

**CASE STUDIES AND
PRESENTATION MATERIALS
FROM THE SEMINAR "CREDIT
FINANCING OF MUNICIPAL
INFRASTRUCTURE
INVESTMENTS"**

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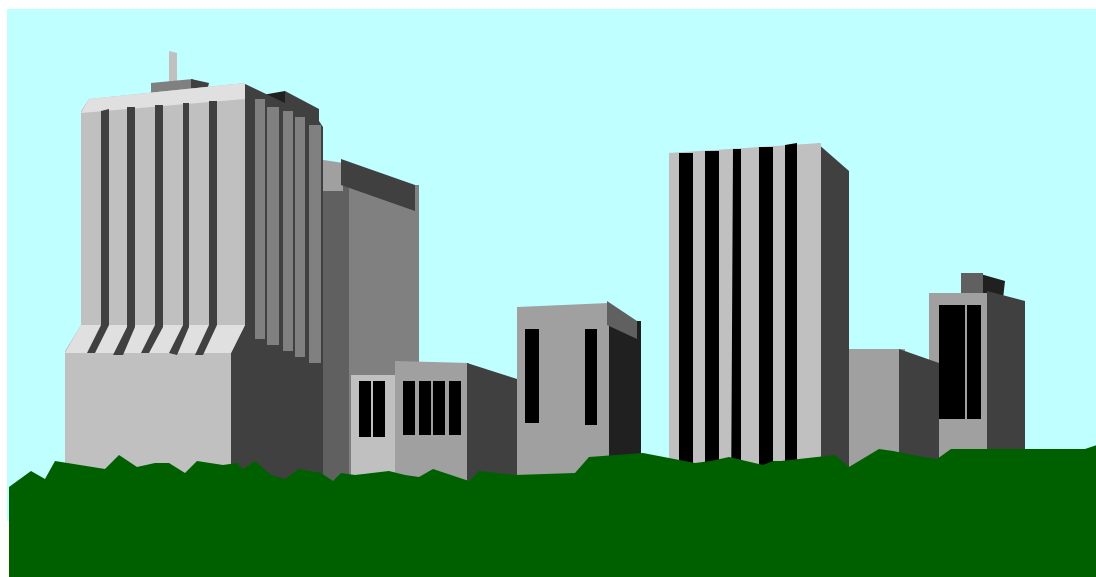
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CAPITAL BUDGETS



**For Municipal Credit Training Seminar prepared by:
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CAPITAL BUDGETING

MUNICIPAL BUDGET

! **Cash Fund** (static approach, equilibrium or balance):

- Principle of non-receivables
- Non-equivalence principle
- Non-voluntary principle

! **Balance of Accounts** (with this approach, the revenue and expenditure flows must be balanced in accounting terms, over an accounting period):

- Creation of a reserve
- Balancing with revenue receivables

! The budget structure allows us to analyze the internal structuring of a municipality by:

- Current budget
- Capital budget

It is important because both parts of the budget are very different, and their revenues and expenditures are affected by different factors. It is necessary to differentiate one from another.

Current Budget Components

! Current revenues recur each year and are for a greater part tax revenues.

! Current expenditures recur each year and include claimed and obligatory expenditures.

! Current revenues represent the budget limitation on current expenditures.

Capital Budget Components

! Irregular, "non-recurring" revenues:

- Proceeds from sale of municipal assets—(In general, it is more advisable to lease the assets. An overall calculation should be made to assess the feasibility of financing of repairs and maintenance. Often financially burdensome major overhauls, etc. If keeping the assets is more effective, they can be leased and long-term revenues generated. In the opposite case, the assets should be sold and non-recurring revenue generated, which will not repeat in the future. (See privatization of municipal residential facilities, etc.)
 - Capital subsidies from the state budget system. There is no legal title to them—therefore they are often reduced (cut by Government)
 - Sale of securities
 - Pooled funds of municipalities—still not sufficiently appreciated
 - Grants funding of capital expenditures etc.
- ! Irregular, “non-recurrent” expenditures—investment expenditures:
- Capital expenditures are critical for the public sector, but financially burdensome
 - Purchase of time deposits and securities can increase the value of temporarily disposable funds
- ! Any changes to capital budget should be only exceptional, such as:
- Cuts in capital subsidies from the state budget and the need to find other funding sources through sale of property
 - Application for a change in the amortization schedule

Financial Planning (Budgeting)

- Analyze the past financial performance, both for the current and capital budgets
- Project future budgets of the municipality
- Analyze possible tolerable indebtedness for the municipality at time of acquisition, as well as future debt service (the loan will have to be repaid—principal and interest—and the municipality has to repay it from its budget)



- ! Medium-term and long-term forecast—important for capital expenditure funding

- ! To create medium-term and long-term budget projections for the municipality, there needs to be:
 - Fixed taxes
 - Rules for distribution of subsidies from the budget system
 - Clearer competencies in the public sector
- ! To ensure the liquidity of the municipality, on an annual basis:
 - Balanced! $R = E$
 - Surplus! $R > E$! Creates a reserve for future investment expenditures or future budget deficit
 - Deficit ! $R < E$! How will deficit be covered? With prior period reserves, or with revenue receivables, can the debt service be covered?
 - If the current budget of a municipality is balanced then this does not create a reserve for funding investment expenditures. A surplus indicates that the municipality can amortize future debt service for medium-term or long-term loans for funding capital expenditures.

Types and Causes of a Deficit Include

- ! Short-term, within a budget year
 - Results from time difference between the current revenues flow and current expenditures flow in the municipal budget ! use of a short-term loan ! short-term debt
 - To minimize interest charges, the municipality should consider:
 - # Timely obtaining other revenues (from local taxes and fees, etc.)
 - # Short-term investments of own temporarily disposable funds at a higher interest rate (time deposit etc.)
- ! Deficit in the current budget at the year-end:
 - ?! projected? ! why?
 - ?! not projected? ! why?
 - Sources of coverage:



- # Prior reserves?
- # Medium-term loan?, borrowings? (What is the debt service and level of indebtedness)
- # Issue of municipal bonds?

! Chronic Deficit (Long-Term)

— Current budget ! Poor financial performance (!):

- # Identify reasons
- # Search for economies of current expenditures
- # Search for other revenue receivables
- # Plan to reduce the deficit
- # Develop a surplus

— Capital budget ! too much investment expenditures, several investment expenditures at the same time?:

- # Investment expenditure strategy—is it in place? OR missing? ! prepare a medium-term debt and long-term debt repayment strategy for debt service and amortization of the principal

Why Is a Capital Investment Strategy Necessary?

! Investment expenditures in the local public sector and municipal indebtedness:

— Investment expenditures - financially challenging

— Return on funds invested for the purpose of a fixed asset acquisition in the public sector is as a rule either indirect or long-term

— Where should the necessary funding be obtained?

- # Savings (inflation will affect the year-to-year growth of investment expenditures and possibly devalue savings):
- # Medium-term and long-term investment loans (What is a tolerable amount of debt?)
- # Issue municipal bonds (cost of issue; requires consent by the Securities Commission)
- # Capital-nature loans

- ! Debt service ! decide reasonably on obtaining medium- and long-term investment loans and borrowings
- ! Necessary to differentiate between the current budget and capital budget:
- ! Plan investment expenditure strategy of the municipality - future provision of public services as prioritized by the citizens

A Long-term Capital Investment Strategy of the Municipality Should:

- Serve at least for a medium-term period at the minimum
- Move from the general to detailed
- Plan the method and timing for acquiring and funding future capital investments
- Decide which projects are justified based on analysis
- Decide the order of their subsequent completion, based on financial resources available to the municipality the method of ensuring funding sources
- Involve the public evaluate citizens' priorities
- Be adopted by the local council

Capital Investment Phasing:

- Preparation of the capital investment
- Compare available options based on analysis
- Goal - choose the optimal option
- Minimize costs while gaining the required benefit
- Actual construction
- Use of the asset for the public good

CAPITAL INVESTMENT ANALYSIS

- ! The analysis should include the following:
 - “Market” needs analysis
 - Technological and cost analysis



- Economic, environmental and social effects analysis
- Financial analysis:
 - # Analyzing the loan option
- Institutional analysis

Needs analysis (of the "market" for public and semi-market goods)

- ! Analysis of both current and future demand, citizens' priorities and what they are willing to pay for
- ! Analysis of both current and future population structure (the way it will affect future demand and future required capacity of facilities)
- ! Analysis of possible introduction of a user charge and its amount (with view to the future users, specifically social structure of the population), i.e., including effects on other future recurring revenues:
 - Will it completely cover the costs?
 - Will it partly cover the costs?
 - Will it be supplemented by targeted social allowances?
 - Will it be:
 - # Uniform?
 - # Differentiated?—residential vs. commercial?
 - If not to be introduced, why? (high transaction costs?, other reasons?)
 - Effect on development of the future demand—"a shock"?
- ! Analysis of the labor market developments—stability of vacancies and employment, average income per citizen and its expected development
 - ! because they will affect:
 - Future increase of tax revenues - share in tax on individual income from dependent activity etc.
 - Ability to pay user charge

- Availability of the public good for various income groups of population, or targeted allowances for the socially disadvantaged
 - Respect fair consumption ! consistently measure consumption in the case of the mixed public good
- ! Current supply analysis:
- Is the current capacity sufficient, or is an investment expenditure required?
 - Options for alternative solutions?

