

Understanding the impact of financial sustainability on South African municipalities

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This article acknowledges the lack of skills and poor financial governance within South African municipalities but argues that these factors are an insufficient explanation of their increasing fiscal distress, which was found at over 90% by 2016. It employs the concept of financial condition to construct an econometric function for South African local government. This financial condition function confirms that the fiscal framework of South African local government is distressed. The article further concludes that as service delivery improves, so does the fiscal distress. This applies even to municipalities that receive audit outcomes without material findings. As an illustration, the article uses the collective debt incurred by municipalities to Eskom – the energy utility company. The article argues that it is mathematically impossible to settle this debt within the current local government fiscal framework. The conclusion confirms the importance of constructing the financial condition function as an enabler for improved local government financial health.

Keywords: Financial condition; service delivery solvency; good financial governance; fiscal framework; fiscal distress; municipal sustainability; audit outcomes.

Introduction

The poor financial state of municipalities is well researched and documented across the world, starting with the United States since the New York fiscal crisis of the 1970s (Clark, Ferguson & Shapiro 1982), as well as in recent times (Wang, Dennis & Tu 2007). Based on the essentiality of municipal functions, similar studies have been conducted in other countries, such as Israel (Ben-Elia 1998; Carmeli & Cohen 2001; Razin 1998), Greece (Kalchheim 1997), Czechoslovakia (Hrůza 2013) and Italy (Padovani, Manes Rossi & Orelli 2010). In South Africa, the Local Government Turnaround Strategy (Republic of South Africa [RSA], Department of Co-operative Governance and Traditional Affairs [COGTA] 2009a) has provided valuable insights into the country's poor municipal fiscal health, such as the lack of skills and poor financial governance. By 2016, the number of financially distressed municipalities stood at 93% (Afrika Rating 2016). In concerted efforts to address this deterioration, the Auditor-General of the country released findings that show deficiencies, increasing dysfunctionality and minimal increase in the number of clean audits. In South Africa, a clean audit is defined as the three pillars of financial reporting, performance outcomes and compliance to laws and regulations – all without material findings (RSA 2004).

The deficit in skills needs to be understood in the context of the lack of political desire to appoint highly professional senior managers. This is because they are less likely to implement questionable instructions than those who are beholden to their political principals usually through cadre deployment (Netshitendzhe 1996). Cadre deployment is the:

... appointment of government party loyalist to an institution, as a means of circumventing public accountability and bringing the institution under the control of the party, as opposed to the state. (Van Onselen 2012:1)

This means that the Department of Cooperative Governance and Traditional Affairs cannot address the skills deficit without considering the impact of cadre deployment on municipal governance (Twala 2014). Unlike other spheres of government and state-owned enterprises, at local government level, the executive mayor, through Section 56 of the *Local Government Municipal Structures Act* (RSA 1998), is empowered to implement the political mandate doing away with the need for cadre deployment within the administration. However, cadre deployment is not only an African National Congress (ANC) practice. A perusal of the websites of leading political parties (i.e. the Democratic Alliance and the Economic Freedom Fighters) shows that although they do not have similar cadre deployment policies, they have similar recruitment practices as the ANC.

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This article excludes the lack of skills and investigates systematic fiscal failure that results in negative audit outcomes as reported by the Auditor-General.

Based on the Auditor-General's reports between 2006/2007 and the 2011/2012 administrative years, Powell et al. (2014) concluded that 100% of clean audits will occur in the 2022/2023 fiscal year. Given the financial environment, Powell extrapolated that in the 2016/2017 fiscal year, South Africa should have achieved 60% clean audits. In reality, only 13% of the municipalities received clean audits in the 2016/2017 fiscal year. This means that the expected goal of a 100% success rate will have to be extended far beyond the 2022/2023 fiscal year. This leads to the following question: Will this elusive target be met, and if not, what are the influencing factors? The Auditor-General's report of 2016/2017 highlighted three key problems that need to be resolved in order to meet the elusive target: (1) addressing the lack of *consequence management* that leads to (2) *non-compliance* that leads to (3) *irregular expenditure* (RSA, AGSA 2017). The cycle repeats annually, resulting in increased irregular expenditure and poor financial governance.

The impact on municipal financial sustainability was raised in the Local Government Turnaround Strategy (LGTAS) report of 2009 (RSA, COGTA 2009a). This was a result of the limited success of Project Consolidate (2004–2009). A number of measures were put in place, including the *Local Government Municipal Regulations on Minimum Competency Levels* (RSA, Department of Finance [DOF] 2007) and the *Local Government Municipal Regulations on Financial Misconduct Procedures and Criminal Proceedings of the Municipal Finance Management Act* (MFMA) (RSA, DOF 2014).

Despite these measures, the ability of municipalities under the project LGTAS (2009–2014) to reach 30% of clean audits failed (Powell et al. 2014). To address this, the Back to Basics Programme was launched in September 2014 (RSA, COGTA 2014). Four years later, in 2018, the programme had achieved minimal success as predicted by Powell et al. (2014). In September 2018, the COGTA launched the Municipal Recovery Plan, also referred to as Back to Basics Programme II (Mkhize 2018). Its ability in arresting fiscal distress remains to be seen. However, the failed turnaround strategies since 2004 prompt the next question: besides poor financial governance and lack of skills, are there any other key factors that cause poor fiscal health of local government?

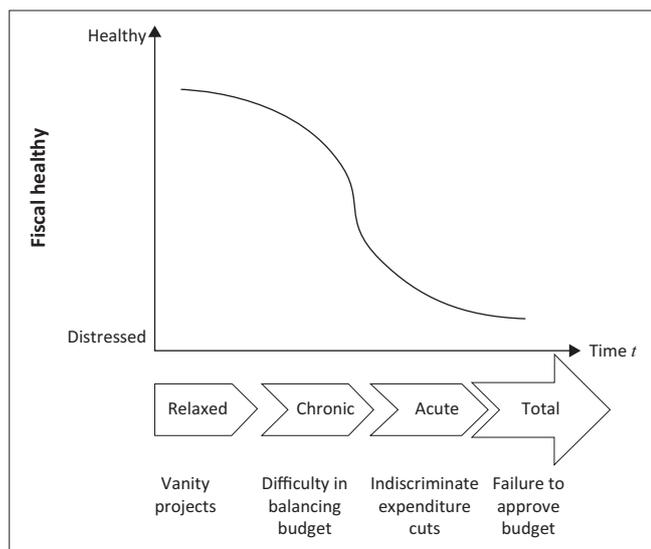
The remainder of this article is structured as follows: the 'Introduction' and 'The fiscal environment of South African local government' sections present a review and discussion relating to existing works from two perspectives: South African fiscal environment and financial condition. The 'Measure of financial condition' section deals with measurement of financial condition. The 'Data and modelling' section discusses the data presented in the article. The analysis and results are presented in the 'Analysis and results' section, followed by the 'Discussion'

section that provides a general discussions of the study. The 'Limitations' section discusses the limitations of the article. The concluding remarks of the article are presented in the 'Conclusion' section.

The fiscal environment of South African local government

Local government, unlike the other two spheres of government (national and provincial), is the only arm that generates its own revenue to sustain its legislated mandate. This makes the economic (transactional structure) of local government aligned with state-owned enterprises, rather than with the other spheres of government that have an administrative structure (Nutt & Backoff 1992). This transactional authority is derived from Section 156 of the *Constitution of the Republic of South Africa* (RSA 1996), Section 64 of the MFMA (RSA 2003) and Chapter 9 of the *Local Government Municipal Systems Act* (RSA, DOF 2000). The National Treasury MFMA Circular 64 (RSA 2012b) provides the local government fiscal framework that underpins a financially sustainable municipality. Its aim is to improve municipal financial health by maximising revenue collection while reducing inefficiency, costs and uncollectible debt (RSA, DOF 2012b). The circular offers a guideline for municipalities on how to accumulate surplus funds or cash-backed reserves through improving their financial health.

