Performance measures (ratios) in the evaluation of financial and other results of municipalities: revisited

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Legislation requires municipalities in South Africa to measure and report on their performance when their budgets are prepared (for the purpose of setting performance target indicators or norms) as well as during and at the end of the financial year. The purpose of the latter requirement is mainly to indicate the extent to which the targets or norms have been met and the performances attained.

The legislative requirements seem to require only three financial performance indicators. This may be too few, since a fairly substantial number of financial indicators can be determined, based on the financial statements.

This article builds on previous research regarding the evaluation (analysis and interpretation) of the financial and other results of municipalities in South Africa that was completed during the late 1980s.

Key words: analysis, assessment, evaluation, financial and other results, financial performance, financial statements, interpretation, local government, municipalities, performance measures

Introduction

Municipalities in South Africa form one of the three tiers of government. As municipalities are the closest of the three tiers to the inhabitants of an area, they have to perform and deliver services, especially those that the private sector cannot render, or prefers not to. As most of these services are financed from payments made by the users or consumers of the services, municipalities have to ensure that the moneys entrusted to them are spent wisely. The best way to test whether money has been, or is being, spent wisely, is to analyse and interpret (evaluate) the financial and other results attained in a particular financial year (in other words, to measure their financial performance).

Central government has promulgated legislation for the purpose of measuring the performance of municipalities. About nine key performance indicators have accordingly been set, only three of which measure financial performance. Apart from these indicators set in the regulations, a number of additional financial performance indicators were developed some years ago.

Regulation No. R. 796, published in Government Gazette No. 22605 on 24 August 2001, was promulgated in terms of Section 43(1)(a) of the Local Government Municipal Systems Act (Act No. 32 of 2000). In terms of Regulation 2(1)(e), key performance indicators, as set by the municipality, must be included in the Integrated Development Plan (IDP) of the municipality. Chapter 3 of the regulations deals with performance management. Regulations 7 and 8 deal with the nature and adoption of the performance management system.

Problem statement

During the past year, several incidents have been reported by the media regarding the poor performance of municipalities, mainly in service delivery (Newmarch 2004; Volksblad 2004; Wyngaard 2004). Some municipalities perform poorly in other fields. In this regard, for example, Hopewell Radebe reported in Business Day on 22 October 2004 that several municipalities in the Free State and Eastern Cape could be placed under direct provincial control. This provision can be implemented if municipalities are underperforming (Radebe 2004).

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In many cases, municipalities fail to render services because users, consumers or ratepayers do not pay for the services rendered to them (Paton 2004; Sepotokele 2004).

Municipal councils and, especially, chief financial officers (CFOs) of municipalities should evaluate their financial and other results in more detail than required by Regulation No. R. 796. The question is how this can be done.

**Purpose and objectives of the study**

The purpose of this article is to revisit and translate the ratio analyses developed by Swanevelder during his masters degree studies in 1988 and his research on the analysis of the cash flow statements of municipalities in 1994.

The objective of this article is to indicate to municipal councillors, CFOs and other users of the financial statements of municipalities, such as provincial and central governments and municipal auditors, that there are a variety of performance measures that can be used in practice to evaluate the financial performance of municipalities, as well as performance in other areas.

**Key performance indicators required**

Regulation 9(1)(a) of Regulation No. R. 796 requires municipalities to set key performance indicators, including input indicators, output indicators and outcome indicators, in respect of each of the development priorities and objectives referred to in section 26(c) of the Local Government Municipal Systems Act. Regulation 9(1)(b) stipulates that a “key performance indicator must be measurable, relevant, objective and precise”. The definition of ‘input indicator’ is given in Regulation 1 as “an indicator that measures the costs, resources and time used to produce an output”, ‘outcome indicator’ means “an indicator that measures the quality and/or impact of an output on achieving a particular objective”, and ‘output indicator’ means “an indicator that measures the results of activities, processes and strategies of a program of a municipality”.