Technological and Cost Analysis

- ! Experts (own or to be outsourced from specialist firms):
- Suitability and viability of the capital investment, i.e., technological and technical viability
 - Available alternative solutions
- ! Selection of the optimal option with regard to the following:
- Cost of capital expenditure
 - Future operating costs
 - Capacity ! future supply
- # Both current and future needs of the local public sector
 - # Estimate initial capacity and possible future extending of capacity (such as of the water supply system, sewerage system, sewage treatment plants etc.)
 - # Location
 - # Financial effects of the above solution



! Cost Analysis:

- Compare costs of separate investment options
- To ensure comparability, one should use as the start date, the beginning of construction
- Use various comparison methods for measuring efficiency of capital expenditures
- Can costs be projected and future benefits valued? e.g., the internal rate of return method, method of discounted capital and future non-capital expenditure costs and future revenues etc.
- If future benefits cannot be valued e.g., the discounted costs method

Economic, Environmental and Social Effects Analysis

! Analysis of the effect the contemplated capital investment will have on the following:

- Employment, or reduction of unemployment
- Increased attractiveness of the municipality and attracting of private capital
- Conditions for private businesses ! future tax and other revenues into the municipal budget
- Environmental effects, compliance with environmental and technological standards etc., ability to conform with future stricter environmental standards ! savings: exemption from payment of environmental taxes (if introduced) and penal charges for environment pollution etc.
- Evaluation of which social groups of the population will benefit from the project, whether the results will be fair and balanced

Financial Analysis

- ! The most challenging and vital
- ! Analysis of current and future revenues:
 - Own, including future user charges

- Shared and general taxes
- Possible subsidies
- Ability to generate additional revenues, especially from new commercial activity
- ! Analysis of the current and future expenditures (these will increase after capital construction completion, even if the capital investment is funded solely from own funds of the municipality capital budget, or from subsidies that do not have to be paid back):
 - What affects operating expenditures? How can they be reduced?
 - How can a deficit be eliminated and a reserve created?
 - Analysis of possible use of an investment loan and ability to repay it, including the interest, payment of the debt service ! amortization schedule, method of repayment of the principal, interest payments and, as a result, effects of the debt service on the budget. What matters is not only the amount of the required investment loan but also its maturity, ability to secure the loan and type of collateral. (If investment expenditures cannot be funded directly from the tax revenues—the tax burden would have to grow, which the municipality is currently unable to influence in practice—an increased tax burden would be intolerable for citizens - taxpayers.)
- Financial strategy: operating surplus

Analyzing the Loan Option

- ! Repayment: using future revenues, more precisely future operating surpluses ! are these realistic?
- ! Debt exposure of the municipality
 - Basis: long-term projection of operating surpluses for the period of the loan repayment
 - Operating surplus should be a key indicator for assessing the tolerable indebtedness level of the municipality



! Factors

- Current revenues structure
- Operating expenditures structure, amount of expenditures mandated (by law)
- What affects these? Can the amount of the current revenues and operating expenditures be influenced?
- Indicator: debt service as a share of current revenues
- Current debts. How are they repaid?
- Security (general revenue pledges, collateral):
 - # Secured with future general revenue pledges (own, subsidies), the key method
 - # Secured with collateral (property) owned by the municipality - this should serve as a 'last resort' security (it would be illegal for a municipality to acquire a new real property for the public sector only to lose another pledged property if it got into difficulties with repayment of the to-be-acquired property)
 - # Combination
 - # "Third party" guarantee

Institutional Analysis

- ! Selection of the contractor, supplier and future operator by public tender
- ! Preparation of perfect agreements ! specification of rights and duties of the following:
 - Municipality
 - Contractor
 - Supplier
 - Future operator, even more importantly if it may concurrently become a vendor
 - Other possible parties

- Penalties available to the municipality as the investor

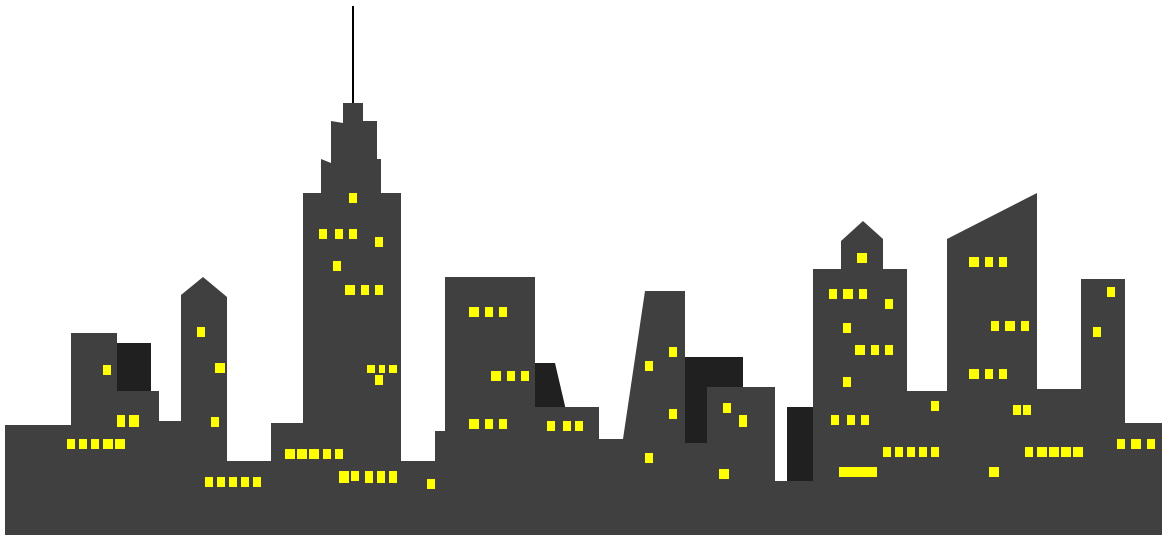
Completion of capital investment:

- ! Method of invoicing: according to progress in the construction and availability of the required funds
- ! Method of control by the municipality over the process of the capital construction and possible penalties charged to the vendors etc.
 - Control over capital project parameters and possible penalties for non-performance of the project delivery
 - Make contractually clear how funding of any additional costs of the project above the construction budget limits will be handled
 - Insist on meeting the construction deadlines, apply penalties in the case of non-performance

Budget Structure—Debt Service

- ! Differentiate short-term loans or borrowings (up to one year) from medium-term and long-term loans or borrowings (maturity over 1 year) and their repayment (i.e., of the principal)—See Statement on Budget Performance of Municipalities and District Offices, Part III Financing. Also differentiate between domestic and international loans and borrowings and also accordance with the approved budget and cumulative from the beginning of the year. Part IV of the Statement explains consolidation of the loan and loan payments within the budget system. Reporting according to the procedures laid out in the statements is obligatory by regulation for the municipalities.
- ! Also significant are other record items:—specifically borrowings and payments of borrowings in non-cash units (such as a long-term supplier credit), which are recognized only as record items—see Part VII of the Statement—selected record items.

ASSESSING MUNICIPAL DEBT CAPACITY



**For Municipal Credit Training Seminar prepared by:
Ronald W. Forbes
Consultant of The Urban Institute**

An Overall Perspective





An Overview of the Major Factors

Our major focus during this part of the seminar will be on the analysis of municipal financial statements. Our objective is to measure and evaluate the net operating cash flow available to meet debt service obligations. We will analyze the information on revenues and expenses to derive alternative measures of debt service coverage.

Demographic and Economic Base Factors



Administrative and Managerial Factors



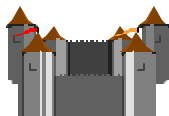
Municipal Assets as Collateral



Financial Analysis:

Statement of Budget Performance

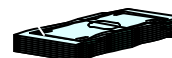
Intergovernmental Fiscal Relationships



The Legal Status of Municipal Debt

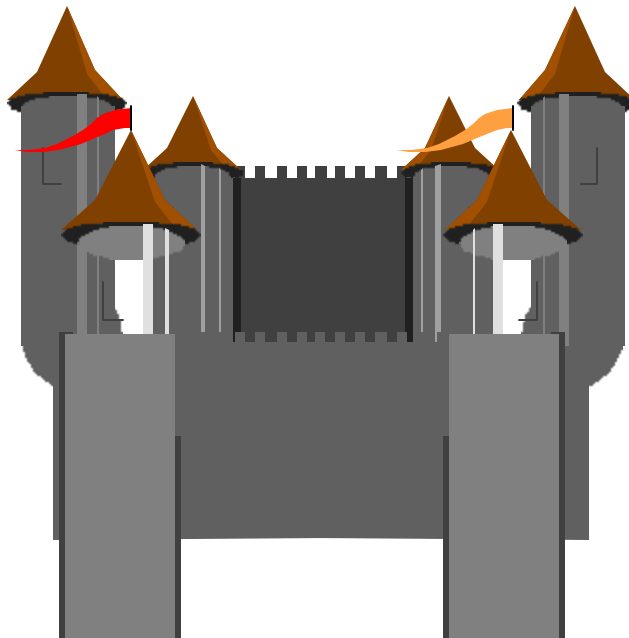


Debt Management Policies



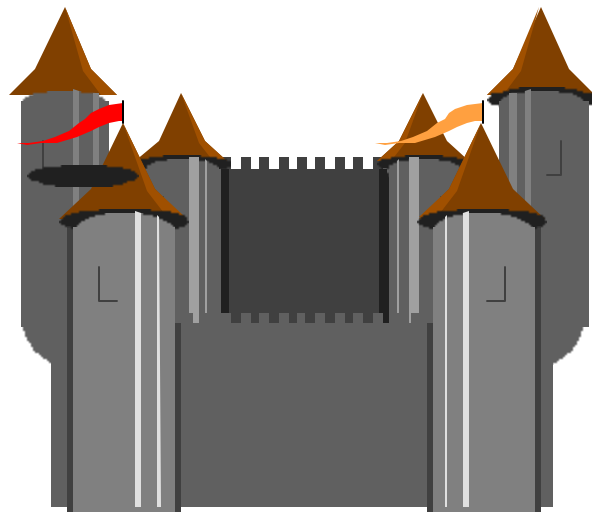


Intergovernmental Fiscal Relationships



Fiscal connections with other levels of government can introduce “political risk” and add uncertainty to forecasts of municipal revenues and expenditures.