Good financial governance is prescribed under Section 216 in the *Constitution of the Republic of South Africa* (RSA 1996). This is enacted by Section 87 of the *Public Finance Management Act* (PFMA) (RSA 1999) through the establishment of the Accounting Standards Board (ASB). The ASB sets standards and guidelines for financial statements as mandated by Section 216(a) of the *Constitution of the Republic of South Africa*. It entails developing measures to ensure transparency by introducing Generally Recognised Accounting Practices (GRAP) in the three spheres of government as a mechanism of good financial governance. To further enhance good financial governance there is the In-Year Budgetary Monitoring process. This commences with monthly reporting prescribed in Section 71 of the MFMA (RSA 2003), followed by Section 52(d) for quarterly monitoring. Mid-year assessment is enabled through Section 72 of the MFMA (RSA 2003). At this point, budget adjustment is permitted to address reallocations and priority changes. Both quarterly and mid-year reporting includes service delivery performance. The three sets of reporting provide an oversight mechanism for the municipal council, COGTA and National Treasury. The objective of this good financial governance is to ensure financial sustainability of municipalities by proactively preventing fiscal distress. Schick (1988) defines four stages of financial health, as illustrated in Figure 1. When a local government is relaxed, it is prone to have vanity projects because of surplus funds. As the surplus funds deplete, it starts having chronic difficulties in balancing the budget.



Source: Schick, A., 1988, 'Micro-budgetary adoptions to fiscal stress in industrialized democracies, *Public Administration Review* 48(January/February), 523–533. <https://doi.org/10.2307/975515>

FIGURE 1: Stages of financial health.

As this worsens, the municipality gets fiscally distressed in carrying out indiscriminate expenditure cuts at the expense of service delivery. When there is total distress, the municipality is unable to pass its budget and needs to be placed under administration.

In a situation where fiscal health is found to be in distress, remedy is sought. This is done by complementary invoking Section 139(5) of the *Constitution of the Republic of South Africa* (RSA 1996), Section 65(2)(f) of the MFMA (RSA 2003) and MFMA Circular 49 (RSA, DOF 2009). MFMA Circular 71 (RSA, DOF 2014) defines financial distress as:

... when a municipality fails to make payments when due and such failures amount to 2% of the municipality's operating budget for that year may indicate that the municipality is in serious breach of its obligations. (p. 2)

Municipal Finance Management Act Circular 71 (RSA, DOF 2014) provides a list of indicators for evaluating the financial position of a municipality flagging fiscal distress. The indicators consist of five singular ratios: (1) total debt to revenue (excluding grants), (2) debt service coverage ratio, (3) debt to net cash ratio, (4) cash flow interest coverage, and (5) liability management ratio. These ratios are analysed descriptively in the annual *State of Local Government* report, which forms part of the Auditor-General's and National Treasury's financial viability assessments.

It is noted that these indicators do not consider financial condition as defined by United States Governmental Accounting Standards Board (GASB) Statement No. 44 of 2004. It defines this as the government's capacity to fulfil its contractual obligations while continuing to provide services at both current and future states (USA, GASB 2004). Financial condition incorporates the concept of service delivery solvency, which is the ability of a municipality to provide services in accordance with legislative obligations, for current

and future states. With respect to revenue generation, the cost of service delivery solvency is important for South Africa in that it has one of the highest unemployment rates in the world. This makes the concept of financial condition as important for South Africa as in the United States.

The absence of financial condition as part of National Treasury's policy has resulted in limited data and academic literature. Instead, lack of skills and poor governance (Schoeman 2011; Van der Waldt 2012) are accepted as the *de facto* cause of municipal distress. One of the first studies on financial condition was Ngwenya's (2010) study which was confined to three metropolitan councils in Gauteng between 2006/2007 and 2008/2009. This was followed by an article by Ncube and Vacu (2014) on 273 municipalities over the 2004/2005 to 2010/2011 fiscal years. However, Ncube and Vacu did not develop a composite index but applied Kloha's scale for financial health (Kloha, Weissert & Kleine 2005). The most recent research conducted in this regard is by Coetzee and Kleynhans (2019), which focused on the financial conditions of 51 municipalities in KwaZulu-Natal from 2008/2009 to 2014/2015 using a methodology adopted from Ritonga's thesis (2014). While constructing composite scores for the individual municipalities, Coetzee and Kleynhans (2019) did not provide a financial condition function that can assist in determining the robustness of the local government fiscal framework.

Measure of financial condition

The GASB defines four key indicators of financial condition: cash solvency, budgetary solvency, long-term solvency and service-level solvency (USA, GASB 2004). The first three are standard financial indicators, while the fourth, service-level solvency, is specific to local government. The rationale behind financial condition is the determination of a mechanism that can allow prevention of fiscal emergencies. This enables prompt response to emergencies (Coe 2008; Groves, Godsey & Shulman 1981; Kloha et al. 2005; Nollenberger 2003). Financial condition is therefore predictive in nature.

While financial condition in itself provides warnings about fiscal distress, the efficacy of the indicator is constrained by the measurement methodology. This challenge was addressed by the seminal work of Groves et al. (1981) on financial indicators for local government in which they proposed a practical methodology, 'Financial Trends Monitoring System' (FTMS). The FTMS was adopted by the National League of Cities (NLC) to provide fiscal positions of local governments as a means to gather their financial position on an annual basis. (The NLC is the United States' equivalent of the South African Local Government Association [SALGA]). Owing to it being an open financial system of both partial and uncontrollable fiscal environments, it is treated as a complex and unwieldy methodology comprising 47 ratios. To overcome this issue, Berne and Schramm (1986) argued that analysing the partially controllable fiscal environment provided sufficient data to determine the financial position

of a municipality. The first of such methods was that of Brown's 10-point ratios (1993) that used general fund data, making it a closed financial system methodology. This was followed by Mercer and Gilbert's (1996) method and Chaney, Mead and Schermann's (2002) method. The adoption of the concept of financial condition in GASB Statement No. 44 (US, GASB 2004) led to several models, most notably Kloha et al.'s (2005) model that used general fund data with socio-economic indicators, making it a pseudo-open financial system; Wang et al. (2007) and Maher and Nollenberger (2009) used general fund data similar to Brown (1993). To ensure better understanding, this article considers all related models as financial condition models, even those developed before the adoption of GASB Statement No. 44 in 2004.

The strength of Brown's 10-point test lies in its ability to evaluate the financial condition of local government utilising existing general fund data. The composite score assesses the financial condition of the municipality relative to the performance of other municipalities in the same basket; from among the worst to the best. This means that it does not provide an absolute interpretation of the local government, that is, whether it is financially healthy or financially distressed. Thus, if all the municipalities in the basket were financially unhealthy, then this would not be reflected, only showing the relative financial state of each municipality against those it is compared to. Another weakness of Brown's tool is that each ratio has equal weight, ignoring that some ratios have greater impact.

