FINANCIAL TREND MONITORING

FOR MONTANA TOWNS

by

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APPROVAL

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ABSTRACT

Financial trend monitoring is a management technique that has become popular with local governments during the last decade. This technique assists local government officials in long-range planning to improve the financial health of their communities, while maintaining service levels and avoiding financial problems. This study focuses on the financial trend monitoring system developed by the International City Management Association, because of its apparent applicability to small municipal governments.

Small municipalities in Montana have been subject to increasing financial stress during the 1980's. Federal government transfers have been drastically cut or eliminated; the state government has not been able to fill the void caused by shrinking federal funds. In addition, the economy of Montana and the nation has been weak throughout the decade. Add to these problems the restrictions placed on municipal governments by the Montana Constitution, legislative mandates, state and federal agency regulations, and voter concerns, and it is understandable that many small municipalities are in poor financial health.

Most small town officials have limited time and technical expertise, and the town generally cannot afford the services of a professional financial analyst. Therefore, any useful management technique must be within the capabilities of the town staff.

This paper demonstrates that financial trend monitoring can be implemented by small Montana towns. A system comprising four financial indicators was developed using actual data collected from Ekalaka, Montana. This exercise demonstrates that four indicators can be used by any town in Montana and should be considered as a base from which to expand to include other factors that affect municipal financial health.

CHAPTER 1

INTRODUCTION

Managers of any organization, including small Montana municipal governments, conduct their business in a dynamic environment. Internal and external forces are constantly compelling managers to consider new problems, and to find alternative solutions to those problems while maintaining a satisfactory fiscal "balance" within political, economic, and legal constraints. Municipal managers must deal with the daily problems associated with delivering services at a reasonable cost. At the same time, they must consider the burdens placed on them by other levels of government and their own town's circumstances.

The federal government, during the Reagan Administration, restructured and reduced many of the programs that provided financial assistance to municipalities during the 1970's. Federal spending for local discretionary programs, such as general revenue sharing, community development block grants, and many social welfare programs, was reduced by $124 billion between 1981 and 1988.[1] Direct grant assistance declined at a 5.3% annual rate between 1980 and 1989.[2] In addition to this, a growing concern for the environment has led to increasingly restrictive regulations concerning water

quality, sewage treatment, solid waste landfills, and toxic waste disposal, increasing the cost of delivering those municipal services.

With the end of municipal dependence on federal assistance, the importance of the regional and national economy became central to all levels of government. Economic growth has become the most important source of new revenue for municipalities.[3] The Montana regional economy, however, has been depressed throughout most of this decade.

The economic base of Montana towns is generally agriculture, timber, tourism, mining, coal, or oil. Some industries are seasonal, others are subject to the weather and market demands, and a representative small town will seldom enjoy more than one of these industries. Manufacturing, if present, is usually conducted on a small scale. The employment base is generated by a few retail outlets, schools, hospitals, county government in the case where the town is also the county seat, and occasionally field offices of state and federal agencies.

The financial condition of a town is dependent on its officials' flexibility to adequately respond to fluctuations in the economy. Various management techniques are available to improve municipal management, but some techniques may not be appropriate for Montana towns.

The state's Constitution constrains Montana town managers' ability to respond to economic fluctuations. Montana is essentially a "Dillon's Rule" state, with most small towns having little financial freedom.[4] The state

stipulates accounting format and reporting requirements, and sets property values and permissible taxes.[5] The mandated form of bookkeeping, also known as the Budgeting, Accounting, and Reporting System (BARS), is designed for reporting accountability and is not easily adapted for local management purposes. State control of local revenues leaves little room for local managerial flexibility. In addition, property taxes have been capped at 1986 levels by Initiative 105.[6] Towns that maintained conservative taxing policies prior to 1986 are now having difficulty finding revenue sources to offset the ever-increasing costs of service delivery.[7]

Furthermore, there are inherent local government institutional problems that inhibit the implementation of available management techniques.[8] Most small town clerks are hired on a part-time basis at a wage that does not encourage progressiveness or innovation. The clerk's workload generally exceeds paid time, so activities that are deemed less important are often curtailed. The typical clerk is female and has a high school education but little theoretical academic training. Many Montana town clerks are active in a professional association which seeks to provide training and improvements in the daily managerial process.

Mayors, too, seldom have the necessary educational preparation for their position. They are generally not familiar with the terminology, governmental processes, or legal and political constraints. Mayors are typically male, part-time, and have almost no incentive to improve management techniques.

Council members are also part-time, with minimal training in governmental management. They are concerned more with daily sewer and water system operations, filling potholes in the streets, and keeping taxes low than with learning fund accounting and financial management techniques.[9] Consequently, any turnover of elected officials tends to limit planning to short-term considerations.[10]

John Gargan summed it up when he noted, "For [the town clerk], and her policy-making superiors, financial management is primarily budgeting; and budgeting is not viewed in terms of long range planning and resource allocations but simply as a mechanism for control of expenditures."[11]

This lack of decision-making capacity has received attention from both the federal and state governments. The U.S. Department of Housing and Urban Development (HUD) has invested over $86 million in local government capacity activities.[12] A study by the Congressional Subcommittee on Fiscal and Intergovernmental Policy concluded that a growing number of municipalities will experience severe financial distress.[13] Deferred capital expenditures, national economic recovery, and federal assistance were noted as key factors in maintaining municipal solvency. A 1981 study completed by the Montana Department of Administration expressed a concern that towns are faced with increasing expenditures and declining revenues, and that continuation of these difficulties may lead to a breakdown of essential services and to financial default.[14]

As a result of inadequate managerial response to these and other problems, many small local governments are in a position of financial uncertainty.[15] Local governments vary in their capacity to deal with problems. Managerial ability is a concern because of the "growing gap between local practices and the magnitude of the demands placed upon local governments."[16]

Statement of the Problem

Given the magnitude and complexity of problems facing town managers and the inherent problems of small local governments, few management techniques are available to small town managers that: (1) address the broad concept of municipal financial condition, (2) provide information that is easy to understand and communicate, and (3) can be used to support policy changes that will improve municipal financial condition.

Proposed Solution

The realities of small municipal governments must be considered when suggesting techniques to increase the capacity of small town decision makers. Selection of a suitable management tool must consider staff time and financial resources, as well as whether the technique encourages an increased level of management. Conventional analysis methods used in municipalities generally focus on single-year budgets, balance sheets, and

operating statements. These methods do not provide the necessary broad perspective, nor do they generate data that are easily understood or communicated.[17]

A management technique that appears to provide a potential solution to the problem is financial trend monitoring. This management tool uses locally available financial information and develops a framework of ratios for assessing municipal financial condition.

This study deals with the implementation of a financial trend monitoring system for a Montana town. Chapter 2 provides an overview of various studies that have used ratios to measure financial condition. A financial trend monitoring system developed by the International City Management Association (ICMA) is reviewed in depth because of its apparent applicability to small towns. Chapter 3 discusses a selection process for determining which of the many ICMA indicators of financial condition are best suited for implementation by Montana towns. Chapter 4 modifies selected indicators and demonstrates their use by applying them to information collected from the Town of Ekalaka, Montana.

It is not the intention of this paper to address all the problems faced by Montana towns, nor to propose an all-encompassing method to solve those problems. The goal, rather, is to suggest a starting point for assessing municipal financial condition. Each town must work within its own context and capacity and incrementally build its own financial assessment system.

Endnotes

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CHAPTER 2

EVALUATING MUNICIPAL FINANCIAL CONDITION

Many different ratios have been used to evaluate municipal financial condition. Analysts do not agree on what constitutes financial condition, nor how it should be measured. This chapter reviews some of the perspectives concerning the use of ratios and their suitability to assess the financial condition of Montana towns.

What Is Ratio Analysis?

One management tool that is gaining popularity in larger municipalities converts accounting and other relevant information to ratios.[1] Ratios help managers estimate the financial position of their organization, assess the capabilities of policy makers, and identify potential problems that may hinder achievement of desired goals.[2]

Ratios are a mathematical relationship between two numbers, such as revenues and population. This technique, known variously as ratio analysis, indicator analysis, or trend monitoring, reduces and quantifies large amounts of financial information. Occasionally a single number rather than

a comparison is of importance, such as the dollar amount of loss from an enterprise; so the term "indicator" is sometimes used to describe the technique. Trend monitoring carries the process further by considering amounts and rates of change in ratios over an extended time period rather than focusing on ratios for a single period.

Ratios are of major importance in determining financial condition because they inject a qualitative measurement and demonstrate the adequacy of one financial factor relative to another. Ratio analysis presents output data in a form that can be more easily understood and communicated than pages of accounting data or complex financial statements. Ratios are not ends in themselves, but they can help in measuring financial condition and management performance.[3] At the local government level, such ratios can assist officials in understanding the financial condition of the city and identifying any important trends.

The Use of Ratio Analysis

As a management tool, ratio analysis has had limited use in the public sector. However, it has been used in private industry since the late nineteenth century.[4] Present-day private companies such as Dun and Bradstreet, Robert Morris Associates, and Eli Lilly and Company annually compile ratio analysis data and publish reports on industry standards.[5] Commercial banks commonly use ratios to evaluate the potential risk of loans

and investments. Trade associations, universities, and federal agencies produce annual ratio-average reports, such as debt-to-asset and net-profit-to-net-worth ratios, for their industrial and commercial constituents. Ratio standards have been developed for most manufacturing, retail, wholesale, construction, agricultural, service, and communication businesses.

Private sector managers compare these industry standards with those of their own company to determine how well they are doing. Substandard comparisons indicate which segment of the business operation an entrepreneur may improve.