In terms of Regulation 10, the “following general key performance indicators are prescribed in terms of section 43 of the Act:

(a) the percentage of households with access to basic levels of water, sanitation, electricity and solid waste removal;
(b) the percentage of households earning less than R1 100 per month with access to free basic services;
(c) the percentage of a municipality’s capital budget actually spent on capital projects identified for a particular financial year in terms of the municipality’s integrated development plan;
(d) the number of jobs created through a municipality’s local economic development initiatives including capital projects;
(e) the number of people from employment equity target groups employed in the three highest levels of management in compliance with a municipality’s approved employment equity plan;
(f) the percentage of a municipality’s budget actually spent on implementing its workplace skills plan; and
(g) financial viability as expressed by the following ratios:

(i) \[ A = \frac{(B - C)}{D} \]

Where:
- ‘A’ is debt coverage
- ‘B’ is total operating revenue received
- ‘C’ is operating grants
- ‘D’ is debt service payments (that is, interest + redemption) due within the financial year;

(ii) \[ A = \frac{B}{C} \]

Where:
- ‘A’ is outstanding service debtors to revenue
- ‘B’ is total outstanding service debtors
- ‘C’ is annual revenue actually received for services;

(iii) \[ A = \frac{(B + C)}{D} \]

Where:
- ‘A’ is cost coverage
- ‘B’ is all available cash at a particular time
- ‘C’ is investments
- ‘D’ is monthly fixed operating expenditure.”

The three indicators related to financial performance (paragraphs (g)(i) to (iii)) may, however, be insufficient to properly assess or evaluate the financial performance of municipalities. It may, therefore, be necessary to first ascertain what performance indicators for municipalities have already been identified in previous research. From
such possible performance measures, the most critical measures can then be determined, in the event that they are not all appropriate.

The analyses determined by Swanevelder (1988) are used as the point of departure for most of the following discussion of the analysis and evaluation of the performance (especially the financial performance) of municipalities in South Africa.

Research completed regarding performance measurement in municipalities

In the analysis and evaluation of the income statement, balance sheet and cash flow statement, the results of the analyses can be compared with:

- The budgeted results for the year under surveillance
- The actual results of previous years for the same municipality
- The results of similar sized municipalities
- The averages of municipalities (that is, the industry), where such averages are available.

Swanevelder (1988) indicates the way in which the income statements of municipalities can be analysed, as described in the following sections.

1. Analysis of the income statement of the rate and general services

(a) The percentage allocation of total income (and gross expenditure) to the various expenditure item groups (namely: (i) salaries, wages and allowances, (ii) general expenses, (iii) repairs and maintenance, (iv) capital charges (that is, interest and redemption on loans), (v) contributions (from operating income) to capital expenditure, and (vi) contributions to various funds and provisions maintained by the municipality.

\[ A = \frac{B}{C} \times 100 \]

Where:

- `A' is the percentage allocation
- `B' is the values of the various expenditure-item groups respectively
- `C' is the total operating income.

Similar ratios can be determined using gross operating expenditure as the basis (that is, replacing total operating income (C) with total operating expenditure).

This analysis will enable the analyst to determine expense trends of the municipality. A better overall analysis of the municipality is available. Large deviations from budgeted results or from the ratios of previous financial years can be investigated. Management and municipal councils can use this information to determine future policies regarding the appropriation of resources.

(b) The percentage allocation of gross expenditure related to rate and general services (that is, subsidised, community and economic services) to these various groups of services financed mainly from income from assessment rates.

\[ A = \frac{B}{C} \times 100 \]

Where:

- `A' is the percentage allocation
- `B' is expenditure allocated to the subsidised, community and economic services respectively
- `C' is total operating expenditure of rate and general services.

The analyst can determine the ratio in which expenditure is incurred to render the various services in the three groups of services. Comparisons can indicate whether the allocation (or allocations) is realistic. Changes in the policies of the municipality can be justified, amended or rejected.

(c) Percentage allocation of total income from assessment rates, subsidised and community services to the groups of services usually financed from those sources of income.

\[ A = \frac{B}{C} \times 100 \]

Where:

- `A' is the percentage allocation
- `B' is the expenditure related to the groups of services
- `C' is total income from assessment rates, subsidised and community services.

Usually the main source of income for rate and general services is assessment rates. The manner in which this source is spent on the various services is thus determined. This will also show any changes in the spending pattern and whether there was a substantial change in the net surplus or deficit. Regarding a decrease in the net surplus (or increase in a deficit), the internal analyst must ensure that it was indeed the intention of the municipal council to achieve such a performance. This result may be due to improper planning and/or delays in the application of, for example, increased tariffs.
The analyst should ensure that the tariffs for rendering economic services are at such a level that these services break even. These services should be self-supporting and should not rely heavily on assessment rate income.