Despite its drawbacks, Brown's model (1993) has given rise to several offshoots, notably those of Chaney et al. (2002), Wang et al. (2007) and Maher and Nollenberger (2009). The latter initially built on the work of Brown's model opting to use Altman's (1968) multivariate discriminate analysis approach but applied linear regression. To be consistent with accounting practice, they applied FTMS ratios for the four GASB composite indicators. This gave rise to the μ -matrix in Equation 1:

$$[\mu] = \alpha + Y_{1a,b} + Y_{2a,b,c} + Y_{3a,b,c,d} + Y_{4a,b,c,d,e} \\ = \alpha + \alpha_1 \Sigma Y_1 + \alpha_2 \Sigma Y_2 + \alpha_3 \Sigma Y_3 + \alpha_4 \Sigma Y_4 + \varphi \quad [\text{Eqn 1}]$$

Where:

- α = constant
- α_1 = coefficient of Financial Condition Indicator
- Y_1 = financial condition ratio as per GASB Statement No. 44
- φ = error margin.

Maher and Nollenberger (2009) argued that the model constructs the composite matrix of μ -scores of the municipalities using the composite ratios in Table 1. Notably, it provides absolute gradation of financial condition as an indicator of potential distress; the lower the score, the higher the distress.

Data and modelling

This study was limited to selecting one ratio for each of the four financial condition indicators mentioned in Table 1.

TABLE 1: Financial condition ratios.

Financial condition indicator	Ratio
Cash solvency	Y_{1a} – Cash ratio
	Y_{1b} – Liabilities ratio
Budgetary solvency	Y_{2a} – Operating ratio
	Y_{2b} – Property tax revenue ratio
	Y_{2c} – Intergovernmental revenue ratio
Long-term solvency	Y_{3a} – Fund balance ratio
	Y_{3b} – Outstanding general long-term debt ratio
	Y_{3c} – Governmental debt service ratio
	Y_{3d} – Unfunded pension liability ratio
Service-level solvency	Y_{4a} – Outstanding general long-term debt per capita
	Y_{4b} – General Fund operating revenues per capita
	Y_{4c} – General Fund expenditures per capita
	Y_{4d} – Debt Service Fund expenditures per capita
	Y_{4e} – Capital Projects Fund expenditures per capita

Source: Maher, C.S. & Nollenberger, K., 2009, Revisiting Kenneth Brown's 'Ten-Point Test'. *Government Finance Review*. October 2009

The first three ratios were obtained from the MFMA Circular 71 (RSA, DOF 2014). For cash solvency, the cash ratio was used to measure the municipality's capacity to service its current debts by comparing its net cash flows from operating activities against its total debt service obligations. The higher the ratio, the greater the cash flow available to meet service delivery demands.

For budgetary solvency, the study used the operating ratio. This ratio determines the percentage of operating revenue that is available to the local government. The lower the ratio, the greater the restriction on the availability of funds for service delivery and the greater the dependency on grant transfers.

For long-term solvency, the long-term debt ratio was applied. This helps to determine the extent to which a local government entity can survive as a going concern. The higher the ratio, the lower the probability that the local government will survive as a going concern. Finally, for service delivery solvency, the study used capital projects per capita (Griesel & Leatherman 2010). The higher the ratio, the greater the funds available for service delivery.

To determine the financial condition model, the financial condition function $g(x)$ was solved using the econometric Equation 2:

$$g(x) = \alpha_1 x_1 + \alpha_2 x_2 + \alpha_3 x_3 + \alpha_4 x_4 + \varphi \quad [\text{Eqn 2}]$$

In this weighted-sum approach, the coefficients of the indicators are assigned according to their impact on the composite index (Greene 2003:257). The study selected LIMDEP® as the econometric software to solve $g(x)$ as a linear function of the form of Altman's (1968) Z-score and Ohlson's (1980) O-score. It is opposed to Coetzee and Kleynhans (2019) who, like Ritonga (2014), solved Equation 1 using the statistical analytical hierarchical process (AHP) of Saaty (1990) that results in a matrix outcome.

The financial condition function $g(x)$ determines the coefficients α_1 with *density* as the independent variable. *Density* was used for two main reasons. Firstly, it had limited noise φ over a 5-year administrative period, thus reducing the

error margin. Secondly, using *density* was appropriate as the national census had taken place in 2010, thus providing official population figures for the study that were not dependent on local government data.

Figure 2 illustrates how the financial condition score was constructed. Data were sourced from the National Treasury which provided the audited financial statements of 233 municipalities from the 2012/2013 to 2015/2016 fiscal years. During this period, there was a total population of 233 local and metropolitan municipalities in the country. This excludes district councils as they do not deliver direct services but support local municipalities. Thus, the study was not based on randomised population sampling. To provide service delivery solvency, statistical data were sourced from Statistics South Africa P9115 data sets for the delivery of water, energy, sanitation and roads. Figure 2 presents the normalisation and modelling process to solve for financial condition function $g(x)$.

Ethical consideration

The data were sourced from the public domain in particular, the National Treasury and Statistics South Africa websites.

Analysis and results

Regression analysis was carried out on the individual four fiscal years and then as an aggregate of the 2012/2013–2015/2016 data sets. This is the eigenvector that calculates the four eigenvalues which are the financial condition coefficients (or betas in LIMPDEP® terminology). There were five audit disclaimers that reduced the number to 228 municipalities over the 4 years. The results can be found in Figure 3.

This gives rise to Table 2.

The financial condition function $g(x)$ for South African local government is as follows:

$$g(x) = 0.09 \text{ Cash solvency} + 0.50 \text{ budget solvency} - 0.64 \text{ long-term debt} - 0.04 \text{ service delivery solvency} \quad [\text{Eqn } 3]$$

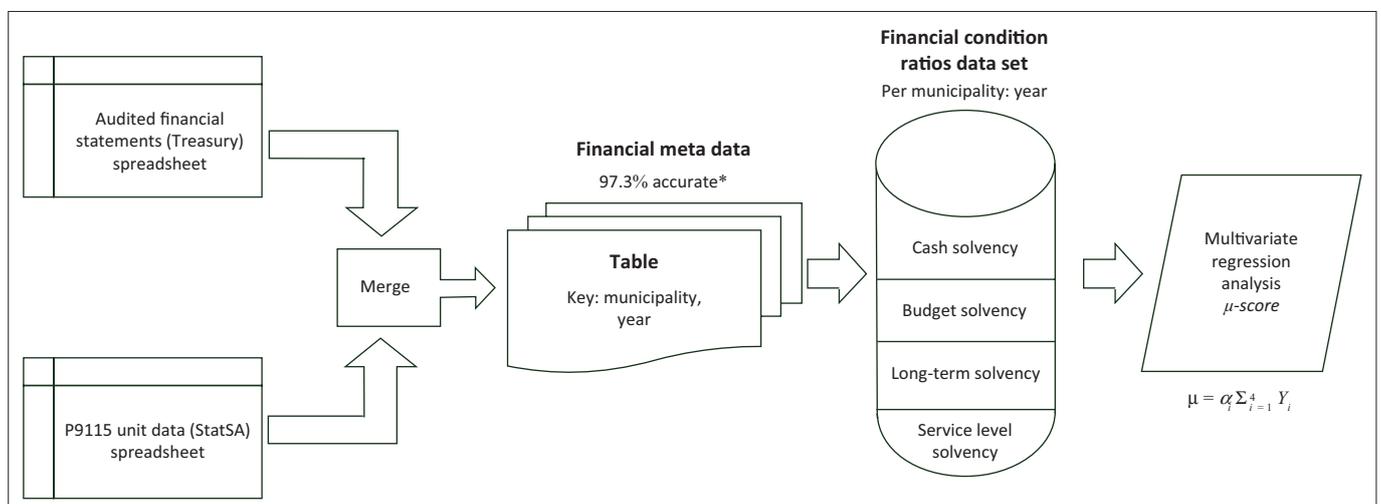
These individual municipal μ -scores with the following gradation scale were compared with Brown's (1993) original 10-point score and the Auditor-General's description (RSA, DOF 2012a) (see Table 3).