Even though industry standards have been developed for nearly every type and size of private sector business and are widely used, most experts agree that standard ratios must be used with caution. Data collection disparities, due to statistical averaging over a range of business size and accuracy of reported figures, influence the published ratios.[6] In addition, differences in business size within an industry, business diversification, type of clientele served, geographic factors, and accounting methods and practices affect the industry averages.[7]

These deficiencies notwithstanding, ratios and standards are excellent tools for determining financial health. Unfortunately, public sector ratio standards have not been developed, due to limited application of ratios in the municipal arena and the complex differences among participating cities. The financial condition of any municipality is dependent on a number of factors.

The choice of factors to be measured results in different perspectives regarding municipal financial condition.

Measuring Municipal Financial Condition

A review of the concepts and practices that have been used by researchers and practitioners provides an understanding of the complex nature of determining municipal financial condition. There is no single ratio or measurement that can be applied to assess municipal financial health because city financial structures are complicated with many separate but interrelated functions. It is therefore necessary to measure different features of the overall financial structure and relate these aspects to the whole.

Authorities have offered varying views on which of these features should be measured. For example, the Advisory Commission on Intergovernmental Relations (ACIR) developed an index that considered changes in tax effort, local taxes divided by local income, over a period of time. As the calculated index deviates above and below 100, a municipality may be judged financially healthy, healthy but failing, poor but improving, or poor and failing.[8] Touche Ross and Company, on the other hand, suggests that maintaining good financial condition is a dynamic process that balances financial capacity against demand for goods and services.[9] Municipal bond rating companies, such as Moody's, Standard and Poor's, and Fitche, tend to view municipal condition as the relative ability and willingness to repay debt.[10] They do not

use a specific formula to measure financial condition, but intuitively rely on the assessment of a city's economic, financial, and governmental structures as compared with those of other municipalities.[11]

There are other perspectives as well. One definition of financial condition addresses the city's ability to provide services, pay employees, and fund social programs with the revenues collected from all sources. According to Joan K. Martin, when expenses outweigh revenues for reasons other than seasonal tax receipts, the municipality is living beyond its means and is in poor financial condition. This condition is determined by subtracting actual expenses from revenues for the fiscal year.[12] Financial condition has also been defined in terms of the economic base of a community. Employment levels and population changes are considered to be key factors in determining financial condition.[13] Clark and Ferguson submit that financial condition is the result of balancing fiscal policy against a changing social and economic base. Population size, median family income, and a city wealth index are compared with those of other communities to produce a picture of financial condition.[14]

The International City Management Association (ICMA) examines several definitions of financial condition.[15] Cash solvency is the ability to produce adequate revenues to pay all 30 or 60 day expenses. A second definition is budgetary solvency, or the ability to generate enough revenues to pay all budgeted appropriations without acquiring deficits. A third view looks at the

ability to pay all the costs of operation, including those costs which appear in the current budget as well as those appearing in future years. This definition is known as long-run solvency. A fourth definition of financial condition, service-level solvency, is the capacity to maintain an adequate mix and level of services as demanded by the community's citizens.

Most of these models are of limited usefulness to small towns. The definitions of financial condition are based on quantitative studies completed by highly trained professionals and are not suited for use as a management tool by small town officials because of the level of expertise required. Nor do small rural governments generally have access to the information necessary to complete a financial assessment based on these studies.

Each of the above models focuses on a particular segment of the various factors that affect municipal financial condition. These perspectives fail to address a comprehensive view of municipal financial structures because of the complex and interrelated nature of the factors that affect financial condition.

The ACIR model does not consider taxpayer satisfaction with the quantity and quality of services. The Touche Ross and the bond rating firms' definitions are inadequate because ability to repay debt is not an acceptable indicator of overall financial condition or service adequacy. A high capacity for debt repayment can be the result of high taxes coupled with inadequate services. Furthermore, financial condition based on comparing statistics

with other municipalities is suspect if the other cities are also financially unhealthy.[16] And finally, some studies have considered only one year's data, which is not a reliable base to predict longer term conditions. Analyzing multi-year trends is indispensable to determining financial condition.[17]

A fundamental problem is that these definitions came from studies conducted on large metropolitan areas. One study considers local governments small if they are under 100,000 in population.[18] Another defines small local governments as those having populations of 25,000 and under.[19] Many of the selected factors under these definitions are not applicable to Montana towns with populations of 1,000 and under due to the level of professional training of town staff and elected officials and the availability of information.

While each of the definitions of financial condition has merit, none address all the influences on municipal finances. However, ICMA provides a more comprehensive and useful definition:

> Financial condition can be broadly defined as a local government's ability to finance its services on a continuing basis. More specifically, financial condition refers to a government's ability to (1) maintain existing service levels, (2) withstand local and regional economic disruptions, and (3) meet the demands of natural growth, decline and change.[20]

This definition examines the municipal environment from a manager's viewpoint rather than from an authoritative perspective. ICMA relied on this definition to develop the Financial Trend Monitoring System (FTMS), a ratio technique, as a tool for measuring financial condition. FTMS is designed to

be used by local officials to assess the financial condition of their own municipality. This system provides an in-depth review of municipal condition by requiring the collection, manipulation, and interpretation of a wide range of information. Because of its apparent applicability to Montana towns, the FTMS is described in detail.

ICMA's Financial Trend Monitoring System

Evaluating a town's financial condition is a complex process that involves analysis of many factors. A financial trend monitoring system identifies these factors and logically arranges them to simplify measurement and analysis.

Implementation of a trend monitoring system offers several benefits. It will help: (1) identify unrecognized problems, (2) clarify emerging problems with enough lead time to permit corrective decisions, (3) introduce long-range planning considerations into the budgeting process, (4) develop an understandable financial picture that is easily communicated, and (5) provide a starting point for setting financial policy.[21] Trend monitoring does not reveal the cause of a particular problem. It does not produce a single number or index to evaluate financial condition, but it does supply "flags for identifying problems, clues about their causes, and time to take anticipatory action."[22] Moreover, financial monitoring overcomes the deficiencies of single-year analysis by calculating ratios and plotting trends for periods of five years or more.

There are many causal factors that may lead to an uncertain financial condition. The Financial Trend Monitoring System (FTMS) by ICMA utilizes 12 factors covering 36 indicators. The 12 factors are subclassified as environmental, organizational, or financial. Environmental factors create demands, provide resources, or both. Organizational factors are the policy makers' responses to the environmental factors. Financial condition is a result of these responses. Financial factors which reflect financial condition are influenced by environmental and organizational factors.[23] The assumption is that the financial factors will eventually show signs of insolvency unless the organization makes a balancing response when the environment creates more demands than resources. There are six financial factors.

Financial Factors

Revenues. Revenues determine a municipality's ability to provide services. The FTMS examines revenues for growth, diversity, flexibility, elasticity, dependability, and administration. Nine indicators are used. Revenues per capita reflect changes in revenues relative to population variations. Decreasing revenues with stable or increasing population may indicate future revenue shortfalls. Dependence on restricted revenues, one-time revenues, or intergovernmental revenues may limit the municipality's response to changing needs. Elasticity of tax revenues determines the ability of revenues to respond to inflation and changes in the economy. Property tax revenues are often the primary source of income for municipalities and should

be measured for changes due to inflation. Uncollected property taxes and revenue shortfalls reflect management deficiencies. User charge coverage indicates whether charges cover the cost of a service.[24]

Expenditures. Due to balanced budget constraints, it would appear that expenditures should grow in conjunction with revenues. However, there are many ways that expenditures can exceed revenues. Borrowing, reserve depletion, deferred funding, and using capital bond and grant funds for operations permit expenditures to overrun revenues. Four indicators are used to measure expenditures. Expenditures per capita show if costs are changing relative to population fluctuations. Fixed costs are considered as part of a municipality's financial flexibility. Employees per capita and fringe benefits influence service delivery costs.[25]

Operating position. This factor refers to the ability to maintain a balanced budget, pay bills on time, and keep adequate reserves for emergencies. Four indicators are used to measure this factor. Frequent operating deficits exhibit an imbalance between revenues and expenditures. Enterprise losses gauge service demands, cost of services, and adequacy of user charges. The fund balances indicator assesses the sufficiency of fund reserves held to meet emergency requirements for liquidity purposes. This indicator should be developed for each fund. Liquidity is a measure of short-run financial condition; cash and short-term investments must be greater than

current liabilities to avoid late payment charges or borrowing to cover operating costs.[26]

Debt structure. Borrowed money is often used to cover short-term revenue shortfalls. Continued revenue shortages prevent debt repayment, so lending institutions advance new debt to pay the original loan. This is called a "rollover," and consistent use of this practice will lead to financing operations with long-term debt. Individual long-term debts may be within the municipality's ability to repay, but all debts must be considered together in order to determine debt capacity.

Four indicators are considered in evaluating debt structure. Current liabilities or total year-end liabilities measure liquidity. A long-term debt factor assesses the ability to repay. Debt service is a factor used to measure flexibility. Overlapping debt evaluates the ability to repay all debts that have a claim on the tax base within a community.[27]

Unfunded liabilities. This factor addresses employee costs that are incurred in one year but not due until a future year. Three indicators, unfunded pension liabilities, pension assets, and accumulated employee leave liabilities, are used to measure whether funds will be available as liabilities are due. These liabilities do not have a specific due date. They may come due without notice and funds must be available to satisfy these liabilities to avoid financial strain.[28]

Capital plant condition. Streets, sidewalks, buildings, utility systems, and equipment are high cost assets that must be maintained. Failure to adequately maintain these assets results in loss of usefulness, increased costs of maintenance, and early replacement of assets. Poor maintenance can also diminish the ability to attract and retain residents and businesses. Safety, liability risks, and efficiency must also be considered when examining capital maintenance or replacement.