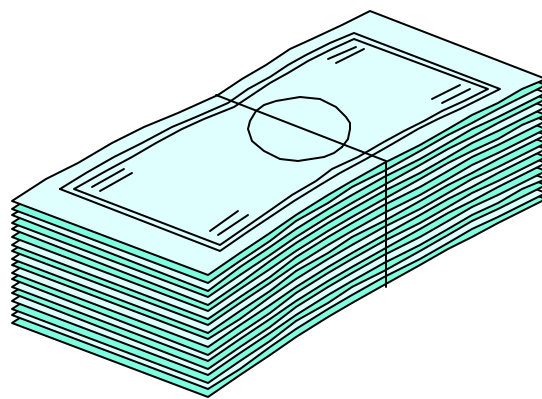
Intergovernmental Fiscal Relationships



*Issues concerning shared national
tax trends in subsidies*

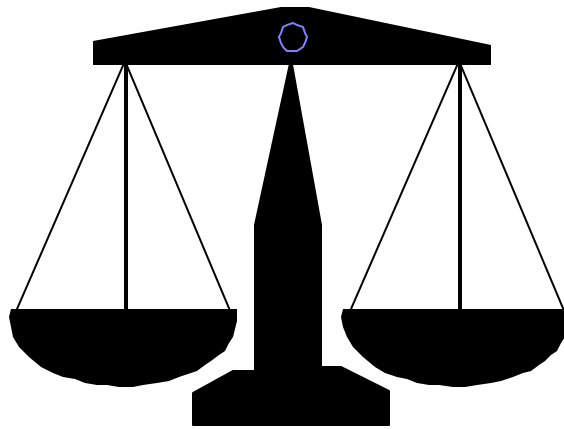


Debt Management Policies



The purposes for municipal borrowing, the structure of debt obligations, and the burden of debt service on future municipal budgets are important in assessing debt capacity.

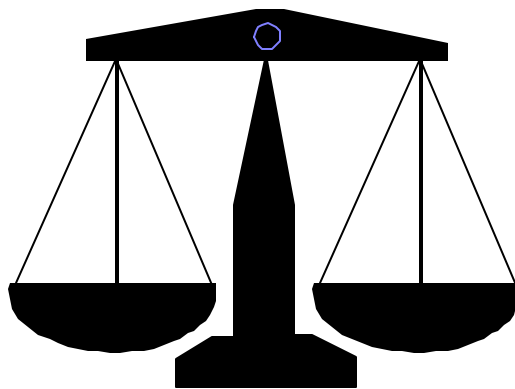
The Legal Status of Municipal Debt



*The ability of lenders to enforce
loan terms is important in
facilitating credit market access for
municipalities.*



Legal Issues in Municipal Lending



**Issues concerning the legal status of
municipal general revenue pledges,
collateral and other loan terms:**

- Senior/subordinated**
- Limits on indebtedness**
- Intercept mechanisms**

Administrative and Managerial Factors



The ability of management to meet operating budgets, adapt to unexpected changes in revenues and/or expenses, and to formulate reasonable long-range capital budgets lend credibility to projected financial results.



Demographic and Economic Base Factors



*Trends in population, incomes,
employment, building activity have impacts
on municipal revenues and expenditures.*

Demographic Factors



Indicators:

- Trends in population
- Personal Incomes
- Age Distribution
- Unemployment Rate



Local Economic Base Factors



Indicators:

- **Trends in employment in major businesses**
- **New construction**
- **New business formations**

Sources of Information ?

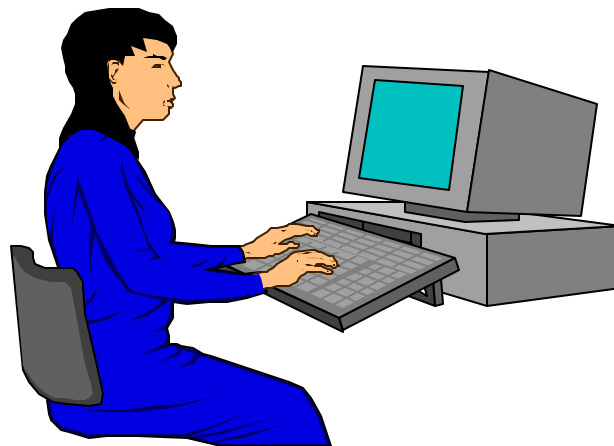
Evaluating Future Cash Flows



Although the analysis of past and present financial performance is a necessary part of the financial evaluation, debt service is paid from future cash flow.



Monitoring Changes in Debt Capacity



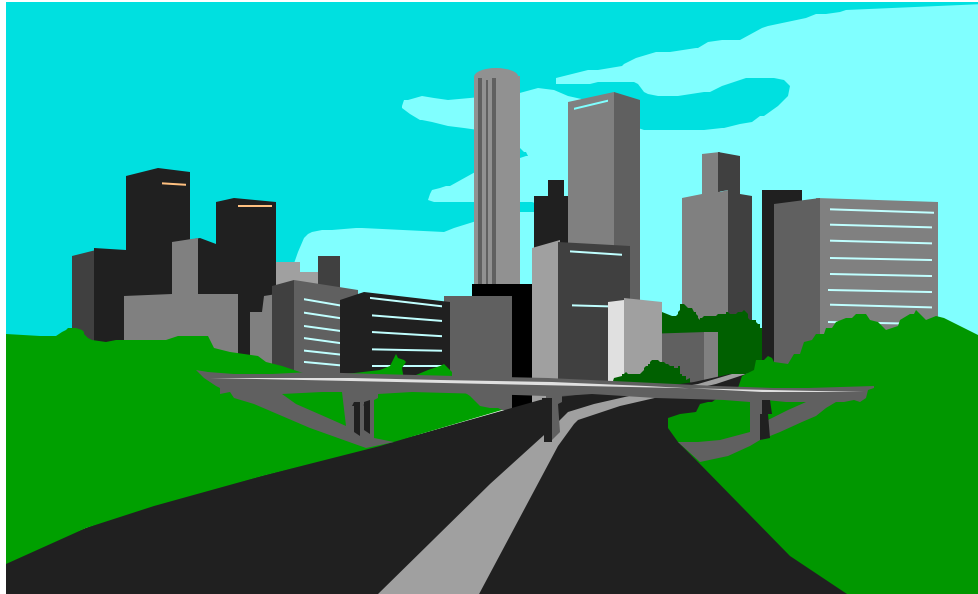
Debt capacity analysis does not end with the initial project financing decision. Ongoing monitoring can provide useful early warning signals of future credit problems.

Municipal Assets as Collateral



Although loans are expected to be repaid with future cash flows from operations, collateral can serve as an added security.

CASE STUDIES: CITY A CITY F



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CITY A CASE STUDY

INTRODUCTION

The purpose of this case study is to focus on the financial criteria that lenders increasingly emphasize in evaluating a loan application. To establish this focus, the analysis will provide only an abbreviated discussion of the capital project. Lending institutions are placing more emphasis on the ability of borrowers to generate sufficient cash flow from operations to repay debt. Therefore, we will present limited financial and budget data that most directly provide this cash flow information. Other factors are always considered in any loan request, but the methodology discussed in this case is designed to highlight the concept of debt service coverage.

Narrative—City A

City A is applying for a credit of 8 million Kc, to be repaid over 10 years at an interest rate of 12 percent. If granted, the loan will have annual principal repayments of 800 thousand Kc beginning in June 2000. The purpose of the loan is to finance a major upgrading of the city water supply. The city water system has provided an adequate volume of piped water to all city residents from 3 municipal wells. However, testing of water quality in 1998 revealed that 2 of the city's wells were contaminated by the seepage of sewage. Therefore, in 1998, planning was completed on a new well, a water treatment plant, and connections to the city water distribution system. This project has been assigned a top priority by the city council. The total cost of the project is estimated at 12 million Kc, and a loan for 4 million Kc has been approved by the State Environmental Fund for part of the cost. City A had a population of 2700 persons in 1998, and population is expected to remain stable in future years.

City A has provided, in Exhibit 1, a budget for 1999, along with actual financial results for 1994-1998. The 1999 budget includes investment expenditures of 12 million Kc to complete the project. As indicated by the Economic Results, without this credit, the budget shows a deficit of 11.1 million Kc.

The city also has 1 million Kc in outstanding debt from an earlier loan for a heating plant project. This loan is scheduled to be fully repaid in 1999, and all payments to date have been in full and on time. The amortization schedule for this loan is in Exhibit 2. The SEF loan is repayable financial assistance, at 3 percent interest. According to the terms, the principal on the SEF grant is scheduled to be repaid in 4 installments beginning in 2002. See Exhibit 3. Exhibit 4 provides an amortization schedule for the proposed credit, with annual payments of principal beginning in 2000 and interest extending from 1999 to 2009. The consolidated debt service schedule is in Exhibit 5.



Exhibit 6 shows the budget for 1999 including the credit of 8 million Kc as source of financing, and it shows adjusted expenditures to include the estimated 1999 payment of interest.

Exhibit 1 (Revised)
 Financial Information for City A
 Budget Data After Proposed Financing
 (All amounts in thousands of Kc)

Revenues	Actual 1994	Actual 1995	Actual 1996	Actual 1997	Actual 1998	Budget 1999 (After New Credit)
Total Tax Revenues	5,654	8,973	11,799	10,920	10,540	10,384
-Income Tax of natural person from dependent activity	2,902	3,629	5,467	2,767	3,044	3,105
-Income Tax of natural persons from business	—	2,259	1,773	1,186	901	900
- Corporate Income Tax	—	—	1,589	3,900	3,315	3,249
-Property Tax	1,623	1,815	1,727	1,731	1,956	1,900
-Administrative and Court Fees	717	801	917	920	994	900
-Other Tax Revenues	412	469	326	416	330	330
Total Non Tax Revenues	6,986	7,021	8,269	8,475	8,600	8,370
-Revenues from BO, CO	5,001	6,251	7,814	8,205	8,287	8,370
-Revenues from non-investment property sales	—	—	—	—	—	—
-Revenues from property lease	—	—	—	—	—	—
-Loan instalments	—	—	—	—	—	—
-Other non-tax revenues	1,985	770	455	270	313	—
State Subsidies	2,986	5,729	2,710	4,245	3,996	3,756
-Total General Subsidies	2,583	5,729	2,710	3,132	3,104	3,104
-Extraordinary & special purpose subsidies	403	—	—	1,113	892	652
Capital Revenues	7,968	—	—	—	—	—
-Revenues from investment property sales	7,968	—	—	—	—	—
-Other Capital Revenues	—	—	—	—	—	—
Total Revenues	23,594	21,723	22,778	23,640	23,136	22,510



Exhibit 1 Revised (Continued)