From Figure 4, it is clear that most municipalities fall between 0.28 and 0.57, with a negative skewedness of -0.57 , which is less than -2 , making it a normal distribution. This indicates that although municipalities are on average doing well, they are becoming increasingly financially distressed. Thus, despite an inherently negative fiscal framework, municipalities endeavour to ensure that they become as financially sustainable as possible. This could be attributed to Operation Clean Audit (RSA, COGTA 2009b) and competency upskilling of chief financial officers through the *Municipal Regulations on Minimum Competency Levels* (RSA, DOF 2007).

The finding that 10.5% (or 24) of municipalities are financially sustainable aligns well to a study by Afrika Rating (2016) and confirms the findings of Mkhize (2018), who stated that only 7% of municipalities are financially healthy, and the rest were either in fiscal distress (60%) or on the verge of becoming distressed. These figures exclude the five municipalities with audit disclaimers.

Table 4 shows that two peer-reviewed studies support the results of this research. The first is Ritonga's (2014) study on the financial condition index for Indonesian municipalities. His gradation scores for Indonesia are consistent with the findings of this study. This is of critical importance because Indonesia shares similar developmental attributes as South Africa.

The second peer-reviewed study is a South African study by Coetzee and Kleynhans (2019). Even though the study was limited to KwaZulu-Natal, it found the province to have an average index score between 0.40 and 0.44. This score is compared to this research, which has shown that the average μ -score for KwaZulu-Natal is 0.44, as shown in Figure 5.



*, Less five municipalities with audit disclaimers.

FIGURE 2: Construction of the financial condition μ -score.

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Ordinary      least squares regression .....
LHS=DNSTY    Mean          =          47.59693
              Standard deviation =        177.47444
              Number of observs. =           912
Model size    Parameters      =           4
              Degrees of freedom =          908
Residuals     Sum of squares =        .283852E+08
              Standard error of e =       176.80861
Fit           R-squared       =          .01076
              Adjusted R-squared =         .00749
Model test    F[ 3, 908] (prob) =       3.3(.0201)
Not using OLS or no constant. Rsqrd & F may be < 0
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	Coefficient	Standard Error	z	Prob. z >Z*	95% Confidence Interval
CASH	15.1093*	9.16474	1.65	.0992	-2.8532 33.0719
BDGT	49.8956***	14.93897	3.34	.0008	20.6158 79.1755
LNGTRM	-64.1621***	22.84011	-2.81	.0050	-108.9279 -19.3963
SERV	-4.18306	3.83562	-1.09	.2755	-11.70074 3.33462

FIGURE 3: Calculation betas over the 4 years: 2012/2013–2015/2016.

TABLE 2: Coefficients of financial condition.

Variable	FY 2012/2013	FY 2013/2014	FY 2014/2015	FY 2015/2016	4-Betas
Cash solvency	9.45	14.84	17.27	18.10	9.16
Budget solvency	92.07	49.15	93.20	37.89	49.90
Long-term solvency	-366.25	-48.70	-461.00	-22.55	-64.16
Service delivery solvency	-2.83	-6.03	-3.46	9.17	-4.18

FY, fiscal year.

TABLE 3: Comparison of financial condition index with Brown’s 10-point score.

Grade	Brown’s score	μ-score	Auditor-general
Among the best	10 or more	0.50 to 0.60	Excellent
Better than most	5 to 9	0.40 to 0.49	Above average
Average	1 to 4	0.30 to 0.39	Average
Worse than most	0 to -4	0.2 to 0.29	Below average
Among the worst	-5 or less	0.19 and below	Poor

Therefore, the study supports the μ-score as an absolute score applicable to the South African local government environment.

Converse to this study, Ncube and Vacu (2014), using Kloha et al.’s (2005) methodology, concluded that there was an improvement in the financial health of municipalities over the same period. This is supported by the skewness of the 139 out of 228 municipalities being above average. However, in reality, the fiscal health of municipalities has indeed regressed, contrary to their conclusion. This could

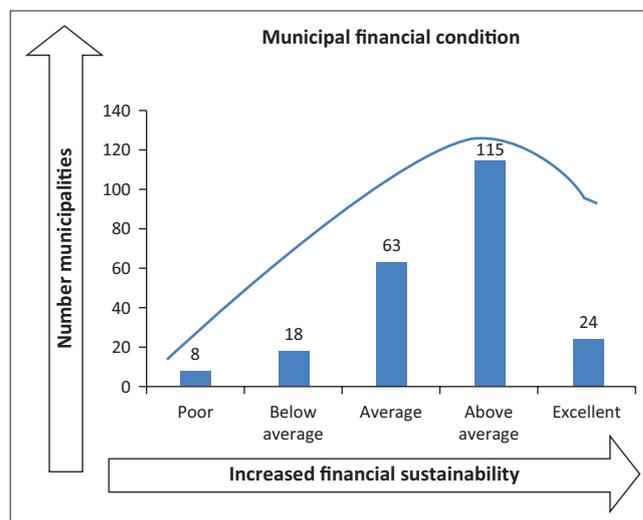


FIGURE 4: Financial condition by rank.

have been because Ncube and Vacu (2014), while using Kloha’s method, did not use the standard GASB composite ratios recommended by Kloha et al. (2005). Rather, they opted to use conventional singular ratios from National Treasury under MFMA Circular 71 (RSA, DOF 2014) that do not include service-level solvency. This view supports the need to not only consider singular financial indicators, but also incorporate service delivery solvency as defined under financial condition (Figure 6).

TABLE 4: Comparing Ritonga’s index to the financial condition index.

Level of financial condition	Ritonga’s FC index score	FC μ -score
Good financial condition	Higher than 0.51774	0.50–0.60
Average financial condition	Between 0.323707 and 0.51774	0.30–0.49
Poor financial condition	Less than 0.323707	0.29 and below

FC, financial condition.

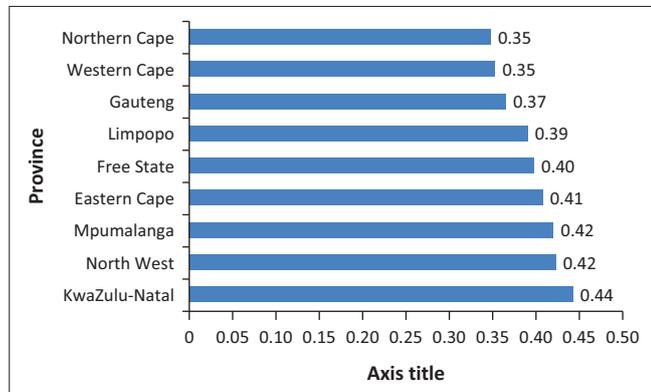


FIGURE 5: Average financial conditions by province over 4-year period.

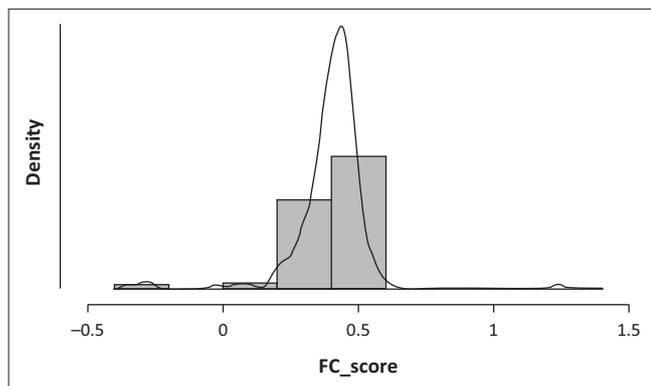


FIGURE 6: Normal distribution of financial condition scores.