Three indicators may be developed to measure capital plant condition. Maintenance effort looks at annual expenditures for maintenance for each asset category. Capital outlay for operating equipment examines the adequacy of turnover of such items as service trucks, typewriters, and other equipment that needs periodic replacement. A depreciation indicator measures whether capital items are being replaced as they become obsolete. Failure to replace obsolete equipment may mean a lack of funds to purchase new equipment.[29]

Environmental Factors

Environmental factors are the external influences that are normally beyond the control of local government managers. Of the five environmental factors, community needs and resources is the only factor that has indicators. The remaining four factors of this model have no quantifiable indicators for identifying warning trends. These factors are generally beyond the control of local government, but should not be ignored. Early recognition and

understanding of the characteristics of these factors will permit municipal managers to consider positive responses.

Community needs and resources. Tax base and economic and demographic aspects of a community determine both the ability to generate revenues and the demand for services. Nine indicators have been developed to measure the influences on community needs and resources. Many of these indicators are interrelated.

Population is a key indicator. Changes in population will affect both the demand for services and the ability to pay for those services. However, due to fixed costs associated with some services, expenditure reductions are not directly connected with population loss. At the same time, a decreasing population will result in decreased municipal revenues. Median age, personal income, and numbers of poverty-households are measures of the types and levels of service demanded and potential future revenues. Young and high income residents tend to spend more, boosting the business community which, in turn, affects municipal revenues. On the other hand, retired and low income residents spend only for essentials and require more services. Property value, residential development, and vacancy rate indicators measure economic influences on the ability to generate future revenues. Property values are especially important if a municipality relies heavily on property taxes for revenue, as is the case in Montana. Employment base and business activity indicators measure the economic health of a community, but they also are related to population, personal income, and property values.[30]

External economic conditions. This factor includes trends in inflation, regional employment, wealth, and business activity. Officials must examine sensitivity of tax revenues to national and regional economic changes, reliance on intergovernmental revenues, mandated costs, and fixed costs. This information is identified by indicators discussed earlier. Examination of these indicators from a broader perspective will provide decision makers a better opportunity to react positively.

Intergovernmental constraints. Municipal governments are incorporated entities of state government. Even in the case of incorporation by charter, the state often dictates the form of charter. In addition to incorporation laws, municipal governments may be constrained by state administrative stipulations, cooperative interlocal agreements, and federal regulations. These constraints can affect local government structure, service responsibilities, and financing powers. Local officials often find that such constraints limit the flexibility of their decision making.

Natural disasters and emergencies. Local government officials must have contingency plans to avoid financial problems during catastrophes and emergencies. Emergency operation plans, financial reserves, and insurance can be examined for adequacy in case of an unpredictable disruption.

Political culture. Political culture is a subjective factor that is difficult to analyze. It addresses the attitudes of a community towards taxes and services. Citizen participation in governmental affairs affects the way officials

develop policies. Officials must be aware of these attitudes as they consider taxation or service levels.[31]

Organizational Factor

There is one organizational factor: management practices and legislative policies. This final factor has a major influence on financial condition. Municipal officials have complete control over practices and policies, but past decisions may be difficult to change as these often result in fixed costs. Examining the effects of past practices and policies will help decision makers avoid repeating errors and will increase general understanding of external influences on financial condition.

Management practices that can lead to uncertain financial condition are varied, but generally may be categorized into three groups: (1) repeated use of one-time revenues, (2) deferring current costs to the future, and (3) disregarding the full lifetime costs of a liability.

Occasional use of one-time revenues to balance the budget will not normally cause financial difficulties. However, repeated use of these sources may permit the establishment of a service that will compete for stable revenues once the one-time sources are no longer available. An example is the use of project grant monies to partially fund general government administration. Other management practices that lead to operating deficits are excessive interfund transfers, short-term borrowing, maintaining inadequate reserves, and refusing to increase taxes or service charges to cover the cost of doing business.

Deferring current costs to the future may ease cash flow difficulties in the short-run. However, extended deferment of these costs will almost certainly result in increased maintenance costs, premature replacement of expensive capital items, or a large liability, such as unused employee leave, without a compensating revenue source. Additionally, deferred maintenance costs can result in reduced efficiency for equipment and may create public safety hazards in the case of poorly maintained streets or traffic signals.

Full lifetime costs of a service or a capital item must be considered prior to its implementation or acceptance. Failure to do so will lead to commitments that cannot be sustained due to the lack of adequate funding sources. Nonsalary employee benefits can easily be overlooked if these costs are not identified and accounted for during the budgeting process. Cost of equipment acquisition is generally known, but long-term operational and maintenance costs are harder to identify. For instance, the purchase price of computer equipment hardware and software can be easily established, but costs of training, data processing supplies, and adequacy to meet changing needs must also be considered.

Legislative policies must be examined for conflicting, inconsistent, and incomplete procedures. These problems may be caused by unwritten guidelines which allow for prolonged discussion by the council and contradictory decisions and procedures. Financial policies must be established with a comprehensive perspective rather than on a case-by-case basis. Written,

extensive financial policies permit decision makers to decide what level of financial security they desire for their community.

Appropriate policies will help educate elected officials by making them more aware of their role in maintaining good financial condition. In addition, proper financial policies will contribute to public confidence, provide stability by using long-range planning considerations, and yet remain flexible enough to allow for unexpected events.[32]

Summary

This chapter has examined the concept of ratio analysis as a tool to measure financial condition. Ratios are widely used in the private sector, but are only recently becoming popular in the public sector. This may be due, in part, to the specialist's approach of many analytic systems.

This paper, however, focuses on the managerial approach, which is the development of a financial assessment system that can be used effectively by small town administrators in Montana. The Financial Trend Monitoring System developed by the International City Management Association addresses this purpose and the reader is provided with an overview of this system. The following chapter will examine this system in greater detail for its applicability to small towns in Montana.

Endnotes

[1]Theodore H. Poister and Gregory Streib, "Management Tools in Municipal Government: Trends Over the Past Decade," Public Administration Review 49, no. 3 (1989): 244.

[2]Sanford M. Groves and Maureen Godsey Valente, Evaluating Financial Condition: A Handbook for Local Government (Washington, DC: International City Management Assn., 1986), 1; and Philip Rosenberg and C. Wayne Stallings, Is Your City Heading for Financial Difficulty? A Guidebook for Small Cities and Other Governmental Units (Chicago: Municipal Finance Officers Assn., 1978), 1.

[3]Ronald C. Spurga, Balance Sheet Basics: Financial Management for Non-Financial Managers (New York: Franklin Watts, 1986), 108.

[4]C.A. Westwick, How to Use Management Ratios (New York: John Wiley & Sons, 1973), xiii.

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[7]Robert W. Johnson, Financial Management, 3rd ed. (Boston: Allyn, 1969), 73.

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[10]John L. Mikesell, Fiscal Administration: Analysis and Applications for the Public Sector (Homewood, NJ: Dorsey, 1982), 341-343.

[11]Joan K. Martin, Urban Financial Stress: Why Cities Go Broke (Boston: Auburn House, 1982), 7.

[12]Ibid., p. 1.

[13]Terry Nichols Clark and Lorna Crowley Ferguson, City Money: Political Processes, Fiscal Strain, and Retrenchment (New York: Columbia University Press, 1983), 43-44.

[14]Ibid., p. 45.

[15]Groves and Valente, p. 1.

[16]Robert W. Burchell and David Listokin, eds., "The Urban Fiscal Crisis: Fact or Fantasy?" Cities Under Stress: The Fiscal Crises of Urban America (New Brunswick, NJ: Center for Urban Policy Research, Rutgers, the State University of New Jersey, 1981), 147-148.

[17]Ibid., p. 149.

[18]Alvin D. Sokolow and Beth Walter Honadle, "How Rural Local Governments Budget: The Alternative to Executive Preparation," Public Administration Review 44, no. 5 (1984): 373.

[19]Carl D. Ekstrom, "Budgetary Practices in Smaller Units of Government," Public Budgeting and Finance 9, no. 2 (1989): 76.

[20]Groves and Valente, p. 1.

[21]Ibid., p. 3.

[22]Ibid.

[23]Ibid., p. 5.

[24]Ibid., pp. 19-45.

[25]Ibid., pp. 47-60.

[26]Ibid., pp. 61-74.

[27]Ibid., pp. 75-88.

[28]Ibid., pp. 89-97.

[29]Ibid., pp. 98-106.

[30]Ibid., pp. 107-132.

[31]Ibid., pp. 135-138.

[32]Ibid., pp. 138-139.

CHAPTER 3

SELECTION OF INDICATORS

The financial indicators discussed in the preceding chapter were chosen by the International City Management Association from a larger group identified by public finance literature and practitioners as applicable to most small governments.[1] Some of these indicators require information that may not be available to small local governments in Montana, while calculation and interpretation of other indicators require a level of technical expertise that may be beyond the abilities of the typical town clerk. In addition, decision makers may feel inundated with too much information when faced with so many indicators. Therefore, a smaller number of indicators must be selected to ensure successful implementation of an introductory financial trend monitoring system.

A suggested framework for selecting the initial indicators will be developed in this chapter. Such a system must be uncomplicated and economical enough to encourage implementation, but it also must offer a broad, yet useful, picture of financial condition.[2] The selected indicators may also require some adjustment to fit the typical small Montana town.

Due to limited staff and financial resources, indicators cannot require excessive amounts of time or money to research, calculate, and present. Nevertheless, some time needs to be allotted to implement the system. Initially, data from at least five years should be compiled for each indicator to include at least one national economic cycle and to provide enough perspective to reveal emerging trends.[3] Annual updates of an ongoing system will require much less time due to the increase in staff experience and because only the past year's data must be compiled. Therefore, to develop a usable system, a suggested set of criteria to identify and select the initial indicators will be outlined.