Expenditures	Actual 1994	Actual 1995	Actual 1996	Actual 1997	Actual 1998	Budget 1999 (Before New Credit)
Operating Expenditures (exl. payments of interest)	13,198	17,617	19,126	20,399	21,308	21,598
-Salaries and other personnel expenses	1,470	2,059	1,930	2,461	2,707	2,910
Operating Subsidies to CO and other firms	212	360	1,073	1,935	3,077	2,000
Operating Loans	—	—	—	—	—	—
Other Expenditures	11,516	15,198	16,123	16,003	15,524	16,688
Investment Expenditures	7,651	13,766	5,465	5,900	4,500	12,000
Investment Subsidies to CO and other firms	—	1,086	65	—	—	—
Investment Loans	—	—	—	—	—	—
Investment Expenditures	7,651	12,680	5,400	5,900	4,500	12,000
Total Expenditures	20,849	31,383	24,591	26,299	25,808	33,598
Total Expenditures (including payments of interest)	21,124	31,878	24,976	26,574	25,973	34,193

	Actual 1994	Actual 1995	Actual 1996	Actual 1997	Actual 1998	Budget 1999
Economic Results						
Total Revenues	23 594	21,723	22,778	23 640	23,136	22,510
Total Expenditures	21 124	31,878	24,976	26 574	25,973	34,193
Surplus (Deficit)	2 470	- 10,155	- 2,198	- 2 934	- 2,837	- 11,683
Financing						
Changes on bank accounts (+, -)	-7,470	11,155	3,198	3,934	3,837	683
Principal payments (-)	—	-1,000	-1,000	-1,000	-1,000	-1,000
Revenues from loans (+)	5,000	—	—	—	—	12,000
Financing	- 2 470	10,155	2,198	2,934	2,837	11,683
Debt Service						
Interest	275	495	385	275	165	595
Principal	—	1,000	1,000	1,000	1,000	1,000
Total Debt Service	275	1,495	1,385	1,275	1,165	1,595

Exhibit 1
Financial Information for City A (Before New Financing)
(All amounts in thousands of Kc)

	Actual 1994	Actual 1995	Actual 1996	Actual 1997	Actual 1998	Budget 1999 (Before New Credit)
Revenues						
Total Tax Revenues	5,654	8,973	11,799	10,920	10,540	10,384
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Revenues from non-investment property sales	—	—	—	—	—	—
Revenues from property lease Loan instalments	—	—	—	—	—	—
Other non-tax revenues	1,985	770	455	270	313	—
State Subsidies	2,986	5,729	2,710	4,245	3,996	3,756
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Extraordinary and special purpose subsidies	403	—	—	1,113	892	652
Capital Revenues	7,968	—	—	—	—	—
Revenues from investment property sales	7,968	—	—	—	—	—
Other Capital Revenues	—	—	—	—	—	—
Total Revenues	23,594	21,723	22,778	23,640	23,136	22,510



Exhibit 1 (Continued)

	Actual 1994	Actual 1995	Actual 1996	Actual 1997	Actual 1998	Budget 1999 (Before New Credit)
Expenditures						
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Operating Subsidies to CO and other firms	212	360	1,073	1,935	3,077	2,000
Operating Loans	—	—	—	—	—	—
Other Expenditures	11,516	15,198	16,123	16,003	15,524	16,688
Investment Expenditures	7,651	13,766	5,465	5,900	4,500	12,000
Investment Subsidies to CO and other firms	—	1,086	65	—	—	—
Investment Loans	—	—	—	—	—	—
Investment Expenditures	7,651	12,680	5,400	5 900	4 500	12,000
Total Expenditures	20,849	31,383	24,591	26,299	25,808	33,598
Total Expenditures (including payments of interest)	21,124	31,878	24,976	26,574	25,973	33,653
Economic Results						
Total Revenues	23,594	21,723	22,778	23,640	23,136	22,510
Total Expenditures	21,124	31,878	24,976	26,574	25,973	33,653
Surplus (Deficit)	2,470	-10,155	-2,198	-2,934	-2,837	-11,143
Financing						
Changes on bank accounts (+, -)	-7,470	11,155	3,198	3,934	3,837	12,143
Principle payments (-)	—	-1,000	-1,000	-1,000	-1,000	-1,000
Revenues from loans (+)	5,000	—	—	—	—	—
Financing	-2,470	10,155	2,198	2,934	2,837	11,143
Debt Service						
Interest	275	495	385	275	165	55
Principle	—	1,000	1,000	1,000	1,000	1,000
Total Debt Service	275	1,495	1,385	1,275	1,165	1,055

Exhibit 2
Schedule of Remaining Debt Service on
1994 Credit of 5 Million Kc for City A (all amounts in thousands of Kc)

Year	Principal Outstanding, Beginning of Period	New Credits Accepted	Scheduled Principal Payments	Scheduled Interest Payments	Scheduled Total Debt Service	Outstanding Principal, End of Period
1999	1,000		1,000	55	1,055	—
2000	—		—	—	—	—
2001	—		—	—	—	—
2002	—		—	—	—	—
2003	—		—	—	—	—
2004	—		—	—	—	—
2005	—		—	—	—	—
2006	—		—	—	—	—
2007	—		—	—	—	—
2008	—		—	—	—	—
2009	—		—	—	—	—

Exhibit 3
Schedule of Debt Service on 1999 SEF Loan of 4 Million Kc
for City A Interest Rate = 3 Percent
(all amounts in thousands of Kc)

Year	Principal Outstanding, Beginning of Period	New Credits Accepted	Scheduled Principal Payments	Scheduled Interest Payments	Scheduled Total Debt Service	Outstanding Principal, End of Period
1999		4,000	—	60	60	4,000
2000	4,000	—	—	120	120	4,000
2001	4,000	—	—	120	120	4,000
2002	4,000	—	1,000	105	1,105	3,000
2003	3,000	—	1,000	75	1,075	2,000
2004	2,000	—	1,000	45	1,045	1,000
2005	1,000	—	1,000	15	1,015	—
2006	—	—	—	—	—	—
2007	—	—	—	—	—	—
2008	—	—	—	—	—	—
2009	—	—	—	—	—	—



Exhibit 4

**Schedule of Debt Service on 1999 Proposed Credit of 8 Million Kc
for City A Interest Rate = 12 Percent
(all amounts in thousands of Kc)**

Year	Principal Outstanding, Beginning of Period	New Credits Accepted	Scheduled Principal Payments	Scheduled Interest Payments	Scheduled Total Debt Service	Outstanding Principal, End of Period
1999		8,000	—	480	480	8,000
2000	8,000	—	800	912	1,712	7,200
2001	7,200	—	800	816	1,616	6,400
2002	6,400	—	800	720	1,520	5,600
2003	5,600	—	800	624	1,424	4,800
2004	4,800	—	800	528	1,328	4,000
2005	4,000	—	800	432	1,232	3,200
2006	3,200	—	800	336	1,136	2,400
2007	2,400	—	800	240	1,040	1,600
2008	1,600	—	800	144	944	800
2009	800	—	800	48	848	—

Exhibit 5

**Consolidated Schedule of Debt Service on Outstanding and Proposed Credits and Loans
for City A (all amounts in thousands of Kc)**

Year	Principal Outstanding, Beginning of Period	New Credits Accepted	Scheduled Principal Payments	Scheduled Interest Payments	Scheduled Total Debt Service	Outstanding Principal, End of Period
1999	1,000	12,000	1,000	595	1,595	12,000
2000	12,000	—	800	1,032	1,832	11,200
2001	11,200	—	800	936	1,736	10,400
2002	10,400	—	1,800	825	2,625	8,600
2003	8,600	—	1,800	699	2,499	6,800
2004	6,800	—	1,800	573	2,373	5,000
2005	5,000	—	1,800	447	2,247	3,200
2006	3,200	—	800	336	1,136	2,400
2007	2,400	—	800	240	1,040	1,600
2008	1,600	—	800	144	944	800
2009	800	—	800	48	848	—

City A
Worksheet #1
Separating Recurring Revenue from Non-Recurring Revenue

		Actual 1994	Actual 1995	Actual 1996	Actual 1997	Actual 1998	Budget 1999 (After New Credit)
Recurring Revenues							
National Tax Revenues							
Income Tax of natural person from dependent activity	1	2,902	3,629	5,467	2,767	3,044	3,105
Income Tax of natural persons from business	2	—	2,259	1,773	1,186	901	900
Corporate Income Tax	3	—	—	1,589	3,900	3,315	3,249
Total National Tax Revenues (=1+2+3)	4	2,902	5,888	8,829	7,853	7,260	7,254
State Operating Subsidies							
Total General Subsidies	5	2,583	5,729	2,710	3,132	3,104	3,104
Local Revenues							
Revenues from RO, PO	6	5,001	6,251	7,814	8,205	8,287	8,370
Property Tax	7	1,623	1,815	1,727	1,731	1,956	1,900
Administrative Fees	8	717	801	917	920	994	900
Local Fees	9	—	—	—	—	—	—
Revenues from property lease	10	—	—	—	—	—	—
Total Local Revenues (=6+7+8+9+10)	11	7,341	8,867	10,458	10,856	11,237	11,170
Total Recurring Revenues (=4+5+11)	12	12,826	20,484	21,997	21,841	21,601	21,528
Non-Recurring Revenue:							
Revenues from property sales	13	7,968	—	—	—	—	—
Other and Random Revenues	14	2,397	1,239	781	686	643	330
Extraordinary and special purpose subsidies	15	403	—	—	1,113	892	652
Total Non-Recurring Revenue (=13+14+15)	16	10,768	1,239	781	1,799	1,535	982
Total Revenues (= 12+16)		23,594	21,723	22,778	23,640	23,136	22,510



Worksheet #2

The Concept of Net Operating Surplus (Deficit)

	Actual 1994	Actual 1995	Actual 1996	Actual 1997	Actual 1998	Budget 1999 (After New Credit)
Recurring Revenues						
Total National Tax Revenues	2,902	5,888	8,829	7,853	7,260	7,254
Total General Subsidies	2,583	5,729	2,710	3,132	3,104	3,104
Total Local Revenues	7,341	8,867	10,458	10,856	11,237	11,170
Total Recurring Revenues	12,826	20,484	21,997	21,841	21,601	21,528
Less						
Operating Expenditures Equals	13,198	17,617	19,126	20,399	21,308	21,598
Net Operating Surplus	-372	2,867	2,871	1,442	293	-70