Descriptive statistical analysis using principal component and reliability analyses gave the following determination on efficacy, robustness and consistency (see Table 5).

The principal component analysis (PCA) and the normal distribution chart show that the μ -score is dependent on the population density of the local government; the greater the density, the higher the probability that it will be financially sustainable. This finding was similar to other studies in the United States (Ladd 1992; Wang et al. 2007). This is provided that the municipality does not enter into large long-term obligations, as in the case of the City of Johannesburg, with a μ -score of 0.10. The normal distribution chart further supports the efficacy of the results.

The reliability analysis performed a Cronbach’s alpha test for the fiscal years 2012/2013 to 2015/2016, the results of which are presented in Table 6.

The Cronbach’s alphas for the respective years are shown in Table 7. An alpha score of more than 0.70 indicates that the results are reliable and consistent. The consistency spread

TABLE 5: Principal component analysis.

Component loadings	RC 1	Uniqueness
Density	-0.746	0.443
FC_score	0.746	0.443

TABLE 6: Scale reliability statistics.

Scale	Cronbach’s α
Reliability statistic	0.738

Note: Of the observations, 228 were used, 0 were excluded listwise and 228 were provided.

TABLE 7: Cronbach’s alphas for financial scores from 2012/2013 to 2015/2016.

Year	Cronbach’s α
2012/2013	0.820
2013/2014	0.752
2014/2015	0.798
2015/2016	0.700

over the 4 years makes the financial condition function $g(x)$ robust and reliable.

The results on financial condition that were used in this study offer a table of the μ -scores for South African metropolitan and local municipalities (see Appendix 1). The single outlier, Tlokwe Local Municipality with a μ -score of 1.24, was removed from the table. With only one outlier from 228 municipalities, this indicates that the financial condition function $g(x)$ is robust.

Discussion

The financial condition function $g(x)$ for South African local government was solved as follows:

$$g(x) = 0.09 \text{ cash solvency} + 0.50 \text{ budget solvency} - 0.64 \text{ long-term debt} - 0.04 \text{ service delivery solvency} \quad [\text{Eqn 4}]$$

This solution supports Maher and Nollenberger’s (2009) fiscal model that within the South African local government fiscal framework, the higher the μ -score, the greater the financial sustainability of a municipality. It is observed that the absolute value of negative coefficients (0.68) is greater than those with positive attributes: cash and budget solvency at 0.59. This means that the current fiscal framework of South African local government is negative or leads to greater fiscal distress. Thus, the dysfunctionality of local government should not only be viewed as a result of poor financial governance and lack of skills but also caused by an adverse fiscal framework.

On the positive side, although the fiscal framework for South African local government is distressed, most municipalities had a μ -score between 0.30 and 0.52. This indicates that despite fiscal pressures the drive by the National Treasury to enforce fiscal prudence is paying off. This supports Ncube and Vacu’s (2014) conclusion of improved financial health but fails to explain the increasing fiscal distress recorded by the Auditor-General and the skewedness of -0.57 .

The financial condition function $g(x)$ ‘long-term debt’ variable has the greatest negative impact on the financial

health of a municipality by a weight of 0.64. Thus, any increase in the financial indebtedness of a municipality will have an adverse impact on service delivery. This is observed in the 2012/2013 and 2014/2015 fiscal years when the Back to Basics Programme, aimed at increasing service delivery, was launched (RSA, COGTA 2014). The financial condition function $g(x)$ indicates that the best way to offset this is through improved budgetary solvency as it has a positive impact on service delivery. This confirms the current research that the greatest threat for financial sustainability of South African local government is the ability to manage expenditure and long-term obligations (SALGA 2015).

The financial condition function $g(x)$ shows that cash solvency has a limited impact on the financial sustainability of local government. This is contrary to the National Treasury's policy where it is used as a key financial indicator of liquidity, insisting that municipalities must have a 3 months' cash cover. Considering the constitutional mandate of local government is service delivery and not funds retention indicates that the financial condition function $g(x)$ reflects this mandate. However, it makes the ability of municipalities to have a budgetary solvency or cash-based budgeting crucial to achieve financial sustainability. This gives impetus to revisit National Treasury's traditional financial management approach as its success is limited (Hrůza 2013; Ntliziywana 2013).

Although the coefficient for service delivery is low at 0.04, it has a negative impact on the sustainability of local government entities. Thus, the greater the ability of a municipality to deliver services to its communities, the higher the probability that it will become fiscally distressed. This supports the observation that the provisioning of each utility (water, energy, sanitation and waste) is not cost reflective. This results in property tax subsidising loss-making revenue streams. As a consequence, the annual increase in property tax exceeds other tariffs. This is contrary to MFMA Circular 64 (RSA, DOF 2012b), which assumes that, if well managed, these tariffs will result in improved revenue management.

A case in point of this skewed fiscal model is illustrated through service tariffs. Section 74(2) of the *Local Government Municipal Systems Act* (RSA 2000) states that tariffs must reflect the costs reasonably associated with rendering the service, including capital, operating, maintenance, administration and replacement costs, and interest charges in deriving revenue. In the case of Eskom, the largest energy supplier to municipalities, electricity cost tariffs (to the municipalities) are set at the start of the Eskom fiscal year in March, but the municipality can only implement demand price tariffs (to the consumer) at the start of the local government fiscal year in July. As a result, during the winter months between March and July, municipalities subsidise consumers for a product that they sell at below cost. Therefore, municipalities only receive $0.75R$, where R is the total revenue possible. This loss is further worsened by the

Pareto principle that states that 80% of the revenue is derived from the top 20% of the consumer base (Koch 1997). These are the large industrial businesses, such as mines, that have the highest price tariffs and revenue. However, they are Eskom's direct customers, leaving municipalities with commercial, government and residential customers with lower price tariffs and revenue. This maximum revenue is denoted by $0.8R$ while dropping to $0.2R$. Thus, $R_{min} = 0.15R$ and $R_{max} = 0.60R$. Maximum revenue R_{max} is not 100% because of lost streams that include the culture of non-payment among townships that are historically serviced by Eskom.

In the financial condition function $g(x)$, this revenue settles the long-term debt variable such as with Eskom. With the highest coefficient of 0.64 it indicates that municipalities where Eskom has no presence are able to cover 0.60 of the long-term debt, leaving 0.04 of the debt settled by water and other levies. Where municipalities are mining towns, their ability to cover long-term debt remains with 0.49 of the long-term debt. With electricity more than 50% of revenue generated by municipalities, this leaves an outstanding 0.34 of the long-term debt weight not covered. This results in the municipalities at this low end of the spectrum spiralling into a fiscal quagmire. Even at the top end of the spectrum, the financial condition function $g(x)$ shows that the collective debt is mathematically impossible to be liquidated without adversely affecting the health of the local governments. Consequently, the number of local governments that are unable to pay Eskom increases.

A press release from Eskom states that the debt by September 2018 stood at R34 billion of which 50% is for the townships of Soweto. Möller (2019:1) in this press release states:

Municipal debt continues to rise, and this has become unsustainable. Municipal debt is no longer just an Eskom problem, it is a national problem.

The press release belies that when Eskom demand tariffs are plotted against the Consumer Price Index (CPI) from 1988 to 2017, they have increased by 356% compared to CPI at 74% (Moolman 2018). This is indicative of poor financial governance.