Municipal services classified as ‘economic services’ are those services for which the tariffs are set at such a level that the cost of rendering the service is recovered in full without a surplus or deficit. The results of each economic service should be evaluated individually. Surpluses on these services will ‘subsidise’ assessment rates, while rates will ‘subsidise’ any deficits.

2. Analysis of the income statement of the electricity service

The percentage allocation of total income of the service to the various expenditure groups (as defined in 1(a) above):

\[ A = B \times \frac{100}{C} \]

Where:
- `A` is the percentage allocation
- `B` is the values of the various expenditure-item groups respectively
- `C` is the total operating income of the electricity service.

The sale of electricity should be regarded as a trading undertaking, with profit-making as a motive. The analyst can determine the extent to which income from the sale of electricity is used to render the service. The actual profit on rendering the service should be at the level set by the municipal council. Tariffs should be set at a level at which they will attain a profit.

3. Analysis of the statistical information related to the electricity service

(a) Units (kWh) lost in distribution

\[ A = B - C \]

Where:
- `A` is the kWh lost in distribution
- `B` is the kWh purchased and/or generated during the year (that is, available for sale)
- `C` is the kWh sold during the year.

Extraordinary losses can result in the service being rendered at a loss. Consumers pay for distribution losses, which should thus be kept as low as possible. Losses may indicate that electricity is being consumed illegally, that electricity consumption meters are faulty or that the consumption figures are not being recorded properly in the books of the municipality. Where losses in distribution are high, the municipality should investigate and take corrective action as soon as possible.

(b) Percentage loss in distribution

\[ A = B \times \frac{100}{C} \]

Where:
- `A` is the percentage loss in distribution
- `B` is the kWh lost in distribution (previous calculation)
- `C` is the kWh purchased and/or generated during the year.

The percentage loss in distribution will be easier to understand than the actual number of units (kWh) lost in distribution.

(c) Cost per unit (kWh) sold (in cents)

\[ A = \frac{B}{C} \]

Where:
- `A` is the cost per kWh sold
- `B` is the total cost to render the electricity service
- `C` is the kWh sold during the year.

(d) Income per unit (kWh) sold (in cents)

\[ A = \frac{B}{C} \]

Where:
- `A` is the income per kWh sold
- `B` is the total income from rendering the electricity service
- `C` is the kWh sold during the year.

(e) Purchase (generating) cost per unit sold (in cents)

\[ A = \frac{B}{C} \]

Where:
- `A` is the purchase and/or generating costs per kWh sold
- `B` is the total purchase and/or generating costs related to kWh purchased or generated
- `C` is the kWh sold during the year.

(f) Cost of distribution losses

\[ A = B \times C \]

Where:
- `A` is the cost of distribution losses
- `B` is the total units lost in distribution -
calculation (a)
‘C’ is the purchase (generating) cost per unit sold (in cents) – calculation (e).

The cost of losses in distribution can be expressed either in terms of the actual cost to the municipality (that is, the purchase cost or cost of generating (calculation (e)) is used as basis), or in terms of the loss of potential income (that is, the number of units lost is multiplied by the income per unit sold per calculation (d)). This will indicate the amount the municipality will lose by not selling the units.

4. Analysis of the income statement of the water service

The percentage allocation of total income of the service to the various expenditure groups (as defined in 1(a) above):

\[ A = B \times 100 \div C \]

Where:
‘A’ is the percentage allocation
‘B’ is the respective values of the various expenditure items
‘C’ is the total operating income of the water service.

5. Analysis of the statistical information related to the water service

The foregoing discussion of the electricity service also applies to rendering the water service. Water is a very scarce commodity, and care must be taken to save water as far as possible. Distribution losses can easily occur and remain undetected, as water pipes are underground. Water distribution, as well as the free water given to households, must be monitored carefully.

(a) Kilolitres lost in distribution
\[ A = B - C \]
Where:
‘A’ is the kilolitres lost in distribution
‘B’ is the kilolitres purchased and/or purified during the year (available for sale)
‘C’ is the kilolitres sold during the year.

(b) Percentage loss in distribution
\[ A = B \times 100 \div C \]
Where:
‘A’ is the percentage lost in distribution
‘B’ is the kilolitres lost in distribution (previous calculation)
‘C’ is the kilolitres purchased and/or purified during the year.

(c) Cost per kilolitre sold (in cents)
\[ A = B \times 100 \div C \]
Where:
‘A’ is the cost per kilolitre sold
‘B’ is the total cost to render the water service
‘C’ is the kilolitres sold during the year.