City A

Worksheet # 3

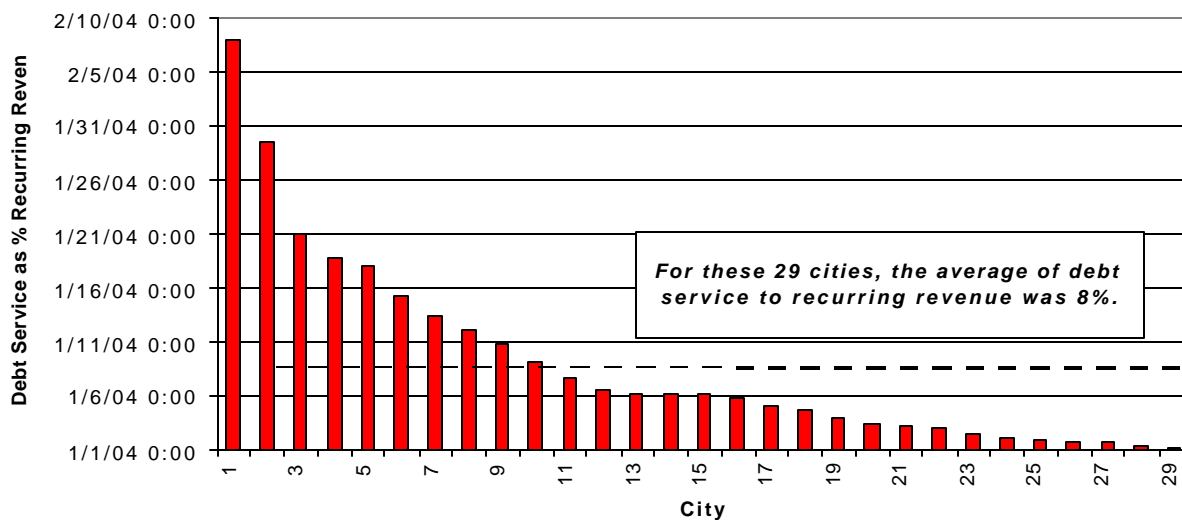
The Concept of the Debt Service Coverage Ratio

	Actual 1994	Actual 1995	Actual 1996	Actual 1997	Actual 1998	Budget 1999 (After New Credit)
Net Operating Surplus (Deficit)	-372	2,867	2,871	1,442	293	-70
Divided by						
Debt Service	275	1,495	1,385	1,275	1,165	1,595
Equals the						
Debt Service Coverage Ratio (in Percent)	N/R	1.92	2.07	1.13	0.25	N/R


Worksheet #4
Measures of Debt Service Coverage City A (in Percent)

	Actual 1994	Actual 1995	Actual 1996	Actual 1997	Actual 1998	Budget 1999 (Before New Credit)
Debt Service Coverage Ratio	N/R	1.92	2.07	1.13	0.25	N/R
Ratio of Debt Service to Recurring Revenues	2.1	7.3	6.3	5.8	5.4	7.4
Ratio of Debt Service to Total Revenues	1.2	6.9	6.1	5.4	5.0	7.1

**Annual Debt Service as a Percent of Recurring Revenue for a
Sample of 29 Czech Cities**



CITY F NARRATIVE

INTRODUCTION

You have been retained as the financial advisor to City F. The city has asked you to review the proposed plans for a reconstruction of the city heating system, and to evaluate the financial feasibility of the project. You have also been asked to assess the risks of the proposed financial arrangements. To assist you in this assignment, City F has prepared a summary of the key factors relating to the heating system project.

Project Overview

City F is planning a major replacement of the district heating system at an estimated cost of 90 Kc million. At present, the system consists of a number of independent local boilers that provide hot water and heating to its service area. These local boilers are old, and in need of repair. Moreover, hard coal, coke and brown coal fuel these boilers, which result in substantial emissions of particulate (dust), sulfur dioxide and carbon monoxide. The planned new system will provide significant reductions in these pollutants.

Under the proposed plan, the city will eliminate the local boilers by developing a system to buy heat supply from the ABC Steel Company (which is located on the edge of the city) by extracting waste heat from the steel furnaces. ABC Steel Company operates a total of 5 rolling mill furnaces that generate substantial waste heat, and two of the steel furnaces will be connected to ensure continued service in the event of outages and breaks in service for furnace maintenance. Peak energy needs will require supplemental energy from company-owned power station at the steel mills. As part of an earlier company plant-expansion program, a hot water system had been constructed from the power plant to the furnace facility. Waste heat from the mill is expected to produce about 70-80 percent of the heat required, and the remaining 20-30 percent will come from the power plant.

Heat and hot water will be distributed using an underground pipe system from the Company furnaces to City F. The pipeline will consist of 3900 m of insulated steel pipes for main distribution lines, and for branch piping to the heat exchanger stations. The Steel Company engineers have completed a technical evaluation and design. The system will be sized to provide a reserve margin of 33 percent.

Once the new heating system is in place, the existing boilers will be replaced with heat exchangers, and the old boilers will be dismantled. An estimate of the construction costs is provided in Exhibit 1. The ABC Steel Company will construct the portions of the project that are on its property and it will bill the city for costs of approximately 18.5 Kc million. The remainder of the

project has been put out for tenders, and the construction firm of E_, s.r.o. submitted the low bid of 71.5 Kc million for the remaining construction costs. The city plans to start construction in early May and finish by December 1999, so that the new plant will be operational in January 2000.

The District Heating Company and City F

The heating plant will be owned by the city. In 1998, the city formed a joint stock company—the F District Heating Company, to manage, operate, and maintain the heating system, and to produce and market heat and hot water to the city's service area. The Joint Stock Company is 100 percent owned by the city, and the city also owns the physical plant of the heating district. Under the arrangements, the city will continue to own the heating plant, but will lease the facilities to the heating company. The lease for the new plant facilities has been structured to require annual payments of Kc 6.917 million over a 15 year period. These terms were established to amortize the new plant costs over a period more closely related to the useful life of the project, and to enable the heating company to establish initial rates for service of 300 Kc per GJ. Since the new plant will require an increase in rate to customers above the current rate of 275 Kc per GJ, the council has been adamant in keeping lease payments at the proposed level.

The initial rates of 300 Kc/GJ will enable the heating company to pay for operating costs, taxes and the lease of the facilities. Included in the operating costs is the cost of purchasing the heat supply from the ABC Steel Company. Although a contract has not been signed with the ABC Steel Company, the company has indicated that it will charge an initial rate of Kc 125 per GJ.

The Service Area

More than 72 percent of the heating system production for heat and hot water is supplied to the residential sector and to city-owned facilities, which consume 180,000 GJ per year. City F has a population of 10,000, which is expected to remain stable for the next 10 years. Table 1 provides an analysis of the overall customer base for the output from the project. The prison currently consumes about 25 percent of total heat supplied.

Financing Arrangements

Based on preliminary discussions with the State Environmental Fund, the project will be eligible for a grant of 27 Kc millions (equal to 30 percent of the construction cost), and a low-interest loan for another 30 percent of the project. This loan, 27 million Kc, will have a 3 percent interest rate. The State Environmental Fund has agreed to provide a grace period until 2002 at which time principal on the loan will be amortized through 2009. The city is now



discussing with prospective lending institutions loan terms for the remaining 36 Kc million. Based on current trends, the city believes that this project would qualify for a MUFIS loan with an interest rate of 12 percent and a 10-year principal amortization schedule. Exhibit 2 provides a summary of the proposed financing arrangements for the project, and Exhibit 3 provides a detailed schedule of debt service payments based on the estimated loan terms. As Exhibit 3 demonstrates, there will be a substantial increase in debt service for this project beginning next year when debt service jumps to 8.7 Kc million. Debt service continues to increase through the year 2002, reaching a level of 11.24 Kc million. After 2002, outlays for debt service will fall each year through the final maturity date in 2009.

Additional Data Supplied by the City

You have requested information from the city to assist your analysis. Exhibit 4 provides financial information for 1996 through 1998 and a budget for 1999 without the project. The city has also supplied a budget for 1999 that includes the project and this is available in Exhibit 5. As a first step in your evaluation, you note that City F has outstanding debt, so you decide to review the city's past coverage of debt service. The summary of your analysis is provided in Worksheets 1 and 2. Finally, you ask the city to provide you with pro-forma projections of the key budget items in recurring revenues and operating expenses for the years 1999 through 2009. This data is provided in Worksheet 3.

Based on the information, you can develop a preliminary assessment of City F's ability to meet future debt service obligations for the project. You also prepare questions for City F regarding the projections of future revenue/expense items and other factors such as construction period/project completion risks.