Poor financial governance is further compounded when price tariffs are set in July; they are not cost reflective as high increases are absorbed by municipalities. This is synonymous to providing the service at a loss. Added to this, Eskom charges interest after 15 days on submission of invoice compared to the legislated 30 days. This results in irregular expenditure on the part of the municipality. When the municipality opts to pay as per legislation, the interest incurred is deemed wasteful expenditure. The municipal council is empowered to recoup the 'wasteful expenditure' from the Accounting Officer as prescribed in MFMA Circular 68 (RSA, DOF 2003).

The financial condition function $g(x)$ shows that under the current local government fiscal regime, it is not possible for

municipalities to comply with Section 74(2)(d) and (e) of the *Local Government Municipal Systems Act* (RSA 2000). Any expectations that at some point in the future Eskom will finally recoup monies owed by municipalities should be dispelled: there is no pot of gold at the end of the rainbow. This is exacerbated by the falling in prices for going off-the-grid solutions with the lifetime cost of energy (LCOE) dropping. For example, the City of Tshwane has an LCOE of R0.87/kWh over 11 years. This is lower than the average municipal electricity costs of R1.09/kWh (Ayanna 2018). On the other hand, demand price tariffs keep escalating, making municipal energy services less and less economically attractive. This means that if the current fiscal framework is not reviewed, it could in the future result in an irreversible loss of municipal revenue as more consumers move off the grid.

In conclusion, despite the objectives of Section 73(2) of the *Local Government Municipal System Act* (RSA 2000), the financial condition function $g(x)$ concludes that the current local government fiscal framework is not sustainable, leading to further fiscal distress even under good financial governance. Section 139(8) of the *Constitution of the Republic of South Africa* states that: 'National legislation may regulate the implementation of this section [on fiscal distress], including processes established by this section' (RSA 1996:98). The absence of legislation permits municipalities to invoke Section 151(4) of the *Constitution of the Republic of South Africa* (RSA 1996), which prohibits other spheres of government interfering in the affairs of a local government. This ambiguity in legislation makes placing a municipality under administration a political rather than administrative decision. An example is the City of Tshwane. With the lowest μ -score of -0.02 , it should have been placed under administration in 2012/2013. To avoid this scenario, it is proposed to draft legislation to effect Section 139(8) that is balanced against local governments' qualified autonomy enshrined in Section 151(3) of the *Constitution of the Republic of South Africa* (RSA 1996).

Limitations

The financial condition function $g(x)$ is based on Maher and Nollenberger's (2009) methodology applied using econometric modelling. It captures the gradations of local governments' financial condition as well as putting them in a strong position to predict fiscal distress using general fund data. However, there is critique of Maher and Nollenberger's (2009) model, and econometric tools in general. These include Jones and Walker (2007) who posit that the use of general fund data is limited to closed financial systems and does not incorporate socio-economic conditions such as unstable or weak coalition governments. Their impact is incorporated into pseudo-open and open financial systems. This debate is best resolved by setting the parameters based on the objectives of the study in question (Dollery, Byrnes & Crase 2007). The closed financial system of four financial ratios in this article offers an explanation as to why local governments in South Africa are becoming more and more fiscally

unviable. This is despite the improvement in service delivery through increased community access to basic services.

Conclusion

Cooperative Governance and Traditional Affairs has implemented three initiatives: Project Consolidate (2004–2009), LGTAS (2009–2014) and the Back to Basics Programme (2014–2018). Their common aim was to address municipal financial sustainability, but none had tangible success. There is no indication about why the current Back to Basics Programme II of 2018 is expected to have a greater success without rectifying the fiscal structural defects. Thus, concurrent to addressing the lack of skills capacity and poor financial governance, a review of the fiscal framework needs to be made for municipalities to attain audit outcomes without material findings that are also financially sustainable. To address the skills deficit, the ANC as the ruling party should review its cadre deployment policy of 1996 by putting the interests of the state above those of the party.

The National Treasury's use of traditional measurements of financial position that apply singular ratios (RSA, DOF 2014) to determine financial sustainability have been eclipsed by the introduction of financial condition in 2004 which uses composite ratios (USA, GASB 2004). (This is the year after the enactment of the *Local Government Municipal Finance Management Act* [RSA 2003]). This article goes a step further by advocating the financial condition function $g(x)$ to unpack fiscal structures that underpin financial condition. It is evident that National Treasury needs to overhaul its traditional financial management approach towards local government in order for it to truly become the face of democracy.

As the financial condition function $g(x)$ illustrates, the National Treasury has to intervene in an increasing number of municipalities becoming financially unviable. This results in municipalities seeking financial support from national and provincial spheres by invoking Section 139 of the *Constitution of the Republic of South Africa* (RSA 1996), together with Section 150 of the MFMA (RSA 2003). As a result, it is difficult for bulk utility providers like Eskom to cut off services to municipalities because of non-payment.

The custodian of the MFMA is the National Treasury. This makes the National Treasury the architect of the local government fiscal framework. In its construction, it failed to acknowledge that local government has a transactional structure as opposed to the administrative nature of the other two spheres of government (national and provincial). As a result, the focus on the skills deficit as the *de facto* cause of poor financial governance undermines the National Treasury's ability to make appropriate structural reforms. If this is not attended to, it will reach such levels that the national fiscus can no longer support unsustainable local governments, as required by law. This, in turn, will adversely affect South Africa's sovereign rating. It could not have been

better articulated than by the Minister of Finance, who said: 'South Africa's approach to tackling economic issues has not changed since the 1980's, even though society's structure has fundamentally changed' (Mboweni 2018).

In conclusion, fiscal research focuses on the modelling of financial condition per jurisdiction and analysing the resultant data. The assumption is that the fiscal framework is robust and conducive for sustainable local government. This article stresses the importance of constructing the financial condition function $g(x)$ as a mechanism to better understand the underlying fiscal structures. The article confirms that in the absence of an appropriate structure, financial condition analysis alone will not lead to financially viable local governments.

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Competing interests

The author has declared that no competing interest exists. Views and opinions expressed in this article are those of the author and do not necessarily reflect the official policy or position of any affiliated agency of the author.

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Appendix 1

TABLE 1-A1: Financial condition scores by rank.