(d) Income per kilolitre sold (in cents)
\[ A = B \times 100 \div C \]
Where:
‘A’ is the income per kilolitre sold
‘B’ is the total income from rendering the water service
‘C’ is the kilolitres sold during the year.

(e) Purchase/purification cost per kilolitre sold (in cents)
\[ A = B \times 100 \div C \]
Where:
‘A’ is the purchase/purification costs per kilolitre sold
‘B’ is the total purchase costs related to kilolitres purchased or purified
‘C’ is the kilolitres sold during the year.

(f) Cost of distribution losses
\[ A = B \times C \]
Where:
‘A’ is the cost of distribution losses
‘B’ is the total number of kilolitres lost in distribution – calculation (a)
‘C’ is the purchase/purification cost per kilolitre sold (in cents) – calculation (e).

The cost of distribution losses can be expressed in terms of the actual cost to the municipality (that is, the purchase cost or cost of purifying water (calculation (e) is used as the basis), or in terms of the loss of potential income (that is, the number of kilolitres lost is multiplied by the income per unit sold, as per calculation (d)). This will indicate the amount the municipality will lose by not selling the kilolitres.
6. Percentage net surplus (or deficit) for all services

\[ A = B \times 100 \div C \]

Where:

- ‘A’ is the percentage net surplus (deficit) for all services
- ‘B’ is the amount of the net surplus (deficit)
- ‘C’ is the total operating expenditure.

This percentage can also be calculated by expressing it as a percentage of total operating income. Furthermore, it can be determined for each of the electricity and water services individually, in which case, the percentage will represent the net profit percentage on the services.

7. Analysis of the appropriation section of the income statement

Swanevelder (1988) indicates an important ratio to be determined from the information in the appropriation section of the income statement.

The percentage unappropriated surplus at year end in relation to total income for the year

\[ A = B \times 100 \div C \]

Where:

- ‘A’ is the percentage unappropriated surplus (or deficit) at year end
- ‘B’ is the amount of the unappropriated surplus (or deficit)
- ‘C’ is the total operating income for the year.

The unappropriated surplus is in effect the working capital of a municipality. This means that it represents the amount of money (cash) that is more or less available to finance the activities of the municipality in the short term. An accumulated deficit, therefore, means that the municipality must rely on or use other available cash to finance operating activities. This can result in financial difficulty. Operating expenses should be financed from operating income. Where cash is unavailable, service rendering may result in chaos.

Analysis of the balance sheet

The extent to which a municipality binds itself and its ratepayers to loan debt can usually not be determined by means of a fixed formula, but depends on various factors, such as:

- The financial capacity of the municipality
- The purpose for which the debt is to be incurred
- The period of the loan and the expected economic life of the asset to be acquired
- The level of interest rates and the burden of capital charges (interest and redemption) on the operating account
- The availability of money on the capital market
- The possibility of generating income
- The manner in which loan debt is planned and managed
- The intangible factor: the willingness of the inhabitants to support increasing the municipal debt.

The following ratios will help in assessing the financial position of the municipality. These can also be used to determine its creditworthiness and the ratios to determine trends.

(a) Loan debt to value of rateable property

\[ A = B \times 100 \div C \]

Where:

- ‘A’ is the percentage of loan debt to the value of rateable property
- ‘B’ is the total loan debt outstanding less accumulated loan redemption fund(s)
- ‘C’ is the total value of rateable property (land plus improvements).

This ratio brings the debt (that is, the debt on all services) of the municipality into relation with the value of rateable property situated within the jurisdiction of the municipality.

The rateable value of property is usually limited to property subject to assessment rates, which influences the total value if large portions are non-taxable or are exempted from assessment rates. Property should only be rated where the municipality renders services such as those regarded as rate and general services.

This ratio will indicate whether the financing of capital expenditure by means of loans is too high, as well as whether the capital programme is maintained properly.

(b) Loan debt per capita (inhabitants within the jurisdiction of the municipality)

\[ A = B \times 100 \div C \]

Where:

- ‘A’ is the percentage of loan debt per capita
- ‘B’ is the total loan debt outstanding less accumulated loan redemption fund(s)
- ‘C’ is the number of inhabitants within the jurisdiction of the municipality.
Loans funded in respect of rate and general services (excluding self-supporting services such as water and electricity) comprise rate supported debt. Such loans should be repaid (including interest and redemption) from income from assessment rates. The ratio can also be determined for rate supported debt in relation to the number of inhabitants.