Selection Criteria

The ICMA indicators are listed in Appendix A. Town officials should develop as many indicators from this list as they can comfortably manage. It is suggested that at least one indicator be developed for each of the seven factors as they apply to the town's situation. More indicators can be developed as officials gain experience with the trend monitoring system.

It is difficult, if not impossible, to propose an initial set of indicators that will apply to all towns. Local officials need to review all the indicators and decide for themselves which indicators to develop. There are four criteria that may be considered to ease the selection process.

The first criterion is that the data used to calculate the indicators must be readily available. Town clerks do not have time to conduct extensive research, particularly when locating information for the previous five years. For the purposes of this study, in-house sources such as the Annual Financial Report (AFR) are considered to be sources of readily available financial information. Other information, such as inflation rates, population, per capita income, or median age, may be available from the state government or the decennial census.

Indicators must also be easy to calculate and communicate. Small town clerks typically do not have the degree of technical expertise required to manipulate sophisticated statistical or financial data.[4] Nor do they usually have enough mastery of trend monitoring theory to properly interpret and convey to others the meaning of an indicator trendline. Moreover, elected officials generally do not have the level of training that would permit them to comprehend complex financial measurements. Uncomplicated procedures require less explanation and are more readily accepted. Therefore, the initial indicators must be easily understood by clerks, town officials, and other concerned citizens. This is a rather subjective factor that town administrators must assess for their own situation.

Another criterion used to select appropriate indicators is their scope. Some indicators for each factor are more general in nature than others. For instance, revenues per capita measures all revenues, while one-time revenues

addresses a narrower focus. A small number of indicators with a broad perspective will provide a better picture of financial condition than an equal number that concentrate on narrow factors. Some indicators, such as pension assets, are not controlled by the town and can be eliminated from further consideration. Other indicators are not appropriate due to their limited role (e.g., the number of employees per capita). Small towns have few employees and time spent on this indicator would provide no additional benefit. Some indicators provide slightly different perspectives, such as revenues per capita and property tax revenues, but would result in similar policy decisions. In sum, a few broad indicators will present a range of results that can be easily recognized and acted upon by town officials.

A final criterion is that the selected indicators must present information that officials can use to redirect policies. All of the 36 indicators can be used for this purpose, but the potential for policy changes is more apparent with certain indicators than with others. For instance, deteriorating property tax revenues will point to necessary changes in revenue diversification or expenditure policies, but a negative trend in fixed costs may not suggest a clear policy direction. Indicators, such as business activity, may indicate a problem that small town officials cannot control, but the information may still be useful. As officials gain experience with the system, they will begin to recognize conceivable policy changes resulting from the development of supplementary indicators.

Officials and staff should consider all of the above criteria as they choose the initial indicators for implementation. In summary, indicators should be selected in response to the following questions:

(1) Is the necessary data readily available?

(2) Is the indicator easy to understand?

(3) Is the indicator general in nature?

(4) Can officials readily use the information to redirect financial policy?

Selected Indicators

The focus of this study is a practical application of an introductory trend monitoring system using actual data collected from a small Montana town. The town, Ekalaka, is characterized in Chapter 4. Four indicators were chosen from the list of ICMA indicators by applying the selection criteria to Ekalaka's situation: (1) revenues per capita, (2) expenditures per capita, (3) fund balance, and (4) property tax revenues. Focusing on these selected indicators, it will be demonstrated how they meet the criteria.

Revenues per Capita

This indicator meets all four of the criteria. Data on revenues are available in the Annual Financial Report (AFR), while population figures are found in the statistical section of the AFR. Current population estimates may be obtained from the Montana Department of Commerce as well.

It is important to note that mid-decade census information, however, is generally based on the previous decennial census data, to which statistical procedures are applied. This information may be only a rough estimation of the correct figure and, as such, it may not provide the level of accuracy appropriate for measuring financial trends, especially for small towns.[5] Since many services are delivered on a per household basis, the population value may be replaced with the number of utility hookups.[6] These data are available in the statistical section of the AFR as the number of water consumers. The problem of using estimated population is further discussed in Chapter 4.

Revenues per capita must also be adjusted for the effects of inflation. Data on the consumer price index are available from various sources including the Montana Department of Commerce.

Revenues per capita is easy to compile, calculate, and communicate to others. The indicator measures net operating revenues that are available for general government operations. Inexperienced people can understand that revenues limit a town's capacity to provide services and that a negative trend in this indicator means that the town may be unable to maintain existing service levels.

This measure offers the broadest perspective of the nine revenue indicators. Intergovernmental and one-time revenue indicators are important, but they have a more limited scope than revenues per capita. The revenue

shortfalls indicator can be foregone because shortfalls of small towns are easily monitored by examining budgetary sections of their AFR.

Revenues per capita can assist policy changes. Policy makers can correct a negative trend in this indicator by finding new and stable sources of revenues or ways to save money. This indicator also encourages the use of financial projection techniques to guide financial policy.

Expenditures per Capita

Expenditures per capita also satisfies the four criteria. The information needed to calculate expenditures is available in the AFR. Population and inflation data for expenditures should be the same as for revenues.

Calculation of this indicator requires simple math. Presentation and communication are also relatively easy. Increasing per capita expenditures indicate that the cost of service provision may be exceeding the community's ability to pay. If expenditures are growing faster than the effects of inflation or new services, productivity may be declining or existing service levels increasing.

Expenditures per capita surveys a broader scope than the other three indicators of the expenditure factor. Fixed costs, for example, do not include those expenditures that are variable from year-to-year.

This indicator will produce information that can help decision makers adjust policy. Negative trends may be changed by increasing efficiency, cutting costs, or reducing services. Increased costs due to mandated costs

and services can possibly be offset by shifting some expenditures to other levels of government.

Fund Balance

The fund balance indicator meets all four criteria. Data for this indicator are available in the AFR. The denominator for this ratio is net operating revenues, which is the same figure calculated for the revenues per capita indicator.

This indicator is easy to understand and requires simple arithmetic to calculate. Fund balances are reserves which provide for liquidity during the months from July to November when the second half of tax revenues is received by the town.[7]

This indicator provides a broad perspective, as it should be developed for the general fund, each special revenue fund, debt service fund, and capital projects fund.

The fund balance indicator provides information that will assist officials in redirecting policy. Policy makers can counteract a long-term negative trend by setting policy to maintain the proper amount of reserves. Excessive interfund transfers may be a warning sign of budgetary problems which result in insufficient reserves. Abnormally high fund balances may be an indication of exorbitant taxation or deteriorating service levels.

Property Tax Revenues

This indicator also meets all four criteria. The indicator measures revenues from property tax sources in constant dollar amounts. Property tax data are available in the AFR. Information on inflation is the same as for the revenues per capita indicator.

The property tax revenues indicator is easy to calculate and communicate. It addresses the major source of revenue for Montana towns and is, therefore, more generally applicable than restricted revenues or one-time revenues.

This indicator can help municipal officials determine financial policies by illustrating trends and fluctuations in their town's major source of revenue.

Benefits of the Indicators

Implementation of the indicators will help town officials better understand the forces that influence their local government's financial condition and the problems associated with measuring financial condition. The indicators accomplish this by presenting information in a form that is readily understood by all persons involved. This allows for improved municipal management because everyone is "talking the same language." The indicators reduce accounting data to a common base with which everyone can identify.

In addition, trend monitoring establishes a starting point for further analysis. If a problem is indicated, officials need to determine the causes of

the problem and to develop and implement solutions. Finally, long-range measurements focus on the general trends, not on what a single year's figure should be. Decision makers can concentrate on addressing the comprehensive financial picture rather than engaging in crisis management or piecemeal financial policies. Also, each indicator provides specific benefits.

Revenues and expenditures can be readily compared. Due to balanced budget constraints, revenues should be equal to expenditures. If expenditures are growing faster or are consistently larger than revenues, the town is invading its cash position and will eventually be unable to provide adequate services. The indicators for revenues and expenditures have a common base which facilitates measurement and comparison.

Fund balances should remain relatively stable from year to year. Long-term decreases in fund balances signal potential future problems. This indicator can also be a starting point for determining the adequacy of each fund balance.

The property tax revenues indicator provides a means for assessing changes in this revenue source. If a problem is identified, officials can work to stabilize this source, diversify to obtain revenue from other sources, or reduce expenditures.

Additional Indicator for Consideration

One additional indicator addresses an important area of municipal financial condition and should be considered by other town officials. This indicator is debt service. Debt service was not selected for this study, because Ekalaka did not incur any general obligation debt during the time frame of the study. If a town has debt, this indicator meets the selection criteria because data would be available in the AFR and it is easy to calculate and communicate. It addresses a significant area of a town's financial picture and it can help officials redirect policy.

The debt service indicator allows a long-term perspective on the use of borrowed funds. A warning trend for this indicator is an increasing amount of debt service. Increasing debt service can mean poor cash management or an expanding reliance on debt to finance government activities. A healthy government should be able to pay its own way on a continuing basis.

Town officials should consider the legal constraints that apply, as Montana law limits the amount of general obligation bond indebtedness to 28 percent of assessed value, except when the debt is incurred for sewer or water systems. In that case, the debt is limited to 55 percent of assessed valuation over and above the first 28 percent.[8]

The credit industry also offers guidelines for several warning trends that local officials may wish to consider:

(1) Net debt greater than 10 percent of assessed valuation.

(2) Net debt greater than $1,200 per capita.

(3) Twenty percent increase in one year of debt as a percent of assessed valuation.

(4) Fifty percent increase in four years of debt as a percent of assessed valuation.

(5) Net debt per capita exceeding 15 percent of personal income per capita.