Range	Number	Municipality name	Code	Density	μ -score
5: Among the best – excellent	1	Steve Tshwete Local Municipality	MP313	57.80	0.60
	2	Umlalazi Local Municipality	KZN284	96.48	0.58
	3	Lukhanji Local Municipality	EC134	50.02	0.56
	4	Vulamehlo Local Municipality	KZN211	80.63	0.56
	5	Umnngeni Local Municipality	KZN222	59.16	0.55
	6	Emthanjeni Local Municipality	NC073	3.14	0.54
	7	Ntambanana Local Municipality	KZN283	68.64	0.53
	8	Umtshezi Local Municipality	KZN234	42.17	0.53
	9	Kwa Sani Local Municipality	KZN432	6.96	0.53
	10	Uphongolo Local Municipality	KZN262	39.28	0.52
	11	Setsoto Local Municipality	FS191	18.87	0.52
	12	Ngquza Hill Local Municipality	EC153	112.43	0.51
	13	Abaqulusi Local Municipality	KZN263	50.43	0.51
	14	Victor Khanye Local Municipality	MP311	48.12	0.51
	15	Makhado Local Municipality	LIM344	62.17	0.51
	16	Pixley Ka Seme Local Municipality	MP304	15.92	0.51
	17	Greater letaba Local Municipality	LIM332	112.48	0.50
	18	Emalahleni Local Municipality	MP312	147.67	0.50
	19	Modimolle Local Municipality	LIM365	14.65	0.50
	20	Blouberg Local Municipality	LIM351	17.59	0.50
	21	Emfuleni Local Municipality	GT421	747.06	0.50
	22	Greater Taung Local Municipality	NW394	31.52	0.50
	23	Mnquma Local Municipality	EC122	77.18	0.50
4: Better than most – above average	1	Mhlontlo Local Municipality	EC156	66.61	0.49
	2	Emnambithi-Ladysmith Local Municipality	KZN232	80.08	0.49
	3	Midvaal Local Municipality	GT422	55.34	0.49
	4	Hibiscus Coast Local Municipality	KZN216	305.29	0.49
	5	Greater Kokstad Local Municipality	KZN433	24.62	0.49
	6	Buffalo City Local Municipality	BUF	297.79	0.49
	7	Molemole Local Municipality	LIM353	32.36	0.48
	8	Camdeboo Local Municipality	EC101	4.11	0.48
	9	Umdoni Local Municipality	KZN212	313.00	0.48
	10	Moqhaka Local Municipality	FS201	20.26	0.48
	11	Imbabazane Local Municipality	KZN236	79.29	0.48
	12	Kwadukuza Local Municipality	KZN292	314.54	0.48
	13	Elundini Local Municipality	EC141	27.27	0.47
	14	Lepelle-Nkumpi Local Municipality	LIM355	66.52	0.47
	15	Msunduzi Local Municipality	KZN225	975.61	0.47
	16	Gariep Local Municipality	EC144	3.78	0.47
	17	Umvoti Local Municipality	KZN245	40.97	0.47
	18	Newcastle Local Municipality	KZN252	195.81	0.47
	19	Kouga Local Municipality	EC108	36.91	0.47
	20	Lephalale Local Municipality	LIM362	8.40	0.47
	21	The Big Five False Bay Local Municipality	KZN273	16.62	0.47
	22	Sakhisizwe Local Municipality	EC138	27.00	0.47
	23	Greater Tubatse Local Municipality	LIM475	72.94	0.47
	24	Indaka Local Municipality	KZN233	103.95	0.47
	25	Thulamela Local Municipality	LIM343	103.08	0.47
	26	Dikgatlong Local Municipality	NC092	6.40	0.47
	27	Mbizana Local Municipality	EC443	116.63	0.47
	28	Govan Mbeki Local Municipality	MP307	99.67	0.46
	29	Ubuntu Local Municipality	NC071	0.91	0.46
	30	Emakhazeni Local Municipality	MP314	9.97	0.46
	31	Msukaligwa Local Municipality	MP302	24.83	0.46
	32	Kou-kamma Local Municipality	EC109	11.32	0.46
	33	Mtubatuba Local Municipality	KZN275	100.93	0.46
	34	Nquthu Local Municipality	KZN242	84.25	0.46
	35	Emadlangeni Local Municipality	KZN253	9.73	0.46

Appendix 1 continues on the next page →

TABLE 1-A1 (Continues...): Financial condition scores by rank.

Range	Number	Municipality name	Code	Density	μ -score
	36	Ngwathe Local Municipality	FS203	17.08	0.46
	37	Kgatelopele Local Municipality	NC086	7.54	0.46
	38	Amahlathi Local Municipality	EC124	25.47	0.45
	39	Mandeni Local Municipality	KZN291	253.35	0.45
	40	Port St Johns Local Municipality	EC154	120.94	0.45
	41	Ndwedwe Local Municipality	KZN293	128.84	0.45
	42	Matatiele Local Municipality	EC441	46.84	0.45
	43	Aganang Local Municipality	LIM352	69.73	0.45
	44	Elias Motsoaledi Local Municipality	LIM472	67.16	0.45
	45	Mutale Local Municipality	LIM342	23.64	0.45
	46	Blue Crane Route Local Municipality	EC102	3.25	0.45
	47	Senqu Local Municipality	EC142	18.30	0.45
	48	Ekurhuleni Metropolitan Municipality	EKU	1652.01	0.44
	49	Merafong City Local Municipality	GT484	121.10	0.44
	50	Jozini Local Municipality	KZN272	54.18	0.44
	51	Swartland Local Municipality	WC015	30.69	0.44
	52	Lekwa Local Municipality	MP305	25.23	0.44
	53	Magareng Local Municipality	NC093	15.70	0.44
	54	Laingsburg Local Municipality	WC051	0.94	0.44
	55	Moses Kotane Local Municipality	NW375	42.41	0.44
	56	Maluti-a-Phofung Local Municipality	FS194	77.41	0.44
	57	Randfontein Local Municipality	GT482	314.29	0.44
	58	Tsolwana Local Municipality	EC132	5.47	0.44
	59	Nongoma Local Municipality	KZN265	89.33	0.44
	60	City of Matlosana Local Municipality	NW403	111.96	0.44
	61	Ngqushwa Local Municipality	EC126	32.21	0.44
	62	Matjhabeng Local Municipality	FS184	78.85	0.43
	63	Polokwane Local Municipality	LIM354	167.02	0.43
	64	Westonaria Local Municipality	GT483	174.64	0.43
	65	Umshwathi Local Municipality	KZN221	58.51	0.43
	66	Mthonjaneni Local Municipality	KZN285	44.03	0.43
	67	Lesedi Local Municipality	GT423	67.06	0.43
	68	Mafube Local Municipality	FS205	14.57	0.43
	69	Maruleng Local Municipality	LIM335	29.24	0.43
	70	Engcobo Local Municipality	EC137	62.61	0.43
	71	Greater Giyani Local Municipality	LIM331	58.54	0.43
	72	Stellenbosch Local Municipality	WC024	187.40	0.43
	73	Langeberg Local Municipality	WC026	21.63	0.43
	74	George Local Municipality	WC044	37.31	0.43
	75	Ulundi Local Municipality	KZN266	57.94	0.43
	76	Hlabisa Local Municipality	KZN274	46.25	0.43
	77	Mkhambathini Local Municipality	KZN226	70.87	0.43
	78	Richmond Local Municipality	KZN227	52.38	0.43
	79	Umzimvubu Local Municipality	EC442	74.36	0.43
	80	Bela Bela Local Municipality	LIM366	19.52	0.42
	81	Okhahlamba Local Municipality	KZN235	33.26	0.42
	82	Ba-phalaborwa Local Municipality	LIM334	20.19	0.42
	83	Musina Local Municipality	LIM341	9.02	0.42
	84	Intsika Yethu Local Municipality	EC135	53.62	0.42
	85	Letsemeng Local Municipality	FS161	3.93	0.42
	86	Tswelopele Local Municipality	FS183	7.30	0.42
	87	Metsimaholo Local Municipality	FS204	86.84	0.42
	88	Tsantsabane Local Municipality	NC085	1.91	0.42
	89	Sunday's River Valley Local Municipality	EC106	9.09	0.42
	90	Ndlambe Local Municipality	EC105	33.23	0.42
	91	Witzenberg Local Municipality	WC022	10.78	0.42
	92	Nketoana Local Municipality	FS193	10.75	0.42
	93	Maphumulo Local Municipality	KZN294	107.95	0.42
	94	Nkomazi Local Municipality	MP324	81.60	0.41
	95	Ezinqoleni Local Municipality	KZN215	81.08	0.41
	96	Richtersveld Local Municipality	NC061	1.25	0.41

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TABLE 1-A1 (Continues...): Financial condition scores by rank.