What does it mean if the ratio of one municipality is R400 and that of another is R4 000? It may be that the latter renders a series of essential services that were originally installed at a much higher cost. It may also mean that the latter municipality owes large amounts in respect of non-profitable services such as civic centres, roads and parks. In many cases, the rendering of luxury services is one of the reasons why municipalities fell into financial difficulty.

If there is a substantial deviation from the ratio of previous years or from that of other similar sized municipalities or from an average, additional loan debt should be limited at all costs. New projects such as tarring and curbing of roads or the erection of a new civic centre can be regarded as luxurious and can be postponed. The capital programme can also be revised.

(c) Rates supported loan debt to the estimated market value of rateable properties

The debt to be repaid from assessment rates, calculated above, is used to determine this ratio, but the estimated market value of rateable property is used as the basis. This is a better basis than using the valuation roll of the municipality, especially where the values in the valuation roll are outdated. Using the market value means that the value of the rateable property as disclosed in the valuation roll must be adjusted to bring the valuations closer to the current value of rateable property. This is in cases where the values of properties in the valuation roll are not based on market values.

\[ A = B \times 100 \div C \]

Where:
- ‘A’ is the percentage of rates supported loan debt to the market value of rateable property
- ‘B’ is the total rates supported loan debt outstanding less accumulated loan redemption fund(s)
- ‘C’ is the total (estimated) market value of rateable property (land plus improvements).

An interpretation and evaluation of the result may be difficult to assess, as the determination of the average increase in market values of rateable properties may be difficult to determine. To determine the market values of the individual properties may be too large a task to justify the use of this ratio. This ratio may, however, assist or support the assessment made as a result of the previous ratio discussed in (a).

(d) Average term of outstanding rates supported loan debt

The average term of outstanding rates supported debt is expressed in years or as a percentage of the annual redemption to total outstanding debt.

\[ A = B \div C \]

Where:
- ‘A’ is the average term of outstanding rates supported loan debt (years)
- ‘B’ is the total rates supported loan debt outstanding less accumulated loan redemption fund(s)
- ‘C’ is the total redemption paid on loan debt during the financial year plus contributions to loan redemption funds.

The faster a municipality repays its debt, the better its chances of obtaining new loans for new capital projects.

(e) Annual capital charges on rates supported debt to total operating income of rate and general services

Capital charges include interest and redemption. This ratio can be used as a general guide. Where a municipality uses short term loans or available cash to finance capital expenditure in anticipation of the funding of a long term loan, the capital charges on such new loans, as well as the amount of the loan, should also be taken into account.

\[ A = B \times 100 \div C \]

Where:
- ‘A’ is the percentage capital charges on rates supported loan debt to operating income
- ‘B’ is the total capital charges on rates supported loan debt for the financial year
- ‘C’ is the total operating income of rate and general services.

Where the ratio of the municipality is much higher than that of the average of similar sized
municipalities, or where it is higher than the acceptable level for a municipality of that size, future loans (and perhaps new capital expenditure) should be limited to the minimum.

The ratio may vary from one year to another. It may thus be necessary to calculate the ratios for the past three to five years and even to calculate them for the next three to five years.

(f) Internal debt and external debt to total debt

This ratio and the next ratio will only be calculated where the municipality still grants internal loans to borrowing services from funds such as the Capital Development Fund (CDF) or Revolving Fund.

\[ A = \frac{B \times 100}{C} \]

Where:
- ‘A’ is the percentage internal debt in relation to total debt
- ‘B’ is the total internal debt
- ‘C’ is the total outstanding debt at year end.

This ratio can be used, if applicable, to determine the extent to which the municipality provides for capital expenditure from own resources. Where the ratio declines from one year to the next, it indicates that the municipality is relying more and more on external debt. It may thus eventually be to the advantage of the municipality and the community to increase the accumulated fund in a fund such as the CDF. Where the CDF is already strong, advances (loans) from the fund can be made for shorter periods in order to use the money in the fund more often. This will help development, as loans can also be made available to services at lower interest rates than are applicable when borrowing from outside institutions.

(g) External debt to total debt

This ratio will support the previous ratio, and recommendations made in that regard. The less the municipality needs to rely on external borrowing, the better. Resources (that is, redemption and, especially, interest) remain in the hands of the municipality when funds for internal financing are created, maintained and/or increased.

\[ A = \frac{B \times 100}{C} \]

Where:
- ‘A’ is the percentage external debt in relation to total debt
- ‘B’ is the total external debt
- ‘C’ is the total outstanding debt at year end.