Table 1
Customer Base, City B Central Heat System

Customer Base	Heat Consumption (GJ/year)	Percent of Total
Residential:		
City Owned	81,085	39
Other Residential	27,561	13
<hr/>		
Other City Owned Facilities		
Orphans Home	2,136	1
Cultural Center	3,204	2
Health Center	930	1
Kindergarten	1,056	1
Special School	1,078	1

Customer Base	Heat Consumption (GJ/year)	Percent of Total
Other City Facilities	3,637	2
Supply to Exchange Stations	15,100	9
Direct Purchasers		
Prison	51,415	25
Manufacturing Firm	4,867	2
Elementary School	10,828	5
Kindergarten	3,348	2
Total	209,456	100

Exhibit 1
Financial Information for City F
(All amounts in Kc 000's)

	Actual 1996	Actual 1997	Actual 1998	Budget 1999
Revenues				
Total Tax Revenues	43,142	51,333	50,277	52,430
Physical entities income taxes from dependent activity	8,214	7,457	8,146	9,530
Physical entities income taxes from independent activity	20,445	19,869	12,079	13,000
Legal entities income tax	3,432	8,426	9,824	10,300
Legal entities income tax from municipalities	6,101	10,698	13,595	13,600
Property taxes	2,484	2,238	3,498	3,400
Administrative and court fees	2,169	2,214	2,048	2,100
Other tax revenues	297	431	1,087	500
Total Non-Tax Revenues	32,942	22,603	18,188	14,929
Revenues from BO, CO	6,260	1,664	7,538	7,300
Revenues from non-investment property sales	326	529	236	—
Revenues from property lease	168	154	129	129
Loan instalments	1,025	1,329	1,827	1,500
Other non-tax revenues	25,163	18,927	8,458	6,000
State Subsidies	30,068	73,088	30,856	26,000
Total General Subsidies	12,317	8,970	9,834	11,000
Extraordinary and special purpose subsidies	17,751	64,118	21,022	15,000
Capital Revenues	—	17,918	14,894	30,000
Revenues from investment property sales	—	15,740	11,257	20,000
Other Capital Revenues	—	2,178	3,637	10,000
Total Revenues	106,152	164,942	114,215	123,359
Expenditures				
Operating Expenditures (excluding payments of interest)	42,347	53,950	66,761	70,306



	Actual 1996	Actual 1997	Actual 1998	Budget 1999
Salaries and other personnel expenses	8,262	8,818	8,114	9,006
Operating Subsidies to CO and other firms	7,369	5,274	6,259	6,300
Operating Loans	—	—	—	—
Other Expenditures	26,716	39,858	52,388	55,000
Investment Expenditures	62,977	118,191	55,560	49,000
Investment Subsidies to CO and other firms	250	—	—	—
Investment Loans	—	1,973	—	—
Investment Expenditures	62,727	116,218	55,560	49,000
Total Expenditures	105,324	172,141	122,321	119,306
Total Expenditures (including payments of interest)	106,478	172,681	122,861	119,486
Economic Results				
Total Revenues	106,152	164,942	114,215	123,359
Total Expenditures	106,478	172,681	122,861	119,486
Surplus (Deficit)	-326	-7,739	-8,646	3,873
Financing				
Changes on bank accounts (+, -)	4,326	1,739	12,646	-1,873
Principle payments (-)	-4,000	—	-4,000	-2,000
Revenues from loans (+)	—	6,000	—	—
Financing	326	7,739	8,646	-3,873
Debt Service				
Interest	1,154	540	540	180
Principle	4,000	—	4,000	2,000
Total Debt Service	5,154	540	4,540	2,180

Exhibit 2
Summary of Construction Costs
City F Heating Plant

Component	Cost (in Kc millions)
Heat Exchanger at the rolling mill furnaces	13.1
Pumping Stations	4.2
Pipeline (50-250 mm)	45.3
Heat Exchanges in Apartment buildings	11.2
Modifications in rolling mill at Steel, a.s.	0.4
Measurements and regulations for the construction	11.1
Electro-equipment for the whole construction	4.7
Total	90.0

Exhibit 3
City F
Uses and Sources of Funds for Heating Plant Project
(All amounts in Kc 000's)

Uses

Total Project Construction Costs **90,000**

Sources of Project Funds

SEF Grant = 30 Percent of Project Costs **27,000**

SEF Loan

Loan Amount = 30 Percent of Project Costs

27,000

Interest Rate

3 Percent

Maturity

Final maturity: 2009

First Principal Payment in 2002

MUFIS Loan

Loan Amount = 40 Percent of Project Costs

36,000

Interest Rate

12 Percent

Maturity

Final Maturity: 2009

First principal payment in 2000

Exhibit 4
City F Schedule of Debt Service Payments For Proposed Financing Municipal Heating Plant Project
(All amounts in Kc 000's)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
SEF Loan											
Principal Outstanding	27,000	27,000	27,000	27,000	23,625	20,250	16,875	13,500	10,125	6,750	3,375
Interest Expense	405	810	810	810	709	608	506	405	304	203	101
Principal Amortization		—	—	3,375	3,375	3,375	3,375	3,375	3,375	3,375	3,375
Total SEF Debt Service	405	810	810	4,185	4,084	3,983	3,881	3,780	3,679	3,578	3,476
MUFIS Loan											
Principal Outstanding	36,000	36,000	32,400	28,800	25,200	21,600	18,000	14,400	10,800	7,200	3,600
Interest Expense	2,160	4,320	3,888	3,456	3,024	2,592	2,160	1,728	1,296	864	432
Principal Amortization		3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600
Total MUFIS Debt Service	2,160	7,920	7,488	7,056	6,624	6,192	5,760	5,328	4,896	4,464	4,032
Total Debt Service											
Principal Outstanding	63,000	63,000	59,400	55,800	48,825	41,850	34,875	27,900	20,925	13,950	6,975
Interest Expense	2,565	5,130	4,698	4,266	3,733	3,200	2,666	2,133	1,600	1,067	533
Principal Amortization		3,600	3,600	6,975	6,975	6,975	6,975	6,975	6,975	6,975	6,975
Total Debt Service	2,565	8,730	8,298	11,241	10,708	10,175	9,641	9,108	8,575	8,042	7,508



Exhibit 5
Financial Information for City F
Including Sources and Uses of Funds for Heating Project
(all amounts in Kc 000's)

	Actual 1996	Actual 1997	Actual 1998	Budget 1999
Revenues				
Total Tax Revenues	43,142	51,333	50,277	52,430
Physical entities income taxes from dependent activity	8,214	7,457	8,146	9,530
Physical entities income taxes from independent activity	20,445	19,869	12,079	13,000
Legal entities income tax	3,432	8,426	9,824	10,300
Legal entities income tax from municipalities	6,101	10,698	13,595	13,600
Property taxes	2,484	2,238	3,498	3,400
Administrative and court fees	2,169	2,214	2,048	2,100
Other tax revenues	297	431	1,087	500
Total Non-Tax Revenues	32,942	22,603	18,188	14,929
Revenues from BO, CO	6,260	1,664	7,538	7,300
Revenues from non-investment property sales	326	529	236	—
Revenues from property lease	168	154	129	129
Loan instalments	1,025	1,329	1,827	1,500
Other non-tax revenues	25,163	18,927	8,458	6,000
State Subsidies	30,068	73,088	30,856	53,000
Total General Subsidies	12,317	8,970	9,834	11,000
Extraordinary and special purpose subsidies	17,751	64,118	21,022	42,000
Capital Revenues	—	17,918	14,894	30,000
Revenues from investment property sales	—	15,740	11,257	20,000
Other Capital Revenues	—	2,178	3,637	10,000
Total Revenues	106,152	164,942	114,215	150,359
Expenditures				
Operating Expenditures (excluding payments of interest)	42,347	53,950	66,761	70,306
Salaries and other personnel expenses	8,262	8,818	8,114	9,006
Operating Subsidies to CO and other firms	7,369	5,274	6,259	6,300
Operating Loans	—	—	—	—
Other Expenditures	26,716	39,858	52,388	55,000
Investment Expenditures	62,977	118,191	55,560	139,000
Investment Subsidies to CO and other firms	250	—	—	—
Investment Loans	—	1,973	—	—
Investment Expenditures	62,727	116,218	55,560	139,000
Total Expenditures	105,324	172,141	122,321	209,306
Total Expenditures (including payments of interest)	106,478	172,681	122,861	212,051
Economic Results				
Total Revenues	106,152	164,942	114,215	150,359
Total Expenditures	106,478	172,681	122,861	212,051
Surplus (Deficit)	-326	-7,739	-8,646	-61,692



	Actual 1996	Actual 1997	Actual 1998	Budget 1999
Financing				
Changes on bank accounts (+, -)	4,326	1,739	12,646	692
Principal payments (-)	-4,000	—	-4,000	-2,000
Revenues from loans (+)	—	6,000	—	63,000
Financing	326	7,739	8,646	61,692
Debt Service				
Interest	1,154	540	540	2,745
Principal	4,000	—	4,000	2,000
Total Debt Service	5,154	540	4,540	4,745

CityF

Worksheet #1

Separating Recurring Revenue from Non-Recurring Revenue

(All amounts in Kc 000's)

	Actual 1996	Actual 1997	Actual 1998	Budget 1999 (After New Credits)
Recurring Revenues				
National Tax Revenues				
Physical entities income taxes from dependent activity	8,214	7,457	8,146	9,530
Physical entities income taxes from independent activity	20,445	19,869	12,079	13,000
Legal entities income tax	3,432	8,426	9,824	10,300
Legal entities income tax from municipalities	6,101	10,698	13,595	13,600
Total National Tax Revenues	38,192	46,450	43,644	46,430
State Operating Subsidies				
Total General Subsidies	12,317	8,970	9,834	11,000
Local Revenues				
Revenues from RO, PO	6,260	1,664	7,538	7,300
Property Tax	2,484	2,238	3,498	3,400
Administrative Fees	2,169	2,214	2,048	2,100
Revenues from property lease	168	154	129	129
Total Local Revenues	11,081	6,270	13,213	12,929
Total Recurring Revenues	61,590	61,690	66,691	70,359

Non-Recurring Revenue

	Actual 1996	Actual 1997	Actual 1998	Budget 1999 (After New Credits)
Revenues from property sales	326	16,269	11,493	20,000
Other and Random Revenues	26,485	22,865	15,009	18,000
Extraordinary & special purpose subsidies	17,751	64,118	21,022	42,000
Total Non-Recurring Revenue	44,562	103,252	47,524	80,000
Total Revenue	106,152	164,942	114,215	150,359

City F**Worksheet #2****The Concept of Net Operating Surplus (Deficit)****And The Debt Service Coverage Ratio (All amounts in Kc 000's)**

	Actual 1996	Actual 1997	Actual 1998	Budget 1999 (After New Credit)
Recurring Revenues				
Total National Tax Revenues	38,192	46,450	43,644	46,430
Total General Subsidies	12,317	8,970	9,834	11,000
Total Local Revenues	11,081	6,270	13,213	12,929
Total Recurring Revenues	61,590	61,690	66,691	70,359
Less				
Operating Expenditures	42,347	53,950	66,761	70,306
Equals				
Net Operating Surplus (Deficit)	19,243	7,740	-70	53
Debt Service Coverage Ratio				
Net Operating Surplus	19,243	7,740	-70	53
Debt Service	5,154	540	4,540	4,745
Coverage Ratio	4	14	N/R	—