(6) Net debt greater than 90 percent allowable by state law.[9]

Summary

Implementing a trend monitoring system will be more likely to succeed if a small number of indicators is chosen. Four of the ICMA indicators meet the selection criteria. The information required for each indicator is readily available and all are easy to calculate and interpret. The selected indicators are broad in scope, providing a general overview of the factors that influence financial condition. In addition, policy makers can use the information resulting from the indicators to redirect policy and influence the town's financial condition. One other indicator, debt service, does not apply to Ekalaka, but is reviewed because of its potential impact on municipal financial condition.

Chapter 4 demonstrates how these indicators can be readily adapted to towns in Montana without compromising their usefulness.

Endnotes

[1]Sanford M. Groves and Maureen Godsey Valente, Evaluating Financial Condition: A Handbook for Local Government (Washington, DC: International City Management Assn., 1986), 7.

[2]Jack Whitmar, Iowa State University Extension Service, telephone interview with author, 12 April 1990. Iowa reduced their system from 51 to 8 indicators to encourage implementation.

[3]Groves and Valente, p. 14.

[4]Whitmar.

[5]Richard J. Reeder, Nonmetropolitan Fiscal Indicators: A Review of the Literature (Washington, DC: U.S. Department of Agriculture, Economic Research Service, 1984), 17.

[6]Groves and Valente, p. 19.

[7]Montana Code Annotated, 7-7-4230, 1989.

[8]Montana Code Annotated, 7-7-4201 and 7-7-4202, 1989; and Don Dooley, Local Government Services, Montana Department of Commerce, telephone interview with author, 23 August 1990. The two percentages may be added together for a total general obligation debt of 83 percent of assessed valuation.

[9]Groves and Valente, p. 81.

CHAPTER 4

CUSTOMIZATION AND APPLICATION OF THE INDICATORS

Chapter 3 identified four indicators that can be used to measure the financial condition of small municipalities. These can be further customized to adapt them to Montana towns and to encourage their successful use in an introductory financial trend monitoring system. This chapter illustrates the process of customization and how these indicators may be applied to a Montana town.

Customizing the Indicators

The ICMA indicators were devised for use by municipalities that generally have trained staff, so they are not totally appropriate for towns with populations under 1,000. For this reason, they will be modified to consider available data sources and the level of expertise typical to Montana towns.

Revenues and Expenditures

The revenue per capita indicator advanced by ICMA uses net operating revenues as the numerator of the ratio. Determining this figure requires

several steps, but these can be eliminated by substituting a total revenues figure for net operating revenues. The difference between total and net revenues is the amount of restricted revenues. Because the state mandates that these funds are to be expended for certain purposes, they are not considered available for general government operations. However, the amount of restricted funds for towns is relatively small.[1] This change will have little effect on the outcome of the indicator, while it will require fewer steps in the calculations. For the same reason, a total value can be used in the expenditure indicator. Moreover, using total figures for both indicators will also assist in their comparison.

Both the revenue and expenditure ratios will be adjusted for inflation in accordance with the ICMA indicators. However, the third component of these two ratios, population, will be modified.

The population figures that are available from the Montana Department of Commerce are based on the U.S. decennial census and are modified by a formula utilizing the most recent census data and other factors expected to affect the current year's population. Even though the federal census is conducted every 10 years, the information is not available for some time afterward, allowing for continued population variations. This estimated figure may not accurately reflect the true population of a small town.[2] This is important because while an error of 50 people, for example, will have little effect on a city of 50,000, it represents a substantial percentage of the total

population of a town of 500. To circumvent this possible problem, another value, the number of current utility hookups, can be substituted for population.

Utility hookup data are reported as the number of water consumers in the statistical section of the AFR, a ready source that eases collection of historical data. This information is likely to be more accurate and up-to-date than census population data, because towns maintain hookup data for utility billing purposes, while population is an estimate based on a past census.

Even beyond the issue of accuracy, a strong argument can be made in favor of using the number of utility hookups in place of population. Property tax revenues are a major source of municipal revenues. The property tax is assessed according to property ownership, not the number of people living on the property. Municipal services such as utilities, street maintenance, and street lighting are provided to property units rather than actual individuals. Since each property unit utilizes municipal utility services, the number of these hookups more readily corresponds with property tax revenues and the demand for services. Changes in the number of hookups will quickly reflect population fluctuations, so the intent of the indicator is not fundamentally changed.

Another point is that most municipal services are public goods that are shared by the entire population, but population is a total figure that does not consider various demographic factors, such as age or personal income. For

example, a young population will generally demand more recreational services, while an older population will favor public safety. A high income population may desire more cultural amenities than a low income population. A value based on property may not fully account for expenditures on library and recreational services, but neither does population. On the other hand, expenditures for utilities and street services are closely connected to property.

Utility hookup numbers are an accessible and valid measure of both the funding and costs of service delivery and will be used as the denominator for both ratios. These two ratios will become: (1) total revenues, adjusted for inflation, divided by the number of utility consumers; and (2) total expenditures, adjusted for inflation, divided by the number of utility consumers.

Fund Balance

This indicator will be a measure of the fund balances available at the beginning of a fiscal year. The fund balance indicator can be customized by incorporating the general fund, special revenue funds, debt service, and capital project fund balances into a single indicator. This action will require less effort, as there can be many funds. As used in this study, the modified indicator is an aggregate beginning fund balance as a percentage of total revenues.

Measuring all funds together can mask one or more funds that have a wide variation in fund balance. Care must be exercised so that problems in any one fund are not covered up. If a problem is suspected in a fund, then

separate fund balance indicators should also be developed for the problem funds.

Property Tax

The property tax indicator relates a single figure, that of total property tax revenues, for each year. This indicator can be converted to a ratio by comparing property tax revenues to total revenues. This conversion will make the indicator easier to understand in relation to the town's broad financial picture. This indicator, as used in this study, is property tax as a percentage of total revenues, and is labeled "property tax reliance."

Effects of Modifications

These modifications to the indicators will not significantly alter the interpretation of the results. An advantage of these changes is the reduction of both time and effort required to collect the data. Because some data are used in more than one indicator, it is only necessary to gather six data components for each year rather than ten components. Once an indicator is defined, however, it must not be changed. Any changes in indicator definitions during application will render between-year comparisons worthless unless all previous calculations are also changed. For demonstration purposes, these customized indicators will be applied using actual figures from a Montana town.

Source of Data

The town that will serve as a data source to illustrate the use of these indicators is Ekalaka, Montana. Ekalaka is located in eastern Montana, 120 miles southeast of Miles City. Ekalaka is the county seat of Carter County and is home to an estimated 600 people. The economy of the town is supported by the surrounding agricultural community, local governmental and health care services, seasonal hunting, and a small, intermittent timber operation. There are no economic influences from coal or oil, and the commercial businesses are primarily service establishments. The Town of Ekalaka provides the basic services of water, sewer, streets, and police protection. Other services include a library, swimming pool and parks, and street lighting.

Ekalaka has a mayor-council form of government and a city clerk who has held the position for about 13 years and receives strong support from the mayor and council.[3] Ekalaka may be unique among Montana towns in that the clerk has made an effort to professionalize the position. She has taken advantage of all available training and has served as an officer in both the state and national clerks' associations, as well as other nonmunicipal boards. This experience is reflected in progressive administration of the town's business.

Ekalaka's financial condition will be measured by applying the modified indicators to data from the town's sources. Trends will be developed and interpreted for each indicator.

Trend Monitoring Application

Locating the Data

The source of the dollar amounts to be used in the calculation of the financial indicators is the state mandated section entitled "All Governmental Funds: Combined Statement of Revenues, Expenditures, and Changes in Fund Balance" included in each year's Annual Financial Report (AFR). The revenue indicator measures those funds that are available for general government operations plus those that have restricted purposes. To arrive at a total revenues figure, simply subtract expendable trust revenues from current year total revenues. Fiduciary funds are not included in any calculations; these funds are generally small and not widely applicable.

The measure of total revenues includes available funds as well as those that may be restricted to nonoperating uses. Some restricted revenues may be held in a special revenue fund, but will be transferred to another fund prior to their expenditure. Total revenues are used to avoid the research and calculations necessary to identify and exclude restricted funds.

Similar to determining total revenues, total expenditures are calculated by subtracting expendable trust total expenditures from the current year total expenditures.

The numerator of the fund balance indicator is calculated by subtracting the July 1 expendable trust fund balance from the current year total fund balance. The numerator of the property tax reliance indicator is the total amount of property taxes collected for all funds.

Data on the consumer price index (CPI) are available from various sources. The Montana Department of Commerce uses the *CPI Detailed Report* published by the U.S. Bureau of Labor Statistics (BLS).[4] The BLS also publishes the *Producer Price Index,* which may be more relevant to Montana municipalities than the *CPI Detailed Report.* Montana State University's Economics Department also has several sources of CPI information.[5]

Regardless of the source of CPI data, consistent use of the same source is imperative. Various CPI reports measure different products or "market baskets" and use different base years. However, base years may be adjusted within a CPI table to make the resulting information easier to understand. This process is described in Appendix B.

For this study, CPI data were taken from the *Economic Report of the President, February 1990.*[6] Consumer price indexes are computed using specific years as the base; i.e., CPI for that year is equal to 100 and the following years are measured from that base. The index must be changed to a decimal by dividing by 100. For example, an index of 107.3 is divided by 100 to arrive at the decimal of 1.073. This decimal is the actual number used in the indicator calculations.

Annual information on utility hookups is located in the statistical section of the Annual Financial Report as the number of water consumers.

Arraying the Data

With the necessary information and their locations identified, the next step is to develop a worksheet that will array the data in a logical format, facilitating data collection, calculation, and comprehension. Table 1 is a matrix format used in this study, presenting Ekalaka's data.