(h) Total debt to total assets (capital expenditure)

This ratio indicates the extent to which capital assets have been financed from borrowed monies. To determine the percentage of the extent to which internal sources, other than internal borrowing, have been used to finance capital assets, this percentage must be subtracted from 100%.

\[ A = \frac{B \times 100}{C} \]

Where:
- ‘A’ is the percentage debt in relation to total assets
- ‘B’ is the total debt
- ‘C’ is the total assets at year end.

This percentage can also be calculated for rate and general services and trading services separately.

(i) Percentage growth in capital outlay

This percentage gives an overview of the extent to which capital outlay changed during the financial year. This ratio indicates the way in which future expansion can be expected. It can help when preparing the Integrated Development Plan, especially in long term planning.

\[ A = \frac{(C - B) \times 100}{B} \]

Where:
- ‘A’ is the percentage growth in capital outlay (assets)
- ‘B’ is the total assets at the beginning of the financial year
- ‘C’ is the total assets at the end of the year.

The municipality may use this ratio to adjust its anticipated (planned) growth. This adjustment is limited by the extent to which the municipality can control such an adjustment. Factors such as external control over capital spending will also have to be considered.

(j) Current ratio (current assets to current liabilities)

The current assets of municipalities refer mainly to those financial resources used in the operating cycle. Current capital is the surplus (residual amount) of current assets above the current liabilities of the municipality. The current ratio is probably the ratio used in most cases to indicate the degree of solvency of private enterprises.

When analysing the financial results of municipalities, more factors must be considered than the figures used for calculating such results for
the private sector. In the case of municipalities, sundry creditors (accounts payable), as disclosed in the balance sheet, may also include amounts payable in respect of capital assets to be financed from external loans still to be funded. An item such as cash and bank balance (cash and cash equivalents) is often kept as low as possible as it is sound financial practice to invest available cash. Cash related to special funds, provisions and reserves may also influence the current assets.

\[ A = B ÷ C \]

Where:
- ‘A’ is the current ratio
- ‘B’ is the total current assets
- ‘C’ is the total current liabilities.

By including short-term investments in current assets, the ratio may improve for municipalities, especially where the ratio is below the generally accepted ratio of 2:1 in the private sector. If the municipality decides to take up external loans to finance capital expenditure instead of using available cash (in many cases operating cash), the ratio may improve even further. There may, however, be very good reasons to temporarily finance capital projects from available cash. The chief financial officers will most probably be familiar with such reasons, but not an external analyst. Such reasons can be disclosed in the report of the CFO.

(k) Acid test ratio

Inventory is excluded when this ratio is determined for private undertakings. When the ratio is determined for municipalities, it should also be excluded, but for a different reason. The ‘stores and material’ (or inventory) of municipalities are usually not for sale, but are mostly to be used in normal operating activities of the municipality. The ratio therefore represents current assets less inventory to current liabilities.

\[ A = B ÷ C \]

Where:
- ‘A’ is the acid test ratio
- ‘B’ is the current assets less inventory
- ‘C’ is the total current liabilities.

In the private sector, a ratio of 1:1 is regarded as acceptable. This ratio indicates the extent to which the municipality will be able to meet its short-term commitments. If the ratio is unacceptable, at less than 1:1, the municipality may decide rather to finance capital expenditure from short-term loans or to take up long-term loans for this purpose.

(l) Debtors turnover (outstanding debtors in relation to income)

Most of the income of municipalities is generated from rendering services, for which monthly levies are made. Such services, including water, electricity, sewage and refuse removal, are sold mainly on credit. Furthermore, in most cases the assessment rates are also levied monthly in such a way that the full amount of the annual charge is levied and paid before the end of the financial year.

The debtors turnover ratio indicates the efficiency of the municipality in collecting debt owed to it and converting the asset debtors into cash. If the debts are not converted (received) into cash, the municipality will not have cash to pay commitments such as salaries and creditors on time. This will lead the municipality into financial difficulties, as bulk purchases of electricity and water, for example, may be terminated with detrimental effects to the inhabitants, traders and industries in the municipal area. Furthermore, the better the collection of debts, the less the amounts to be written off as irrecoverable (bad debts).

\[ A = B ÷ C \]

Where:
- ‘A’ is the debtors turnover ratio
- ‘B’ is the total charges for the year to consumers
- ‘C’ is the outstanding debtors at year end.