Range	Number	Municipality name	Code	Density	μ -score
	97	Umhlatuze Local Municipality	KZN282	421.76	0.41
	98	Mogalakwena local municipality	LIM367	49.90	0.41
	99	Ventersdorp Local Municipality	NW401	15.06	0.41
	100	King Sabata Dalindyebo Local Municipality	EC157	149.23	0.41
	101	Breede Valley Local Municipality	WC025	43.52	0.41
	102	Ga-segonyana Local Municipality	NC452	20.85	0.40
	103	Ditsobotla Local Municipality	NW384	26.13	0.40
	104	Masilonyana Local Municipality	FS181	9.32	0.40
	105	Nama Khoi Local Municipality	NC062	2.61	0.40
	106	Impendle Local Municipality	KZN224	21.67	0.40
	107	Dannhauser Local Municipality	KZN254	67.39	0.40
	108	Saldanha Bay Local Municipality	WC014	49.23	0.40
	109	Edumbe Local Municipality	KZN261	42.23	0.40
	110	Beaufort West Local Municipality	WC053	2.26	0.40
	111	Nkonkobe Local Municipality	EC127	35.06	0.40
	112	Kareeberg Local Municipality	NC074	0.66	0.40
	113	Mbhashe Local Municipality	EC121	80.44	0.40
	114	Dipaleseng Local Municipality	MP306	16.20	0.40
	115	Gamagara Local Municipality	NC453	15.89	0.40
3: Average	1	Umzumbe Local Municipality	KZN213	127.86	0.39
	2	Ratlou Local Municipality	NW381	21.98	0.39
	3	Nkandla Local Municipality	KZN286	62.59	0.39
	4	Mamusa Local Municipality	NW393	16.70	0.39
	5	Cape Agulhas Local Municipality	WC033	9.53	0.39
	6	Lekwa-Teemane Local Municipality	NW396	14.47	0.39
	7	Mpofana Local Municipality	KZN223	20.94	0.39
	8	Makana Local Municipality	EC104	18.37	0.39
	9	Umuziwabantu Local Municipality	KZN214	88.66	0.39
	10	Thaba Chweu Local Municipality	MP321	17.20	0.39
	11	Overstrand Local Municipality	WC032	47.09	0.38
	12	Mogale City Local Municipality	GT481	270.06	0.38
	13	Maletswai Local Municipality	EC143	10.05	0.38
	14	Ingwe Local Municipality	KZN431	50.88	0.38
	15	Nala Local Municipality	FS185	19.67	0.38
	16	Mfolozi Local Municipality	KZN281	101.56	0.38
	17	Mantsopa Local Municipality	FS196	11.90	0.38
	18	Karoo Hoogland Local Municipality	NC066	0.39	0.38
	19	Bushbuckridge Local Municipality	MP325	52.80	0.38
	20	Umhlabuyalingana Local Municipality	KZN271	39.54	0.38
	21	Mangaung Metropolitan Municipality	MAN	118.94	0.37
	22	Khara Hais Local Municipality	NC083	4.29	0.37
	23	Msinga Local Municipality	KZN244	71.00	0.37
	24	Ramotshere Moiloa Local Municipality	NW385	20.95	0.37
	25	Siyathemba Local Municipality	NC077	1.47	0.37
	26	Nyandeni Local Municipality	EC155	117.38	0.37
	27	Maquassi Hills Local Municipality	NW404	16.76	0.37
	28	Naledi Local Municipality	FS164	9.62	0.37
	29	Mkhondo Local Municipality	MP303	35.23	0.37
	30	Kgetlengrivier Local Municipality	NW374	12.85	0.37
	31	Knysna Local Municipality	WC048	61.91	0.37
	32	Endumeni Local Municipality	KZN241	40.29	0.37
	33	Albert Luthuli Local Municipality	MP301	33.46	0.36
	34	Tswaing Local Municipality	NW382	20.82	0.36
	35	Hessequa Local Municipality	WC042	9.18	0.36
	36	Mahikeng Local Municipality	NW383	78.83	0.36
	37	Umjindi Local Municipality	MP323	39.87	0.36
	38	Drakenstein Local Municipality	WC023	163.37	0.36
	39	Greater Tzaneen Local Municipality	LIM333	120.29	0.36
	40	Khai-Ma Local Municipality	NC067	0.75	0.35
	41	Phumelela Local Municipality	FS195	5.84	0.35
	42	Prince Albert Local Municipality	WC052	1.61	0.35

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TABLE 1-A1 (Continues...): Financial condition scores by rank.

Range	Number	Municipality name	Code	Density	μ -score
	43	Sol Plaatjie Local Municipality	NC091	78.87	0.35
	44	Mbombela Local Municipality	MP322	109.16	0.34
	45	Kai Garib Local Municipality	NC082	2.50	0.34
	46	Rustenburg Local Municipality	NW373	160.55	0.34
	47	Bitou Local Municipality	WC047	49.56	0.34
	48	Mier Local Municipality	NC081	0.31	0.34
	49	Renosterberg Local Municipality	NC075	1.99	0.34
	50	Kheis Local Municipality	NC084	1.50	0.34
	51	Hantam Local Municipality	NC065	0.60	0.34
	52	Kopanong Local Municipality	FS162	3.14	0.33
	53	Dihlabeng Local Municipality	FS192	26.37	0.32
	54	Siyancuma Local Municipality	NC078	2.21	0.32
	55	Nelson Mandela Bay Metropolitan Municipality	NMA	588.11	0.32
	56	Umsobomvu Local Municipality	NC072	4.16	0.32
	57	Kannaland Local Municipality	WC041	5.21	0.32
	58	Madibeng Local Municipality	NW372	124.35	0.32
	59	Ikwezi Local Municipality	EC103	2.31	0.31
	60	Swellendam Local Municipality	WC034	9.37	0.30
	61	Mossel Bay Local Municipality	WC043	44.47	0.30
	62	Moretele Local Municipality	NW371	135.57	0.30
	63	Theewaterskloof Local Municipality	WC031	33.66	0.30
2: Worse than most – below average	1	Matzikama Local Municipality	WC011	5.17	0.29
	2	Mohokare Local Municipality	FS163	3.89	0.29
	3	Tokologo Local Municipality	FS182	3.11	0.29
	4	Ephraim Mogale Local Municipality	LIM471	61.49	0.29
	5	Great Kei Local Municipality	EC123	22.46	0.29
	6	Inkwanca Local Municipality	EC133	6.13	0.28
	7	Nxuba Local Municipality	EC128	8.88	0.27
	8	Naledi Local Municipality	NW392	9.62	0.27
	9	Thembelihle Local Municipality	NC076	1.96	0.27
	10	Cederberg Local Municipality	WC012	6.22	0.25
	11	Bergrivier Local Municipality	WC013	14.05	0.25
	12	Baviaans Local Municipality	EC107	1.52	0.24
	13	Ethekwini Metropolitan Municipality	ETH	1501.90	0.24
	14	Joe Morolong Local municipality	NC451	4.44	0.23
	15	Ubuhlebezwe Local Municipality	KZN434	63.40	0.22
	16	Ntabankulu Local Municipality	EC444	89.51	0.22
	17	Dr JS Moroka Local Municipality	MP316	176.35	0.21
	18	Phokwane Local Municipality	NC094	7.55	0.20
1: Among the worst – poor	1	City of Cape Town Metropolitan Municipality	CPT	1529.66	0.19
	2	Oudtshoorn Local Municipality	WC045	27.12	0.19
	3	City of Johannesburg Metropolitan Municipality	JHB	2695.94	0.10
	4	Inxuba Yethemba Local Municipality	EC131	5.62	0.05
	5	Fetakgomo Local Municipality	LIM474	84.88	-0.34
	6	Kamiesberg Local Municipality	NC064	0.72	-0.29
	7	Thabazimbi Local Municipality	LIM361	7.62	-0.27
	8	City of Tshwane Metropolitan Municipality	TSH	460.44	-0.02