Worksheet #3
Pro-Forma Projections of Net Operating Surplus (Deficit) and Debt Service Coverage
City F Heating Plant Project
(All Data in Kc 000's)

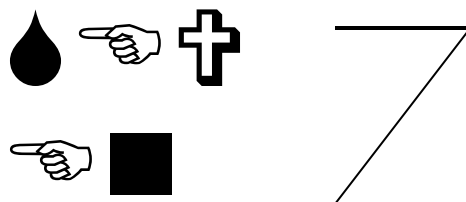
	Line No.	1998 Actual	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Recurring Revenues (=6+7+12)	1	66,691	70,359	79,478	81,817	84,303	86,946	89,755	92,743	95,919	99,298	102,892	106,715
Physical entities income taxes from dependent activity	2	8,146	9,530	10,197	10,911	11,675	12,492	13,366	14,302	15,303	16,374	17,521	18,747
Physical entities income taxes from independent activity	3	12,079	13,000	13,910	14,884	15,926	17,040	18,233	19,509	20,875	22,336	23,900	25,573
Legal entities income tax	4	9,824	10,300	10,815	11,356	11,924	12,520	13,146	13,803	14,493	15,218	15,979	16,778
Legal entities income tax from municipalities	5	13,595	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600
Total National Tax Revenues (=2+3+4+5)	6	43,644	46,430	48,522	50,750	53,124	55,652	58,345	61,214	64,271	67,529	70,999	74,698
Total General Subsidies	7	9,834	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000
Revenues from BO, CO	8	7,538	7,300	7,410	7,521	7,633	7,748	7,864	7,982	8,102	8,223	8,347	8,472
Property Tax	9	3,498	3,400	3,400	3,400	3,400	3,400	3,400	3,400	3,400	3,400	3,400	3,400
Administrative Fees	10	2,048	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100
Revenues from property lease	11	129	129	7,046	7,046	7,046	7,046	7,046	7,046	7,046	7,046	7,046	7,046
Total Local Revenues (=8+9+10+11)	12	13,213	12,929	19,956	20,067	20,179	20,294	20,410	20,528	20,648	20,769	20,893	21,018
Operating Expenditures (exl. interest payments) (=14+15+16)	13	66,761	70,306	71,275	72,267	73,283	74,322	75,386	76,474	77,587	78,725	79,890	81,081
Salaries and other personnel expenses	14	8,114	9,006	9,276	9,554	9,841	10,136	10,440	10,754	11,076	11,409	11,751	12,103
Operating Subsidies	15	6,259	6,300	6,174	6,051	5,930	5,811	5,695	5,581	5,469	5,360	5,253	5,148
Other Expenditure	16	52,388	55,000	55,825	56,662	57,512	58,375	59,251	60,139	61,041	61,957	62,886	63,830
Net Operating Surplus (Deficit)	17	-70	53	8,202	9,550	11,020	12,624	14,370	16,269	18,332	20,572	23,002	25,635
Debt Service	18	4,540	4,745	8,730	8,298	11,241	10,708	10,175	9,641	9,108	8,575	8,042	7,508
Debt Service Coverage Ratio (=17/18)	19	N/R	0.01	0.94	1.15	0.98	1.18	1.41	1.69	2.01	2.40	2.86	3.41

Assumptions:

- Line 2: Increases at 17 percent for 1999, 7 percent per annum thereafter
- Line 3: Increases at 8 percent in 1999, 7 percent thereafter
- Line 4: Increases at 5 percent in 1999 and thereafter
- Line 5: No change forecast
- Line 7: Increase 12 percent in 1999, constant thereafter
- Line 8: Decrease 3 percent in 1999, increase at 1.5 percent per year thereafter
- Line 9: Decrease 3 percent in 1999, constant thereafter
- Line 10: Increase 3 percent in 1999, constant thereafter
- Line 11: Increase in 2000 for lease payments of 6.9 Kc millions on heating plant
- Line 22: Increase at 11 percent in 1999, 3 percent per year thereafter
- Line 15: Increase of 1 percent in 1999, decrease of 2 percent per year thereafter
- Line 16: Increase of 5 percent in 1999, 1.5 percent per year thereafter

HOW TO PREPARE MUNICIPAL ENERGY PROJECTS

Středisko pro efektivní využití energie
The Energy Efficiency Center



For Municipal Credit Training Seminar Prepared by:

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CONTRADICTIONS IN FUNDING MUNICIPAL ENERGY PROJECTS

Municipalities:

T We have projects
available

V No funding

Financial institutions:

T We have funds

V No quality
projects
available

PREPARATION OF PROJECTS

Feasibility study

Business plan

Raising of funds



Technical project - documentation

Implementation

FEASIBILITY STUDY

Problem identification

Market analysis / marketing

Technical analysis of options

Business and financial analysis



Risk analysis and environmental impact

Decision by investor:
Select one option for implementation

BUSINESS PLAN

Description of company and management

Description of market and competition

Marketing plan

Technical provision for project

Environmental impact

Financial plan (budget)

Assessment and method of control of risks

THE CONTRADICTION IN PROJECTS FUNDING

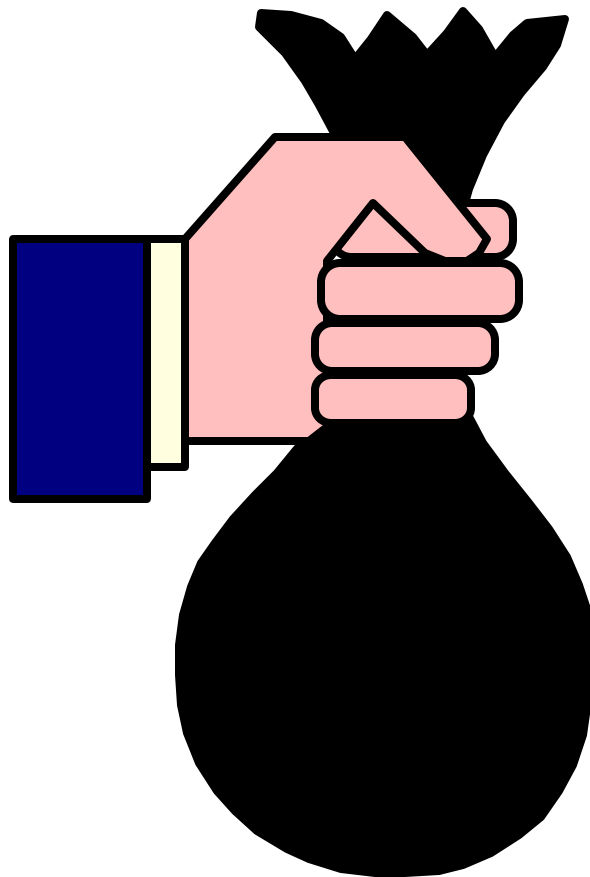
No funds available X No quality projects available

may be overcome through quality preparation of the project:

Feasibility study—a basis for investor's decision - technical, business and financial analyses of various solution options, market and risk analyses.

Business plan—“sells” the business idea to the financial institution - includes presentation of the selected option.

FOREIGN CURRENCY CREDIT RISK ASSESMENT



For Municipal Credit Training Seminar prepared by:
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Finance and Budget Department
City of Ostravy

FLOATATION OF MUNICIPAL BONDS OF CITY OF OSTRAVA ON INTERNATIONAL MARKETS

The City of Ostrava placed a floatation of its municipal bonds on the international markets as of December 19, 1996, under the following terms:

Issuer of basic bond	City of Ostrava
Issue type	Bonds with variable rate (6-month DEM LIBOR + 0.225 percent)
Maturity	Bullet repayment as at December 19, 2001
Nominee	The Chase Manhattan Bank Luxembourg
Main Manager and Subscriber Deutschland	ING Bank N.V., Niederlassung,

Use of Bond Revenue:

! General

- capital outlays, internal revenue projects (with return)
- never for current expenditures

! City of Ostrava

- Refinancing of a loan granted by „ eská spořitelna, a.s. CZK 707,200 ths
- Water services structures CZK 375,000 ths
- Partial refinancing of an international loan CZK 110,000 ths
- Construction of parking facilities CZK 50,000 ths
- Technological park CZK 50,000 ths

Funding of Construction of Water Services Infrastructure of City of Ostrava Through Long-term Loan/Bond

Why long-term?

- Ability to recover the infrastructure capital expenditures over the long-term instead of more rapid repayment, leading to substantially increased costs for users.
- Infrastructure capital expenditures have as a rule longer average useful lives compared to e.g., outlays made for means of transport or means of production.

Bond or loan?



A bank loan (including syndicated loans) ties the user to the bank and usually sets limits to the user when selecting a provider of other financial services (such as an administrator of its current account or "value improver" of disposable funds). A bond holder does not affect an issuer's autonomy.

What Currency? Czech Koruna or Another?

Koruna is the best suitable currency for the debt financing purposes. However, in 1996, there were no investors who were searching for a possibility of long-term "parking" of its funds. The pension funds that have such a need are prohibited by law from investing in municipal bonds.

The easiest way of obtaining long-term monies is to look for them on the dollar markets. A liability denominated in korunas represents a minimum risk exposure for a "koruna" debtor (whose substantial proportion of receipts comes in the Czech korunas). Koruna was, however, expensive through 1996 to 1998.

The key problem arising from use of a foreign currency is the foreign exchange risk. An important benefit of issuing bonds in foreign currencies is placing the city on the international "credit map" and, as a result, improved future access to the global (and through these to the local) financial markets because an international issue requires a credit rating by an internationally renowned agency.

Another challenge of employing a foreign currency results from own foreign exchange transactions. The exposure can be reduced by an agreement with the issue agent or another financial institution on minimization of the exchange rate margin.

What Are the Methods of Repayment?

There are basically two methods of payment:

Bullet repayment. The bullet repayment method requires only one single payment of 100 percent at the final maturity date of the loan or debenture. It therefore requires establishment of a redemption fund, the final amount of which equals to the amount of the loan. Creation of the redemption fund requires specific care in the form of controlled investing using the funds specified in advance in the agreement.