To convert this ratio to the number of days, the number of working days (250), or the number of days in the financial year, must be divided by the ratio, thus:

\[ A = B ÷ C \]

Where:
- ‘A’ is the debtors turnover in number of days
- ‘B’ is the total days used as point of departure (250 working days, or 365 days in the year)
- ‘C’ is the debtors turnover ratio.

If the turnover ratio in number of days is high (more than, say, 50 calendar days), it indicates that the credit control section of the municipality is not performing optimally. This may lead to an investigation of the credit policy, the credit control section or the way in which debts are collected.
(m) Consumer deposits to sundry debtors

Municipalities selling electricity and/or water to consumers on a debtor basis usually require consumers to pay a deposit before the consumer is connected to the main supply. Municipal bylaws sometimes prescribe that such deposits should be the equivalent of the value of the expected consumption for two consecutive months.

\[ A = B / C \]

Where:
- ‘A’ is the ratio between consumer deposits and sundry debtors
- ‘B’ is the total annual levies charged for services for which deposits are held
- ‘C’ is the deposits at year end.

To convert this ratio to number of days, the number of days in the financial year is divided by the ratio, thus:

\[ A = B / C \]

Where:
- ‘A’ is the number of days’ consumption covered by the deposits
- ‘B’ is the total number of days in the year, namely 365
- ‘C’ is the ratio between consumer deposits and sundry debtors.

When this ratio is compared with the debtors turnover ratio, it may confirm or reject that ratio. It may support any corrective actions taken regarding the credit control section. It may sometimes be necessary to include guaranties provided by some consumers, where such amounts are substantial, in the amount of deposits.

Analysis of the cash flow statement

Apart from the foregoing analyses of the income statement and the balance sheet, the following analyses were identified as useable in evaluating the cash flow statements (Swanevelder 1994: 68–70).

(a) Cash to interest coverage

This analysis provides an answer to the question of whether the municipality has generated sufficient cash from ordinary activities to fulfill its interest payable commitments. The ratio shows the number of times the outflow of cash for interest on loans is covered by the available cash from activities. If the ratio is smaller than 1:1, it may indicate that the municipality may encounter cash flow problems in the future. This may require measures to prevent such problems. It supports the interest/revenue ratio as used in the private sector (Hamman 1993: 51)

\[ A = B / C \]

Where:
- ‘A’ is the ratio between cash and interest paid during the financial year
- ‘B’ is the cash generated by activities (before interest paid)
- ‘C’ is interest paid during the financial period.

This ratio can be determined separately for internal debt, external debt and total debt.

(b) Debt to cash

It is also important to ascertain whether a municipality will be able to repay the capital portion of external loans from cash generated from activities. This ratio indicates how long it will take the municipality to repay its debt from cash generated from activities (Hamman 1993: 51).

\[ A = B / C \]

Where:
- ‘A’ is the debt to cash ratio (expressed in number of years)
- ‘B’ is the long-term debt as per the balance sheet
- ‘C’ is the cash generated from activities.

If the period, determined by this analysis, decreases from the performance results of one financial period to the next, it indicates that the cash from activities is improving in relation to an increase in loans.

(c) Cash to income

This is one of the most crucial ratios to determine a number of performances by a municipality. Firstly, it indicates the competence of the credit control section. Secondly, it indicates the extent to which the credit policy of the municipal council is efficient. Thirdly, and perhaps most importantly, it indicates whether the municipality is collecting the moneys it is supposed to collect and whether the commitments of the municipality will be met. If income is not converted into cash, it means that the municipality will not have cash to pay for the goods and services it receives, including services from employees and bulk consumables such as electricity and water.
A = B ÷ C
Where:
‘A’ is the cash to income ratio
‘B’ is the cash generated from activities
‘C’ is the total income from services rendered as per the income statement.

This ratio shows the extent to which operating income is converted into cash. Municipalities should strive to get this performance as close as possible to a 1:1 situation. This will mean that the municipality is collecting all (or almost all) levies (charges) for services rendered to ratepayers, consumers or users of services. Where this ratio was less than 1:1 in previous years, there should be efforts to increase the ratio, which will mean that the balance of outstanding debtors at year end is decreasing from one year to the next.