The description column at the left side of the worksheet lists the indicator name as well as each of its components in order of calculation. Data for each indicator component of each fiscal year can be entered in the appropriate block as it is collected. For simplicity, the financial amounts have been rounded to the nearest whole dollar.

The indicators can be determined easily using either a calculator or a computer. Within each fiscal year column, the first line is divided by each following line and the result is entered on the bottom line. For example, the first indicator calculations are: total revenues divided by the CPI decimal, divided again by consumers, equals revenues per consumer. A formula using line numbers is shown beneath each indicator matrix.

This format of the worksheet is easy to understand. It logically arrays the indicator name, indicator components, data entries, and results of the calculations for each of the four selected indicators for each year of the study.

Table 1. Worksheet presenting Ekalaka's data.

	Revenues per Consumer	FISCAL YEAR				
		1984-85	1985-86	1986-87	1987-88	1988-89
1	Total Revenues	122909	103771	85317	105805	91397
2	Consumer Price Index	1.000	1.034	1.078	1.131	1.187
3	Consumers	333	335	348	341	338
4	Revenues/Consumer	369.10	299.58	227.42	274.34	227.81
FORMULA: [(1 ÷ 2) ÷ 3 = 4]						

	Expenditures per Consumer	FISCAL YEAR				
		1984-85	1985-86	1986-87	1987-88	1988-89
1	Total Expenditures	97716	102478	96088	92366	90335
2	Consumer Price Index	1.000	1.034	1.078	1.131	1.187
3	Consumers	333	335	348	341	338
4	Expenditures/Consumer	293.44	295.85	256.14	239.49	225.16
FORMULA: [(1 ÷ 2) ÷ 3 = 4]						

	Fund Balance	FISCAL YEAR				
		1984-85	1985-86	1986-87	1987-88	1988-89
1	Beginning Fund Balance	24937	52705	56792	49054	57494
2	Total Revenues	122909	103771	85317	105805	91397
3	Fund Balance	0.203	0.508	0.666	0.464	0.629
FORMULA: [1 ÷ 2 = 3]						

	Property Tax Reliance	FISCAL YEAR				
		1984-85	1985-86	1986-87	1987-88	1988-89
1	Property Tax	41200	37924	34478	39235	39223
2	Total Revenues	122909	103771	85317	105805	91397
3	Property Tax Reliance	0.335	0.365	0.404	0.371	0.429
FORMULA: [1 ÷ 2 = 3]						

This format is also useful for reference during the result analysis stage. It contains all the data for calculating the indicators and can be used for identifying values for single components.

Plotting the Data

The next step requires plotting the data. Special attention to the scale will result in an easily readable graph. Narrow limits on a scale will cause sharp peaks and valleys that tend to distort the data. The trendline should also be centered on the graph, when possible. Dates should be arrayed on the *X*-axis and dollars and percentages on the *Y*-axis. In addition, the graph must be fully labeled so that the focus is on the trendline, rather than on how to read the graph itself. Figure 1 displays the revenues per consumer indicator.

The warning trend for the revenues indicator is a decreasing amount of revenues per consumer.[7] A trendline indicating good financial condition would show stable to increasing revenues per consumer.

As can be readily seen, the trendline for Ekalaka is sloping downward to the right, or decreasing. This is a sign of potential financial problems for the town. This graphic illustration quickly conveys the message that Ekalaka's revenues per consumer have significantly decreased over the period. The trendline identifies a potential problem on which policy makers can focus their attention.

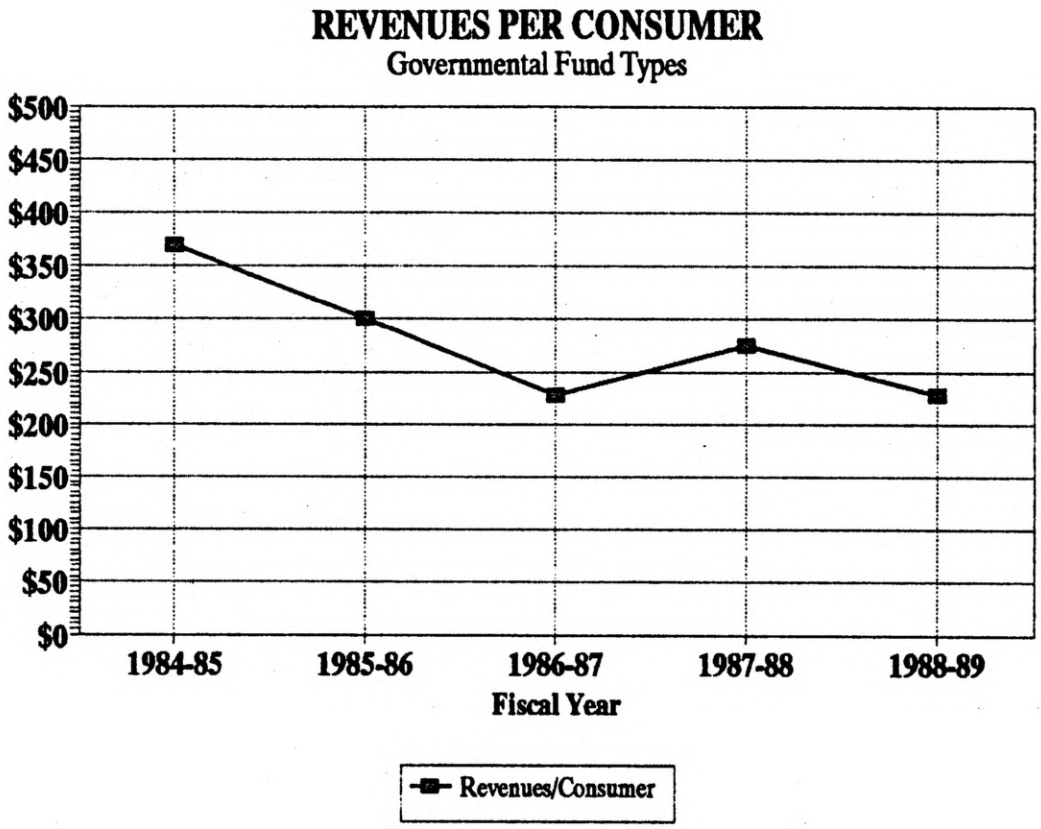


Figure 1. Ekalaka's revenues per consumer.

In like manner, the expenditures per consumer trend is shown in Figure 2. The warning trend for this indicator is increasing expenditures per consumer.[8] Ekalaka's trendline shows a decreasing trend. This may be an indication of good financial condition if the town is increasing its service delivery efficiency, although decreasing expenditures may also be the result of curtailed services.

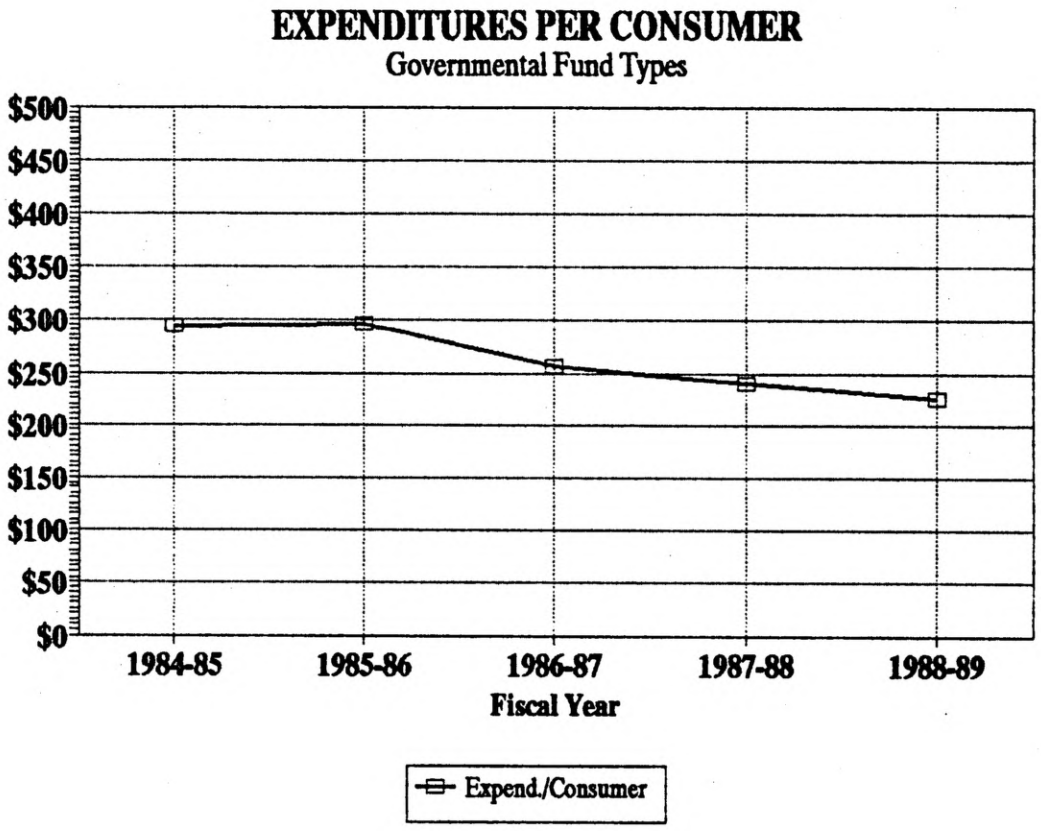


Figure 2. Ekalaka's expenditures per consumer.

For presentation, the revenue and expenditure indicators need to be displayed on separate graphs, so the focus is on the slope of the trendline. A third presentation can then be made by plotting these two trends on the same graph to demonstrate their relationship to each other. Figure 3 displays the two trends together. The revenue and expenditure yearly positions on the graph can be readily compared. It will be noticed that the two trendlines are converging, which may be a signal of potential problems.