Gradual (amortization) repayment. The amortization method of payment requires nothing but contractually defined amounts paid regularly to the investors. Where an amortization fund is established it is smaller than the redemption fund and its "operation" is easier.

From the viewpoint of the city, the amortization method of payment is preferable, firstly because of its easier operation and secondly because of the price of the money since an amortized loan has a shorter term and therefore a lower interest rate.

What Are the Exchange Rate Risks?

There are two basic risks:

- ! Fluctuation of koruna compared to the domestic currency of the bond. A future path of the exchange rate fluctuation is subject to speculation.
- ! Possible adverse administrative interference by government authorities during the bond life.

The koruna rate in relation to other currencies depends on various factors. The key factors (working in both directions) are the following:

- Economic and political stability domestically (and its disturbances)
- Relative changes in the level of the national debt and total internal indebtedness relative to the GNP changes
- Balance of foreign trade
- National inflation rate
- Local inflation rates levels
- Speculative pressures on the international money markets

Is Assessment of the Risks Possible?

A risk must be comparable to the resulting benefit. An unassessed risk is a gamble. When assessing a risk/benefit ratio, the “doomsday” scenario should be applied. This has been determined in quantitative terms as a one-third drop of koruna against dollar one day after floatation (from 27 korunas to 36 korunas per dollar). The scenario should be manageable by the risk bearer, although with maximum efforts. The financial benefit is approximately a difference of 3.5 percent between the 10-year dollar and 10-year koruna prices. The benefit-at issue of a 10-year bond in the amount of CZK 1,350,000 thousand (USD 50 million) and applying the interest rates of 11 percent for koruna and 7.5 percent for dollar may be estimated as the nominal amount of CZK 472 million. For the above “doomsday” scenario, the benefit is calculated as the nominal amount less



CZK 315 million, while the minimum benefit is CZK 611 million using the modest 27-30-24 estimate. However, if we introduce the concept of a "constant 1995 koruna", i.e., koruna affected initially by a 9 percent rate in 1995 and 4.5 percent rate in 2006, the benefit may be estimated at CZK 323 million. For the purposes of comparing the koruna and dollar loans the cash flows need to be discounted by the same percentage (11 percent in our comparison example).

Attached charts:

— Assessment of inflation and exchange rate risks (CZK vs. USD)

Assessment of Inflation and Exchange Rate Risks

Scenario Assumptions	Nominal Inflation		Discounted 11 Percent Inflation	
	—	9.0 to 4.5	—	9.0 to 4.5
Exchange rate from 27 to 30, and then down to 24	611	388	317	216
Exchange rate constant at 27	472	323	278	201
Exchange rate jumps to 36	-315	-142	-79	-25

„ESKÁ SPOJITELNA'S APPROACH TO MUNICIPAL CLIENTS

(A summary document for the panel discussion in the seminar,
Prague 11 and 12 May 1999)

Prague, 11 May 1999-05-18

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INTRODUCTION

If evaluating business performance of „ eská Spořitelna, a.s. (“CS”), we look at its receivable and payable dealings with the municipal sector clients in 1998, we could document stability of its position on the credit market where CS continued to retain over a 60 percent share, while it also retained a 30 percent share in the deposit products. Despite the fact that our clientele was slightly reestablished (loans repaid in the ordinary operation and new loans provided) the number of our clients did not change (1,330 deals). Moreover, the number of clients that manage their budgetary accounts completely through CS (so-called “standing” clients) grew (one third of municipalities) at the same rate as the occasional clients (another one third of municipalities). The total number of clients includes more than 4 thousand municipalities.

It needs to be said that, notwithstanding constant criticism of increasing overall indebtedness of municipalities, this is not markedly affected by increased levels of loans provided in the Czech currencies. Rather, it is due to issues of debt in the form of municipal bonds (e.g., Praha, Ostrava etc.), returnable financial assistance from government funds (in the past, only subsidies), supplier credits and other borrowings and, not unimportantly, due to accepting foreign currency loans from foreign banks. These have been the effects of the overall liberalization of the market economy accompanied by requirements for funding, not only within local relations but distinctly in the outward direction, which impacts, apart from the corporate sector, also the public finance. Comparatively recent products have been adding to increased so-called hidden debts that eventually have quite a significant bearing on the municipalities of financial performance stability.

The attached summary “Forms of Hidden Debt, or, Do We Know Everything about Municipality Debt?” dating from the end of 1997 is still current in our days. Among other things, it provides an interesting comparison of what has changed in the fiscal, currency and economic policies since that time, as well as what has changed in the decision making processes performed by statutory representatives of municipalities in terms of leveraging their budgets.

„ eská Spořitelna, Has Developed Overall Approach to Municipal Clients

For a mutually advantageous, consistent and stable relationship between CS and a municipal client, mutual trust is the priority. On the one hand, there is an awareness of the complete service, which includes payment services, management of disposable funds with expertise of development of the money and capital markets, as well as special services. These special services include, provision of loans, knowledge of municipal issues including their reporting, advisory activity based on knowledge of the tax policy, of linkage to organisations established by municipalities, asset issues, of the possibilities of gaining other than bank funding or possible combination of the sources etc. On the other hand, there is problem-free provision of support documentation for evaluation

creditworthiness of the municipality and its ability to repay debt, information on the development plans for the region and municipality, commitment and ability of the municipalities' management to resolve issues in the best interests of both the municipality and constituency.

The relationship between a savings bank and its municipal clients should be based on looking for the optimum business terms and conditions, preventing a rise of any unnecessary mutual risks. CS's policy corresponds with the above and includes specifically significant "reliefs" for namely the first-class clients. An Individual approach to clients based on the financial analysis of the client's business performance enables application of a discounted interest rate on loans, free-of-charge consultancy, no charges for accepting and evaluating the loan application, zero commitment commission, (i.e., the one for raising funds for the loan). Further, the client pays no early-repayment charges on the loan providing it gives notice of an early repayment reasonably in advance. In our deposit business policy, we prefer application of interest bonuses to current accounts, use of over-nights, deposit bills, traditional time deposits and, in addition, management of services related to establishment of the housing development funds, state budget subsidies provided for selected projects, foreign currency transactions etc.

Česká Spořitelna, does not currently prefer provision of loans to municipalities in foreign currency, however, it does not refuse loan conversion. The point is not that CS would be unable to provide a foreign currency loan to a municipality. It has the same starting base as other banks: the cost of funds is the material difference. Decisive, however, is the final cost of the loan which, under current conditions, roughly corresponds to the cost of loan in the local currency. With municipalities it will eventually get reflected in their risk exposure, corresponding to the nature of their position and roles defined by law. Performance of these roles and functions cannot essentially cover the risk exposure ensuing from their own activities (municipalities do not carry out reciprocal business activities—they realize no exports that would partially dampen the exchange rate risk). Any exchange rate differences arising from the above type of business relationship are fully debited to the municipality budget, due to which evaluation of the municipality credit rating provides no sufficient reliance. This is also why the Czech National Bank puts any such deal under classified loans, i.e., the client loses its first-class credit rating with the attached favors.

In the case a foreign currency loan were provided, the client would lose also exemptions from charges for accepting and evaluation of the application, the commitment commission—i.e., the favors offered by CS when lending in the domestic currency. The loan agreement would then be similar to the type of agreement signed between Volksbank, a.s. and its clients, with the difference,



that the cost of the deal would correspond to the business terms and conditions of the local bank, not to those of an international bank covered by the currency and business policy of its parent bank.

Below is a summary of the sources of exchange rate risks with a foreign currency loan.

- ! At loan provision where the amount has been contractually agreed on in a foreign currency and drawdown is performed in CZK while it is a single-purpose type of drawdown, i.e., gradual drawdown over time which includes also a risk of the loan cost update reflecting the exchange rate development in the relevant country. (A municipality is neither a relevant subject impacting the payment and trade balance of the country, nor does it affect any development of the consumption basket, which means that it only reflects results of the economic and currency situation of the country).
- ! At settlement of charges for the loan account maintenance and related services, such as consultancy and control services.
- ! At settlement of payments of payable principal and interest, at each date set down by the contractual terms.
- ! At settlement of late charges.
- ! At early repayment of the debt, debt conversion to another currency etc. It is always advisable that each client considering accepting a loan in a foreign currency consider not only the cost of the loan but also the cost of other expenses related to the deal and their long-term impacts on the financial position.

„ eská Spolitelna, highly values its municipal sector clients and that is why it asks them, “What benefits does it bring to an already tight municipal budget to spend the saved funds on incidental expenses for covering exchange risks. It has been also asking how much the clients are aware that any intervention within the sensitive basic triangle of “fiscal policy – currency policy – economic policy” has been adding to the total debt of the public finance while at the same time limiting possibilities of savings for debt coverage.

AN EXAMPLE OF EXCHANGE RATE RISK PRESENTED BY VOLKSBANK

Loan for Czech Crowns (CZK) 10,000,000, drawdown as of July 1, 1999, bullet repayment as of October 1, 1999, i.e., 3-months maturity

a) CZK loan interest rate 9.75 percent per annum (p.a.)

amount in CZK	10,000,000
interest in CZK	243,750
total cost	10,243,750

b) Euro (EUR) loan, drawdown in CZK, depreciated CZK rate over 3-months maturity, interest rate 6 percent p.a.

drawdown rate at July 1, 1999 EURCZK		37,690
bullet payment rate at October 1, 1999 EURCZK		38,405
loan amount in EU	10,000,000/37,690	EUR 265,322
interest	(265,322 * 6 percent)4	EUR 3,980
total cost		EUR 269,302
counter value CZK	269,302 * 38.405	CZK 10,342,551
loss on exchange	10,243,750–10,342,551	CZK (98,801)

EUR loan, drawdown in CZK, appreciated CZK rate over 3-months maturity, interest rate 6 percent p.a.

drawdown rate at July 1, 1999 EURCZK		37,690
bullet payment rate at October 1, 1999 EURCZK		37,015
loan amount in EU	10,000,000/37,690	EUR 265,332
interest	(265,322 * 6 percent)4	EUR 3,980
total cost		EUR 269,302
counter value CZK	269,302 * 37,015	CZK 9,968,221
gain on exchange	10,243,750–9,900,221	CZK 275,529