(d) Financing to capital expenditure (infrastructure)

Most capital expenditure (investing activities), especially large municipal capital projects, is financed by means of external loans. Some projects are financed from internally generated funds, provisions, reserves or government grants. This ratio indicates the extent to which the municipality has financed its capital projects during the year. The ratio can differ substantially from one year to the next, depending on the time of taking up the loan. Capital expenditure may be temporarily financed from available cash while the loan is funded in a subsequent financial year. It may also happen that loans are taken up, but that the capital expenditure is incurred only later. It will, therefore, be better to calculate this ratio for a number of years and then to ascertain a trend.

A = B ÷ C
Where:
‘A’ is the financing to capital expenditure (infrastructure) ratio
‘B’ is the net cash received from loans taken up (funded)
‘C’ is the total cash used for the capital expenditure.

A ratio smaller than 1:1 will indicate that more cash was used in that financial year to acquire infrastructure than was received from taking up loans. A ratio of larger than 1:1 indicates that the cash from new loans was more than was spent on capital expenditure in that year.

(e) Cash to total fixed assets (infrastructure)

This ratio should, in the case of municipalities, be less than a similar ratio in the private sector. Large amounts of infrastructure in municipalities do not generate income and/or cash, for example streets, water drainage systems or parks. It indicates, nevertheless, the cash proceeds from total capital assets, which may be a good measure when it is compared with the results of other similar sized municipalities or with an average.

A = B × 100 ÷ C
Where:
‘A’ is the percentage of cash generated by using total fixed assets (infrastructure)
‘B’ is the cash generated from activities
‘C’ is the total fixed assets.

The percentage (ratio) is influenced by the policy of the municipality regarding the valuation of assets, the repayment in full of loans from which assets were financed, and the values at which assets, such as donations, are recorded.

(f) Current capital to net cash flow

This is a ratio showing the percentage influence of the change in current capital on net cash flow.

A = B × 100 ÷ C
Where:
‘A’ is the percentage of current capital to net cash flow
‘B’ is the change in current capital
‘C’ is the net cash flow.

Scott (2001) indicates that only some of the preceding comprehensive analyses are necessary for determining the creditworthiness of municipalities. However, the foregoing set of performance measures will give the analyst a complete picture of the financial performance of the municipality.

Summary and conclusion

In order to obtain a proper performance appraisal, it will be necessary to calculate all these performance measures. They serve a purpose and will help in the decision-making process of municipal councils. If all municipalities were to evaluate their performances in this manner, it would help in finding solutions for the problems that some municipalities
encounter. The main problem is that the available averages, against which the results should be measured, are somewhat outdated and need to be revised.

Some analysts and municipal councillors may be of the opinion that these performance measures are based on past events, that they are developed for profit-seeking entities, and that they exclude non-financial performance indicators (Burger & Ducharme 2001: 11).

The fact that municipalities are non-profit entities (Burger & Ducharme 2001: 11) does not exclude them from analysing their budgets and actual results. The ideal situation is for municipalities to budget for a break-even situation. The results of analyses can, in the case of both budgets and actual results, be compared with past results of the municipality itself, with the results of other similar sized municipalities individually or, where available, with average industry results for similar sized municipalities.

The above analyses, if applied for the evaluation of financial and other results for several years, can establish trends in the case of the budgeted and actual income statements. The allocation of budgeted income to the various expenditure groups (paragraph 1(a) above), or even to each item of expenditure, can, for example, indicate the priorities of the municipal council to the delivery of certain services. Trends can indicate the changes in such priorities. The same will apply to the analyses of the various sources of income in relation to total income.

Where there are substantial deviations from one period to another, questions can be asked and answers sought. This will enable decision-makers to evaluate the performance and, if necessary, make adjustments or take corrective actions.

Recommendations

In order to ascertain the proper performance regarding financial and other matters, it is recommended that:

- The chief financial officers and councillors of municipalities evaluate (analyse and interpret) the financial and other results in more depth than is required by legislation by using the methods described in this article

- This be done for both budgets and year end results in order to ascertain whether the goals set in budgets have been achieved

- Results attained in the analyses be compared with averages where these are available

- Averages be determined for the various sizes of municipalities and that these be made available to municipalities

- The content of this article be made available to municipalities in order to inform them of the methods described.

References


Radebe, H. 2004. ‘Underperforming municipalities must shape up or face legal consequences’, Business Day, 22 October, p. 3.