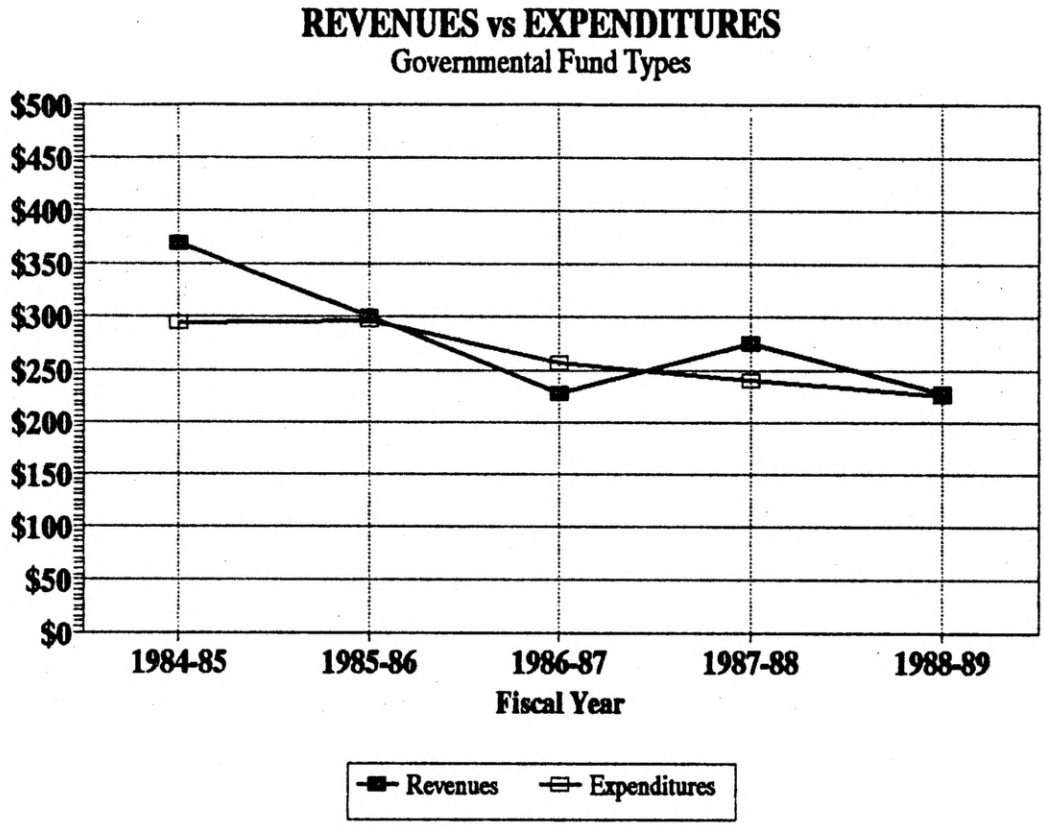


Figure 3. Comparison of Ekalaka's revenues and expenditures.

The fund balance indicator is shown in Figure 4. The warning trend for this indicator is a decreasing fund balance as a percentage of total revenues.[9] Ekalaka's long-term fund balance trendline is increasing, a sign of good financial condition.

The current fiscal year's beginning fund balance is the amount of funds available on July 1, while revenue and expenditure amounts are the result of fiscal year operations and are measured at the end of the fiscal year. For this reason, there appears to be a lag in the correlation between fund balance and revenues and expenditures.

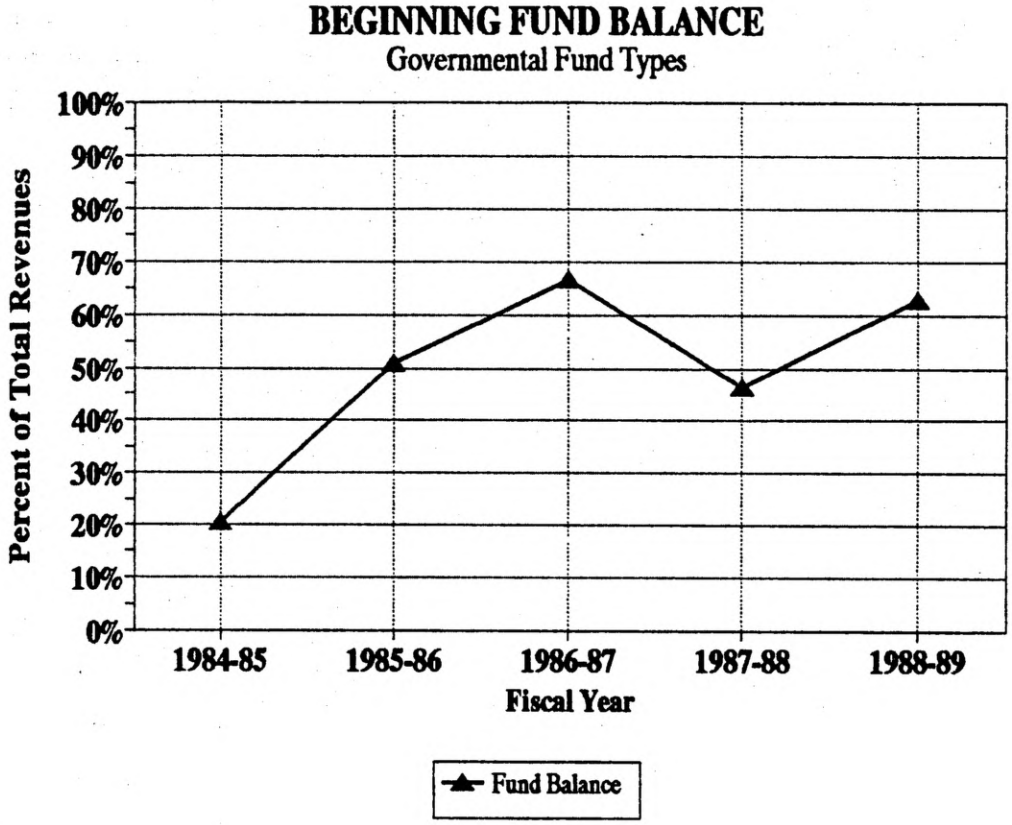


Figure 4. Ekalaka's fund balance.

The final indicator, property tax reliance, is shown in Figure 5. A warning trend is an increasing property tax as a percentage of total revenues. Ekalaka's trendline shows an increasing reliance on property tax as a source of revenue. A trend indicating good financial condition would be stable to decreasing.

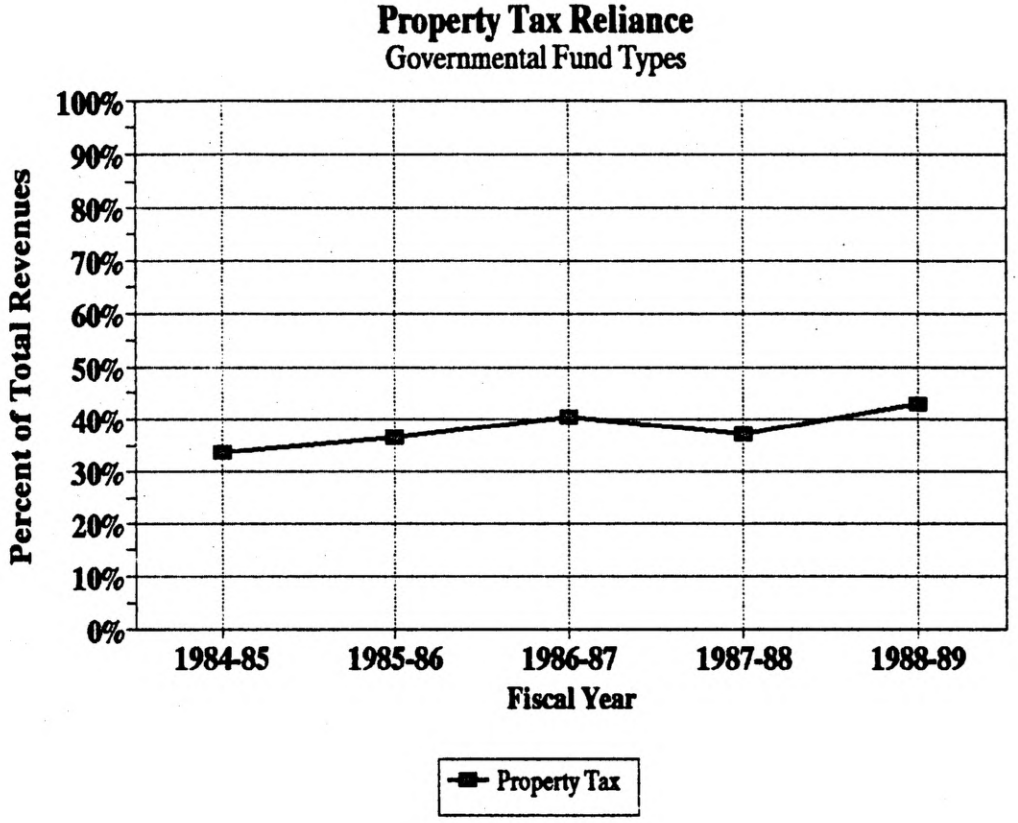


Figure 5. Ekalaka's property tax reliance.

Conclusions

The indicator trends for Ekalaka show a declining financial condition. Revenues are not only decreasing, but they are irregular. Consumer hookups peaked in 1987 and inflation is having an impact, but the data worksheet shows that total revenues are falling. While total revenues are declining, reliance on the property tax as a source of revenue is increasing. Further analysis is necessary to determine which of the other revenue sources are contributing less to total revenues. If current revenue sources cannot be

stabilized or increased, new sources of revenue must be found to fund the current level of expenditures.

