addendum

A series of bond issues has been suggested for the purpose of introducing municipal bond financing to Vladivostok and increasing the capacity of this finance mechanism to become an effective tool to provide the infrastructure needed to foster continued growth. A description follows of the bond issues which can become building blocks to build creditability and marketability in the market place while simultaneously building expertise and experience on the part of the Municipality's staff.

Early Issues

The first issue will introduce Vladivostok Municipal Bonds to the market place. An issue totaling 10 billion roubles with a maturity of six months can become a pilot issue to demonstrate the Municipality's capacity to administer a bond issuance and repayment successfully.

The following design is suggested:

Amount and Purpose	10 Billion Demonstration Bond
Type of Bond	General Obligation
Maturity	Six Months
Interest Structure	Rate set at State Bond interest rate less 10%; paid at maturity
Denominations	5, 10, 20, 50, and 100 Million Roubles Security Full Faith and Credit
Marketing	Sold on a Best Efforts Basis with Vostokinvest Bank as the Sales Agent
Trustee	Vostokinvest Bank

If there is no identifiable use other than as a demonstration bond, the funds can be invested in a short-term State Bond of a similar maturity. The small spread between the investment income and the bond interest can be used to cover the administrative costs.

Intermediate Term Bonds

The second round of bonds can be issued to finance projects that produce revenues within 30 to 60 months sufficient to retire the bonds. The capital Investment Program Committee can identify several projects which require a financial feasibility analysis. The incomplete department store and airline center are candidates, along with several housing construction projects. The sale of the housing units will repay a portion of the bonds used to finance the construction of housing. Lease payments or a sale of the buildings can be used to retire the remainder of the bond issue.

Amount and Purpose of Bond Issue	25 Billion to complete construction of buildings and housing
Maturity	60 Months
Interest	Payable semi-annually at variable rates based on the State Bond rate less 10%
Security	Mortgage on properties and guarantee of Municipality sales proceeds
Marketing	Sold on Best Efforts Basis

The bondholders may be given the right to convert bond principal and interest to purchase housing units.

Long-Term Bond

As the Municipality's bonds become better accepted and as inflation subsides, there will be an opportunity to issue longer-term bonds to construct infrastructure and other capital projects. It will be necessary to increase user fees to cover costs in order to achieve the ability to issue bonds to construct electrical power, water, and sewer projects. An interim step, however, may be to authorize capital assessment fees which can be added to monthly charges to repay the bonds issued to finance improvements in infrastructure. Another use of revenue bonds might be to finance toll roads and bridges where specific revenues might be pledged to repay project costs.

Amount and Purpose	50 Billion to Construct Infrastructure
Type of Bond	Revenue and General Obligation
Maturity	10 Years
Interest Rate	Variable based on index of inflation plus 10% real interest
Security	Pledge of revenues plus assessment

	fees and general obligation of the Municipality
Marketing	Negotiated price on an underwriter basis
Covenants	Establish bond servicing reserves

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