The expenditure trend is decreasing as well, but not in relation to revenues, as shown in Figure 3. Ekalaka officials may wish to consider alternatives that will increase service delivery efficiency or eliminate some services. Expenditures exceeded revenues in 1987, resulting in a decreased fund balance for that year. This can, in part, be attributed to the capital expenditures for that year.

The fund balance trendline is increasing, which indicates improving liquidity. Adequate liquidity is necessary to avoid incurring short-term debt or defaulting on obligations. The town is financially healthy in this area.

Ekalaka's reliance on property tax as a source of revenue is increasing. Local officials should consider ways of diversifying, finding other stable sources of revenue.

The fact that Ekalaka has not incurred general obligation debt during the time span of this analysis is an indication of good financial condition because costs are not being shifted to the future.

Ekalaka's overall financial condition can be described as fair, but with pressing problems. The decreasing revenues trendline implies that future expenditures will have to be substantially reduced to avoid debt financing or default unless revenues can be increased. This is particularly evident (as seen in Figure 3), as the revenues and expenditure trendlines converge.

The increasing reliance on property tax is a signal that other sources are decreasing. This reliance may become a problem as statutory ceilings are reached or if taxable valuation is decreasing.

These indicator trends demonstrate that it is possible to measure the financial condition of Montana towns. Data on financial condition are readily available and easy to understand when presented in a suitable format. This information can guide local officials to address policies in the areas that have indicated problems. When faced with a negative trend, officials need to determine why the problem is occurring and if it is important. They can then develop alternatives for correcting the problem, guiding their town to good financial condition.

Summary

The selected ICMA indicators can be customized to increase their simplicity and accuracy and to encourage their implementation. Total values are used in place of net values, reducing the necessary calculations. Population is an estimated value, so the more accurate number of utility consumers is used in its place.

Data for the indicators are found in the Annual Financial Reports and information on the consumer price index is available from the Department of Commerce and other sources. The data are arrayed in a matrix format that facilitates collection and calculation of the values and understanding of the

process. Each indicator is plotted on a graph to exhibit its long-term trend. The indicator trends show Ekalaka's financial condition as fair, but with potential revenue and property tax reliance problems. Development of specific financial policy to improve Ekalaka's financial condition is beyond the scope of this study and will be left to that town's officials.

Endnotes

[1]Alyce Kuehn, Town Clerk, Ekalaka, Montana, interviews with author, 11 June 1990, and 10 August 1990.

[2]Ibid.

[3]Ibid.

[4]Patricia Roberts, Montana Department of Commerce, telephone interview with author, 6 July 1990.

[5]Two of the more relevant sources of CPI data available through the Montana State University Economics Department are Survey of Current Business and Economic Report of the President. The latter is used as a source for this analysis.

[6]U.S. Department of Commerce, Economic Report of the President, February 1990 (Washington, DC: U.S. Government Printing Office, 1990), 300. (Specifically, refer to Table C-4, Fixed Weighted Price Indexes for Gross National Product, 1982 Weights, State and Local Government Purchase of Goods and Services.)

[7]Sanford M. Groves and Maureen Godsey Valente, Evaluating Financial Condition: A Handbook for Local Government (Washington, DC: International City Management Assn., 1986), 19.

[8]Ibid., p. 48.

[9]Ibid., p. 69.

CHAPTER 5

SUMMARY AND CONCLUSIONS

There are many factors that influence the financial condition of small towns. Federal and state policies, national and regional economies, as well as local politics, provide a never-ending stream of problems for managers to consider and solve. Managers of small towns need to engage in long-range planning techniques to address these problems so that they may continue to provide adequate services at a reasonable cost.

Most of the popular management techniques in use today are beyond the capabilities of small towns. Because towns generally cannot afford professional analysts, financial analysis will reside with available town staff. Town clerks, however, have little time for such activities and they are not trained in the specifics of financial analysis. Furthermore, elected officials may not comprehend the analysis results, nor would they be able to use the results to guide their town toward good financial condition.

One management technique used by private industry is ratio analysis. This is a method that compares one financial factor with another using simple mathematical procedures. Ratio analysis has been used effectively in the private sector for nearly 100 years. It has evolved to the point where the

various ratios are annually published as "industry standards" that private entrepreneurs can use as a model of performance for their own company.

Financial trend monitoring is a public application of ratio analysis, and can be tailored to meet the needs and constraints of small towns. Financial trend monitoring differs from ratio analysis in that trend monitoring focuses on the change in a ratio over a long period of time, while ratio analysis considers the value of a ratio calculated from a single year's data. While ratio analysis has resulted in numerical standards in the private sector, trend monitoring establishes general trends that can be analyzed to measure municipal financial health. An approved standard has yet to be developed for municipal governments.

The International City Management Association (ICMA) has developed a Financial Trend Monitoring System (FTMS) that is particularly useful for small towns. This procedure develops 36 indicators to measure a broad variety of factors that influence municipal financial condition. Because this system was developed for municipalities that have populations of 25,000 and over, some of the indicators require data that are not readily available for towns under 1,000 in population. However, this fact does not preclude the use of FTMS for smaller communities.

Town managers may select a small number of key indicators for which data are available, as an introductory system. As they become accustomed to the indicators and as their need for information grows, they can add other

indicators to their personalized system. Where data are not currently available, town staff can begin now to collect that information for future development of indicators.

The indicators can also be modified to ease their implementation. Total values for revenues and expenditures are used instead of net values to simplify the required calculations. Another modification deals with the per capita portion of the revenue and expenditure indicators. Available population numbers are estimates based on the decennial census and may not be an accurate reflection of the true size of a community. The small size of towns demands accuracy for this component. To circumvent this problem, the number of utility hookups is used instead of population estimates. Utility hookups information is readily available since it is reported in the town's Annual Financial Report as the number of water consumers. This information is accurate since it is used in the town's utility billing process.

As a demonstration, the modified indicators were applied to information gained from the small southeastern Montana town of Ekalaka. Financial information was arrayed in a matrix format that eases both collection and calculation of data spanning a five-year period. The results of the calculations were plotted on a graph to show the long-term trends of each indicator.

The graphic displays provide a visual assessment of the factors affecting Ekalaka's financial condition. The fund balance trendline shows improving liquidity and the lack of debt service indicates that the town is able to pay its

own way on a continuing basis. On the other hand, revenues per consumer have decreased substantially over the five years in the study. Expenditures per consumer have also decreased, but not at the same rate as revenues. If this problem is not addressed, Ekalaka will soon be unable to provide the current level of services. The property tax reliance indicator shows that other sources of revenue are unstable and diversification of revenue sources should be considered.

Overall, a financial trend monitoring system is a suitable management tool that can be effectively used by Montana town managers. The system does not explain why a problem is occurring, nor does it provide an index to measure financial condition. It does provide signals of potential problems, clues about their causes, and time for managers to take corrective action.

Implications for Future Research

Several questions remain unanswered and could be examined in future studies. This study developed four indicators for use by towns under 1,000 in population. Other indicators may be developed and customized for use if information is determined to be generally available. Sources of information, other than the Annual Financial Report, could be considered.

The fund balance indicator shows general trends, but it does not address the question of adequacy or what level of fund balance is necessary for statutory compliance.

Infrastructure maintenance was not addressed in this study, because the Town of Ekalaka does not make regular expenditures for capital items. This may mean that Ekalaka's infrastructure is deteriorating or that small towns repair capital items rather than replace them.

One final point of interest is the enterprise funds. Sewer, water, and sometimes garbage are a significant purpose for a town's existence, but the ICMA indicators do not address the area of retained earnings. It may be possible to develop indicators relating service charges and levels of retained earnings.

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APPENDICES

APPENDIX A

ICMA INDICATORS

ICMA INDICATORS

Revenues:

(1) Revenues per Capita
(2) Restricted Revenues
(3) Intergovernmental Revenues
(4) Elastic Tax Revenues
(5) One-Time Revenues
(6) Property Tax Revenues
(7) Uncollected Property Taxes
(8) User Charge Coverage
(9) Revenue Shortfalls

Expenditures:

(10) Expenditures per Capita
(11) Employees per Capita
(12) Fixed Costs
(13) Fringe Benefits

Operating Position:

(14) Operating Deficits
(15) Enterprise Losses
(16) Fund Balances
(17) Liquidity

Debt Structure:

(18) Current Liabilities
(19) Long-Term Debt
(20) Debt Service
(21) Overlapping Debt

Unfunded Liabilities:

(22) Unfunded Pension Costs
(23) Pension Assets
(24) Accumulated Employee Leave

Capital Plant Condition:

(25) Maintenance Effort
(26) Capital Outlay
(27) Depreciation

Community Needs and Resources:

(28) Population
(29) Median Age
(30) Personal Income per Capita
(31) Poverty Households
(32) Property Value
(33) Residential Development
(34) Vacancy Rates
(35) Employment Base
(36) Business Activity

APPENDIX B

CONVERTING BASE YEARS WITHIN A CPI TABLE

Table 2. Converting base years within a CPI table.

Year	1982-Based Index	Calculation	Result (1985-Based Index)
1985	115.3	Set Equal to 100	100.0
1986	119.2	(100.0 x 119.2) ÷ 115.3	103.4
1987	124.3	(103.4 x 124.3) ÷ 119.2	107.8
1988	130.4	(107.8 x 130.4) ÷ 124.3	113.1
1989	136.9	(113.1 x 136.9) ÷ 130.4	118.7

To convert an index from any base to one that is more current, the following calculations are necessary:

(1) Set the chosen year (1985 in the example) equal to 100.

(2) Calculate the index numbers for each subsequent year. Multiply the prior year's 1985-based index number by the current year's 1982-based index number; then divide that result by the prior year's 1982-based index number.